DICKINSON WRIGHT PLLC

150 E. GAY STREET, 24TH FLOOR
COLUMBUS, OH 43215-3192
TELEPHONE: (614) 591-5461
FACSIMILE: (844) 670-6009
http://www.dickinsonwright.com

CHRISTINE M.T. PIRIK
CPirik@dickinsonwright.com

October 14, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: **Case No. 20-1605-EL-BGN** - In the Matter of the Application of Birch Solar 1, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Allen and Auglaize Counties, Ohio.

Response to Eleventh Data Request from Staff of the Ohio Power Siting Board

Dear Ms. Troupe:

Attached please find Birch Solar 1, LLC's ("Applicant") Response to the Eleventh Data Request from the staff of the Ohio Power Siting Board ("OPSB Staff"). The Applicant provided this response to OPSB Staff on October 14, 2021.

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ Christine M.T. Pirik
Christine M.T. Pirik (0029759)
(Counsel of Record)
Terrence O'Donnell (0074213)
Matthew C. McDonnell (0090164)
Dickinson Wright PLLC
150 East Gay Street, Suite 2400
Columbus, Ohio 43215
Phone: (614) 591-5461
Email: cpirik@dickinsonwright.com
todonnell@dickinsonwright.com
mmcdonnell@dickinsonwright.com

Cc: James O'Dell
Theresa White
Randall Schumacher
Jon Pawley

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 14th day of October, 2021.

/s/ Christine M.T. Pirik
Christine M.T. Pirik (0029759)

Counsel:

jodi.bair@ohioattorneygeneral.gov
kyle.kern@ohioattorneygeneral.gov
jvankley@vankleywalker.com
epierce@auglaizecounty.org
amilam@ofbf.org
cendsley@ofbf.org
lcurtis@ofbf.org
RDove@keglerbrown.com
rmkalnins@gmail.com
echristensen@bdlaw.com
jlandfried@bdlaw.com
hjacobs@bdlaw.com
jreagan@bdlaw.com

Administrative Law Judge:

michael.williams@puco.ohio.gov

4846-6429-5678 v1 [92234-1]

BEFORE
THE OHIO POWER SITING BOARD

In the Matter of the Application of Birch Solar 1, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Allen and Auglaize Counties, Ohio.	)))))	Case No: 20-1605-EL-BGN

BIRCH SOLAR 1, LLC 'S
RESPONSE TO THE ELEVENTH DATA REQUEST
FROM THE STAFF OF THE OHIO POWER SITING BOARD

On February 12, 2021, as supplemented on March 25 and 31, April 5, and October 5, 2021, Birch Solar 1, LLC ("Applicant") filed an application ("Application") with the Ohio Power Siting Board ("OPSB") proposing to construct a solar-powered electric generation facility in Allen and Auglaize Counties, Ohio.

On October 7, 2021, the Staff of the OPSB ("OPSB Staff") provided the Applicant with OPSB Staff's Eleventh Data Request. Now comes the Applicant providing the following response to the Eleventh Data Request from the OPSB Staff.

1. Adjacent to St. Rita's Medical Center, there appears to be a second helipad at the northwest corner of Spring and Collett Street in Lima (Located at 40°44'20.02"N and 84° 7'14.80"W). Please provide confirmation that the owners of this helipad has been notified of the proposed facility and any impacts it will have on its operations.

Response: The owners of the helipad at the northwest corner of Spring and Collett Street in Lima have not been notified of the proposed facility as the ForgeSolar analysis completed for that location shows that there is no glare predicted. Additionally, the Federal Aviation Administration ("FAA") Notice Criteria Tool did not indicate that formal filing of the Project was necessary.

2. In Exhibit N of the Application, your consultant ran a glare analysis for helicopter pilots hovering at 500 feet over the St. Rita's Medical Center airport which was listed as Observation Point 1 on page 2.2 of that report. Please provide a similar analysis for a helicopter pilot hovering at 500 feet over the second helipad located at the northwest corner of Spring and Collett Street in Lima (Located at 40°44'20.02"N and 84° 7'14.80"W).

Response: Stantec completed the same analysis for the helipad located at the northwest corner of Spring and Collett Street in Lima as was previously completed for St. Rita's Medical Center. This included the assumption of a helicopter pilot hovering at 500 feet over the helipad. No glare was found at this location as a result of the Project. The attached ForgeSolar reports provide confirmation of this effort.

Respectfully submitted,

/s/ Christine M.T. Pirik

Christine M.T. Pirik (0029759)
(Counsel of Record)
Terrence O'Donnell (0074213)
Matthew C. McDonnell (0090164)
Dickinson Wright PLLC
150 East Gay Street, Suite 2400
Columbus, Ohio 43215
Phone: (614) 591-5461
Email: cpirik@dickinsonwright.com
todonnell@dickinsonwright.com
mmcdonnell@dickinsonwright.com

Attorneys for Birch Solar 1, LLC

4839-7603-6606 v1 [92234-1]

Attachment 1
Forge Solar Report

DICKINSON WRIGHT PLLC

Birch October 2021

Block 1 5 ft panels

Created Oct. 11, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59705.10610

Project type Advanced
Project status: active
Category 100 to 500 kW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
101	SA tracking	SA tracking	0	0	-
102	SA tracking	SA tracking	0	0	-
103	SA tracking	SA tracking	0	0	-
104	SA tracking	SA tracking	0	0	-
105	SA tracking	SA tracking	0	0	-
106	SA tracking	SA tracking	0	0	-
107	SA tracking	SA tracking	0	0	-
108	SA tracking	SA tracking	0	0	-
109	SA tracking	SA tracking	0	0	-
110	SA tracking	SA tracking	0	0	-
111	SA tracking	SA tracking	0	0	-
112	SA tracking	SA tracking	0	0	-
113	SA tracking	SA tracking	0	0	-
114	SA tracking	SA tracking	0	0	-
116	SA tracking	SA tracking	0	0	-
117	SA tracking	SA tracking	0	0	-
118	SA tracking	SA tracking	0	0	-
119	SA tracking	SA tracking	0	0	-
120	SA tracking	SA tracking	0	0	-

Component Data

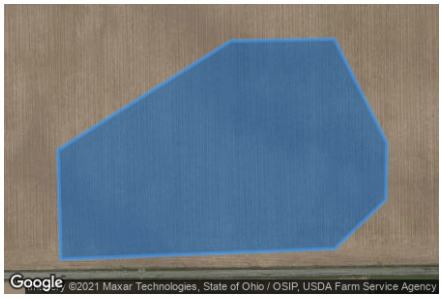
PV Array(s)

Total PV footprint area: 361.9 acres

Name: 101
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

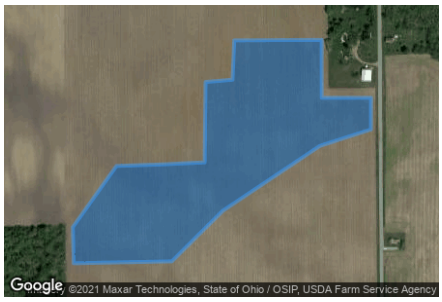
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.672024	-84.170623	857.40	5.00	862.40
2	40.673700	-84.170730	856.32	5.00	861.32
3	40.673651	-84.171911	856.99	5.00	861.99
4	40.674579	-84.171975	854.12	5.00	859.12
5	40.674611	-84.169464	844.75	5.00	849.75
6	40.672707	-84.168563	848.71	5.00	853.71
7	40.672496	-84.168027	846.07	5.00	851.07
8	40.672024	-84.168027	849.84	5.00	854.84

Name: 102
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664570	-84.169754	859.76	5.00	864.76
2	40.665489	-84.169786	857.62	5.00	862.62
3	40.666409	-84.167866	857.96	5.00	862.96
4	40.666425	-84.166718	861.05	5.00	866.05
5	40.665550	-84.166136	863.35	5.00	868.35
6	40.665072	-84.166145	862.32	5.00	867.32
7	40.664659	-84.166712	862.81	5.00	867.81

Name: 103
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666319	-84.172147	853.58	5.00	858.58
2	40.665717	-84.172125	853.98	5.00	858.98
3	40.665750	-84.169947	857.26	5.00	862.26
4	40.666592	-84.168821	857.90	5.00	862.90
5	40.667680	-84.166659	860.33	5.00	865.33
6	40.667955	-84.165527	863.74	5.00	868.74
7	40.668484	-84.165527	866.42	5.00	871.42
8	40.668484	-84.166621	861.86	5.00	866.86
9	40.669452	-84.166621	866.70	5.00	871.70
10	40.669444	-84.168563	865.24	5.00	870.24
11	40.668785	-84.168601	863.26	5.00	868.26
12	40.668748	-84.169199	862.10	5.00	867.10
13	40.667404	-84.169219	856.83	5.00	861.83
14	40.667369	-84.170194	855.91	5.00	860.91
15	40.667345	-84.171176	854.57	5.00	859.57

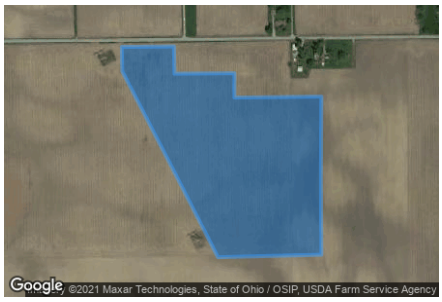
Name: 104
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666738	-84.173012	853.18	5.00	858.18
2	40.666779	-84.172454	853.41	5.00	858.41
3	40.668374	-84.170341	860.45	5.00	865.45
4	40.669920	-84.168291	863.46	5.00	868.46
5	40.670905	-84.168302	858.04	5.00	863.04
6	40.670872	-84.170110	854.14	5.00	859.15
7	40.670840	-84.172004	853.49	5.00	858.49
8	40.668757	-84.172540	854.20	5.00	859.21

Name: 105
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 17.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

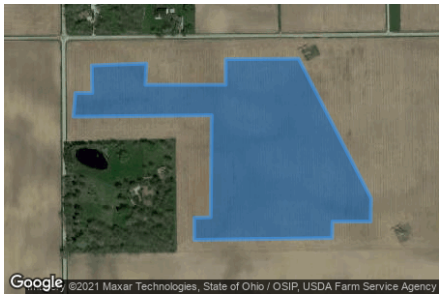
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666429	-84.173034	853.52	5.00	858.52
2	40.666746	-84.173023	853.18	5.00	858.18
3	40.668887	-84.172513	855.18	5.00	860.18
4	40.670848	-84.172047	853.58	5.00	858.58
5	40.670856	-84.172433	853.59	5.00	858.59
6	40.671572	-84.172433	853.74	5.00	858.75
7	40.671572	-84.173152	853.98	5.00	858.98
8	40.670718	-84.173162	853.20	5.00	858.20
9	40.670710	-84.174246	851.74	5.00	856.74
10	40.668516	-84.174235	854.00	5.00	859.00
11	40.666405	-84.174224	855.35	5.00	860.35

Name: 106
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670718	-84.174246	851.76	5.00	856.76
2	40.670701	-84.176177	854.61	5.00	859.61
3	40.671108	-84.176177	853.64	5.00	858.64
4	40.671100	-84.177507	854.16	5.00	859.16
5	40.671556	-84.177518	852.16	5.00	857.16
6	40.671548	-84.178677	852.94	5.00	857.94
7	40.671141	-84.178666	853.62	5.00	858.62
8	40.669562	-84.177583	857.08	5.00	862.08
9	40.668032	-84.176542	855.74	5.00	860.74
10	40.668073	-84.174246	855.01	5.00	860.01
11	40.669347	-84.174257	852.60	5.00	857.60

Name: 107
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

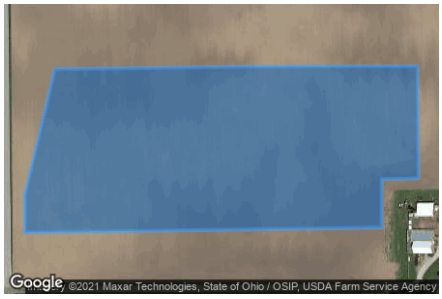


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670286	-84.184277	844.04	5.00	849.04
2	40.670311	-84.181209	849.89	5.00	854.89
3	40.668594	-84.181230	853.81	5.00	858.81
4	40.668586	-84.181595	854.58	5.00	859.58
5	40.668211	-84.181595	854.64	5.00	859.64
6	40.668244	-84.178537	857.82	5.00	862.82
7	40.668521	-84.178527	856.49	5.00	861.49
8	40.668521	-84.177679	855.89	5.00	860.89
9	40.668911	-84.177668	856.14	5.00	861.14
10	40.671263	-84.179278	851.76	5.00	856.76
11	40.671255	-84.180898	849.18	5.00	854.18
12	40.670823	-84.180898	849.16	5.00	854.16
13	40.670823	-84.182679	849.17	5.00	854.18
14	40.671182	-84.182657	848.29	5.00	853.29
15	40.671149	-84.183870	844.03	5.00	849.03
16	40.670685	-84.183859	845.23	5.00	850.23
17	40.670685	-84.184234	843.76	5.00	848.76

Name: 108
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667910	-84.183344	846.12	5.00	851.12
2	40.667918	-84.181579	855.10	5.00	860.10
3	40.667926	-84.179879	854.65	5.00	859.65
4	40.667031	-84.179873	853.97	5.00	858.97
5	40.666234	-84.179868	852.76	5.00	857.76
6	40.666218	-84.181917	851.41	5.00	856.41
7	40.666201	-84.183902	847.23	5.00	852.23
8	40.667430	-84.183848	845.59	5.00	850.59
9	40.667438	-84.183360	844.09	5.00	849.09

Name: 109
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666196	-84.183895	847.22	5.00	852.22
2	40.665138	-84.184227	849.91	5.00	854.91
3	40.664821	-84.184227	850.44	5.00	855.44
4	40.664841	-84.182183	847.57	5.00	852.57
5	40.664861	-84.180268	849.22	5.00	854.22
6	40.665268	-84.180268	850.06	5.00	855.06
7	40.665277	-84.179861	850.04	5.00	855.04
8	40.666221	-84.179871	852.75	5.00	857.75
9	40.666216	-84.181819	852.21	5.00	857.21

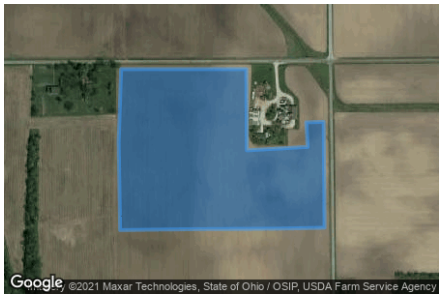
Name: 110
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670843	-84.184732	843.61	5.00	848.61
2	40.669219	-84.184726	845.26	5.00	850.26
3	40.667661	-84.184721	847.83	5.00	852.83
4	40.667661	-84.186727	843.74	5.00	848.75
5	40.669329	-84.187360	843.80	5.00	848.80
6	40.669695	-84.187349	843.16	5.00	848.16
7	40.670810	-84.186566	843.39	5.00	848.39

Name: 111
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667962	-84.187264	843.75	5.00	848.75
2	40.667962	-84.189195	845.28	5.00	850.28
3	40.666615	-84.189163	849.15	5.00	854.15
4	40.665333	-84.189152	846.11	5.00	851.11
5	40.665350	-84.188251	846.09	5.00	851.09
6	40.664438	-84.188272	847.28	5.00	852.28
7	40.664455	-84.185761	846.00	5.00	851.00
8	40.664918	-84.185761	845.38	5.00	850.38
9	40.665578	-84.186427	844.61	5.00	849.61
10	40.666770	-84.186845	843.90	5.00	848.90

