

SHADOW - Calendar

Shadow receptor: 202 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2537)

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 16:45	07:28 17:22			06:49 17:58	54	07:17 (T22) 08:11 (T22)	06:55 19:36	08:01 (T22) 09:07 (T22)	06:06 20:10	11	19:25 (T16) 19:36 (T16)	05:35 20:42	64	06:11 (T24) 07:15 (T24)
2	07:43 16:46	07:27 17:23			06:47 18:00	57	07:16 (T22) 08:13 (T22)	06:53 19:37	08:02 (T22) 09:05 (T22)	06:05 20:11		19:28 (T16) 19:31 (T16)	05:34 20:43	65	06:11 (T24) 07:16 (T24)
3	07:43 16:47	07:25 17:24			06:46 18:01	60	07:14 (T22) 08:14 (T22)	06:52 19:38	08:02 (T22) 09:03 (T22)	06:03 20:12			05:34 20:44	66	06:11 (T24) 07:17 (T24)
4	07:43 16:48	07:24 17:26			06:44 18:02	62	07:12 (T22) 08:14 (T22)	06:50 19:39	08:03 (T22) 09:01 (T22)	06:02 20:13			05:33 20:45	66	06:11 (T24) 07:17 (T24)
5	07:43 16:49	07:23 17:27			06:42 18:03	65	07:11 (T22) 08:16 (T22)	06:48 19:41	08:04 (T22) 09:00 (T22)	06:01 20:14			05:33 20:45	59	06:11 (T24) 07:16 (T24)
6	07:43 16:50	07:22 17:28			06:41 18:05	66	07:10 (T22) 08:16 (T22)	06:46 19:42	08:05 (T22) 08:58 (T22)	05:59 20:15			05:32 20:46	35	06:10 (T24) 07:17 (T24)
7	07:43 16:51	07:21 17:30			06:39 18:06	69	07:08 (T22) 08:17 (T22)	06:45 19:43	08:06 (T22) 08:56 (T22)	05:58 20:17		06:40 (T24) 06:45 (T24)	05:32 20:47	40	06:11 (T24) 07:17 (T24)
8	07:43 16:52	07:20 17:31			06:37 18:07	70	07:07 (T22) 08:17 (T22)	06:43 19:44	08:08 (T22) 08:54 (T22)	05:57 20:18		06:33 (T24) 06:52 (T24)	05:32 20:47	39	06:11 (T24) 07:18 (T24)
9	07:42 16:53	07:18 17:32			06:36 18:08	71	07:07 (T22) 08:18 (T22)	06:41 19:45	08:09 (T22) 08:52 (T22)	05:55 20:19		06:30 (T24) 06:55 (T24)	05:31 20:48	45	06:11 (T24) 07:18 (T24)
10	07:42 16:54	07:17 17:34			06:34 18:10	74	07:05 (T22) 08:19 (T22)	06:39 19:46	08:11 (T22) 08:49 (T22)	05:54 20:20	25	06:27 (T24) 06:57 (T24)	05:31 20:49	43	06:12 (T24) 07:19 (T24)
11	07:42 16:55	07:16 17:35			06:32 18:11	75	07:04 (T22) 08:19 (T22)	06:38 19:48	08:13 (T22) 08:45 (T22)	05:53 20:21	30	06:25 (T24) 06:59 (T24)	05:31 20:49	36	06:11 (T24) 07:16 (T24)
12	07:42 16:56	07:15 17:36			06:30 18:12	76	07:03 (T22) 08:19 (T22)	06:36 19:49	08:17 (T22) 08:42 (T22)	05:52 20:22	34	06:23 (T24) 07:01 (T24)	05:31 20:50	47	06:11 (T24) 07:19 (T24)
13	07:41 16:57	07:13 17:38			07:29 19:13	76	08:03 (T22) 09:19 (T22)	06:34 19:50	08:21 (T22) 08:37 (T22)	05:51 20:23	41	06:22 (T24) 07:03 (T24)	05:31 20:50	43	06:11 (T24) 07:19 (T24)
14	07:41 16:59	07:12 17:39			07:27 19:15	77	08:02 (T22) 09:19 (T22)	06:33 19:51	19:27 (T16) 19:30 (T16)	05:50 20:24	44	06:20 (T24) 07:04 (T24)	05:31 20:51	47	06:12 (T24) 07:19 (T24)
15	07:40 17:00	07:10 17:40			07:25 19:16	77	08:02 (T22) 09:19 (T22)	06:31 19:52	19:25 (T16) 19:32 (T16)	05:49 20:25	46	06:19 (T24) 07:05 (T24)	05:30 20:51	41	06:12 (T24) 07:16 (T24)
16	07:40 17:01	07:09 17:42			07:23 19:17	78	08:01 (T22) 09:19 (T22)	06:29 19:53	19:23 (T16) 19:32 (T16)	05:47 20:27	48	06:18 (T24) 07:06 (T24)	05:30 20:52	51	06:12 (T24) 07:20 (T24)
17	07:39 17:02	07:08 17:43			07:22 19:18	78	08:01 (T22) 09:19 (T22)	06:28 19:55	19:22 (T16) 19:34 (T16)	05:46 20:28	50	06:17 (T24) 07:07 (T24)	05:30 20:52	37	06:12 (T24) 07:20 (T24)
18	07:39 17:03	07:06 17:44			07:20 19:19	78	08:01 (T22) 09:19 (T22)	06:26 19:56	19:21 (T16) 19:35 (T16)	05:45 20:29	52	06:16 (T24) 07:08 (T24)	05:31 20:53	42	06:12 (T24) 07:20 (T24)
19	07:38 17:05	07:05 17:46			07:18 19:21	78	08:00 (T22) 09:18 (T22)	06:24 19:57	19:20 (T16) 19:36 (T16)	05:44 20:30	54	06:15 (T24) 07:09 (T24)	05:31 20:53	47	06:12 (T24) 07:17 (T24)
20	07:38 17:06	07:03 17:47			07:16 19:22	78	07:59 (T22) 09:17 (T22)	06:23 19:58	19:20 (T16) 19:37 (T16)	05:43 20:31	55	06:14 (T24) 07:09 (T24)	05:31 20:53	46	06:13 (T24) 07:21 (T24)
21	07:37 17:07	07:02 17:48			07:15 19:23	78	07:59 (T22) 09:17 (T22)	06:21 19:59	19:19 (T16) 19:38 (T16)	05:43 20:32	56	06:15 (T24) 07:11 (T24)	05:31 20:54	43	06:13 (T24) 07:21 (T24)
22	07:36 17:08	07:00 17:49	07:41 (T22)		07:13 19:24	77	08:00 (T22) 09:17 (T22)	06:20 20:00	19:19 (T16) 19:40 (T16)	05:42 20:33	57	06:14 (T24) 07:11 (T24)	05:31 20:54	35	06:13 (T24) 07:21 (T24)
23	07:36 17:10	06:59 17:51	07:33 (T22)		07:11 19:25	77	07:59 (T22) 09:16 (T22)	06:18 20:00	19:18 (T16) 19:40 (T16)	05:41 20:34	59	06:13 (T24) 07:12 (T24)	05:31 20:54	39	06:13 (T24) 07:16 (T24)
24	07:35 17:11	06:57 17:52	07:30 (T22)		07:09 19:26	76	07:59 (T22) 09:15 (T22)	06:16 20:02	19:19 (T16) 19:42 (T16)	05:40 20:35	60	06:12 (T24) 07:12 (T24)	05:32 20:54	47	06:13 (T24) 07:21 (T24)
25	07:34 17:12	06:55 17:53	07:26 (T22)		07:07 19:28	75	07:59 (T22) 09:14 (T22)	06:15 20:03	19:18 (T16) 19:42 (T16)	05:39 20:36	60	06:13 (T24) 07:13 (T24)	05:32 20:54	45	06:14 (T24) 07:22 (T24)
26	07:33 17:14	06:54 17:55	07:23 (T22)		07:06 19:29	74	07:59 (T22) 09:13 (T22)	06:13 20:04	19:19 (T16) 19:43 (T16)	05:38 20:37	61	06:12 (T24) 07:13 (T24)	05:32 20:55	51	06:14 (T24) 07:22 (T24)
27	07:32 17:15	06:52 17:56	07:21 (T22)		07:04 19:30	73	08:00 (T22) 09:13 (T22)	06:12 20:05	19:19 (T16) 19:42 (T16)	05:38 20:38	62	06:12 (T24) 07:14 (T24)	05:33 20:55	43	06:14 (T24) 07:22 (T24)
28	07:32 17:16	06:51 17:57	07:19 (T22)		07:02 19:31	72	08:00 (T22) 09:12 (T22)	06:10 20:06	19:20 (T16) 19:41 (T16)	05:37 20:39	63	06:12 (T24) 07:15 (T24)	05:33 20:55	41	06:15 (T24) 07:23 (T24)
29	07:31 17:17				07:00 19:32	70	08:00 (T22) 09:10 (T22)	06:09 20:07	19:21 (T16) 19:39 (T16)	05:36 20:39	64	06:11 (T24) 07:15 (T24)	05:33 20:55	46	06:15 (T24) 07:22 (T24)
30	07:30 17:19				06:59 19:34	69	08:00 (T22) 09:09 (T22)	06:08 20:09	19:22 (T16) 19:38 (T16)	05:36 20:40	64	06:11 (T24) 07:15 (T24)	05:34 20:55	36	06:15 (T24) 07:23 (T24)
31	07:29 17:20				06:57 19:35	67	08:00 (T22) 09:07 (T22)			05:35 20:41	64	06:11 (T24) 07:15 (T24)			
Potential sun hours	291	294			369		401			453		459			
Total, worst case		238			2227		896			1225		1385			
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			0.75		0.75			
Total reduction		0.28			0.33		0.38			0.43		0.47			
Total, real		67			736		341			529		649			

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: 202 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2537)

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 (T24)	06:00	06:35 (T24)	06:34	08:15 (T22)	07:07	07:42 (T22)	07:44	07:21	
	20:55	40 07:23 (T24)	20:35	26 07:13 (T24)	19:48	17 08:40 (T22)	18:54	76 08:58 (T22)	18:04	16:37	
2	05:35	06:16 (T24)	06:01	06:34 (T24)	06:35	08:12 (T22)	07:08	07:43 (T22)	07:45	07:23	
	20:55	60 07:23 (T24)	20:34	22 07:11 (T24)	19:46	24 08:44 (T22)	18:52	73 08:58 (T22)	18:03	16:37	
3	05:35	06:16 (T24)	06:02	06:36 (T24)	06:36	08:09 (T22)	07:09	07:43 (T22)	07:47	07:24	
	20:54	67 07:23 (T24)	20:33	23 07:09 (T24)	19:44	26 08:46 (T22)	18:51	71 08:57 (T22)	18:02	16:36	
4	05:36	06:16 (T24)	06:03	06:38 (T24)	06:37	08:06 (T22)	07:10	07:43 (T22)	07:48	07:25	
	20:54	68 07:24 (T24)	20:32	17 07:07 (T24)	19:43	30 08:45 (T22)	18:49	72 08:56 (T22)	18:00	16:36	
5	05:36	06:16 (T24)	06:04	06:41 (T24)	06:38	08:04 (T22)	07:11	07:43 (T22)	07:49	07:26	
	20:54	51 07:23 (T24)	20:30	21 07:04 (T24)	19:41	30 08:45 (T22)	18:47	72 08:55 (T22)	17:59	16:36	
6	05:37	06:17 (T24)	06:05	06:45 (T24)	06:39	08:03 (T22)	07:12	07:44 (T22)	06:51	07:27	
	20:54	33 07:22 (T24)	20:29	8 06:58 (T24)	19:39	38 08:52 (T22)	18:45	65 08:54 (T22)	16:58	16:36	
7	05:38	06:18 (T24)	06:06		06:40	08:00 (T22)	07:14	07:44 (T22)	06:52	07:28	
	20:54	42 07:24 (T24)	20:28		19:37	30 08:53 (T22)	18:44	68 08:53 (T22)	16:57	16:36	
8	05:38	06:17 (T24)	06:07		06:41	07:58 (T22)	07:15	07:45 (T22)	06:53	07:29	
	20:53	30 07:20 (T24)	20:27		19:36	34 08:45 (T22)	18:42	68 08:53 (T22)	16:55	16:36	
9	05:39	06:18 (T24)	06:08		06:42	07:57 (T22)	07:16	07:45 (T22)	06:54	07:30	
	20:53	64 07:24 (T24)	20:25		19:34	43 08:55 (T22)	18:40	65 08:51 (T22)	16:54	16:35	
10	05:40	06:18 (T24)	06:10		06:44	07:57 (T22)	07:17	07:46 (T22)	06:56	07:31	
	20:52	49 07:24 (T24)	20:24		19:32	37 08:57 (T22)	18:39	64 08:50 (T22)	16:53	16:35	
11	05:41	06:18 (T24)	06:11		06:45	07:55 (T22)	07:18	07:47 (T22)	06:57	07:32	
	20:52	42 07:23 (T24)	20:22		19:30	46 08:58 (T22)	18:37	61 08:48 (T22)	16:52	16:35	
12	05:41	06:19 (T24)	06:12		19:35 (T16)	06:46	07:59 (T22)	07:19	07:48 (T22)	06:58	07:32
	20:52	36 07:24 (T24)	20:21	2	19:37 (T16)	19:29	36 08:59 (T22)	18:35	58 08:46 (T22)	16:51	16:36
13	05:42	06:19 (T24)	06:13		19:33 (T16)	06:47	07:52 (T22)	07:21	07:50 (T22)	07:00	07:33
	20:51	47 07:24 (T24)	20:20	2	19:35 (T16)	19:27	49 08:58 (T22)	18:33	56 08:46 (T22)	16:50	16:36
14	05:43	06:20 (T24)	06:14		19:31 (T16)	06:48	07:51 (T22)	07:22	07:51 (T22)	07:01	07:34
	20:50	39 07:24 (T24)	20:18	13	19:46 (T16)	19:25	52 09:00 (T22)	18:32	52 08:43 (T22)	16:49	16:36
15	05:44	06:20 (T24)	06:15		19:30 (T16)	06:49	07:52 (T22)	07:23	07:52 (T22)	07:02	07:35
	20:50	42 07:23 (T24)	20:17	12	19:47 (T16)	19:23	48 08:59 (T22)	18:30	49 08:41 (T22)	16:48	16:36
16	05:45	06:20 (T24)	06:16		19:27 (T16)	06:50	07:49 (T22)	07:24	07:53 (T22)	07:03	07:36
	20:49	38 07:22 (T24)	20:15	13	19:48 (T16)	19:21	54 09:01 (T22)	18:28	46 08:39 (T22)	16:47	16:36
17	05:45	06:21 (T24)	06:17		19:28 (T16)	06:51	07:48 (T22)	07:25	07:56 (T22)	07:05	07:36
	20:49	35 07:21 (T24)	20:14	10	19:48 (T16)	19:20	55 08:59 (T22)	18:27	41 08:37 (T22)	16:46	16:36
18	05:46	06:21 (T24)	06:18		19:25 (T16)	06:52	07:49 (T22)	07:27	07:58 (T22)	07:06	07:37
	20:48	35 07:23 (T24)	20:12	12	19:49 (T16)	19:18	47 08:59 (T22)	18:25	36 08:34 (T22)	16:45	16:37
19	05:47	06:22 (T24)	06:19		19:27 (T16)	06:53	07:50 (T22)	07:28	08:01 (T22)	07:07	07:38
	20:47	28 07:23 (T24)	20:11	13	19:49 (T16)	19:16	49 09:01 (T22)	18:24	29 08:30 (T22)	16:44	16:37
20	05:48	06:23 (T24)	06:20		19:24 (T16)	06:54	07:45 (T22)	07:29	08:05 (T22)	07:08	07:38
	20:46	32 07:23 (T24)	20:09	22	19:47 (T16)	19:14	46 08:58 (T22)	18:22	20 08:25 (T22)	16:44	16:38
21	05:49	06:22 (T24)	06:22		19:24 (T16)	06:56	07:46 (T22)	07:30		07:10	07:39
	20:46	40 07:21 (T24)	20:08	18	19:46 (T16)	19:12	57 09:00 (T22)	18:20		16:43	16:38
22	05:50	06:23 (T24)	06:23		19:24 (T16)	06:57	07:44 (T22)	07:32		07:11	07:39
	20:45	35 07:21 (T24)	20:06	16	19:44 (T16)	19:10	52 09:01 (T22)	18:19		16:42	16:38
23	05:51	06:24 (T24)	06:24		19:23 (T16)	06:58	07:43 (T22)	07:33		07:12	07:40
	20:44	31 07:16 (T24)	20:05	15	19:43 (T16)	19:09	53 09:01 (T22)	18:17		16:41	16:39
24	05:52	06:24 (T24)	06:25		19:23 (T16)	06:59	07:45 (T22)	07:34		07:13	07:40
	20:43	50 07:20 (T24)	20:03	15	19:41 (T16)	19:07	58 09:02 (T22)	18:16		16:41	16:39
25	05:53	06:25 (T24)	06:26		19:24 (T16)	07:00	07:43 (T22)	07:35		07:15	07:41
	20:42	30 07:19 (T24)	20:01	15	19:39 (T16)	19:05	55 09:00 (T22)	18:14		16:40	16:40
26	05:54	06:26 (T24)	06:27		19:24 (T16)	07:01	07:43 (T22)	07:37		07:16	07:41
	20:41	35 07:18 (T24)	20:00	14	19:38 (T16)	19:03	56 09:01 (T22)	18:13		16:40	16:41
27	05:55	06:27 (T24)	06:28		19:24 (T16)	07:02	07:43 (T22)	07:38		07:17	07:41
	20:40	26 07:18 (T24)	19:56	8	19:36 (T16)	19:01	57 09:01 (T22)	18:11		16:39	16:41
28	05:56	06:28 (T24)	06:29		19:25 (T16)	07:03	07:43 (T22)	07:39		07:18	07:42
	20:39	42 07:17 (T24)	19:55	9	19:34 (T16)	19:00	49 09:00 (T22)	18:10		16:38	16:42
29	05:57	06:29 (T24)	06:30		19:26 (T16)	07:05	07:42 (T22)	07:40		07:19	07:42
	20:38	46 07:16 (T24)	19:53	7	19:33 (T16)	18:58	60 08:57 (T22)	18:08		16:38	16:43
30	05:58	06:30 (T24)	06:31		19:28 (T16)	07:06	07:42 (T22)	07:42		07:20	07:42
	20:37	44 07:15 (T24)	19:51	3	19:31 (T16)	18:56	53 08:59 (T22)	18:07		16:38	16:43
31	05:59	06:31 (T24)	06:33		08:20 (T22)			07:43			07:42
	20:36	24 07:14 (T24)	19:50	10	08:32 (T22)			18:06			16:44
Potential sun hours	466		433		376		343		293		281
Total, worst case	1281		346		1341		1142				
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		0.72		0.71		0.71				
Total reduction	0.50		0.45		0.39		0.31				
Total, real	639		157		528		354				

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: 215 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2545)

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		08:09 (T22)	07:28		08:09 (T22)	06:49		06:55			07:31 (T24)	06:06		05:35		
	16:45	42	08:51 (T22)	17:21	59	09:08 (T22)	17:58		19:36	81	19:16 (T16)	20:10	20:42				
2	07:43		08:09 (T22)	07:27		08:09 (T22)	06:47		06:53			07:31 (T24)	06:05		05:34		
	16:46	43	08:52 (T22)	17:23	59	09:08 (T22)	18:00		19:37	83	19:17 (T16)	20:11	20:43				
3	07:43		08:09 (T22)	07:25		08:10 (T22)	06:46		06:52			07:30 (T24)	06:03		05:34		
	16:47	44	08:53 (T22)	17:24	58	09:08 (T22)	18:01		19:38	84	19:18 (T16)	20:12	20:44				
4	07:43		08:09 (T22)	07:24		08:10 (T22)	06:44		06:50			07:30 (T24)	06:02		05:33		
	16:48	44	08:53 (T22)	17:26	58	09:08 (T22)	18:02		19:39	85	19:19 (T16)	20:13	20:45				
5	07:43		08:09 (T22)	07:23		08:11 (T22)	06:42		06:48			07:30 (T24)	06:01		05:33		
	16:49	45	08:54 (T22)	17:27	57	09:08 (T22)	18:03		19:41	85	19:20 (T16)	20:14	20:45				
6	07:43		08:09 (T22)	07:22		08:11 (T22)	06:41		06:46			07:30 (T24)	05:59		05:32		
	16:50	46	08:55 (T22)	17:28	56	09:07 (T22)	18:05		19:42	83	19:19 (T16)	20:15	20:46				
7	07:43		08:08 (T22)	07:21		08:12 (T22)	06:39		06:45			07:30 (T24)	05:58		05:32		
	16:51	47	08:55 (T22)	17:30	55	09:07 (T22)	18:06		19:43	79	19:17 (T16)	20:17	20:47				
8	07:43		08:08 (T22)	07:20		08:13 (T22)	06:37		06:43			07:31 (T24)	05:57		05:32		
	16:52	48	08:56 (T22)	17:31	54	09:07 (T22)	18:07		19:44	75	19:16 (T16)	20:18	20:47				
9	07:42		08:08 (T22)	07:18		08:14 (T22)	06:36		06:41			07:31 (T24)	05:55		05:31		
	16:53	49	08:57 (T22)	17:32	52	09:06 (T22)	18:08		19:45	71	19:14 (T16)	20:19	20:48				
10	07:42		08:08 (T22)	07:17		08:14 (T22)	06:34		06:39			07:31 (T24)	05:54		05:31		
	16:54	51	08:59 (T22)	17:34	51	09:05 (T22)	18:10		19:46	64	19:11 (T16)	20:20	20:49				
11	07:42		08:07 (T22)	07:16		08:15 (T22)	06:32		06:38			07:31 (T24)	05:53		05:31		
	16:55	52	08:59 (T22)	17:35	49	09:04 (T22)	18:11		19:48	52	08:23 (T24)	20:21	20:49				
12	07:42		08:07 (T22)	07:15		08:16 (T22)	06:30		06:36			07:32 (T24)	05:52		05:31		
	16:56	53	09:00 (T22)	17:36	47	09:03 (T22)	18:12		19:49	50	08:22 (T24)	20:22	20:50				
13	07:41		08:07 (T22)	07:13		08:17 (T22)	07:29		06:34			07:33 (T24)	05:51		05:31		
	16:57	53	09:00 (T22)	17:38	45	09:02 (T22)	19:13		19:50	48	08:21 (T24)	20:23	20:50				
14	07:41		08:07 (T22)	07:12		08:18 (T22)	07:27	07:59 (T24)	06:33			07:33 (T24)	05:50		05:31		
	16:59	54	09:01 (T22)	17:39	43	09:01 (T22)	19:15	08:15 (T24)	19:51	46	08:19 (T24)	20:24	20:51				
15	07:40		08:07 (T22)	07:10		08:19 (T22)	07:25	07:54 (T24)	06:31			07:35 (T24)	05:49		05:30		
	17:00	55	09:02 (T22)	17:40	40	08:59 (T22)	19:16	08:19 (T24)	19:52	43	08:18 (T24)	20:25	20:51				
16	07:40		08:07 (T22)	07:09		08:21 (T22)	07:23	07:50 (T24)	06:29			07:35 (T24)	05:47		05:30		
	17:01	56	09:03 (T22)	17:42	36	08:57 (T22)	19:17	08:21 (T24)	19:53	41	08:16 (T24)	20:27	20:52				
17	07:39		08:07 (T22)	07:08		08:23 (T22)	07:22	07:48 (T24)	06:28			07:37 (T24)	05:46		05:30		
	17:02	56	09:03 (T22)	17:43	31	08:54 (T22)	19:18	08:24 (T24)	19:55	37	08:14 (T24)	20:28	20:52				
18	07:39		08:07 (T22)	07:06		08:26 (T22)	07:20	07:46 (T24)	06:26			07:38 (T24)	05:45		05:31		
	17:03	57	09:04 (T22)	17:44	26	08:52 (T22)	19:19	08:26 (T24)	19:56	34	08:12 (T24)	20:29	20:53				
19	07:38		08:07 (T22)	07:05		08:28 (T22)	07:18	07:44 (T24)	06:24			07:40 (T24)	05:44		05:31		
	17:05	58	09:05 (T22)	17:46	20	08:48 (T22)	19:21	08:27 (T24)	19:57	29	08:09 (T24)	20:30	20:53				
20	07:38		08:07 (T22)	07:03		08:34 (T22)	07:16	07:42 (T24)	06:23			07:43 (T24)	05:43		05:31		
	17:06	58	09:05 (T22)	17:47	9	08:43 (T22)	19:22	08:28 (T24)	19:58	23	08:06 (T24)	20:31	20:53				
21	07:37		08:08 (T22)	07:02			07:15	07:40 (T24)	06:21			07:46 (T24)	05:43		05:31		
	17:07	58	09:06 (T22)	17:48			19:23	08:29 (T24)	19:59	16	08:02 (T24)	20:32	20:54				
22	07:36		08:07 (T22)	07:00			07:13	07:39 (T24)	06:20				05:42		05:31		
	17:08	59	09:06 (T22)	17:49			19:24	08:30 (T24)	20:00				20:33		20:54		
23	07:36		08:07 (T22)	06:59			07:11	07:38 (T24)	06:18				05:41		05:31		
	17:10	60	09:07 (T22)	17:51			19:25	08:31 (T24)	20:00				20:34		20:54		
24	07:35		08:07 (T22)	06:57			07:09	07:37 (T24)	06:16				05:40		05:32		
	17:11	60	09:07 (T22)	17:52			19:26	08:31 (T24)	20:02				20:35		20:54		
25	07:34		08:07 (T22)	06:55			07:07	07:35 (T24)	06:15				05:39		05:32		
	17:12	60	09:07 (T22)	17:53			19:28	19:08 (T16)	20:03				20:36		20:55		
26	07:33		08:07 (T22)	06:54			07:06	07:34 (T24)	06:13				05:38		05:32		
	17:14	60	09:07 (T22)	17:55			19:29	19:09 (T16)	20:04				20:37		20:55		
27	07:32		08:07 (T22)	06:52			07:04	07:34 (T24)	06:12				05:38		05:33		
	17:15	61	09:08 (T22)	17:56			19:30	19:10 (T16)	20:05				20:38		20:55		
28	07:32		08:08 (T22)	06:51			07:02	07:33 (T24)	06:10				05:37		05:33		
	17:16	60	09:08 (T22)	17:57			19:31	19:11 (T16)	20:06				20:39		20:55		
29	07:31		08:08 (T22)				07:00	07:32 (T24)	06:09				05:36		05:33		
	17:17	60	09:08 (T22)				19:32	19:12 (T16)	20:07				20:40		20:55		
30	07:30		08:08 (T22)				06:59	07:32 (T24)	06:08				05:36		05:34		
	17:19	60	09:08 (T22)				19:34	19:13 (T16)	20:09				20:40		20:55		
31	07:29		08:08 (T22)				06:57	07:31 (T24)					05:35				
	17:20	60	09:08 (T22)				19:35	19:14 (T16)					20:41				
Potential sun hours	291			294			369		401			453	459				
Total, worst case	1669			905			942		1209								
Sun reduction	0.36			0.40			0.47		0.54								
Oper. time red.	1.00			1.00			1.00		1.00								
Wind dir. red.	0.61			0.61			0.74		0.74								
Total reduction	0.21			0.24			0.34		0.39								
Total, real	357			215			318		469								

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: 215 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2545)

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	06:00		06:34	07:31 (T24)	07:07	07:42 (T24)	07:44	08:45 (T22)	07:22	07:48 (T22)
	20:55	20:35		19:48	50 08:21 (T24)	18:54	8 07:50 (T24)	18:04	48 09:34 (T22)	16:37	51 08:41 (T22)
2	05:35	06:01		06:35	07:30 (T24)	07:08		07:45	08:43 (T22)	07:23	07:50 (T22)
	20:55	20:34		19:46	52 08:22 (T24)	18:52		18:03	48 09:35 (T22)	16:37	50 08:42 (T22)
3	05:35	06:02		06:36	07:29 (T24)	07:09		07:47	08:42 (T22)	07:24	07:51 (T22)
	20:54	20:33		19:44	64 19:09 (T16)	18:51		18:02	51 09:35 (T22)	16:36	48 08:42 (T22)
4	05:36	06:03		06:37	07:28 (T24)	07:10		07:48	08:42 (T22)	07:25	07:52 (T22)
	20:54	20:32		19:43	71 19:11 (T16)	18:49		18:00	53 09:36 (T22)	16:36	47 08:42 (T22)
5	05:36	06:04		06:38	07:27 (T24)	07:11		07:49	08:41 (T22)	07:26	07:53 (T22)
	20:54	20:30		19:41	75 19:12 (T16)	18:47		17:59	51 09:35 (T22)	16:36	45 08:41 (T22)
6	05:37	06:05		06:39	07:26 (T24)	07:12		06:51	07:41 (T22)	07:27	07:54 (T22)
	20:54	20:29		19:39	79 19:13 (T16)	18:45		16:58	51 08:36 (T22)	16:36	46 08:41 (T22)
7	05:38	06:06		06:40	07:25 (T24)	07:14		06:52	07:41 (T22)	07:28	07:55 (T22)
	20:54	20:28		19:37	82 19:14 (T16)	18:44		16:57	52 08:38 (T22)	16:36	42 08:40 (T22)
8	05:38	06:07		06:41	07:25 (T24)	07:15		06:53	07:40 (T22)	07:29	07:56 (T22)
	20:53	20:27		19:36	49 19:14 (T16)	18:42		16:55	56 08:38 (T22)	16:36	44 08:41 (T22)
9	05:39	06:08		06:42	07:24 (T24)	07:16		06:54	07:44 (T22)	07:30	07:57 (T22)
	20:53	20:25		19:34	57 19:13 (T16)	18:40		16:54	55 08:39 (T22)	16:35	42 08:42 (T22)
10	05:40	06:10		06:44	07:24 (T24)	07:17		06:56	07:40 (T22)	07:31	07:58 (T22)
	20:52	20:24		19:32	60 19:12 (T16)	18:39		16:53	57 08:39 (T22)	16:35	43 08:41 (T22)
11	05:41	06:11		06:45	07:24 (T24)	07:18		06:57	07:40 (T22)	07:32	07:59 (T22)
	20:52	20:22		19:30	65 19:10 (T16)	18:37		16:52	56 08:39 (T22)	16:35	43 08:42 (T22)
12	05:41	06:12		06:46	07:25 (T24)	07:19		06:58	07:40 (T22)	07:32	08:00 (T22)
	20:52	20:21		19:29	54 19:07 (T16)	18:35		16:51	53 08:38 (T22)	16:36	35 08:42 (T22)
13	05:42	06:13		06:47	07:23 (T24)	07:21		07:00	07:40 (T22)	07:33	08:00 (T22)
	20:51	20:20		19:27	56 19:07 (T16)	18:33		16:50	55 08:40 (T22)	16:36	38 08:41 (T22)
14	05:43	06:14		06:48	07:24 (T24)	07:22		07:01	07:40 (T22)	07:34	08:01 (T22)
	20:50	20:18		19:25	56 19:05 (T16)	18:32		16:49	51 08:40 (T22)	16:36	37 08:42 (T22)
15	05:44	06:15		06:49	07:23 (T24)	07:23		07:02	07:41 (T22)	07:35	08:02 (T22)
	20:50	20:17		19:23	53 19:03 (T16)	18:30		16:48	57 08:41 (T22)	16:36	35 08:41 (T22)
16	05:45	06:16		06:50	07:22 (T24)	07:24		07:03	07:40 (T22)	07:36	08:03 (T22)
	20:49	20:15		19:21	53 19:01 (T16)	18:28		16:47	56 08:41 (T22)	16:36	39 08:43 (T22)
17	05:45	06:17		06:51	07:22 (T24)	07:25		07:05	07:41 (T22)	07:36	08:03 (T22)
	20:49	20:14		19:20	48 18:54 (T16)	18:27		16:46	54 08:41 (T22)	16:36	37 08:42 (T22)
18	05:46	06:18		06:52	07:22 (T24)	07:27		07:06	07:41 (T22)	07:37	08:04 (T22)
	20:48	20:12		19:18	48 18:57 (T16)	18:25		16:45	50 08:40 (T22)	16:37	37 08:43 (T22)
19	05:47	06:19		06:53	07:25 (T24)	07:28		07:07	07:41 (T22)	07:38	08:05 (T22)
	20:47	20:11		19:16	39 18:55 (T16)	18:24		16:44	57 08:41 (T22)	16:37	34 08:44 (T22)
20	05:48	06:20		06:54	07:23 (T24)	07:29		07:08	07:42 (T22)	07:38	08:05 (T22)
	20:47	20:09		19:14	33 08:13 (T24)	18:22		16:44	57 08:42 (T22)	16:37	38 08:43 (T22)
21	05:49	06:22		06:56	07:23 (T24)	07:30		07:10	07:42 (T22)	07:39	08:06 (T22)
	20:46	20:08		19:12	37 08:16 (T24)	18:20		16:43	58 08:41 (T22)	16:38	35 08:44 (T22)
22	05:50	06:23		06:57	07:24 (T24)	07:32		07:11	07:43 (T22)	07:39	08:06 (T22)
	20:45	20:06		19:10	41 08:15 (T24)	18:19		16:42	52 08:41 (T22)	16:38	35 08:44 (T22)
23	05:51	06:24	07:50 (T24)	06:58	07:24 (T24)	07:33		07:12	07:44 (T22)	07:40	08:07 (T22)
	20:44	20:05	17 08:07 (T24)	19:09	34 08:13 (T24)	18:17	13 09:15 (T22)	16:41	55 08:42 (T22)	16:39	36 08:45 (T22)
24	05:52	06:25	07:46 (T24)	06:59	07:26 (T24)	07:34		07:13	07:44 (T22)	07:40	08:07 (T22)
	20:43	20:03	25 08:11 (T24)	19:07	35 08:13 (T24)	18:16	22 09:20 (T22)	16:41	51 08:41 (T22)	16:39	36 08:45 (T22)
25	05:53	06:26	07:44 (T24)	07:00	07:27 (T24)	07:35		07:15	07:44 (T22)	07:41	08:08 (T22)
	20:42	20:01	29 08:13 (T24)	19:05	35 08:11 (T24)	18:14	28 09:23 (T22)	16:40	53 08:41 (T22)	16:40	37 08:47 (T22)
26	05:54	06:27	07:41 (T24)	07:01	07:28 (T24)	07:37		07:16	07:45 (T22)	07:41	08:08 (T22)
	20:41	20:00	34 08:15 (T24)	19:03	25 08:09 (T24)	18:13	33 09:25 (T22)	16:40	53 08:40 (T22)	16:41	37 08:47 (T22)
27	05:55	06:28	07:39 (T24)	07:02	07:29 (T24)	07:38		07:17	07:47 (T22)	07:41	08:08 (T22)
	20:40	19:56	37 08:16 (T24)	19:01	32 08:07 (T24)	18:11	36 09:27 (T22)	16:39	51 08:42 (T22)	16:41	36 08:47 (T22)
28	05:56	06:29	07:37 (T24)	07:03	07:31 (T24)	07:39		07:18	07:47 (T22)	07:42	08:08 (T22)
	20:39	19:55	41 08:18 (T24)	19:00	16 07:57 (T24)	18:10	40 09:29 (T22)	16:38	52 08:42 (T22)	16:42	36 08:48 (T22)
29	05:57	06:30	07:36 (T24)	07:05	07:33 (T24)	07:40		07:19	07:47 (T22)	07:42	08:09 (T22)
	20:38	19:53	43 08:19 (T24)	18:58	23 08:01 (T24)	18:08	43 09:30 (T22)	16:38	51 08:41 (T22)	16:43	37 08:49 (T22)
30	05:58	06:31	07:34 (T24)	07:06	07:38 (T24)	07:42		07:20	07:48 (T22)	07:42	08:09 (T22)
	20:37	19:51	46 08:20 (T24)	18:56	14 07:57 (T24)	18:07	46 09:32 (T22)	16:38	51 08:41 (T22)	16:43	40 08:50 (T22)
31	05:59	06:33	07:33 (T24)			07:43		08:45 (T22)		07:42	08:09 (T22)
	20:36	19:50	48 08:21 (T24)			18:06	47 09:32 (T22)			16:44	38 08:50 (T22)
Potential sun hours	466	433		376		343		293		281	
Total, worst case			320	1436		316		1595		1234	
Sun reduction			0.63	0.56		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		0.61		0.61		0.61	
Total reduction			0.45	0.40		0.26		0.15		0.14	
Total, real			145	577		83		237		176	

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: 216 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2546)

