



Solar Glare and Glint Analysis Report

for

Gateway Solar
Randolph County, Illinois

October 2025

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Kimley»Horn

Introduction

The Gateway Solar Project (Project) is a proposed solar panel project, represented in **Figure 1** as the shaded blue areas, and is located northeast of Sparta in Randolph County, Illinois. The use of the data is up to the client, including the determination if any glare is allowed for this development and if further steps should mitigation be required for any glare identified. See **Figure 1** for vicinity map with receptors and Project location. All observation points are indicated with yellow pins, all roadways are indicated with red paths, and all flight paths are indicated with green paths.

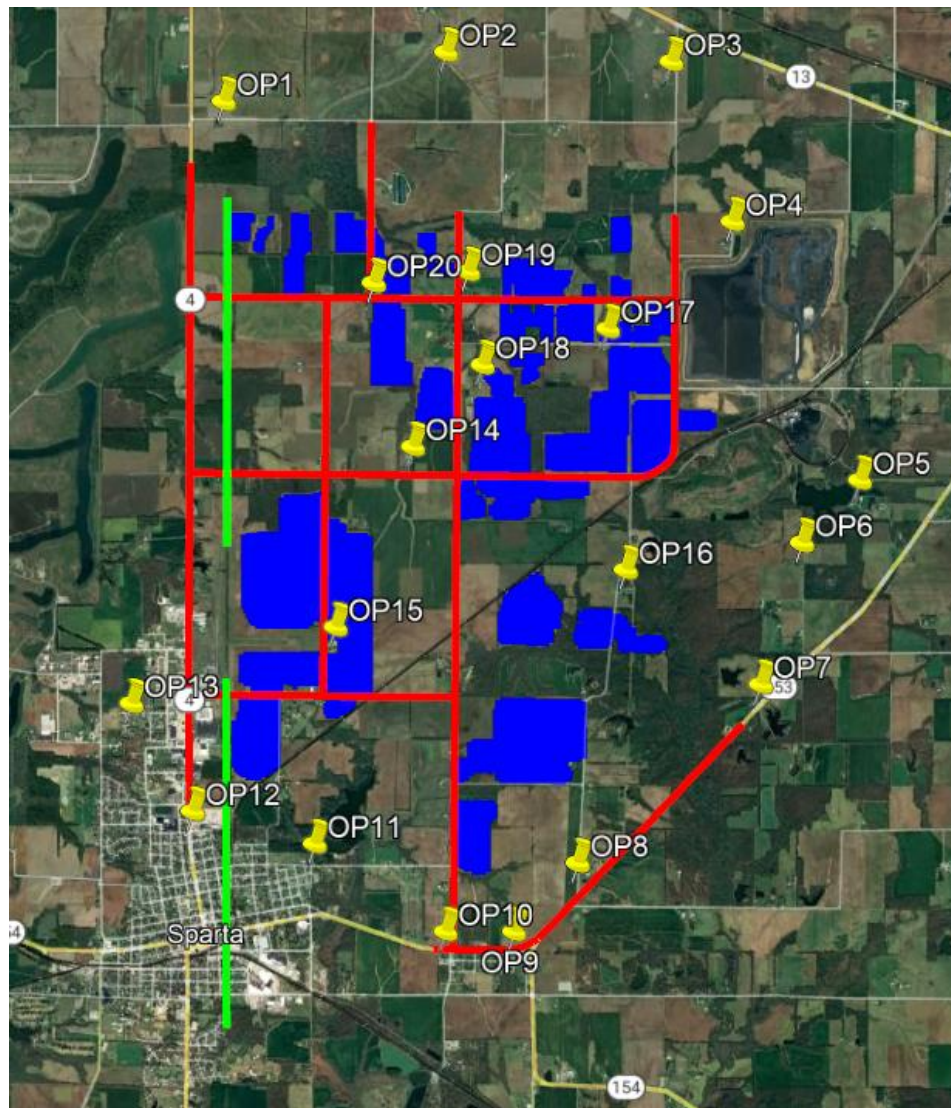


Figure 1: Project Location

Kimley Horn completed a glare analysis using the Solar Glare Hazard Analysis Tool (SGHAT) software, developed by Sandia Laboratories, now hosted by ForgeSolar. The SGHAT software is considered an industry-best practice and conservative model that effectively models the potential for glare at defined receptors from defined solar energy generating facilities.

Receptors & Methodology

Kimley Horn included as part of the analysis, 20 observation points within one mile of the Project, 8 adjacent roadways, and 2 flight paths. The points used for observation points were modeled without restricting the field of view, to ensure the results were conservative in nature. The receptors for roadways were limited to a 50-degree field of view to the left and right simulating the extent of peripheral vision. Glare that is beyond 50 degrees left or right from a driver's line-of-sight is not considered a safety hazard. The PV array was modeled with single axis tracking, smooth glass with anti-reflective coating, and shade-slope backtracking, see **Table 2**. The panel specifications, roadways, observation points, and flight path specifications can be found in **Appendices A and B**. All receptors analyzed are listed in **Table 1**, including observation points, roadways, and flight paths.

Receptors	Location	Description
Michael Road	Roadway passes through Project site	Analyzed north to south
Tilden Road	Roadway passes through Project site	Analyzed north to south
Wilson Road	Roadway passes through Project site	Analyzed east to west
Zeigler Mine Road	Roadway passes through Project site	Analyzed east to west
Airport Road	Roadway passes through Project site	Analyzed east to west
Hunter Field Road	Roadway passes through Project site	Analyzed north to south
State Route 4	Roadway west of Project site	Analyzed north to south
State Route 53	Roadway southeast of Project site	Analyzed northeast to southwest
Sparta Airport	Runways southwest of Project site	Analyzed 2 miles north and south along the runway flight path
20 Observation Points	Single family homes identified all around site	Analyzed within one mile of Project

Table 1: Receptor Descriptions

Parameter	Value
Rotation Axis Height	5'
Axis Tracking	Single-axis rotation
Tracking Axis Orientation	180°
Max Tracking Angle	60°
Backtracking Strategy	Shade
Ground Coverage Ratio	0.3721
Panel Material	Smooth glass with Anti-Reflective Coating
Resting Angle	60°

Table 2: Panel Specifications

Kimley Horn utilized the ForgeSolar Glare Gauge software tool to perform the glare analysis. If any receptor showed signs of glare, the tool calculated the retinal irradiance (brightness) and subtended angle (size divided by distance) of the glare source. By considering retinal irradiance and subtended angle, the analysis could predict ocular hazards ranging from low potential for temporary after-image to retinal burn. Based on the predicted retinal irradiance (intensity) and the subtended angle (size/distance) of the glare source to the receptor, the software categories glare into three levels shown by colors. The three glare levels are: "green" grade indicating a low potential for temporary after-image, "yellow" grade indicating the potential for temporary after-image, and "red" grade indicating the potential for retinal damage. For comparison, viewing the unfiltered sun is in the upper region of yellow glare near the red border, while solar panel glare tends to be on the border of green and yellow, approximately three orders of magnitude less than direct viewing of the sun. The three levels of glare were determined in "Ho, 2011". The different levels are displayed in **Figure 2**, with viewing unfiltered sun shown as a reference point.

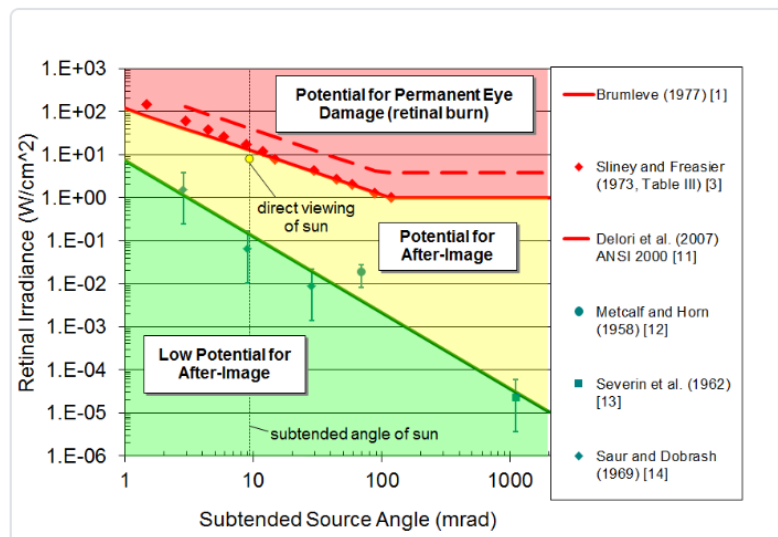


Figure 2: Glare Level Determined from "Ho, 2011"

Green and yellow glare is common from bodies of water, glass facades, and solar panel arrays. Red glare is extremely rare for PV arrays because solar panels do not concentrate glare.

According to the Federal Aviation Administration's (FAA) 2021 Final Policy, in previous years, pilots have reported glare from bodies of water and glass façades, resembling the glare produced by solar panels. The software analyzes pilot's similarly to motorists; therefore, results are like those found when analyzing pilots near bodies of water or existing building facades. Mitigating glare remains the focus, but it is not as significant an issue as initially thought in 2013 when the initial policy was formulated. The amount of light reflected by a surface, increases as the sunlight's angle of incidence from the surface increases as illustrated in **Figure 3**. The red angle of incidence yields 50% light reflected while the blue angle of incidence yields only two percent of light reflected.

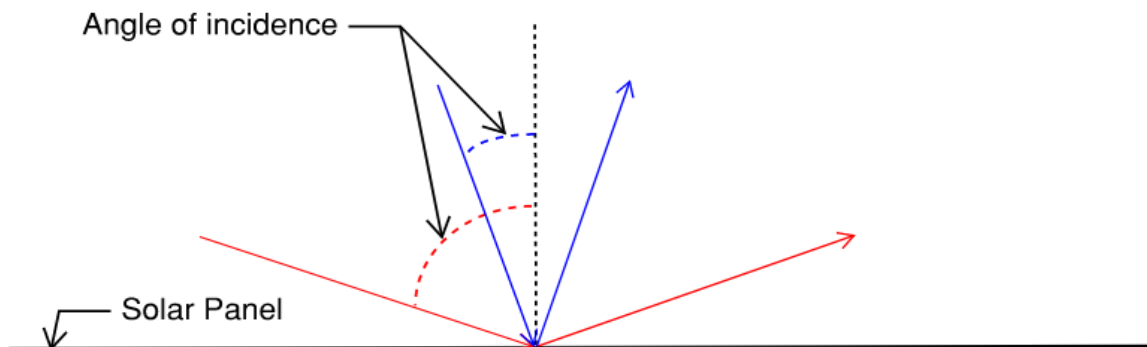


Figure 3: Reflected Light and Angle of Incidence (illustration only) on a panel

Analysis Results

The Project anticipates glare for one flight path. The Table 3-5 summarize the results for the observation points, roadways, and flight paths. Glare is reflected in hours per year with time of day in standard time assuming clear skies, no existing topography, or manmade objects to block line of sight.

Observation Points

The observation points were modeled at a height of six foot to simulate an individual in a single-story building within one mile of the Project. The site has no obstructions other than those modeled in existing and proposed vegetative buffers adjacent to the Project. OP 1-20 observed no glare see **Table 3**.

Receptor	Hazard Level	Hours (per year)
OP 1-20	Green	0
	Yellow	0
	Red	0

Table 3: Total Yearly Glare Hazard per Observation Point Receptors

Routes

The routes were modeled with a driver height of five foot to simulate an individual in a sedan vehicle. No roadways observed glare, see **Table 4**.

Receptor	Hazard Level	Hours (per year)
Michael Road	Green	0
	Yellow	0
	Red	0
Tilden Road	Green	0
	Yellow	0
	Red	0
Wilson Road	Green	0
	Yellow	0
	Red	0
Zeigler Mine Road	Green	0
	Yellow	0
	Red	0
Airport Road	Green	0
	Yellow	0
	Red	0
Hunter Field Road	Green	0
	Yellow	0
	Red	0
State Route 4	Green	0
	Yellow	0
	Red	0
State Route 53	Green	0
	Yellow	0
	Red	0

Table 4: Total Yearly Glare Hazard per Drive Path Receptors

Flight Paths

The flight paths were modeled by extending the runway by two miles on either end to simulate an aircraft landing from both sides. The flight path south out of Sparta Airport observed no glare while the flight path north observed green and yellow glare, see **Table 5**. Assuming an aircraft is traveling at 100 miles per hour, a pilot would only be anticipated to experience up to two seconds of glare during final approach to Sparta Airport.

Receptor	Hazard Level	Hours (per year)
Sparta Airport Flight Path North	Green	657.7
	Yellow	0.7
	Red	0
Sparta Airport Flight Path South	Green	0
	Yellow	0
	Red	0

Table 4: Total Yearly Glare Hazard per Flight Path out of Sparta Airport

Sparta Airport Flight Path North observed 657.7 hours of green glare and 0.7 hours of yellow glare from September to March, between 8:00 AM to 4:00 PM, up to 325 minutes and 5 minutes per day, respectively.

Conclusion

In summary, there was glare identified for one flight path throughout the entire Project. The model is shown in the most conservative scenario assuming there is no terrain or man-made objects blocking the line of sight from the PV arrays and receptors. For a pilot, green and yellow glare can be similar to natural occurring glare produced from bodies of water, soil, and glass façade buildings. The panel specifications should resemble those shown in **Appendix A** for panel arrays 1-20 and in **Appendix B** for panel arrays 21-35 to aim for the same results shown in this report.