Name: 112
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



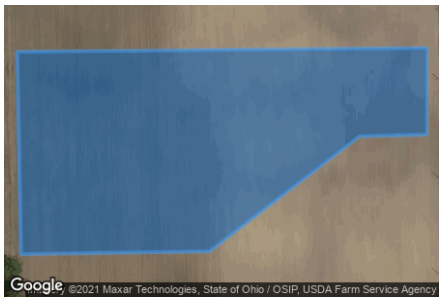
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664202	-84.189077	851.60	5.00	856.60
2	40.664202	-84.186298	848.03	5.00	853.03
3	40.662835	-84.186287	853.98	5.00	858.98
4	40.662892	-84.184935	850.67	5.00	855.67
5	40.663307	-84.184968	848.93	5.00	853.93
6	40.663315	-84.184581	848.94	5.00	853.94
7	40.661533	-84.184560	850.90	5.00	855.90
8	40.661517	-84.185665	850.89	5.00	855.89
9	40.661508	-84.187446	858.65	5.00	863.66
10	40.661492	-84.189098	850.74	5.00	855.74
11	40.662973	-84.189130	850.82	5.00	855.82

Name: 113
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.660499	-84.184571	850.72	5.00	855.72
2	40.659604	-84.184571	853.92	5.00	858.92
3	40.657301	-84.184517	851.10	5.00	856.10
4	40.657358	-84.184903	850.63	5.00	855.63
5	40.657765	-84.185847	850.44	5.00	855.44
6	40.657708	-84.186952	852.58	5.00	857.58
7	40.658961	-84.186877	852.44	5.00	857.44
8	40.658953	-84.188090	852.90	5.00	857.90
9	40.659449	-84.188047	854.60	5.00	859.60
10	40.659466	-84.186952	852.42	5.00	857.42
11	40.659661	-84.186942	852.79	5.00	857.79
12	40.659685	-84.185483	852.34	5.00	857.34
13	40.660491	-84.185504	850.74	5.00	855.74
14	40.660491	-84.184968	850.47	5.00	855.47

Name: 114
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661486	-84.189130	850.77	5.00	855.77
2	40.659793	-84.189087	853.14	5.00	858.14
3	40.659818	-84.186995	853.41	5.00	858.41
4	40.660778	-84.185332	850.66	5.00	855.66
5	40.660794	-84.184581	850.18	5.00	855.18
6	40.661519	-84.184581	850.85	5.00	855.85



Name: 116
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676378	-84.194055	839.08	5.00	844.08
2	40.676296	-84.192038	839.60	5.00	844.61
3	40.676459	-84.191845	838.95	5.00	843.95
4	40.676703	-84.190879	839.00	5.00	844.00
5	40.673253	-84.190879	841.57	5.00	846.57
6	40.673237	-84.193990	837.80	5.00	842.81

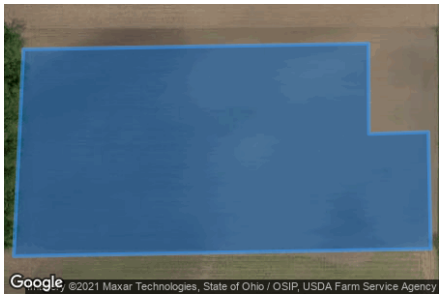
Name: 117
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676736	-84.190900	838.99	5.00	843.99
2	40.676980	-84.190772	839.45	5.00	844.45
3	40.676980	-84.189119	839.23	5.00	844.23
4	40.676996	-84.188175	839.26	5.00	844.26
5	40.673253	-84.188261	841.19	5.00	846.19
6	40.673237	-84.190879	841.60	5.00	846.60

Name: 118
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673243	-84.188253	841.24	5.00	846.24
2	40.673243	-84.187250	839.50	5.00	844.50
3	40.673475	-84.187046	840.82	5.00	845.82
4	40.673751	-84.187046	841.63	5.00	846.63
5	40.673780	-84.186402	844.70	5.00	849.70
6	40.674219	-84.186386	845.01	5.00	850.01
7	40.674211	-84.185995	846.58	5.00	851.58
8	40.674724	-84.185968	850.06	5.00	855.06
9	40.674728	-84.185158	845.29	5.00	850.29
10	40.675212	-84.185142	841.99	5.00	846.99
11	40.675224	-84.184589	845.62	5.00	850.62
12	40.677047	-84.184670	841.64	5.00	846.64
13	40.676998	-84.188162	839.26	5.00	844.26

Name: 119
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 17.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678731	-84.189192	841.55	5.00	846.55
2	40.678780	-84.185362	840.86	5.00	845.86
3	40.678019	-84.185356	840.25	5.00	845.25
4	40.678035	-84.184697	840.37	5.00	845.37
5	40.677051	-84.184670	841.64	5.00	846.64
6	40.676990	-84.189299	839.30	5.00	844.31

Name: 120
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680206	-84.193966	839.08	5.00	844.08
2	40.680238	-84.190576	841.25	5.00	846.25
3	40.680653	-84.190565	839.30	5.00	844.30
4	40.680686	-84.188065	842.96	5.00	847.96
5	40.679921	-84.188108	842.65	5.00	847.65
6	40.679002	-84.188141	842.10	5.00	847.10
7	40.679018	-84.191477	843.34	5.00	848.34
8	40.679018	-84.194009	838.57	5.00	843.57

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt deg	Orientation deg	"Green" Glare min	"Yellow" Glare min	Energy Produced kWh	Data File
101	SA tracking	SA tracking	0	0	-	
102	SA tracking	SA tracking	0	0	-	
103	SA tracking	SA tracking	0	0	-	
104	SA tracking	SA tracking	0	0	-	
105	SA tracking	SA tracking	0	0	-	
106	SA tracking	SA tracking	0	0	-	
107	SA tracking	SA tracking	0	0	-	
108	SA tracking	SA tracking	0	0	-	
109	SA tracking	SA tracking	0	0	-	
110	SA tracking	SA tracking	0	0	-	
111	SA tracking	SA tracking	0	0	-	
112	SA tracking	SA tracking	0	0	-	
113	SA tracking	SA tracking	0	0	-	
114	SA tracking	SA tracking	0	0	-	
116	SA tracking	SA tracking	0	0	-	
117	SA tracking	SA tracking	0	0	-	
118	SA tracking	SA tracking	0	0	-	
119	SA tracking	SA tracking	0	0	-	
120	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

101 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

102 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

103 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

104 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

105 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

106 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

107 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

108 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

109 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

110 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

111 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

112 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

113 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

114 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

116 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

117 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

118 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

119 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

120 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 1 10 ft panels

Created Oct. 12, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59749.10610

Project type Advanced
Project status: active
Category 100 to 500 kW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
101	SA tracking	SA tracking	0	0	-
102	SA tracking	SA tracking	0	0	-
103	SA tracking	SA tracking	0	0	-
104	SA tracking	SA tracking	0	0	-
105	SA tracking	SA tracking	0	0	-
106	SA tracking	SA tracking	0	0	-
107	SA tracking	SA tracking	0	0	-
108	SA tracking	SA tracking	0	0	-
109	SA tracking	SA tracking	0	0	-
110	SA tracking	SA tracking	0	0	-
111	SA tracking	SA tracking	0	0	-
112	SA tracking	SA tracking	0	0	-
113	SA tracking	SA tracking	0	0	-
114	SA tracking	SA tracking	0	0	-
116	SA tracking	SA tracking	0	0	-
117	SA tracking	SA tracking	0	0	-
118	SA tracking	SA tracking	0	0	-
119	SA tracking	SA tracking	0	0	-
120	SA tracking	SA tracking	0	0	-

Component Data

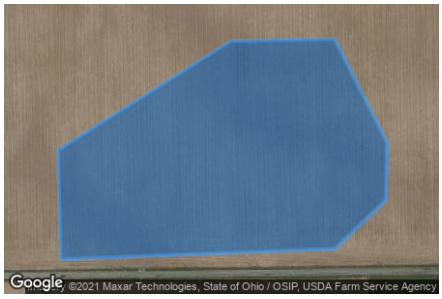
PV Array(s)

Total PV footprint area: 361.9 acres

Name: 101
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

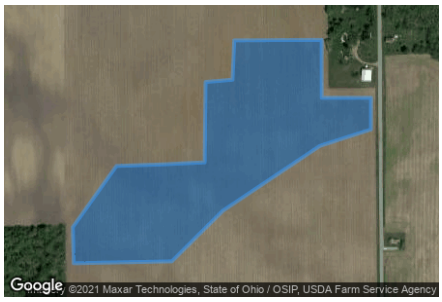
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.672024	-84.170623	857.40	10.00	867.40
2	40.673700	-84.170730	856.32	10.00	866.32
3	40.673651	-84.171911	856.99	10.00	866.99
4	40.674579	-84.171975	854.12	10.00	864.12
5	40.674611	-84.169464	844.75	10.00	854.75
6	40.672707	-84.168563	848.71	10.00	858.71
7	40.672496	-84.168027	846.07	10.00	856.07
8	40.672024	-84.168027	849.84	10.00	859.84

Name: 102
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664570	-84.169754	859.76	10.00	869.76
2	40.665489	-84.169786	857.62	10.00	867.62
3	40.666409	-84.167866	857.96	10.00	867.96
4	40.666425	-84.166718	861.05	10.00	871.05
5	40.665550	-84.166136	863.35	10.00	873.36
6	40.665072	-84.166145	862.32	10.00	872.32
7	40.664659	-84.166712	862.81	10.00	872.81

Name: 103
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666319	-84.172147	853.58	10.00	863.58
2	40.665717	-84.172125	853.98	10.00	863.98
3	40.665750	-84.169947	857.26	10.00	867.26
4	40.666592	-84.168821	857.90	10.00	867.90
5	40.667680	-84.166659	860.33	10.00	870.33
6	40.667955	-84.165527	863.74	10.00	873.74
7	40.668484	-84.165527	866.42	10.00	876.42
8	40.668484	-84.166621	861.86	10.00	871.86
9	40.669452	-84.166621	866.70	10.00	876.70
10	40.669444	-84.168563	865.24	10.00	875.24
11	40.668785	-84.168601	863.26	10.00	873.26
12	40.668748	-84.169199	862.10	10.00	872.10
13	40.667404	-84.169219	856.83	10.00	866.83
14	40.667369	-84.170194	855.91	10.00	865.91
15	40.667345	-84.171176	854.57	10.00	864.57

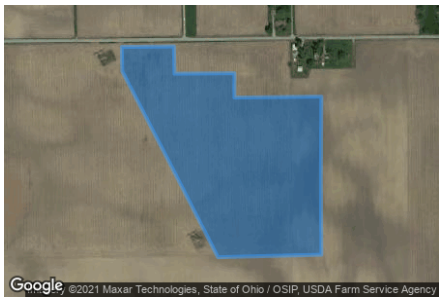
Name: 104
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666738	-84.173012	853.18	10.00	863.18
2	40.666779	-84.172454	853.41	10.00	863.41
3	40.668374	-84.170341	860.45	10.00	870.45
4	40.669920	-84.168291	863.46	10.00	873.46
5	40.670905	-84.168302	858.04	10.00	868.05
6	40.670872	-84.170110	854.14	10.00	864.15
7	40.670840	-84.172004	853.49	10.00	863.49
8	40.668757	-84.172540	854.20	10.00	864.21

Name: 105
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 17.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

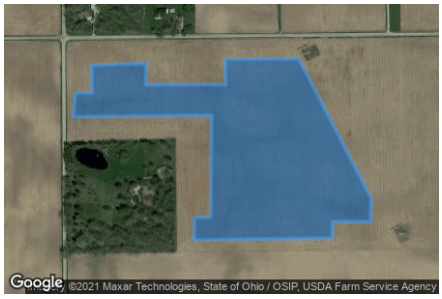
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666429	-84.173034	853.52	10.00	863.53
2	40.666746	-84.173023	853.18	10.00	863.18
3	40.668887	-84.172513	855.18	10.00	865.19
4	40.670848	-84.172047	853.58	10.00	863.58
5	40.670856	-84.172433	853.59	10.00	863.59
6	40.671572	-84.172433	853.74	10.00	863.75
7	40.671572	-84.173152	853.98	10.00	863.98
8	40.670718	-84.173162	853.20	10.00	863.20
9	40.670710	-84.174246	851.74	10.00	861.74
10	40.668516	-84.174235	854.00	10.00	864.00
11	40.666405	-84.174224	855.35	10.00	865.35

Name: 106
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670718	-84.174246	851.76	10.00	861.76
2	40.670701	-84.176177	854.61	10.00	864.61
3	40.671108	-84.176177	853.64	10.00	863.64
4	40.671100	-84.177507	854.16	10.00	864.16
5	40.671556	-84.177518	852.16	10.00	862.16
6	40.671548	-84.178677	852.94	10.00	862.94
7	40.671141	-84.178666	853.62	10.00	863.62
8	40.669562	-84.177583	857.08	10.00	867.08
9	40.668032	-84.176542	855.74	10.00	865.74
10	40.668073	-84.174246	855.01	10.00	865.01
11	40.669347	-84.174257	852.60	10.00	862.60

Name: 107
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

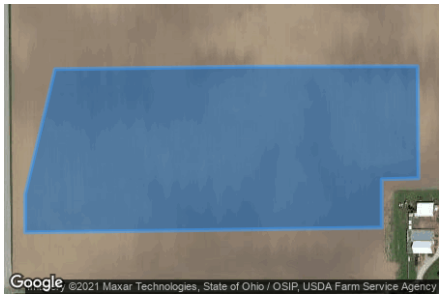


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670286	-84.184277	844.04	10.00	854.04
2	40.670311	-84.181209	849.89	10.00	859.89
3	40.668594	-84.181230	853.81	10.00	863.81
4	40.668586	-84.181595	854.58	10.00	864.58
5	40.668211	-84.181595	854.64	10.00	864.65
6	40.668244	-84.178537	857.82	10.00	867.82
7	40.668521	-84.178527	856.49	10.00	866.49
8	40.668521	-84.177679	855.89	10.00	865.89
9	40.668911	-84.177668	856.14	10.00	866.14
10	40.671263	-84.179278	851.76	10.00	861.76
11	40.671255	-84.180898	849.18	10.00	859.18
12	40.670823	-84.180898	849.16	10.00	859.16
13	40.670823	-84.182679	849.17	10.00	859.18
14	40.671182	-84.182657	848.29	10.00	858.29
15	40.671149	-84.183870	844.03	10.00	854.03
16	40.670685	-84.183859	845.23	10.00	855.23
17	40.670685	-84.184234	843.76	10.00	853.76

Name: 108
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667910	-84.183344	846.12	10.00	856.12
2	40.667918	-84.181579	855.10	10.00	865.10
3	40.667926	-84.179879	854.65	10.00	864.65
4	40.667031	-84.179873	853.97	10.00	863.97
5	40.666234	-84.179868	852.76	10.00	862.76
6	40.666218	-84.181917	851.41	10.00	861.41
7	40.666201	-84.183902	847.23	10.00	857.23
8	40.667430	-84.183848	845.59	10.00	855.59
9	40.667438	-84.183360	844.09	10.00	854.10

Name: 109
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666196	-84.183895	847.22	10.00	857.23
2	40.665138	-84.184227	849.91	10.00	859.91
3	40.664821	-84.184227	850.44	10.00	860.44
4	40.664841	-84.182183	847.57	10.00	857.57
5	40.664861	-84.180268	849.22	10.00	859.22
6	40.665268	-84.180268	850.06	10.00	860.06
7	40.665277	-84.179861	850.04	10.00	860.04
8	40.666221	-84.179871	852.75	10.00	862.75
9	40.666216	-84.181819	852.21	10.00	862.21