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 16:45	07:28 17:22	06:49 17:59	06:55 19:36	06:06 20:10	06:38 (T10) 20:42 32
2	07:43 16:46	07:27 17:23	06:48 18:00	06:53 19:37	06:05 20:11	06:37 (T10) 20:43 32
3	07:43 16:47	07:26 17:24	06:46 18:01	06:52 19:38	06:03 20:12	06:38 (T10) 20:44 33
4	07:43 16:48	07:25 17:26	06:44 18:02	06:50 19:40	06:02 20:13	06:38 (T10) 20:45 33
5	07:43 16:49	07:23 17:27	06:43 18:04	06:48 19:41	06:01 20:14	06:39 (T10) 20:45 34
6	07:43 16:50	07:22 17:28	06:41 18:05	06:46 19:42	05:59 20:16	06:39 (T10) 20:46 34
7	07:43 16:51	07:21 17:30	06:39 18:06	06:45 19:43	05:58 20:17	06:39 (T10) 20:47 35
8	07:43 16:52	07:20 17:31	06:38 18:07	06:43 19:44	05:57 20:18	06:40 (T10) 20:48 34
9	07:43 16:53	07:19 17:32	06:36 18:09	06:41 19:45	05:56 20:19	06:41 (T10) 20:48 34
10	07:42 16:54	07:17 17:34	06:34 18:10	06:40 19:47	05:54 20:20	06:42 (T10) 20:49 34
11	07:42 16:55	07:16 17:35	06:32 18:11	06:38 19:48	07:00 (T10) 20:21	06:42 (T10) 20:49 34
12	07:42 16:56	07:15 17:36	06:31 18:12	06:36 19:49	07:13 (T10) 20:22	06:43 (T10) 20:50 33
13	07:41 16:58	07:13 17:38	06:29 18:13	06:34 19:50	07:16 (T10) 20:23	06:45 (T10) 20:51 33
14	07:41 16:59	07:12 17:39	06:27 18:15	06:33 19:51	07:18 (T10) 20:25	06:46 (T10) 20:51 33
15	07:41 17:00	07:11 17:40	06:25 18:16	06:31 19:52	07:20 (T10) 20:26	06:48 (T10) 20:52 33
16	07:40 17:01	07:09 17:42	06:24 18:17	06:29 19:54	07:21 (T10) 20:27	06:50 (T10) 20:52 33
17	07:40 17:02	07:08 17:43	06:22 18:18	06:28 19:55	07:22 (T10) 20:28	06:52 (T10) 20:52 33
18	07:39 17:04	07:06 17:44	06:20 18:19	06:26 19:56	07:24 (T10) 20:29	06:57 (T10) 20:53 33
19	07:39 17:05	07:05 17:46	06:18 18:20	06:25 19:57	07:25 (T10) 20:30	06:58 (T10) 20:53 32
20	07:38 17:06	07:03 17:47	06:17 18:21	06:23 19:58	07:26 (T10) 20:31	06:59 (T10) 20:54 32
21	07:37 17:07	07:02 17:48	06:15 18:22	06:21 19:59	07:27 (T10) 20:32	07:00 (T10) 20:54 32
22	07:37 17:09	07:00 17:50	06:13 18:23	06:20 20:01	07:28 (T10) 20:33	07:01 (T10) 20:54 32
23	07:36 17:10	06:59 17:51	06:11 18:24	06:18 20:02	07:29 (T10) 20:34	07:02 (T10) 20:54 32
24	07:35 17:11	06:57 17:52	06:09 18:25	06:16 20:03	07:30 (T10) 20:35	07:03 (T10) 20:55 32
25	07:34 17:12	06:56 17:54	06:08 18:26	06:15 20:04	07:31 (T10) 20:36	07:04 (T10) 20:55 33
26	07:33 17:14	06:54 17:55	06:06 18:27	06:14 20:05	07:32 (T10) 20:37	07:05 (T10) 20:55 33
27	07:33 17:15	06:52 17:56	06:04 18:28	06:12 20:06	07:33 (T10) 20:38	07:06 (T10) 20:55 33
28	07:32 17:16	06:51 17:57	06:02 18:29	06:11 20:07	07:34 (T10) 20:39	07:07 (T10) 20:55 33
29	07:31 17:18		06:01 18:30	06:09 20:08	07:35 (T10) 20:40	07:08 (T10) 20:55 32
30	07:30 17:19		05:59 18:31	06:08 20:09	07:36 (T10) 20:41	07:09 (T10) 20:55 33
31	07:29 17:20		06:57 19:35	06:07 20:10	07:37 (T10) 20:42	07:10 (T10) 20:55 33
Potential sun hours	291	294	369	401	453	459
Total, worst case			229	748	1004	989
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	0.75	0.72	0.67
Total reduction			0.35	0.40	0.42	0.42
Total, real			79	303	418	418

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

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: 216 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2546)

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	19:54 (T05)	06:00	06:55 (T10)	06:34	06:57 (T10)	07:07	07:30 (T13)	07:44	07:22	
	20:55	33	20:27 (T05)	20:35	21	20:12 (T05)	19:48	10	07:15 (T10)	18:54	9
2	05:35	19:54 (T05)	06:01	06:54 (T10)	06:35	06:58 (T10)	07:08	07:31 (T13)	07:46	07:23	
	20:55	34	20:28 (T05)	20:34	14	07:26 (T10)	19:46	6	07:05 (T10)	18:53	6
3	05:35	19:54 (T05)	06:02	06:53 (T10)	06:36		07:09	07:32 (T13)	07:47	07:24	
	20:55	34	20:28 (T05)	20:33	25	07:27 (T10)	19:45	2	07:34 (T13)	18:02	
4	05:36	19:55 (T05)	06:03	06:59 (T10)	06:37		07:10		07:48	07:25	
	20:54	33	20:28 (T05)	20:32	21	07:26 (T10)	19:43		18:49	16:36	
5	05:37	19:55 (T05)	06:04	06:51 (T10)	06:38		07:12		07:49	07:26	
	20:54	34	20:29 (T05)	20:31	23	07:29 (T10)	19:41		18:47	17:59	
6	05:37	19:55 (T05)	06:05	06:53 (T10)	06:39		07:13		06:51	07:27	
	20:54	34	20:29 (T05)	20:29	18	07:30 (T10)	19:39		18:46	16:58	
7	05:38	19:55 (T05)	06:06	06:49 (T10)	06:40		07:14		06:52	07:28	
	20:54	33	20:29 (T05)	20:28	26	07:29 (T10)	19:38		18:44	16:57	
8	05:39	19:55 (T05)	06:08	06:48 (T10)	06:42		07:15		06:53	07:29	
	20:53	34	20:29 (T05)	20:27	24	07:31 (T10)	19:36		18:42	16:56	
9	05:39	19:55 (T05)	06:09	06:47 (T10)	06:43		07:16		06:55	07:30	
	20:53	34	20:29 (T05)	20:25	23	07:31 (T10)	19:34		18:40	16:54	
10	05:40	19:55 (T05)	06:10	06:49 (T10)	06:44		07:17		06:56	07:31	
	20:53	34	20:29 (T05)	20:24	20	07:29 (T10)	19:32		18:39	16:53	
11	05:41	19:58 (T05)	06:11	06:49 (T10)	06:45		07:18		06:57	07:32	
	20:52	29	20:28 (T05)	20:23	25	07:32 (T10)	19:31		18:37	16:52	
12	05:41	19:55 (T05)	06:12	06:48 (T10)	06:46		07:20		06:58	07:33	
	20:52	26	20:27 (T05)	20:21	26	07:32 (T10)	19:29		18:35	16:51	
13	05:42	19:56 (T05)	06:13	06:45 (T10)	06:47		07:21		07:00	07:33	
	20:51	27	20:27 (T05)	20:20	36	07:32 (T10)	19:27		18:34	16:50	
14	05:43	19:56 (T05)	06:14	06:49 (T10)	06:48		07:22		07:01	07:34	
	20:51	25	20:27 (T05)	20:18	28	07:26 (T10)	19:25		18:32	16:49	
15	05:44	19:57 (T05)	06:15	06:45 (T10)	06:49		07:23		07:02	07:35	
	20:50	27	20:26 (T05)	20:17	48	07:33 (T10)	19:23		18:30	16:48	
16	05:45	19:56 (T05)	06:16	06:45 (T10)	06:50		07:24		07:04	07:36	
	20:49	21	20:25 (T05)	20:16	31	07:33 (T10)	19:22		18:29	16:47	
17	05:46	19:59 (T05)	06:17	06:45 (T10)	06:51		07:26		07:05	07:36	
	20:49	22	20:25 (T05)	20:14	30	07:33 (T10)	19:20		18:27	16:46	
18	05:46	19:57 (T05)	06:18	06:45 (T10)	06:52		07:32 (T13)	07:27	07:06	07:37	
	20:48	26	20:24 (T05)	20:13	27	07:31 (T10)	19:18	2	07:34 (T13)	18:25	
19	05:47	19:57 (T05)	06:20	06:45 (T10)	06:54		07:26 (T13)	07:28	07:07	07:38	
	20:47	15	20:24 (T05)	20:11	44	07:32 (T10)	19:16	9	07:38 (T13)	18:24	
20	05:48	19:57 (T05)	06:21	06:46 (T10)	06:55		07:26 (T13)	07:29	07:09	07:38	
	20:47	24	20:23 (T05)	20:09	31	07:28 (T10)	19:14	11	07:40 (T13)	18:22	
21	05:49	19:58 (T05)	06:22	06:46 (T10)	06:56		07:22 (T13)	07:30	07:10	07:39	
	20:46	8	20:21 (T05)	20:08	36	07:31 (T10)	19:12	16	07:41 (T13)	18:21	
22	05:50	20:01 (T05)	06:23	06:53 (T10)	06:57		07:21 (T13)	07:32	07:11	07:39	
	20:45	10	20:17 (T05)	20:06	23	07:30 (T10)	19:11	19	07:43 (T13)	18:19	
23	05:51	19:58 (T05)	06:24	06:51 (T10)	06:58		07:21 (T13)	07:33	07:12	07:40	
	20:44	22	20:20 (T05)	20:05	26	07:29 (T10)	19:09	15	07:43 (T13)	18:17	
24	05:52	20:01 (T05)	06:25	06:53 (T10)	06:59		07:26 (T13)	07:34	07:14	07:40	
	20:43	9	20:19 (T05)	20:03	22	07:29 (T10)	19:07	15	07:43 (T13)	18:16	
25	05:53	20:02 (T05)	06:26	06:52 (T10)	07:00		07:23 (T13)	07:35	07:15	07:41	
	20:42	5	20:18 (T05)	20:02	22	07:28 (T10)	19:05	16	07:43 (T13)	18:14	
26	05:54	20:01 (T05)	06:27	06:51 (T10)	07:01		07:24 (T13)	07:37	07:16	07:41	
	20:42	12	20:18 (T05)	20:00	23	07:22 (T10)	19:03	13	07:43 (T13)	18:13	
27	05:55	07:05 (T10)	06:28	06:52 (T10)	07:02		07:25 (T13)	07:38	07:17	07:42	
	20:41	18	20:17 (T05)	19:57	18	07:25 (T10)	19:02	13	07:42 (T13)	18:11	
28	05:56	07:02 (T10)	06:29	06:53 (T10)	07:04		07:26 (T13)	07:39	07:18	07:42	
	20:40	18	20:10 (T05)	19:55	23	07:24 (T10)	19:00	9	07:42 (T13)	18:10	
29	05:57	06:59 (T10)	06:31	06:54 (T10)	07:05		07:27 (T13)	07:40	07:19	07:42	
	20:39	31	20:15 (T05)	19:53	24	07:22 (T10)	18:58	10	07:40 (T13)	18:09	
30	05:58	06:58 (T10)	06:32	06:55 (T10)	07:06		07:28 (T13)	07:42	07:21	07:42	
	20:37	30	20:14 (T05)	19:52	11	07:20 (T10)	18:56	6	07:39 (T13)	18:07	
31	05:59	07:02 (T10)	06:33	06:56 (T10)					07:43	07:43	
	20:36	19	20:13 (T05)	19:50	22	07:18 (T10)			18:06	16:44	
Potential sun hours	466		433		376		343		293	281	
Total, worst case	761		791		170		17				
Sun reduction	0.67		0.63		0.56		0.44				
Oper. time red.	1.00		1.00		1.00		1.00				
Wind dir. red.	0.68		0.75		0.73		0.73				
Total reduction	0.45		0.47		0.41		0.32				
Total, real	346		373		70		5				

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: 217 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2547)

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	16:45	07:28	17:22	17:59				06:55	19:36		06:06	20:10	51	06:34 (T10)	05:35	19:47 (T05)
2	07:43	16:46	07:27	17:23	18:00				06:53	19:37		06:05	20:11	51	06:33 (T10)	05:34	19:47 (T05)
3	07:43	16:47	07:26	17:24	18:01				06:52	19:38		06:03	20:12	52	06:33 (T10)	05:34	19:47 (T05)
4	07:43	16:48	07:25	17:26	18:02				06:50	19:40		06:02	20:13	51	06:34 (T10)	05:33	19:47 (T05)
5	07:43	16:49	07:23	17:27	18:04				06:48	19:41		06:01	20:14	50	06:34 (T10)	05:33	19:48 (T05)
6	07:43	16:50	07:22	17:32	18:05				06:46	19:42		05:59	20:16	50	06:33 (T10)	05:32	19:49 (T05)
7	07:43	16:51	07:21	17:30	18:06				06:45	19:43		05:58	20:17	49	06:34 (T10)	05:32	19:48 (T05)
8	07:43	16:52	07:20	17:31	18:07				06:43	19:44		05:57	20:18	49	06:34 (T10)	05:32	19:49 (T05)
9	07:43	16:53	07:19	17:32	18:09				06:41	19:45		05:56	20:19	47	06:35 (T10)	05:32	19:49 (T05)
10	07:42	16:54	07:17	17:34	18:10				06:40	19:47		05:54	20:20	49	06:35 (T10)	05:31	19:50 (T05)
11	07:42	16:55	07:16	17:35	18:11	2	06:54 (T13)	06:38	06:38	19:48		05:53	20:21	52	06:35 (T10)	05:31	19:51 (T05)
12	07:42	16:56	07:15	17:36	18:12	6	06:53 (T13)	06:36	06:36	19:49		05:52	20:22	53	06:36 (T10)	05:31	19:50 (T05)
13	07:41	16:58	07:13	17:38	18:13	9	06:59 (T13)	06:34	06:34	19:49		05:51	20:23	55	06:36 (T10)	05:31	19:51 (T05)
14	07:41	16:59	07:12	17:39	18:15	11	07:51 (T13)	06:34	06:34	19:49		05:51	20:24	55	06:37 (T10)	05:31	19:51 (T05)
15	07:41	17:00	07:11	17:40	18:16	14	08:00 (T13)	06:31	06:31	19:48		05:50	20:25	56	06:38 (T10)	05:31	19:51 (T05)
16	07:40	17:01	07:09	17:42	18:17	16	07:47 (T13)	06:29	06:29	19:47		05:49	20:26	56	06:39 (T10)	05:31	19:52 (T05)
17	07:40	17:02	07:08	17:43	18:18	18	08:01 (T13)	06:28	06:28	19:46		05:48	20:27	55	06:40 (T10)	05:31	19:52 (T05)
18	07:39	17:04	07:06	17:44	18:19	19	08:02 (T13)	06:26	06:26	19:45		05:47	20:28	56	06:41 (T10)	05:31	19:53 (T05)
19	07:39	17:05	07:05	17:45	18:20	21	07:40 (T13)	06:25	06:25	19:44		05:46	20:29	56	06:42 (T10)	05:31	19:53 (T05)
20	07:38	17:06	07:03	17:46	18:21	22	08:01 (T13)	06:23	06:23	19:43		05:45	20:30	54	06:43 (T10)	05:31	19:53 (T05)
21	07:37	17:07	07:02	17:47	18:22	23	07:38 (T13)	06:21	06:21	19:42		05:44	20:31	54	06:44 (T10)	05:31	19:53 (T05)
22	07:37	17:09	07:00	17:48	18:23	23	08:00 (T13)	06:20	06:20	19:41		05:43	20:32	52	06:45 (T10)	05:31	19:53 (T05)
23	07:36	17:10	06:59	17:49	18:24	24	07:36 (T13)	06:18	06:18	19:40		05:42	20:33	50	06:46 (T10)	05:31	19:53 (T05)
24	07:35	17:11	06:57	17:50	18:25	22	07:24 (T10)	06:17	06:17	19:39		05:41	20:34	49	06:47 (T10)	05:31	19:53 (T05)
25	07:34	17:12	06:56	17:51	18:26	19	06:40 (T10)	06:15	06:15	19:38		05:40	20:35	45	06:48 (T10)	05:31	19:54 (T05)
26	07:33	17:14	06:54	17:53	18:27	16	07:25 (T10)	06:14	06:14	19:37		05:39	20:36	42	06:49 (T10)	05:32	19:54 (T05)
27	07:33	17:15	06:52	17:54	18:28	11	07:26 (T10)	06:13	06:13	19:36		05:38	20:37	36	06:50 (T10)	05:33	19:55 (T05)
28	07:32	17:16	06:51	17:55	18:29				06:12	19:35		05:37	20:38	30	06:51 (T10)	05:33	19:55 (T05)
29	07:31	17:18		17:57	19:30				06:11	19:34		05:36	20:39	30	06:52 (T10)	05:34	19:55 (T05)
30	07:30	17:19			19:31				06:10	19:33		05:35	20:40	31	06:53 (T10)	05:34	19:55 (T05)
31	07:29	17:20			19:32				06:09	19:32		05:34	20:41	32	06:54 (T10)	05:34	19:55 (T05)
Potential sun hours	291	294	369					401				453			459		
Total, worst case						252		694				1475			854		
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		0.75				0.72			0.67		
Total reduction						0.35		0.40				0.42			0.42		
Total, real						87		281				621			363		

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: 217 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2547)

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		19:54 (T05)	06:00		06:47 (T10)	06:34			07:07		07:30 (T13)	07:44		07:22			
	20:55	28	20:22 (T05)	20:35	39	20:12 (T05)	19:48			18:54	10	07:40 (T13)	18:04		16:37			
2	05:35		19:55 (T05)	06:01		06:47 (T10)	06:35			07:08		07:31 (T13)	07:46		07:23			
	20:55	28	20:23 (T05)	20:34	30	20:11 (T05)	19:46			18:53	7	07:38 (T13)	18:03		16:37			
3	05:35		19:54 (T05)	06:02		06:45 (T10)	06:36			07:09		07:32 (T13)	07:47		07:24			
	20:55	29	20:23 (T05)	20:33	40	20:09 (T05)	19:45			18:51	4	07:36 (T13)	18:02		16:37			
4	05:36		19:55 (T05)	06:03		06:45 (T10)	06:37			07:10			07:48		07:25			
	20:54	29	20:24 (T05)	20:32	25	07:26 (T10)	19:43			18:49			18:01		16:36			
5	05:37		19:55 (T05)	06:04		06:44 (T10)	06:38			07:11			07:49		07:26			
	20:54	30	20:25 (T05)	20:31	33	07:32 (T10)	19:41			18:47			17:59		16:36			
6	05:37		19:55 (T05)	06:05		06:44 (T10)	06:39			07:13			06:51		07:27			
	20:54	30	20:25 (T05)	20:29	26	07:33 (T10)	19:39			18:46			16:58		16:36			
7	05:38		19:55 (T05)	06:06		06:44 (T10)	06:40			07:14			06:52		07:28			
	20:54	29	20:25 (T05)	20:28	33	07:33 (T10)	19:38			18:44			16:57		16:36			
8	05:39		19:54 (T05)	06:08		06:43 (T10)	06:42			07:15			06:53		07:29			
	20:53	31	20:25 (T05)	20:27	29	07:32 (T10)	19:36			18:42			16:56		16:36			
9	05:39		19:55 (T05)	06:09		06:43 (T10)	06:43			07:16			06:55		07:30			
	20:53	31	20:26 (T05)	20:25	27	07:32 (T10)	19:34			18:40			16:54		16:36			
10	05:40		19:55 (T05)	06:10		06:42 (T10)	06:44			07:17			06:56		07:31			
	20:53	31	20:26 (T05)	20:24	27	07:33 (T10)	19:32			18:39			16:53		16:36			
11	05:41		19:54 (T05)	06:11		06:43 (T10)	06:45			07:18			06:57		07:32			
	20:52	28	20:26 (T05)	20:23	29	07:33 (T10)	19:31			18:37			16:52		16:36			
12	05:41		19:54 (T05)	06:12		06:42 (T10)	06:46			07:20			06:58		07:33			
	20:52	26	20:26 (T05)	20:21	31	07:33 (T10)	19:29			18:35			16:51		16:36			
13	05:42		19:56 (T05)	06:13		06:43 (T10)	06:47			07:21			07:00		07:33			
	20:51	27	20:27 (T05)	20:20	38	07:32 (T10)	19:27			18:34			16:50		16:36			
14	05:43		19:56 (T05)	06:14		06:49 (T10)	06:48			07:22			07:01		07:34			
	20:51	25	20:27 (T05)	20:18	28	07:26 (T10)	19:25			18:32			16:49		16:36			
15	05:44		19:55 (T05)	06:15		06:41 (T10)	06:49			07:23			07:02		07:35			
	20:50	28	20:26 (T05)	20:17	51	07:32 (T10)	19:23			18:30			16:48		16:36			
16	05:45		19:54 (T05)	06:16		06:42 (T10)	06:50			07:24			07:04		07:36			
	20:49	23	20:25 (T05)	20:16	34	07:33 (T10)	19:22			18:29			16:47		16:36			
17	05:46		19:59 (T05)	06:17		06:42 (T10)	06:51			07:26			07:05		07:36			
	20:49	22	20:25 (T05)	20:14	33	07:33 (T10)	19:20			18:27			16:46		16:37			
18	05:46		19:56 (T05)	06:18		06:44 (T10)	06:52			07:27			07:06		07:37			
	20:48	27	20:24 (T05)	20:13	28	07:31 (T10)	19:18	4		07:36 (T13)			16:45		16:37			
19	05:47		07:03 (T10)	06:20		06:44 (T10)	06:54			07:26 (T13)			07:07		07:38			
	20:47	24	20:24 (T05)	20:11	44	07:31 (T10)	19:16	11		07:41 (T13)			16:45		16:37			
20	05:48		07:02 (T10)	06:21		06:46 (T10)	06:55			07:26 (T13)			07:09		07:38			
	20:47	34	20:23 (T05)	20:09	31	07:28 (T10)	19:14	13		07:42 (T13)			16:44		16:38			
21	05:49		06:58 (T10)	06:22		06:46 (T10)	06:56			07:22 (T13)			07:10		07:39			
	20:46	28	20:21 (T05)	20:08	35	07:30 (T10)	19:12	17		07:42 (T13)			16:43		16:38			
22	05:50		06:57 (T10)	06:23		06:53 (T10)	06:57			07:21 (T13)			07:11		07:39			
	20:45	26	20:17 (T05)	20:06	22	07:29 (T10)	19:11	19		07:43 (T13)			16:42		16:39			
23	05:51		07:02 (T10)	06:24		06:51 (T10)	06:58			07:21 (T13)			07:12		07:40			
	20:44	35	20:20 (T05)	20:05	25	07:28 (T10)	19:09	16		07:44 (T13)			16:42		16:39			
24	05:52		06:53 (T10)	06:25		06:53 (T10)	06:59			07:26 (T13)			07:14		07:40			
	20:43	36	20:19 (T05)	20:03	20	07:26 (T10)	19:07	16		07:44 (T13)			16:41		16:40			
25	05:53		06:52 (T10)	06:26		06:52 (T10)	07:00			07:23 (T13)			07:15		07:41			
	20:42	23	20:18 (T05)	20:02	19	07:25 (T10)	19:05	17		07:44 (T13)			16:40		16:40			
26	05:54		06:53 (T10)	06:27		06:51 (T10)	07:01			07:24 (T13)			07:16		07:41			
	20:42	37	20:18 (T05)	20:00	23	07:22 (T10)	19:03	14		07:44 (T13)			16:40		16:41			
27	05:55		06:55 (T10)	06:28		06:52 (T10)	07:02			07:25 (T13)			07:17		07:42			
	20:41	34	20:17 (T05)	19:57	15	07:22 (T10)	19:02	14		07:43 (T13)			16:39		16:41			
28	05:56		06:50 (T10)	06:29		06:53 (T10)	07:04			07:26 (T13)			07:18		07:42			
	20:40	36	20:10 (T05)	19:55	22	07:20 (T10)	19:00	9		07:42 (T13)			16:39		16:42			
29	05:57		06:49 (T10)	06:31		06:54 (T10)	07:05			07:27 (T13)			07:19		07:42			
	20:39	49	20:15 (T05)	19:53	21	07:17 (T10)	18:58	11		07:42 (T13)			16:38		16:43			
30	05:58		06:48 (T10)	06:32		06:55 (T10)	07:06			07:28 (T13)			07:21		07:42			
	20:37	51	20:14 (T05)	19:52	7	07:08 (T10)	18:56	7		07:40 (T13)			16:38		16:44			
31	05:59		06:47 (T10)	06:33		06:56 (T10)									07:43			
	20:36	36	20:13 (T05)	19:50	14	07:10 (T10)				18:06					16:44			
Potential sun hours	466			433			376			343			293		281			
Total, worst case	951			879			168			21								
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			0.75			0.73			0.73								
Total reduction	0.47			0.47			0.41			0.32								
Total, real	444			414			69			7								

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: 218 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2548)

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 16:45	07:28 17:22	06:49 17:59	06:55 19:36	06:06 20:10	06:29 (T10) 20:42 66
2	07:43 16:46	07:27 17:23	06:48 18:00	06:53 19:37	06:05 20:11	06:28 (T10) 20:43 68
3	07:43 16:47	07:26 17:24	06:46 18:01	06:52 19:38	06:03 20:12	06:28 (T10) 20:44 57
4	07:43 16:48	07:25 17:26	06:44 18:02	06:50 19:40	06:02 20:13	06:28 (T10) 20:45 48
5	07:43 16:49	07:23 17:27	06:43 18:04	06:48 19:41	06:01 20:14	06:28 (T10) 20:45 53
6	07:43 16:50	07:22 17:28	06:41 18:05	06:46 19:42	05:59 20:16	06:27 (T10) 20:46 47
7	07:43 16:51	07:21 17:30	06:39 18:06	06:45 19:43	05:58 20:17	06:26 (T10) 20:47 41
8	07:43 16:52	07:20 17:31	06:38 18:07	06:43 19:44	05:57 20:18	06:26 (T10) 20:48 50
9	07:43 16:53	07:19 17:32	06:36 18:09	06:41 19:45	05:56 20:19	06:26 (T10) 20:48 43
10	07:42 16:54	07:17 17:34	06:34 18:10	06:40 19:47	05:54 20:20	06:26 (T10) 20:49 43
11	07:42 16:55	07:16 17:35	06:32 18:11	06:38 19:48	05:53 20:21	06:26 (T10) 20:49 47
12	07:42 16:56	07:15 17:36	06:31 18:12	06:36 19:49	05:52 20:22	06:26 (T10) 20:50 54
13	07:41 16:58	07:13 17:38	06:29 18:13	06:34 19:50	05:51 20:23	06:26 (T10) 20:51 46
14	07:41 16:59	07:12 17:39	06:27 18:15	06:33 19:51	05:50 20:25	06:26 (T10) 20:51 44
15	07:41 17:00	07:11 17:40	06:25 18:16	06:31 19:52	05:49 20:26	06:26 (T10) 20:52 52
16	07:40 17:01	07:09 17:42	06:24 18:17	06:29 19:54	05:48 20:27	06:26 (T10) 20:52 53
17	07:40 17:02	07:08 17:43	06:22 18:18	06:28 19:55	05:47 20:28	06:26 (T10) 20:52 32
18	07:39 17:04	07:06 17:44	06:20 18:19	06:26 19:56	05:46 20:29	06:26 (T10) 20:53 37
19	07:39 17:05	07:05 17:45	06:18 18:20	06:25 19:57	05:45 20:30	06:27 (T10) 20:53 46
20	07:38 17:06	07:03 17:47	06:17 18:21	06:23 19:58	05:44 20:31	06:28 (T10) 20:54 46
21	07:37 17:07	07:02 17:48	06:15 18:22	06:21 19:59	05:43 20:32	06:28 (T10) 20:54 40
22	07:37 17:09	07:00 17:50	06:13 18:23	06:20 20:01	05:42 20:33	06:28 (T10) 20:54 38
23	07:36 17:10	06:59 17:51	06:11 18:24	06:18 20:01	05:41 20:34	06:28 (T10) 20:54 31
24	07:35 17:11	06:57 17:52	06:09 18:25	06:17 20:02	05:40 20:35	06:28 (T10) 20:55 51
25	07:34 17:12	06:56 17:54	06:08 18:26	06:15 20:03	05:39 20:36	06:30 (T10) 20:55 48
26	07:33 17:14	06:54 17:55	06:06 18:27	06:14 20:04	05:39 20:37	06:30 (T10) 20:55 45
27	07:33 17:15	06:52 17:56	06:04 18:28	06:12 20:05	05:38 20:38	06:30 (T10) 20:55 38
28	07:32 17:16	06:51 17:57	06:02 18:29	06:11 20:06	05:37 20:39	06:31 (T10) 20:55 39
29	07:31 17:18		06:01 18:30	06:09 20:08	05:36 20:40	06:31 (T10) 20:55 46
30	07:30 17:19		05:59 18:31	06:08 20:09	05:36 20:41	06:32 (T10) 20:55 36
31	07:29 17:20		06:57 19:35		05:35 20:41	06:32 (T10) 20:55
Potential sun hours	291	294	369	401	453	459
Total, worst case			319	567	2325	1385
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	0.75	0.73	0.72
Total reduction			0.34	0.41	0.43	0.45
Total, real			110	230	990	624

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
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Calculated:

7/11/2022 8:58 AM/3.4.424

SHADOW - Calendar

Shadow receptor: 218 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2548)

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	06:43 (T10)	06:00	06:36 (T10)	06:34				07:07	07:30 (T13)	07:44	07:22					
	20:55	55 20:30 (T07)	20:35	59 20:12 (T05)	19:48				18:54	15 07:45 (T13)	18:04	16:37					
2	05:35	06:43 (T10)	06:01	06:36 (T10)	06:35				07:08	07:31 (T13)	07:46	07:23					
	20:55	57 20:30 (T07)	20:34	56 20:11 (T05)	19:46				18:53	12 07:43 (T13)	18:03	16:37					
3	05:35	06:43 (T10)	06:02	06:36 (T10)	06:36				07:09	07:32 (T13)	07:47	07:24					
	20:55	54 20:28 (T07)	20:33	61 20:09 (T05)	19:45				18:51	10 07:42 (T13)	18:02	16:37					
4	05:36	06:43 (T10)	06:03	06:36 (T10)	06:37				07:10	07:33 (T13)	07:48	07:25					
	20:54	53 20:27 (T07)	20:32	51 20:08 (T05)	19:43				18:49	6 07:39 (T13)	18:01	16:36					
5	05:37	06:43 (T10)	06:04	06:36 (T10)	06:38				07:11	07:34 (T13)	07:49	07:26					
	20:54	47 20:30 (T07)	20:31	56 20:06 (T05)	19:41				18:47	2 07:36 (T13)	17:59	16:36					
6	05:37	06:43 (T10)	06:05	06:36 (T10)	06:39				07:13		06:51	07:27					
	20:54	37 20:28 (T07)	20:29	45 20:04 (T05)	19:39				18:46		16:58	16:36					
7	05:38	06:44 (T10)	06:06	06:36 (T10)	06:40				07:14		06:52	07:28					
	20:54	43 20:30 (T07)	20:28	49 20:05 (T05)	19:38				18:44		16:57	16:36					
8	05:39	06:42 (T10)	06:08	06:36 (T10)	06:42				07:15		06:53	07:29					
	20:53	36 20:23 (T07)	20:27	43 20:04 (T05)	19:36				18:42		16:56	16:36					
9	05:39	06:42 (T10)	06:09	06:36 (T10)	06:43				07:16		06:55	07:30					
	20:53	63 20:24 (T07)	20:25	37 20:02 (T05)	19:34				18:40		16:54	16:36					
10	05:40	06:42 (T10)	06:10	06:36 (T10)	06:44				07:17		06:56	07:31					
	20:53	59 20:26 (T07)	20:24	37 07:37 (T10)	19:32				18:39		16:53	16:36					
11	05:41	06:41 (T10)	06:11	06:37 (T10)	06:45				07:18		06:57	07:32					
	20:52	61 20:27 (T07)	20:23	35 07:35 (T10)	19:31				18:37		16:52	16:36					
12	05:41	06:43 (T10)	06:12	06:37 (T10)	06:46				07:20		06:58	07:33					
	20:52	44 20:27 (T07)	20:21	37 07:34 (T10)	19:29				18:35		16:51	16:36					
13	05:42	06:41 (T10)	06:13	06:37 (T10)	06:47				07:21		07:00	07:33					
	20:51	52 20:15 (T05)	20:20	40 07:32 (T10)	19:27				18:34		16:50	16:36					
14	05:43	06:41 (T10)	06:14	06:38 (T10)	06:48				07:22		07:01	07:34					
	20:51	42 20:16 (T05)	20:18	32 07:34 (T10)	19:25				18:32		16:49	16:36					
15	05:44	06:41 (T10)	06:15	06:39 (T10)	06:49				07:23		07:02	07:35					
	20:50	51 20:17 (T05)	20:17	54 07:33 (T10)	19:23				18:30		16:48	16:36					
16	05:45	06:40 (T10)	06:16	06:41 (T10)	06:50				07:24		07:04	07:36					
	20:49	50 20:15 (T05)	20:16	35 07:33 (T10)	19:22				18:29		16:47	16:36					
17	05:46	06:39 (T10)	06:17	06:42 (T10)	06:51				07:26		07:05	07:36					
	20:49	49 20:17 (T05)	20:14	32 07:32 (T10)	19:20				18:27		16:46	16:37					
18	05:46	06:39 (T10)	06:18	06:44 (T10)	06:52			07:32 (T13)	07:27		07:06	07:37					
	20:48	58 20:18 (T05)	20:13	28 07:31 (T10)	19:18		8	07:42 (T13)	18:25		16:45	16:37					
19	05:47	06:39 (T10)	06:20	06:44 (T10)	06:54			07:28 (T13)	07:28		07:07	07:38					
	20:47	37 20:19 (T05)	20:11	43 07:30 (T10)	19:16		10	07:42 (T13)	18:24		16:45	16:37					
20	05:48	06:41 (T10)	06:21	06:46 (T10)	06:55			07:26 (T13)	07:29		07:09	07:38					
	20:47	52 20:19 (T05)	20:09	31 07:28 (T10)	19:14		17	07:46 (T13)	18:22		16:44	16:38					
21	05:49	06:39 (T10)	06:22	06:46 (T10)	06:56			07:24 (T13)	07:30		07:10	07:39					
	20:46	62 20:20 (T05)	20:08	32 07:27 (T10)	19:12		17	07:47 (T13)	18:21		16:43	16:38					
22	05:50	06:39 (T10)	06:23	06:53 (T10)	06:57			07:25 (T13)	07:32		07:11	07:39					
	20:45	49 20:17 (T05)	20:06	18 07:23 (T10)	19:11		19	07:46 (T13)	18:19		16:42	16:39					
23	05:51	06:38 (T10)	06:24	06:51 (T10)	06:58			07:22 (T13)	07:33		07:12	07:40					
	20:44	57 20:20 (T05)	20:05	20 07:23 (T10)	19:09		17	07:49 (T13)	18:17		16:42	16:39					
24	05:52	06:37 (T10)	06:25	06:53 (T10)	06:59			07:26 (T13)	07:34		07:14	07:40					
	20:43	67 20:19 (T05)	20:03	16 07:21 (T10)	19:07		20	07:49 (T13)	18:16		16:41	16:40					
25	05:53	06:37 (T10)	06:26	06:52 (T10)	07:00			07:23 (T13)	07:35		07:15	07:41					
	20:42	42 20:18 (T05)	20:02	14 07:18 (T10)	19:05		19	07:46 (T13)	18:14		16:40	16:40					
26	05:54	06:37 (T10)	06:27	06:53 (T10)	07:01			07:24 (T13)	07:37		07:16	07:41					
	20:42	56 20:18 (T05)	20:00	14 07:09 (T10)	19:03		15	07:45 (T13)	18:13		16:40	16:41					
27	05:55	06:37 (T10)	06:28	07:04 (T10)	07:02			07:25 (T13)	07:38		07:17	07:42					
	20:41	51 20:17 (T05)	19:57	5 07:09 (T10)	19:02		19	07:48 (T13)	18:11		16:39	16:41					
28	05:56	06:37 (T10)	06:29		07:04			07:26 (T13)	07:39		07:18	07:42					
	20:40	64 20:10 (T05)	19:55		19:00		13	07:47 (T13)	18:10		16:39	16:42					
29	05:57	06:37 (T10)	06:31		07:05			07:27 (T13)	07:40		07:19	07:42					
	20:39	74 20:15 (T05)	19:53		18:58		14	07:46 (T13)	18:09		16:38	16:43					
30	05:58	06:37 (T10)	06:32		07:06			07:28 (T13)	07:42		07:21	07:42					
	20:37	75 20:14 (T05)	19:52		18:56		11	07:45 (T13)	18:07		16:38	16:44					
31	05:59	06:36 (T10)	06:33						07:43			07:43					
	20:36	52 20:13 (T05)	19:50						18:06			16:44					
Potential sun hours	466		433		376				343		293	281					
Total, worst case	1649		980		199				45								
Sun reduction	0.67		0.63		0.56				0.44								
Oper. time red.	1.00		1.00		1.00				1.00								
Wind dir. red.	0.73		0.74		0.73				0.73								
Total reduction	0.49		0.47		0.41				0.32								
Total, real	804		459		82				14								

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: 222 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2550)

