

Shadow Flicker Report

Heritage Wind

Town of Barre
Orleans County, New York

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1.0 PROJECT OVERVIEW

Heritage Wind, LLC (the Permit Holder), was issued a Siting Permit for a Major Renewable Energy Facility (the Permit) for Heritage Wind (the Project) on January 13, 2022. Since the issuance of the Permit, modifications were made to further minimize resource impacts, and optimize the design of the Project. The updated Project is proposed to include up to 31 wind turbines and associated necessary project infrastructure, in the Town of Barre in Orleans County, New York (see Figure 1). The proposed layout will have a generating capacity of up to 200.1 megawatts (MW). The actual number of turbines constructed will depend on the capacity of the turbine model selected. However, no more than 31 turbines will be built, and therefore this number of turbines has been assumed for purposes of this evaluation. This report provides an assessment of the potential shadow flicker that could be experienced at sensitive receptors located in the vicinity of the proposed Project. Sensitive receptors include any known residential structures (both participating and non-participating), schools, office buildings, store fronts, hospitals or nursing homes, or high-use public recreation areas that are located within a 10-rotor diameter area (1,620 meters) around the proposed turbines (Study Area).

Two wind turbine generator models are being considered for this Project: the Vestas V162 6.0 and the Vestas V162 6.8. Both models have the same rotor diameter. Each wind turbine consists of three major mechanical components: the tower, nacelle, and rotor. The tower height or "hub height" (height from foundation to the center of the rotor) for the Vestas V162 turbine is approximately 119 meters (390 feet) and the rotor diameter of 162 meters (531 feet), resulting in a total maximum turbine tip height of 200 meters (656 feet). The hub heights of the turbine models being considered are lower than the models considered in the original Article 10/Section 94-c Transfer Application for this project—previously, turbine models considered had tip heights of 676 feet (206 meters)(with a hub height of 125 meters/410 feet), this has been reduced in the Proposed Modified Facility layout to a tip height of 656 feet (200 meters)(with a hub height of 119 meters/390 feet). The Proposed Modified Facility layout is depicted in Figure 2.

The Project is located within Orleans County, New York, approximately 35 miles east of the City of Rochester and 15 miles south of Lake Ontario, within the Erie-Ontario Lowlands physiographic province. Elevations in the area range from approximately 640 feet above mean sea level (amsl) to 670 feet amsl. Land cover within the Project area is dominated by active agriculture and forest land, with farms and single-family residences generally occurring along the road frontage.

2.0 INTRODUCTION

Shadow flicker refers to the moving shadows that an operating wind turbine casts at times of the day when the turbine rotor is between the sun and a receptor's position. Shadow flicker is most pronounced in northern latitudes during winter months because of the lower angle of the sun in the winter sky. However, it is possible to encounter shadow flicker anywhere for brief periods after sunrise and before sunset (U.S. Department of the Interior, 2005). During intervals of sunshine, wind turbine generators will cast a shadow on surrounding areas as the rotor blades pass in front of the sun, and if these moving shadows pass over a window, they can cause a flickering effect. Shadow flicker does not occur when fog or clouds obscure the sun, or when turbines are not operating.

The distance between a wind turbine and a potential shadow-flicker receptor affects the intensity of the shadows cast by the blades, and therefore the intensity of flickering. Shadows cast close to a turbine will be more intense, distinct, and focused. This is because a greater proportion of the sun's disc is intermittently blocked by the turbine (BERR, 2009). Obstacles such as terrain, vegetation, and/or buildings occurring between receptors and wind turbines may significantly reduce or eliminate shadow-flicker effects. At distances beyond roughly 10 rotor diameters (approximately 1,620 meters based on the Vestas V162 turbine model or equivalent proposed for the Project) shadow-flicker effects are generally considered negligible (BERR, 2009; DECC, 2011; DOER, 2011).

The location and duration of shadow flicker can be predicted using computer modeling programs and input data regarding turbine characteristics and weather conditions. A "worst-case" shadow-flicker scenario could be predicted based on the assumptions that there are no clouds or fog, wind conditions allow continuous turbine operation, the turbine rotor is continuously perpendicular to the sun, and the turbine rotor is positioned between the receptor and the sun. However, this "worst-case" scenario is not realistic because turbines do not operate continuously, are not always aligned perpendicular to the sun, and are not always positioned between the receptor and the sun. In addition, sunlight intensity and duration vary daily and seasonally, and obstacles that block shadows (terrain, vegetation, and buildings) exist in the landscape. Thus, a "worst-case" shadow flicker analysis provides an overly conservative estimate of shadow flicker impacts in excess of the Facility's actual impacts.

3.0 METHODS

3.1 Shadow Flicker Analysis

This shadow flicker analysis evaluated the potential impact of 31 Vestas V162 turbines, each with a rotor diameter of 162 meters and a hub height of 119 meters. A maximum distance of potential effect of 1,620 meters (10 rotor diameters) was used for this analysis to ensure that all potentially impacted receptors were identified and assessed, which is the accepted approach in New York for shadow flicker studies.

The shadow flicker analysis for the proposed Project used *WindPRO* 3.4 software and associated Shadow module. *WindPRO* is a widely accepted modeling software package developed specifically for the design and evaluation of wind power projects. Input variables and assumptions used for shadow flicker modeling calculations for the proposed Project include:

- The latitude and longitude coordinates of 31 proposed wind turbine sites (provided by the Permit Holder).
- The latitude and longitude coordinates of 638 potential sensitive receptors¹ located within the 10-rotor diameter (1,620 meter) Study Area.
- U.S. Geological Survey (USGS) 1:24,000 topographic mapping and USGS 10-meter resolution digital elevation model (DEM) data.
- The rotor diameter (162 meters) and hub height (119 meters) for the Vestas V162 turbine model.

¹ Sensitive receptors include both participating and non-participating known residential structures (both year-round and seasonal), schools, office buildings, storefronts, hospitals or nursing homes, or high-use public recreation areas.

- Annual wind rose data (provided by the Permit Holder), which is depicted in Table A1 of Attachment A (to determine the approximate directional frequency of rotor orientation throughout the year).
- To account for the occurrence of cloudy conditions, the average monthly percent of available sunshine for the nearest National Oceanic and Atmospheric Administration (NOAA) weather station in Rochester, New York was used. Data were obtained from NOAA's "Comparative Climatic Data for the United States through 2015" (see Table A2 of Attachment A) (<http://www.ncdc.noaa.gov>).
- No allowance was made for wind being below or above generation speeds. Blades are assumed to be moving during all daylight hours when the sun's elevation is more than 3 degrees above the horizon. Shadow flicker is generally considered imperceptible when the sun is less than 3 degrees above the horizon (due to the scattering effect of the atmosphere on low angle sunlight) (States Committee for Pollution Control, 2002).

Shadow-flicker effects on receptors are expressed in terms of predicted frequency (hours per year). Shadow isolines (i.e., contours indicating total number of hours of shadowing per average year) were calculated based on the data and assumptions outlined above. These isolines define the theoretical number of hours per year that shadow flicker would occur at any given location within a 1,620-meter radius of all proposed turbine locations (see Figure 3).

The model calculations include the cumulative sum of shadow flicker hours for all Project turbines. This omni-directional approach reports total shadow flicker results at a receptor regardless of the presence or orientation of windows at that particular residence (i.e., it assumes shadows from all directions can be perceived at a residence, which may or may not be true). A receptor in this "greenhouse" model is defined as a one square meter area located one meter above ground; actual house dimensions are not taken into consideration.

Because the shadow flicker analysis conducted for the proposed Project was based on the conservative assumptions that the turbines are in continuous operation during daylight hours and that shadow flicker can be perceived at a receptor structure regardless of the presence or orientation of windows or the screening effects of all surrounding trees and buildings, the analysis presented herein is a conservative projection of the shadow-flicker effects at ground level. The actual flicker hours from the Project would be lower than this conservative projection.

3.2 Curtailment Data Analysis

In addition to the shadow flicker analysis described above, the *WindPRO* software allows for the inclusion of a wind turbine curtailment plan. Curtailment involves the feathering of the rotor blades during periods when wind speeds are within the turbines operational range. During curtailment, the turbines will not be rotating and will not be producing shadow flicker. To determine how this curtailment could affect predicted shadow flicker, the Permit Holder provided a preliminary curtailment plan to EDR for inclusion in preparing the *WindPro* model (see Attachment B). The curtailment was created by using Openwind, a common wind farm modeling software, looking at the worst-case shadow flicker durations and applying a curtailment to the site-specific conditions. The plan is defined by turbine, day-by-day with turbine stop and start times. Therefore, the preliminary curtailment protocols planned for the projects (i.e., stops defined at a given

turbine) are accounted for in this analysis. The final curtailment strategy is being developed and refined; the Permit Holder anticipates providing additional final details as a compliance filing, to demonstrate the final Facility layout's adherence to the shadow flicker limits in the Final Permit. Like the basic shadow flicker analysis, the curtailment analysis over-estimates actual shadow-flicker impacts because it is based on the conservative assumptions that 1) the turbines are in continuous motion outside of the curtailment windows, 2) does not take into consideration curtailment periods to minimize additional impacts (e.g., noise and bat curtailments), and 3) shadow flicker can be perceived at a receptor structure regardless of the presence or orientation of windows or the screening effects of all surrounding trees and buildings.

3.3 Operational Reduction

The shadow flicker analysis described in Section 3.1 assumes that the proposed wind turbines will be continuously in motion. In reality, there will be times when the wind speed will be below the cut-in or above the cut-out wind speed, and the turbines will not be in operation. An additional analysis was conducted to include times when wind turbines may not be operating at the receptors evaluated in the curtailment data analysis. The site monthly average 10-minute on-site meteorological dataset extrapolated to hub height and verified by an independent engineer, was analyzed for frequency of being outside of turbine operational range. The monthly reduction factors were applied to the shadow flicker results for each receptor predicted to receive over 30 hours of shadow flicker (the annual shadow flicker limit applicable to the Facility in the Final Permit).

3.4 Shadow Flicker Threshold

Section 900-2.9(d)(6) of the ORES regulations establish a shadow flicker limit of 30 hours per year at any non-participating residence—this limit is incorporated into the Final Permit at Section IV(I)(1)(iii). Accordingly, a threshold of 30 shadow flicker hours per year was applied to the analysis of the proposed Project to identify any potentially significant impacts on non-participating receptors.

4.0 RESULTS

Output from the model includes the following information:

- Calculated shadow-flicker time (days per year, maximum hours per day, and total hours per year when shadow flicker is expected) at each of the 638 receptors (both participating and non-participating residential and non-residential) located in the shadow flicker Study Area.
- Tabulated and plotted time of day that structures are predicted to receive shadow flicker.
- Shadow isolines, which are used to create maps showing turbine locations, receptors, and projected shadow-flicker duration (hours per year) without taking into consideration the effect of screening provided by vegetation and structures (see Figure 3).

These data are presented in the tables and calendars included in Attachment C.

A summary of the projected shadow flicker at each of the 638 receptors² is presented below:

- 95 (15%) of the receptors are not expected to experience any shadow flicker,
- 6 (1%) of the receptors may be affected 0-1 hour/year,
- 188 (29%) of the receptors may be affected 1-10 hours/year,
- 146 (23%) of the receptors may be affected 10-20 hours/year,
- 91 (14%) of the receptors may be affected 20-30 hours/year,
- 112 (18%) of the receptors may be affected for more than 30 hours/year.

See Section 5.1 below for a detailed breakdown of the participation status and structure type of the 112 receptors predicted to receive over 30 hours of shadow flicker.

As these results indicate, 82% of the receptors are predicted to receive less than 30 hours of shadow flicker per year, with over 45% of the receptors predicted to receive less than 10 hours of shadow flicker per year. At most receptor locations, shadow flicker will occur primarily in the early morning or late afternoon. The maximum daily duration of shadow flicker predicted at any receptor is 2 hours and 35 minutes (at receptor 1234, see Attachment C).

5.0 ATTACHMENT C PROVIDES THE RESULTS OF THE PREDICTED SHADOW FLICKER AT EACH STRUCTURE. THE TIMES OF DAY AND DURATION OF SHADOW FLICKER EXPERIENCED BY EACH STRUCTURE WILL VARY THROUGHOUT THE CALENDAR YEAR BASED ON THE POSITION OF THE SUN IN THE SKY AND THE DIRECTION OF PREVAILING WINDS. SEE ATTACHMENT C FOR A TABLE INDICATING THE AMOUNT OF SHADOW FLICKER EXPECTED AT EACH RECEPTOR. FOR RECEPTORS ESTIMATED TO RECEIVE OVER 30 HOURS OF SHADOW FLICKER, DETAILED CALENDARS THAT ILLUSTRATE THE SPECIFIC TIMES OF YEAR AND DAY THAT SHADOW FLICKER MAY OCCUR ARE INCLUDED WITHIN ATTACHMENT C. FOR NON-PARTICIPATING RECEPTORS OVER 30 HOURS, DETAILED MAPS ARE PROVIDED IN FIGURE 3. AS NOTED ABOVE, THESE ESTIMATES ARE OVERLY CONSERVATIVE "WORST CASE" PREDICTIONS, BASED UPON THE CONSERVATIVE METHODOLOGY OUTLINED HEREIN; IN REALITY, MANY OF THE RECEPTORS IDENTIFIED WILL RECEIVE LESS SHADOW FLICKER THAN PREDICTED HEREIN.DISCUSsION

5.1 Receptors Predicted to Receive Over 30 Hours of Shadow Flicker Annually

As outlined above, results of the shadow flicker analysis for the Facility indicate that up to 112 receptors could exceed the 30-hour per year threshold. However, 43 of these receptors (38%) are located on

² Sensitive receptors include both participating and non-participating known residential structures (both year-round and seasonal), schools, office buildings, storefronts, hospitals or nursing homes, or high-use public recreation areas.

properties owned by Project participants, and an additional two receptors are commercial/public structures and as such are not residential receptors. Given that shadow flicker limitations are established for non-participating residential receptors, the analysis shows only 69 non-participating residential receptors (including unknown structures) were predicted to receive in excess of the 30 hours per year maximum allowed under the Final Permit. The details regarding anticipated shadow flicker at all receptors predicted to receive in excess of 30 hours, taking curtailment into account, are summarized below in Table 1.

Table 1. Receptors Predicted to Exceed 30 Hours of Shadow Flicker Annually Post Curtailment

Receptor ID	Project Status	Predicted Annual Shadow Flicker (hh:mm/year) ²	Predicted Max Daily Shadow Flicker (hh:mm/day) ²	Predicted Shadow Flicker (days/year) ²	Hours/Year Avoided by Curtailment	Days/Year Avoided by Curtailment
Residence Year-Round						
134	Not Participating	30:00	1:01	94	2:11	0
271	Not Participating	30:09	1:10	157	0:33	0
13	Not Participating	30:15	0:46	183	0:10	0
464	Not Participating	30:36	0:43	200	0:48	0
270	Not Participating	30:40	1:12	156	0:31	0
1227	Not Participating	31:22	1:12	173	0:00	0
107	Not Participating	32:03	0:56	194	0:37	0
949	Not Participating	32:44	1:16	162	0:39	0
105	Not Participating	33:11	0:43	192	0:37	0
216	Not Participating	33:31	0:48	176	5:12	0
515	Not Participating	33:47	1:13	158	1:28	0
78	Not Participating	34:22	0:53	137	2:40	0
404	Not Participating	34:26	1:13	172	1:06	0
1158	Not Participating	34:27	0:51	187	0:58	0
928	Not Participating	34:33	1:14	191	0:46	0

Receptor ID	Project Status	Predicted Annual Shadow Flicker (hh:mm/year) ²	Predicted Max Daily Shadow Flicker (hh:mm/day) ²	Predicted Shadow Flicker (days/year) ²	Hours/Year Avoided by Curtailment	Days/Year Avoided by Curtailment
1167	Not Participating	34:33	0:49	234	5:48	0
79	Not Participating	35:09	0:49	155	2:31	0
528	Not Participating	36:55	1:18	179	3:15	0
1303	Not Participating	37:13	0:56	222	0:18	0
217	Not Participating	38:05	0:56	173	6:18	0
1234	Not Participating	38:12	2:35	119	0:52	0
1232	Not Participating	38:26	2:25	127	0:49	0
1174	Not Participating	38:44	0:55	221	4:22	0
947	Not Participating	39:43	1:15	180	0:44	0
778	Not Participating	39:58	1:10	111	3:08	0
1210	Not Participating	39:58	0:54	246	8:11	0
487	Not Participating	40:09	1:31	178	7:45	0
503	Not Participating	41:39	0:44	253	0:00	0
191	Not Participating	41:50	1:00	166	4:20	0
946	Not Participating	42:24	1:35	184	0:51	0
201	Not Participating	42:27	0:54	186	4:03	0
428	Not Participating	42:34	0:49	230	5:14	0
215	Not Participating	42:56	1:25	200	3:15	0
423	Not Participating	42:57	0:54	224	6:36	0
267	Not Participating	44:17	1:24	186	0:53	0

Receptor ID	Project Status	Predicted Annual Shadow Flicker (hh:mm/year) ²	Predicted Max Daily Shadow Flicker (hh:mm/day) ²	Predicted Shadow Flicker (days/year) ²	Hours/Year Avoided by Curtailment	Days/Year Avoided by Curtailment
1172	Not Participating	44:39	0:57	226	6:36	0
373	Not Participating	44:53	1:09	143	7:15	0
193	Not Participating	45:05	0:54	168	5:30	0
1235	Not Participating	45:39	1:50	139	0:54	0
444	Not Participating	46:00	1:05	240	5:16	1
1211	Not Participating	46:45	0:58	243	9:51	1
229	Not Participating	46:53	1:09	196	14:15	0
945	Not Participating	47:40	1:28	192	0:53	0
1196	Not Participating	51:20	1:04	253	10:00	0
164	Not Participating	51:35	1:24	193	13:40	0
232	Not Participating	52:51	1:18	209	14:06	0
218	Not Participating	55:13	1:27	169	14:13	0
119	Not Participating	55:43	1:10	204	6:07	0
1184	Not Participating	55:51	1:06	192	10:19	0
80	Not Participating	57:50	0:58	320	11:00	0
889	Not Participating	59:56	1:30	210	6:08	0
235	Not Participating	61:44	1:13	250	11:09	0
824	Not Participating	63:11	1:18	216	14:26	0
199	Not Participating	63:25	1:08	228	14:13	0
292	Not Participating	63:36	2:07	193	2:28	0

Receptor ID	Project Status	Predicted Annual Shadow Flicker (hh:mm/year) ²	Predicted Max Daily Shadow Flicker (hh:mm/day) ²	Predicted Shadow Flicker (days/year) ²	Hours/Year Avoided by Curtailment	Days/Year Avoided by Curtailment
242	Not Participating	65:14	1:30	192	16:24	0
202	Not Participating	66:40	1:18	232	15:04	0
892	Not Participating	68:30	1:42	218	18:18	0
222	Not Participating	69:28	1:37	187	20:43	0
916	Not Participating	70:57	1:47	233	8:31	0
236	Not Participating	71:27	1:38	244	20:45	0
246	Not Participating	71:55	1:48	234	5:17	0
899	Not Participating	72:12	1:43	203	12:58	0
912	Not Participating	75:45	1:59	243	13:42	0
911	Not Participating	77:47	2:01	231	6:43	0
239	Not Participating	79:00	1:45	236	20:15	0
324	Participating	30:24	2:06	101	0:50	0
322	Participating	30:34	1:22	163	0:37	0
361	Participating	30:41	0:55	100	0:26	0
571	Participating	30:45	0:51	206	0:09	0
321	Participating	31:46	1:21	192	0:43	0
1140	Participating	31:57	1:08	150	0:00	0
388	Participating	32:43	1:07	135	0:00	0
348	Participating	36:24	0:52	180	2:47	0
1182	Participating	37:09	0:47	194	2:09	0
441	Participating	37:15	0:50	216	3:06	0
240	Participating	40:31	0:50	215	0:00	0
382	Participating	41:29	1:08	143	0:00	0
185	Participating	41:43	0:52	166	3:26	0
314	Participating	43:14	1:50	157	1:03	0
919	Participating	47:27	0:54	255	1:32	0
264	Participating	49:14	1:43	194	0:45	0
369	Participating	51:14	1:00	205	6:20	0

Receptor ID	Project Status	Predicted Annual Shadow Flicker (hh:mm/year) ²	Predicted Max Daily Shadow Flicker (hh:mm/day) ²	Predicted Shadow Flicker (days/year) ²	Hours/Year Avoided by Curtailment	Days/Year Avoided by Curtailment
980	Participating	52:26	1:35	200	0:53	0
927	Participating	54:05	1:40	190	3:32	0
438	Participating	55:08	1:23	220	5:22	0
237	Participating	56:24	1:29	181	17:26	0
1009	Participating	56:27	2:00	224	0:14	0
249	Participating	84:32	1:46	210	7:27	0
Unknown Structure¹						
2570	Not Participating	44:04	0:40	264	0:00	0
896	Participating	42:18	1:08	162	5:08	0
895	Participating	44:48	1:14	163	5:29	0
894	Participating	46:06	1:21	159	7:12	0
920	Participating	50:35	0:54	254	1:20	0
Commercial Structure						
952	Not Participating	38:32	1:36	178	0:42	0
1141	Participating	30:10	1:04	166	0:02	0
590	Participating	33:06	2:04	143	0:07	0
1143	Participating	35:14	1:06	139	0:13	0
591	Participating	36:11	1:58	148	0:08	0
1147	Participating	36:24	1:10	141	0:09	0
1146	Participating	37:26	1:12	143	0:09	0
1148	Participating	37:41	1:11	141	0:09	0
921	Participating	37:45	1:09	163	8:19	0
763	Participating	38:33	1:16	176	0:10	0
762	Participating	42:37	1:20	196	0:08	0
1011	Participating	44:24	1:51	201	0:17	0
1013	Participating	45:34	1:48	197	0:12	0
1012	Participating	47:12	1:55	207	0:16	0
1014	Participating	51:30	1:56	217	0:11	0
1010	Participating	56:33	2:02	233	0:09	0
1015	Participating	59:36	2:03	250	0:06	0
Public Structure						
915	Not Participating	73:15	1:56	253	10:47	0

¹ Unknown structures are structures that could not be definitively classified during field verification.

² Results do not account for the screening effect of trees or orientation of windows.

Although the shadow flicker results presented in Table 1 theoretically exceed the 30-hour per year threshold, these calculations do not take into account the actual location and orientation of windows, or the screening effects associated with existing, site-specific conditions and obstacles such as trees and/or buildings (i.e., does not take into account the results of a viewshed analysis). Further, this analysis assumes turbine rotors are continuously in motion outside the periods of curtailment and that each receptor location is occupied year-round—these are unrealistic assumptions which do not represent real-world scenarios, and again provide a “worst-case” estimate of impact.

Given these assumptions, the predicted shadow-flicker frequency represents a very conservative scenario. In addition, many of the modeled shadow flicker hours are expected to be low intensity because they would occur during the early morning or late afternoon hours when the sun is low in the sky. As the sun sinks below the horizon, more of its light is scattered by the atmosphere, which has the effect of dampening its brightness and therefore reducing its ability to cast dark shadows (EMD, 2013).

Details regarding shadow flicker effects predicted at the non-participating receptors predicted to exceed 30 hours of shadow flicker per year post curtailment are presented in Table 2 below. Results of predicted shadow flicker at each receptor is provided in Attachment C.

Table 2. Daily Effect to Non-Participating Receptors Predicted to Exceed 30 Hours of Shadow Flicker Post Curtailment

Receptor ID	Predicted Annual Shadow Flicker (hh:mm/year) ²	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker
Year Round Residence			
134	30:00	T8	7:00 AM – 8:00 AM
271	30:09	T4, T5, T6, T9	7:45 AM – 8:45 AM 3:00 PM – 6:30 PM
13	30:15	T12, T14, T17	6:00 AM – 7:00 AM 7:15 AM – 9:00 AM
464	30:36	T25, T29, T30	6:00 AM – 6:45 AM 7:30 AM – 9:15 AM 3:30 PM – 3:45 PM
270	30:40	T4, T5, T6, T9	7:30 AM – 8:45 AM 3:00 PM – 3:15 PM 3:30 PM – 6:15 PM
1227	31:22	T26, T28, T31	7:00 AM – 9:15 AM
107	32:03	T2, T3, T8	6:15 AM – 7:00 AM 3:45 PM – 4:45 PM 7:30 PM – 8:30 PM
949	32:44	T4, T5, T6, T7, T9	7:45 AM – 8:45 AM 3:00 PM – 6:30 PM
105	33:11	T2, T3, T8	6:15 AM – 7:00 AM 3:45 PM – 4:45 PM

Receptor ID	Predicted Annual Shadow Flicker (hh:mm/year) ²	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker
Year Round Residence			
			7:30 PM – 8:30 PM
216	33:31	T5, T10, T13	6:45 PM – 8:00 AM 7:45 PM – 8:30 PM
515	33:47	T16, T22, T24	7:15 AM – 9:30 AM 6:30 PM – 7:15 PM
78	34:22	T1, T2	7:00 PM – 8:30 PM
404	34:26	T25, T29, T30	6:00 AM – 6:45 AM 8:00 AM – 9:00 AM 3:30 PM – 4:15 PM
1158	34:27	T25, T29, T30	6:00 AM – 7:00 AM 7:45 AM – 9:00 AM
928	34:33	T9, T10, T16, T19	6:45 AM – 7:15 AM 8:45 AM – 9:15 AM 3:15 PM – 4:30 PM 4:45 PM – 6:45 PM
1167	34:33	T27, T29, T30	6:30 AM – 7:30 AM 7:45 AM – 8:30 AM
79	35:09	T1, T2	6:45 PM – 8:15 PM
528	36:55	T16, T22, T24	7:00 AM – 9:45 AM 6:45 PM – 7:15 PM
1303	37:13	T26, T27, T28, T31	7:00 AM – 9:15 AM
217	38:05	T5, T10, T13	6:30 AM – 8:00 AM 7:45 PM – 8:30 PM
1234	38:12	T26, T31	8:15 AM – 10:30 AM 1:30 PM – 3:00 PM
1232	38:26	T26, T31	8:00 AM – 10:15 AM 1:15 PM – 2:45 PM
1174	38:44	T27, T28, T29, T30	6:00 AM – 6:30 AM 6:45 AM – 7:45 AM 8:00 AM – 8:45 AM
947	39:43	T4, T5, T6, T7, T9	7:15 AM – 9:00 AM 2:45 PM – 7:00 PM
778	39:58	T8	7:00 AM – 8:15 AM
1210	39:58	T26, T27, T28, T30, T31	6:15 AM – 8:45 AM
487	40:09	T5, T7, T10, T13, T15	6:00 AM – 7:30 AM 7:45 PM – 8:30 PM
503	41:39	T20, T21, T23, T24	3:30 PM – 4:30 PM 5:15 PM – 7:30 PM 7:45 PM – 8:30 PM
191	41:50	T13, T15, T16	6:00 AM – 8:45 AM
946	42:24	T5, T6, T7, T9, T10	7:15 AM – 9:00 AM

Receptor ID	Predicted Annual Shadow Flicker (hh:mm/year) ²	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker
Year Round Residence			
			3:00 PM – 7:00 PM
201	42:27	T22, T24	5:00 PM – 8:00 PM
428	42:34	T27, T28, T29, T30, T31	6:00 AM – 8:30 AM
215	42:56	T16, T22, T24	7:15 AM – 9:30 AM 6:45 PM – 7:15 PM
423	42:57	T27, T29, T30	6:15 AM – 7:30 AM 7:45 AM – 8:30 AM
267	44:17	T5, T6, T7, T9, T10	7:15 AM – 9:00 AM 3:00 PM – 7:00 PM
1172	44:39	T27, T29, T30	6:30 AM – 7:30 AM 8:00 AM – 8:45 AM
373	44:53	T25, T29	6:00 AM – 7:30 AM 5:30 PM – 7:00 PM
193	45:05	T22, T24	5:15 PM – 8:15 PM
1235	45:39	T26, T28, T31	2:00 PM – 5:45 PM
444	46:00	T26, T27, T28, T30, T31	6:00 AM – 9:00 AM
1211	46:45	T26, T27, T28, T30, T31	6:00 AM – 8:45 AM
229	46:53	T5, T7, T9, T10, T13	6:00 AM – 8:15 AM 7:30 PM – 8:30 PM
945	47:40	T5, T6, T7, T9, T10	7:15 AM – 9:00 AM 3:00 PM – 7:00 PM
1196	51:20	T26, T27, T28, T30, T31	6:00 AM – 9:00 AM
164	51:35	T8, T15	6:15 AM – 7:45 AM 3:30 PM – 5:15 PM
232	52:51	T5, T7, T10, T13	7:00 AM – 8:30 AM 7:30 PM – 8:30 PM
218	55:13	T5, T7, T10, T13	6:30 AM – 8:15 AM 7:45 PM – 8:30 PM
119	55:43	T8, T14	7:15 AM – 9:15 AM 7:15 PM – 8:30 PM
1184	55:51	T27, T28, T30, T31	6:00 AM – 8:30 AM
80	57:50	T26, T27, T28, T30, T31	6:15 AM – 9:15 AM
889	59:56	T5, T7, T9, T10, T13	6:00 AM – 8:00 AM 7:15 PM – 8:30 PM
235	61:44	T16, T20, T22, T24	6:15 AM – 9:30 AM
824	63:11	T8, T15	6:30 AM – 8:00 AM 3:30 PM – 8:45 PM
199	63:25	T16, T22, T24	6:15 AM – 9:00 AM 7:15 PM – 8:00 PM
292	63:36	T19, T21, T23	7:00 AM – 9:15 AM

Receptor ID	Predicted Annual Shadow Flicker (hh:mm/year) ²	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker
Year Round Residence			
			2:45 PM – 5:00 PM
242	65:14	T4, T5, T7, T9, T10	6:30 AM – 8:30 AM 7:00 PM – 8:30 PM
202	66:40	T16, T22, T24	6:00 AM – 9:15 AM 7:15 PM – 8:00 PM
892	68:30	T5, T7, T9, T10, T13	6:30 AM – 8:30 AM 7:00 PM – 8:30 PM
222	69:28	T5, T7, T10, T13	6:30 AM – 8:15 AM 7:30 PM – 8:30 PM
916	70:57	T9, T10, T16	7:30 AM – 9:00 AM 2:45 PM – 5:00 PM 5:45 PM – 7:15 PM
236	71:27	T5, T7, T9, T10, T13	6:00 AM – 8:30 AM 7:15 PM – 8:45 PM
246	71:55	T5, T6, T7, T9, T10, T13	6:45 AM – 8:45 AM 6:45 PM – 8:30 PM
899	72:12	T5, T7, T9, T10	6:45 AM – 8:30 AM 7:00 PM – 8:15 PM
912	75:45	T4, T5, T6, T7, T9, T10	7:15 AM – 8:45 AM 5:45 PM – 8:30 PM
911	77:47	T4, T5, T6, T7, T9, T10	7:30 AM – 8:30 AM 6:15 PM – 8:30 PM
239	79:00	T5, T6, T7, T9, T10, T13	6:00 AM – 8:30 AM 7:00 PM – 8:30 PM
Unknown Structure			
2570	44:04	T20, T22, T23, T24	3:30 PM – 5:45 PM 6:45 PM – 7:30 PM 7:45 PM – 8:30 PM
Commercial Structure			
952	38:32	T5, T6, T7, T9	7:45 AM – 9:15 AM 3:15 PM – 7:00 PM
Public Structure			
915	73:15	T4, T5, T6, T7, T9, T10	7:15 AM – 8:45 AM 5:15 PM – 8:15 PM

5.2 Operational Reduction

To more accurately calculate the amount of shadow flicker likely to occur at non-participating receptors where the curtailment data analysis still predicted over 30 hours of shadow flicker per year, an operational reduction analysis was conducted. As indicated in Table 3 below, the analysis suggested that shadow flicker

at nine additional receptors should be reduced below the 30-hour per year threshold due to the percentage of time that wind speeds are below the cut-in speed or above the cut-out speed. The other 60 non-participating receptors are predicted to receive reduced levels of shadow flicker due to wind speeds being outside the turbine's operating range, although not enough to fall below the 30-hour per year threshold. The results of the operational reduction analysis are included in Attachment D.

Table 3. Results of Operational Reduction Shadow Flicker Analysis at Non-Participating Receptors Post Curtailment.

Receptor	Annual Expected Shadow Flicker (hh:mm/year)	Operational Reduction Shadow Flicker (hh:mm/year)
Residence Year-Round		
134	30:00	26:40
271	30:09	27:50
13	30:15	27:33
464	30:36	28:01
270	30:40	28:21
1227	31:22	29:08
107	32:03	28:02
949	32:44	30:05
105	33:11	29:08
216	33:31	29:43
515	33:47	31:26
78	34:22	30:16
404	34:26	31:40
1158	34:27	31:53
928	34:33	31:42
1167	34:33	31:02
79	35:09	30:49
528	36:55	34:25
1303	37:13	34:31
217	38:05	33:32
1234	38:12	34:41
1232	38:26	34:58
1174	38:44	35:05
947	39:43	36:33

Receptor	Annual Expected Shadow Flicker (hh:mm/year)	Operational Reduction Shadow Flicker (hh:mm/year)
778	39:58	35:32
1210	39:58	36:05
487	40:09	35:38
503	41:39	37:13
191	41:50	37:19
946	42:24	38:53
201	42:27	37:41
428	42:34	38:24
215	42:56	39:56
423	42:57	38:45
267	44:17	40:49
1172	44:39	40:14
373	44:53	39:54
193	45:05	39:50
1235	45:39	41:38
444	46:00	41:39
1211	46:45	42:13
229	46:53	41:29
945	47:40	43:58
1196	51:20	46:22
164	51:35	40:50
232	52:51	46:51
218	55:13	48:28
119	55:43	50:04
1184	55:51	49:38
80	57:50	52:59
889	59:56	52:58
235	61:44	56:16
824	63:11	56:06
199	63:25	56:42
292	63:36	58:14
242	65:14	57:32

Receptor	Annual Expected Shadow Flicker (hh:mm/year)	Operational Reduction Shadow Flicker (hh:mm/year)
202	66:40	60:03
892	68:30	60:19
222	69:28	61:23
916	70:57	64:16
236	71:27	63:24
246	71:55	63:41
899	72:12	63:49
912	75:45	67:33
911	77:47	69:19
239	79:00	69:54
Unknown Structure		
2570	44:04	38:57
Commercial Structure		
952	38:32	35:18
Public Structure		
915	73:15	65:31

6.0 CONCLUSIONS

WindPRO predicted that following a proposed curtailment schedule, 69 non-participating receptors will receive more than 30 hours/year of shadow flicker from the Project wind turbines. However, two of the non-participating receptors are commercial or public structures and will be occupied only periodically, and which are not subject to the 30-hours-per-year shadow flicker limit in the Final Permit. Further, there is little, if any, likelihood that individuals in these receptors will actually experience 30 hours per year of shadow flicker.

More generally, the assumptions underlying the shadow flicker analysis are conservative, and the analysis does not take into account important real-world factors, including the actual location and orientation of windows and the screening effects associated with existing, site-specific conditions and obstacles such as trees and/or buildings. Also, the analysis assumes turbine rotors are in continuous motion outside of the curtailment windows. Given these assumptions, the predicted shadow-flicker frequency represents a conservative scenario and likely overstates the actual frequency of shadow flicker that would be experienced at any given receptor location.

The curtailment analysis was performed by incorporating times of turbine stoppage within the operational cut in/out speeds. An operational reduction shadow flicker analysis was conducted for the 69 non-

participating receptors predicted to receive more than 30 hours shadow flicker per year after the initial curtailment data analysis. The operational reduction included turbine stoppage when the winds are outside of the turbine operational cut-in/out wind speeds. This analysis revealed that predicted shadow flicker will be reduced below the 30-hour threshold at nine additional receptors due to the percentage of time the turbines are not operating due to wind speeds below the turbine cut-in speed or above the cut-out speed. Consequently, 60 non-participating receptors are predicted to receive more than 30 hours of shadow flicker per year based on the currently proposed turbine model and layout.

Following the final shadow-flicker analysis, if shadow flicker is modeled to exceed 30 hours per year at a non-participating residential receptor, the following mitigation options are available: 1) work with the landowner to sign a neighbor agreement and become a Project participant, 2) plant trees or install window blinds to block the shadow flicker, and/or 3) install detection systems on the turbines resulting in greater than 30 hours per year of shadow flicker at non-participating receptors. Final mitigation strategies will be selected prior to Facility construction and operation.

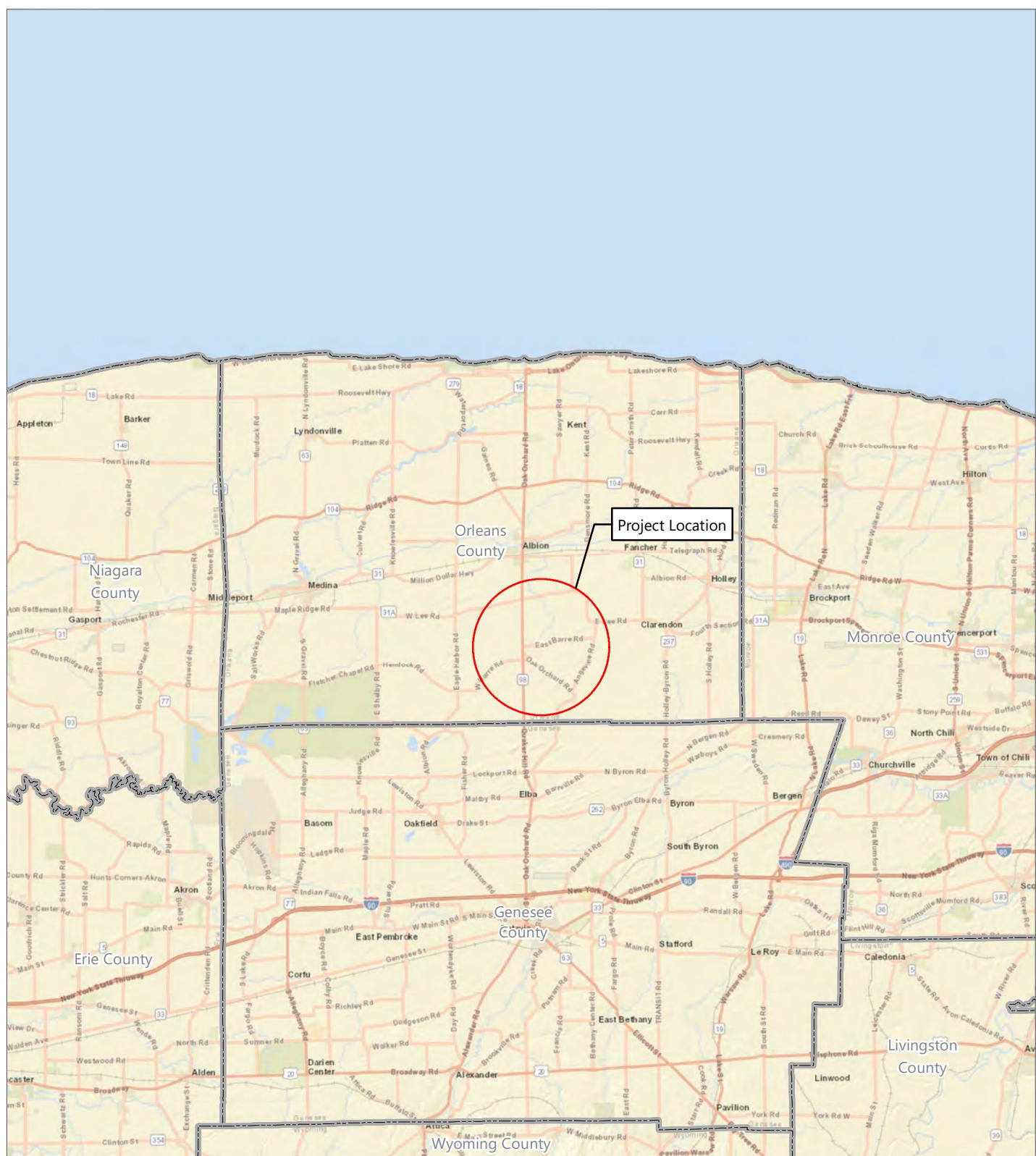
To achieve compliance with the 30-hour-per-year shadow flicker limit at non-participating residential receptors included in the Final Permit, The Permit Holder will utilize operational information from the turbine (windspeed and orientation) and in-field sensors to capture sunshine time combined with receptor calendars to track the shadow flicker at each receptor . If this data indicates that a receptor is at the 30 hour per year threshold, the turbines will be stopped during conditions that could result in additional shadow flicker at that receptor. the Permit Holder will develop an additional curtailment strategy during the compliance phase, as part of its Visual Impacts Minimization and Mitigation Plan required by 19 NYCRR Section 900-2.9. The Permit Holder will then submit that plan showing that, with the curtailment strategy applied, the Facility achieves compliance with the Final Permit's shadow flicker limit in accordance with Final Permit Section 6(f) and (g), and 19 NYCRR Section 900-10.2. The current Final Permit includes provisions which memorialize this requirement. However, to the extent that any changes to the Final Permit are needed, ORES staff could add a subsection (g)(3) under Site Specific Condition 6(g) which requires that the final Visual Impacts Minimization and Mitigation Plan submitted in the compliance phase include a final curtailment strategy to demonstrate compliance with the shadow flicker limitation.

