

ESTUDIO LUMÍNICO DE UNA PLANTA SOLAR FOTOVOLTAICA DENOMIONADA “FV CEDILLO”, DE 374,9 MW DE POTENCIA INSTALADA, LÍNEA DE EVACUACIÓN DE 400 KV E INFRAESTRUCTURAS DE EVACUACIÓN, EN LA LOCALIDAD DE CEDILLO Y HERRERA DE ALCANTARA (CÁCERES).



Promotor: Iberenova Promociones, S.A.U.

Badajoz, septiembre 2020.

Autor: Francisco Martín López Acuña.

Versión	Fecha	Motivo de la actuación	Elaboración	Revisado	Aprobado
1	30/09/2020	Creación de documento	CC	FL	FL

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## 1 INTRODUCCIÓN.

El presente Proyecto denominado “FV Cedillo”, consiste en la ejecución de una planta de generación con tecnología fotovoltaica de 374,9 MW de potencia instalada.

### 1.1 PROMOTOR.

Se redacta por encargo de la empresa Iberenova Promociones S.A.U., con C.I.F. A-82104001, y domicilio a efectos de notificación en C/ Tomás Redondo nº1, 28033 Madrid, como promotora de las instalaciones.

- Denominación social: Iberenova Promociones S.A.U.
- CIF.: A-82104001.
- Dirección social: Calle Tomás Redondo nº1, 28033 Madrid.
- Persona de contacto: Nicolás Antón García.

Actúa en su representación D. Nicolás Antón García, con número de identificación 5425598-J.

### 1.2 INGENIERÍA.

Redacta el presente proyecto ECOINGENIERÍA DEL GUADIANA S.L. mediante el técnico que suscribe Francisco Martín López Acuña, Ingeniero Técnico Industrial colegiado en el Colegio Oficial de Ingenieros Técnicos Industriales de Badajoz con el número 873, con domicilio en Paseo Fluvial nº15-9ª Planta Edificio Badajoz Siglo XXI.

- INGENIERIA: ECOINGENIERÍA DEL GUADIANA S.L.
- CIF: B-06557532
- TÉCNICO REDACTOR: Francisco Martín López Acuña.
- TITULACIÓN: Ingeniero Técnico Industrial.

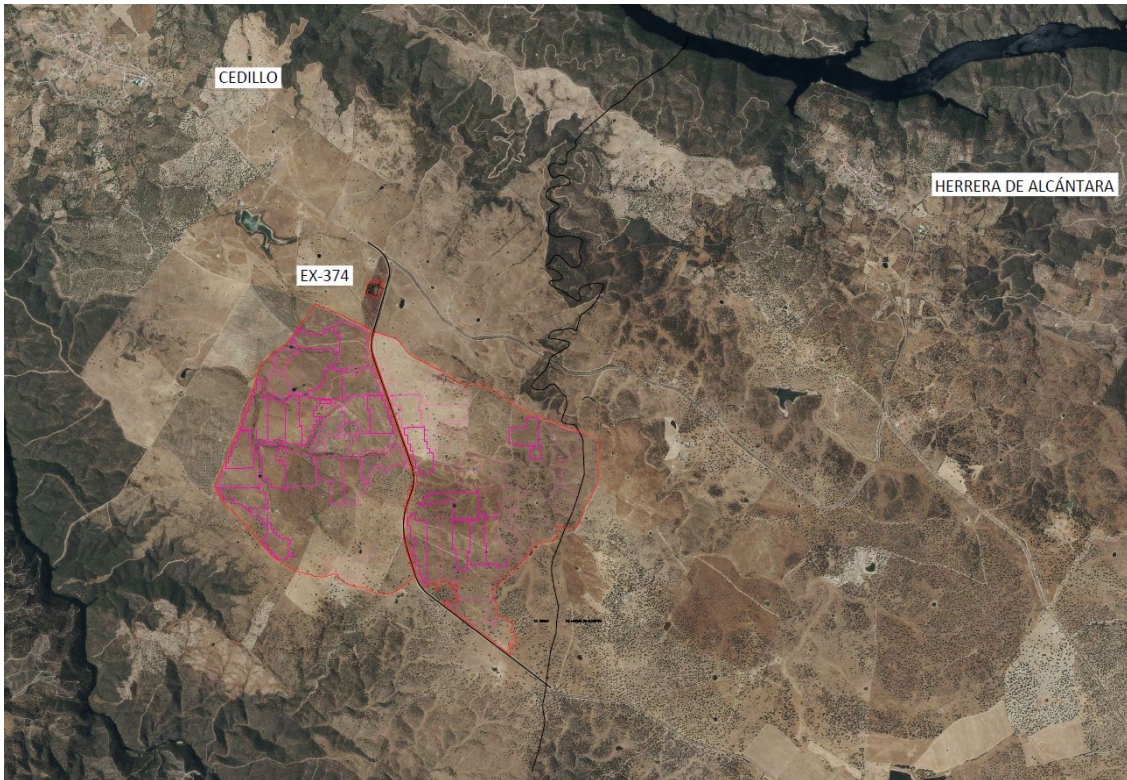
### 1.3 OBJETO DEL ESTUDIO

El objeto del estudio es realizar el análisis de los posibles focos de contaminación lumínica, como es el caso de posibles reflejos en carreteras cercanas, asociado al proyecto de la planta fotovoltaica “FV Cedillo”.



## 2 LOCALIZACIÓN DEL AREA DE ESTUDIO

La planta fotovoltaica “FV Cedillo” se proyecta en las localidades de Cedillo y Herrera de Alcántara. Podemos destacar la carretera EX-374 que ‘divide’ la planta en dos.



### 3 CARACTERÍSTICAS BÁSICAS DE LA PLANTA FOTOVOLTAICA.

La planta solar fotovoltaica “FV Cedillo” se diseña como una planta solar fotovoltaica de 374,9 MW de potencia instalada. La parte generadora estará compuesta por 925.680 módulos fotovoltaicos de 405 Wp cada uno.

Estos campos solares tipo están formados por los módulos, estructura de suportación e inversores solares con conexión a un mismo transformador. La instalación fotovoltaica está compuesta por 45 campos tipo, los cuales se distribuyen de la siguiente manera:

	Número de Inversores (ud)	Total potencia en inversor (MVA)	Total potencia en paneles (MWp)	Unidades	Total Potencia (MVA)
Campo tipo 1	4	6.548	8,174520	20	130,96
Campo tipo 2	4	6.548	8,4564	25	163,7
Total					294,66

#### Campo tipo 1:

Descripción	Unidades/Potencia
Panel Solar Fotovoltaico de 405 Wp	20.184 uds
Número de Módulos por String	29 uds
Potencia por String	11.745 Wp
Nº de String por instalación	696 uds
Tensión de funcionamiento a máx. potencia (V)	1206,4
Intensidad punto de máxima potencia (A)	9,74
Potencia del Campo	8.174,52 kWp
Inversor solar Ingecon Sun 1640TL B630 Outdoor	4 ud
Estructura fija de 3V10 o 3V9	464 (3V10) y 232 (3V9) uds
Superficie de paneles (m2)	40.508,08

**Campo tipo 2:**

Descripción	Unidades/Potencia
Panel Solar Fotovoltaico de 405 Wp	20.880 uds
Número de Módulos por String	29 uds
Potencia por String	11.745 Wp
Nº de String por instalación	720 uds
Tensión de funcionamiento a máx. potencia (V)	1206,4
Intensidad punto de máxima potencia (A)	9,74
Potencia del Campo	8.456,4 kWp
Inversor solar Ingecon Sun 1640TL B630 Outdoor	4 ud
Estructura fija de 3V10 o 3V9	480 (3V10) y 240 (3V9) uds
Superficie de paneles (m2)	41.904,9



## 4 ESTUDIO DE VISIBILIDAD

Para estudiar la visibilidad desde los distintos puntos de interés (Carretera EX-374), se han empleado las imágenes generadas por Google Earth Pro.

En las siguientes imágenes se puede apreciar el campo de visión que los conductores tendrán del terreno donde se implantará la planta fotovoltaica.

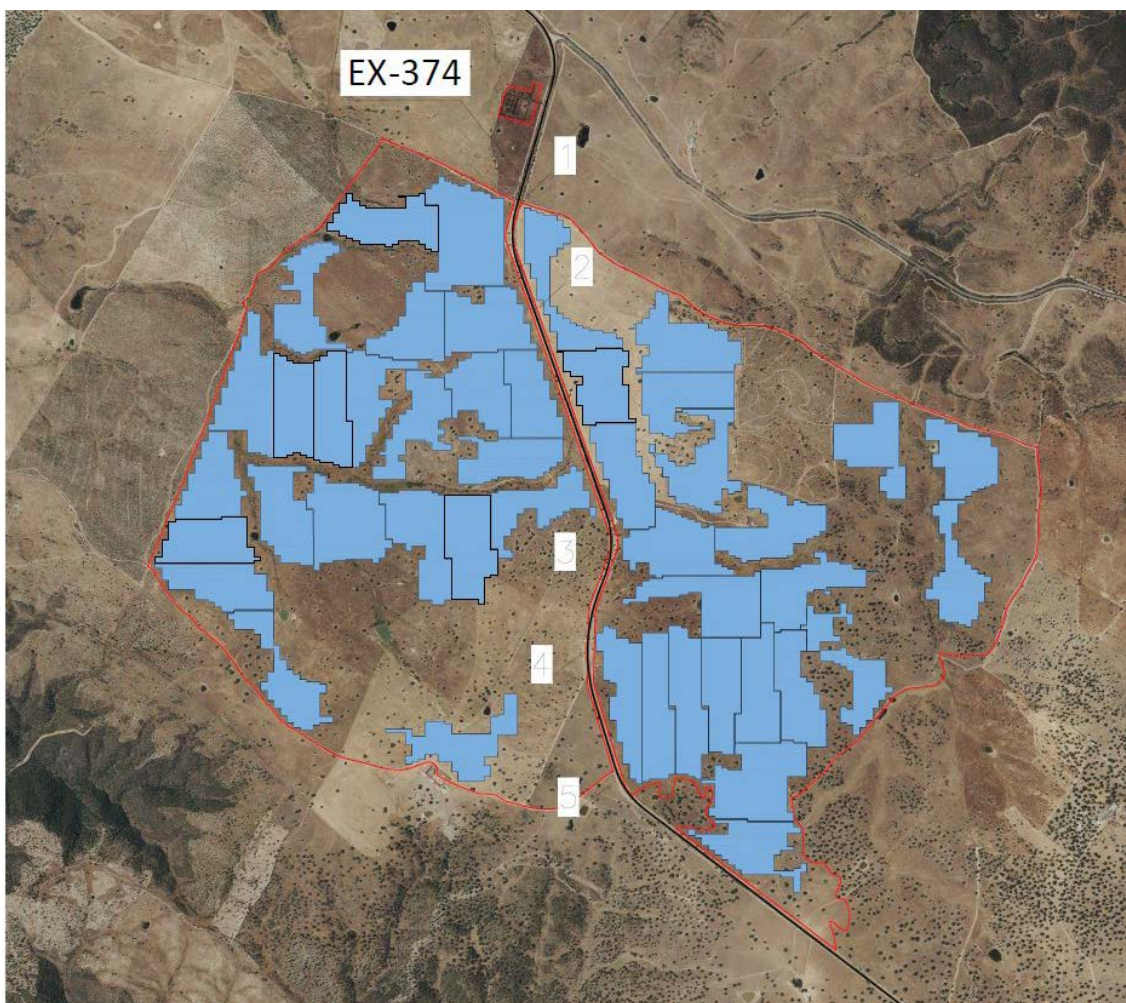


Ilustración 1. Tramo de estudio en la EX-374

**Vista desde la carretera EX-374:**



**Ilustración 2. Posición 1 del tramo de la carretera**



**Ilustración 3. Posición 2 del tramo de la carretera**





**Ilustración 4. Posición 3 del tramo de la carretera**



**Ilustración 5. Posición 4 del tramo de la carretera**



**Ilustración 6. Posición 5 del tramo de la carretera**

## 5 ANALISIS DEL ESTUDIO

### 5.1 CONCEPTOS GENERALES

El deslumbramiento puede definirse como una fuente continua de luz brillante. El deslumbramiento, generalmente, se asocia con objetos estacionarios que, debido al lento movimiento relativo del sol, reflejan la luz solar durante más tiempo. La diferencia entre un destello y el deslumbramiento es la duración. Es, por lo tanto, un fenómeno que aparece cuando la diferencia de luminancias entre la tarea visual y el objeto que se observa es muy elevada.

