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April 15, 2019

Monique Wijnholds  
Avangrid Renewables  
1125 NW Couch  
Suite 700  
Portland, Oregon 97209

Subject: Mohawk Solar Farm Glare Analysis – Technical Memo

Dear Ms. Wijnholds:

At your request, POWER Engineers, Inc. (POWER) has evaluated the proposed Mohawk Solar Project (Project) to determine the occurrence and duration of solar glare visible to sensitive viewers including adjacent residences and major transportation routes. This technical memo describes our findings.

**Qualifications** – POWER has been commissioned to analyze potential glare impacts from solar installations of over 30 projects dating back to 2011. POWER has developed proprietary methods for analyzing glare using geometric analysis in addition to utilizing the Federal Aviation Administration (FAA) approved Solar Glare Hazard Analysis Tool (SGHAT) developed by Sandia National Laboratories.

**Project Description** – The proposed Project, located in Montgomery County, New York, consists of a 90.5-megawatt solar field utilizing single axis tracking photovoltaic (PV) solar panels. The proposed Project is approximately two miles south of Fort Plains, New York and two miles west of Canajoharie, New York (see Figure 1). The Project proposes the use of single-axis tracking PV panels rotating around a north/south axis. Single-axis trackers are designed to maximize solar efficiency by tracking the east-west position of the sun throughout the day.

**Glare Analysis** – Specifically, this analysis evaluates the occurrence of glare to the following sensitive viewers:

- **Residences** – Residential viewers within 1,500 feet of the Project and with direct line of sight to proposed solar installations were analyzed. Residences were analyzed with an elevation of 15 feet above ground level to represent worst-case scenario second story views (see Figure 1).
- **Roadways** – Major roadways within one-mile of proposed solar installations were analyzed. Roadways were analyzed with an elevation of 8 feet above ground level to represent worst-case scenario truck views (see Figure 1). Roads analyzed include the following:
  - Highway 163
  - Fisk Hill Road
  - Nestle Road
  - Marshville Road

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- Tanners Road
- Clinton Road
- Buel Road
- Dygert Road
- Sprout Brook Road
- Ames Road
- Frederick Street
- Seeblers Lane

A viewshed analysis was performed by Environmental Design and Research (EDR) which identified all residential viewers within 1,500 feet of the project that would have a direct line of sight to the proposed project. Coordinates for PV systems and sensitive viewers for use with the SGHAT were derived from shape files provided by EDR on March 28, 2019. Due to the size and complexity of the proposed panel arrangement, PV arrays were divided and analyzed as three separate analyses for both residential viewers and roadways. Each analysis was performed in ten-minute increments throughout the day for residential viewers and fifteen-minute increments for roadways. All analysis was performed for 365 days of the year. It is important to note that each residence is analyzed as a single point and does not represent an entire parcel.

POWER utilized Sandia National Laboratories' Solar Glare Hazard Analysis Tool (SGHAT) licensed by Forge Solar to determine the occurrence and duration of potential glare from proposed solar installations. The SGHAT is a web-based glare assessment tool allowing input of viewer position, solar installations, solar technology, and elevation data. The SGHAT provides a quantified assessment of when and where glare may occur throughout the year from solar installations, as well as identifying the potential effects on the human eye when glare does occur (see <https://share.sandia.gov/phlux> for more information on the SGHAT). The SGHAT analyzes worst-case scenarios of full exposed sun throughout the year with the absence of cloud cover, minor terrain undulation, vegetation, or other visual obstructions which may block potential glare.

Analysis assumes a five-foot mounting height, five-degree stow position and 62-degree maximum tracking angle per manufacturer specification. Analysis also assumes the use of back-tracking in which panels return to stow position after reaching their rotational limits to avoid shading (see Figure 2).

**Results** – POWER's independent analysis using the SGHAT reported the following:

- **Residences** – Glare was reported for one residential viewer centrally located in the Project (See Exhibit A). Durations range from one to ten minutes and occur during the first hour of the day. Glare reported is categorized as “Yellow” with the potential for temporary after-image predicted. For detailed results showing time, duration and source of glare, see Exhibit A.
  - Residence OP39: Glare was reported intermittently near sunrise throughout the year with durations lasting less than ten minutes (See Figure 3).
- **Roadways** – No glare was reported for any major roadways adjacent the Project.

**Mitigation** – If levels of potential glare are found to be unacceptable, potential glare may be further reduced through a combination of vegetation planting, modified panel stow angles, reduction of panel footprint or an increase in rack height for the offending panels.

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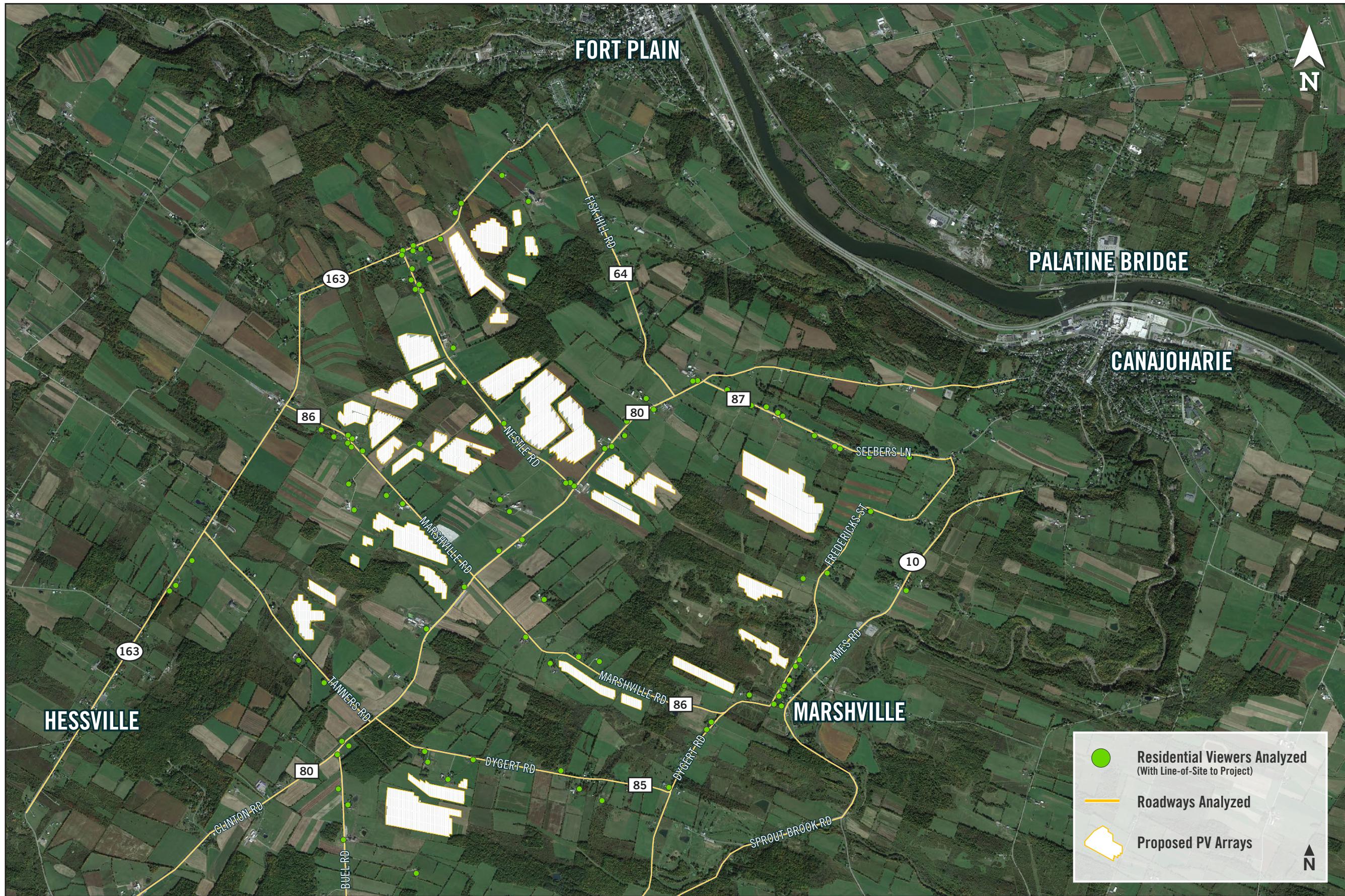
**Conclusion** – Potential glare is limited to one residential location and only occurs when the sun is lowest in the sky. During these times, a viewer would likely have their gaze diverted to avoid looking directly into the setting or rising sun. No glare is anticipated for motorists. Due to the low occurrence and duration of potential glare, it is POWER's professional opinion that glare resulting from the proposed Mohawk Solar Farm will have minimal impact to sensitive viewers.

Please let me know if you have any questions, as I would be happy to discuss process and recommendations.

Sincerely,



Andy Stephens  
Visualization Specialist



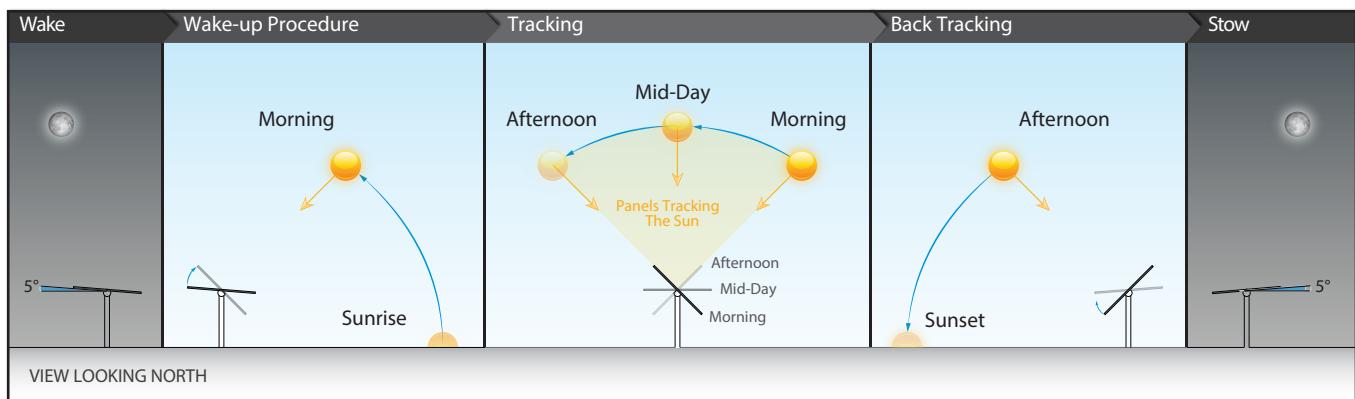
Prepared By,



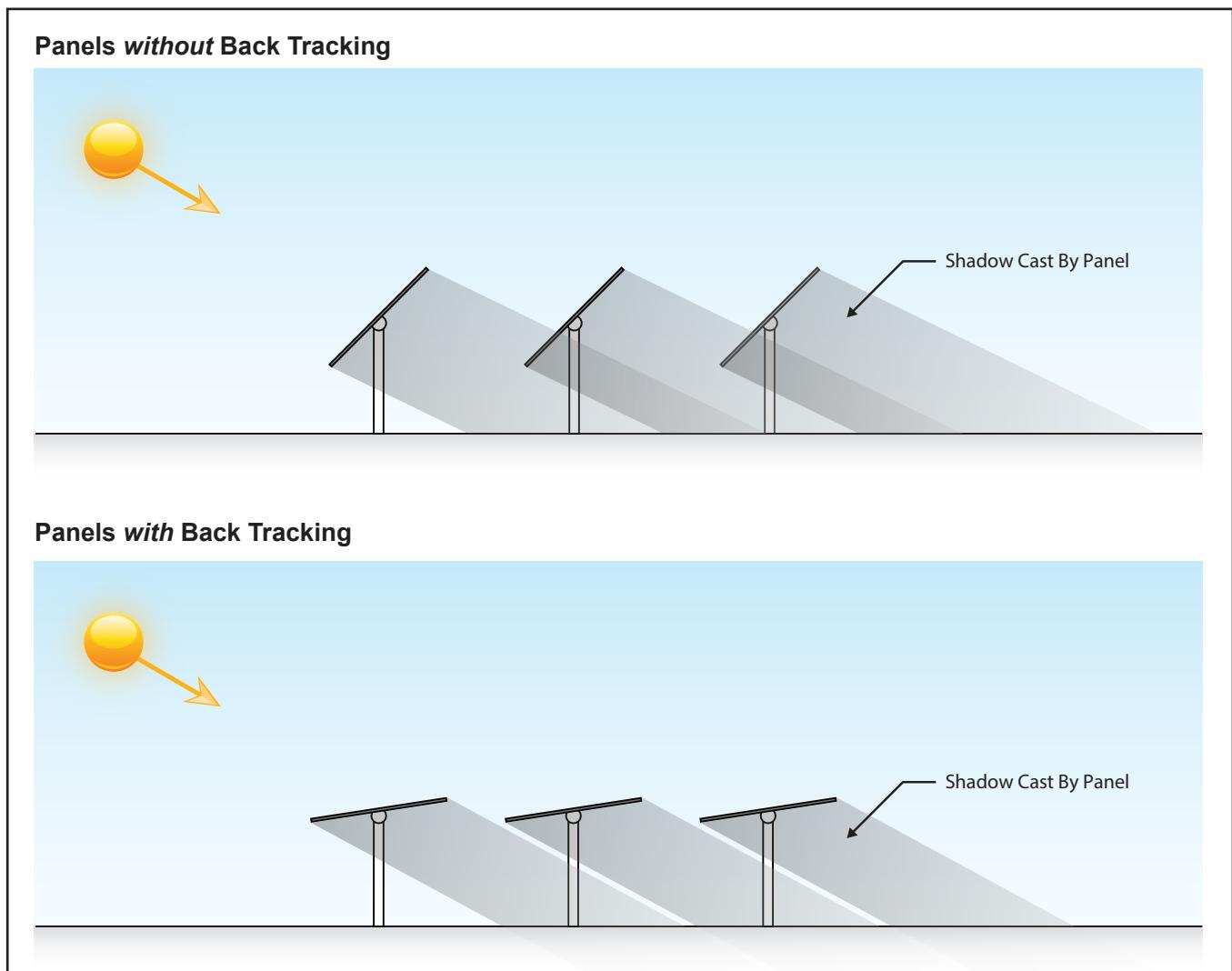
Mohawk Solar Farm Glare Study

Figure 1 - Area Map

## Single Axis Tracker Behavior



## Back Tracking Procedures

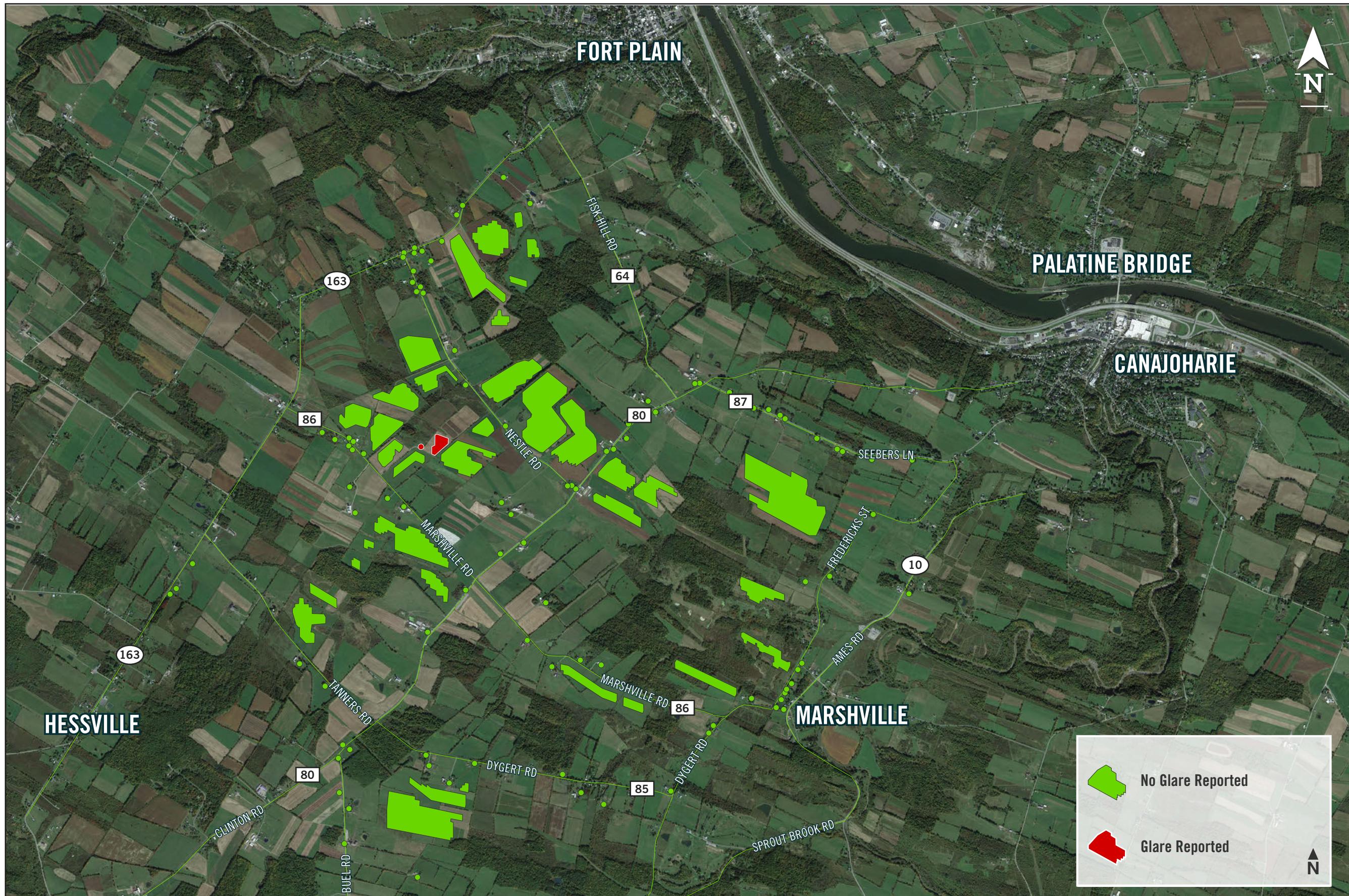


Prepared By,



**Mohawk Solar Farm Glare Study**

Figure 2 - Panel Behavior



Prepared By,



#### **Mohawk Solar Farm Glare Study**

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Figure 3 - Reported Glare

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Exhibit A – GlareGauge Glare Analysis Results



## GlareGauge Glare Analysis Results

### Site Configuration: Mohawk Residence 1 R3

Project site configuration details and results.

Created **March 28, 2019 10:52 p.m.**  
Updated **March 28, 2019 11:01 p.m.**  
**DNI varies** and peaks at **1,000.0 W/m<sup>2</sup>**  
Analyze every **10** minute(s)  
**0.5** ocular transmission coefficient  
**0.002 m** pupil diameter  
**0.017 m** eye focal length  
**9.3 mrad** sun subtended angle  
Timezone **UTC-5**  
Site Configuration ID: 26662.4661

### Summary of Results

No glare predicted!