APPENDIX A

ForgeSolar Glare Analysis Report for Panel Arrays 1-20

FORGESOLAR GLARE ANALYSIS

Project: **Gateway**

Site configuration: **Gateway1**

Created 17 Sep, 2025

Updated 21 Oct, 2025

Time-step 1 minute

Timezone offset UTC-6

Minimum sun altitude 0.0 deg

DNI peaks at 1,000.0 W/m²

Category 1 MW to 5 MW

Site ID 159740.26772

Ocular transmission coefficient 0.5

Pupil diameter 0.002 m

Eye focal length 0.017 m

Sun subtended angle 9.3 mrad

PV analysis methodology V2

Summary of Results Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy kWh
	°	°	min	hr	min	hr	
PV1	SA tracking	SA tracking	39,463	657.7	42	0.7	-
PV10	SA tracking	SA tracking	0	0.0	0	0.0	-
PV11	SA tracking	SA tracking	0	0.0	0	0.0	-
PV12	SA tracking	SA tracking	0	0.0	0	0.0	-
PV13	SA tracking	SA tracking	0	0.0	0	0.0	-
PV14	SA tracking	SA tracking	0	0.0	0	0.0	-
PV15	SA tracking	SA tracking	0	0.0	0	0.0	-
PV16	SA tracking	SA tracking	0	0.0	0	0.0	-
PV17	SA tracking	SA tracking	0	0.0	0	0.0	-
PV18	SA tracking	SA tracking	0	0.0	0	0.0	-
PV19	SA tracking	SA tracking	0	0.0	0	0.0	-
PV2	SA tracking	SA tracking	0	0.0	0	0.0	-
PV20	SA tracking	SA tracking	0	0.0	0	0.0	-
PV3	SA tracking	SA tracking	0	0.0	0	0.0	-
PV4	SA tracking	SA tracking	0	0.0	0	0.0	-
PV5	SA tracking	SA tracking	0	0.0	0	0.0	-
PV6	SA tracking	SA tracking	0	0.0	0	0.0	-
PV7	SA tracking	SA tracking	0	0.0	0	0.0	-
PV8	SA tracking	SA tracking	0	0.0	0	0.0	-
PV9	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

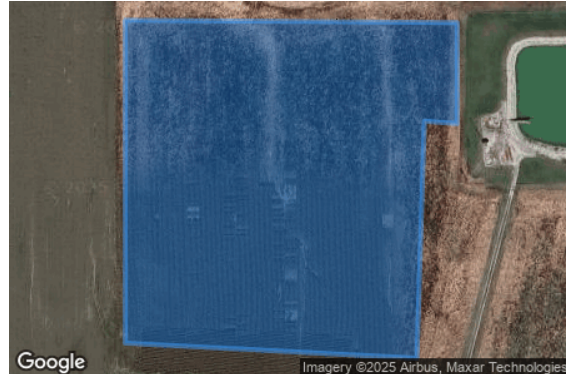
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	39,463	657.7	42	0.7
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV1
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0°
Max tracking angle: 60.0°
Resting angle: 60.0°
Ground Coverage Ratio: 0.3721
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.180724	-89.697081	477.10	5.00	482.10
2	38.182319	-89.697016	464.90	5.00	469.90
3	38.182302	-89.696735	466.40	5.00	471.40
4	38.182981	-89.696735	461.60	5.00	466.60
5	38.182998	-89.699586	455.20	5.00	460.20
6	38.180825	-89.699586	465.30	5.00	470.30
7	38.180724	-89.697081	477.10	5.00	482.10

Name: PV10
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0°
Max tracking angle: 60.0°
Resting angle: 60.0°
Ground Coverage Ratio: 0.3721
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.176115	-89.661832	487.80	5.00	492.80
2	38.176129	-89.660597	489.10	5.00	494.10
3	38.177115	-89.660579	479.70	5.00	484.70
4	38.177157	-89.661741	482.10	5.00	487.10
5	38.176115	-89.661832	487.80	5.00	492.80

Name: PV11

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.176187	-89.658781	486.90	5.00	491.90
2	38.176101	-89.656892	495.60	5.00	500.60
3	38.177443	-89.656892	493.40	5.00	498.40
4	38.177429	-89.657709	491.10	5.00	496.10
5	38.177743	-89.657728	490.70	5.00	495.70
6	38.177757	-89.658817	487.50	5.00	492.50
7	38.176187	-89.658781	486.90	5.00	491.90

Name: PV12

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.179827	-89.658800	495.70	5.00	500.70
2	38.179854	-89.656948	502.40	5.00	507.40
3	38.182742	-89.656956	498.00	5.00	503.00
4	38.182715	-89.658750	482.50	5.00	487.50
5	38.179827	-89.658800	495.70	5.00	500.70

Name: PV13

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.172368	-89.656464	508.00	5.00	513.00
2	38.172359	-89.655868	508.20	5.00	513.20
3	38.172333	-89.655407	508.20	5.00	513.20
4	38.172364	-89.653978	508.60	5.00	513.60
5	38.172797	-89.653989	501.80	5.00	506.80
6	38.172979	-89.653336	501.20	5.00	506.20
7	38.172983	-89.652419	507.40	5.00	512.40
8	38.174801	-89.652442	508.70	5.00	513.70
9	38.175544	-89.652459	513.20	5.00	518.20
10	38.175707	-89.656200	499.50	5.00	504.50
11	38.175690	-89.656481	498.50	5.00	503.50
12	38.174823	-89.656487	492.30	5.00	497.30
13	38.174805	-89.654687	498.00	5.00	503.00
14	38.174473	-89.654709	498.70	5.00	503.70
15	38.173589	-89.654709	496.30	5.00	501.30
16	38.173686	-89.655604	498.40	5.00	503.40
17	38.173691	-89.656228	498.20	5.00	503.20
18	38.173699	-89.656453	500.40	5.00	505.40
19	38.172368	-89.656464	508.00	5.00	513.00

Name: PV14

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.172385	-89.659991	497.30	5.00	502.30
2	38.172372	-89.656812	508.20	5.00	513.20
3	38.174010	-89.656806	500.10	5.00	505.10
4	38.174032	-89.659435	492.20	5.00	497.20
5	38.173486	-89.659992	493.30	5.00	498.30
6	38.172385	-89.659991	497.30	5.00	502.30

Name: PV15

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.175312	-89.663226	490.80	5.00	495.80
2	38.175272	-89.664488	489.80	5.00	494.80
3	38.174801	-89.664526	491.00	5.00	496.00
4	38.174651	-89.664654	491.30	5.00	496.30
5	38.173299	-89.664654	493.50	5.00	498.50
6	38.173289	-89.664501	493.80	5.00	498.80
7	38.172427	-89.664501	495.20	5.00	500.20
8	38.172387	-89.660703	499.30	5.00	504.30
9	38.175613	-89.660754	492.10	5.00	497.10
10	38.175633	-89.663226	489.90	5.00	494.90
11	38.175312	-89.663226	490.80	5.00	495.80

Name: PV16

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.174701	-89.666863	493.30	5.00	498.30
2	38.174701	-89.667501	493.80	5.00	498.80
3	38.175312	-89.667424	494.80	5.00	499.80
4	38.175322	-89.669158	491.40	5.00	496.40
5	38.174661	-89.669132	493.30	5.00	498.30
6	38.174681	-89.669655	491.60	5.00	496.60
7	38.175633	-89.669693	488.70	5.00	493.70
8	38.175663	-89.670432	484.90	5.00	489.90
9	38.172417	-89.670483	480.70	5.00	485.70
10	38.172397	-89.668350	482.20	5.00	487.20
11	38.172687	-89.668312	483.80	5.00	488.80
12	38.172727	-89.668108	483.50	5.00	488.50
13	38.173349	-89.667904	487.30	5.00	492.30
14	38.173609	-89.667942	489.80	5.00	494.80
15	38.173619	-89.666285	489.90	5.00	494.90
16	38.172377	-89.666260	487.90	5.00	492.90
17	38.172397	-89.664985	493.40	5.00	498.40
18	38.173319	-89.664947	492.80	5.00	497.80
19	38.174641	-89.664909	491.50	5.00	496.50
20	38.174751	-89.665023	491.50	5.00	496.50
21	38.175322	-89.664972	490.80	5.00	495.80
22	38.175312	-89.666808	494.30	5.00	499.30
23	38.174701	-89.666863	493.30	5.00	498.30

Name: PV17

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.170690	-89.669639	473.90	5.00	478.90
2	38.170376	-89.669396	474.30	5.00	479.30
3	38.170358	-89.668147	480.20	5.00	485.20
4	38.170167	-89.667962	480.40	5.00	485.40
5	38.169890	-89.668280	480.60	5.00	485.60
6	38.168876	-89.668251	476.20	5.00	481.20
7	38.168885	-89.667568	479.80	5.00	484.80
8	38.169167	-89.667592	482.00	5.00	487.00
9	38.169166	-89.667015	484.80	5.00	489.80
10	38.169356	-89.666585	487.80	5.00	492.80
11	38.169891	-89.666587	489.10	5.00	494.10
12	38.169891	-89.666857	489.40	5.00	494.40
13	38.170192	-89.666829	487.00	5.00	492.00
14	38.170359	-89.666555	486.50	5.00	491.50
15	38.170394	-89.666109	489.80	5.00	494.80
16	38.171397	-89.666106	490.70	5.00	495.70
17	38.171400	-89.669634	475.10	5.00	480.10
18	38.170690	-89.669639	473.90	5.00	478.90

Name: PV18

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

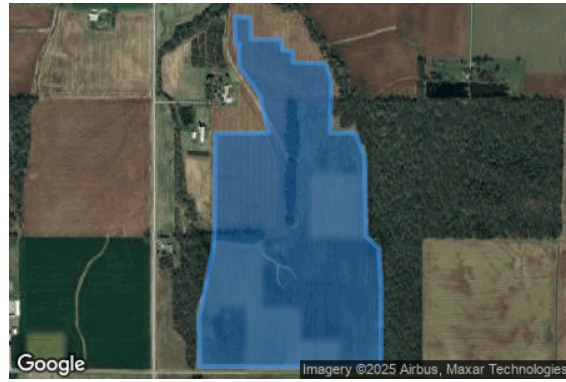
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.170109	-89.672492	482.17	5.00	487.17
2	38.170088	-89.672358	483.14	5.00	488.14
3	38.169483	-89.672349	480.35	5.00	485.35
4	38.168694	-89.671641	485.06	5.00	490.06
5	38.167691	-89.671337	486.17	5.00	491.17
6	38.167684	-89.673163	488.91	5.00	493.91
7	38.165131	-89.673190	489.46	5.00	494.46
8	38.164577	-89.673245	494.55	5.00	499.55
9	38.162731	-89.673727	494.91	5.00	499.91
10	38.161401	-89.673709	493.47	5.00	498.47
11	38.161394	-89.667476	500.46	5.00	505.46
12	38.163505	-89.667458	498.98	5.00	503.98
13	38.164581	-89.667548	495.20	5.00	500.20
14	38.164905	-89.667986	496.31	5.00	501.31
15	38.167060	-89.668040	494.84	5.00	499.84
16	38.167692	-89.668345	494.76	5.00	499.76
17	38.167692	-89.669214	493.52	5.00	498.52
18	38.169093	-89.669187	484.58	5.00	489.58
19	38.169567	-89.669390	484.12	5.00	489.12
20	38.169588	-89.670504	491.31	5.00	496.31
21	38.169884	-89.670501	488.31	5.00	493.31
22	38.169920	-89.670859	487.51	5.00	492.51
23	38.170199	-89.670893	484.22	5.00	489.22
24	38.170207	-89.671938	485.85	5.00	490.85
25	38.170802	-89.671964	486.97	5.00	491.97
26	38.170833	-89.672497	478.91	5.00	483.91
27	38.170109	-89.672492	482.17	5.00	487.17

Name: PV19

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

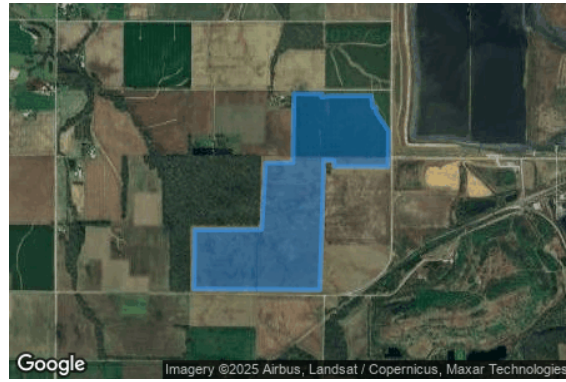
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.168224	-89.660891	511.34	5.00	516.34
2	38.166365	-89.661025	511.39	5.00	516.39
3	38.164644	-89.661156	513.01	5.00	518.01
4	38.164626	-89.665763	501.28	5.00	506.28
5	38.161440	-89.665810	503.85	5.00	508.85
6	38.161400	-89.657150	519.69	5.00	524.69
7	38.168381	-89.656870	522.53	5.00	527.53
8	38.168359	-89.656208	522.50	0.00	522.50
9	38.168041	-89.656147	525.30	5.00	530.30
10	38.168027	-89.652465	530.45	5.00	535.45
11	38.169954	-89.652442	520.16	5.00	525.16
12	38.170914	-89.653252	515.19	5.00	520.19
13	38.171229	-89.653319	511.62	5.00	516.62
14	38.171238	-89.653521	512.18	5.00	517.18
15	38.171848	-89.653615	509.70	5.00	514.70
16	38.171835	-89.656468	514.85	5.00	519.85
17	38.171778	-89.657035	512.03	5.00	517.03
18	38.171942	-89.657009	512.47	5.00	517.47
19	38.171960	-89.658940	506.33	5.00	511.33
20	38.168248	-89.659011	517.68	5.00	522.68

Name: PV2

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.179834	-89.695740	479.90	5.00	484.90
2	38.180726	-89.695547	473.20	5.00	478.20
3	38.181050	-89.695471	472.90	5.00	477.90
4	38.181056	-89.695320	471.40	5.00	476.40
5	38.181202	-89.695253	471.00	5.00	476.00
6	38.181723	-89.694665	464.70	5.00	469.70
7	38.182748	-89.694648	460.90	5.00	465.90
8	38.182734	-89.695026	465.60	5.00	470.60
9	38.181796	-89.695060	468.30	5.00	473.30
10	38.181776	-89.696136	472.50	5.00	477.50
11	38.180528	-89.696556	482.40	5.00	487.40
12	38.179827	-89.696514	485.90	5.00	490.90
13	38.179834	-89.695740	479.90	5.00	484.90

Name: PV20

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.161509	-89.656581	518.30	5.00	523.30
2	38.161482	-89.654734	515.90	5.00	520.90
3	38.161665	-89.654301	517.10	5.00	522.10
4	38.162286	-89.653204	516.80	5.00	521.80
5	38.163011	-89.652502	519.50	5.00	524.50
6	38.163685	-89.652414	518.30	5.00	523.30
7	38.167433	-89.652463	526.50	5.00	531.50
8	38.167459	-89.656158	522.80	5.00	527.80
9	38.167128	-89.656547	520.90	5.00	525.90
10	38.161509	-89.656581	518.30	5.00	523.30

Name: PV3

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.179590	-89.692794	486.00	5.00	491.00
2	38.179344	-89.693332	488.60	5.00	493.60
3	38.176370	-89.693315	503.10	5.00	508.10
4	38.176424	-89.691457	488.50	5.00	493.50
5	38.179644	-89.691336	474.10	5.00	479.10
6	38.179835	-89.690780	470.10	5.00	475.10
7	38.182960	-89.690798	454.50	5.00	459.50
8	38.182988	-89.692690	458.80	5.00	463.80
9	38.179590	-89.692794	486.00	5.00	491.00

Name: PV4

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.179835	-89.688020	464.30	5.00	469.30
2	38.179780	-89.684514	468.00	5.00	473.00
3	38.180818	-89.684513	463.40	5.00	468.40
4	38.180859	-89.684947	463.50	5.00	468.50
5	38.181322	-89.684947	462.20	5.00	467.20
6	38.181745	-89.684791	461.20	5.00	466.20
7	38.182387	-89.684791	459.00	5.00	464.00
8	38.182401	-89.686110	457.60	5.00	462.60
9	38.183042	-89.686093	456.40	5.00	461.40
10	38.183056	-89.687985	459.30	5.00	464.30
11	38.179835	-89.688020	464.30	5.00	469.30