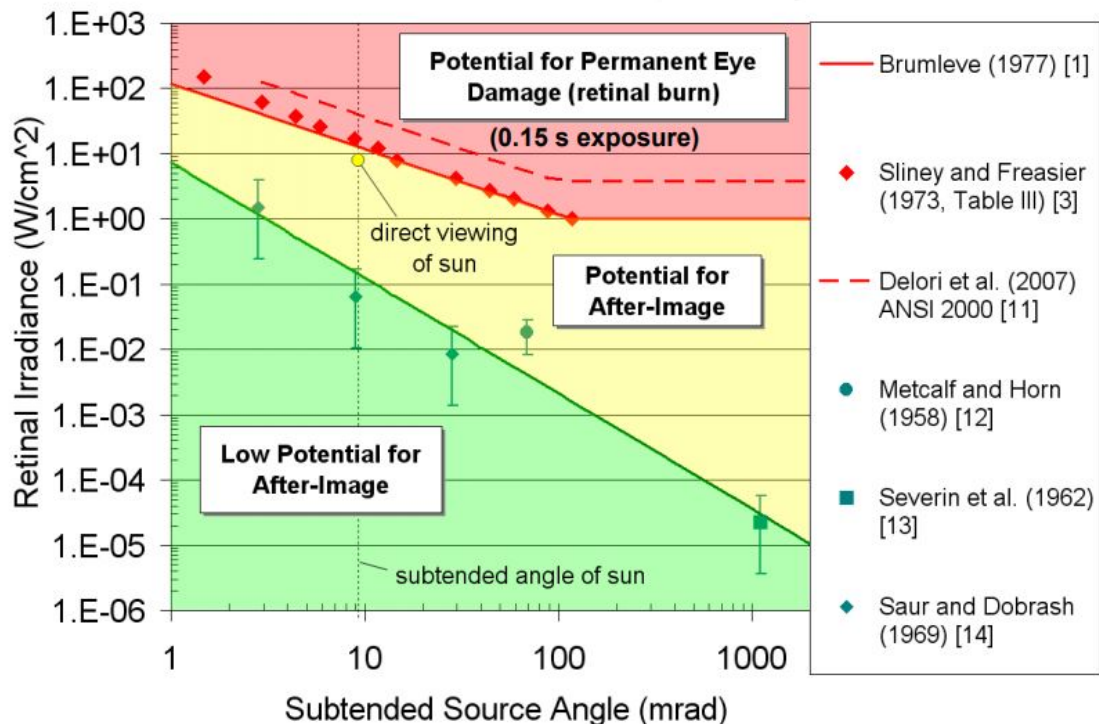
Pueden distinguirse dos tipos de deslumbramiento, ambos pueden aparecer por deslumbramiento directo o por reflexión sobre una superficie:

- El deslumbramiento molesto. Aparece cuando, en un momento determinado, hay demasiada luz y el ojo no es capaz de generar con tanta rapidez las suficientes células en la retina para producir el pigmento, lo que significa que no hay transmisión al nervio óptico, por lo tanto, tampoco al cerebro. Este deslumbramiento afecta al confort visual produciendo fatiga, pero no disminuye la capacidad de visión. Un ejemplo típico es la luz del sol. El ojo tiene a parpadear o mirar hacia otro lado para evitar el deslumbramiento o se puede evitar utilizando unas gafas de sol que reducen el nivel de luminancia del campo visual.
- El deslumbramiento perturbador. Causa malestar en la persona debido a una elevada luminancia en el entorno. Como consecuencia, se reduce el campo visual y produce fatiga. Este fenómeno se produce por la aparición de un velo luminoso que provoca visión borrosa y con poco contraste entre el objeto y el entorno. La luminancia de velo es la pérdida de visión que se produce por el deslumbramiento perturbador está creada por la aparición de un velo que se superpone a la imagen nítida que ve el ojo, de modo que disminuye la capacidad del ojo de apreciar los contrastes.

El impacto ocular del resplandor solar se cuantifica (a los efectos del presente estudio) en tres categorías:

- Verde: bajo potencial de causar imagen posterior (ceguera de flash).
- Amarillo: potencial para causar una imagen posterior temporal.
- Rojo: potencial para causar quemaduras retinianas (daño ocular permanente).





Estas categorías suponen una respuesta típica al parpadeo del observador. Hay que tener en cuenta que la quemadura retiniana, generalmente, no es posible para el deslumbramiento ya que los módulos PV no enfocan la luz solar reflejada.

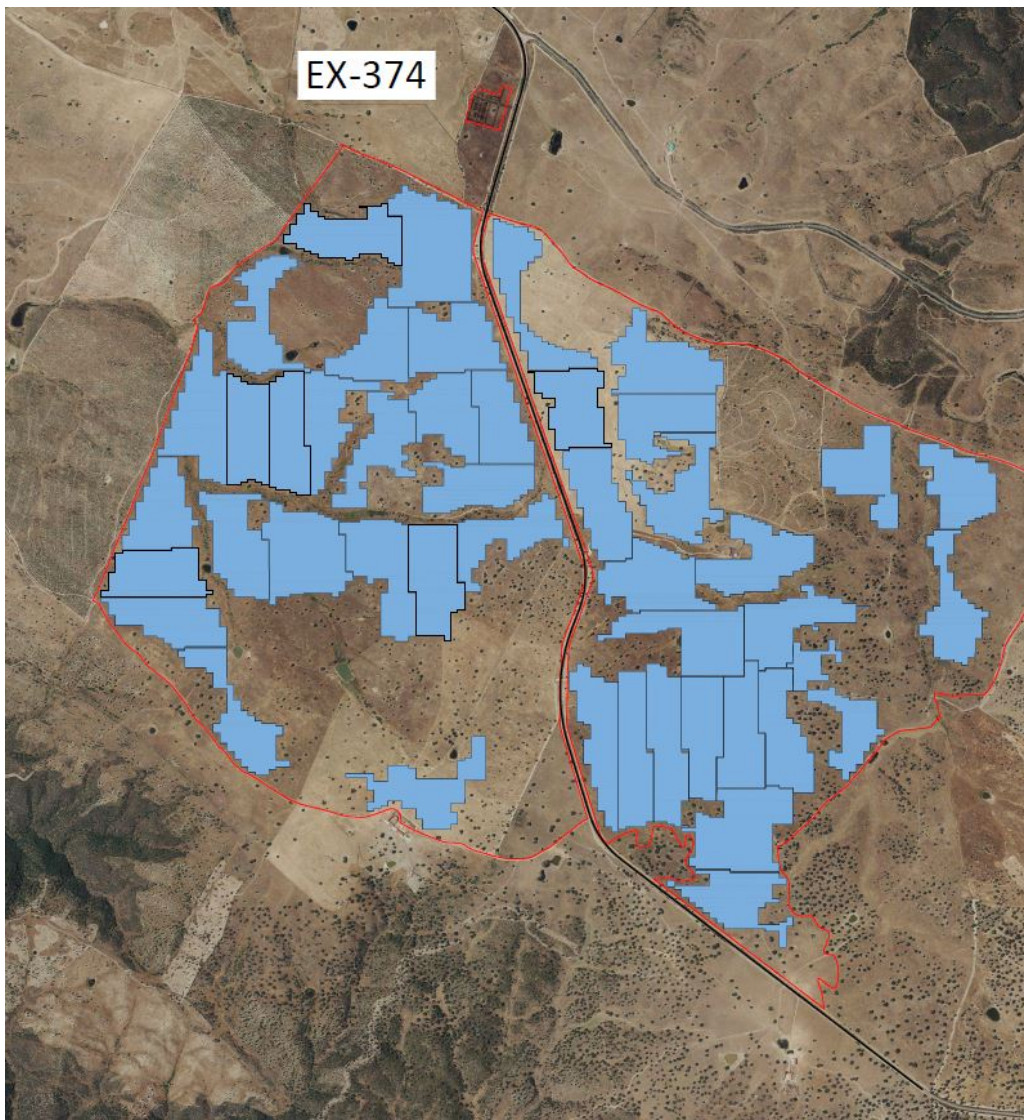
Los reflejos de los paneles fotovoltaicos pueden afectar a los observadores. Los estudios han encontrado que  $7 W/m^2$  es suficiente para causar un velo que dura de 4 a 12 segundos. Esto representa un reflejo de solo el 1-2% de la irradiancia solar típica (luz solar entrante) para una ubicación determinada que, generalmente, oscila entre  $800-1000 W/m^2$ .

## 5.2 PROCEDIMIENTO DE ANÁLISIS

Para analizar el posible deslumbramiento que generaría la planta fotovoltaica sobre los usuarios de la carretera Ex-374 y se ha procedido a calcular la trayectoria del sol a lo largo del año en el área de estudio, determinando la reflexión de la luz del sol, su distribución a lo largo del tiempo y potencia para, de este modo, determinar el impacto potencial del posible deslumbramiento.

Para los cálculos se ha empleado un software específico, incluyéndose los datos de entrada y las características en el informe adjunto en el estudio.

Se han definido tantas áreas de estudio como ubicaciones previstas hay para la colocación de los módulos fotovoltaicos.



Se ha considerado que los paneles se sitúan sobre el terreno a una altura de 1,5 metros, ajustándose a la orografía de la zona. Por otra parte, se ha considerado que el observador se localiza en la siguiente zona:

- Carretera EX-374 de doble sentido

En función de su ubicación, los resultados del calculo estiman a lo largo del año los meses y horas en los cuales se puede producir deslumbramiento, así como la duración del mismo y su potencia, y la dirección principal del mismo respecto al centroide del área de estudio,

En el Anexo I se encuentra el análisis del estudio de todos los campos y su afección, en caso de que exista, a los usuarios de la carretera EX-374, en que meses y durante cuanto tiempo se darán esos reflejos.

## 6 CONCLUSIÓN.

Considerando los resultados del cálculo realizado junto con los condicionantes derivados de la orografía del terreno, la orientación de la vía, así como la futura disposición de los paneles solares, se entiende que tras la instalación de la planta fotovoltaica se pueden producir ligeros deslumbramientos en tramos de corto recorrido de la vía. Estos deslumbramientos tendrán un carácter temporal (pocos minutos) y con una intensidad baja, estimando que, a priori, pueden ser molestos pero admisibles y no llegarían a generar problemas de visión.

Desde el momento en que se realice la instalación de los paneles fotovoltaicos, sobre el cerramiento se instalará una malla de brezo natural para evitar posibles deslumbramientos.

Badajoz, septiembre de 2.020

Fdo: Francisco Martín López Acuña

Nº de Colegiado: 873

## 7 ANEXO I. RESULTADOS DEL CÁLCULO

## Site Configuration: Cedillo

Project site configuration details and results.