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	06:38 (T10)
	16:45	17:22	17:59	19:36	20:10	86 19:49 (T05)
2	07:43	07:27	06:48	06:53	06:05	06:37 (T10)
	16:46	17:23	18:00	19:37	20:11	89 19:50 (T05)
3	07:43	07:26	06:46	06:52	06:03	06:37 (T10)
	16:47	17:24	18:01	19:38	20:12	90 19:51 (T05)
4	07:43	07:25	06:44	07:06 (T13)	06:02	06:37 (T10)
	16:48	17:26	18:02	07:10 (T13)	20:13	92 19:53 (T05)
5	07:43	07:23	06:43	07:05 (T13)	06:01	06:37 (T10)
	16:49	17:27	18:04	07:13 (T13)	20:14	93 19:54 (T05)
6	07:43	07:22	06:41	07:03 (T13)	05:59	06:37 (T10)
	16:50	17:28	18:05	07:15 (T13)	20:16	93 19:54 (T05)
7	07:43	07:21	06:39	07:01 (T13)	05:58	06:37 (T10)
	16:51	17:30	18:06	07:15 (T13)	20:17	95 19:56 (T05)
8	07:43	07:20	06:38	07:00 (T13)	05:57	06:37 (T10)
	16:52	17:31	18:07	07:17 (T13)	20:18	95 19:57 (T05)
9	07:43	07:19	06:36	06:58 (T13)	07:10 (T10)	05:56
	16:53	17:32	18:09	07:17 (T13)	20:19	96 19:58 (T05)
10	07:42	07:17	06:34	06:56 (T13)	07:05 (T10)	05:54
	16:54	17:34	18:10	07:17 (T13)	20:20	96 19:59 (T05)
11	07:42	07:16	06:32	06:54 (T13)	07:02 (T10)	05:53
	16:55	17:35	18:11	07:17 (T13)	20:21	96 19:59 (T05)
12	07:42	07:15	06:31	06:53 (T13)	06:59 (T10)	05:52
	16:56	17:36	18:12	07:18 (T13)	20:22	95 19:58 (T05)
13	07:41	07:13	06:29	07:51 (T13)	06:56 (T10)	05:51
	16:58	17:38	18:13	08:17 (T13)	20:23	97 20:02 (T07)
14	07:41	07:12	06:27	07:49 (T13)	06:55 (T10)	05:50
	16:59	17:39	18:15	08:17 (T13)	20:25	96 20:03 (T07)
15	07:41	07:11	06:25	07:47 (T13)	06:53 (T10)	05:49
	17:00	17:40	18:16	08:16 (T13)	20:26	96 20:04 (T07)
16	07:40	07:09	06:24	07:46 (T13)	06:51 (T10)	05:48
	17:01	17:42	18:17	08:15 (T13)	20:27	95 20:05 (T07)
17	07:40	07:08	06:22	07:48 (T13)	06:50 (T10)	05:47
	17:02	17:43	18:18	08:15 (T13)	20:28	94 20:06 (T07)
18	07:39	07:06	06:20	07:48 (T13)	06:48 (T10)	05:46
	17:03	17:44	18:19	08:13 (T13)	20:29	93 20:07 (T07)
19	07:39	07:05	06:18	07:49 (T13)	06:46 (T10)	05:45
	17:05	17:46	18:21	08:11 (T13)	20:30	91 20:07 (T07)
20	07:38	07:03	06:17	07:50 (T13)	06:45 (T10)	05:44
	17:06	17:47	18:22	08:09 (T13)	20:31	84 20:09 (T07)
21	07:37	07:02	06:15	07:52 (T13)	06:44 (T10)	05:43
	17:07	17:48	18:23	08:07 (T13)	20:32	85 20:10 (T07)
22	07:37	07:00	06:13	07:56 (T13)	06:43 (T10)	05:42
	17:09	17:50	18:24	08:03 (T13)	20:33	86 20:11 (T07)
23	07:36	06:59	06:11	06:18	06:42 (T10)	05:41
	17:10	17:51	18:25	20:01	66 07:48 (T10)	20:34
24	07:35	06:57	06:09	06:17	06:42 (T10)	05:40
	17:11	17:52	18:27	20:02	67 07:49 (T10)	20:35
25	07:34	06:56	06:08	06:15	06:40 (T10)	05:39
	17:12	17:54	18:28	20:03	69 07:49 (T10)	20:36
26	07:33	06:54	06:06	06:14	06:40 (T10)	05:39
	17:14	17:55	18:29	20:04	70 19:44 (T05)	20:37
27	07:33	06:52	06:04	06:12	06:39 (T10)	05:38
	17:15	17:56	18:30	20:05	74 19:44 (T05)	20:38
28	07:32	06:51	06:02	06:11	06:39 (T10)	05:37
	17:16	17:57	18:31	20:06	78 19:46 (T05)	20:39
29	07:31		06:01	06:09	06:39 (T10)	05:36
	17:18		18:32	20:08	81 19:47 (T05)	20:40
30	07:30		06:59	06:08	06:38 (T10)	05:36
	17:19		18:34	20:09	84 19:48 (T05)	20:41
31	07:29		06:57		05:35	06:47 (T10)
	17:20		18:35		20:41	54 20:16 (T07)
Potential sun hours	291	294	369	401	453	459
Total, worst case			370	1259	2665	1572
Sun reduction			0.47	0.54	0.58	0.63
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.72	0.75	0.73	0.71
Total reduction			0.34	0.40	0.42	0.45
Total, real			126	507	1126	701

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: 222 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2550)

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	06:59 (T10)	06:00	06:48 (T10)	06:34	06:58 (T10)	07:07	07:30 (T13)	07:44	07:22	
	20:55	68 20:30 (T07)	20:35	61 20:09 (T05)	19:48	21 07:29 (T10)	18:54	27 07:57 (T13)	18:04	16:37	
2	05:35	07:00 (T10)	06:01	06:48 (T10)	06:35	07:00 (T10)	07:08	07:31 (T13)	07:46	07:23	
	20:55	67 20:30 (T07)	20:34	58 20:09 (T05)	19:46	18 07:33 (T10)	18:53	25 07:56 (T13)	18:03	16:37	
3	05:35	06:59 (T10)	06:02	06:48 (T10)	06:36	07:04 (T10)	07:09	07:32 (T13)	07:47	07:24	
	20:55	70 20:28 (T07)	20:33	72 20:09 (T05)	19:45	17 07:30 (T10)	18:51	24 07:56 (T13)	18:02	16:37	
4	05:36	06:59 (T10)	06:03	06:47 (T10)	06:37	07:07 (T10)	07:10	07:33 (T13)	07:48	07:25	
	20:54	61 20:27 (T07)	20:32	63 20:08 (T05)	19:43	15 07:24 (T10)	18:49	22 07:55 (T13)	18:01	16:36	
5	05:37	06:59 (T10)	06:04	06:47 (T10)	06:38		07:11	07:34 (T13)	07:49	07:26	
	20:54	56 20:30 (T07)	20:31	74 20:06 (T05)	19:41		18:47	20 07:54 (T13)	17:59	16:36	
6	05:37	06:58 (T10)	06:05	06:47 (T10)	06:39		07:13	07:35 (T13)	06:51	07:27	
	20:54	50 20:28 (T07)	20:29	61 20:04 (T05)	19:39		18:46	18 07:53 (T13)	16:58	16:36	
7	05:38	07:03 (T10)	06:06	06:47 (T10)	06:40		07:14	07:37 (T13)	06:52	07:28	
	20:54	56 20:30 (T07)	20:28	58 20:05 (T05)	19:38		18:44	16 07:53 (T13)	16:57	16:36	
8	05:39	07:00 (T10)	06:08	06:46 (T10)	06:42		07:15	07:38 (T13)	06:53	07:29	
	20:53	35 20:23 (T07)	20:27	70 20:04 (T05)	19:36		18:42	13 07:51 (T13)	16:56	16:36	
9	05:39	06:57 (T10)	06:09	06:46 (T10)	06:43		07:16	07:39 (T13)	06:55	07:30	
	20:53	62 20:24 (T07)	20:25	56 20:02 (T05)	19:34		18:40	10 07:49 (T13)	16:54	16:36	
10	05:40	06:57 (T10)	06:10	06:46 (T10)	06:44		07:17	07:40 (T13)	06:56	07:31	
	20:53	58 20:26 (T07)	20:24	52 20:01 (T05)	19:32		18:39	7 07:47 (T13)	16:53	16:36	
11	05:41	06:56 (T10)	06:11	06:49 (T10)	06:45		07:18	07:41 (T13)	06:57	07:32	
	20:52	65 20:27 (T07)	20:23	41 20:00 (T05)	19:31		18:37	2 07:43 (T13)	16:52	16:36	
12	05:41	06:59 (T10)	06:12	06:48 (T10)	06:46		07:20		06:58	07:33	
	20:52	49 20:27 (T07)	20:21	49 19:58 (T05)	19:29		18:35		16:51	16:36	
13	05:42	06:56 (T10)	06:13	06:46 (T10)	06:47		07:21		07:00	07:33	
	20:51	56 20:20 (T07)	20:20	58 19:56 (T05)	19:27		18:34		16:50	16:36	
14	05:43	06:55 (T10)	06:14	06:49 (T10)	06:48		07:22		07:01	07:34	
	20:51	47 20:25 (T07)	20:18	52 19:55 (T05)	19:25		18:32		16:49	16:36	
15	05:44	06:58 (T10)	06:15	06:46 (T10)	06:49		07:23		07:02	07:35	
	20:50	56 20:26 (T07)	20:17	78 19:53 (T05)	19:23		18:30		16:48	16:36	
16	05:45	06:54 (T10)	06:16	06:47 (T10)	06:50		07:24		07:04	07:36	
	20:49	54 20:22 (T07)	20:16	47 19:53 (T05)	19:21		18:29		16:47	16:36	
17	05:46	06:54 (T10)	06:17	06:47 (T10)	06:51		07:26		07:05	07:36	
	20:49	41 20:25 (T07)	20:14	47 19:52 (T05)	19:20		18:27		16:46	16:37	
18	05:46	06:53 (T10)	06:18	06:47 (T10)	06:52		07:27		07:06	07:37	
	20:48	59 20:24 (T07)	20:13	37 07:51 (T10)	19:18		18:25		16:45	16:37	
19	05:47	06:58 (T10)	06:20	06:47 (T10)	06:54		07:28		07:07	07:38	
	20:47	45 20:24 (T07)	20:11	62 07:55 (T10)	19:16		18:24		16:45	16:37	
20	05:48	06:53 (T10)	06:21	06:47 (T10)	06:55		07:29		07:09	07:38	
	20:47	57 20:23 (T07)	20:09	40 07:55 (T10)	19:14		18:22		16:44	16:38	
21	05:49	06:53 (T10)	06:22	06:50 (T10)	06:56		07:30		07:10	07:39	
	20:46	60 20:21 (T07)	20:08	53 07:54 (T10)	19:12		18:21		16:43	16:38	
22	05:50	06:52 (T10)	06:23	06:53 (T10)	06:57		07:32		07:11	07:39	
	20:45	43 20:17 (T07)	20:06	40 07:53 (T10)	19:11		18:19		16:42	16:39	
23	05:51	06:51 (T10)	06:24	06:51 (T10)	06:58		07:33		07:12	07:40	
	20:44	48 20:20 (T07)	20:05	32 07:52 (T10)	19:09	8 07:51 (T13)	18:17		16:42	16:39	
24	05:52	06:51 (T10)	06:25	06:53 (T10)	06:59		07:35		07:34	07:40	
	20:43	65 20:16 (T07)	20:03	35 07:51 (T10)	19:07	15 07:53 (T13)	18:16		16:41	16:40	
25	05:53	06:50 (T10)	06:26	06:52 (T10)	07:00		07:33		07:35	07:41	
	20:42	48 20:18 (T07)	20:02	32 07:48 (T10)	19:05	15 07:54 (T13)	18:14		16:40	16:40	
26	05:54	06:50 (T10)	06:27	06:51 (T10)	07:01		07:31		07:37	07:41	
	20:41	55 20:18 (T07)	20:00	32 07:47 (T10)	19:03	10 07:54 (T13)	18:13		16:40	16:41	
27	05:55	06:55 (T10)	06:28	06:52 (T10)	07:02		07:29		07:38	07:42	
	20:41	58 20:17 (T07)	19:57	31 07:47 (T10)	19:02	21 07:56 (T13)	18:11		16:39	16:41	
28	05:56	06:49 (T10)	06:29	06:53 (T10)	07:04		07:31		07:39	07:42	
	20:40	63 20:10 (T07)	19:55	38 07:43 (T10)	19:00	15 07:56 (T13)	18:10		16:39	16:42	
29	05:57	06:49 (T10)	06:31	06:54 (T10)	07:05		07:27		07:40	07:42	
	20:38	82 20:15 (T07)	19:53	39 07:41 (T10)	18:58	24 07:56 (T13)	18:09		16:38	16:43	
30	05:58	06:49 (T10)	06:32	06:55 (T10)	07:06		07:28		07:42	07:42	
	20:37	83 20:14 (T07)	19:52	21 07:39 (T10)	18:56	18 07:56 (T13)	18:07		16:38	16:44	
31	05:59	06:49 (T10)	06:33	06:56 (T10)			07:43			07:43	
	20:36	66 20:13 (T07)	19:50	34 07:38 (T10)			18:06			16:44	
Potential sun hours	466		433		376		343		293		281
Total, worst case	1783		1523		197		184				
Sun reduction	0.67		0.63		0.56		0.44				
Oper. time red.	1.00		1.00		1.00		1.00				
Wind dir. red.	0.72		0.74		0.73		0.72				
Total reduction	0.48		0.47		0.41		0.32				
Total, real	861		709		81		59				

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: 229 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2554)

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 (T09)	06:00	06:26 (T09)	06:34	07:09 (T10)	07:07
20:55	42 20:30 (T07)	20:35	20:12 (T05)	19:48	27 07:49 (T10)	18:54
2 05:35	06:03 (T09)	06:01	19:39 (T05)	06:35	07:15 (T10)	07:08
20:55	58 20:30 (T07)	20:34	20:11 (T05)	19:46	26 07:50 (T10)	18:53
3 05:35	06:03 (T09)	06:02	19:39 (T05)	06:36	07:07 (T10)	07:09
20:55	69 20:28 (T07)	20:33	20:09 (T05)	19:45	25 07:50 (T10)	18:51
4 05:36	06:04 (T09)	06:03	19:39 (T05)	06:37	07:06 (T10)	07:10
20:54	67 20:27 (T07)	20:32	20:08 (T05)	19:43	35 07:50 (T10)	18:49
5 05:37	06:04 (T09)	06:04	19:41 (T05)	06:38	07:06 (T10)	07:12
20:54	57 20:30 (T07)	20:31	20:06 (T05)	19:41	27 07:48 (T10)	18:47
6 05:37	06:04 (T09)	06:05	19:40 (T05)	06:39	07:06 (T10)	07:13
20:54	47 20:28 (T07)	20:29	20:04 (T05)	19:39	27 07:50 (T10)	18:46
7 05:38	06:04 (T09)	06:06	19:40 (T05)	06:40	07:06 (T10)	07:14
20:54	53 20:30 (T07)	20:28	20:05 (T05)	19:38	26 07:50 (T10)	18:44
8 05:39	06:04 (T09)	06:08	19:41 (T05)	06:42	07:05 (T10)	07:15
20:53	45 20:23 (T07)	20:27	20:04 (T05)	19:36	31 07:50 (T10)	18:42
9 05:39	06:05 (T09)	06:09	19:42 (T05)	06:43	07:07 (T10)	07:16
20:53	56 20:24 (T07)	20:25	20:02 (T05)	19:34	22 07:49 (T10)	18:40
10 05:40	06:06 (T09)	06:10	19:43 (T05)	06:44	07:07 (T10)	07:17
20:53	49 20:07 (T05)	20:24	20:01 (T05)	19:32	30 07:48 (T10)	18:39
11 05:41	06:06 (T09)	06:11	19:53 (T05)	06:45	07:16 (T10)	07:18
20:52	45 20:07 (T05)	20:23	20:00 (T05)	19:31	25 07:48 (T10)	18:37
12 05:41	06:07 (T09)	06:12	19:45 (T05)	06:46	07:12 (T10)	07:20
20:52	37 20:06 (T05)	20:21	19:58 (T05)	19:29	22 07:44 (T10)	18:35
13 05:42	06:08 (T09)	06:13	19:47 (T05)	06:47	07:10 (T10)	07:21
20:51	43 20:09 (T05)	20:20	19:56 (T05)	19:27	25 07:45 (T10)	18:34
14 05:43	06:11 (T09)	06:14	19:50 (T05)	06:48	07:12 (T10)	07:22
20:51	46 20:10 (T05)	20:18	19:55 (T05)	19:25	23 07:44 (T10)	18:32
15 05:44	06:14 (T09)	06:15	06:49	07:12 (T10)	07:23	07:02
20:50	48 20:11 (T05)	20:17	19:23	22 07:43 (T10)	18:30	16:48
16 05:45	06:10 (T09)	06:16	06:50	07:13 (T10)	07:24	07:04
20:49	36 20:10 (T05)	20:16	19:22	21 07:38 (T10)	18:29	16:47
17 05:46	06:12 (T09)	06:17	06:51	07:14 (T10)	07:26	07:05
20:49	38 20:12 (T05)	20:14	19:20	20 07:39 (T10)	18:27	16:46
18 05:46	06:14 (T09)	06:18	06:52	07:15 (T10)	07:27	07:06
20:48	40 20:13 (T05)	20:13	19:18	11 07:36 (T10)	18:25	16:45
19 05:47	06:16 (T09)	06:20	06:54	07:16 (T10)	07:28	07:07
20:47	30 20:09 (T05)	20:11	19:16	14 07:35 (T10)	18:24	16:45
20 05:48	06:15 (T09)	06:21	06:55	07:17 (T10)	07:29	07:09
20:47	43 20:14 (T05)	20:09	19:14	12 07:32 (T10)	18:22	16:44
21 05:49	06:15 (T09)	06:22	06:56	07:18 (T10)	07:30	07:10
20:46	37 20:10 (T05)	20:08	19:12	6 07:26 (T10)	18:21	16:43
22 05:50	06:16 (T09)	06:23	06:57	07:32	07:32	07:11
20:45	38 20:15 (T05)	20:06	19:11	18:19	16:42	16:39
23 05:51	06:16 (T09)	06:24	07:25 (T10)	06:58	07:33	07:12
20:44	51 20:14 (T05)	20:05	07:29 (T10)	19:09	18:17	16:42
24 05:52	06:17 (T09)	06:25	07:22 (T10)	06:59	07:34	07:14
20:43	38 20:15 (T05)	20:03	07:41 (T10)	19:07	18:16	16:41
25 05:53	06:18 (T09)	06:26	07:19 (T10)	07:00	07:35	07:15
20:42	28 20:06 (T05)	20:02	07:43 (T10)	19:05	18:14	16:40
26 05:54	06:19 (T09)	06:27	07:17 (T10)	07:01	07:37	07:16
20:42	35 20:15 (T05)	20:00	07:45 (T10)	19:03	18:13	16:40
27 05:55	06:23 (T09)	06:28	07:17 (T10)	07:02	07:38	07:17
20:41	30 20:16 (T05)	19:57	07:46 (T10)	19:02	18:11	16:39
28 05:56	06:21 (T09)	06:29	07:13 (T10)	07:04	07:37 (T13)	07:39
20:40	36 20:10 (T05)	19:55	07:43 (T10)	19:00	9 07:47 (T13)	18:10
29 05:57	06:22 (T09)	06:31	07:12 (T10)	07:05	07:33 (T13)	07:40
20:39	42 20:15 (T05)	19:53	07:48 (T10)	18:58	11 07:48 (T13)	18:09
30 05:58	06:25 (T09)	06:32	07:14 (T10)	07:06	07:31 (T13)	07:42
20:37	32 20:14 (T05)	19:52	07:48 (T10)	18:56	12 07:47 (T13)	18:07
31 05:59	06:24 (T09)	06:33	07:10 (T10)	07:03	07:43	07:43
20:36	46 20:13 (T05)	19:50	07:48 (T10)	18:06	18:06	16:44
Potential sun hours	466	433	376	343	293	281
Total, worst case	1362	399	509	158		
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	0.74	0.72		
Total reduction	0.48	0.45	0.42	0.32		
Total, real	651	179	212	50		

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Shadow receptor: 232 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2555)

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 16:45	07:28 17:22		06:49 17:59	07:12 (T13) 5 07:17 (T13)	06:55 19:36	07:17 (T10) 37 07:54 (T10)	06:06 20:10	06:59 (T10) 77 19:49 (T05)	05:35 20:42	19:38 (T07) 33 20:20 (T07)
2	07:43 16:46	07:27 17:23		06:48 18:00	07:10 (T13) 9 07:19 (T13)	06:53 19:37	07:15 (T10) 41 07:56 (T10)	06:05 20:11	06:59 (T10) 77 19:50 (T05)	05:34 20:43	19:37 (T07) 43 20:20 (T07)
3	07:43 16:47	07:26 17:24		06:46 18:01	07:08 (T13) 12 07:20 (T13)	06:52 19:38	07:13 (T10) 44 07:57 (T10)	06:03 20:12	06:59 (T10) 78 19:51 (T05)	05:34 20:44	19:38 (T07) 21 20:20 (T07)
4	07:43 16:48	07:25 17:26		06:44 18:02	07:06 (T13) 15 07:21 (T13)	06:50 19:40	07:12 (T10) 47 07:59 (T10)	06:02 20:13	07:01 (T10) 76 19:53 (T05)	05:33 20:45	19:40 (T07) 25 20:17 (T07)
5	07:43 16:49	07:23 17:27		06:43 18:04	07:05 (T13) 17 07:22 (T13)	06:48 19:41	07:10 (T10) 50 08:00 (T10)	06:01 20:14	07:02 (T10) 75 19:54 (T05)	05:33 20:45	19:38 (T07) 23 20:20 (T07)
6	07:43 16:50	07:22 17:28		06:41 18:05	07:03 (T13) 19 07:22 (T13)	06:46 19:42	07:08 (T10) 52 08:00 (T10)	05:59 20:16	07:02 (T10) 74 19:54 (T05)	05:32 20:46	19:39 (T07) 30 20:21 (T07)
7	07:43 16:51	07:21 17:30		06:39 18:06	07:01 (T13) 21 07:22 (T13)	06:45 19:43	07:06 (T10) 55 08:01 (T10)	05:58 20:17	07:03 (T10) 73 19:56 (T05)	05:32 20:47	19:38 (T07) 29 20:20 (T07)
8	07:43 16:52	07:20 17:31		06:38 18:07	07:00 (T13) 23 07:23 (T13)	06:43 19:44	07:05 (T10) 57 08:02 (T10)	05:57 20:18	07:04 (T10) 70 19:55 (T05)	05:32 20:48	19:39 (T07) 26 20:20 (T07)
9	07:43 16:53	07:19 17:32		06:36 18:09	06:58 (T13) 24 07:22 (T13)	06:41 19:45	07:03 (T10) 59 08:02 (T10)	05:56 20:19	07:06 (T10) 69 19:58 (T07)	05:32 20:48	19:39 (T07) 29 20:18 (T07)
10	07:42 16:54	07:17 17:34		06:34 18:10	06:56 (T13) 26 07:22 (T13)	06:40 19:47	07:02 (T10) 60 08:02 (T10)	05:54 20:20	07:07 (T10) 66 19:59 (T07)	05:31 20:49	19:43 (T07) 21 20:21 (T07)
11	07:42 16:55	07:16 17:35		06:32 18:11	06:54 (T13) 27 07:21 (T13)	06:38 19:48	07:01 (T10) 62 08:03 (T10)	05:53 20:21	07:08 (T10) 64 19:59 (T07)	05:31 20:49	19:40 (T07) 25 20:19 (T07)
12	07:42 16:56	07:15 17:36		06:31 18:12	06:53 (T13) 28 07:21 (T13)	06:36 19:49	07:00 (T10) 63 08:03 (T10)	05:52 20:22	07:10 (T10) 61 20:01 (T07)	05:31 20:50	19:39 (T07) 36 20:21 (T07)
13	07:41 16:58	07:13 17:38		06:29 19:13	07:54 (T13) 26 08:20 (T13)	06:34 19:50	06:59 (T10) 64 08:03 (T10)	05:51 20:23	07:12 (T10) 56 20:02 (T07)	05:31 20:51	19:41 (T07) 22 20:17 (T07)
14	07:41 16:59	07:12 17:39		06:27 19:15	07:54 (T13) 24 08:18 (T13)	06:33 19:51	06:59 (T10) 64 08:03 (T10)	05:50 20:25	07:14 (T10) 52 20:03 (T07)	05:31 20:51	19:40 (T07) 34 20:21 (T07)
15	07:41 17:00	07:11 17:40		06:25 19:16	07:55 (T13) 21 08:16 (T13)	06:31 19:52	06:58 (T10) 65 08:03 (T10)	05:49 20:26	07:17 (T10) 45 20:04 (T07)	05:31 20:52	19:40 (T07) 27 20:20 (T07)
16	07:40 17:01	07:09 17:42		06:24 19:17	07:56 (T13) 18 08:14 (T13)	06:29 19:54	06:57 (T10) 66 08:03 (T10)	05:48 20:27	19:37 (T05) 28 20:05 (T07)	05:31 20:52	19:42 (T07) 30 20:21 (T07)
17	07:40 17:02	07:08 17:43		06:22 19:18	07:59 (T13) 13 08:12 (T13)	06:28 19:55	06:58 (T10) 65 08:03 (T10)	05:47 20:28	19:40 (T07) 26 20:06 (T07)	05:31 20:52	19:41 (T07) 24 20:21 (T07)
18	07:39 17:03	07:06 17:44		06:20 19:19	08:03 (T13) 4 08:07 (T13)	06:26 19:56	06:57 (T10) 65 08:02 (T10)	05:46 20:29	19:39 (T07) 28 20:07 (T07)	05:31 20:53	19:41 (T07) 27 20:21 (T07)
19	07:39 17:05	07:05 17:46		06:18 19:21	06:25 19:57	06:25 19:57	06:56 (T10) 66 08:02 (T10)	05:45 20:30	19:38 (T07) 29 20:07 (T07)	05:31 20:53	19:44 (T07) 27 20:23 (T07)
20	07:38 17:06	07:03 17:47		06:17 19:22	06:23 19:58	06:23 19:58	06:57 (T10) 65 08:02 (T10)	05:44 20:31	19:39 (T07) 30 20:09 (T07)	05:31 20:54	19:42 (T07) 26 20:23 (T07)
21	07:37 17:07	07:02 17:48		06:15 19:23	06:21 19:59	06:21 19:59	06:56 (T10) 65 08:01 (T10)	05:43 20:32	19:38 (T07) 32 20:10 (T07)	05:31 20:54	19:43 (T07) 23 20:23 (T07)
22	07:37 17:09	07:00 17:50		06:13 19:24	06:20 20:01	06:20 20:01	06:56 (T10) 65 08:01 (T10)	05:42 20:33	19:38 (T07) 33 20:11 (T07)	05:31 20:54	19:42 (T07) 27 20:22 (T07)
23	07:36 17:10	06:59 17:51		06:11 19:25	06:18 20:01	06:18 20:01	06:56 (T10) 66 19:40 (T05)	05:41 20:34	19:37 (T07) 35 20:12 (T07)	05:31 20:54	19:44 (T07) 21 20:23 (T07)
24	07:35 17:11	06:57 17:52		06:09 19:27	06:17 20:02	06:17 20:02	06:56 (T10) 70 19:42 (T05)	05:40 20:35	19:37 (T07) 35 20:12 (T07)	05:32 20:55	19:43 (T07) 40 20:24 (T07)
25	07:34 17:12	06:56 17:54		06:08 19:28	06:15 20:03	06:15 20:03	06:56 (T10) 72 19:42 (T05)	05:39 20:36	19:37 (T07) 37 20:14 (T07)	05:32 20:55	19:43 (T07) 30 20:24 (T07)
26	07:33 17:14	06:54 17:55		06:06 19:29	06:14 20:04	06:14 20:04	06:57 (T10) 74 19:44 (T05)	05:39 20:37	19:37 (T07) 26 20:14 (T07)	05:32 20:55	19:43 (T07) 23 20:24 (T07)
27	07:33 17:15	06:52 17:56		06:04 19:30	06:12 20:05	06:12 20:05	06:56 (T10) 75 19:44 (T05)	05:38 20:38	19:37 (T07) 28 20:15 (T07)	05:33 20:55	19:46 (T07) 22 20:25 (T07)
28	07:32 17:16	06:51 17:57	07:13 (T13) 1 07:14 (T13)	06:02 19:31	06:11 20:06	06:11 20:06	06:57 (T10) 76 19:46 (T05)	05:37 20:39	19:37 (T07) 27 20:16 (T07)	05:33 20:55	19:43 (T07) 28 20:20 (T07)
29	07:31 17:18			06:01 19:33	06:10 20:07	06:10 20:07	06:58 (T10) 76 19:47 (T05)	05:36 20:40	19:37 (T07) 33 20:17 (T07)	05:33 20:55	19:43 (T07) 27 20:24 (T07)
30	07:30 17:19			06:00 19:34	06:08 20:08	06:08 20:08	06:58 (T10) 77 19:48 (T05)	05:36 20:41	19:38 (T07) 30 20:18 (T07)	05:34 20:55	19:45 (T07) 19 20:25 (T07)
31	07:29 17:20			06:57 19:35	07:19 (T10) 33 07:52 (T10)	06:57 20:09	05:35 20:41	19:40 (T07) 26 20:16 (T07)			
Potential sun hours	291	294		369	401	453		459			
Total, worst case		1		412	1863	1496		818			
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.		0.72		0.72	0.74	0.71		0.67			
Total reduction		0.29		0.34	0.40	0.41		0.42			
Total, real		0		140	749	615		348			

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: 232 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2555)

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	19:51 (T07)	06:00	07:21 (T10)	06:34	06:59 (T10)	07:07	07:34 (T13)	07:44	07:22	
2	05:35	19:48 (T07)	06:01	07:25 (T10)	06:35	07:00 (T10)	07:08	07:32 (T13)	07:46	07:23	
3	05:35	19:44 (T07)	06:02	07:18 (T10)	06:36	07:00 (T10)	07:09	07:32 (T13)	07:47	07:24	
4	05:36	19:45 (T07)	06:03	07:16 (T10)	06:37	07:00 (T10)	07:10	07:33 (T13)	07:48	07:25	
5	05:37	19:47 (T07)	06:04	07:15 (T10)	06:38	07:01 (T10)	07:11	07:34 (T13)	07:49	07:26	
6	05:37	19:46 (T07)	06:05	07:20 (T10)	06:39	07:03 (T10)	07:13	07:35 (T13)	06:51	07:27	
7	05:38	19:45 (T07)	06:06	07:12 (T10)	06:40	07:06 (T10)	07:14	07:37 (T13)	06:52	07:28	
8	05:39	19:45 (T07)	06:08	07:12 (T10)	06:42	07:05 (T10)	07:15	07:38 (T13)	06:53	07:29	
9	05:39	19:45 (T07)	06:09	07:10 (T10)	06:43	07:07 (T10)	07:16	07:39 (T13)	06:55	07:30	
10	05:40	19:45 (T07)	06:10	07:09 (T10)	06:44	07:07 (T10)	07:17	07:40 (T13)	06:56	07:31	
11	05:41	19:45 (T07)	06:11	07:11 (T10)	06:45	07:16 (T10)	07:18	07:41 (T13)	06:57	07:32	
12	05:41	19:45 (T07)	06:12	07:07 (T10)	06:46	07:12 (T10)	07:20	07:43 (T13)	06:58	07:33	
13	05:42	19:47 (T07)	06:13	07:06 (T10)	06:47	07:10 (T10)	07:21	07:44 (T13)	07:00	07:33	
14	05:43	19:46 (T07)	06:14	07:05 (T10)	06:48	07:12 (T10)	07:22	07:45 (T13)	07:01	07:34	
15	05:44	19:49 (T07)	06:15	07:04 (T10)	06:49	07:15 (T10)	07:23	07:49 (T13)	07:02	07:35	
16	05:45	19:47 (T07)	06:16	07:05 (T10)	06:50	07:35 (T10)	07:24		07:04	07:36	
17	05:46	19:46 (T07)	06:17	07:04 (T10)	06:51	07:29 (T10)	07:25		07:05	07:36	
18	05:46	19:46 (T07)	06:18	07:05 (T10)	06:52		07:27		07:06	07:37	
19	05:47	19:50 (T07)	06:20	07:03 (T10)	06:54		07:28		07:07	07:38	
20	05:48	19:47 (T07)	06:21	07:07 (T10)	06:55		07:29		07:09	07:38	
21	05:49	19:48 (T07)	06:22	07:04 (T10)	06:56		07:30		07:10	07:39	
22	05:50	19:48 (T07)	06:23	07:02 (T10)	06:57		07:32		07:11	07:39	
23	05:51	19:47 (T07)	06:24	07:02 (T10)	06:58		07:33		07:12	07:40	
24	05:52	19:52 (T07)	06:25	07:03 (T10)	06:59		07:34		07:14	07:40	
25	05:53	19:48 (T07)	06:26	07:00 (T10)	07:00		07:35		07:15	07:41	
26	05:54	19:49 (T07)	06:27	07:00 (T10)	07:01		07:37		07:16	07:41	
27	05:55	19:57 (T07)	06:28	07:04 (T10)	07:02	07:41 (T13)	07:38		07:17	07:42	
28	05:56	19:53 (T07)	06:29	06:59 (T10)	07:04	07:52 (T13)	07:39		07:18	07:42	
29	05:57	20:10 (T07)	06:31	06:59 (T10)	07:05	07:53 (T13)	07:40		07:19	07:42	
30	05:58	20:15 (T07)	06:32	06:59 (T10)	07:06	07:56 (T13)	07:41		07:20	07:43	
31	05:59	20:14 (T07)	06:33	06:59 (T10)	07:07	07:57 (T13)	07:42		07:21	07:43	
Potential sun hours	466	433	376	343	293	281					
Total, worst case	745	1466	520	265							
Sun reduction	0.67	0.63	0.56	0.44							
Oper. time red.	1.00	1.00	1.00	1.00							
Wind dir. red.	0.68	0.73	0.74	0.72							
Total reduction	0.45	0.46	0.42	0.32							
Total, real	339	680	217	84							

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

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: 235 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2556)

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	08:56 (T22)	07:28	08:05 (T24)	06:49	07:40 (T24)	06:55	06:06		06:42 (T20)	05:35
	16:45	34 09:30 (T22)	17:21	3 08:08 (T24)	17:58	51 08:31 (T24)	19:36	20:10	16	06:58 (T20)	20:42
2	07:43	08:57 (T22)	07:27	07:59 (T24)	06:47	07:42 (T24)	06:53	06:05		06:37 (T20)	05:34
	16:46	32 09:29 (T22)	17:23	16 08:15 (T24)	18:00	49 08:31 (T24)	19:37	20:11	24	07:01 (T20)	20:43
3	07:43	08:58 (T22)	07:25	07:56 (T24)	06:46	07:42 (T24)	06:52	06:03		06:34 (T20)	05:34
	16:47	31 09:29 (T22)	17:24	23 08:19 (T24)	18:01	47 08:29 (T24)	19:38	20:12	31	07:05 (T20)	20:44
4	07:43	08:59 (T22)	07:24	07:54 (T24)	06:44	07:42 (T24)	06:50	06:02		06:32 (T20)	05:33
	16:48	30 09:29 (T22)	17:26	27 08:21 (T24)	18:02	46 08:28 (T24)	19:39	20:13	35	07:07 (T20)	20:45
5	07:43	09:00 (T22)	07:23	07:52 (T24)	06:42	07:44 (T24)	06:48	06:01		06:29 (T20)	05:33
	16:49	29 09:29 (T22)	17:27	32 08:24 (T24)	18:03	43 08:27 (T24)	19:41	20:14	39	07:08 (T20)	20:45
6	07:43	09:02 (T22)	07:22	07:50 (T24)	06:41	07:45 (T24)	06:46	05:59		06:27 (T20)	05:32
	16:50	27 09:29 (T22)	17:28	35 08:25 (T24)	18:05	40 08:25 (T24)	19:42	20:15	43	07:10 (T20)	20:46
7	07:43	09:02 (T22)	07:21	07:49 (T24)	06:39	07:46 (T24)	06:45	05:58		06:26 (T20)	05:32
	16:51	26 09:28 (T22)	17:30	37 08:26 (T24)	18:06	42 17:46 (T16)	19:43	20:17	46	07:12 (T20)	20:47
8	07:43	09:04 (T22)	07:20	07:48 (T24)	06:37	07:47 (T24)	06:43	05:57		06:25 (T20)	05:32
	16:52	23 09:27 (T22)	17:31	40 08:28 (T24)	18:07	43 17:47 (T16)	19:44	20:18	48	07:13 (T20)	20:47
9	07:42	09:06 (T22)	07:18	07:47 (T24)	06:36	07:50 (T24)	06:41	05:55		06:24 (T20)	05:31
	16:53	21 09:27 (T22)	17:32	43 08:30 (T24)	18:08	41 17:49 (T16)	19:45	20:19	51	07:15 (T20)	20:48
10	07:42	09:08 (T22)	07:17	07:45 (T24)	06:34	07:52 (T24)	06:39	05:54		06:22 (T20)	05:31
	16:54	18 09:26 (T22)	17:34	45 08:30 (T24)	18:10	38 17:50 (T16)	19:46	20:20	53	07:15 (T20)	20:49
11	07:42	09:10 (T22)	07:16	07:45 (T24)	06:32	07:55 (T24)	06:38	05:53		06:21 (T20)	05:31
	16:55	14 09:24 (T22)	17:35	46 08:31 (T24)	18:11	33 17:51 (T16)	19:48	20:21	55	07:16 (T20)	20:49
12	07:42	09:13 (T22)	07:15	07:44 (T24)	06:30	17:33 (T16)	06:36	05:52		06:20 (T20)	05:31
	16:56	8 09:21 (T22)	17:36	49 08:33 (T24)	18:12	19 17:52 (T16)	19:49	20:22	57	07:17 (T20)	20:50
13	07:41		07:13	07:43 (T24)	07:29	18:33 (T16)	06:34	05:51		06:19 (T20)	05:31
	16:57		17:38	50 08:33 (T24)	19:13	21 18:54 (T16)	19:50	20:23	59	07:18 (T20)	20:50
14	07:41		07:12	07:43 (T24)	07:27	18:32 (T16)	06:33	05:50		06:18 (T20)	05:31
	16:59		17:39	51 08:34 (T24)	19:15	23 18:55 (T16)	19:51	20:24	61	07:19 (T20)	20:51
15	07:40		07:10	07:41 (T24)	07:25	18:32 (T16)	06:31	05:49		06:18 (T20)	05:30
	17:00		17:40	53 08:34 (T24)	19:16	24 18:56 (T16)	19:52	20:25	61	07:19 (T20)	20:51
16	07:40		07:09	07:41 (T24)	07:23	18:32 (T16)	06:29	05:47		06:17 (T20)	05:30
	17:01		17:42	54 08:35 (T24)	19:17	25 18:57 (T16)	19:53	20:27	63	07:20 (T20)	20:52
17	07:39		07:08	07:40 (T24)	07:22	18:32 (T16)	06:28	05:46		06:16 (T20)	05:30
	17:02		17:43	55 08:35 (T24)	19:18	26 18:58 (T16)	19:55	20:28	64	07:20 (T20)	20:52
18	07:39		07:06	07:41 (T24)	07:20	18:33 (T16)	06:26	05:45		06:16 (T20)	05:31
	17:03		17:44	54 08:35 (T24)	19:19	24 18:57 (T16)	19:56	20:29	65	07:21 (T20)	20:53
19	07:38		07:05	07:40 (T24)	07:18	18:33 (T16)	06:24	05:44		06:15 (T20)	05:31
	17:05		17:46	55 08:35 (T24)	19:21	23 18:56 (T16)	19:57	20:30	66	07:21 (T20)	20:53
20	07:38		07:03	07:40 (T24)	07:16	18:34 (T16)	06:23	05:43		06:15 (T20)	05:31
	17:06		17:47	56 08:36 (T24)	19:22	20 18:54 (T16)	19:58	20:31	66	07:21 (T20)	20:53
21	07:37		07:02	07:39 (T24)	07:15	18:35 (T16)	06:21	05:43		06:15 (T20)	05:31
	17:07		17:48	56 08:35 (T24)	19:23	17 18:52 (T16)	19:59	20:32	68	07:23 (T20)	20:54
22	07:36		07:00	07:40 (T24)	07:13	18:37 (T16)	06:20	05:42		06:15 (T20)	05:31
	17:08		17:49	55 08:35 (T24)	19:24	13 18:50 (T16)	20:00	20:33	68	07:23 (T20)	20:54
23	07:36		06:59	07:39 (T24)	07:11	18:42 (T16)	06:18	05:41		06:14 (T20)	05:31
	17:10		17:51	56 08:35 (T24)	19:25	3 18:45 (T16)	20:00	20:34	69	07:23 (T20)	20:54
24	07:35		06:57	07:40 (T24)	07:09		06:16	05:40		06:14 (T20)	05:32
	17:11		17:52	55 08:35 (T24)	19:26		20:02	20:35	69	07:23 (T20)	20:54
25	07:34		06:55	07:40 (T24)	07:07		06:15	05:39		06:13 (T20)	05:32
	17:12		17:53	54 08:34 (T24)	19:28		20:03	20:36	70	07:23 (T20)	20:55
26	07:33		06:54	07:39 (T24)	07:06		06:13	05:38		06:14 (T20)	05:32
	17:14		17:55	54 08:33 (T24)	19:29		20:04	20:37	70	07:24 (T20)	20:55
27	07:32		06:52	07:40 (T24)	07:04		06:12	05:38		06:13 (T20)	05:33
	17:15		17:56	53 08:33 (T24)	19:30		20:05	20:38	71	07:24 (T20)	20:55
28	07:32		06:51	07:40 (T24)	07:02		06:10	05:37		06:14 (T20)	05:33
	17:16		17:57	52 08:32 (T24)	19:31		20:06	20:39	71	07:25 (T20)	20:55
29	07:31				07:00		06:09	05:36		06:14 (T20)	05:33
	17:17				19:32		20:07	20:40	71	07:25 (T20)	20:55
30	07:30				06:59		06:08	05:36		06:13 (T20)	05:34
	17:19				19:34		20:09	20:40	72	07:25 (T20)	20:55
31	07:29				06:57			05:35		06:14 (T20)	
	17:20				19:35			20:41	71	07:25 (T20)	
Potential sun hours	291		294		369		401	453		459	
Total, worst case	293		1259		711			1773		1599	
Sun reduction	0.36		0.40		0.47			0.58		0.63	
Oper. time red.	1.00		1.00		1.00			1.00		1.00	
Wind dir. red.	0.55		0.67		0.70			0.75		0.75	
Total reduction	0.20		0.26		0.32			0.42		0.46	
Total, real	57		329		229			753		738	