Name: PV5

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.181704	-89.684026	460.90	5.00	465.90
2	38.178508	-89.684026	464.10	5.00	469.10
3	38.178497	-89.683642	461.70	5.00	466.70
4	38.178378	-89.683216	460.20	5.00	465.20
5	38.177590	-89.683229	461.80	5.00	466.80
6	38.176996	-89.683174	463.10	5.00	468.10
7	38.176370	-89.682845	464.50	5.00	469.50
8	38.176380	-89.680152	472.70	5.00	477.70
9	38.178821	-89.680125	473.00	5.00	478.00
10	38.179555	-89.680537	463.10	5.00	468.10
11	38.179577	-89.681897	458.80	5.00	463.80
12	38.179296	-89.682391	459.00	5.00	464.00
13	38.179696	-89.682996	460.80	5.00	465.80
14	38.180776	-89.682996	467.80	5.00	472.80
15	38.181380	-89.683614	464.50	5.00	469.50
16	38.181704	-89.683697	461.50	5.00	466.50
17	38.181704	-89.684026	460.90	5.00	465.90

Name: PV6

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.180667	-89.679330	459.50	5.00	464.50
2	38.180346	-89.679187	459.30	5.00	464.30
3	38.180058	-89.678678	460.00	5.00	465.00
4	38.180042	-89.678392	460.90	5.00	465.90
5	38.177845	-89.678310	461.00	5.00	466.00
6	38.177813	-89.675435	477.70	5.00	482.70
7	38.178839	-89.675435	475.60	5.00	480.60
8	38.178903	-89.677413	462.80	5.00	467.80
9	38.181340	-89.677372	476.70	5.00	481.70
10	38.181420	-89.679289	459.50	5.00	464.50
11	38.180667	-89.679330	459.50	5.00	464.50

Name: PV7

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.174188	-89.683875	476.20	5.00	481.20
2	38.173759	-89.684277	476.40	5.00	481.40
3	38.168793	-89.684277	486.10	5.00	491.10
4	38.168729	-89.680017	476.60	5.00	481.60
5	38.170625	-89.680001	478.30	5.00	483.30
6	38.170739	-89.680644	480.10	5.00	485.10
7	38.175023	-89.680644	477.30	5.00	482.30
8	38.175060	-89.681126	475.80	5.00	480.80
9	38.175667	-89.681126	476.20	5.00	481.20
10	38.175617	-89.682203	469.70	5.00	474.70
11	38.175654	-89.682991	470.00	5.00	475.00
12	38.175642	-89.683827	474.60	5.00	479.60
13	38.174188	-89.683875	476.20	5.00	481.20

Name: PV8

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.169506	-89.678817	473.20	5.00	478.20
2	38.166194	-89.679470	483.00	5.00	488.00
3	38.165137	-89.679507	488.50	5.00	493.50
4	38.165123	-89.675475	485.10	5.00	490.10
5	38.167379	-89.675366	479.40	5.00	484.40
6	38.168036	-89.675548	479.40	5.00	484.40
7	38.168821	-89.675730	476.40	5.00	481.40
8	38.169906	-89.675766	480.40	5.00	485.40
9	38.170234	-89.676855	483.70	5.00	488.70
10	38.170191	-89.678454	473.40	5.00	478.40
11	38.169506	-89.678817	473.20	5.00	478.20

Name: PV9

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

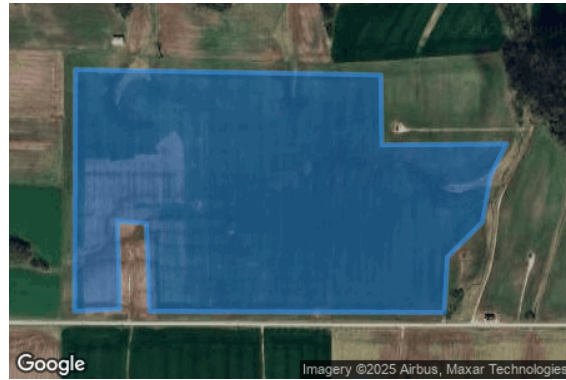
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.177200	-89.669626	487.50	5.00	492.50
2	38.177172	-89.669136	488.20	5.00	493.20
3	38.175987	-89.669081	489.60	5.00	494.60
4	38.175973	-89.664014	488.50	5.00	493.50
5	38.176715	-89.663960	489.80	5.00	494.80
6	38.177186	-89.663360	484.20	5.00	489.20
7	38.177814	-89.663215	482.30	5.00	487.30
8	38.178243	-89.662943	480.90	5.00	485.90
9	38.178228	-89.665086	490.10	5.00	495.10
10	38.179171	-89.665104	490.30	5.00	495.30
11	38.179242	-89.670353	491.30	5.00	496.30
12	38.175987	-89.670371	486.00	5.00	491.00
13	38.176015	-89.669590	487.80	5.00	492.80
14	38.177200	-89.669626	487.50	5.00	492.50

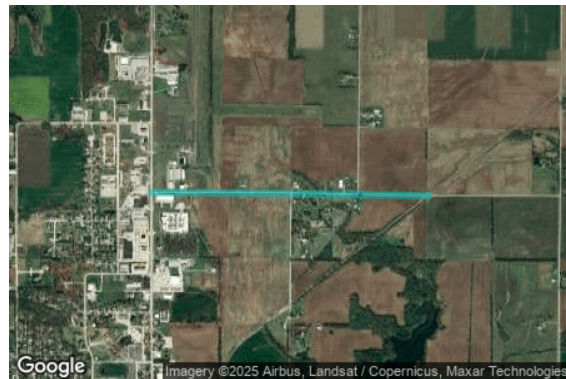
Route Receptors

Name: Airport Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.143048	-89.703533	528.80	5.00	533.80
2	38.142984	-89.693891	514.50	5.00	519.50
3	38.142877	-89.684527	516.50	5.00	521.50

Name: Hunter Field Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



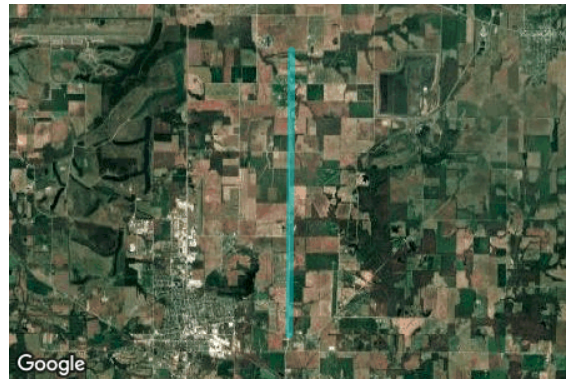
Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.142943	-89.689317	516.20	5.00	521.20
2	38.175898	-89.688925	477.80	5.00	482.80

Name: Michael Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.183215	-89.674961	467.60	5.00	472.60
2	38.121874	-89.675571	514.90	5.00	519.90

Name: State Route 4

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.187256	-89.703336	450.60	5.00	455.60
2	38.176058	-89.703379	472.80	5.00	477.80
3	38.160741	-89.703419	509.10	5.00	514.10
4	38.148989	-89.703500	530.00	5.00	535.00
5	38.142922	-89.703521	528.90	5.00	533.90
6	38.133774	-89.703428	536.60	5.00	541.60

Name: State Route 53

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.140584	-89.645019	497.60	5.00	502.60
2	38.126002	-89.662641	533.00	5.00	538.00
3	38.122765	-89.666578	532.40	5.00	537.40
4	38.122149	-89.668067	533.10	5.00	538.10
5	38.121848	-89.669284	534.10	5.00	539.10
6	38.121855	-89.672527	533.00	5.00	538.00
7	38.121889	-89.677681	512.30	5.00	517.30

Name: Tilden Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.190638	-89.684213	462.00	5.00	467.00
2	38.175960	-89.684353	469.70	5.00	474.70

Name: Wilson Road
Path type: Two-way
Azimuthal view angle: 50.0°
Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.176085	-89.703357	472.80	5.00	477.80
2	38.175966	-89.685313	468.90	5.00	473.90
3	38.175914	-89.678588	466.40	5.00	471.40
4	38.175823	-89.666662	495.30	5.00	500.30
5	38.175835	-89.652157	514.40	5.00	519.40

Name: Zeigler Mine Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 0.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.161492	-89.703434	499.00	5.00	504.00
2	38.161412	-89.699114	509.90	5.00	514.90
3	38.161415	-89.697644	503.20	5.00	508.20
4	38.161368	-89.694237	501.70	5.00	506.70
5	38.161326	-89.686739	506.60	5.00	511.60
6	38.161240	-89.675236	497.20	5.00	502.20
7	38.161077	-89.656782	516.40	5.00	521.40
8	38.161107	-89.655563	510.50	5.00	515.50
9	38.161307	-89.654736	514.50	5.00	519.50
10	38.161860	-89.653541	517.60	5.00	522.60
11	38.162465	-89.652632	518.00	5.00	523.00
12	38.163174	-89.652216	517.70	5.00	522.70
13	38.163886	-89.652183	519.50	5.00	524.50
14	38.165143	-89.652162	524.10	5.00	529.10
15	38.168498	-89.652158	523.70	5.00	528.70
16	38.176701	-89.652135	515.40	5.00	520.40
17	38.182938	-89.652104	497.80	5.00	502.80

Flight Path Receptors

Name: Sparta Airport Flight Path North

Description: None

Threshold height: 50 ft

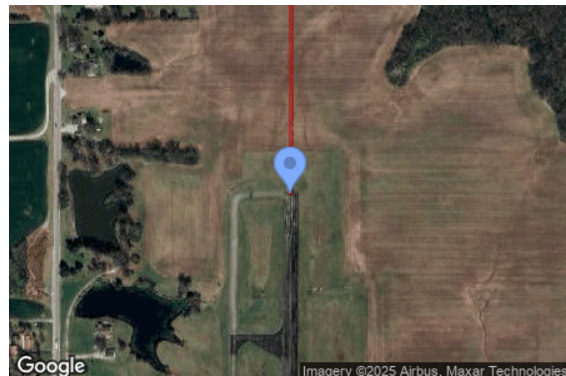
Direction: 180.0°

Glide slope: 3.0°

Pilot view restricted? Yes

Vertical view: 30.0°

Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.155365	-89.699480	536.50	50.00	586.50
Two-mile	38.184351	-89.699456	451.70	50.00	501.70

Name: Sparta Airport Flight Path South

Description: None

Threshold height: 50 ft

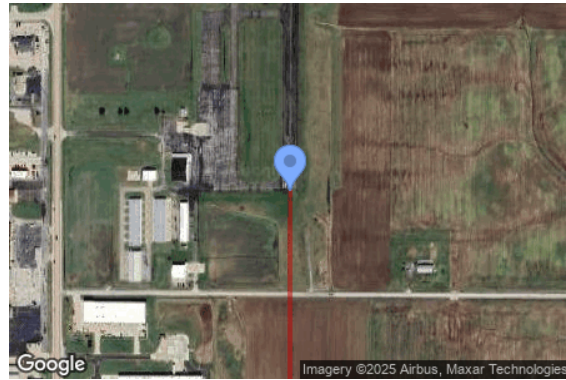
Direction: 0.0°

Glide slope: 3.0°

Pilot view restricted? Yes

Vertical view: 30.0°

Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.144417	-89.699539	522.00	50.00	572.00
Two-mile	38.115328	-89.699518	510.40	50.00	560.40

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.190610	-89.700480	454.70	6.00
OP 2	2	38.194700	-89.676969	474.40	6.00
OP 3	3	38.193909	-89.653142	505.20	6.00
OP 4	4	38.180606	-89.646673	522.60	6.00
OP 5	5	38.159124	-89.633228	511.20	6.00
OP 6	6	38.153931	-89.639346	524.90	6.00
OP 7	7	38.142175	-89.643710	519.40	6.00
OP 8	8	38.127336	-89.663052	542.30	6.00
OP 9	9	38.121633	-89.669779	535.80	6.00
OP 10	10	38.121637	-89.677006	516.10	6.00
OP 11	11	38.128928	-89.690833	513.10	6.00
OP 12	12	38.131627	-89.703722	534.80	6.00
OP 13	13	38.140581	-89.710198	513.80	6.00
OP 14	14	38.161917	-89.680458	501.60	6.00
OP 15	15	38.146935	-89.688632	531.20	6.00
OP 16	16	38.151683	-89.657973	507.50	6.00
OP 17	17	38.171718	-89.659843	500.30	6.00
OP 18	18	38.168713	-89.673099	482.00	6.00
OP 19	19	38.176470	-89.674639	483.90	6.00
OP 20	20	38.175520	-89.684604	472.40	6.00

Glare Analysis Results

Summary of Results Glare with potential for temporary after-image predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV1	SA tracking	SA tracking	39,463	657.7	42	0.7	-
PV10	SA tracking	SA tracking	0	0.0	0	0.0	-
PV11	SA tracking	SA tracking	0	0.0	0	0.0	-
PV12	SA tracking	SA tracking	0	0.0	0	0.0	-
PV13	SA tracking	SA tracking	0	0.0	0	0.0	-
PV14	SA tracking	SA tracking	0	0.0	0	0.0	-
PV15	SA tracking	SA tracking	0	0.0	0	0.0	-
PV16	SA tracking	SA tracking	0	0.0	0	0.0	-
PV17	SA tracking	SA tracking	0	0.0	0	0.0	-
PV18	SA tracking	SA tracking	0	0.0	0	0.0	-
PV19	SA tracking	SA tracking	0	0.0	0	0.0	-
PV2	SA tracking	SA tracking	0	0.0	0	0.0	-
PV20	SA tracking	SA tracking	0	0.0	0	0.0	-
PV3	SA tracking	SA tracking	0	0.0	0	0.0	-
PV4	SA tracking	SA tracking	0	0.0	0	0.0	-
PV5	SA tracking	SA tracking	0	0.0	0	0.0	-
PV6	SA tracking	SA tracking	0	0.0	0	0.0	-
PV7	SA tracking	SA tracking	0	0.0	0	0.0	-
PV8	SA tracking	SA tracking	0	0.0	0	0.0	-
PV9	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	39,463	657.7	42	0.7
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV: PV1 potential temporary after-image

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	39,463	657.7	42	0.7
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV1 and Route: Airport Road