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced		
			deg	deg	min	min	kWh
PV19	SA tracking	SA tracking	0	0	-	-	-
PV2	SA tracking	SA tracking	0	0	-	-	-
PV20	SA tracking	SA tracking	0	0	-	-	-
PV21	SA tracking	SA tracking	0	0	-	-	-
PV22	SA tracking	SA tracking	0	0	-	-	-
PV23	SA tracking	SA tracking	0	0	-	-	-

### Component Data

#### PV Array(s)

**Name:** PV19  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.883285	-74.663599	799.58	5.00	804.58
2	42.883000	-74.663586	799.16	5.00	804.16
3	42.881972	-74.663176	802.17	5.00	807.18
4	42.881754	-74.662868	804.22	5.00	809.22
5	42.881799	-74.662797	804.62	5.00	809.62
6	42.881013	-74.662805	811.93	5.00	816.93
7	42.880474	-74.662088	817.59	5.00	822.59
8	42.880491	-74.661116	816.75	5.00	821.75
9	42.881253	-74.661077	811.41	5.00	816.41
10	42.881391	-74.661278	810.37	5.00	815.37
11	42.881398	-74.661526	809.72	5.00	814.72
12	42.882007	-74.661411	806.02	5.00	811.02
13	42.882095	-74.659886	803.43	5.00	808.43
14	42.882642	-74.659849	800.24	5.00	805.24
15	42.882899	-74.660063	799.51	5.00	804.51
16	42.882924	-74.661401	802.06	5.00	807.06
17	42.883466	-74.661403	799.71	5.00	804.71
18	42.883457	-74.661722	800.27	5.00	805.27
19	42.883725	-74.661750	799.20	5.00	804.20
20	42.883722	-74.662295	799.87	5.00	804.87
21	42.884202	-74.662329	797.96	5.00	802.96
22	42.884245	-74.662873	798.96	5.00	803.96
23	42.883737	-74.662917	801.11	5.00	806.11
24	42.883723	-74.663330	800.94	5.00	805.94
25	42.883472	-74.663348	800.92	5.00	805.92
26	42.883433	-74.663496	800.31	5.00	805.31
27	42.883285	-74.663599	799.58	5.00	804.58

**Name:** PV2  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.886855	-74.656988	824.67	5.00	829.67
2	42.886485	-74.656028	834.89	5.00	839.89
3	42.887265	-74.655988	833.77	5.00	838.77
4	42.887595	-74.656786	831.67	5.00	836.67
5	42.887361	-74.656796	831.55	5.00	836.55
6	42.887397	-74.657006	832.62	5.00	837.62
7	42.886855	-74.656988	824.67	5.00	829.67

**Name:** PV20  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.884608	-74.661624	804.06	5.00	809.06
2	42.883318	-74.658620	800.37	5.00	805.37
3	42.884139	-74.658649	807.43	5.00	812.43
4	42.885499	-74.661693	796.89	5.00	801.89
5	42.884608	-74.661624	804.06	5.00	809.06



**Name:** PV21  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.888369	-74.655642	827.65	5.00	832.65
2	42.888224	-74.655130	826.38	5.00	831.38
3	42.888440	-74.655128	827.74	5.00	832.74
4	42.888271	-74.654476	826.55	5.00	831.55
5	42.888801	-74.654447	839.13	5.00	844.13
6	42.889121	-74.655580	841.04	5.00	846.04
7	42.888369	-74.655642	827.65	5.00	832.65



**Name:** PV22  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.889759	-74.654476	843.35	5.00	848.36
2	42.889406	-74.653671	838.67	5.00	843.67
3	42.889617	-74.653653	843.51	5.00	848.51
4	42.889467	-74.653359	840.69	5.00	845.69
5	42.889694	-74.653294	842.82	5.00	847.82
6	42.889561	-74.652946	841.21	5.00	846.21
7	42.889818	-74.652927	835.60	5.00	840.60
8	42.889499	-74.652153	835.65	5.00	840.65
9	42.888218	-74.652166	831.50	5.00	836.50
10	42.886672	-74.646113	838.31	5.00	843.31
11	42.887235	-74.646067	837.16	5.00	842.16
12	42.887270	-74.646191	837.32	5.00	842.32
13	42.887504	-74.646196	835.70	5.00	840.70
14	42.887644	-74.646792	834.03	5.00	839.03
15	42.887963	-74.646843	831.49	5.00	836.49
16	42.888057	-74.647262	831.86	5.00	836.86
17	42.888358	-74.647258	826.71	5.00	831.71
18	42.888453	-74.647747	826.78	5.00	831.78
19	42.888674	-74.647690	822.28	5.00	827.28
20	42.888832	-74.648232	822.00	5.00	827.00
21	42.889071	-74.648237	817.65	5.00	822.65
22	42.889210	-74.648702	817.94	5.00	822.94
23	42.889484	-74.648668	817.50	5.00	822.50
24	42.889584	-74.649227	818.45	5.00	823.45
25	42.889846	-74.649208	815.49	5.00	820.49
26	42.890220	-74.650628	814.50	5.00	819.50
27	42.889986	-74.650677	817.30	5.00	822.30
28	42.890016	-74.650871	817.88	5.00	822.88
29	42.889777	-74.650944	821.79	5.00	826.79
30	42.890097	-74.652076	822.78	5.00	827.78
31	42.890303	-74.652051	820.40	5.00	825.40
32	42.891043	-74.653818	823.41	5.00	828.41
33	42.890867	-74.653882	826.34	5.00	831.34
34	42.890897	-74.654099	827.76	5.00	832.76
35	42.890435	-74.654073	835.29	5.00	840.29
36	42.890500	-74.654445	836.48	5.00	841.48
37	42.889759	-74.654476	843.35	5.00	848.36

Name: PV23

Axis tracking: Single-axis rotation

Tracking axis orientation: 180.0 deg

Tracking axis tilt: 0.0 deg

Tracking axis panel offset: 0.0 deg

Maximum tracking angle: 62.0 deg

Resting angle: 5.0 deg

Rated power: -

Panel material: Light textured glass without AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.885875	-74.649204	846.41	5.00	851.41
2	42.885727	-74.648659	844.98	5.00	849.98
3	42.885414	-74.648682	849.99	5.00	854.99
4	42.885337	-74.648194	847.46	5.00	852.46
5	42.885061	-74.648188	847.71	5.00	852.71
6	42.884828	-74.647506	843.52	5.00	848.52
7	42.884409	-74.647504	843.50	5.00	848.50
8	42.884395	-74.646730	840.99	5.00	845.99
9	42.883882	-74.646690	839.01	5.00	844.01
10	42.883896	-74.646208	837.67	5.00	842.67
11	42.884953	-74.646110	843.72	5.00	848.72
12	42.885191	-74.646313	843.38	5.00	848.38
13	42.885232	-74.646634	842.11	5.00	847.11
14	42.885510	-74.646630	841.29	5.00	846.29
15	42.885512	-74.646940	840.72	5.00	845.72
16	42.885747	-74.646961	839.71	5.00	844.71
17	42.885908	-74.647462	837.72	5.00	842.72
18	42.886145	-74.647466	837.35	5.00	842.35
19	42.886467	-74.648186	835.84	5.00	840.84
20	42.886677	-74.649186	837.14	5.00	842.14
21	42.885875	-74.649204	846.41	5.00	851.41

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	42.867315	-74.628656	818.40	15.00	833.40
OP 2	42.868261	-74.631198	822.76	15.00	837.76
OP 3	42.869766	-74.633275	810.91	15.00	825.91
OP 4	42.870671	-74.643151	849.81	15.00	864.81
OP 5	42.869056	-74.645959	882.05	15.00	897.05
OP 6	42.870491	-74.648217	898.94	15.00	913.95
OP 7	42.872147	-74.657933	934.13	15.00	949.13
OP 8	42.871780	-74.657142	940.35	15.00	955.36
OP 9	42.871103	-74.658429	945.86	15.00	960.86
OP 10	42.868244	-74.658304	948.65	15.00	963.65
OP 11	42.866930	-74.657220	943.18	15.00	958.18
OP 12	42.873811	-74.616368	736.23	15.00	751.23
OP 13	42.868417	-74.621123	779.16	15.00	794.16
OP 14	42.877015	-74.659925	848.79	15.00	863.79
OP 15	42.878856	-74.662789	839.54	15.00	854.54
OP 16	42.885035	-74.676631	810.74	15.00	825.75
OP 17	42.884599	-74.677340	810.92	15.00	825.92
OP 18	42.887103	-74.674815	769.06	15.00	784.06
OP 19	42.878822	-74.628937	732.91	15.00	747.91
OP 20	42.879195	-74.631312	740.98	15.00	755.98
OP 21	42.878643	-74.634496	742.57	15.00	757.57
OP 22	42.880826	-74.637250	784.96	15.00	799.96
OP 23	42.883950	-74.635233	839.10	15.00	854.10
OP 24	42.881496	-74.648427	838.31	15.00	853.31
OP 25	42.884981	-74.644191	847.96	15.00	862.96
OP 26	42.887949	-74.640252	783.41	15.00	798.41
OP 27	42.888884	-74.637678	761.65	15.00	776.65
OP 28	42.891845	-74.651174	832.89	15.00	847.90
OP 29	42.891316	-74.656584	837.43	15.00	852.43
OP 30	42.893473	-74.657217	832.50	15.00	847.51
OP 31	42.892513	-74.652955	835.95	15.00	850.95
OP 32	42.897955	-74.660319	786.22	15.00	801.22
OP 33	42.897388	-74.658876	791.93	15.00	806.93
OP 34	42.897479	-74.657330	788.76	15.00	803.76
OP 35	42.897203	-74.656852	793.69	15.00	808.69
OP 36	42.896884	-74.657323	788.67	15.00	803.67
OP 37	42.896557	-74.656928	787.35	15.00	802.35
OP 38	42.896191	-74.655650	791.00	15.00	806.00
OP 39	42.896780	-74.649311	826.69	15.00	841.69
OP 40	42.898498	-74.639751	711.25	15.00	726.25
OP 41	42.901890	-74.644212	740.20	15.00	755.20
OP 42	42.904727	-74.645452	783.09	15.00	798.09
OP 43	42.909459	-74.649018	691.28	15.00	706.28
OP 44	42.909577	-74.649736	688.56	15.00	703.56
OP 45	42.909990	-74.649342	686.05	15.00	701.05
OP 46	42.910344	-74.650215	681.96	15.00	696.96
OP 47	42.911270	-74.650092	658.96	15.00	673.96
OP 48	42.912386	-74.651256	635.01	15.00	650.01
OP 49	42.912745	-74.650045	652.62	15.00	667.62
OP 50	42.912908	-74.649151	649.35	15.00	664.35
OP 51	42.912102	-74.648128	677.01	15.00	692.02
OP 52	42.913754	-74.646964	674.24	15.00	689.24
OP 53	42.893577	-74.632783	698.97	15.00	713.98
OP 54	42.893326	-74.631835	704.52	15.00	719.52
OP 55	42.893617	-74.632295	703.81	15.00	718.81
OP 56	42.896605	-74.627639	755.29	15.00	770.29
OP 57	42.896431	-74.628414	752.51	15.00	767.51

OP 58	42.897499	-74.626162	752.33	15.00	767.33
OP 59	42.898672	-74.625942	747.03	15.00	762.03
OP 60	42.899677	-74.622919	725.98	15.00	740.98
OP 61	42.900574	-74.623736	720.45	15.00	735.45
OP 62	42.902080	-74.617960	715.00	15.00	730.00
OP 63	42.876055	-74.612104	705.33	15.00	720.33
OP 64	42.875145	-74.608494	684.69	15.00	699.69
OP 65	42.875302	-74.609331	697.67	15.00	712.67
OP 66	42.875954	-74.608787	671.03	15.00	686.03
OP 67	42.876520	-74.608349	669.99	15.00	684.99
OP 68	42.876828	-74.608178	672.10	15.00	687.10
OP 69	42.877289	-74.607612	677.12	15.00	692.12
OP 70	42.878436	-74.606898	678.03	15.00	693.03
OP 71	42.878964	-74.606463	675.96	15.00	690.96
OP 72	42.885707	-74.606097	691.77	15.00	706.77
OP 73	42.886131	-74.603360	697.11	15.00	712.11
OP 74	42.891266	-74.598480	763.04	15.00	778.04
OP 75	42.884709	-74.594454	715.58	15.00	730.58
OP 76	42.895724	-74.594124	783.36	15.00	798.36
OP 77	42.895771	-74.598643	758.41	15.00	773.41
OP 78	42.896456	-74.601916	736.31	15.00	751.31
OP 79	42.896635	-74.602515	734.86	15.00	749.86
OP 80	42.897504	-74.604809	735.01	15.00	750.01
OP 81	42.899398	-74.608981	739.47	15.00	754.47
OP 82	42.899977	-74.611915	733.92	15.00	748.92
OP 83	42.871356	-74.648601	883.62	15.00	898.62
OP 84	42.892188	-74.640237	750.48	15.00	765.48
OP 85	42.891185	-74.639108	749.18	15.00	764.18
OP 86	42.916702	-74.644609	630.83	15.00	645.83
OP 87	42.915901	-74.645267	639.47	15.00	654.47
OP 88	42.919001	-74.640020	611.58	15.00	626.58
OP 89	42.916865	-74.637032	618.67	15.00	633.67
OP 90	42.899907	-74.610248	733.66	15.00	748.66
OP 91	42.899127	-74.608389	738.22	15.00	753.22
OP 92	42.861250	-74.649534	893.39	15.00	908.39
OP 93	42.873211	-74.616892	733.74	15.00	748.74
OP 94	42.864003	-74.657748	923.54	15.00	938.54
OP 95	42.913179	-74.649991	644.94	15.00	659.94
OP 96	42.912773	-74.651172	636.84	15.00	651.84
OP 97	42.902029	-74.618499	706.14	15.00	721.14
OP 98	42.901320	-74.614630	721.40	15.00	736.40

## Site Configuration: Mohawk Roads 1a

Project site configuration details and results.

Created **April 2, 2019 1:29 p.m.**  
 Updated **April 2, 2019 1:48 p.m.**  
 DNI **varies** and peaks at **1,000.0 W/m<sup>2</sup>**  
 Analyze every **15** minute(s)  
**0.5** ocular transmission coefficient  
**0.002 m** pupil diameter  
**0.017 m** eye focal length  
**9.3 mrad** sun subtended angle  
 Timezone **UTC-5**  
 Site Configuration ID: 26759.4661

## Summary of Results

No glare predicted!

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced		
			deg	deg	min	min	kWh
PV19	SA tracking	SA tracking	0	0	-	-	-
PV2	SA tracking	SA tracking	0	0	-	-	-
PV20	SA tracking	SA tracking	0	0	-	-	-
PV21	SA tracking	SA tracking	0	0	-	-	-
PV22	SA tracking	SA tracking	0	0	-	-	-
PV23	SA tracking	SA tracking	0	0	-	-	-

## Component Data

### PV Array(s)

**Name:** PV19  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.883285	-74.663599	799.58	5.00	804.58
2	42.883000	-74.663586	799.16	5.00	804.16
3	42.881972	-74.663176	802.17	5.00	807.18
4	42.881754	-74.662868	804.22	5.00	809.22
5	42.881799	-74.662797	804.62	5.00	809.62
6	42.881013	-74.662805	811.93	5.00	816.93
7	42.880474	-74.662088	817.59	5.00	822.59
8	42.880491	-74.661116	816.75	5.00	821.75
9	42.881253	-74.661077	811.41	5.00	816.41
10	42.881391	-74.661278	810.37	5.00	815.37
11	42.881398	-74.661526	809.72	5.00	814.72
12	42.882007	-74.661411	806.02	5.00	811.02
13	42.882095	-74.659886	803.43	5.00	808.43
14	42.882642	-74.659849	800.24	5.00	805.24
15	42.882899	-74.660063	799.51	5.00	804.51
16	42.882924	-74.661401	802.06	5.00	807.06
17	42.883466	-74.661403	799.71	5.00	804.71
18	42.883457	-74.661722	800.27	5.00	805.27
19	42.883725	-74.661750	799.20	5.00	804.20
20	42.883722	-74.662295	799.87	5.00	804.87
21	42.884202	-74.662329	797.96	5.00	802.96
22	42.884245	-74.662873	798.96	5.00	803.96
23	42.883737	-74.662917	801.11	5.00	806.11
24	42.883723	-74.663330	800.94	5.00	805.94
25	42.883472	-74.663348	800.92	5.00	805.92
26	42.883433	-74.663496	800.31	5.00	805.31
27	42.883285	-74.663599	799.58	5.00	804.58

**Name:** PV2  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.886855	-74.656988	824.67	5.00	829.67
2	42.886485	-74.656028	834.89	5.00	839.89
3	42.887265	-74.655988	833.77	5.00	838.77
4	42.887595	-74.656786	831.67	5.00	836.67
5	42.887361	-74.656796	831.55	5.00	836.55
6	42.887397	-74.657006	832.62	5.00	837.62
7	42.886855	-74.656988	824.67	5.00	829.67

**Name:** PV20  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.884608	-74.661624	804.06	5.00	809.06
2	42.883318	-74.658620	800.37	5.00	805.37
3	42.884139	-74.658649	807.43	5.00	812.43
4	42.885499	-74.661693	796.89	5.00	801.89
5	42.884608	-74.661624	804.06	5.00	809.06



**Name:** PV21  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.888369	-74.655642	827.65	5.00	832.65
2	42.888224	-74.655130	826.38	5.00	831.38
3	42.888440	-74.655128	827.74	5.00	832.74
4	42.888271	-74.654476	826.55	5.00	831.55
5	42.888801	-74.654447	839.13	5.00	844.13
6	42.889121	-74.655580	841.04	5.00	846.04
7	42.888369	-74.655642	827.65	5.00	832.65



**Name:** PV22  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.889759	-74.654476	843.35	5.00	848.36
2	42.889406	-74.653671	838.67	5.00	843.67
3	42.889617	-74.653653	843.51	5.00	848.51
4	42.889467	-74.653359	840.69	5.00	845.69
5	42.889694	-74.653294	842.82	5.00	847.82
6	42.889561	-74.652946	841.21	5.00	846.21
7	42.889818	-74.652927	835.60	5.00	840.60
8	42.889499	-74.652153	835.65	5.00	840.65
9	42.888218	-74.652166	831.50	5.00	836.50
10	42.886672	-74.646113	838.31	5.00	843.31
11	42.887235	-74.646067	837.16	5.00	842.16
12	42.887270	-74.646191	837.32	5.00	842.32
13	42.887504	-74.646196	835.70	5.00	840.70
14	42.887644	-74.646792	834.03	5.00	839.03
15	42.887963	-74.646843	831.49	5.00	836.49
16	42.888057	-74.647262	831.86	5.00	836.86
17	42.888358	-74.647258	826.71	5.00	831.71
18	42.888453	-74.647747	826.78	5.00	831.78
19	42.888674	-74.647690	822.28	5.00	827.28
20	42.888832	-74.648232	822.00	5.00	827.00
21	42.889071	-74.648237	817.65	5.00	822.65
22	42.889210	-74.648702	817.94	5.00	822.94
23	42.889484	-74.648668	817.50	5.00	822.50
24	42.889584	-74.649227	818.45	5.00	823.45
25	42.889846	-74.649208	815.49	5.00	820.49
26	42.890220	-74.650628	814.50	5.00	819.50
27	42.889986	-74.650677	817.30	5.00	822.30
28	42.890016	-74.650871	817.88	5.00	822.88
29	42.889777	-74.650944	821.79	5.00	826.79
30	42.890097	-74.652076	822.78	5.00	827.78
31	42.890303	-74.652051	820.40	5.00	825.40
32	42.891043	-74.653818	823.41	5.00	828.41
33	42.890867	-74.653882	826.34	5.00	831.34
34	42.890897	-74.654099	827.76	5.00	832.76
35	42.890435	-74.654073	835.29	5.00	840.29
36	42.890500	-74.654445	836.48	5.00	841.48
37	42.889759	-74.654476	843.35	5.00	848.36