Created **Sept. 29, 2020 9:46 a.m.**  
Updated **Sept. 30, 2020 3:53 a.m.**  
DNI **varies** and peaks at **1,000.0**  
**W/m<sup>2</sup>**  
Analyze every **1** minute(s)  
**0.5** ocular transmission coefficient  
**0.002 m** pupil diameter  
**0.017 m** eye focal length  
**9.3 mrad** sun subtended angle  
Timezone **UTC1**  
Site Configuration ID: 43848.7939

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

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV1	30.0	180.0	0	0	-
PV10	30.0	180.0	0	0	-
PV11	30.0	180.0	0	0	-
PV12	30.0	180.0	0	0	-
PV13	30.0	180.0	0	0	-
PV14	30.0	180.0	0	0	-
PV15	30.0	180.0	0	0	-
PV16	30.0	180.0	0	0	-
PV17	30.0	180.0	0	3,176	-
PV18	30.0	180.0	0	0	-
PV19	30.0	180.0	0	77	-
PV2	30.0	180.0	0	0	-
PV20	30.0	180.0	0	0	-
PV21	30.0	180.0	0	6,892	-
PV22	30.0	180.0	0	3,564	-
PV23	30.0	180.0	0	0	-
PV24	30.0	180.0	8	7,504	-
PV25	30.0	180.0	0	0	-
PV26	30.0	180.0	0	1,624	-
PV27	30.0	180.0	0	0	-
PV28	30.0	180.0	0	0	-
PV29	30.0	180.0	0	0	-
PV3	30.0	180.0	362	67	-
PV30	30.0	180.0	0	0	-
PV31	30.0	180.0	0	0	-
PV32	30.0	180.0	0	0	-
PV33	30.0	180.0	0	0	-
PV34	30.0	180.0	0	2,738	-
PV35	30.0	180.0	0	0	-
PV36	30.0	180.0	0	0	-
PV37	30.0	180.0	0	96	-
PV38	30.0	180.0	0	0	-
PV39	30.0	180.0	21	0	-
PV4	30.0	180.0	756	0	-
PV40	30.0	180.0	0	17	-
PV41	30.0	180.0	0	0	-
PV42	30.0	180.0	0	0	-
PV43	30.0	180.0	0	0	-
PV44	30.0	180.0	0	0	-
PV45	30.0	180.0	0	9,169	-
PV5	30.0	180.0	465	0	-
PV6	30.0	180.0	0	0	-
PV7	30.0	180.0	0	0	-
PV8	30.0	180.0	0	0	-
PV9	30.0	180.0	0	0	-

## Component Data

PV Array(s)

Name: PV1

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

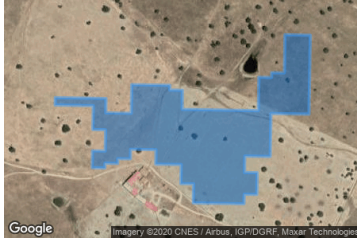
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 83,482 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.603279	-7.466281	315.26	1.50	316.76
2	39.603973	-7.466266	316.48	1.50	317.98
3	39.603968	-7.465923	318.16	1.50	319.66
4	39.604067	-7.465920	317.92	1.50	319.42
5	39.604063	-7.465577	319.05	1.50	320.55
6	39.604855	-7.465559	317.93	1.50	319.43
7	39.604846	-7.464875	320.74	1.50	322.24
8	39.603208	-7.464911	319.70	1.50	321.20
9	39.603222	-7.465939	315.97	1.50	317.47
10	39.602330	-7.465961	319.61	1.50	321.11
11	39.602339	-7.466646	318.09	1.50	319.59
12	39.601996	-7.466656	319.33	1.50	320.83
13	39.601991	-7.466312	319.65	1.50	321.15
14	39.601542	-7.466322	321.46	1.50	322.96
15	39.601546	-7.466663	321.27	1.50	322.77
16	39.601348	-7.466670	322.15	1.50	323.65
17	39.601366	-7.468041	323.29	1.50	324.79
18	39.601763	-7.468033	322.51	1.50	324.01
19	39.601767	-7.468376	322.90	1.50	324.40
20	39.602163	-7.468367	321.41	1.50	322.91
21	39.602172	-7.469054	322.41	1.50	323.91
22	39.602470	-7.469048	320.56	1.50	322.06
23	39.602479	-7.469737	320.58	1.50	322.08
24	39.602281	-7.469741	321.85	1.50	323.35
25	39.602285	-7.470085	321.54	1.50	323.04
26	39.602186	-7.470087	322.08	1.50	323.58
27	39.602191	-7.470431	321.88	1.50	323.38
28	39.602091	-7.470433	322.06	1.50	323.56
29	39.602096	-7.470774	322.26	1.50	323.76
30	39.602446	-7.470766	321.63	1.50	323.13
31	39.602442	-7.470423	320.93	1.50	322.43
32	39.602884	-7.470413	319.22	1.50	320.72
33	39.602889	-7.470756	320.29	1.50	321.79
34	39.603384	-7.470746	319.46	1.50	320.96
35	39.603398	-7.471776	318.87	1.50	320.37
36	39.603550	-7.471773	318.72	1.50	320.22
37	39.603532	-7.470401	318.19	1.50	319.69
38	39.603234	-7.470408	318.39	1.50	319.89
39	39.603225	-7.469718	316.60	1.50	318.10
40	39.603820	-7.469705	315.04	1.50	316.54
41	39.603806	-7.468677	313.19	1.50	314.69
42	39.603707	-7.468677	313.66	1.50	315.16
43	39.603703	-7.468336	313.00	1.50	314.50
44	39.603306	-7.468342	315.00	1.50	316.50
45	39.603279	-7.466281	315.26	1.50	316.76



Name: PV10

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 78,386 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.620245	-7.475186	302.35	1.50	303.85
2	39.620240	-7.474844	304.34	1.50	305.84
3	39.619844	-7.474853	301.92	1.50	303.42
4	39.619839	-7.474510	301.78	1.50	303.28
5	39.619146	-7.474525	296.78	1.50	298.28
6	39.619132	-7.473494	304.79	1.50	306.29
7	39.618934	-7.473496	305.17	1.50	306.67
8	39.618930	-7.473155	306.93	1.50	308.43
9	39.618777	-7.473158	307.45	1.50	308.95
10	39.618782	-7.473500	304.19	1.50	305.69
11	39.618881	-7.473497	304.88	1.50	306.38
12	39.618904	-7.475217	295.14	1.50	296.64
13	39.618805	-7.475220	294.49	1.50	295.99
14	39.618809	-7.475563	294.05	1.50	295.55
15	39.618710	-7.475565	293.47	1.50	294.97
16	39.618714	-7.475907	292.45	1.50	293.95
17	39.618814	-7.475904	293.16	1.50	294.66
18	39.618818	-7.476248	291.28	1.50	292.78
19	39.618917	-7.476246	291.86	1.50	293.36
20	39.618922	-7.476589	289.69	1.50	291.19
21	39.619120	-7.476585	291.62	1.50	293.12
22	39.619124	-7.476929	290.37	1.50	291.87
23	39.619322	-7.476926	291.79	1.50	293.29
24	39.619327	-7.477268	289.37	1.50	290.87
25	39.620767	-7.477236	289.41	1.50	290.91
26	39.620749	-7.475862	299.38	1.50	300.88
27	39.621290	-7.475850	301.02	1.50	302.52
28	39.621304	-7.476881	293.29	1.50	294.79
29	39.621555	-7.476875	294.78	1.50	296.28
30	39.621546	-7.476188	297.15	1.50	298.65
31	39.622088	-7.476179	295.38	1.50	296.88
32	39.622092	-7.476520	293.38	1.50	294.88
33	39.622290	-7.476515	293.26	1.50	294.76
34	39.622295	-7.476859	291.17	1.50	292.67
35	39.622447	-7.476856	291.39	1.50	292.89
36	39.622442	-7.476512	293.15	1.50	294.65
37	39.622641	-7.476508	293.16	1.50	294.66
38	39.622636	-7.476164	294.80	1.50	296.30
39	39.622735	-7.476162	294.69	1.50	296.19
40	39.622731	-7.475821	297.56	1.50	299.06
41	39.623028	-7.475812	295.83	1.50	297.33
42	39.623023	-7.475468	297.55	1.50	299.05
43	39.623122	-7.475466	297.01	1.50	298.51
44	39.623118	-7.475123	299.09	1.50	300.59
45	39.623217	-7.475120	298.33	1.50	299.83
46	39.623204	-7.474092	300.12	1.50	301.62
47	39.623104	-7.474094	301.49	1.50	302.99
48	39.623100	-7.473751	301.81	1.50	303.31
49	39.622902	-7.473755	305.01	1.50	306.51
50	39.622897	-7.473411	303.99	1.50	305.49
51	39.622844	-7.473413	305.24	1.50	306.74
52	39.622849	-7.473756	305.65	1.50	307.15
53	39.622750	-7.473758	306.43	1.50	307.93
54	39.622754	-7.474100	304.73	1.50	306.23
55	39.622655	-7.474104	305.22	1.50	306.72
56	39.622660	-7.474445	303.93	1.50	305.43
57	39.622362	-7.474454	303.39	1.50	304.89
58	39.622367	-7.474795	301.91	1.50	303.41
59	39.621971	-7.474806	303.85	1.50	305.35
60	39.621975	-7.475148	301.62	1.50	303.12
61	39.620245	-7.475186	302.35	1.50	303.85



**Name:** PV11

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 76,528 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618461	-7.475225	293.75	1.50	295.25
2	39.618457	-7.474881	297.79	1.50	299.29
3	39.618655	-7.474877	295.08	1.50	296.58
4	39.618650	-7.474533	296.52	1.50	298.02
5	39.618849	-7.474529	296.13	1.50	297.63
6	39.618835	-7.473501	304.56	1.50	306.06
7	39.615962	-7.473561	307.82	1.50	309.32
8	39.615957	-7.473220	307.76	1.50	309.26
9	39.614121	-7.473261	297.46	1.50	298.96
10	39.614130	-7.473945	296.74	1.50	298.24
11	39.614229	-7.473943	297.73	1.50	299.23
12	39.614233	-7.474287	296.69	1.50	298.19
13	39.614332	-7.474285	297.77	1.50	299.27
14	39.614341	-7.474972	296.65	1.50	298.15
15	39.614441	-7.474969	297.33	1.50	298.83
16	39.614445	-7.475313	296.03	1.50	297.53
17	39.618461	-7.475225	293.75	1.50	295.25