7.0 REFERENCES

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FIGURES

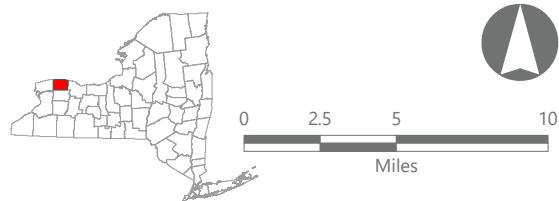
Figure 1. Regional Project Location



Heritage Wind Project

Town of Barre, Orleans County,
New York

Shadow Flicker Analysis



Prepared May 25, 2022

Basemap: Esri "World Street Map" map service

Figure 2. Proposed Project Layout

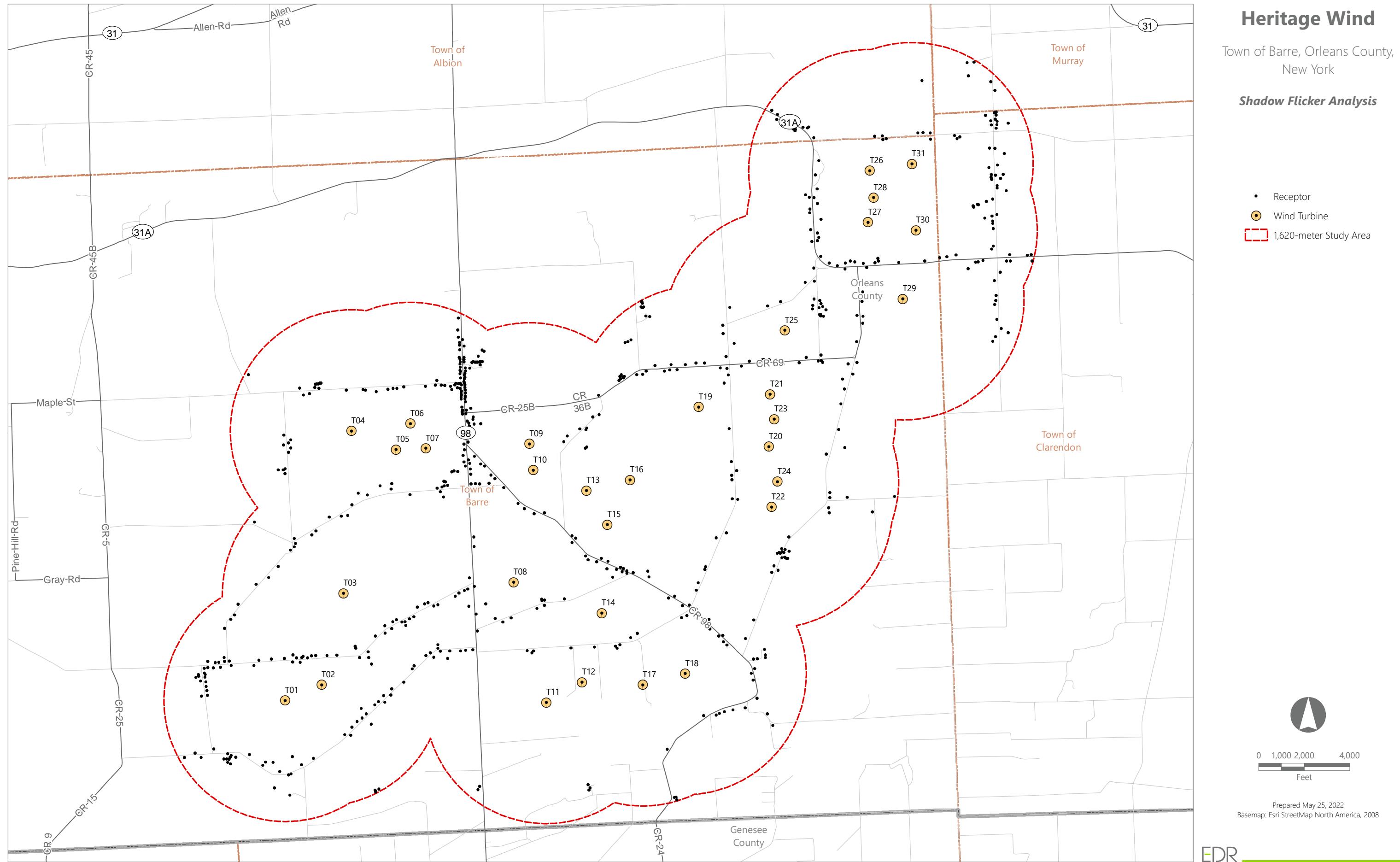
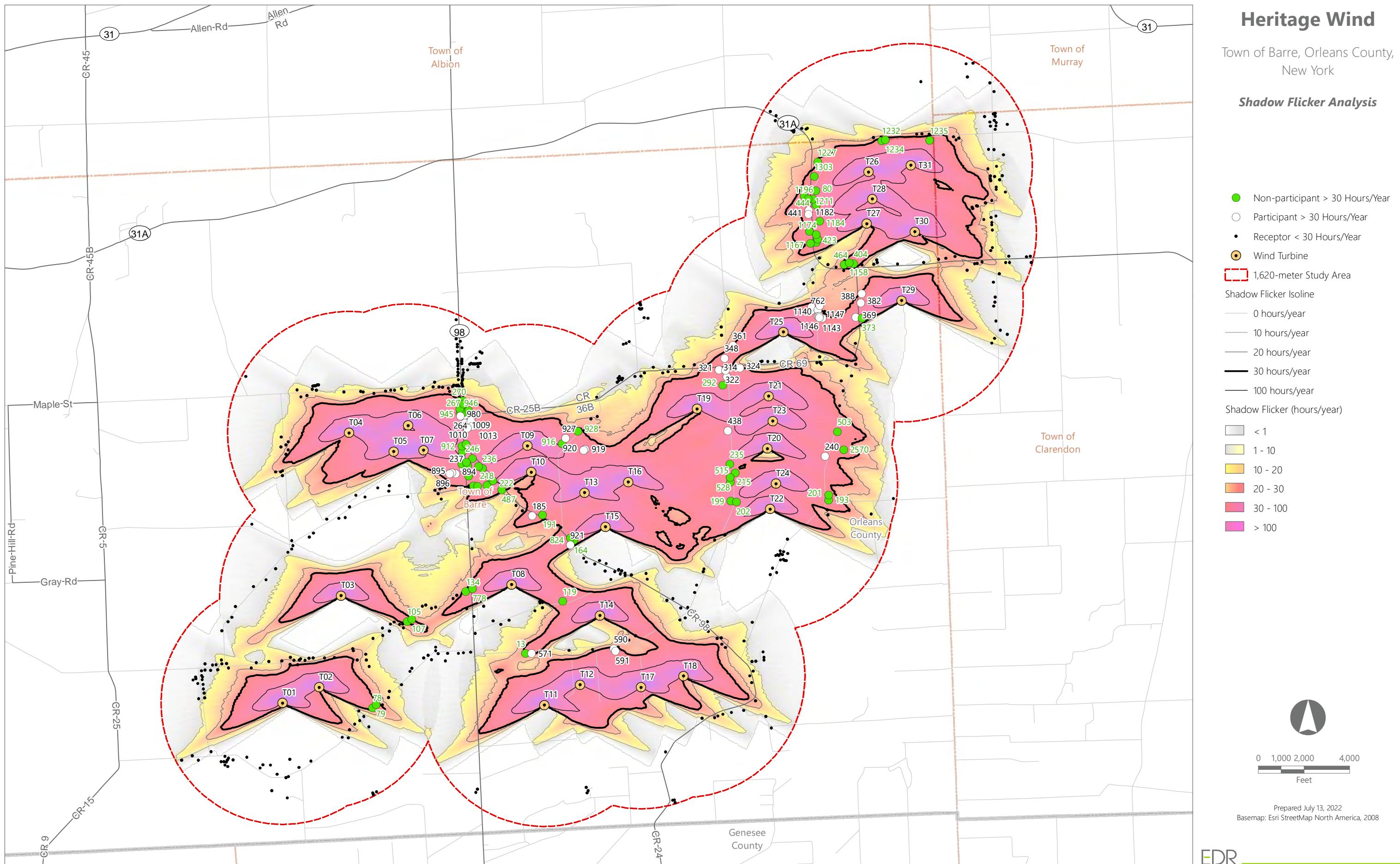


Figure 3. Projected Shadow Flicker



ATTACHMENT A

Windrose and Sunshine Data

Table A1. Wind Rose Data

Sector	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Hours of Operation	202	197	289	407	405	362	419	516	398	588	1,138	1,492	922	680	492	253

Source: Wind rose data provided by Heritage Wind, LLC

Table A2. Sunshine Probability Data

Month	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Sunshine Probability	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

¹Source: NOAA Comparative Climatic Data for the United States through 2015 – Rochester, New York Weather Station.

²Defined by NOAA as the total time that sunshine reaches the surface of the earth, expressed as the percentage of the maximum amount possible from sunrise to sunset with clear sky conditions.

ATTACHMENT B

WindPRO Results and Calendars

SHADOW - Flicker curtailment calendar

WTG: T01 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (100)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

1											
2											
3											
4											
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12											
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29											
30											
31											

SHADOW - Flicker curtailment calendar

WTG: T02 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (101)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												16:13-16:14 16:08-16:09 16:01-16:02
2												16:08-16:10 16:01-16:02
3												
4												
5												
6												
7												
8												16:04-16:05
9												16:05-16:06
10												16:09-16:11 16:06-16:07
11												
12												
13												
14												
15									15:57-15:58			16:09-16:11
16									15:57-15:58			
17									15:58-15:59			
18												
19												
20												
21												16:07-16:11
22												16:08-16:09
23									15:54-15:55			
24									16:11-16:12 15:55-15:57			
25									16:05-16:06 15:59-16:01			16:14-16:15
26												
27									16:14-16:15 16:03-16:04			
28									16:08-16:10 15:54-15:55			
29									16:11-16:14 15:59-16:01			
30									16:13-16:14 16:03-16:04 15:55-15:57			
31												09:44-09:45 09:39-09:40 09:18-09:19 09:13-09:14 09:34-09:35 09:28-09:29 09:07-09:09 09:01-09:03 09:51-09:52 09:47-09:49 09:39-09:40 09:21-09:22 09:17-09:18 16:12-16:14 09:43-09:44 09:19-09:20 08:51-08:52 08:43-08:46 16:16-16:19 09:35-09:37 09:28-09:29 09:22-09:25 09:13-09:14 09:08-09:09 08:54-08:55

Project:
2019-12-08_Heritage SFA

Licensed user:
EDR
217 Montgomery St., Suite 1000
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
6/28/2022 9:50 AM/3.4.424

SHADOW - Flicker curtailment calendar

WTG: T03 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (102)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
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6												
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31												

SHADOW - Flicker curtailment calendar

WTG: T04 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (103)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
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31												

SHADOW - Flicker curtailment calendar

WTG: T05 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (104)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
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27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T06 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (105)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4							19:30-19:32					
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21							19:30-19:32					
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T07 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (106)

Flicker curtailment according to specified plan

	January	February	March	April	May	June
1						
2						
3						
4						
5						
6						
7						
8						19:16-19:20 19:07-19:08 19:02-19:03 18:57-18:58 18:53-18:55 18:47-18:49 18:41-18:43
9						
10						19:20-19:22
11						19:23-19:24 19:20-19:21
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						19:07-19:09 18:59-19:04 18:56-18:57 18:51-18:54
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Project:
2019-12-08_Heritage SFA

Licensed user:
EDR
217 Montgomery St., Suite 1000
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
6/28/2022 9:50 AM/3.4.424

SHADOW - Flicker curtailment calendar

WTG: T07 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (106)

Flicker curtailment according to specified plan

July	August	September	October	November	December
1 19:11-19:15 19:04-19:09 18:56-18:57 18:49-18:50 18:46-18:47	19:10-19:11 19:08-19:09 18:53-18:54 18:50-18:51	17:52-17:53			15:47-15:48 15:36-15:37
2					15:47-15:48 15:41-15:42 15:34-15:36 15:28-15:31 15:17-15:18 15:06-15:07
3 19:13-19:19 19:09-19:11 19:06-19:07					16:01-16:02 14:57-14:59
4 19:29-19:31 19:25-19:27 19:22-19:23 19:19-19:20 19:11-19:17 19:01-19:08 18:50-18:52	18:46-18:49 18:37-18:38				15:29-15:30 15:26-15:27 15:17-15:18
5					15:42-15:45 15:39-15:40 15:23-15:24 15:20-15:21 15:05-15:06
6					15:34-15:35 15:24-15:25 15:21-15:22
7					15:35-15:36 15:30-15:32
8					15:38-15:40 15:29-15:30 15:26-15:27 15:22-15:23 15:08-15:09
9					15:34-15:35
10					15:34-15:35 15:24-15:25 15:21-15:22
11					15:57-15:58 15:44-15:47 15:13-15:18
12					16:02-16:03 15:43-15:44 15:36-15:38
13					15:43-15:45 15:13-15:14 15:04-15:05
14					16:00-16:01 15:27-15:28 15:22-15:23
15					15:54-15:55 15:49-15:50 15:25-15:28 15:19-15:20
16					15:44-15:45 15:41-15:42
17					15:55-15:56 15:40-15:51 15:30-15:31
18					16:07-16:10 15:46-15:47 15:31-15:32 15:04-15:05
19					16:08-16:09 16:01-16:02 15:44-15:45 15:13-15:14
20					16:01-16:02 15:58-15:59 15:52-15:53
21					15:56-15:57 15:51-15:52 15:43-15:45 15:16-15:17
22					15:54-15:55 15:38-15:39 15:22-15:23 15:10-15:11
23					15:56-15:57 15:50-15:51 15:41-15:42 15:06-15:09
24 19:11-19:13		15:38-15:40 15:35-15:36 15:32-15:33			15:57-15:58 15:48-15:50 15:33-15:34 15:24-15:25
25 19:18-19:19 19:11-19:14 19:07-19:09 19:02-19:04 18:59-19:00 18:52-18:54 18:47-18:50 18:40-18:41	15:17-15:20				15:16-15:17
26		15:28-15:30 15:22-15:23 14:54-14:55			16:05-16:07 15:59-16:00 15:52-15:53 15:30-15:31 15:14-15:15
27		15:39-15:41 15:32-15:35 15:27-15:29			15:25-15:26 15:20-15:21 15:15-15:16 15:03-15:04
28		15:54-15:55 15:46-15:48 15:41-15:43			15:55-15:57 15:28-15:29
29		15:38-15:39 15:24-15:25 15:14-15:16			15:05-15:25
30 19:10-19:14 19:06-19:08 18:59-19:02 18:54-18:55 18:42-18:52 18:35-18:40	17:54-17:55				16:02-16:14 16:02-16:03 15:49-15:53 15:42-15:44 15:24-15:25 15:06-15:09
31					16:09-16:10 15:44-15:45 15:35-15:36 15:30-15:31 15:18-15:19 15:12-15:15

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Calculated:

SHADOW - Flicker curtailment calendar

WTG: T08 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (107)

Flicker curtailment according to specified plan

SHADOW - Flicker curtailment calendar

WTG: T09 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (108)

Flicker curtailment according to specified plan

January	February	March	April	May	June	July	August	September	October	November	December
1								18:00-18:03 17:56-17:58 17:50-17:51 18:00-18:01 17:55-17:58 17:52-17:53 17:48-17:50 17:55-18:02 17:51-17:53 18:01-18:02 17:52-17:54 17:48-17:50 17:52-17:58 17:41-17:46 18:01-18:02 17:56-17:59 17:57-17:59 17:54-17:55 17:50-17:52 17:44-17:48 17:39-17:42 17:49-17:53 17:39-17:40 17:46-17:47 17:42-17:43 17:39-17:40 17:45-17:46 17:39-17:43			
2									07:41-07:42 07:34-07:35 07:28-07:29 07:49-07:50 07:33-07:34 07:31-07:32		
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

SHADOW - Flicker curtailment calendar

WTG: T10 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (109)

Flicker curtailment according to specified plan

	January	February	March	April	May	June
1						
2						06:23-06:37 06:20-06:21 06:14-06:16 06:11-06:12 06:05-06:09
3						06:05-06:07
4						06:31-06:37 06:24-06:29 06:21-06:22 06:08-06:10 06:04-06:06
5						06:26-06:27 06:18-06:22 06:12-06:16 06:05-06:08
6						06:34-06:35 06:25-06:27 06:15-06:19 06:11-06:13
7						06:17-06:19
8						06:07-06:08 06:02-06:03
9						06:35-06:38 06:29-06:31
10						06:30-06:32 06:25-06:27 06:17-06:21 06:13-06:15 06:10-06:11 06:03-06:08
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29					06:30-06:35	
30					06:34-06:36	
31			06:36-06:40 06:32-06:34 06:27-06:29 06:17-06:18 06:13-06:15 06:34-06:36 06:29-06:32 06:22-06:26 06:10-06:14 06:34-06:38 06:31-06:32 06:25-06:26 06:21-06:22 06:18-06:19 06:13-06:14 06:08-06:11			

SHADOW - Flicker curtailment calendar

WTG: T10 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (109)

Flicker curtailment according to specified plan

July	August	September	October	November	December
1		06:51-06:54 06:46-06:47			15:47-15:48 15:36-15:37 08:22-08:23
2		06:55-06:58 06:47-06:51 06:44-06:49	07:04-07:09 06:59-07:02		15:47-15:48 15:41-15:42 15:34-15:36 15:28-15:31 15:17-15:18 08:27-08:28
3			07:11-07:12 07:08-07:09 06:59-07:00		16:01-16:02
4			07:07-07:09 07:01-07:03		15:29-15:30 15:26-15:27 15:17-15:18
5			07:14-07:16 07:09-07:10 07:03-07:04		15:46-15:47 08:21-08:28
6	06:36-06:39 06:29-06:30 06:20-06:24 06:09-06:15				08:35-08:36
7			07:14-07:15 07:05-07:10		15:38-15:40 15:29-15:30 15:20-15:27 15:22-15:23
8			07:15-07:17 07:05-07:10		15:29-15:30 08:39-08:41 10:28-08:31
9			07:06-07:12		15:44-15:47 08:26-08:27 08:18-08:21
10	06:13-06:15		07:16-07:18 07:09-07:10		15:44-15:47
11					16:02-16:03 15:43-15:44 15:36-15:38 08:41-08:42
12			07:14-07:16		16:00-16:01 08:35-08:32 10:28-08:26 08:20-08:21
13		06:37-06:39	07:10-07:12		08:38-08:39 08:22-08:26
14					15:54-15:55 15:35-15:36 15:26-15:28 15:13-15:14 15:05-15:06
15					15:34-15:36 15:28-15:30 15:18-15:19
16					15:27-15:28 15:18-15:19
17					15:33-15:34
18					15:45-15:46 15:37-15:38
19					15:36-15:40 15:35-15:36 15:32-15:33
20					15:45-15:46 15:37-15:38
21	06:45-06:46 06:37-06:43 06:29-06:32				15:34-15:36 15:49-15:50 08:35-08:36 08:32-08:33 08:25-08:27
22	06:54-06:56 06:50-06:51				15:45-15:46 15:41-15:42 08:40-08:42
23	06:49-06:52 06:40-06:41				15:55-15:56 15:49-15:52 15:40-15:41 08:38-08:39
24					16:07-16:08 15:46-15:47 15:31-15:32 08:36-08:37
25	06:54-06:55 06:50-06:51 06:47-06:48 06:43-06:44 06:40-06:41				16:08-16:09 16:01-16:02 15:44-15:45 15:25-15:27 15:21-15:22 15:13-15:14 08:42-08:43
26					15:56-15:58 15:51-15:52 15:43-15:45 08:28-08:30
27					15:54-15:55 08:50-08:51 08:35-08:36
28					15:58-15:59 15:50-15:51 15:41-15:42 08:32-08:33
29					15:50-15:51 15:45-15:47 15:38-15:40 08:49-08:50 08:42-08:44 08:32-08:33
30					16:05-16:07 15:59-16:00 15:52-15:53 15:30-15:31
31	06:51-06:52 06:40-06:46	06:57-06:58			08:31-08:32
					16:12-16:14 16:02-16:03 15:49-15:53 15:42-15:44 15:24-15:25 08:51-08:52 08:43-08:46 08:26-08:27
					16:09-16:10 15:44-15:45 15:35-15:36 08:39-08:40 08:35-08:36

SHADOW - Flicker curtailment calendar

WTG: T11 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (110)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T12 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (111)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T13 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (112)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:
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SHADOW - Flicker curtailment calendar

WTG: T14 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (113)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1										08:01-08:02 07:56-07:59 07:52-07:54 07:48-07:49 07:32-07:34		
2										07:51-07:52 07:47-07:48 07:44-07:45 07:40-07:41 07:35-07:36		
3										07:54-07:56 07:51-07:52 07:46-07:49 07:41-07:43 07:36-07:37		
4										08:02-08:04 07:59-08:00 07:48-07:50		
5										08:03-08:04 08:00-08:01 07:53-07:54 07:38-07:40		
6										07:56-07:57 07:53-07:54 07:48-07:51 07:37-07:44		
7										07:55-07:56 07:50-07:51 07:43-07:45 07:37-07:39		
8										07:42-07:43 07:38-07:40		
9										07:49-07:50 07:46-07:47 07:42-07:43		
10										07:56-07:57 07:48-07:49 07:44-07:46		
11										08:02-08:03 07:52-07:54 07:44-07:45		
12										08:03-08:04 08:00-08:01 07:52-07:54 07:44-07:45		
13										07:55-07:59 07:52-07:53		
14										07:57-07:58 07:53-07:55		
15										07:48-07:49		
16										07:52-07:55 07:47-07:49		
17												
18												
19												
20												
21												
22										07:55-07:56		
23										08:01-08:02		
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T15 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (114)

Flicker curtailment according to specified plan

January February March April May June

1					
2					
3					
4					06:42-06:44 06:39-06:40 06:34-06:36 06:28-06:31 06:25-06:26 06:22-06:23 06:16-06:19
5					06:40-06:44 06:34-06:38 06:30-06:32 06:23-06:28 06:20-06:21 06:12-06:18 06:08-06:09 06:04-06:06
6					06:41-06:42 06:23-06:39 06:20-06:21 06:14-06:16 06:11-06:12 06:05-06:09
7					06:40-06:41 06:36-06:38 06:28-06:30 06:22-06:23 06:14-06:17 06:09-06:11 06:05-06:07
8					06:08-06:10 06:04-06:06
9					06:36-06:40 06:30-06:32 06:25-06:28 06:20-06:21 06:17-06:18 06:07-06:12 06:03-06:05
10					06:42-06:44 06:38-06:40 06:31-06:34 06:26-06:27 06:18-06:22 06:12-06:16 06:05-06:08
11					06:38-06:45 06:31-06:32 06:07-06:08 06:04-06:05
12					06:34-06:37
13					06:39-06:43 06:34-06:37 06:31-06:32 06:26-06:27
14					06:44-06:45 06:35-06:36 06:30-06:31
15					06:39-06:46 06:34-06:35
16					06:35-06:36 06:30-06:31
17					06:38-06:44 06:30-06:36 06:25-06:27 06:17-06:21 06:13-06:15 06:10-06:11 06:03-06:08
18					06:42-06:43 06:34-06:37 06:31-06:32
19					06:42-06:44 06:30-06:35
20					06:30-06:35
21					06:34-06:35
22					06:43-06:48 06:37-06:41
23					06:43-06:46 06:34-06:40
24					06:33-06:37
25					06:40-06:41
26					06:34-06:39
27					06:41-06:45 06:36-06:37 06:30-06:34
28					06:43-06:45
29					06:44-06:45 06:40-06:42
30					06:45-06:47 06:40-06:41
31					

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SHADOW - Flicker curtailment calendar

WTG: T15 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (114)

Flicker curtailment according to specified plan

July	August	September	October	November	December
1 06:36-06:39 06:30-06:31 06:25-06:28 06:20-06:21	06:46-06:47 06:33-06:40				
2	06:44-06:45 06:32-06:37				
3	06:41-06:45 06:38-06:39				
4					
5					
6 06:47-06:48 06:36-06:39 06:29-06:30 06:20-06:24	06:43-06:46 06:39-06:41				
7 06:51-06:52 06:43-06:45 06:38-06:41	06:44-06:45 06:41-06:42				
8 06:45-06:49 06:41-06:43					
9					
10 06:24-06:25 06:21-06:22 06:13-06:15					
11 06:45-06:48 06:41-06:43					
12 06:48-06:50 06:42-06:46					
13 06:42-06:43					
14 06:45-06:50 06:40-06:43					
15 06:40-06:42					
16 06:49-06:50 06:42-06:47 06:33-06:34 06:23-06:30 06:20-06:21					
17 06:51-06:52 06:44-06:47 06:25-06:28 06:22-06:23					
18 06:51-06:53 06:45-06:47 06:42-06:43					
19 06:53-06:54 06:47-06:49 06:41-06:45 06:34-06:39 06:30-06:32					
20 06:49-06:52 06:44-06:47					
21 06:23-06:26 06:18-06:21					
22 06:47-06:49 06:34-06:36 06:25-06:26 06:20-06:23					
23 06:40-06:41					
24					
25 06:50-06:51 06:47-06:48 06:43-06:44 06:40-06:41					
26 06:42-06:53					
27 06:46-06:47 06:32-06:44					
28					
29					
30					
31 06:36-06:46					

SHADOW - Flicker curtailment calendar

WTG: T16 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (115)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												07:54-07:55
2												07:56-07:57
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												09:08-09:09

SHADOW - Flicker curtailment calendar

WTG: T17 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (116)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T18 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (117)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T19 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (118)

Flicker curtailment according to specified plan

January February March April May June

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

SHADOW - Flicker curtailment calendar

WTG: T19 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (118)

Flicker curtailment according to specified plan

	July	August	September	October	November	December
1					15:44-15:46	15:47-15:48 15:36-15:37
2					15:40-15:41	15:47-15:48 15:41-15:42 15:34-15:36 15:28-15:31 15:17-15:18 15:06-15:07
3						14:57-14:59
4						15:29-15:30 15:26-15:27 15:17-15:18 14:52-14:53
5					15:48-15:50 15:40-15:43	15:42-15:45 15:28-15:29 15:23-15:24 15:20-15:21 15:05-15:06
6					15:49-15:52 15:39-15:41 15:31-15:32 15:28-15:29 15:15-15:16 15:01-15:02 14:58-14:59	
7					15:50-15:51 15:46-15:47 15:18-15:19 15:12-15:13 15:02-15:03 14:58-15:00 14:53-14:54 14:45-14:46	
8					15:44-15:46 15:30-15:32 15:06-15:07 14:47-14:48	15:38-15:40 15:29-15:30 15:26-15:27 15:22-15:23 15:08-15:09
9						15:34-15:35
10						15:29-15:30 15:11-15:12
11						15:44-15:47 15:13-15:18
12					15:35-15:36 15:28-15:30 15:23-15:24 15:04-15:06	15:43-15:44 15:36-15:38
13					15:13-15:14 15:10-15:11	15:43-15:45 15:13-15:14
14						15:27-15:28 15:22-15:23
15						15:05-15:09 14:52-14:53
16					15:54-15:55 15:35-15:36 15:26-15:28 15:13-15:14 15:05-15:06 14:50-14:51 14:46-14:47	15:54-15:55 15:49-15:50 15:25-15:28 15:19-15:20 14:22-14:23
17					15:34-15:36 15:28-15:30 15:18-15:19 15:05-15:06 15:00-15:01	15:44-15:45 15:41-15:42 14:31-14:34
18					15:27-15:28 15:18-15:19	15:45-15:46 15:42-15:43 15:35-15:36 15:26-15:27 14:44-14:45 14:39-14:40 14:32-14:35 14:29-14:30 14:23-14:24 14:16-14:17
19					15:33-15:34 15:18-15:19 15:05-15:07	15:55-15:56 15:49-15:52 15:40-15:41 14:09-14:10
20						15:46-15:47 15:31-15:32 15:04-15:05 14:17-14:18
21					15:45-15:46 15:37-15:38 14:53-14:55 14:49-14:51	16:01-16:02 15:44-15:45 15:25-15:27 15:21-15:22 15:13-15:14 14:41-14:43 14:31-14:33
22					15:38-15:40 15:35-15:36 15:32-15:33	16:01-16:02 15:58-15:59 15:52-15:53
23						15:56-15:58 15:51-15:52 15:43-15:45 15:16-15:17 14:33-14:35
24						15:54-15:55 15:30-15:32 15:22-15:23 14:18-14:19
25						15:58-15:59 15:50-15:51 15:41-15:42 15:15-15:09 14:56-15:00 14:45-14:46 14:18-14:19
26						15:57-15:58 15:48-15:50 15:33-15:34 15:24-15:25 15:02-15:03 14:32-14:33
27						15:45-15:47 15:38-15:40 15:02-15:03 14:54-14:55
28					15:25-15:26 15:20-15:21 15:15-15:16 15:03-15:04	16:05-16:07 15:59-16:00 15:52-15:53 15:30-15:31 15:14-15:15 15:09-15:10 14:38-14:39 14:32-14:33 14:26-14:28
29					15:55-15:57 15:28-15:29	14:25-14:26
30					15:41-15:43 15:23-15:24 15:20-15:21 15:13-15:14 15:06-15:07 14:48-14:51	16:12-16:14 16:02-16:03 15:49-15:53 15:42-15:44 15:24-15:25 15:06-15:09 15:03-15:04 14:52-14:53 14:48-14:49 14:18-14:22
31						15:44-15:45 15:35-15:36 15:30-15:31 15:18-15:19 15:12-15:14 15:08-15:10 15:01-15:03

SHADOW - Flicker curtailment calendar

WTG: T20 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (119)

Flicker curtailment according to specified plan

January	February	March	April	May	June	July	August	September	October	November	December
1											
2											
3											
4											
5											
6						06:29-06:30 06:20-06:24					
7						06:24-06:33					
8					06:21-06:22						
9				06:25-06:27 06:20-06:21 06:17-06:18							
10			06:26-06:27 06:18-06:22 06:15-06:16								
11		06:18-06:28									
12		06:15-06:19			06:30-06:32						
13		06:17-06:20									
14		06:24-06:27 06:21-06:22 06:15-06:16			06:30-06:33						
15					06:24-06:26						
16		06:16-06:17									
17		06:25-06:27 06:17-06:21			06:25-06:28						
18		06:20-06:24 06:16-06:17									
19		06:26-06:27 06:21-06:22 06:17-06:19			06:28-06:32						
20		06:24-06:28 06:20-06:21									
21		06:18-06:19									
22		06:20-06:26									
23		06:26-06:29 06:19-06:20									
24											
25		06:18-06:24			06:26-06:31						
26					06:25-06:29 06:21-06:22						
27					06:30-06:31						
28					06:28-06:31 06:22-06:23						
29											
30											
31											

Project:
2019-12-08_Heritage SFA

Licensed user:
EDR
217 Montgomery St., Suite 1000
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
6/28/2022 9:50 AM/3.4.424

SHADOW - Flicker curtailment calendar

WTG: T21 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (120)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												08:22-08:23
2												08:51-08:52 08:27-08:28 08:11-08:12
3												08:34-08:35
4												08:36-08:37
5												08:38-08:39 08:27-08:28 08:16-08:17
6												08:42-08:43 08:37-08:38 08:21-08:23
7												08:43-08:44 08:35-08:36
8												08:45-08:46 08:09-08:10
9												08:39-08:41 08:30-08:31
10												08:40-08:41 08:26-08:27 08:18-08:21
11												08:53-08:54 08:41-08:42
12												08:41-08:42 08:25-08:26 08:20-08:21
13												08:35-08:36 08:30-08:31
14												08:51-08:52 08:38-08:39 08:24-08:26
15												08:46-08:47 08:35-08:36 08:32-08:33 08:25-08:27
16												08:40-08:42
17												08:43-08:45
18												08:38-08:39
19												08:36-08:37
20												08:45-08:46 08:16-08:17 08:13-08:14
21												08:34-08:35
22												08:30-08:31
23												08:58-08:59 08:17-08:18
24												08:28-08:30
25												08:50-08:51 08:35-08:36
26												08:51-08:52 08:32-08:33
27												08:31-08:32
28												09:18-09:19 09:13-09:14 08:49-08:50 08:42-08:44 08:32-08:33
29												09:07-09:09 09:01-09:03
30												09:21-09:22 09:17-09:18 08:31-08:32
31												09:19-09:20 08:51-08:52 08:43-08:46 08:26-08:27
												09:22-09:23 09:13-09:14 09:08-09:09 08:54-08:55 08:39-08:40 08:35-08:36

SHADOW - Flicker curtailment calendar

WTG: T22 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (121)

Flicker curtailment according to specified plan

January February March April May June

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Project:
2019-12-08_Heritage SFA

Licensed user:
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217 Montgomery St., Suite 1000
US-SYRACUSE, NY 13202
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Calculated:
6/28/2022 9:50 AM/3.4.424

SHADOW - Flicker curtailment calendar

WTG: T22 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (121)

Flicker curtailment according to specified plan

July	August	September	October	November	December
1			07:48-07:49		09:58-08:59 08:22-08:23 07:54-07:55
2			07:46-07:49 07:41-07:43		09:06-09:07 08:54-08:55 08:51-08:52 08:27-08:28 08:11-08:12 07:56-07:57
3			07:48-07:50		08:34-08:35 08:13-08:14 08:04-08:06
4				09:00-09:03 08:14-08:15 08:10-08:11	
5				09:17-09:18 09:13-09:15 08:38-08:39 08:27-08:28 08:16-08:17 08:06-08:08	
6				09:08-09:09 08:42-08:43 08:37-08:38 08:21-08:23	
7				09:20-09:22 09:15-09:16 08:43-08:44 08:35-08:36 07:58-08:01	
8			07:42-07:43	09:06-09:07 08:45-08:46 08:09-08:10	
9				09:10-09:11 09:04-09:06 08:56-08:57 08:39-08:41 08:30-08:31 08:07-08:08	
10				08:14-08:15	08:40-08:41 08:26-08:27 08:18-08:21
11					
12	07:57-08:00		08:32-08:34 08:02-08:03	09:05-09:06 09:02-09:03 08:53-08:54 08:41-08:42 08:08-08:10 08:03-08:04	
13			08:31-08:32 08:21-08:23 08:00-08:01	08:58-08:59 08:41-08:42 08:25-08:26 08:20-08:21 08:11-08:13 08:04-08:05	
14			08:08-08:09		
15	07:52-07:53		08:17-08:18 08:08-08:09 08:03-08:04 07:53-07:56 07:47-07:49	09:23-09:24 09:19-09:20 09:16-09:17 09:05-09:07 08:51-08:52 08:38-08:39 08:22-08:26 08:10-08:11	
16	07:49-07:51		08:34-08:35 08:26-08:27 08:06-08:07 07:54-07:55	08:46-08:47 08:35-08:36 08:32-08:33 08:25-08:27 08:09-08:10	
17			08:27-08:28 08:15-08:16 08:10-08:11 07:59-08:00	09:15-09:16	
18				08:43-08:45 08:09-08:10	
19			08:30-08:31 08:23-08:24 08:13-08:14	09:25-09:26 09:17-09:18 08:27-08:28 08:23-08:24 08:07-08:08	
20	07:44-07:45		08:16-08:17 08:13-08:14 07:58-07:59 07:47-07:48	09:02-09:03 08:58-08:59 08:55-08:56 08:36-08:37 08:21-08:23 08:09-08:10	
21			08:41-08:42 08:34-08:35 08:19-08:20 07:50-07:51		
22	07:53-07:54 07:42-07:44		08:30-08:31 08:02-08:07 07:51-07:54 07:45-07:46	09:12-09:13 09:09-09:10 08:58-08:59 08:17-08:18 08:14-08:15	
23	07:54-07:55 07:46-07:50 07:42-07:43		08:19-08:20 07:53-07:54	09:30-09:31 09:12-09:13 08:28-08:30	
24	07:49-07:50 07:43-07:45		08:38-08:39 08:15-08:16 08:06-08:09 08:00-08:01	09:23-09:24 08:50-08:51 08:35-08:36 08:11-08:13	
25	07:45-07:47		08:37-08:39 08:19-08:20 08:13-08:15 08:09-08:10 08:01-08:03	09:08-09:12 08:51-08:52 08:32-08:33 08:09-08:11	
26				09:09-09:10 08:31-08:32 08:15-08:17 08:09-08:10	
27			08:35-08:36 08:24-08:25 08:09-08:10	09:18-09:19 09:13-09:14 08:32-08:33 08:21-08:22 08:14-08:16	
28	07:57-08:00 07:42-07:44		08:40-08:41 08:31-08:32 08:22-08:24 08:07-08:08 07:57-07:58	09:07-09:09 09:01-09:03 08:23-08:25 08:15-08:17	
29			08:21-08:22 08:02-08:03 07:57-07:58	09:21-09:22 09:17-09:18 08:31-08:32 08:11-08:12	
30			08:51-08:52 08:27-08:28	09:19-09:20 08:51-08:52 08:43-08:44 08:26-08:27 08:10-08:12	
31				09:22-09:25 09:13-09:14 09:08-09:09 08:54-08:55 08:39-08:40 08:35-08:36	

SHADOW - Flicker curtailment calendar

WTG: T23 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (122)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												08:55-08:56 08:22-08:23 07:54-07:55
2												08:54-08:55 08:51-08:52 08:27-08:28 08:11-08:12 07:56-07:57
3												08:13-08:14 08:04-08:06
4												08:13-08:15 08:10-08:11
5												08:38-08:39 08:27-08:28 08:16-08:17 08:06-08:08
6												08:42-08:43 08:37-08:38 08:21-08:23
7												08:43-08:44 08:35-08:36 07:58-08:01
8												08:45-08:46 08:09-08:10
9												08:56-08:57 08:39-08:41 08:30-08:31 08:07-08:08
10												08:40-08:41 08:26-08:27 08:18-08:21
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T24 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (123)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1							06:16-06:21					
2								19:01-19:03				
3								19:00-19:01				
4								19:02-19:03				
5							06:11-06:12					
6							06:12-06:18					
7							06:14-06:16 06:11-06:12	06:20-06:24				
8							06:14-06:17	06:24-06:25 06:20-06:21				
9							06:17-06:18 06:11-06:12	06:25-06:27 06:17-06:19				
10							06:18-06:20 06:12-06:16					
11							06:18-06:20 06:12-06:13					
12							06:16-06:17	06:23-06:24				
13							06:13-06:14	06:23-06:24 06:19-06:21				
14							06:14-06:16	06:21-06:24				
15							06:17-06:19					
16							06:23-06:24 06:20-06:21					
17							06:17-06:21 06:13-06:15	06:25-06:28 06:22-06:23				
18							06:15-06:17 06:12-06:13	06:23-06:24				
19							06:17-06:19 06:14-06:15	19:07-19:08 06:22-06:24				
20								06:23-06:28				
21							06:13-06:14					
22							06:20-06:22	19:08-19:09 19:04-19:06				09:12-09:13 09:09-09:10
23							06:19-06:20 06:13-06:14					
24							06:16-06:17					
25							06:18-06:19	19:03-19:04 06:26-06:27				09:08-09:12
26							06:15-06:16	19:05-19:08				
27							06:15-06:19					
28							06:15-06:16	19:07-19:08 19:03-19:04				
29							06:16-06:18					
30							06:22-06:23 06:19-06:20	19:06-19:07				
31												

SHADOW - Flicker curtailment calendar

WTG: T25 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (124)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1										17:30-17:32 17:27-17:28 17:22-17:23 17:18-17:20		15:36-15:37
2										17:25-17:29 17:20-17:23 17:14-17:15 17:08-17:09	15:41-15:42	15:34-15:36
3										17:25-17:28 17:17-17:19		
4										17:19-17:22		
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18										17:30-17:32 17:25-17:28 17:18-17:21	15:44-15:45	15:41-15:42
19										17:24-17:26 17:19-17:22	15:45-15:46	15:42-15:43
20										17:24-17:39	15:49-15:52	15:40-15:41
21										17:37-17:39 17:29-17:32 17:23-17:24 17:20-17:21 17:13-17:15 17:10-17:11	15:46-15:47	
22										17:38-17:41 17:31-17:33 17:27-17:29	16:01-16:02	15:44-15:45
23										17:40-17:41 17:31-17:34 17:24-17:25 17:15-17:20 17:12-17:13	15:52-15:53	
24										17:38-17:40 17:35-17:36 17:26-17:27 17:17-17:22	15:56-15:58	15:51-15:52 15:43-15:45
25										17:37-17:38 17:25-17:26 17:21-17:23 17:10-17:13	15:54-15:55	
26										17:33-17:35 17:20-17:22 17:12-17:18 17:08-17:10	15:58-15:59	15:50-15:51 15:41-15:42
27										17:36-17:39 17:25-17:29 17:22-17:23 17:18-17:19 17:10-17:14	15:57-15:58	15:48-15:50
28										17:33-17:36 17:29-17:30 17:26-17:27 17:21-17:22 17:14-17:17 17:08-17:09	15:50-15:51	15:45-15:47
29										17:32-17:34 17:27-17:29	15:59-16:00	15:52-15:53
30										17:33-17:34 17:30-17:31 17:26-17:28 17:20-17:21 17:12-17:15	15:41-15:43	16:02-16:03
31												15:49-15:53 15:43-15:44

SHADOW - Flicker curtailment calendar

WTG: T26 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (125)

Flicker curtailment according to specified plan

January	February	March	April	May	June	July	August	September	October	November	December
1					06:05-06:08 06:00-06:03			06:26-06:27			
2					06:06-06:08		06:27-06:28				
3					06:04-06:06 05:58-06:02	06:11-06:13 06:02-06:03					
4					06:05-06:07 05:58-06:01	06:09-06:14 06:04-06:05					
5					06:05-06:07 05:57-05:58	06:11-06:13 06:03-06:07					
6					06:04-06:06 05:57-06:02	06:11-06:15 06:07-06:09 06:04-06:05					
7					05:57-06:05						
8					06:05-06:06	06:13-06:15					
9					06:04-06:05 06:00-06:02	06:10-06:14					
10					06:06-06:07	06:16-06:17 06:11-06:13					
11					06:03-06:06 06:00-06:01 05:56-05:58	06:16-06:17 06:10-06:12					
12					06:02-06:03	06:10-06:16					
13						06:18-06:19 06:10-06:16					
14						06:11-06:17					
15						06:17-06:20 06:11-06:12					
16						06:14-06:19					
17						06:18-06:20					
18						06:17-06:23 06:13-06:15					
19						06:18-06:21 06:14-06:15					
20						06:20-06:23					
21						06:23-06:25 06:16-06:18					
22						06:20-06:21 06:17-06:18					
23						06:23-06:24					
24						06:24-06:27 06:21-06:22					
25						06:20-06:26					
26						06:14-06:19 14:18-14:19 14:05-14:06 13:56-13:57 13:48-13:50					
27						14:39-14:40 14:32-14:35 14:29-14:30 14:23-14:24 14:16-14:17					
28						14:07-14:10 14:04-14:05 13:55-13:57 13:27-13:28					
29						14:17-14:18 13:57-13:58 13:53-13:54 13:36-13:37					
30						14:41-14:43 14:31-14:33 13:53-13:54					
31					06:08-06:09	13:55-13:56					
						14:33-14:35 14:03-14:04 13:58-14:01 13:51-13:52 13:34-13:36 13:27-13:28					
						14:18-14:19 13:45-13:47 13:38-13:39					
						14:45-14:46 14:18-14:19 14:07-14:08					
						14:32-14:33 14:18-14:19 14:05-14:06 13:56-13:57 13:48-13:50					
						14:39-14:40 14:32-14:33 14:26-14:28 14:17-14:19 14:02-14:05 13:52-13:53					
						14:38-14:39 14:32-14:33 14:26-14:28 14:17-14:19 14:02-14:03 13:59-14:00					
						14:52-14:53 14:48-14:49 14:18-14:22 14:02-14:03 13:59-14:00					
						14:15-14:16					

SHADOW - Flicker curtailment calendar

WTG: T27 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (126)

Flicker curtailment according to specified plan

January February March April May June

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

SHADOW - Flicker curtailment calendar

WTG: T27 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (126)

Flicker curtailment according to specified plan

July	August	September	October	November	December
1		07:04-07:09 06:58-07:02	07:32-07:34	08:11-08:12	08:22-08:23 07:54-07:55
2		07:15-07:17 07:11-07:12 07:08-07:09 06:59-07:00	07:40-07:41 07:35-07:36	08:27-08:28 08:11-08:12 07:56-07:57	08:34-08:35 08:13-08:14 08:04-08:06
3		07:07-07:09 07:04-07:05	07:41-07:43 07:36-07:37	08:10-08:11	08:38-08:39 08:27-08:28 08:16-08:17 08:06-08:08
4		07:16-07:17 07:05-07:11 07:01-07:03	07:38-07:40	08:08-08:09 07:54-07:56	08:42-08:43 08:37-08:38 08:21-08:23
5		07:18-07:19 07:14-07:16 07:09-07:10 07:03-07:04	07:37-07:44	08:15-08:16 07:41-07:42 07:34-07:35 07:28-07:29	08:43-08:44 08:35-08:36 07:58-08:01
6		07:05-07:10	07:43-07:45 07:37-07:39	08:19-08:20 07:49-07:50 07:33-07:34	08:45-08:46 08:09-08:10
7		07:15-07:19 07:04-07:10	07:42-07:43 07:38-07:40		08:39-08:41 08:30-08:31 08:07-08:08
8		07:06-07:12	07:42-07:43		08:40-08:41 08:26-08:27 08:18-08:21
9		07:16-07:18 07:09-07:10 07:06-07:07	07:44-07:46		08:03-08:04
10		07:14-07:16	07:44-07:45	08:04-08:05	08:53-08:54 08:41-08:42 08:08-08:10 08:03-08:04
11			07:44-07:45		08:41-08:42 08:25-08:26 08:20-08:21 08:11-08:13 08:04-08:05
12			07:44-07:45		
13				08:00-08:01	
14				08:08-08:09 07:34-07:35	
15			07:48-07:49	08:17-08:18 08:08-08:09 08:03-08:04 07:53-07:56 07:47-07:49	08:51-08:52 08:38-08:39 08:10-08:11
16			07:52-07:53 07:47-07:49	08:06-08:08 07:54-07:55	08:46-08:47 08:35-08:36 08:32-08:33 08:25-08:27 08:09-08:10
17			07:50-07:52	08:15-08:16 08:10-08:11 07:59-08:00 07:43-07:44	08:49-08:42
18			07:50-07:52		08:43-08:45
19				08:23-08:24	
20				08:16-08:17 08:13-08:14 07:58-07:59 07:47-07:48	08:55-08:56 08:09-08:10
21					08:42-08:43
22				08:30-08:31 08:02-08:07 07:51-07:54 07:45-07:46 07:40-07:41	08:58-08:59 08:17-08:18 08:14-08:15
23				07:53-07:54	08:28-08:30
24				08:38-08:39 08:15-08:16 08:06-08:09 08:00-08:01	08:50-08:51 08:35-08:36 08:11-08:13
25				08:37-08:39 08:13-08:15 08:09-08:10 08:01-08:03 07:50-07:52	08:51-08:52 08:09-08:11
26				08:12-08:13 07:53-07:54	08:15-08:19 08:09-08:10
27				08:09-08:10	08:49-08:50 08:42-08:44 08:21-08:22 08:14-08:16
28				08:40-08:41 08:31-08:32 08:22-08:24 08:07-08:08 07:57-07:58	08:15-08:17
29		07:09-07:14 07:06-07:07 06:59-07:03 06:54-06:57	08:02-08:03 07:57-07:58 07:51-07:52	08:31-08:32 08:11-08:12	
30		07:12-07:14 07:02-07:08	08:27-08:28		
31		07:12-07:15 07:06-07:08 06:57-06:58	08:12-08:14	08:51-08:52 08:43-08:46 08:26-08:27 08:10-08:12	
			08:12-08:13	08:54-08:55 08:39-08:40 08:35-08:36	