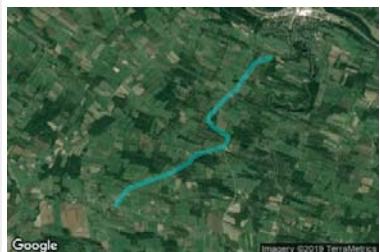
**Name:** PV23  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
			deg	deg	ft
1	42.885875	-74.649204	846.41	5.00	851.41
2	42.885727	-74.648659	844.98	5.00	849.98
3	42.885414	-74.648682	849.99	5.00	854.99
4	42.885337	-74.648194	847.46	5.00	852.46
5	42.885061	-74.648188	847.71	5.00	852.71
6	42.884828	-74.647506	843.52	5.00	848.52
7	42.884409	-74.647504	843.50	5.00	848.50
8	42.884395	-74.646730	840.99	5.00	845.99
9	42.883882	-74.646690	839.01	5.00	844.01
10	42.883896	-74.646208	837.67	5.00	842.67
11	42.884953	-74.646110	843.72	5.00	848.72
12	42.885191	-74.646313	843.38	5.00	848.38
13	42.885232	-74.646634	842.11	5.00	847.11
14	42.885510	-74.646630	841.29	5.00	846.29
15	42.885512	-74.646940	840.72	5.00	845.72
16	42.885747	-74.646961	839.71	5.00	844.71
17	42.885908	-74.647462	837.72	5.00	842.72
18	42.886145	-74.647466	837.35	5.00	842.35
19	42.886467	-74.648186	835.84	5.00	840.84
20	42.886677	-74.649186	837.14	5.00	842.14
21	42.885875	-74.649204	846.41	5.00	851.41

## Route Receptor(s)

**Name:** Route 1  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.848100	-74.646547	711.15	8.00	719.15
2	42.853009	-74.641805	763.03	8.00	771.03
3	42.855588	-74.632213	788.92	8.00	796.92
4	42.857869	-74.623909	821.15	8.00	829.15
5	42.858231	-74.622922	827.57	8.00	835.57
6	42.858679	-74.621828	841.51	8.00	849.51
7	42.859293	-74.620487	847.78	8.00	855.78
8	42.859859	-74.618963	836.92	8.00	844.92
9	42.860645	-74.616753	810.05	8.00	818.05
10	42.861023	-74.615862	795.50	8.00	803.50
11	42.861322	-74.615573	796.68	8.00	804.68
12	42.861864	-74.615272	785.74	8.00	793.74
13	42.862580	-74.614672	775.02	8.00	783.02
14	42.862957	-74.614210	767.48	8.00	775.49
15	42.863233	-74.613663	758.78	8.00	766.78
16	42.863468	-74.612998	745.90	8.00	753.90
17	42.863610	-74.612386	742.02	8.00	750.02
18	42.863783	-74.611496	730.88	8.00	738.89
19	42.864208	-74.609511	717.60	8.00	725.60
20	42.865946	-74.601690	664.23	8.00	672.23
21	42.866049	-74.601580	664.94	8.00	672.94
22	42.866628	-74.600765	679.18	8.00	687.18
23	42.867331	-74.600390	668.60	8.00	676.60
24	42.867740	-74.600127	659.85	8.00	667.85
25	42.868039	-74.600052	661.76	8.00	669.76
26	42.868381	-74.600036	667.39	8.00	675.39
27	42.868766	-74.600186	676.35	8.00	684.35
28	42.869167	-74.600433	681.92	8.00	689.92
29	42.869462	-74.600717	678.00	8.00	686.00
30	42.869777	-74.601189	683.58	8.00	691.58
31	42.870091	-74.602004	675.97	8.00	683.98
32	42.870457	-74.602750	666.63	8.00	674.63
33	42.870960	-74.603678	674.48	8.00	682.48
34	42.871212	-74.604281	662.38	8.00	670.38
35	42.871394	-74.604858	703.28	8.00	711.28
36	42.871727	-74.605577	701.81	8.00	709.81
37	42.872118	-74.606433	678.11	8.00	686.11
38	42.872320	-74.606720	663.75	8.00	671.75
39	42.872737	-74.607192	654.90	8.00	662.90
40	42.873456	-74.607760	657.79	8.00	665.79
41	42.873830	-74.608002	665.94	8.00	673.94
42	42.874140	-74.608117	669.51	8.00	677.51
43	42.874439	-74.608144	670.73	8.00	678.73
44	42.874769	-74.608082	673.41	8.00	681.41
45	42.875056	-74.607959	672.05	8.00	680.05
46	42.875404	-74.607685	673.13	8.00	681.13
47	42.875947	-74.606980	669.11	8.00	677.11
48	42.877164	-74.605381	675.37	8.00	683.37
49	42.879132	-74.602822	667.17	8.00	675.17
50	42.881613	-74.599582	668.48	8.00	676.48
51	42.882063	-74.598962	667.55	8.00	675.55
52	42.882281	-74.598549	661.58	8.00	669.58
53	42.882456	-74.598066	655.04	8.00	663.04
54	42.882598	-74.597540	657.68	8.00	665.68
55	42.882733	-74.597090	665.91	8.00	673.91
56	42.882867	-74.596806	668.80	8.00	676.81
57	42.883063	-74.596500	673.10	8.00	681.10

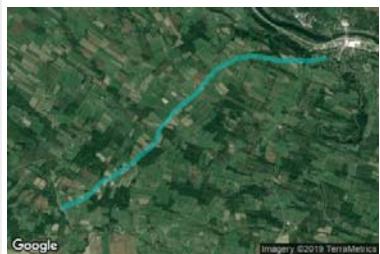
58	42.883315	-74.596210	676.77	8.00	684.77
59	42.883510	-74.596052	682.42	8.00	690.42
60	42.884221	-74.595531	698.57	8.00	706.57
61	42.884929	-74.594973	715.24	8.00	723.24
62	42.885840	-74.594324	700.57	8.00	708.57
63	42.886025	-74.594174	700.88	8.00	708.88
64	42.886332	-74.593906	699.15	8.00	707.15
65	42.886764	-74.593466	700.55	8.00	708.55
66	42.887456	-74.592726	702.76	8.00	710.76
67	42.888034	-74.592120	693.84	8.00	701.84
68	42.888556	-74.591529	691.32	8.00	699.32
69	42.889126	-74.590880	677.65	8.00	685.65
70	42.889464	-74.590537	681.47	8.00	689.47
71	42.889869	-74.590172	672.98	8.00	680.98
72	42.890176	-74.589952	666.78	8.00	674.78
73	42.890541	-74.589716	661.63	8.00	669.64
74	42.890824	-74.589459	659.92	8.00	667.92
75	42.891064	-74.589110	656.22	8.00	664.22
76	42.891378	-74.588397	641.81	8.00	649.81
77	42.891689	-74.587796	636.48	8.00	644.48
78	42.891933	-74.587275	641.73	8.00	649.73
79	42.892078	-74.586691	637.01	8.00	645.01
80	42.892212	-74.585832	629.98	8.00	637.98
81	42.892628	-74.583402	600.64	8.00	608.64
82	42.892846	-74.582117	594.43	8.00	602.43

Name: Route 2  
 Route type Two-way  
 View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
			deg	deg	ft
1	42.849242	-74.658606	724.06	8.00	732.06
2	42.852986	-74.657748	839.22	8.00	847.22
3	42.854968	-74.657297	877.63	8.00	885.63
4	42.855833	-74.657211	878.11	8.00	886.11
5	42.858350	-74.657254	870.13	8.00	878.13
6	42.865161	-74.657619	906.30	8.00	914.30
7	42.869501	-74.657984	948.30	8.00	956.31
8	42.870822	-74.658134	949.14	8.00	957.14
9	42.871561	-74.658070	935.84	8.00	943.84
10	42.871843	-74.657910	935.11	8.00	943.11

**Name:** Route 3  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.856659	-74.688802	745.91	8.00	753.91
2	42.857917	-74.686099	797.44	8.00	805.44
3	42.858295	-74.684361	829.69	8.00	837.69
4	42.859176	-74.681271	885.50	8.00	893.50
5	42.861063	-74.677580	920.19	8.00	928.19
6	42.861740	-74.676293	924.73	8.00	932.73
7	42.863281	-74.674469	941.36	8.00	949.36
8	42.864460	-74.672859	974.92	8.00	982.92
9	42.864995	-74.671701	983.12	8.00	991.12
10	42.865640	-74.669898	1001.80	8.00	1009.81
11	42.866143	-74.668546	986.54	8.00	994.54
12	42.870673	-74.659405	937.41	8.00	945.41
13	42.872104	-74.657582	932.84	8.00	940.84
14	42.874290	-74.653805	852.53	8.00	860.53
15	42.875689	-74.651445	829.62	8.00	837.62
16	42.877026	-74.650028	827.75	8.00	835.75
17	42.877686	-74.649599	807.75	8.00	815.75
18	42.879589	-74.649106	796.16	8.00	804.16
19	42.880532	-74.648762	808.06	8.00	816.06
20	42.881428	-74.647969	828.66	8.00	836.66
21	42.882325	-74.646724	817.95	8.00	825.95
22	42.883378	-74.645458	828.69	8.00	836.69
23	42.884887	-74.643913	847.04	8.00	855.04
24	42.885548	-74.643312	844.31	8.00	852.31
25	42.885957	-74.642947	842.80	8.00	850.80
26	42.891899	-74.633034	677.47	8.00	685.47
27	42.892622	-74.632219	681.14	8.00	689.14
28	42.893220	-74.631789	702.23	8.00	710.23
29	42.896552	-74.628013	751.24	8.00	759.24
30	42.898282	-74.625974	748.53	8.00	756.53
31	42.898690	-74.625502	739.86	8.00	747.86
32	42.899193	-74.624472	723.32	8.00	731.32
33	42.899791	-74.623292	721.73	8.00	729.73
34	42.900687	-74.620653	670.29	8.00	678.29
35	42.901944	-74.617327	708.48	8.00	716.48
36	42.902258	-74.616898	696.64	8.00	704.64
37	42.902573	-74.615782	680.00	8.00	688.00
38	42.902416	-74.614666	661.71	8.00	669.71
39	42.902573	-74.613507	645.11	8.00	653.11
40	42.903076	-74.611512	613.58	8.00	621.58
41	42.903233	-74.610568	606.12	8.00	614.12
42	42.903013	-74.608422	610.79	8.00	618.79
43	42.902054	-74.601985	555.30	8.00	563.31
44	42.901614	-74.597736	559.42	8.00	567.42
45	42.901692	-74.596449	561.99	8.00	569.99
46	42.901771	-74.595161	579.50	8.00	587.50
47	42.901457	-74.592694	574.52	8.00	582.52
48	42.901441	-74.591320	568.31	8.00	576.31
49	42.901661	-74.589346	546.53	8.00	554.53
50	42.901583	-74.587291	508.35	8.00	516.36
51	42.901583	-74.586326	492.15	8.00	500.15
52	42.901976	-74.583429	466.35	8.00	474.35
53	42.902211	-74.580790	427.76	8.00	435.76
54	42.902400	-74.580125	409.26	8.00	417.26

Name: Route 4  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.866317	-74.693421	852.13	8.00	860.13
2	42.899021	-74.665269	754.87	8.00	762.87
3	42.901221	-74.663252	773.82	8.00	781.82
4	42.903170	-74.662694	792.64	8.00	800.64
5	42.905025	-74.662737	756.69	8.00	764.69
6	42.909206	-74.662780	690.16	8.00	698.16
7	42.914077	-74.646815	663.18	8.00	671.18
8	42.915083	-74.645013	638.30	8.00	646.30
9	42.916277	-74.644626	637.16	8.00	645.16
10	42.917252	-74.643854	605.97	8.00	613.97
11	42.919892	-74.640721	583.78	8.00	591.78
12	42.920913	-74.639219	554.29	8.00	562.29
13	42.921212	-74.637846	535.56	8.00	543.56
14	42.923176	-74.634927	527.99	8.00	535.99
15	42.918682	-74.631087	559.95	8.00	567.95
16	42.916780	-74.630003	641.70	8.00	649.70
17	42.915476	-74.629134	662.37	8.00	670.37
18	42.911013	-74.626430	584.38	8.00	592.38
19	42.908027	-74.625035	604.52	8.00	612.52
20	42.905434	-74.623845	628.39	8.00	636.39
21	42.904907	-74.623861	642.67	8.00	650.67
22	42.904047	-74.624040	649.85	8.00	657.85
23	42.903507	-74.623808	650.19	8.00	658.19
24	42.903187	-74.623404	646.68	8.00	654.68
25	42.902598	-74.622518	649.62	8.00	657.62
26	42.902019	-74.621820	653.54	8.00	661.54
27	42.900765	-74.620551	668.04	8.00	676.04

Name: Route 5  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.875149	-74.609680	689.50	8.00	697.51
2	42.875605	-74.609293	677.19	8.00	685.19
3	42.880283	-74.605764	674.66	8.00	682.66
4	42.881234	-74.605002	668.15	8.00	676.16
5	42.881682	-74.604691	673.17	8.00	681.18
6	42.882209	-74.604519	671.96	8.00	679.96
7	42.882909	-74.604519	673.19	8.00	681.19
8	42.883349	-74.604616	665.22	8.00	673.22
9	42.883891	-74.604809	660.49	8.00	668.49
10	42.884426	-74.604744	660.16	8.00	668.16
11	42.885448	-74.604423	681.12	8.00	689.12
12	42.885927	-74.604058	682.06	8.00	690.06
13	42.888176	-74.601333	736.05	8.00	744.05
14	42.888710	-74.600968	764.74	8.00	772.74
15	42.891446	-74.599391	758.71	8.00	766.71
16	42.891556	-74.599187	760.00	8.00	768.00
17	42.891540	-74.598844	759.61	8.00	767.61
18	42.891053	-74.597084	745.73	8.00	753.73
19	42.890644	-74.595389	737.59	8.00	745.59
20	42.890534	-74.594852	733.53	8.00	741.53
21	42.890573	-74.593468	724.62	8.00	732.62
22	42.890950	-74.592932	712.34	8.00	720.34
23	42.893969	-74.589552	640.59	8.00	648.59
24	42.894385	-74.589155	652.68	8.00	660.68
25	42.894731	-74.589102	659.10	8.00	667.10
26	42.895258	-74.589316	662.06	8.00	670.06
27	42.895665	-74.589642	664.56	8.00	672.56
28	42.895538	-74.590406	690.19	8.00	698.19
29	42.895914	-74.593101	764.83	8.00	772.83
30	42.896036	-74.595598	775.19	8.00	783.19
31	42.896280	-74.600506	744.73	8.00	752.73
32	42.901923	-74.617276	708.93	8.00	716.93

**Name:** Route 6  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.874103	-74.654151	859.14	8.00	867.14
2	42.873529	-74.653185	878.20	8.00	886.20
3	42.872279	-74.651029	896.36	8.00	904.36
4	42.871784	-74.649966	886.15	8.00	894.15
5	42.871634	-74.649001	877.15	8.00	885.15
6	42.870667	-74.641813	843.92	8.00	851.92
7	42.870353	-74.639538	834.02	8.00	842.02
8	42.869338	-74.632328	817.31	8.00	825.31
9	42.869112	-74.630512	794.88	8.00	802.88
10	42.869087	-74.629968	786.44	8.00	794.44
11	42.869126	-74.629056	777.79	8.00	785.79
12	42.868937	-74.627296	767.73	8.00	775.73
13	42.868544	-74.624485	760.77	8.00	768.77
14	42.868497	-74.623455	758.99	8.00	766.99
15	42.868434	-74.622855	761.09	8.00	769.09
16	42.868229	-74.622007	762.92	8.00	770.92
17	42.868088	-74.621396	766.60	8.00	774.60
18	42.868025	-74.620934	767.92	8.00	775.92
19	42.866254	-74.621885	805.64	8.00	813.64
20	42.865050	-74.622464	826.20	8.00	834.20
21	42.864327	-74.622818	831.24	8.00	839.24
22	42.863871	-74.622893	836.49	8.00	844.49
23	42.863352	-74.622979	831.69	8.00	839.69
24	42.862479	-74.623022	834.85	8.00	842.85
25	42.861409	-74.623076	864.80	8.00	872.80
26	42.860772	-74.623086	865.11	8.00	873.11
27	42.860631	-74.623119	863.88	8.00	871.89

**Name:** Route 7  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.912738	-74.651258	639.21	8.00	647.21
2	42.909123	-74.649156	691.17	8.00	699.17
3	42.906451	-74.647611	736.46	8.00	744.46
4	42.905288	-74.646967	778.09	8.00	786.09
5	42.903874	-74.646237	781.67	8.00	789.67
6	42.901925	-74.643877	742.11	8.00	750.11
7	42.896926	-74.638384	699.63	8.00	707.63
8	42.896297	-74.637483	693.93	8.00	701.93
9	42.895794	-74.636195	692.59	8.00	700.59
10	42.895291	-74.634908	692.26	8.00	700.26
11	42.893153	-74.632075	695.32	8.00	703.32

**Name:** Route 8  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.900004	-74.664412	768.92	8.00	776.92
2	42.898762	-74.661258	786.57	8.00	794.57
3	42.898275	-74.659756	781.12	8.00	789.12
4	42.897803	-74.658339	783.20	8.00	791.21
5	42.897442	-74.657696	788.62	8.00	796.62
6	42.896011	-74.655786	789.92	8.00	797.92
7	42.893606	-74.652846	816.58	8.00	824.59
8	42.885824	-74.643062	843.89	8.00	851.89
9	42.879708	-74.635401	756.96	8.00	764.96
10	42.879519	-74.634650	752.83	8.00	760.83
11	42.879519	-74.632826	747.99	8.00	755.99
12	42.877632	-74.628728	721.67	8.00	729.67
13	42.875808	-74.622462	716.09	8.00	724.09
14	42.875211	-74.620145	719.02	8.00	727.03
15	42.875211	-74.619115	710.83	8.00	718.83
16	42.875101	-74.618042	707.74	8.00	715.75
17	42.874629	-74.615961	702.58	8.00	710.58
18	42.874613	-74.614974	688.97	8.00	696.97
19	42.874865	-74.614351	680.47	8.00	688.47
20	42.875399	-74.613493	672.55	8.00	680.55
21	42.875572	-74.612613	680.13	8.00	688.13
22	42.875431	-74.611669	681.59	8.00	689.59
23	42.875179	-74.609673	690.88	8.00	698.88
24	42.874943	-74.608686	682.59	8.00	690.59
25	42.875038	-74.608129	677.31	8.00	685.31

**Name:** Route 9  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.889550	-74.673574	753.29	8.00	761.29
2	42.889047	-74.672845	755.75	8.00	763.75
3	42.888009	-74.671772	756.08	8.00	764.08
4	42.886280	-74.669412	756.63	8.00	764.63
5	42.885400	-74.668210	763.33	8.00	771.33
6	42.884708	-74.667395	770.62	8.00	778.62
7	42.882444	-74.665635	810.37	8.00	818.37
8	42.880683	-74.663575	817.25	8.00	825.25
9	42.878167	-74.660829	848.61	8.00	856.61
10	42.876815	-74.659069	848.95	8.00	856.95
11	42.874928	-74.656322	862.08	8.00	870.08
12	42.873795	-74.654692	874.85	8.00	882.85

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- Several calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **User's Manual** for assumptions and limitations not listed here.