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 235 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2556)

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	06:19 (T20)	06:00	06:30 (T20)	06:34	07:07	18:12 (T16)	07:44	08:14 (T24)	07:22	08:55 (T22)
	20:55	49 07:31 (T20)	20:35	36 07:28 (T20)	19:48	18:54	21 18:33 (T16)	18:04	44 09:01 (T24)	16:37	4 09:02 (T22)
2	05:35	06:20 (T20)	06:01	06:33 (T20)	06:35	07:08	18:12 (T16)	07:45	08:15 (T24)	07:23	08:53 (T22)
	20:55	68 07:32 (T20)	20:34	36 07:27 (T20)	19:46	18:52	20 18:32 (T16)	18:03	41 09:00 (T24)	16:37	13 09:06 (T22)
3	05:35	06:19 (T20)	06:02	06:35 (T20)	06:36	07:09	08:36 (T24)	07:47	08:16 (T24)	07:24	08:51 (T22)
	20:54	73 07:32 (T20)	20:33	41 07:26 (T20)	19:44	18:51	29 18:30 (T16)	18:02	39 08:58 (T24)	16:36	17 09:08 (T22)
4	05:36	06:20 (T20)	06:03	06:33 (T20)	06:37	07:10	08:31 (T24)	07:48	08:18 (T24)	07:25	08:50 (T22)
	20:54	72 07:32 (T20)	20:32	42 07:25 (T20)	19:43	18:49	35 18:28 (T16)	18:00	40 08:58 (T24)	16:36	20 09:11 (T22)
5	05:36	06:20 (T20)	06:04	06:37 (T20)	06:38	07:11	08:27 (T24)	07:49	08:19 (T24)	07:26	08:49 (T22)
	20:54	56 07:32 (T20)	20:30	45 07:24 (T20)	19:41	18:47	40 18:26 (T16)	17:59	36 08:56 (T24)	16:36	23 09:12 (T22)
6	05:37	06:20 (T20)	06:05	06:37 (T20)	06:39	07:12	08:25 (T24)	06:51	07:20 (T24)	07:27	08:48 (T22)
	20:54	36 07:33 (T20)	20:29	24 07:23 (T20)	19:39	18:45	41 18:24 (T16)	16:58	31 07:54 (T24)	16:36	24 09:14 (T22)
7	05:38	06:21 (T20)	06:06	06:36 (T20)	06:40	07:14	08:22 (T24)	06:52	07:22 (T24)	07:28	08:48 (T22)
	20:54	50 07:33 (T20)	20:28	37 07:21 (T20)	19:37	18:44	43 18:22 (T16)	16:57	30 07:53 (T24)	16:36	25 09:15 (T22)
8	05:38	06:20 (T20)	06:07	06:37 (T20)	06:41	07:15	08:21 (T24)	06:53	07:24 (T24)	07:29	08:48 (T22)
	20:53	36 07:33 (T20)	20:27	26 07:19 (T20)	19:36	18:42	42 18:21 (T16)	16:55	25 07:51 (T24)	16:36	25 09:16 (T22)
9	05:39	06:21 (T20)	06:08	06:39 (T20)	06:42	07:16	08:19 (T24)	06:54	07:27 (T24)	07:30	08:48 (T22)
	20:53	72 07:33 (T20)	20:25	21 07:17 (T20)	19:34	18:40	42 09:01 (T24)	16:54	18 07:49 (T24)	16:35	28 09:17 (T22)
10	05:40	06:21 (T20)	06:10	06:41 (T20)	06:44	07:17	08:18 (T24)	06:56	07:30 (T24)	07:31	08:47 (T22)
	20:52	56 07:34 (T20)	20:24	34 07:15 (T20)	19:32	18:39	44 09:02 (T24)	16:53	16 07:46 (T24)	16:35	28 09:18 (T22)
11	05:41	06:21 (T20)	06:11	06:43 (T20)	06:45	07:18	08:16 (T24)	06:57	07:37 (T24)	07:32	08:47 (T22)
	20:52	55 07:33 (T20)	20:23	18 07:12 (T20)	19:30	18:37	47 09:03 (T24)	16:52	1 07:38 (T24)	16:35	31 09:19 (T22)
12	05:41	06:21 (T20)	06:12	06:46 (T20)	06:46	07:19	08:15 (T24)	06:58		07:32	08:48 (T22)
	20:52	41 07:33 (T20)	20:21	14 07:09 (T20)	19:29	18:35	48 09:03 (T24)	16:51		16:36	32 09:21 (T22)
13	05:42	06:22 (T20)	06:13	06:51 (T20)	06:47	07:21	08:15 (T24)	07:00		07:33	08:47 (T22)
	20:51	54 07:34 (T20)	20:20	13 07:04 (T20)	19:27	18:33	49 09:04 (T24)	16:50		16:36	32 09:21 (T22)
14	05:43	06:22 (T20)	06:14		06:48	07:22	08:14 (T24)	07:01		07:34	08:47 (T22)
	20:50	42 07:34 (T20)	20:18		19:25	18:32	51 09:05 (T24)	16:49		16:36	35 09:22 (T22)
15	05:44	06:22 (T20)	06:15		06:49	07:23	08:13 (T24)	07:02		07:35	08:48 (T22)
	20:50	49 07:33 (T20)	20:17		19:23	18:30	52 09:05 (T24)	16:48		16:36	31 09:22 (T22)
16	05:45	06:22 (T20)	06:16		06:50	07:24	08:12 (T24)	07:03		07:36	08:48 (T22)
	20:49	45 07:33 (T20)	20:15		19:21	18:28	53 09:05 (T24)	16:47		16:36	33 09:23 (T22)
17	05:45	06:23 (T20)	06:17		06:51	07:25	08:12 (T24)	07:05		07:36	08:48 (T22)
	20:49	41 07:34 (T20)	20:14		19:20	18:27	54 09:06 (T24)	16:46		16:36	35 09:23 (T22)
18	05:46	06:23 (T20)	06:18		06:52	07:27	08:11 (T24)	07:06		07:37	08:48 (T22)
	20:48	44 07:34 (T20)	20:12		19:18	18:25	55 09:06 (T24)	16:45		16:37	35 09:24 (T22)
19	05:47	06:24 (T20)	06:19		06:53	07:28	08:10 (T24)	07:07		07:38	08:49 (T22)
	20:47	33 07:34 (T20)	20:11		19:16	18:24	56 09:06 (T24)	16:44		16:37	34 09:25 (T22)
20	05:48	06:24 (T20)	06:20		06:54	07:29	08:10 (T24)	07:08		07:38	08:49 (T22)
	20:47	39 07:34 (T20)	20:09		19:14	18:22	55 09:05 (T24)	16:44		16:37	34 09:24 (T22)
21	05:49	06:24 (T20)	06:22		06:56	07:30	08:10 (T24)	07:10		07:39	08:50 (T22)
	20:46	54 07:33 (T20)	20:08		19:12	18:20	56 09:06 (T24)	16:43		16:38	33 09:24 (T22)
22	05:50	06:24 (T20)	06:23		06:57	07:32	08:10 (T24)	07:11		07:39	08:50 (T22)
	20:45	52 07:33 (T20)	20:06		19:10	18:32 (T16)	56 09:06 (T24)	16:42		16:38	34 09:26 (T22)
23	05:51	06:25 (T20)	06:24		06:58	07:33	08:10 (T24)	07:12		07:40	08:51 (T22)
	20:44	44 07:32 (T20)	20:05		19:09	18:33 (T16)	55 09:05 (T24)	16:41		16:39	34 09:27 (T22)
24	05:52	06:25 (T20)	06:25		06:59	07:34	08:10 (T24)	07:13		07:40	08:51 (T22)
	20:43	63 07:32 (T20)	20:03		19:07	18:37 (T16)	56 09:06 (T24)	16:41		16:39	34 09:27 (T22)
25	05:53	06:26 (T20)	06:26		07:00	07:35	08:10 (T24)	07:15		07:41	08:52 (T22)
	20:42	36 07:32 (T20)	20:01		19:05	18:39 (T16)	55 09:05 (T24)	16:40		16:40	36 09:28 (T22)
26	05:54	06:26 (T20)	06:27		07:01	07:37	08:10 (T24)	07:16		07:41	08:52 (T22)
	20:41	45 07:32 (T20)	20:00		19:03	18:39 (T16)	54 09:04 (T24)	16:40		16:41	32 09:28 (T22)
27	05:55	06:27 (T20)	06:28		07:02	07:38	08:11 (T24)	07:17		07:41	08:52 (T22)
	20:40	37 07:31 (T20)	19:56		19:01	18:40 (T16)	53 09:04 (T24)	16:39		16:41	36 09:28 (T22)
28	05:56	06:27 (T20)	06:29		07:03	07:39	08:11 (T24)	07:18		07:42	08:53 (T22)
	20:39	60 07:31 (T20)	19:55		19:00	18:37 (T16)	52 09:03 (T24)	16:38		16:42	34 09:28 (T22)
29	05:57	06:28 (T20)	06:30		07:05	07:40	08:11 (T24)	07:19		07:42	08:54 (T22)
	20:38	61 07:30 (T20)	19:53		18:58	18:37 (T16)	51 09:02 (T24)	16:38		16:43	36 09:30 (T22)
30	05:58	06:28 (T20)	06:31		07:06	07:42	08:13 (T24)	07:20		07:42	08:55 (T22)
	20:37	59 07:30 (T20)	19:51		18:56	18:35 (T16)	49 09:02 (T24)	16:38		16:43	31 09:30 (T22)
31	05:59	06:29 (T20)	06:33			07:43	08:13 (T24)			07:43	08:56 (T22)
	20:36	35 07:29 (T20)	19:50			18:06	48 09:01 (T24)			16:44	32 09:30 (T22)
Potential sun hours	466		433		376		343	293		281	
Total, worst case	1557		387		143		1462		321		911
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		0.75		0.67		0.67		0.55
Total reduction	0.49		0.46		0.41		0.29		0.16		0.13
Total, real	764		179		58		424		52		119

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)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

SHADOW - Calendar

Shadow receptor: 236 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2557)

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 16:45	07:28 17:22			06:49 17:59	22	07:12 (T13) 07:34 (T13)	06:55 19:36	07:35 (T10) 08:27 (T10)	06:06 20:10	19:16 (T05) 19:49 (T07)	05:35 20:42	06:01 (T09) 19:58 (T07)
2	07:43 16:46	07:27 17:23			06:48 18:00	23	07:10 (T13) 07:33 (T13)	06:53 19:37	07:35 (T10) 08:26 (T10)	06:05 20:11	19:16 (T05) 19:50 (T07)	05:34 20:43	06:00 (T09) 20:00 (T07)
3	07:43 16:47	07:26 17:24			06:46 18:01	24	07:08 (T13) 07:32 (T13)	06:52 19:38	07:35 (T10) 08:24 (T10)	06:03 20:12	19:17 (T05) 19:51 (T07)	05:34 20:44	06:01 (T09) 19:56 (T07)
4	07:43 16:48	07:25 17:26			06:44 18:02	25	07:06 (T13) 07:31 (T13)	06:50 19:40	07:36 (T10) 08:24 (T10)	06:02 20:13	19:19 (T05) 19:53 (T07)	05:33 20:45	06:00 (T09) 19:59 (T07)
5	07:43 16:49	07:23 17:27			06:43 18:04	23	07:08 (T13) 07:31 (T13)	06:48 19:41	07:36 (T10) 08:22 (T10)	06:01 20:14	19:19 (T07) 19:54 (T07)	05:33 20:45	06:00 (T09) 19:59 (T07)
6	07:43 16:50	07:22 17:28			06:41 18:05	21	07:08 (T13) 07:29 (T13)	06:46 19:42	07:37 (T10) 08:20 (T10)	05:59 20:16	19:18 (T07) 19:54 (T07)	05:32 20:46	06:01 (T09) 19:58 (T07)
7	07:43 16:51	07:21 17:30			06:39 18:06	18	07:09 (T13) 07:27 (T13)	06:45 19:43	07:38 (T10) 08:18 (T10)	05:58 20:17	19:17 (T07) 19:56 (T07)	05:32 20:47	06:00 (T09) 20:23 (T06)
8	07:43 16:52	07:20 17:31			06:38 18:07	22	07:04 (T10) 07:26 (T13)	06:43 19:44	07:40 (T10) 08:17 (T10)	05:57 20:18	19:17 (T07) 19:57 (T07)	05:32 20:48	06:00 (T09) 20:24 (T06)
9	07:43 16:53	07:19 17:32			06:36 18:09	23	06:58 (T10) 07:21 (T13)	06:41 19:45	07:41 (T10) 08:15 (T10)	05:56 20:19	19:17 (T07) 19:58 (T07)	05:32 20:48	06:01 (T09) 20:25 (T06)
10	07:42 16:54	07:17 17:34			06:34 18:10	25	06:56 (T10) 07:21 (T10)	06:40 19:47	07:42 (T10) 08:12 (T10)	05:54 20:20	19:16 (T07) 19:59 (T07)	05:31 20:49	06:05 (T09) 20:26 (T06)
11	07:42 16:55	07:16 17:35			06:32 18:11	29	06:54 (T10) 07:23 (T10)	06:38 19:48	07:45 (T10) 08:10 (T10)	05:53 20:21	06:19 (T09) 19:59 (T07)	05:31 20:49	06:01 (T09) 20:26 (T06)
12	07:42 16:56	07:15 17:36			06:31 18:12	33	06:53 (T10) 07:26 (T10)	06:36 19:49	07:47 (T10) 08:06 (T10)	05:52 20:22	06:16 (T09) 20:01 (T07)	05:31 20:50	06:00 (T09) 20:26 (T06)
13	07:41 16:57	07:13 17:38			06:29 18:13	36	07:51 (T10) 08:27 (T10)	06:34 19:50	07:53 (T10) 08:00 (T10)	05:51 20:23	06:14 (T09) 20:02 (T07)	05:31 20:51	06:01 (T09) 20:27 (T06)
14	07:41 16:59	07:12 17:39			06:27 18:15	39	07:49 (T10) 08:28 (T10)	06:33 19:51	19:28 (T05) 20:25	05:50 20:25	06:13 (T09) 20:02 (T07)	05:31 20:51	06:01 (T09) 20:27 (T06)
15	07:41 17:00	07:11 17:40			06:25 18:16	42	07:47 (T10) 08:29 (T10)	06:31 19:52	19:24 (T05) 19:32 (T05)	05:49 20:26	06:12 (T09) 20:02 (T07)	05:31 20:52	06:01 (T09) 20:28 (T06)
16	07:40 17:01	07:09 17:42			06:24 18:17	44	07:45 (T10) 08:29 (T10)	06:29 19:54	19:21 (T05) 19:32 (T05)	05:48 20:27	06:11 (T09) 20:02 (T07)	05:31 20:52	06:01 (T09) 20:28 (T06)
17	07:40 17:02	07:08 17:43			06:22 18:18	47	07:44 (T10) 08:31 (T10)	06:28 19:55	19:20 (T05) 19:34 (T05)	05:47 20:28	06:10 (T09) 20:02 (T07)	05:31 20:52	06:01 (T09) 20:28 (T06)
18	07:39 17:03	07:06 17:44			06:20 18:19	49	07:42 (T10) 08:31 (T10)	06:26 19:56	19:19 (T05) 19:35 (T05)	05:46 20:29	06:09 (T09) 20:02 (T07)	05:31 20:53	06:01 (T09) 20:28 (T06)
19	07:39 17:05	07:05 17:46			06:18 18:21	51	07:40 (T10) 08:31 (T10)	06:25 19:57	19:17 (T05) 19:36 (T05)	05:45 20:30	06:08 (T09) 20:02 (T07)	05:31 20:53	06:02 (T09) 20:30 (T06)
20	07:38 17:06	07:03 17:47			06:17 18:22	53	07:38 (T10) 08:31 (T10)	06:23 19:58	19:17 (T05) 19:37 (T05)	05:44 20:31	06:08 (T09) 20:03 (T07)	05:31 20:54	06:03 (T09) 20:30 (T06)
21	07:37 17:07	07:02 17:48	07:24 (T13)	07:15	06:15 18:23	54	07:38 (T10) 08:32 (T10)	06:21 19:59	19:15 (T05) 19:38 (T05)	05:43 20:32	06:07 (T09) 20:03 (T07)	05:31 20:54	06:03 (T09) 20:30 (T06)
22	07:37 17:09	07:00 17:50	07:23 (T13)	07:13	06:13 18:24	55	07:37 (T10) 08:32 (T10)	06:20 20:01	19:15 (T05) 19:40 (T05)	05:42 20:33	06:06 (T09) 20:02 (T07)	05:31 20:54	06:03 (T09) 20:30 (T06)
23	07:36 17:10	06:59 17:51	07:21 (T13)	07:11	06:11 18:25	56	07:36 (T10) 08:32 (T10)	06:18 20:01	19:14 (T05) 19:40 (T05)	05:41 20:34	06:05 (T09) 20:02 (T07)	05:31 20:54	06:03 (T09) 20:30 (T06)
24	07:35 17:11	06:57 17:52	07:20 (T13)	07:09	06:09 18:26	56	07:35 (T10) 08:31 (T10)	06:17 20:02	19:15 (T05) 19:42 (T05)	05:40 20:35	06:04 (T09) 20:02 (T07)	05:32 20:55	06:04 (T09) 20:31 (T06)
25	07:34 17:12	06:56 17:54	07:18 (T13)	07:08	06:07 18:27	56	07:35 (T10) 08:31 (T10)	06:15 20:03	19:14 (T05) 19:42 (T05)	05:39 20:36	06:04 (T09) 20:02 (T07)	05:32 20:55	06:03 (T09) 20:31 (T06)
26	07:33 17:14	06:54 17:55	07:16 (T13)	07:06	06:05 18:28	56	07:35 (T10) 08:31 (T10)	06:14 20:04	19:14 (T05) 19:44 (T07)	05:39 20:37	06:03 (T09) 20:00 (T07)	05:32 20:55	06:03 (T09) 20:30 (T06)
27	07:33 17:15	06:52 17:56	07:15 (T13)	07:04	06:03 18:29	56	07:35 (T10) 08:31 (T10)	06:12 20:05	19:14 (T05) 19:44 (T07)	05:38 20:38	06:02 (T09) 20:01 (T07)	05:33 20:55	06:04 (T09) 20:31 (T06)
28	07:32 17:16	06:51 17:57	07:13 (T13)	07:02	06:01 18:30	56	07:34 (T10) 08:30 (T10)	06:11 20:06	19:14 (T05) 19:46 (T07)	05:37 20:39	06:02 (T09) 20:00 (T07)	05:33 20:55	06:05 (T09) 20:31 (T06)
29	07:31 17:18		07:33 (T13)	07:01	06:00 18:31	55	07:34 (T10) 08:29 (T10)	06:09 20:08	19:15 (T05) 19:47 (T07)	05:36 20:40	06:01 (T09) 20:01 (T07)	05:33 20:55	06:06 (T09) 20:30 (T06)
30	07:30 17:19			06:59	06:59 18:32	54	07:34 (T10) 08:28 (T10)	06:08 20:09	19:15 (T05) 19:48 (T07)	05:36 20:41	06:01 (T09) 19:56 (T07)	05:34 20:55	06:05 (T09) 20:31 (T06)
31	07:29 17:20			06:57	06:57 18:33	53	07:35 (T10) 08:28 (T10)			05:35 20:41	06:00 (T09) 20:01 (T07)		
Potential sun hours	291	294			369		401		453		459		
Total, worst case			105		1256		858		2062		1939		
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.			0.70		0.73		0.72		0.71		0.72		
Total reduction			0.28		0.34		0.39		0.41		0.45		
Total, real			30		429		334		854		874		

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: 236 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2557)

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	06:04 (T09)	06:00	06:26 (T09)	06:34	07:46 (T10)	07:07	07:30 (T10)	07:44	07:22	
	20:55	62 20:30 (T06)	20:35	58 20:12 (T07)	19:48	14 08:05 (T10)	18:54	37 08:07 (T10)	18:04	16:37	
2	05:35	06:05 (T09)	06:01	06:28 (T09)	06:35	07:43 (T10)	07:08	07:31 (T10)	07:46	07:23	
	20:55	76 20:31 (T06)	20:34	53 20:11 (T07)	19:46	17 08:04 (T10)	18:53	34 08:05 (T10)	18:03	16:37	
3	05:35	06:05 (T09)	06:02	06:35 (T09)	06:36	07:43 (T10)	07:09	07:32 (T10)	07:47	07:24	
	20:55	98 20:30 (T06)	20:33	48 20:09 (T07)	19:45	18 08:10 (T10)	18:51	31 08:03 (T10)	18:02	16:37	
4	05:36	06:06 (T09)	06:03	19:26 (T07)	06:37	07:38 (T10)	07:10	07:33 (T10)	07:48	07:25	
	20:54	79 20:30 (T06)	20:32	36 20:08 (T07)	19:43	29 08:10 (T10)	18:49	27 08:00 (T10)	18:01	16:36	
5	05:37	06:06 (T09)	06:04	19:26 (T07)	06:38	07:36 (T10)	07:11	07:34 (T10)	07:49	07:26	
	20:54	60 20:30 (T06)	20:31	29 20:06 (T07)	19:41	28 08:13 (T10)	18:47	23 07:57 (T10)	17:59	16:36	
6	05:37	06:09 (T09)	06:05	19:27 (T07)	06:39	07:35 (T10)	07:13	07:36 (T10)	06:51	07:27	
	20:54	52 20:30 (T06)	20:29	33 20:04 (T07)	19:39	33 08:15 (T10)	18:46	24 08:00 (T13)	16:58	16:36	
7	05:38	06:11 (T09)	06:06	19:27 (T07)	06:40	07:37 (T10)	07:14	07:47 (T13)	06:52	07:28	
	20:54	58 20:03 (T07)	20:28	33 20:05 (T07)	19:38	24 08:15 (T10)	18:44	16 08:03 (T13)	16:57	16:36	
8	05:39	06:06 (T09)	06:08	19:28 (T07)	06:42	07:32 (T10)	07:15	07:45 (T13)	06:53	07:29	
	20:53	45 20:03 (T07)	20:27	36 20:04 (T07)	19:36	31 08:17 (T10)	18:42	19 08:04 (T13)	16:56	16:36	
9	05:39	06:07 (T09)	06:09	19:28 (T07)	06:43	07:35 (T10)	07:16	07:43 (T13)	06:55	07:30	
	20:53	66 20:04 (T07)	20:25	28 20:02 (T07)	19:34	31 08:18 (T10)	18:40	22 08:05 (T13)	16:54	16:36	
10	05:40	06:08 (T09)	06:10	19:27 (T05)	06:44	07:29 (T10)	07:17	07:42 (T13)	06:56	07:31	
	20:53	68 20:07 (T07)	20:24	32 20:01 (T07)	19:32	39 08:18 (T10)	18:39	24 08:06 (T13)	16:53	16:36	
11	05:41	06:07 (T09)	06:11	19:29 (T07)	06:45	07:28 (T10)	07:18	07:41 (T13)	06:57	07:32	
	20:52	66 20:07 (T07)	20:23	24 20:00 (T07)	19:31	39 08:19 (T10)	18:37	25 08:06 (T13)	16:52	16:36	
12	05:41	06:09 (T09)	06:12	19:25 (T05)	06:46	07:27 (T10)	07:20	07:43 (T13)	06:58	07:33	
	20:52	51 20:06 (T07)	20:21	25 19:58 (T07)	19:29	29 08:19 (T10)	18:35	24 08:07 (T13)	16:51	16:36	
13	05:42	06:10 (T09)	06:13	19:24 (T05)	06:47	07:27 (T10)	07:21	07:44 (T13)	07:00	07:33	
	20:51	59 20:09 (T07)	20:20	28 19:56 (T07)	19:27	40 08:18 (T10)	18:34	23 08:07 (T13)	16:50	16:36	
14	05:43	06:11 (T09)	06:14	19:23 (T05)	06:48	07:25 (T10)	07:22	07:45 (T13)	07:01	07:34	
	20:51	61 20:09 (T07)	20:18	28 19:55 (T07)	19:25	37 08:19 (T10)	18:32	21 08:06 (T13)	16:49	16:36	
15	05:44	06:14 (T09)	06:15	19:22 (T05)	06:49	07:24 (T10)	07:23	07:46 (T13)	07:02	07:35	
	20:50	60 20:10 (T07)	20:17	29 19:54 (T07)	19:23	36 08:19 (T10)	18:30	20 08:06 (T13)	16:48	16:36	
16	05:45	06:10 (T09)	06:16	19:22 (T05)	06:50	07:25 (T10)	07:24	07:48 (T13)	07:04	07:36	
	20:49	59 20:10 (T07)	20:16	26 19:53 (T07)	19:22	39 08:19 (T10)	18:29	18 08:06 (T13)	16:47	16:36	
17	05:46	06:12 (T09)	06:17	19:22 (T05)	06:51	07:23 (T10)	07:26	07:49 (T13)	07:05	07:36	
	20:49	54 20:10 (T07)	20:14	23 19:52 (T07)	19:20	40 08:19 (T10)	18:27	16 08:05 (T13)	16:46	16:37	
18	05:46	06:14 (T09)	06:18	19:22 (T05)	06:52	07:23 (T10)	07:27	07:50 (T13)	07:06	07:37	
	20:48	53 20:11 (T07)	20:13	16 19:50 (T05)	19:18	39 08:15 (T10)	18:25	14 08:04 (T13)	16:45	16:37	
19	05:47	06:16 (T09)	06:20	19:21 (T05)	06:54	07:22 (T10)	07:28	07:51 (T13)	07:07	07:38	
	20:47	40 20:09 (T07)	20:11	16 19:49 (T05)	19:16	34 08:18 (T10)	18:24	12 08:03 (T13)	16:45	16:37	
20	05:48	06:15 (T09)	06:21	19:20 (T05)	06:55	07:22 (T10)	07:29	07:53 (T13)	07:09	07:38	
	20:47	55 20:12 (T07)	20:09	26 19:47 (T05)	19:14	34 08:18 (T10)	18:22	9 08:02 (T13)	16:44	16:38	
21	05:49	06:15 (T09)	06:22	19:20 (T05)	06:56	07:21 (T10)	07:30	07:54 (T13)	07:10	07:39	
	20:46	53 20:10 (T07)	20:08	22 19:46 (T05)	19:12	39 08:17 (T10)	18:21	6 08:00 (T13)	16:43	16:38	
22	05:50	06:16 (T09)	06:23	19:20 (T05)	06:57	07:22 (T10)	07:32	07:55 (T13)	07:11	07:39	
	20:45	54 20:11 (T07)	20:06	17 19:44 (T05)	19:11	43 08:18 (T10)	18:19	3 07:58 (T13)	16:42	16:39	
23	05:51	06:16 (T09)	06:24	19:20 (T05)	06:58	07:22 (T10)	07:33		07:12	07:40	
	20:44	67 20:12 (T07)	20:05	16 19:43 (T05)	19:09	38 08:17 (T10)	18:17		16:42	16:39	
24	05:52	06:17 (T09)	06:25	19:21 (T05)	06:59	07:26 (T10)	07:34		07:14	07:40	
	20:43	55 20:05 (T07)	20:03	16 19:41 (T05)	19:07	38 08:16 (T10)	18:16		16:41	16:40	
25	05:53	06:18 (T09)	06:26	19:21 (T05)	07:00	07:23 (T10)	07:35		07:15	07:41	
	20:42	42 20:06 (T07)	20:02	18 19:39 (T05)	19:05	43 08:15 (T10)	18:14		16:40	16:40	
26	05:54	06:19 (T09)	06:27	19:21 (T05)	07:01	07:24 (T10)	07:37		07:16	07:41	
	20:42	49 20:10 (T07)	20:00	17 19:38 (T05)	19:03	34 08:14 (T10)	18:13		16:40	16:41	
27	05:55	06:23 (T09)	06:28	19:22 (T05)	07:02	07:25 (T10)	07:38		07:17	07:42	
	20:41	40 20:13 (T07)	19:57	7 19:36 (T05)	19:02	41 08:13 (T10)	18:11		16:39	16:41	
28	05:56	06:21 (T09)	06:29	19:23 (T05)	07:04	07:26 (T10)	07:39		07:18	07:42	
	20:40	60 20:10 (T07)	19:55	11 19:34 (T05)	19:00	23 08:11 (T10)	18:10		16:39	16:42	
29	05:57	06:22 (T09)	06:31	19:25 (T05)	07:05	07:27 (T10)	07:40		07:19	07:42	
	20:39	63 20:13 (T07)	19:53	8 19:33 (T05)	18:58	37 08:10 (T10)	18:09		16:38	16:43	
30	05:58	06:25 (T09)	06:32	19:28 (T05)	07:06	07:28 (T10)	07:42		07:21	07:42	
	20:37	53 20:13 (T07)	19:52	3 19:31 (T05)	18:56	27 08:08 (T10)	18:07		16:38	16:44	
31	05:59	06:24 (T09)	06:33	07:52 (T10)			07:43			07:43	
	20:36	68 20:13 (T07)	19:50	4 07:57 (T10)			18:06			16:44	
Potential sun hours	466		433		376		343		293	281	
Total, worst case	1826		766		994		448				
Sun reduction	0.67		0.63		0.56		0.44				
Oper. time red.	1.00		1.00		1.00		1.00				
Wind dir. red.	0.72		0.70		0.73		0.71				
Total reduction	0.48		0.44		0.41		0.31				
Total, real	880		339		407		141				

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: 237 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2558)

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	16:45	07:28	17:22	17:59				06:55	19:36	30	07:36 (T10)	06:06		06:29 (T09)	05:35	06:37 (T09)
2	07:43	16:46	07:27	17:23	18:00				06:53	19:37	27	07:37 (T10)	06:05		06:27 (T09)	05:34	06:34 (T09)
3	07:43	16:47	07:26	17:24	18:01				06:52	19:38	23	07:38 (T10)	06:03		06:26 (T09)	05:34	06:35 (T09)
4	07:43	16:48	07:25	17:26	18:02				06:50	19:40	18	07:41 (T10)	06:02		06:25 (T09)	05:33	06:37 (T09)
5	07:43	16:49	07:23	17:27	18:04				06:48	19:41	10	07:44 (T10)	06:01		06:24 (T09)	05:33	06:40 (T09)
6	07:43	16:50	07:22	17:28	18:05				06:46	19:42			05:59		06:22 (T09)	05:32	19:23 (T07)
7	07:43	16:51	07:21	17:30	18:06				06:45	19:43			05:58		06:21 (T09)	05:32	19:21 (T07)
8	07:43	16:52	07:20	17:31	18:07				06:43	19:44			05:57		06:20 (T09)	05:32	19:22 (T07)
9	07:43	16:53	07:19	17:32	18:09				06:41	19:45			05:56		06:20 (T09)	05:32	19:22 (T07)
10	07:42	16:54	07:17	17:34	18:10				06:40	19:47			05:54		06:20 (T09)	05:31	19:21 (T07)
11	07:42	16:55	07:16	17:35	18:11	9	06:54 (T10)	06:38	06:38	19:48			05:53		06:20 (T09)	05:31	19:23 (T07)
12	07:42	16:56	07:15	17:36	18:12	14	07:07 (T10)	19:49	06:36	19:49			05:52		06:20 (T09)	05:31	19:21 (T07)
13	07:41	16:58	07:13	17:38	18:13	18	08:09 (T10)	19:50	06:34	19:50			05:51		06:20 (T09)	05:31	19:21 (T07)
14	07:41	16:59	07:12	17:39	18:14	22	08:11 (T10)	19:51	06:33	19:51			05:50		06:20 (T09)	05:31	19:22 (T07)
15	07:41	17:00	07:11	17:40	18:15	25	08:12 (T10)	19:52	06:31	19:52			05:49		06:20 (T09)	05:31	19:25 (T07)
16	07:40	17:01	07:09	17:42	18:16	27	08:14 (T10)	19:54	06:29	19:54			05:48		06:21 (T09)	05:31	19:21 (T07)
17	07:40	17:02	07:08	17:43	18:17	30	08:14 (T10)	19:55	06:28	19:55			05:47		06:21 (T09)	05:31	19:22 (T07)
18	07:39	17:04	07:06	17:44	18:18	32	08:14 (T10)	19:56	06:26	19:56			05:46		06:21 (T09)	05:31	19:21 (T07)
19	07:39	17:05	07:05	17:45	18:19	34	08:14 (T10)	19:57	06:25	19:57	4	19:33 (T05)	05:45		06:21 (T09)	05:31	19:28 (T07)
20	07:38	17:06	07:03	17:46	18:20	36	08:14 (T10)	19:58	06:23	19:58	10	19:37 (T05)	05:44		06:23 (T09)	05:31	19:23 (T07)
21	07:37	17:07	07:02	17:47	18:21	38	08:15 (T10)	19:59	06:21	19:59	15	19:38 (T05)	05:43		06:23 (T09)	05:31	19:31 (T07)
22	07:37	17:09	07:01	17:48	18:22	40	08:15 (T10)	20:01	06:20	20:01	18	19:40 (T05)	05:42		06:24 (T09)	05:31	19:23 (T07)
23	07:36	17:10	06:59	17:49	18:23	41	08:14 (T10)	20:02	06:18	20:02	22	19:40 (T05)	05:41		06:24 (T09)	05:31	19:23 (T07)
24	07:35	17:11	06:57	17:50	18:24	41	08:14 (T10)	20:03	06:17	20:03	36	19:42 (T05)	05:40		06:24 (T09)	05:32	19:24 (T07)
25	07:34	17:12	06:56	17:51	18:25	41	08:13 (T10)	20:04	06:15	20:04	41	19:42 (T05)	05:39		06:26 (T09)	05:32	19:24 (T07)
26	07:33	17:14	06:54	17:52	18:26	40	08:13 (T10)	20:05	06:14	20:05	48	19:44 (T05)	05:38		06:26 (T09)	05:32	19:30 (T07)
27	07:33	17:15	06:52	17:53	18:27	39	08:12 (T10)	20:06	06:12	20:06	52	19:44 (T05)	05:37		06:27 (T09)	05:33	19:25 (T07)
28	07:32	17:16	06:51	17:54	18:28	38	08:11 (T10)	20:07	06:11	20:07	57	19:46 (T05)	05:36		06:28 (T09)	05:33	19:24 (T07)
29	07:31	17:18		17:55	18:29	37	08:10 (T10)	20:08	06:09	20:08	61	19:47 (T05)	05:35		06:29 (T09)	05:34	19:24 (T07)
30	07:30	17:19		17:56	18:30	35	08:08 (T10)	20:09	06:08	20:09	65	19:48 (T05)	05:34		06:31 (T09)	05:34	19:27 (T07)
31	07:29	17:20		17:57	18:31	33	08:08 (T10)	20:10	06:07	20:10	49	20:16 (T07)	05:33		06:31 (T09)	05:34	20:28 (T07)
Potential sun hours	291	294	369			401			453		459						
Total, worst case						537			2446		1302						
Sun reduction						0.47			0.58		0.63						
Oper. time red.						1.00			1.00		1.00						
Wind dir. red.						0.73			0.71		0.67						
Total reduction						0.35			0.41		0.42						
Total, real						231			1011		549						