SHADOW - Flicker curtailment calendar

WTG: T28 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (127)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1							06:04-06:05 06:00-06:02					15:36-15:37
2							06:04-06:05					15:28-15:31
3												15:29-15:30 15:26-15:27
4												15:28-15:29 15:23-15:24
5												15:38-15:40 15:29-15:30 15:26-15:27
6												15:34-15:35
7												15:29-15:30
8												15:44-15:47
9												15:36-15:38
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T29 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (128)

Flicker curtailment according to specified plan

January	February	March	April	May	June	July	August	September	October	November	December
1											08:22-08:23 07:54-07:55
2											08:27-08:28 08:11-08:12 07:56-07:57
3											08:13-08:14 08:04-08:06
4											08:13-08:15 08:10-08:11
5											08:38-08:39 08:27-08:28 08:16-08:17 08:06-08:08
6											08:42-08:43 08:37-08:38 08:21-08:23
7											08:43-08:44 08:35-08:36 07:58-08:01
8											08:45-08:46 08:09-08:10
9											08:39-08:41 08:30-08:31 08:07-08:08
10											08:26-08:27 08:18-08:21
11											08:41-08:42 08:08-08:10 08:03-08:04
12											08:41-08:42 08:25-08:26 08:20-08:21 08:11-08:13 08:04-08:05
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											

SHADOW - Flicker curtailment calendar

WTG: T30 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (129)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

SHADOW - Flicker curtailment calendar

WTG: T31 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (130)

Flicker curtailment according to specified plan

January February March April May June

1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

SHADOW - Flicker curtailment calendar

WTG: T31 - VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (130)

Flicker curtailment according to specified plan

	July	August	September	October	November	December
1						14:43-14:44 14:24-14:26
2						15:06-15:07 14:35-14:37
3						14:57-14:59 14:48-14:49 14:36-14:37 14:17-14:18
4						15:17-15:18 14:52-14:53
5						15:05-15:06 14:51-14:52 14:36-14:38 14:26-14:28
6						14:47-14:48
7						15:08-15:09 15:02-15:03
8						14:44-14:45 14:32-14:33
9						15:11-15:12 14:47-14:48 08:40-08:41 08:26-08:27 08:18-08:21
10						15:13-15:18 14:50-14:51
11						15:04-15:05 14:29-14:30 09:05-09:06 09:02-09:03 08:53-08:54 08:41-08:42
12						15:13-15:14 15:04-15:05 14:50-14:52 08:58-08:59 08:41-08:42 08:25-08:26 08:20-08:21
13						09:00-09:01 08:52-08:53 08:38-08:39 08:35-08:36 08:29-08:31
14						15:08-15:09 14:52-14:53 14:47-14:48 14:40-14:41 14:28-14:29 14:17-14:20 09:23-09:24 09:19-09:20 09:16-09:17 09:05-09:07 08:51-08:52 08:38-08:39 08:22-08:26
15						15:05-15:06 08:46-08:47 08:35-08:36 08:32-08:33 08:25-08:27
16						14:31-14:34 08:54-08:55 08:40-08:42
17						14:44-14:45 14:39-14:40 14:32-14:35 14:29-14:30 14:23-14:24 08:43-08:45
18						15:03-15:04 14:57-14:58 14:44-14:45 08:38-08:39
19						15:04-15:05 14:17-14:18 09:02-09:03 08:58-08:59 08:55-08:56 08:36-08:37
20						15:25-15:26 15:21-15:22 15:13-15:14 14:41-14:43 14:31-14:33 08:42-08:43
21						09:30-09:32 09:12-09:13 09:09-09:10 08:58-08:59
22						15:16-15:17 15:04-15:05 14:33-14:35 09:36-09:37 09:30-09:31 09:12-09:13 08:28-08:30
23						15:22-15:23 15:10-15:11 15:07-15:08 15:03-15:05 14:42-14:43 09:23-09:24 08:50-08:51 08:35-08:36
24						15:06-15:09 14:56-14:59 14:45-14:46 08:48-09:01 08:51-08:52 08:32-08:33
25						15:24-15:25 15:02-15:03 09:44-09:45 09:32-09:49 09:18-09:19 09:13-09:14 08:49-08:50 08:42-08:44 08:32-08:33
26						15:14-15:15 15:09-15:10 09:07-09:09 09:01-09:03
27						09:39-09:40 09:21-09:22 09:17-09:18 08:31-08:32
28						15:20-15:21 15:15-16 15:03-15:04
29						14:38-14:39 14:34-14:35
30						15:20-15:21 15:13-15:14 15:06-15:07 14:48-14:51 14:36-14:37
31						15:18-15:19 15:12-15:14 15:08-15:10 15:01-15:03 09:28-09:29 09:22-09:25 09:13-09:14 09:08-09:09 08:54-08:55 08:39-08:40 08:35-08:36

ATTACHMENT C

Curtailment Schedule

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence	1,620 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.36 0.40 0.47 0.54 0.58 0.63 0.67 0.63 0.56 0.44 0.25 0.24

Operational time
N NNE NE ENE E ESE SE SSE S SSW SW WSW
245 195 263 395 451 393 363 382 412 348 736 1,617
W WNW NW NNW Sum
1,224 837 579 320 8,760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: 1 meter contour.wpo (1)

Obstacles not used in calculation

Eye height for map: 1.5 m

Grid resolution: 1.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 17

WTGs

Easting	Northing	Z	Row data/Description	WTG type	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM
											[RPM]
T01	725,621	4,781,042	193.5 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T02	726,109	4,781,247	194.6 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T03	726,402	4,782,470	196.8 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T04	726,508	4,784,643	201.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T05	727,101	4,784,395	201.9 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T06	727,294	4,784,741	200.4 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T07	727,501	4,784,409	200.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T08	728,674	4,782,620	198.1 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T09	728,887	4,784,469	202.9 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T10	728,938	4,784,119	199.3 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T11	729,111	4,781,014	197.3 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T12	729,591	4,781,285	197.3 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T13	729,649	4,783,847	198.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T14	729,853	4,782,206	195.7 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T15	729,928	4,783,390	198.6 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T16	730,231	4,783,989	199.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T17	730,400	4,781,250	196.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T18	730,967	4,781,400	204.7 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T19	731,148	4,784,961	204.6 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T20	732,089	4,784,435	199.1 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T21	732,103	4,785,133	199.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T22	732,123	4,783,627	197.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T23	732,160	4,784,802	199.7 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T24	732,202	4,783,964	207.3 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T25	732,301	4,785,986	204.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T26	733,438	4,788,122	204.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T27	733,412	4,787,435	203.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T28	733,487	4,787,760	204.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T29	733,879	4,786,410	199.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T30	734,054	4,787,326	201.0 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		
T31	733,999	4,788,215	204.1 VESTAS V162-6.0 6000 162.0 IO! hub: 119.0 m (TOT: 200.0 m) ... Yes	VESTAS	V162-6.0-6,000	6,000	162.0	119.0	0.0		

SHADOW - Main Result

Shadow receptor-Input

No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l. [m]
	[m]	[m]	[m]	[m]			[°]		
1	724,467	4,781,358	202.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2	724,542	4,781,465	199.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
3	724,756	4,781,482	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
4	725,205	4,781,506	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
5	725,827	4,781,548	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
7	724,690	4,781,544	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
8	724,737	4,781,550	200.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
9	724,813	4,781,561	201.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
10	726,616	4,781,610	195.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
11	727,047	4,781,195	195.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
12	727,609	4,781,616	198.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
13	728,858	4,781,702	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
14	727,346	4,781,502	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
15	727,504	4,781,640	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
16	727,697	4,781,695	198.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
17	727,823	4,781,700	197.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
18	729,759	4,781,748	200.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
19	725,976	4,781,634	200.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
20	726,029	4,781,640	201.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
21	731,481	4,781,821	203.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
22	725,440	4,781,590	195.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
25	731,777	4,781,863	199.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
27	724,588	4,781,559	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
28	726,731	4,781,687	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
29	725,272	4,781,575	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
31	725,922	4,781,607	200.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
32	730,330	4,781,933	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
33	731,300	4,781,995	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
34	726,830	4,781,900	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
35	726,962	4,781,940	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
36	731,887	4,782,113	199.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
37	731,214	4,782,072	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
38	732,691	4,786,818	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
42	725,668	4,780,041	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
43	725,480	4,779,868	194.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
58	725,550	4,780,085	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
60	729,670	4,779,915	192.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
62	725,842	4,780,178	195.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
65	724,275	4,780,277	195.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
66	724,500	4,780,277	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
67	725,719	4,780,288	194.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
68	726,002	4,780,265	196.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
69	728,140	4,783,856	207.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
70	724,670	4,780,392	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
72	732,144	4,780,704	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
75	731,498	4,780,886	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
76	726,588	4,780,756	202.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
78	726,822	4,780,978	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
79	726,871	4,781,021	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
80	732,735	4,787,874	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
81	731,928	4,781,068	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
82	724,504	4,781,096	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
83	724,584	4,781,106	196.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
84	726,941	4,781,104	197.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
86	724,569	4,781,225	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
89	731,899	4,781,462	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
90	724,562	4,781,285	203.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
91	724,494	4,781,297	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
92	731,854	4,781,397	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
94	724,552	4,781,348	203.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
97	732,356	4,783,225	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
98	730,922	4,782,142	199.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
99	728,534	4,782,083	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
100	727,185	4,782,085	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
101	730,992	4,782,170	199.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[°]		[m]
103	728,642	4,782,139	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
104	727,224	4,782,088	197.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
105	727,282	4,782,129	198.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
106	731,114	4,782,257	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
107	727,341	4,782,156	197.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
108	731,083	4,782,278	199.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
110	728,429	4,782,131	199.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
111	726,184	4,781,641	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
112	728,175	4,782,193	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
113	727,063	4,782,089	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
114	729,087	4,782,311	205.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
115	724,893	4,782,122	200.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
116	728,303	4,782,331	197.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
117	727,489	4,782,330	198.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
119	729,357	4,782,395	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
122	727,390	4,782,285	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
124	730,830	4,782,431	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
125	727,665	4,782,318	198.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
128	727,899	4,782,431	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
129	727,945	4,782,475	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
130	728,079	4,782,296	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
132	728,020	4,782,506	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
133	724,994	4,782,325	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
134	728,066	4,782,524	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
136	732,214	4,782,780	199.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
137	732,129	4,782,751	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
138	730,192	4,782,740	200.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
139	730,274	4,782,746	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
140	731,233	4,782,791	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
141	730,128	4,782,757	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
142	730,002	4,782,685	204.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
143	728,088	4,782,677	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
144	732,159	4,782,838	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
147	730,146	4,782,800	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
148	725,404	4,782,681	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
152	729,924	4,782,797	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
153	730,104	4,782,819	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
156	727,532	4,782,343	198.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
158	728,991	4,782,267	204.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
162	731,387	4,783,213	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
164	729,507	4,783,207	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
166	725,760	4,783,138	205.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
169	725,745	4,783,205	204.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
171	726,034	4,783,301	206.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
175	733,476	4,783,559	197.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
182	732,890	4,783,616	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
185	728,950	4,783,536	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
187	726,371	4,783,499	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
190	728,821	4,783,600	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
191	729,087	4,783,548	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
193	732,902	4,783,747	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
195	725,216	4,783,421	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
196	726,461	4,783,513	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
199	731,599	4,783,732	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
200	733,135	4,783,750	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
201	732,902	4,783,814	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
202	731,673	4,783,724	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
204	728,736	4,783,673	198.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
205	726,513	4,783,651	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
206	727,292	4,783,789	200.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
207	727,740	4,783,755	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
208	727,655	4,783,873	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
209	727,698	4,783,825	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
210	728,038	4,783,848	206.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
215	731,594	4,783,990	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
216	728,166	4,783,936	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
	[m]	[m]	[m]	[m]	[m]	[°]			[m]
217	728,223	4,783,934	208.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
218	728,348	4,783,941	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
219	728,109	4,783,932	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
222	728,427	4,784,002	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
224	726,603	4,783,807	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
225	729,941	4,782,898	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
228	727,797	4,783,912	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
229	728,103	4,784,065	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
232	728,376	4,784,051	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
235	731,587	4,784,229	199.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
236	728,288	4,784,168	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
237	728,032	4,784,170	207.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
239	728,236	4,784,198	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
240	732,858	4,784,331	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
242	728,011	4,784,226	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
243	726,724	4,783,785	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
244	725,626	4,784,134	202.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
246	728,156	4,784,301	208.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
247	725,699	4,784,413	204.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
249	728,000	4,784,310	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
250	725,599	4,784,454	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
251	725,667	4,784,354	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
253	725,667	4,784,480	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
257	725,697	4,784,519	202.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
260	725,604	4,784,581	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
264	728,039	4,784,870	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
265	733,051	4,785,002	201.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
267	727,994	4,784,918	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
270	727,978	4,785,064	209.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
271	728,029	4,785,068	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
272	728,032	4,785,091	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
273	727,977	4,785,093	209.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
274	728,032	4,785,109	210.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
276	727,980	4,785,120	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
279	733,102	4,785,204	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
280	727,978	4,785,146	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
288	728,030	4,785,189	210.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
291	728,035	4,785,151	210.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
292	731,495	4,785,281	208.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
294	733,075	4,785,330	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
295	725,949	4,785,139	203.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
296	725,869	4,785,119	201.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
299	726,663	4,785,193	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
300	726,842	4,785,167	203.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
301	726,994	4,785,197	203.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
302	727,207	4,785,229	203.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
304	727,502	4,785,239	203.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
305	728,029	4,785,259	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
306	727,629	4,785,253	203.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
307	727,757	4,785,251	204.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
308	727,938	4,785,272	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
309	727,965	4,785,277	210.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
310	728,020	4,785,283	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
311	728,021	4,785,335	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
312	728,024	4,785,344	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
314	731,547	4,785,387	208.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
315	727,968	4,785,346	210.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
316	728,027	4,785,356	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
317	730,450	4,785,440	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
318	730,694	4,785,440	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
319	730,861	4,785,458	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
320	727,960	4,785,404	209.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
321	731,442	4,785,480	205.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
322	731,527	4,785,475	206.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
323	728,029	4,785,412	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
324	731,722	4,785,504	213.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[°]		[m]
325	727,969	4,785,435	209.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
326	730,565	4,785,513	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
327	732,496	4,785,551	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
328	728,036	4,785,443	210.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
329	727,963	4,785,450	208.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
330	732,748	4,785,575	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
331	733,149	4,785,538	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
333	733,268	4,785,558	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
334	731,230	4,785,551	204.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
335	733,213	4,785,400	202.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
337	731,827	4,785,574	217.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
338	728,032	4,785,482	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
339	727,964	4,785,488	207.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
341	728,090	4,785,478	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
344	727,961	4,785,531	207.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
345	732,784	4,785,657	201.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
346	731,997	4,785,587	216.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
347	732,097	4,785,592	213.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
348	731,516	4,785,636	208.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
351	727,964	4,785,564	207.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
352	725,133	4,785,390	199.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
353	728,011	4,785,563	208.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
355	728,011	4,785,597	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
356	728,015	4,785,624	207.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
357	733,264	4,785,832	200.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
361	731,628	4,785,808	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
363	730,249	4,785,856	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
364	728,017	4,785,773	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
365	731,478	4,785,944	208.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
366	726,420	4,780,578	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
367	727,937	4,785,891	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
368	727,931	4,785,989	202.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
369	733,265	4,786,182	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
373	733,349	4,786,172	202.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
382	733,333	4,786,373	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
386	731,475	4,786,053	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
387	731,566	4,786,292	202.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
388	733,344	4,786,497	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
393	730,446	4,786,174	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
394	731,116	4,785,547	204.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
396	733,397	4,786,827	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
399	733,352	4,786,882	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
400	734,171	4,786,911	201.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
404	733,240	4,786,900	204.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
406	732,781	4,786,973	207.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
409	732,896	4,786,886	206.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
423	732,736	4,787,184	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
428	732,649	4,787,329	204.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
438	731,559	4,784,671	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
441	732,638	4,787,604	204.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
444	732,739	4,787,680	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
464	733,112	4,786,884	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
465	733,507	4,786,890	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
468	733,827	4,786,895	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
487	728,543	4,783,884	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
488	724,854	4,780,325	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
489	730,732	4,780,386	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
490	731,028	4,782,313	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
503	733,020	4,784,659	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
504	728,012	4,785,300	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
505	725,235	4,782,590	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
506	725,531	4,782,830	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
507	725,696	4,783,044	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
508	726,211	4,783,486	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
509	732,067	4,780,860	197.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
510	729,445	4,781,737	196.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[°]		[m]
515	731,659	4,784,112	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
516	726,500	4,780,571	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
519	728,120	4,785,558	209.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
520	728,161	4,785,560	209.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
521	728,180	4,785,561	209.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
522	728,199	4,785,561	209.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
523	728,222	4,785,563	209.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
524	728,236	4,785,564	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
525	728,228	4,785,521	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
526	728,138	4,785,567	209.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
527	728,262	4,785,570	208.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
528	731,592	4,784,045	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
533	726,877	4,779,854	193.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
536	727,967	4,785,210	210.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
545	724,430	4,781,344	202.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
546	724,460	4,781,381	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
548	724,588	4,781,478	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
551	724,661	4,781,474	201.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
553	724,905	4,781,505	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
556	726,655	4,780,804	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
558	725,721	4,781,554	200.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
571	728,944	4,781,700	194.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
572	728,924	4,781,673	194.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
574	727,322	4,781,459	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
581	727,796	4,781,599	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
582	727,970	4,781,700	196.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
584	728,037	4,781,707	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
586	728,132	4,781,715	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
589	730,097	4,781,781	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
590	730,036	4,781,760	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
591	730,063	4,781,736	199.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
592	725,612	4,781,601	197.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
596	731,474	4,781,906	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
597	731,417	4,781,901	201.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
600	724,810	4,781,611	198.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
602	726,741	4,781,610	194.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
603	726,781	4,781,527	194.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
605	724,875	4,781,565	200.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
607	725,773	4,781,610	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
608	725,727	4,781,648	198.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
611	730,245	4,781,876	201.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
613	725,845	4,781,611	200.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
614	725,863	4,781,629	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
615	727,562	4,781,673	198.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
618	726,313	4,781,644	198.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
632	725,705	4,780,053	195.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
660	725,686	4,779,772	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
669	725,326	4,780,168	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
670	725,359	4,780,211	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
679	725,148	4,780,317	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
681	725,464	4,780,210	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
683	724,420	4,780,336	198.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
692	731,612	4,780,909	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
694	726,709	4,780,859	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
701	726,955	4,781,011	196.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
707	731,880	4,781,308	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
708	727,036	4,781,112	195.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
711	724,575	4,781,172	200.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
713	727,209	4,781,280	195.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
719	724,543	4,781,404	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
720	724,555	4,781,384	202.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
723	727,049	4,781,999	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
724	726,957	4,782,037	198.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
729	727,237	4,782,041	196.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
730	727,666	4,781,735	196.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
731	727,665	4,781,780	195.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

...continued from previous page

No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
	[m]	[m]	[m]	[m]	[m]	[°]			[m]
733	731,288	4,782,118	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
736	730,934	4,782,304	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
742	724,811	4,782,002	200.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
746	724,946	4,782,180	200.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
751	727,612	4,782,302	196.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
755	727,109	4,782,116	199.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
762	732,671	4,786,271	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
763	732,674	4,786,318	202.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
764	732,694	4,786,404	205.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
765	730,747	4,782,408	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
776	731,146	4,782,610	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
778	728,153	4,782,562	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
781	731,522	4,783,280	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
787	730,190	4,782,770	200.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
790	730,053	4,782,791	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
798	730,470	4,782,765	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
799	730,489	4,782,690	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
800	726,558	4,781,760	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
801	726,568	4,781,733	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
807	729,786	4,782,894	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
808	729,673	4,782,916	209.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
810	729,640	4,782,968	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
813	729,847	4,782,936	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
816	732,259	4,783,064	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
820	728,150	4,783,093	197.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
821	725,746	4,783,088	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
823	728,145	4,783,222	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
824	729,460	4,783,241	198.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
826	725,978	4,783,250	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
827	731,246	4,782,826	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
836	732,281	4,785,533	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
838	732,895	4,783,547	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
870	727,038	4,783,860	198.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
879	727,046	4,783,939	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
880	727,719	4,783,889	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
881	727,749	4,783,907	204.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
882	727,744	4,783,967	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
883	727,765	4,783,963	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
884	726,440	4,785,186	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
889	728,101	4,784,128	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
892	728,090	4,784,207	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
894	727,928	4,784,097	205.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
895	727,880	4,784,108	204.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
896	727,852	4,784,096	203.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
899	728,072	4,784,253	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
900	725,618	4,784,071	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
901	725,597	4,784,117	203.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
902	725,531	4,784,118	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
911	728,021	4,784,389	201.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
912	728,011	4,784,466	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
915	728,067	4,784,493	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
916	729,350	4,784,496	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
919	729,656	4,784,425	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
920	729,636	4,784,408	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
921	729,458	4,783,148	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
927	729,397	4,784,571	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
928	729,560	4,784,667	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
929	729,644	4,784,655	199.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
935	729,734	4,784,828	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
937	729,823	4,784,857	201.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
939	729,656	4,784,680	200.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
945	727,990	4,784,897	207.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
946	728,045	4,784,918	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
947	727,983	4,784,956	208.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
949	728,037	4,785,028	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
952	728,102	4,784,940	205.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
	[m]	[m]	[m]	[m]	[m]	[°]			[m]
956	729,813	4,785,115	203.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
972	728,027	4,785,222	210.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
977	726,696	4,785,188	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
979	727,066	4,785,211	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
980	727,992	4,784,866	206.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
981	727,116	4,785,211	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
987	727,710	4,785,254	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
990	727,835	4,785,237	207.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
991	727,850	4,785,196	207.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
992	727,928	4,785,219	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
993	727,889	4,785,256	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
994	727,908	4,785,276	209.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
995	727,950	4,785,272	210.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
996	727,983	4,785,257	210.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1003	727,652	4,785,317	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1009	728,056	4,784,774	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1010	728,078	4,784,747	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1011	728,138	4,784,828	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1012	728,134	4,784,796	203.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1013	728,239	4,784,736	203.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1014	728,149	4,784,735	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1015	728,088	4,784,705	201.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1017	730,323	4,785,390	202.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1018	730,401	4,785,394	202.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1019	728,021	4,785,387	211.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1020	730,764	4,785,456	206.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1032	732,791	4,785,582	201.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1033	732,811	4,785,557	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1035	730,973	4,785,526	206.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1041	732,587	4,785,624	203.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1042	732,184	4,785,593	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1049	730,785	4,785,525	206.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1055	725,815	4,785,215	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1057	727,951	4,785,624	205.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1059	727,957	4,785,725	203.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1062	727,955	4,785,787	203.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1067	727,962	4,785,599	207.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1071	730,170	4,785,822	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1072	730,203	4,785,833	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1073	727,954	4,785,821	203.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1074	728,205	4,785,640	207.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1075	728,259	4,785,724	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1076	728,281	4,785,706	206.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1077	727,994	4,785,862	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1080	733,344	4,786,081	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1084	726,075	4,785,209	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1086	726,020	4,785,222	203.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1087	726,026	4,785,266	202.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1088	726,046	4,785,269	203.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1089	726,066	4,785,269	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1090	726,083	4,785,281	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1091	726,093	4,785,282	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1092	726,105	4,785,282	204.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1106	727,936	4,786,149	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1109	732,074	4,786,309	212.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1128	732,575	4,786,624	213.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1134	730,496	4,786,168	203.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1137	732,246	4,786,369	215.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1138	733,110	4,786,805	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1140	732,763	4,786,287	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1141	732,784	4,786,339	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1142	732,809	4,786,302	201.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1143	732,820	4,786,172	201.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1144	732,770	4,786,386	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1145	732,854	4,786,257	201.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1146	732,767	4,786,194	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[°]		[m]
1147	732,781	4,786,194	201.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1148	732,780	4,786,175	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1151	733,006	4,786,851	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1158	733,179	4,786,914	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1167	732,662	4,787,175	206.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1172	732,758	4,787,229	205.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1174	732,738	4,787,285	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1182	732,637	4,787,556	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1184	732,785	4,787,469	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1196	732,696	4,787,761	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1210	732,580	4,787,797	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1211	732,633	4,787,764	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1217	733,546	4,786,947	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1219	733,555	4,786,914	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1227	732,759	4,788,252	205.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1232	733,614	4,788,538	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1234	733,662	4,788,548	205.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1235	734,252	4,788,542	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1237	724,963	4,780,278	195.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1238	724,892	4,780,188	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1239	724,856	4,780,209	198.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1240	724,805	4,780,255	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1241	724,840	4,780,258	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1242	724,888	4,780,281	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1243	724,905	4,780,303	197.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1244	724,871	4,780,253	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1258	728,193	4,781,968	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1263	730,086	4,785,315	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1264	730,111	4,785,338	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1265	730,143	4,785,347	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1266	730,138	4,785,363	202.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1267	730,157	4,785,369	202.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1268	730,117	4,785,390	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1269	730,096	4,785,366	202.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1292	726,515	4,780,683	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1297	726,777	4,780,721	197.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1303	732,709	4,788,062	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1328	729,089	4,782,381	206.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1329	729,056	4,782,373	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1330	729,052	4,782,392	205.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1335	727,983	4,785,173	210.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1338	734,756	4,789,387	202.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1341	735,056	4,789,308	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1343	734,830	4,789,568	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1346	734,739	4,789,560	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1357	735,110	4,789,192	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1360	735,105	4,788,894	202.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1361	735,128	4,788,901	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1377	735,309	4,786,995	204.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1397	735,182	4,786,764	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1399	734,753	4,786,810	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1400	734,854	4,786,899	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1402	734,885	4,786,901	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1403	734,953	4,786,922	201.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1404	735,321	4,786,912	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1405	735,270	4,786,914	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1419	735,084	4,785,836	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1420	735,117	4,785,901	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1421	735,287	4,785,956	200.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1424	735,198	4,786,010	201.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1427	735,137	4,786,133	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1436	735,108	4,786,329	201.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1438	735,126	4,786,453	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1439	735,121	4,786,386	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1442	735,103	4,786,649	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1444	734,467	4,786,967	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...

SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l. [m]
1446	735,067	4,787,069	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1447	735,093	4,787,111	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1453	734,372	4,786,956	200.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1455	734,589	4,786,992	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1462	735,090	4,787,345	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1466	735,082	4,787,414	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1468	735,081	4,787,444	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1471	735,545	4,786,989	206.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1472	735,597	4,786,994	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1477	735,138	4,787,532	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1483	735,071	4,787,513	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1485	734,977	4,787,484	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1486	734,891	4,787,664	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1487	734,876	4,787,670	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1488	734,818	4,787,651	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1489	734,828	4,787,635	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1490	735,142	4,787,886	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1492	735,144	4,787,919	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1493	735,084	4,787,741	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1495	734,997	4,787,708	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1497	735,265	4,787,850	203.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1498	735,063	4,788,730	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1499	735,055	4,788,785	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1501	735,068	4,788,003	203.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1505	735,059	4,788,033	203.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1506	735,065	4,788,069	203.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1508	735,031	4,788,162	203.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1510	735,148	4,788,195	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1513	735,185	4,788,017	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1515	735,120	4,788,061	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1516	735,222	4,788,071	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1517	735,111	4,788,419	203.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1519	735,237	4,788,348	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1523	734,572	4,788,588	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1524	734,643	4,788,572	203.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1525	734,608	4,788,550	203.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1526	735,039	4,788,424	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1527	735,126	4,788,684	201.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1528	735,138	4,788,733	201.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1529	735,143	4,788,779	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1532	735,116	4,788,807	203.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1534	734,985	4,788,862	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1536	735,125	4,788,862	202.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1539	735,287	4,788,752	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1549	735,608	4,788,915	206.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1551	733,606	4,788,585	205.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1552	734,081	4,788,624	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1553	734,150	4,788,627	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1554	732,370	4,788,721	207.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1555	732,543	4,788,700	206.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1557	732,412	4,788,774	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1558	732,195	4,788,806	208.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1561	732,205	4,788,871	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1562	732,127	4,788,927	209.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1563	734,248	4,788,622	205.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1565	733,505	4,788,582	206.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1587	732,438	4,788,652	205.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1588	732,448	4,788,669	205.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1589	732,413	4,788,673	206.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1590	732,416	4,788,683	206.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1594	734,137	4,789,325	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1596	732,689	4,788,561	204.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1599	732,604	4,788,692	205.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1600	732,622	4,788,700	205.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1602	732,032	4,781,717	198.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1603	732,046	4,781,646	199.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0

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SHADOW - Main Result

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No.	Easting	Northing	Z	Width	Height	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
1604	732,045	4,781,610	199.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1605	731,935	4,781,596	198.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1606	731,883	4,781,591	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1611	730,859	4,779,709	194.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1612	730,852	4,779,742	193.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1613	730,826	4,779,739	193.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1625	729,683	4,779,838	192.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1626	729,700	4,779,870	192.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1632	731,386	4,780,842	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1633	731,430	4,780,863	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1634	731,774	4,780,939	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1635	731,215	4,780,837	195.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1651	726,894	4,783,904	200.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1653	731,118	4,782,511	199.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1662	732,203	4,783,004	202.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1663	732,224	4,783,014	201.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1664	732,241	4,783,002	201.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1674	733,770	4,783,764	198.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1695	728,222	4,779,889	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1696	728,201	4,779,847	196.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1698	732,287	4,783,013	199.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1699	732,306	4,783,054	199.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1700	732,266	4,782,944	198.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1701	732,299	4,782,951	197.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1702	732,313	4,782,940	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1703	732,328	4,782,938	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1704	732,343	4,782,935	196.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1705	732,359	4,783,032	197.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1709	731,528	4,781,778	204.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1713	726,836	4,779,809	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1714	726,835	4,779,824	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1715	726,828	4,779,839	193.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1720	732,699	4,786,642	211.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
1790	732,263	4,783,026	201.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2561	730,388	4,786,374	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2562	730,390	4,786,364	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2563	730,398	4,786,343	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2564	730,408	4,786,291	202.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2565	730,417	4,786,298	202.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2566	730,397	4,786,289	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2567	730,389	4,786,289	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2568	730,382	4,786,299	202.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2569	732,017	4,785,598	215.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2570	733,104	4,784,419	197.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2574	726,640	4,780,931	199.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0

Calculation Results

Shadow receptor

No.	Shadow, worst case		Shadow, expected values				
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	
1	14:26	42	0:31			4:23	
10*	98:14	118	1:19	0:32		24:19	0:05
100*	67:19	177	0:41	1:51		23:25	0:36
1003*	51:40	107	0:49	0:48		9:54	0:07
1009*	202:42	224	2:00	1:31		56:27	0:14
101	16:34	44	0:32			6:46	
1010*	197:20	233	2:02	1:04		56:33	0:09
1011*	166:59	201	1:51	1:54		44:24	0:17
1012*	172:59	207	1:55	1:49		47:12	0:16
1013*	162:32	197	1:48	1:23		45:34	0:12
1014*	180:28	217	1:56	1:19		51:30	0:11
1015*	199:17	250	2:03	0:41		59:36	0:06

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
1017	35:00	68	0:42			7:50		
1018	45:49	83	0:45			9:32		
1019	45:40	75	0:42			9:16		
1020	63:45	133	0:55			11:30		
103	19:55	66	0:30			6:09		
1032*	47:56	89	0:47	0:03		11:42	0:00	
1033	54:49	107	0:47			13:17		
1035*	47:04	161	0:32	0:58		13:33	0:21	
104*	73:04	189	0:44	1:53		26:34	0:36	
1041*	95:24	176	0:58	0:37		23:03	0:07	
1042	19:10	55	0:32			4:31		
1049	30:36	122	0:26			9:05		
105*	86:33	192	0:43	1:51		33:11	0:37	
1055	77:14	112	1:03			14:14		
1057	0:00	0	0:00			0:00		
1059	0:00	0	0:00			0:00		
106	12:22	38	0:29			4:52		
1062	0:00	0	0:00			0:00		
1067	0:00	0	0:00			0:00		
107*	82:05	194	0:56	1:48		32:03	0:37	
1071	11:03	35	0:23			1:41		
1072	5:08	23	0:17			0:43		
1073	0:00	0	0:00			0:00		
1074	12:20	37	0:25			2:17		
1075	3:03	19	0:12			0:30		
1076	9:02	32	0:21			1:38		
1077	0:00	0	0:00			0:00		
108	13:09	39	0:29			5:08		
1080*	65:42	166	0:46	4:43	1	24:22	2:02	
1084	51:12	94	1:05			9:17		
1086	57:54	97	1:08			10:21		
1087	31:56	89	0:40			6:10		
1088	27:39	85	0:28			5:31		
1089	26:16	83	0:28			5:16		
1090	22:50	76	0:28			4:38		
1091	21:39	73	0:29			4:25		
1092	20:59	73	0:29			4:19		
11	36:04	88	0:40			14:44		
110*	32:49	95	0:28	0:06		7:28	0:00	
1106	0:00	0	0:00			0:00		
1109	151:12	108	1:40			23:01		
111	107:51	67	2:07			18:44		
112	0:00	0	0:00			0:00		
1128	10:10	35	0:26			3:22		
113*	34:25	86	0:32	0:43		8:41	0:07	
1134	0:00	0	0:00			0:00		
1137	55:18	55	1:15			7:53		
1138*	88:57	189	0:45	2:03		26:57	0:37	
114*	35:31	62	0:48	1:03		12:41	0:19	
1140	108:47	150	1:08			31:57		
1141*	111:05	166	1:04	0:14		30:10	0:02	
1142	96:18	142	1:03			29:03		
1143*	94:45	139	1:06	0:39		35:14	0:13	
1144*	121:27	163	1:03	1:07		29:47	0:11	
1145*	86:10	133	1:00	0:29		29:25	0:09	
1146*	105:40	143	1:12	0:29		37:26	0:09	
1147*	102:04	141	1:10	0:29		36:24	0:09	
1148*	103:14	141	1:11	0:29		37:41	0:09	
115*	29:08	93	0:26	0:39		6:59	0:05	
1151*	67:58	162	0:40	1:32		24:14	0:39	
1158*	115:22	187	0:51	3:51		34:27	0:58	
116*	7:00	29	0:22	0:14		2:35	0:04	
1167*	88:27	234	0:49	12:32		34:33	5:48	
117*	36:43	57	1:03	0:15		15:44	0:07	
1172*	114:55	226	0:57	14:35		44:39	6:36	

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
1174*	101:22	221	0:55	10:12		38:44	4:22	
1182*	90:12	194	0:47	4:57		37:09	2:09	
1184*	129:16	192	1:06	22:19		55:51	10:19	
119*	156:42	204	1:10	14:03		55:43	6:07	
1196*	138:57	253	1:04	21:51		51:20	10:00	
12	15:16	64	0:22			4:30		
1210*	107:53	246	0:54	17:45		39:58	8:11	
1211*	123:32	243	0:58	21:18	1	46:45	9:51	
1217*	26:35	69	0:36	0:16		4:55	0:02	
1219*	42:02	75	0:48	0:07		7:02	0:01	
122*	41:09	60	1:06	0:13		17:36	0:06	
1227	120:00	173	1:12			31:22		
1232*	210:05	127	2:25	5:37		38:26	0:49	
1234*	214:48	119	2:35	6:00		38:12	0:52	
1235*	207:47	139	1:50	5:26		45:39	0:54	
1237	0:00	0	0:00			0:00		
1238	0:00	0	0:00			0:00		
1239	0:00	0	0:00			0:00		
124	20:49	49	0:37			7:27		
1240	0:00	0	0:00			0:00		
1241	0:00	0	0:00			0:00		
1242	0:00	0	0:00			0:00		
1243	0:00	0	0:00			0:00		
1244	0:00	0	0:00			0:00		
125*	39:41	84	0:46	0:52		17:24	0:24	
1258*	10:05	41	0:23	0:05		2:07	0:00	
1263	35:26	110	0:34			9:11		
1264	36:12	115	0:35			9:14		
1265	36:08	108	0:36			9:09		
1266	37:03	117	0:35			9:12		
1267	37:10	114	0:36			9:10		
1268	39:44	126	0:34			9:28		
1269	39:03	125	0:34			9:31		
128*	55:04	110	0:48	1:19		24:13	0:36	
129*	56:27	107	0:51	2:48		24:26	1:15	
1292	51:22	91	0:42			21:57		
1297	20:50	57	0:32			8:49		
13*	93:15	183	0:46	1:09		30:15	0:10	
130	52:54	71	0:55			24:53		
1303*	130:21	222	0:56	2:08		37:13	0:18	
132*	65:47	114	0:57	4:29		28:31	1:59	
1328*	53:12	100	0:48	3:32		18:56	1:19	
1329*	31:43	59	0:46	1:25		10:29	0:26	
133	9:36	34	0:25			3:56		
1330*	37:14	79	0:46	2:04		12:31	0:42	
1335*	114:58	142	1:10	2:12		25:01	0:20	
1338	0:00	0	0:00			0:00		
134*	68:35	94	1:01	4:56		30:00	2:11	
1341	0:00	0	0:00			0:00		
1343	0:00	0	0:00			0:00		
1346	0:00	0	0:00			0:00		
1357	20:17	53	0:28			3:59		
136	0:00	0	0:00			0:00		
1360	17:02	52	0:30			3:57		
1361	16:22	51	0:29			3:49		
137	0:00	0	0:00			0:00		
1377	24:10	82	0:29			9:23		
138	38:16	79	0:48			8:13		
139	53:06	91	0:54			11:13		
1397	29:41	95	0:26			11:41		
1399	48:55	124	0:39			17:46		
14	12:26	38	0:29			4:27		
140	32:31	105	0:27			12:54		
1400	54:10	145	0:35			20:09		
1402	57:21	146	0:34			21:46		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
1403	57:46	122	0:41			22:30		
1404	26:14	89	0:29			10:24		
1405	30:19	97	0:30			12:04		
141	8:57	39	0:24			3:16		
1419	22:50	65	0:28			9:35		
142	14:27	50	0:27			4:35		
1420	31:23	85	0:30			13:24		
1421	13:30	49	0:25			5:43		
1424	15:31	50	0:28			6:34		
1427	15:24	46	0:29			6:27		
143*	63:06	80	1:02	1:39		23:50	0:41	
1436	14:04	40	0:30			5:49		
1438	12:44	38	0:29			5:01		
1439	13:15	40	0:29			5:21		
144	0:00	0	0:00			0:00		
1442	12:34	38	0:29			4:34		
1444	97:41	160	0:50			28:03		
1446	42:05	109	0:37			15:39		
1447	37:17	102	0:36			13:27		
1453	81:15	134	0:55			21:30		
1455	89:55	186	0:44			26:34		
1462	40:18	116	0:36			12:17		
1466	39:30	104	0:36			11:43		
1468	37:24	98	0:36			11:05		
147	8:00	31	0:23			3:03		
1471	9:18	37	0:23			3:53		
1472	8:12	34	0:22			3:24		
1477	16:59	43	0:34			6:13		
148	21:14	47	0:37			6:53		
1483	27:30	80	0:36			10:34		
1485	45:28	118	0:47			16:48		
1486	59:44	165	0:42			21:57		
1487	61:40	169	0:42			22:33		
1488	72:19	181	0:45			26:33		
1489	71:10	180	0:45			26:26		
1490	39:04	107	0:33			14:18		
1492	37:54	107	0:33			13:28		
1493	60:48	155	0:34			23:55		
1495	66:44	204	0:37			25:27		
1497	29:50	92	0:29			11:16		
1498	17:32	46	0:32			5:07		
1499	18:08	50	0:32			4:50		
15	8:47	33	0:24			2:57		
1501	51:53	146	0:35			17:15		
1505	54:15	157	0:36			17:37		
1506	56:06	165	0:35			17:27		
1508	61:25	158	0:37			18:37		
1510	41:52	113	0:33			11:55		
1513	32:52	98	0:31			10:51		
1515	39:45	114	0:34			12:38		
1516	30:09	93	0:31			9:45		
1517	16:21	42	0:33			6:02		
1519	30:57	90	0:30			8:29		
152	11:45	37	0:28			4:26		
1523	94:02	143	1:14			24:12		
1524	76:11	125	1:11			21:05		
1525	83:42	129	1:15			23:25		
1526	18:57	45	0:35			6:55		
1527	15:24	43	0:31			4:50		
1528	15:02	44	0:30			4:32		
1529	14:59	44	0:30			4:18		
153	8:33	32	0:24			3:14		
1532	15:54	46	0:30			4:17		
1534	23:19	64	0:33			5:17		
1536	16:01	50	0:30			3:58		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
1539	11:06	38	0:27			3:28		
1549	8:38	36	0:22			3:37		
1551*	145:02	109	2:02	4:28		24:50	0:38	
1552*	128:44	107	1:44	0:03		24:12	0:00	
1553*	123:14	112	1:32	0:37		24:01	0:05	
1554	26:09	85	0:32			4:56		
1555	48:42	126	0:38			9:47		
1557	29:59	87	0:33			5:32		
1558	14:34	50	0:27			2:54		
156*	36:15	61	0:59	0:20		15:33	0:09	
1561	17:17	67	0:27			3:17		
1562	15:08	65	0:25			2:52		
1563*	131:17	120	1:31	3:30		26:34	0:33	
1565*	112:32	119	1:19	2:01		20:32	0:17	
158*	28:28	55	0:43	0:22		10:41	0:07	
1587	34:35	95	0:35			6:37		
1588	38:55	122	0:35			8:06		
1589	31:52	93	0:34			6:02		
1590	30:21	91	0:34			5:44		
1594	0:00	0	0:00			0:00		
1596	58:52	132	0:45			13:02		
1599	56:55	126	0:40			11:09		
16	9:52	40	0:23			2:05		
1600	58:31	123	0:40			11:19		
1602	18:01	43	0:34			6:05		
1603	17:45	43	0:34			6:21		
1604	17:48	43	0:34			6:31		
1605	23:14	53	0:38			8:30		
1606	26:16	56	0:40			9:37		
1611	0:00	0	0:00			0:00		
1612	0:00	0	0:00			0:00		
1613	0:00	0	0:00			0:00		
162	49:15	104	0:45			22:38		
1625	0:00	0	0:00			0:00		
1626	0:00	0	0:00			0:00		
1632	43:53	85	0:38			18:43		
1633	44:21	95	0:36			19:03		
1634	16:18	62	0:26			6:45		
1635	26:08	56	0:36			10:52		
164*	129:10	193	1:24	29:02		51:35	13:40	
1651	0:00	0	0:00			0:00		
1653	11:26	37	0:28			3:57		
166	12:24	33	0:28			1:49		
1662	0:00	0	0:00			0:00		
1663	0:00	0	0:00			0:00		
1664	0:00	0	0:00			0:00		
1674*	8:17	32	0:23	0:15		3:27	0:06	
169	0:00	0	0:00			0:00		
1695	0:00	0	0:00			0:00		
1696	0:00	0	0:00			0:00		
1698	0:00	0	0:00			0:00		
1699	0:00	0	0:00			0:00		
17	19:31	88	0:26			5:13		
1700	0:00	0	0:00			0:00		
1701	0:00	0	0:00			0:00		
1702	0:00	0	0:00			0:00		
1703	0:00	0	0:00			0:00		
1704	0:00	0	0:00			0:00		
1705	0:00	0	0:00			0:00		
1709	82:58	98	1:20			21:27		
171	0:00	0	0:00			0:00		
1713	0:00	0	0:00			0:00		
1714	0:00	0	0:00			0:00		
1715	0:00	0	0:00			0:00		
1720*	34:46	122	0:30	1:01		14:19	0:30	