**Name:** PV12

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

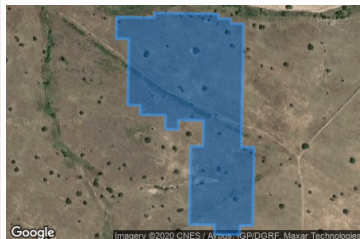
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 96,350 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.610345	-7.468531	317.94	1.50	319.44
2	39.610341	-7.468187	319.40	1.50	320.90
3	39.608703	-7.468226	323.20	1.50	324.70
4	39.608707	-7.468569	321.58	1.50	323.08
5	39.608509	-7.468574	322.20	1.50	323.70
6	39.608518	-7.469258	319.56	1.50	321.06
7	39.608716	-7.469254	318.36	1.50	319.86
8	39.608725	-7.469941	315.32	1.50	316.82
9	39.610364	-7.469905	313.24	1.50	314.74
10	39.610359	-7.469564	314.36	1.50	315.86
11	39.610900	-7.469552	314.79	1.50	316.29
12	39.610909	-7.470236	313.47	1.50	314.97
13	39.610711	-7.470243	313.35	1.50	314.85
14	39.610716	-7.470584	312.91	1.50	314.41
15	39.611013	-7.470578	312.74	1.50	314.24
16	39.611022	-7.471265	310.41	1.50	311.91
17	39.611220	-7.471263	310.13	1.50	311.63
18	39.611225	-7.471604	308.64	1.50	310.14
19	39.612612	-7.471573	305.27	1.50	306.77
20	39.612616	-7.471917	304.17	1.50	305.67
21	39.613066	-7.471907	298.95	1.50	300.45
22	39.613052	-7.470879	300.94	1.50	302.44
23	39.613151	-7.470874	300.02	1.50	301.52
24	39.613129	-7.469159	301.87	1.50	303.37
25	39.613030	-7.469161	303.08	1.50	304.58
26	39.613025	-7.468818	302.71	1.50	304.21
27	39.612926	-7.468820	304.17	1.50	305.67
28	39.612922	-7.468476	303.22	1.50	304.72
29	39.610345	-7.468531	317.94	1.50	319.44

**Name:** PV13

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

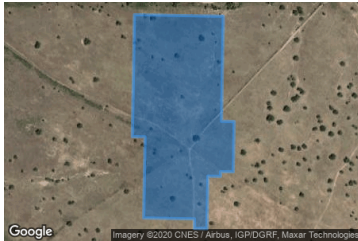
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 90,703 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.612921	-7.468474	303.21	1.50	304.71
2	39.612890	-7.466069	306.44	1.50	307.94
3	39.610710	-7.466117	319.33	1.50	320.83
4	39.610705	-7.465774	319.97	1.50	321.47
5	39.609662	-7.465799	328.52	1.50	330.02
6	39.609666	-7.466143	327.87	1.50	329.37
7	39.609567	-7.466145	328.31	1.50	329.81
8	39.609572	-7.466486	326.98	1.50	328.48
9	39.608482	-7.466513	328.96	1.50	330.46
10	39.608486	-7.466854	328.28	1.50	329.78
11	39.608684	-7.466849	327.20	1.50	328.70
12	39.608703	-7.468223	323.21	1.50	324.71
13	39.610387	-7.468186	319.46	1.50	320.96
14	39.610391	-7.468530	318.01	1.50	319.51
15	39.612921	-7.468474	303.21	1.50	304.71

Name: PV14

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

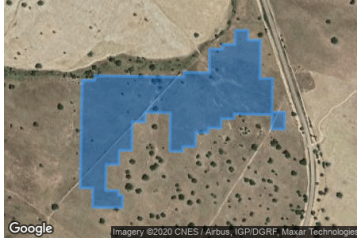
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 74,958 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.612989	-7.466067	305.15	1.50	306.65
2	39.612984	-7.465726	306.51	1.50	308.01
3	39.613083	-7.465721	305.37	1.50	306.87
4	39.613052	-7.463317	308.87	1.50	310.37
5	39.613151	-7.463315	308.54	1.50	310.04
6	39.613142	-7.462628	310.29	1.50	311.79
7	39.613637	-7.462617	309.56	1.50	311.06
8	39.613632	-7.462273	311.03	1.50	312.53
9	39.613731	-7.462271	310.57	1.50	312.07
10	39.613727	-7.461930	312.35	1.50	313.85
11	39.614024	-7.461921	311.04	1.50	312.54
12	39.614020	-7.461580	312.37	1.50	313.87
13	39.613821	-7.461582	313.52	1.50	315.02
14	39.613817	-7.461240	314.99	1.50	316.49
15	39.613024	-7.461258	317.65	1.50	319.15
16	39.613020	-7.460914	319.20	1.50	320.70
17	39.612326	-7.460930	317.40	1.50	318.90
18	39.612322	-7.460586	319.17	1.50	320.67
19	39.611971	-7.460594	317.80	1.50	319.30
20	39.611976	-7.460935	316.10	1.50	317.60
21	39.612273	-7.460929	317.17	1.50	318.67
22	39.612287	-7.461959	311.94	1.50	313.44
23	39.612188	-7.461964	312.34	1.50	313.84
24	39.612192	-7.462305	312.01	1.50	313.51
25	39.611994	-7.462312	312.65	1.50	314.15
26	39.611999	-7.462655	313.58	1.50	315.08
27	39.611900	-7.462657	313.86	1.50	315.36
28	39.611904	-7.462999	314.24	1.50	315.74
29	39.611607	-7.463007	315.38	1.50	316.88
30	39.611611	-7.463351	315.93	1.50	317.43
31	39.611512	-7.463353	316.28	1.50	317.78
32	39.611517	-7.463694	316.20	1.50	317.70
33	39.612310	-7.463679	312.81	1.50	314.31
34	39.612319	-7.464366	311.31	1.50	312.81
35	39.612120	-7.464371	312.12	1.50	313.62
36	39.612125	-7.464712	312.92	1.50	314.42
37	39.611531	-7.464727	315.55	1.50	317.05
38	39.611535	-7.465071	315.92	1.50	317.42
39	39.611238	-7.465077	317.63	1.50	319.13
40	39.611242	-7.465421	317.85	1.50	319.35
41	39.610701	-7.465433	320.55	1.50	322.05
42	39.610696	-7.465089	320.53	1.50	322.03
43	39.610597	-7.465091	321.23	1.50	322.73
44	39.610596	-7.464973	321.03	1.50	322.53
45	39.610345	-7.464979	322.98	1.50	324.48
46	39.610355	-7.465782	323.21	1.50	324.71
47	39.610752	-7.465775	319.65	1.50	321.15
48	39.610756	-7.466116	318.88	1.50	320.38
49	39.612989	-7.466067	305.15	1.50	306.65

Name: PV15

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

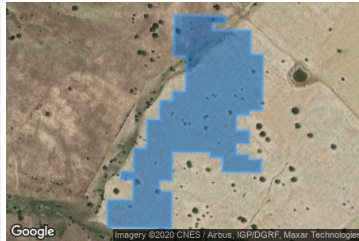
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 79,313 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.618002	-7.470424	312.42	1.50	313.92
2	39.617984	-7.469052	309.62	1.50	311.12
3	39.617831	-7.469055	309.01	1.50	310.51
4	39.617836	-7.469397	310.38	1.50	311.88
5	39.617691	-7.469402	309.01	1.50	310.51
6	39.617677	-7.468371	310.33	1.50	311.83
7	39.617182	-7.468380	311.56	1.50	313.06
8	39.617177	-7.468039	313.06	1.50	314.56
9	39.616034	-7.468064	314.40	1.50	315.90
10	39.616039	-7.468408	313.83	1.50	315.33
11	39.615940	-7.468410	313.78	1.50	315.28
12	39.615944	-7.468753	313.45	1.50	314.95
13	39.615601	-7.468761	313.37	1.50	314.87
14	39.615597	-7.468417	313.25	1.50	314.75
15	39.615345	-7.468423	312.29	1.50	313.79
16	39.615350	-7.468764	312.56	1.50	314.06
17	39.615106	-7.468769	311.41	1.50	312.91
18	39.615101	-7.468428	311.03	1.50	312.53
19	39.615002	-7.468430	310.48	1.50	311.98
20	39.614998	-7.468087	309.88	1.50	311.38
21	39.614746	-7.468092	308.42	1.50	309.92
22	39.614760	-7.469121	309.83	1.50	311.33
23	39.615057	-7.469114	311.48	1.50	312.98
24	39.615062	-7.469458	311.86	1.50	313.36
25	39.615161	-7.469455	312.32	1.50	313.82
26	39.615174	-7.470486	309.86	1.50	311.36
27	39.614580	-7.470501	307.31	1.50	308.81
28	39.614584	-7.470843	306.22	1.50	307.72
29	39.614340	-7.470850	305.25	1.50	306.75
30	39.614336	-7.470507	306.21	1.50	307.71
31	39.613589	-7.470523	300.69	1.50	302.19
32	39.613612	-7.472239	298.27	1.50	299.77
33	39.614160	-7.472227	298.99	1.50	300.49
34	39.614151	-7.471542	302.10	1.50	303.60
35	39.614594	-7.471530	303.32	1.50	304.82
36	39.614598	-7.471873	301.11	1.50	302.61
37	39.614750	-7.471870	300.62	1.50	302.12
38	39.614746	-7.471526	303.08	1.50	304.58
39	39.615241	-7.471516	302.53	1.50	304.03
40	39.615237	-7.471174	305.85	1.50	307.35
41	39.615831	-7.471159	304.08	1.50	305.58
42	39.615826	-7.470818	307.39	1.50	308.89
43	39.616223	-7.470807	304.66	1.50	306.16
44	39.616218	-7.470465	306.57	1.50	308.07
45	39.616416	-7.470459	305.74	1.50	307.24
46	39.616412	-7.470115	307.55	1.50	309.05
47	39.617152	-7.470101	306.74	1.50	308.24
48	39.617156	-7.470442	308.41	1.50	309.91
49	39.618002	-7.470424	312.42	1.50	313.92

**Name:** PV16

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

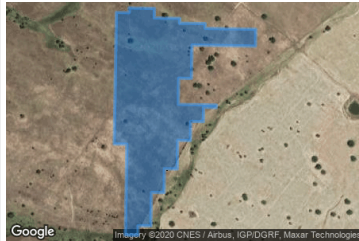
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 73,301 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618736	-7.473501	303.87	1.50	305.37
2	39.618731	-7.473157	307.34	1.50	308.84
3	39.618830	-7.473155	307.49	1.50	308.99
4	39.618821	-7.472470	306.96	1.50	308.46
5	39.618623	-7.472472	309.63	1.50	311.13
6	39.618614	-7.471787	309.40	1.50	310.90
7	39.618515	-7.471789	309.20	1.50	310.70
8	39.618506	-7.471100	312.89	1.50	314.39
9	39.618407	-7.471102	312.54	1.50	314.04
10	39.618389	-7.469730	313.22	1.50	314.72
11	39.618039	-7.469738	312.12	1.50	313.62
12	39.618061	-7.471453	312.60	1.50	314.10
13	39.617368	-7.471471	311.10	1.50	312.60
14	39.617372	-7.471815	311.01	1.50	312.51
15	39.616831	-7.471827	308.66	1.50	310.16
16	39.616817	-7.470796	306.35	1.50	307.85
17	39.616764	-7.470797	305.75	1.50	307.25
18	39.616769	-7.471141	307.30	1.50	308.80
19	39.616472	-7.471147	304.58	1.50	306.08
20	39.616476	-7.471488	306.36	1.50	307.86
21	39.616080	-7.471499	303.64	1.50	305.14
22	39.616084	-7.471843	305.23	1.50	306.73
23	39.615490	-7.471856	302.25	1.50	303.75
24	39.615494	-7.472200	303.54	1.50	305.04
25	39.614999	-7.472210	300.76	1.50	302.26
26	39.615003	-7.472552	302.20	1.50	303.70
27	39.614310	-7.472569	298.71	1.50	300.21
28	39.614314	-7.472913	299.72	1.50	301.22
29	39.614116	-7.472917	297.65	1.50	299.15
30	39.614121	-7.473258	297.46	1.50	298.96
31	39.616003	-7.473217	307.98	1.50	309.48
32	39.616008	-7.473560	308.01	1.50	309.51
33	39.618736	-7.473501	303.87	1.50	305.37

