



Stourhead Solar Farm

Residential Receptor Glare Results

Created Nov 17, 2025
Updated Nov 17, 2025
Time-step 1 minute
Timezone offset UTC0
Minimum sun altitude 0.0 deg
Site ID 164764.27557

Project type Advanced
Project status: active
Category 500 kW to 1 MW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m^2 peak)	PV Analysis Methodology: Version 2
Ocular transmission coefficient: 0.5	Enhanced subtended angle calculation: On
Pupil diameter: 0.002 m	
Eye focal length: 0.017 m	
Sun subtended angle: 9.3 mrad	

Summary of Results

Glare with low potential for temporary after-image predicted

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV array 1	25.0	180.0	6,881	0	-

Component Data

PV Array(s)

Total PV footprint area: 5,808 m^2

Name: PV array 1
Footprint area: 5,808 m^2
Axis tracking: Fixed (no rotation)
Tilt: 25.0 deg
Orientation: 180.0 deg

Rated power: -
Panel material: Light textured glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 9.16 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	51.101920	-2.320037	180.93	2.85	183.79
2	51.101497	-2.319952	179.58	2.85	182.43
3	51.101192	-2.321636	181.07	2.85	183.93
4	51.101596	-2.321781	182.17	2.85	185.02



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Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	m	m	m
OP 1	51.104616	-2.333047	175.22	2.00	177.22
OP 2	51.102487	-2.327043	165.46	2.00	167.46
OP 3	51.100732	-2.335846	155.82	2.00	157.82
OP 4	51.100103	-2.335303	153.38	2.00	155.38
OP 5	51.100024	-2.335641	150.70	2.00	152.70
OP 6	51.099956	-2.334598	155.24	2.00	157.24
OP 7	51.100364	-2.333016	158.50	2.00	160.50
OP 8	51.100007	-2.332643	154.64	2.00	156.64
OP 9	51.100134	-2.329958	143.93	2.00	145.93
OP 10	51.097747	-2.326120	177.83	2.00	179.83
OP 11	51.095540	-2.331212	138.69	2.00	140.69
OP 12	51.095413	-2.329825	153.10	2.00	155.10
OP 13	51.103684	-2.313811	176.68	2.00	178.68

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV array 1	25.0	180.0	6,881	0	-	-

Distinct glare per month

Excludes overlapping glare from PV array for multiple receptors at matching time(s)

PV	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pv-array-1 (green)	0	0	39	550	423	0	86	759	163	0	0	0
pv-array-1 (yellow)	0	0	0	0	0	0	0	0	0	0	0	0

PV & Receptor Analysis Results

Results for each PV array and receptor

PV array 1 low potential for temporary after-image

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	505	0
OP: OP 4	864	0
OP: OP 5	882	0
OP: OP 6	988	0
OP: OP 7	892	0
OP: OP 8	1172	0
OP: OP 9	1578	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0