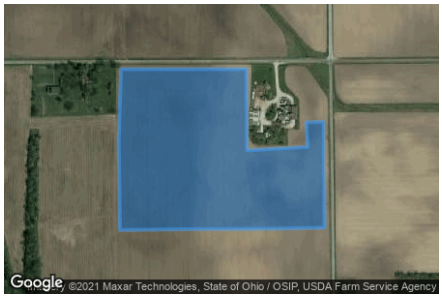
Name: 110
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670843	-84.184732	843.61	10.00	853.61
2	40.669219	-84.184726	845.26	10.00	855.26
3	40.667661	-84.184721	847.83	10.00	857.83
4	40.667661	-84.186727	843.74	10.00	853.75
5	40.669329	-84.187360	843.80	10.00	853.80
6	40.669695	-84.187349	843.16	10.00	853.16
7	40.670810	-84.186566	843.39	10.00	853.39

Name: 111
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667962	-84.187264	843.75	10.00	853.75
2	40.667962	-84.189195	845.28	10.00	855.28
3	40.666615	-84.189163	849.15	10.00	859.15
4	40.665333	-84.189152	846.11	10.00	856.11
5	40.665350	-84.188251	846.09	10.00	856.09
6	40.664438	-84.188272	847.28	10.00	857.28
7	40.664455	-84.185761	846.00	10.00	856.00
8	40.664918	-84.185761	845.38	10.00	855.38
9	40.665578	-84.186427	844.61	10.00	854.61
10	40.666770	-84.186845	843.90	10.00	853.90

Name: 112
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



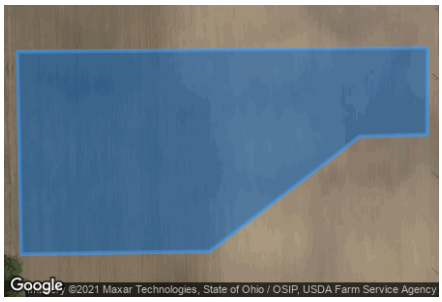
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664202	-84.189077	851.60	10.00	861.60
2	40.664202	-84.186298	848.03	10.00	858.03
3	40.662835	-84.186287	853.98	10.00	863.98
4	40.662892	-84.184935	850.67	10.00	860.67
5	40.663307	-84.184968	848.93	10.00	858.93
6	40.663315	-84.184581	848.94	10.00	858.94
7	40.661533	-84.184560	850.90	10.00	860.90
8	40.661517	-84.185665	850.89	10.00	860.89
9	40.661508	-84.187446	858.65	10.00	868.66
10	40.661492	-84.189098	850.74	10.00	860.74
11	40.662973	-84.189130	850.82	10.00	860.82

Name: 113
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.660499	-84.184571	850.72	10.00	860.72
2	40.659604	-84.184571	853.92	10.00	863.92
3	40.657301	-84.184517	851.10	10.00	861.10
4	40.657358	-84.184903	850.63	10.00	860.63
5	40.657765	-84.185847	850.44	10.00	860.44
6	40.657708	-84.186952	852.58	10.00	862.58
7	40.658961	-84.186877	852.44	10.00	862.44
8	40.658953	-84.188090	852.90	10.00	862.90
9	40.659449	-84.188047	854.60	10.00	864.60
10	40.659466	-84.186952	852.42	10.00	862.42
11	40.659661	-84.186942	852.79	10.00	862.79
12	40.659685	-84.185483	852.34	10.00	862.34
13	40.660491	-84.185504	850.74	10.00	860.74
14	40.660491	-84.184968	850.47	10.00	860.47

Name: 114
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661486	-84.189130	850.77	10.00	860.77
2	40.659793	-84.189087	853.14	10.00	863.14
3	40.659818	-84.186995	853.41	10.00	863.41
4	40.660778	-84.185332	850.66	10.00	860.66
5	40.660794	-84.184581	850.18	10.00	860.18
6	40.661519	-84.184581	850.85	10.00	860.85



Name: 116
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676378	-84.194055	839.08	10.00	849.08
2	40.676296	-84.192038	839.60	10.00	849.61
3	40.676459	-84.191845	838.95	10.00	848.95
4	40.676703	-84.190879	839.00	10.00	849.00
5	40.673253	-84.190879	841.57	10.00	851.57
6	40.673237	-84.193990	837.80	10.00	847.81

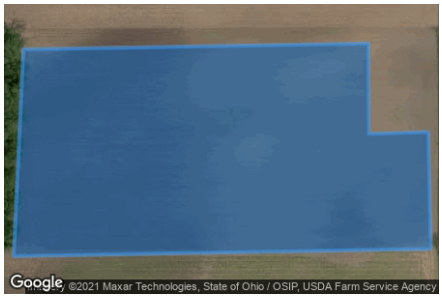
Name: 117
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676736	-84.190900	838.99	10.00	848.99
2	40.676980	-84.190772	839.45	10.00	849.45
3	40.676980	-84.189119	839.23	10.00	849.23
4	40.676996	-84.188175	839.26	10.00	849.26
5	40.673253	-84.188261	841.19	10.00	851.19
6	40.673237	-84.190879	841.60	10.00	851.60

Name: 118
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673243	-84.188253	841.24	10.00	851.24
2	40.673243	-84.187250	839.50	10.00	849.50
3	40.673475	-84.187046	840.82	10.00	850.82
4	40.673751	-84.187046	841.63	10.00	851.63
5	40.673780	-84.186402	844.70	10.00	854.71
6	40.674219	-84.186386	845.01	10.00	855.01
7	40.674211	-84.185995	846.58	10.00	856.58
8	40.674724	-84.185968	850.06	10.00	860.06
9	40.674728	-84.185158	845.29	10.00	855.29
10	40.675212	-84.185142	841.99	10.00	851.99
11	40.675224	-84.184589	845.62	10.00	855.62
12	40.677047	-84.184670	841.64	10.00	851.64
13	40.676998	-84.188162	839.26	10.00	849.26

Name: 119
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 17.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678731	-84.189192	841.55	10.00	851.55
2	40.678780	-84.185362	840.86	10.00	850.86
3	40.678019	-84.185356	840.25	10.00	850.25
4	40.678035	-84.184697	840.37	10.00	850.37
5	40.677051	-84.184670	841.64	10.00	851.64
6	40.676990	-84.189299	839.30	10.00	849.31

Name: 120
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680206	-84.193966	839.08	10.00	849.09
2	40.680238	-84.190576	841.25	10.00	851.25
3	40.680653	-84.190565	839.30	10.00	849.30
4	40.680686	-84.188065	842.96	10.00	852.96
5	40.679921	-84.188108	842.65	10.00	852.65
6	40.679002	-84.188141	842.10	10.00	852.10
7	40.679018	-84.191477	843.34	10.00	853.34
8	40.679018	-84.194009	838.57	10.00	848.57

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt deg	Orientation deg	"Green" Glare min	"Yellow" Glare min	Energy Produced kWh	Data File
101	SA tracking	SA tracking	0	0	-	
102	SA tracking	SA tracking	0	0	-	
103	SA tracking	SA tracking	0	0	-	
104	SA tracking	SA tracking	0	0	-	
105	SA tracking	SA tracking	0	0	-	
106	SA tracking	SA tracking	0	0	-	
107	SA tracking	SA tracking	0	0	-	
108	SA tracking	SA tracking	0	0	-	
109	SA tracking	SA tracking	0	0	-	
110	SA tracking	SA tracking	0	0	-	
111	SA tracking	SA tracking	0	0	-	
112	SA tracking	SA tracking	0	0	-	
113	SA tracking	SA tracking	0	0	-	
114	SA tracking	SA tracking	0	0	-	
116	SA tracking	SA tracking	0	0	-	
117	SA tracking	SA tracking	0	0	-	
118	SA tracking	SA tracking	0	0	-	
119	SA tracking	SA tracking	0	0	-	
120	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

101 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

102 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

103 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

104 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

105 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

106 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

107 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

108 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

109 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

110 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

111 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

112 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

113 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

114 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

116 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

117 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

118 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

119 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

120 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 2 5 ft panels

Created Oct. 11, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59707.10610

Project type Advanced
Project status: active
Category 100 to 500 kW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
201	SA tracking	SA tracking	0	0	-
202	SA tracking	SA tracking	0	0	-
203	SA tracking	SA tracking	0	0	-
204	SA tracking	SA tracking	0	0	-
205	SA tracking	SA tracking	0	0	-
206	SA tracking	SA tracking	0	0	-
207	SA tracking	SA tracking	0	0	-
208	SA tracking	SA tracking	0	0	-
209	SA tracking	SA tracking	0	0	-
210	SA tracking	SA tracking	0	0	-
211	SA tracking	SA tracking	0	0	-
212	SA tracking	SA tracking	0	0	-
213	SA tracking	SA tracking	0	0	-
214	SA tracking	SA tracking	0	0	-
215	SA tracking	SA tracking	0	0	-
216	SA tracking	SA tracking	0	0	-
217	SA tracking	SA tracking	0	0	-
218	SA tracking	SA tracking	0	0	-
219	SA tracking	SA tracking	0	0	-
220	SA tracking	SA tracking	0	0	-

Component Data

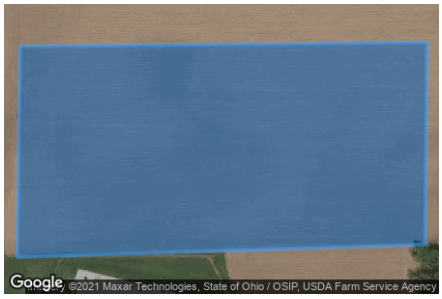
PV Array(s)

Total PV footprint area: 387.4 acres

Name: 201
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680670	-84.190580	839.25	5.00	844.25
2	40.680784	-84.190575	839.51	5.00	844.51
3	40.680987	-84.190570	840.38	5.00	845.38
4	40.680987	-84.190688	840.54	5.00	845.54
5	40.681996	-84.190655	839.79	5.00	844.79
6	40.682020	-84.189121	843.76	5.00	848.76
7	40.682362	-84.189110	840.57	5.00	845.57
8	40.682391	-84.186798	840.62	5.00	845.62
9	40.680796	-84.187067	846.15	5.00	851.15
10	40.680383	-84.187059	843.71	5.00	848.71
11	40.680381	-84.184798	842.62	5.00	847.62
12	40.678929	-84.184776	840.72	5.00	845.72
13	40.679010	-84.188123	842.17	5.00	847.17
14	40.680686	-84.188048	843.06	5.00	848.06

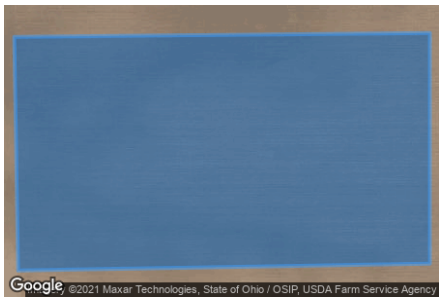
Name: 202
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680644	-84.184272	841.41	5.00	846.41
2	40.680676	-84.179755	842.24	5.00	847.24
3	40.678976	-84.179777	841.52	5.00	846.52
4	40.678870	-84.184304	841.08	5.00	846.08

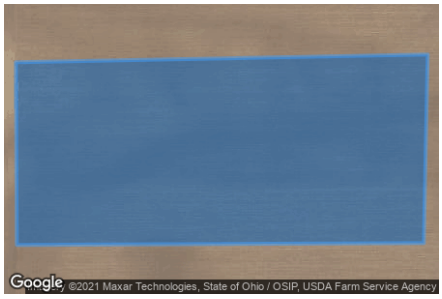
Name: 203
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682190	-84.184283	842.72	5.00	847.73
2	40.684142	-84.184326	840.85	5.00	845.85
3	40.684175	-84.179713	841.97	5.00	846.97
4	40.682247	-84.179713	841.96	5.00	846.96



Name: 204
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682186	-84.184287	842.71	5.00	847.71
2	40.680648	-84.184276	841.43	5.00	846.44
3	40.680664	-84.179759	842.45	5.00	847.45
4	40.682251	-84.179716	841.94	5.00	846.94



Name: 205
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682381	-84.188396	841.81	5.00	846.81
2	40.683007	-84.188374	840.53	5.00	845.53
3	40.684586	-84.186400	842.47	5.00	847.47
4	40.685172	-84.185982	842.55	5.00	847.55
5	40.685180	-84.184812	841.23	5.00	846.23
6	40.682812	-84.184802	840.56	5.00	845.56
7	40.682780	-84.185971	840.81	5.00	845.81
8	40.682405	-84.185971	840.87	5.00	845.87

Name: 206
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 21.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.685286	-84.193256	844.81	5.00	849.81
2	40.685342	-84.189962	843.14	5.00	848.14
3	40.683577	-84.189930	842.95	5.00	847.95
4	40.683601	-84.188492	839.83	5.00	844.83
5	40.683170	-84.188503	840.95	5.00	845.95
6	40.683162	-84.190273	841.33	5.00	846.33
7	40.682617	-84.190273	840.47	5.00	845.47
8	40.682593	-84.193277	840.48	5.00	845.48
9	40.685212	-84.193245	845.09	5.00	850.09

Name: 207
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 13.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684862	-84.194350	845.52	5.00	850.52
2	40.684846	-84.195037	846.23	5.00	851.23
3	40.685286	-84.195005	845.68	5.00	850.68
4	40.685237	-84.197912	846.65	5.00	851.65
5	40.684073	-84.197944	844.87	5.00	849.87
6	40.684049	-84.199307	845.70	5.00	850.70
7	40.683675	-84.199318	844.89	5.00	849.89
8	40.683715	-84.194275	842.29	5.00	847.29

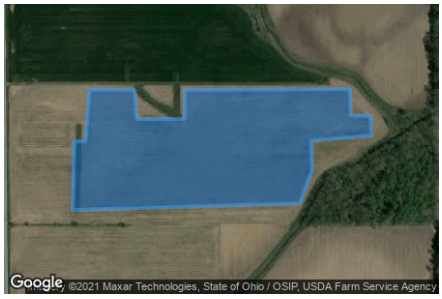
Name: 208
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.683634	-84.199039	846.20	5.00	851.20
2	40.683097	-84.199017	844.10	5.00	849.10
3	40.683105	-84.197805	843.88	5.00	848.88
4	40.681811	-84.197365	841.16	5.00	846.16
5	40.681811	-84.195820	840.09	5.00	845.09
6	40.680965	-84.195230	840.87	5.00	845.87
7	40.680982	-84.194339	839.26	5.00	844.26
8	40.683715	-84.194286	842.33	5.00	847.33

Name: 209
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684913	-84.201826	852.24	5.00	857.24
2	40.684926	-84.200689	849.63	5.00	854.63
3	40.684287	-84.200673	846.93	5.00	851.93
4	40.683717	-84.199589	845.31	5.00	850.31
5	40.682725	-84.199048	843.22	5.00	848.22
6	40.682285	-84.199010	844.56	5.00	849.56
7	40.682253	-84.198272	842.06	5.00	847.06
8	40.681492	-84.198226	843.04	5.00	848.04
9	40.681458	-84.200342	847.33	5.00	852.33
10	40.681472	-84.202556	846.10	5.00	851.10
11	40.682981	-84.202577	849.04	5.00	854.04
12	40.683758	-84.201944	849.37	5.00	854.37

Name: 210
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.681126	-84.201821	848.19	5.00	853.19
2	40.681118	-84.200813	845.16	5.00	850.16
3	40.680630	-84.200770	843.98	5.00	848.98
4	40.680630	-84.199933	840.31	5.00	845.31
5	40.680630	-84.199707	839.91	5.00	844.91
6	40.681118	-84.199697	843.89	5.00	848.89
7	40.681134	-84.196038	839.77	5.00	844.77
8	40.680695	-84.196017	841.18	5.00	846.18
9	40.680679	-84.195577	839.50	5.00	844.50
10	40.680353	-84.195555	839.33	5.00	844.33
11	40.680264	-84.196897	840.52	5.00	845.52
12	40.679767	-84.196875	838.89	5.00	843.89
13	40.679210	-84.197149	838.41	5.00	843.41
14	40.679098	-84.202189	840.44	5.00	845.44
15	40.680258	-84.202155	845.54	5.00	850.54
16	40.680253	-84.201902	845.37	5.00	850.37