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
175*	28:36	96	0:29	2:24		11:56	1:05	
1790	0:00	0	0:00			0:00		
18*	125:59	131	2:10	0:46		23:28	0:06	
182*	68:02	117	0:49	0:47		28:23	0:19	
185*	94:49	166	0:52	7:10		41:43	3:26	
187	0:00	0	0:00			0:00		
19	73:33	65	1:34			10:38		
190*	60:48	127	0:45	0:33		25:25	0:13	
191*	98:07	166	1:00	9:10		41:50	4:20	
193*	107:58	168	0:54	12:23		45:05	5:30	
195	12:06	39	0:23			1:54		
196	0:00	0	0:00			0:00		
199*	155:54	228	1:08	30:58		63:25	14:13	
2	24:18	77	0:33			6:58		
20	68:24	55	1:45			9:58		
200*	50:26	117	0:40	6:28		20:34	2:51	
201*	103:34	186	0:54	9:01		42:27	4:03	
202*	168:01	232	1:18	33:14		66:40	15:04	
204	44:48	99	0:44			17:39		
205	0:00	0	0:00			0:00		
206	0:00	0	0:00			0:00		
207*	21:47	94	0:30	5:40	1	9:49	2:40	
208*	31:44	127	0:29	11:08		14:21	5:20	
209*	31:05	113	0:29	10:33	2	14:06	5:01	
21	110:52	121	1:17			25:16		
210*	37:02	120	0:41	6:31	1	16:02	3:03	
215*	160:26	200	1:25	10:16		42:56	3:15	
216*	78:29	176	0:48	11:18		33:31	5:12	
217*	88:14	173	0:56	13:30		38:05	6:18	
218*	124:29	169	1:27	30:32		55:13	14:13	
219*	70:07	171	0:45	9:19	1	29:46	4:16	
22	51:31	80	0:51			12:06		
222*	159:13	187	1:37	45:08		69:28	20:43	
224	3:55	25	0:12			1:47		
225	11:06	36	0:27			3:55		
228*	41:30	127	0:36	13:46		18:36	6:33	
229*	109:34	196	1:09	31:15		46:53	14:15	
232*	126:26	209	1:18	31:46		52:51	14:06	
235*	173:36	250	1:13	24:07		61:44	11:09	
236*	170:54	244	1:38	45:26		71:27	20:45	
237*	133:49	181	1:29	39:27		56:24	17:26	
239*	187:17	236	1:45	43:59		79:00	20:15	
240	130:42	215	0:50			40:31		
242*	155:38	192	1:30	36:58		65:14	16:24	
243	0:00	0	0:00			0:00		
244	37:14	96	0:35			17:06		
246*	176:31	234	1:48	11:50		71:55	5:17	
247	54:36	112	0:46			23:59		
249*	200:58	210	1:46	16:23		84:32	7:27	
25	39:45	64	0:55			10:53		
250	38:36	92	0:41			16:23		
251	56:13	121	0:44			25:15		
253	45:18	98	0:44			19:10		
2561	0:00	0	0:00			0:00		
2562	0:00	0	0:00			0:00		
2563	0:00	0	0:00			0:00		
2564	0:00	0	0:00			0:00		
2565	0:00	0	0:00			0:00		
2566	0:00	0	0:00			0:00		
2567	0:00	0	0:00			0:00		
2568	0:00	0	0:00			0:00		
2569*	35:25	93	0:37	0:38		7:41	0:06	
257	48:01	100	0:46			20:02		
2570	127:58	264	0:40			44:04		
2574*	23:50	66	0:37	1:25		9:55	0:36	

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
260	36:17	84	0:42			14:24		
264*	196:17	194	1:43	4:35		49:14	0:45	
265	77:23	169	0:41			27:13		
267*	179:25	186	1:24	5:18		44:17	0:53	
27	28:24	85	0:34			6:55		
270*	128:53	156	1:12	3:08		30:40	0:31	
271*	130:33	157	1:10	3:29		30:09	0:33	
272*	122:15	154	1:08	3:04		27:59	0:29	
273*	124:43	152	1:12	2:48		29:07	0:27	
274*	115:00	151	1:07	2:43		26:18	0:26	
276*	122:48	149	1:11	2:36		27:54	0:25	
279	72:14	181	0:37			21:21		
28*	70:21	104	1:05	0:36		16:45	0:06	
280*	120:17	145	1:11	2:25		26:42	0:22	
288*	99:47	141	1:04	1:55		21:49	0:18	
29	43:52	90	0:42			9:59		
291*	107:27	146	1:05	2:20		23:58	0:22	
292*	269:54	193	2:07	10:41		63:36	2:28	
294	67:01	157	0:38			18:07		
295	99:49	118	1:17			18:16		
296	92:23	133	1:07			17:36		
299	77:29	103	0:51			13:45		
3	40:00	101	0:40			9:52		
300*	125:00	95	1:56	0:01		21:26	0:00	
301*	103:36	71	1:55	0:01		17:29	0:00	
302	56:08	89	0:44			11:42		
304*	49:47	100	0:50	0:24		10:08	0:03	
305*	73:02	107	0:57	0:49		15:05	0:07	
306*	77:21	117	1:00	0:33		15:19	0:05	
307*	104:33	121	1:23	0:57		21:07	0:08	
308*	89:34	127	1:11	0:41		18:38	0:05	
309*	84:05	127	1:07	0:24		17:38	0:03	
31*	107:43	87	1:33	1:04		15:55	0:07	
310*	66:12	101	0:53	0:27		13:40	0:04	
311*	53:10	89	0:43			11:03		
312*	51:35	87	0:43			10:43		
314*	199:29	157	1:50	6:28		43:14	1:03	
315	52:16	81	0:45			10:39		
316	49:42	85	0:42			10:18		
317	64:14	103	0:46			11:38		
318	81:23	146	1:00			14:49		
319*	58:13	162	0:54	0:52		13:29	0:24	
32*	131:13	122	1:36	0:26		29:17	0:04	
320	37:20	63	0:43			7:21		
321*	128:26	192	1:21	3:46		31:46	0:43	
322*	142:51	163	1:22	4:00		30:34	0:37	
323	41:32	71	0:41			8:21		
324*	167:21	101	2:06	5:21		30:24	0:50	
325	29:56	57	0:39			5:48		
326	56:38	102	0:50			10:09		
327*	113:11	131	1:09	0:35		24:06	0:05	
328	35:03	63	0:40			6:57		
329	24:57	51	0:37			4:45		
33	48:30	110	0:44			11:45		
330*	56:00	94	0:50	0:09		13:23	0:01	
331	65:59	178	0:34			19:57		
333	72:03	179	0:39			25:40		
334*	79:59	195	0:40	5:37		22:12	2:05	
335	54:17	148	0:33			14:06		
337*	86:33	77	1:39	2:18		15:09	0:22	
338	25:33	53	0:36			4:56		
339	14:33	37	0:29			2:39		
34*	60:23	81	0:56	0:38		12:30	0:06	
341	32:32	63	0:38			6:27		
344	1:44	13	0:10			0:17		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
345*	59:55	114	0:46	0:43		13:01	0:07	
346*	37:14	93	0:37	0:43		8:03	0:07	
347*	24:44	68	0:34	0:07		5:35	0:01	
348*	118:36	180	0:52	7:42		36:24	2:47	
35*	47:52	85	0:46	0:59		10:06	0:10	
351	0:00	0	0:00			0:00		
352	11:39	46	0:24			2:19		
353	1:50	13	0:10			0:18		
355	0:00	0	0:00			0:00		
356	0:00	0	0:00			0:00		
357	54:55	147	0:39			17:47		
36	36:59	87	0:35			7:49		
361*	67:49	100	0:55	0:53		30:41	0:26	
363	0:00	0	0:00			0:00		
364	0:00	0	0:00			0:00		
365	34:05	61	0:45			13:55		
366	6:08	30	0:16			2:28		
367	0:00	0	0:00			0:00		
368	0:00	0	0:00			0:00		
369*	122:17	205	1:00	13:27		51:14	6:20	
37	28:39	82	0:30			7:50		
373*	99:32	143	1:09	15:03		44:53	7:15	
38	26:19	86	0:29			9:35		
382	102:15	143	1:08			41:29		
386	32:19	57	0:45			12:04		
387	41:00	67	0:48			11:03		
388	94:11	135	1:07			32:43		
393	0:00	0	0:00			0:00		
394*	68:42	179	0:36	2:58		18:25	0:59	
396*	114:01	100	1:30	2:50		20:39	0:24	
399*	112:10	133	1:26	2:51		24:51	0:25	
4	91:33	130	1:03			17:51		
400	39:54	55	0:55			7:07		
404*	124:54	172	1:13	4:40		34:26	1:06	
406*	31:25	97	0:31	0:12		9:33	0:01	
409*	43:07	117	0:35	0:20		14:18	0:08	
42	0:00	0	0:00			0:00		
423*	110:07	224	0:54	14:29		42:57	6:36	
428*	108:44	230	0:49	11:50		42:34	5:14	
43	0:00	0	0:00			0:00		
438*	162:46	220	1:23	12:03		55:08	5:22	
441*	93:08	216	0:50	6:52		37:15	3:06	
444*	122:50	240	1:05	11:39	1	46:00	5:16	
464*	96:12	200	0:43	2:37		30:36	0:48	
465*	68:04	75	1:07	0:20		11:21	0:03	
468	0:00	0	0:00			0:00		
487*	95:10	178	1:31	17:30		40:09	7:45	
488	0:00	0	0:00			0:00		
489	0:00	0	0:00			0:00		
490	14:22	40	0:31			5:33		
5*	170:08	125	1:43	3:32		29:32	0:28	
503	124:19	253	0:44			41:39		
504*	60:47	97	0:48	0:06		12:38	0:00	
505	14:58	41	0:32			5:25		
506	28:54	59	0:41			7:39		
507	48:41	75	0:45			8:14		
508	0:00	0	0:00			0:00		
509	22:03	59	0:30			9:13		
510	56:47	128	0:48			11:04		
515*	133:07	158	1:13	5:34		33:47	1:28	
516	16:12	50	0:26			6:40		
519	18:37	45	0:30			3:32		
520	22:38	51	0:32			4:23		
521	24:36	55	0:33			4:49		
522	26:11	57	0:33			5:10		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
523	27:24	59	0:33			5:27		
524	28:03	61	0:32			5:37		
525	31:21	69	0:33			6:24		
526	19:03	47	0:31			3:38		
527	28:03	63	0:31			5:39		
528*	147:13	179	1:18	10:35		36:55	3:15	
533	0:00	0	0:00			0:00		
536*	107:28	136	1:12	1:37		22:52	0:14	
545	13:18	39	0:30			4:05		
546	14:22	42	0:30			4:17		
548	27:03	80	0:34			7:28		
551	31:29	88	0:37			8:23		
553	71:43	144	0:46			14:54		
556	24:43	60	0:36			10:25		
558*	143:36	132	1:18	2:30		27:19	0:21	
571*	110:59	206	0:51	1:04		30:45	0:09	
572*	90:26	169	0:50	1:09		26:34	0:10	
574	13:03	38	0:30			4:49		
58	0:00	0	0:00			0:00		
581	11:42	41	0:26			2:45		
582	20:43	68	0:29			3:59		
584	35:59	115	0:31			7:21		
586*	43:28	108	0:34	0:01		8:30	0:00	
589*	126:03	137	1:16	0:48		27:32	0:08	
590*	162:26	143	2:04	0:46		33:06	0:07	
591*	175:42	148	1:58	0:52		36:11	0:08	
592*	105:55	123	1:04	1:40		20:09	0:14	
596	92:17	105	1:06			19:18		
597	101:33	136	1:09			22:27		
60	0:00	0	0:00			0:00		
600	59:32	127	0:40			11:49		
602*	55:27	78	1:01	0:06		15:21	0:01	
603	46:03	70	0:52			14:58		
605	68:17	132	0:44			13:39		
607*	117:43	105	1:20	2:45		19:25	0:22	
608*	95:06	95	1:12	2:31		15:37	0:20	
611*	126:34	106	1:42	0:34		25:00	0:05	
613*	113:28	95	1:27	2:14		17:14	0:16	
614*	95:33	85	1:24	1:46		13:58	0:13	
615	7:53	31	0:23			2:38		
618	149:57	85	2:06			28:40		
62	0:00	0	0:00			0:00		
632	0:00	0	0:00			0:00		
65	17:57	63	0:23			8:26		
66	0:47	16	0:04			0:21		
660	0:00	0	0:00			0:00		
669	0:00	0	0:00			0:00		
67	0:00	0	0:00			0:00		
670	0:00	0	0:00			0:00		
679	0:00	0	0:00			0:00		
68	0:00	0	0:00			0:00		
681	0:00	0	0:00			0:00		
683	16:35	58	0:23			7:46		
69*	65:40	155	0:46	8:32		28:44	4:03	
692	19:06	54	0:31			8:05		
694*	19:51	52	0:34	0:13		8:20	0:05	
7	36:06	99	0:37			8:26		
70	1:37	20	0:07			0:44		
701*	57:59	135	0:44	5:06	1	24:39	2:15	
707	39:47	91	0:41			16:31		
708*	39:19	95	0:41	0:28		16:19	0:11	
711	25:59	68	0:35			9:32		
713	24:16	69	0:34			9:30		
719	23:43	76	0:33			7:18		
72	0:00	0	0:00			0:00		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
720	24:17	75	0:34			7:36		
723*	33:18	79	0:34	1:03		6:58	0:11	
724*	27:27	58	0:35	0:26		5:25	0:04	
729*	54:03	168	0:33	0:58	1	19:32	0:17	
730	10:34	57	0:23			2:21		
731	6:42	39	0:14			2:44		
733	25:40	77	0:28			6:50		
736	17:25	45	0:34			6:46		
742	13:38	54	0:25			2:38		
746*	21:15	75	0:24	0:40		5:39	0:05	
75	29:29	75	0:34			12:37		
751*	38:51	76	0:52	0:51		16:56	0:24	
755*	58:32	119	0:43	0:43		19:17	0:07	
76	34:32	78	0:39			14:44		
762*	159:41	196	1:20	0:51		42:37	0:08	
763*	157:21	176	1:16	1:01		38:33	0:10	
764*	118:49	146	1:09	0:52		26:54	0:08	
765*	26:18	63	0:41	0:03		9:19	0:00	
776	10:37	35	0:26			3:31		
778*	91:42	111	1:10	7:06		39:58	3:08	
78*	80:44	137	0:53	6:02		34:22	2:40	
781	56:14	93	1:04			25:36		
787	21:00	62	0:32			5:02		
79*	82:02	155	0:49	5:40		35:09	2:31	
790	9:20	33	0:26			3:33		
798	62:04	87	0:48			12:44		
799	67:50	110	0:49			14:54		
8	41:49	110	0:39			9:23		
80*	179:37	320	0:58	25:14		57:50	11:00	
800*	99:33	85	1:24	0:03		20:05	0:00	
801*	109:10	91	1:27	0:15		22:28	0:02	
807	14:56	42	0:31			5:12		
808	18:59	47	0:36			6:23		
81	60:17	134	0:39			25:55		
810	20:08	49	0:37			6:34		
813	13:16	40	0:30			4:30		
816	0:00	0	0:00			0:00		
82	23:02	62	0:33			8:53		
820	72:43	89	0:57			12:13		
821	31:11	56	0:41			4:58		
823	21:24	43	0:37			3:10		
824*	161:57	216	1:18	31:03		63:11	14:26	
826	0:00	0	0:00			0:00		
827	34:47	115	0:26			13:54		
83	27:40	66	0:36			10:38		
836	99:14	121	1:23			19:08		
838	44:34	72	0:49			18:53		
84*	50:38	109	0:45	1:06		21:08	0:28	
86	25:05	71	0:35			8:45		
870	0:00	0	0:00			0:00		
879	0:00	0	0:00			0:00		
880*	34:56	127	0:30	12:52	1	15:48	6:08	
881*	36:45	129	0:31	13:18		16:37	6:20	
882*	40:57	140	0:31	9:30		18:01	4:30	
883*	45:14	139	0:32	12:32		20:02	5:57	
884	60:08	120	0:40			11:49		
889*	141:03	210	1:30	45:15		59:56	20:22	
89	30:07	68	0:40			11:50		
892*	163:48	218	1:42	40:43		68:30	18:18	
894*	107:10	159	1:21	15:39		46:06	7:12	
895*	104:42	163	1:14	12:03		44:48	5:29	
896*	99:01	162	1:08	11:19		42:18	5:08	
899*	171:56	203	1:43	28:45		72:12	12:58	
9	58:11	136	0:41			12:02		
90	24:33	75	0:34			8:09		

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SHADOW - Main Result

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No.	Shadow, worst case				Shadow, expected values			
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Avoided hours per year [h/year]	Avoided days per year [days/year]	Shadow hours per year [h/year]	Avoided hours per year [h/year]	
900	19:49	76	0:24			8:56		
901	35:34	95	0:34			16:21		
902	42:24	105	0:37			19:39		
91	21:12	70	0:32			7:02		
911*	190:50	231	2:01	15:41		77:47	6:43	
912*	192:49	243	1:59	31:35		75:45	13:42	
915*	191:14	253	1:56	24:51		73:15	10:47	
916*	243:20	233	1:47	22:47		70:57	8:31	
919*	171:53	255	0:54	4:03		47:27	1:32	
92	37:19	79	0:42			15:10		
920*	177:49	254	0:54	3:33		50:35	1:20	
921*	99:28	163	1:09	18:02		37:45	8:19	
927*	207:35	190	1:40	10:49		54:05	3:32	
928*	131:56	191	1:14	3:57		34:33	0:46	
929*	107:20	198	0:47	3:18		29:43	0:50	
935*	76:38	161	0:41	1:38		20:49	0:16	
937*	70:33	164	0:38	1:29		19:27	0:15	
939*	98:56	193	0:47	2:24		28:05	0:32	
94	23:54	74	0:33			7:40		
945*	191:46	192	1:28	5:23		47:40	0:53	
946*	172:35	184	1:35	5:07		42:24	0:51	
947*	161:59	180	1:15	4:30		39:43	0:44	
949*	140:06	162	1:16	4:03		32:44	0:39	
952*	159:14	178	1:36	4:11		38:32	0:42	
956	39:54	113	0:35			10:21		
97	0:00	0	0:00			0:00		
972*	85:10	117	1:03	1:26		17:45	0:13	
977	79:51	103	0:53			14:05		
979	78:54	77	1:36			14:15		
98	30:45	94	0:35			10:39		
980*	208:08	200	1:35	5:21		52:26	0:53	
981	66:37	83	1:14			12:55		
987*	96:24	117	1:17	0:46		19:17	0:06	
99*	36:56	97	0:31	0:05		8:35	0:00	
990*	113:22	128	1:25	1:03		23:21	0:09	
991*	125:38	135	1:24	1:06		26:36	0:09	
992*	111:23	134	1:16	1:16		23:25	0:11	
993*	101:24	127	1:18	1:02		20:55	0:08	
994*	92:06	125	1:15	0:53		18:58	0:07	
995*	88:06	127	1:10	0:36		18:24	0:05	
996*	88:51	131	1:08	0:43		18:43	0:06	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
T01	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (100)	495:57	2:44	137:20
T02	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (101)	989:50	10:03	238:49
T03	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (102)	256:53	0:29	85:50
T04	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (103)	514:44	2:28	153:57
T05	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (104)	351:27	16:01	114:30
T06	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (105)	663:54	16:30	173:31
T07	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (106)	511:22	42:27	170:54
T08	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (107)	511:17	22:24	182:13
T09	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (108)	526:48	53:15	185:53
T10	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (109)	532:34	50:25	170:43
T11	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (110)	120:50	0:26	24:06
T12	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (111)	282:08	2:02	55:45
T13	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (112)	161:01	9:37	69:27
T14	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (113)	441:30	3:21	137:48
T15	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (114)	229:36	34:28	98:29
T16	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (115)	202:27	7:44	55:36
T17	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (116)	327:03	0:25	87:18
T18	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (117)	493:28	0:06	139:17

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SHADOW - Main Result

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No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
T19	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (118)	485:17	6:45	110:05
T20	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (119)	314:37	22:53	110:17
T21	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (120)	659:22	8:22	159:23
T22	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (121)	446:13	21:25	134:18
T23	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (122)	381:10	14:19	119:17
T24	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (123)	475:19	41:04	173:35
T25	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (124)	844:21	8:50	248:46
T26	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (125)	519:06	28:15	154:31
T27	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (126)	414:39	28:53	145:14
T28	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (127)	386:33	26:28	130:23
T29	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (128)	768:49	16:36	239:06
T30	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (129)	394:01	5:08	139:39
T31	VESTAS V162-6.0 6000 162.0 !O! hub: 119.0 m (TOT: 200.0 m) (130)	793:53	15:23	208:09

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Shadow receptor: 13 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2437)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April	May	June
1	07:43	07:28	07:56 (T12) 06:49	07:21 (T17) 06:55	06:06	05:35
	16:46	17:22 45	08:41 (T12) 17:59	07:34 (T17) 19:36	20:10	20:42 35
2	07:43	07:27	07:56 (T12) 06:48	07:26 (T17) 06:53	06:05	05:34
	16:46	17:23 46	08:42 (T12) 18:00	07:30 (T17) 19:37	20:11	20:43 36
3	07:43	07:26	07:56 (T12) 06:46	06:52	06:04	06:00 (T14)
	16:47	17:24 46	08:42 (T12) 18:01	19:38	20:12	20:44 36
4	07:43	07:24	07:57 (T12) 06:44	06:50	06:02	05:33
	16:48	17:26 45	08:42 (T12) 18:02	19:39	20:13	20:45 36
5	07:43	07:23	07:57 (T12) 06:43	06:48	06:01	05:33
	16:49	17:27 46	08:43 (T12) 18:04	19:41	20:14	20:45 36
6	07:43	07:22	07:56 (T12) 06:41	06:46	05:59	05:33
	16:50	17:28 46	08:42 (T12) 18:05	19:42	20:16	20:46 36
7	07:43	07:21	07:57 (T12) 06:39	06:45	05:58	05:32
	16:51	17:30 45	08:42 (T12) 18:06	19:43	20:17	20:47 35
8	07:43	07:20	07:58 (T12) 06:37	06:43	05:57	05:32
	16:52	17:31 44	08:42 (T12) 18:07	19:44	20:18	20:48 36
9	07:42	07:19	07:58 (T12) 06:36	06:41	05:56	05:32
	16:53	17:32 44	08:42 (T12) 18:09	19:45	20:19	20:48 35
10	07:42	07:17	07:58 (T12) 06:34	06:40	05:54	05:31
	16:54	17:34 43	08:41 (T12) 18:10	19:47	20:20	20:49 35
11	07:42	08:10 (T12) 07:16	07:59 (T12) 06:32	06:38	05:53	05:31
	16:55 5	08:15 (T12) 17:35	08:41 (T12) 18:11	19:48	20:21	20:49 35
12	07:42	08:07 (T12) 07:15	08:00 (T12) 06:31	06:36	05:52	05:31
	16:56 13	08:20 (T12) 17:36	08:40 (T12) 18:12	19:49	20:22	20:50 35
13	07:41	08:07 (T12) 07:13	08:00 (T12) 07:29	06:34	05:51	06:14 (T14) 05:31
	16:58 15	08:22 (T12) 17:38	08:39 (T12) 19:13	19:50	20:23 7	06:21 (T14) 20:51 35
14	07:41	08:06 (T12) 07:12	08:02 (T12) 07:27	06:33	05:50	06:13 (T14) 05:31
	16:59 18	08:24 (T12) 17:39	08:38 (T12) 19:15	19:51	20:24 11	06:24 (T14) 20:51 34
15	07:41	08:06 (T12) 07:11	07:33 (T17) 07:25	06:31	05:49	06:12 (T14) 05:31
	17:00 20	08:26 (T12) 17:40	08:36 (T12) 19:16	19:52	20:26 13	06:25 (T14) 20:52 35
16	07:40	08:05 (T12) 07:09	07:32 (T17) 07:24	06:29	05:48	06:11 (T14) 05:31
	17:01 23	08:28 (T12) 17:42	08:35 (T12) 19:17	19:53	20:27 16	06:27 (T14) 20:52 35
17	07:40	08:04 (T12) 07:08	07:30 (T17) 07:22	06:28	05:47	06:10 (T14) 05:31
	17:02 25	08:29 (T12) 17:43	08:33 (T12) 19:18	19:55	20:28 18	06:28 (T14) 20:52 35
18	07:39	08:04 (T12) 07:06	07:29 (T17) 07:20	06:26	05:46	06:09 (T14) 05:31
	17:04 27	08:31 (T12) 17:44	08:31 (T12) 19:19	19:56	20:29 20	06:29 (T14) 20:53 35
19	07:38	08:03 (T12) 07:05	07:27 (T17) 07:18	06:25	05:45	06:08 (T14) 05:31
	17:05 29	08:32 (T12) 17:46	08:28 (T12) 19:21	19:57	20:30 21	06:29 (T14) 20:53 34
20	07:38	08:02 (T12) 07:03	07:26 (T17) 07:17	06:23	05:44	06:08 (T14) 05:31
	17:06 30	08:32 (T12) 17:47	08:24 (T12) 19:22	19:58	20:31 23	06:31 (T14) 20:53 34
21	07:37	08:02 (T12) 07:02	07:24 (T17) 07:15	06:21	05:43	06:07 (T14) 05:31
	17:07 32	08:34 (T12) 17:48	07:40 (T17) 19:23	19:59	20:32 25	06:32 (T14) 20:54 34
22	07:36	08:01 (T12) 07:00	07:23 (T17) 07:13	06:20	05:42	06:06 (T14) 05:31
	17:09 34	08:35 (T12) 17:50	07:41 (T17) 19:24	20:00	20:33 26	06:32 (T14) 20:54 34
23	07:36	08:00 (T12) 06:59	07:21 (T17) 07:11	06:18	05:41	06:05 (T14) 05:32
	17:10 36	08:36 (T12) 17:51	07:40 (T17) 19:25	20:00	20:34 27	06:32 (T14) 20:54 34
24	07:35	07:59 (T12) 06:57	07:20 (T17) 07:09	06:17	05:40	06:04 (T14) 05:32
	17:11 38	08:37 (T12) 17:52	07:41 (T17) 19:27	20:02	20:35 28	06:32 (T14) 20:54 34
25	07:34	07:58 (T12) 06:56	07:18 (T17) 07:08	06:15	05:39	06:04 (T14) 05:32
	17:12 39	08:37 (T12) 17:54	07:40 (T17) 19:28	20:03	20:36 29	06:33 (T14) 20:55 35
26	07:33	07:57 (T12) 06:54	07:18 (T17) 07:06	06:14	05:39	06:03 (T14) 05:32
	17:14 41	08:38 (T12) 17:55	07:39 (T17) 19:29	20:04	20:37 30	06:33 (T14) 20:55 35
27	07:33	07:57 (T12) 06:52	07:19 (T17) 07:04	06:12	05:38	06:02 (T14) 05:33
	17:15 43	08:40 (T12) 17:56	07:38 (T17) 19:30	20:05	20:38 31	06:33 (T14) 20:55 35
28	07:32	07:57 (T12) 06:51	07:20 (T17) 07:02	06:11	05:37	06:02 (T14) 05:33
	17:16 43	08:40 (T12) 17:57	07:36 (T17) 19:31	20:06	20:39 32	06:34 (T14) 20:55 35
29	07:31	07:57 (T12)		06:09	05:37	06:01 (T14) 05:34
	17:18 44	08:41 (T12)		20:07	20:40 33	06:34 (T14) 20:55 35
30	07:30	07:57 (T12)		06:08	05:36	06:01 (T14) 05:34
	17:19 44	08:41 (T12)		20:09	20:40 34	06:35 (T14) 20:55 35
31	07:29	07:56 (T12)		05:35	06:00 (T14)	
	17:20 45	08:41 (T12)		20:41	35	06:35 (T14) 20:55 35
Potential sun hours	291	294	369	401	453	459
Total, worst case	644	955	17			1049
Sun reduction	0.36	0.40	0.47			0.63
Oper. time red.	1.00	1.00	1.00			1.00
Wind dir. red.	0.64	0.65	0.70			0.74
Total reduction	0.22	0.25	0.32			0.46
Total, real	144	242	5			480

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 13 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2437)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December
1	05:34	06:05 (T14)	06:00	06:25 (T14)	06:34	07:07
	20:55	35	06:40 (T14)	20:35	5 06:30 (T14)	19:48
2	05:35	06:06 (T14)	06:01	06:35	07:08	07:44
	20:55	35	06:41 (T14)	20:34	19:46	18:04
3	05:36	06:05 (T14)	06:02	06:36	07:09	40 09:10 (T12)
	20:55	36	06:41 (T14)	20:33	19:45	16:37
4	05:36	06:06 (T14)	06:03	06:37	07:10	13 08:02 (T12)
	20:54	35	06:41 (T14)	20:32	19:43	16:37
5	05:37	06:06 (T14)	06:04	06:38	07:11	07:45
	20:54	36	06:42 (T14)	20:30	19:41	08:28 (T12)
6	05:37	06:06 (T14)	06:05	06:39	07:13	40 09:11 (T12)
	20:54	36	06:42 (T14)	20:29	19:39	16:37
7	05:38	06:06 (T14)	06:06	06:40	07:14	6 07:59 (T12)
	20:54	36	06:42 (T14)	20:28	19:38	16:37
8	05:39	06:06 (T14)	06:08	06:42	07:15	44 09:12 (T12)
	20:53	36	06:42 (T14)	20:27	19:36	16:36
9	05:39	06:06 (T14)	06:09	06:43	07:16	49 08:27 (T12)
	20:53	36	06:42 (T14)	20:25	19:34	16:36
10	05:40	06:07 (T14)	06:10	06:44	07:17	42 09:11 (T12)
	20:53	36	06:43 (T14)	20:24	19:32	16:36
11	05:41	06:07 (T14)	06:11	06:45	07:18	45 08:13 (T12)
	20:52	36	06:43 (T14)	20:23	19:30	16:36
12	05:42	06:07 (T14)	06:12	06:46	07:20	44 08:12 (T12)
	20:52	36	06:43 (T14)	20:21	19:29	16:36
13	05:42	06:08 (T14)	06:13	06:47	07:21	43 08:13 (T12)
	20:51	35	06:43 (T14)	20:20	19:27	16:36
14	05:43	06:09 (T14)	06:14	06:48	07:22	45 08:13 (T12)
	20:51	34	06:43 (T14)	20:18	19:25	16:36
15	05:44	06:10 (T14)	06:15	06:49	07:23	44 08:12 (T12)
	20:50	34	06:44 (T14)	20:17	19:23	16:36
16	05:45	06:10 (T14)	06:16	06:50	07:24	41 08:12 (T12)
	20:49	33	06:43 (T14)	20:15	19:21	16:36
17	05:46	06:11 (T14)	06:17	06:51	07:26	41 08:12 (T12)
	20:49	32	06:43 (T14)	20:14	19:20	16:36
18	05:46	06:12 (T14)	06:18	06:52	07:27	40 08:13 (T12)
	20:48	31	06:43 (T14)	20:12	19:18	16:36
19	05:47	06:13 (T14)	06:20	06:54	07:28	31 08:10 (T12)
	20:47	30	06:43 (T14)	20:11	19:16	16:36
20	05:48	06:14 (T14)	06:21	06:55	07:29	39 08:12 (T12)
	20:47	29	06:43 (T14)	20:09	19:14	16:36
21	05:49	06:15 (T14)	06:22	06:56	07:30	35 08:11 (T12)
	20:46	28	06:43 (T14)	20:08	19:12	16:36
22	05:50	06:16 (T14)	06:23	06:57	07:32	34 08:10 (T12)
	20:45	27	06:43 (T14)	20:06	19:11	16:36
23	05:51	06:16 (T14)	06:24	06:58	07:33	34 08:09 (T12)
	20:44	25	06:41 (T14)	20:05	19:09	16:36
24	05:52	06:17 (T14)	06:25	06:59	07:34	29 08:10 (T12)
	20:43	24	06:41 (T14)	20:03	19:07	16:40
25	05:53	06:18 (T14)	06:26	07:00	07:35	28 08:09 (T12)
	20:42	22	06:40 (T14)	20:01	19:05	16:40
26	05:54	06:19 (T14)	06:27	07:01	07:37	24 08:08 (T12)
	20:41	21	06:40 (T14)	20:00	19:03	16:41
27	05:55	06:20 (T14)	06:28	07:02	07:38	25 08:08 (T12)
	20:40	19	06:39 (T14)	19:57	19:02	16:41
28	05:56	06:21 (T14)	06:29	07:04	07:39	19 08:07 (T12)
	20:39	17	06:38 (T14)	19:55	19:00	16:42
29	05:57	06:22 (T14)	06:31	07:05	07:40	19 08:06 (T12)
	20:38	15	06:37 (T14)	19:53	18:58	16:42
30	05:58	06:23 (T14)	06:32	07:06	07:42	18 08:04 (T12)
	20:37	12	06:35 (T14)	19:51	18:56	16:42
31	05:59	06:24 (T14)	06:33	07:43	08:29 (T12)	15 08:03 (T12)
	20:36	9	06:33 (T14)	19:50	18:06	16:44
Potential sun hours	466	433	376	343	293	281
Total, worst case	906	5		489	1052	19
Sun reduction	0.67	0.63		0.44	0.25	0.24
Oper. time red.	1.00	1.00		1.00	1.00	1.00
Wind dir. red.	0.74	0.74		0.66	0.64	0.64
Total reduction	0.49	0.46		0.29	0.16	0.15
Total, real	441	2		140	164	3