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: 237 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2558)

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	19:25 (T07)	06:00	06:30 (T09)	06:34	07:07	07:30 (T10)	07:44	07:22		
2	05:35	19:26 (T07)	06:01	06:33 (T09)	06:35	07:08	07:31 (T10)	07:46	07:23		
3	05:35	19:25 (T07)	06:02	06:35 (T09)	06:36	07:09	07:32 (T10)	07:47	07:24		
4	05:36	19:27 (T07)	06:03	06:30 (T09)	06:37	07:10	07:33 (T10)	07:48	07:25		
5	05:37	19:27 (T07)	06:04	06:32 (T09)	06:38	07:12	07:38 (T10)	07:49	07:26		
6	05:37	19:30 (T07)	06:05	06:31 (T09)	06:39	07:13		07:59	07:27		
7	05:38	19:32 (T07)	06:06	06:33 (T09)	06:40	07:14		06:52	07:28		
8	05:39	19:29 (T07)	06:08	06:34 (T09)	06:42	07:15		06:53	07:29		
9	05:39	20:23 (T07)	06:09	06:34 (T09)	06:43	07:16		06:55	07:30		
10	05:40	20:24 (T07)	06:10	06:35 (T09)	06:44	07:17		06:56	07:31		
11	05:41	20:26 (T07)	06:11	06:39 (T09)	06:45	07:18		06:57	07:32		
12	05:41	20:27 (T07)	06:12	06:37 (T09)	06:46	07:20		06:58	07:33		
13	05:42	20:27 (T07)	06:13	19:58 (T05)	19:29	07:21		06:59	07:34		
14	05:43	20:20 (T07)	06:14	06:43 (T09)	06:47	07:22		07:00	07:35		
15	05:44	20:25 (T07)	06:15	19:56 (T05)	19:27	07:23		07:01	07:36		
16	05:45	20:26 (T07)	06:16	06:38 (T09)	06:48	07:24		07:02	07:37		
17	05:46	20:22 (T07)	06:17	06:40 (T09)	06:49	07:25		07:03	07:38		
18	05:46	20:25 (T07)	06:18	06:41 (T09)	06:50	07:26		07:04	07:39		
19	05:47	20:24 (T07)	06:19	06:42 (T09)	06:51	07:27		07:05	07:40		
20	05:48	20:23 (T07)	06:20	06:43 (T09)	06:52	07:28		07:06	07:41		
21	05:49	20:23 (T07)	06:21	06:44 (T09)	06:53	07:29		07:07	07:42		
22	05:50	20:24 (T07)	06:22	06:45 (T09)	06:54	07:30		07:08	07:43		
23	05:51	20:24 (T07)	06:23	06:46 (T09)	06:55	07:31		07:09	07:44		
24	05:52	20:20 (T07)	06:24	06:47 (T09)	06:56	07:32		07:10	07:45		
25	05:53	20:22 (T07)	06:25	06:48 (T09)	06:57	07:33		07:11	07:46		
26	05:54	20:18 (T07)	06:26	06:49 (T09)	06:58	07:34		07:12	07:47		
27	05:55	20:18 (T07)	06:27	06:50 (T09)	06:59	07:35		07:13	07:48		
28	05:56	20:16 (T07)	06:28	06:51 (T09)	07:00	07:36		07:14	07:49		
29	05:57	20:17 (T07)	06:29	06:52 (T09)	07:01	07:37		07:15	07:50		
30	05:58	20:12 (T07)	06:30	06:53 (T09)	07:02	07:38		07:16	07:51		
31	05:59	20:33 (T09)	06:31	06:54 (T09)	07:03	07:39		07:17	07:52		
Potential sun hours	466	433	376	343	293	281					
Total, worst case	1493	1021	507	53							
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	0.72	0.73	0.73							
Total reduction	0.47	0.45	0.41	0.32							
Total, real	694	463	209	17							

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: 239 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2215)

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		
07:43	07:28			06:49		07:12 (T13)	06:55	07:46 (T10)	06:06	06:31 (T09)	05:35	06:11 (T09)
16:45	17:22			17:59	22	07:34 (T13)	19:36	08:23 (T10)	20:10	19:49 (T07)	20:42	19:57 (T07)
07:43	07:27			06:48		07:10 (T13)	06:53	07:47 (T10)	06:05	06:27 (T09)	05:34	06:11 (T09)
16:46	17:23			18:00	23	07:33 (T13)	19:37	08:21 (T10)	20:11	19:50 (T07)	20:43	19:57 (T07)
07:43	07:26			06:46		07:09 (T13)	06:52	07:48 (T10)	06:03	06:26 (T09)	05:34	06:12 (T09)
16:47	17:24			18:01	23	07:32 (T13)	19:38	08:18 (T10)	20:12	19:51 (T07)	20:44	19:56 (T07)
07:43	07:25			06:44		07:10 (T13)	06:50	07:50 (T10)	06:02	06:25 (T09)	05:33	06:11 (T09)
16:48	17:26			18:02	21	07:31 (T13)	19:40	08:17 (T10)	20:13	19:53 (T07)	20:45	19:56 (T07)
07:43	07:23			06:43		07:05 (T10)	06:48	07:53 (T10)	06:01	06:24 (T09)	05:33	06:14 (T09)
16:49	17:27			18:04	25	07:30 (T13)	19:41	08:13 (T10)	20:14	19:54 (T07)	20:45	19:56 (T07)
07:43	07:22			06:41		07:03 (T10)	06:46	07:57 (T10)	05:59	06:22 (T09)	05:32	06:12 (T09)
16:50	17:28			18:05	24	07:27 (T13)	19:42	08:08 (T10)	20:16	19:54 (T07)	20:46	19:56 (T07)
07:43	07:21			06:39		07:01 (T10)	06:45		05:58	06:21 (T09)	05:32	06:18 (T09)
16:51	17:30			18:06	26	07:27 (T10)	19:43		20:17	19:56 (T07)	20:47	20:23 (T06)
07:43	07:20			06:38		07:00 (T10)	06:43		05:57	06:20 (T09)	05:32	06:12 (T09)
16:52	17:31			18:07	29	07:29 (T10)	19:44		20:18	19:57 (T07)	20:48	20:24 (T06)
07:43	07:19			06:36		06:58 (T10)	06:41		05:56	06:19 (T09)	05:32	06:13 (T09)
16:53	17:32			18:09	32	07:30 (T10)	19:45		20:19	19:58 (T07)	20:48	20:25 (T06)
07:42	07:17			06:34		06:56 (T10)	06:40		05:54	06:18 (T09)	05:31	06:13 (T09)
16:54	17:34			18:10	35	07:31 (T10)	19:47		20:20	19:59 (T07)	20:49	20:26 (T06)
07:42	07:16			06:32		06:54 (T10)	06:38		05:53	06:16 (T09)	05:31	06:14 (T09)
16:55	17:35			18:11	38	07:32 (T10)	19:48		20:21	19:59 (T07)	20:50	20:26 (T06)
07:42	07:15			06:31		06:53 (T10)	06:36	19:24 (T05)	05:52	06:15 (T09)	05:31	06:19 (T09)
16:56	17:36			18:12	41	07:34 (T10)	19:49	19:28 (T05)	20:22	19:59 (T07)	20:50	20:26 (T06)
07:41	07:13			07:29		07:51 (T10)	06:34	19:21 (T05)	05:51	06:14 (T09)	05:31	06:16 (T09)
16:58	17:38			19:13	43	08:34 (T10)	19:50	19:29 (T05)	20:23	19:59 (T07)	20:51	20:27 (T06)
07:41	07:12			07:27		07:49 (T10)	06:33	19:19 (T05)	05:50	06:13 (T09)	05:31	06:14 (T09)
16:59	17:39			19:15	45	08:34 (T10)	19:51	19:31 (T05)	20:25	19:59 (T07)	20:51	20:27 (T06)
07:41	07:11			07:25		07:47 (T10)	06:31	19:17 (T05)	05:49	06:12 (T09)	05:31	06:14 (T09)
17:00	17:40			19:16	47	08:34 (T10)	19:52	19:32 (T05)	20:26	20:00 (T07)	20:52	20:28 (T06)
07:40	07:09			07:24		07:45 (T10)	06:29	19:15 (T05)	05:48	06:11 (T09)	05:31	06:16 (T09)
17:01	17:42			19:17	49	08:34 (T10)	19:54	19:32 (T05)	20:27	19:59 (T07)	20:52	20:28 (T06)
07:40	07:08			07:22		07:44 (T10)	06:28	19:14 (T05)	05:47	06:11 (T09)	05:31	06:15 (T09)
17:02	17:43			19:18	51	08:35 (T10)	19:55	19:34 (T05)	20:28	19:59 (T07)	20:52	20:28 (T06)
07:39	07:06			07:20		07:43 (T10)	06:26	19:13 (T05)	05:46	06:10 (T09)	05:31	06:15 (T09)
17:04	17:44			19:20	52	08:35 (T10)	19:56	19:35 (T05)	20:29	19:59 (T07)	20:53	20:28 (T06)
07:39	07:05			07:18		07:43 (T10)	06:25	19:12 (T05)	05:45	06:10 (T09)	05:31	06:17 (T09)
17:05	17:46			19:21	52	08:35 (T10)	19:57	19:36 (T05)	20:30	19:59 (T07)	20:53	20:30 (T06)
07:38	07:03		07:26 (T13)	07:17		07:42 (T10)	06:23	19:12 (T05)	05:44	06:11 (T09)	05:31	06:16 (T09)
17:06	17:47	4	07:30 (T13)	19:22	52	08:34 (T10)	19:58	19:37 (T05)	20:31	20:00 (T07)	20:54	20:30 (T06)
07:37	07:02		07:24 (T13)	07:15		07:42 (T10)	06:21	19:11 (T05)	05:43	06:10 (T09)	05:31	06:16 (T09)
17:07	17:48	7	07:31 (T13)	19:23	53	08:35 (T10)	19:59	19:38 (T05)	20:32	20:00 (T07)	20:54	20:30 (T06)
07:37	07:00		07:23 (T13)	07:13		07:42 (T10)	06:20	19:11 (T05)	05:42	06:10 (T09)	05:31	06:18 (T09)
17:09	17:50	10	07:33 (T13)	19:24	52	08:34 (T10)	20:01	19:40 (T05)	20:33	19:59 (T07)	20:54	20:30 (T06)
07:36	06:59		07:21 (T13)	07:11		07:42 (T10)	06:18	19:10 (T05)	05:41	06:10 (T09)	05:31	06:16 (T09)
17:10	17:51	12	07:33 (T13)	19:25	51	08:33 (T10)	20:01	19:40 (T05)	20:34	19:59 (T07)	20:54	20:30 (T06)
07:35	06:57		07:20 (T13)	07:09		07:41 (T10)	06:17	19:11 (T05)	05:40	06:09 (T09)	05:32	06:17 (T09)
17:11	17:52	15	07:35 (T13)	19:27	51	08:32 (T10)	20:02	19:42 (T07)	20:35	19:58 (T07)	20:55	20:31 (T06)
07:34	06:56		07:18 (T13)	07:08		07:41 (T10)	06:15	19:10 (T05)	05:39	06:10 (T09)	05:32	06:17 (T09)
17:12	17:54	16	07:34 (T13)	19:28	50	08:31 (T10)	20:03	19:42 (T07)	20:36	19:59 (T07)	20:55	20:31 (T06)
07:33	06:54		07:16 (T13)	07:06		07:42 (T10)	06:14	19:11 (T05)	05:39	06:10 (T09)	05:32	06:18 (T09)
17:14	17:55	18	07:34 (T13)	19:29	49	08:31 (T10)	20:04	19:44 (T07)	20:37	19:56 (T07)	20:55	20:30 (T06)
07:33	06:52		07:15 (T13)	07:04		07:42 (T10)	06:12	19:10 (T05)	05:38	06:10 (T09)	05:33	06:18 (T09)
17:15	17:56	20	07:35 (T13)	19:30	48	08:30 (T10)	20:05	19:44 (T07)	20:38	19:58 (T07)	20:55	20:31 (T06)
07:32	06:51		07:13 (T13)	07:02		07:42 (T10)	06:11	19:11 (T05)	05:37	06:10 (T09)	05:33	06:18 (T09)
17:16	17:57	21	07:34 (T13)	19:31	47	08:29 (T10)	20:06	19:46 (T07)	20:39	19:58 (T07)	20:55	20:31 (T06)
07:31				07:01		07:43 (T10)	06:09	19:12 (T05)	05:36	06:10 (T09)	05:33	06:21 (T09)
17:18				19:33	44	08:27 (T10)	20:08	19:47 (T07)	20:40	19:56 (T07)	20:55	20:30 (T06)
07:30				06:59		07:43 (T10)	06:08	19:12 (T05)	05:36	06:11 (T09)	05:34	06:22 (T09)
17:19				19:34	43	08:26 (T10)	20:09	19:48 (T07)	20:41	19:56 (T07)	20:55	20:31 (T06)
07:29				06:57		07:45 (T10)			05:35	06:11 (T09)		
17:20				19:35	40	08:25 (T10)			20:41	19:54 (T07)		
291	294			369			401		453		459	
	123				1258							1961
	0.40				0.47							0.63
	1.00				1.00							1.00
	0.70				0.72							0.72
	0.28				0.34							0.45
	35				427							886

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: 239 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2215)

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	06:19 (T09)	06:00	06:26 (T09)	06:34	19:23 (T05)	07:07	07:30 (T10)	07:44	07:22	
	20:55	67 20:30 (T06)	20:35	77 20:10 (T07)	19:48	4 19:27 (T05)	18:54	44 08:14 (T10)	18:04	16:37	
2	05:35	06:19 (T09)	06:01	06:26 (T09)	06:35		07:08	07:31 (T10)	07:46	07:23	
	20:55	77 20:31 (T06)	20:34	78 20:10 (T07)	19:46		18:53	42 08:13 (T10)	18:03	16:37	
3	05:35	06:18 (T09)	06:02	06:27 (T09)	06:36		07:09	07:32 (T10)	07:47	07:24	
	20:55	95 20:30 (T06)	20:33	76 20:09 (T07)	19:45		18:51	39 08:11 (T10)	18:02	16:37	
4	05:36	06:18 (T09)	06:03	06:28 (T09)	06:37		07:10	07:33 (T10)	07:48	07:25	
	20:54	75 20:30 (T06)	20:32	71 20:08 (T07)	19:43		18:49	37 08:10 (T10)	18:01	16:36	
5	05:37	06:24 (T09)	06:04	06:32 (T09)	06:38		07:11	07:34 (T10)	07:49	07:26	
	20:54	62 20:30 (T06)	20:31	62 20:06 (T07)	19:41		18:47	34 08:08 (T10)	17:59	16:36	
6	05:37	06:22 (T09)	06:05	06:31 (T09)	06:39		07:13	07:35 (T10)	06:51	07:27	
	20:54	53 20:30 (T06)	20:29	60 20:04 (T07)	19:39		18:46	31 08:06 (T10)	16:58	16:36	
7	05:38	06:21 (T09)	06:06	06:33 (T09)	06:40		07:57 (T10)	07:14	07:37 (T10)	06:52	07:28
	20:54	62 20:30 (T06)	20:28	69 20:05 (T07)	19:38	5	08:03 (T10)	18:44	28 08:05 (T10)	16:57	16:36
8	05:39	06:24 (T09)	06:08	06:34 (T09)	06:42		07:48 (T10)	07:15	07:38 (T10)	06:53	07:29
	20:53	46 20:02 (T07)	20:27	61 20:04 (T07)	19:36	9	08:07 (T10)	18:42	24 08:02 (T10)	16:56	16:36
9	05:39	06:18 (T09)	06:09	06:34 (T09)	06:43		07:45 (T10)	07:16	07:39 (T10)	06:55	07:30
	20:53	71 20:03 (T07)	20:25	49 20:02 (T07)	19:34	19	08:10 (T10)	18:40	24 08:03 (T13)	16:54	16:36
10	05:40	06:22 (T09)	06:10	06:35 (T09)	06:44		07:42 (T10)	07:17	07:40 (T10)	06:56	07:31
	20:53	69 20:01 (T07)	20:24	53 20:01 (T07)	19:32	24	08:12 (T10)	18:39	25 08:05 (T13)	16:53	16:36
11	05:41	06:18 (T09)	06:11	06:39 (T09)	06:45		07:40 (T10)	07:18	07:44 (T13)	06:57	07:32
	20:52	62 20:04 (T07)	20:23	44 20:00 (T07)	19:31	27	08:14 (T10)	18:37	21 08:05 (T13)	16:52	16:36
12	05:41	06:20 (T09)	06:12	06:37 (T09)	06:46		07:42 (T10)	07:20	07:43 (T13)	06:58	07:33
	20:52	52 20:04 (T07)	20:21	43 19:58 (T07)	19:29	20	08:15 (T10)	18:35	24 08:07 (T13)	16:51	16:36
13	05:42	06:22 (T09)	06:13	06:43 (T09)	06:47		07:36 (T10)	07:21	07:44 (T13)	07:00	07:33
	20:51	62 20:05 (T07)	20:20	38 19:56 (T07)	19:27	31	08:16 (T10)	18:34	23 08:07 (T13)	16:50	16:36
14	05:43	06:20 (T09)	06:14	19:20 (T05)	06:48		07:37 (T10)	07:22	07:45 (T13)	07:01	07:34
	20:51	64 20:02 (T07)	20:18	35 19:55 (T07)	19:25	26	08:15 (T10)	18:32	22 08:07 (T13)	16:49	16:36
15	05:44	06:19 (T09)	06:15	19:19 (T05)	06:49		07:33 (T10)	07:23	07:46 (T13)	07:02	07:35
	20:50	68 20:06 (T07)	20:17	35 19:54 (T07)	19:23	29	08:12 (T10)	18:30	21 08:07 (T13)	16:48	16:36
16	05:45	06:19 (T09)	06:16	19:19 (T05)	06:50		07:32 (T10)	07:24	07:48 (T13)	07:04	07:36
	20:49	70 20:03 (T07)	20:16	32 19:53 (T07)	19:22	31	08:18 (T10)	18:29	19 08:07 (T13)	16:47	16:36
17	05:46	06:19 (T09)	06:17	19:18 (T05)	06:51		07:33 (T10)	07:26	07:49 (T13)	07:05	07:36
	20:49	63 20:07 (T07)	20:14	32 19:52 (T07)	19:20	31	08:18 (T10)	18:27	18 08:07 (T13)	16:46	16:37
18	05:46	06:26 (T09)	06:18	19:17 (T05)	06:52		07:32 (T10)	07:27	07:50 (T13)	07:06	07:37
	20:48	63 20:08 (T07)	20:13	32 19:50 (T07)	19:18	35	08:15 (T10)	18:25	16 08:06 (T13)	16:45	16:37
19	05:47	06:21 (T09)	06:20	19:17 (T05)	06:54		07:32 (T10)	07:28	07:51 (T13)	07:07	07:38
	20:47	52 20:08 (T07)	20:11	28 19:49 (T07)	19:16	30	08:19 (T10)	18:24	14 08:05 (T13)	16:45	16:37
20	05:48	06:23 (T09)	06:21	19:16 (T05)	06:55		07:28 (T10)	07:29	07:53 (T13)	07:09	07:38
	20:47	62 20:09 (T07)	20:09	30 19:47 (T07)	19:14	32	08:19 (T10)	18:22	12 08:05 (T13)	16:44	16:38
21	05:49	06:20 (T09)	06:22	19:16 (T05)	06:56		07:27 (T10)	07:30	07:54 (T13)	07:10	07:39
	20:46	60 20:09 (T07)	20:08	26 19:46 (T05)	19:12	36	08:19 (T10)	18:21	9 08:03 (T13)	16:43	16:38
22	05:50	06:20 (T09)	06:23	19:16 (T05)	06:57		07:28 (T10)	07:32	07:55 (T13)	07:11	07:40
	20:45	60 20:09 (T07)	20:06	21 19:44 (T05)	19:11	40	08:19 (T10)	18:19	7 08:02 (T13)	16:42	16:39
23	05:51	06:29 (T09)	06:24	19:16 (T05)	06:58		07:27 (T10)	07:33	07:57 (T13)	07:12	07:40
	20:44	78 20:09 (T07)	20:05	19 19:43 (T05)	19:09	37	08:19 (T10)	18:17	3 08:00 (T13)	16:42	16:39
24	05:52	06:20 (T09)	06:25	19:16 (T05)	06:59		07:26 (T10)	07:34		07:14	07:40
	20:43	65 20:05 (T07)	20:03	19 19:41 (T05)	19:07	41	08:19 (T10)	18:16		16:41	16:40
25	05:53	06:30 (T09)	06:26	19:16 (T05)	07:00		07:26 (T10)	07:35		07:15	07:41
	20:42	53 20:06 (T07)	20:02	23 19:39 (T05)	19:05	43	08:18 (T10)	18:14		16:40	16:40
26	05:54	06:21 (T09)	06:27	19:16 (T05)	07:01		07:26 (T10)	07:37		07:16	07:41
	20:42	63 20:10 (T07)	20:00	22 19:38 (T05)	19:03	36	08:18 (T10)	18:13		16:40	16:41
27	05:55	06:23 (T09)	06:28	19:16 (T05)	07:02		07:26 (T10)	07:38		07:17	07:42
	20:41	56 20:08 (T07)	19:57	9 19:36 (T05)	19:02	44	08:17 (T10)	18:11		16:39	16:41
28	05:56	06:21 (T09)	06:29	19:17 (T05)	07:04		07:26 (T10)	07:39		07:18	07:42
	20:40	83 20:10 (T07)	19:55	17 19:34 (T05)	19:00	28	08:16 (T10)	18:10		16:39	16:42
29	05:57	06:22 (T09)	06:31	19:18 (T05)	07:05		07:27 (T10)	07:40		07:19	07:42
	20:39	83 20:10 (T07)	19:53	15 19:33 (T05)	18:58	42	08:15 (T10)	18:09		16:38	16:43
30	05:58	06:25 (T09)	06:32	19:19 (T05)	07:06		07:28 (T10)	07:42		07:21	07:42
	20:37	72 20:09 (T07)	19:52	12 19:31 (T05)	18:56	33	08:14 (T10)	18:07		16:38	16:44
31	05:59	06:24 (T09)	06:33	19:21 (T05)				07:43			07:43
	20:36	81 20:10 (T07)	19:50	8 19:29 (T05)				18:06			16:44
Potential sun hours	466		433		376		343		293		281
Total, worst case	2049		1196		733		537				
Sun reduction	0.67		0.63		0.56		0.44				
Oper. time red.	1.00		1.00		1.00		1.00				
Wind dir. red.	0.72		0.71		0.73		0.71				
Total reduction	0.49		0.45		0.41		0.31				
Total, real	994		537		298		169				

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: 240 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2559)

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	15:32 (T22)	07:28		16:24 (T24)	06:49		16:27 (T24)	06:55		06:06		18:48 (T20)	05:34			
	16:45	39	16:11 (T22)	17:21	34	16:58 (T24)	17:58	29	16:56 (T24)	19:36		20:10	46	19:34 (T20)	20:42		
2	07:43	15:33 (T22)	07:27		16:23 (T24)	06:47		16:30 (T24)	06:53		06:05		18:48 (T20)	05:34			
	16:46	38	16:11 (T22)	17:23	36	16:59 (T24)	18:00	24	16:54 (T24)	19:37		20:11	45	19:33 (T20)	20:43		
3	07:43	15:33 (T22)	07:25		16:22 (T24)	06:46		16:32 (T24)	06:51		06:03		18:49 (T20)	05:33			
	16:47	39	16:12 (T22)	17:24	39	17:01 (T24)	18:01	19	16:51 (T24)	19:38		20:12	43	19:32 (T20)	20:44		
4	07:43	15:34 (T22)	07:24		16:22 (T24)	06:44		16:37 (T24)	06:50		06:02		18:50 (T20)	05:33			
	16:48	38	16:12 (T22)	17:25	40	17:02 (T24)	18:02	8	16:45 (T24)	19:39		20:13	42	19:32 (T20)	20:44		
5	07:43	15:35 (T22)	07:23		16:21 (T24)	06:42			06:48		06:01		18:50 (T20)	05:33			
	16:49	38	16:13 (T22)	17:27	42	17:03 (T24)	18:03		19:40		20:14	40	19:30 (T20)	20:45			
6	07:43	15:36 (T22)	07:22		16:20 (T24)	06:41			06:46		05:59		18:51 (T20)	05:32			
	16:50	37	16:13 (T22)	17:28	43	17:03 (T24)	18:05		19:42		20:15	39	19:30 (T20)	20:46			
7	07:43	15:35 (T22)	07:21		16:19 (T24)	06:39			06:44		05:58		18:52 (T20)	05:32			
	16:51	37	16:12 (T22)	17:30	45	17:04 (T24)	18:06		19:43		20:17	37	19:29 (T20)	20:47			
8	07:43	15:36 (T22)	07:20		16:19 (T24)	06:37			06:43		05:57		18:53 (T20)	05:32			
	16:52	37	16:13 (T22)	17:31	46	17:05 (T24)	18:07		19:44	11	19:21 (T20)	20:18	35	19:28 (T20)	20:47		
9	07:42	15:37 (T22)	07:18		16:19 (T24)	06:36			06:41		05:55		18:54 (T20)	05:31			
	16:53	36	16:13 (T22)	17:32	47	17:06 (T24)	18:08		19:45	19	19:25 (T20)	20:19	32	19:26 (T20)	20:48		
10	07:42	15:38 (T22)	07:17		16:18 (T24)	06:34			06:39		05:54		18:55 (T20)	05:31			
	16:54	36	16:14 (T22)	17:34	48	17:06 (T24)	18:10		19:46	24	19:26 (T20)	20:20	30	19:25 (T20)	20:49		
11	07:42	15:38 (T22)	07:16		16:18 (T24)	06:32			06:38		05:53		18:57 (T20)	05:31			
	16:55	35	16:13 (T22)	17:35	49	17:07 (T24)	18:11		19:47	27	19:27 (T20)	20:21	26	19:23 (T20)	20:49		
12	07:42	15:40 (T22)	07:14		16:17 (T24)	06:30			06:36		05:52		18:58 (T20)	05:31			
	16:56	33	16:13 (T22)	17:36	50	17:07 (T24)	18:12		19:49	30	19:28 (T20)	20:22	24	19:22 (T20)	20:50		
13	07:41	15:40 (T22)	07:13		16:17 (T24)	07:29			06:34		05:51		19:01 (T20)	05:31			
	16:57	33	16:13 (T22)	17:38	50	17:07 (T24)	19:13		19:50	33	19:29 (T20)	20:23	19	19:20 (T20)	20:50		
14	07:41	15:41 (T22)	07:12		16:18 (T24)	07:27			06:33		05:50		19:03 (T20)	05:30			
	16:58	32	16:13 (T22)	17:39	50	17:08 (T24)	19:14		19:51	36	19:30 (T20)	20:24	14	19:17 (T20)	20:51		
15	07:40	15:42 (T22)	07:10		16:17 (T24)	07:25			06:31		05:48		19:10 (T20)	05:30			
	17:00	30	16:12 (T22)	17:40	50	17:07 (T24)	19:16		19:52	38	19:32 (T20)	20:25	1	19:11 (T20)	20:51		
16	07:40	15:43 (T22)	07:09		16:18 (T24)	07:23			06:29		05:47			05:30			
	17:01	30	16:13 (T22)	17:42	50	17:08 (T24)	19:17		19:53	40	19:32 (T20)	20:27		20:52			
17	07:39	15:44 (T22)	07:08		16:17 (T24)	07:22			06:28		05:46			05:30			
	17:02	28	16:12 (T22)	17:43	50	17:07 (T24)	19:18		19:54	42	19:33 (T20)	20:28		20:52			
18	07:39	15:46 (T22)	07:06		16:18 (T24)	07:20			06:26		05:45			05:30			
	17:03	26	16:12 (T22)	17:44	49	17:07 (T24)	19:19		19:56	45	19:35 (T20)	20:29		20:53			
19	07:38	15:47 (T22)	07:05		16:18 (T24)	07:18			06:24		05:44			05:31			
	17:05	24	16:11 (T22)	17:45	49	17:07 (T24)	19:20		19:57	47	19:36 (T20)	20:30		20:53			
20	07:38	15:49 (T22)	07:03		16:18 (T24)	07:16			06:23		05:43			05:31			
	17:06	20	16:09 (T22)	17:47	49	17:07 (T24)	19:22		19:58	47	19:36 (T20)	20:31		20:53			
21	07:37	15:51 (T22)	07:02		16:18 (T24)	07:15			06:21		05:42			05:31			
	17:07	18	16:09 (T22)	17:48	48	17:06 (T24)	19:23		19:59	48	19:36 (T20)	20:32		20:54			
22	07:36	15:54 (T22)	07:00		16:20 (T24)	07:13			06:20		05:42			05:31			
	17:08	13	16:07 (T22)	17:49	46	17:06 (T24)	19:24		20:00	49	19:37 (T20)	20:33		20:54			
23	07:36	15:58 (T22)	06:59		16:20 (T24)	07:11			06:18		05:41			05:31			
	17:10	5	16:03 (T22)	17:51	44	17:04 (T24)	19:25		20:00	48	19:36 (T20)	20:34		20:54			
24	07:35		06:57		16:20 (T24)	07:09			06:16		05:40			05:31			
	17:11		17:52	43	17:03 (T24)	19:26			20:01	49	19:37 (T20)	20:35		20:54			
25	07:34		06:55		16:22 (T24)	07:07			06:15		05:39			05:32			
	17:12		17:53	41	17:03 (T24)	19:28			20:03	49	19:36 (T20)	20:36		20:54			
26	07:33		06:54		16:22 (T24)	07:06			06:13		05:38			05:32			
	17:13		17:55	39	17:01 (T24)	19:29			20:04	48	19:36 (T20)	20:37		20:55			
27	07:32	16:34 (T24)	06:52		16:24 (T24)	07:04			06:12		05:38			05:32			
	17:15	12	16:46 (T24)	17:56	36	17:00 (T24)	19:30		20:05	48	19:35 (T20)	20:38		20:55			
28	07:31	16:31 (T24)	06:51		16:25 (T24)	07:02			06:10		05:37			05:33			
	17:16	18	16:49 (T24)	17:57	33	16:58 (T24)	19:31		20:06	47	19:35 (T20)	20:39		20:55			
29	07:31	16:28 (T24)				07:00			06:09		05:36			05:33			
	17:17	24	16:52 (T24)			19:32			20:07	47	19:34 (T20)	20:39		20:55			
30	07:30	16:27 (T24)				06:59			06:07		05:36			05:34			
	17:19	27	16:54 (T24)			19:33			20:08	46	19:34 (T20)	20:40		20:55			
31	07:29	16:25 (T24)				06:57					05:35						
	17:20	31	16:56 (T24)			19:35					20:41						
Potential sun hours	291		294			369			401		453			459			
Total, worst case	814		1246			80			918		473						
Sun reduction	0.36		0.40			0.47			0.54		0.58						
Oper. time red.	1.00		1.00			1.00			1.00		1.00						
Wind dir. red.	0.71		0.74			0.74			0.72		0.72						
Total reduction	0.26		0.29			0.35			0.39		0.42						
Total, real	208		367			28			357		198						

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: 240 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2559)

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	06:00	19:10 (T20)	06:34	18:57 (T20)	07:07	07:44	16:47 (T24)	07:21	15:21 (T22)	
	20:55	20:35	21	19:31 (T20)	19:48	30	18:04	49	17:36 (T24)	16:37	33
2	05:35	06:01	19:08 (T20)	06:35	18:59 (T20)	07:08	07:45	16:48 (T24)	07:23	15:22 (T22)	
	20:55	20:34	25	19:33 (T20)	19:46	27	18:03	48	17:36 (T24)	16:37	34
3	05:35	06:02	19:07 (T20)	06:36	19:00 (T20)	07:09	07:47	16:48 (T24)	07:24	15:21 (T22)	
	20:54	20:33	28	19:35 (T20)	19:44	24	18:02	47	17:35 (T24)	16:36	36
4	05:36	06:03	19:05 (T20)	06:37	19:03 (T20)	07:10	07:48	16:49 (T24)	07:25	15:21 (T22)	
	20:54	20:32	31	19:36 (T20)	19:43	19	18:00	46	17:35 (T24)	16:36	36
5	05:36	06:04	19:04 (T20)	06:38	19:07 (T20)	07:11	07:49	16:49 (T24)	07:26	15:21 (T22)	
	20:54	20:30	33	19:37 (T20)	19:41	11	17:59	45	17:34 (T24)	16:36	37
6	05:37	06:05	19:03 (T20)	06:39	19:18 (T20)	07:12	06:50	15:50 (T24)	07:27	15:22 (T22)	
	20:54	20:29	35	19:38 (T20)	19:39		16:58	43	16:33 (T24)	16:36	36
7	05:38	06:06	19:01 (T20)	06:40		07:14	06:52	15:51 (T24)	07:28	15:22 (T22)	
	20:53	20:28	38	19:39 (T20)	19:37		16:57	42	16:33 (T24)	16:36	37
8	05:38	06:07	19:00 (T20)	06:41		07:15	06:53	15:52 (T24)	07:29	15:22 (T22)	
	20:53	20:26	40	19:40 (T20)	19:36		16:55	40	16:32 (T24)	16:35	38
9	05:39	06:08	18:59 (T20)	06:42		07:16	06:54	15:53 (T24)	07:30	15:22 (T22)	
	20:53	20:25	41	19:40 (T20)	19:34		16:54	38	16:31 (T24)	16:35	38
10	05:40	06:09	18:58 (T20)	06:43		07:17	06:56	15:54 (T24)	07:31	15:23 (T22)	
	20:52	20:24	43	19:41 (T20)	19:32		16:53	36	16:30 (T24)	16:35	38
11	05:40	06:11	18:58 (T20)	06:45		07:18	06:57	15:55 (T24)	07:31	15:23 (T22)	
	20:52	20:22	43	19:41 (T20)	19:30		17:22 (T24)	16:52	16:29 (T24)	16:35	39
12	05:41	06:12	18:57 (T20)	06:46		07:19	17:04 (T24)	16:58	15:57 (T24)	07:32	
	20:51	20:21	44	19:41 (T20)	19:28		17:26 (T24)	16:51	16:28 (T24)	16:35	39
13	05:42	06:13	18:56 (T20)	06:47		07:21	17:02 (T24)	16:59	15:59 (T24)	07:33	
	20:51	20:20	46	19:42 (T20)	19:27		17:29 (T24)	16:50	16:26 (T24)	16:36	39
14	05:43	06:14	18:55 (T20)	06:48		07:22	16:59 (T24)	07:01	16:00 (T24)	07:34	
	20:50	20:18	47	19:42 (T20)	19:25		17:30 (T24)	16:49	16:24 (T24)	16:36	39
15	05:44	06:15	18:55 (T20)	06:49		07:23	16:57 (T24)	07:02	16:04 (T24)	07:35	
	20:50	20:17	47	19:42 (T20)	19:23		17:31 (T24)	16:48	16:22 (T24)	16:36	39
16	05:44	06:16	18:54 (T20)	06:50		07:24	16:55 (T24)	07:03	16:07 (T24)	07:35	
	20:49	20:15	48	19:42 (T20)	19:21		17:32 (T24)	16:47	16:19 (T24)	16:36	39
17	05:45	06:17	18:54 (T20)	06:51		07:25	16:54 (T24)	07:05		07:36	
	20:49	20:14	48	19:42 (T20)	19:19		17:34 (T24)	16:46		16:36	39
18	05:46	06:18	18:53 (T20)	06:52		07:27	16:53 (T24)	07:06		07:37	
	20:48	20:12	49	19:42 (T20)	19:18		17:35 (T24)	16:45		16:37	40
19	05:47	06:19	18:53 (T20)	06:53		07:28	16:51 (T24)	07:07		07:38	
	20:47	20:11	49	19:42 (T20)	19:16		17:35 (T24)	16:44		16:37	40
20	05:48	06:20	18:53 (T20)	06:54		07:29	16:50 (T24)	07:08	15:33 (T22)	07:38	
	20:46	20:09	48	19:41 (T20)	19:14		17:35 (T24)	16:44	15:38 (T22)	16:37	40
21	05:49	06:22	18:53 (T20)	06:56		07:30	16:50 (T24)	07:10	15:29 (T22)	07:39	
	20:46	20:08	49	19:42 (T20)	19:12		17:36 (T24)	16:43	15:42 (T22)	16:38	39
22	05:50	06:23	18:53 (T20)	06:57		07:31	16:49 (T24)	07:11	15:27 (T22)	07:39	
	20:45	20:06	48	19:41 (T20)	19:10		17:36 (T24)	16:42	15:44 (T22)	16:38	39
23	05:51	06:24	18:53 (T20)	06:58		07:33	16:48 (T24)	07:12	15:26 (T22)	07:40	
	20:44	20:05	48	19:41 (T20)	19:09		17:36 (T24)	16:41	15:46 (T22)	16:39	39
24	05:52	06:25	18:53 (T20)	06:59		07:34	16:48 (T24)	07:13	15:24 (T22)	07:40	
	20:43	20:03	47	19:40 (T20)	19:07		17:37 (T24)	16:41	15:48 (T22)	16:39	39
25	05:53	06:26	18:53 (T20)	07:00		07:35	16:47 (T24)	07:14	15:23 (T22)	07:41	
	20:42	20:01	46	19:39 (T20)	19:05		17:37 (T24)	16:40	15:49 (T22)	16:40	40
26	05:54	06:27	18:53 (T20)	07:01		07:36	16:47 (T24)	07:16	15:22 (T22)	07:41	
	20:41	20:00	45	19:38 (T20)	19:03		17:37 (T24)	16:39	15:50 (T22)	16:41	40
27	05:55	06:28	18:54 (T20)	07:02		07:38	16:47 (T24)	07:17	15:23 (T22)	07:41	
	20:40	19:56	42	19:36 (T20)	19:01		17:37 (T24)	16:39	15:52 (T22)	16:41	40
28	05:56	06:29	18:54 (T20)	07:03		07:39	16:47 (T24)	07:18	15:22 (T22)	07:42	
	20:39	19:55	40	19:34 (T20)	19:00		17:37 (T24)	16:38	15:52 (T22)	16:42	39
29	05:57	06:30	18:55 (T20)	07:04		07:40	16:46 (T24)	07:19	15:21 (T22)	07:42	
	20:38	19:53	38	19:33 (T20)	18:58		17:36 (T24)	16:38	15:53 (T22)	16:43	39
30	05:58	06:31	18:55 (T20)	07:06		07:42	16:47 (T24)	07:20	15:21 (T22)	07:42	
	20:37	9	19:25 (T20)	19:51	36	18:07	17:37 (T24)	16:37	15:54 (T22)	16:43	39
31	05:59	19:13 (T20)	06:33	18:56 (T20)	18:56	07:43	16:47 (T24)			07:42	
	20:36	16	19:29 (T20)	19:50	33	18:06	17:36 (T24)			16:44	39
Potential sun hours	466		433		376		343		293		281
Total, worst case	25		1276		111		874		837		1188
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.	0.72		0.72		0.72		0.74		0.73		0.71
Total reduction	0.48		0.45		0.40		0.32		0.18		0.17
Total, real	12		579		45		283		152		202