Name: 211
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678762	-84.202629	839.56	5.00	844.56
2	40.678331	-84.202629	838.08	5.00	843.08
3	40.678323	-84.202844	838.02	5.00	843.02
4	40.677965	-84.202865	837.94	5.00	842.94
5	40.677965	-84.202640	837.82	5.00	842.82
6	40.677566	-84.202661	837.86	5.00	842.86
7	40.677371	-84.202651	837.80	5.00	842.80
8	40.677379	-84.202104	837.82	5.00	842.82
9	40.677070	-84.202114	837.77	5.00	842.77
10	40.677062	-84.201696	838.04	5.00	843.04
11	40.676159	-84.201728	838.42	5.00	843.42
12	40.676151	-84.200634	836.44	5.00	841.44
13	40.677534	-84.200569	837.90	5.00	842.90
14	40.677558	-84.199014	837.16	5.00	842.16
15	40.678811	-84.199035	839.80	5.00	844.80

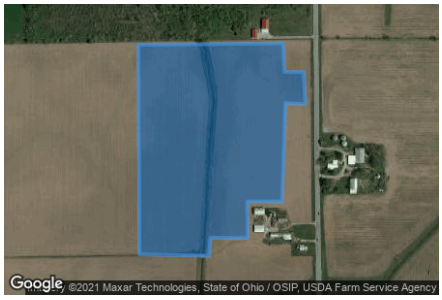
Name: 212
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674534	-84.201856	837.29	5.00	842.29
2	40.675840	-84.200332	837.09	5.00	842.09
3	40.675873	-84.198948	837.23	5.00	842.23
4	40.673358	-84.198921	839.68	5.00	844.68
5	40.673379	-84.200879	838.14	5.00	843.14
6	40.673696	-84.200890	840.27	5.00	845.27
7	40.673728	-84.202945	836.34	5.00	841.34
8	40.674139	-84.202955	835.78	5.00	840.78
9	40.674156	-84.201920	840.61	5.00	845.61

Name: 213
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673134	-84.210342	834.08	5.00	839.08
2	40.673208	-84.204141	835.39	5.00	840.39
3	40.672410	-84.204184	836.25	5.00	841.26
4	40.672402	-84.204656	836.79	5.00	841.79
5	40.671954	-84.204624	835.32	5.00	840.32
6	40.671922	-84.207542	833.16	5.00	838.16
7	40.672361	-84.207531	836.19	5.00	841.19
8	40.672337	-84.210385	834.17	5.00	839.17

Name: 214
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676113	-84.204452	839.77	5.00	844.77
2	40.676113	-84.205224	840.27	5.00	845.27
3	40.675502	-84.205214	839.32	5.00	844.32
4	40.675502	-84.206040	836.29	5.00	841.29
5	40.675201	-84.206072	836.46	5.00	841.46
6	40.675226	-84.207617	834.99	5.00	839.99
7	40.678741	-84.207638	839.65	5.00	844.65
8	40.678765	-84.204431	840.63	5.00	845.63
9	40.678285	-84.204398	838.83	5.00	843.83
10	40.678285	-84.203969	838.35	5.00	843.35
11	40.677748	-84.203937	838.04	5.00	843.04
12	40.677764	-84.204377	838.05	5.00	843.05

Name: 215
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678749	-84.207638	839.65	5.00	844.65
2	40.678708	-84.210567	841.43	5.00	846.43
3	40.675152	-84.210664	840.80	5.00	845.80
4	40.675226	-84.207606	835.01	5.00	840.01

Name: 216
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678716	-84.210600	841.62	5.00	846.62
2	40.678667	-84.212906	851.12	5.00	856.12
3	40.677862	-84.212906	850.38	5.00	855.38
4	40.677878	-84.212381	848.35	5.00	853.35
5	40.675283	-84.212370	845.34	5.00	850.34
6	40.675266	-84.212220	845.65	5.00	850.65
7	40.674143	-84.212252	842.34	5.00	847.34
8	40.674176	-84.210353	833.89	5.00	838.89
9	40.674558	-84.210331	836.07	5.00	841.07
10	40.674575	-84.209430	833.72	5.00	838.72
11	40.675193	-84.209419	835.47	5.00	840.47
12	40.675144	-84.210664	840.84	5.00	845.84

Name: 217
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.677390	-84.213053	848.34	5.00	853.35
2	40.677846	-84.213053	849.92	5.00	854.92
3	40.677846	-84.215306	851.25	5.00	856.25
4	40.677455	-84.215327	848.49	5.00	853.49
5	40.677439	-84.215907	847.31	5.00	852.31
6	40.677423	-84.217237	847.97	5.00	852.97
7	40.677423	-84.217537	847.94	5.00	852.94
8	40.675242	-84.217537	843.15	5.00	848.15
9	40.675242	-84.212795	845.90	5.00	850.90
10	40.676186	-84.212731	846.78	5.00	851.78
11	40.676235	-84.213503	848.61	5.00	853.61
12	40.677276	-84.213482	847.70	5.00	852.70

Name: 218
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.677439	-84.215349	848.21	5.00	853.21
2	40.679945	-84.215242	853.76	5.00	858.76
3	40.679961	-84.216465	857.01	5.00	862.01
4	40.679538	-84.216529	857.87	5.00	862.87
5	40.679522	-84.217495	859.17	5.00	864.17
6	40.677390	-84.217559	847.63	5.00	852.63

Name: 219
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676397	-84.217580	848.70	5.00	853.70
2	40.675193	-84.217559	842.95	5.00	847.95
3	40.675193	-84.221057	844.99	5.00	849.99
4	40.675763	-84.221078	845.96	5.00	850.96
5	40.675763	-84.222451	853.82	5.00	858.82
6	40.677992	-84.222473	856.84	5.00	861.84
7	40.678041	-84.220499	855.78	5.00	860.78
8	40.678708	-84.220542	860.92	5.00	865.92
9	40.678708	-84.219469	858.88	5.00	863.88
10	40.676316	-84.219426	847.78	5.00	852.78

Name: 220
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.685282	-84.214705	851.20	5.00	856.20
2	40.685298	-84.212409	851.52	5.00	856.52
3	40.683834	-84.212452	847.20	5.00	852.20
4	40.683818	-84.213482	846.81	5.00	851.81
5	40.683167	-84.213503	846.78	5.00	851.79
6	40.683183	-84.212688	845.59	5.00	850.59
7	40.681914	-84.212731	846.98	5.00	851.98
8	40.681881	-84.214812	850.48	5.00	855.48

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
201	SA tracking	SA tracking	0	0	-	
202	SA tracking	SA tracking	0	0	-	
203	SA tracking	SA tracking	0	0	-	
204	SA tracking	SA tracking	0	0	-	
205	SA tracking	SA tracking	0	0	-	
206	SA tracking	SA tracking	0	0	-	
207	SA tracking	SA tracking	0	0	-	
208	SA tracking	SA tracking	0	0	-	
209	SA tracking	SA tracking	0	0	-	
210	SA tracking	SA tracking	0	0	-	
211	SA tracking	SA tracking	0	0	-	
212	SA tracking	SA tracking	0	0	-	
213	SA tracking	SA tracking	0	0	-	
214	SA tracking	SA tracking	0	0	-	
215	SA tracking	SA tracking	0	0	-	
216	SA tracking	SA tracking	0	0	-	
217	SA tracking	SA tracking	0	0	-	
218	SA tracking	SA tracking	0	0	-	
219	SA tracking	SA tracking	0	0	-	
220	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

201 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

202 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

203 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

204 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

205 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

206 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

207 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

208 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

209 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

210 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

211 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

212 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

213 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

214 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

215 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

216 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

217 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

218 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

219 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

220 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 2 10 ft panels

Created Oct. 12, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59748.10610

Project type Advanced
Project status: active
Category 100 to 500 kW

Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
201	SA tracking	SA tracking	0	0	-
202	SA tracking	SA tracking	0	0	-
203	SA tracking	SA tracking	0	0	-
204	SA tracking	SA tracking	0	0	-
205	SA tracking	SA tracking	0	0	-
206	SA tracking	SA tracking	0	0	-
207	SA tracking	SA tracking	0	0	-
208	SA tracking	SA tracking	0	0	-
209	SA tracking	SA tracking	0	0	-
210	SA tracking	SA tracking	0	0	-
211	SA tracking	SA tracking	0	0	-
212	SA tracking	SA tracking	0	0	-
213	SA tracking	SA tracking	0	0	-
214	SA tracking	SA tracking	0	0	-
215	SA tracking	SA tracking	0	0	-
216	SA tracking	SA tracking	0	0	-
217	SA tracking	SA tracking	0	0	-
218	SA tracking	SA tracking	0	0	-
219	SA tracking	SA tracking	0	0	-
220	SA tracking	SA tracking	0	0	-

Component Data

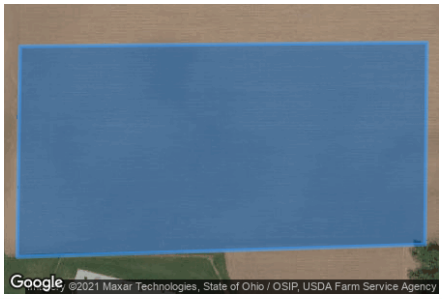
PV Array(s)

Total PV footprint area: 387.4 acres

Name: 201
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680670	-84.190580	839.25	10.00	849.25
2	40.680784	-84.190575	839.51	10.00	849.51
3	40.680987	-84.190570	840.38	10.00	850.38
4	40.680987	-84.190688	840.54	10.00	850.54
5	40.681996	-84.190655	839.79	10.00	849.79
6	40.682020	-84.189121	843.76	10.00	853.76
7	40.682362	-84.189110	840.57	10.00	850.57
8	40.682391	-84.186798	840.62	10.00	850.62
9	40.680796	-84.187067	846.15	10.00	856.15
10	40.680383	-84.187059	843.71	10.00	853.71
11	40.680381	-84.184798	842.62	10.00	852.62
12	40.678929	-84.184776	840.72	10.00	850.72
13	40.679010	-84.188123	842.17	10.00	852.17
14	40.680686	-84.188048	843.06	10.00	853.06

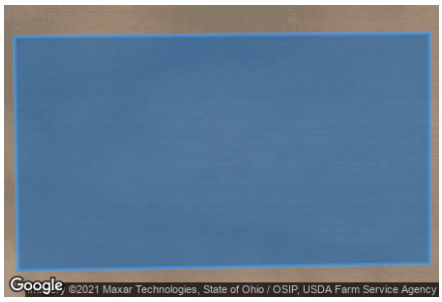
Name: 202
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680644	-84.184272	841.41	10.00	851.41
2	40.680676	-84.179755	842.24	10.00	852.24
3	40.678976	-84.179777	841.52	10.00	851.52
4	40.678870	-84.184304	841.08	10.00	851.08

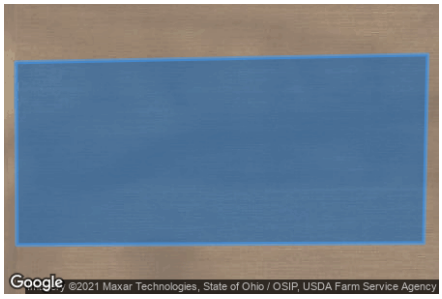
Name: 203
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682190	-84.184283	842.72	10.00	852.73
2	40.684142	-84.184326	840.85	10.00	850.85
3	40.684175	-84.179713	841.97	10.00	851.97
4	40.682247	-84.179713	841.96	10.00	851.96



Name: 204
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682186	-84.184287	842.71	10.00	852.71
2	40.680648	-84.184276	841.43	10.00	851.44
3	40.680664	-84.179759	842.45	10.00	852.45
4	40.682251	-84.179716	841.94	10.00	851.94



Name: 205
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682381	-84.188396	841.81	10.00	851.81
2	40.683007	-84.188374	840.53	10.00	850.53
3	40.684586	-84.186400	842.47	10.00	852.47
4	40.685172	-84.185982	842.55	10.00	852.55
5	40.685180	-84.184812	841.23	10.00	851.23
6	40.682812	-84.184802	840.56	10.00	850.56
7	40.682780	-84.185971	840.81	10.00	850.81
8	40.682405	-84.185971	840.87	10.00	850.87

Name: 206
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 21.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.685286	-84.193256	844.81	10.00	854.81
2	40.685342	-84.189962	843.14	10.00	853.14
3	40.683577	-84.189930	842.95	10.00	852.95
4	40.683601	-84.188492	839.83	10.00	849.83
5	40.683170	-84.188503	840.95	10.00	850.95
6	40.683162	-84.190273	841.33	10.00	851.33
7	40.682617	-84.190273	840.47	10.00	850.47
8	40.682593	-84.193277	840.48	10.00	850.48
9	40.685212	-84.193245	845.09	10.00	855.09

Name: 207
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 13.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684862	-84.194350	845.52	10.00	855.52
2	40.684846	-84.195037	846.23	10.00	856.23
3	40.685286	-84.195005	845.68	10.00	855.68
4	40.685237	-84.197912	846.65	10.00	856.65
5	40.684073	-84.197944	844.87	10.00	854.87
6	40.684049	-84.199307	845.70	10.00	855.70
7	40.683675	-84.199318	844.89	10.00	854.89
8	40.683715	-84.194275	842.29	10.00	852.29

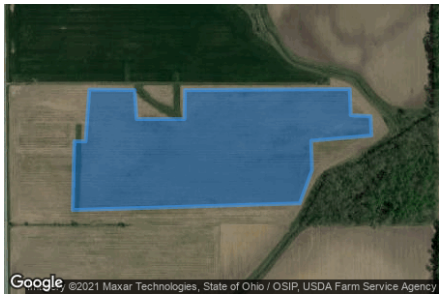
Name: 208
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 18.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.683634	-84.199039	846.20	10.00	856.20
2	40.683097	-84.199017	844.10	10.00	854.10
3	40.683105	-84.197805	843.88	10.00	853.88
4	40.681811	-84.197365	841.16	10.00	851.16
5	40.681811	-84.195820	840.09	10.00	850.09
6	40.680965	-84.195230	840.87	10.00	850.87
7	40.680982	-84.194339	839.26	10.00	849.26
8	40.683715	-84.194286	842.33	10.00	852.33

Name: 209
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684913	-84.201826	852.24	10.00	862.24
2	40.684926	-84.200689	849.63	10.00	859.63
3	40.684287	-84.200673	846.93	10.00	856.93
4	40.683717	-84.199589	845.31	10.00	855.31
5	40.682725	-84.199048	843.22	10.00	853.22
6	40.682285	-84.199010	844.56	10.00	854.56
7	40.682253	-84.198272	842.06	10.00	852.06
8	40.681492	-84.198226	843.04	10.00	853.04
9	40.681458	-84.200342	847.33	10.00	857.33
10	40.681472	-84.202556	846.10	10.00	856.10
11	40.682981	-84.202577	849.04	10.00	859.04
12	40.683758	-84.201944	849.37	10.00	859.37

Name: 210
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.681126	-84.201821	848.19	10.00	858.19
2	40.681118	-84.200813	845.16	10.00	855.16
3	40.680630	-84.200770	843.98	10.00	853.98
4	40.680630	-84.199933	840.31	10.00	850.31
5	40.680630	-84.199707	839.91	10.00	849.91
6	40.681118	-84.199697	843.89	10.00	853.89
7	40.681134	-84.196038	839.77	10.00	849.77
8	40.680695	-84.196017	841.18	10.00	851.18
9	40.680679	-84.195577	839.50	10.00	849.50
10	40.680353	-84.195555	839.33	10.00	849.33
11	40.680264	-84.196897	840.52	10.00	850.52
12	40.679767	-84.196875	838.89	10.00	848.89
13	40.679210	-84.197149	838.41	10.00	848.41
14	40.679098	-84.202189	840.44	10.00	850.44
15	40.680258	-84.202155	845.54	10.00	855.54
16	40.680253	-84.201902	845.37	10.00	855.37