No glare found

PV1 and Route: Hunter Field Road

No glare found

PV1 and Route: Michael Road

No glare found

PV1 and Route: State Route 4

No glare found

PV1 and Route: State Route 53

No glare found

PV1 and Route: Tilden Road

No glare found

PV1 and Route: Wilson Road

No glare found

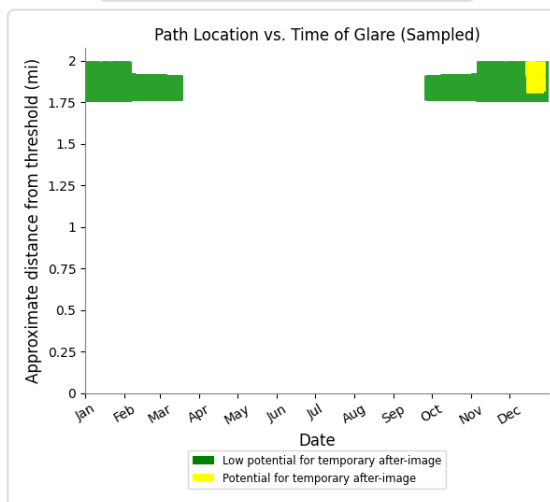
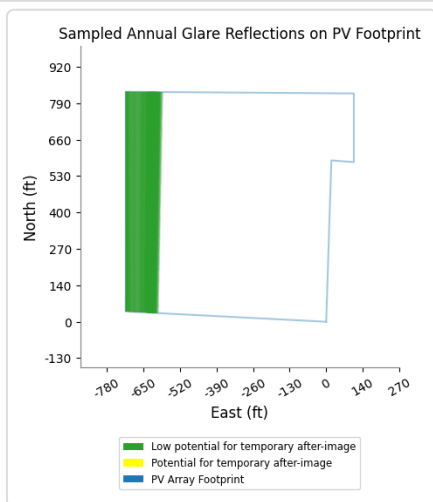
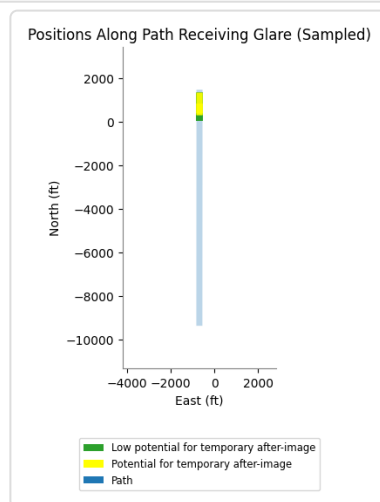
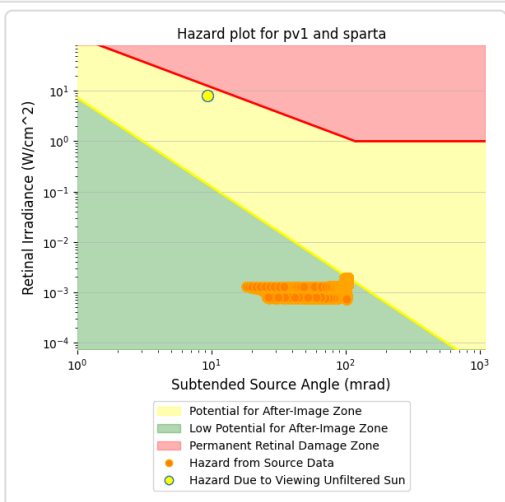
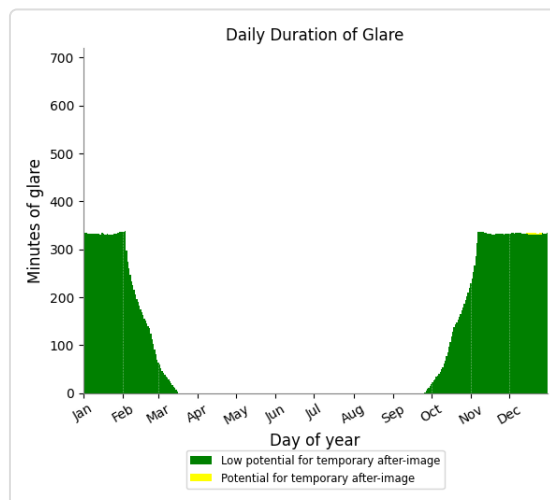
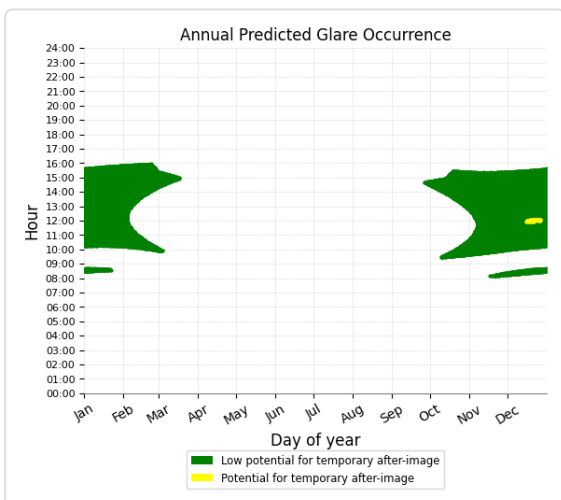
PV1 and Route: Zeigler Mine Road

No glare found

PV1 and FP: Sparta Airport Flight Path North

Yellow glare: 42 min.

Green glare: 39,463 min.



PV1 and FP: Sparta Airport Flight Path South

No glare found

PV1 and OP 1

No glare found

PV1 and OP 2

No glare found

PV1 and OP 3

No glare found

PV1 and OP 4

No glare found

PV1 and OP 5

No glare found

PV1 and OP 6

No glare found

PV1 and OP 7

No glare found

PV1 and OP 8

No glare found

PV1 and OP 9

No glare found

PV1 and OP 10

No glare found

PV1 and OP 11

No glare found

PV1 and OP 12

No glare found

PV1 and OP 13

No glare found

PV1 and OP 14

No glare found

PV1 and OP 15

No glare found

PV1 and OP 16

No glare found

PV1 and OP 17

No glare found

PV1 and OP 18

No glare found

PV1 and OP 19

No glare found

PV1 and OP 20

No glare found

PV: PV10 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV10 and Route: Airport Road

No glare found

PV10 and Route: Hunter Field Road

No glare found

PV10 and Route: Michael Road

No glare found

PV10 and Route: State Route 4

No glare found

PV10 and Route: State Route 53

No glare found

PV10 and Route: Tilden Road

No glare found

PV10 and Route: Wilson Road

No glare found

PV10 and Route: Zeigler Mine Road

No glare found

PV10 and FP: Sparta Airport Flight Path North

No glare found

PV10 and FP: Sparta Airport Flight Path South

No glare found

PV10 and OP 1

No glare found

PV10 and OP 2

No glare found

PV10 and OP 3

No glare found

PV10 and OP 4

No glare found

PV10 and OP 5

No glare found

PV10 and OP 6

No glare found

PV10 and OP 7

No glare found

PV10 and OP 8

No glare found

PV10 and OP 9

No glare found

PV10 and OP 10

No glare found

PV10 and OP 11

No glare found

PV10 and OP 12

No glare found

PV10 and OP 13

No glare found

PV10 and OP 14

No glare found

PV10 and OP 15

No glare found

PV10 and OP 16

No glare found

PV10 and OP 17

No glare found

PV10 and OP 18

No glare found

PV10 and OP 19

No glare found

PV10 and OP 20

No glare found

PV: PV11 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV11 and Route: Airport Road

No glare found

PV11 and Route: Hunter Field Road

No glare found

PV11 and Route: Michael Road

No glare found

PV11 and Route: State Route 4

No glare found

PV11 and Route: State Route 53

No glare found

PV11 and Route: Tilden Road

No glare found

PV11 and Route: Wilson Road

No glare found

PV11 and Route: Zeigler Mine Road

No glare found

PV11 and FP: Sparta Airport Flight Path North

No glare found

PV11 and FP: Sparta Airport Flight Path South

No glare found

PV11 and OP 1

No glare found

PV11 and OP 2

No glare found

PV11 and OP 3

No glare found

PV11 and OP 4

No glare found

PV11 and OP 5

No glare found

PV11 and OP 6

No glare found

PV11 and OP 7

No glare found

PV11 and OP 8

No glare found

PV11 and OP 9

No glare found

PV11 and OP 10

No glare found

PV11 and OP 11

No glare found

PV11 and OP 12

No glare found

PV11 and OP 13

No glare found

PV11 and OP 14

No glare found

PV11 and OP 15

No glare found

PV11 and OP 16

No glare found

PV11 and OP 17

No glare found

PV11 and OP 18

No glare found

PV11 and OP 19

No glare found

PV11 and OP 20

No glare found

PV: PV12 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV12 and Route: Airport Road

No glare found

PV12 and Route: Hunter Field Road

No glare found

PV12 and Route: Michael Road

No glare found

PV12 and Route: State Route 4

No glare found

PV12 and Route: State Route 53

No glare found

PV12 and Route: Tilden Road

No glare found

PV12 and Route: Wilson Road

No glare found

PV12 and Route: Zeigler Mine Road

No glare found

PV12 and FP: Sparta Airport Flight Path North

No glare found

PV12 and FP: Sparta Airport Flight Path South

No glare found

PV12 and OP 1

No glare found

PV12 and OP 2

No glare found

PV12 and OP 3

No glare found

PV12 and OP 4

No glare found

PV12 and OP 5

No glare found

PV12 and OP 6

No glare found

PV12 and OP 7

No glare found

PV12 and OP 8

No glare found

PV12 and OP 9

No glare found

PV12 and OP 10

No glare found

PV12 and OP 11

No glare found

PV12 and OP 12

No glare found

PV12 and OP 13

No glare found

PV12 and OP 14

No glare found

PV12 and OP 15

No glare found

PV12 and OP 16

No glare found

PV12 and OP 17

No glare found

PV12 and OP 18

No glare found

PV12 and OP 19

No glare found

PV12 and OP 20

No glare found

PV: PV13 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV13 and Route: Airport Road

No glare found

PV13 and Route: Hunter Field Road

No glare found

PV13 and Route: Michael Road

No glare found

PV13 and Route: State Route 4

No glare found

PV13 and Route: State Route 53

No glare found

PV13 and Route: Tilden Road

No glare found

PV13 and Route: Wilson Road

No glare found

PV13 and Route: Zeigler Mine Road

No glare found

PV13 and FP: Sparta Airport Flight Path North

No glare found

PV13 and FP: Sparta Airport Flight Path South

No glare found

PV13 and OP 1

No glare found

PV13 and OP 2

No glare found

PV13 and OP 3

No glare found

PV13 and OP 4

No glare found

PV13 and OP 5

No glare found

PV13 and OP 6

No glare found

PV13 and OP 7

No glare found

PV13 and OP 8

No glare found

PV13 and OP 9

No glare found

PV13 and OP 10

No glare found

PV13 and OP 11

No glare found

PV13 and OP 12

No glare found

PV13 and OP 13

No glare found

PV13 and OP 14

No glare found

PV13 and OP 15

No glare found

PV13 and OP 16

No glare found

PV13 and OP 17

No glare found

PV13 and OP 18

No glare found

PV13 and OP 19

No glare found

PV13 and OP 20

No glare found

PV: PV14 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV14 and Route: Airport Road

No glare found

PV14 and Route: Hunter Field Road

No glare found

PV14 and Route: Michael Road

No glare found

PV14 and Route: State Route 4

No glare found

PV14 and Route: State Route 53

No glare found

PV14 and Route: Tilden Road

No glare found

PV14 and Route: Wilson Road

No glare found

PV14 and Route: Zeigler Mine Road

No glare found

PV14 and FP: Sparta Airport Flight Path North

No glare found

PV14 and FP: Sparta Airport Flight Path South

No glare found

PV14 and OP 1

No glare found

PV14 and OP 2

No glare found

PV14 and OP 3

No glare found

PV14 and OP 4

No glare found

PV14 and OP 5

No glare found

PV14 and OP 6

No glare found

PV14 and OP 7

No glare found

PV14 and OP 8

No glare found

PV14 and OP 9

No glare found

PV14 and OP 10

No glare found

PV14 and OP 11

No glare found

PV14 and OP 12

No glare found

PV14 and OP 13

No glare found

PV14 and OP 14

No glare found

PV14 and OP 15

No glare found

PV14 and OP 16

No glare found

PV14 and OP 17

No glare found

PV14 and OP 18

No glare found

PV14 and OP 19

No glare found

PV14 and OP 20

No glare found

PV: PV15 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV15 and Route: Airport Road

No glare found

PV15 and Route: Hunter Field Road

No glare found

PV15 and Route: Michael Road

No glare found

PV15 and Route: State Route 4

No glare found

PV15 and Route: State Route 53

No glare found

PV15 and Route: Tilden Road

No glare found

PV15 and Route: Wilson Road

No glare found

PV15 and Route: Zeigler Mine Road

No glare found

PV15 and FP: Sparta Airport Flight Path North

No glare found

PV15 and FP: Sparta Airport Flight Path South

No glare found

PV15 and OP 1

No glare found

PV15 and OP 2

No glare found

PV15 and OP 3

No glare found

PV15 and OP 4

No glare found

PV15 and OP 5

No glare found

PV15 and OP 6

No glare found

PV15 and OP 7

No glare found

PV15 and OP 8

No glare found

PV15 and OP 9

No glare found

PV15 and OP 10

No glare found

PV15 and OP 11

No glare found

PV15 and OP 12

No glare found

PV15 and OP 13

No glare found

PV15 and OP 14

No glare found

PV15 and OP 15

No glare found

PV15 and OP 16

No glare found

PV15 and OP 17

No glare found

PV15 and OP 18

No glare found

PV15 and OP 19

No glare found

PV15 and OP 20

No glare found

PV: PV16 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV16 and Route: Airport Road

No glare found

PV16 and Route: Hunter Field Road

No glare found

PV16 and Route: Michael Road

No glare found

PV16 and Route: State Route 4

No glare found

PV16 and Route: State Route 53

No glare found

PV16 and Route: Tilden Road

No glare found

PV16 and Route: Wilson Road

No glare found

PV16 and Route: Zeigler Mine Road

No glare found

PV16 and FP: Sparta Airport Flight Path North

No glare found

PV16 and FP: Sparta Airport Flight Path South

No glare found

PV16 and OP 1

No glare found

PV16 and OP 2

No glare found

PV16 and OP 3

No glare found

PV16 and OP 4

No glare found

PV16 and OP 5

No glare found

PV16 and OP 6

No glare found

PV16 and OP 7

No glare found

PV16 and OP 8

No glare found

PV16 and OP 9

No glare found

PV16 and OP 10

No glare found

PV16 and OP 11

No glare found

PV16 and OP 12

No glare found

PV16 and OP 13

No glare found

PV16 and OP 14

No glare found

PV16 and OP 15

No glare found

PV16 and OP 16

No glare found

PV16 and OP 17

No glare found

PV16 and OP 18

No glare found

PV16 and OP 19

No glare found

PV16 and OP 20

No glare found

PV: PV17 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV17 and Route: Airport Road

No glare found

PV17 and Route: Hunter Field Road

No glare found

PV17 and Route: Michael Road

No glare found

PV17 and Route: State Route 4

No glare found

PV17 and Route: State Route 53

No glare found

PV17 and Route: Tilden Road

No glare found

PV17 and Route: Wilson Road

No glare found

PV17 and Route: Zeigler Mine Road

No glare found

PV17 and FP: Sparta Airport Flight Path North

No glare found

PV17 and FP: Sparta Airport Flight Path South

No glare found

PV17 and OP 1

No glare found

PV17 and OP 2

No glare found

PV17 and OP 3

No glare found

PV17 and OP 4

No glare found

PV17 and OP 5

No glare found

PV17 and OP 6

No glare found

PV17 and OP 7

No glare found

PV17 and OP 8

No glare found

PV17 and OP 9

No glare found

PV17 and OP 10

No glare found

PV17 and OP 11

No glare found

PV17 and OP 12

No glare found

PV17 and OP 13

No glare found

PV17 and OP 14

No glare found

PV17 and OP 15

No glare found

PV17 and OP 16

No glare found

PV17 and OP 17

No glare found

PV17 and OP 18

No glare found

PV17 and OP 19

No glare found

PV17 and OP 20

No glare found

PV: PV18 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV18 and Route: Airport Road