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 78 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2468)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June											
1	07:43	07:28	06:49	06:55	19:04 (T01)	06:06	05:35	19:22 (T02)									
	16:46	17:22	17:59	19:36	12	19:16 (T01)	20:10	20:42	52	20:14 (T02)							
2	07:43	07:27	06:48	06:54	19:02 (T01)	06:05	05:34	19:22 (T02)									
	16:47	17:23	18:00	19:37	15	19:17 (T01)	20:11	20:43	52	20:14 (T02)							
3	07:43	07:26	06:46	06:52	19:01 (T01)	06:04	05:34	19:22 (T02)									
	16:47	17:24	18:01	19:38	17	19:18 (T01)	20:12	20:44	52	20:14 (T02)							
4	07:43	07:25	06:44	06:50	19:00 (T01)	06:02	05:33	19:22 (T02)									
	16:48	17:26	18:02	19:40	20	19:20 (T01)	20:13	20:45	52	20:14 (T02)							
5	07:43	07:23	06:43	06:48	18:59 (T01)	06:01	05:33	19:22 (T02)									
	16:49	17:27	18:04	19:41	22	19:21 (T01)	20:14	20:45	53	20:15 (T02)							
6	07:43	07:22	06:41	06:47	18:58 (T01)	06:00	19:39 (T02)	05:33	19:23 (T02)								
	16:50	17:29	18:05	19:42	23	19:21 (T01)	20:16	15	19:54 (T02)	20:46	52	20:15 (T02)					
7	07:43	07:21	06:39	06:45	18:57 (T01)	05:58	19:30 (T02)	05:32	19:22 (T02)								
	16:51	17:30	18:06	19:43	25	19:22 (T01)	20:17	19	19:55 (T02)	20:47	52	20:14 (T02)					
8	07:43	07:20	06:38	06:43	18:57 (T01)	05:57	19:34 (T02)	05:32	19:23 (T02)								
	16:52	17:31	18:07	19:44	27	19:24 (T01)	20:18	23	19:57 (T02)	20:48	52	20:15 (T02)					
9	07:43	07:19	06:36	06:41	18:57 (T01)	05:56	19:32 (T02)	05:32	19:23 (T02)								
	16:53	17:33	18:09	19:45	28	19:25 (T01)	20:19	26	19:58 (T02)	20:48	52	20:15 (T02)					
10	07:42	07:17	06:34	06:40	18:56 (T01)	05:55	19:30 (T02)	05:31	19:24 (T02)								
	16:54	17:34	18:10	19:47	30	19:26 (T01)	20:20	29	19:59 (T02)	20:49	52	20:16 (T02)					
11	07:42	07:16	06:32	06:38	18:57 (T01)	05:53	19:29 (T02)	05:31	19:24 (T02)								
	16:55	17:35	18:11	19:48	30	19:27 (T01)	20:21	31	20:00 (T02)	20:49	52	20:16 (T02)					
12	07:42	07:15	06:31	06:36	18:57 (T01)	05:52	19:27 (T02)	05:31	19:25 (T02)								
	16:57	17:37	18:12	19:49	29	19:26 (T01)	20:22	33	20:00 (T02)	20:50	51	20:16 (T02)					
13	07:41	07:13	07:29	06:35	18:57 (T01)	05:51	19:26 (T02)	05:31	19:24 (T02)								
	16:58	17:38	19:14	19:50	28	19:25 (T01)	20:23	36	20:02 (T02)	20:51	51	20:15 (T02)					
14	07:41	07:12	07:27	06:33	18:58 (T01)	05:50	19:25 (T02)	05:31	19:24 (T02)								
	16:59	17:39	19:15	19:51	27	19:25 (T01)	20:25	38	20:03 (T02)	20:51	52	20:16 (T02)					
15	07:41	07:11	07:25	06:31	18:58 (T01)	05:49	19:25 (T02)	05:31	19:24 (T02)								
	17:00	17:41	19:16	19:52	25	19:23 (T01)	20:26	39	20:04 (T02)	20:52	52	20:16 (T02)					
16	07:40	07:09	07:24	06:30	18:59 (T01)	05:48	19:24 (T02)	05:31	19:25 (T02)								
	17:01	17:42	19:17	19:54	22	19:21 (T01)	20:27	41	20:05 (T02)	20:52	51	20:16 (T02)					
17	07:40	07:08	07:22	06:28	19:01 (T01)	05:47	19:23 (T02)	05:31	19:25 (T02)								
	17:02	17:43	19:18	19:55	19	19:20 (T01)	20:28	43	20:06 (T02)	20:52	51	20:16 (T02)					
18	07:39	07:06	07:20	06:26	19:02 (T01)	05:46	19:23 (T02)	05:31	19:26 (T02)								
	17:04	17:45	19:20	19:56	15	19:17 (T01)	20:29	43	20:05 (T02)	20:53	51	20:17 (T02)					
19	07:39	07:05	07:18	06:25	19:06 (T01)	05:45	19:23 (T02)	05:31	19:26 (T02)								
	17:05	17:46	19:21	19:57	8	19:14 (T01)	20:30	45	20:08 (T02)	20:53	51	20:17 (T02)					
20	07:38	07:03	07:17	06:23			05:44	19:23 (T02)	05:31	19:26 (T02)							
	17:06	17:47	19:22	19:58			20:31	46	20:09 (T02)	20:54	51	20:17 (T02)					
21	07:37	07:02	07:15	06:21			05:43	19:22 (T02)	05:31	19:26 (T02)							
	17:07	17:48	19:23	19:59			20:32	48	20:10 (T02)	20:54	51	20:17 (T02)					
22	07:37	07:00	07:13	06:20			05:42	19:22 (T02)	05:31	19:26 (T02)							
	17:09	17:50	19:24	20:01			20:33	49	20:11 (T02)	20:54	51	20:17 (T02)					
23	07:36	06:59	07:11	06:18			05:41	19:21 (T02)	05:32	19:26 (T02)							
	17:10	17:51	19:26	20:01			20:34	50	20:11 (T02)	20:54	51	20:17 (T02)					
24	07:35	06:57	07:10	06:17			05:40	19:22 (T02)	05:32	19:27 (T02)							
	17:11	17:52	19:27	20:02			20:35	51	20:13 (T02)	20:54	51	20:18 (T02)					
25	07:34	06:56	07:08	06:15			05:39	19:22 (T02)	05:32	19:27 (T02)							
	17:13	17:54	19:28	20:03			20:36	51	20:13 (T02)	20:55	51	20:18 (T02)					
26	07:33	06:54	07:06	06:14			05:39	19:21 (T02)	05:33	19:27 (T02)							
	17:14	17:55	19:29	20:04			20:37	52	20:13 (T02)	20:55	51	20:18 (T02)					
27	07:33	06:53	07:04	06:12			05:38	19:21 (T02)	05:33	19:28 (T02)							
	17:15	17:56	19:30	20:05			20:38	51	20:12 (T02)	20:55	51	20:19 (T02)					
28	07:32	06:51	07:02	06:11			05:37	19:22 (T02)	05:33	19:28 (T02)							
	17:16	17:57	19:31	20:06			20:39	51	20:13 (T02)	20:55	51	20:19 (T02)					
29	07:31		07:01	06:09			05:37	19:21 (T02)	05:34	19:28 (T02)							
	17:18		19:33	20:08			20:40	52	20:13 (T02)	20:55	52	20:20 (T02)					
30	07:30		06:59	3	19:11 (T01)	06:08	05:36	19:22 (T02)	05:34	19:28 (T02)							
	17:19		19:34	3	19:14 (T01)	20:09	20:41	52	20:14 (T02)	20:55	52	20:20 (T02)					
31	07:29		06:57	19:07 (T01)			05:35	19:21 (T02)									
	17:20		19:35	8	19:15 (T01)		20:41	53	20:14 (T02)		459						
	Potential sun hours	291	294	369		401		453		459							
	Total, worst case			11		422		1067		1546							
	Sun reduction			0.47		0.54		0.58		0.63							
	Oper. time red.			1.00		1.00		1.00		1.00							
	Wind dir. red.			0.73		0.73		0.68		0.68							
	Total reduction			0.35		0.40		0.39		0.43							
	Total, real			4		168		421		663							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 78 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2468)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December										
1	05:35	19:29 (T02)	06:00	19:37 (T02)	06:34	18:56 (T01)	07:07	07:44	07:22							
	20:55	51	20:20 (T02)	20:35	35	20:12 (T02)	19:48	16	19:22 (T01)	18:55	18:05	16:37				
2	05:35	19:28 (T02)	06:01	19:38 (T02)	06:35	18:55 (T01)	07:08	07:46	07:23							
	20:55	52	20:20 (T02)	20:34	33	20:11 (T02)	19:46	23	19:25 (T01)	18:53	18:03	16:37				
3	05:36	19:29 (T02)	06:02	19:39 (T02)	06:36	18:54 (T01)	07:09	07:47	07:24							
	20:55	52	20:21 (T02)	20:33	28	20:09 (T02)	19:45	19	19:24 (T01)	18:51	18:02	16:37				
4	05:36	19:29 (T02)	06:03	19:41 (T02)	06:37	18:55 (T01)	07:10	07:48	07:25							
	20:54	51	20:20 (T02)	20:32	24	20:08 (T02)	19:43	15	19:23 (T01)	18:49	18:01	16:37				
5	05:37	19:29 (T02)	06:04	19:42 (T02)	06:38	18:54 (T01)	07:12	07:49	07:26							
	20:54	52	20:21 (T02)	20:31	23	20:06 (T02)	19:41	15	19:21 (T01)	18:47	17:59	16:36				
6	05:37	19:29 (T02)	06:06	19:44 (T02)	06:39	18:55 (T01)	07:13	06:51	07:27							
	20:54	52	20:21 (T02)	20:29	16	20:04 (T02)	19:39	16	19:19 (T01)	18:46	16:58	16:36				
7	05:38	19:29 (T02)	06:07	19:47 (T02)	06:41	18:54 (T01)	07:14	06:52	07:28							
	20:54	52	20:21 (T02)	20:28	16	20:05 (T02)	19:38	21	19:18 (T01)	18:44	16:57	16:36				
8	05:39	19:30 (T02)	06:08	19:50 (T02)	06:42	18:55 (T01)	07:15	06:53	07:29							
	20:53	52	20:22 (T02)	20:27	12	20:02 (T02)	19:36	12	19:16 (T01)	18:42	16:56	16:36				
9	05:39	19:29 (T02)	06:09			06:43		18:54 (T01)	07:16	06:55	07:30					
	20:53	52	20:21 (T02)	20:25		19:34		16	19:14 (T01)	18:40	16:55	16:36				
10	05:40	19:30 (T02)	06:10			06:44		18:55 (T01)	07:17	06:56	07:31					
	20:53	52	20:22 (T02)	20:24		19:32		9	19:12 (T01)	18:39	16:53	16:36				
11	05:41	19:30 (T02)	06:11			06:45		18:55 (T01)	07:19	06:57	07:32					
	20:52	52	20:22 (T02)	20:23		19:31		12	19:10 (T01)	18:37	16:52	16:36				
12	05:42	19:29 (T02)	06:12			06:46		18:56 (T01)	07:20	06:58	07:33					
	20:52	53	20:22 (T02)	20:21		19:29		10	19:07 (T01)	18:35	16:51	16:36				
13	05:42	19:30 (T02)	06:13			06:47		18:58 (T01)	07:21	07:00	07:33					
	20:51	52	20:22 (T02)	20:20		19:27		7	19:07 (T01)	18:34	16:50	16:36				
14	05:43	19:30 (T02)	06:14			06:48		19:02 (T01)	07:22	07:01	07:34					
	20:51	52	20:22 (T02)	20:18		19:25		3	19:05 (T01)	18:32	16:49	16:36				
15	05:44	19:31 (T02)	06:15			06:49			07:23	07:02	07:35					
	20:50	49	20:22 (T02)	20:17		19:23			18:30	16:48	16:36					
16	05:45	19:31 (T02)	06:16			06:50			07:24	07:04	07:36					
	20:49	40	20:23 (T02)	20:16		19:22			18:29	16:47	16:37					
17	05:46	19:30 (T02)	06:17			06:51			07:26	07:05	07:36					
	20:49	36	20:22 (T02)	20:14		19:20			18:27	16:46	16:37					
18	05:47	19:31 (T02)	06:19			06:53			07:27	07:06	07:37					
	20:48	40	20:22 (T02)	20:13		19:18			18:25	16:46	16:37					
19	05:47	19:31 (T02)	06:20			06:54			07:28	07:07	07:38					
	20:47	25	20:22 (T02)	20:11		19:16			18:24	16:45	16:37					
20	05:48	19:31 (T02)	06:21			06:55			07:29	07:09	07:38					
	20:47	49	20:22 (T02)	20:09		19:14			18:22	16:44	16:38					
21	05:49	19:32 (T02)	06:22			06:56			07:31	07:10	07:39					
	20:46	25	20:21 (T02)	20:08		19:13			18:21	16:43	16:38					
22	05:50	19:32 (T02)	06:23			06:57			07:32	07:11	07:39					
	20:45	28	20:17 (T02)	20:06		19:11			18:19	16:42	16:39					
23	05:51	19:33 (T02)	06:24			06:58			07:33	07:12	07:40					
	20:44	48	20:21 (T02)	20:05		19:09			18:18	16:42	16:39					
24	05:52	19:33 (T02)	06:25			06:59			07:34	07:14	07:40					
	20:43	35	20:20 (T02)	20:03		19:07			18:16	16:41	16:40					
25	05:53	19:33 (T02)	06:26	19:09 (T01)	07:00				07:35	07:15	07:41					
	20:42	26	20:18 (T02)	20:02	8	19:17 (T01)	19:05		18:15	16:40	16:40					
26	05:54	19:33 (T02)	06:27	19:05 (T01)	07:01				07:37	07:16	07:41					
	20:42	31	20:18 (T02)	20:00	15	19:20 (T01)	19:03		18:13	16:40	16:41					
27	05:55	19:34 (T02)	06:28	19:03 (T01)	07:03				07:38	07:17	07:42					
	20:41	32	20:17 (T02)	19:57	11	19:18 (T01)	19:02		18:12	16:39	16:42					
28	05:56	19:34 (T02)	06:30	19:01 (T01)	07:04				07:39	07:18	07:42					
	20:40	20	20:10 (T02)	19:55	22	19:23 (T01)	19:00		18:10	16:39	16:42					
29	05:57	19:35 (T02)	06:31	18:59 (T01)	07:05				07:40	07:19	07:42					
	20:39	34	20:15 (T02)	19:53	18	19:24 (T01)	18:58		18:09	16:38	16:43					
30	05:58	19:36 (T02)	06:32	18:59 (T01)	07:06				07:42	07:21	07:42					
	20:37	25	20:14 (T02)	19:52	13	19:25 (T01)	18:56		18:07	16:38	16:44					
31	05:59	19:36 (T02)	06:33	18:57 (T01)					07:43		07:43					
	20:36	37	20:13 (T02)	19:50	23	19:25 (T01)			18:06		16:45					
	Potential sun hours	466		433		376			343	293	281					
	Total, worst case		1307		297		194									
	Sun reduction		0.67		0.63		0.56									
	Oper. time red.		1.00		1.00		1.00									
	Wind dir. red.		0.68		0.70		0.73									
	Total reduction		0.46		0.44		0.41									
	Total, real		596		131		80									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: 79 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2469)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
Total	245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April	May	June											
1	07:43	07:28	06:49	06:55	18:56 (T01)	06:06	19:19 (T02)	05:35									
	16:46	17:22	17:59	19:36	20	19:16 (T01)	20:10	30	19:49 (T02)	20:42	42	19:59 (T02)					
2	07:43	07:27	06:48	06:54	18:55 (T01)	06:05	19:18 (T02)	05:34									
	16:47	17:23	18:00	19:37	22	19:17 (T01)	20:11	33	19:51 (T02)	20:43	41	19:58 (T02)					
3	07:43	07:26	06:46	06:52	18:54 (T01)	06:04	19:16 (T02)	05:34									
	16:47	17:24	18:01	19:38	24	19:18 (T01)	20:12	35	19:51 (T02)	20:44	40	19:58 (T02)					
4	07:43	07:25	06:44	06:50	18:54 (T01)	06:02	19:16 (T02)	05:33									
	16:48	17:26	18:02	19:40	26	19:20 (T01)	20:13	36	19:52 (T02)	20:45	39	19:57 (T02)					
5	07:43	07:23	06:43	06:48	18:54 (T01)	06:01	19:15 (T02)	05:33									
	16:49	17:27	18:04	19:41	27	19:21 (T01)	20:14	39	19:54 (T02)	20:45	39	19:57 (T02)					
6	07:43	07:22	06:41	06:47	18:53 (T01)	06:00	19:14 (T02)	05:33									
	16:50	17:29	18:05	19:42	28	19:21 (T01)	20:16	40	19:54 (T02)	20:46	39	19:58 (T02)					
7	07:43	07:21	06:39	06:45	18:53 (T01)	05:58	19:13 (T02)	05:32									
	16:51	17:30	18:06	19:43	29	19:22 (T01)	20:17	42	19:55 (T02)	20:47	38	19:57 (T02)					
8	07:43	07:20	06:38	06:43	18:54 (T01)	05:57	19:13 (T02)	05:32									
	16:52	17:31	18:07	19:44	28	19:22 (T01)	20:18	44	19:57 (T02)	20:48	37	19:57 (T02)					
9	07:43	07:19	06:36	06:41	18:54 (T01)	05:56	19:13 (T02)	05:32									
	16:53	17:33	18:09	19:45	26	19:20 (T01)	20:19	45	19:58 (T02)	20:48	36	19:57 (T02)					
10	07:42	07:17	06:34	06:40	18:54 (T01)	05:55	19:12 (T02)	05:31									
	16:54	17:34	18:10	19:47	25	19:19 (T01)	20:20	47	19:59 (T02)	20:49	36	19:57 (T02)					
11	07:42	07:16	06:32	06:38	18:56 (T01)	05:53	19:12 (T02)	05:31									
	16:55	17:35	18:11	19:48	22	19:18 (T01)	20:21	48	20:00 (T02)	20:49	35	19:57 (T02)					
12	07:42	07:15	06:31	06:36	18:57 (T01)	05:52	19:11 (T02)	05:31									
	16:57	17:37	18:12	19:49	19	19:16 (T01)	20:22	48	19:59 (T02)	20:50	34	19:57 (T02)					
13	07:41	07:13	07:29	06:35	18:59 (T01)	05:51	19:11 (T02)	05:31									
	16:58	17:38	19:14	19:50	14	19:13 (T01)	20:23	49	20:00 (T02)	20:51	34	19:56 (T02)					
14	07:41	07:12	07:27	06:33	19:03 (T01)	05:50	19:11 (T02)	05:31									
	16:59	17:39	19:15	19:51	7	19:10 (T01)	20:25	49	20:00 (T02)	20:51	33	19:56 (T02)					
15	07:41	07:11	07:25	06:31	19:49	05:49	19:11 (T02)	05:31									
	17:00	17:41	19:16	19:52		20:26	49	20:00 (T02)	20:52	33	19:56 (T02)						
16	07:40	07:09	07:24	06:30	19:48	05:48	19:11 (T02)	05:31									
	17:01	17:42	19:17	19:54		20:27	49	20:00 (T02)	20:52	32	19:56 (T02)						
17	07:40	07:08	07:22	06:28	19:56	05:47	19:11 (T02)	05:31									
	17:02	17:43	19:18	19:55		20:28	49	20:00 (T02)	20:52	32	19:56 (T02)						
18	07:39	07:06	07:20	06:26	19:56	05:46	19:11 (T02)	05:31									
	17:04	17:45	19:20	19:56		20:29	49	20:00 (T02)	20:53	32	19:57 (T02)						
19	07:39	07:05	07:18	06:25	19:45	05:45	19:12 (T02)	05:31									
	17:05	17:46	19:21	19:57		20:30	49	20:01 (T02)	20:53	32	19:57 (T02)						
20	07:38	07:03	07:17	06:23	19:44	05:44	19:12 (T02)	05:31									
	17:06	17:47	19:22	19:58		20:31	48	20:00 (T02)	20:54	31	19:57 (T02)						
21	07:37	07:02	07:15	06:21	19:59	05:43	19:12 (T02)	05:31									
	17:07	17:48	19:23	19:59		20:32	48	20:00 (T02)	20:54	31	19:57 (T02)						
22	07:37	07:00	07:13	06:20	19:42	05:42	19:12 (T02)	05:31									
	17:09	17:50	19:24	20:01		20:33	48	20:00 (T02)	20:54	31	19:57 (T02)						
23	07:36	06:59	07:11	06:18	19:41	05:41	19:12 (T02)	05:32									
	17:10	17:51	19:26	20:01		20:34	48	20:00 (T02)	20:54	31	19:57 (T02)						
24	07:35	06:57	07:10	06:17	19:40	05:40	19:13 (T02)	05:32									
	17:11	17:52	19:27	20:02		20:35	47	20:00 (T02)	20:54	31	19:58 (T02)						
25	07:34	06:56	07:08	06:15	19:39	05:39	19:13 (T02)	05:32									
	17:13	17:54	19:28	20:03		20:36	47	20:00 (T02)	20:55	32	19:58 (T02)						
26	07:33	06:54	07:06	19:08 (T01)	06:14	19:31 (T02)	05:39										
	17:14	17:55	19:29	2	19:10 (T01)	20:04	12	19:43 (T02)	20:37	46	19:59 (T02)	20:55					
27	07:33	06:53	07:04	19:04 (T01)	06:12	19:28 (T02)	05:38										
	17:15	17:56	19:30	6	19:10 (T01)	20:05	17	19:45 (T02)	20:38	46	19:59 (T02)	20:55					
28	07:32	06:51	07:02	19:01 (T01)	06:11	19:24 (T02)	05:37										
	17:16	17:57	19:31	10	19:11 (T01)	20:06	22	19:46 (T02)	20:39	44	19:59 (T02)	20:55					
29	07:31		07:01	18:59 (T01)	06:09	19:23 (T02)	05:37										
	17:18		19:33	13	19:12 (T01)	20:08	24	19:47 (T02)	20:40	44	19:59 (T02)	20:55					
30	07:30		06:59	18:58 (T01)	06:08	19:20 (T02)	05:36										
	17:19		19:34	16	19:14 (T01)	20:09	28	19:48 (T02)	20:41	43	19:59 (T02)	20:55					
31	07:29		06:57	18:57 (T01)			05:35										
	17:20		19:35	18	19:15 (T01)		20:41	42	19:58 (T02)								
	Potential sun hours	291	294	369		401		453			459						
	Total, worst case			65		420		1381			1035						
	Sun reduction			0.47		0.54		0.58			0.63						
	Oper. time red.			1.00		1.00		1.00			1.00						
	Wind dir. red.			0.74		0.73		0.69			0.69						
	Total reduction			0.35		0.39		0.40			0.44						
	Total, real			23		165		557			453						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: 79 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2469)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December										
1	05:35	19:27 (T02)	06:00	19:22 (T02)	06:34	18:56 (T01)	07:07	07:44	07:22							
	20:55	34	20:01 (T02)	20:35	48	20:10 (T02)	19:48	10	19:14 (T01)	18:55	18:05	16:37				
2	05:35	19:26 (T02)	06:01	19:22 (T02)	06:35	18:54 (T01)	07:08	07:46	07:23							
	20:55	35	20:01 (T02)	20:34	48	20:10 (T02)	19:46	17	19:16 (T01)	18:53	18:03	16:37				
3	05:36	19:27 (T02)	06:02	19:22 (T02)	06:36	18:52 (T01)	07:09	07:47	07:24							
	20:55	35	20:02 (T02)	20:33	45	20:09 (T02)	19:45	15	19:17 (T01)	18:51	18:02	16:37				
4	05:36	19:26 (T02)	06:03	19:22 (T02)	06:37	18:54 (T01)	07:10	07:48	07:25							
	20:54	36	20:02 (T02)	20:32	43	20:08 (T02)	19:43	15	19:13 (T01)	18:49	18:01	16:37				
5	05:37	19:26 (T02)	06:04	19:22 (T02)	06:38	18:52 (T01)	07:12	07:49	07:26							
	20:54	37	20:03 (T02)	20:31	43	20:06 (T02)	19:41	16	19:18 (T01)	18:47	17:59	16:36				
6	05:37	19:25 (T02)	06:06	19:23 (T02)	06:39	18:50 (T01)	07:13	06:51	07:27							
	20:54	38	20:03 (T02)	20:29	37	20:04 (T02)	19:39	20	19:19 (T01)	18:46	16:58	16:36				
7	05:38	19:26 (T02)	06:07	19:23 (T02)	06:41	18:49 (T01)	07:14	06:52	07:28							
	20:54	38	20:04 (T02)	20:28	34	20:05 (T02)	19:38	26	19:18 (T01)	18:44	16:57	16:36				
8	05:39	19:26 (T02)	06:08	19:23 (T02)	06:42	18:49 (T01)	07:15	06:53	07:29							
	20:53	39	20:05 (T02)	20:27	40	20:03 (T02)	19:36	15	19:16 (T01)	18:42	16:56	16:36				
9	05:39	19:25 (T02)	06:09	19:24 (T02)	06:43	18:48 (T01)	07:16	06:55	07:30							
	20:53	39	20:04 (T02)	20:25	31	20:02 (T02)	19:34	21	19:14 (T01)	18:40	16:55	16:36				
10	05:40	19:25 (T02)	06:10	19:25 (T02)	06:44	18:48 (T01)	07:17	06:56	07:31							
	20:53	40	20:05 (T02)	20:24	33	20:01 (T02)	19:32	15	19:12 (T01)	18:39	16:53	16:36				
11	05:41	19:25 (T02)	06:11	19:25 (T02)	06:45	18:48 (T01)	07:19	06:57	07:32							
	20:52	41	20:06 (T02)	20:23	22	19:59 (T02)	19:31	17	19:10 (T01)	18:37	16:52	16:36				
12	05:42	19:24 (T02)	06:12	19:26 (T02)	06:46	18:48 (T01)	07:20	06:58	07:33							
	20:52	42	20:06 (T02)	20:21	20	19:58 (T02)	19:29	18	19:07 (T01)	18:35	16:51	16:36				
13	05:42	19:24 (T02)	06:13	19:28 (T02)	06:47	18:48 (T01)	07:21	07:00	07:33							
	20:51	42	20:06 (T02)	20:20	21	19:58 (T02)	19:27	13	19:07 (T01)	18:34	16:50	16:36				
14	05:43	19:24 (T02)	06:14	19:29 (T02)	06:48	18:48 (T01)	07:22	07:01	07:34							
	20:51	43	20:07 (T02)	20:18	27	19:56 (T02)	19:25	14	19:05 (T01)	18:32	16:49	16:36				
15	05:44	19:24 (T02)	06:15	19:31 (T02)	06:49	18:49 (T01)	07:23	07:02	07:35							
	20:50	44	20:08 (T02)	20:17	24	19:55 (T02)	19:23	12	19:03 (T01)	18:30	16:48	16:36				
16	05:45	19:24 (T02)	06:16	19:33 (T02)	06:50	18:50 (T01)	07:24	07:04	07:36							
	20:49	36	20:08 (T02)	20:16	16	19:53 (T02)	19:22	11	19:01 (T01)	18:29	16:47	16:37				
17	05:46	19:23 (T02)	06:17	19:35 (T02)	06:51	18:52 (T01)	07:26	07:05	07:36							
	20:49	33	20:07 (T02)	20:14	17	19:52 (T02)	19:20	4	18:56 (T01)	18:27	16:46	16:37				
18	05:47	19:23 (T02)	06:19	19:39 (T02)	06:53	18:54 (T01)	07:27	07:06	07:37							
	20:48	35	20:09 (T02)	20:13	10	19:49 (T02)	19:18	3	18:57 (T01)	18:25	16:46	16:37				
19	05:47	19:23 (T02)	06:20		06:54			07:28	07:07	07:38						
	20:47	26	20:09 (T02)	20:11		19:16			18:24	16:45	16:37					
20	05:48	19:23 (T02)	06:21		06:55			07:29	07:09	07:38						
	20:47	45	20:10 (T02)	20:09		19:14			18:22	16:44	16:38					
21	05:49	19:23 (T02)	06:22		06:56			07:31	07:10	07:39						
	20:46	30	20:10 (T02)	20:08		19:13			18:21	16:43	16:38					
22	05:50	19:23 (T02)	06:23		06:57			07:32	07:11	07:39						
	20:45	32	20:10 (T02)	20:06		19:11			18:19	16:42	16:39					
23	05:51	19:23 (T02)	06:24		06:58			07:33	07:12	07:40						
	20:44	48	20:11 (T02)	20:05		19:09			18:18	16:42	16:39					
24	05:52	19:23 (T02)	06:25		06:59			07:34	07:14	07:40						
	20:43	39	20:05 (T02)	20:03		19:07			18:16	16:41	16:40					
25	05:53	19:21 (T02)	06:26		07:00			07:35	07:15	07:41						
	20:42	37	20:06 (T02)	20:02		19:05			18:15	16:40	16:40					
26	05:54	19:21 (T02)	06:27		07:01			07:37	07:16	07:41						
	20:42	39	20:10 (T02)	20:00		19:03			18:13	16:40	16:41					
27	05:55	19:21 (T02)	06:28		07:02			07:38	07:17	07:42						
	20:41	41	20:08 (T02)	19:57		19:02			18:12	16:39	16:42					
28	05:56	19:21 (T02)	06:30		07:04			07:39	07:18	07:42						
	20:40	33	20:10 (T02)	19:55		19:00			18:10	16:39	16:42					
29	05:57	19:21 (T02)	06:31		07:05			07:40	07:19	07:42						
	20:39	43	20:10 (T02)	19:53		18:58			18:09	16:38	16:43					
30	05:58	19:21 (T02)	06:32	19:03 (T01)	07:06			07:42	07:21	07:42						
	20:37	36	20:09 (T02)	19:52	5	19:10 (T01)	18:56		18:07	16:38	16:44					
31	05:59	19:21 (T02)	06:33		18:59 (T01)			07:43			07:43					
	20:36	49	20:10 (T02)	19:50	10	19:13 (T01)			18:06		16:45					
	Potential sun hours	466		433		376			343	293	281					
	Total, worst case		1185		574		262									
	Sun reduction		0.67		0.63		0.56									
	Oper. time red.		1.00		1.00		1.00									
	Wind dir. red.		0.69		0.70		0.74									
	Total reduction		0.47		0.44		0.41									
	Total, real		552		252		108									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: 80 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2171)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
Total	245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April	May	June
1 07:43	08:09 (T27)	07:28	07:51 (T30)	06:49	06:55	08:08 (T28)
16:45	08:35 (T27)	17:21	08:53 (T27)	17:58	19:36	06:06
2 07:43	08:09 (T27)	07:27	07:50 (T30)	06:47	07:11 (T28)	08:12 (T28)
16:46	08:35 (T27)	17:23	08:53 (T27)	18:00	06:53	20:10
3 07:43	08:09 (T27)	07:26	07:49 (T30)	06:46	07:27 (T28)	07:27 (T28)
16:47	08:36 (T27)	17:24	08:53 (T27)	18:01	19:37	06:05
4 07:43	08:09 (T27)	07:24	07:48 (T30)	06:44	07:08 (T28)	07:08 (T28)
16:48	08:37 (T27)	17:25	08:52 (T27)	18:02	19:38	06:03
5 07:43	08:09 (T27)	07:23	07:47 (T30)	06:42	07:08 (T28)	07:08 (T28)
16:49	08:38 (T27)	17:27	08:52 (T27)	18:03	19:41	06:03
6 07:43	08:09 (T27)	07:22	07:45 (T30)	06:41	07:03 (T28)	07:03 (T28)
16:50	08:39 (T27)	17:28	08:51 (T27)	18:05	19:42	06:46
7 07:43	08:09 (T27)	07:21	07:44 (T30)	06:39	07:36 (T28)	07:36 (T28)
16:51	08:40 (T27)	17:29	08:50 (T27)	18:06	19:42	06:44
8 07:43	08:08 (T27)	07:20	07:43 (T30)	06:37	07:37 (T28)	07:37 (T28)
16:52	08:41 (T27)	17:31	08:50 (T27)	18:07	19:44	06:43
9 07:42	08:08 (T27)	07:18	07:42 (T30)	06:36	07:35 (T28)	07:35 (T28)
16:53	08:42 (T27)	17:32	08:49 (T27)	18:08	19:45	06:41
10 07:42	08:08 (T27)	07:17	07:40 (T30)	06:34	07:39 (T28)	07:39 (T28)
16:54	08:43 (T27)	17:33	08:47 (T27)	18:10	19:45	06:39
11 07:42	08:07 (T27)	07:16	07:39 (T30)	06:32	07:37 (T28)	07:37 (T28)
16:55	08:43 (T27)	17:35	08:46 (T27)	18:11	19:48	06:38
12 07:42	08:07 (T27)	07:15	07:38 (T30)	06:30	07:39 (T28)	07:39 (T28)
16:56	08:44 (T27)	17:36	08:44 (T27)	18:12	19:49	06:36
13 07:41	08:07 (T27)	07:13	07:36 (T30)	07:29	07:53 (T28)	07:53 (T28)
16:57	08:46 (T27)	17:37	08:42 (T27)	19:13	19:46	06:34
14 07:41	08:06 (T27)	07:12	07:36 (T30)	07:27	07:52 (T28)	07:52 (T28)
16:58	08:46 (T27)	17:39	08:39 (T27)	19:14	19:51	06:33
15 07:40	08:06 (T27)	07:10	07:36 (T30)	07:25	07:51 (T28)	07:51 (T28)
17:00	08:47 (T27)	17:40	08:33 (T27)	19:16	07:53 (T28)	07:53 (T28)
16 07:40	08:05 (T27)	07:09	07:38 (T30)	07:23	19:52	06:34
17:01	08:48 (T27)	17:41	08:42 (T27)	19:13	07:54 (T28)	07:54 (T28)
17 07:40	08:04 (T27)	07:08	07:36 (T30)	07:27	19:50	06:33
17:02	08:48 (T27)	17:43	08:39 (T27)	19:14	07:52 (T28)	07:52 (T28)
18 07:39	08:04 (T27)	07:06	07:36 (T30)	07:25	19:51	06:32
17:03	08:49 (T27)	17:44	08:44 (T27)	19:19	07:53 (T28)	07:53 (T28)
19 07:38	08:04 (T27)	07:05	07:42 (T30)	07:18	19:55	06:31
17:04	08:49 (T27)	17:45	07:54 (T30)	19:20	07:55 (T28)	07:55 (T28)
20 07:38	08:03 (T27)	07:03	07:47 (T30)	07:16	19:56	06:30
17:06	08:50 (T27)	17:47	07:50 (T30)	19:22	07:57 (T28)	07:57 (T28)
21 07:37	08:04 (T27)	07:02	07:15	07:20	19:57	06:29
17:07	08:51 (T27)	17:48	07:38 (T30)	07:23	07:58 (T28)	07:58 (T28)
22 07:36	08:04 (T27)	07:00	07:13	07:23	19:58	06:28
17:08	08:51 (T27)	17:49	08:00 (T30)	19:17	07:59 (T28)	07:59 (T28)
23 07:36	08:04 (T27)	06:59	07:11	07:22	19:59	06:27
17:09	08:52 (T27)	17:51	08:38 (T30)	19:18	07:50 (T28)	07:50 (T28)
24 07:35	08:04 (T27)	06:57	07:09	07:25	19:55	06:26
17:11	08:52 (T27)	17:52	08:36 (T30)	19:26	07:52 (T28)	07:52 (T28)
25 07:34	08:04 (T27)	06:55	07:07	07:25	19:56	06:25
17:12	08:52 (T27)	17:53	08:42 (T30)	19:28	07:53 (T28)	07:53 (T28)
26 07:33	08:04 (T27)	06:54	07:06	07:28	19:57	06:24
17:13	08:52 (T27)	17:55	08:31 (T30)	19:29	07:54 (T28)	07:54 (T28)
27 07:32	08:04 (T27)	06:52	07:04	07:28	19:58	06:23
17:15	08:52 (T27)	17:56	08:30 (T30)	19:30	07:55 (T28)	07:55 (T28)
28 07:32	08:05 (T27)	06:51	07:02	07:28	19:59	06:22
17:16	08:54 (T27)	17:57	08:33 (T30)	19:31	07:56 (T28)	07:56 (T28)
29 07:31	08:06 (T27)	07:00	07:00	07:28	20:06	06:21
17:17	08:54 (T27)	17:59	08:32 (T30)	19:32	07:57 (T28)	07:57 (T28)
30 07:30	08:05 (T27)	06:59	07:04	07:28	20:07	06:20
17:19	08:53 (T27)	17:59	08:33 (T30)	19:33	07:58 (T28)	07:58 (T28)
31 07:29	08:05 (T27)	06:57	07:02	07:28	20:09	06:19
17:20	08:53 (T27)	17:59	08:34 (T30)	19:35	07:59 (T28)	07:59 (T28)
Potential sun hours	291	294	369	401	454	459
Total, worst case	1243	850	1151	342	1501	739
Sun reduction	0.36	0.40	0.47	0.54	0.58	0.63
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.62	0.64	0.72	0.75	0.75	0.75
Total reduction	0.22	0.25	0.33	0.39	0.42	0.46
Total, real	269	212	379	135	638	341

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 80 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2171)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December				
1 05:34	06:37 (T26)	06:00	06:30 (T26)	06:34	07:07	07:31 (T28)	07:44	08:09 (T30)	07:22	07:49 (T27)
2 05:55	29 07:11 (T26)	20:35 33	07:22 (T26) 19:48	18:54 48	08:19 (T28) 07:08	18:04 50	09:16 (T27) 07:32	16:37 37	08:27 (T27)	
3 05:35	06:35 (T26)	06:01	06:33 (T26)	06:35	07:17 (T26)	07:32 (T28)	07:45	08:10 (T30)	07:23	07:50 (T27)
4 05:36	06:34 (T26)	06:02	06:35 (T26)	06:36	07:12 (T26)	07:32 (T28)	07:47	08:11 (T30)	07:24	07:51 (T27)
5 05:36	06:34 (T26)	06:04	06:32 (T26)	06:38	07:13 (T26)	07:34 (T28)	07:49	08:14 (T30)	07:26	07:53 (T27)
6 05:37	06:35 (T26)	06:05	06:31 (T26)	06:39	07:14 (T26)	07:35 (T28)	07:51	09:20 (T27) 07:12	16:36 32	08:26 (T27)
7 05:38	06:33 (T26)	06:06	06:31 (T26)	06:37	07:15 (T26)	07:37 (T28)	07:48	08:13 (T30)	07:25	07:52 (T27)
8 05:38	06:36 (T26)	06:07	06:34 (T26)	06:41	07:16 (T26)	07:38 (T28)	07:53	09:20 (T27) 07:29	16:36 32	08:26 (T27)
9 05:39	06:33 (T26)	06:08	06:34 (T26)	06:42	07:17 (T26)	07:39 (T28)	07:54	09:20 (T27) 07:30	16:35 32	08:25 (T27)
10 05:40	06:33 (T26)	06:09	06:38 (T26)	06:43	07:18 (T26)	07:40 (T28)	07:55	09:21 (T27) 07:31	16:36 31	08:26 (T27)
11 05:40	06:38 (T26)	06:10	06:39 (T26)	06:45	07:19 (T26)	07:41 (T28)	07:57	09:22 (T27) 07:32	16:35 30	08:26 (T27)
12 05:41	06:33 (T26)	06:12	06:37 (T26)	06:46	07:20 (T26)	07:42 (T28)	07:58	09:23 (T27) 07:33	16:35 30	08:25 (T27)
13 05:42	06:34 (T26)	06:13	06:43 (T31)	06:47	07:21 (T26)	07:43 (T28)	07:59	09:24 (T27) 07:34	16:35 29	08:25 (T27)
14 05:43	06:32 (T26)	06:14	06:38 (T26)	06:48	07:22 (T26)	07:44 (T28)	08:00 (T28)	08:24 (T27) 07:35	16:35 28	08:25 (T27)
15 05:44	06:32 (T26)	06:15	06:39 (T26)	06:49	07:23 (T26)	07:45 (T28)	08:02 (T28)	08:25 (T27) 07:36	16:35 27	08:25 (T27)
16 05:44	06:37 (T26)	06:16	06:40 (T26)	06:50	07:24 (T26)	07:46 (T28)	08:03 (T28)	08:26 (T27) 07:37	16:35 26	08:25 (T27)
17 05:45	06:33 (T26)	06:17	06:41 (T31)	06:51	07:25 (T26)	07:47 (T28)	08:04 (T28)	08:27 (T27) 07:38	16:35 25	08:25 (T27)
18 05:46	06:32 (T26)	06:18	06:42 (T31)	06:52	07:26 (T26)	07:48 (T28)	08:05 (T28)	08:28 (T27) 07:39	16:35 24	08:25 (T27)
19 05:47	06:32 (T26)	06:19	06:43 (T31)	06:53	07:27 (T26)	07:49 (T28)	08:06 (T28)	08:29 (T27) 07:40	16:35 23	08:25 (T27)
20 05:48	06:31 (T26)	06:20	06:44 (T31)	06:54	07:28 (T26)	07:50 (T28)	08:07 (T28)	08:30 (T27) 07:41	16:35 22	08:25 (T27)
21 05:49	06:31 (T26)	06:21	06:45 (T31)	06:56	07:29 (T26)	07:51 (T28)	08:08 (T28)	08:31 (T27) 07:42	16:35 21	08:25 (T27)
22 05:50	06:30 (T26)	06:23	06:53 (T31)	06:57	07:30 (T26)	07:52 (T28)	08:09 (T28)	08:32 (T27) 07:43	16:35 20	08:25 (T27)
23 05:51	06:30 (T26)	06:24	06:51 (T31)	06:58	07:31 (T26)	07:53 (T28)	08:10 (T28)	08:33 (T27) 07:44	16:35 19	08:26 (T27)
24 05:52	06:32 (T26)	06:25	06:53 (T31)	06:59	07:32 (T26)	07:54 (T28)	08:11 (T28)	08:34 (T27) 07:45	16:35 18	08:26 (T27)
25 05:53	06:30 (T26)	06:26	06:52 (T31)	07:00	07:33 (T26)	07:55 (T28)	08:12 (T28)	08:35 (T27) 07:46	16:35 17	08:26 (T27)
26 05:54	06:30 (T26)	06:27	06:51 (T31)	07:01	07:34 (T26)	07:56 (T28)	08:13 (T28)	08:36 (T27) 07:47	16:35 16	08:26 (T27)
27 05:55	06:30 (T26)	06:28	06:52 (T31)	07:02	07:35 (T26)	07:57 (T28)	08:14 (T28)	08:37 (T27) 07:48	16:35 15	08:26 (T27)
28 05:56	06:30 (T26)	06:29	06:53 (T31)	07:03	07:36 (T26)	07:58 (T28)	08:15 (T28)	08:38 (T27) 07:49	16:35 14	08:26 (T27)
29 05:57	06:30 (T26)	06:30	06:54 (T31)	07:04	07:37 (T26)	07:59 (T28)	08:16 (T28)	08:39 (T27) 07:50	16:35 13	08:26 (T27)
30 05:58	06:30 (T26)	06:31	06:55 (T31)	07:05	07:38 (T26)	07:60 (T28)	08:17 (T28)	08:40 (T27) 07:51	16:35 12	08:26 (T27)
31 05:59	06:30 (T26)	06:32	06:56 (T31)	07:06	07:39 (T26)	07:61 (T28)	08:18 (T28)	08:41 (T27) 07:52	16:35 11	08:26 (T27)
Potential sun hours	466	433	376	343	343	293	281			
Total, worst case	954	644	512	710	1378		753			
Sun reduction	0.67	0.63	0.56	0.44	0.25		0.24			
Oper. time red.	1.00	1.00	1.00	1.00	1.00		1.00			
Wind dir. red.	0.75	0.75	0.72	0.70	0.62		0.62			
Total reduction	0.49	0.46	0.39	0.30	0.15		0.14			
Total, real	468	297	201	212	209		109			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 105 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2487)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April		May	June										
1 07:43	16:08 (T02)	07:28	06:49	06:55		06:06	06:29 (T08)	05:35									
16:46	13	16:21 (T02)	17:22	17:59	19:36	20:10	18	06:47 (T08)	20:42	42	20:15 (T03)						
2 07:43		16:09 (T02)	07:27	06:48	06:54	06:05	06:28 (T08)	05:34			19:33 (T03)						
16:46	13	16:22 (T02)	17:23	18:00	19:37	20:11	19	06:47 (T08)	20:43	42	20:15 (T03)						
3 07:43		16:09 (T02)	07:26	06:46	06:52	06:04	06:26 (T08)	05:34			19:33 (T03)						
16:47	13	16:22 (T02)	17:24	18:01	19:38	20:12	21	06:47 (T08)	20:44	42	20:15 (T03)						
4 07:43		16:09 (T02)	07:25	06:44	06:50	06:02	06:25 (T08)	05:33			19:33 (T03)						
16:48	14	16:23 (T02)	17:26	18:02	19:40	20:13	22	06:47 (T08)	20:45	42	20:15 (T03)						
5 07:43		16:09 (T02)	07:23	06:43	06:48	06:01	06:24 (T08)	05:33			19:34 (T03)						
16:49	16	16:25 (T02)	17:27	18:04	19:41	20:14	23	06:47 (T08)	20:45	41	20:15 (T03)						
6 07:43		16:10 (T02)	07:22	06:41	06:47	06:00	06:22 (T08)	05:33			19:34 (T03)						
16:50	16	16:26 (T02)	17:28	18:05	19:42	20:16	24	06:46 (T08)	20:46	42	20:16 (T03)						
7 07:43		16:10 (T02)	07:21	06:39	06:45	05:58	06:21 (T08)	05:32			19:34 (T03)						
16:51	17	16:27 (T02)	17:30	18:06	19:43	20:17	30	19:55 (T03)	20:47	41	20:15 (T03)						
8 07:43		16:10 (T02)	07:20	06:38	06:43	05:57	06:21 (T08)	05:32			19:34 (T03)						
16:52	17	16:27 (T02)	17:31	18:07	19:44	20:18	37	19:57 (T03)	20:48	41	20:15 (T03)						
9 07:43		16:10 (T02)	07:19	06:36	06:41	05:56	06:22 (T08)	05:32			19:35 (T03)						
16:53	19	16:29 (T02)	17:33	18:09	19:45	20:19	38	19:58 (T03)	20:48	41	20:16 (T03)						
10 07:42		16:11 (T02)	07:17	06:34	06:40	05:55	06:22 (T08)	05:31			19:35 (T03)						
16:54	19	16:30 (T02)	17:34	18:10	19:47	20:20	41	19:59 (T03)	20:49	41	20:16 (T03)						
11 07:42		16:11 (T02)	07:16	06:32	06:38	05:53	06:23 (T08)	05:31			19:36 (T03)						
16:55	20	16:31 (T02)	17:35	18:11	19:48	20:21	41	20:00 (T03)	20:49	40	20:16 (T03)						
12 07:42		16:11 (T02)	07:15	06:31	06:36	05:52	06:23 (T08)	05:31			19:36 (T03)						
16:57	21	16:32 (T02)	17:37	18:12	19:49	20:22	41	20:00 (T03)	20:50	40	20:16 (T03)						
13 07:41		16:12 (T02)	07:13	06:29	06:35	05:51	06:24 (T08)	05:31			19:36 (T03)						
16:58	22	16:34 (T02)	17:38	19:14	19:50	20:23	42	20:02 (T03)	20:51	40	20:16 (T03)						
14 07:41		16:12 (T02)	07:12	06:27	06:33	05:50	06:26 (T08)	05:31			19:36 (T03)						
16:59	22	16:34 (T02)	17:39	19:15	19:51	20:25	41	20:03 (T03)	20:51	40	20:16 (T03)						
15 07:41		16:13 (T02)	07:11	06:25	06:31	05:49	06:28 (T08)	05:31			19:36 (T03)						
17:00	23	16:36 (T02)	17:41	19:16	19:52	20:26	39	20:04 (T03)	20:52	40	20:16 (T03)						
16 07:40		16:13 (T02)	07:09	06:24	06:30	05:48	06:32 (T08)	05:31			19:37 (T03)						
17:01	24	16:37 (T02)	17:42	19:17	19:54	20:27	33	20:05 (T03)	20:52	39	20:16 (T03)						
17 07:40		16:13 (T02)	07:08	06:22	06:28	05:47	19:34 (T03)	05:31			19:37 (T03)						
17:02	25	16:38 (T02)	17:43	19:18	19:55	20:28	32	20:06 (T03)	20:52	39	20:16 (T03)						
18 07:39		16:14 (T02)	07:06	06:20	06:26	05:46	19:33 (T03)	05:31			19:38 (T03)						
17:04	26	16:40 (T02)	17:44	19:20	19:56	20:29	34	20:07 (T03)	20:53	39	20:17 (T03)						
19 07:39		16:14 (T02)	07:05	06:18	06:25	05:45	19:34 (T03)	05:31			19:38 (T03)						
17:05	26	16:40 (T02)	17:46	19:21	19:57	20:30	34	20:08 (T03)	20:53	39	20:17 (T03)						
20 07:38		16:15 (T02)	07:03	06:17	06:23	05:44	19:33 (T03)	05:31			19:38 (T03)						
17:06	25	16:40 (T02)	17:47	19:22	19:58	20:31	36	20:09 (T03)	20:54	39	20:17 (T03)						
21 07:37		16:16 (T02)	07:02	06:15	06:21	05:43	19:33 (T03)	05:31			19:38 (T03)						
17:07	24	16:40 (T02)	17:48	19:23	19:59	20:32	37	20:10 (T03)	20:54	39	20:17 (T03)						
22 07:37		16:17 (T02)	07:00	06:20	06:20	05:42	19:32 (T03)	05:31			19:38 (T03)						
17:09	23	16:40 (T02)	17:50	19:24	20:01	20:33	39	20:11 (T03)	20:54	39	20:17 (T03)						
23 07:36		16:17 (T02)	06:59	07:11	06:18	05:41	19:32 (T03)	05:32			19:38 (T03)						
17:10	22	16:39 (T02)	17:51	19:25	20:01	20:34	39	20:11 (T03)	20:54	39	20:17 (T03)						
24 07:35		16:18 (T02)	06:57	07:09	06:17	05:40	19:32 (T03)	05:32			19:39 (T03)						
17:11	21	16:39 (T02)	17:52	19:27	20:02	20:35	40	20:12 (T03)	20:55	39	20:18 (T03)						
25 07:34		16:19 (T02)	06:56	07:08	06:15	06:37 (T08)	05:39				19:39 (T03)						
17:12	19	16:38 (T02)	17:54	19:28	20:03	4	06:41 (T08)	20:36	42	20:14 (T03)	20:55	39	20:18 (T03)				
26 07:33		16:22 (T02)	06:54	07:06	06:14	06:36 (T08)	05:39				19:39 (T03)						
17:14	16	16:38 (T02)	17:55	19:29	20:04	7	06:43 (T08)	20:37	42	20:14 (T03)	20:55	39	20:18 (T03)				
27 07:33		16:24 (T02)	06:52	07:04	06:12	06:34 (T08)	05:38				19:32 (T03)	05:33		19:40 (T03)			
17:15	12	16:36 (T02)	17:56	19:30	20:05	10	06:44 (T08)	20:38	42	20:14 (T03)	20:55	39	20:19 (T03)				
28 07:32		16:27 (T02)	06:51	07:02	06:11	06:33 (T08)	05:37				19:32 (T03)	05:33		19:39 (T03)			
17:16	7	16:34 (T02)	17:57	19:31	20:06	12	06:45 (T08)	20:39	43	20:15 (T03)	20:55	40	20:19 (T03)				
29 07:31				07:01	06:09	06:32 (T08)	05:37				19:32 (T03)	05:34		19:40 (T03)			
17:18				19:33	20:08	14	06:46 (T08)	20:40	42	20:14 (T03)	20:55	40	20:20 (T03)				
30 07:30				06:59	06:08	06:30 (T08)	05:36				19:33 (T03)	05:34		19:40 (T03)			
17:19				19:34	20:09	16	06:46 (T08)	20:41	42	20:15 (T03)	20:55	40	20:20 (T03)				
31 07:29				06:57	06:17	05:35					19:32 (T03)						
17:20				19:35	20:15 (T03)	453					459						
Potential sun hours	291		294	369	401												
Total, worst case	535				63							1097		1203			
Sun reduction	0.36				0.54							0.58		0.63			
Oper. time red.	1.00																