PV array 1: OP 1

No glare found

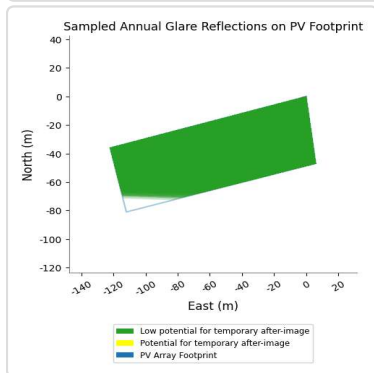
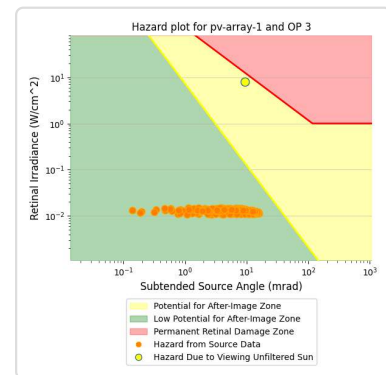
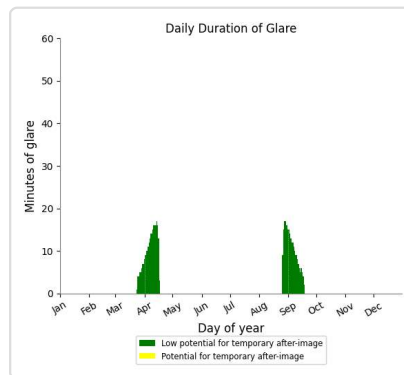
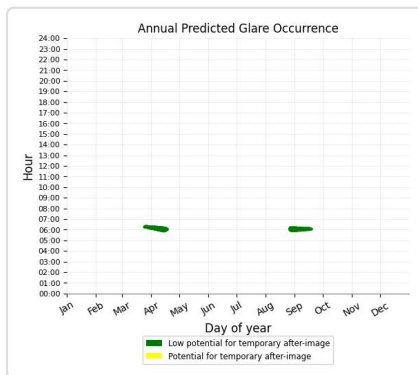
PV array 1: OP 2

No glare found

PV array 1: OP 3

PV array is expected to produce the following glare for this receptor:

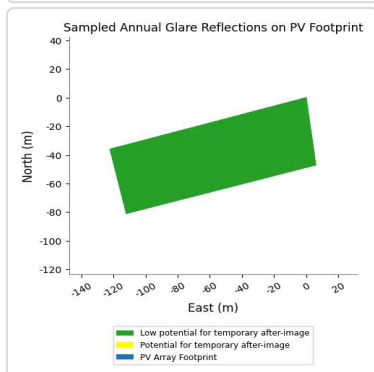
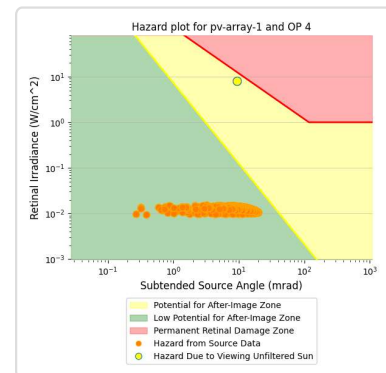
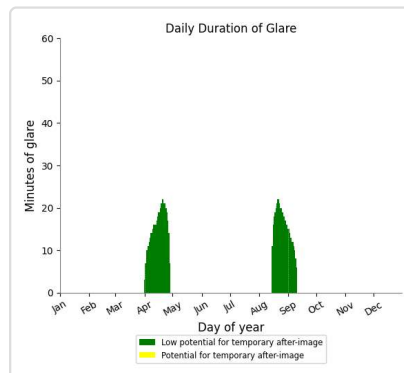
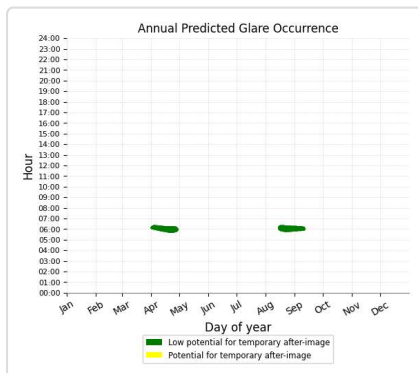
- 505 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 4

PV array is expected to produce the following glare for this receptor:

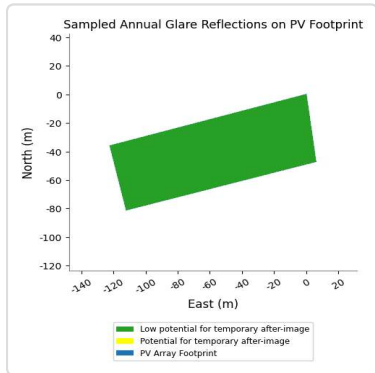
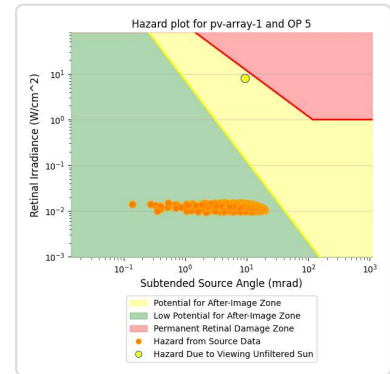
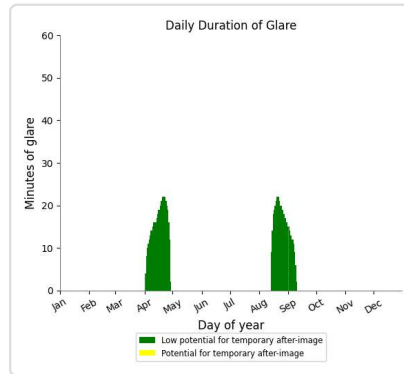
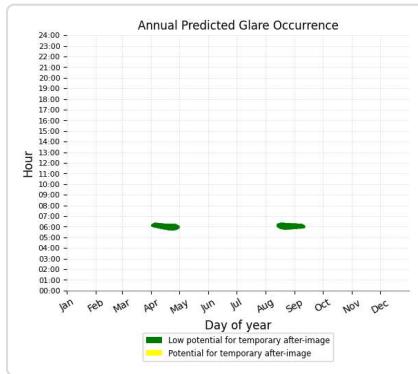
- 864 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 5

PV array is expected to produce the following glare for this receptor:

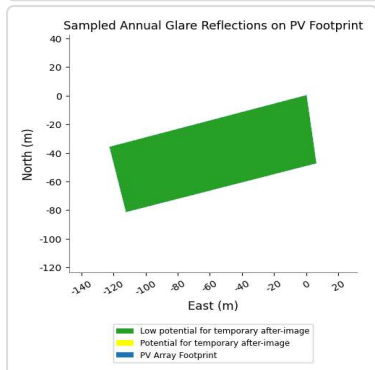
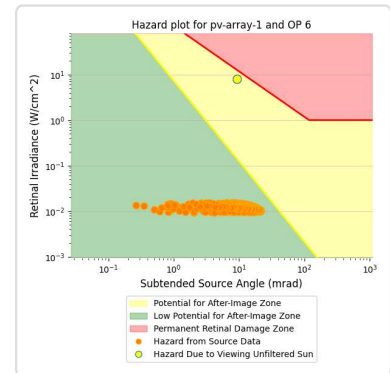
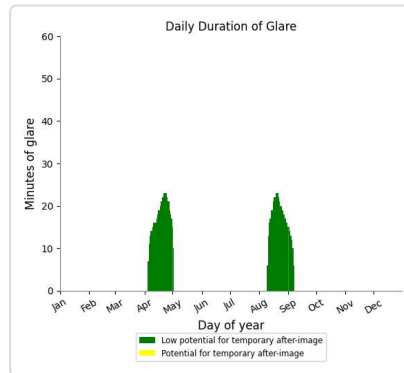
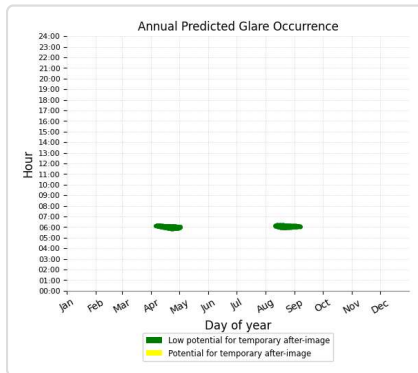
- 882 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 6

PV array is expected to produce the following glare for this receptor:

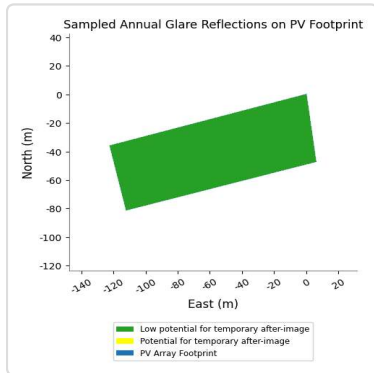
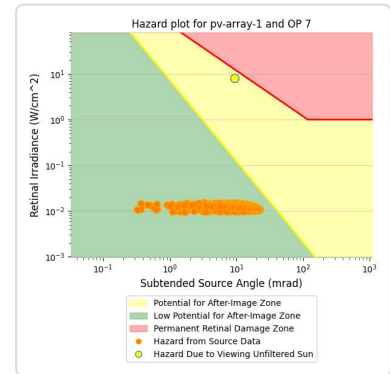
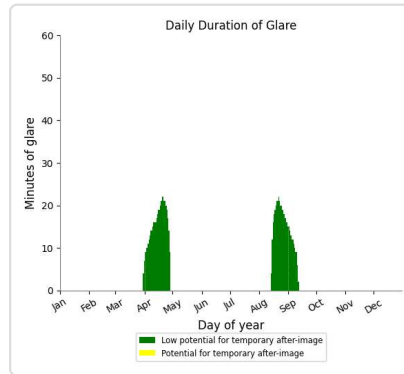
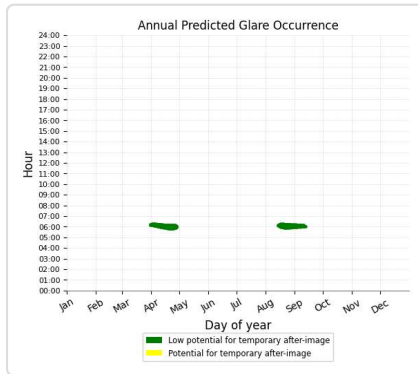
- 988 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 7

PV array is expected to produce the following glare for this receptor:

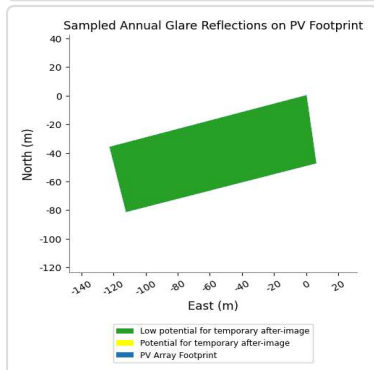
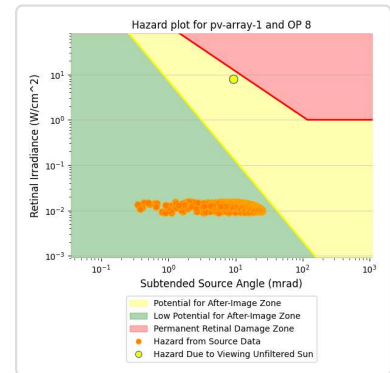
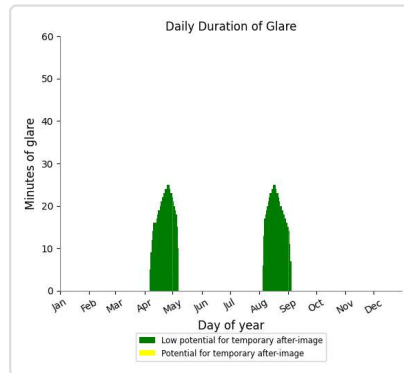
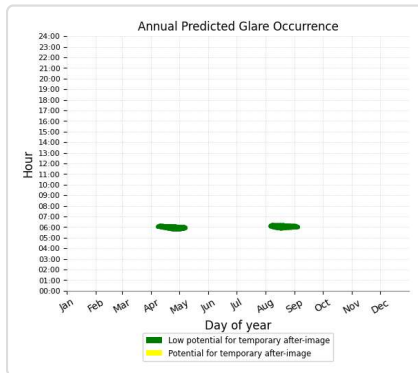
- 892 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 8