## Site Configuration: Mohawk Residence 2

Project site configuration details and results.

Created **March 28, 2019 6:13 p.m.**

Updated **April 1, 2019 6:10 p.m.**

DNI **varies** and peaks at **1,000.0 W/m<sup>2</sup>**

Analyze every **10** minute(s)

**0.5** ocular transmission coefficient

**0.002 m** pupil diameter

**0.017 m** eye focal length

**9.3 mrad** sun subtended angle

Timezone **UTC-5**

Site Configuration ID: 26642.4661

## Summary of Results

Glare with potential for temporary after-image predicted

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
			deg	deg	min
PV2	SA tracking	SA tracking	0	0	-
PV24	SA tracking	SA tracking	0	0	-
PV25	SA tracking	SA tracking	0	0	-
PV26	SA tracking	SA tracking	0	0	-
PV27	SA tracking	SA tracking	0	0	-
PV28	SA tracking	SA tracking	0	0	-
PV29	SA tracking	SA tracking	0	19	-
PV3	SA tracking	SA tracking	0	0	-
PV30	SA tracking	SA tracking	0	0	-
PV31	SA tracking	SA tracking	0	0	-
PV32	SA tracking	SA tracking	0	0	-
PV33	SA tracking	SA tracking	0	0	-
PV34	SA tracking	SA tracking	0	0	-
PV35	SA tracking	SA tracking	0	0	-
PV36	SA tracking	SA tracking	0	0	-
PV4	SA tracking	SA tracking	0	0	-
PV5	SA tracking	SA tracking	0	0	-
PV6	SA tracking	SA tracking	0	0	-
PV7	SA tracking	SA tracking	0	0	-

## Component Data

### PV Array(s)

**Name:** PV2  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.906720	-74.641335	745.62	5.00	750.62
2	42.906701	-74.639501	740.65	5.00	745.65
3	42.906934	-74.639519	736.95	5.00	741.95
4	42.906968	-74.639290	736.72	5.00	741.72
5	42.907500	-74.639309	725.40	5.00	730.40
6	42.907513	-74.640159	732.61	5.00	737.61
7	42.908002	-74.640241	725.77	5.00	730.77
8	42.908012	-74.640594	729.96	5.00	734.96
9	42.907750	-74.640684	731.33	5.00	736.34
10	42.907522	-74.640722	732.82	5.00	737.82
11	42.907475	-74.641082	734.33	5.00	739.33
12	42.907249	-74.641075	736.01	5.00	741.01
13	42.907240	-74.641365	738.52	5.00	743.52
14	42.906720	-74.641335	745.62	5.00	750.62

**Name:** PV24  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.896319	-74.634646	707.07	5.00	712.07
2	42.895941	-74.634639	702.01	5.00	707.01
3	42.896148	-74.634186	709.68	5.00	714.68
4	42.895959	-74.634188	707.75	5.00	712.75
5	42.896056	-74.633929	709.97	5.00	714.97
6	42.895823	-74.633891	706.40	5.00	711.40
7	42.895914	-74.633779	708.94	5.00	713.94
8	42.895411	-74.633765	703.78	5.00	708.78
9	42.895530	-74.633458	710.17	5.00	715.17
10	42.895267	-74.633458	705.29	5.00	710.29
11	42.895622	-74.632773	715.13	5.00	720.13
12	42.895376	-74.632782	716.40	5.00	721.40
13	42.895439	-74.632628	717.60	5.00	722.60
14	42.895257	-74.632618	717.66	5.00	722.66
15	42.895348	-74.632269	719.57	5.00	724.57
16	42.895148	-74.632340	718.10	5.00	723.10
17	42.895337	-74.631867	719.04	5.00	724.04
18	42.895046	-74.631938	717.79	5.00	722.79
19	42.896306	-74.629485	739.55	5.00	744.55
20	42.897344	-74.629519	773.20	5.00	778.20
21	42.897785	-74.629832	784.22	5.00	789.22
22	42.898448	-74.630734	792.40	5.00	797.40
23	42.899649	-74.630859	801.31	5.00	806.31
24	42.900696	-74.632317	801.72	5.00	806.72
25	42.900075	-74.633677	783.61	5.00	788.61
26	42.899438	-74.633614	772.53	5.00	777.53
27	42.897752	-74.631947	753.57	5.00	758.57
28	42.896319	-74.634646	707.07	5.00	712.07

**Name:** PV25

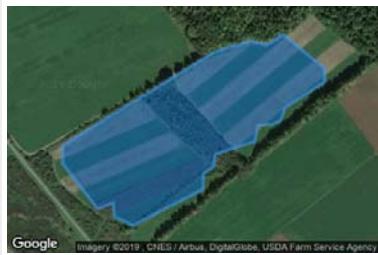
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.896240	-74.635521	704.54	5.00	709.54
2	42.897845	-74.632934	738.83	5.00	743.83
3	42.898366	-74.632866	758.44	5.00	763.44
4	42.899996	-74.634552	776.08	5.00	781.08
5	42.901104	-74.632859	800.17	5.00	805.17
6	42.901619	-74.632815	793.85	5.00	798.85
7	42.902932	-74.635025	796.86	5.00	801.86
8	42.901213	-74.637863	766.43	5.00	771.43
9	42.900416	-74.637865	757.52	5.00	762.52
10	42.899405	-74.636806	758.59	5.00	763.59
11	42.899163	-74.636882	753.22	5.00	758.22
12	42.898911	-74.637386	730.50	5.00	735.50
13	42.898350	-74.637358	720.79	5.00	725.79
14	42.898016	-74.637884	713.58	5.00	718.58
15	42.897514	-74.637881	708.73	5.00	713.73
16	42.896996	-74.637410	704.69	5.00	709.69
17	42.896277	-74.635931	701.87	5.00	706.87
18	42.896240	-74.635521	704.54	5.00	709.54

**Name:** PV26

**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.901868	-74.642436	746.72	5.00	751.72
2	42.901523	-74.642447	737.40	5.00	742.40
3	42.900654	-74.641538	728.27	5.00	733.27
4	42.900774	-74.641130	734.33	5.00	739.33
5	42.900509	-74.641108	729.55	5.00	734.55
6	42.900336	-74.640625	729.32	5.00	734.32
7	42.901032	-74.638807	757.32	5.00	762.32
8	42.901335	-74.638790	759.18	5.00	764.18
9	42.901457	-74.638527	762.41	5.00	767.41
10	42.901700	-74.638484	766.46	5.00	771.46
11	42.901942	-74.637465	776.38	5.00	781.38
12	42.902256	-74.637369	778.06	5.00	783.06
13	42.902265	-74.637020	779.62	5.00	784.62
14	42.902347	-74.636784	780.69	5.00	785.69
15	42.902586	-74.636675	783.20	5.00	788.20
16	42.903082	-74.635645	793.91	5.00	798.91
17	42.903338	-74.635657	794.95	5.00	799.95
18	42.903988	-74.636729	795.27	5.00	800.27
19	42.903779	-74.637160	789.33	5.00	794.33
20	42.903857	-74.637577	786.84	5.00	791.84
21	42.903658	-74.638489	780.08	5.00	785.08
22	42.901868	-74.642436	746.72	5.00	751.72

**Name:** PV27  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.898204	-74.643478	746.44	5.00	751.44
2	42.897910	-74.643512	750.95	5.00	755.95
3	42.897491	-74.641728	731.49	5.00	736.49
4	42.898030	-74.640971	713.25	5.00	718.25
5	42.898405	-74.641072	710.84	5.00	715.84
6	42.899186	-74.641837	712.42	5.00	717.42
7	42.898204	-74.643478	746.44	5.00	751.44



**Name:** PV28  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.896068	-74.646976	788.26	5.00	793.26
2	42.895517	-74.646986	798.29	5.00	803.29
3	42.895432	-74.646661	796.61	5.00	801.61
4	42.895168	-74.646685	799.38	5.00	804.38
5	42.894796	-74.645060	798.50	5.00	803.50
6	42.894538	-74.645063	799.24	5.00	804.24
7	42.894201	-74.643603	805.44	5.00	810.44
8	42.894458	-74.643591	801.23	5.00	806.23
9	42.894388	-74.643228	799.03	5.00	804.03
10	42.895017	-74.642312	763.13	5.00	768.13
11	42.895297	-74.642341	755.88	5.00	760.88
12	42.895607	-74.643539	774.78	5.00	779.78
13	42.895831	-74.643563	771.67	5.00	776.68
14	42.895953	-74.644000	772.69	5.00	777.69
15	42.896395	-74.644019	769.27	5.00	774.27
16	42.896523	-74.643789	776.61	5.00	781.61
17	42.896199	-74.642271	772.99	5.00	777.99
18	42.895974	-74.642241	764.49	5.00	769.49
19	42.895717	-74.641260	760.39	5.00	765.39
20	42.895955	-74.641231	763.38	5.00	768.38
21	42.895879	-74.640803	756.53	5.00	761.53
22	42.896176	-74.640780	751.05	5.00	756.05
23	42.897240	-74.645135	794.10	5.00	799.10
24	42.896068	-74.646976	788.26	5.00	793.26



**Name:** PV29  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.895994	-74.647641	797.63	5.00	802.63
2	42.896011	-74.647631	796.91	5.00	801.91
3	42.896948	-74.646173	785.96	5.00	790.96
4	42.897397	-74.646141	791.03	5.00	796.03
5	42.897749	-74.647442	794.20	5.00	799.20
6	42.897663	-74.647633	793.53	5.00	798.53
7	42.896832	-74.647656	793.81	5.00	798.81
8	42.896701	-74.648016	796.78	5.00	801.78
9	42.896099	-74.648004	802.25	5.00	807.25
10	42.895994	-74.647641	797.63	5.00	802.63

**Name:** PV3  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.910841	-74.639314	713.46	5.00	718.46
2	42.910551	-74.639363	710.75	5.00	715.75
3	42.910529	-74.639282	711.32	5.00	716.32
4	42.910290	-74.639243	707.67	5.00	712.67
5	42.909853	-74.637354	718.09	5.00	723.09
6	42.910404	-74.637370	721.37	5.00	726.37
7	42.910841	-74.639314	713.46	5.00	718.46

**Name:** PV30  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.894943	-74.652282	809.99	5.00	814.99
2	42.894093	-74.652348	810.02	5.00	815.02
3	42.895537	-74.649807	818.47	5.00	823.48
4	42.895272	-74.649023	799.51	5.00	804.51
5	42.895466	-74.648784	802.29	5.00	807.29
6	42.895981	-74.648772	811.85	5.00	816.85
7	42.896369	-74.649810	826.47	5.00	831.47
8	42.894943	-74.652282	809.99	5.00	814.99



**Name:** PV31  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.895018	-74.653285	806.89	5.00	811.89
2	42.895623	-74.652362	811.40	5.00	816.40
3	42.895888	-74.652307	813.51	5.00	818.51
4	42.896030	-74.652125	813.85	5.00	818.85
5	42.896495	-74.652122	814.19	5.00	819.19
6	42.896216	-74.651670	816.29	5.00	821.29
7	42.896551	-74.651274	820.92	5.00	825.92
8	42.896819	-74.651216	821.32	5.00	826.32
9	42.897331	-74.652154	824.24	5.00	829.24
10	42.896134	-74.654040	800.96	5.00	805.96
11	42.895597	-74.654037	801.13	5.00	806.13
12	42.895069	-74.653536	806.33	5.00	811.33
13	42.895018	-74.653285	806.89	5.00	811.89



**Name:** PV32  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.896314	-74.654530	797.41	5.00	802.41
2	42.898517	-74.651214	798.08	5.00	803.08
3	42.898747	-74.651158	795.05	5.00	800.05
4	42.899485	-74.653942	817.69	5.00	822.69
5	42.899097	-74.654520	826.80	5.00	831.80
6	42.898521	-74.654541	825.21	5.00	830.21
7	42.898299	-74.654937	820.94	5.00	825.94
8	42.897236	-74.654873	802.16	5.00	807.16
9	42.897058	-74.654698	799.23	5.00	804.23
10	42.896428	-74.654703	795.35	5.00	800.35
11	42.896314	-74.654530	797.41	5.00	802.41

**Name:** PV33  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.899273	-74.658409	809.96	5.00	814.96
2	42.898733	-74.658444	804.38	5.00	809.38
3	42.898176	-74.657743	800.72	5.00	805.72
4	42.898194	-74.657505	800.45	5.00	805.45
5	42.898503	-74.656545	812.78	5.00	817.78
6	42.898250	-74.655392	818.77	5.00	823.77
7	42.898434	-74.655134	820.49	5.00	825.49
8	42.898988	-74.654889	828.65	5.00	833.65
9	42.899216	-74.654799	826.21	5.00	831.21
10	42.899755	-74.654776	822.86	5.00	827.87
11	42.900283	-74.656858	813.18	5.00	818.18
12	42.899978	-74.657739	814.08	5.00	819.08
13	42.899073	-74.657804	809.25	5.00	814.25
14	42.899421	-74.658189	809.70	5.00	814.70
15	42.899273	-74.658409	809.96	5.00	814.96

**Name:** PV34**Axis tracking:** Single-axis rotation**Tracking axis orientation:** 180.0 deg**Tracking axis tilt:** 0.0 deg**Tracking axis panel offset:** 0.0 deg**Maximum tracking angle:** 62.0 deg**Resting angle:** 5.0 deg**Rated power:** -**Panel material:** Light textured glass without AR coating**Vary reflectivity with sun position?** Yes**Correlate slope error with surface type?** Yes**Slope error:** 9.7 mrad

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Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.900968	-74.654625	825.04	5.00	830.04
2	42.900710	-74.654625	816.45	5.00	821.45
3	42.899607	-74.650114	790.67	5.00	795.67
4	42.899962	-74.649486	784.73	5.00	789.73
5	42.900720	-74.649458	779.18	5.00	784.18
6	42.901156	-74.649978	782.26	5.00	787.26
7	42.901274	-74.650324	784.50	5.00	789.50
8	42.901521	-74.650388	783.52	5.00	788.52
9	42.901621	-74.650786	787.65	5.00	792.65
10	42.901868	-74.650828	787.33	5.00	792.33
11	42.901974	-74.651240	791.26	5.00	796.26
12	42.901691	-74.652191	809.47	5.00	814.47
13	42.901280	-74.652611	826.25	5.00	831.25
14	42.901061	-74.652782	825.08	5.00	830.08
15	42.901273	-74.653534	842.76	5.00	847.76
16	42.900968	-74.654625	825.04	5.00	830.04

**Name:** PV35**Axis tracking:** Single-axis rotation**Tracking axis orientation:** 180.0 deg**Tracking axis tilt:** 0.0 deg**Tracking axis panel offset:** 0.0 deg**Maximum tracking angle:** 62.0 deg**Resting angle:** 5.0 deg**Rated power:** -**Panel material:** Light textured glass without AR coating**Vary reflectivity with sun position?** Yes**Correlate slope error with surface type?** Yes**Slope error:** 9.7 mrad

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Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.902814	-74.650349	783.80	5.00	788.80
2	42.903874	-74.646936	783.10	5.00	788.10
3	42.905651	-74.647978	767.38	5.00	772.38
4	42.905859	-74.650693	764.48	5.00	769.48
5	42.905571	-74.651708	771.42	5.00	776.42
6	42.905038	-74.651711	775.49	5.00	780.49
7	42.902814	-74.650349	783.80	5.00	788.80

**Name:** PV36

**Axis tracking:** Single-axis rotation

**Tracking axis orientation:** 180.0 deg

**Tracking axis tilt:** 0.0 deg

**Tracking axis panel offset:** 0.0 deg

**Maximum tracking angle:** 62.0 deg

**Resting angle:** 5.0 deg

**Rated power:** -

**Panel material:** Light textured glass without AR coating

**Vary reflectivity with sun position?** Yes

**Correlate slope error with surface type?** Yes

**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.902102	-74.650017	779.29	5.00	784.29
2	42.902128	-74.649885	778.81	5.00	783.81
3	42.901867	-74.649906	777.92	5.00	782.92
4	42.901885	-74.649669	776.39	5.00	781.39
5	42.901683	-74.649603	776.98	5.00	781.98
6	42.901822	-74.649135	772.48	5.00	777.48
7	42.901336	-74.649063	775.32	5.00	780.32
8	42.901384	-74.648905	770.46	5.00	775.46
9	42.901148	-74.648852	770.35	5.00	775.35
10	42.901628	-74.647323	757.00	5.00	762.00
11	42.902185	-74.647332	753.83	5.00	758.83
12	42.902180	-74.647451	754.34	5.00	759.34
13	42.902594	-74.647435	769.59	5.00	774.59
14	42.902945	-74.646364	766.54	5.00	771.54
15	42.902053	-74.645242	741.50	5.00	746.50
16	42.902282	-74.645083	746.59	5.00	751.59
17	42.903453	-74.646497	781.32	5.00	786.32
18	42.902361	-74.650002	779.51	5.00	784.51
19	42.902102	-74.650017	779.29	5.00	784.29

**Name:** PV4

**Axis tracking:** Single-axis rotation

**Tracking axis orientation:** 180.0 deg

**Tracking axis tilt:** 0.0 deg

**Tracking axis panel offset:** 0.0 deg

**Maximum tracking angle:** 62.0 deg

**Resting angle:** 5.0 deg

**Rated power:** -

**Panel material:** Light textured glass without AR coating

**Vary reflectivity with sun position?** Yes

**Correlate slope error with surface type?** Yes

**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.913031	-74.645891	681.39	5.00	686.39
2	42.908941	-74.643447	727.65	5.00	732.65
3	42.909784	-74.641934	712.20	5.00	717.20
4	42.908599	-74.640026	717.46	5.00	722.46
5	42.908739	-74.639733	714.32	5.00	719.32
6	42.909275	-74.639726	707.07	5.00	712.07
7	42.910639	-74.641930	703.05	5.00	708.05
8	42.911053	-74.642038	703.68	5.00	708.68
9	42.911254	-74.642392	703.83	5.00	708.83
10	42.914304	-74.644971	654.94	5.00	659.94
11	42.913744	-74.646001	677.77	5.00	682.77
12	42.913031	-74.645891	681.39	5.00	686.39