SHADOW - Calendar

Shadow receptor: 105 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2487)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	July	August	September	October	November	December
1	05:35	19:39 (T03) 06:00	06:34 (T08) 06:34	07:07	07:44	07:22 15:53 (T02)
	20:55	40 20:19 (T03) 20:35	42 20:12 (T03) 19:48	18:54	18:05	16:37 20 16:14 (T02)
2	05:35	19:40 (T03) 06:01	06:33 (T08) 06:35	07:08	07:46	07:23 15:54 (T02)
	20:55	40 20:20 (T03) 20:34	42 20:11 (T03) 19:46	18:53	18:03	16:37 19 16:14 (T02)
3	05:36	19:40 (T03) 06:02	06:32 (T08) 06:36	07:09	07:47	07:24 15:54 (T02)
	20:55	40 20:20 (T03) 20:33	42 20:10 (T03) 19:45	18:51	18:02	16:37 19 16:13 (T02)
4	05:36	19:40 (T03) 06:03	06:32 (T08) 06:37	07:10	07:48	07:25 15:54 (T02)
	20:54	41 20:21 (T03) 20:32	40 20:08 (T03) 19:43	18:49	18:01	16:36 18 16:13 (T02)
5	05:37	19:41 (T03) 06:04	06:31 (T08) 06:38	07:12	07:49	07:26 15:55 (T02)
	20:54	40 20:21 (T03) 20:31	38 20:07 (T03) 19:41	18:47	17:59	16:36 17 16:12 (T02)
6	05:37	19:40 (T03) 06:05	06:31 (T08) 06:39	07:13	06:51	07:27 15:55 (T02)
	20:54	41 20:21 (T03) 20:29	30 20:06 (T03) 19:39	18:46	16:58	16:36 17 16:12 (T02)
7	05:38	19:41 (T03) 06:07	06:33 (T08) 06:40	07:14	06:52	07:28 15:56 (T02)
	20:54	41 20:22 (T03) 20:28	19 06:56 (T08) 19:38	18:44	16:57	16:36 14 16:11 (T02)
8	05:39	19:41 (T03) 06:08	06:34 (T08) 06:42	07:15	06:53	07:29 15:57 (T02)
	20:53	41 20:22 (T03) 20:27	14 06:56 (T08) 19:36	18:42	16:56	16:36 15 16:12 (T02)
9	05:39	19:40 (T03) 06:09	06:34 (T08) 06:43	07:16	06:55	07:30 15:57 (T02)
	20:53	42 20:22 (T03) 20:25	14 06:56 (T08) 19:34	18:40	16:55	16:36 15 16:12 (T02)
10	05:40	19:41 (T03) 06:10	06:35 (T08) 06:44	07:17	06:56	07:31 15:58 (T02)
	20:53	41 20:22 (T03) 20:24	19 06:56 (T08) 19:32	18:39	16:53	16:36 12 16:10 (T02)
11	05:41	19:41 (T03) 06:11	06:39 (T08) 06:45	07:18	06:57	07:32 15:59 (T02)
	20:52	42 20:23 (T03) 20:23	11 06:55 (T08) 19:31	18:37	16:52	16:36 12 16:11 (T02)
12	05:42	19:40 (T03) 06:12	06:37 (T08) 06:46	07:20	06:58	07:33 15:59 (T02)
	20:52	42 20:22 (T03) 20:21	14 06:55 (T08) 19:29	18:35	16:51	16:36 12 16:12 (T02)
13	05:42	19:41 (T03) 06:13	06:43 (T08) 06:47	07:21	07:00	07:33 16:00 (T02)
	20:51	42 20:23 (T03) 20:20	9 06:54 (T08) 19:27	18:34	16:50	16:36 12 16:12 (T02)
14	05:43	19:41 (T03) 06:14	06:39 (T08) 06:48	07:22	07:01	07:34 16:00 (T02)
	20:51	42 20:23 (T03) 20:18	8 06:55 (T08) 19:25	18:32	16:49	16:36 11 16:11 (T02)
15	05:44	19:41 (T03) 06:15	06:40 (T08) 06:49	07:23	07:02	15:59 (T02) 07:35 16:01 (T02)
	20:50	43 20:24 (T03) 20:17	14 06:54 (T08) 19:23	18:30	16:48	5 16:06 (T02) 16:36 11 16:12 (T02)
16	05:45	19:41 (T03) 06:16	06:41 (T08) 06:50	07:24	07:04	15:56 (T02) 07:36 16:02 (T02)
	20:49	42 20:23 (T03) 20:16	12 06:53 (T08) 19:22	18:29	16:47	11 16:08 (T02) 16:36 9 16:12 (T02)
17	05:46	19:41 (T03) 06:17	06:42 (T08) 06:51	07:26	07:05	15:55 (T02) 07:36 16:03 (T02)
	20:49	42 20:23 (T03) 20:14	9 06:51 (T08) 19:20	18:27	16:46	16 16:11 (T02) 16:37 10 16:13 (T02)
18	05:47	19:41 (T03) 06:19	06:43 (T08) 06:53	07:27	07:06	15:53 (T02) 07:37 16:03 (T02)
	20:48	42 20:23 (T03) 20:13	6 06:49 (T08) 19:18	18:25	16:46	19 16:12 (T02) 16:37 8 16:12 (T02)
19	05:47	19:42 (T03) 06:20	06:44 (T08) 06:54	07:28	07:07	15:52 (T02) 07:38 16:04 (T02)
	20:47	41 20:23 (T03) 20:11	3 06:47 (T08) 19:16	18:24	16:45	21 16:13 (T02) 16:37 8 16:13 (T02)
20	05:48	19:42 (T03) 06:21		06:55	07:29	15:52 (T02) 07:38 16:04 (T02)
	20:47	41 20:23 (T03) 20:09		19:14	18:22	16:44 20 16:14 (T02) 16:38 8 16:13 (T02)
21	05:49	19:42 (T03) 06:22		06:56	07:30	15:52 (T02) 07:39 16:05 (T02)
	20:46	40 20:22 (T03) 20:08		19:12	18:21	16:43 20 16:15 (T02) 16:38 8 16:13 (T02)
22	05:50	19:43 (T03) 06:23		06:57	07:32	15:51 (T02) 07:39 16:05 (T02)
	20:45	39 20:22 (T03) 20:06		19:11	18:19	22 16:15 (T02) 16:39 9 16:14 (T02)
23	05:51	19:43 (T03) 06:24		06:58	07:33	15:52 (T02) 07:40 16:06 (T02)
	20:44	38 20:21 (T03) 20:05		19:09	18:18	24 16:17 (T02) 16:39 7 16:15 (T02)
24	05:52	19:42 (T03) 06:25		06:59	07:34	15:51 (T02) 07:40 16:06 (T02)
	20:43	37 20:19 (T03) 20:03		19:07	18:16	24 16:17 (T02) 16:40 7 16:15 (T02)
25	05:53	19:43 (T03) 06:26		07:00	07:35	15:51 (T02) 07:41 16:07 (T02)
	20:42	35 20:18 (T03) 20:02		19:05	18:15	24 16:17 (T02) 16:40 6 16:14 (T02)
26	05:54	19:43 (T03) 06:27		07:01	07:37	15:52 (T02) 07:41 16:07 (T02)
	20:42	35 20:18 (T03) 20:00		19:03	18:13	23 16:17 (T02) 16:41 9 16:16 (T02)
27	05:55	19:44 (T03) 06:28		07:02	07:38	15:52 (T02) 07:42 16:07 (T02)
	20:41	33 20:17 (T03) 19:57		19:02	18:12	23 16:16 (T02) 16:42 9 16:17 (T02)
28	05:56	19:44 (T03) 06:30		07:04	07:39	15:52 (T02) 07:42 16:08 (T02)
	20:40	32 20:16 (T03) 19:55		19:00	18:10	22 16:15 (T02) 16:42 9 16:18 (T02)
29	05:57	06:40 (T08) 06:31		07:05	07:40	15:52 (T02) 07:42 16:08 (T02)
	20:39	37 20:15 (T03) 19:53		18:58	18:09	19 16:15 (T02) 16:43 9 16:18 (T02)
30	05:58	06:37 (T08) 06:32		07:06	07:42	15:52 (T02) 07:42 16:08 (T02)
	20:37	40 20:14 (T03) 19:52		18:56	18:07	22 16:14 (T02) 16:44 9 16:19 (T02)
31	05:59	06:36 (T08) 06:33			07:43	
	20:36	41 20:13 (T03) 19:50		18:06		07:43 16:45 12 16:20 (T02)
	Potential sun hours	466	433	376	343	293
	Total, worst case	1233	386		315	361
	Sun reduction	0.67	0.63		0.25	0.24
	Oper. time red.	1.00	1.00		1.00	1.00
	Wind dir. red.	0.68	0.73		0.72	0.72
	Total reduction	0.46	0.46		0.18	0.17
	Total, real	565	179		57	63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 107 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2489)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April		May	June									
1	07:43	16:12 (T02)	07:28	06:49	06:55	06:06	06:29 (T08)	05:35	19:31 (T03)							
	16:46	9	16:21 (T02)	17:22	17:59	17:59	19:49 (T03)	20:42	33	20:04 (T03)						
2	07:43	16:12 (T02)	07:27	06:48	06:54	06:05	06:28 (T08)	05:34	19:31 (T03)							
	16:46	10	16:22 (T02)	17:23	18:00	19:37	19:51 (T03)	20:43	32	20:03 (T03)						
3	07:43	16:12 (T02)	07:26	06:46	06:52	06:04	06:26 (T08)	05:34	19:32 (T03)							
	16:47	10	16:22 (T02)	17:24	18:01	19:38	19:51 (T03)	20:44	31	20:03 (T03)						
4	07:43	16:13 (T02)	07:25	06:44	06:50	06:02	06:25 (T08)	05:33	19:32 (T03)							
	16:48	10	16:23 (T02)	17:26	18:02	19:40	19:53 (T03)	20:45	31	20:03 (T03)						
5	07:43	16:13 (T02)	07:23	06:43	06:48	06:01	06:24 (T08)	05:33	19:33 (T03)							
	16:49	12	16:25 (T02)	17:27	18:04	19:41	19:54 (T03)	20:45	30	20:03 (T03)						
6	07:43	16:13 (T02)	07:22	06:41	06:47	06:00	06:22 (T08)	05:33	19:33 (T03)							
	16:50	13	16:26 (T02)	17:28	18:05	19:42	19:54 (T03)	20:46	30	20:03 (T03)						
7	07:43	16:13 (T02)	07:21	06:39	06:45	05:58	06:21 (T08)	05:32	19:33 (T03)							
	16:51	14	16:27 (T02)	17:30	18:06	19:43	19:55 (T03)	20:47	29	20:02 (T03)						
8	07:43	16:13 (T02)	07:20	06:38	06:43	05:57	06:22 (T08)	05:32	19:34 (T03)							
	16:52	14	16:27 (T02)	17:31	18:07	19:44	19:57 (T03)	20:48	28	20:02 (T03)						
9	07:43	16:13 (T02)	07:19	06:36	06:41	05:56	06:22 (T08)	05:32	19:35 (T03)							
	16:53	16	16:29 (T02)	17:33	18:09	19:45	19:58 (T03)	20:48	27	20:02 (T03)						
10	07:42	16:14 (T02)	07:17	06:34	06:40	05:55	06:23 (T08)	05:31	19:36 (T03)							
	16:54	16	16:30 (T02)	17:34	18:10	19:47	19:59 (T03)	20:49	26	20:02 (T03)						
11	07:42	16:13 (T02)	07:16	06:32	06:38	05:53	06:24 (T08)	05:31	19:36 (T03)							
	16:55	18	16:31 (T02)	17:35	18:11	19:48	20:00 (T03)	20:49	26	20:02 (T03)						
12	07:42	16:14 (T02)	07:15	06:31	06:36	05:52	06:24 (T08)	05:31	19:37 (T03)							
	16:57	18	16:32 (T02)	17:37	18:12	19:49	20:00 (T03)	20:50	25	20:02 (T03)						
13	07:41	16:15 (T02)	07:13	06:29	06:35	05:51	06:25 (T08)	05:31	19:37 (T03)							
	16:58	19	16:34 (T02)	17:38	19:14	19:50	20:23	20:51	24	20:01 (T03)						
14	07:41	16:15 (T02)	07:12	06:27	06:33	05:50	06:26 (T08)	05:31	19:37 (T03)							
	16:59	19	16:34 (T02)	17:39	19:15	19:51	20:25	20:51	24	20:01 (T03)						
15	07:41	16:15 (T02)	07:11	06:25	06:31	05:49	06:28 (T08)	05:31	19:38 (T03)							
	17:00	21	16:36 (T02)	17:41	19:16	19:52	20:26	20:52	23	20:01 (T03)						
16	07:40	16:15 (T02)	07:09	06:24	06:30	05:48	06:30 (T08)	05:31	19:38 (T03)							
	17:01	22	16:37 (T02)	17:42	19:17	19:54	20:27	20:52	23	20:01 (T03)						
17	07:40	16:15 (T02)	07:08	06:22	06:28	05:47	19:25 (T03)	05:31	19:39 (T03)							
	17:02	23	16:38 (T02)	17:43	19:18	19:55	20:28	20:52	21	20:00 (T03)						
18	07:39	16:16 (T02)	07:06	06:20	06:26	05:46	19:25 (T03)	05:31	19:40 (T03)							
	17:04	24	16:40 (T02)	17:44	19:20	19:56	20:29	20:53	21	20:01 (T03)						
19	07:39	16:17 (T02)	07:05	06:18	06:25	05:45	19:26 (T03)	05:31	19:40 (T03)							
	17:05	24	16:41 (T02)	17:46	19:21	19:57	20:30	20:53	21	20:01 (T03)						
20	07:38	16:17 (T02)	07:03	06:17	06:23	05:44	19:26 (T03)	05:31	19:41 (T03)							
	17:06	25	16:42 (T02)	17:47	19:22	19:58	20:31	20:54	20	20:01 (T03)						
21	07:37	16:18 (T02)	07:02	06:15	06:21	05:43	19:26 (T03)	05:31	19:41 (T03)							
	17:07	24	16:42 (T02)	17:48	19:23	19:59	20:32	20:54	20	20:01 (T03)						
22	07:37	16:19 (T02)	07:00	06:13	06:20	05:42	19:26 (T03)	05:31	19:41 (T03)							
	17:09	23	16:42 (T02)	17:50	19:24	20:01	20:33	20:54	20	20:01 (T03)						
23	07:36	16:19 (T02)	06:59	06:11	06:18	05:41	19:26 (T03)	05:32	19:41 (T03)							
	17:10	23	16:42 (T02)	17:51	19:25	20:01	20:34	20:54	20	20:01 (T03)						
24	07:35	16:20 (T02)	06:57	07:09	06:17	06:39 (T08)	05:40	19:26 (T03)	05:32	19:41 (T03)						
	17:11	21	16:41 (T02)	17:52	19:27	20:02	2	06:41 (T08)	20:35	39	20:05 (T03)	20:55	21	20:02 (T03)		
25	07:34	16:21 (T02)	06:56	07:08	06:15	06:37 (T08)	05:39	19:27 (T03)	05:32	19:41 (T03)						
	17:12	19	16:40 (T02)	17:54	19:28	20:03	6	06:43 (T08)	20:36	38	20:05 (T03)	20:55	21	20:02 (T03)		
26	07:33	16:24 (T02)	06:54	07:06	06:14	06:36 (T08)	05:39	19:27 (T03)	05:32	19:41 (T03)						
	17:14	16	16:40 (T02)	17:55	19:29	20:04	9	06:45 (T08)	20:37	38	20:05 (T03)	20:55	21	20:02 (T03)		
27	07:33	16:25 (T02)	06:52	07:04	06:12	06:34 (T08)	05:38	19:27 (T03)	05:33	19:42 (T03)						
	17:15	14	16:39 (T02)	17:56	19:30	20:05	12	06:46 (T08)	20:38	37	20:04 (T03)	20:55	22	20:04 (T03)		
28	07:32	16:27 (T02)	06:51	07:02	06:11	06:33 (T08)	05:37	19:28 (T03)	05:33	19:41 (T03)						
	17:16	10	16:37 (T02)	17:57	19:31	20:06	14	06:47 (T08)	20:39	37	20:05 (T03)	20:55	23	20:04 (T03)		
29	07:31			07:01	06:09	06:32 (T08)	05:37	19:29 (T03)	05:34	19:42 (T03)						
	17:18			19:33	20:08	16	06:48 (T08)	20:40	35	20:04 (T03)	20:55	23	20:05 (T03)			
30	07:30			06:59	06:08	06:30 (T08)	05:36	19:30 (T03)	05:34	19:41 (T03)						
	17:19			19:34	20:09	18	06:48 (T08)	20:41	34	20:04 (T03)	20:55	24	20:05 (T03)			
31	07:29			06:57			05:35	19:30 (T03)								
	17:20			19:35			20:41	34	20:04 (T03)		459					
	Potential sun hours	291		294	369	401		453			459					
	Total, worst case	487			77		1340				740					
	Sun reduction	0.36			0.54		0.58				0.63					
	Oper. time red.	1.00			1.00		1.00				1.00					
	Wind dir. red.	0.72			0.75		0.70				0.69					
	Total reduction	0.26			0.41		0.41				0.43					
	Total, real	127			31		549				322					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 107 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2489)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	July	August	September	October	November	December
1	05:35	19:40 (T03) 06:00	06:35 (T08) 06:34	07:07	07:44	07:22 15:56 (T02)
2	05:35	25 20:05 (T03) 06:01	20:12 (T03) 19:48	18:54	18:05	16:37 17 16:14 (T02)
3	05:36	19:40 (T03) 06:02	06:34 (T08) 06:35	07:08	07:46	07:23 15:57 (T02)
4	05:36	26 20:06 (T03) 06:03	20:11 (T03) 19:46	18:53	18:03	16:37 16 16:14 (T02)
5	05:37	19:40 (T03) 06:04	06:33 (T08) 06:36	07:09	07:47	07:24 15:57 (T02)
6	05:37	27 20:07 (T03) 06:05	20:10 (T03) 19:45	18:51	18:02	16:37 16 16:13 (T02)
7	05:38	19:40 (T03) 06:07	06:32 (T08) 06:37	07:10	07:48	07:25 15:57 (T02)
8	05:39	29 20:09 (T03) 06:08	20:08 (T03) 19:43	18:49	18:01	16:36 15 16:13 (T02)
9	05:39	30 20:10 (T03) 06:09	06:32 (T08) 06:38	07:12	07:49	07:26 15:58 (T02)
10	05:40	31 20:10 (T03) 06:10	20:07 (T03) 19:41	18:47	17:59	16:36 14 16:12 (T02)
11	05:41	19:39 (T03) 06:11	06:31 (T08) 06:42	07:13	07:49	07:27 15:59 (T02)
12	05:42	32 20:11 (T03) 06:12	20:06 (T03) 19:36	18:42	16:56	16:36 13 16:12 (T02)
13	05:42	33 20:11 (T03) 06:13	06:31 (T08) 06:39	07:13	06:51	07:28 15:59 (T02)
14	05:43	34 20:12 (T03) 06:14	20:05 (T03) 19:38	18:44	16:57	16:36 11 16:11 (T02)
15	05:44	35 20:13 (T03) 06:15	06:30 (T08) 06:43	07:16	06:55	07:29 16:00 (T02)
16	05:45	35 20:13 (T03) 06:16	20:02 (T03) 19:34	18:40	16:55	16:36 12 16:12 (T02)
17	05:46	36 20:13 (T03) 06:17	06:30 (T08) 06:45	07:18	06:57	07:30 16:01 (T02)
18	05:47	36 20:13 (T03) 06:19	20:03 (T03) 19:36	18:42	16:56	16:36 11 16:12 (T02)
19	05:47	37 20:14 (T03) 06:20	06:30 (T08) 06:43	07:16	06:55	07:30 16:01 (T02)
20	05:48	38 20:15 (T03) 06:21	20:04 (T03) 19:37	18:40	16:55	16:36 11 16:12 (T02)
21	05:49	38 20:15 (T03) 06:22	06:29 (T08) 06:47	07:21	07:00	07:33 16:04 (T02)
22	05:50	38 20:15 (T03) 06:23	20:03 (T03) 19:38	18:39	16:53	16:36 9 16:10 (T02)
23	05:51	39 20:16 (T03) 06:24	06:28 (T08) 06:51	07:22	07:01	07:32 16:02 (T02)
24	05:52	39 20:16 (T03) 06:25	20:04 (T03) 19:39	18:37	16:52	16:36 9 16:11 (T02)
25	05:53	39 20:16 (T03) 06:26	06:27 (T08) 06:46	07:20	06:58	07:33 16:03 (T02)
26	05:54	39 20:16 (T03) 06:27	20:05 (T03) 19:40	18:30	16:48	16:36 8 16:12 (T02)
27	05:55	39 20:16 (T03) 06:28	06:26 (T08) 06:55	07:24	07:04	07:34 16:04 (T02)
28	05:56	40 20:16 (T03) 06:29	20:06 (T03) 19:41	18:32	16:46	16:36 7 16:11 (T02)
29	05:57	40 20:16 (T03) 06:30	06:25 (T08) 06:54	07:23	07:02	07:35 16:05 (T02)
30	05:58	41 20:16 (T03) 06:32	20:07 (T03) 19:42	18:35	16:51	16:36 7 16:12 (T02)
31	05:59	41 20:16 (T03) 06:33	06:24 (T08) 06:53	07:25	07:01	07:33 16:04 (T02)
	20:36	42 20:17 (T03) 06:34	20:08 (T03) 19:43	18:36	16:49	16:36 7 16:13 (T02)
Potential sun hours	466	433	376	343	293	281
Total, worst case	1106	621			301	253
Sun reduction	0.67	0.63			0.25	0.24
Oper. time red.	1.00	1.00			1.00	1.00
Wind dir. red.	0.69	0.72			0.72	0.72
Total reduction	0.46	0.45			0.18	0.17
Total, real	514	283			55	44

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 119 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2499)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June
1	07:43	07:28	06:49	07:26 (T14)	06:55	06:06
	16:45	17:22	17:59	08:35 (T14)	19:36	19:26 (T08)
2	07:43	07:27	06:48	07:26 (T14)	06:53	05:35
	16:46	17:23	18:00	08:35 (T14)	19:37	20:10 (T08)
3	07:43	07:26	07:54 (T14)	06:46	07:26 (T14)	06:52
	16:47	17:24	16 08:10 (T14)	18:01	08:35 (T14)	19:38
4	07:43	07:24	07:50 (T14)	06:44	07:26 (T14)	06:50
	16:48	17:26	24 08:14 (T14)	18:02	08:34 (T14)	19:39
5	07:43	07:23	07:47 (T14)	06:43	07:27 (T14)	06:48
	16:49	17:27	30 08:17 (T14)	18:04	08:34 (T14)	19:41
6	07:43	07:22	07:45 (T14)	06:41	07:27 (T14)	06:46
	16:50	17:28	34 08:19 (T14)	18:05	08:33 (T14)	19:42
7	07:43	07:21	07:44 (T14)	06:39	07:27 (T14)	06:45
	16:51	17:30	38 08:22 (T14)	18:06	08:32 (T14)	19:43
8	07:43	07:20	07:43 (T14)	06:37	07:28 (T14)	06:43
	16:52	17:31	41 08:24 (T14)	18:07	08:31 (T14)	19:44
9	07:42	07:18	07:42 (T14)	06:36	07:28 (T14)	06:41
	16:53	17:32	44 08:26 (T14)	18:09	08:30 (T14)	19:45
10	07:42	07:17	07:40 (T14)	06:34	07:28 (T14)	06:40
	16:54	17:34	47 08:27 (T14)	18:10	08:29 (T14)	19:46
11	07:42	07:16	07:39 (T14)	06:32	07:29 (T14)	06:38
	16:55	17:35	49 08:28 (T14)	18:11	08:27 (T14)	19:48
12	07:42	07:15	07:38 (T14)	06:31	07:30 (T14)	06:36
	16:56	17:36	52 08:30 (T14)	18:12	08:26 (T14)	19:49
13	07:41	07:13	07:36 (T14)	07:29	08:31 (T14)	06:34
	16:58	17:38	54 08:30 (T14)	19:13	09:25 (T14)	19:50
14	07:41	07:12	07:35 (T14)	07:27	08:31 (T14)	06:33
	16:59	17:39	57 08:32 (T14)	19:15	09:23 (T14)	19:51
15	07:41	07:11	07:33 (T14)	07:25	08:32 (T14)	06:31
	17:00	17:40	59 08:32 (T14)	19:16	09:21 (T14)	19:52
16	07:40	07:09	07:32 (T14)	07:24	08:33 (T14)	06:29
	17:01	17:42	61 08:33 (T14)	19:17	09:18 (T14)	19:53
17	07:40	07:08	07:31 (T14)	07:22	08:36 (T14)	06:28
	17:02	17:43	63 08:34 (T14)	19:18	09:17 (T14)	19:55
18	07:39	07:06	07:31 (T14)	07:20	08:37 (T14)	06:26
	17:03	17:44	64 08:35 (T14)	19:19	09:14 (T14)	19:56
19	07:38	07:05	07:29 (T14)	07:18	08:39 (T14)	06:25
	17:05	17:46	66 08:35 (T14)	19:21	09:11 (T14)	19:57
20	07:38	07:03	07:29 (T14)	07:16	08:42 (T14)	06:23
	17:06	17:47	67 08:36 (T14)	19:22	09:07 (T14)	19:58
21	07:37	07:02	07:28 (T14)	07:15	08:46 (T14)	06:21
	17:07	17:48	67 08:35 (T14)	19:23	09:02 (T14)	19:59
22	07:36	07:00	07:28 (T14)	07:13	06:20	
	17:09	17:50	68 08:36 (T14)	19:24	06:20	
23	07:36	06:59	07:28 (T14)	07:11	06:18	
	17:10	17:51	68 08:36 (T14)	19:25	06:20	
24	07:35	06:57	07:28 (T14)	07:09	06:17	
	17:11	17:52	69 08:37 (T14)	19:27	06:20	
25	07:34	06:56	07:27 (T14)	07:08	06:15	
	17:12	17:53	69 08:36 (T14)	19:28	06:20	
26	07:33	06:54	07:26 (T14)	07:06	06:14	
	17:14	17:55	70 08:36 (T14)	19:29	06:20	
27	07:33	06:52	07:27 (T14)	07:04	06:12	
	17:15	17:56	69 08:36 (T14)	19:30	06:20	
28	07:32	06:51	07:26 (T14)	07:02	06:11	
	17:16	17:57	70 08:36 (T14)	19:31	06:20	
29	07:31		07:00	06:09	19:33 (T08)	05:36
	17:18		19:32	06:07	19:47 (T08)	04:20
30	07:30		06:59	06:08	19:29 (T08)	05:36
	17:19		19:34	20:09	19:48 (T08)	04:20
31	07:29		06:57		05:35	19:13 (T08)
	17:20		19:35		20:41	54 20:07 (T08)
Potential sun hours	291	294	369	401	453	459
Total, worst case		1416	1124	33	1455	1337
Sun reduction		0.40	0.47	0.54	0.58	0.63
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.68	0.68	0.69	0.69	0.69
Total reduction		0.27	0.32	0.37	0.40	0.43
Total, real		384	358	12	581	580

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 119 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2499)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December
1	05:34	19:21 (T08) 06:00	19:24 (T08) 06:34	07:07	08:11 (T14) 07:44	08:09 (T14) 07:22
	20:55	47 20:11 (T08) 20:35	45 20:12 (T08) 19:48	18:54	53 09:04 (T14) 18:04	46 08:58 (T14) 16:37
2	05:35	19:22 (T08) 06:01	19:24 (T08) 06:35	07:08	08:09 (T14) 07:45	08:10 (T14) 07:23
	20:55	32 20:12 (T08) 20:34	47 20:11 (T08) 19:46	18:53	56 09:05 (T14) 18:03	42 08:56 (T14) 16:37
3	05:35	19:21 (T08) 06:02	19:25 (T08) 06:36	07:09	08:08 (T14) 07:47	08:11 (T14) 07:24
	20:55	51 20:12 (T08) 20:33	43 20:10 (T08) 19:45	18:51	57 09:05 (T14) 18:02	39 08:54 (T14) 16:37
4	05:36	19:22 (T08) 06:03	19:25 (T08) 06:37	07:10	08:06 (T14) 07:48	08:13 (T14) 07:25
	20:54	25 20:11 (T08) 20:32	37 20:08 (T08) 19:43	18:49	60 09:06 (T14) 18:00	40 08:53 (T14) 16:36
5	05:37	19:22 (T08) 06:04	19:26 (T08) 06:38	07:11	08:05 (T14) 07:49	08:14 (T14) 07:26
	20:54	30 20:13 (T08) 20:30	32 20:06 (T08) 19:41	18:47	60 09:06 (T14) 17:59	36 08:51 (T14) 16:36
6	05:37	19:22 (T08) 06:05	19:26 (T08) 06:39	07:13	08:04 (T14) 06:51	07:15 (T14) 07:27
	20:54	35 20:13 (T08) 20:29	32 20:04 (T08) 19:39	18:46	63 09:07 (T14) 16:58	29 07:49 (T14) 16:36
7	05:38	19:22 (T08) 06:06	19:27 (T08) 06:40	07:14	08:03 (T14) 06:52	07:18 (T14) 07:28
	20:54	35 20:14 (T08) 20:28	37 20:05 (T08) 19:38	18:44	61 09:07 (T14) 16:57	29 07:47 (T14) 16:36
8	05:39	19:21 (T08) 06:08	19:28 (T08) 06:41	07:15	08:03 (T14) 06:53	07:20 (T14) 07:29
	20:53	34 20:13 (T08) 20:27	35 20:03 (T08) 19:36	18:42	65 09:08 (T14) 16:56	23 07:44 (T14) 16:36
9	05:39	19:22 (T08) 06:09	19:29 (T08) 06:43	07:16	08:02 (T14) 06:54	07:25 (T14) 07:30
	20:53	30 20:14 (T08) 20:25	28 20:02 (T08) 19:34	18:40	65 09:08 (T14) 16:54	15 07:40 (T14) 16:36
10	05:40	19:22 (T08) 06:10	19:30 (T08) 06:44	07:17	08:01 (T14) 06:56	07:31
	20:53	37 20:14 (T08) 20:24	31 20:01 (T08) 19:32	18:39	67 09:08 (T14) 16:53	16:36
11	05:41	19:21 (T08) 06:11	19:31 (T08) 06:45	07:18	08:00 (T14) 06:57	07:32
	20:52	37 20:13 (T08) 20:23	28 19:59 (T08) 19:30	18:37	68 09:08 (T14) 16:52	16:36
12	05:41	19:22 (T08) 06:12	19:33 (T08) 06:46	07:20	07:59 (T14) 06:58	07:32
	20:52	28 20:15 (T08) 20:21	25 19:58 (T08) 19:29	18:35	67 09:08 (T14) 16:51	16:36
13	05:42	19:22 (T08) 06:13	19:35 (T08) 06:47	07:21	08:00 (T14) 07:00	07:33
	20:51	32 20:15 (T08) 20:20	22 19:57 (T08) 19:27	18:34	66 09:09 (T14) 16:50	16:36
14	05:43	19:22 (T08) 06:14	19:37 (T08) 06:48	07:22	07:59 (T14) 07:01	07:34
	20:51	37 20:16 (T08) 20:18	18 19:55 (T08) 19:25	18:32	70 09:09 (T14) 16:49	16:36
15	05:44	19:22 (T08) 06:15	19:41 (T08) 06:49	07:23	07:59 (T14) 07:02	07:35
	20:50	39 20:16 (T08) 20:17	12 19:53 (T08) 19:23	18:30	69 09:08 (T14) 16:48	16:36
16	05:45	19:21 (T08) 06:16	19:35 (T08) 06:50	07:24	07:59 (T14) 07:03	07:36
	20:49	44 20:15 (T08) 20:15	19:21	18:29	66 09:08 (T14) 16:47	16:36
17	05:46	19:22 (T08) 06:17	19:31 (T08) 06:51	07:26	07:59 (T14) 07:05	07:36
	20:49	38 20:16 (T08) 20:14	19:20	18:27	66 09:08 (T14) 16:46	16:37
18	05:46	19:22 (T08) 06:18	19:32 (T08) 06:52	07:27	07:59 (T14) 07:06	07:37
	20:48	37 20:16 (T08) 20:12	19:18	18:25	67 09:08 (T14) 16:45	16:37
19	05:47	19:22 (T08) 06:20	19:35 (T08) 06:53	07:28	08:02 (T14) 07:07	07:38
	20:47	28 20:16 (T08) 20:11	19:16	18:24	65 09:07 (T14) 16:45	16:37
20	05:48	19:22 (T08) 06:21	19:37 (T08) 06:55	07:29	07:59 (T14) 07:08	07:38
	20:47	46 20:17 (T08) 20:09	19:14	18:22	69 09:08 (T14) 16:44	16:38
21	05:49	19:22 (T08) 06:22	19:38 (T08) 06:56	07:30	07:59 (T14) 07:10	07:39
	20:46	24 20:10 (T08) 20:08	19:12	18:21	67 09:07 (T14) 16:43	16:38
22	05:50	19:22 (T08) 06:23	19:38 (T08) 06:57	07:32	07:59 (T14) 07:11	07:39
	20:45	33 20:17 (T08) 20:06	19:11	18:19	66 09:06 (T14) 16:42	16:39
23	05:51	19:21 (T08) 06:24	19:41 (T08) 06:58	08:36 (T14) 07:33	07:59 (T14) 07:12	07:40
	20:44	55 20:16 (T08) 20:05	19:09	08:44 (T14) 18:17	66 09:05 (T14) 16:42	16:39
24	05:52	19:22 (T08) 06:25	19:43 (T08) 06:59	08:28 (T14) 07:34	08:00 (T14) 07:13	07:40
	20:43	41 20:16 (T08) 20:03	19:07	08:50 (T14) 18:16	64 09:05 (T14) 16:41	16:40
25	05:53	19:22 (T08) 06:26	19:45 (T08) 07:00	08:28 (T14) 07:35	08:00 (T14) 07:15	07:41
	20:42	31 20:16 (T08) 20:01	19:05	08:53 (T14) 18:14	64 09:04 (T14) 16:40	16:40
26	05:54	19:22 (T08) 06:27	19:47 (T08) 07:01	08:24 (T14) 07:37	08:01 (T14) 07:16	07:41
	20:41	31 20:16 (T08) 20:00	19:03	08:56 (T14) 18:13	62 09:03 (T14) 16:40	16:41
27	05:55	19:22 (T08) 06:28	19:48 (T08) 07:02	08:18 (T14) 07:38	08:02 (T14) 07:17	07:42
	20:40	34 20:16 (T08) 20:07	19:02	08:57 (T14) 18:11	61 09:03 (T14) 16:39	16:41
28	05:56	19:22 (T08) 06:29	19:49 (T08) 07:03	08:16 (T14) 07:39	08:03 (T14) 07:18	07:42
	20:39	32 20:10 (T08) 19:55	19:00	08:59 (T14) 18:10	59 09:02 (T14) 16:39	16:42
29	05:57	19:23 (T08) 06:31	19:50 (T08) 07:05	08:13 (T14) 07:40	08:04 (T14) 07:19	07:42
	20:38	37 20:15 (T08) 19:53	18:58	09:01 (T14) 18:09	56 09:00 (T14) 16:38	16:43
30	05:58	19:23 (T08) 06:32	19:51 (T08) 07:06	08:12 (T14) 07:42	08:06 (T14) 07:20	07:42
	20:37	33 20:14 (T08) 19:51	18:56	09:00 (T14) 18:07	54 09:00 (T14) 16:38	16:44
31	05:59	19:23 (T08) 06:33	19:53 (T08) 07:43	08:07 (T14) 07:43	08:07 (T14) 07:43	07:43
	20:36	50 20:13 (T08) 19:50	18:06	08:58 (T14) 18:06	51 08:58 (T14) 16:44	16:44
					293	281
	Potential sun hours	466	433	376	343	293
	Total, worst case	1123	472	193	1950	299
	Sun reduction	0.67	0.63	0.56	0.44	0.25
	Oper. time red.	1.00	1.00	1.00	1.00	1.00
	Wind dir. red.	0.69	0.69	0.68	0.68	0.68
	Total reduction	0.46	0.43	0.38	0.30	0.17
	Total, real	518	205	73	582	51

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

2019-12-08_Heritage SFA

Licensed user:

EDR

217 Montgomery St., Suite 1000

US-SYRACUSE, NY 13202

(315) 471 0688

Calculated:

7/11/2022 8:58 AM/3.4.424

SHADOW - Calendar

Shadow receptor: 134 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2507)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June	July	August	September	October	November	December								
1	07:43	07:28	06:49	06:55	06:06	06:53 (T08)	05:35	05:34	06:00	07:12 (T08)	06:34	06:59 (T08)	07:07	07:44	07:22					
	16:46	17:22	17:59	19:36	20:10	05:7	07:50 (T08)	20:42	20:55	20:35	37	07:49 (T08)	19:48	39	07:51 (T08)	18:54	18:04	16:37		
2	07:43	07:27	06:48	06:53	06:05	06:54 (T08)	05:34	05:35	06:01	07:10 (T08)	06:35	07:00 (T08)	07:08	07:46	07:23					
	16:46	17:23	18:00	19:37	20:11	05:5	07:49 (T08)	20:43	20:55	20:34	40	07:50 (T08)	19:46	33	07:50 (T08)	18:53	18:03	16:37		
3	07:43	07:26	06:46	06:52	07:21 (T08)	06:04	06:54 (T08)	05:34	05:36	06:02	07:09 (T08)	06:36	07:01 (T08)	07:09	07:47	07:24				
	16:47	17:24	18:01	19:38	15	07:36 (T08)	20:12	54	07:48 (T08)	20:44	20:55	20:33	42	07:51 (T08)	19:45	29	07:48 (T08)	18:51	18:02	16:37
4	07:43	07:25	06:44	06:50	07:17 (T08)	06:02	06:54 (T08)	05:33	05:36	06:03	07:08 (T08)	06:37	07:01 (T08)	07:10	07:48	07:25				
	16:48	17:26	18:02	19:40	24	07:41 (T08)	20:13	54	07:48 (T08)	20:45	20:54	20:32	44	07:52 (T08)	19:43	37	07:47 (T08)	18:49	18:01	16:36
5	07:43	07:23	06:43	06:48	07:12 (T08)	06:01	06:55 (T08)	05:33	05:37	06:04	07:09 (T08)	06:38	07:02 (T08)	07:12	07:49	07:26				
	16:49	17:27	18:04	19:41	30	07:43 (T08)	20:14	52	07:47 (T08)	20:45	20:54	20:30	46	07:53 (T08)	19:41	29	07:44 (T08)	18:47	17:59	16:36
6	07:43	07:22	06:41	06:46	07:10 (T08)	06:00	06:55 (T08)	05:33	05:37	06:05	07:04 (T08)	06:39	07:05 (T08)	07:13	06:51	07:27				
	16:50	17:28	18:05	19:42	35	07:45 (T08)	20:16	50	07:45 (T08)	20:46	20:54	20:29	48	07:54 (T08)	19:39	23	07:44 (T08)	18:46	16:58	16:36
7	07:43	07:21	06:39	06:45	07:08 (T08)	05:58	06:54 (T08)	05:32	05:38	06:07	07:05 (T08)	06:40	07:06 (T08)	07:14	06:52	07:28				
	16:51	17:30	18:06	19:43	39	07:47 (T08)	20:17	49	07:45 (T08)	20:47	20:54	20:28	50	07:55 (T08)	19:38	17	07:40 (T08)	18:44	16:57	16:36
8	07:43	07:20	06:38	06:43	07:07 (T08)	05:57	06:57 (T08)	05:32	05:39	06:08	07:04 (T08)	06:42	07:08 (T08)	07:15	06:53	07:29				
	16:52	17:31	18:07	19:44	42	07:49 (T08)	20:18	47	07:44 (T08)	20:48	20:53	20:27	51	07:55 (T08)	19:36	20	07:39 (T08)	18:42	16:56	16:36
9	07:43	07:19	06:36	06:41	07:04 (T08)	05:56	06:58 (T08)	05:33	05:39	06:09	07:04 (T08)	06:43	07:11 (T08)	07:16	06:55	07:30				
	16:53	17:32	18:09	19:45	46	07:50 (T08)	20:19	45	07:43 (T08)	20:48	20:53	20:25	52	07:56 (T08)	19:34	11	07:30 (T08)	18:40	16:55	16:36
10	07:42	07:17	06:34	06:40	07:03 (T08)	05:54	06:59 (T08)	05:31	05:40	06:10	07:04 (T08)	06:44	07:21 (T08)	07:17	06:56	07:31				
	16:54	17:34	18:10	19:47	47	07:50 (T08)	20:20	43	07:42 (T08)	20:49	20:53	20:24	53	07:56 (T08)	19:32	8	07:30 (T08)	18:39	16:53	16:36
11	07:42	07:16	06:32	06:38	07:02 (T08)	05:53	06:59 (T08)	05:31	05:41	06:11	07:02 (T08)	06:45	07:18	07:27	06:57	07:32				
	16:55	17:35	18:11	19:48	50	07:52 (T08)	20:21	41	07:40 (T08)	20:49	20:52	20:23	55	07:57 (T08)	19:31					
12	07:42	07:15	06:31	06:36	07:06 (T08)	05:52	07:00 (T08)	05:31	05:42	06:12	07:01 (T08)	06:46	07:20	07:29	06:58	07:33				
	16:56	17:36	18:12	19:49	52	07:52 (T08)	20:22	39	07:39 (T08)	20:50	20:52	20:17	56	07:57 (T08)	19:29					
13	07:41	07:13	06:34	06:41	06:59 (T08)	05:51	07:02 (T08)	05:31	05:42	06:13	07:01 (T08)	06:47	07:21	07:00	06:55	07:33				
	16:58	17:38	18:14	19:50	53	07:52 (T08)	20:23	36	07:38 (T08)	20:51	20:51	20:20	57	07:58 (T08)	19:27					
14	07:41	07:12	06:33	06:40	06:58 (T08)	05:50	07:03 (T08)	05:31	05:43	06:14	07:00 (T08)	06:48	07:22	07:01	07:34					
	16:59	17:39	18:15	19:51	55	07:53 (T08)	20:25	33	07:36 (T08)	20:51	20:51	20:18	58	07:58 (T08)	19:25					
15	07:41	07:11	06:31	06:31	06:57 (T08)	05:49	07:05 (T08)	05:31	05:44	06:15	07:01 (T08)	06:49	07:23	07:02	07:35					
	17:00	17:40	18:16	19:52	56	07:53 (T08)	20:26	30	07:35 (T08)	20:52	20:50	20:17	58	07:59 (T08)	19:23					
16	07:40	07:09	07:24	06:29	06:56 (T08)	05:48	07:06 (T08)	05:31	05:45	06:16	07:00 (T08)	06:50	07:24	07:04	07:36					
	17:01	17:42	18:17	19:54	57	07:53 (T08)	20:27	27	07:33 (T08)	20:52	20:49	20:15	59	07:59 (T08)	19:22					
17	07:40	07:08	07:22	06:28	06:56 (T08)	05:47	07:08 (T08)	05:31	05:46	06:17	07:00 (T08)	06:51	07:26	07:05	07:36					
	17:02	17:43	18:18	19:55	58	07:54 (T08)	20:28	23	07:31 (T08)	20:52	20:49	20:14	59	07:59 (T08)	19:20					
18	07:39	07:06	07:20	06:26	06:55 (T08)	05:46	07:11 (T08)	05:31	05:46	06:18	06:59 (T08)	06:52	07:27	07:06	07:37					
	17:04	17:44	18:20	19:56	59	07:54 (T08)	20:29	17	07:28 (T08)	20:53	20:48	20:13	60	07:59 (T08)	19:18					
19	07:39	07:05	07:18	06:25	06:55 (T08)	05:45	07:15 (T08)	05:31	05:47	06:20	06:59 (T08)	06:54	07:28	07:07	07:38					
	17:05	17:46	18:21	19:57	59	07:54 (T08)	20:30	9	07:24 (T08)	20:53	20:47	20:11	60	07:59 (T08)	19:16					
20	07:38	07:03	07:17	06:23	06:54 (T08)	05:44	07:13 (T08)	05:31	05:48	06:21	06:58 (T08)	06:55	07:29	07:09	07:38					
	17:06	17:47	18:22	19:58	60	07:54 (T08)	20:31		07:20 (T08)	20:54	20:47	20:09	61	07:59 (T08)	19:14					
21	07:37	07:02	07:15	06:21	06:53 (T08)	05:43	07:11 (T08)	05:31	05:49	06:22	06:58 (T08)	06:56	07:30	07:10	07:39					
	17:07	17:48	18:23	19:59	60	07:53 (T08)	20:32		07:20 (T08)	20:54	20:46	20:08	61	07:59 (T08)	19:12					
22	07:37	07:00	07:13	06:20	06:53 (T08)	05:42	07:10 (T08)	05:31	05:50	06:23	06:58 (T08)	06:57	07:32	07:11	07:39					
	17:09	17:50	18:24	20:01	61	07:54 (T08)	20:33		07:21 (T08)	20:54	20:45	20:06	61	07:59 (T08)	19:11					
23	07:36	07:06	07:11	06:18	06:52 (T08)	05:41	07:05 (T08)	05:32	05:51	06:24	06:58 (T08)	06:58	07:33	07:12	07:40					
	17:10	17:51	18:25	20:01	61	07:53 (T08)	20:34		07:22 (T08)	20:54	20:44	20:05	41	07:56 (T08)	19:09					
24	07:35	06:57	07:09	06:17	06:53 (T08)	05:40	07:13 (T08)	05:32	05:52	06:25	06:58 (T08)	06:59	07:34	07:13	07:40					
	17:11	17:52	18:27	20:02	60	07:53 (T08)	20:35		07:23 (T08)	20:54	20:43	20:03	42	07:58 (T08)	19:07					
25	07:34	06:56	07:08	06:15	06:52 (T08)	05:39	07:12 (T08)	05:32	05:53	06:26	06:58 (T08)	07:00	07:35	07:15	07:41					
	17:12	17:54	18:28	20:03	60	07:52 (T08)	20:36		07:24 (T08)	20:55	20:42	20:02	35	07:57 (T08)	19:05					
26	07:33	06:54	07:06	06:14	06:52 (T08)	05:39	07:13 (T08)	05:32	05:54	06:27	06:58 (T08)	07:01	07:37	07:16	07:41					
	17:14	17:55	18:29	20:04	60	07:52 (T08)	20:37		07:25 (T08)	20:55	20:41	14	33	07:54 (T08)	19:03					
27	07:33	06:52	07:04	06:12	06:52 (T08)	05:38	07:14 (T08)	05:33	05:55	06:28	06:58 (T08)	07:02	07:38	07:17	07:42					