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)

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: 242 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2560)

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		06:32 (T09)	05:35		19:00 (T07)
	16:45	17:22	17:59							19:36			20:10	88	19:49 (T04)	20:42	50	20:12 (T07)
2	07:43	07:27	06:48							06:53			06:05		06:31 (T09)	05:34		18:59 (T07)
	16:46	17:23	18:00							19:37			20:11	89	19:50 (T04)	20:43	70	20:11 (T07)
3	07:43	07:26	06:46							06:52			06:03		06:32 (T09)	05:34		19:00 (T07)
	16:47	17:24	18:01							19:38			20:12	89	19:51 (T04)	20:44	38	20:11 (T07)
4	07:43	07:25	06:44							06:50			06:02		06:32 (T09)	05:33		18:59 (T07)
	16:48	17:26	18:02							19:40			20:13	90	19:53 (T04)	20:45	54	20:08 (T07)
5	07:43	07:23	06:43						07:05 (T10)	06:48			06:01		06:32 (T09)	05:33		19:00 (T07)
	16:49	17:27	18:04	10					07:15 (T10)	19:41			20:14	90	19:54 (T04)	20:45	40	20:12 (T07)
6	07:43	07:22	06:41						07:03 (T10)	06:46			05:59		06:32 (T09)	05:32		19:00 (T07)
	16:50	17:28	18:05	14					07:17 (T10)	19:42			20:16	89	19:54 (T04)	20:46	57	20:13 (T07)
7	07:43	07:21	06:39						07:01 (T10)	06:45			05:58		06:33 (T09)	05:32		19:00 (T07)
	16:51	17:30	18:06	18					07:19 (T10)	19:43			20:17	88	19:56 (T04)	20:47	53	20:12 (T07)
8	07:43	07:20	06:38						07:00 (T10)	06:43			05:57		06:33 (T09)	05:32		19:00 (T07)
	16:52	17:31	18:07	21					07:21 (T10)	19:44			20:18	87	19:56 (T07)	20:48	48	20:11 (T07)
9	07:43	07:19	06:36						06:58 (T10)	06:41			05:56		06:34 (T09)	05:32		19:01 (T07)
	16:53	17:32	18:09	24					07:22 (T10)	19:45			20:19	87	19:58 (T07)	20:48	51	20:13 (T07)
10	07:42	07:17	06:34						06:56 (T10)	06:40			05:54		06:35 (T09)	05:31		19:01 (T07)
	16:54	17:34	18:10	27					07:23 (T10)	19:47			20:20	85	19:59 (T07)	20:49	39	20:14 (T07)
11	07:42	07:16	06:32						06:54 (T10)	06:38			05:53		06:34 (T09)	05:31		19:01 (T07)
	16:55	17:35	18:11	29					07:23 (T10)	19:48			20:21	86	19:59 (T07)	20:50	50	20:14 (T07)
12	07:42	07:15	06:31						06:53 (T10)	06:36			05:52		06:35 (T09)	05:31		19:01 (T07)
	16:56	17:36	18:12	31					07:24 (T10)	19:49			20:22	87	20:01 (T07)	20:50	60	20:14 (T07)
13	07:41	07:13	07:29						07:51 (T10)	06:34			19:22 (T05)		06:36 (T09)	05:31		19:01 (T07)
	16:58	17:38	18:13	34					08:25 (T10)	19:50	7		19:29 (T05)	20:23	20:02 (T07)	20:51	49	20:14 (T07)
14	07:41	07:12	07:27						07:49 (T10)	06:33			19:18 (T05)	05:50	06:37 (T09)	05:31		19:01 (T07)
	16:59	17:39	18:15	35					08:24 (T10)	19:51	13		19:31 (T05)	20:25	20:03 (T07)	20:51	54	20:14 (T07)
15	07:41	07:11	07:25						07:47 (T10)	06:31			19:15 (T05)	05:49	06:39 (T09)	05:31		19:01 (T07)
	17:00	17:40	19:16	37					08:24 (T10)	19:52	17		19:32 (T05)	20:26	20:03 (T07)	20:52	48	20:14 (T07)
16	07:40	07:09	07:24						07:45 (T10)	06:29			06:51 (T09)	05:48	06:40 (T09)	05:31		19:02 (T07)
	17:01	17:42	19:17	39					08:24 (T10)	19:54	32		19:32 (T05)	20:27	20:04 (T07)	20:52	57	20:13 (T07)
17	07:40	07:08	07:22						07:45 (T10)	06:28			06:50 (T09)	05:47	06:41 (T09)	05:31		19:02 (T07)
	17:02	17:43	19:18	39					08:24 (T10)	19:55	39		19:34 (T05)	20:28	20:05 (T07)	20:53	45	20:13 (T07)
18	07:39	07:06	07:20						07:44 (T10)	06:26			06:48 (T09)	05:46	06:43 (T09)	05:31		19:02 (T07)
	17:04	17:44	19:20	40					08:24 (T10)	19:56	46		19:35 (T05)	20:29	20:05 (T07)	20:53	51	20:15 (T07)
19	07:39	07:05	07:18						07:44 (T10)	06:25			06:47 (T09)	05:45	06:46 (T09)	05:31		19:03 (T07)
	17:05	17:46	19:21	39					08:23 (T10)	19:57	51		19:37 (T05)	20:30	20:06 (T07)	20:53	42	20:16 (T07)
20	07:38	07:03	07:17						07:44 (T10)	06:23			06:45 (T09)	05:44	19:02 (T07)	05:31		19:03 (T07)
	17:06	17:47	19:22	38					08:22 (T10)	19:58	56		19:37 (T05)	20:31	20:07 (T07)	20:54	56	20:16 (T07)
21	07:37	07:02	07:15						07:45 (T10)	06:21			06:43 (T09)	05:43	19:01 (T07)	05:31		19:03 (T07)
	17:07	17:48	19:23	37					08:22 (T10)	19:59	60		19:38 (T05)	20:32	20:07 (T07)	20:54	34	20:13 (T07)
22	07:37	07:00	07:13						07:45 (T10)	06:20			06:42 (T09)	05:42	19:01 (T07)	05:31		19:03 (T07)
	17:09	17:50	19:24	36					08:21 (T10)	20:01	65		19:40 (T05)	20:33	20:08 (T07)	20:54	53	20:16 (T07)
23	07:36	06:59	07:11						07:45 (T10)	06:18			06:40 (T09)	05:41	19:00 (T07)	05:31		19:03 (T07)
	17:10	17:51	19:25	35					08:20 (T10)	20:01	69		19:40 (T05)	20:34	20:08 (T07)	20:54	47	20:16 (T07)
24	07:35	06:57	07:09						07:46 (T10)	06:17			06:39 (T09)	05:40	19:00 (T07)	05:32		19:04 (T07)
	17:11	17:52	19:27	32					08:18 (T10)	20:02	73		19:42 (T05)	20:35	20:08 (T07)	20:55	69	20:17 (T07)
25	07:34	06:56	07:08						07:46 (T10)	06:15			06:37 (T09)	05:39	19:00 (T07)	05:32		19:04 (T07)
	17:12	17:54	19:28	30					08:16 (T10)	20:03	75		19:42 (T05)	20:36	20:09 (T07)	20:55	49	20:16 (T07)
26	07:33	06:54	07:06						07:48 (T10)	06:14			06:36 (T09)	05:39	19:00 (T07)	05:32		19:04 (T07)
	17:14	17:55	19:29	27					08:15 (T10)	20:04	79		19:44 (T05)	20:37	20:09 (T07)	20:55	38	20:11 (T07)
27	07:33	06:52	07:04						07:49 (T10)	06:12			06:34 (T09)	05:38	18:59 (T07)	05:33		19:05 (T07)
	17:15	17:56	19:30	24					08:13 (T10)	20:05	81		19:44 (T05)	20:38	20:09 (T07)	20:55	42	20:18 (T07)
28	07:32	06:51	07:02						07:51 (T10)	06:11			06:33 (T09)	05:37	19:00 (T07)	05:33		19:04 (T07)
	17:16	17:57	19:31	19					08:10 (T10)	20:06	84		19:46 (T04)	20:39	20:10 (T07)	20:55	53	20:17 (T07)
29	07:31		07:01						07:55 (T10)	06:09			06:33 (T09)	05:36	18:59 (T07)	05:34		19:04 (T07)
	17:18		19:33	10					08:05 (T10)	20:08	86		19:47 (T04)	20:40	20:10 (T07)	20:55	56	20:17 (T07)
30	07:30		06:59							06:08			06:32 (T09)	05:36	19:00 (T07)	05:34		19:05 (T07)
	17:19		19:34							20:09	87		19:48 (T04)	20:41	20:11 (T07)	20:55	39	20:17 (T07)
31	07:29		06:57											05:35	18:59 (T07)			
	17:20		19:35											20:41	20:11 (T07)			
Potential sun hours	291	294	369						401				453		459			
Total, worst case							725			1020			2366				1492	
Sun reduction							0.47			0.54			0.58				0.63	
Oper. time red.							1.00			1.00			1.00				1.00	
Wind dir. red.							0.72			0.73			0.70				0.68	
Total reduction							0.34			0.39			0.41				0.43	
Total, real							247			401			964				644	

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: 242 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2560)

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	19:05 (T07)	06:00	06:46 (T09)	06:34	07:07	07:30 (T10)	07:44	07:22		
2	05:35	19:05 (T07)	06:01	06:47 (T09)	06:35	07:08	07:31 (T10)	07:46	07:23		
3	05:35	19:05 (T07)	06:02	06:45 (T09)	06:36	07:09	07:32 (T10)	07:47	07:24		
4	05:36	19:06 (T07)	06:03	06:44 (T09)	06:37	07:10	07:33 (T10)	07:48	07:25		
5	05:37	19:06 (T07)	06:04	06:43 (T09)	06:38	07:12	07:34 (T10)	07:49	07:26		
6	05:37	19:06 (T07)	06:05	06:44 (T09)	06:39	07:13	07:35 (T10)	06:51	07:27		
7	05:38	19:07 (T07)	06:06	06:44 (T09)	06:40	07:14	07:37 (T10)	06:52	07:28		
8	05:39	19:07 (T07)	06:08	06:43 (T09)	06:42	07:15	07:38 (T10)	06:53	07:29		
9	05:39	19:07 (T07)	06:09	06:41 (T09)	06:43	07:16	07:39 (T10)	06:55	07:30		
10	05:40	19:07 (T07)	06:10	06:41 (T09)	06:44	07:17	07:40 (T10)	06:56	07:31		
11	05:41	19:07 (T07)	06:11	06:40 (T09)	06:45	07:18		06:57	07:32		
12	05:41	19:07 (T07)	06:12	06:40 (T09)	06:46	07:20		06:58	07:33		
13	05:42	19:08 (T07)	06:13	06:43 (T09)	06:47	07:21		07:00	07:33		
14	05:43	19:08 (T07)	06:14	06:39 (T09)	06:48	07:22		07:01	07:34		
15	05:44	19:09 (T07)	06:15	06:40 (T09)	06:49	07:23		07:02	07:35		
16	05:45	19:09 (T07)	06:16	06:41 (T09)	06:50	07:24		07:04	07:36		
17	05:46	19:09 (T07)	06:17	06:42 (T09)	06:51	07:26		07:05	07:36		
18	05:46	19:09 (T07)	06:18	06:44 (T09)	06:52	07:27		07:06	07:37		
19	05:47	19:09 (T07)	06:20	06:44 (T09)	06:54	07:28		07:07	07:38		
20	05:48	19:10 (T07)	06:21	06:46 (T09)	06:55	07:29		07:09	07:38		
21	05:49	19:10 (T07)	06:22	06:46 (T09)	06:56	07:31 (T10)	07:30	07:10	07:39		
22	05:50	19:11 (T07)	06:23	06:53 (T09)	06:57	07:30 (T10)	07:32	07:11	07:40		
23	05:51	19:10 (T07)	06:24	06:51 (T09)	06:58	07:29 (T10)	07:33	07:12	07:40		
24	05:52	19:11 (T07)	06:25	06:53 (T09)	06:59	07:28 (T10)	07:34	07:14	07:40		
25	05:53	19:11 (T07)	06:26	06:52 (T09)	07:00	07:28 (T10)	07:35	07:15	07:41		
26	05:54	19:12 (T07)	06:27	06:51 (T09)	07:01	07:27 (T10)	07:37	07:16	07:41		
27	05:55	19:12 (T07)	06:28	06:52 (T09)	07:02	07:26 (T10)	07:38	07:17	07:42		
28	05:56	19:13 (T07)	06:29	06:53 (T09)	07:04	07:26 (T10)	07:39	07:18	07:42		
29	05:57	19:14 (T07)	06:31	06:54 (T09)	07:05	07:27 (T10)	07:40	07:19	07:42		
30	05:58	19:14 (T07)	06:32	06:55 (T09)	07:06	07:28 (T10)	07:42	07:21	07:42		
31	05:59	19:15 (T07)	06:33	06:56 (T09)	07:07	07:29 (T10)	07:43	07:22	07:43		
Potential sun hours	466		433		376		343		293		281
Total, worst case	1518		1647		343		227				
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		0.72		0.72		0.72				
Total reduction	0.46		0.45		0.41		0.32				
Total, real	701		746		139		72				

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: 246 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2562)

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		
07:43	07:28			06:49	07:12 (T10)	06:55		06:06	06:39 (T09)	05:35	20:02 (T06)	
16:45	17:22			17:59	39 07:51 (T10)	19:36		20:10	107 19:42 (T07)	20:42	18 20:20 (T06)	
07:43	07:27			06:48	07:10 (T10)	06:53		06:05	06:39 (T09)	05:34	19:58 (T06)	
16:46	17:23			18:00	41 07:51 (T10)	19:37		20:11	106 19:41 (T07)	20:43	22 20:20 (T06)	
07:43	07:26			06:46	07:08 (T10)	06:52		19:11 (T05)	06:03	06:39 (T09)	05:34	20:04 (T06)
16:47	17:24			18:01	43 07:51 (T10)	19:38	7	19:18 (T05)	20:12	106 19:41 (T07)	20:44	14 20:21 (T06)
07:43	07:25			06:44	07:06 (T10)	06:50		19:08 (T05)	06:02	06:40 (T09)	05:33	19:58 (T06)
16:48	17:26			18:02	45 07:51 (T10)	19:40	12	19:20 (T05)	20:13	103 19:41 (T07)	20:45	20 20:21 (T06)
07:43	07:23			06:43	07:05 (T10)	06:48		19:06 (T05)	06:01	06:40 (T09)	05:33	19:57 (T06)
16:49	17:27			18:04	46 07:51 (T10)	19:41	15	19:21 (T05)	20:14	103 19:41 (T07)	20:45	19 20:22 (T06)
07:43	07:22			06:41	07:05 (T10)	06:46		19:03 (T05)	05:59	06:40 (T09)	05:32	19:57 (T06)
16:50	17:28			18:05	46 07:51 (T10)	19:42	18	19:21 (T05)	20:16	101 19:40 (T07)	20:46	22 20:23 (T06)
07:43	07:21			06:39	07:04 (T10)	06:45		19:02 (T05)	05:58	06:41 (T09)	05:32	19:56 (T06)
16:51	17:30			18:06	46 07:50 (T10)	19:43	20	19:22 (T05)	20:17	99 19:40 (T07)	20:47	24 20:23 (T06)
07:43	07:20			06:38	07:05 (T10)	06:43		19:01 (T05)	05:57	06:41 (T09)	05:32	19:56 (T06)
16:52	17:31			18:07	46 07:51 (T10)	19:44	23	19:24 (T05)	20:18	97 19:39 (T07)	20:48	27 20:24 (T06)
07:43	07:19			06:36	07:04 (T10)	06:41		19:00 (T05)	05:56	06:42 (T09)	05:32	19:57 (T06)
16:53	17:32			18:09	46 07:50 (T10)	19:45	25	19:25 (T05)	20:19	95 19:39 (T07)	20:48	24 20:25 (T06)
07:42	07:17			06:34	07:04 (T10)	06:40		07:04 (T09)	05:54	06:43 (T09)	05:31	19:57 (T06)
16:54	17:34			18:10	45 07:49 (T10)	19:47	36	19:26 (T05)	20:20	92 19:39 (T07)	20:49	20 20:26 (T06)
07:42	07:16			06:32	07:04 (T10)	06:38		07:00 (T09)	05:53	06:43 (T09)	05:31	19:58 (T06)
16:55	17:35			18:11	44 07:48 (T10)	19:48	47	19:28 (T07)	20:21	89 19:37 (T07)	20:50	22 20:26 (T06)
07:42	07:15			06:31	07:05 (T10)	06:36		06:58 (T09)	05:52	06:44 (T09)	05:31	19:56 (T06)
16:56	17:36			18:12	43 07:48 (T10)	19:49	53	19:28 (T07)	20:22	87 19:37 (T07)	20:50	30 20:26 (T06)
07:41	07:13			07:29	08:05 (T10)	06:34		06:56 (T09)	05:51	06:45 (T09)	05:31	19:56 (T06)
16:58	17:38			19:13	42 08:47 (T10)	19:50	58	19:29 (T07)	20:23	83 19:36 (T07)	20:51	26 20:27 (T06)
07:41	07:12		07:35 (T13)	07:27	08:06 (T10)	06:33		06:55 (T09)	05:50	06:46 (T09)	05:31	19:56 (T06)
16:59	17:39	3	07:38 (T13)	19:15	40 08:46 (T10)	19:51	64	19:31 (T07)	20:25	80 19:36 (T07)	20:51	28 20:27 (T06)
07:41	07:11		07:33 (T13)	07:25	08:06 (T10)	06:31		06:53 (T09)	05:49	06:47 (T09)	05:31	19:57 (T06)
17:00	17:40	6	07:39 (T13)	19:16	38 08:44 (T10)	19:52	69	19:32 (T07)	20:26	75 19:35 (T07)	20:52	19 20:28 (T06)
07:40	07:09		07:32 (T13)	07:24	08:07 (T10)	06:29		06:51 (T09)	05:48	06:49 (T09)	05:31	19:57 (T06)
17:01	17:42	8	07:40 (T13)	19:17	35 08:42 (T10)	19:54	73	19:32 (T07)	20:27	71 19:34 (T07)	20:52	24 20:28 (T06)
07:40	07:08		07:31 (T13)	07:22	08:08 (T10)	06:28		06:50 (T09)	05:47	06:50 (T09)	05:31	19:57 (T06)
17:02	17:43	11	07:42 (T13)	19:18	33 08:41 (T10)	19:55	79	19:34 (T07)	20:28	66 19:33 (T07)	20:53	30 20:28 (T06)
07:39	07:06		07:29 (T13)	07:20	08:10 (T10)	06:26		06:48 (T09)	05:46	06:52 (T09)	05:31	19:57 (T06)
17:04	17:44	13	07:42 (T13)	19:20	29 08:39 (T10)	19:56	83	19:35 (T07)	20:29	60 19:32 (T07)	20:53	28 20:29 (T06)
07:39	07:05		07:28 (T13)	07:18	08:11 (T10)	06:25		06:46 (T09)	05:45	06:54 (T09)	05:31	19:59 (T06)
17:05	17:46	15	07:43 (T13)	19:21	26 08:37 (T10)	19:57	88	19:36 (T07)	20:30	54 19:31 (T07)	20:53	30 20:30 (T06)
07:38	07:03		07:26 (T10)	07:17	08:13 (T10)	06:23		06:45 (T09)	05:44	06:59 (T09)	05:31	20:07 (T06)
17:06	17:47	16	07:42 (T13)	19:22	20 08:33 (T10)	19:58	91	19:37 (T07)	20:31	44 19:31 (T07)	20:54	18 20:30 (T06)
07:37	07:02		07:24 (T10)	07:15	08:18 (T10)	06:21		06:43 (T09)	05:43	18:56 (T07)	05:31	19:59 (T06)
17:07	17:48	18	07:42 (T13)	19:23	12 08:30 (T10)	19:59	96	19:38 (T07)	20:32	34 19:30 (T07)	20:54	20 20:30 (T06)
07:37	07:00		07:23 (T10)	07:13		06:20		06:42 (T09)	05:42	18:57 (T07)	05:31	20:03 (T06)
17:09	17:50	19	07:42 (T10)	19:24		20:01	100	19:40 (T07)	20:33	32 19:29 (T07)	20:54	25 20:30 (T06)
07:36	06:59		07:21 (T10)	07:11		06:18		06:41 (T09)	05:41	18:58 (T07)	05:31	19:59 (T06)
17:10	17:51	23	07:44 (T10)	19:25		20:01	102	19:40 (T07)	20:34	30 19:28 (T07)	20:54	28 20:30 (T06)
07:35	06:57		07:20 (T10)	07:09		06:17		06:40 (T09)	05:40	18:59 (T07)	05:32	19:59 (T06)
17:11	17:52	26	07:46 (T10)	19:27		20:02	105	19:42 (T07)	20:35	32 20:12 (T06)	20:55	32 20:31 (T06)
07:34	06:56		07:18 (T10)	07:08		06:15		06:40 (T09)	05:39	19:02 (T07)	05:32	19:59 (T06)
17:12	17:54	29	07:47 (T10)	19:28		20:03	105	19:41 (T07)	20:36	32 20:14 (T06)	20:55	32 20:31 (T06)
07:33	06:54		07:16 (T10)	07:06		06:14		06:40 (T09)	05:39	19:03 (T07)	05:32	20:02 (T06)
17:14	17:55	32	07:48 (T10)	19:29		20:04	106	19:42 (T07)	20:37	30 20:14 (T06)	20:55	27 20:30 (T06)
07:33	06:52		07:15 (T10)	07:04		06:12		06:39 (T09)	05:38	19:05 (T07)	05:33	20:13 (T06)
17:15	17:56	34	07:49 (T10)	19:30		20:05	106	19:41 (T07)	20:38	24 20:15 (T06)	20:55	18 20:31 (T06)
07:32	06:51		07:13 (T10)	07:02		06:11		06:39 (T09)	05:37	19:12 (T07)	05:33	20:00 (T06)
17:16	17:57	37	07:50 (T10)	19:31		20:06	108	19:42 (T07)	20:39	20 20:16 (T06)	20:55	27 20:31 (T06)
07:31				07:01		06:09		06:39 (T09)	05:36	20:00 (T06)	05:33	19:59 (T06)
17:18				19:33		20:08	108	19:42 (T07)	20:40	17 20:17 (T06)	20:55	26 20:30 (T06)
07:30				06:59		06:08		06:39 (T09)	05:36	20:04 (T06)	05:34	20:07 (T06)
17:19				19:34		20:09	107	19:41 (T07)	20:41	14 20:18 (T06)	20:55	16 20:31 (T06)
07:29				06:57					05:35	19:59 (T06)		
17:20				19:35					20:41	18 20:19 (T06)		
291	294		369			401		453		459		
	290		805			1904		2001		716		
	0.40		0.47			0.54		0.58		0.63		
	1.00		1.00			1.00		1.00		1.00		
	0.70		0.70			0.73		0.72		0.65		
	0.28		0.33			0.39		0.42		0.41		
	81		266			750		840		293		

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: 246 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2562)

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		20:00 (T06)	06:00		06:55 (T09)	06:34		06:57 (T09)	07:07		07:45 (T10)	07:44		07:22		
	20:55	30	20:30 (T06)	20:35	72	19:47 (T07)	19:48	53	19:27 (T07)	18:54	41	08:26 (T10)	18:04		16:37		
2	05:35		20:01 (T06)	06:01		06:54 (T09)	06:35		06:58 (T09)	07:08		07:44 (T10)	07:46		07:23		
	20:55	24	20:31 (T06)	20:34	76	19:48 (T07)	19:46	48	19:26 (T07)	18:53	43	08:27 (T10)	18:03		16:37		
3	05:35		20:01 (T06)	06:02		06:53 (T09)	06:36		07:02 (T09)	07:09		07:43 (T10)	07:47		07:24		
	20:55	22	20:30 (T06)	20:33	81	19:48 (T07)	19:45	36	19:24 (T05)	18:51	44	08:27 (T10)	18:02		16:37		
4	05:36		20:02 (T06)	06:03		06:59 (T09)	06:37		18:57 (T05)	07:10		07:42 (T10)	07:48		07:25		
	20:54	22	20:30 (T06)	20:32	80	19:48 (T07)	19:43	25	19:22 (T05)	18:49	45	08:27 (T10)	18:01		16:36		
5	05:37		20:03 (T06)	06:04		06:51 (T09)	06:38		18:57 (T05)	07:12		07:41 (T10)	07:49		07:26		
	20:54	23	20:30 (T06)	20:31	79	19:47 (T07)	19:41	23	19:20 (T05)	18:47	46	08:27 (T10)	17:59		16:36		
6	05:37		20:02 (T06)	06:05		06:53 (T09)	06:39		18:59 (T05)	07:13		07:41 (T10)	06:51		07:27		
	20:54	23	20:30 (T06)	20:29	80	19:48 (T07)	19:39	20	19:19 (T05)	18:46	45	08:26 (T10)	16:58		16:36		
7	05:38		20:06 (T06)	06:06		06:50 (T09)	06:40		18:59 (T05)	07:14		07:41 (T10)	06:52		07:28		
	20:54	21	20:30 (T06)	20:28	86	19:49 (T07)	19:38	19	19:18 (T05)	18:44	46	08:27 (T10)	16:57		16:36		
8	05:39		20:12 (T06)	06:08		06:49 (T09)	06:42		19:01 (T05)	07:15		07:40 (T10)	06:53		07:29		
	20:53	16	20:29 (T06)	20:27	88	19:49 (T07)	19:36	15	19:16 (T05)	18:42	47	08:27 (T10)	16:56		16:36		
9	05:39		20:06 (T06)	06:09		07:01 (T09)	06:43		19:02 (T05)	07:16		07:40 (T10)	06:55		07:30		
	20:53	17	20:29 (T06)	20:25	82	19:50 (T07)	19:34	12	19:14 (T05)	18:40	46	08:26 (T10)	16:54		16:36		
10	05:40		20:05 (T06)	06:10		06:49 (T09)	06:44		19:05 (T05)	07:17		07:40 (T10)	06:56		07:31		
	20:53	18	20:29 (T06)	20:24	92	19:50 (T07)	19:32	7	19:12 (T05)	18:39	46	08:26 (T10)	16:53		16:36		
11	05:41		20:05 (T06)	06:11		06:49 (T09)	06:45			07:18		07:41 (T10)	06:57		07:32		
	20:52	16	20:28 (T06)	20:23	87	19:47 (T07)	19:31			18:37	44	08:25 (T10)	16:52		16:36		
12	05:41		20:13 (T06)	06:12		06:48 (T09)	06:46			07:20		07:43 (T10)	06:58		07:33		
	20:52	9	20:27 (T06)	20:21	89	19:48 (T07)	19:29			18:35	42	08:25 (T10)	16:51		16:36		
13	05:42		20:07 (T06)	06:13		06:48 (T09)	06:47			07:21		07:44 (T10)	07:00		07:33		
	20:51	19	20:27 (T06)	20:20	98	19:49 (T07)	19:27			18:34	40	08:24 (T10)	16:50		16:36		
14	05:43		20:08 (T06)	06:14		06:49 (T09)	06:48			07:22		07:45 (T10)	07:01		07:34		
	20:51	16	20:27 (T06)	20:18	97	19:49 (T07)	19:25			18:32	38	08:23 (T10)	16:49		16:36		
15	05:44		20:09 (T06)	06:15		06:46 (T09)	06:49			07:23		07:46 (T10)	07:02		07:35		
	20:50	15	20:26 (T06)	20:17	107	19:49 (T07)	19:23			18:30	36	08:22 (T10)	16:48		16:36		
16	05:45		19:19 (T07)	06:16		06:47 (T09)	06:50			07:24		07:48 (T10)	07:04		07:36		
	20:49	17	20:25 (T06)	20:16	104	19:49 (T07)	19:22			18:29	33	08:21 (T10)	16:47		16:36		
17	05:46		19:16 (T07)	06:17		06:47 (T09)	06:51			07:26		07:49 (T10)	07:05		07:36		
	20:49	25	20:25 (T06)	20:14	101	19:49 (T07)	19:20			18:27	31	08:20 (T10)	16:46		16:37		
18	05:46		19:14 (T07)	06:18		06:47 (T09)	06:52			07:27		07:50 (T10)	07:06		07:37		
	20:48	22	20:24 (T06)	20:13	96	19:49 (T07)	19:18			18:25	28	08:18 (T10)	16:45		16:37		
19	05:47		19:12 (T07)	06:20		06:46 (T09)	06:54			07:28		07:51 (T10)	07:07		07:38		
	20:47	25	20:24 (T06)	20:11	106	19:48 (T07)	19:16			18:24	25	08:16 (T10)	16:45		16:37		
20	05:48		19:11 (T07)	06:21		06:46 (T09)	06:55			07:29		07:53 (T10)	07:09		07:38		
	20:47	25	20:23 (T06)	20:09	95	19:47 (T07)	19:14			18:22	22	08:15 (T10)	16:44		16:38		
21	05:49		19:09 (T07)	06:22		06:46 (T09)	06:56			07:30		07:54 (T10)	07:10		07:39		
	20:46	13	20:21 (T06)	20:08	93	19:46 (T07)	19:12			18:21	19	08:13 (T13)	16:43		16:38		
22	05:50		19:08 (T07)	06:23		06:53 (T09)	06:57			07:32		07:55 (T10)	07:11		07:40		
	20:45	21	19:39 (T07)	20:06	84	19:44 (T07)	19:11			18:19	17	08:12 (T13)	16:42		16:39		
23	05:51		19:06 (T07)	06:24		06:51 (T09)	06:58		08:05 (T10)	07:33		07:57 (T10)	07:12		07:40		
	20:44	33	19:39 (T07)	20:05	91	19:43 (T07)	19:09	7	08:12 (T10)	18:17	16	08:13 (T13)	16:42		16:39		
24	05:52		19:05 (T07)	06:25		06:53 (T09)	06:59		07:59 (T10)	07:34		07:58 (T13)	07:14		07:40		
	20:43	33	19:38 (T07)	20:03	78	19:41 (T07)	19:07	12	08:17 (T10)	18:16	14	08:12 (T13)	16:41		16:40		
25	05:53		07:11 (T09)	06:26		06:52 (T09)	07:00		07:55 (T10)	07:35		07:59 (T13)	07:15		07:41		
	20:42	37	19:40 (T07)	20:02	84	19:39 (T07)	19:05	22	08:19 (T10)	18:14	12	08:11 (T13)	16:40		16:40		
26	05:54		07:04 (T09)	06:27		06:51 (T09)	07:01		07:53 (T10)	07:37		08:01 (T13)	07:16		07:41		
	20:42	42	19:42 (T07)	20:00	81	19:38 (T07)	19:03	25	08:21 (T10)	18:13	10	08:11 (T13)	16:40		16:41		
27	05:55		07:02 (T09)	06:28		06:52 (T09)	07:02		07:51 (T10)	07:38		08:02 (T13)	07:17		07:42		
	20:41	51	19:43 (T07)	19:57	70	19:36 (T07)	19:02	29	08:22 (T10)	18:11	8	08:10 (T13)	16:39		16:41		
28	05:56		07:00 (T09)	06:29		06:53 (T09)	07:04		07:50 (T10)	07:39		08:03 (T13)	07:18		07:42		
	20:40	65	19:44 (T07)	19:55	73	19:34 (T07)	19:00	22	08:23 (T10)	18:10	5	08:08 (T13)	16:39		16:42		
29	05:57		06:59 (T09)	06:31		06:54 (T09)	07:05		07:47 (T10)	07:40		08:05 (T13)	07:19		07:42		
	20:39	65	19:45 (T07)	19:53	68	19:33 (T07)	18:58	36	08:24 (T10)	18:09	2	08:07 (T13)	16:38		16:43		
30	05:58		06:57 (T09)	06:32		06:55 (T09)	07:06		07:46 (T10)	07:42			07:21		07:42		
	20:37	65	19:46 (T07)	19:52	64	19:31 (T07)	18:56	32	08:25 (T10)	18:07			16:38		16:44		
31	05:59		07:02 (T09)	06:33		06:56 (T09)				07:43					07:43		
	20:36	71	19:46 (T07)	19:50	58	19:29 (T07)				18:06					16:44		
Potential sun hours	466			433			376			343			293			281	
Total, worst case	901			2640			443			891							
Sun reduction	0.67			0.63			0.56			0.44							
Oper. time red.	1.00			1.00			1.00			1.00							
Wind dir. red.	0.70			0.73			0.72			0.70							
Total reduction	0.47			0.46			0.40			0.31							
Total, real	420			1211			178			275							

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: 249 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2564)