No glare found

PV18 and Route: Hunter Field Road

No glare found

PV18 and Route: Michael Road

No glare found

PV18 and Route: State Route 4

No glare found

PV18 and Route: State Route 53

No glare found

PV18 and Route: Tilden Road

No glare found

PV18 and Route: Wilson Road

No glare found

PV18 and Route: Zeigler Mine Road

No glare found

PV18 and FP: Sparta Airport Flight Path North

No glare found

PV18 and FP: Sparta Airport Flight Path South

No glare found

PV18 and OP 1

No glare found

PV18 and OP 2

No glare found

PV18 and OP 3

No glare found

PV18 and OP 4

No glare found

PV18 and OP 5

No glare found

PV18 and OP 6

No glare found

PV18 and OP 7

No glare found

PV18 and OP 8

No glare found

PV18 and OP 9

No glare found

PV18 and OP 10

No glare found

PV18 and OP 11

No glare found

PV18 and OP 12

No glare found

PV18 and OP 13

No glare found

PV18 and OP 14

No glare found

PV18 and OP 15

No glare found

PV18 and OP 16

No glare found

PV18 and OP 17

No glare found

PV18 and OP 18

No glare found

PV18 and OP 19

No glare found

PV18 and OP 20

No glare found

PV: PV19 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV19 and Route: Airport Road

No glare found

PV19 and Route: Hunter Field Road

No glare found

PV19 and Route: Michael Road

No glare found

PV19 and Route: State Route 4

No glare found

PV19 and Route: State Route 53

No glare found

PV19 and Route: Tilden Road

No glare found

PV19 and Route: Wilson Road

No glare found

PV19 and Route: Zeigler Mine Road

No glare found

PV19 and FP: Sparta Airport Flight Path North

No glare found

PV19 and FP: Sparta Airport Flight Path South

No glare found

PV19 and OP 1

No glare found

PV19 and OP 2

No glare found

PV19 and OP 3

No glare found

PV19 and OP 4

No glare found

PV19 and OP 5

No glare found

PV19 and OP 6

No glare found

PV19 and OP 7

No glare found

PV19 and OP 8

No glare found

PV19 and OP 9

No glare found

PV19 and OP 10

No glare found

PV19 and OP 11

No glare found

PV19 and OP 12

No glare found

PV19 and OP 13

No glare found

PV19 and OP 14

No glare found

PV19 and OP 15

No glare found

PV19 and OP 16

No glare found

PV19 and OP 17

No glare found

PV19 and OP 18

No glare found

PV19 and OP 19

No glare found

PV19 and OP 20

No glare found

PV: PV2 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV2 and Route: Airport Road

No glare found

PV2 and Route: Hunter Field Road

No glare found

PV2 and Route: Michael Road

No glare found

PV2 and Route: State Route 4

No glare found

PV2 and Route: State Route 53

No glare found

PV2 and Route: Tilden Road

No glare found

PV2 and Route: Wilson Road

No glare found

PV2 and Route: Zeigler Mine Road

No glare found

PV2 and FP: Sparta Airport Flight Path North

No glare found

PV2 and FP: Sparta Airport Flight Path South

No glare found

PV2 and OP 1

No glare found

PV2 and OP 2

No glare found

PV2 and OP 3

No glare found

PV2 and OP 4

No glare found

PV2 and OP 5

No glare found

PV2 and OP 6

No glare found

PV2 and OP 7

No glare found

PV2 and OP 8

No glare found

PV2 and OP 9

No glare found

PV2 and OP 10

No glare found

PV2 and OP 11

No glare found

PV2 and OP 12

No glare found

PV2 and OP 13

No glare found

PV2 and OP 14

No glare found

PV2 and OP 15

No glare found

PV2 and OP 16

No glare found

PV2 and OP 17

No glare found

PV2 and OP 18

No glare found

PV2 and OP 19

No glare found

PV2 and OP 20

No glare found

PV: PV20 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV20 and Route: Airport Road

No glare found

PV20 and Route: Hunter Field Road

No glare found

PV20 and Route: Michael Road

No glare found

PV20 and Route: State Route 4

No glare found

PV20 and Route: State Route 53

No glare found

PV20 and Route: Tilden Road

No glare found

PV20 and Route: Wilson Road

No glare found

PV20 and Route: Zeigler Mine Road

No glare found

PV20 and FP: Sparta Airport Flight Path North

No glare found

PV20 and FP: Sparta Airport Flight Path South

No glare found

PV20 and OP 1

No glare found

PV20 and OP 2

No glare found

PV20 and OP 3

No glare found

PV20 and OP 4

No glare found

PV20 and OP 5

No glare found

PV20 and OP 6

No glare found

PV20 and OP 7

No glare found

PV20 and OP 8

No glare found

PV20 and OP 9

No glare found

PV20 and OP 10

No glare found

PV20 and OP 11

No glare found

PV20 and OP 12

No glare found

PV20 and OP 13

No glare found

PV20 and OP 14

No glare found

PV20 and OP 15

No glare found

PV20 and OP 16

No glare found

PV20 and OP 17

No glare found

PV20 and OP 18

No glare found

PV20 and OP 19

No glare found

PV20 and OP 20

No glare found

PV: PV3 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV3 and Route: Airport Road

No glare found

PV3 and Route: Hunter Field Road

No glare found

PV3 and Route: Michael Road

No glare found

PV3 and Route: State Route 4

No glare found

PV3 and Route: State Route 53

No glare found

PV3 and Route: Tilden Road

No glare found

PV3 and Route: Wilson Road

No glare found

PV3 and Route: Zeigler Mine Road

No glare found

PV3 and FP: Sparta Airport Flight Path North

No glare found

PV3 and FP: Sparta Airport Flight Path South

No glare found

PV3 and OP 1

No glare found

PV3 and OP 2

No glare found

PV3 and OP 3

No glare found

PV3 and OP 4

No glare found

PV3 and OP 5

No glare found

PV3 and OP 6

No glare found

PV3 and OP 7

No glare found

PV3 and OP 8

No glare found

PV3 and OP 9

No glare found

PV3 and OP 10

No glare found

PV3 and OP 11

No glare found

PV3 and OP 12

No glare found

PV3 and OP 13

No glare found

PV3 and OP 14

No glare found

PV3 and OP 15

No glare found

PV3 and OP 16

No glare found

PV3 and OP 17

No glare found

PV3 and OP 18

No glare found

PV3 and OP 19

No glare found

PV3 and OP 20

No glare found

PV: PV4 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV4 and Route: Airport Road

No glare found

PV4 and Route: Hunter Field Road

No glare found

PV4 and Route: Michael Road

No glare found

PV4 and Route: State Route 4

No glare found

PV4 and Route: State Route 53

No glare found

PV4 and Route: Tilden Road

No glare found

PV4 and Route: Wilson Road

No glare found

PV4 and Route: Zeigler Mine Road

No glare found

PV4 and FP: Sparta Airport Flight Path North

No glare found

PV4 and FP: Sparta Airport Flight Path South

No glare found

PV4 and OP 1

No glare found

PV4 and OP 2

No glare found

PV4 and OP 3

No glare found

PV4 and OP 4

No glare found

PV4 and OP 5

No glare found

PV4 and OP 6

No glare found

PV4 and OP 7

No glare found

PV4 and OP 8

No glare found

PV4 and OP 9

No glare found

PV4 and OP 10

No glare found

PV4 and OP 11

No glare found

PV4 and OP 12

No glare found

PV4 and OP 13

No glare found

PV4 and OP 14

No glare found

PV4 and OP 15

No glare found

PV4 and OP 16

No glare found

PV4 and OP 17

No glare found

PV4 and OP 18

No glare found

PV4 and OP 19

No glare found

PV4 and OP 20

No glare found

PV: PV5 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV5 and Route: Airport Road

No glare found

PV5 and Route: Hunter Field Road

No glare found

PV5 and Route: Michael Road

No glare found

PV5 and Route: State Route 4

No glare found

PV5 and Route: State Route 53

No glare found

PV5 and Route: Tilden Road

No glare found

PV5 and Route: Wilson Road

No glare found

PV5 and Route: Zeigler Mine Road

No glare found

PV5 and FP: Sparta Airport Flight Path North

No glare found

PV5 and FP: Sparta Airport Flight Path South

No glare found

PV5 and OP 1

No glare found

PV5 and OP 2

No glare found

PV5 and OP 3

No glare found

PV5 and OP 4

No glare found

PV5 and OP 5

No glare found

PV5 and OP 6

No glare found

PV5 and OP 7

No glare found

PV5 and OP 8

No glare found

PV5 and OP 9

No glare found

PV5 and OP 10

No glare found

PV5 and OP 11

No glare found

PV5 and OP 12

No glare found

PV5 and OP 13

No glare found

PV5 and OP 14

No glare found

PV5 and OP 15

No glare found

PV5 and OP 16

No glare found

PV5 and OP 17

No glare found

PV5 and OP 18

No glare found

PV5 and OP 19

No glare found

PV5 and OP 20

No glare found

PV: PV6 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV6 and Route: Airport Road

No glare found

PV6 and Route: Hunter Field Road

No glare found

PV6 and Route: Michael Road

No glare found

PV6 and Route: State Route 4

No glare found

PV6 and Route: State Route 53

No glare found

PV6 and Route: Tilden Road

No glare found

PV6 and Route: Wilson Road

No glare found

PV6 and Route: Zeigler Mine Road

No glare found

PV6 and FP: Sparta Airport Flight Path North

No glare found

PV6 and FP: Sparta Airport Flight Path South

No glare found

PV6 and OP 1

No glare found

PV6 and OP 2

No glare found

PV6 and OP 3

No glare found

PV6 and OP 4

No glare found

PV6 and OP 5

No glare found

PV6 and OP 6

No glare found

PV6 and OP 7

No glare found

PV6 and OP 8

No glare found

PV6 and OP 9

No glare found

PV6 and OP 10

No glare found

PV6 and OP 11

No glare found

PV6 and OP 12

No glare found

PV6 and OP 13

No glare found

PV6 and OP 14

No glare found

PV6 and OP 15

No glare found

PV6 and OP 16

No glare found

PV6 and OP 17

No glare found

PV6 and OP 18

No glare found

PV6 and OP 19

No glare found

PV6 and OP 20

No glare found

PV: PV7 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV7 and Route: Airport Road

No glare found

PV7 and Route: Hunter Field Road

No glare found

PV7 and Route: Michael Road

No glare found

PV7 and Route: State Route 4

No glare found

PV7 and Route: State Route 53

No glare found

PV7 and Route: Tilden Road

No glare found

PV7 and Route: Wilson Road

No glare found

PV7 and Route: Zeigler Mine Road

No glare found

PV7 and FP: Sparta Airport Flight Path North

No glare found

PV7 and FP: Sparta Airport Flight Path South

No glare found

PV7 and OP 1

No glare found

PV7 and OP 2

No glare found

PV7 and OP 3

No glare found

PV7 and OP 4

No glare found

PV7 and OP 5

No glare found

PV7 and OP 6

No glare found

PV7 and OP 7

No glare found

PV7 and OP 8

No glare found

PV7 and OP 9

No glare found

PV7 and OP 10

No glare found

PV7 and OP 11

No glare found

PV7 and OP 12

No glare found

PV7 and OP 13

No glare found

PV7 and OP 14

No glare found

PV7 and OP 15

No glare found

PV7 and OP 16

No glare found

PV7 and OP 17

No glare found

PV7 and OP 18

No glare found

PV7 and OP 19

No glare found

PV7 and OP 20

No glare found

PV: PV8 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV8 and Route: Airport Road

No glare found

PV8 and Route: Hunter Field Road

No glare found

PV8 and Route: Michael Road

No glare found

PV8 and Route: State Route 4

No glare found

PV8 and Route: State Route 53

No glare found

PV8 and Route: Tilden Road

No glare found

PV8 and Route: Wilson Road

No glare found

PV8 and Route: Zeigler Mine Road

No glare found

PV8 and FP: Sparta Airport Flight Path North

No glare found

PV8 and FP: Sparta Airport Flight Path South

No glare found

PV8 and OP 1

No glare found

PV8 and OP 2

No glare found

PV8 and OP 3

No glare found

PV8 and OP 4

No glare found

PV8 and OP 5

No glare found

PV8 and OP 6

No glare found

PV8 and OP 7

No glare found

PV8 and OP 8

No glare found

PV8 and OP 9

No glare found

PV8 and OP 10

No glare found

PV8 and OP 11

No glare found

PV8 and OP 12

No glare found

PV8 and OP 13

No glare found

PV8 and OP 14

No glare found

PV8 and OP 15

No glare found

PV8 and OP 16

No glare found

PV8 and OP 17

No glare found

PV8 and OP 18

No glare found

PV8 and OP 19

No glare found

PV8 and OP 20

No glare found

PV: PV9 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV9 and Route: Airport Road

No glare found

PV9 and Route: Hunter Field Road

No glare found

PV9 and Route: Michael Road

No glare found

PV9 and Route: State Route 4

No glare found

PV9 and Route: State Route 53

No glare found

PV9 and Route: Tilden Road

No glare found

PV9 and Route: Wilson Road

No glare found

PV9 and Route: Zeigler Mine Road

No glare found

PV9 and FP: Sparta Airport Flight Path North

No glare found

PV9 and FP: Sparta Airport Flight Path South

No glare found

PV9 and OP 1

No glare found

PV9 and OP 2

No glare found

PV9 and OP 3

No glare found

PV9 and OP 4

No glare found

PV9 and OP 5

No glare found

PV9 and OP 6

No glare found

PV9 and OP 7

No glare found

PV9 and OP 8

No glare found

PV9 and OP 9

No glare found

PV9 and OP 10

No glare found

PV9 and OP 11

No glare found

PV9 and OP 12

No glare found

PV9 and OP 13

No glare found

PV9 and OP 14

No glare found

PV9 and OP 15

No glare found

PV9 and OP 16

No glare found

PV9 and OP 17

No glare found

PV9 and OP 18

No glare found

PV9 and OP 19

No glare found

PV9 and OP 20

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.

The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.

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. This primarily affects V1 analyses of path receptors.

Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.

The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.

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.)

The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.

The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.

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.

Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. 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 at www.forgesolar.com/help/ for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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APPENDIX B

ForgeSolar Glare Analysis Report for Panel Arrays 21-34

FORGESOLAR GLARE ANALYSIS

Project: **Gateway**

Site configuration: **Gateway2**

Created 17 Sep, 2025

Updated 21 Oct, 2025

Time-step 1 minute

Timezone offset UTC-6

Minimum sun altitude 0.0 deg

DNI peaks at 1,000.0 W/m²

Category 1 MW to 5 MW

Site ID 159739.26772

Ocular transmission coefficient 0.5

Pupil diameter 0.002 m

Eye focal length 0.017 m

Sun subtended angle 9.3 mrad

PV analysis methodology V2

Summary of Results No glare predicted

PV Array	Tilt	Orient	Annual Green Glare		Annual Yellow Glare		Energy
	°	°	min	hr	min	hr	kWh
PV21	SA tracking	SA tracking	0	0.0	0	0.0	-
PV22	SA tracking	SA tracking	0	0.0	0	0.0	-
PV23	SA tracking	SA tracking	0	0.0	0	0.0	-
PV24	SA tracking	SA tracking	0	0.0	0	0.0	-
PV25	SA tracking	SA tracking	0	0.0	0	0.0	-
PV26	SA tracking	SA tracking	0	0.0	0	0.0	-
PV27	SA tracking	SA tracking	0	0.0	0	0.0	-
PV28	SA tracking	SA tracking	0	0.0	0	0.0	-
PV29	SA tracking	SA tracking	0	0.0	0	0.0	-
PV30	SA tracking	SA tracking	0	0.0	0	0.0	-
PV31	SA tracking	SA tracking	0	0.0	0	0.0	-
PV32	SA tracking	SA tracking	0	0.0	0	0.0	-
PV33	SA tracking	SA tracking	0	0.0	0	0.0	-
PV34	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

Component Data

PV Arrays

Name: PV21

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.147375	-89.667031	487.90	5.00	492.90
2	38.147381	-89.665305	494.90	5.00	499.90
3	38.148058	-89.665313	492.10	5.00	497.10
4	38.148580	-89.665451	491.60	5.00	496.60
5	38.148602	-89.664779	494.10	5.00	499.10
6	38.149692	-89.664719	497.30	5.00	502.30
7	38.149849	-89.664410	493.80	5.00	498.80
8	38.150569	-89.664416	495.30	5.00	500.30
9	38.151792	-89.665638	502.10	5.00	507.10
10	38.151827	-89.666449	501.90	5.00	506.90
11	38.152984	-89.666518	504.90	5.00	509.90
12	38.152984	-89.667081	505.40	5.00	510.40
13	38.152409	-89.667083	503.80	5.00	508.80
14	38.152435	-89.668150	507.30	5.00	512.30
15	38.151694	-89.669314	505.90	5.00	510.90
16	38.151214	-89.669836	503.30	5.00	508.30
17	38.150207	-89.669843	498.70	5.00	503.70
18	38.149714	-89.670466	501.10	5.00	506.10
19	38.147436	-89.670501	499.10	5.00	504.10
20	38.147464	-89.669387	499.80	5.00	504.80

Name: PV22

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.149060	-89.661854	498.40	5.00	503.40
2	38.148928	-89.662149	499.50	5.00	504.50
3	38.147801	-89.662423	500.00	5.00	505.00
4	38.147038	-89.662191	492.00	5.00	497.00
5	38.147055	-89.659177	494.90	5.00	499.90
6	38.148795	-89.658861	509.30	5.00	514.30
7	38.149906	-89.658861	504.90	5.00	509.90
8	38.149955	-89.661896	492.40	5.00	497.40
9	38.149060	-89.661854	498.40	5.00	503.40

Name: PV23

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.148983	-89.658440	507.80	5.00	512.80
2	38.148007	-89.658455	504.70	5.00	509.70
3	38.147984	-89.657942	504.30	5.00	509.30
4	38.147608	-89.657955	501.10	5.00	506.10
5	38.147602	-89.657722	501.50	5.00	506.50
6	38.146692	-89.657736	490.60	5.00	495.60
7	38.146713	-89.656832	486.80	5.00	491.80
8	38.146707	-89.656501	491.10	5.00	496.10
9	38.146723	-89.653529	502.90	5.00	507.90
10	38.147850	-89.653613	507.90	5.00	512.90
11	38.147701	-89.656775	493.20	5.00	498.20
12	38.148712	-89.656792	503.70	5.00	508.70
13	38.148729	-89.657681	505.00	5.00	510.00
14	38.149608	-89.657767	502.10	5.00	507.10
15	38.149608	-89.658297	505.10	5.00	510.10
16	38.148983	-89.658440	507.80	5.00	512.80

Name: PV24

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.165177	-89.651906	524.50	5.00	529.50
2	38.165189	-89.648250	521.20	5.00	526.20
3	38.166464	-89.648329	522.30	5.00	527.30
4	38.166526	-89.651869	529.60	5.00	534.60
5	38.165177	-89.651906	524.50	5.00	529.50

Name: PV25

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.160987	-89.661738	517.30	5.00	522.30
2	38.161028	-89.672687	499.40	5.00	504.40
3	38.160364	-89.672753	497.20	5.00	502.20
4	38.159639	-89.672011	500.00	5.00	505.00
5	38.158848	-89.671293	503.50	5.00	508.50
6	38.157830	-89.671264	504.20	5.00	509.20
7	38.157811	-89.668075	508.20	5.00	513.20
8	38.158144	-89.667884	507.30	5.00	512.30
9	38.159032	-89.667802	506.70	5.00	511.70
10	38.159053	-89.667340	505.80	5.00	510.80
11	38.159447	-89.665905	505.40	5.00	510.40
12	38.159580	-89.661727	515.20	5.00	520.20
13	38.160987	-89.661738	517.30	5.00	522.30

Name: PV26

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.142526	-89.667078	504.80	5.00	509.80
2	38.142568	-89.670632	506.80	5.00	511.80
3	38.141752	-89.670773	510.10	5.00	515.10
4	38.137540	-89.670751	511.60	5.00	516.60
5	38.137138	-89.670525	511.10	5.00	516.10
6	38.135889	-89.670551	510.40	5.00	515.40
7	38.135859	-89.663584	523.90	5.00	528.90
8	38.136557	-89.663412	529.30	5.00	534.30
9	38.137248	-89.663854	533.50	5.00	538.50
10	38.137711	-89.663825	536.10	5.00	541.10
11	38.137758	-89.661982	531.40	5.00	536.40
12	38.139647	-89.661988	520.80	5.00	525.80
13	38.142496	-89.661913	505.00	5.00	510.00
14	38.142495	-89.666003	507.20	5.00	512.20
15	38.142526	-89.667078	504.80	5.00	509.80

Name: PV27

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.135892	-89.675268	505.00	5.00	510.00
2	38.135893	-89.674418	505.50	5.00	510.50
3	38.136534	-89.674404	509.80	5.00	514.80
4	38.136540	-89.673256	508.10	5.00	513.10
5	38.136727	-89.673246	509.90	5.00	514.90
6	38.136679	-89.671208	509.50	5.00	514.50
7	38.139082	-89.671243	514.10	5.00	519.10
8	38.139110	-89.673580	517.90	5.00	522.90
9	38.137580	-89.673571	512.30	5.00	517.30
10	38.137592	-89.675232	508.50	5.00	513.50
11	38.135892	-89.675268	505.00	5.00	510.00

Name: PV28

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.130459	-89.675234	504.90	5.00	509.90
2	38.128962	-89.674988	496.00	5.00	501.00
3	38.128282	-89.673648	499.10	5.00	504.10
4	38.128299	-89.672067	504.00	5.00	509.00
5	38.132661	-89.672140	508.70	5.00	513.70
6	38.132736	-89.671360	514.30	5.00	519.30
7	38.134002	-89.671293	516.90	5.00	521.90
8	38.134041	-89.675318	500.50	5.00	505.50
9	38.130459	-89.675234	504.90	5.00	509.90

Name: PV29

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

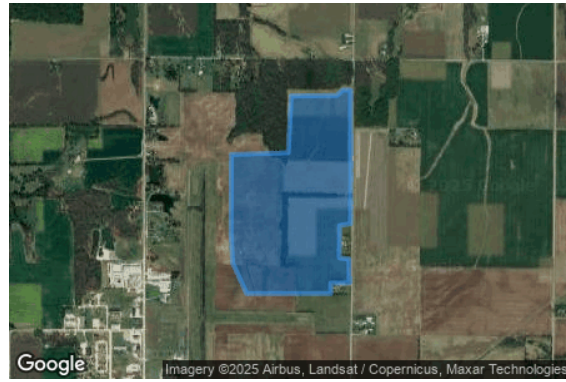
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.156369	-89.693661	531.90	5.00	536.90
2	38.156320	-89.695144	528.70	5.00	533.70
3	38.156270	-89.697568	533.10	5.00	538.10
4	38.151982	-89.697588	524.00	5.00	529.00
5	38.150405	-89.697483	520.30	5.00	525.30
6	38.148779	-89.696522	517.10	5.00	522.10
7	38.148779	-89.690736	529.20	5.00	534.20
8	38.149338	-89.690736	529.70	5.00	534.70
9	38.149354	-89.689461	532.00	5.00	537.00
10	38.150635	-89.689482	535.80	5.00	540.80
11	38.150701	-89.690151	534.80	5.00	539.80
12	38.152443	-89.690130	538.40	5.00	543.40
13	38.152541	-89.689378	536.60	5.00	541.60
14	38.159728	-89.689375	511.50	5.00	516.50
15	38.159728	-89.689930	509.00	5.00	514.00
16	38.159453	-89.690312	507.60	5.00	512.60
17	38.159418	-89.693462	510.30	5.00	515.30
18	38.156369	-89.693661	531.90	5.00	536.90

Name: PV30

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

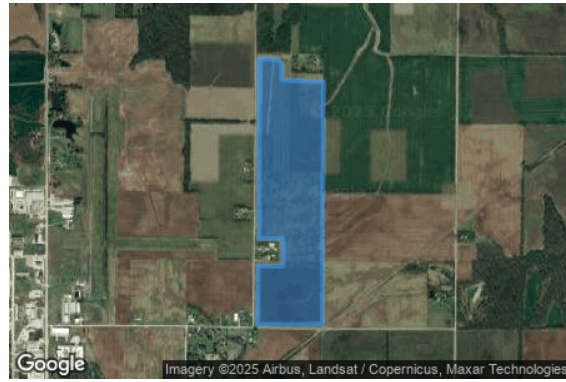
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.147746	-89.688956	529.60	5.00	534.60
2	38.147746	-89.687330	526.20	5.00	531.20
3	38.146278	-89.687330	524.00	5.00	529.00
4	38.146295	-89.689031	528.40	5.00	533.40
5	38.143122	-89.689063	517.90	5.00	522.90
6	38.143135	-89.684624	516.40	5.00	521.40
7	38.156202	-89.684538	517.70	5.00	522.70
8	38.156306	-89.687406	521.40	5.00	526.40
9	38.157206	-89.687399	516.90	5.00	521.90
10	38.157394	-89.687728	516.30	5.00	521.30
11	38.157418	-89.688967	517.90	5.00	522.90
12	38.147746	-89.688956	529.60	5.00	534.60

Name: PV31

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

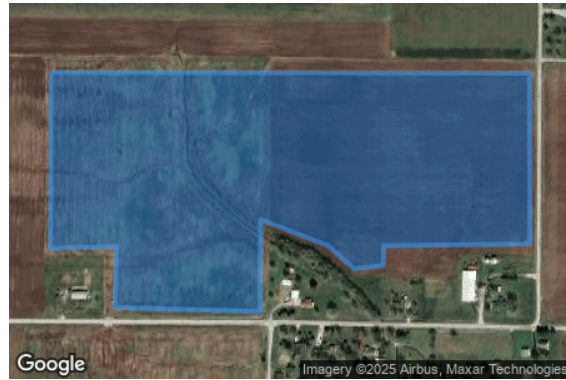
Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.144389	-89.694096	512.40	5.00	517.40
2	38.144039	-89.692946	511.60	5.00	516.60
3	38.143728	-89.692497	511.40	5.00	516.40
4	38.143774	-89.691991	513.50	5.00	518.50
5	38.144039	-89.691986	515.20	5.00	520.20
6	38.144062	-89.689473	521.60	5.00	526.60
7	38.146362	-89.689479	528.90	5.00	533.90
8	38.146375	-89.697705	517.10	5.00	522.10
9	38.144004	-89.697712	517.10	5.00	522.10
10	38.144027	-89.696572	516.50	5.00	521.50
11	38.143207	-89.696613	516.80	5.00	521.80
12	38.143151	-89.694112	514.60	5.00	519.60
13	38.144389	-89.694096	512.40	5.00	517.40

Name: PV32

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.141324	-89.688893	504.60	5.00	509.60
2	38.141250	-89.687487	509.60	5.00	514.60
3	38.142046	-89.686261	516.80	5.00	521.80
4	38.142577	-89.686264	517.60	5.00	522.60
5	38.142543	-89.688590	513.90	5.00	518.90
6	38.142288	-89.688608	512.50	5.00	517.50
7	38.142288	-89.688911	512.50	5.00	517.50
8	38.141324	-89.688893	504.60	5.00	509.60

Name: PV33

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.140962	-89.698001	522.70	5.00	527.70
2	38.140948	-89.698460	523.40	5.00	528.40
3	38.137037	-89.698440	520.90	5.00	525.90
4	38.136492	-89.697963	518.30	5.00	523.30
5	38.136116	-89.697436	516.60	5.00	521.60
6	38.136144	-89.695760	514.90	5.00	519.90
7	38.137038	-89.694244	522.00	5.00	527.00
8	38.142720	-89.694162	514.50	5.00	519.50
9	38.142808	-89.697618	517.50	5.00	522.50
10	38.140962	-89.698001	522.70	5.00	527.70

Name: PV34

Axis tracking: Single-axis rotation

Backtracking: Shade-slope

Tracking axis orientation: 180.0°

Max tracking angle: 60.0°

Resting angle: 60.0°

Ground Coverage Ratio: 0.3721

Rated power: -

Panel material: Smooth glass with AR coating

Reflectivity: Vary with sun

Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.157840	-89.674962	507.50	5.00	512.50
2	38.157849	-89.672527	503.80	5.00	508.80
3	38.158571	-89.672567	502.90	5.00	507.90
4	38.159096	-89.672674	501.70	5.00	506.70
5	38.159766	-89.673191	498.80	5.00	503.80
6	38.159828	-89.673562	499.80	5.00	504.80
7	38.160120	-89.673564	497.80	5.00	502.80
8	38.161027	-89.674085	496.40	5.00	501.40
9	38.161038	-89.674951	497.10	5.00	502.10
10	38.157840	-89.674962	507.50	5.00	512.50