**Name:** PV5  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.913812	-74.643542	661.91	5.00	666.91
2	42.913775	-74.643341	661.93	5.00	666.93
3	42.913518	-74.643275	668.49	5.00	673.49
4	42.913479	-74.642881	667.38	5.00	672.38
5	42.912958	-74.642854	680.43	5.00	685.43
6	42.912907	-74.642459	677.60	5.00	682.60
7	42.912656	-74.642378	683.16	5.00	688.16
8	42.912415	-74.640366	673.13	5.00	678.13
9	42.912626	-74.640342	669.89	5.00	674.89
10	42.912627	-74.639990	664.33	5.00	669.33
11	42.913085	-74.639983	664.09	5.00	669.09
12	42.913055	-74.639413	657.83	5.00	662.83
13	42.914381	-74.639438	667.20	5.00	672.20
14	42.914666	-74.639561	670.21	5.00	675.21
15	42.914735	-74.640220	676.54	5.00	681.54
16	42.914998	-74.640254	672.75	5.00	677.75
17	42.915084	-74.640666	674.93	5.00	679.93
18	42.915342	-74.640683	669.78	5.00	674.78
19	42.915411	-74.641327	674.23	5.00	679.23
20	42.915176	-74.641358	673.03	5.00	678.03
21	42.915179	-74.641767	670.37	5.00	675.37
22	42.914968	-74.641775	669.19	5.00	674.19
23	42.915038	-74.642394	665.41	5.00	670.41
24	42.914867	-74.642444	664.99	5.00	669.99
25	42.914845	-74.642964	662.39	5.00	667.39
26	42.914375	-74.642970	659.35	5.00	664.35
27	42.914376	-74.643507	655.37	5.00	660.37
28	42.913812	-74.643542	661.91	5.00	666.91

**Name:** PV6  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.915170	-74.638649	610.95	5.00	615.95
2	42.914718	-74.638568	611.31	5.00	616.31
3	42.914898	-74.637813	606.25	5.00	611.25
4	42.915841	-74.637898	614.79	5.00	619.79
5	42.916111	-74.638049	616.65	5.00	621.65
6	42.916002	-74.638791	615.60	5.00	620.60
7	42.915222	-74.638794	612.14	5.00	617.14
8	42.915170	-74.638649	610.95	5.00	615.95

**Name:** PV7

**Axis tracking:** Single-axis rotation

**Tracking axis orientation:** 180.0 deg

**Tracking axis tilt:** 0.0 deg

**Tracking axis panel offset:** 0.0 deg

**Maximum tracking angle:** 62.0 deg

**Resting angle:** 5.0 deg

**Rated power:** -

**Panel material:** Light textured glass without AR coating

**Vary reflectivity with sun position?** Yes

**Correlate slope error with surface type?** Yes

**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.912350	-74.637315	631.20	5.00	636.20
2	42.912315	-74.636815	625.18	5.00	630.18
3	42.912553	-74.636821	619.42	5.00	624.42
4	42.912556	-74.636527	615.92	5.00	620.92
5	42.912316	-74.636523	622.05	5.00	627.05
6	42.912340	-74.636009	614.68	5.00	619.68
7	42.912577	-74.635907	609.34	5.00	614.34
8	42.913138	-74.636041	605.87	5.00	610.87
9	42.913186	-74.636236	606.20	5.00	611.20
10	42.913623	-74.636248	604.56	5.00	609.56
11	42.913871	-74.636505	607.42	5.00	612.42
12	42.913856	-74.637411	609.11	5.00	614.11
13	42.912350	-74.637315	631.20	5.00	636.20

## Discrete Observation Receptors

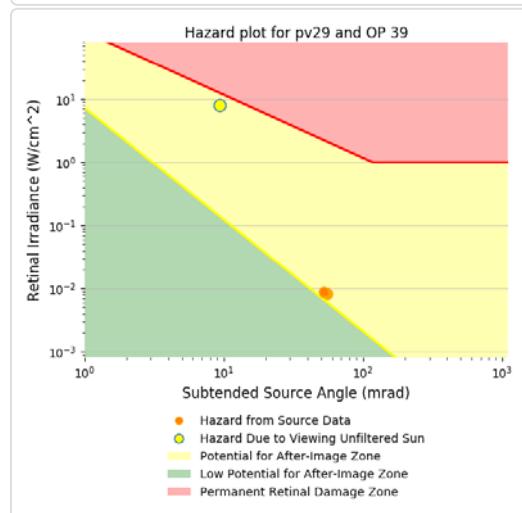
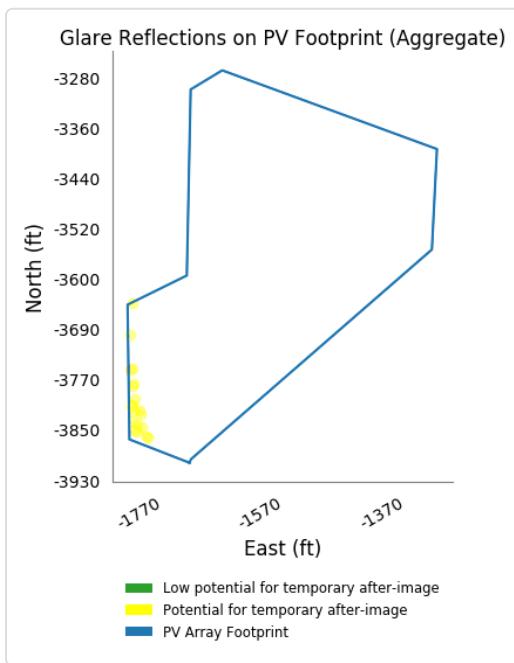
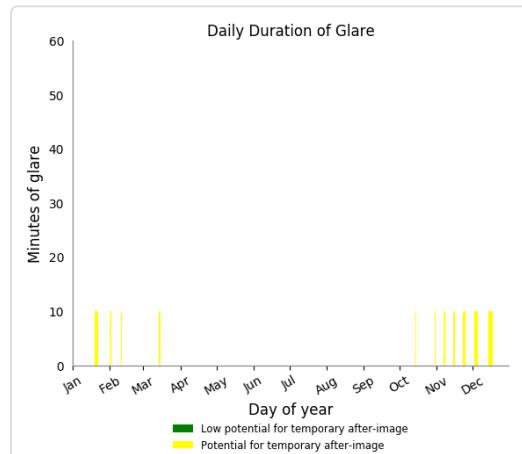
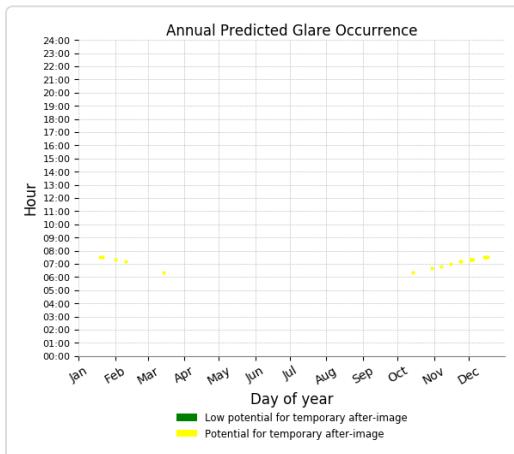
Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	42.867315	-74.628656	818.40	15.00	833.40
OP 2	42.868261	-74.631198	822.76	15.00	837.76
OP 3	42.869766	-74.633275	810.91	15.00	825.91
OP 4	42.870671	-74.643151	849.81	15.00	864.81
OP 5	42.869056	-74.645959	882.05	15.00	897.05
OP 6	42.870491	-74.648217	898.94	15.00	913.95
OP 7	42.872147	-74.657933	934.13	15.00	949.13
OP 8	42.871780	-74.657142	940.35	15.00	955.36
OP 9	42.871103	-74.658429	945.86	15.00	960.86
OP 10	42.868244	-74.658304	948.65	15.00	963.65
OP 11	42.866930	-74.657220	943.18	15.00	958.18
OP 12	42.873811	-74.616368	736.23	15.00	751.23
OP 13	42.868417	-74.621123	779.16	15.00	794.16
OP 14	42.877015	-74.659925	848.79	15.00	863.79
OP 15	42.878856	-74.662789	839.54	15.00	854.54
OP 16	42.885035	-74.676631	810.74	15.00	825.75
OP 17	42.884599	-74.677340	810.92	15.00	825.92
OP 18	42.887103	-74.674815	769.06	15.00	784.06
OP 19	42.878822	-74.628937	732.91	15.00	747.91
OP 20	42.879195	-74.631312	740.98	15.00	755.98
OP 21	42.878643	-74.634496	742.57	15.00	757.57
OP 22	42.880826	-74.637250	784.96	15.00	799.96
OP 23	42.883950	-74.635233	839.10	15.00	854.10
OP 24	42.881496	-74.648427	838.31	15.00	853.31
OP 25	42.884981	-74.644191	847.96	15.00	862.96
OP 26	42.887949	-74.640252	783.41	15.00	798.41
OP 27	42.888884	-74.637678	761.65	15.00	776.65
OP 28	42.891845	-74.651174	832.89	15.00	847.90
OP 29	42.891316	-74.656584	837.43	15.00	852.43
OP 30	42.893473	-74.657217	832.50	15.00	847.51
OP 31	42.892513	-74.652955	835.95	15.00	850.95
OP 32	42.897955	-74.660319	786.22	15.00	801.22
OP 33	42.897388	-74.658876	791.93	15.00	806.93
OP 34	42.897479	-74.657330	788.76	15.00	803.76
OP 35	42.897203	-74.656852	793.69	15.00	808.69
OP 36	42.896884	-74.657323	788.67	15.00	803.67
OP 37	42.896557	-74.656928	787.35	15.00	802.35
OP 38	42.896191	-74.655650	791.00	15.00	806.00
OP 39	42.896780	-74.649311	826.69	15.00	841.69
OP 40	42.898498	-74.639751	711.25	15.00	726.25
OP 41	42.901890	-74.644212	740.20	15.00	755.20
OP 42	42.904727	-74.645452	783.09	15.00	798.09
OP 43	42.909459	-74.649018	691.28	15.00	706.28
OP 44	42.909577	-74.649736	688.56	15.00	703.56
OP 45	42.909990	-74.649342	686.05	15.00	701.05
OP 46	42.910344	-74.650215	681.96	15.00	696.96
OP 47	42.911270	-74.650092	658.96	15.00	673.96
OP 48	42.912386	-74.651256	635.01	15.00	650.01
OP 49	42.912745	-74.650045	652.62	15.00	667.62
OP 50	42.912908	-74.649151	649.35	15.00	664.35
OP 51	42.912102	-74.648128	677.01	15.00	692.02
OP 52	42.913754	-74.646964	674.24	15.00	689.24
OP 53	42.893577	-74.632783	698.97	15.00	713.98
OP 54	42.893326	-74.631835	704.52	15.00	719.52
OP 55	42.893617	-74.632295	703.81	15.00	718.81
OP 56	42.896605	-74.627639	755.29	15.00	770.29
OP 57	42.896431	-74.628414	752.51	15.00	767.51

OP 58	42.897499	-74.626162	752.33	15.00	767.33
OP 59	42.898672	-74.625942	747.03	15.00	762.03
OP 60	42.899677	-74.622919	725.98	15.00	740.98
OP 61	42.900574	-74.623736	720.45	15.00	735.45
OP 62	42.902080	-74.617960	715.00	15.00	730.00
OP 63	42.876055	-74.612104	705.33	15.00	720.33
OP 64	42.875145	-74.608494	684.69	15.00	699.69
OP 65	42.875302	-74.609331	697.67	15.00	712.67
OP 66	42.875954	-74.608787	671.03	15.00	686.03
OP 67	42.876520	-74.608349	669.99	15.00	684.99
OP 68	42.876828	-74.608178	672.10	15.00	687.10
OP 69	42.877289	-74.607612	677.12	15.00	692.12
OP 70	42.878436	-74.606898	678.03	15.00	693.03
OP 71	42.878964	-74.606463	675.96	15.00	690.96
OP 72	42.885707	-74.606097	691.77	15.00	706.77
OP 73	42.886131	-74.603360	697.11	15.00	712.11
OP 74	42.891266	-74.598480	763.04	15.00	778.04
OP 75	42.884709	-74.594454	715.58	15.00	730.58
OP 76	42.895724	-74.594124	783.36	15.00	798.36
OP 77	42.895771	-74.598643	758.41	15.00	773.41
OP 78	42.896456	-74.601916	736.31	15.00	751.31
OP 79	42.896635	-74.602515	734.86	15.00	749.86
OP 80	42.897504	-74.604809	735.01	15.00	750.01
OP 81	42.899398	-74.608981	739.47	15.00	754.47
OP 82	42.899977	-74.611915	733.92	15.00	748.92
OP 83	42.871356	-74.648601	883.62	15.00	898.62
OP 84	42.892188	-74.640237	750.48	15.00	765.48
OP 85	42.891185	-74.639108	749.18	15.00	764.18
OP 86	42.916702	-74.644609	630.83	15.00	645.83
OP 87	42.915901	-74.645267	639.47	15.00	654.47
OP 88	42.919001	-74.640020	611.58	15.00	626.58
OP 89	42.916865	-74.637032	618.67	15.00	633.67
OP 90	42.899907	-74.610248	733.66	15.00	748.66
OP 91	42.899127	-74.608389	738.22	15.00	753.22
OP 92	42.861250	-74.649534	893.39	15.00	908.39
OP 93	42.873211	-74.616892	733.74	15.00	748.74
OP 94	42.864003	-74.657748	923.54	15.00	938.54
OP 95	42.913179	-74.649991	644.94	15.00	659.94
OP 96	42.912773	-74.651172	636.84	15.00	651.84
OP 97	42.902029	-74.618499	706.14	15.00	721.14
OP 98	42.901320	-74.614630	721.40	15.00	736.40

## PV29 - OP Receptor (OP 39)

PV array is expected to produce the following glare for receptors at this location:

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



## Site Configuration: Mohawk Roads 2

Project site configuration details and results.

Created **March 28, 2019 11:38 p.m.**

Updated **April 2, 2019 12:54 p.m.**

DNI **varies** and peaks at **1,000.0 W/m<sup>2</sup>**

Analyze every **15** minute(s)

**0.5** ocular transmission coefficient

**0.002 m** pupil diameter

**0.017 m** eye focal length

**9.3 mrad** sun subtended angle

Timezone **UTC-5**

Site Configuration ID: 26664.4661

## Summary of Results

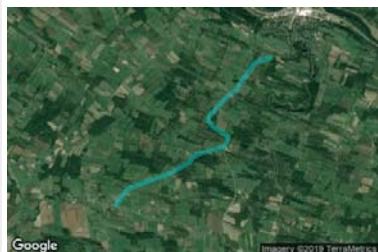
No glare predicted!

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
			deg	deg	min
PV2	SA tracking	SA tracking	0	0	-
PV24	SA tracking	SA tracking	0	0	-
PV25	SA tracking	SA tracking	0	0	-
PV26	SA tracking	SA tracking	0	0	-
PV27	SA tracking	SA tracking	0	0	-
PV28	SA tracking	SA tracking	0	0	-
PV29	SA tracking	SA tracking	0	0	-
PV3	SA tracking	SA tracking	0	0	-
PV30	SA tracking	SA tracking	0	0	-
PV31	SA tracking	SA tracking	0	0	-
PV32	SA tracking	SA tracking	0	0	-
PV33	SA tracking	SA tracking	0	0	-
PV34	SA tracking	SA tracking	0	0	-
PV35	SA tracking	SA tracking	0	0	-
PV36	SA tracking	SA tracking	0	0	-
PV4	SA tracking	SA tracking	0	0	-
PV5	SA tracking	SA tracking	0	0	-
PV6	SA tracking	SA tracking	0	0	-
PV7	SA tracking	SA tracking	0	0	-

## Component Data

### PV Array(s)

**Name:** Route 1  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.848100	-74.646547	711.15	8.00	719.15
2	42.853009	-74.641805	763.03	8.00	771.03
3	42.855588	-74.632213	788.92	8.00	796.92
4	42.857869	-74.623909	821.15	8.00	829.15
5	42.858231	-74.622922	827.57	8.00	835.57
6	42.858679	-74.621828	841.51	8.00	849.51
7	42.859293	-74.620487	847.78	8.00	855.78
8	42.859859	-74.618963	836.92	8.00	844.92
9	42.860645	-74.616753	810.05	8.00	818.05
10	42.861023	-74.615862	795.50	8.00	803.50
11	42.861322	-74.615573	796.68	8.00	804.68
12	42.861864	-74.615272	785.74	8.00	793.74
13	42.862580	-74.614672	775.02	8.00	783.02
14	42.862957	-74.614210	767.48	8.00	775.49
15	42.863233	-74.613663	758.78	8.00	766.78
16	42.863468	-74.612998	745.90	8.00	753.90
17	42.863610	-74.612386	742.02	8.00	750.02
18	42.863783	-74.611496	730.88	8.00	738.89
19	42.864208	-74.609511	717.60	8.00	725.60
20	42.865946	-74.601690	664.23	8.00	672.23
21	42.866049	-74.601580	664.94	8.00	672.94
22	42.866828	-74.600765	679.18	8.00	687.18
23	42.867331	-74.600390	668.60	8.00	676.60
24	42.867740	-74.600127	659.85	8.00	667.85
25	42.868039	-74.600052	661.76	8.00	669.76
26	42.868381	-74.600036	667.39	8.00	675.39
27	42.868766	-74.600186	676.35	8.00	684.35
28	42.869167	-74.600433	681.92	8.00	689.92
29	42.869462	-74.600717	678.00	8.00	686.00
30	42.869777	-74.601189	683.58	8.00	691.58
31	42.870091	-74.602004	675.97	8.00	683.98
32	42.870457	-74.602750	666.63	8.00	674.63
33	42.870960	-74.603678	674.48	8.00	682.48
34	42.871212	-74.604281	662.38	8.00	670.38
35	42.871394	-74.604858	703.28	8.00	711.28
36	42.871727	-74.605577	701.81	8.00	709.81
37	42.872118	-74.606433	678.11	8.00	686.11
38	42.872320	-74.606720	663.75	8.00	671.75
39	42.872737	-74.607192	654.90	8.00	662.90
40	42.873456	-74.607760	657.79	8.00	665.79
41	42.873830	-74.608002	665.94	8.00	673.94
42	42.874140	-74.608117	669.51	8.00	677.51
43	42.874439	-74.608144	670.73	8.00	678.73
44	42.874769	-74.608082	673.41	8.00	681.41
45	42.875056	-74.607959	672.05	8.00	680.05
46	42.875404	-74.607685	673.13	8.00	681.13
47	42.875947	-74.606980	669.11	8.00	677.11
48	42.877164	-74.605381	675.37	8.00	683.37
49	42.879132	-74.602822	667.17	8.00	675.17
50	42.881613	-74.599582	668.48	8.00	676.48
51	42.882063	-74.598962	667.55	8.00	675.55
52	42.882281	-74.598549	661.58	8.00	669.58
53	42.882456	-74.598066	655.04	8.00	663.04
54	42.882598	-74.597540	657.68	8.00	665.68
55	42.882733	-74.597090	665.91	8.00	673.91
56	42.882867	-74.596806	668.80	8.00	676.81
57	42.883063	-74.596500	673.10	8.00	681.10