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		
07:43	07:28			06:49	07:12 (T10)	06:55		06:06		06:55 (T09)	05:35	18:36 (T07)
16:45	17:22			17:59	27 07:39 (T10)	19:36		20:10	103	19:48 (T04)	20:42	51 19:40 (T07)
07:43	07:27			06:48	07:10 (T10)	06:53		06:05		06:55 (T09)	05:34	18:35 (T07)
16:46	17:23			18:00	29 07:39 (T10)	19:37		20:11	100	19:46 (T04)	20:43	65 19:42 (T07)
07:43	07:26			06:46	07:08 (T10)	06:52		06:03		06:57 (T09)	05:34	18:36 (T07)
16:47	17:24			18:01	31 07:39 (T10)	19:38		20:12	96	19:46 (T04)	20:44	48 19:42 (T07)
07:43	07:25			06:44	07:06 (T10)	06:50	19:08 (T05)	06:02		07:00 (T09)	05:33	18:36 (T07)
16:48	17:26			18:02	33 07:39 (T10)	19:40	12 19:20 (T05)	20:13	90	19:45 (T04)	20:45	58 19:42 (T07)
07:43	07:23			06:43	07:05 (T10)	06:48		06:01		07:04 (T09)	05:33	18:37 (T07)
16:49	17:27			18:04	35 07:40 (T10)	19:41	17 19:21 (T05)	20:14	81	19:43 (T07)	20:45	45 19:40 (T07)
07:43	07:22			06:41	07:03 (T10)	06:46		05:59		18:30 (T07)	05:32	18:38 (T07)
16:50	17:28			18:05	37 07:40 (T10)	19:42	33 19:21 (T05)	20:16	73	19:43 (T07)	20:46	57 19:42 (T07)
07:43	07:21			06:39	07:01 (T10)	06:45		05:58		18:30 (T07)	05:32	18:38 (T07)
16:51	17:30			18:06	39 07:40 (T10)	19:43	42 19:22 (T05)	20:17	73	19:43 (T07)	20:47	52 19:41 (T07)
07:43	07:20			06:38	07:02 (T10)	06:43		05:57		18:30 (T07)	05:32	18:38 (T07)
16:52	17:31			18:07	38 07:40 (T10)	19:44	49 19:24 (T05)	20:18	74	19:44 (T07)	20:48	50 19:41 (T07)
07:43	07:19			06:36	07:01 (T10)	06:41		05:56		18:30 (T07)	05:32	18:39 (T07)
16:53	17:32			18:09	39 07:40 (T10)	19:45	55 19:25 (T05)	20:19	74	19:44 (T07)	20:48	51 19:42 (T07)
07:42	07:17			06:34	07:01 (T10)	06:40		05:54		18:30 (T07)	05:31	18:40 (T07)
16:54	17:34			18:10	38 07:39 (T10)	19:47	60 19:26 (T05)	20:20	74	19:44 (T07)	20:49	43 19:36 (T07)
07:42	07:16			06:32	07:01 (T10)	06:38		05:53		18:29 (T07)	05:31	18:40 (T07)
16:55	17:35			18:11	37 07:38 (T10)	19:48	66 19:28 (T05)	20:21	74	19:43 (T07)	20:50	51 19:42 (T07)
07:42	07:15			06:31	07:02 (T10)	06:36		05:52		18:29 (T07)	05:31	18:40 (T07)
16:56	17:36			18:12	36 07:38 (T10)	19:49	69 19:28 (T05)	20:22	74	19:43 (T07)	20:50	53 19:41 (T07)
07:41	07:13			07:29		06:34		05:51		18:29 (T07)	05:31	18:40 (T07)
16:58	17:38			19:13	35 08:37 (T10)	19:50	73 19:29 (T05)	20:23	75	19:44 (T07)	20:51	51 19:38 (T07)
07:41	07:12			07:27		06:33		05:50		18:29 (T07)	05:31	18:41 (T07)
16:59	17:39			19:15	34 08:36 (T10)	19:51	77 19:31 (T05)	20:25	75	19:44 (T07)	20:51	47 19:41 (T07)
07:41	07:11			07:25		06:31		05:49		18:29 (T07)	05:31	18:41 (T07)
17:00	17:40			19:16	32 08:34 (T10)	19:52	80 19:31 (T05)	20:26	75	19:44 (T07)	20:52	46 19:41 (T07)
07:40	07:09			07:24		06:29		05:48		18:29 (T07)	05:31	18:41 (T07)
17:01	17:42			19:17	30 08:33 (T10)	19:54	83 19:31 (T05)	20:27	75	19:44 (T07)	20:52	51 19:40 (T07)
07:40	07:08			07:22		06:28		05:47		18:29 (T07)	05:31	18:42 (T07)
17:02	17:43			19:18	27 08:32 (T10)	19:55	82 19:31 (T05)	20:28	74	19:43 (T07)	20:53	45 19:42 (T07)
07:39	07:06			07:20		06:26		05:46		18:30 (T07)	05:31	18:42 (T07)
17:04	17:44			19:20	23 08:29 (T10)	19:56	84 19:31 (T05)	20:29	73	19:43 (T07)	20:53	49 19:42 (T07)
07:39	07:05			07:18		06:25		05:45		18:30 (T07)	05:31	18:43 (T07)
17:05	17:46			19:21	18 08:26 (T10)	19:57	89 19:37 (T04)	20:30	73	19:43 (T07)	20:53	41 19:39 (T07)
07:38	07:03			07:17		06:23		05:44		18:31 (T07)	05:31	18:43 (T07)
17:06	17:47			19:22	11 08:22 (T10)	19:58	94 19:37 (T04)	20:31	73	19:44 (T07)	20:54	55 19:43 (T07)
07:37	07:02			07:15		06:21		05:43		18:31 (T07)	05:31	18:43 (T07)
17:07	17:48			19:23		19:59	97 19:38 (T04)	20:32	73	19:44 (T07)	20:54	35 19:36 (T07)
07:37	07:00			07:13		06:20		05:42		18:31 (T07)	05:31	18:43 (T07)
17:09	17:50			19:24		20:01	99 19:40 (T04)	20:33	72	19:43 (T07)	20:54	52 19:43 (T07)
07:36	06:59			07:11		06:18		05:41		18:31 (T07)	05:31	18:43 (T07)
17:10	17:51			19:25		20:01	101 19:40 (T04)	20:34	72	19:43 (T07)	20:54	51 19:42 (T07)
07:35	06:57	07:20 (T10)		07:09		06:17		05:40		18:31 (T07)	05:32	18:44 (T07)
17:11	17:52	9 07:29 (T10)		19:27		20:02	103 19:42 (T04)	20:35	72	19:43 (T07)	20:55	56 19:44 (T07)
07:34	06:56	07:18 (T10)		07:08		06:15		05:39		18:32 (T07)	05:32	18:44 (T07)
17:12	17:54	14 07:32 (T10)		19:28		20:03	104 19:42 (T04)	20:36	71	19:43 (T07)	20:55	46 19:44 (T07)
07:33	06:54	07:16 (T10)		07:06		06:14		05:39		18:32 (T07)	05:32	18:44 (T07)
17:14	17:55	18 07:34 (T10)		19:29		20:04	104 19:44 (T04)	20:37	71	19:43 (T07)	20:55	43 19:44 (T07)
07:33	06:52	07:15 (T10)		07:04		06:12		05:38		18:33 (T07)	05:33	18:44 (T07)
17:15	17:56	21 07:36 (T10)		19:30		20:05	105 19:44 (T04)	20:38	57	19:42 (T07)	20:55	46 19:42 (T07)
07:32	06:51	07:13 (T10)		07:02		06:11		05:37		18:34 (T07)	05:33	18:44 (T07)
17:16	17:57	24 07:37 (T10)		19:31		20:06	105 19:46 (T04)	20:39	61	19:43 (T07)	20:55	50 19:45 (T07)
07:31				07:01		06:09		05:36		18:34 (T07)	05:34	18:44 (T07)
17:18				19:33		20:08	105 19:47 (T04)	20:40	57	19:38 (T07)	20:55	57 19:44 (T07)
07:30				06:59		06:08		05:36		18:35 (T07)	05:34	18:44 (T07)
17:19				19:34		20:09	106 19:48 (T04)	20:41	66	19:43 (T07)	20:55	45 19:42 (T07)
07:29				06:57				05:35		18:35 (T07)		
17:20				19:35				20:41	54	19:42 (T07)		
291	294		369		401			453			459	
	86		629		2094			2305			1490	
	0.40		0.47		0.54			0.58			0.63	
	1.00		1.00		1.00			1.00			1.00	
	0.71		0.71		0.73			0.71			0.71	
	0.28		0.33		0.39			0.41			0.45	
	24		209		822			949			665	

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: 249 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2564)

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	18:44 (T07)	06:00		18:40 (T07)	06:34		06:57 (T09)	07:07		07:42 (T10)	07:44		07:22			
	20:55	57	19:44 (T07)	20:35	70	19:53 (T07)	19:48	68	19:27 (T05)	18:54	35	08:17 (T10)	18:04	16:37			
2	05:35		18:44 (T07)	06:01		18:40 (T07)	06:35		06:58 (T09)	07:08		07:40 (T10)	07:46	07:23			
	20:55	40	19:43 (T07)	20:34	74	19:54 (T07)	19:46	65	19:26 (T05)	18:53	37	08:17 (T10)	18:03	16:37			
3	05:35		18:44 (T07)	06:02		18:39 (T07)	06:36		06:59 (T09)	07:09		07:39 (T10)	07:47	07:24			
	20:55	62	19:46 (T07)	20:33	74	19:54 (T07)	19:45	59	19:24 (T05)	18:51	38	08:17 (T10)	18:02	16:37			
4	05:36		18:44 (T07)	06:03		18:39 (T07)	06:37		07:00 (T09)	07:10		07:39 (T10)	07:48	07:25			
	20:54	41	19:47 (T07)	20:32	72	19:51 (T07)	19:43	52	19:22 (T05)	18:49	38	08:17 (T10)	18:01	16:36			
5	05:37		18:45 (T07)	06:04		18:39 (T07)	06:38		07:01 (T09)	07:12		07:38 (T10)	07:49	07:26			
	20:54	45	19:48 (T07)	20:31	66	19:53 (T07)	19:41	48	19:20 (T05)	18:47	39	08:17 (T10)	17:59	16:36			
6	05:37		18:44 (T07)	06:05		18:39 (T07)	06:39		07:03 (T09)	07:13		07:37 (T10)	06:51	07:27			
	20:54	48	19:47 (T07)	20:29	71	19:53 (T07)	19:39	41	19:19 (T05)	18:46	39	08:16 (T10)	16:58	16:36			
7	05:38		18:44 (T07)	06:06		18:39 (T07)	06:40		07:04 (T09)	07:14		07:38 (T10)	06:52	07:28			
	20:54	52	19:48 (T07)	20:28	70	19:53 (T07)	19:38	35	19:18 (T05)	18:44	39	08:17 (T10)	16:57	16:36			
8	05:39		18:43 (T07)	06:08		18:39 (T07)	06:42		19:00 (T05)	07:15		07:38 (T10)	06:53	07:29			
	20:53	56	19:48 (T07)	20:27	73	19:52 (T07)	19:36	16	19:16 (T05)	18:42	38	08:16 (T10)	16:56	16:36			
9	05:39		18:44 (T07)	06:09		07:12 (T09)	06:43		19:01 (T05)	07:16		07:39 (T10)	06:55	07:30			
	20:53	53	19:48 (T07)	20:25	79	19:52 (T07)	19:34	13	19:14 (T05)	18:40	36	08:15 (T10)	16:54	16:36			
10	05:40		18:44 (T07)	06:10		07:08 (T09)	06:44			07:17		07:40 (T10)	06:56	07:31			
	20:53	60	19:47 (T07)	20:24	90	19:53 (T04)	19:32			18:39	35	08:15 (T10)	16:53	16:36			
11	05:41		18:43 (T07)	06:11		07:06 (T09)	06:45			07:18		07:41 (T10)	06:57	07:32			
	20:52	53	19:49 (T07)	20:23	84	19:55 (T04)	19:31			18:37	33	08:14 (T10)	16:52	16:36			
12	05:41		18:43 (T07)	06:12		07:07 (T09)	06:46			07:20		07:43 (T10)	06:58	07:33			
	20:52	44	19:46 (T07)	20:21	87	19:54 (T04)	19:29			18:35	30	08:13 (T10)	16:51	16:36			
13	05:42		18:43 (T07)	06:13		07:04 (T09)	06:47			07:21		07:44 (T10)	07:00	07:33			
	20:51	50	19:50 (T07)	20:20	94	19:56 (T04)	19:27			18:34	28	08:12 (T10)	16:50	16:36			
14	05:43		18:43 (T07)	06:14		07:02 (T09)	06:48			07:22		07:45 (T10)	07:01	07:34			
	20:51	52	19:51 (T07)	20:18	99	19:55 (T04)	19:25			18:32	26	08:11 (T10)	16:49	16:36			
15	05:44		18:43 (T07)	06:15		07:00 (T09)	06:49			07:23		07:46 (T10)	07:02	07:35			
	20:50	56	19:51 (T07)	20:17	105	19:55 (T04)	19:23			18:30	23	08:09 (T10)	16:48	16:36			
16	05:45		18:42 (T07)	06:16		06:59 (T09)	06:50			07:24		07:48 (T10)	07:04	07:36			
	20:49	65	19:49 (T07)	20:16	103	19:53 (T04)	19:22			18:29	20	08:08 (T10)	16:47	16:36			
17	05:46		18:42 (T07)	06:17		06:58 (T09)	06:51			07:26		07:49 (T10)	07:05	07:36			
	20:49	63	19:51 (T07)	20:14	104	19:52 (T04)	19:20			18:27	16	08:05 (T10)	16:46	16:37			
18	05:46		18:42 (T07)	06:18		07:01 (T09)	06:52			07:27		07:50 (T10)	07:06	07:37			
	20:48	52	19:49 (T07)	20:13	100	19:50 (T04)	19:18			18:25	12	08:02 (T10)	16:45	16:37			
19	05:47		18:42 (T07)	06:20		06:57 (T09)	06:54			07:28		07:51 (T10)	07:07	07:38			
	20:47	55	19:52 (T07)	20:11	100	19:49 (T04)	19:16			18:24	6	07:57 (T10)	16:45	16:37			
20	05:48		18:42 (T07)	06:21		06:56 (T09)	06:55			07:29			07:09	07:38			
	20:47	61	19:53 (T07)	20:09	94	19:47 (T04)	19:14			18:22			16:44	16:38			
21	05:49		18:42 (T07)	06:22		06:55 (T09)	06:56			07:30			07:10	07:39			
	20:46	49	19:53 (T07)	20:08	92	19:46 (T04)	19:12			18:21			16:43	16:38			
22	05:50		18:42 (T07)	06:23		06:56 (T09)	06:57			07:32			07:11	07:40			
	20:45	56	19:54 (T07)	20:06	89	19:44 (T04)	19:11			18:19			16:42	16:39			
23	05:51		18:41 (T07)	06:24		06:55 (T09)	06:58			07:33			07:12	07:40			
	20:44	72	19:53 (T07)	20:05	96	19:43 (T04)	19:09			18:17			16:42	16:39			
24	05:52		18:40 (T07)	06:25		06:54 (T09)	06:59			07:58 (T10)	07:34		07:14	07:40			
	20:43	61	19:53 (T07)	20:03	84	19:41 (T04)	19:07	5		08:03 (T10)	18:16		16:41	16:40			
25	05:53		18:40 (T07)	06:26		06:53 (T09)	07:00			07:53 (T10)	07:35		07:15	07:41			
	20:42	61	19:51 (T07)	20:02	88	19:39 (T04)	19:05	14		08:09 (T10)	18:14		16:40	16:40			
26	05:54		18:40 (T07)	06:27		06:53 (T09)	07:01			07:52 (T10)	07:37		07:16	07:41			
	20:42	56	19:54 (T07)	20:00	82	19:34 (T05)	19:03	16		08:11 (T10)	18:13		16:40	16:41			
27	05:55		18:40 (T07)	06:28		06:56 (T09)	07:02			07:47 (T10)	07:38		07:17	07:42			
	20:41	58	19:47 (T07)	19:57	71	19:32 (T05)	19:02	23		08:13 (T10)	18:11		16:39	16:41			
28	05:56		18:40 (T07)	06:29		06:53 (T09)	07:04			07:45 (T10)	07:39		07:18	07:42			
	20:40	63	19:54 (T07)	19:55	83	19:33 (T05)	19:00	15		08:14 (T10)	18:10		16:39	16:42			
29	05:57		18:40 (T07)	06:31		06:54 (T09)	07:05			07:43 (T10)	07:40		07:19	07:42			
	20:39	63	19:52 (T07)	19:53	80	19:32 (T05)	18:58	30		08:15 (T10)	18:09		16:38	16:43			
30	05:58		18:40 (T07)	06:32		06:55 (T09)	07:06			07:42 (T10)	07:42		07:21	07:42			
	20:37	58	19:54 (T07)	19:52	77	19:31 (T05)	18:56	26		08:15 (T10)	18:07		16:38	16:44			
31	05:59		18:40 (T07)	06:33		06:56 (T09)					07:43			07:43			
	20:36	74	19:54 (T07)	19:50	73	19:29 (T05)				18:06				16:44			
Potential sun hours	466			433		376			343			293		281			
Total, worst case	1736			2624		526			568								
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			0.72		0.73			0.71								
Total reduction	0.47			0.45		0.41			0.31								
Total, real	824			1189		215			177								

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: 264 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2570)

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	08:20 (T10)	07:28			07:51 (T09)	06:49		06:55		18:14 (T06)	06:06			05:35		
	16:45	80 16:20 (T07)	17:22	88		16:58 (T05)	17:59		19:36	34	18:48 (T06)	20:10			20:42		
2	07:43	08:21 (T10)	07:27			07:50 (T09)	06:48		06:53		18:15 (T06)	06:05			05:34		
	16:46	80 16:21 (T07)	17:23	91		17:00 (T05)	18:00		19:37	31	18:46 (T06)	20:11			20:43		
3	07:43	08:21 (T10)	07:26			07:49 (T09)	06:46		06:52		18:17 (T06)	06:03			05:34		
	16:47	81 16:22 (T07)	17:24	95		17:02 (T05)	18:01		19:38	26	18:43 (T06)	20:12			20:44		
4	07:43	08:22 (T10)	07:25			07:48 (T09)	06:44		06:50		18:20 (T06)	06:02			05:33		
	16:48	81 16:23 (T07)	17:26	97		17:03 (T05)	18:02		19:40	21	18:41 (T06)	20:13			20:45		
5	07:43	08:23 (T10)	07:23			07:47 (T09)	06:43		06:48		18:23 (T06)	06:01			05:33		
	16:49	81 16:24 (T07)	17:27	100		17:05 (T05)	18:04		19:41	14	18:37 (T06)	20:14			20:46		
6	07:43	08:24 (T10)	07:22			07:46 (T09)	06:41		17:32 (T06)		06:46	05:59			05:32		
	16:50	79 16:24 (T07)	17:28	102		17:07 (T05)	18:05	12	17:44 (T06)		19:42	20:16			20:46		
7	07:43	08:25 (T10)	07:21			07:44 (T09)	06:39		17:27 (T06)		06:45	05:58			05:32		
	16:51	79 16:25 (T07)	17:30	102		17:07 (T05)	18:06	19	17:46 (T06)		19:43	20:17			20:47		
8	07:43	08:25 (T10)	07:20			07:43 (T09)	06:38		17:25 (T06)		06:43	05:57			05:32		
	16:52	80 16:25 (T07)	17:31	103		17:09 (T05)	18:07	23	17:48 (T06)		19:44	20:18			20:48		
9	07:43	08:26 (T10)	07:19			07:44 (T09)	06:36		17:22 (T06)		06:41	05:56			05:32		
	16:53	79 16:26 (T07)	17:32	101		17:11 (T05)	18:09	27	17:49 (T06)		19:45	20:19			20:48		
10	07:42	08:27 (T10)	07:17			07:43 (T09)	06:34		17:20 (T06)		06:40	05:54			05:31		
	16:54	79 16:27 (T07)	17:34	99		17:12 (T05)	18:10	30	17:50 (T06)		19:47	20:20			20:49		
11	07:42	08:28 (T10)	07:16			07:43 (T09)	06:32		17:18 (T06)		06:38	05:53			05:31		
	16:55	77 16:27 (T07)	17:35	95		17:13 (T05)	18:11	33	17:51 (T06)		19:48	20:21			20:50		
12	07:42	08:29 (T10)	07:15			07:44 (T09)	06:31		17:17 (T06)		06:36	05:52			05:31		
	16:56	76 16:28 (T07)	17:36	88		17:15 (T05)	18:12	36	17:53 (T06)		19:49	20:22			20:50		
13	07:41	08:31 (T10)	07:13			07:43 (T09)	07:29		18:16 (T06)		06:34	05:51			05:31		
	16:58	75 16:29 (T07)	17:38	76		17:16 (T05)	19:13	38	18:54 (T06)		19:50	20:23			20:51		
14	07:41	08:32 (T10)	07:12			07:44 (T09)	07:27		18:14 (T06)		06:33	05:50			05:31		
	16:59	72 16:29 (T07)	17:39	77		17:17 (T05)	19:15	41	18:55 (T06)		19:51	20:25			20:51		
15	07:41	08:35 (T10)	07:11			07:44 (T09)	07:25		18:13 (T06)		06:31	05:49			05:31		
	17:00	69 16:30 (T07)	17:40	75		17:16 (T05)	19:16	43	18:56 (T06)		19:52	20:26			20:52		
16	07:40	08:37 (T10)	07:09			07:45 (T09)	07:24		18:12 (T06)		06:29	05:48			05:31		
	17:01	65 16:30 (T07)	17:42	72		17:16 (T05)	19:17	45	18:57 (T06)		19:54	20:27			20:52		
17	07:40	15:36 (T07)	07:08			07:46 (T09)	07:22		18:12 (T06)		06:28	05:47			05:31		
	17:02	55 16:31 (T07)	17:43	70		17:16 (T05)	19:18	47	18:59 (T06)		19:55	20:28			20:53		
18	07:39	15:35 (T07)	07:06			07:46 (T09)	07:20		18:11 (T06)		06:26	05:46			05:31		
	17:03	56 16:31 (T07)	17:44	68		17:15 (T05)	19:20	49	19:00 (T04)		19:56	20:29			20:53		
19	07:39	15:35 (T07)	07:05			07:48 (T09)	07:18		18:10 (T06)		06:25	05:45			05:31		
	17:05	56 16:31 (T07)	17:46	64		17:15 (T05)	19:21	51	19:01 (T04)		19:57	20:30			20:53		
20	07:38	15:36 (T07)	07:03			07:48 (T09)	07:17		18:10 (T06)		06:23	05:44			05:31		
	17:06	56 16:32 (T07)	17:47	61		17:14 (T05)	19:22	50	19:00 (T04)		19:58	20:31			20:54		
21	07:37	15:36 (T07)	07:02			07:49 (T09)	07:15		18:10 (T06)		06:21	05:43			05:31		
	17:07	56 16:32 (T07)	17:48	55		17:12 (T05)	19:23	50	19:00 (T04)		19:59	20:32			20:54		
22	07:37	15:37 (T07)	07:00			07:52 (T09)	07:13		18:10 (T06)		06:20	05:42			05:31		
	17:08	55 16:32 (T07)	17:50	49		17:11 (T05)	19:24	48	18:58 (T06)		20:01	20:33			20:54		
23	07:36	15:37 (T07)	06:59			07:53 (T09)	07:11		18:10 (T06)		06:18	05:41			05:31		
	17:10	55 16:32 (T07)	17:51	41		17:09 (T05)	19:25	48	18:58 (T06)		20:01	20:34			20:54		
24	07:35	08:00 (T09)	06:57			07:58 (T09)	07:09		18:09 (T06)		06:17	05:40			05:32		
	17:11	57 16:32 (T07)	17:52	29		17:07 (T05)	19:27	48	18:57 (T06)		20:02	20:35			20:55		
25	07:34	07:58 (T09)	06:56			16:52 (T05)	07:08		18:09 (T06)		06:15	05:39			05:32		
	17:12	64 16:32 (T07)	17:54	12		17:04 (T05)	19:28	47	18:56 (T06)		20:03	20:36			20:55		
26	07:33	07:58 (T09)	06:54				07:06		18:10 (T06)		06:14	05:39			05:32		
	17:14	67 16:33 (T07)	17:55				19:29	46	18:56 (T06)		20:04	20:37			20:55		
27	07:33	07:57 (T09)	06:52				07:04		18:10 (T06)		06:12	05:38			05:33		
	17:15	70 16:33 (T07)	17:56				19:30	45	18:55 (T06)		20:05	20:38			20:55		
28	07:32	07:56 (T09)	06:51				07:02		18:11 (T06)		06:11	05:37			05:33		
	17:16	72 16:33 (T07)	17:57				19:31	43	18:54 (T06)		20:06	20:39			20:55		
29	07:31	07:55 (T09)					07:01		18:11 (T06)		06:09	05:36			05:33		
	17:18	74 16:33 (T07)					19:33	41	18:52 (T06)		20:08	20:40			20:55		
30	07:30	07:54 (T09)					06:59		18:12 (T06)		06:08	05:36			05:34		
	17:19	77 16:56 (T05)					19:34	39	18:51 (T06)		20:09	20:41			20:55		
31	07:29	07:53 (T09)					06:57		18:13 (T06)			05:35					
	17:20	83 16:58 (T05)					19:35	37	18:50 (T06)			20:41					
Potential sun hours	291		294			369		401				453			459		
Total, worst case	2186		1910			1036		126									
Sun reduction	0.36		0.40			0.47		0.54									
Oper. time red.	1.00		1.00			1.00		1.00									
Wind dir. red.	0.69		0.70			0.75		0.75									
Total reduction	0.25		0.28			0.35		0.40									
Total, real	539		532			360		50									

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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: 264 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2570)

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	06:00	06:34	07:07	17:55 (T06)	07:44
	20:55	20:35	19:48	18:54	39	18:34 (T06)
2	05:35	06:01	06:35	07:08		17:55 (T06)
	20:55	20:34	19:46	18:53	37	18:32 (T06)
3	05:35	06:02	06:36	07:09		17:56 (T06)
	20:55	20:33	19:45	18:51	34	18:30 (T06)
4	05:36	06:03	06:37	07:10		17:57 (T06)
	20:54	20:32	19:43	18:49	31	18:28 (T06)
5	05:37	06:04	06:38	07:12		17:58 (T06)
	20:54	20:31	19:41	18:47	28	18:26 (T06)
6	05:37	06:05	06:39	07:13		17:59 (T06)
	20:54	20:29	19:39	18:46	25	18:24 (T06)
7	05:38	06:06	06:40	07:14		18:02 (T06)
	20:54	20:28	19:38	18:44	21	18:23 (T06)
8	05:39	06:08	06:42	18:19 (T06)	07:15	18:05 (T06)
	20:53	20:27	19:36	18:32 (T06)	16	18:21 (T06)
9	05:39	06:09	06:43	18:15 (T06)	07:16	18:12 (T06)
	20:53	20:25	19:34	18:35 (T06)	18:40	3
10	05:40	06:10	06:44	18:11 (T06)	07:17	
	20:53	20:24	19:32	18:37 (T06)	18:39	
11	05:41	06:11	06:45	18:09 (T06)	07:18	
	20:52	20:23	19:31	18:39 (T06)	18:37	
12	05:41	06:12	06:46	18:07 (T06)	07:20	
	20:52	20:21	19:29	18:40 (T06)	18:35	
13	05:42	06:13	06:47	18:05 (T06)	07:21	
	20:51	20:20	19:27	18:41 (T06)	18:34	
14	05:43	06:14	06:48	18:03 (T06)	07:22	
	20:51	20:18	19:25	18:42 (T06)	18:32	
15	05:44	06:15	06:49	18:02 (T06)	07:23	
	20:50	20:17	19:23	18:43 (T06)	18:30	
16	05:45	06:16	06:50	18:00 (T06)	07:24	
	20:50	20:16	19:22	18:43 (T06)	18:29	
17	05:46	06:17	06:51	17:59 (T06)	07:26	
	20:49	20:14	19:20	18:43 (T06)	18:27	
18	05:46	06:18	06:52	17:58 (T06)	07:27	
	20:48	20:13	19:18	18:43 (T06)	18:25	14
19	05:47	06:20	06:54	17:57 (T06)	07:28	
	20:47	20:11	19:16	18:43 (T06)	18:24	34
20	05:48	06:21	06:55	17:56 (T06)	07:29	
	20:47	20:09	19:14	18:43 (T06)	18:22	43
21	05:49	06:22	06:56	17:55 (T06)	07:30	
	20:46	20:08	19:12	18:43 (T06)	18:21	50
22	05:50	06:23	06:57	17:55 (T06)	07:32	
	20:45	20:06	19:11	18:44 (T06)	18:19	57
23	05:51	06:24	06:58	17:55 (T06)	07:33	
	20:44	20:05	19:09	18:44 (T04)	18:17	61
24	05:52	06:25	06:59	17:54 (T06)	07:34	
	20:43	20:03	19:07	18:45 (T04)	18:16	66
25	05:53	06:26	07:00	17:54 (T06)	07:35	
	20:42	20:02	19:05	18:45 (T04)	18:14	69
26	05:54	06:27	07:01	17:54 (T06)	07:37	
	20:42	20:00	19:03	18:43 (T04)	18:13	71
27	05:55	06:28	07:02	17:53 (T06)	07:38	
	20:41	19:57	19:02	18:41 (T06)	18:11	73
28	05:56	06:29	07:04	17:53 (T06)	07:39	
	20:40	19:55	19:00	18:39 (T06)	18:10	74
29	05:57	06:31	07:05	17:53 (T06)	07:40	
	20:39	19:53	18:58	18:37 (T06)	18:09	75
30	05:58	06:32	07:06	17:54 (T06)	07:42	
	20:37	19:52	18:56	18:35 (T06)	18:07	75
31	05:59	06:33		07:43	08:13 (T09)	73
	20:36	19:50		18:06	17:44 (T05)	90
Potential sun hours	466	433	376	343	293	281
Total, worst case			939	1086	2189	2305
Sun reduction			0.56	0.44	0.25	0.24
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.75	0.71	0.70	0.67
Total reduction			0.41	0.31	0.17	0.16
Total, real			389	337	381	367

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: 267 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2572)

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	08:23 (T10)	07:28	07:51 (T09)	06:49	17:10 (T06)	06:55	06:06	05:35	
	16:45	82 16:06 (T07)	17:22	80 16:58 (T05)	17:59	29 17:39 (T06)	19:36	20:10	20:42	
2	07:43	08:23 (T10)	07:27	07:50 (T09)	06:48	17:08 (T06)	06:53	06:05	05:34	
	16:46	83 16:07 (T07)	17:23	73 17:00 (T05)	18:00	32 17:40 (T06)	19:37	20:11	20:43	
3	07:43	08:24 (T10)	07:26	07:49 (T09)	06:46	17:06 (T06)	06:52	06:03	05:34	
	16:47	81 16:07 (T07)	17:24	69 17:02 (T05)	18:01	35 17:41 (T06)	19:38	20:12	20:44	
4	07:43	08:25 (T10)	07:25	07:48 (T09)	06:44	17:05 (T06)	06:50	06:02	05:33	
	16:48	81 16:08 (T07)	17:26	71 17:03 (T05)	18:02	37 17:42 (T06)	19:40	20:13	20:45	
5	07:43	08:26 (T10)	07:23	07:47 (T09)	06:43	17:04 (T06)	06:48	06:01	05:33	
	16:49	79 16:08 (T07)	17:27	74 17:05 (T05)	18:04	40 17:44 (T06)	19:41	20:14	20:46	
6	07:43	08:27 (T10)	07:22	07:47 (T09)	06:41	17:03 (T06)	06:46	05:59	05:32	
	16:50	78 16:09 (T07)	17:28	76 17:06 (T05)	18:05	42 17:45 (T06)	19:42	20:16	20:46	
7	07:43	08:28 (T10)	07:21	07:47 (T09)	06:39	17:01 (T06)	06:45	05:58	05:32	
	16:51	77 16:09 (T07)	17:30	75 17:06 (T05)	18:06	45 17:46 (T06)	19:43	20:17	20:47	
8	07:43	08:29 (T10)	07:20	07:47 (T09)	06:38	17:01 (T06)	06:43	05:57	05:32	
	16:52	75 16:09 (T07)	17:31	75 17:06 (T05)	18:07	47 17:48 (T06)	19:44	20:18	20:48	
9	07:43	08:30 (T10)	07:19	07:48 (T09)	06:36	17:00 (T06)	06:41	05:56	05:32	
	16:53	73 16:09 (T07)	17:32	73 17:06 (T05)	18:09	49 17:49 (T06)	19:45	20:19	20:48	
10	07:42	08:32 (T10)	07:17	07:47 (T09)	06:34	16:59 (T06)	06:40	05:54	05:31	
	16:54	71 16:10 (T07)	17:34	73 17:05 (T05)	18:10	51 17:50 (T04)	19:47	20:20	20:49	
11	07:42	08:33 (T10)	07:16	07:48 (T09)	06:32	16:59 (T06)	06:38	05:53	05:31	
	16:55	67 16:09 (T07)	17:35	71 17:05 (T05)	18:11	52 17:51 (T04)	19:48	20:21	20:50	
12	07:42	08:36 (T10)	07:15	07:49 (T09)	06:31	16:59 (T06)	06:36	05:52	05:31	
	16:56	63 16:10 (T07)	17:36	69 17:05 (T05)	18:12	54 17:53 (T04)	19:49	20:22	20:50	
13	07:41	15:17 (T07)	07:13	07:49 (T09)	07:29	17:58 (T06)	06:34	05:51	05:31	
	16:58	54 16:11 (T07)	17:38	65 17:03 (T05)	19:13	56 18:54 (T04)	19:50	20:24	20:51	
14	07:41	15:17 (T07)	07:12	07:50 (T09)	07:27	17:58 (T06)	06:33	05:50	05:31	
	16:59	53 16:10 (T07)	17:39	63 17:03 (T05)	19:15	57 18:55 (T04)	19:51	20:25	20:51	
15	07:41	15:18 (T07)	07:11	07:51 (T09)	07:25	17:58 (T06)	06:31	05:49	05:31	
	17:00	53 16:11 (T07)	17:40	57 17:01 (T05)	19:16	58 18:56 (T04)	19:52	20:26	20:52	
16	07:40	15:18 (T07)	07:09	07:52 (T09)	07:24	17:57 (T06)	06:29	05:48	05:31	
	17:01	53 16:11 (T07)	17:42	53 17:00 (T05)	19:17	59 18:56 (T04)	19:54	20:27	20:52	
17	07:40	15:20 (T07)	07:08	07:54 (T09)	07:22	17:58 (T06)	06:28	05:47	05:31	
	17:02	51 16:11 (T07)	17:43	46 16:59 (T05)	19:18	58 18:56 (T04)	19:55	20:28	20:53	
18	07:39	15:20 (T07)	07:06	07:56 (T09)	07:20	17:58 (T06)	06:26	05:46	05:31	
	17:03	51 16:11 (T07)	17:44	36 16:56 (T05)	19:20	56 18:54 (T04)	19:56	20:29	20:53	
19	07:39	15:20 (T07)	07:05	07:59 (T09)	07:18	17:58 (T06)	06:25	05:45	05:31	
	17:05	50 16:10 (T07)	17:46	24 16:53 (T05)	19:21	54 18:52 (T04)	19:57	20:30	20:53	
20	07:38	08:03 (T09)	07:03	08:03 (T09)	07:17	17:58 (T06)	06:23	05:44	05:31	
	17:06	55 16:43 (T05)	17:47	6 08:09 (T09)	19:22	49 18:47 (T04)	19:58	20:31	20:54	
21	07:37	08:02 (T09)	07:02		07:15	18:00 (T06)	06:21	05:43	05:31	
	17:07	61 16:44 (T05)	17:48		19:23	45 18:45 (T06)	19:59	20:32	20:54	
22	07:37	08:01 (T09)	07:00		07:13	18:00 (T06)	06:20	05:42	05:31	
	17:08	67 16:45 (T05)	17:50		19:24	43 18:43 (T06)	20:01	20:33	20:54	
23	07:36	08:00 (T09)	06:59		07:11	18:01 (T06)	06:18	05:41	05:31	
	17:10	71 16:46 (T05)	17:51		19:25	41 18:42 (T06)	20:01	20:34	20:54	
24	07:35	07:59 (T09)	06:57		07:09	18:02 (T06)	06:17	05:40	05:32	
	17:11	73 16:47 (T05)	17:52		19:27	38 18:40 (T06)	20:02	20:35	20:55	
25	07:34	07:58 (T09)	06:56		07:08	18:03 (T06)	06:15	05:39	05:32	
	17:12	77 16:48 (T05)	17:54		19:28	35 18:38 (T06)	20:03	20:36	20:55	
26	07:33	07:58 (T09)	06:54	17:18 (T06)	07:06	18:05 (T06)	06:14	05:39	05:32	
	17:14	80 16:51 (T05)	17:55	16 17:34 (T06)	19:29	32 18:37 (T06)	20:04	20:37	20:55	
27	07:33	07:57 (T09)	06:52	17:15 (T06)	07:04	18:06 (T06)	06:12	05:38	05:33	
	17:15	81 16:52 (T05)	17:56	21 17:36 (T06)	19:30	28 18:34 (T06)	20:05	20:38	20:55	
28	07:32	07:56 (T09)	06:51	17:12 (T06)	07:02	18:09 (T06)	06:11	05:37	05:33	
	17:16	83 16:54 (T05)	17:57	25 17:37 (T06)	19:31	22 18:31 (T06)	20:06	20:39	20:55	
29	07:31	07:55 (T09)			07:01	18:12 (T06)	06:09	05:36	05:33	
	17:18	84 16:55 (T05)			19:33	15 18:27 (T06)	20:08	20:40	20:55	
30	07:30	07:54 (T09)			06:59		06:08	05:36	05:34	
	17:19	83 16:56 (T05)			19:34		20:09	20:41	20:55	
31	07:29	07:53 (T09)			06:57			05:35		
	17:20	82 16:58 (T05)			19:35			20:41		
Potential sun hours	291		294		369		401	453	459	
Total, worst case	2172		1291		1259					
Sun reduction	0.36		0.40		0.47					
Oper. time red.	1.00		1.00		1.00					
Wind dir. red.	0.69		0.69		0.75					
Total reduction	0.24		0.28		0.35					
Total, real	532		355		438					

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

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: 267 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2572)

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	06:00	06:34	07:07	17:38 (T06)	07:44
	20:55	20:35	19:48	18:54	56	18:34 (T04)
2	05:35	06:01	06:35	07:08		17:38 (T06)
	20:55	20:34	19:46	18:53	54	18:32 (T04)
3	05:35	06:02	06:36	07:09		17:37 (T06)
	20:55	20:33	19:45	18:51	53	18:30 (T04)
4	05:36	06:03	06:37	07:10		17:37 (T06)
	20:54	20:32	19:43	18:49	51	18:28 (T04)
5	05:37	06:04	06:38	07:12		17:37 (T06)
	20:54	20:31	19:41	18:47	49	18:26 (T06)
6	05:37	06:05	06:39	07:13		17:37 (T06)
	20:54	20:29	19:39	18:46	47	18:24 (T06)
7	05:38	06:06	06:40	07:14		17:38 (T06)
	20:54	20:28	19:38	18:44	45	18:23 (T06)
8	05:39	06:08	06:42	07:15		17:38 (T06)
	20:53	20:27	19:36	18:42	43	18:21 (T06)
9	05:39	06:09	06:43	07:16		17:38 (T06)
	20:53	20:25	19:34	18:40	41	18:19 (T06)
10	05:40	06:10	06:44	07:17		17:39 (T06)
	20:53	20:24	19:32	18:39	38	18:17 (T06)
11	05:41	06:11	06:45	07:18		17:39 (T06)
	20:52	20:23	19:31	18:37	37	18:16 (T06)
12	05:41	06:12	06:46	07:20		17:41 (T06)
	20:52	20:21	19:29	18:35	34	18:15 (T06)
13	05:42	06:13	06:47	07:21		17:42 (T06)
	20:51	20:20	19:27	18:34	31	18:13 (T06)
14	05:43	06:14	06:48	07:22		17:43 (T06)
	20:51	20:18	19:25	18:32	28	18:11 (T06)
15	05:44	06:15	06:49	18:03 (T06)	07:23	17:45 (T06)
	20:50	20:17	19:23	18:16 (T06)	18:30	18:09 (T06)
16	05:45	06:16	06:50	17:59 (T06)	07:24	17:48 (T06)
	20:50	20:16	19:22	18:20 (T06)	18:29	18:08 (T06)
17	05:46	06:17	06:51	17:55 (T06)	07:26	17:52 (T06)
	20:49	20:14	19:20	18:22 (T06)	18:27	18:06 (T06)
18	05:46	06:18	06:52	17:53 (T06)	07:27	17:50 (T06)
	20:48	20:13	19:18	18:24 (T06)	18:25	17:47 (T06)
19	05:47	06:20	06:54	17:50 (T06)	07:28	17:46 (T06)
	20:47	20:11	19:16	18:25 (T06)	18:24	17:44 (T06)
20	05:48	06:21	06:55	17:48 (T06)	07:29	17:43 (T06)
	20:47	20:09	19:14	18:26 (T06)	18:22	17:42 (T06)
21	05:49	06:22	06:56	17:47 (T06)	07:30	17:41 (T06)
	20:46	20:08	19:12	18:27 (T06)	18:21	17:40 (T06)
22	05:50	06:23	06:57	17:46 (T06)	07:32	17:39 (T06)
	20:45	20:06	19:11	18:28 (T06)	18:19	17:38 (T06)
23	05:51	06:24	06:58	17:44 (T06)	07:33	17:36 (T06)
	20:44	20:05	19:09	18:29 (T06)	18:17	17:35 (T06)
24	05:52	06:25	06:59	17:43 (T06)	07:34	17:34 (T06)
	20:43	20:03	19:07	18:29 (T06)	18:16	17:33 (T06)
25	05:53	06:26	07:00	17:42 (T06)	07:35	17:32 (T06)
	20:42	20:02	19:05	18:34 (T04)	18:14	17:31 (T06)
26	05:54	06:27	07:01	17:41 (T06)	07:37	17:30 (T06)
	20:42	20:00	19:03	18:36 (T04)	18:13	17:29 (T06)
27	05:55	06:28	07:02	17:40 (T06)	07:38	17:28 (T06)
	20:41	19:57	19:02	18:37 (T04)	18:11	17:27 (T06)
28	05:56	06:29	07:04	17:39 (T06)	07:39	17:26 (T06)
	20:40	19:55	19:00	18:38 (T04)	18:10	17:25 (T06)
29	05:57	06:31	07:05	17:38 (T06)	07:40	17:24 (T06)
	20:39	19:53	18:58	18:37 (T04)	18:09	17:23 (T06)
30	05:58	06:32	07:06	17:38 (T06)	07:42	17:22 (T06)
	20:37	19:52	18:56	18:35 (T04)	18:07	17:21 (T06)
31	05:59	06:33		07:43		17:20 (T06)
	20:36	19:50		18:06	69	17:19 (T06)
Potential sun hours	466	433	376	343	293	281
Total, worst case			677	1098	1925	2343
Sun reduction			0.56	0.44	0.25	0.24
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.75	0.73	0.70	0.67
Total reduction			0.41	0.32	0.17	0.16
Total, real			281	347	332	372