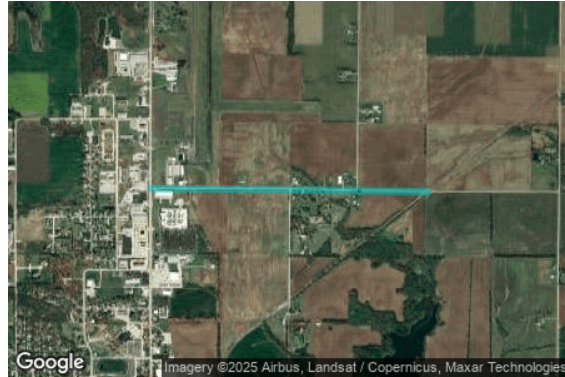
Route Receptors

Name: Airport Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



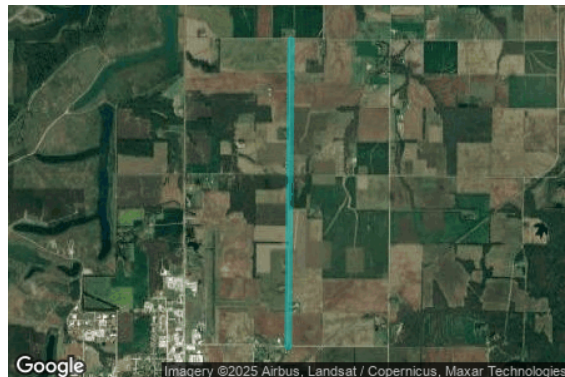
Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.143048	-89.703533	528.80	5.00	533.80
2	38.142984	-89.693891	514.50	5.00	519.50
3	38.142877	-89.684527	516.50	5.00	521.50

Name: Hunter Field Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.142943	-89.689317	516.20	5.00	521.20
2	38.175898	-89.688925	477.80	5.00	482.80

Name: Michael Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



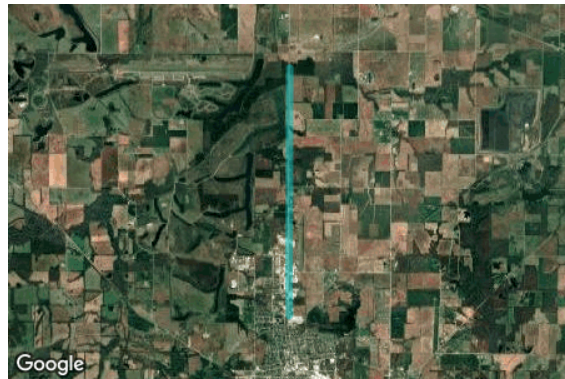
Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.183215	-89.674961	467.60	5.00	472.60
2	38.121874	-89.675571	514.90	5.00	519.90

Name: State Route 4

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.187256	-89.703336	450.60	5.00	455.60
2	38.176058	-89.703379	472.80	5.00	477.80
3	38.160741	-89.703419	509.10	5.00	514.10
4	38.148989	-89.703500	530.00	5.00	535.00
5	38.142922	-89.703521	528.90	5.00	533.90
6	38.133774	-89.703428	536.60	5.00	541.60

Name: State Route 53

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.140584	-89.645019	497.60	5.00	502.60
2	38.126002	-89.662641	533.00	5.00	538.00
3	38.122765	-89.666578	532.40	5.00	537.40
4	38.122149	-89.668067	533.10	5.00	538.10
5	38.121848	-89.669284	534.10	5.00	539.10
6	38.121855	-89.672527	533.00	5.00	538.00
7	38.121889	-89.677681	512.30	5.00	517.30

Name: Tilden Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.190638	-89.684213	462.00	5.00	467.00
2	38.175960	-89.684353	469.70	5.00	474.70

Name: Wilson Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.176085	-89.703357	472.80	5.00	477.80
2	38.175966	-89.685313	468.90	5.00	473.90
3	38.175914	-89.678588	466.40	5.00	471.40
4	38.175823	-89.666662	495.30	5.00	500.30
5	38.175835	-89.652157	514.40	5.00	519.40

Name: Zeigler Mine Road

Path type: Two-way

Azimuthal view angle: 50.0°

Downward view angle: 90.0°



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	38.161492	-89.703434	499.00	5.00	504.00
2	38.161412	-89.699114	509.90	5.00	514.90
3	38.161415	-89.697644	503.20	5.00	508.20
4	38.161368	-89.694237	501.70	5.00	506.70
5	38.161326	-89.686739	506.60	5.00	511.60
6	38.161240	-89.675236	497.20	5.00	502.20
7	38.161077	-89.656782	516.40	5.00	521.40
8	38.161107	-89.655563	510.50	5.00	515.50
9	38.161307	-89.654736	514.50	5.00	519.50
10	38.161860	-89.653541	517.60	5.00	522.60
11	38.162465	-89.652632	518.00	5.00	523.00
12	38.163174	-89.652216	517.70	5.00	522.70
13	38.163886	-89.652183	519.50	5.00	524.50
14	38.165143	-89.652162	524.10	5.00	529.10
15	38.168498	-89.652158	523.70	5.00	528.70
16	38.176701	-89.652135	515.40	5.00	520.40
17	38.182938	-89.652104	497.80	5.00	502.80

Flight Path Receptors

Name: Sparta Airport Flight Path North

Description: None

Threshold height: 50 ft

Direction: 180.0°

Glide slope: 3.0°

Pilot view restricted? Yes

Vertical view: 30.0°

Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.155365	-89.699480	536.50	50.00	586.50
Two-mile	38.184351	-89.699456	451.70	50.00	501.70

Name: Sparta Airport Flight Path South

Description: None

Threshold height: 50 ft

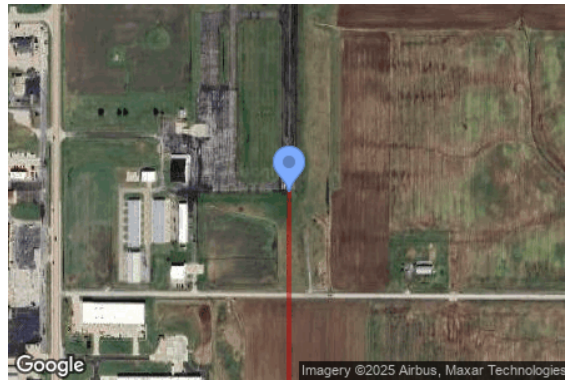
Direction: 0.0°

Glide slope: 3.0°

Pilot view restricted? Yes

Vertical view: 30.0°

Azimuthal view: 50.0°



Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	38.144417	-89.699539	522.00	50.00	572.00
Two-mile	38.115328	-89.699518	510.40	50.00	560.40

Discrete Observation Point Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	38.190610	-89.700480	454.70	6.00
OP 2	2	38.194700	-89.676969	474.40	6.00
OP 3	3	38.193909	-89.653142	505.20	6.00
OP 4	4	38.180606	-89.646673	522.60	6.00
OP 5	5	38.159124	-89.633228	511.20	6.00
OP 6	6	38.153931	-89.639346	524.90	6.00
OP 7	7	38.142175	-89.643710	519.40	6.00
OP 8	8	38.127336	-89.663052	542.30	6.00
OP 9	9	38.121633	-89.669779	535.80	6.00
OP 10	10	38.121637	-89.677006	516.10	6.00
OP 11	11	38.128928	-89.690833	513.10	6.00
OP 12	12	38.131627	-89.703722	534.80	6.00
OP 13	13	38.140581	-89.710198	513.80	6.00
OP 14	14	38.161917	-89.680458	501.60	6.00
OP 15	15	38.146935	-89.688632	531.20	6.00
OP 16	16	38.151683	-89.657973	507.50	6.00
OP 17	17	38.171718	-89.659843	500.30	6.00
OP 18	18	38.168713	-89.673099	482.00	6.00
OP 19	19	38.176470	-89.674639	483.90	6.00
OP 20	20	38.175520	-89.684604	472.40	6.00

Glare Analysis Results

Summary of Results No glare predicted

PV Array	Tilt °	Orient °	Annual Green Glare		Annual Yellow Glare		Energy kWh
			min	hr	min	hr	
PV21	SA tracking	SA tracking	0	0.0	0	0.0	-
PV22	SA tracking	SA tracking	0	0.0	0	0.0	-
PV23	SA tracking	SA tracking	0	0.0	0	0.0	-
PV24	SA tracking	SA tracking	0	0.0	0	0.0	-
PV25	SA tracking	SA tracking	0	0.0	0	0.0	-
PV26	SA tracking	SA tracking	0	0.0	0	0.0	-
PV27	SA tracking	SA tracking	0	0.0	0	0.0	-
PV28	SA tracking	SA tracking	0	0.0	0	0.0	-
PV29	SA tracking	SA tracking	0	0.0	0	0.0	-
PV30	SA tracking	SA tracking	0	0.0	0	0.0	-
PV31	SA tracking	SA tracking	0	0.0	0	0.0	-
PV32	SA tracking	SA tracking	0	0.0	0	0.0	-
PV33	SA tracking	SA tracking	0	0.0	0	0.0	-
PV34	SA tracking	SA tracking	0	0.0	0	0.0	-

Total glare received by each receptor; may include duplicate times of glare from multiple reflective surfaces.

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV: PV21 no glare found*Receptor results ordered by category of glare*

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV21 and Route: Airport Road

No glare found

PV21 and Route: Hunter Field Road

No glare found

PV21 and Route: Michael Road

No glare found

PV21 and Route: State Route 4

No glare found

PV21 and Route: State Route 53

No glare found

PV21 and Route: Tilden Road

No glare found

PV21 and Route: Wilson Road

No glare found

PV21 and Route: Zeigler Mine Road

No glare found

PV21 and FP: Sparta Airport Flight Path North

No glare found

PV21 and FP: Sparta Airport Flight Path South

No glare found

PV21 and OP 1

No glare found

PV21 and OP 2

No glare found

PV21 and OP 3

No glare found

PV21 and OP 4

No glare found

PV21 and OP 5

No glare found

PV21 and OP 6

No glare found

PV21 and OP 7

No glare found

PV21 and OP 8

No glare found

PV21 and OP 9

No glare found

PV21 and OP 10

No glare found

PV21 and OP 11

No glare found

PV21 and OP 12

No glare found

PV21 and OP 13

No glare found

PV21 and OP 14

No glare found

PV21 and OP 15

No glare found

PV21 and OP 16

No glare found

PV21 and OP 17

No glare found

PV21 and OP 18

No glare found

PV21 and OP 19

No glare found

PV21 and OP 20

No glare found

PV: PV22 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV22 and Route: Airport Road

No glare found

PV22 and Route: Hunter Field Road

No glare found

PV22 and Route: Michael Road

No glare found

PV22 and Route: State Route 4

No glare found

PV22 and Route: State Route 53

No glare found

PV22 and Route: Tilden Road

No glare found

PV22 and Route: Wilson Road

No glare found

PV22 and Route: Zeigler Mine Road

No glare found

PV22 and FP: Sparta Airport Flight Path North

No glare found

PV22 and FP: Sparta Airport Flight Path South

No glare found

PV22 and OP 1

No glare found

PV22 and OP 2

No glare found

PV22 and OP 3

No glare found

PV22 and OP 4

No glare found

PV22 and OP 5

No glare found

PV22 and OP 6

No glare found

PV22 and OP 7

No glare found

PV22 and OP 8

No glare found

PV22 and OP 9

No glare found

PV22 and OP 10

No glare found

PV22 and OP 11

No glare found

PV22 and OP 12

No glare found

PV22 and OP 13

No glare found

PV22 and OP 14

No glare found

PV22 and OP 15

No glare found

PV22 and OP 16

No glare found

PV22 and OP 17

No glare found

PV22 and OP 18

No glare found

PV22 and OP 19

No glare found

PV22 and OP 20

No glare found

PV: PV23 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV23 and Route: Airport Road

No glare found

PV23 and Route: Hunter Field Road

No glare found

PV23 and Route: Michael Road

No glare found

PV23 and Route: State Route 4

No glare found

PV23 and Route: State Route 53

No glare found

PV23 and Route: Tilden Road

No glare found

PV23 and Route: Wilson Road

No glare found

PV23 and Route: Zeigler Mine Road

No glare found

PV23 and FP: Sparta Airport Flight Path North

No glare found

PV23 and FP: Sparta Airport Flight Path South

No glare found

PV23 and OP 1

No glare found

PV23 and OP 2

No glare found

PV23 and OP 3

No glare found

PV23 and OP 4

No glare found

PV23 and OP 5

No glare found

PV23 and OP 6

No glare found

PV23 and OP 7

No glare found

PV23 and OP 8

No glare found

PV23 and OP 9

No glare found

PV23 and OP 10

No glare found

PV23 and OP 11

No glare found

PV23 and OP 12

No glare found

PV23 and OP 13

No glare found

PV23 and OP 14

No glare found

PV23 and OP 15

No glare found

PV23 and OP 16

No glare found

PV23 and OP 17

No glare found

PV23 and OP 18

No glare found

PV23 and OP 19

No glare found

PV23 and OP 20

No glare found

PV: PV24 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV24 and Route: Airport Road

No glare found

PV24 and Route: Hunter Field Road

No glare found

PV24 and Route: Michael Road

No glare found

PV24 and Route: State Route 4

No glare found

PV24 and Route: State Route 53

No glare found

PV24 and Route: Tilden Road

No glare found

PV24 and Route: Wilson Road

No glare found

PV24 and Route: Zeigler Mine Road

No glare found

PV24 and FP: Sparta Airport Flight Path North

No glare found

PV24 and FP: Sparta Airport Flight Path South

No glare found

PV24 and OP 1

No glare found

PV24 and OP 2

No glare found

PV24 and OP 3

No glare found

PV24 and OP 4

No glare found

PV24 and OP 5

No glare found

PV24 and OP 6

No glare found

PV24 and OP 7

No glare found

PV24 and OP 8

No glare found

PV24 and OP 9

No glare found

PV24 and OP 10

No glare found

PV24 and OP 11

No glare found

PV24 and OP 12

No glare found

PV24 and OP 13

No glare found

PV24 and OP 14

No glare found

PV24 and OP 15

No glare found

PV24 and OP 16

No glare found

PV24 and OP 17

No glare found

PV24 and OP 18

No glare found

PV24 and OP 19

No glare found

PV24 and OP 20

No glare found

PV: PV25 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV25 and Route: Airport Road

No glare found

PV25 and Route: Hunter Field Road

No glare found

PV25 and Route: Michael Road

No glare found

PV25 and Route: State Route 4

No glare found

PV25 and Route: State Route 53

No glare found

PV25 and Route: Tilden Road

No glare found

PV25 and Route: Wilson Road

No glare found

PV25 and Route: Zeigler Mine Road

No glare found

PV25 and FP: Sparta Airport Flight Path North

No glare found

PV25 and FP: Sparta Airport Flight Path South

No glare found

PV25 and OP 1

No glare found

PV25 and OP 2

No glare found

PV25 and OP 3

No glare found

PV25 and OP 4

No glare found

PV25 and OP 5

No glare found

PV25 and OP 6

No glare found

PV25 and OP 7

No glare found

PV25 and OP 8

No glare found

PV25 and OP 9

No glare found

PV25 and OP 10

No glare found

PV25 and OP 11

No glare found

PV25 and OP 12

No glare found

PV25 and OP 13

No glare found

PV25 and OP 14

No glare found

PV25 and OP 15

No glare found

PV25 and OP 16

No glare found

PV25 and OP 17

No glare found

PV25 and OP 18

No glare found

PV25 and OP 19

No glare found

PV25 and OP 20

No glare found

PV: PV26 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV26 and Route: Airport Road