Name: 211
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678762	-84.202629	839.56	10.00	849.56
2	40.678331	-84.202629	838.08	10.00	848.08
3	40.678323	-84.202844	838.02	10.00	848.02
4	40.677965	-84.202865	837.94	10.00	847.94
5	40.677965	-84.202640	837.82	10.00	847.82
6	40.677566	-84.202661	837.86	10.00	847.86
7	40.677371	-84.202651	837.80	10.00	847.80
8	40.677379	-84.202104	837.82	10.00	847.82
9	40.677070	-84.202114	837.77	10.00	847.77
10	40.677062	-84.201696	838.04	10.00	848.04
11	40.676159	-84.201728	838.42	10.00	848.42
12	40.676151	-84.200634	836.44	10.00	846.44
13	40.677534	-84.200569	837.90	10.00	847.90
14	40.677558	-84.199014	837.16	10.00	847.16
15	40.678811	-84.199035	839.80	10.00	849.80

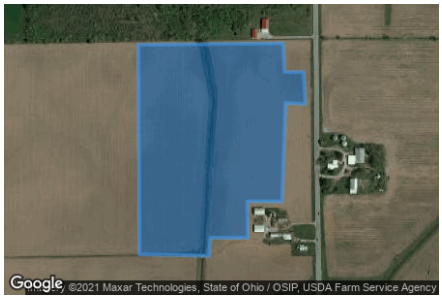
Name: 212
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674534	-84.201856	837.29	10.00	847.29
2	40.675840	-84.200332	837.09	10.00	847.09
3	40.675873	-84.198948	837.23	10.00	847.23
4	40.673358	-84.198921	839.68	10.00	849.68
5	40.673379	-84.200879	838.14	10.00	848.14
6	40.673696	-84.200890	840.27	10.00	850.27
7	40.673728	-84.202945	836.34	10.00	846.34
8	40.674139	-84.202955	835.78	10.00	845.78
9	40.674156	-84.201920	840.61	10.00	850.61

Name: 213
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 14.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673134	-84.210342	834.08	10.00	844.08
2	40.673208	-84.204141	835.39	10.00	845.39
3	40.672410	-84.204184	836.25	10.00	846.26
4	40.672402	-84.204656	836.79	10.00	846.79
5	40.671954	-84.204624	835.32	10.00	845.32
6	40.671922	-84.207542	833.16	10.00	843.16
7	40.672361	-84.207531	836.19	10.00	846.19
8	40.672337	-84.210385	834.17	10.00	844.17

Name: 214
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676113	-84.204452	839.77	10.00	849.77
2	40.676113	-84.205224	840.27	10.00	850.27
3	40.675502	-84.205214	839.32	10.00	849.32
4	40.675502	-84.206040	836.29	10.00	846.30
5	40.675201	-84.206072	836.46	10.00	846.46
6	40.675226	-84.207617	834.99	10.00	844.99
7	40.678741	-84.207638	839.65	10.00	849.65
8	40.678765	-84.204431	840.63	10.00	850.63
9	40.678285	-84.204398	838.83	10.00	848.83
10	40.678285	-84.203969	838.35	10.00	848.35
11	40.677748	-84.203937	838.04	10.00	848.04
12	40.677764	-84.204377	838.05	10.00	848.05

Name: 215
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678749	-84.207638	839.65	10.00	849.65
2	40.678708	-84.210567	841.43	10.00	851.43
3	40.675152	-84.210664	840.80	10.00	850.80
4	40.675226	-84.207606	835.01	10.00	845.01

Name: 216
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678716	-84.210600	841.62	10.00	851.62
2	40.678667	-84.212906	851.12	10.00	861.12
3	40.677862	-84.212906	850.38	10.00	860.38
4	40.677878	-84.212381	848.35	10.00	858.35
5	40.675283	-84.212370	845.34	10.00	855.34
6	40.675266	-84.212220	845.65	10.00	855.65
7	40.674143	-84.212252	842.34	10.00	852.34
8	40.674176	-84.210353	833.89	10.00	843.89
9	40.674558	-84.210331	836.07	10.00	846.07
10	40.674575	-84.209430	833.72	10.00	843.72
11	40.675193	-84.209419	835.47	10.00	845.47
12	40.675144	-84.210664	840.84	10.00	850.84

Name: 217
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.677390	-84.213053	848.34	10.00	858.35
2	40.677846	-84.213053	849.92	10.00	859.92
3	40.677846	-84.215306	851.25	10.00	861.25
4	40.677455	-84.215327	848.49	10.00	858.50
5	40.677439	-84.215907	847.31	10.00	857.31
6	40.677423	-84.217237	847.97	10.00	857.97
7	40.677423	-84.217537	847.94	10.00	857.94
8	40.675242	-84.217537	843.15	10.00	853.15
9	40.675242	-84.212795	845.90	10.00	855.90
10	40.676186	-84.212731	846.78	10.00	856.78
11	40.676235	-84.213503	848.61	10.00	858.61
12	40.677276	-84.213482	847.70	10.00	857.71

Name: 218
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.677439	-84.215349	848.21	10.00	858.21
2	40.679945	-84.215242	853.76	10.00	863.76
3	40.679961	-84.216465	857.01	10.00	867.01
4	40.679538	-84.216529	857.87	10.00	867.87
5	40.679522	-84.217495	859.17	10.00	869.17
6	40.677390	-84.217559	847.63	10.00	857.63

Name: 219
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676397	-84.217580	848.70	10.00	858.70
2	40.675193	-84.217559	842.95	10.00	852.95
3	40.675193	-84.221057	844.99	10.00	854.99
4	40.675763	-84.221078	845.96	10.00	855.96
5	40.675763	-84.222451	853.82	10.00	863.82
6	40.677992	-84.222473	856.84	10.00	866.84
7	40.678041	-84.220499	855.78	10.00	865.78
8	40.678708	-84.220542	860.92	10.00	870.92
9	40.678708	-84.219469	858.88	10.00	868.88
10	40.676316	-84.219426	847.78	10.00	857.78

Name: 220
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.685282	-84.214705	851.20	10.00	861.20
2	40.685298	-84.212409	851.52	10.00	861.52
3	40.683834	-84.212452	847.20	10.00	857.20
4	40.683818	-84.213482	846.81	10.00	856.81
5	40.683167	-84.213503	846.78	10.00	856.79
6	40.683183	-84.212688	845.59	10.00	855.59
7	40.681914	-84.212731	846.98	10.00	856.98
8	40.681881	-84.214812	850.48	10.00	860.48

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
201	SA tracking	SA tracking	0	0	-	
202	SA tracking	SA tracking	0	0	-	
203	SA tracking	SA tracking	0	0	-	
204	SA tracking	SA tracking	0	0	-	
205	SA tracking	SA tracking	0	0	-	
206	SA tracking	SA tracking	0	0	-	
207	SA tracking	SA tracking	0	0	-	
208	SA tracking	SA tracking	0	0	-	
209	SA tracking	SA tracking	0	0	-	
210	SA tracking	SA tracking	0	0	-	
211	SA tracking	SA tracking	0	0	-	
212	SA tracking	SA tracking	0	0	-	
213	SA tracking	SA tracking	0	0	-	
214	SA tracking	SA tracking	0	0	-	
215	SA tracking	SA tracking	0	0	-	
216	SA tracking	SA tracking	0	0	-	
217	SA tracking	SA tracking	0	0	-	
218	SA tracking	SA tracking	0	0	-	
219	SA tracking	SA tracking	0	0	-	
220	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

201 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

202 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

203 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

204 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

205 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

206 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

207 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

208 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

209 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

210 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

211 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

212 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

213 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

214 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

215 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

216 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

217 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

218 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

219 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

220 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

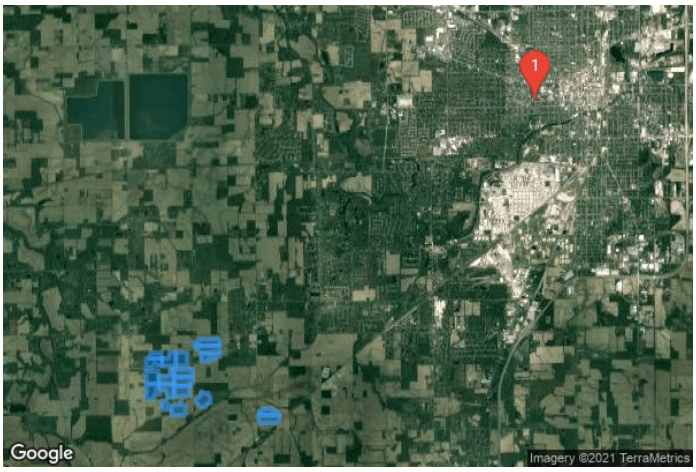
- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 3 5 ft panels

Created Oct. 11, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59711.10610

Project type Advanced
Project status: active
Category 100 to 500 kW



Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
301	SA tracking	SA tracking	0	0	-
302	SA tracking	SA tracking	0	0	-
303	SA tracking	SA tracking	0	0	-
304	SA tracking	SA tracking	0	0	-
305	SA tracking	SA tracking	0	0	-
306	SA tracking	SA tracking	0	0	-
307	SA tracking	SA tracking	0	0	-
308	SA tracking	SA tracking	0	0	-
309	SA tracking	SA tracking	0	0	-
310	SA tracking	SA tracking	0	0	-
311	SA tracking	SA tracking	0	0	-
312	SA tracking	SA tracking	0	0	-
313	SA tracking	SA tracking	0	0	-
314	SA tracking	SA tracking	0	0	-
315	SA tracking	SA tracking	0	0	-
316	SA tracking	SA tracking	0	0	-
317	SA tracking	SA tracking	0	0	-
318	SA tracking	SA tracking	0	0	-
319	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 400.8 acres

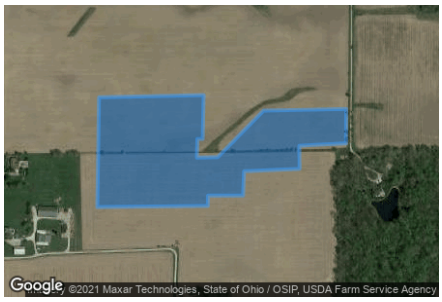
Name: 301
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684770	-84.221324	863.10	5.00	868.10
2	40.685119	-84.221313	864.58	5.00	869.58
3	40.685152	-84.215026	851.80	5.00	856.80
4	40.683643	-84.215075	849.61	5.00	854.61
5	40.683614	-84.219666	857.21	5.00	862.21
6	40.683574	-84.222601	875.39	5.00	880.39
7	40.684412	-84.222590	868.67	5.00	873.67
8	40.684412	-84.221388	862.60	5.00	867.60

Name: 302
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.683643	-84.215069	849.61	5.00	854.61
2	40.682170	-84.215064	851.31	5.00	856.31
3	40.682158	-84.217118	857.23	5.00	862.23
4	40.681954	-84.217113	857.65	5.00	862.66
5	40.681922	-84.220659	870.42	5.00	875.42
6	40.682992	-84.221941	874.55	5.00	879.55
7	40.683586	-84.221936	873.96	5.00	878.96

Name: 303
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.681918	-84.220488	869.63	5.00	874.63
2	40.680083	-84.220525	867.05	5.00	872.05
3	40.680103	-84.218074	863.53	5.00	868.53
4	40.680274	-84.218068	863.91	5.00	868.91
5	40.680274	-84.217291	862.35	5.00	867.35
6	40.680681	-84.217269	862.90	5.00	867.90
7	40.680722	-84.216035	857.48	5.00	862.48
8	40.681108	-84.216041	858.33	5.00	863.33
9	40.681149	-84.215005	853.72	5.00	858.72
10	40.681723	-84.215000	851.24	5.00	856.24
11	40.681694	-84.216835	855.94	5.00	860.94
12	40.680917	-84.217854	861.44	5.00	866.44
13	40.680909	-84.218315	860.76	5.00	865.76
14	40.681222	-84.218304	860.07	5.00	865.07
15	40.681222	-84.218186	859.77	5.00	864.77
16	40.681954	-84.218165	861.65	5.00	866.65

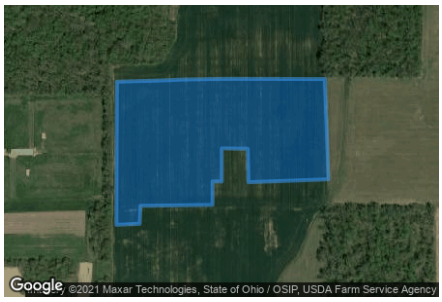
Name: 304
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682133	-84.224838	870.46	5.00	875.46
2	40.679180	-84.224624	857.87	5.00	862.87
3	40.679131	-84.228186	856.40	5.00	861.40
4	40.680636	-84.228132	866.61	5.00	871.61
5	40.682154	-84.228148	870.69	5.00	875.69
6	40.682166	-84.227005	874.52	5.00	879.52

Name: 305
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682162	-84.228160	870.82	5.00	875.82
2	40.682138	-84.230112	875.78	5.00	880.78
3	40.680811	-84.230155	863.18	5.00	868.18
4	40.680813	-84.232347	861.25	5.00	866.25
5	40.678997	-84.232280	855.85	5.00	860.85
6	40.679127	-84.228160	856.35	5.00	861.35

Name: 306
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.679147	-84.232282	856.29	5.00	861.30
2	40.680824	-84.232360	861.31	5.00	866.31
3	40.680828	-84.234549	872.52	5.00	877.52
4	40.680815	-84.235520	869.00	5.00	874.00
5	40.680803	-84.235895	867.02	5.00	872.02
6	40.680779	-84.236979	862.87	5.00	867.87
7	40.678387	-84.236990	857.32	5.00	862.32
8	40.678403	-84.236475	858.88	5.00	863.88
9	40.678704	-84.236453	860.15	5.00	865.15
10	40.678720	-84.234855	857.35	5.00	862.35
11	40.679111	-84.234855	860.10	5.00	865.10
12	40.679111	-84.234651	859.64	5.00	864.64
13	40.679664	-84.234651	864.89	5.00	869.89
14	40.679658	-84.234074	865.18	5.00	870.18
15	40.679099	-84.234058	858.70	5.00	863.70

Name: 307
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 10.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680810	-84.235960	866.78	5.00	871.78
2	40.681082	-84.235976	868.07	5.00	873.07
3	40.681493	-84.235686	874.66	5.00	879.66
4	40.682099	-84.235563	875.95	5.00	880.95
5	40.682112	-84.232398	865.36	5.00	870.36
6	40.680830	-84.232355	861.32	5.00	866.32

Name: 308
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674948	-84.236891	851.70	5.00	856.70
2	40.675054	-84.233394	844.40	5.00	849.40
3	40.677991	-84.233447	853.78	5.00	858.78
4	40.677877	-84.237031	855.96	5.00	860.96

Name: 309
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674948	-84.236898	851.76	5.00	856.76
2	40.671555	-84.236888	853.95	5.00	858.95
3	40.671587	-84.234699	851.11	5.00	856.11
4	40.672287	-84.234742	849.77	5.00	854.77
5	40.672303	-84.234527	849.35	5.00	854.35
6	40.672645	-84.234527	846.99	5.00	851.99
7	40.672694	-84.232725	845.16	5.00	850.16
8	40.673003	-84.232811	844.50	5.00	849.50
9	40.673036	-84.234098	845.73	5.00	850.73
10	40.673947	-84.234098	846.27	5.00	851.27
11	40.673947	-84.233304	845.31	5.00	850.31
12	40.675037	-84.233379	844.53	5.00	849.53