58	42.883315	-74.596210	676.77	8.00	684.77
59	42.883510	-74.596052	682.42	8.00	690.42
60	42.884221	-74.595531	698.57	8.00	706.57
61	42.884929	-74.594973	715.24	8.00	723.24
62	42.885840	-74.594324	700.57	8.00	708.57
63	42.886025	-74.594174	700.88	8.00	708.88
64	42.886332	-74.593906	699.15	8.00	707.15
65	42.886764	-74.593466	700.55	8.00	708.55
66	42.887456	-74.592726	702.76	8.00	710.76
67	42.888034	-74.592120	693.84	8.00	701.84
68	42.888556	-74.591529	691.32	8.00	699.32
69	42.889126	-74.590880	677.65	8.00	685.65
70	42.889464	-74.590537	681.47	8.00	689.47
71	42.889869	-74.590172	672.98	8.00	680.98
72	42.890176	-74.589952	666.78	8.00	674.78
73	42.890541	-74.589716	661.63	8.00	669.64
74	42.890824	-74.589459	659.92	8.00	667.92
75	42.891064	-74.589110	656.22	8.00	664.22
76	42.891378	-74.588397	641.81	8.00	649.81
77	42.891689	-74.587796	636.48	8.00	644.48
78	42.891933	-74.587275	641.73	8.00	649.73
79	42.892078	-74.586691	637.01	8.00	645.01
80	42.892212	-74.585832	629.98	8.00	637.98
81	42.892628	-74.583402	600.64	8.00	608.64
82	42.892846	-74.582117	594.43	8.00	602.43

Name: Route 2

Route type Two-way

View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
			deg	deg	ft
1	42.849242	-74.658606	724.06	8.00	732.06
2	42.852986	-74.657748	839.22	8.00	847.22
3	42.854968	-74.657297	877.63	8.00	885.63
4	42.855833	-74.657211	878.11	8.00	886.11
5	42.858350	-74.657254	870.13	8.00	878.13
6	42.865161	-74.657619	906.30	8.00	914.30
7	42.869501	-74.657984	948.30	8.00	956.31
8	42.870822	-74.658134	949.14	8.00	957.14
9	42.871561	-74.658070	935.84	8.00	943.84
10	42.871843	-74.657910	935.11	8.00	943.11

**Name:** Route 3  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.856659	-74.688802	745.91	8.00	753.91
2	42.857917	-74.686099	797.44	8.00	805.44
3	42.858295	-74.684361	829.69	8.00	837.69
4	42.859176	-74.681271	885.50	8.00	893.50
5	42.861063	-74.677580	920.19	8.00	928.19
6	42.861740	-74.676293	924.73	8.00	932.73
7	42.863281	-74.674469	941.36	8.00	949.36
8	42.864460	-74.672859	974.92	8.00	982.92
9	42.864995	-74.671701	983.12	8.00	991.12
10	42.865640	-74.669898	1001.80	8.00	1009.81
11	42.866143	-74.668546	986.54	8.00	994.54
12	42.870673	-74.659405	937.41	8.00	945.41
13	42.872104	-74.657582	932.84	8.00	940.84
14	42.874290	-74.653805	852.53	8.00	860.53
15	42.875689	-74.651445	829.62	8.00	837.62
16	42.877026	-74.650028	827.75	8.00	835.75
17	42.877686	-74.649599	807.75	8.00	815.75
18	42.879589	-74.649106	796.16	8.00	804.16
19	42.880532	-74.648762	808.06	8.00	816.06
20	42.881428	-74.647969	828.66	8.00	836.66
21	42.882325	-74.646724	817.95	8.00	825.95
22	42.883378	-74.645458	828.69	8.00	836.69
23	42.884887	-74.643913	847.04	8.00	855.04
24	42.885548	-74.643312	844.31	8.00	852.31
25	42.885957	-74.642947	842.80	8.00	850.80
26	42.891899	-74.633034	677.47	8.00	685.47
27	42.892622	-74.632219	681.14	8.00	689.14
28	42.893220	-74.631789	702.23	8.00	710.23
29	42.896552	-74.628013	751.24	8.00	759.24
30	42.898282	-74.625974	748.53	8.00	756.53
31	42.898690	-74.625502	739.86	8.00	747.86
32	42.899193	-74.624472	723.32	8.00	731.32
33	42.899791	-74.623292	721.73	8.00	729.73
34	42.900687	-74.620653	670.29	8.00	678.29
35	42.901944	-74.617327	708.48	8.00	716.48
36	42.902258	-74.616898	696.64	8.00	704.64
37	42.902573	-74.615782	680.00	8.00	688.00
38	42.902416	-74.614666	661.71	8.00	669.71
39	42.902573	-74.613507	645.11	8.00	653.11
40	42.903076	-74.611512	613.58	8.00	621.58
41	42.903233	-74.610568	606.12	8.00	614.12
42	42.903013	-74.608422	610.79	8.00	618.79
43	42.902054	-74.601985	555.30	8.00	563.31
44	42.901614	-74.597736	559.42	8.00	567.42
45	42.901692	-74.596449	561.99	8.00	569.99
46	42.901771	-74.595161	579.50	8.00	587.50
47	42.901457	-74.592694	574.52	8.00	582.52
48	42.901441	-74.591320	568.31	8.00	576.31
49	42.901661	-74.589346	546.53	8.00	554.53
50	42.901583	-74.587291	508.35	8.00	516.36
51	42.901583	-74.586326	492.15	8.00	500.15
52	42.901976	-74.583429	466.35	8.00	474.35
53	42.902211	-74.580790	427.76	8.00	435.76
54	42.902400	-74.580125	409.26	8.00	417.26

Name: Route 4  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.866317	-74.693421	852.13	8.00	860.13
2	42.899021	-74.665269	754.87	8.00	762.87
3	42.901221	-74.663252	773.82	8.00	781.82
4	42.903170	-74.662694	792.64	8.00	800.64
5	42.905025	-74.662737	756.69	8.00	764.69
6	42.909206	-74.662780	690.16	8.00	698.16
7	42.914077	-74.646815	663.18	8.00	671.18
8	42.915083	-74.645013	638.30	8.00	646.30
9	42.916277	-74.644626	637.16	8.00	645.16
10	42.917252	-74.643854	605.97	8.00	613.97
11	42.919892	-74.640721	583.78	8.00	591.78
12	42.920913	-74.639219	554.29	8.00	562.29
13	42.921212	-74.637846	535.56	8.00	543.56
14	42.923176	-74.634927	527.99	8.00	535.99
15	42.918682	-74.631087	559.95	8.00	567.95
16	42.916780	-74.630003	641.70	8.00	649.70
17	42.915476	-74.629134	662.37	8.00	670.37
18	42.911013	-74.626430	584.38	8.00	592.38
19	42.908027	-74.625035	604.52	8.00	612.52
20	42.905434	-74.623845	628.39	8.00	636.39
21	42.904907	-74.623861	642.67	8.00	650.67
22	42.904047	-74.624040	649.85	8.00	657.85
23	42.903507	-74.623808	650.19	8.00	658.19
24	42.903187	-74.623404	646.68	8.00	654.68
25	42.902598	-74.622518	649.62	8.00	657.62
26	42.902019	-74.621820	653.54	8.00	661.54
27	42.900765	-74.620551	668.04	8.00	676.04

**Name:** Route 5  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.875149	-74.609680	689.50	8.00	697.51
2	42.875605	-74.609293	677.19	8.00	685.19
3	42.880283	-74.605764	674.66	8.00	682.66
4	42.881234	-74.605002	668.15	8.00	676.16
5	42.881682	-74.604691	673.17	8.00	681.18
6	42.882209	-74.604519	671.96	8.00	679.96
7	42.882909	-74.604519	673.19	8.00	681.19
8	42.883349	-74.604616	665.22	8.00	673.22
9	42.883891	-74.604809	660.49	8.00	668.49
10	42.884426	-74.604744	660.16	8.00	668.16
11	42.885448	-74.604423	681.12	8.00	689.12
12	42.885927	-74.604058	682.06	8.00	690.06
13	42.888176	-74.601333	736.05	8.00	744.05
14	42.888710	-74.600968	764.74	8.00	772.74
15	42.891446	-74.599391	758.71	8.00	766.71
16	42.891556	-74.599187	760.00	8.00	768.00
17	42.891540	-74.598844	759.61	8.00	767.61
18	42.891053	-74.597084	745.73	8.00	753.73
19	42.890644	-74.595389	737.59	8.00	745.59
20	42.890534	-74.594852	733.53	8.00	741.53
21	42.890573	-74.593468	724.62	8.00	732.62
22	42.890950	-74.592932	712.34	8.00	720.34
23	42.893969	-74.589552	640.59	8.00	648.59
24	42.894385	-74.589155	652.68	8.00	660.68
25	42.894731	-74.589102	659.10	8.00	667.10
26	42.895258	-74.589316	662.06	8.00	670.06
27	42.895665	-74.589642	664.56	8.00	672.56
28	42.895538	-74.590406	690.19	8.00	698.19
29	42.895914	-74.593101	764.83	8.00	772.83
30	42.896036	-74.595598	775.19	8.00	783.19
31	42.896280	-74.600506	744.73	8.00	752.73
32	42.901923	-74.617276	708.93	8.00	716.93

**Name:** Route 6  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.874103	-74.654151	859.14	8.00	867.14
2	42.873529	-74.653185	878.20	8.00	886.20
3	42.872279	-74.651029	896.36	8.00	904.36
4	42.871784	-74.649966	886.15	8.00	894.15
5	42.871634	-74.649001	877.15	8.00	885.15
6	42.870667	-74.641813	843.92	8.00	851.92
7	42.870353	-74.639538	834.02	8.00	842.02
8	42.869338	-74.632328	817.31	8.00	825.31
9	42.869112	-74.630512	794.88	8.00	802.88
10	42.869087	-74.629968	786.44	8.00	794.44
11	42.869126	-74.629056	777.79	8.00	785.79
12	42.868937	-74.627296	767.73	8.00	775.73
13	42.868544	-74.624485	760.77	8.00	768.77
14	42.868497	-74.623455	758.99	8.00	766.99
15	42.868434	-74.622855	761.09	8.00	769.09
16	42.868229	-74.622007	762.92	8.00	770.92
17	42.868088	-74.621396	766.60	8.00	774.60
18	42.868025	-74.620934	767.92	8.00	775.92
19	42.866254	-74.621885	805.64	8.00	813.64
20	42.865050	-74.622464	826.20	8.00	834.20
21	42.864327	-74.622818	831.24	8.00	839.24
22	42.863871	-74.622893	836.49	8.00	844.49
23	42.863352	-74.622979	831.69	8.00	839.69
24	42.862479	-74.623022	834.85	8.00	842.85
25	42.861409	-74.623076	864.80	8.00	872.80
26	42.860772	-74.623086	865.11	8.00	873.11
27	42.860631	-74.623119	863.88	8.00	871.89

**Name:** Route 7  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.912738	-74.651258	639.21	8.00	647.21
2	42.909123	-74.649156	691.17	8.00	699.17
3	42.906451	-74.647611	736.46	8.00	744.46
4	42.905288	-74.646967	778.09	8.00	786.09
5	42.903874	-74.646237	781.67	8.00	789.67
6	42.901925	-74.643877	742.11	8.00	750.11
7	42.896926	-74.638384	699.63	8.00	707.63
8	42.896297	-74.637483	693.93	8.00	701.93
9	42.895794	-74.636195	692.59	8.00	700.59
10	42.895291	-74.634908	692.26	8.00	700.26
11	42.893153	-74.632075	695.32	8.00	703.32

**Name:** Route 8  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.900004	-74.664412	768.92	8.00	776.92
2	42.898762	-74.661258	786.57	8.00	794.57
3	42.898275	-74.659756	781.12	8.00	789.12
4	42.897803	-74.658339	783.20	8.00	791.21
5	42.897442	-74.657696	788.62	8.00	796.62
6	42.896011	-74.655786	789.92	8.00	797.92
7	42.893606	-74.652846	816.58	8.00	824.59
8	42.885824	-74.643062	843.89	8.00	851.89
9	42.879708	-74.635401	756.96	8.00	764.96
10	42.879519	-74.634650	752.83	8.00	760.83
11	42.879519	-74.632826	747.99	8.00	755.99
12	42.877632	-74.628728	721.67	8.00	729.67
13	42.875808	-74.622462	716.09	8.00	724.09
14	42.875211	-74.620145	719.02	8.00	727.03
15	42.875211	-74.619115	710.83	8.00	718.83
16	42.875101	-74.618042	707.74	8.00	715.75
17	42.874629	-74.615961	702.58	8.00	710.58
18	42.874613	-74.614974	688.97	8.00	696.97
19	42.874865	-74.614351	680.47	8.00	688.47
20	42.875399	-74.613493	672.55	8.00	680.55
21	42.875572	-74.612613	680.13	8.00	688.13
22	42.875431	-74.611669	681.59	8.00	689.59
23	42.875179	-74.609673	690.88	8.00	698.88
24	42.874943	-74.608686	682.59	8.00	690.59
25	42.875038	-74.608129	677.31	8.00	685.31

**Name:** Route 9  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.889550	-74.673574	753.29	8.00	761.29
2	42.889047	-74.672845	755.75	8.00	763.75
3	42.888009	-74.671772	756.08	8.00	764.08
4	42.886280	-74.669412	756.63	8.00	764.63
5	42.885400	-74.668210	763.33	8.00	771.33
6	42.884708	-74.667395	770.62	8.00	778.62
7	42.882444	-74.665635	810.37	8.00	818.37
8	42.880683	-74.663575	817.25	8.00	825.25
9	42.878167	-74.660829	848.61	8.00	856.61
10	42.876815	-74.659069	848.95	8.00	856.95
11	42.874928	-74.656322	862.08	8.00	870.08
12	42.873795	-74.654692	874.85	8.00	882.85

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- Several calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **User's Manual** for assumptions and limitations not listed here.

## Site Configuration: Mohawk Residence 3

Project site configuration details and results.

Created **March 28, 2019 6:13 p.m.**  
 Updated **March 28, 2019 6:33 p.m.**  
 DNI **varies** and peaks at **1,000.0 W/m<sup>2</sup>**  
 Analyze every **10** minute(s)  
**0.5** ocular transmission coefficient  
**0.002 m** pupil diameter  
**0.017 m** eye focal length  
**9.3 mrad** sun subtended angle  
 Timezone **UTC-5**  
 Site Configuration ID: 26643.4661

## Summary of Results

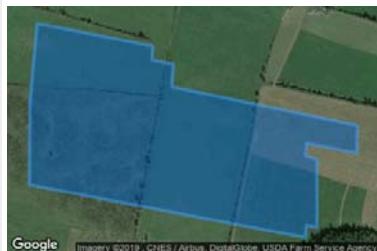
No glare predicted!

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced		
			deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	-	-	-
PV10	SA tracking	SA tracking	0	0	-	-	-
PV11	SA tracking	SA tracking	0	0	-	-	-
PV12	SA tracking	SA tracking	0	0	-	-	-
PV13	SA tracking	SA tracking	0	0	-	-	-
PV14	SA tracking	SA tracking	0	0	-	-	-
PV15	SA tracking	SA tracking	0	0	-	-	-
PV16	SA tracking	SA tracking	0	0	-	-	-
PV17	SA tracking	SA tracking	0	0	-	-	-
PV18	SA tracking	SA tracking	0	0	-	-	-
PV19	SA tracking	SA tracking	0	0	-	-	-
PV8	SA tracking	SA tracking	0	0	-	-	-
PV9	SA tracking	SA tracking	0	0	-	-	-

## Component Data

### PV Array(s)

**Name:** PV1  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



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Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.865234	-74.652984	882.35	5.00	887.35
2	42.864230	-74.645826	884.42	5.00	889.42
3	42.864460	-74.645794	881.49	5.00	886.49
4	42.864419	-74.645521	881.27	5.00	886.27
5	42.865711	-74.645524	873.85	5.00	878.85
6	42.865787	-74.645822	874.49	5.00	879.49
7	42.866024	-74.645791	875.37	5.00	880.37
8	42.865837	-74.644494	875.60	5.00	880.60
9	42.866356	-74.644472	883.56	5.00	888.56
10	42.867098	-74.649287	891.57	5.00	896.57
11	42.867528	-74.649256	891.82	5.00	896.82
12	42.867610	-74.649803	896.74	5.00	901.74
13	42.867870	-74.649788	894.76	5.00	899.77
14	42.868301	-74.652784	934.85	5.00	939.85
15	42.866785	-74.652972	900.91	5.00	905.91
16	42.865234	-74.652984	882.35	5.00	887.35

**Name:** PV10  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



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Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.878278	-74.633514	736.07	5.00	741.07
2	42.878243	-74.633222	735.73	5.00	740.73
3	42.877957	-74.633230	731.83	5.00	736.83
4	42.877859	-74.632647	730.75	5.00	735.75
5	42.876007	-74.628859	708.49	5.00	713.49
6	42.875607	-74.627344	704.96	5.00	709.96
7	42.875818	-74.627185	708.38	5.00	713.38
8	42.876351	-74.627185	714.85	5.00	719.85
9	42.876805	-74.628859	716.79	5.00	721.79
10	42.878673	-74.632632	742.48	5.00	747.48
11	42.878806	-74.633522	741.79	5.00	746.79
12	42.878278	-74.633514	736.07	5.00	741.07

**Name:** PV11  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.875340	-74.626513	705.58	5.00	710.58
2	42.874741	-74.624295	703.18	5.00	708.18
3	42.874949	-74.624196	706.29	5.00	711.29
4	42.875493	-74.624210	714.93	5.00	719.93
5	42.876114	-74.626433	714.19	5.00	719.19
6	42.875889	-74.626490	711.37	5.00	716.37
7	42.875340	-74.626513	705.58	5.00	710.58



**Name:** PV12  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.878451	-74.620699	741.76	5.00	746.76
2	42.876111	-74.613948	693.19	5.00	698.19
3	42.876333	-74.613780	699.54	5.00	704.54
4	42.876830	-74.613770	699.08	5.00	704.08
5	42.879189	-74.620527	750.04	5.00	755.04
6	42.878936	-74.620705	756.19	5.00	761.19
7	42.878451	-74.620699	741.76	5.00	746.76