SHADOW - Calendar

Shadow receptor: 164 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2522)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June											
1	07:43	16:13 (T08)	07:28	16:13 (T08)	06:49	06:55	06:06		05:35		06:12 (T15)						
	16:45	8	16:21 (T08)	17:22	35	16:48 (T08)	17:59	19:36	20:10		20:42	82	07:34 (T15)				
2	07:43	16:13 (T08)	07:27	16:13 (T08)	06:48	06:53	06:05		06:47 (T15)	05:34		06:12 (T15)					
	16:46	8	16:21 (T08)	17:23	35	16:48 (T08)	18:00	19:37	20:11	10	06:57 (T15)	20:43	82	07:34 (T15)			
3	07:43	16:12 (T08)	07:26	16:14 (T08)	06:46	06:52	06:03		06:41 (T15)	05:34		06:12 (T15)					
	16:47	10	16:22 (T08)	17:24	34	16:48 (T08)	18:01	19:38	20:12	22	07:03 (T15)	20:44	82	07:34 (T15)			
4	07:43	16:12 (T08)	07:24	16:15 (T08)	06:44	06:50	06:02		06:37 (T15)	05:33		06:11 (T15)					
	16:48	11	16:23 (T08)	17:26	32	16:47 (T08)	18:02	19:39	20:13	30	07:07 (T15)	20:45	83	07:34 (T15)			
5	07:43	16:12 (T08)	07:23	16:17 (T08)	06:43	06:48	06:01		06:34 (T15)	05:33		06:12 (T15)					
	16:49	12	16:24 (T08)	17:27	30	16:47 (T08)	18:04	19:41	20:14	36	07:10 (T15)	20:45	83	07:35 (T15)			
6	07:43	16:12 (T08)	07:22	16:17 (T08)	06:41	06:46	05:59		06:31 (T15)	05:32		06:12 (T15)					
	16:50	14	16:26 (T08)	17:28	28	16:45 (T08)	18:05	19:42	20:16	41	07:12 (T15)	20:46	56	07:35 (T15)			
7	07:43	16:12 (T08)	07:21	16:19 (T08)	06:39	06:45	05:58		06:29 (T15)	05:32		06:11 (T15)					
	16:51	15	16:27 (T08)	17:30	25	16:44 (T08)	18:06	19:43	20:17	45	07:14 (T15)	20:47	61	07:35 (T15)			
8	07:43	16:11 (T08)	07:20	16:21 (T08)	06:37	06:43	05:57		06:27 (T15)	05:32		06:12 (T15)					
	16:52	16	16:27 (T08)	17:31	22	16:43 (T08)	18:07	19:44	20:18	49	07:16 (T15)	20:48	57	07:35 (T15)			
9	07:42	16:11 (T08)	07:18	16:23 (T08)	06:36	06:41	05:56		06:26 (T15)	05:32		06:12 (T15)					
	16:53	18	16:29 (T08)	17:32	18	16:41 (T08)	18:09	19:45	20:19	52	07:18 (T15)	20:48	60	07:36 (T15)			
10	07:42	16:11 (T08)	07:17	16:26 (T08)	06:34	06:39	05:54		06:25 (T15)	05:31		06:12 (T15)					
	16:54	19	16:30 (T08)	17:34	12	16:38 (T08)	18:10	19:46	20:20	54	07:19 (T15)	20:49	62	07:36 (T15)			
11	07:42	16:10 (T08)	07:16			06:32	06:38	05:53		06:22 (T15)	05:31		06:12 (T15)				
	16:55	20	16:30 (T08)	17:35		18:11	19:48	20:21	58	07:20 (T15)	20:49	50	07:32 (T15)				
12	07:42	16:10 (T08)	07:15			06:31	06:36	05:52		06:21 (T15)	05:31		06:12 (T15)				
	16:56	22	16:32 (T08)	17:36		18:12	19:49	20:22	60	07:21 (T15)	20:50	69	07:36 (T15)				
13	07:41	16:10 (T08)	07:13			07:29	06:34	05:51		06:20 (T15)	05:31		06:12 (T15)				
	16:58	24	16:34 (T08)	17:38		19:13	19:50	20:23	62	07:22 (T15)	20:51	66	07:36 (T15)				
14	07:41	16:10 (T08)	07:12			07:27	06:33	05:50		06:19 (T15)	05:31		06:12 (T15)				
	16:59	24	16:34 (T08)	17:39		19:15	19:51	20:24	64	07:23 (T15)	20:51	61	07:37 (T15)				
15	07:41	16:10 (T08)	07:11			07:25	06:31	05:49		06:18 (T15)	05:31		06:12 (T15)				
	17:00	26	16:36 (T08)	17:40		19:16	19:52	20:26	66	07:24 (T15)	20:52	55	07:37 (T15)				
16	07:40	16:10 (T08)	07:09			07:24	06:29	05:48		06:18 (T15)	05:31		06:13 (T15)				
	17:01	27	16:37 (T08)	17:42		19:17	19:53	20:27	67	07:25 (T15)	20:52	62	07:37 (T15)				
17	07:40	16:09 (T08)	07:08			07:22	06:28	05:47		06:17 (T15)	05:31		06:13 (T15)				
	17:02	29	16:38 (T08)	17:43		19:18	19:55	20:28	69	07:26 (T15)	20:52	51	07:37 (T15)				
18	07:39	16:10 (T08)	07:06			07:20	06:26	05:46		06:16 (T15)	05:31		06:13 (T15)				
	17:03	30	16:40 (T08)	17:44		19:19	19:56	20:29	70	07:26 (T15)	20:53	52	07:37 (T15)				
19	07:38	16:09 (T08)	07:05			07:18	06:24	05:45		06:15 (T15)	05:31		06:13 (T15)				
	17:05	32	16:41 (T08)	17:46		19:21	19:57	20:30	72	07:27 (T15)	20:53	57	07:35 (T15)				
20	07:38	16:09 (T08)	07:03			07:16	06:23	05:44		06:15 (T15)	05:31		06:15 (T15)				
	17:06	33	16:42 (T08)	17:47		19:22	19:58	20:31	73	07:28 (T15)	20:53	57	07:39 (T15)				
21	07:37	16:10 (T08)	07:02			07:15	06:21	05:43		06:15 (T15)	05:31		06:14 (T15)				
	17:07	34	16:44 (T08)	17:48		19:23	19:59	20:32	74	07:29 (T15)	20:54	53	07:39 (T15)				
22	07:36	16:10 (T08)	07:00			07:13	06:20	05:42		06:14 (T15)	05:31		06:14 (T15)				
	17:08	35	16:45 (T08)	17:50		19:24	20:00	20:33	75	07:29 (T15)	20:54	42	07:38 (T15)				
23	07:36	16:10 (T08)	06:59			07:11	06:18	05:41		06:14 (T15)	05:31		06:14 (T15)				
	17:10	36	16:46 (T08)	17:51		19:25	20:00	20:34	76	07:30 (T15)	20:54	44	07:38 (T15)				
24	07:35	16:10 (T08)	06:57			07:09	06:17	05:40		06:13 (T15)	05:32		06:15 (T15)				
	17:11	37	16:47 (T08)	17:52		19:27	20:02	20:35	77	07:30 (T15)	20:54	56	07:40 (T15)				
25	07:34	16:10 (T08)	06:56			07:08	06:15	05:39		06:13 (T15)	05:32		06:15 (T15)				
	17:12	38	16:48 (T08)	17:53		19:28	20:03	20:36	78	07:31 (T15)	20:55	55	07:40 (T15)				
26	07:33	16:10 (T08)	06:54			07:06	06:14	05:39		06:13 (T15)	05:32		06:15 (T15)				
	17:14	38	16:48 (T08)	17:55		19:29	20:04	20:37	78	07:31 (T15)	20:55	59	07:38 (T15)				
27	07:33	16:11 (T08)	06:52			07:04	06:12	05:38		06:12 (T15)	05:33		06:16 (T15)				
	17:15	38	16:49 (T08)	17:56		19:30	20:05	20:38	79	07:31 (T15)	20:55	53	07:40 (T15)				
28	07:32	16:11 (T08)	06:51			07:02	06:11	05:37		06:12 (T15)	05:33		06:15 (T15)				
	17:16	39	16:50 (T08)	17:57		19:31	20:06	20:39	80	07:32 (T15)	20:55	54	07:39 (T15)				
29	07:31	16:12 (T08)				07:00	06:09	05:36		06:12 (T15)	05:33		06:15 (T15)				
	17:18	38	16:50 (T08)			19:32	20:07	20:40	80	07:32 (T15)	20:55	58	07:39 (T15)				
30	07:30	16:12 (T08)				06:59	06:08	05:36		06:12 (T15)	05:34		06:16 (T15)				
	17:19	38	16:50 (T08)			19:34	20:09	20:40	81	07:33 (T15)	20:55	47	07:40 (T15)				
31	07:29	16:12 (T08)				06:57	05:35										
	17:20	37	16:49 (T08)			19:35	20:41	81	07:33 (T15)								
	Potential sun hours	291			294	369	401	453		459							
	Total, worst case	806			271				1859		1809						
	Sun reduction	0.36			0.40				0.58		0.63						
	Oper. time red.	1.00			1.00				1.00		1.00						
	Wind dir. red.	0.72			0.72				0.75		0.75						
	Total reduction	0.26			0.29				0.43		0.47						
	Total, real	209															

SHADOW - Calendar

Shadow receptor: 164 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2522)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December	
1 05:34	06:16 (T15)	06:00	06:31 (T15)	06:34	07:07 07:44	07:22 15:52 (T08)	
20:55	50	07:40 (T15)	20:35	39	07:32 (T15) 19:48 18:54 18:04 16:37 21 16:14 (T08)		
2 05:35	06:17 (T15)	06:01	06:32 (T15)	06:35	07:08 07:45 16:55 (T08) 07:23 15:53 (T08)		
20:55	75	07:41 (T15)	20:34	30	07:28 (T15) 19:46 18:53 18:03 13 17:08 (T08) 16:37 20 16:14 (T08)		
3 05:35	06:16 (T15)	06:02	06:33 (T15)	06:36	07:09 07:47 16:52 (T08) 07:24 15:54 (T08)		
20:55	84	07:40 (T15)	20:33	45	07:30 (T15) 19:45 18:51 18:02 18 17:11 (T08) 16:37 19 16:13 (T08)		
4 05:36	06:17 (T15)	06:03	06:35 (T15)	06:37	07:10 07:48 16:50 (T08) 07:25 15:55 (T08)		
20:54	84	07:41 (T15)	20:32	35	07:26 (T15) 19:43 18:49 18:00 21 17:13 (T08) 16:36 17 16:13 (T08)		
5 05:37	06:17 (T15)	06:04	06:36 (T15)	06:38	07:11 07:49 16:48 (T08) 07:26 15:56 (T08)		
20:54	59	07:41 (T15)	20:30	39	07:27 (T15) 19:41 18:47 17:59 26 17:14 (T08) 16:36 16 16:12 (T08)		
6 05:37	06:17 (T15)	06:05	06:38 (T15)	06:39	07:13 06:51 15:47 (T08) 07:27 15:57 (T08)		
20:54	41	07:40 (T15)	20:29	23	07:25 (T15) 19:39 18:46 16:58 28 16:15 (T08) 16:36 15 16:12 (T08)		
7 05:38	06:18 (T15)	06:06	06:39 (T15)	06:40	07:14 06:52 15:41 (T08) 07:28 15:58 (T08)		
20:54	60	07:41 (T15)	20:28	29	07:23 (T15) 19:38 18:44 16:57 29 16:17 (T08) 16:36 12 16:11 (T08)		
8 05:39	06:18 (T15)	06:07	06:43 (T15)	06:41	07:15 06:53 15:45 (T08) 07:29 15:59 (T08)		
20:53	39	07:41 (T15)	20:27	22	07:19 (T15) 19:36 18:42 16:56 26 16:17 (T08) 16:36 13 16:12 (T08)		
9 05:39	06:18 (T15)	06:09	06:44 (T15)	06:43	07:16 06:54 15:45 (T08) 07:30 16:00 (T08)		
20:53	81	07:41 (T15)	20:25	16	07:17 (T15) 19:34 18:40 16:54 32 16:19 (T08) 16:36 12 16:12 (T08)		
10 05:40	06:19 (T15)	06:10	06:49 (T15)	06:44	07:17 06:56 15:44 (T08) 07:31 16:01 (T08)		
20:53	61	07:42 (T15)	20:24	15	07:15 (T15) 19:32 18:39 16:53 29 16:19 (T08) 16:36 9 16:10 (T08)		
11 05:41	06:19 (T15)	06:11	06:52 (T15)	06:45	07:18 06:57 15:43 (T08) 07:32 16:03 (T08)		
20:52	55	07:41 (T15)	20:23	10	07:08 (T15) 19:30 18:37 16:52 36 16:19 (T08) 16:36 8 16:11 (T08)		
12 05:41	06:19 (T15)	06:12	06:46	07:20	06:58 15:44 (T08) 07:32 16:04 (T08)		
20:52	45	07:41 (T15)	20:21	19:29	18:35 16:51 16:21 (T08) 16:36 7 16:12 (T08)		
13 05:42	06:20 (T15)	06:13	06:47	07:21	07:00 15:43 (T08) 07:33 16:06 (T08)		
20:51	59	07:41 (T15)	20:20	19:27	18:34 16:50 16:21 (T08) 16:36 6 16:12 (T08)		
14 05:43	06:21 (T15)	06:14	06:48	07:22	07:01 15:44 (T08) 07:34 16:06 (T08)		
20:51	47	07:41 (T15)	20:18	19:25	18:32 16:49 16:22 (T08) 16:36 5 16:11 (T08)		
15 05:44	06:21 (T15)	06:15	06:49	07:23	07:02 15:43 (T08) 07:35 16:08 (T08)		
20:50	58	07:42 (T15)	20:17	19:23	18:30 16:48 16:22 (T08) 16:36 4 16:12 (T08)		
16 05:45	06:21 (T15)	06:16	06:50	07:24	07:03 15:43 (T08) 07:36 16:09 (T08)		
20:49	46	07:41 (T15)	20:15	19:21	18:29 16:47 16:21 (T08) 16:36 3 16:12 (T08)		
17 05:46	06:21 (T15)	06:17	06:51	07:26	07:05 15:44 (T08) 07:36 16:11 (T08)		
20:49	43	07:37 (T15)	20:14	19:20	18:27 16:46 16:22 (T08) 16:37 2 16:13 (T08)		
18 05:46	06:22 (T15)	06:18	06:52	07:27	07:06 15:44 (T08) 07:37 16:09 (T08)		
20:48	47	07:41 (T15)	20:12	19:18	18:25 16:45 16:22 (T08) 16:37 3 16:12 (T08)		
19 05:47	06:22 (T15)	06:20	06:53	07:28	07:07 15:46 (T08) 07:38 16:09 (T08)		
20:47	37	07:41 (T15)	20:11	19:16	18:24 16:45 16:21 (T08) 16:37 1 16:13 (T08)		
20 05:48	06:23 (T15)	06:21	06:55	07:29	07:08 15:45 (T08) 07:38 16:09 (T08)		
20:47	42	07:39 (T15)	20:09	19:14	18:22 16:44 16:21 (T08) 16:38 1 16:13 (T08)		
21 05:49	06:24 (T15)	06:22	06:56	07:30	07:10 15:45 (T08) 07:39 16:09 (T08)		
20:46	55	07:40 (T15)	20:08	19:12	18:21 16:43 16:20 (T08) 16:38 1 16:13 (T08)		
22 05:50	06:24 (T15)	06:23	06:57	07:32	07:11 15:45 (T08) 07:39 16:09 (T08)		
20:45	38	07:39 (T15)	20:06	19:11	18:19 16:42 16:19 (T08) 16:39 1 16:13 (T08)		
23 05:51	06:24 (T15)	06:24	06:58	07:33	07:12 15:46 (T08) 07:40 16:09 (T08)		
20:44	36	07:30 (T15)	20:05	19:09	18:17 16:42 16:19 (T08) 16:39 1 16:13 (T08)		
24 05:52	06:25 (T15)	06:25	06:59	07:34	07:13 15:46 (T08) 07:40 16:09 (T08)		
20:43	63	07:38 (T15)	20:03	19:07	18:16 16:41 16:18 (T08) 16:40 1 16:13 (T08)		
25 05:53	06:25 (T15)	06:26	07:00	07:35	07:15 15:47 (T08) 07:41 16:09 (T08)		
20:42	40	07:38 (T15)	20:01	19:05	18:14 16:40 16:17 (T08) 16:40 1 16:13 (T08)		
26 05:54	06:26 (T15)	06:27	07:01	07:37	07:16 15:48 (T08) 07:41 16:09 (T08)		
20:41	44	07:37 (T15)	20:00	19:03	18:13 16:40 16:17 (T08) 16:41 1 16:13 (T08)		
27 05:55	06:30 (T15)	06:28	07:02	07:38	07:17 15:49 (T08) 07:42 16:09 (T08)		
20:40	40	07:37 (T15)	19:57	19:02	18:11 16:39 16:16 (T08) 16:41 1 16:13 (T08)		
28 05:56	06:28 (T15)	06:29	07:03	07:39	07:18 15:49 (T08) 07:42 16:09 (T08)		
20:39	61	07:36 (T15)	19:55	19:00	18:10 16:39 16:15 (T08) 16:42 2 16:17 (T08)		
29 05:57	06:28 (T15)	06:31	07:05	07:40	07:19 15:50 (T08) 07:42 16:15 (T08)		
20:38	66	07:35 (T15)	19:53	18:58	18:09 16:38 21 16:15 (T08) 16:43 3 16:18 (T08)		
30 05:58	06:29 (T15)	06:32	07:06	07:42	07:20 15:50 (T08) 07:42 16:15 (T08)		
20:37	63	07:34 (T15)	19:51	18:56	18:07 16:38 24 16:14 (T08) 16:44 4 16:19 (T08)		
31 05:59	06:30 (T15)	06:33	07:43			07:43 16:44 6 16:20 (T08)	
20:36	36	07:32 (T15)	19:50	18:06		281 16:44 35	
Potential sun hours	466	433	376	343	293	281	
Total, worst case	1655	303			843	204	
Sun reduction	0.67	0.63			0.25	0.24	
Oper. time red.	1.00	1.00			1.00	1.00	
Wind dir. red.	0.75	0.75			0.72	0.72	
Total reduction	0.50	0.47			0.18	0.17	
Total, real	826	142			152	35	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: 185 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2214)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April		May		June									
1	07:43	07:28	06:49		06:55		06:06	06:29 (T16)	05:35		06:08 (T13)						
	16:45	17:22	17:59		19:36		20:10	19 06:48 (T16)	20:42	52	07:00 (T13)						
2	07:43	07:27	06:48	07:10 (T15)	06:53		06:05	06:27 (T16)	05:34		06:07 (T13)						
	16:46	17:23	18:00	9 07:19 (T15)	19:37		20:11	21 06:48 (T16)	20:43	52	06:59 (T13)						
3	07:43	07:26	06:46	07:08 (T15)	06:52		06:03	06:26 (T16)	05:34		06:08 (T13)						
	16:47	17:24	18:01	14 07:22 (T15)	19:38		20:12	22 06:48 (T16)	20:44	52	07:00 (T13)						
4	07:43	07:24	06:44	07:06 (T15)	06:50		06:02	06:25 (T16)	05:33		06:07 (T13)						
	16:48	17:26	18:02	18 07:24 (T15)	19:40		20:13	24 06:49 (T16)	20:45	52	06:59 (T13)						
5	07:43	07:23	06:43	07:05 (T15)	06:48		06:01	06:24 (T16)	05:33		06:08 (T13)						
	16:49	17:27	18:04	21 07:26 (T15)	19:41		20:14	25 06:49 (T16)	20:45	52	07:00 (T13)						
6	07:43	07:22	06:41	07:03 (T15)	06:46		05:59	06:22 (T16)	05:32		06:09 (T13)						
	16:50	17:28	18:05	24 07:27 (T15)	19:42		20:16	26 06:48 (T16)	20:46	51	07:00 (T13)						
7	07:43	07:21	06:39	07:01 (T15)	06:45		05:58	06:21 (T16)	05:32		06:08 (T13)						
	16:51	17:30	18:06	26 07:27 (T15)	19:43		20:17	27 06:48 (T16)	20:47	51	06:59 (T13)						
8	07:43	07:20	06:37	07:00 (T15)	06:43		05:57	06:20 (T16)	05:32		06:09 (T13)						
	16:52	17:31	18:07	29 07:29 (T15)	19:44		20:18	28 06:48 (T16)	20:48	51	07:00 (T13)						
9	07:43	07:19	06:36	06:58 (T15)	06:41		05:56	06:19 (T13)	05:32		06:09 (T13)						
	16:53	17:32	18:09	31 07:29 (T15)	19:45		20:19	30 06:49 (T13)	20:48	51	07:00 (T13)						
10	07:42	07:17	06:34	06:56 (T15)	06:40		05:54	06:18 (T13)	05:31		06:09 (T13)						
	16:54	17:34	18:10	33 07:29 (T15)	19:47		20:20	32 06:50 (T13)	20:49	51	07:00 (T13)						
11	07:42	07:16	06:32	06:54 (T15)	06:38		05:53	06:16 (T13)	05:31		06:10 (T13)						
	16:55	17:35	18:11	35 07:29 (T15)	19:48		20:21	34 06:50 (T13)	20:49	51	07:01 (T13)						
12	07:42	07:15	06:31	06:53 (T15)	06:36		05:52	06:15 (T13)	05:31		06:09 (T13)						
	16:56	17:36	18:12	37 07:30 (T15)	19:49		20:22	36 06:51 (T13)	20:50	51	07:00 (T13)						
13	07:41	07:13	06:29	07:52 (T15)	06:34		05:51	06:14 (T13)	05:31		06:10 (T13)						
	16:58	17:38	19:13	37 08:29 (T15)	19:50		20:23	38 06:52 (T13)	20:51	50	07:00 (T13)						
14	07:41	07:12	07:27	07:51 (T15)	06:33		05:50	06:13 (T13)	05:31		06:10 (T13)						
	16:59	17:39	19:15	38 08:29 (T15)	19:51		20:25	40 06:53 (T13)	20:51	50	07:00 (T13)						
15	07:41	07:11	07:25	07:51 (T15)	06:31		05:49	06:12 (T13)	05:31		06:10 (T13)						
	17:00	17:40	19:16	37 08:28 (T15)	19:52		20:26	42 06:54 (T13)	20:52	51	07:01 (T13)						
16	07:40	07:09	07:24	07:51 (T15)	06:29		05:48	06:11 (T13)	05:31		06:10 (T13)						
	17:01	17:42	19:17	36 08:27 (T15)	19:54		20:27	43 06:54 (T13)	20:52	51	07:01 (T13)						
17	07:40	07:08	07:22	07:52 (T15)	06:28		05:47	06:10 (T13)	05:31		06:11 (T13)						
	17:02	17:43	19:18	35 08:27 (T15)	19:55		20:28	45 06:55 (T13)	20:52	50	07:01 (T13)						
18	07:39	07:06	07:20	07:52 (T15)	06:26		05:46	06:08 (T13)	05:31		06:11 (T13)						
	17:03	17:44	19:19	34 08:26 (T15)	19:56		20:29	46 06:55 (T13)	20:53	50	07:01 (T13)						
19	07:38	07:05	07:18	07:52 (T15)	06:25		05:45	06:08 (T13)	05:31		06:12 (T13)						
	17:05	17:46	19:21	33 08:25 (T15)	19:57		20:30	48 06:56 (T13)	20:53	50	07:02 (T13)						
20	07:38	07:03	07:17	07:52 (T15)	06:23		05:44	06:08 (T13)	05:31		06:12 (T13)						
	17:06	17:47	19:22	31 08:23 (T15)	19:58		20:31	49 06:57 (T13)	20:54	50	07:02 (T13)						
21	07:37	07:02	07:15	07:54 (T15)	06:21		05:43	06:08 (T13)	05:31		06:12 (T13)						
	17:07	17:48	19:23	29 08:23 (T15)	19:59		20:32	49 06:57 (T13)	20:54	50	07:02 (T13)						
22	07:37	07:00	07:13	07:55 (T15)	06:20		05:42	06:07 (T13)	05:31		06:12 (T13)						
	17:08	17:50	19:24	25 08:20 (T15)	20:01		20:33	50 06:57 (T13)	20:54	50	07:02 (T13)						
23	07:36	06:59	07:11	07:56 (T15)	06:18		05:41	06:07 (T13)	05:31		06:12 (T13)						
	17:10	17:51	19:25	22 08:18 (T15)	20:01		20:34	50 06:57 (T13)	20:54	50	07:02 (T13)						
24	07:35	06:57	07:09	07:58 (T15)	06:17		05:40	06:07 (T13)	05:32		06:13 (T13)						
	17:11	17:52	19:27	17 08:15 (T15)	20:02		20:35	50 06:57 (T13)	20:54	50	07:03 (T13)						
25	07:34	06:56	07:08	08:02 (T15)	06:15	06:37 (T16)	05:39			06:07 (T13)	05:32		06:13 (T13)				
	17:12	17:53	19:28	8 08:10 (T15)	20:03	5 06:42 (T16)	20:36	51	06:58 (T13)	20:55	50	07:03 (T13)					
26	07:33	06:54	07:06		06:14	06:36 (T16)	05:39		06:07 (T13)	05:32		06:13 (T13)					
	17:14	17:55	19:29		20:04	8 06:44 (T16)	20:37	51	06:58 (T13)	20:55	50	07:03 (T13)					
27	07:33	06:52	07:04		06:12	06:34 (T16)	05:38		06:06 (T13)	05:33		06:13 (T13)					
	17:15	17:56	19:30		20:05	11 06:45 (T16)	20:38	52	06:58 (T13)	20:55	51	07:04 (T13)					
28	07:32	06:51	07:02		06:11	06:33 (T16)	05:37		06:07 (T13)	05:33		06:13 (T13)					
	17:16	17:57	19:31		20:06	13 06:46 (T16)	20:39	52	06:59 (T13)	20:55	51	07:04 (T13)					
29	07:31		07:01		06:09	06:32 (T16)	05:36		06:07 (T13)	05:33		06:13 (T13)					
	17:18		19:32		20:07	16 06:48 (T16)	20:40	52	06:59 (T13)	20:55	50	07:03 (T13)					
30	07:30		06:59		06:08	06:30 (T16)	05:36		06:07 (T13)	05:34		06:14 (T13)					
	17:19		19:34		20:09	18 06:48 (T16)	20:41	52	06:59 (T13)	20:55	28	07:04 (T13)					
31	07:29		06:57				05:35		06:07 (T13)								
	17:20		19:35				20:41	52	06:59 (T13)		459						
	Potential sun hours	291	294	369		401						459					
	Total, worst case			659		71							1499				
	Sun reduction			0.47		0.54							0.63				
	Oper. time red.			1.00		1.00							1.00				
	Wind dir. red.			0.72		0.75							0.75				
	Total reduction			0.34		0.40							0.47				
	Total, real			222		29							705				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 185 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2214)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	July	August	September	October	November	December
1	05:34	06:15 (T13)	06:00	06:25 (T13)	06:34	07:07
	20:55	36 07:04 (T13)	20:35	38 07:03 (T13)	19:48	18:54 38 08:09 (T15)
2	05:35	06:16 (T13)	06:01	06:26 (T13)	06:35	08:09 (T15) 18:04
	20:55	42 07:05 (T13)	20:34	36 07:02 (T13)	19:46	16:37 07:31 (T15) 07:46
3	05:35	06:14 (T13)	06:02	06:27 (T13)	06:36	08:08 (T15) 18:03
	20:55	51 07:05 (T13)	20:33	34 07:01 (T13)	19:45	16:37 07:32 (T15) 07:47
4	05:36	06:14 (T13)	06:03	06:28 (T13)	06:37	08:08 (T15) 18:02
	20:54	51 07:05 (T13)	20:32	31 06:59 (T13)	19:43	16:37 07:33 (T15) 07:48
5	05:37	06:14 (T13)	06:04	06:29 (T13)	06:38	08:07 (T15) 18:00
	20:54	39 07:05 (T13)	20:30	29 06:58 (T13)	19:41	16:36 07:34 (T15) 07:49
6	05:37	06:15 (T13)	06:05	06:30 (T13)	06:39	08:06 (T15) 17:59
	20:54	24 07:06 (T13)	20:29	28 06:58 (T16)	19:39	16:36 07:35 (T15) 06:51
7	05:38	06:16 (T13)	06:06	06:31 (T13)	06:40	08:05 (T15) 16:58
	20:54	36 07:06 (T13)	20:28	27 06:58 (T16)	19:38	16:36 07:37 (T15) 06:52
8	05:39	06:16 (T13)	06:08	06:32 (T13)	06:41	08:05 (T15) 16:57
	20:53	27 07:06 (T13)	20:27	25 06:58 (T16)	19:36	16:36 07:38 (T15) 06:53
9	05:39	06:16 (T13)	06:09	06:34 (T13)	06:43	08:03 (T15) 16:56
	20:53	48 07:06 (T13)	20:25	21 06:58 (T16)	19:34	16:36 07:39 (T15) 06:55
10	05:40	06:15 (T13)	06:10	06:36 (T16)	06:44	08:02 (T15) 16:54
	20:53	47 07:07 (T13)	20:24	21 06:57 (T16)	19:32	16:36 07:40 (T15) 06:56
11	05:41	06:15 (T13)	06:11	06:39 (T16)	06:45	08:00 (T15) 16:53
	20:52	46 07:06 (T13)	20:23	13 06:57 (T16)	19:30	16:36 07:41 (T15) 06:57
12	05:41	06:15 (T13)	06:12	06:37 (T16)	06:46	07:57 (T15) 16:52
	20:52	27 07:07 (T13)	20:21	17 06:56 (T16)	19:29	16:36 07:43 (T15) 06:58
13	05:42	06:22 (T13)	06:13	06:43 (T13)	06:47	07:55 (T15) 16:51
	20:51	34 07:07 (T13)	20:20	13 06:56 (T16)	19:27	16:36 07:44 (T15) 07:00
14	05:43	06:17 (T13)	06:14	06:38 (T16)	06:48	07:51 (T15) 16:50
	20:51	40 07:08 (T13)	20:18	12 06:55 (T16)	19:25	16:36 07:22 (T15) 07:34
15	05:44	06:17 (T13)	06:15	06:39 (T16)	06:49	07:57 (T15) 16:52
	20:50	44 07:08 (T13)	20:17	15 06:54 (T16)	19:23	16:36 07:43 (T15) 06:58
16	05:45	06:19 (T13)	06:16	06:41 (T16)	06:50	07:55 (T15) 16:51
	20:49	36 07:07 (T13)	20:15	13 06:54 (T16)	19:21	16:36 07:44 (T15) 07:00
17	05:46	06:17 (T13)	06:17	06:42 (T16)	06:51	07:55 (T15) 16:52
	20:49	33 07:07 (T13)	20:14	10 06:52 (T16)	19:20	16:36 07:57 (T15) 16:52
18	05:46	06:16 (T13)	06:18	06:43 (T16)	06:52	07:55 (T15) 16:51
	20:48	42 07:08 (T13)	20:12	7 06:50 (T16)	19:18	16:36 07:55 (T15) 16:51
19	05:47	06:16 (T13)	06:20	06:44 (T16)	06:54	07:53 (T15) 16:50
	20:47	30 07:08 (T13)	20:11	4 06:48 (T16)	19:16	16:36 07:54 (T15) 16:50
20	05:48	06:17 (T13)	06:21	06:55	07:29	07:54 (T15) 16:45
	20:47	29 07:08 (T13)	20:09	19:14	07:29	07:59 (T15) 16:37
21	05:49	06:18 (T13)	06:22	06:56	07:30	07:59 (T15) 16:38
	20:46	50 07:08 (T13)	20:08	19:12	08:01 (T15)	07:30 (T15) 07:39
22	05:50	06:18 (T13)	06:23	06:57	07:32	07:40 (T15) 07:11
	20:45	48 07:08 (T13)	20:06	19:11	08:04 (T15)	16:43 07:39
23	05:51	06:17 (T13)	06:24	06:58	07:33	07:42 (T15) 16:43
	20:44	45 07:07 (T13)	20:05	19:09	08:07 (T15)	16:43 07:40
24	05:52	06:17 (T13)	06:25	06:59	07:34	08:07 (T15) 16:43
	20:43	50 07:07 (T13)	20:03	19:07	08:03 (T15)	16:43 07:40
25	05:53	06:18 (T13)	06:26	07:00	07:36 (T15)	16:43 07:41
	20:42	36 07:06 (T13)	20:01	19:05	08:08 (T15)	16:40 07:41
26	05:54	06:19 (T13)	06:27	07:01	07:34 (T15)	16:40 07:41
	20:41	34 07:06 (T13)	20:00	19:03	08:08 (T15)	16:40 07:41
27	05:55	06:20 (T13)	06:28	07:02	07:33 (T15)	16:40 07:42
	20:40	40 07:06 (T13)	19:57	19:02	08:09 (T15)	16:39 07:42
28	05:56	06:21 (T13)	06:29	07:04	07:32 (T15)	16:41 07:42
	20:39	44 07:05 (T13)	19:55	19:00	08:09 (T15)	16:39 07:42
29	05:57	06:22 (T13)	06:31	07:05	07:32 (T15)	16:42 07:42
	20:38	43 07:05 (T13)	19:53	18:58	08:09 (T15)	16:38 07:42
30	05:58	06:23 (T13)	06:32	07:06	07:31 (T15)	16:43 07:42
	20:37	41 07:04 (T13)	19:51	18:56	08:08 (T15)	16:38 07:42
31	05:59	06:24 (T13)	06:33			07:43 16:44
	20:36	39 07:03 (T13)	19:50			18:06 293 281
				376	343	
						Total, real 616 186 104 338 107
						Potential sun hours 466 433 376 260 338 293 281
						Total, worst case 1232 394 260 0.56 0.44 293 281
						Sun reduction 0.67 0.63 0.56 0.44 0.44 293 281
						Oper. time red. 1.00 1.00 1.00 1.00 1.00 293 281
						Wind dir. red. 0.75 0.75 0.72 0.72 0.72 293 281
						Total reduction 0.50 0.47 0.40 0.32 0.32 293 281
						Total, real 616 186 104 0.40 0.32 293 281

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 191 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2530)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June
1	07:43	07:28	06:49	07:11 (T15)	06:55	06:06
	16:45	17:22	17:59 25	07:36 (T15)	19:36	06:29 (T16)
2	07:43	07:27	06:48	07:10 (T15)	06:53	05:35
	16:46	17:23	18:00 28	07:38 (T15)	19:37	06:43 (T16)
3	07:43	07:26	06:46	07:08 (T15)	06:52	05:35
	16:47	17:24	18:01 31	07:39 (T15)	19:38	06:43 (T16)
4	07:43	07:24	06:44	07:06 (T15)	06:50	05:35
	16:48	17:26	18:02 33	07:39 (T15)	19:39	06:45 (T16)
5	07:43	07:23	06:43	07:05 (T15)	06:48	05:35
	16:49	17:27	18:04 36	07:41 (T15)	19:41	06:46 (T16)
6	07:43	07:22	06:41	07:03 (T15)	06:46	05:35
	16:50	17:28	18:05 38	07:41 (T15)	19:42	06:22 (T16)
7	07:43	07:21	06:39	07:01 (T15)	06:45	05:32
	16:51	17:30	18:06 40	07:41 (T15)	19:43	06:21 (T16)
8	07:43	07:20	06:37	07:00 (T15)	06:43	05:32
	16:52	17:31	18:07 42	07:42 (T15)	19:44	06:24 (T16)
9	07:43	07:19	06:36	06:59 (T15)	06:41	05:32
	16:53	17:32	18:09 43	07:42 (T15)	19:45	06:19 (T16)
10	07:42	07:17	06:34	06:58 (T15)	06:40	05:31
	16:54	17:34	18:10 43	07:41 (T15)	19:47	06:18 (T16)
11	07:42	07:16	06:32	06:57 (T15)	06:38	05:31
	16:55	17:35	18:11 44	07:41 (T15)	19:48	06:46 (T16)
12	07:42	07:15	06:31	06:58 (T15)	06:36	05:31
	16:56	17:36	18:12 43	07:41 (T15)	19:49	06:15 (T16)
13	07:41	07:13	07:29	07:58 (T15)	06:34	05:31
	16:58	17:38	19:13 43	08:41 (T15)	19:50	06:15 (T16)
14	07:41	07:12	07:27	07:57 (T15)	06:33	05:31
	16:59	17:39	19:15 43	08:40 (T15)	19:51	06:46 (T16)
15	07:41	07:11	07:25	07:57 (T15)	06:31	05:31
	17:00	17:40	19:16 42	08:39 (T15)	19:52	06:10 (T16)
16	07:40	07:09	07:24	07:57 (T15)	06:29	05:31
	17:01	17:42	19:17 41	08:38 (T15)	19:54	06:15 (T16)
17	07:40	07:08	07:22	07:59 (T15)	06:28	05:31
	17:02	17:43	19:18 38	08:37 (T15)	19:55	06:45 (T16)
18	07:39	07:06	07:20	07:59 (T15)	06:26	05:31
	17:03	17:44	19:19 37	08:36 (T15)	19:56	06:10 (T16)
19	07:38	07:05	07:18	07:59 (T15)	06:25	05:31
	17:05	17:46	19:21 35	08:34 (T15)	19:57	06:08 (T16)
20	07:38	07:03	07:16	08:00 (T15)	06:23	05:31
	17:06	17:47	19:22 33	08:33 (T15)	19:58	06:45 (T16)
21	07:37	07:02	07:15	08:01 (T15)	06:21	05:31
	17:07	17:48	19:23 30	08:31 (T15)	19:59	06:07 (T16)
22	07:37	07:00	07:13	08:03 (T15)	06:20	05:31
	17:08	17:50	19:24 26	08:29 (T15)	20:00	06:44 (T16)
23	07:36	06:59	07:11	08:05 (T15)	06:18	05:31
	17:10	17:51	19:25 21	08:26 (T15)	20:00	06:44 (T16)
24	07:35	06:57	07:09	08:08 (T15)	06:17	05:31
	17:11	17:52	19:27 14	08:22 (T15)	20:02	06:47 (T16)
25	07:34	06:56	07:08		06:15	05:31
	17:12	17:53	19:28		06:15	06:04 (T13)
26	07:33	06:54	07:16 (T15)	07:06	06:14	05:31
	17:14	17:55 14	07:30 (T15)	19:29	06:04	06:03 (T13)
27	07:33	06:52	07:15 (T15)	07:04	06:12	05:31
	17:15	17:56 18	07:33 (T15)	19:30	05:38	06:02 (T13)
28	07:32	06:51	07:13 (T15)	07:02	06:05	05:33
	17:16	17:57 22	07:35 (T15)	19:31	06:33 (T16)	06:02 (T13)
29	07:31		07:00		06:37 (T16)	05:33
	17:18		19:32		06:32 (T16)	06:02 (T13)
30	07:30		06:59		06:40 (T16)	05:33
	17:19		19:34		06:30 (T16)	06:03 (T13)
31	07:29		06:57		06:41 (T16)	05:34
	17:20		19:35		06:52 (T13)	06:04 (T13)
Potential sun hours	291	294	369	401	453	459
Total, worst case		54	849	23	1046	1731
Sun reduction		0.40	0.47	0.54	0.58	0.63
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.71	0.71	0.75	0.75	0.74
Total reduction		0.28	0.33	0.40	0.43	0.47
Total, real		15	283	9	451	806