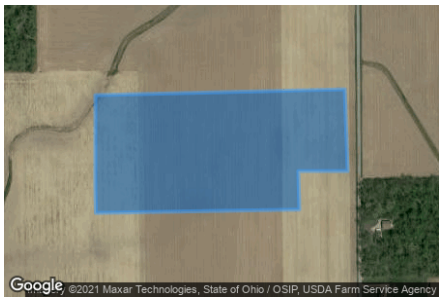
Name: 310
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678316	-84.229896	858.10	5.00	863.10
2	40.678333	-84.229145	855.59	5.00	860.59
3	40.678333	-84.228630	854.71	5.00	859.71
4	40.674964	-84.228587	853.11	5.00	858.12
5	40.674883	-84.232986	846.16	5.00	851.16
6	40.676852	-84.233007	853.24	5.00	858.24
7	40.676917	-84.229875	852.98	5.00	857.98

Name: 311
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678349	-84.228652	854.91	5.00	859.91
2	40.678414	-84.223051	858.93	5.00	863.93
3	40.676591	-84.223051	857.09	5.00	862.09
4	40.676526	-84.228566	849.18	5.00	854.18

Name: 312
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676486	-84.228594	849.10	5.00	854.10
2	40.676583	-84.223058	857.15	5.00	862.15
3	40.675216	-84.222994	853.51	5.00	858.51
4	40.675216	-84.224088	856.51	5.00	861.51
5	40.674574	-84.224067	854.18	5.00	859.18
6	40.674517	-84.228583	851.07	5.00	856.07
7	40.674972	-84.228594	853.12	5.00	858.12
8	40.674956	-84.228594	853.11	5.00	858.12

Name: 313
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 21.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674879	-84.233000	846.17	5.00	851.17
2	40.673967	-84.232968	844.85	5.00	849.85
3	40.673975	-84.232560	844.69	5.00	849.69
4	40.673658	-84.232539	844.30	5.00	849.30
5	40.673691	-84.231262	844.00	5.00	849.00
6	40.672031	-84.230522	844.03	5.00	849.03
7	40.672079	-84.228634	845.95	5.00	850.95
8	40.674968	-84.228580	853.12	5.00	858.12

Name: 314
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674529	-84.228591	851.10	5.00	856.10
2	40.674586	-84.224127	853.99	5.00	858.99
3	40.672291	-84.224117	847.07	5.00	852.07
4	40.672275	-84.225796	851.59	5.00	856.59
5	40.672096	-84.225809	851.82	5.00	856.82
6	40.672096	-84.226331	850.99	5.00	855.99
7	40.672299	-84.226334	851.17	5.00	856.17
8	40.672210	-84.228601	846.82	5.00	851.82

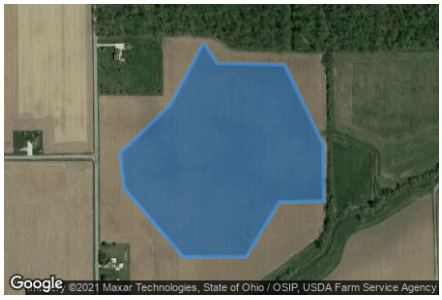
Name: 315
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 8.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.671282	-84.232185	844.70	5.00	849.70
2	40.671274	-84.230822	842.45	5.00	847.45
3	40.670322	-84.230286	842.46	5.00	847.46
4	40.669191	-84.230243	841.86	5.00	846.86
5	40.669183	-84.232185	843.14	5.00	848.14

Name: 316
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670232	-84.228762	842.98	5.00	847.98
2	40.670249	-84.227164	847.82	5.00	852.82
3	40.670680	-84.227185	846.32	5.00	851.32
4	40.670688	-84.226284	848.03	5.00	853.03
5	40.670273	-84.226263	849.10	5.00	854.10
6	40.670257	-84.225318	848.04	5.00	853.05
7	40.668353	-84.225275	847.38	5.00	852.38
8	40.668361	-84.225608	847.35	5.00	852.35
9	40.667864	-84.225619	843.22	5.00	848.22
10	40.667905	-84.229363	848.40	5.00	853.40
11	40.669825	-84.229374	842.20	5.00	847.20

Name: 317
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

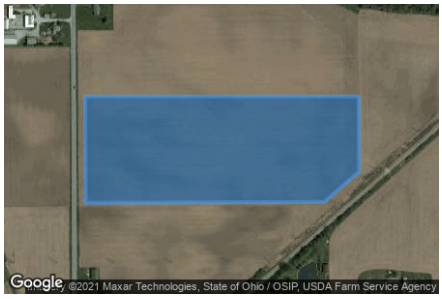


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673337	-84.220315	846.99	5.00	851.99
2	40.672299	-84.221045	846.81	5.00	851.81
3	40.671490	-84.222161	846.98	5.00	851.98
4	40.670904	-84.222075	841.83	5.00	846.83
5	40.669748	-84.220766	840.17	5.00	845.17
6	40.669748	-84.219371	832.44	5.00	837.44
7	40.670668	-84.218631	833.88	5.00	838.88
8	40.670684	-84.217644	833.71	5.00	838.71
9	40.671628	-84.217654	836.22	5.00	841.22
10	40.672971	-84.218513	835.19	5.00	840.19
11	40.672995	-84.220015	844.96	5.00	849.96

Name: 318
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.669409	-84.202488	837.71	5.00	842.71
2	40.669474	-84.199152	837.72	5.00	842.72
3	40.668921	-84.199141	840.22	5.00	845.22
4	40.668945	-84.198133	839.32	5.00	844.32
5	40.667969	-84.197274	838.42	5.00	843.42
6	40.667977	-84.203315	839.09	5.00	844.09
7	40.668929	-84.203272	840.81	5.00	845.81
8	40.668945	-84.202553	837.90	5.00	842.91

Name: 319
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667957	-84.203329	839.07	5.00	844.07
2	40.666166	-84.203318	842.18	5.00	847.18
3	40.666183	-84.198018	846.90	5.00	851.90
4	40.666695	-84.197246	845.94	5.00	850.94
5	40.667957	-84.197256	838.42	5.00	843.42

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt deg	Orientation deg	"Green" Glare min	"Yellow" Glare min	Energy Produced kWh	Data File
301	SA tracking	SA tracking	0	0	-	
302	SA tracking	SA tracking	0	0	-	
303	SA tracking	SA tracking	0	0	-	
304	SA tracking	SA tracking	0	0	-	
305	SA tracking	SA tracking	0	0	-	
306	SA tracking	SA tracking	0	0	-	
307	SA tracking	SA tracking	0	0	-	
308	SA tracking	SA tracking	0	0	-	
309	SA tracking	SA tracking	0	0	-	
310	SA tracking	SA tracking	0	0	-	
311	SA tracking	SA tracking	0	0	-	
312	SA tracking	SA tracking	0	0	-	
313	SA tracking	SA tracking	0	0	-	
314	SA tracking	SA tracking	0	0	-	
315	SA tracking	SA tracking	0	0	-	
316	SA tracking	SA tracking	0	0	-	
317	SA tracking	SA tracking	0	0	-	
318	SA tracking	SA tracking	0	0	-	
319	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

301 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

302 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

303 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

304 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

305 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

306 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

307 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

308 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

309 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

310 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

311 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

312 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

313 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

314 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

315 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

316 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

317 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

318 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

319 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

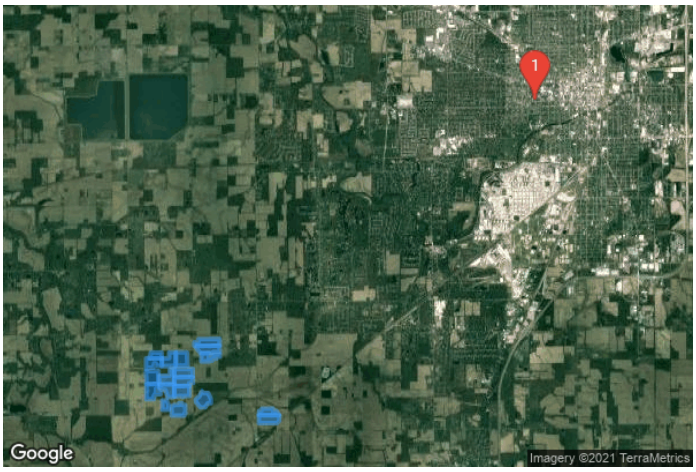
- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 3 10 ft panels

Created Oct. 12, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59746.10610

Project type Advanced
Project status: active
Category 100 to 500 kW



Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
301	SA tracking	SA tracking	0	0	-
302	SA tracking	SA tracking	0	0	-
303	SA tracking	SA tracking	0	0	-
304	SA tracking	SA tracking	0	0	-
305	SA tracking	SA tracking	0	0	-
306	SA tracking	SA tracking	0	0	-
307	SA tracking	SA tracking	0	0	-
308	SA tracking	SA tracking	0	0	-
309	SA tracking	SA tracking	0	0	-
310	SA tracking	SA tracking	0	0	-
311	SA tracking	SA tracking	0	0	-
312	SA tracking	SA tracking	0	0	-
313	SA tracking	SA tracking	0	0	-
314	SA tracking	SA tracking	0	0	-
315	SA tracking	SA tracking	0	0	-
316	SA tracking	SA tracking	0	0	-
317	SA tracking	SA tracking	0	0	-
318	SA tracking	SA tracking	0	0	-
319	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 400.8 acres

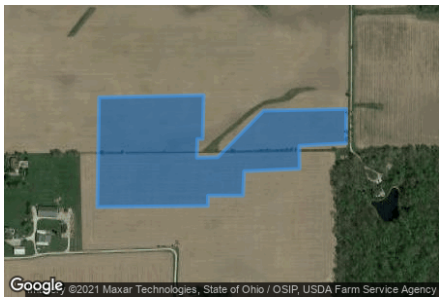
Name: 301
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.684770	-84.221324	863.10	10.00	873.10
2	40.685119	-84.221313	864.58	10.00	874.58
3	40.685152	-84.215026	851.80	10.00	861.80
4	40.683643	-84.215075	849.61	10.00	859.61
5	40.683614	-84.219666	857.21	10.00	867.21
6	40.683574	-84.222601	875.39	10.00	885.39
7	40.684412	-84.222590	868.67	10.00	878.67
8	40.684412	-84.221388	862.60	10.00	872.60

Name: 302
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.683643	-84.215069	849.61	10.00	859.61
2	40.682170	-84.215064	851.31	10.00	861.31
3	40.682158	-84.217118	857.23	10.00	867.23
4	40.681954	-84.217113	857.65	10.00	867.66
5	40.681922	-84.220659	870.42	10.00	880.42
6	40.682992	-84.221941	874.55	10.00	884.55
7	40.683586	-84.221936	873.96	10.00	883.96

Name: 303
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.681918	-84.220488	869.63	10.00	879.63
2	40.680083	-84.220525	867.05	10.00	877.05
3	40.680103	-84.218074	863.53	10.00	873.54
4	40.680274	-84.218068	863.91	10.00	873.91
5	40.680274	-84.217291	862.35	10.00	872.35
6	40.680681	-84.217269	862.90	10.00	872.90
7	40.680722	-84.216035	857.48	10.00	867.48
8	40.681108	-84.216041	858.33	10.00	868.33
9	40.681149	-84.215005	853.72	10.00	863.72
10	40.681723	-84.215000	851.24	10.00	861.24
11	40.681694	-84.216835	855.94	10.00	865.94
12	40.680917	-84.217854	861.44	10.00	871.44
13	40.680909	-84.218315	860.76	10.00	870.76
14	40.681222	-84.218304	860.07	10.00	870.07
15	40.681222	-84.218186	859.77	10.00	869.77
16	40.681954	-84.218165	861.65	10.00	871.65

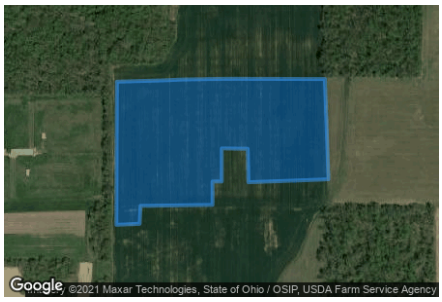
Name: 304
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682133	-84.224838	870.46	10.00	880.46
2	40.679180	-84.224624	857.87	10.00	867.87
3	40.679131	-84.228186	856.40	10.00	866.40
4	40.680636	-84.228132	866.61	10.00	876.61
5	40.682154	-84.228148	870.69	10.00	880.69
6	40.682166	-84.227005	874.52	10.00	884.52

Name: 305
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.682162	-84.228160	870.82	10.00	880.82
2	40.682138	-84.230112	875.78	10.00	885.78
3	40.680811	-84.230155	863.18	10.00	873.18
4	40.680813	-84.232347	861.25	10.00	871.25
5	40.678997	-84.232280	855.85	10.00	865.85
6	40.679127	-84.228160	856.35	10.00	866.35

Name: 306
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.679147	-84.232282	856.29	10.00	866.30
2	40.680824	-84.232360	861.31	10.00	871.32
3	40.680828	-84.234549	872.52	10.00	882.52
4	40.680815	-84.235520	869.00	10.00	879.00
5	40.680803	-84.235895	867.02	10.00	877.02
6	40.680779	-84.236979	862.87	10.00	872.87
7	40.678387	-84.236990	857.32	10.00	867.32
8	40.678403	-84.236475	858.88	10.00	868.88
9	40.678704	-84.236453	860.15	10.00	870.15
10	40.678720	-84.234855	857.35	10.00	867.35
11	40.679111	-84.234855	860.10	10.00	870.10
12	40.679111	-84.234651	859.64	10.00	869.64
13	40.679664	-84.234651	864.89	10.00	874.90
14	40.679658	-84.234074	865.18	10.00	875.18
15	40.679099	-84.234058	858.70	10.00	868.70

Name: 307
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 10.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.680810	-84.235960	866.78	10.00	876.79
2	40.681082	-84.235976	868.07	10.00	878.07
3	40.681493	-84.235686	874.66	10.00	884.66
4	40.682099	-84.235563	875.95	10.00	885.95
5	40.682112	-84.232398	865.36	10.00	875.36
6	40.680830	-84.232355	861.32	10.00	871.32

Name: 308
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674948	-84.236891	851.70	10.00	861.70
2	40.675054	-84.233394	844.40	10.00	854.40
3	40.677991	-84.233447	853.78	10.00	863.78
4	40.677877	-84.237031	855.96	10.00	865.96

Name: 309
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674948	-84.236898	851.76	10.00	861.76
2	40.671555	-84.236888	853.95	10.00	863.95
3	40.671587	-84.234699	851.11	10.00	861.11
4	40.672287	-84.234742	849.77	10.00	859.77
5	40.672303	-84.234527	849.35	10.00	859.35
6	40.672645	-84.234527	846.99	10.00	856.99
7	40.672694	-84.232725	845.16	10.00	855.16
8	40.673003	-84.232811	844.50	10.00	854.50
9	40.673036	-84.234098	845.73	10.00	855.73
10	40.673947	-84.234098	846.27	10.00	856.27
11	40.673947	-84.233304	845.31	10.00	855.31
12	40.675037	-84.233379	844.53	10.00	854.53

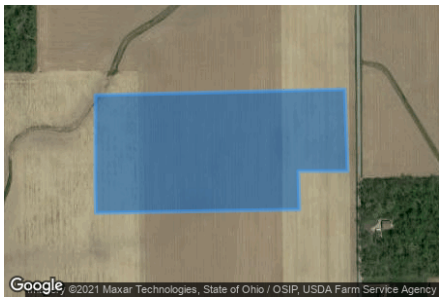
Name: 310
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678316	-84.229896	858.10	10.00	868.10
2	40.678333	-84.229145	855.59	10.00	865.59
3	40.678333	-84.228630	854.71	10.00	864.71
4	40.674964	-84.228587	853.11	10.00	863.12
5	40.674883	-84.232986	846.16	10.00	856.16
6	40.676852	-84.233007	853.24	10.00	863.24
7	40.676917	-84.229875	852.98	10.00	862.98