No glare found

PV26 and Route: Hunter Field Road

No glare found

PV26 and Route: Michael Road

No glare found

PV26 and Route: State Route 4

No glare found

PV26 and Route: State Route 53

No glare found

PV26 and Route: Tilden Road

No glare found

PV26 and Route: Wilson Road

No glare found

PV26 and Route: Zeigler Mine Road

No glare found

PV26 and FP: Sparta Airport Flight Path North

No glare found

PV26 and FP: Sparta Airport Flight Path South

No glare found

PV26 and OP 1

No glare found

PV26 and OP 2

No glare found

PV26 and OP 3

No glare found

PV26 and OP 4

No glare found

PV26 and OP 5

No glare found

PV26 and OP 6

No glare found

PV26 and OP 7

No glare found

PV26 and OP 8

No glare found

PV26 and OP 9

No glare found

PV26 and OP 10

No glare found

PV26 and OP 11

No glare found

PV26 and OP 12

No glare found

PV26 and OP 13

No glare found

PV26 and OP 14

No glare found

PV26 and OP 15

No glare found

PV26 and OP 16

No glare found

PV26 and OP 17

No glare found

PV26 and OP 18

No glare found

PV26 and OP 19

No glare found

PV26 and OP 20

No glare found

PV: PV27 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV27 and Route: Airport Road

No glare found

PV27 and Route: Hunter Field Road

No glare found

PV27 and Route: Michael Road

No glare found

PV27 and Route: State Route 4

No glare found

PV27 and Route: State Route 53

No glare found

PV27 and Route: Tilden Road

No glare found

PV27 and Route: Wilson Road

No glare found

PV27 and Route: Zeigler Mine Road

No glare found

PV27 and FP: Sparta Airport Flight Path North

No glare found

PV27 and FP: Sparta Airport Flight Path South

No glare found

PV27 and OP 1

No glare found

PV27 and OP 2

No glare found

PV27 and OP 3

No glare found

PV27 and OP 4

No glare found

PV27 and OP 5

No glare found

PV27 and OP 6

No glare found

PV27 and OP 7

No glare found

PV27 and OP 8

No glare found

PV27 and OP 9

No glare found

PV27 and OP 10

No glare found

PV27 and OP 11

No glare found

PV27 and OP 12

No glare found

PV27 and OP 13

No glare found

PV27 and OP 14

No glare found

PV27 and OP 15

No glare found

PV27 and OP 16

No glare found

PV27 and OP 17

No glare found

PV27 and OP 18

No glare found

PV27 and OP 19

No glare found

PV27 and OP 20

No glare found

PV: PV28 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV28 and Route: Airport Road

No glare found

PV28 and Route: Hunter Field Road

No glare found

PV28 and Route: Michael Road

No glare found

PV28 and Route: State Route 4

No glare found

PV28 and Route: State Route 53

No glare found

PV28 and Route: Tilden Road

No glare found

PV28 and Route: Wilson Road

No glare found

PV28 and Route: Zeigler Mine Road

No glare found

PV28 and FP: Sparta Airport Flight Path North

No glare found

PV28 and FP: Sparta Airport Flight Path South

No glare found

PV28 and OP 1

No glare found

PV28 and OP 2

No glare found

PV28 and OP 3

No glare found

PV28 and OP 4

No glare found

PV28 and OP 5

No glare found

PV28 and OP 6

No glare found

PV28 and OP 7

No glare found

PV28 and OP 8

No glare found

PV28 and OP 9

No glare found

PV28 and OP 10

No glare found

PV28 and OP 11

No glare found

PV28 and OP 12

No glare found

PV28 and OP 13

No glare found

PV28 and OP 14

No glare found

PV28 and OP 15

No glare found

PV28 and OP 16

No glare found

PV28 and OP 17

No glare found

PV28 and OP 18

No glare found

PV28 and OP 19

No glare found

PV28 and OP 20

No glare found

PV: PV29 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV29 and Route: Airport Road

No glare found

PV29 and Route: Hunter Field Road

No glare found

PV29 and Route: Michael Road

No glare found

PV29 and Route: State Route 4

No glare found

PV29 and Route: State Route 53

No glare found

PV29 and Route: Tilden Road

No glare found

PV29 and Route: Wilson Road

No glare found

PV29 and Route: Zeigler Mine Road

No glare found

PV29 and FP: Sparta Airport Flight Path North

No glare found

PV29 and FP: Sparta Airport Flight Path South

No glare found

PV29 and OP 1

No glare found

PV29 and OP 2

No glare found

PV29 and OP 3

No glare found

PV29 and OP 4

No glare found

PV29 and OP 5

No glare found

PV29 and OP 6

No glare found

PV29 and OP 7

No glare found

PV29 and OP 8

No glare found

PV29 and OP 9

No glare found

PV29 and OP 10

No glare found

PV29 and OP 11

No glare found

PV29 and OP 12

No glare found

PV29 and OP 13

No glare found

PV29 and OP 14

No glare found

PV29 and OP 15

No glare found

PV29 and OP 16

No glare found

PV29 and OP 17

No glare found

PV29 and OP 18

No glare found

PV29 and OP 19

No glare found

PV29 and OP 20

No glare found

PV: PV30 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV30 and Route: Airport Road

No glare found

PV30 and Route: Hunter Field Road

No glare found

PV30 and Route: Michael Road

No glare found

PV30 and Route: State Route 4

No glare found

PV30 and Route: State Route 53

No glare found

PV30 and Route: Tilden Road

No glare found

PV30 and Route: Wilson Road

No glare found

PV30 and Route: Zeigler Mine Road

No glare found

PV30 and FP: Sparta Airport Flight Path North

No glare found

PV30 and FP: Sparta Airport Flight Path South

No glare found

PV30 and OP 1

No glare found

PV30 and OP 2

No glare found

PV30 and OP 3

No glare found

PV30 and OP 4

No glare found

PV30 and OP 5

No glare found

PV30 and OP 6

No glare found

PV30 and OP 7

No glare found

PV30 and OP 8

No glare found

PV30 and OP 9

No glare found

PV30 and OP 10

No glare found

PV30 and OP 11

No glare found

PV30 and OP 12

No glare found

PV30 and OP 13

No glare found

PV30 and OP 14

No glare found

PV30 and OP 15

No glare found

PV30 and OP 16

No glare found

PV30 and OP 17

No glare found

PV30 and OP 18

No glare found

PV30 and OP 19

No glare found

PV30 and OP 20

No glare found

PV: PV31 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV31 and Route: Airport Road

No glare found

PV31 and Route: Hunter Field Road

No glare found

PV31 and Route: Michael Road

No glare found

PV31 and Route: State Route 4

No glare found

PV31 and Route: State Route 53

No glare found

PV31 and Route: Tilden Road

No glare found

PV31 and Route: Wilson Road

No glare found

PV31 and Route: Zeigler Mine Road

No glare found

PV31 and FP: Sparta Airport Flight Path North

No glare found

PV31 and FP: Sparta Airport Flight Path South

No glare found

PV31 and OP 1

No glare found

PV31 and OP 2

No glare found

PV31 and OP 3

No glare found

PV31 and OP 4

No glare found

PV31 and OP 5

No glare found

PV31 and OP 6

No glare found

PV31 and OP 7

No glare found

PV31 and OP 8

No glare found

PV31 and OP 9

No glare found

PV31 and OP 10

No glare found

PV31 and OP 11

No glare found

PV31 and OP 12

No glare found

PV31 and OP 13

No glare found

PV31 and OP 14

No glare found

PV31 and OP 15

No glare found

PV31 and OP 16

No glare found

PV31 and OP 17

No glare found

PV31 and OP 18

No glare found

PV31 and OP 19

No glare found

PV31 and OP 20

No glare found

PV: PV32 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV32 and Route: Airport Road

No glare found

PV32 and Route: Hunter Field Road

No glare found

PV32 and Route: Michael Road

No glare found

PV32 and Route: State Route 4

No glare found

PV32 and Route: State Route 53

No glare found

PV32 and Route: Tilden Road

No glare found

PV32 and Route: Wilson Road

No glare found

PV32 and Route: Zeigler Mine Road

No glare found

PV32 and FP: Sparta Airport Flight Path North

No glare found

PV32 and FP: Sparta Airport Flight Path South

No glare found

PV32 and OP 1

No glare found

PV32 and OP 2

No glare found

PV32 and OP 3

No glare found

PV32 and OP 4

No glare found

PV32 and OP 5

No glare found

PV32 and OP 6

No glare found

PV32 and OP 7

No glare found

PV32 and OP 8

No glare found

PV32 and OP 9

No glare found

PV32 and OP 10

No glare found

PV32 and OP 11

No glare found

PV32 and OP 12

No glare found

PV32 and OP 13

No glare found

PV32 and OP 14

No glare found

PV32 and OP 15

No glare found

PV32 and OP 16

No glare found

PV32 and OP 17

No glare found

PV32 and OP 18

No glare found

PV32 and OP 19

No glare found

PV32 and OP 20

No glare found

PV: PV33 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV33 and Route: Airport Road

No glare found

PV33 and Route: Hunter Field Road

No glare found

PV33 and Route: Michael Road

No glare found

PV33 and Route: State Route 4

No glare found

PV33 and Route: State Route 53

No glare found

PV33 and Route: Tilden Road

No glare found

PV33 and Route: Wilson Road

No glare found

PV33 and Route: Zeigler Mine Road

No glare found

PV33 and FP: Sparta Airport Flight Path North

No glare found

PV33 and FP: Sparta Airport Flight Path South

No glare found

PV33 and OP 1

No glare found

PV33 and OP 2

No glare found

PV33 and OP 3

No glare found

PV33 and OP 4

No glare found

PV33 and OP 5

No glare found

PV33 and OP 6

No glare found

PV33 and OP 7

No glare found

PV33 and OP 8

No glare found

PV33 and OP 9

No glare found

PV33 and OP 10

No glare found

PV33 and OP 11

No glare found

PV33 and OP 12

No glare found

PV33 and OP 13

No glare found

PV33 and OP 14

No glare found

PV33 and OP 15

No glare found

PV33 and OP 16

No glare found

PV33 and OP 17

No glare found

PV33 and OP 18

No glare found

PV33 and OP 19

No glare found

PV33 and OP 20

No glare found

PV: PV34 no glare found

Receptor results ordered by category of glare

Receptor	Annual Green Glare		Annual Yellow Glare	
	min	hr	min	hr
Airport Road	0	0.0	0	0.0
Hunter Field Road	0	0.0	0	0.0
Michael Road	0	0.0	0	0.0
State Route 4	0	0.0	0	0.0
State Route 53	0	0.0	0	0.0
Tilden Road	0	0.0	0	0.0
Wilson Road	0	0.0	0	0.0
Zeigler Mine Road	0	0.0	0	0.0
Sparta Airport Flight Path North	0	0.0	0	0.0
Sparta Airport Flight Path South	0	0.0	0	0.0
OP 1	0	0.0	0	0.0
OP 2	0	0.0	0	0.0
OP 3	0	0.0	0	0.0
OP 4	0	0.0	0	0.0
OP 5	0	0.0	0	0.0
OP 6	0	0.0	0	0.0
OP 7	0	0.0	0	0.0
OP 8	0	0.0	0	0.0
OP 9	0	0.0	0	0.0
OP 10	0	0.0	0	0.0
OP 11	0	0.0	0	0.0
OP 12	0	0.0	0	0.0
OP 13	0	0.0	0	0.0
OP 14	0	0.0	0	0.0
OP 15	0	0.0	0	0.0
OP 16	0	0.0	0	0.0
OP 17	0	0.0	0	0.0
OP 18	0	0.0	0	0.0
OP 19	0	0.0	0	0.0
OP 20	0	0.0	0	0.0

PV34 and Route: Airport Road

No glare found

PV34 and Route: Hunter Field Road

No glare found

PV34 and Route: Michael Road

No glare found

PV34 and Route: State Route 4

No glare found

PV34 and Route: State Route 53

No glare found

PV34 and Route: Tilden Road

No glare found

PV34 and Route: Wilson Road

No glare found

PV34 and Route: Zeigler Mine Road

No glare found

PV34 and FP: Sparta Airport Flight Path North

No glare found

PV34 and FP: Sparta Airport Flight Path South

No glare found

PV34 and OP 1

No glare found

PV34 and OP 2

No glare found

PV34 and OP 3

No glare found

PV34 and OP 4

No glare found

PV34 and OP 5

No glare found

PV34 and OP 6

No glare found

PV34 and OP 7

No glare found

PV34 and OP 8

No glare found

PV34 and OP 9

No glare found

PV34 and OP 10

No glare found

PV34 and OP 11

No glare found

PV34 and OP 12

No glare found

PV34 and OP 13

No glare found

PV34 and OP 14

No glare found

PV34 and OP 15

No glare found

PV34 and OP 16

No glare found

PV34 and OP 17

No glare found

PV34 and OP 18

No glare found

PV34 and OP 19

No glare found

PV34 and OP 20

No glare found

Assumptions

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.

Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.

The algorithm does not rigorously represent the detailed geometry of a system; detailed features such as gaps between modules, variable height of the PV array, and support structures may impact actual glare results. However, we have validated our models against several systems, including a PV array causing glare to the air-traffic control tower at Manchester-Boston Regional Airport and several sites in Albuquerque, and the tool accurately predicted the occurrence and intensity of glare at different times and days of the year.

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. This primarily affects V1 analyses of path receptors.

Random number computations are utilized by various steps of the annual hazard analysis algorithm. Predicted minutes of glare can vary between runs as a result. This limitation primarily affects analyses of Observation Point receptors, including ATCTs. Note that the SGHAT/ ForgeSolar methodology has always relied on an analytical, qualitative approach to accurately determine the overall hazard (i.e. green vs. yellow) of expected glare on an annual basis.

The analysis does not automatically consider obstacles (either man-made or natural) between the observation points and the prescribed solar installation that may obstruct observed glare, such as trees, hills, buildings, etc.

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.)

The variable direct normal irradiance (DNI) feature (if selected) scales the user-prescribed peak DNI using a typical clear-day irradiance profile. This profile has a lower DNI in the mornings and evenings and a maximum at solar noon. The scaling uses a clear-day irradiance profile based on a normalized time relative to sunrise, solar noon, and sunset, which are prescribed by a sun-position algorithm and the latitude and longitude obtained from Google maps. The actual DNI on any given day can be affected by cloud cover, atmospheric attenuation, and other environmental factors.

The ocular hazard predicted by the tool depends on a number of environmental, optical, and human factors, which can be uncertain. We provide input fields and typical ranges of values for these factors so that the user can vary these parameters to see if they have an impact on the results. The speed of SGHAT allows expedited sensitivity and parametric analyses.

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.

Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. 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 at www.forgesolar.com/help/ for assumptions and limitations not listed here.

Default glare analysis parameters and observer eye characteristics (for reference only):

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

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