**Name:** PV17

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 75,048 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.615119	-7.462242	314.64	1.50	316.14
2	39.614174	-7.462263	310.71	1.50	312.21
3	39.614178	-7.462607	312.09	1.50	313.59
4	39.613980	-7.462611	310.47	1.50	311.97
5	39.613985	-7.462955	310.81	1.50	312.31
6	39.613787	-7.462959	309.58	1.50	311.08
7	39.613791	-7.463300	309.57	1.50	311.07
8	39.613593	-7.463307	308.98	1.50	310.48
9	39.613598	-7.463651	308.69	1.50	310.19
10	39.613499	-7.463653	308.33	1.50	309.83
11	39.613508	-7.464338	307.55	1.50	309.05
12	39.613607	-7.464335	307.89	1.50	309.39
13	39.613625	-7.465709	306.53	1.50	308.03
14	39.613526	-7.465714	306.17	1.50	307.67
15	39.613530	-7.466055	306.42	1.50	307.92
16	39.613431	-7.466060	305.69	1.50	307.19
17	39.613436	-7.466403	305.67	1.50	307.17
18	39.613337	-7.466405	304.97	1.50	306.47
19	39.613355	-7.467777	304.67	1.50	306.17
20	39.614399	-7.467754	306.63	1.50	308.13
21	39.614385	-7.466726	311.15	1.50	312.65
22	39.615026	-7.466709	312.73	1.50	314.23
23	39.615030	-7.467053	310.85	1.50	312.35
24	39.615129	-7.467051	311.07	1.50	312.57
25	39.615138	-7.467738	310.38	1.50	311.88
26	39.615290	-7.467734	311.27	1.50	312.77
27	39.615277	-7.466706	313.24	1.50	314.74
28	39.615178	-7.466706	313.03	1.50	314.53
29	39.615173	-7.466365	314.55	1.50	316.05
30	39.615074	-7.466365	314.29	1.50	315.79
31	39.615065	-7.465678	314.60	1.50	316.10
32	39.615164	-7.465675	314.93	1.50	316.43
33	39.615119	-7.462242	314.64	1.50	316.14

**Name:** PV18

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

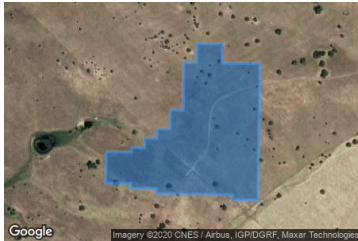
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 75,856 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.618318	-7.468357	310.95	1.50	312.45
2	39.618327	-7.469042	310.83	1.50	312.33
3	39.618426	-7.469040	311.18	1.50	312.68
4	39.618453	-7.471101	312.69	1.50	314.19
5	39.618552	-7.471099	313.08	1.50	314.58
6	39.618561	-7.471786	309.24	1.50	310.74
7	39.618660	-7.471784	309.67	1.50	311.17
8	39.618669	-7.472471	309.07	1.50	310.57
9	39.619317	-7.472457	308.30	1.50	309.80
10	39.619308	-7.471772	311.44	1.50	312.94
11	39.619407	-7.471768	310.60	1.50	312.10
12	39.619402	-7.471424	309.84	1.50	311.34
13	39.619600	-7.471420	308.69	1.50	310.19
14	39.619596	-7.471076	309.92	1.50	311.42
15	39.619794	-7.471072	311.03	1.50	312.53
16	39.619790	-7.470730	312.26	1.50	313.76
17	39.620186	-7.470719	315.34	1.50	316.84
18	39.620181	-7.470376	316.41	1.50	317.91
19	39.621172	-7.470354	320.10	1.50	321.60
20	39.621168	-7.470013	320.24	1.50	321.74
21	39.621564	-7.470002	318.44	1.50	319.94
22	39.621555	-7.469317	318.01	1.50	319.51
23	39.621159	-7.469326	320.59	1.50	322.09
24	39.621145	-7.468295	320.87	1.50	322.37
25	39.618318	-7.468357	310.95	1.50	312.45

Name: PV19

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 82,485 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.622781	-7.468603	313.72	1.50	315.22
2	39.622785	-7.468944	312.81	1.50	314.31
3	39.622884	-7.468944	312.94	1.50	314.44
4	39.622889	-7.469285	311.74	1.50	313.24
5	39.623087	-7.469281	312.29	1.50	313.79
6	39.623092	-7.469624	311.25	1.50	312.75
7	39.623191	-7.469622	311.81	1.50	313.31
8	39.623204	-7.470655	310.40	1.50	311.90
9	39.623105	-7.470657	309.62	1.50	311.12
10	39.623110	-7.471001	309.61	1.50	311.11
11	39.623011	-7.471003	308.68	1.50	310.18
12	39.623015	-7.471344	308.53	1.50	310.03
13	39.623114	-7.471342	309.15	1.50	310.65
14	39.623132	-7.472717	307.29	1.50	308.79
15	39.623231	-7.472717	307.26	1.50	308.76
16	39.623236	-7.473058	305.22	1.50	306.72
17	39.623335	-7.473056	305.75	1.50	307.25
18	39.623340	-7.473399	303.85	1.50	305.35
19	39.623439	-7.473397	304.30	1.50	305.80
20	39.623443	-7.473741	302.42	1.50	303.92
21	39.623641	-7.473736	303.59	1.50	305.09
22	39.623650	-7.474424	301.19	1.50	302.69
23	39.624001	-7.474416	304.76	1.50	306.26
24	39.623996	-7.474072	306.20	1.50	307.70
25	39.624392	-7.474064	307.46	1.50	308.96
26	39.624388	-7.473722	307.19	1.50	308.69
27	39.624784	-7.473711	306.14	1.50	307.64
28	39.624780	-7.473368	305.45	1.50	306.95
29	39.625176	-7.473359	303.98	1.50	305.48
30	39.625172	-7.473018	302.46	1.50	303.96
31	39.624874	-7.473024	304.20	1.50	305.70
32	39.624870	-7.472681	302.94	1.50	304.44
33	39.624672	-7.472683	304.11	1.50	305.61
34	39.624667	-7.472341	303.59	1.50	305.09
35	39.624568	-7.472344	303.83	1.50	305.33
36	39.624541	-7.470280	310.42	1.50	311.92
37	39.624983	-7.470270	313.15	1.50	314.65
38	39.624988	-7.470614	311.29	1.50	312.79
39	39.625041	-7.470613	311.41	1.50	312.91
40	39.625027	-7.469582	315.40	1.50	316.90
41	39.625126	-7.469580	315.63	1.50	317.13
42	39.625122	-7.469238	316.18	1.50	317.68
43	39.624626	-7.469249	313.97	1.50	315.47
44	39.624617	-7.468562	315.47	1.50	316.97
45	39.622781	-7.468603	313.72	1.50	315.22



Name: PV2

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 76,531 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.606995	-7.477538	311.41	1.50	312.91
2	39.606991	-7.477197	311.63	1.50	313.13
3	39.606396	-7.477210	314.49	1.50	315.99
4	39.606392	-7.476866	316.64	1.50	318.14
5	39.605995	-7.476875	317.73	1.50	319.23
6	39.605991	-7.476531	319.07	1.50	320.57
7	39.605793	-7.476536	319.22	1.50	320.72
8	39.605788	-7.476192	320.23	1.50	321.73
9	39.605590	-7.476194	320.14	1.50	321.64
10	39.605585	-7.475853	320.30	1.50	321.80
11	39.605486	-7.475855	320.31	1.50	321.81
12	39.605477	-7.475168	319.41	1.50	320.91
13	39.605378	-7.475168	319.37	1.50	320.87
14	39.605374	-7.474827	318.39	1.50	319.89
15	39.605023	-7.474835	318.22	1.50	319.72
16	39.605028	-7.475176	319.24	1.50	320.74
17	39.604090	-7.475197	320.21	1.50	321.71
18	39.604081	-7.474512	318.68	1.50	320.18
19	39.603830	-7.474517	318.58	1.50	320.08
20	39.603839	-7.475202	319.95	1.50	321.45
21	39.603740	-7.475207	319.90	1.50	321.40
22	39.603744	-7.475550	320.68	1.50	322.18
23	39.603546	-7.475554	320.56	1.50	322.06
24	39.603555	-7.476239	321.85	1.50	323.35
25	39.603654	-7.476237	321.88	1.50	323.38
26	39.603659	-7.476580	322.21	1.50	323.71
27	39.603857	-7.476576	322.32	1.50	323.82
28	39.603862	-7.476919	322.59	1.50	324.09
29	39.604159	-7.476913	322.59	1.50	324.09
30	39.604163	-7.477256	321.85	1.50	323.35
31	39.604461	-7.477250	321.19	1.50	322.69
32	39.604465	-7.477593	320.87	1.50	322.37
33	39.604762	-7.477587	319.89	1.50	321.39
34	39.604767	-7.477930	320.39	1.50	321.89
35	39.605163	-7.477922	318.75	1.50	320.25
36	39.605168	-7.478265	319.88	1.50	321.38
37	39.605518	-7.478257	318.62	1.50	320.12
38	39.605513	-7.477916	317.51	1.50	319.01
39	39.605910	-7.477905	315.96	1.50	317.46
40	39.605905	-7.477564	315.09	1.50	316.59
41	39.606843	-7.477541	311.95	1.50	313.45
42	39.606852	-7.478228	314.35	1.50	315.85
43	39.607446	-7.478215	312.55	1.50	314.05
44	39.607451	-7.478559	313.72	1.50	315.22
45	39.607649	-7.478554	313.72	1.50	315.22
46	39.607663	-7.479585	316.38	1.50	317.88
47	39.608059	-7.479579	314.78	1.50	316.28
48	39.608063	-7.479920	314.36	1.50	315.86
49	39.608315	-7.479914	312.95	1.50	314.45
50	39.608310	-7.479571	313.43	1.50	314.93
51	39.608409	-7.479569	312.80	1.50	314.30
52	39.608382	-7.477510	309.72	1.50	311.22
53	39.606995	-7.477538	311.41	1.50	312.91

Name: PV20

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

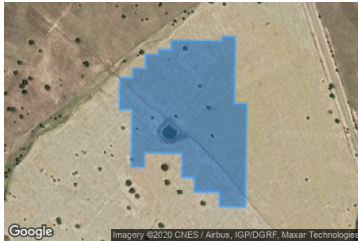
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 77,599 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.617339	-7.465286	320.66	1.50	322.16
2	39.617335	-7.464943	321.19	1.50	322.69
3	39.615201	-7.464990	315.23	1.50	316.73
4	39.615210	-7.465674	315.02	1.50	316.52
5	39.615507	-7.465668	315.56	1.50	317.06
6	39.615516	-7.466355	314.85	1.50	316.35
7	39.615814	-7.466348	314.79	1.50	316.29
8	39.615818	-7.466692	313.90	1.50	315.40
9	39.616314	-7.466683	315.06	1.50	316.56
10	39.616327	-7.467712	315.55	1.50	317.05
11	39.616030	-7.467720	314.81	1.50	316.31
12	39.616034	-7.468062	314.41	1.50	315.91
13	39.617223	-7.468035	312.91	1.50	314.41
14	39.617228	-7.468379	311.42	1.50	312.92
15	39.617875	-7.468365	309.82	1.50	311.32
16	39.617871	-7.468024	311.10	1.50	312.60
17	39.618069	-7.468017	310.82	1.50	312.32
18	39.618065	-7.467673	312.10	1.50	313.60
19	39.618362	-7.467667	311.70	1.50	313.20
20	39.618357	-7.467323	313.01	1.50	314.51
21	39.618456	-7.467321	312.75	1.50	314.25
22	39.618452	-7.466980	314.28	1.50	315.78
23	39.618650	-7.466973	313.66	1.50	315.16
24	39.618632	-7.465599	322.28	1.50	323.78
25	39.618731	-7.465597	321.85	1.50	323.35
26	39.618726	-7.465255	323.77	1.50	325.27
27	39.617339	-7.465286	320.66	1.50	322.16