Name: 311
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.678349	-84.228652	854.91	10.00	864.91
2	40.678414	-84.223051	858.93	10.00	868.93
3	40.676591	-84.223051	857.09	10.00	867.09
4	40.676526	-84.228566	849.18	10.00	859.18

Name: 312
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.3 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.676486	-84.228594	849.10	10.00	859.10
2	40.676583	-84.223058	857.15	10.00	867.15
3	40.675216	-84.222994	853.51	10.00	863.51
4	40.675216	-84.224088	856.51	10.00	866.51
5	40.674574	-84.224067	854.18	10.00	864.18
6	40.674517	-84.228583	851.07	10.00	861.07
7	40.674972	-84.228594	853.12	10.00	863.12
8	40.674956	-84.228594	853.11	10.00	863.12

Name: 313
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 21.0 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674879	-84.233000	846.17	10.00	856.18
2	40.673967	-84.232968	844.85	10.00	854.85
3	40.673975	-84.232560	844.69	10.00	854.69
4	40.673658	-84.232539	844.30	10.00	854.30
5	40.673691	-84.231262	844.00	10.00	854.00
6	40.672031	-84.230522	844.03	10.00	854.03
7	40.672079	-84.228634	845.95	10.00	855.95
8	40.674968	-84.228580	853.12	10.00	863.12

Name: 314
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.9 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.674529	-84.228591	851.10	10.00	861.10
2	40.674586	-84.224127	853.99	10.00	863.99
3	40.672291	-84.224117	847.07	10.00	857.07
4	40.672275	-84.225796	851.59	10.00	861.59
5	40.672096	-84.225809	851.82	10.00	861.82
6	40.672096	-84.226331	850.99	10.00	860.99
7	40.672299	-84.226334	851.17	10.00	861.17
8	40.672210	-84.228601	846.82	10.00	856.83

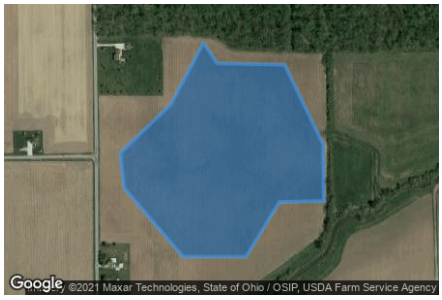
Name: 315
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 8.7 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.671282	-84.232185	844.70	10.00	854.70
2	40.671274	-84.230822	842.45	10.00	852.45
3	40.670322	-84.230286	842.46	10.00	852.46
4	40.669191	-84.230243	841.86	10.00	851.86
5	40.669183	-84.232185	843.14	10.00	853.14

Name: 316
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670232	-84.228762	842.98	10.00	852.98
2	40.670249	-84.227164	847.82	10.00	857.82
3	40.670680	-84.227185	846.32	10.00	856.32
4	40.670688	-84.226284	848.03	10.00	858.03
5	40.670273	-84.226263	849.10	10.00	859.10
6	40.670257	-84.225318	848.04	10.00	858.05
7	40.668353	-84.225275	847.38	10.00	857.38
8	40.668361	-84.225608	847.35	10.00	857.35
9	40.667864	-84.225619	843.22	10.00	853.22
10	40.667905	-84.229363	848.40	10.00	858.40
11	40.669825	-84.229374	842.20	10.00	852.20

Name: 317
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

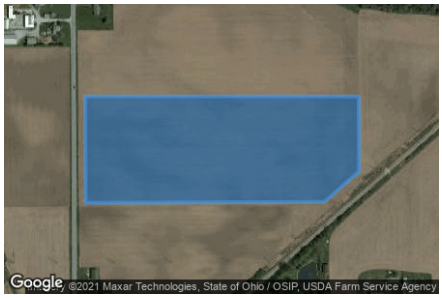


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.673337	-84.220315	846.99	10.00	856.99
2	40.672299	-84.221045	846.81	10.00	856.81
3	40.671490	-84.222161	846.98	10.00	856.98
4	40.670904	-84.222075	841.83	10.00	851.83
5	40.669748	-84.220766	840.17	10.00	850.17
6	40.669748	-84.219371	832.44	10.00	842.44
7	40.670668	-84.218631	833.88	10.00	843.88
8	40.670684	-84.217644	833.71	10.00	843.71
9	40.671628	-84.217654	836.22	10.00	846.22
10	40.672971	-84.218513	835.19	10.00	845.19
11	40.672995	-84.220015	844.96	10.00	854.96

Name: 318
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 16.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.669409	-84.202488	837.71	10.00	847.71
2	40.669474	-84.199152	837.72	10.00	847.72
3	40.668921	-84.199141	840.22	10.00	850.22
4	40.668945	-84.198133	839.32	10.00	849.32
5	40.667969	-84.197274	838.42	10.00	848.42
6	40.667977	-84.203315	839.09	10.00	849.09
7	40.668929	-84.203272	840.81	10.00	850.81
8	40.668945	-84.202553	837.90	10.00	847.91

Name: 319
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.667957	-84.203329	839.07	10.00	849.07
2	40.666166	-84.203318	842.18	10.00	852.18
3	40.666183	-84.198018	846.90	10.00	856.90
4	40.666695	-84.197246	845.94	10.00	855.94
5	40.667957	-84.197256	838.42	10.00	848.42

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt deg	Orientation deg	"Green" Glare min	"Yellow" Glare min	Energy Produced kWh	Data File
301	SA tracking	SA tracking	0	0	-	
302	SA tracking	SA tracking	0	0	-	
303	SA tracking	SA tracking	0	0	-	
304	SA tracking	SA tracking	0	0	-	
305	SA tracking	SA tracking	0	0	-	
306	SA tracking	SA tracking	0	0	-	
307	SA tracking	SA tracking	0	0	-	
308	SA tracking	SA tracking	0	0	-	
309	SA tracking	SA tracking	0	0	-	
310	SA tracking	SA tracking	0	0	-	
311	SA tracking	SA tracking	0	0	-	
312	SA tracking	SA tracking	0	0	-	
313	SA tracking	SA tracking	0	0	-	
314	SA tracking	SA tracking	0	0	-	
315	SA tracking	SA tracking	0	0	-	
316	SA tracking	SA tracking	0	0	-	
317	SA tracking	SA tracking	0	0	-	
318	SA tracking	SA tracking	0	0	-	
319	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

301 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

302 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

303 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

304 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

305 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

306 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

307 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

308 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

309 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

310 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

311 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

312 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

313 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

314 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

315 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

316 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

317 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

318 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

319 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

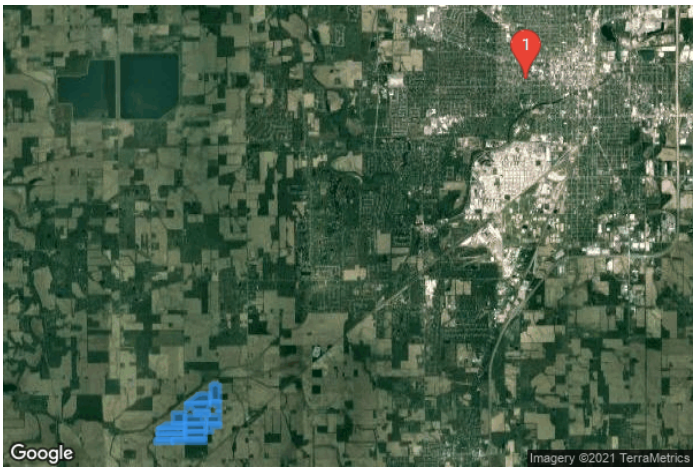
- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 4 5 ft panels

Created Oct. 12, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59738.10610

Project type Advanced
Project status: active
Category 100 to 500 kW



Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
401	SA tracking	SA tracking	0	0	-
402	SA tracking	SA tracking	0	0	-
403	SA tracking	SA tracking	0	0	-
404	SA tracking	SA tracking	0	0	-
405	SA tracking	SA tracking	0	0	-
406	SA tracking	SA tracking	0	0	-
407	SA tracking	SA tracking	0	0	-
408	SA tracking	SA tracking	0	0	-
409	SA tracking	SA tracking	0	0	-
410	SA tracking	SA tracking	0	0	-
411	SA tracking	SA tracking	0	0	-
412	SA tracking	SA tracking	0	0	-
413	SA tracking	SA tracking	0	0	-
414	SA tracking	SA tracking	0	0	-
415	SA tracking	SA tracking	0	0	-
416	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 298.3 acres

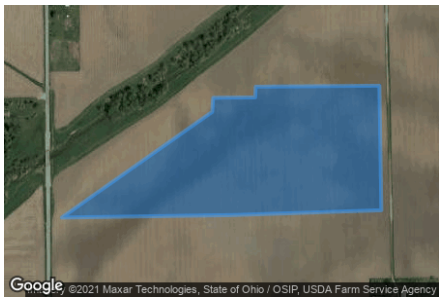
Name: 401
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670490	-84.214285	833.38	5.00	838.38
2	40.670502	-84.213111	834.28	5.00	839.28
3	40.670169	-84.213100	833.87	5.00	838.87
4	40.670177	-84.212242	834.58	5.00	839.58
5	40.666385	-84.212220	838.79	5.00	843.79
6	40.666393	-84.214913	833.57	5.00	838.57
7	40.670104	-84.215020	833.15	5.00	838.15
8	40.670116	-84.214280	834.60	5.00	839.60

Name: 402
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 10.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657012	-84.226369	844.84	5.00	849.84
2	40.656967	-84.228928	839.15	5.00	844.15
3	40.656922	-84.231551	832.93	5.00	837.93
4	40.657810	-84.231541	830.66	5.00	835.66
5	40.657862	-84.228944	839.51	5.00	844.51
6	40.657915	-84.226369	839.39	5.00	844.39

Name: 403
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

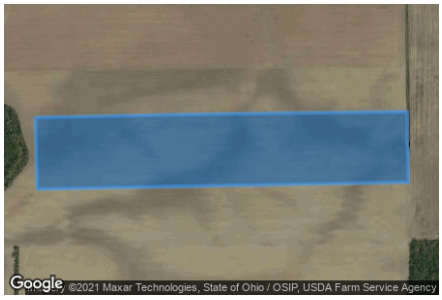


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.668198	-84.215294	833.75	5.00	838.75
2	40.668182	-84.218040	832.41	5.00	837.41
3	40.668003	-84.218051	833.14	5.00	838.14
4	40.667995	-84.218984	831.83	5.00	836.83
5	40.667759	-84.219006	833.31	5.00	838.31
6	40.665993	-84.222342	833.11	5.00	838.11
7	40.666034	-84.218614	834.39	5.00	839.39
8	40.666115	-84.215251	834.00	5.00	839.00

Name: 404
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

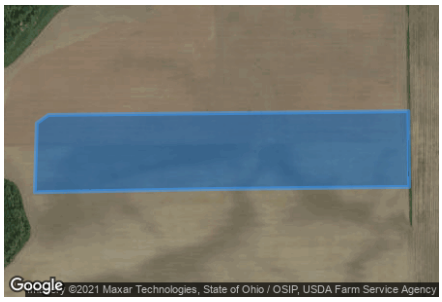
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666095	-84.215319	834.12	5.00	839.12
2	40.665110	-84.215297	836.11	5.00	841.11
3	40.665094	-84.215705	835.47	5.00	840.47
4	40.664312	-84.215694	840.27	5.00	845.27
5	40.664329	-84.220222	836.60	5.00	841.60
6	40.664703	-84.220222	836.62	5.00	841.62
7	40.664703	-84.220726	835.50	5.00	840.50
8	40.665151	-84.220704	837.53	5.00	842.53
9	40.665142	-84.221552	833.58	5.00	838.58
10	40.664719	-84.221606	833.80	5.00	838.80
11	40.664736	-84.222249	833.64	5.00	838.64
12	40.664320	-84.222239	833.22	5.00	838.22
13	40.664304	-84.222389	833.25	5.00	838.25
14	40.665973	-84.222346	833.22	5.00	838.22
15	40.666034	-84.218762	834.32	5.00	839.32

Name: 405
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657846	-84.230789	835.43	5.00	840.43
2	40.659051	-84.230832	830.89	5.00	835.89
3	40.659112	-84.226573	837.66	5.00	842.66
4	40.659149	-84.222571	840.88	5.00	845.88
5	40.657960	-84.222549	839.57	5.00	844.57
6	40.657903	-84.226761	839.10	5.00	844.10

Name: 406
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.659059	-84.230882	830.51	5.00	835.51
2	40.660215	-84.230839	833.55	5.00	838.55
3	40.660353	-84.230576	833.52	5.00	838.52
4	40.660384	-84.226599	832.87	5.00	837.88
5	40.660414	-84.222589	838.98	5.00	843.98
6	40.659149	-84.222573	840.88	5.00	845.88
7	40.659116	-84.226762	838.26	5.00	843.26

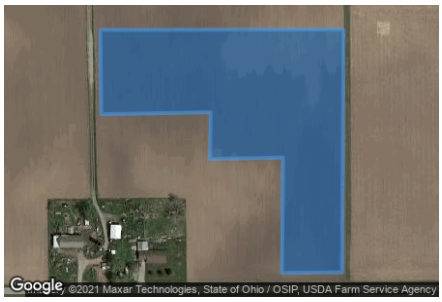
Name: 407
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.660358	-84.230562	833.47	5.00	838.47
2	40.661420	-84.228319	831.62	5.00	836.62
3	40.661459	-84.225433	832.72	5.00	837.72
4	40.661497	-84.222601	834.75	5.00	839.75
5	40.660407	-84.222590	838.98	5.00	843.98
6	40.660382	-84.226538	832.97	5.00	837.97

Name: 408
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661453	-84.226291	832.45	5.00	837.45
2	40.662663	-84.226281	832.51	5.00	837.51
3	40.663878	-84.226270	828.51	5.00	833.51
4	40.663898	-84.224425	833.50	5.00	838.51
5	40.663933	-84.222625	833.00	5.00	838.00
6	40.662693	-84.222624	834.09	5.00	839.09
7	40.661501	-84.222606	834.74	5.00	839.74
8	40.661475	-84.224441	833.34	5.00	838.34

Name: 409
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 7.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666389	-84.214924	833.56	5.00	838.56
2	40.665685	-84.214913	833.97	5.00	838.97
3	40.665701	-84.213701	834.38	5.00	839.38
4	40.665310	-84.213706	836.43	5.00	841.43
5	40.665323	-84.212896	836.19	5.00	841.19
6	40.664358	-84.212907	837.64	5.00	842.64
7	40.664362	-84.212242	837.33	5.00	842.33
8	40.666393	-84.212226	838.88	5.00	843.88

Name: 410
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664045	-84.213073	837.38	5.00	842.38
2	40.664053	-84.212215	838.50	5.00	843.50
3	40.661380	-84.212193	844.41	5.00	849.41
4	40.661380	-84.216238	841.84	5.00	846.84
5	40.663308	-84.216217	836.97	5.00	841.97
6	40.663329	-84.213084	839.87	5.00	844.87

Name: 411
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661388	-84.212193	844.30	5.00	849.30
2	40.660578	-84.212177	845.10	5.00	850.10
3	40.660578	-84.214564	845.63	5.00	850.63
4	40.659390	-84.214564	847.76	5.00	852.76
5	40.659382	-84.216335	845.50	5.00	850.50
6	40.661388	-84.216313	841.65	5.00	846.65

Name: 412
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 7.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664012	-84.219575	834.05	5.00	839.05
2	40.664073	-84.215503	839.41	5.00	844.41
3	40.663308	-84.215471	838.75	5.00	843.75
4	40.663268	-84.219559	833.49	5.00	838.49

Name: 413
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.663275	-84.217525	835.47	5.00	840.47
2	40.662249	-84.217504	840.11	5.00	845.11
3	40.662241	-84.216527	838.14	5.00	843.14
4	40.661378	-84.216549	841.70	5.00	846.70
5	40.661358	-84.219607	842.96	5.00	847.96
6	40.661338	-84.222600	835.22	5.00	840.22
7	40.663210	-84.222600	834.84	5.00	839.84
8	40.663242	-84.220073	833.74	5.00	838.74