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 191 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2530)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	July	August	September	October	November	December
1	05:34	06:02 (T13)	06:00	06:25 (T16)	06:34	07:07
	20:55	38 07:01 (T13)	20:35	24 06:57 (T16)	19:48	07:37 (T15)
2	05:35	06:03 (T13)	06:01	06:26 (T16)	06:35	08:20 (T15)
	20:55	46 07:02 (T13)	20:34	19 06:57 (T16)	19:46	18:04
3	05:35	06:03 (T13)	06:02	06:27 (T16)	06:36	07:37 (T15)
	20:55	59 07:02 (T13)	20:33	22 06:57 (T16)	19:45	07:46
4	05:36	06:04 (T13)	06:03	06:28 (T16)	06:37	08:20 (T15)
	20:54	58 07:02 (T13)	20:32	25 06:57 (T16)	19:43	18:03
5	05:37	06:04 (T13)	06:04	06:32 (T16)	06:38	07:35 (T15)
	20:54	43 07:01 (T13)	20:30	19 06:56 (T16)	19:41	07:49
6	05:37	06:04 (T13)	06:05	06:31 (T16)	06:39	08:18 (T15)
	20:54	24 07:00 (T13)	20:29	14 06:56 (T16)	19:39	17:59
7	05:38	06:05 (T13)	06:06	06:33 (T16)	06:40	08:19 (T15)
	20:54	35 07:02 (T13)	20:28	19 06:56 (T16)	19:38	18:02
8	05:39	06:05 (T13)	06:08	06:34 (T16)	06:41	07:36 (T15)
	20:53	27 07:01 (T13)	20:27	13 06:55 (T16)	19:36	07:48
9	05:39	06:06 (T13)	06:09	06:34 (T16)	06:43	08:19 (T15)
	20:53	48 07:02 (T13)	20:25	16 06:55 (T16)	19:34	18:00
10	05:40	06:07 (T13)	06:10	06:36 (T16)	06:44	08:18 (T15)
	20:53	50 07:02 (T13)	20:24	18 06:54 (T16)	19:32	16:52
11	05:41	06:06 (T13)	06:11	06:39 (T16)	06:45	07:38 (T15)
	20:52	50 07:01 (T13)	20:23	9 06:53 (T16)	19:30	06:53
12	05:41	06:07 (T13)	06:12	06:37 (T16)	06:46	08:17 (T15)
	20:52	28 07:01 (T13)	20:21	13 06:52 (T16)	19:29	16:56
13	05:42	06:08 (T13)	06:13	06:43 (T16)	06:47	07:39 (T15)
	20:51	34 07:01 (T13)	20:20	7 06:50 (T16)	19:27	06:55
14	05:43	06:09 (T13)	06:14	06:38 (T16)	06:48	07:40 (T15)
	20:51	38 07:01 (T13)	20:18	6 06:49 (T16)	19:25	07:41 (T15)
15	05:44	06:14 (T13)	06:15	06:39 (T16)	06:49	08:13 (T15)
	20:50	39 07:01 (T13)	20:17	7 06:46 (T16)	19:23	16:58
16	05:45	06:10 (T13)	06:16	06:41 (T16)	06:50	08:13 (T15)
	20:49	31 07:00 (T13)	20:15	3 06:44 (T16)	19:21	16:51
17	05:46	06:11 (T13)	06:17	06:51		07:00
	20:49	32 06:59 (T13)	20:14	19:20		07:33
18	05:46	06:14 (T13)	06:18	06:52		07:36
	20:48	35 06:59 (T13)	20:12	19:18		07:37
19	05:47	06:16 (T13)	06:20	06:54		07:38
	20:47	27 06:58 (T13)	20:11	19:16		07:38
20	05:48	06:15 (T13)	06:21	06:55	08:00 (T15)	07:38
	20:47	33 06:58 (T13)	20:09	19:14	08:07 (T15)	07:40
21	05:49	06:15 (T13)	06:22	06:56	07:51 (T15)	07:39
	20:46	40 06:57 (T13)	20:08	19:12	08:11 (T15)	07:43
22	05:50	06:16 (T13)	06:23	06:57	07:49 (T15)	07:39
	20:45	38 06:56 (T13)	20:06	19:11	08:13 (T15)	07:43
23	05:51	06:16 (T13)	06:24	06:58	07:47 (T15)	07:40
	20:44	34 06:55 (T13)	20:05	19:09	08:15 (T15)	07:42
24	05:52	06:17 (T13)	06:25	06:59	07:45 (T15)	07:40
	20:43	37 06:54 (T13)	20:03	19:07	08:17 (T15)	07:44
25	05:53	06:18 (T13)	06:26	07:00	07:43 (T15)	07:44
	20:42	30 06:54 (T16)	20:01	19:05	08:16 (T15)	07:44
26	05:54	06:20 (T13)	06:27	07:01	07:42 (T15)	07:44
	20:41	30 06:54 (T16)	20:00	19:03	08:17 (T15)	07:44
27	05:55	06:22 (T13)	06:28	07:02	07:40 (T15)	07:44
	20:40	26 06:55 (T16)	19:57	19:02	08:19 (T15)	07:45
28	05:56	06:24 (T13)	06:29	07:04	07:39 (T15)	07:45
	20:39	28 06:55 (T16)	19:55	19:00	08:19 (T15)	07:45
29	05:57	06:26 (T16)	06:31	07:05	07:38 (T15)	07:46
	20:38	30 06:56 (T16)	19:53	18:58	08:19 (T15)	07:47
30	05:58	06:26 (T16)	06:32	07:06	07:37 (T15)	07:47
	20:37	29 06:56 (T16)	19:51	18:56	08:19 (T15)	07:48
31	05:59	06:25 (T16)	06:33		07:43	07:48
	20:36	22 06:54 (T16)	19:50		18:06	16:44
Potential sun hours	466	433	376	343	293	281
Total, worst case	1119	234	258	573		
Sun reduction	0.67	0.63	0.56	0.44		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.74	0.75	0.71	0.71		
Total reduction	0.50	0.47	0.40	0.31		
Total, real	555	110	102	179		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 193 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2531)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April		May		June								
1	07:43	07:28	06:49		06:55	18:15 (T22)	06:06		19:22 (T24)	05:35		19:07 (T24)				
	16:45	17:21	17:58		19:36	37	18:52 (T22)	20:10	22	19:44 (T24)	20:42	52	19:59 (T24)			
2	07:43	07:26	06:47		06:53	18:16 (T22)	06:05		19:19 (T24)	05:34		19:08 (T24)				
	16:46	17:23	18:00		19:37	34	18:50 (T22)	20:11	26	19:45 (T24)	20:43	51	19:59 (T24)			
3	07:43	07:25	06:46		06:51	18:17 (T22)	06:03		19:17 (T24)	05:33		19:07 (T24)				
	16:47	17:24	18:01		19:38	31	18:48 (T22)	20:12	30	19:47 (T24)	20:44	52	19:59 (T24)			
4	07:43	07:24	06:44		06:50	18:18 (T22)	06:02		19:16 (T24)	05:33		19:08 (T24)				
	16:48	17:25	18:02		19:39	28	18:46 (T22)	20:13	33	19:49 (T24)	20:44	51	19:59 (T24)			
5	07:43	07:23	06:42		06:48	18:21 (T22)	06:01		19:13 (T24)	05:33		19:09 (T24)				
	16:49	17:27	18:03		19:40	23	18:44 (T22)	20:14	37	19:50 (T24)	20:45	51	20:00 (T24)			
6	07:43	07:22	06:41		06:46	18:24 (T22)	05:59		19:12 (T24)	05:32		19:08 (T24)				
	16:50	17:28	18:05		19:42	17	18:41 (T22)	20:15	39	19:51 (T24)	20:46	51	19:59 (T24)			
7	07:43	07:21	06:39		06:44	18:29 (T22)	05:58		19:11 (T24)	05:32		19:09 (T24)				
	16:51	17:30	18:06		19:43	5	18:34 (T22)	20:17	41	19:52 (T24)	20:47	50	19:59 (T24)			
8	07:43	07:20	06:37		06:43				05:57	19:11 (T24)	05:32		19:10 (T24)			
	16:52	17:31	18:07		19:44				20:18	42	19:53 (T24)	20:47	50	20:00 (T24)		
9	07:42	07:18	06:36	17:32 (T22)	06:41				05:55	19:09 (T24)	05:31		19:10 (T24)			
	16:53	17:32	18:08	16	17:48 (T22)	19:45			20:19	44	19:53 (T24)	20:48	50	20:00 (T24)		
10	07:42	07:17	06:34	17:28 (T22)	06:39				05:54	19:08 (T24)	05:31		19:10 (T24)			
	16:54	17:34	18:10	22	17:50 (T22)	19:46			20:20	46	19:54 (T24)	20:49	49	19:59 (T24)		
11	07:42	07:16	06:32	17:25 (T22)	06:38				05:53	19:08 (T24)	05:31		19:10 (T24)			
	16:55	17:35	18:11	26	17:51 (T22)	19:47			20:21	47	19:55 (T24)	20:49	49	19:59 (T24)		
12	07:42	07:14	06:30	17:23 (T22)	06:36				05:52	19:07 (T24)	05:31		19:11 (T24)			
	16:56	17:36	18:12	29	17:52 (T22)	19:49			20:22	49	19:56 (T24)	20:50	49	20:00 (T24)		
13	07:41	07:13	06:29	18:22 (T22)	06:34				05:51	19:07 (T24)	05:31		19:11 (T24)			
	16:57	17:38	18:13	32	18:54 (T22)	19:50			20:23	49	19:55 (T24)	20:50	49	20:00 (T24)		
14	07:41	07:12	07:27	18:20 (T22)	06:33				05:50	19:07 (T24)	05:30		19:11 (T24)			
	16:59	17:39	18:14	35	18:55 (T22)	19:51			20:24	50	19:57 (T24)	20:51	49	20:00 (T24)		
15	07:40	07:10	07:25	18:18 (T22)	06:31				05:48	19:06 (T24)	05:30		19:12 (T24)			
	17:00	17:40	18:16	38	18:56 (T22)	19:52			20:25	51	19:57 (T24)	20:51	48	20:00 (T24)		
16	07:40	07:09	07:23	18:17 (T22)	06:29				05:47	19:06 (T24)	05:30		19:12 (T24)			
	17:01	17:42	18:17	40	18:57 (T22)	19:53			20:26	51	19:57 (T24)	20:52	48	20:00 (T24)		
17	07:39	07:08	07:22	18:16 (T22)	06:28				05:46	19:06 (T24)	05:30		19:12 (T24)			
	17:02	17:43	18:18	42	18:58 (T22)	19:54			20:28	52	19:58 (T24)	20:52	48	20:00 (T24)		
18	07:39	07:06	07:20	18:16 (T22)	06:26				05:45	19:05 (T24)	05:30		19:13 (T24)			
	17:03	17:44	18:19	44	19:00 (T22)	19:56			20:29	53	19:58 (T24)	20:53	47	20:00 (T24)		
19	07:38	07:05	07:18	18:15 (T22)	06:24				05:44	19:05 (T24)	05:31		19:13 (T24)			
	17:05	17:45	18:20	45	19:00 (T22)	19:57			20:30	53	19:58 (T24)	20:53	47	20:00 (T24)		
20	07:38	07:03	07:16	18:14 (T22)	06:23				05:43	19:05 (T24)	05:31		19:13 (T24)			
	17:06	17:47	18:22	46	19:00 (T22)	19:58			20:31	53	19:58 (T24)	20:53	47	20:00 (T24)		
21	07:37	07:02	07:15	18:13 (T22)	06:21				05:42	19:05 (T24)	05:31		19:14 (T24)			
	17:07	17:48	18:23	46	18:59 (T22)	19:59			20:32	53	19:58 (T24)	20:54	48	20:02 (T24)		
22	07:36	07:00	07:13	18:13 (T22)	06:20				05:42	19:06 (T24)	05:31		19:14 (T24)			
	17:08	17:49	18:24	47	19:00 (T22)	20:00			20:33	53	19:59 (T24)	20:54	48	20:02 (T24)		
23	07:36	06:59	07:11	18:13 (T22)	06:18				05:41	19:06 (T24)	05:31		19:14 (T24)			
	17:10	17:51	18:25	47	19:00 (T22)	20:00			20:34	53	19:59 (T24)	20:54	48	20:02 (T24)		
24	07:35	06:57	07:09	18:12 (T22)	06:16				05:40	19:05 (T24)	05:32		19:14 (T24)			
	17:11	17:52	18:26	47	18:58 (T22)	20:01			20:35	54	19:59 (T24)	20:54	47	20:01 (T24)		
25	07:34	06:55	07:07	18:12 (T22)	06:15				05:39	19:05 (T24)	05:32		19:15 (T24)			
	17:12	17:53	18:28	46	18:58 (T22)	20:03			20:36	54	19:59 (T24)	20:54	47	20:02 (T24)		
26	07:33	06:54	07:06	18:12 (T22)	06:13				05:38	19:06 (T24)	05:32		19:14 (T24)			
	17:13	17:55	18:29	46	18:58 (T22)	20:04			20:37	53	19:59 (T24)	20:55	48	20:02 (T24)		
27	07:32	06:52	07:04	18:13 (T22)	06:12				05:38	19:06 (T24)	05:32		19:14 (T24)			
	17:15	17:56	18:30	45	18:58 (T22)	20:05			20:38	53	19:59 (T24)	20:55	48	20:02 (T24)		
28	07:31	06:51	07:02	18:13 (T22)	06:10				05:37	19:05 (T24)	05:33		19:15 (T24)			
	17:16	17:57	18:31	44	18:57 (T22)	20:06			20:39	53	19:59 (T24)	20:55	48	20:03 (T24)		
29	07:31		07:00		18:13 (T22)	06:09			05:36	19:06 (T24)	05:33		19:15 (T24)			
	17:17		18:32	43	18:56 (T22)	20:07			20:39	53	19:59 (T24)	20:55	48	20:03 (T24)		
30	07:30		06:59	18:13 (T22)	06:07		19:26 (T24)	05:36		19:06 (T24)	05:34		19:15 (T24)			
	17:19		18:33	41	18:54 (T22)	20:08	14	19:40 (T24)	05:35		19:59 (T24)	20:55	49	20:04 (T24)		
31	07:29		06:57	18:14 (T22)				20:41	52	19:59 (T24)						
	17:20		18:35	39	18:53 (T22)				453		459					
	Potential sun hours	291	294	369		401										
	Total, worst case			906		189			1452		1467					
	Sun reduction			0.47		0.54			0.58		0.63					
	Oper. time red.			1.00		1.00			1.00		1.00					
	Wind dir. red.			0.75		0.74			0.69		0.69					
	Total reduction			0.35		0.40			0.40		0.44					
	Total, real			319		76			585		642					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Shadow receptor: 193 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2531)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December
1	05:34	19:15 (T24) 06:00	19:18 (T24) 06:34	07:07	18:00 (T22) 07:44	07:21
	20:55	49 20:04 (T24) 20:35	45 20:07 (T24) 19:48	18:54	33 18:33 (T22) 18:04	16:37
2	05:35	19:15 (T24) 06:01	19:18 (T24) 06:35	07:08	18:01 (T22) 07:45	07:23
	20:55	50 20:05 (T24) 20:34	48 20:06 (T24) 19:46	18:52	30 18:31 (T22) 18:03	16:37
3	05:35	19:15 (T24) 06:02	19:19 (T24) 06:36	07:09	18:03 (T22) 07:47	07:24
	20:54	49 20:04 (T24) 20:33	42 20:04 (T24) 19:44	18:51	27 18:30 (T22) 18:02	16:36
4	05:36	19:15 (T24) 06:03	19:19 (T24) 06:37	07:10	18:05 (T22) 07:48	07:25
	20:54	50 20:05 (T24) 20:31	41 20:04 (T24) 19:43	18:49	23 18:28 (T22) 18:00	16:36
5	05:36	19:15 (T24) 06:04	19:20 (T24) 06:38	07:11	18:07 (T22) 07:49	07:26
	20:54	50 20:05 (T24) 20:30	32 20:04 (T24) 19:41	18:47	19 18:26 (T22) 17:59	16:36
6	05:37	19:15 (T24) 06:05	19:21 (T24) 06:39	18:26 (T22) 07:12	18:12 (T22) 06:50	07:27
	20:54	51 20:06 (T24) 20:29	35 20:03 (T24) 19:39	2 18:28 (T22) 18:45	9 18:21 (T22) 16:58	16:36
7	05:38	19:16 (T24) 06:06	19:21 (T24) 06:40	18:22 (T22) 07:14	18:52	07:28
	20:53	50 20:06 (T24) 20:28	36 20:02 (T24) 19:37	14 18:36 (T22) 18:44	16:57	16:36
8	05:38	19:15 (T24) 06:07	19:22 (T24) 06:41	18:15 (T22) 07:15	06:53	07:29
	20:53	51 20:06 (T24) 20:26	38 20:00 (T24) 19:36	13 18:38 (T22) 18:42	16:55	16:35
9	05:39	19:15 (T24) 06:08	19:23 (T24) 06:42	18:17 (T22) 07:16	06:54	07:30
	20:53	32 20:07 (T24) 20:25	31 19:59 (T24) 19:34	19 18:39 (T22) 18:40	16:54	16:35
10	05:40	19:16 (T24) 06:09	19:25 (T24) 06:43	18:10 (T22) 07:17	06:56	07:31
	20:52	40 20:07 (T24) 20:24	32 19:57 (T24) 19:32	23 18:41 (T22) 18:38	16:53	16:35
11	05:40	19:15 (T24) 06:11	19:26 (T24) 06:45	18:10 (T22) 07:18	06:57	07:31
	20:52	35 20:07 (T24) 20:22	30 19:56 (T24) 19:30	25 18:42 (T22) 18:37	16:52	16:35
12	05:41	19:15 (T24) 06:12	19:28 (T24) 06:46	18:10 (T22) 07:19	06:58	07:32
	20:51	28 20:07 (T24) 20:21	25 19:53 (T24) 19:28	20 18:44 (T22) 18:35	16:51	16:35
13	05:42	19:15 (T24) 06:13	19:31 (T24) 06:47	18:08 (T22) 07:21	06:59	07:33
	20:51	33 20:08 (T24) 20:20	7 19:49 (T24) 19:27	28 18:45 (T22) 18:33	16:50	16:36
14	05:43	19:16 (T24) 06:14	19:35 (T24) 06:48	18:06 (T22) 07:22	07:01	07:34
	20:50	36 20:08 (T24) 20:18	8 19:46 (T24) 19:25	31 18:45 (T22) 18:32	16:49	16:36
15	05:44	19:15 (T24) 06:15	19:46 (T24) 06:49	18:10 (T22) 07:23	07:02	07:35
	20:50	36 20:08 (T24) 20:17	19:23	19 18:45 (T22) 18:30	16:48	16:36
16	05:44	19:15 (T24) 06:16	19:50	18:02 (T22) 07:24	07:03	07:35
	20:49	44 20:08 (T24) 20:15	19:21	30 18:46 (T22) 18:28	16:47	16:36
17	05:45	19:15 (T24) 06:17	19:51	18:01 (T22) 07:25	07:05	07:36
	20:49	38 20:08 (T24) 20:14	19:19	32 18:46 (T22) 18:27	16:46	16:36
18	05:46	19:15 (T24) 06:18	19:52	18:00 (T22) 07:27	07:06	07:37
	20:48	33 20:09 (T24) 20:12	19:18	33 18:46 (T22) 18:25	16:45	16:37
19	05:47	19:16 (T24) 06:19	19:53	18:00 (T22) 07:28	07:07	07:38
	20:47	30 20:09 (T24) 20:11	19:16	32 18:46 (T22) 18:24	16:44	16:37
20	05:48	19:16 (T24) 06:20	19:54	17:59 (T22) 07:29	07:08	07:38
	20:46	39 20:09 (T24) 20:09	19:14	37 18:45 (T22) 18:22	16:44	16:37
21	05:49	19:15 (T24) 06:22	19:56	17:58 (T22) 07:30	07:10	07:39
	20:46	25 20:08 (T24) 20:08	19:12	29 18:45 (T22) 18:20	16:43	16:38
22	05:50	19:15 (T24) 06:23	19:57	17:58 (T22) 07:31	07:11	07:39
	20:45	31 20:08 (T24) 20:06	19:10	28 18:45 (T22) 18:19	16:42	16:38
23	05:51	19:15 (T24) 06:24	19:58	17:57 (T22) 07:33	07:12	07:40
	20:44	53 20:08 (T24) 20:05	19:09	34 18:42 (T22) 18:17	16:41	16:39
24	05:52	19:15 (T24) 06:25	19:59	17:57 (T22) 07:34	07:13	07:40
	20:43	38 20:09 (T24) 20:03	19:07	34 18:40 (T22) 18:16	16:41	16:39
25	05:53	19:16 (T24) 06:26	19:00	17:59 (T22) 07:35	07:14	07:41
	20:42	34 20:08 (T24) 20:01	19:05	35 18:43 (T22) 18:14	16:40	16:40
26	05:54	19:16 (T24) 06:27	19:01	18:01 (T22) 07:36	07:16	07:41
	20:41	29 20:08 (T24) 20:00	19:03	36 18:43 (T22) 18:13	16:39	16:41
27	05:55	19:16 (T24) 06:28	19:02	17:58 (T22) 07:38	07:17	07:41
	20:40	32 20:08 (T24) 19:56	19:01	33 18:41 (T22) 18:11	16:39	16:41
28	05:56	19:16 (T24) 06:29	19:03	17:58 (T22) 07:39	07:18	07:42
	20:39	30 20:08 (T24) 19:55	19:00	27 18:37 (T22) 18:10	16:38	16:42
29	05:57	19:17 (T24) 06:30	19:04	18:01 (T22) 07:40	07:19	07:42
	20:38	32 20:08 (T24) 19:53	18:58	25 18:37 (T22) 18:08	16:38	16:43
30	05:58	19:17 (T24) 06:31	19:06	17:59 (T22) 07:41	07:20	07:42
	20:37	28 20:05 (T24) 19:51	18:56	28 18:35 (T22) 18:07	16:37	16:43
31	05:59	19:17 (T24) 06:33		07:43		07:42
	20:36	50 20:07 (T24) 19:50		18:06		16:44
Potential sun hours	466	433	376	343	293	281
Total, worst case	1206	450	667	141		
Sun reduction	0.67	0.63	0.56	0.44		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.69	0.69	0.75	0.75		
Total reduction	0.47	0.44	0.42	0.33		
Total, real	561	197	279	46		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 199 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2534)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
Total	245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760

	January	February	March	April	May	June												
1	07:43	07:28	06:49	07:14 (T22)	06:55	08:02 (T22)	06:06	06:36 (T24)	05:35							06:18 (T24)		
	16:45	17:22	17:58	44	07:58 (T22)	19:36	49	08:51 (T22)	20:10	44	19:39 (T16)	20:42	60		07:18 (T24)			
2	07:43	07:27	06:47	07:12 (T22)	06:53	08:03 (T22)	06:05	06:33 (T24)	05:34							06:19 (T24)		
	16:46	17:23	18:00	48	08:00 (T22)	19:37	46	08:49 (T22)	20:11	46	19:37 (T16)	20:43	60		07:19 (T24)			
3	07:43	07:25	06:46	07:10 (T22)	06:52	08:04 (T22)	06:03	06:31 (T24)	05:34							06:20 (T24)		
	16:47	17:24	18:01	51	08:01 (T22)	19:38	43	08:47 (T22)	20:12	45	19:35 (T16)	20:44	59		07:19 (T24)			
4	07:43	07:24	06:44	07:09 (T22)	06:50	08:05 (T22)	06:02	06:30 (T24)	05:33							06:19 (T24)		
	16:48	17:26	18:02	53	08:02 (T22)	19:39	39	08:44 (T22)	20:13	38	07:08 (T24)	20:45	60		07:19 (T24)			
5	07:43	07:23	06:42	07:08 (T22)	06:48	08:07 (T22)	06:01	06:27 (T24)	05:33							06:20 (T24)		
	16:49	17:27	18:03	56	08:04 (T22)	19:41	35	08:42 (T22)	20:14	41	07:08 (T24)	20:45	52		07:19 (T24)			
6	07:43	07:22	06:41	07:06 (T22)	06:46	08:09 (T22)	05:59	06:26 (T24)	05:32							06:19 (T24)		
	16:50	17:28	18:05	58	08:04 (T22)	19:42	30	08:39 (T22)	20:15	44	07:10 (T24)	20:46	34		07:19 (T24)			
7	07:43	07:21	06:39	07:05 (T22)	06:45	08:12 (T22)	05:58	06:25 (T24)	05:32							06:20 (T24)		
	16:51	17:30	18:06	60	08:05 (T22)	19:43	23	08:35 (T22)	20:17	46	07:11 (T24)	20:47	38		07:19 (T24)			
8	07:43	07:20	06:37	07:04 (T22)	06:43	08:18 (T22)	05:57	06:25 (T24)	05:32							06:20 (T24)		
	16:52	17:31	18:07	61	08:05 (T22)	19:44	12	08:30 (T22)	20:18	47	07:12 (T24)	20:47	31		07:19 (T24)			
9	07:42	07:18	06:36	07:03 (T22)	06:41			05:55			06:24 (T24)	05:31				06:21 (T24)		
	16:53	17:32	18:08	63	08:06 (T22)	19:45		06:19 (T24)	05:31		06:24 (T24)	05:31				06:21 (T24)		
10	07:42	07:17	06:34	07:02 (T22)	06:39			05:54			06:22 (T24)	05:31				06:25 (T24)		
	16:54	17:34	18:10	64	08:06 (T22)	19:46		06:20 (T24)	05:31		07:13 (T24)	20:49	35			06:20 (T24)		
11	07:42	07:16	06:32	07:01 (T22)	06:38			05:53			06:21 (T24)	05:31				06:21 (T24)		
	16:55	17:35	18:11	65	08:06 (T22)	19:48		06:21 (T24)	05:31		07:14 (T24)	20:49	29			07:19 (T24)		
12	07:42	07:15	06:30	07:00 (T22)	06:36			05:52			06:21 (T24)	05:31				06:21 (T24)		
	16:56	17:36	18:12	66	08:06 (T22)	19:49		06:22 (T24)	05:31		07:14 (T24)	20:50	43			07:19 (T24)		
13	07:41	07:13	07:29	08:00 (T22)	06:34			05:51			06:20 (T24)	05:31				06:28 (T24)		
	16:57	17:38	19:13	67	09:07 (T22)	19:50		06:20 (T24)	05:31		07:15 (T24)	20:50	35			06:20 (T24)		
14	07:41	07:12	07:27	07:59 (T22)	06:33	19:29 (T16)	05:50				06:20 (T24)	05:31				06:22 (T24)		
	16:59	17:39	19:15	68	09:07 (T22)	19:51	1	19:30 (T16)	20:24	55	07:15 (T24)	20:51	38			07:19 (T24)		
15	07:40	07:10	07:25	07:59 (T22)	06:31	19:26 (T16)	05:49				06:19 (T24)	05:31				06:22 (T24)		
	17:00	17:40	19:16	67	09:06 (T22)	19:52	6	19:32 (T16)	20:25	57	07:16 (T24)	20:51	32			07:16 (T24)		
16	07:40	07:09	07:23	07:58 (T22)	06:29	19:24 (T16)	05:47				06:19 (T24)	05:30				06:22 (T24)		
	17:01	17:42	19:17	68	09:06 (T22)	19:53	8	19:32 (T16)	20:27	57	07:16 (T24)	20:52	41			07:20 (T24)		
17	07:39	07:08	07:22	07:58 (T22)	06:28	19:23 (T16)	05:46				06:19 (T24)	05:30				06:23 (T24)		
	17:02	17:43	19:18	68	09:06 (T22)	19:55	11	19:34 (T16)	20:28	57	07:16 (T24)	20:52	28			07:20 (T24)		
18	07:39	07:06	07:20	07:58 (T22)	06:26	19:21 (T16)	05:45				06:18 (T24)	05:31				06:23 (T24)		
	17:03	17:44	19:19	68	09:06 (T22)	19:56	14	19:35 (T16)	20:29	59	07:17 (T24)	20:53	31			07:20 (T24)		
19	07:38	07:05	07:18	07:57 (T22)	06:24	19:19 (T16)	05:44				06:18 (T24)	05:31				06:23 (T24)		
	17:05	17:46	19:21	68	09:05 (T22)	19:57	17	19:36 (T16)	20:30	59	07:17 (T24)	20:53	39			07:17 (T24)		
20	07:38	07:03	07:16	07:57 (T22)	06:23	19:19 (T16)	05:43				06:18 (T24)	05:31				06:31 (T24)		
	17:06	17:47	19:22	67	09:04 (T22)	19:58	18	19:37 (T16)	20:31	59	07:17 (T24)	20:53	38			07:21 (T24)		
21	07:37	07:02	07:15	07:57 (T22)	06:21	19:18 (T16)	05:43				06:18 (T24)	05:31				06:24 (T24)		
	17:07	17:48	19:23	66	09:03 (T22)	19:59	20	19:38 (T16)	20:32	60	07:18 (T24)	20:54	34			07:21 (T24)		
22	07:36	07:00	07:13	07:58 (T22)	06:20	19:18 (T16)	05:42				06:18 (T24)	05:31				06:34 (T24)		
	17:08	17:49	19:24	66	09:04 (T22)	20:00	22	19:40 (T16)	20:33	60	07:18 (T24)	20:54	28			07:21 (T24)		
23	07:36	06:59	07:11	07:57 (T22)	06:18	19:17 (T16)	05:41				06:18 (T24)	05:31				06:24 (T24)		
	17:10	17:51	19:25	66	09:03 (T22)	20:00	23	19:40 (T16)	20:34	60	07:18 (T24)	20:54	28			07:16 (T24)		
24	07:35	06:57	07:31 (T22)	07:09	07:57 (T22)	06:16	23	19:42 (T16)	20:35	60	07:18 (T24)	20:54	37			07:21 (T24)		
	17:11	17:52	13	07:44 (T22)	19:26	64	09:01 (T22)	20:02	24	19:42 (T16)	20:35	61	07:19 (T24)	20:54	35		07:22 (T24)	
25	07:34	06:55	07:25 (T22)	07:07	07:57 (T22)	06:15		19:17 (T16)	05:39		06:18 (T24)	05:32				06:28 (T24)		
	17:12	17:53	24	07:49 (T22)	19:28	63	09:00 (T22)	20:03	25	19:42 (T16)	20:36	61	07:19 (T24)	20:54	35		07:22 (T24)	
26	07:33	06:54	07:21 (T22)	07:06	07:57 (T22)	06:13		19:18 (T16)	05:38		06:18 (T24)	05:32				06:25 (T24)		
	17:14	17:55	31	07:52 (T22)	19:29	62	08:59 (T22)	20:04	26	19:44 (T16)	20:37	60	07:18 (T24)	20:55	42		07:22 (T24)	
27	07:32	06:52	07:19 (T22)	07:04	07:58 (T22)	06:12		19:18 (T16)	05:38		06:18 (T24)	05:33				06:26 (T24)		
	17:15	17:56	36	07:55 (T22)	19:30	61	08:59 (T22)	20:05	25	19:43 (T16)	20:38	60	07:18 (T24)	20:55	34		07:22 (T24)	
28	07:32	06:51	07:16 (T22)	07:02	07:59 (T22)	06:10		19:18 (T16)	05:37		06:18 (T24)	05:33				06:25 (T24)		
	17:16	17:57	41	07:57 (T22)	19:31	58	08:57 (T22)	20:06	25	19:43 (T16)	20:39	61	07:19 (T24)	20:55	36		07:23 (T24)	
29	07:31				07:00			07:59 (T22)	06:09		06:43 (T24)	05:36				06:25 (T24)		
	17:17				19:32	57	08:56 (T22)	20:07	34	19:41 (T16)	20:40	61	07:19 (T24)	20:55	43		07:23 (T24)	
30	07:30				06:59			08:00 (T22)	06:08		06:39 (T24)	05:36				06:26 (T24)		
	17:19				19:34	54	08:54 (T22)	20:09	40	19:40 (T16)	20:40	60	07:18 (T24)	20:55	32		07:24 (T24)	
31	07:29				06:57			08:00 (T22)			05:35							
	17:20				19:35	52	08:52 (T22)			06:19 (T24)								
	Potential sun hours	291	294		369		401			453					459			
	Total, worst case			145		1899		616			1678					1172		
	Sun reduction			0.40		0.47		0.54			0.58					0.63		
	Oper. time red.			1.00		1.00		1.00			1.00					1.00		
	Wind dir. red.			0.71		0.71		0.71										

SHADOW - Calendar

Shadow receptor: 199 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2534)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December
1	05:34	06:27 (T24)	06:00	06:31 (T24)	06:34	07:07
	20:55	32	07:24 (T24)	20:35	34	07:25 (T24)
2	05:35	06:26 (T24)	06:01	06:33 (T24)	06:35	08:54
	20:55	53	07:24 (T24)	20:34	34	07:25 (T24)
3	05:35	06:25 (T24)	06:02	06:32 (T24)	06:36	07:52
	20:54	59	07:24 (T24)	20:33	40	07:24 (T24)
4	05:36	06:26 (T24)	06:03	06:33 (T24)	06:37	07:10
	20:54	59	07:25 (T24)	20:32	38	07:23 (T24)
5	05:36	06:26 (T24)	06:04	06:34 (T24)	06:38	08:14 (T22)
	20:54	43	07:25 (T24)	20:30	43	07:22 (T24)
6	05:37	06:26 (T24)	06:05	06:34 (T24)	06:39	08:26 (T22)
	20:54	29	07:22 (T24)	20:29	24	07:21 (T24)
7	05:38	06:27 (T24)	06:06	06:35 (T24)	06:40	08:10 (T22)
	20:54	37	07:26 (T24)	20:28	36	07:20 (T24)
8	05:38	06:29 (T24)	06:07	06:36 (T24)	06:41	08:05 (T22)
	20:53	25	07:20 (T24)	20:27	27	07:19 (T24)
9	05:39	06:26 (T24)	06:08	06:37 (T24)	06:42	08:36 (T22)
	20:53	60	07:26 (T24)	20:25	24	07:18 (T24)
10	05:40	06:27 (T24)	06:10	06:39 (T24)	06:44	07:58 (T22)
	20:52	43	07:27 (T24)	20:24	42	09:41 (T16)
11	05:41	06:26 (T24)	06:11	06:40 (T24)	06:45	07:56 (T22)
	20:52	37	07:26 (T24)	20:22	31	19:44 (T16)
12	05:41	06:30 (T24)	06:12	06:42 (T24)	06:46	08:42 (T22)
	20:52	34	07:27 (T24)	20:21	25	19:46 (T16)
13	05:42	06:29 (T24)	06:13	06:44 (T24)	06:47	07:53 (T22)
	20:51	45	07:27 (T24)	20:20	31	19:47 (T16)
14	05:43	06:27 (T24)	06:14	06:47 (T24)	06:48	08:43 (T22)
	20:50	40	07:28 (T24)	20:18	36	19:48 (T16)
15	05:44	06:27 (T24)	06:15	06:53 (T24)	06:49	07:52 (T22)
	20:50	40	07:27 (T24)	20:17	21	19:49 (T16)
16	05:45	06:27 (T24)	06:16	06:50	07:48 (T22)	07:24
	20:49	35	07:27 (T24)	20:15	16	19:25 (T16)
17	05:45	06:28 (T24)	06:17	06:51	07:48 (T22)	07:25
	20:49	37	07:28 (T24)	20:14	14	19:50 (T16)
18	05:46	06:27 (T24)	06:18	06:52	07:46 (T22)	07:27
	20:48	35	07:28 (T24)	20:12	13	19:49 (T16)
19	05:47	06:32 (T24)	06:19	06:53	07:50 (T22)	07:28
	20:47	26	07:28 (T24)	20:11	14	19:49 (T16)
20	05:48	06:28 (T24)	06:20	06:54	07:44 (T22)	07:29
	20:47	34	07:28 (T24)	20:09	22	19:47 (T16)
21	05:49	06:27 (T24)	06:22	06:56	07:43 (T22)	07:30
	20:46	41	07:27 (T24)	20:08	19	19:46 (T16)
22	05:50	06:29 (T24)	06:23	06:57	07:42 (T22)	07:32
	20:45	40	07:28 (T24)	20:06	17	19:44 (T16)
23	05:51	06:29 (T24)	06:24	06:58	07:41 (T22)	07:33
	20:44	37	07:28 (T24)	20:05	15	19:43 (T16)
24	05:52	06:32 (T24)	06:25	06:59	07:42 (T22)	07:34
	20:43	54	07:28 (T24)	20:03	15	19:41 (T16)
25	05:53	06:30 (T24)	06:26	07:00	07:41 (T22)	07:35
	20:42	32	07:27 (T24)	20:01	16	19:39 (T16)
26	05:54	06:29 (T24)	06:27	07:01	07:40 (T22)	07:37
	20:41	38	07:26 (T24)	20:00	14	19:38 (T16)
27	05:55	06:30 (T24)	06:28	07:02	07:40 (T22)	07:38
	20:40	33	07:27 (T24)	19:56	7	19:36 (T16)
28	05:56	06:29 (T24)	06:29	07:03	07:40 (T22)	07:39
	20:39	51	07:27 (T24)	19:55	8	19:34 (T16)
29	05:57	06:30 (T24)	06:30	07:05	07:39 (T22)	07:40
	20:38	56	07:27 (T24)	19:53	6	19:33 (T16)
30	05:58	06:30 (T24)	06:31	07:06	07:39 (T22)	07:42
	20:37	55	07:26 (T24)	19:51	1	19:31 (T16)
31	05:59	06:31 (T24)	06:33	07:43	08:45 (T22)	07:42
	20:36	30	07:26 (T24)	19:50	376	343
Potential sun hours	466	433		376	343	293
Total, worst case	1270	683		977	914	281
Sun reduction	0.67	0.63		0.56	0.44	
Oper. time red.	1.00	1.00		1.00	1.00	
Wind dir. red.	0.75	0.73		0.71	0.71	
Total reduction	0.50	0.46		0.40	0.31	
Total, real	636	315		386	284	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 201 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2536)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	January	February	March	April	May	June
1	07:43	07:28	06:49	17:18 (T22)	06:55	06:06
	16:45	17:21	17:58	20 17:38 (T22)	19:36	18:53 (T24)
2	07:43	07:27	06:47	17:16 (T22)	06:53	05:35
	16:46	17:23	18:00	24 17:40 (T22)	19:37	19:43 (T24)
3	07:43	07:25	06:46	17:14 (T22)	06:51	05:34
	16:47	17:24	18:01	27 17:41 (T22)	19:38	19:43 (T24)
4	07:43	07:24	06:44	17:11 (T22)	06:50	05:33
	16:48	17:25	18:02	31 17:42 (T22)	19:39	19:44 (T24)
5	07:43	07:23	06:42	17:11 (T22)	06:48	05:32
	16:49	17:27	18:03	33 17:44 (T22)	19:40	19:43 (T24)
6	07:43	07:22	06:41	17:09 (T22)	06:46	05:32
	16:50	17:28	18:05	36 17:45 (T22)	19:42	19:43 (T24)
7	07:43	07:21	06:39	17:07 (T22)	06:44	05:32
	16:51	17:30	18:06	39 17:46 (T22)	19:43	19:45 (T24)
8	07:43	07:20	06:37	17:06 (T22)	06:43	05:31
	16:52	17:31	18:07	41 17:47 (T22)	19:44	19:44 (T24)
9	07:42	07:18	06:36	17:06 (T22)	06:41	05:31
	16:53	17:32	18:08	43 17:49 (T22)	19:45	19:43 (T24)
10	07:42	07:17	06:34	17:05 (T22)	06:39	05:31
	16:54	17:34	18:10	44 17:49 (T22)	19:46	19:43 (T24)
11	07:42	07:16	06:32	17:04 (T22)	06:38	05:31
	16:55	17:35	18:11	45 17:49 (T22)	19:47	19:43 (T24)
12	07:42	07:14	06:30	17:03 (T22)	06:36	05:31
	16:56	17:36	18:12	46 17:49 (T22)	19:49	19:43 (T24)
13	07:41	07:13	07:29	18:04 (T22)	06:34	05:31
	16:57	17:38	19:13	46 18:50 (T22)	19:50	19:43 (T24)
14	07:41	07:12	07:27	18:03 (T22)	06:33	05:30
	16:59	17:39	19:14	46 18:49 (T22)	19:51	19:43 (T24)
15	07:40	07:10	07:25	18:03 (T22)	06:31	05:30
	17:00	17:40	19:16	46 18:49 (T22)	19:52	19:43 (T24)
16	07:40	07:09	07:23	18:02 (T22)	06:29	05:30
	17:01	17:42	19:17	46 18:48 (T22)	19:53	19:42 (T24)
17	07:39	07:08	07:22	18:02 (T22)	06:28	05:30
	17:02	17:43	19:18	45 18:47 (T22)	19:54	19:42 (T24)
18	07:39	07:06	07:20	18:03 (T22)	06:26	05:30
	17:03	17:44	19:19	44 18:47 (T22)	19:56	19:42 (T24)
19	07:38	07:05	07:18	18:03 (T22)	06:24	05:31
	17:05	17:45	19:20	43 18:46 (T22)	19:57	19:43 (T24)
20	07:38	07:03	07:16	18:03 (T22)	06:23	05:31
	17:06	17:47	19:22	42 18:45 (T22)	19:58	19:43 (T24)
21	07:37	07:02	07:15	18:04 (T22)	06:21	05:31
	17:07	17:48	19:23	40 18:44 (T22)	19:59	19:43 (T24)
22	07:36	07:00	07:13	18:05 (T22)	06:20	05:31
	17:08	17:49	19:24	39 18:44 (T22)	20:00	19:43 (T24)
23	07:36	06:59	07:11	18:06 (T22)	06:18	05:31
	17:10	17:51	19:25	36 18:42 (T22)	20:00	19:40 (T24)
24	07:35	06:57	07:09	18:07 (T22)	06:16	05:30
	17:11	17:52	19:26	33 18:40 (T22)	20:01	19:39 (T24)
25	07:34	06:55	07:07	18:08 (T22)	06:15	05:30
	17:12	17:53	19:28	30 18:38 (T22)	20:03	19:39 (T24)
26	07:33	06:54	07:06	18:09 (T22)	06:13	05:30
	17:13	17:55	19:29	27 18:36 (T22)	20:04	19:39 (T24)
27	07:32	06:52	07:04	18:12 (T22)	06:12	05:30
	17:15	17:56	19:30	22 18:34 (T22)	20:05	19:38 (T24)
28	07:31	06:51	17:22 (T22)	07:02	18:15 (T22)	06:10
	17:16	17:57	14	17:36 (T22)	09:31	18:55 (T24)
29	07:31		07:00	15 18:30 (T22)	20:06	19:41 (T24)
	17:17		19:32		06:09	18:55 (T24)
30	07:30		06:59		48 19:41 (T24)	20:39
	17:18		19:33		06:07	18:53 (T24)
31	07:29		06:57		20:08	19:42 (T24)
	17:20		19:35			20:41
Potential sun hours	291	294	369	401	453	459
Total, worst case		14	1029	449	1491	440
Sun reduction		0.40	0.47	0.54	0.58	0.63
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.75	0.75	0.71	0.71	0.71
Total reduction		0.30	0.35	0.38	0.41	0.45
Total, real		4	363	172	612	196

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 201 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2536)

Assumptions for shadow calculations

Reference year for calendar

2022

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.36	0.40	0.47	0.54	0.58	0.63	0.67	0.63	0.56	0.44	0.25	0.24	

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
245	195	263	395	451	393	363	382	412	348	736	1,617	1,224	837	579	320	8,760	

	July	August	September	October	November	December						
1	05:34	19:17 (T24)	06:00	19:01 (T24)	06:34	17:42 (T22)	07:44	07:21				
	20:55	16	19:33 (T24)	20:35	49	18:54	46	18:28 (T22)	18:04	16:37		
2	05:35	19:17 (T24)	06:01	19:01 (T24)	06:35	17:42 (T22)	07:45	07:23				
	20:55	17	19:34 (T24)	20:34	53	19:54 (T24)	19:46	18:52	46	18:28 (T22)	18:03	16:37
3	05:35	19:15 (T24)	06:02	19:01 (T24)	06:36	17:43 (T22)	07:47	07:24				
	20:54	20	19:35 (T24)	20:33	51	19:54 (T24)	19:44	18:51	45	18:28 (T22)	18:02	16:36
4	05:36	19:15 (T24)	06:03	19:00 (T24)	06:37	17:42 (T22)	07:48	07:25				
	20:54	21	19:36 (T24)	20:31	51	19:51 (T24)	19:43	18:49	45	18:27 (T22)	18:00	16:36
5	05:36	19:14 (T24)	06:04	19:00 (T24)	06:38	17:42 (T22)	07:49	07:26				
	20:54	22	19:36 (T24)	20:30	45	19:54 (T24)	19:41	18:47	44	18:22 (T22)	17:59	16:36
6	05:37	19:14 (T24)	06:05	19:00 (T24)	06:39	17:43 (T22)	06:50	07:27				
	20:54	24	19:38 (T24)	20:29	47	19:53 (T24)	19:39	18:45	41	18:24 (T22)	16:58	16:36
7	05:38	19:13 (T24)	06:06	19:00 (T24)	06:40	17:43 (T22)	06:52	07:28				
	20:53	26	19:39 (T24)	20:28	49	19:53 (T24)	19:37	18:44	39	18:22 (T22)	16:57	16:36
8	05:38	19:12 (T24)	06:07	19:00 (T24)	06:41	17:44 (T22)	06:53	07:29				
	20:53	27	19:39 (T24)	20:26	53	19:53 (T24)	19:36	18:42	37	18:21 (T22)	16:55	16:35
9	05:39	19:12 (T24)	06:08	19:00 (T24)	06:42	17:45 (T22)	06:54	07:30				
	20:53	20	19:40 (T24)	20:25	49	19:53 (T24)	19:34	18:40	34	18:19 (T22)	16:54	16:35
10	05:40	19:12 (T24)	06:09	19:00 (T24)	06:43	17:45 (T22)	06:56	07:31				
	20:52	29	19:42 (T24)	20:24	52	19:52 (T24)	19:32	18:38	32	18:17 (T22)	16:53	16:35
11	05:40	19:10 (T24)	06:11	19:00 (T24)	06:45	17:46 (T22)	06:57	07:31				
	20:52	22	19:42 (T24)	20:22	52	19:52 (T24)	19:30	18:37	30	18:16 (T22)	16:52	16:35
12	05:41	19:10 (T24)	06:12	19:00 (T24)	06:46	17:48 (T22)	06:58	07:32				
	20:51	17	19:40 (T24)	20:21	51	19:51 (T24)	19:28	18:35	26	18:14 (T22)	16:51	16:35
13	05:42	19:10 (T24)	06:13	19:00 (T24)	06:47	17:50 (T22)	06:59	07:33				
	20:51	22	19:41 (T24)	20:20	38	19:49 (T24)	19:27	18:33	23	18:13 (T22)	16:50	16:36
14	05:43	19:09 (T24)	06:14	19:01 (T24)	06:48	17:53 (T22)	07:01	07:34				
	20:50	25	19:43 (T24)	20:18	42	19:50 (T24)	19:25	18:32	18	18:11 (T22)	16:49	16:36
15	05:44	19:08 (T24)	06:15	19:01 (T24)	06:49	17:57 (T22)	07:02	07:35				
	20:50	27	19:45 (T24)	20:17	38	19:49 (T24)	19:23	18:30	9	18:06 (T22)	16:48	16:36
16	05:44	19:08 (T24)	06:16	19:02 (T24)	06:50	18:07 (T22)	07:24	07:35				
	20:49	37	19:46 (T24)	20:15	33	19:48 (T24)	19:21	10	18:17 (T22)	18:28	16:47	16:36
17	05:45	19:07 (T24)	06:17	19:02 (T24)	06:51	18:01 (T22)	07:25	07:36				
	20:49	34	19:47 (T24)	20:14	34	19:47 (T24)	19:19	13	18:21 (T22)	18:27	16:46	16:36
18	05:46	19:07 (T24)	06:18	19:03 (T24)	06:52	17:58 (T22)	07:27	07:37				
	20:48	26	19:48 (T24)	20:12	24	19:45 (T24)	19:18	19	18:24 (T22)	18:25	16:45	16:37
19	05:47	19:07 (T24)	06:19	19:04 (T24)	06:53	17:56 (T22)	07:28	07:38				
	20:47	30	19:47 (T24)	20:11	23	19:44 (T24)	19:16	22	18:24 (T22)	18:24	16:44	16:37
20	05:48	19:06 (T24)	06:20	19:04 (T24)	06:54	17:53 (T22)	07:29	07:38				
	20:46	33	19:48 (T24)	20:09	38	19:43 (T24)	19:14	26	18:25 (T22)	18:22	16:44	16:37
21	05:49	19:05 (T24)	06:22	19:07 (T24)	06:56	17:53 (T22)	07:30	07:39				
	20:46	25	19:49 (T24)	20:08	21	19:42 (T24)	19:12	25	18:27 (T22)	18:20	16:43	16:38
22	05:50	19:04 (T24)	06:23	19:08 (T24)	06:57	17:51 (T22)	07:31	07:39				
	20:45	33	19:50 (T24)	20:06	28	19:40 (T24)	19:10	24	18:27 (T22)	18:19	16:42	16:38
23	05:51	19:04 (T24)	06:24	19:10 (T24)	06:58	17:48 (T22)	07:33	07:40				
	20:44	46	19:50 (T24)	20:05	24	19:38 (T24)	19:09	29	18:28 (T22)	18:17	16:41	16:39
24	05:52	19:04 (T24)	06:25	19:12 (T24)	06:59	17:47 (T22)	07:34	07:40				
	20:43	35	19:48 (T24)	20:03	23	19:35 (T24)	19:07	32	18:28 (T22)	18:16	16:41	16:39
25	05:53	19:03 (T24)	06:26	19:15 (T24)	07:00	17:49 (T22)	07:35	07:41				
	20:42	38	19:51 (T24)	20:01	16	19:31 (T24)	19:05	32	18:28 (T22)	18:14	16:40	16:40
26	05:54	19:03 (T24)	06:27			07:01			17:49 (T22)	07:36	07:16	07:41
	20:41	31	19:51 (T24)	20:00		18:03	31		18:30 (T22)	18:13	16:39	16:41
27	05:55	19:03 (T24)	06:28			07:02			17:46 (T22)	07:38	07:17	07:41
	20:40	34	19:47 (T24)	19:56		19:01	34		18:30 (T22)	18:11	16:39	16:41
28	05:56	19:02 (T24)	06:29			07:03			17:44 (T22)	07:39	07:18	07:42
	20:39	38	19:44 (T24)	19:55		19:00	33		18:29 (T22)	18:10	16:38	16:42
29	05:57	19:02 (T24)	06:30			07:04			17:43 (T22)	07:40	07:19	07:42
	20:38	37	19:52 (T24)	19:53		18:58	28		18:28 (T22)	18:08	16:38	16:43
30	05:58	19:02 (T24)	06:31			07:06			17:43 (T22)	07:41	07:20	07:42
	20:37	35	19:53 (T24)	19:51		18:56	35		18:27 (T22)	18:07	16:37	16:43
31	05:59	19:01 (T24)	06:33						07:43		07:42	
	20:36	52	19:53 (T24)	19:50					18:06		16:44	
										293	281	
	Potential sun hours	466		433		376		343				
	Total, worst case	899		984		393		515				
	Sun reduction	0.67		0.63		0.56		0.44				
	Oper. time red.	1.00		1.00		1.00		1.00				
	Wind dir. red.	0.71		0.71		0.75		0.75				
	Total reduction	0.47		0.45		0.42		0.33				
	Total, real	427		439		165		170				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker		(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)