Name: PV21

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 75,445 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618726	-7.465253	323.78	1.50	325.28
2	39.618704	-7.463538	324.17	1.50	325.67
3	39.618307	-7.463546	323.07	1.50	324.57
4	39.618303	-7.463203	322.68	1.50	324.18
5	39.617510	-7.463218	319.94	1.50	321.44
6	39.617506	-7.462877	319.57	1.50	321.07
7	39.616713	-7.462894	317.88	1.50	319.38
8	39.616708	-7.462551	317.36	1.50	318.86
9	39.616015	-7.462564	316.07	1.50	317.57
10	39.616010	-7.462223	315.14	1.50	316.64
11	39.615165	-7.462241	314.72	1.50	316.22
12	39.615201	-7.464987	315.23	1.50	316.73
13	39.617381	-7.464939	321.36	1.50	322.86
14	39.617385	-7.465283	320.82	1.50	322.32
15	39.618726	-7.465253	323.78	1.50	325.28

**Name:** PV22

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 95,035 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.621145	-7.468293	320.88	1.50	322.38
2	39.621136	-7.467608	323.28	1.50	324.78
3	39.620938	-7.467612	323.43	1.50	324.93
4	39.620929	-7.466925	325.77	1.50	327.27
5	39.620631	-7.466929	324.75	1.50	326.25
6	39.620622	-7.466242	326.66	1.50	328.16
7	39.621316	-7.466227	327.64	1.50	329.14
8	39.621298	-7.464855	329.11	1.50	330.61
9	39.621199	-7.464857	329.20	1.50	330.70
10	39.621194	-7.464514	329.99	1.50	331.49
11	39.620600	-7.464524	326.30	1.50	327.80
12	39.620595	-7.464183	327.52	1.50	329.02
13	39.619803	-7.464201	323.77	1.50	325.27
14	39.619798	-7.463857	325.34	1.50	326.84
15	39.619005	-7.463872	324.25	1.50	325.75
16	39.619001	-7.463531	324.93	1.50	326.43
17	39.618750	-7.463537	324.28	1.50	325.78
18	39.618777	-7.465598	321.74	1.50	323.24
19	39.618678	-7.465598	322.05	1.50	323.55
20	39.618710	-7.468003	312.75	1.50	314.25
21	39.618511	-7.468009	311.68	1.50	313.18
22	39.618516	-7.468351	312.45	1.50	313.95
23	39.621145	-7.468293	320.88	1.50	322.38

**Note:** PV array encompasses a large surface area (greater than 25 acres). Accuracy of path receptor glare analysis may be affected by footprint size. Additional analyses of array sub-sections may provide more information on expected glare. ✕

**Name:** PV23  
**Axis tracking:** Fixed (no rotation)  
**Tilt:** 30.0 deg  
**Orientation:** 180.0 deg  
**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  
**Approx. area:** 137,300 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.625320	-7.469232	316.91	1.50	318.41
2	39.625315	-7.468888	317.93	1.50	319.43
3	39.625514	-7.468884	318.87	1.50	320.37
4	39.625509	-7.468540	319.67	1.50	321.17
5	39.625806	-7.468534	320.64	1.50	322.14
6	39.625802	-7.468192	321.66	1.50	323.16
7	39.625604	-7.468197	320.94	1.50	322.44
8	39.625599	-7.467853	321.91	1.50	323.41
9	39.625500	-7.467855	321.52	1.50	323.02
10	39.625495	-7.467512	322.54	1.50	324.04
11	39.625396	-7.467514	322.10	1.50	323.60
12	39.625392	-7.467168	323.27	1.50	324.77
13	39.625491	-7.467166	323.80	1.50	325.30
14	39.625486	-7.466825	324.89	1.50	326.39
15	39.625189	-7.466829	323.60	1.50	325.10
16	39.625180	-7.466144	326.28	1.50	327.78
17	39.625081	-7.466144	326.24	1.50	327.74
18	39.625076	-7.465803	328.09	1.50	329.59
19	39.624878	-7.465807	327.83	1.50	329.33
20	39.624869	-7.465120	331.14	1.50	332.64
21	39.623726	-7.465145	327.98	1.50	329.48
22	39.622438	-7.465173	326.99	1.50	328.49
23	39.621401	-7.465194	328.14	1.50	329.64
24	39.621397	-7.464853	328.87	1.50	330.37
25	39.621344	-7.464854	329.00	1.50	330.50
26	39.621385	-7.467946	320.80	1.50	322.30
27	39.621187	-7.467950	321.93	1.50	323.43
28	39.621205	-7.469322	320.34	1.50	321.84
29	39.621951	-7.469306	315.58	1.50	317.08
30	39.621942	-7.468619	315.85	1.50	317.35
31	39.624663	-7.468559	315.68	1.50	317.18
32	39.624672	-7.469246	314.15	1.50	315.65
33	39.625320	-7.469232	316.91	1.50	318.41

Name: PV24

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

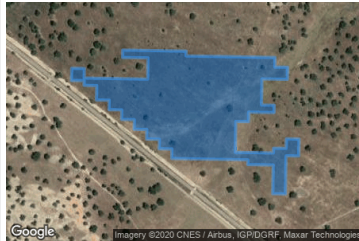
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

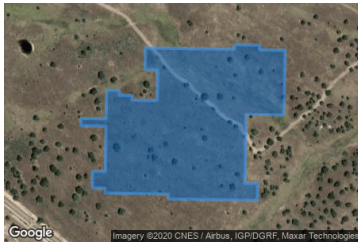
Approx. area: 75,813 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.599503	-7.450564	306.95	1.50	308.45
2	39.599304	-7.450568	306.16	1.50	307.66
3	39.599300	-7.450225	305.46	1.50	306.96
4	39.599049	-7.450230	305.75	1.50	307.25
5	39.599058	-7.450917	306.85	1.50	308.35
6	39.598516	-7.450927	307.62	1.50	309.12
7	39.598512	-7.450586	308.89	1.50	310.39
8	39.598360	-7.450589	309.93	1.50	311.43
9	39.598369	-7.451276	308.30	1.50	309.80
10	39.598171	-7.451280	308.76	1.50	310.26
11	39.598175	-7.451624	309.35	1.50	310.85
12	39.597535	-7.451636	310.59	1.50	312.09
13	39.597521	-7.450605	313.78	1.50	315.28
14	39.597620	-7.450603	313.50	1.50	315.00
15	39.597616	-7.450262	314.27	1.50	315.77
16	39.597814	-7.450255	313.67	1.50	315.17
17	39.597809	-7.449914	314.71	1.50	316.21
18	39.597459	-7.449922	315.44	1.50	316.94
19	39.597463	-7.450265	314.74	1.50	316.24
20	39.596671	-7.450283	316.16	1.50	317.66
21	39.596675	-7.450624	315.94	1.50	317.44
22	39.597270	-7.450611	314.32	1.50	315.82
23	39.597279	-7.451298	312.16	1.50	313.66
24	39.597378	-7.451296	311.80	1.50	313.30
25	39.597406	-7.453356	314.42	1.50	315.92
26	39.597604	-7.453352	313.51	1.50	315.01
27	39.597608	-7.453695	313.76	1.50	315.26
28	39.597806	-7.453691	312.92	1.50	314.42
29	39.597811	-7.454034	313.39	1.50	314.89
30	39.598009	-7.454030	313.30	1.50	314.80
31	39.598014	-7.454373	313.84	1.50	315.34
32	39.598212	-7.454369	314.54	1.50	316.04
33	39.598216	-7.454712	314.85	1.50	316.35
34	39.598415	-7.454708	315.71	1.50	317.21
35	39.598419	-7.455052	316.00	1.50	317.50
36	39.598617	-7.455047	316.76	1.50	318.26
37	39.598622	-7.455391	316.97	1.50	318.47
38	39.598919	-7.455384	318.13	1.50	319.63
39	39.598924	-7.455727	318.28	1.50	319.78
40	39.599023	-7.455725	318.68	1.50	320.18
41	39.599027	-7.456069	319.02	1.50	320.52
42	39.599279	-7.456063	320.13	1.50	321.63
43	39.599274	-7.455722	319.72	1.50	321.22
44	39.599076	-7.455724	318.92	1.50	320.42
45	39.599053	-7.454007	314.34	1.50	315.84
46	39.599495	-7.453999	315.18	1.50	316.68
47	39.599504	-7.454684	317.38	1.50	318.88
48	39.599657	-7.454680	317.45	1.50	318.95
49	39.599634	-7.452966	314.02	1.50	315.52
50	39.599535	-7.452968	313.63	1.50	315.13
51	39.599503	-7.450564	306.95	1.50	308.45

**Note:** PV array encompasses a large surface area (greater than 25 acres). Accuracy of path receptor glare analysis may be affected by footprint size. Additional analyses of array sub-sections may provide more information on expected glare. ✕

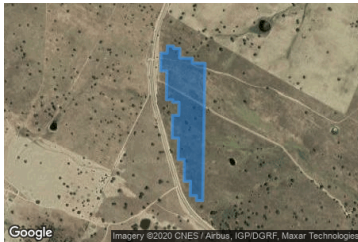
**Name:** PV25  
**Axis tracking:** Fixed (no rotation)  
**Tilt:** 30.0 deg  
**Orientation:** 180.0 deg  
**Rated power:** -  
**Panel material:** Smooth glass with AR coating  
**Vary reflectivity with sun position?** Yes  
**Correlate slope error with surface type?** Yes  
**Slope error:** 8.43 mrad  
**Approx. area:** 115,109 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.602682	-7.451178	311.22	1.50	312.72
2	39.602781	-7.451175	311.78	1.50	313.28
3	39.602772	-7.450491	311.83	1.50	313.33
4	39.602673	-7.450493	311.36	1.50	312.86
5	39.602664	-7.449806	310.64	1.50	312.14
6	39.601323	-7.449836	304.26	1.50	305.76
7	39.601337	-7.450864	305.90	1.50	307.40
8	39.599903	-7.450896	308.81	1.50	310.31
9	39.599899	-7.450555	307.84	1.50	309.34
10	39.599549	-7.450563	307.16	1.50	308.66
11	39.599581	-7.452964	313.81	1.50	315.31
12	39.599680	-7.452962	314.15	1.50	315.65
13	39.599703	-7.454679	317.50	1.50	319.00
14	39.599802	-7.454677	317.60	1.50	319.10
15	39.599806	-7.455021	318.75	1.50	320.25
16	39.600157	-7.455013	319.28	1.50	320.78
17	39.600152	-7.454669	318.20	1.50	319.70
18	39.601090	-7.454649	318.81	1.50	320.31
19	39.601099	-7.455336	320.36	1.50	321.86
20	39.601251	-7.455332	319.88	1.50	321.38
21	39.601242	-7.454648	318.18	1.50	319.68
22	39.601836	-7.454632	313.77	1.50	315.27
23	39.601832	-7.454291	313.10	1.50	314.60
24	39.601733	-7.454291	313.86	1.50	315.36
25	39.601728	-7.453950	314.09	1.50	315.59
26	39.601629	-7.453949	314.96	1.50	316.46
27	39.601620	-7.453263	313.59	1.50	315.09
28	39.602260	-7.453248	309.59	1.50	311.09
29	39.602265	-7.453592	310.48	1.50	311.98
30	39.602714	-7.453582	311.51	1.50	313.01
31	39.602682	-7.451178	311.22	1.50	312.72