Name: 414
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661378	-84.216549	841.70	5.00	846.70
2	40.659637	-84.216527	845.36	5.00	850.36
3	40.659572	-84.222568	841.51	5.00	846.51
4	40.661330	-84.222589	835.28	5.00	840.28
5	40.661354	-84.219472	842.83	5.00	847.83

Name: 415
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.659633	-84.216542	845.26	5.00	850.26
2	40.657989	-84.216520	843.83	5.00	848.83
3	40.657989	-84.219444	846.01	5.00	851.01
4	40.657980	-84.220938	840.03	5.00	845.03
5	40.657972	-84.222518	839.47	5.00	844.47
6	40.659568	-84.222582	841.49	5.00	846.49
7	40.659600	-84.219519	842.93	5.00	847.93

Name: 416
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657997	-84.216531	843.86	5.00	848.86
2	40.657044	-84.216509	846.91	5.00	851.91
3	40.657032	-84.221386	841.42	5.00	846.42
4	40.657026	-84.223845	845.35	5.00	850.35
5	40.657008	-84.226358	844.87	5.00	849.87
6	40.657464	-84.226348	841.64	5.00	846.64
7	40.657907	-84.226358	839.44	5.00	844.44
8	40.657934	-84.223856	842.02	5.00	847.02
9	40.657960	-84.221407	839.24	5.00	844.24

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
401	SA tracking	SA tracking	0	0	-	
402	SA tracking	SA tracking	0	0	-	
403	SA tracking	SA tracking	0	0	-	
404	SA tracking	SA tracking	0	0	-	
405	SA tracking	SA tracking	0	0	-	
406	SA tracking	SA tracking	0	0	-	
407	SA tracking	SA tracking	0	0	-	
408	SA tracking	SA tracking	0	0	-	
409	SA tracking	SA tracking	0	0	-	
410	SA tracking	SA tracking	0	0	-	
411	SA tracking	SA tracking	0	0	-	
412	SA tracking	SA tracking	0	0	-	
413	SA tracking	SA tracking	0	0	-	
414	SA tracking	SA tracking	0	0	-	
415	SA tracking	SA tracking	0	0	-	
416	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

401 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

402 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

403 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

404 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

405 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

406 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

407 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

408 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

409 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

410 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

411 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

412 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

413 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

414 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

415 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

416 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

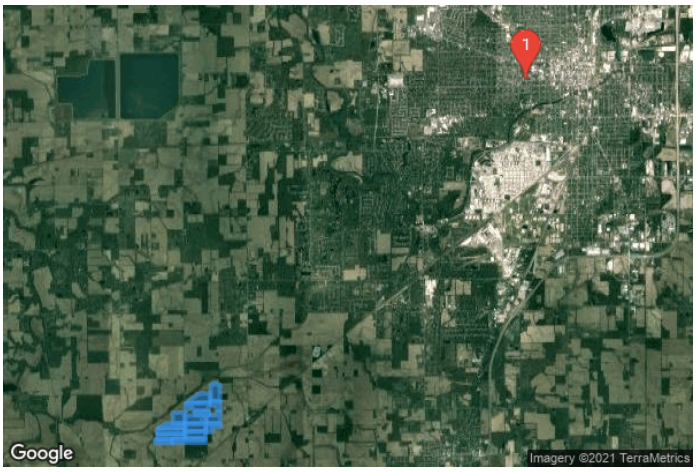
- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions
- Detailed system geometry is not rigorously simulated.
- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Birch October 2021

Block 4 10 ft panels

Created Oct. 12, 2021
Updated Oct. 12, 2021
Time-step 1 minute
Timezone offset UTC-5
Site ID 59747.10610

Project type Advanced
Project status: active
Category 100 to 500 kW



Misc. Analysis Settings

DNI: **varies (1,000.0 W/m^2 peak)**
Ocular transmission coefficient: **0.5**
Pupil diameter: **0.002 m**
Eye focal length: **0.017 m**
Sun subtended angle: **9.3 mrad**

Analysis Methodologies:

- Observation point: **Version 2**
- 2-Mile Flight Path: **Version 2**
- Route: **Version 2**

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
401	SA tracking	SA tracking	0	0	-
402	SA tracking	SA tracking	0	0	-
403	SA tracking	SA tracking	0	0	-
404	SA tracking	SA tracking	0	0	-
405	SA tracking	SA tracking	0	0	-
406	SA tracking	SA tracking	0	0	-
407	SA tracking	SA tracking	0	0	-
408	SA tracking	SA tracking	0	0	-
409	SA tracking	SA tracking	0	0	-
410	SA tracking	SA tracking	0	0	-
411	SA tracking	SA tracking	0	0	-
412	SA tracking	SA tracking	0	0	-
413	SA tracking	SA tracking	0	0	-
414	SA tracking	SA tracking	0	0	-
415	SA tracking	SA tracking	0	0	-
416	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 298.3 acres

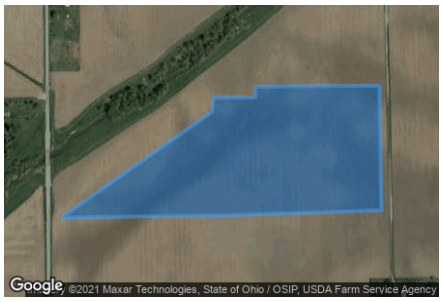
Name: 401
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.670490	-84.214285	833.38	10.00	843.38
2	40.670502	-84.213111	834.28	10.00	844.28
3	40.670169	-84.213100	833.87	10.00	843.87
4	40.670177	-84.212242	834.58	10.00	844.58
5	40.666385	-84.212220	838.79	10.00	848.80
6	40.666393	-84.214913	833.57	10.00	843.57
7	40.670104	-84.215020	833.15	10.00	843.15
8	40.670116	-84.214280	834.60	10.00	844.60

Name: 402
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 10.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657012	-84.226369	844.84	10.00	854.84
2	40.656967	-84.228928	839.15	10.00	849.15
3	40.656922	-84.231551	832.93	10.00	842.93
4	40.657810	-84.231541	830.66	10.00	840.66
5	40.657862	-84.228944	839.51	10.00	849.51
6	40.657915	-84.226369	839.39	10.00	849.39

Name: 403
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

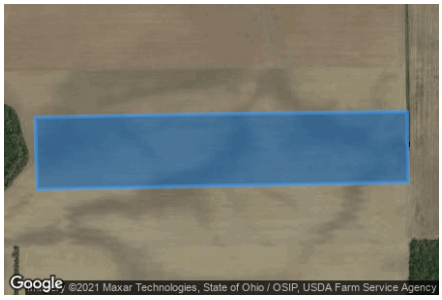


Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.668198	-84.215294	833.75	10.00	843.75
2	40.668182	-84.218040	832.41	10.00	842.41
3	40.668003	-84.218051	833.14	10.00	843.14
4	40.667995	-84.218984	831.83	10.00	841.83
5	40.667759	-84.219006	833.31	10.00	843.31
6	40.665993	-84.222342	833.11	10.00	843.11
7	40.666034	-84.218614	834.39	10.00	844.39
8	40.666115	-84.215251	834.00	10.00	844.00

Name: 404
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 24.5 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

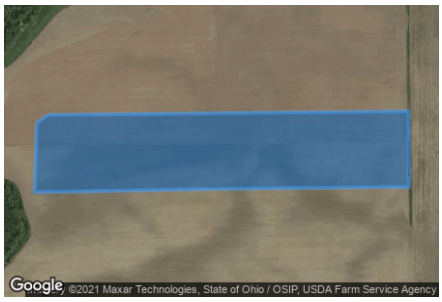
Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666095	-84.215319	834.12	10.00	844.12
2	40.665110	-84.215297	836.11	10.00	846.11
3	40.665094	-84.215705	835.47	10.00	845.47
4	40.664312	-84.215694	840.27	10.00	850.27
5	40.664329	-84.220222	836.60	10.00	846.60
6	40.664703	-84.220222	836.62	10.00	846.63
7	40.664703	-84.220726	835.50	10.00	845.50
8	40.665151	-84.220704	837.53	10.00	847.53
9	40.665142	-84.221552	833.58	10.00	843.58
10	40.664719	-84.221606	833.80	10.00	843.80
11	40.664736	-84.222228	833.59	10.00	843.59
12	40.664320	-84.222239	833.22	10.00	843.22
13	40.664304	-84.222389	833.25	10.00	843.25
14	40.665973	-84.222346	833.22	10.00	843.22
15	40.666034	-84.218762	834.32	10.00	844.32

Name: 405
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657846	-84.230789	835.43	10.00	845.43
2	40.659051	-84.230832	830.89	10.00	840.89
3	40.659112	-84.226573	837.66	10.00	847.66
4	40.659149	-84.222571	840.88	10.00	850.88
5	40.657960	-84.222549	839.57	10.00	849.57
6	40.657903	-84.226761	839.10	10.00	849.10

Name: 406
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.659059	-84.230882	830.51	10.00	840.51
2	40.660215	-84.230839	833.55	10.00	843.55
3	40.660353	-84.230576	833.52	10.00	843.52
4	40.660384	-84.226599	832.87	10.00	842.88
5	40.660414	-84.222589	838.98	10.00	848.98
6	40.659149	-84.222573	840.88	10.00	850.88
7	40.659116	-84.226762	838.26	10.00	848.26

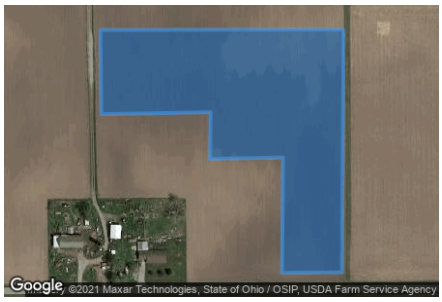
Name: 407
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0 deg
Tracking axis tilt: 0.0 deg
Tracking axis panel offset: 0.0 deg
Maximum tracking angle: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 15.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.660358	-84.230562	833.47	10.00	843.47
2	40.661420	-84.228319	831.62	10.00	841.62
3	40.661459	-84.225433	832.72	10.00	842.72
4	40.661497	-84.222601	834.75	10.00	844.75
5	40.660407	-84.222590	838.98	10.00	848.98
6	40.660382	-84.226538	832.97	10.00	842.97

Name: 408
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661453	-84.226291	832.45	10.00	842.45
2	40.662663	-84.226281	832.51	10.00	842.51
3	40.663878	-84.226270	828.51	10.00	838.51
4	40.663898	-84.224425	833.50	10.00	843.51
5	40.663933	-84.222625	833.00	10.00	843.00
6	40.662693	-84.222624	834.09	10.00	844.09
7	40.661501	-84.222606	834.74	10.00	844.74
8	40.661475	-84.224441	833.34	10.00	843.34

Name: 409
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 7.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.666389	-84.214924	833.56	10.00	843.56
2	40.665685	-84.214913	833.97	10.00	843.97
3	40.665701	-84.213701	834.38	10.00	844.38
4	40.665310	-84.213706	836.43	10.00	846.43
5	40.665323	-84.212896	836.19	10.00	846.19
6	40.664358	-84.212907	837.64	10.00	847.64
7	40.664362	-84.212242	837.33	10.00	847.33
8	40.666393	-84.212226	838.88	10.00	848.88

Name: 410
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 19.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664045	-84.213073	837.38	10.00	847.38
2	40.664053	-84.212215	838.50	10.00	848.50
3	40.661380	-84.212193	844.41	10.00	854.41
4	40.661380	-84.216238	841.84	10.00	851.84
5	40.663308	-84.216217	836.97	10.00	846.97
6	40.663329	-84.213084	839.87	10.00	849.87

Name: 411
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 12.6 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661388	-84.212193	844.30	10.00	854.30
2	40.660578	-84.212177	845.10	10.00	855.10
3	40.660578	-84.214564	845.63	10.00	855.63
4	40.659390	-84.214564	847.76	10.00	857.77
5	40.659382	-84.216335	845.50	10.00	855.50
6	40.661388	-84.216313	841.65	10.00	851.65

Name: 412
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 7.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.664012	-84.219575	834.05	10.00	844.05
2	40.664073	-84.215503	839.41	10.00	849.41
3	40.663308	-84.215471	838.75	10.00	848.75
4	40.663268	-84.219559	833.49	10.00	843.49

Name: 413
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 23.4 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.663275	-84.217525	835.47	10.00	845.47
2	40.662249	-84.217504	840.11	10.00	850.11
3	40.662241	-84.216527	838.14	10.00	848.14
4	40.661378	-84.216549	841.70	10.00	851.70
5	40.661358	-84.219607	842.96	10.00	852.96
6	40.661338	-84.222600	835.22	10.00	845.22
7	40.663210	-84.222600	834.84	10.00	844.84
8	40.663242	-84.220073	833.74	10.00	843.74

Name: 414
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 22.2 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.661378	-84.216549	841.70	10.00	851.70
2	40.659637	-84.216527	845.36	10.00	855.36
3	40.659572	-84.222568	841.51	10.00	851.51
4	40.661330	-84.222589	835.28	10.00	845.28
5	40.661354	-84.219472	842.83	10.00	852.83

Name: 415
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.8 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.659633	-84.216542	845.26	10.00	855.26
2	40.657989	-84.216520	843.83	10.00	853.83
3	40.657989	-84.219444	846.01	10.00	856.01
4	40.657980	-84.220938	840.03	10.00	850.04
5	40.657972	-84.222518	839.47	10.00	849.47
6	40.659568	-84.222582	841.49	10.00	851.49
7	40.659600	-84.219519	842.93	10.00	852.93

Name: 416
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: 52.0 deg
Resting angle: 52.0 deg
Footprint area: 20.1 acres
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad

Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	ft	ft	ft
1	40.657997	-84.216531	843.86	10.00	853.86
2	40.657044	-84.216509	846.91	10.00	856.91
3	40.657032	-84.221386	841.42	10.00	851.42
4	40.657026	-84.223845	845.35	10.00	855.36
5	40.657008	-84.226358	844.87	10.00	854.87
6	40.657464	-84.226348	841.64	10.00	851.64
7	40.657907	-84.226358	839.44	10.00	849.44
8	40.657934	-84.223856	842.02	10.00	852.02
9	40.657960	-84.221407	839.24	10.00	849.24

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	40.738925	-84.120768	862.41	500.02	1362.43

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
401	SA tracking	SA tracking	0	0	-	
402	SA tracking	SA tracking	0	0	-	
403	SA tracking	SA tracking	0	0	-	
404	SA tracking	SA tracking	0	0	-	
405	SA tracking	SA tracking	0	0	-	
406	SA tracking	SA tracking	0	0	-	
407	SA tracking	SA tracking	0	0	-	
408	SA tracking	SA tracking	0	0	-	
409	SA tracking	SA tracking	0	0	-	
410	SA tracking	SA tracking	0	0	-	
411	SA tracking	SA tracking	0	0	-	
412	SA tracking	SA tracking	0	0	-	
413	SA tracking	SA tracking	0	0	-	
414	SA tracking	SA tracking	0	0	-	
415	SA tracking	SA tracking	0	0	-	
416	SA tracking	SA tracking	0	0	-	

PV & Receptor Analysis Results

Results for each PV array and receptor

401 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

402 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

403 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

404 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

405 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

406 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

407 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

408 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

409 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

410 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

411 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

412 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

413 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

414 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

415 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

416 no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0

No glare found

Assumptions

- 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.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for larg 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, nc 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 **Help page** for detailed assumptions and limitations not listed here.

Summary: Response to Eleventh Data Request from Staff of the Ohio Power Siting Board electronically filed by Christine M.T. Pirik on behalf of Birch Solar 1, LLC