**Name:** PV13  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



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Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
			deg	deg	ft
1	42.881390	-74.613277	666.01	5.00	671.01
2	42.881054	-74.613304	667.36	5.00	672.36
3	42.880822	-74.613034	667.68	5.00	672.68
4	42.880573	-74.613001	668.82	5.00	673.82
5	42.880439	-74.612637	668.67	5.00	673.67
6	42.880705	-74.612598	667.91	5.00	672.91
7	42.880353	-74.611690	667.92	5.00	672.92
8	42.880566	-74.611659	667.02	5.00	672.02
9	42.880510	-74.611512	667.31	5.00	672.31
10	42.880251	-74.611519	668.13	5.00	673.13
11	42.880148	-74.611305	668.39	5.00	673.39
12	42.879897	-74.611287	669.32	5.00	674.32
13	42.879744	-74.610844	669.65	5.00	674.65
14	42.879785	-74.610704	669.42	5.00	674.42
15	42.879429	-74.609601	669.66	5.00	674.66
16	42.878995	-74.609574	671.26	5.00	676.26
17	42.878982	-74.609763	671.33	5.00	676.33
18	42.878677	-74.609745	671.95	5.00	676.95
19	42.878394	-74.609100	672.42	5.00	677.42
20	42.878575	-74.608995	672.14	5.00	677.14
21	42.878161	-74.608059	673.96	5.00	678.96
22	42.878705	-74.607743	673.51	5.00	678.51
23	42.879021	-74.607726	672.44	5.00	677.44
24	42.879002	-74.608112	671.88	5.00	676.88
25	42.879252	-74.608745	670.88	5.00	675.88
26	42.879873	-74.608746	668.34	5.00	673.34
27	42.880422	-74.610078	666.66	5.00	671.66
28	42.880220	-74.610252	667.51	5.00	672.51
29	42.880422	-74.610740	666.78	5.00	671.78
30	42.880520	-74.610753	666.60	5.00	671.60
31	42.881462	-74.613012	665.39	5.00	670.39
32	42.881390	-74.613277	666.01	5.00	671.01

**Name:** PV14

**Axis tracking:** Single-axis rotation

**Tracking axis orientation:** 180.0 deg

**Tracking axis tilt:** 0.0 deg

**Tracking axis panel offset:** 0.0 deg

**Maximum tracking angle:** 62.0 deg

**Resting angle:** 5.0 deg

**Rated power:** -

**Panel material:** Light textured glass without AR coating

**Vary reflectivity with sun position?** Yes

**Correlate slope error with surface type?** Yes

**Slope error:** 9.7 mrad



**Name:** PV15

**Axis tracking:** Single-axis rotation

**Tracking axis orientation:** 180.0 deg

**Tracking axis tilt:** 0.0 deg

**Tracking axis panel offset:** 0.0 deg

**Maximum tracking angle:** 62.0 deg

**Resting angle:** 5.0 deg

**Rated power:** -

**Panel material:** Light textured glass without AR coating

**Vary reflectivity with sun position?** Yes

**Correlate slope error with surface type?** Yes

**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.885784	-74.613424	675.93	5.00	680.93
2	42.885295	-74.613435	670.47	5.00	675.47
3	42.885220	-74.613314	669.89	5.00	674.89
4	42.884963	-74.613341	667.04	5.00	672.04
5	42.884763	-74.612642	666.90	5.00	671.90
6	42.884489	-74.612672	664.26	5.00	669.26
7	42.884419	-74.612432	664.18	5.00	669.18
8	42.884203	-74.612393	662.30	5.00	667.30
9	42.883761	-74.611208	659.39	5.00	664.39
10	42.884015	-74.611139	661.62	5.00	666.62
11	42.883934	-74.610920	660.68	5.00	665.68
12	42.884152	-74.610860	662.29	5.00	667.29
13	42.884069	-74.610614	660.97	5.00	665.97
14	42.884294	-74.610570	663.00	5.00	668.00
15	42.884026	-74.609605	659.13	5.00	664.13
16	42.884264	-74.609531	661.42	5.00	666.42
17	42.884035	-74.608421	659.85	5.00	664.85
18	42.884581	-74.608431	665.87	5.00	670.87
19	42.886058	-74.613283	678.70	5.00	683.70
20	42.885784	-74.613424	675.93	5.00	680.93

Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.894145	-74.612932	740.96	5.00	745.96
2	42.893015	-74.610118	744.09	5.00	749.09
3	42.892128	-74.610317	740.17	5.00	745.17
4	42.892933	-74.612401	726.37	5.00	731.37
5	42.892340	-74.612420	717.80	5.00	722.80
6	42.891994	-74.611507	723.81	5.00	728.81
7	42.891727	-74.611521	721.17	5.00	726.17
8	42.889415	-74.605654	748.92	5.00	753.92
9	42.889429	-74.604859	746.11	5.00	751.11
10	42.891271	-74.603789	757.79	5.00	762.79
11	42.891836	-74.603856	735.75	5.00	740.75
12	42.891873	-74.604751	736.29	5.00	741.29
13	42.892353	-74.604823	725.65	5.00	730.65
14	42.892811	-74.606051	718.30	5.00	723.30
15	42.893522	-74.605810	705.24	5.00	710.24
16	42.894036	-74.605855	697.68	5.00	702.68
17	42.894755	-74.607683	717.29	5.00	722.29
18	42.894287	-74.607732	727.24	5.00	732.24
19	42.896256	-74.612857	730.25	5.00	735.25
20	42.894145	-74.612932	740.96	5.00	745.96

**Name:** PV16  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.892223	-74.629877	691.75	5.00	696.75
2	42.890025	-74.624520	678.93	5.00	683.93
3	42.890839	-74.624478	685.83	5.00	690.83
4	42.891235	-74.625346	689.07	5.00	694.07
5	42.891582	-74.625303	692.21	5.00	697.21
6	42.892817	-74.628498	704.91	5.00	709.91
7	42.892523	-74.628514	702.32	5.00	707.32
8	42.892930	-74.629573	703.23	5.00	708.23
9	42.892741	-74.629901	698.94	5.00	703.94
10	42.892223	-74.629877	691.75	5.00	696.75

**Name:** PV17  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			deg	deg	ft
1	42.892708	-74.625329	702.29	5.00	707.30
2	42.891658	-74.622652	694.76	5.00	699.76
3	42.892176	-74.622647	702.85	5.00	707.85
4	42.892259	-74.622808	702.88	5.00	707.88
5	42.893180	-74.622788	714.97	5.00	719.97
6	42.893123	-74.622576	715.81	5.00	720.81
7	42.893320	-74.622535	718.18	5.00	723.18
8	42.892598	-74.620466	718.49	5.00	723.49
9	42.892908	-74.620421	721.42	5.00	726.42
10	42.893038	-74.620831	722.13	5.00	727.13
11	42.893316	-74.620823	724.23	5.00	729.24
12	42.894408	-74.623615	727.33	5.00	732.33
13	42.894230	-74.623693	724.32	5.00	729.32
14	42.894230	-74.623923	723.80	5.00	728.80
15	42.893776	-74.623929	717.76	5.00	722.76
16	42.893009	-74.624386	717.74	5.00	722.74
17	42.893249	-74.625356	707.50	5.00	712.50
18	42.892708	-74.625329	702.29	5.00	707.30

Name: PV18

Axis tracking: Single-axis rotation

Tracking axis orientation: 180.0 deg

Tracking axis tilt: 0.0 deg

Tracking axis panel offset: 0.0 deg

Maximum tracking angle: 62.0 deg

Resting angle: 5.0 deg

Rated power: -

Panel material: Light textured glass without AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.894269	-74.629341	723.03	5.00	728.03
2	42.892983	-74.626141	700.74	5.00	705.74
3	42.893206	-74.626126	703.94	5.00	708.94
4	42.893204	-74.626058	703.97	5.00	708.97
5	42.893428	-74.626062	707.88	5.00	712.88
6	42.893261	-74.625647	706.78	5.00	711.78
7	42.893479	-74.625612	709.88	5.00	714.88
8	42.893408	-74.625405	708.97	5.00	713.97
9	42.893640	-74.625339	712.30	5.00	717.30
10	42.893586	-74.625166	712.06	5.00	717.06
11	42.894203	-74.625131	719.78	5.00	724.78
12	42.894623	-74.626203	724.44	5.00	729.44
13	42.895181	-74.626210	732.80	5.00	737.80
14	42.895405	-74.626735	733.98	5.00	738.98
15	42.895624	-74.626731	737.40	5.00	742.40
16	42.895872	-74.627341	739.27	5.00	744.27
17	42.895451	-74.628305	733.23	5.00	738.23
18	42.894608	-74.629353	725.68	5.00	730.68
19	42.894269	-74.629341	723.03	5.00	728.03

Name: PV19

Axis tracking: Single-axis rotation

Tracking axis orientation: 180.0 deg

Tracking axis tilt: 0.0 deg

Tracking axis panel offset: 0.0 deg

Maximum tracking angle: 62.0 deg

Resting angle: 5.0 deg

Rated power: -

Panel material: Light textured glass without AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.883285	-74.663599	799.58	5.00	804.58
2	42.883000	-74.663586	799.16	5.00	804.16
3	42.881972	-74.663176	802.17	5.00	807.18
4	42.881754	-74.662868	804.22	5.00	809.22
5	42.881799	-74.662797	804.62	5.00	809.62
6	42.881013	-74.662805	811.93	5.00	816.93
7	42.880474	-74.662088	817.59	5.00	822.59
8	42.880491	-74.661116	816.75	5.00	821.75
9	42.881253	-74.661077	811.41	5.00	816.41
10	42.881391	-74.661278	810.37	5.00	815.37
11	42.881398	-74.661526	809.72	5.00	814.72
12	42.882007	-74.661411	806.02	5.00	811.02
13	42.882095	-74.659886	803.43	5.00	808.43
14	42.882642	-74.659849	800.24	5.00	805.24
15	42.882899	-74.660063	799.51	5.00	804.51
16	42.882924	-74.661401	802.06	5.00	807.06
17	42.883466	-74.661403	799.71	5.00	804.71
18	42.883457	-74.661722	800.27	5.00	805.27
19	42.883725	-74.661750	799.20	5.00	804.20
20	42.883722	-74.662295	799.87	5.00	804.87
21	42.884202	-74.662329	797.96	5.00	802.96
22	42.884245	-74.662873	798.96	5.00	803.96
23	42.883737	-74.662917	801.11	5.00	806.11
24	42.883723	-74.663330	800.94	5.00	805.94
25	42.883472	-74.663348	800.92	5.00	805.92
26	42.883433	-74.663496	800.31	5.00	805.31
27	42.883285	-74.663599	799.58	5.00	804.58

**Name:** PV8  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



**Name:** PV9  
**Axis tracking:** Single-axis rotation  
**Tracking axis orientation:** 180.0 deg  
**Tracking axis tilt:** 0.0 deg  
**Tracking axis panel offset:** 0.0 deg  
**Maximum tracking angle:** 62.0 deg  
**Resting angle:** 5.0 deg  
**Rated power:** -  
**Panel material:** Light textured glass without AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 9.7 mrad



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.868954	-74.650467	906.57	5.00	911.57
2	42.867542	-74.648033	888.27	5.00	893.28
3	42.866928	-74.644192	880.81	5.00	885.81
4	42.867176	-74.644112	880.07	5.00	885.07
5	42.867985	-74.644114	873.35	5.00	878.35
6	42.868586	-74.648027	889.74	5.00	894.74
7	42.868869	-74.648511	892.27	5.00	897.27
8	42.868644	-74.648527	892.21	5.00	897.21
9	42.868968	-74.649131	895.30	5.00	900.30
10	42.868767	-74.649131	895.20	5.00	900.20
11	42.869485	-74.650437	908.84	5.00	913.84
12	42.868954	-74.650467	906.57	5.00	911.57

Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.868337	-74.644815	875.41	5.00	880.41
2	42.868180	-74.643849	869.63	5.00	874.63
3	42.868422	-74.643793	866.73	5.00	871.73
4	42.868953	-74.643779	861.71	5.00	866.71
5	42.869011	-74.644230	865.13	5.00	870.13
6	42.868792	-74.644269	867.11	5.00	872.11
7	42.868816	-74.644551	868.83	5.00	873.83
8	42.868597	-74.644583	871.25	5.00	876.25
9	42.868603	-74.644784	872.73	5.00	877.73
10	42.868337	-74.644815	875.41	5.00	880.41

## Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	42.867315	-74.628656	818.40	15.00	833.40
OP 2	42.868261	-74.631198	822.76	15.00	837.76
OP 3	42.869766	-74.633275	810.91	15.00	825.91
OP 4	42.870671	-74.643151	849.81	15.00	864.81
OP 5	42.869056	-74.645959	882.05	15.00	897.05
OP 6	42.870491	-74.648217	898.94	15.00	913.95
OP 7	42.872147	-74.657933	934.13	15.00	949.13
OP 8	42.871780	-74.657142	940.35	15.00	955.36
OP 9	42.871103	-74.658429	945.86	15.00	960.86
OP 10	42.868244	-74.658304	948.65	15.00	963.65
OP 11	42.866930	-74.657220	943.18	15.00	958.18
OP 12	42.873811	-74.616368	736.23	15.00	751.23
OP 13	42.868417	-74.621123	779.16	15.00	794.16
OP 14	42.877015	-74.659925	848.79	15.00	863.79
OP 15	42.878856	-74.662789	839.54	15.00	854.54
OP 16	42.885035	-74.676631	810.74	15.00	825.75
OP 17	42.884599	-74.677340	810.92	15.00	825.92
OP 18	42.887103	-74.674815	769.06	15.00	784.06
OP 19	42.878822	-74.628937	732.91	15.00	747.91
OP 20	42.879195	-74.631312	740.98	15.00	755.98
OP 21	42.878643	-74.634496	742.57	15.00	757.57
OP 22	42.880826	-74.637250	784.96	15.00	799.96
OP 23	42.883950	-74.635233	839.10	15.00	854.10
OP 24	42.881496	-74.648427	838.31	15.00	853.31
OP 25	42.884981	-74.644191	847.96	15.00	862.96
OP 26	42.887949	-74.640252	783.41	15.00	798.41
OP 27	42.888884	-74.637678	761.65	15.00	776.65
OP 28	42.891845	-74.651174	832.89	15.00	847.90
OP 29	42.891316	-74.656584	837.43	15.00	852.43
OP 30	42.893473	-74.657217	832.50	15.00	847.51
OP 31	42.892513	-74.652955	835.95	15.00	850.95
OP 32	42.897955	-74.660319	786.22	15.00	801.22
OP 33	42.897388	-74.658876	791.93	15.00	806.93
OP 34	42.897479	-74.657330	788.76	15.00	803.76
OP 35	42.897203	-74.656852	793.69	15.00	808.69
OP 36	42.896884	-74.657323	788.67	15.00	803.67
OP 37	42.896557	-74.656928	787.35	15.00	802.35
OP 38	42.896191	-74.655650	791.00	15.00	806.00
OP 39	42.896780	-74.649311	826.69	15.00	841.69
OP 40	42.898498	-74.639751	711.25	15.00	726.25
OP 41	42.901890	-74.644212	740.20	15.00	755.20
OP 42	42.904727	-74.645452	783.09	15.00	798.09
OP 43	42.909459	-74.649018	691.28	15.00	706.28
OP 44	42.909577	-74.649736	688.56	15.00	703.56
OP 45	42.909990	-74.649342	686.05	15.00	701.05
OP 46	42.910344	-74.650215	681.96	15.00	696.96
OP 47	42.911270	-74.650092	658.96	15.00	673.96
OP 48	42.912386	-74.651256	635.01	15.00	650.01
OP 49	42.912745	-74.650045	652.62	15.00	667.62
OP 50	42.912908	-74.649151	649.35	15.00	664.35
OP 51	42.912102	-74.648128	677.01	15.00	692.02
OP 52	42.913754	-74.646964	674.24	15.00	689.24
OP 53	42.893577	-74.632783	698.97	15.00	713.98
OP 54	42.893326	-74.631835	704.52	15.00	719.52
OP 55	42.893617	-74.632295	703.81	15.00	718.81
OP 56	42.896605	-74.627639	755.29	15.00	770.29
OP 57	42.896431	-74.628414	752.51	15.00	767.51

OP 58	42.897499	-74.626162	752.33	15.00	767.33
OP 59	42.898672	-74.625942	747.03	15.00	762.03
OP 60	42.899677	-74.622919	725.98	15.00	740.98
OP 61	42.900574	-74.623736	720.45	15.00	735.45
OP 62	42.902080	-74.617960	715.00	15.00	730.00
OP 63	42.876055	-74.612104	705.33	15.00	720.33
OP 64	42.875145	-74.608494	684.69	15.00	699.69
OP 65	42.875302	-74.609331	697.67	15.00	712.67
OP 66	42.875954	-74.608787	671.03	15.00	686.03
OP 67	42.876520	-74.608349	669.99	15.00	684.99
OP 68	42.876828	-74.608178	672.10	15.00	687.10
OP 69	42.877289	-74.607612	677.12	15.00	692.12
OP 70	42.878436	-74.606898	678.03	15.00	693.03
OP 71	42.878964	-74.606463	675.96	15.00	690.96
OP 72	42.885707	-74.606097	691.77	15.00	706.77
OP 73	42.886131	-74.603360	697.11	15.00	712.11
OP 74	42.891266	-74.598480	763.04	15.00	778.04
OP 75	42.884709	-74.594454	715.58	15.00	730.58
OP 76	42.895724	-74.594124	783.36	15.00	798.36
OP 77	42.895771	-74.598643	758.41	15.00	773.41
OP 78	42.896456	-74.601916	736.31	15.00	751.31
OP 79	42.896635	-74.602515	734.86	15.00	749.86
OP 80	42.897504	-74.604809	735.01	15.00	750.01
OP 81	42.899398	-74.608981	739.47	15.00	754.47
OP 82	42.899977	-74.611915	733.92	15.00	748.92
OP 83	42.871356	-74.648601	883.62	15.00	898.62
OP 84	42.892188	-74.640237	750.48	15.00	765.48
OP 85	42.891185	-74.639108	749.18	15.00	764.18
OP 86	42.916702	-74.644609	630.83	15.00	645.83
OP 87	42.915901	-74.645267	639.47	15.00	654.47
OP 88	42.919001	-74.640020	611.58	15.00	626.58
OP 89	42.916865	-74.637032	618.67	15.00	633.67
OP 90	42.899907	-74.610248	733.66	15.00	748.66
OP 91	42.899127	-74.608389	738.22	15.00	753.22
OP 92	42.861250	-74.649534	893.39	15.00	908.39
OP 93	42.873211	-74.616892	733.74	15.00	748.74
OP 94	42.864003	-74.657748	923.54	15.00	938.54
OP 95	42.913179	-74.649991	644.94	15.00	659.94
OP 96	42.912773	-74.651172	636.84	15.00	651.84
OP 97	42.902029	-74.618499	706.14	15.00	721.14
OP 98	42.901320	-74.614630	721.40	15.00	736.40

## Site Configuration: Mohawk Roads 3a

Project site configuration details and results.