PV array is expected to produce the following glare for this receptor:

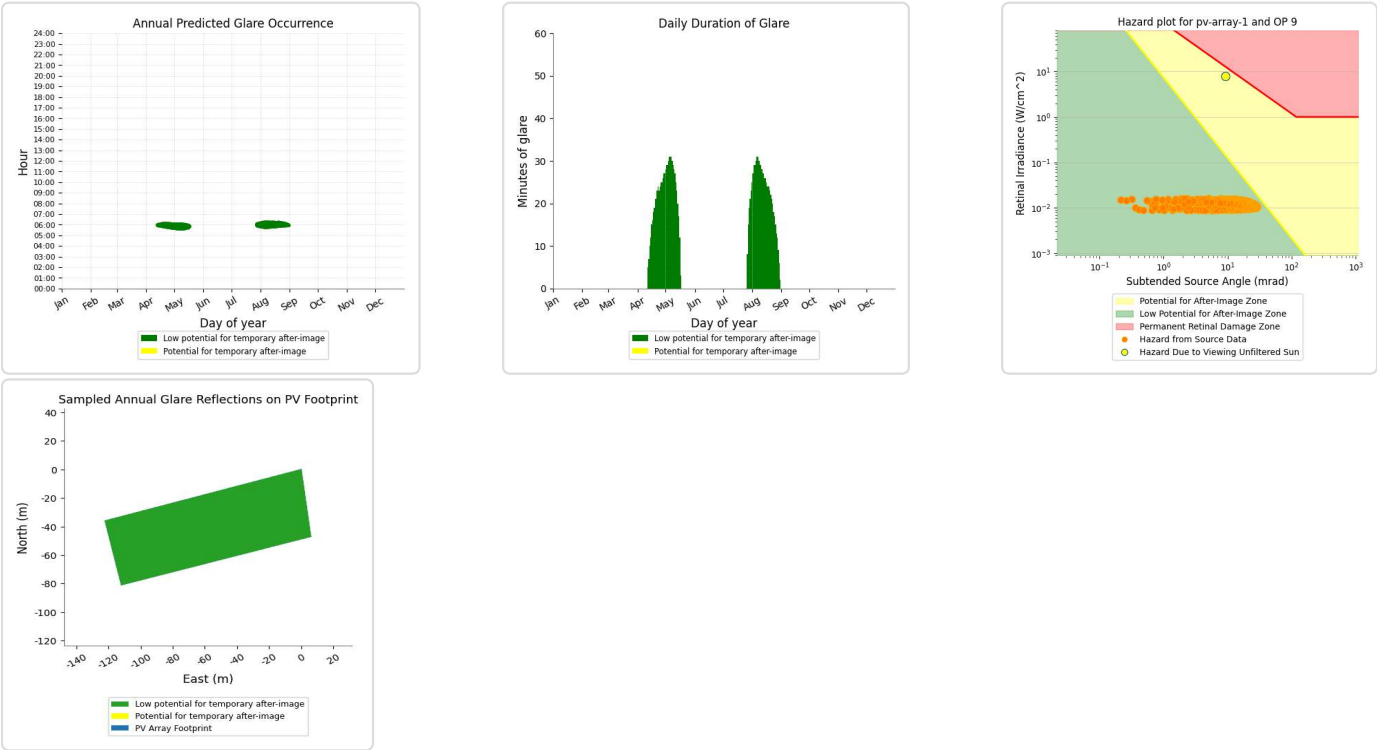
- 1,172 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 9

PV array is expected to produce the following glare for this receptor:

- 1,578 minutes of "green" glare with low potential to cause temporary after-image.
- 0 minutes of "yellow" glare with potential to cause temporary after-image.



PV array 1: OP 10

No glare found

PV array 1: OP 11

No glare found

PV array 1: OP 12

No glare found

PV array 1: OP 13

No glare found

Summary of Vertical Surface Glare Analysis

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographical obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.

- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.