**Note:** PV array encompasses a large surface area (greater than 25 acres). Accuracy of path receptor glare analysis may be affected by footprint size. Additional analyses of array sub-sections may provide more information on expected glare. ✕

**Name:** PV26  
**Axis tracking:** Fixed (no rotation)  
**Tilt:** 30.0 deg  
**Orientation:** 180.0 deg  
**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  
**Approx. area:** 169,428 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.601140	-7.458429	326.89	1.50	328.39
2	39.601144	-7.458770	328.13	1.50	329.63
3	39.601343	-7.458766	327.93	1.50	329.43
4	39.601347	-7.459109	328.96	1.50	330.46
5	39.601942	-7.459096	327.95	1.50	329.45
6	39.601946	-7.459439	328.81	1.50	330.31
7	39.602838	-7.459420	327.77	1.50	329.27
8	39.602842	-7.459763	328.95	1.50	330.45
9	39.603734	-7.459743	327.94	1.50	329.44
10	39.603739	-7.460087	329.58	1.50	331.08
11	39.604683	-7.460066	330.19	1.50	331.69
12	39.604679	-7.459725	329.14	1.50	330.64
13	39.605220	-7.459713	331.79	1.50	333.29
14	39.605225	-7.460054	332.73	1.50	334.23
15	39.605324	-7.460052	332.95	1.50	334.45
16	39.605329	-7.460395	333.58	1.50	335.08
17	39.606518	-7.460371	333.58	1.50	335.08
18	39.606522	-7.460712	333.89	1.50	335.39
19	39.607269	-7.460696	333.04	1.50	334.54
20	39.607264	-7.460355	331.94	1.50	333.44
21	39.607561	-7.460346	332.37	1.50	333.87
22	39.607557	-7.460005	330.59	1.50	332.09
23	39.607458	-7.460007	330.28	1.50	331.78
24	39.607453	-7.459663	328.25	1.50	329.75
25	39.607057	-7.459670	328.96	1.50	330.46
26	39.607048	-7.458985	327.87	1.50	329.37
27	39.606850	-7.458990	329.63	1.50	331.13
28	39.606840	-7.458303	328.85	1.50	330.35
29	39.601140	-7.458429	326.89	1.50	328.39
30	39.601140	-7.458429	326.89	1.50	328.39
31	39.601144	-7.458770	328.13	1.50	329.63
32	39.601343	-7.458766	327.93	1.50	329.43
33	39.601347	-7.459109	328.96	1.50	330.46
34	39.601942	-7.459096	327.95	1.50	329.45
35	39.601946	-7.459439	328.81	1.50	330.31
36	39.602838	-7.459420	327.77	1.50	329.27
37	39.602842	-7.459763	328.95	1.50	330.45
38	39.603734	-7.459743	327.94	1.50	329.44
39	39.603739	-7.460087	329.58	1.50	331.08
40	39.604683	-7.460066	330.19	1.50	331.69
41	39.604679	-7.459725	329.14	1.50	330.64
42	39.605220	-7.459713	331.79	1.50	333.29
43	39.605225	-7.460054	332.73	1.50	334.23
44	39.605324	-7.460052	332.95	1.50	334.45
45	39.605329	-7.460395	333.58	1.50	335.08
46	39.606518	-7.460371	333.58	1.50	335.08
47	39.606522	-7.460712	333.89	1.50	335.39
48	39.607269	-7.460696	333.04	1.50	334.54
49	39.607264	-7.460355	331.94	1.50	333.44
50	39.607561	-7.460346	332.37	1.50	333.87
51	39.607557	-7.460005	330.59	1.50	332.09
52	39.607458	-7.460007	330.28	1.50	331.78
53	39.607453	-7.459663	328.25	1.50	329.75
54	39.607057	-7.459670	328.96	1.50	330.46
55	39.607048	-7.458985	327.87	1.50	329.37



56	39.606850	-7.458990	329.63	1.50	331.13
57	39.606840	-7.458303	328.85	1.50	330.35
58	39.601140	-7.458429	326.89	1.50	328.39

**Name:** PV27

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 83,746 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.607237	-7.458291	326.45	1.50	327.95
2	39.607218	-7.456917	320.50	1.50	322.00
3	39.604147	-7.456988	318.32	1.50	319.82
4	39.604142	-7.456642	317.55	1.50	319.05
5	39.601513	-7.456703	321.31	1.50	322.81
6	39.601518	-7.457046	322.22	1.50	323.72
7	39.601320	-7.457051	321.88	1.50	323.38
8	39.601334	-7.458079	325.45	1.50	326.95
9	39.601234	-7.458083	325.46	1.50	326.96
10	39.601239	-7.458427	326.84	1.50	328.34
11	39.607237	-7.458291	326.45	1.50	327.95

**Name:** PV28

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 90,868 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.607516	-7.456911	319.60	1.50	321.10
2	39.607507	-7.456226	315.26	1.50	316.76
3	39.607408	-7.456228	316.78	1.50	318.28
4	39.607403	-7.455885	318.54	1.50	320.04
5	39.607007	-7.455894	322.74	1.50	324.24
6	39.606998	-7.455207	317.67	1.50	319.17
7	39.604124	-7.455271	314.42	1.50	315.92
8	39.604120	-7.454927	313.57	1.50	315.07
9	39.602283	-7.454968	316.15	1.50	317.65
10	39.602288	-7.455309	317.62	1.50	319.12
11	39.601350	-7.455330	319.26	1.50	320.76
12	39.601345	-7.454989	318.74	1.50	320.24
13	39.601292	-7.454990	319.02	1.50	320.52
14	39.601302	-7.455675	319.55	1.50	321.05
15	39.601401	-7.455672	318.56	1.50	320.06
16	39.601405	-7.456016	318.37	1.50	319.87
17	39.601504	-7.456014	318.29	1.50	319.79
18	39.601513	-7.456701	321.30	1.50	322.80
19	39.604288	-7.456641	317.82	1.50	319.32
20	39.604292	-7.456982	318.64	1.50	320.14
21	39.607516	-7.456911	319.60	1.50	321.10



Name: PV29

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 79,879 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.606998	-7.455204	317.67	1.50	319.17
2	39.606970	-7.453146	315.12	1.50	316.62
3	39.603945	-7.453213	313.25	1.50	314.75
4	39.603949	-7.453554	312.74	1.50	314.24
5	39.602265	-7.453594	310.49	1.50	311.99
6	39.602274	-7.454279	313.17	1.50	314.67
7	39.602373	-7.454277	313.55	1.50	315.05
8	39.602382	-7.454963	316.34	1.50	317.84
9	39.604265	-7.454922	314.02	1.50	315.52
10	39.604269	-7.455265	314.57	1.50	316.07
11	39.606998	-7.455204	317.67	1.50	319.17

Name: PV3

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

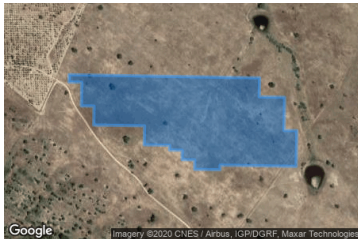
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 78,374 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.610278	-7.478499	304.65	1.50	306.15
2	39.609882	-7.478508	306.31	1.50	307.81
3	39.609873	-7.477821	304.48	1.50	305.98
4	39.609179	-7.477836	307.45	1.50	308.95
5	39.609175	-7.477493	306.22	1.50	307.72
6	39.608428	-7.477509	309.61	1.50	311.11
7	39.608455	-7.479568	312.48	1.50	313.98
8	39.608356	-7.479572	313.14	1.50	314.64
9	39.608365	-7.480257	312.91	1.50	314.41
10	39.608563	-7.480252	311.81	1.50	313.31
11	39.608568	-7.480596	312.80	1.50	314.30
12	39.608766	-7.480592	311.76	1.50	313.26
13	39.608770	-7.480935	312.93	1.50	314.43
14	39.608869	-7.480933	312.38	1.50	313.88
15	39.608878	-7.481620	314.65	1.50	316.15
16	39.609275	-7.481611	313.51	1.50	315.01
17	39.609293	-7.482985	318.30	1.50	319.80
18	39.609689	-7.482977	317.18	1.50	318.68
19	39.609694	-7.483320	318.17	1.50	319.67
20	39.610189	-7.483312	317.18	1.50	318.68
21	39.610193	-7.483653	317.89	1.50	319.39
22	39.610346	-7.483649	317.70	1.50	319.20
23	39.610278	-7.478499	304.65	1.50	306.15

Name: PV30

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 83,272 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.606970	-7.453144	315.13	1.50	316.63
2	39.606956	-7.452113	313.36	1.50	314.86
3	39.607551	-7.452100	311.67	1.50	313.17
4	39.607542	-7.451415	309.09	1.50	310.59
5	39.604768	-7.451477	315.17	1.50	316.67
6	39.604763	-7.451133	314.78	1.50	316.28
7	39.602728	-7.451179	311.49	1.50	312.99
8	39.602760	-7.453581	311.48	1.50	312.98
9	39.603903	-7.453555	312.39	1.50	313.89
10	39.603899	-7.453212	313.06	1.50	314.56
11	39.606970	-7.453144	315.13	1.50	316.63

Name: PV31

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 81,706 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.607145	-7.451422	309.50	1.50	311.00
2	39.607141	-7.451078	307.66	1.50	309.16
3	39.607240	-7.451076	307.46	1.50	308.96
4	39.607222	-7.449701	301.54	1.50	303.04
5	39.606376	-7.449723	305.91	1.50	307.41
6	39.606380	-7.450067	305.03	1.50	306.53
7	39.605344	-7.450088	311.66	1.50	313.16
8	39.605339	-7.449746	311.66	1.50	313.16
9	39.605141	-7.449751	312.67	1.50	314.17
10	39.605136	-7.449407	312.45	1.50	313.95
11	39.604641	-7.449418	311.94	1.50	313.44
12	39.604636	-7.449075	310.16	1.50	311.66
13	39.604042	-7.449087	308.97	1.50	310.47
14	39.604037	-7.448746	307.43	1.50	308.93
15	39.603390	-7.448759	308.10	1.50	309.60
16	39.602498	-7.448779	307.76	1.50	309.26
17	39.602512	-7.449807	310.26	1.50	311.76
18	39.602710	-7.449803	310.73	1.50	312.23
19	39.602719	-7.450490	311.58	1.50	313.08
20	39.602818	-7.450487	312.02	1.50	313.52
21	39.602827	-7.451174	311.99	1.50	313.49
22	39.604809	-7.451130	314.59	1.50	316.09
23	39.604814	-7.451474	315.03	1.50	316.53
24	39.607145	-7.451422	309.50	1.50	311.00

**Name:** PV32

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 96,585 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.607002	-7.452114	313.27	1.50	314.77
2	39.607044	-7.455203	317.26	1.50	318.76
3	39.608827	-7.455166	308.26	1.50	309.76
4	39.608836	-7.455851	312.47	1.50	313.97
5	39.608737	-7.455855	312.42	1.50	313.92
6	39.608743	-7.456303	315.78	1.50	317.28
7	39.608644	-7.456313	315.57	1.50	317.07
8	39.608665	-7.457918	325.65	1.50	327.15
9	39.608467	-7.457923	324.82	1.50	326.32
10	39.608481	-7.458953	327.65	1.50	329.15
11	39.608382	-7.458956	328.00	1.50	329.50
12	39.608386	-7.459297	328.64	1.50	330.14
13	39.608638	-7.459291	326.59	1.50	328.09
14	39.608628	-7.458604	327.48	1.50	328.98
15	39.609124	-7.458593	323.25	1.50	324.75
16	39.609119	-7.458250	324.45	1.50	325.95
17	39.609317	-7.458245	323.49	1.50	324.99
18	39.609313	-7.457902	322.87	1.50	324.37
19	39.609412	-7.457900	322.24	1.50	323.74
20	39.609403	-7.457213	318.64	1.50	320.14
21	39.609502	-7.457210	318.30	1.50	319.80
22	39.609438	-7.452401	297.82	1.50	299.32
23	39.609636	-7.452397	295.97	1.50	297.47
24	39.609632	-7.452056	295.55	1.50	297.05
25	39.607002	-7.452114	313.27	1.50	314.77