Created **April 2, 2019 1:50 p.m.**  
 Updated **April 2, 2019 2:14 p.m.**  
 DNI **varies** and peaks at **1,000.0 W/m<sup>2</sup>**  
 Analyze every **15** minute(s)  
**0.5** ocular transmission coefficient  
**0.002 m** pupil diameter  
**0.017 m** eye focal length  
**9.3 mrad** sun subtended angle  
 Timezone **UTC-5**  
 Site Configuration ID: 26761.4661

## Summary of Results

No glare predicted!

PV name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced		
			deg	deg	min	min	kWh
PV1	SA tracking	SA tracking	0	0	-	-	-
PV10	SA tracking	SA tracking	0	0	-	-	-
PV11	SA tracking	SA tracking	0	0	-	-	-
PV12	SA tracking	SA tracking	0	0	-	-	-
PV13	SA tracking	SA tracking	0	0	-	-	-
PV14	SA tracking	SA tracking	0	0	-	-	-
PV15	SA tracking	SA tracking	0	0	-	-	-
PV16	SA tracking	SA tracking	0	0	-	-	-
PV17	SA tracking	SA tracking	0	0	-	-	-
PV18	SA tracking	SA tracking	0	0	-	-	-
PV8	SA tracking	SA tracking	0	0	-	-	-
PV9	SA tracking	SA tracking	0	0	-	-	-

## Component Data

### PV Array(s)

**Name:** Route 1  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.848100	-74.646547	711.15	8.00	719.15
2	42.853009	-74.641805	763.03	8.00	771.03
3	42.855588	-74.632213	788.92	8.00	796.92
4	42.857869	-74.623909	821.15	8.00	829.15
5	42.858231	-74.622922	827.57	8.00	835.57
6	42.858679	-74.621828	841.51	8.00	849.51
7	42.859293	-74.620487	847.78	8.00	855.78
8	42.859859	-74.618963	836.92	8.00	844.92
9	42.860645	-74.616753	810.05	8.00	818.05
10	42.861023	-74.615862	795.50	8.00	803.50
11	42.861322	-74.615573	796.68	8.00	804.68
12	42.861864	-74.615272	785.74	8.00	793.74
13	42.862580	-74.614672	775.02	8.00	783.02
14	42.862957	-74.614210	767.48	8.00	775.49
15	42.863233	-74.613663	758.78	8.00	766.78
16	42.863468	-74.612998	745.90	8.00	753.90
17	42.863610	-74.612386	742.02	8.00	750.02
18	42.863783	-74.611496	730.88	8.00	738.89
19	42.864208	-74.609511	717.60	8.00	725.60
20	42.865946	-74.601690	664.23	8.00	672.23
21	42.866049	-74.601580	664.94	8.00	672.94
22	42.866628	-74.600765	679.18	8.00	687.18
23	42.867331	-74.600390	668.60	8.00	676.60
24	42.867740	-74.600127	659.85	8.00	667.85
25	42.868039	-74.600052	661.76	8.00	669.76
26	42.868381	-74.600036	667.39	8.00	675.39
27	42.868766	-74.600186	676.35	8.00	684.35
28	42.869167	-74.600433	681.92	8.00	689.92
29	42.869462	-74.600717	678.00	8.00	686.00
30	42.869777	-74.601189	683.58	8.00	691.58
31	42.870091	-74.602004	675.97	8.00	683.98
32	42.870457	-74.602750	666.63	8.00	674.63
33	42.870960	-74.603678	674.48	8.00	682.48
34	42.871212	-74.604281	662.38	8.00	670.38
35	42.871394	-74.604858	703.28	8.00	711.28
36	42.871727	-74.605577	701.81	8.00	709.81
37	42.872118	-74.606433	678.11	8.00	686.11
38	42.872320	-74.606720	663.75	8.00	671.75
39	42.872737	-74.607192	654.90	8.00	662.90
40	42.873456	-74.607760	657.79	8.00	665.79
41	42.873830	-74.608002	665.94	8.00	673.94
42	42.874140	-74.608117	669.51	8.00	677.51
43	42.874439	-74.608144	670.73	8.00	678.73
44	42.874769	-74.608082	673.41	8.00	681.41
45	42.875056	-74.607959	672.05	8.00	680.05
46	42.875404	-74.607685	673.13	8.00	681.13
47	42.875947	-74.606980	669.11	8.00	677.11
48	42.877164	-74.605381	675.37	8.00	683.37
49	42.879132	-74.602822	667.17	8.00	675.17
50	42.881613	-74.599582	668.48	8.00	676.48
51	42.882063	-74.598962	667.55	8.00	675.55
52	42.882281	-74.598549	661.58	8.00	669.58
53	42.882456	-74.598066	655.04	8.00	663.04
54	42.882598	-74.597540	657.68	8.00	665.68
55	42.882733	-74.597090	665.91	8.00	673.91
56	42.882867	-74.596806	668.80	8.00	676.81
57	42.883063	-74.596500	673.10	8.00	681.10

58	42.883315	-74.596210	676.77	8.00	684.77
59	42.883510	-74.596052	682.42	8.00	690.42
60	42.884221	-74.595531	698.57	8.00	706.57
61	42.884929	-74.594973	715.24	8.00	723.24
62	42.885840	-74.594324	700.57	8.00	708.57
63	42.886025	-74.594174	700.88	8.00	708.88
64	42.886332	-74.593906	699.15	8.00	707.15
65	42.886764	-74.593466	700.55	8.00	708.55
66	42.887456	-74.592726	702.76	8.00	710.76
67	42.888034	-74.592120	693.84	8.00	701.84
68	42.888556	-74.591529	691.32	8.00	699.32
69	42.889126	-74.590880	677.65	8.00	685.65
70	42.889464	-74.590537	681.47	8.00	689.47
71	42.889869	-74.590172	672.98	8.00	680.98
72	42.890176	-74.589952	666.78	8.00	674.78
73	42.890541	-74.589716	661.63	8.00	669.64
74	42.890824	-74.589459	659.92	8.00	667.92
75	42.891064	-74.589110	656.22	8.00	664.22
76	42.891378	-74.588397	641.81	8.00	649.81
77	42.891689	-74.587796	636.48	8.00	644.48
78	42.891933	-74.587275	641.73	8.00	649.73
79	42.892078	-74.586691	637.01	8.00	645.01
80	42.892212	-74.585832	629.98	8.00	637.98
81	42.892628	-74.583402	600.64	8.00	608.64
82	42.892846	-74.582117	594.43	8.00	602.43

Name: Route 2

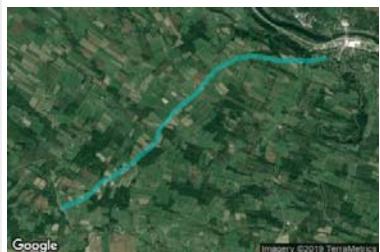
Route type Two-way

View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
			deg	deg	ft
1	42.849242	-74.658606	724.06	8.00	732.06
2	42.852986	-74.657748	839.22	8.00	847.22
3	42.854968	-74.657297	877.63	8.00	885.63
4	42.855833	-74.657211	878.11	8.00	886.11
5	42.858350	-74.657254	870.13	8.00	878.13
6	42.865161	-74.657619	906.30	8.00	914.30
7	42.869501	-74.657984	948.30	8.00	956.31
8	42.870822	-74.658134	949.14	8.00	957.14
9	42.871561	-74.658070	935.84	8.00	943.84
10	42.871843	-74.657910	935.11	8.00	943.11

**Name:** Route 3  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.856659	-74.688802	745.91	8.00	753.91
2	42.857917	-74.686099	797.44	8.00	805.44
3	42.858295	-74.684361	829.69	8.00	837.69
4	42.859176	-74.681271	885.50	8.00	893.50
5	42.861063	-74.677580	920.19	8.00	928.19
6	42.861740	-74.676293	924.73	8.00	932.73
7	42.863281	-74.674469	941.36	8.00	949.36
8	42.864460	-74.672859	974.92	8.00	982.92
9	42.864995	-74.671701	983.12	8.00	991.12
10	42.865640	-74.669898	1001.80	8.00	1009.81
11	42.866143	-74.668546	986.54	8.00	994.54
12	42.870673	-74.659405	937.41	8.00	945.41
13	42.872104	-74.657582	932.84	8.00	940.84
14	42.874290	-74.653805	852.53	8.00	860.53
15	42.875689	-74.651445	829.62	8.00	837.62
16	42.877026	-74.650028	827.75	8.00	835.75
17	42.877686	-74.649599	807.75	8.00	815.75
18	42.879589	-74.649106	796.16	8.00	804.16
19	42.880532	-74.648762	808.06	8.00	816.06
20	42.881428	-74.647969	828.66	8.00	836.66
21	42.882325	-74.646724	817.95	8.00	825.95
22	42.883378	-74.645458	828.69	8.00	836.69
23	42.884887	-74.643913	847.04	8.00	855.04
24	42.885548	-74.643312	844.31	8.00	852.31
25	42.885957	-74.642947	842.80	8.00	850.80
26	42.891899	-74.633034	677.47	8.00	685.47
27	42.892622	-74.632219	681.14	8.00	689.14
28	42.893220	-74.631789	702.23	8.00	710.23
29	42.896552	-74.628013	751.24	8.00	759.24
30	42.898282	-74.625974	748.53	8.00	756.53
31	42.898690	-74.625502	739.86	8.00	747.86
32	42.899193	-74.624472	723.32	8.00	731.32
33	42.899791	-74.623292	721.73	8.00	729.73
34	42.900687	-74.620653	670.29	8.00	678.29
35	42.901944	-74.617327	708.48	8.00	716.48
36	42.902258	-74.616898	696.64	8.00	704.64
37	42.902573	-74.615782	680.00	8.00	688.00
38	42.902416	-74.614666	661.71	8.00	669.71
39	42.902573	-74.613507	645.11	8.00	653.11
40	42.903076	-74.611512	613.58	8.00	621.58
41	42.903233	-74.610568	606.12	8.00	614.12
42	42.903013	-74.608422	610.79	8.00	618.79
43	42.902054	-74.601985	555.30	8.00	563.31
44	42.901614	-74.597736	559.42	8.00	567.42
45	42.901692	-74.596449	561.99	8.00	569.99
46	42.901771	-74.595161	579.50	8.00	587.50
47	42.901457	-74.592694	574.52	8.00	582.52
48	42.901441	-74.591320	568.31	8.00	576.31
49	42.901661	-74.589346	546.53	8.00	554.53
50	42.901583	-74.587291	508.35	8.00	516.36
51	42.901583	-74.586326	492.15	8.00	500.15
52	42.901976	-74.583429	466.35	8.00	474.35
53	42.902211	-74.580790	427.76	8.00	435.76
54	42.902400	-74.580125	409.26	8.00	417.26

Name: Route 4  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.866317	-74.693421	852.13	8.00	860.13
2	42.899021	-74.665269	754.87	8.00	762.87
3	42.901221	-74.663252	773.82	8.00	781.82
4	42.903170	-74.662694	792.64	8.00	800.64
5	42.905025	-74.662737	756.69	8.00	764.69
6	42.909206	-74.662780	690.16	8.00	698.16
7	42.914077	-74.646815	663.18	8.00	671.18
8	42.915083	-74.645013	638.30	8.00	646.30
9	42.916277	-74.644626	637.16	8.00	645.16
10	42.917252	-74.643854	605.97	8.00	613.97
11	42.919892	-74.640721	583.78	8.00	591.78
12	42.920913	-74.639219	554.29	8.00	562.29
13	42.921212	-74.637846	535.56	8.00	543.56
14	42.923176	-74.634927	527.99	8.00	535.99
15	42.918682	-74.631087	559.95	8.00	567.95
16	42.916780	-74.630003	641.70	8.00	649.70
17	42.915476	-74.629134	662.37	8.00	670.37
18	42.911013	-74.626430	584.38	8.00	592.38
19	42.908027	-74.625035	604.52	8.00	612.52
20	42.905434	-74.623845	628.39	8.00	636.39
21	42.904907	-74.623861	642.67	8.00	650.67
22	42.904047	-74.624040	649.85	8.00	657.85
23	42.903507	-74.623808	650.19	8.00	658.19
24	42.903187	-74.623404	646.68	8.00	654.68
25	42.902598	-74.622518	649.62	8.00	657.62
26	42.902019	-74.621820	653.54	8.00	661.54
27	42.900765	-74.620551	668.04	8.00	676.04

Name: Route 5  
Route type Two-way  
View angle: 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.875149	-74.609680	689.50	8.00	697.51
2	42.875605	-74.609293	677.19	8.00	685.19
3	42.880283	-74.605764	674.66	8.00	682.66
4	42.881234	-74.605002	668.15	8.00	676.16
5	42.881682	-74.604691	673.17	8.00	681.18
6	42.882209	-74.604519	671.96	8.00	679.96
7	42.882909	-74.604519	673.19	8.00	681.19
8	42.883349	-74.604616	665.22	8.00	673.22
9	42.883891	-74.604809	660.49	8.00	668.49
10	42.884426	-74.604744	660.16	8.00	668.16
11	42.885448	-74.604423	681.12	8.00	689.12
12	42.885927	-74.604058	682.06	8.00	690.06
13	42.888176	-74.601333	736.05	8.00	744.05
14	42.888710	-74.600968	764.74	8.00	772.74
15	42.891446	-74.599391	758.71	8.00	766.71
16	42.891556	-74.599187	760.00	8.00	768.00
17	42.891540	-74.598844	759.61	8.00	767.61
18	42.891053	-74.597084	745.73	8.00	753.73
19	42.890644	-74.595389	737.59	8.00	745.59
20	42.890534	-74.594852	733.53	8.00	741.53
21	42.890573	-74.593468	724.62	8.00	732.62
22	42.890950	-74.592932	712.34	8.00	720.34
23	42.893969	-74.589552	640.59	8.00	648.59
24	42.894385	-74.589155	652.68	8.00	660.68
25	42.894731	-74.589102	659.10	8.00	667.10
26	42.895258	-74.589316	662.06	8.00	670.06
27	42.895665	-74.589642	664.56	8.00	672.56
28	42.895538	-74.590406	690.19	8.00	698.19
29	42.895914	-74.593101	764.83	8.00	772.83
30	42.896036	-74.595598	775.19	8.00	783.19
31	42.896280	-74.600506	744.73	8.00	752.73
32	42.901923	-74.617276	708.93	8.00	716.93

**Name:** Route 6  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.874103	-74.654151	859.14	8.00	867.14
2	42.873529	-74.653185	878.20	8.00	886.20
3	42.872279	-74.651029	896.36	8.00	904.36
4	42.871784	-74.649966	886.15	8.00	894.15
5	42.871634	-74.649001	877.15	8.00	885.15
6	42.870667	-74.641813	843.92	8.00	851.92
7	42.870353	-74.639538	834.02	8.00	842.02
8	42.869338	-74.632328	817.31	8.00	825.31
9	42.869112	-74.630512	794.88	8.00	802.88
10	42.869087	-74.629968	786.44	8.00	794.44
11	42.869126	-74.629056	777.79	8.00	785.79
12	42.868937	-74.627296	767.73	8.00	775.73
13	42.868544	-74.624485	760.77	8.00	768.77
14	42.868497	-74.623455	758.99	8.00	766.99
15	42.868434	-74.622855	761.09	8.00	769.09
16	42.868229	-74.622007	762.92	8.00	770.92
17	42.868088	-74.621396	766.60	8.00	774.60
18	42.868025	-74.620934	767.92	8.00	775.92
19	42.866254	-74.621885	805.64	8.00	813.64
20	42.865050	-74.622464	826.20	8.00	834.20
21	42.864327	-74.622818	831.24	8.00	839.24
22	42.863871	-74.622893	836.49	8.00	844.49
23	42.863352	-74.622979	831.69	8.00	839.69
24	42.862479	-74.623022	834.85	8.00	842.85
25	42.861409	-74.623076	864.80	8.00	872.80
26	42.860772	-74.623086	865.11	8.00	873.11
27	42.860631	-74.623119	863.88	8.00	871.89

**Name:** Route 7  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.912738	-74.651258	639.21	8.00	647.21
2	42.909123	-74.649156	691.17	8.00	699.17
3	42.906451	-74.647611	736.46	8.00	744.46
4	42.905288	-74.646967	778.09	8.00	786.09
5	42.903874	-74.646237	781.67	8.00	789.67
6	42.901925	-74.643877	742.11	8.00	750.11
7	42.896926	-74.638384	699.63	8.00	707.63
8	42.896297	-74.637483	693.93	8.00	701.93
9	42.895794	-74.636195	692.59	8.00	700.59
10	42.895291	-74.634908	692.26	8.00	700.26
11	42.893153	-74.632075	695.32	8.00	703.32

**Name:** Route 8  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.900004	-74.664412	768.92	8.00	776.92
2	42.898762	-74.661258	786.57	8.00	794.57
3	42.898275	-74.659756	781.12	8.00	789.12
4	42.897803	-74.658339	783.20	8.00	791.21
5	42.897442	-74.657696	788.62	8.00	796.62
6	42.896011	-74.655786	789.92	8.00	797.92
7	42.893606	-74.652846	816.58	8.00	824.59
8	42.885824	-74.643062	843.89	8.00	851.89
9	42.879708	-74.635401	756.96	8.00	764.96
10	42.879519	-74.634650	752.83	8.00	760.83
11	42.879519	-74.632826	747.99	8.00	755.99
12	42.877632	-74.628728	721.67	8.00	729.67
13	42.875808	-74.622462	716.09	8.00	724.09
14	42.875211	-74.620145	719.02	8.00	727.03
15	42.875211	-74.619115	710.83	8.00	718.83
16	42.875101	-74.618042	707.74	8.00	715.75
17	42.874629	-74.615961	702.58	8.00	710.58
18	42.874613	-74.614974	688.97	8.00	696.97
19	42.874865	-74.614351	680.47	8.00	688.47
20	42.875399	-74.613493	672.55	8.00	680.55
21	42.875572	-74.612613	680.13	8.00	688.13
22	42.875431	-74.611669	681.59	8.00	689.59
23	42.875179	-74.609673	690.88	8.00	698.88
24	42.874943	-74.608686	682.59	8.00	690.59
25	42.875038	-74.608129	677.31	8.00	685.31

**Name:** Route 9  
**Route type:** Two-way  
**View angle:** 50.0 deg



Vertex	Latitude	Longitude	Ground	Height above	Total
			elevation	ground	elevation
	deg	deg	ft	ft	ft
1	42.889550	-74.673574	753.29	8.00	761.29
2	42.889047	-74.672845	755.75	8.00	763.75
3	42.888009	-74.671772	756.08	8.00	764.08
4	42.886280	-74.669412	756.63	8.00	764.63
5	42.885400	-74.668210	763.33	8.00	771.33
6	42.884708	-74.667395	770.62	8.00	778.62
7	42.882444	-74.665635	810.37	8.00	818.37
8	42.880683	-74.663575	817.25	8.00	825.25
9	42.878167	-74.660829	848.61	8.00	856.61
10	42.876815	-74.659069	848.95	8.00	856.95
11	42.874928	-74.656322	862.08	8.00	870.08
12	42.873795	-74.654692	874.85	8.00	882.85

## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- Several calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Refer to the **User's Manual** for assumptions and limitations not listed here.