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: 270 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2216)

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	08:09 (T09)	07:28	08:12 (T09)	06:49	16:36 (T06)	06:55	06:06	05:35	
	16:45	45	16:20 (T05)	17:22	45	16:36 (T05)	17:59	58	17:39 (T04)	19:36
2	07:43	08:09 (T09)	07:27	08:13 (T09)	06:48	16:37 (T06)	06:53	06:05	05:34	
	16:46	41	16:21 (T05)	17:23	46	17:00 (T06)	18:00	58	17:40 (T04)	19:37
3	07:43	08:09 (T09)	07:26	08:15 (T09)	06:46	16:37 (T06)	06:52	06:03	05:34	
	16:47	42	16:22 (T05)	17:24	43	17:02 (T06)	18:01	57	17:41 (T04)	19:38
4	07:43	08:09 (T09)	07:25	08:18 (T09)	06:44	16:38 (T06)	06:50	06:02	05:33	
	16:48	44	16:23 (T05)	17:26	30	17:03 (T06)	18:02	56	17:42 (T04)	19:40
5	07:43	08:09 (T09)	07:23	16:44 (T06)	06:43	16:41 (T06)	06:48	06:01	05:33	
	16:49	46	16:24 (T05)	17:27	21	17:05 (T06)	18:04	53	17:44 (T04)	19:41
6	07:43	08:09 (T09)	07:22	16:42 (T06)	06:41	16:42 (T06)	06:46	05:59	05:32	
	16:50	46	16:25 (T05)	17:28	25	17:07 (T06)	18:05	48	17:44 (T04)	19:42
7	07:43	08:09 (T09)	07:21	16:40 (T06)	06:39	16:45 (T06)	06:45	05:58	05:32	
	16:51	49	16:27 (T05)	17:30	27	17:07 (T06)	18:06	40	17:42 (T04)	19:43
8	07:43	08:08 (T09)	07:20	16:39 (T06)	06:38	16:49 (T06)	06:43	05:57	05:32	
	16:52	51	16:27 (T05)	17:31	30	17:09 (T06)	18:07	30	17:41 (T04)	19:44
9	07:43	08:08 (T09)	07:19	16:38 (T06)	06:36	17:27 (T04)	06:41	05:56	05:32	
	16:53	52	16:28 (T05)	17:32	33	17:11 (T06)	18:09	12	17:39 (T04)	19:45
10	07:42	08:08 (T09)	07:17	16:37 (T06)	06:34		06:40	05:54	05:31	
	16:54	55	16:30 (T05)	17:34	35	17:12 (T06)	18:10		19:47	20:20
11	07:42	08:08 (T09)	07:16	16:36 (T06)	06:32		06:38	05:53	05:31	
	16:55	56	16:31 (T05)	17:35	37	17:13 (T06)	18:11		19:48	20:21
12	07:42	08:07 (T09)	07:15	16:36 (T06)	06:31		06:36	05:52	05:31	
	16:56	59	16:32 (T05)	17:36	39	17:15 (T06)	18:12		19:49	20:22
13	07:41	08:07 (T09)	07:13	16:35 (T06)	07:29		06:34	05:51	05:31	
	16:58	61	16:34 (T05)	17:38	41	17:16 (T06)	19:13		19:50	20:24
14	07:41	08:06 (T09)	07:12	16:34 (T06)	07:27		06:33	05:50	05:31	
	16:59	62	16:34 (T05)	17:39	44	17:18 (T06)	19:15		19:51	20:25
15	07:41	08:06 (T09)	07:11	16:33 (T06)	07:25		06:31	05:49	05:31	
	17:00	64	16:36 (T05)	17:40	46	17:19 (T06)	19:16		19:52	20:26
16	07:40	08:05 (T09)	07:09	16:33 (T06)	07:24		06:29	05:48	05:31	
	17:01	67	16:37 (T05)	17:42	48	17:21 (T06)	19:17		19:54	20:27
17	07:40	08:05 (T09)	07:08	16:34 (T06)	07:22		06:28	05:47	05:31	
	17:02	69	16:39 (T05)	17:43	48	17:22 (T06)	19:18		19:55	20:28
18	07:39	08:04 (T09)	07:06	16:33 (T06)	07:20		06:26	05:46	05:31	
	17:03	71	16:40 (T05)	17:44	49	17:22 (T06)	19:20		19:56	20:29
19	07:39	08:03 (T09)	07:05	16:33 (T06)	07:18		06:25	05:45	05:31	
	17:05	72	16:40 (T05)	17:46	50	17:23 (T06)	19:21		19:57	20:30
20	07:38	08:04 (T09)	07:03	16:33 (T06)	07:17		06:23	05:44	05:31	
	17:06	72	16:41 (T05)	17:47	49	17:22 (T06)	19:22		19:58	20:31
21	07:37	08:04 (T09)	07:02	16:32 (T06)	07:15		06:21	05:43	05:31	
	17:07	71	16:41 (T05)	17:48	50	17:22 (T06)	19:23		19:59	20:32
22	07:37	08:04 (T09)	07:00	16:33 (T06)	07:13		06:20	05:42	05:31	
	17:08	71	16:41 (T05)	17:50	49	17:22 (T06)	19:24		20:01	20:33
23	07:36	08:04 (T09)	06:59	16:32 (T06)	07:11		06:18	05:41	05:31	
	17:10	71	16:41 (T05)	17:51	50	17:30 (T04)	19:25		20:01	20:34
24	07:35	08:05 (T09)	06:57	16:33 (T06)	07:09		06:17	05:40	05:32	
	17:11	69	16:41 (T05)	17:52	54	17:32 (T04)	19:27		20:02	20:35
25	07:34	08:05 (T09)	06:56	16:33 (T06)	07:08		06:15	05:39	05:32	
	17:12	68	16:40 (T05)	17:54	56	17:33 (T04)	19:28		20:03	20:36
26	07:33	08:07 (T09)	06:54	16:33 (T06)	07:06		06:14	05:39	05:32	
	17:14	66	16:41 (T05)	17:55	57	17:34 (T04)	19:29		20:04	20:37
27	07:33	08:07 (T09)	06:52	16:34 (T06)	07:04		06:12	05:38	05:33	
	17:15	64	16:41 (T05)	17:56	59	17:36 (T04)	19:30		20:05	20:38
28	07:32	08:08 (T09)	06:51	16:35 (T06)	07:02		06:11	05:37	05:33	
	17:16	61	16:40 (T05)	17:57	58	17:37 (T04)	19:31		20:06	20:39
29	07:31	08:09 (T09)			07:01		06:09	05:36	05:33	
	17:18	58	16:40 (T05)		19:33		20:08	20:40	20:55	
30	07:30	08:10 (T09)			06:59		06:08	05:36	05:34	
	17:19	55	16:39 (T05)		19:34		20:09	20:41	20:55	
31	07:29	08:11 (T09)			06:57			05:35		
	17:20	51	16:38 (T05)		19:35			20:41		
Potential sun hours	291		294		369		401	453	459	
Total, worst case	1829		1219		412					
Sun reduction	0.36		0.40		0.47					
Oper. time red.	1.00		1.00		1.00					
Wind dir. red.	0.67		0.74		0.75					
Total reduction	0.24		0.29		0.35					
Total, real	435		356		143					

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Shadow receptor: 270 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2216)

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 20:55	06:00 20:35	06:34 19:48	07:07 18:54	07:44 18:04	17:06 (T06) 16:37 (T05)
2	05:35 20:55	06:01 20:34	06:35 19:46	07:08 18:53	07:46 18:03	17:07 (T06) 16:37 (T05)
3	05:35 20:55	06:02 20:33	06:36 19:45	07:09 18:51	07:47 18:02	17:07 (T06) 16:37 (T05)
4	05:36 20:54	06:03 20:32	06:37 19:43	07:10 18:49	07:48 18:01	17:09 (T06) 16:36 (T05)
5	05:37 20:54	06:04 20:31	06:38 19:41	07:12 18:47	18:05 (T04) 17:59	17:10 (T06) 16:36 (T05)
6	05:37 20:54	06:05 20:29	06:39 19:39	07:13 18:46	17:28 (T06) 18:16 (T04)	16:12 (T06) 16:36 (T05)
7	05:38 20:54	06:06 20:28	06:40 19:38	07:14 18:44	17:23 (T06) 18:19 (T04)	07:54 (T09) 16:36 (T05)
8	05:39 20:53	06:08 20:27	06:42 19:36	07:15 18:42	17:19 (T06) 18:19 (T04)	07:48 (T09) 16:36 (T05)
9	05:39 20:53	06:09 20:25	06:43 19:34	07:16 18:40	17:17 (T06) 18:19 (T04)	07:46 (T09) 16:36 (T05)
10	05:40 20:53	06:10 20:24	06:44 19:32	07:17 18:39	17:14 (T06) 18:17 (T04)	07:44 (T09) 16:36 (T05)
11	05:41 20:52	06:11 20:23	06:45 19:31	07:18 18:37	17:12 (T06) 18:15 (T04)	07:44 (T09) 16:36 (T05)
12	05:41 20:52	06:12 20:21	06:46 19:29	07:20 18:35	17:13 (T06) 18:15 (T04)	07:42 (T09) 16:36 (T05)
13	05:42 20:51	06:13 20:20	06:47 19:27	07:21 18:34	17:11 (T06) 18:13 (T04)	07:41 (T09) 16:36 (T05)
14	05:43 20:51	06:14 20:18	06:48 19:25	07:22 18:32	17:08 (T06) 18:11 (T04)	07:41 (T09) 16:36 (T05)
15	05:44 20:50	06:15 20:17	06:49 19:23	07:23 18:30	17:07 (T06) 18:09 (T04)	07:40 (T09) 16:36 (T05)
16	05:45 20:50	06:16 20:16	06:50 19:22	07:24 18:29	17:07 (T06) 18:08 (T04)	07:39 (T09) 16:36 (T05)
17	05:46 20:49	06:17 20:14	06:51 19:20	07:26 18:27	17:05 (T06) 18:06 (T04)	07:39 (T09) 16:37 (T05)
18	05:46 20:48	06:18 20:13	06:52 19:18	07:27 18:25	17:04 (T06) 18:04 (T04)	07:39 (T09) 16:37 (T05)
19	05:47 20:47	06:20 20:11	06:54 19:16	07:28 18:24	17:04 (T06) 18:02 (T04)	07:40 (T09) 16:37 (T05)
20	05:48 20:47	06:21 20:09	06:55 19:14	07:29 18:22	17:04 (T06) 17:53 (T06)	07:40 (T09) 16:38 (T05)
21	05:49 20:46	06:22 20:08	06:56 19:12	07:30 18:21	17:03 (T06) 17:53 (T06)	07:39 (T09) 16:38 (T05)
22	05:50 20:45	06:23 20:06	06:57 19:11	07:32 18:19	17:03 (T06) 17:52 (T06)	07:40 (T09) 16:39 (T05)
23	05:51 20:44	06:24 20:05	06:58 19:09	07:33 18:17	17:03 (T06) 17:53 (T06)	07:40 (T09) 16:39 (T05)
24	05:52 20:43	06:25 20:03	06:59 19:07	07:34 18:16	17:03 (T06) 17:52 (T06)	07:40 (T09) 16:40 (T05)
25	05:53 20:42	06:26 20:02	07:00 19:05	07:35 18:14	17:02 (T06) 17:52 (T06)	07:41 (T09) 16:40 (T05)
26	05:54 20:42	06:27 20:00	07:01 19:03	07:37 18:13	17:03 (T06) 17:52 (T06)	07:43 (T09) 16:41 (T05)
27	05:55 20:41	06:28 19:57	07:02 19:02	07:38 18:11	17:03 (T06) 17:50 (T06)	07:44 (T09) 16:41 (T05)
28	05:56 20:40	06:29 19:55	07:04 19:00	07:39 18:10	17:03 (T06) 17:48 (T06)	07:45 (T09) 16:42 (T05)
29	05:57 20:39	06:31 19:53	07:05 18:58	07:40 18:09	17:04 (T06) 17:47 (T06)	07:46 (T09) 16:43 (T05)
30	05:58 20:37	06:32 19:52	07:06 18:56	07:42 18:07	17:04 (T06) 17:45 (T06)	07:48 (T09) 16:44 (T05)
31	05:59 20:36	06:33 19:50	07:07 18:06	07:43 17:44	17:05 (T06) 17:44 (T06)	07:49 (T09) 16:44 (T05)
Potential sun hours	466	433	376	343	293	281
Total, worst case				1278	1519	1476
Sun reduction				0.44	0.25	0.24
Oper. time red.				1.00	1.00	1.00
Wind dir. red.				0.75	0.68	0.67
Total reduction				0.33	0.17	0.16
Total, real				416	255	235

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: 271 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2573)

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	08:09 (T09)	07:28	08:22 (T09)	06:49	16:42 (T06)	06:55	06:06	05:35									
	16:45	67	16:20 (T05)	17:22	41	16:43 (T05)	17:59	55	17:39 (T04)	19:36	20:10	20:42						
2	07:43	08:09 (T09)	07:27	08:26 (T09)	06:48	16:42 (T06)	06:53	06:05	05:34									
	16:46	68	16:21 (T05)	17:23	31	16:42 (T05)	18:00	55	17:40 (T04)	19:37	20:11	20:43						
3	07:43	08:09 (T09)	07:26	16:21 (T05)	06:46	16:43 (T06)	06:52	06:03	05:34									
	16:47	68	16:22 (T05)	17:24	20	16:41 (T05)	18:01	55	17:41 (T04)	19:38	20:12	20:44						
4	07:43	08:09 (T09)	07:25	16:24 (T05)	06:44	16:43 (T06)	06:50	06:02	05:33									
	16:48	67	16:23 (T05)	17:26	15	16:39 (T05)	18:02	54	17:42 (T04)	19:40	20:13	20:45						
5	07:43	08:09 (T09)	07:23	16:27 (T05)	06:43	16:46 (T06)	06:48	06:01	05:33									
	16:49	67	16:24 (T05)	17:27	16	17:05 (T06)	18:04	51	17:44 (T04)	19:41	20:14	20:46						
6	07:43	08:09 (T09)	07:22	16:54 (T06)	06:41	16:47 (T06)	06:46	05:59	05:32									
	16:50	66	16:25 (T05)	17:28	13	17:07 (T06)	18:05	49	17:45 (T04)	19:42	20:16	20:46						
7	07:43	08:09 (T09)	07:21	16:51 (T06)	06:39	16:49 (T06)	06:45	05:58	05:32									
	16:51	66	16:27 (T05)	17:30	16	17:07 (T06)	18:06	42	17:44 (T04)	19:43	20:17	20:47						
8	07:43	08:08 (T09)	07:20	16:49 (T06)	06:38	16:53 (T06)	06:43	05:57	05:32									
	16:52	64	16:27 (T05)	17:31	20	17:09 (T06)	18:07	32	17:43 (T04)	19:44	20:18	20:48						
9	07:43	08:08 (T09)	07:19	16:48 (T06)	06:36	16:59 (T06)	06:41	05:56	05:32									
	16:53	60	16:28 (T05)	17:32	23	17:11 (T06)	18:09	16	17:41 (T04)	19:45	20:19	20:48						
10	07:42	08:08 (T09)	07:17	16:46 (T06)	06:34	17:32 (T04)	06:40	05:54	05:31									
	16:54	55	16:30 (T05)	17:34	26	17:12 (T06)	18:10	4	17:36 (T04)	19:47	20:20	20:49						
11	07:42	08:07 (T09)	07:16	16:45 (T06)	06:32		06:38	05:53	05:31									
	16:55	57	16:30 (T05)	17:35	28	17:13 (T06)	18:11		19:48	20:21	20:50							
12	07:42	08:07 (T09)	07:15	16:44 (T06)	06:31		06:36	05:52	05:31									
	16:56	60	16:32 (T05)	17:36	31	17:15 (T06)	18:12		19:49	20:22	20:50							
13	07:41	08:07 (T09)	07:13	16:43 (T06)	07:29		06:34	05:51	05:31									
	16:58	62	16:34 (T05)	17:38	33	17:16 (T06)	19:13		19:50	20:24	20:51							
14	07:41	08:07 (T09)	07:12	16:42 (T06)	07:27		06:33	05:50	05:31									
	16:59	63	16:34 (T05)	17:39	36	17:18 (T06)	19:15		19:51	20:25	20:51							
15	07:41	08:07 (T09)	07:11	16:41 (T06)	07:25		06:31	05:49	05:31									
	17:00	65	16:36 (T05)	17:40	38	17:19 (T06)	19:16		19:52	20:26	20:52							
16	07:40	08:07 (T09)	07:09	16:41 (T06)	07:24		06:29	05:48	05:31									
	17:01	65	16:37 (T05)	17:42	40	17:21 (T06)	19:17		19:54	20:27	20:52							
17	07:40	08:08 (T09)	07:08	16:41 (T06)	07:22		06:28	05:47	05:31									
	17:02	66	16:39 (T05)	17:43	41	17:22 (T06)	19:18		19:55	20:28	20:53							
18	07:39	08:09 (T09)	07:06	16:40 (T06)	07:20		06:26	05:46	05:31									
	17:03	67	16:40 (T05)	17:44	43	17:23 (T06)	19:20		19:56	20:29	20:53							
19	07:39	08:09 (T09)	07:05	16:40 (T06)	07:18		06:25	05:45	05:31									
	17:05	68	16:41 (T05)	17:46	45	17:25 (T06)	19:21		19:57	20:30	20:53							
20	07:38	08:10 (T09)	07:03	16:39 (T06)	07:17		06:23	05:44	05:31									
	17:06	69	16:43 (T05)	17:47	47	17:26 (T06)	19:22		19:58	20:31	20:54							
21	07:37	08:10 (T09)	07:02	16:39 (T06)	07:15		06:21	05:43	05:31									
	17:07	69	16:44 (T05)	17:48	46	17:25 (T06)	19:23		19:59	20:32	20:54							
22	07:37	08:11 (T09)	07:00	16:39 (T06)	07:13		06:20	05:42	05:31									
	17:08	69	16:45 (T05)	17:50	47	17:26 (T06)	19:24		20:01	20:33	20:54							
23	07:36	08:11 (T09)	06:59	16:39 (T06)	07:11		06:18	05:41	05:31									
	17:10	70	16:46 (T05)	17:51	46	17:25 (T06)	19:25		20:01	20:34	20:54							
24	07:35	08:12 (T09)	06:57	16:39 (T06)	07:09		06:17	05:40	05:32									
	17:11	67	16:46 (T05)	17:52	49	17:32 (T04)	19:27		20:02	20:35	20:55							
25	07:34	08:12 (T09)	06:56	16:39 (T06)	07:08		06:15	05:39	05:32									
	17:12	67	16:46 (T05)	17:54	51	17:33 (T04)	19:28		20:03	20:36	20:55							
26	07:33	08:14 (T09)	06:54	16:39 (T06)	07:06		06:14	05:39	05:32									
	17:14	64	16:47 (T05)	17:55	53	17:34 (T04)	19:29		20:04	20:37	20:55							
27	07:33	08:15 (T09)	06:52	16:40 (T06)	07:04		06:12	05:38	05:33									
	17:15	62	16:46 (T05)	17:56	54	17:36 (T04)	19:30		20:05	20:38	20:55							
28	07:32	08:16 (T09)	06:51	16:40 (T06)	07:02		06:11	05:37	05:33									
	17:16	59	16:46 (T05)	17:57	56	17:37 (T04)	19:31		20:06	20:39	20:55							
29	07:31	08:18 (T09)			07:01		06:09	05:36	05:33									
	17:18	55	16:46 (T05)		19:33		20:08	20:40	20:55									
30	07:30	08:19 (T09)			06:59		06:08	05:36	05:34									
	17:19	51	16:45 (T05)		19:34		20:09	20:41	20:55									
31	07:29	08:21 (T09)			06:57			05:35										
	17:20	47	16:45 (T05)		19:35			20:41										
Potential sun hours	291		294		369		401		459									
Total, worst case	1970		1005		413													
Sun reduction	0.36		0.40		0.47													
Oper. time red.	1.00		1.00		1.00													
Wind dir. red.	0.66		0.74		0.75													
Total reduction	0.23		0.29		0.35													
Total, real	462		295		144													

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: 271 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2573)

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	06:00	06:34	07:07	07:44	17:15 (T06) 07:22 07:49 (T09)
	20:55	20:35	19:48	18:54	18:04	28 17:43 (T06) 16:37 58 16:14 (T05)
2	05:35	06:01	06:35	07:08	07:46	17:16 (T06) 07:23 07:50 (T09)
	20:55	20:34	19:46	18:53	18:03	25 17:41 (T06) 16:37 55 16:14 (T05)
3	05:35	06:02	06:36	07:09	07:47	17:17 (T06) 07:24 07:51 (T09)
	20:55	20:33	19:45	18:51	18:02	22 17:39 (T06) 16:37 52 16:13 (T05)
4	05:36	06:03	06:37	07:10	07:48	17:19 (T06) 07:25 07:52 (T09)
	20:54	20:32	19:43	18:49	18:01	20 17:39 (T06) 16:36 56 16:13 (T05)
5	05:37	06:04	06:38	07:12	18:06 (T04) 07:49	17:21 (T06) 07:26 07:53 (T09)
	20:54	20:31	19:41	18:47	18:16 (T04) 17:59	16 17:37 (T06) 16:36 61 16:12 (T05)
6	05:37	06:05	06:39	07:13	17:31 (T06) 06:51	16:24 (T06) 07:27 07:54 (T09)
	20:54	20:29	19:39	18:46	18:18 (T04) 16:58	12 16:36 (T06) 16:36 64 16:12 (T05)
7	05:38	06:06	06:40	07:14	17:27 (T06) 06:52	15:57 (T05) 07:28 07:55 (T09)
	20:54	20:28	19:38	18:44	18:20 (T04) 16:57	15 16:35 (T06) 16:36 58 16:11 (T05)
8	05:39	06:08	06:42	07:15	17:24 (T06) 06:53	15:53 (T05) 07:29 07:56 (T09)
	20:53	20:27	19:36	18:42	18:21 (T04) 16:56	11 16:09 (T05) 16:36 68 16:12 (T05)
9	05:39	06:09	06:43	07:16	17:21 (T06) 06:55	15:52 (T05) 07:30 07:57 (T09)
	20:53	20:25	19:34	18:40	18:19 (T04) 16:54	20 16:12 (T05) 16:36 63 16:11 (T05)
10	05:40	06:10	06:44	07:17	17:19 (T06) 06:56	07:57 (T09) 07:31 07:58 (T09)
	20:53	20:24	19:32	18:39	18:17 (T04) 16:53	27 16:13 (T05) 16:36 63 16:10 (T05)
11	05:41	06:11	06:45	07:18	17:17 (T06) 06:57	07:54 (T09) 07:32 07:59 (T09)
	20:52	20:23	19:31	18:37	18:15 (T04) 16:52	41 16:15 (T05) 16:36 68 16:11 (T05)
12	05:41	06:12	06:46	07:20	17:17 (T06) 06:58	07:54 (T09) 07:33 08:00 (T09)
	20:52	20:21	19:29	18:35	18:15 (T04) 16:51	45 16:16 (T05) 16:36 63 16:12 (T05)
13	05:42	06:13	06:47	07:21	17:15 (T06) 07:00	07:50 (T09) 07:33 08:01 (T09)
	20:51	20:20	19:27	18:34	18:13 (T04) 16:50	49 16:16 (T05) 16:36 66 16:12 (T05)
14	05:43	06:14	06:48	07:22	17:14 (T06) 07:01	07:51 (T09) 07:34 08:01 (T09)
	20:51	20:18	19:25	18:32	18:11 (T04) 16:49	48 16:18 (T05) 16:36 57 16:11 (T05)
15	05:44	06:15	06:49	07:23	17:12 (T06) 07:02	07:48 (T09) 07:35 08:02 (T09)
	20:50	20:17	19:23	18:30	18:09 (T04) 16:48	54 16:18 (T05) 16:36 62 16:11 (T05)
16	05:45	06:16	06:50	07:24	17:12 (T06) 07:04	07:47 (T09) 07:36 08:03 (T09)
	20:50	20:16	19:22	18:29	18:08 (T04) 16:47	55 16:18 (T05) 16:36 64 16:12 (T05)
17	05:46	06:17	06:51	07:26	17:11 (T06) 07:05	07:47 (T09) 07:36 08:04 (T09)
	20:49	20:14	19:20	18:27	18:06 (T04) 16:46	61 16:20 (T05) 16:37 62 16:12 (T05)
18	05:46	06:18	06:52	07:27	17:11 (T06) 07:06	07:47 (T09) 07:37 08:04 (T09)
	20:48	20:13	19:18	18:25	18:04 (T04) 16:45	63 16:20 (T05) 16:37 60 16:12 (T05)
19	05:47	06:20	06:54	07:28	17:10 (T06) 07:07	07:47 (T09) 07:38 08:05 (T09)
	20:47	20:11	19:16	18:24	18:02 (T04) 16:45	65 16:21 (T05) 16:37 59 16:13 (T05)
20	05:48	06:21	06:55	07:29	17:10 (T06) 07:09	07:46 (T09) 07:38 08:05 (T09)
	20:47	20:09	19:14	18:22	17:57 (T06) 16:44	65 16:21 (T05) 16:38 60 16:13 (T05)
21	05:49	06:22	06:56	07:30	17:10 (T06) 07:10	07:46 (T09) 07:39 08:06 (T09)
	20:46	20:08	19:12	18:21	17:56 (T06) 16:43	66 16:20 (T05) 16:38 60 16:13 (T05)
22	05:50	06:23	06:57	07:32	17:09 (T06) 07:11	07:47 (T09) 07:40 08:07 (T09)
	20:45	20:06	19:11	18:19	17:56 (T06) 16:42	67 16:20 (T05) 16:39 62 16:14 (T05)
23	05:51	06:24	06:58	07:33	17:10 (T06) 07:12	07:46 (T09) 07:40 08:07 (T09)
	20:44	20:05	19:09	18:17	17:56 (T06) 16:42	64 16:19 (T05) 16:39 54 16:14 (T05)
24	05:52	06:25	06:59	07:34	17:10 (T06) 07:14	07:46 (T09) 07:41 08:07 (T09)
	20:43	20:03	19:07	18:16	17:54 (T06) 16:41	63 16:18 (T05) 16:40 60 16:14 (T05)
25	05:53	06:26	07:00	07:35	17:10 (T06) 07:15	07:46 (T09) 07:41 08:08 (T09)
	20:42	20:02	19:05	18:14	17:53 (T06) 16:40	62 16:17 (T05) 16:40 59 16:14 (T05)
26	05:54	06:27	07:01	07:37	17:11 (T06) 07:16	07:47 (T09) 07:41 08:08 (T09)
	20:42	20:00	19:03	18:13	17:52 (T06) 16:40	62 16:17 (T05) 16:41 64 16:16 (T05)
27	05:55	06:28	07:02	07:38	17:11 (T06) 07:17	07:47 (T09) 07:42 08:08 (T09)
	20:41	19:57	19:02	18:11	17:50 (T06) 16:39	61 16:16 (T05) 16:41 61 16:15 (T05)
28	05:56	06:29	07:04	07:39	17:11 (T06) 07:18	07:47 (T09) 07:42 08:09 (T09)
	20:40	19:55	19:00	18:10	17:48 (T06) 16:39	61 16:15 (T05) 16:42 62 16:18 (T05)
29	05:57	06:31	07:05	07:40	17:12 (T06) 07:19	07:47 (T09) 07:42 08:09 (T09)
	20:39	19:53	18:58	18:09	17:47 (T06) 16:38	58 16:14 (T05) 16:43 61 16:18 (T05)
30	05:58	06:32	07:06	07:42	17:12 (T06) 07:21	07:48 (T09) 07:43 08:09 (T09)
	20:37	19:52	18:56	18:07	17:45 (T06) 16:38	60 16:15 (T05) 16:44 64 16:19 (T05)
31	05:59	06:33		07:43	17:13 (T06)	
	20:36	19:50		18:06	17:44 (T06)	
Potential sun hours	466	433	376	343	293	281
Total, worst case				1191	1366	1888
Sun reduction				0.44	0.25	0.24
Oper. time red.				1.00	1.00	1.00
Wind dir. red.				0.75	0.67	0.66
Total reduction				0.33	0.17	0.16
Total, real				387	227	294

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: 292 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2581)

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	08:09 (T23)	07:28	08:18 (T23)	06:49	07:11 (T21)	06:55	06:06	05:35		
	16:45	108 16:11 (T19)	17:21	119 16:28 (T19)	17:58	51 08:02 (T21)	19:36	20:10	20:42		
2	07:43	08:09 (T23)	07:27	08:19 (T23)	06:47	07:10 (T21)	06:53	06:05	05:34		
	16:46	110 16:12 (T19)	17:23	116 16:28 (T19)	18:00	54 08:04 (T21)	19:37	20:11	20:43		
3	07:43	08:09 (T23)	07:26	08:21 (T23)	06:46	07:08 (T21)	06:52	06:03	05:34		
	16:47	112 16:13 (T19)	17:24	113 16:28 (T19)	18:01	56 08:04 (T21)	19:38	20:12	20:44		
4	07:43	08:09 (T23)	07:24	08:23 (T23)	06:44	07:07 (T21)	06:50	06:02	05:33		
	16:48	111 16:13 (T19)	17:26	109 16:28 (T19)	18:02	57 08:04 (T21)	19:39	20:13	20:45		
5	07:43	08:09 (T23)	07:23	08:24 (T23)	06:42	07:07 (T21)	06:48	06:01	05:33		
	16:49	113 16:14 (T19)	17:27	107 16:28 (T19)	18:03	58 08:05 (T21)	19:41	20:14	20:45		
6	07:43	08:09 (T23)	07:22	08:26 (T23)	06:41	07:07 (T21)	06:46	05:59	05:32		
	16:50	115 16:15 (T19)	17:28	101 16:27 (T19)	18:05	57 08:04 (T21)	19:42	20:15	20:46		
7	07:43	08:09 (T23)	07:21	08:29 (T23)	06:39	07:06 (T21)	06:45	05:58	05:32		
	16:51	116 16:16 (T19)	17:30	95 16:27 (T19)	18:06	58 08:04 (T21)	19:43	20:17	20:47		
8	07:43	08:08 (T23)	07:20	08:33 (T23)	06:37	07:05 (T21)	06:43	05:57	05:32		
	16:52	117 16:16 (T19)	17:31	86 16:27 (T19)	18:07	59 08:04 (T21)	19:44	20:18	20:47		
9	07:42	08:08 (T23)	07:18	15:12 (T19)	06:36	07:06 (T21)	06:41	05:55	05:31		
	16:53	119 16:17 (T19)	17:32	75 16:27 (T19)	18:08	58 08:04 (T21)	19:45	20:19	20:48		
10	07:42	08:08 (T23)	07:17	15:12 (T19)	06:34	07:05 (T21)	06:39	05:54	05:31		
	16:54	120 16:18 (T19)	17:34	74 16:26 (T19)	18:10	59 08:04 (T21)	19:46	20:20	20:49		
11	07:42	08:08 (T23)	07:16	15:13 (T19)	06:32	07:05 (T21)	06:38	05:53	05:31		
	16:55	121 16:18 (T19)	17:35	73 16:26 (T19)	18:11	58 08:03 (T21)	19:48	20:21	20:49		
12	07:42	08:08 (T23)	07:15	15:14 (T19)	06:30	07:04 (T21)	06:36	05:52	05:31		
	16:56	122 16:19 (T19)	17:36	72 16:26 (T19)	18:12	58 08:02 (T21)	19:49	20:22	20:50		
13	07:41	08:08 (T23)	07:13	15:14 (T19)	07:29	08:05 (T21)	06:34	05:51	05:31		
	16:57	123 16:19 (T19)	17:38	71 16:25 (T19)	19:13	58 09:03 (T21)	19:50	20:23	20:50		
14	07:41	08:09 (T23)	07:12	15:16 (T19)	07:27	08:05 (T21)	06:33	05:50	05:31		
	16:59	123 16:20 (T19)	17:39	69 16:25 (T19)	19:15	57 09:02 (T21)	19:51	20:24	20:51		
15	07:40	08:10 (T23)	07:10	15:16 (T19)	07:25	08:05 (T21)	06:31	05:48	05:30		
	17:00	124 16:21 (T19)	17:40	67 16:23 (T19)	19:16	56 09:01 (T21)	19:52	20:26	20:51		
16	07:40	08:09 (T23)	07:09	15:17 (T19)	07:23	08:05 (T21)	06:29	05:47	05:30		
	17:01	126 16:22 (T19)	17:42	66 16:23 (T19)	19:17	54 08:59 (T21)	19:53	20:27	20:52		
17	07:40	08:09 (T23)	07:08	15:18 (T19)	07:22	08:06 (T21)	06:28	05:46	05:30		
	17:02	126 16:22 (T19)	17:43	63 16:21 (T19)	19:18	53 08:59 (T21)	19:55	20:28	20:52		
18	07:39	08:10 (T23)	07:06	15:20 (T19)	07:20	08:06 (T21)	06:26	05:45	05:30		
	17:03	127 16:23 (T19)	17:44	61 16:21 (T19)	19:19	52 08:58 (T21)	19:56	20:29	20:53		
19	07:38	08:10 (T23)	07:05	07:29 (T21)	07:18	08:07 (T21)	06:24	05:44	05:31		
	17:05	126 16:23 (T19)	17:46	75 16:19 (T19)	19:21	49 08:56 (T21)	19:57	20:30	20:53		
20	07:38	08:10 (T23)	07:03	07:26 (T21)	07:16	08:07 (T21)	06:23	05:43	05:31		
	17:06	127 16:24 (T19)	17:47	79 16:18 (T19)	19:22	48 08:55 (T21)	19:58	20:31	20:53		
21	07:37	08:12 (T23)	07:02	07:24 (T21)	07:15	08:08 (T21)	06:21	05:43	05:31		
	17:07	126 16:25 (T19)	17:48	81 16:16 (T19)	19:23	45 08:53 (T21)	19:59	20:32	20:54		
22	07:36	08:12 (T23)	07:00	07:23 (T21)	07:13	08:09 (T21)	06:20	05:42	05:31		
	17:08	126 16:25 (T19)	17:49	80 16:15 (T19)	19:24	43 08:52 (T21)	20:00	20:33	20:54		
23	07:36	08:12 (T23)	06:59	07:21 (T21)	07:11	08:10 (T21)	06:18	05:41	05:31		
	17:10	126 16:25 (T19)	17:51	81 16:13 (T19)	19:25	40 08:50 (T21)	20:00	20:34	20:54		
24	07:35	08:12 (T23)	06:57	07:20 (T21)	07:09	08:12 (T21)	06:16	05:40	05:32		
	17:11	127 16:26 (T19)	17:52	79 16:11 (T19)	19:26	36 08:48 (T21)	20:02	20:35	20:54		
25	07:34	08:13 (T23)	06:55	07:18 (T21)	07:07	08:13 (T21)	06:15	05:39	05:32		
	17:12	126 16:26 (T19)	17:53	75 16:08 (T19)	19:28	32 08:45 (T21)	20:03	20:36	20:55		
26	07:33	08:13 (T23)	06:54	07:16 (T21)	07:06	08:15 (T21)	06:13	05:38	05:32		
	17:13	126 16:26 (T19)	17:55	71 16:04 (T19)	19:29	27 08:42 (T21)	20:04	20:37	20:55		
27	07:32	08:14 (T23)	06:52	07:15 (T21)	07:04	08:19 (T21)	06:12	05:38	05:32		
	17:15	124 16:26 (T19)	17:56	64 16:00 (T19)	19:30	20 08:39 (T21)	20:05	20:38	20:55		
28	07:32	08:15 (T23)	06:51	07:13 (T21)	07:02	08:24 (T21)	06:10	05:37	05:33		
	17:16	125 16:28 (T19)	17:57	49 08:02 (T21)	19:31	8 08:32 (T21)	20:06	20:39	20:55		
29	07:31	08:15 (T23)			07:00		06:09	05:36	05:33		
	17:17	124 16:27 (T19)			19:32		20:07	20:40	20:55		
30	07:30	08:16 (T23)			06:59		06:08	05:36	05:34		
	17:19	122 16:27 (T19)			19:34		20:09	20:40	20:55		
31	07:29	08:17 (T23)			06:57			05:35			
	17:20	120 16:27 (T19)			19:35			20:41			
Potential sun hours	291		294		369		401	453	459		
Total, worst case	3758		2271		1361						
Sun reduction	0.36		0.40		0.47						
Oper. time red.	1.00		1.00		1.00						
Wind dir. red.	0.67		0.70		0.70						
Total reduction	0.24		0.28		0.33						
Total, real	904		632		447						

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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