Name: PV33

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 94,246 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.609548	-7.457209	317.95	1.50	319.45
2	39.609449	-7.457212	318.56	1.50	320.06
3	39.609453	-7.457555	320.74	1.50	322.24
4	39.609552	-7.457553	320.45	1.50	321.95
5	39.609557	-7.457896	320.72	1.50	322.22
6	39.610052	-7.457885	314.69	1.50	316.19
7	39.610062	-7.458572	319.27	1.50	320.77
8	39.609764	-7.458581	318.12	1.50	319.62
9	39.609769	-7.458922	321.82	1.50	323.32
10	39.610165	-7.458914	321.38	1.50	322.88
11	39.610170	-7.459257	322.72	1.50	324.22
12	39.611114	-7.459236	320.38	1.50	321.88
13	39.611110	-7.458895	320.21	1.50	321.71
14	39.611407	-7.458886	318.93	1.50	320.43
15	39.611393	-7.457856	313.09	1.50	314.59
16	39.611493	-7.457853	314.55	1.50	316.05
17	39.611488	-7.457510	313.33	1.50	314.83
18	39.612281	-7.457487	319.49	1.50	320.99
19	39.612276	-7.457145	318.71	1.50	320.21
20	39.612177	-7.457153	317.76	1.50	319.26
21	39.612172	-7.456810	317.55	1.50	319.05
22	39.612073	-7.456812	316.50	1.50	318.00
23	39.612069	-7.456468	316.31	1.50	317.81
24	39.611970	-7.456468	315.38	1.50	316.88
25	39.611965	-7.456127	316.16	1.50	317.66
26	39.611866	-7.456129	315.18	1.50	316.68
27	39.611862	-7.455786	315.97	1.50	317.47
28	39.611762	-7.455788	314.92	1.50	316.42
29	39.611758	-7.455445	315.29	1.50	316.79
30	39.611659	-7.455444	314.16	1.50	315.66
31	39.611654	-7.455103	313.16	1.50	314.66
32	39.611456	-7.455105	310.34	1.50	311.84
33	39.611451	-7.454762	310.39	1.50	311.89
34	39.611551	-7.454760	311.40	1.50	312.90
35	39.611546	-7.454418	310.65	1.50	312.15
36	39.609961	-7.454454	304.98	1.50	306.48
37	39.609956	-7.454110	301.26	1.50	302.76
38	39.609857	-7.454112	301.52	1.50	303.02
39	39.609853	-7.453769	300.00	1.50	301.50
40	39.609753	-7.453771	300.58	1.50	302.08
41	39.609749	-7.453428	298.71	1.50	300.21
42	39.609498	-7.453433	298.65	1.50	300.15
43	39.609548	-7.457209	317.95	1.50	319.45

**Name:** PV34

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

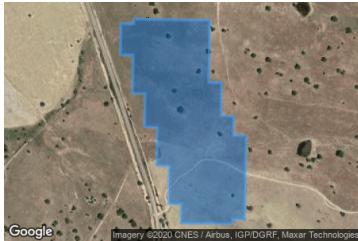
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 85,329 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.615663	-7.458450	324.45	1.50	325.95
2	39.614375	-7.458479	322.67	1.50	324.17
3	39.614370	-7.458136	323.66	1.50	325.16
4	39.613677	-7.458151	324.30	1.50	325.80
5	39.613672	-7.457807	324.31	1.50	325.81
6	39.613276	-7.457816	324.81	1.50	326.31
7	39.613271	-7.457473	323.34	1.50	324.84
8	39.611534	-7.457511	313.39	1.50	314.89
9	39.611539	-7.457852	314.97	1.50	316.47
10	39.611440	-7.457857	313.74	1.50	315.24
11	39.611458	-7.459229	320.24	1.50	321.74
12	39.611854	-7.459222	320.68	1.50	322.18
13	39.611859	-7.459563	321.20	1.50	322.70
14	39.612651	-7.459546	325.03	1.50	326.53
15	39.612656	-7.459889	323.68	1.50	325.18
16	39.613448	-7.459872	321.46	1.50	322.96
17	39.613453	-7.460215	320.49	1.50	321.99
18	39.614147	-7.460200	316.06	1.50	317.56
19	39.614151	-7.460543	314.94	1.50	316.44
20	39.614944	-7.460526	317.11	1.50	318.61
21	39.614948	-7.460869	315.66	1.50	317.16
22	39.615596	-7.460855	316.55	1.50	318.05
23	39.615591	-7.460512	317.31	1.50	318.81
24	39.615690	-7.460509	317.87	1.50	319.37
25	39.615663	-7.458450	324.45	1.50	325.95

Name: PV35

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 75,455 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.606376	-7.449721	305.92	1.50	307.42
2	39.607268	-7.449703	301.40	1.50	302.90
3	39.607272	-7.450047	302.24	1.50	303.74
4	39.607424	-7.450048	302.22	1.50	303.72
5	39.607420	-7.449705	300.93	1.50	302.43
6	39.608212	-7.449680	298.49	1.50	299.99
7	39.608208	-7.449339	299.04	1.50	300.54
8	39.607910	-7.449343	299.62	1.50	301.12
9	39.607892	-7.447969	306.78	1.50	308.28
10	39.608292	-7.447960	306.93	1.50	308.43
11	39.608288	-7.447619	306.63	1.50	308.13
12	39.607887	-7.447621	307.25	1.50	308.75
13	39.607883	-7.447277	306.61	1.50	308.11
14	39.607434	-7.447294	306.06	1.50	307.56
15	39.607438	-7.447636	306.87	1.50	308.37
16	39.607722	-7.447630	307.13	1.50	308.63
17	39.607731	-7.448320	305.86	1.50	307.36
18	39.607005	-7.448327	308.40	1.50	309.90
19	39.607000	-7.447985	308.27	1.50	309.77
20	39.606749	-7.447990	309.31	1.50	310.81
21	39.606754	-7.448333	309.63	1.50	311.13
22	39.606754	-7.448340	309.63	1.50	311.13
23	39.606763	-7.449027	307.59	1.50	309.09
24	39.606420	-7.449035	308.71	1.50	310.21
25	39.606411	-7.448346	310.77	1.50	312.27
26	39.606406	-7.448002	310.19	1.50	311.69
27	39.606505	-7.448000	310.07	1.50	311.57
28	39.606500	-7.447659	309.26	1.50	310.76
29	39.606203	-7.447663	309.20	1.50	310.70
30	39.606199	-7.447322	308.93	1.50	310.43
31	39.606100	-7.447322	308.86	1.50	310.36
32	39.606095	-7.446981	307.81	1.50	309.31
33	39.605996	-7.446981	308.04	1.50	309.54
34	39.605978	-7.445609	301.85	1.50	303.35
35	39.604888	-7.445631	296.90	1.50	298.40
36	39.604883	-7.445290	296.14	1.50	297.64
37	39.604632	-7.445296	294.44	1.50	295.94
38	39.604636	-7.445639	295.55	1.50	297.05
39	39.604339	-7.445646	294.45	1.50	295.95
40	39.604344	-7.445987	296.55	1.50	298.05
41	39.604047	-7.445996	295.95	1.50	297.45
42	39.604051	-7.446337	296.95	1.50	298.45
43	39.603556	-7.446350	296.62	1.50	298.12
44	39.603560	-7.446691	300.23	1.50	301.73
45	39.603263	-7.446700	299.09	1.50	300.59
46	39.603268	-7.447044	301.66	1.50	303.16
47	39.602971	-7.447051	300.99	1.50	302.49
48	39.602975	-7.447392	302.11	1.50	303.61
49	39.603371	-7.447383	303.38	1.50	304.88
50	39.603376	-7.447726	304.43	1.50	305.93
51	39.603475	-7.447724	304.47	1.50	305.97
52	39.603480	-7.448068	305.59	1.50	307.09
53	39.604127	-7.448053	303.56	1.50	305.06
54	39.604123	-7.447712	301.67	1.50	303.17
55	39.604024	-7.447714	302.30	1.50	303.80
56	39.604019	-7.447368	300.53	1.50	302.03
57	39.605551	-7.447334	305.77	1.50	307.27
58	39.605556	-7.447678	305.24	1.50	306.74
59	39.605754	-7.447673	306.46	1.50	307.96
60	39.605758	-7.448017	306.43	1.50	307.93
61	39.605858	-7.448014	307.03	1.50	308.53
62	39.605862	-7.448358	307.98	1.50	309.48

63	39.605961	-7.448356	308.47	1.50	309.97
64	39.605970	-7.449043	309.49	1.50	310.99
65	39.606367	-7.449036	308.77	1.50	310.27
66	39.606376	-7.449721	305.92	1.50	307.42

**Name:** PV36

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

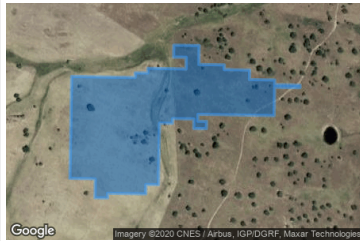
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 84,599 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.607191	-7.451421	309.64	1.50	311.14
2	39.607187	-7.451079	307.61	1.50	309.11
3	39.607286	-7.451077	307.32	1.50	308.82
4	39.607272	-7.450047	302.24	1.50	303.74
5	39.607470	-7.450042	302.24	1.50	303.74
6	39.607466	-7.449703	300.79	1.50	302.29
7	39.608754	-7.449674	296.21	1.50	297.71
8	39.608749	-7.449327	298.95	1.50	300.45
9	39.608848	-7.449322	298.49	1.50	299.99
10	39.608841	-7.448744	300.51	1.50	302.01
11	39.608642	-7.448747	302.59	1.50	304.09
12	39.608638	-7.448406	304.18	1.50	305.68
13	39.608790	-7.448402	302.38	1.50	303.88
14	39.608793	-7.448638	301.43	1.50	302.93
15	39.608938	-7.448635	299.99	1.50	301.49
16	39.608911	-7.446574	302.70	1.50	304.20
17	39.609505	-7.446561	303.67	1.50	305.17
18	39.609496	-7.445874	301.14	1.50	302.64
19	39.609549	-7.445873	300.71	1.50	302.21
20	39.609558	-7.446560	303.23	1.50	304.73
21	39.609657	-7.446558	302.14	1.50	303.64
22	39.609666	-7.447242	301.94	1.50	303.44
23	39.609865	-7.447238	299.93	1.50	301.43
24	39.609874	-7.447925	301.96	1.50	303.46
25	39.609973	-7.447923	301.53	1.50	303.03
26	39.609982	-7.448610	298.62	1.50	300.12
27	39.610378	-7.448603	294.44	1.50	295.94
28	39.610387	-7.449288	290.79	1.50	292.29
29	39.610136	-7.449293	291.80	1.50	293.30
30	39.610132	-7.448952	295.40	1.50	296.90
31	39.609887	-7.448955	296.11	1.50	297.61
32	39.609901	-7.449986	293.71	1.50	295.21
33	39.609802	-7.449990	295.35	1.50	296.85
34	39.609807	-7.450332	292.99	1.50	294.49
35	39.609708	-7.450334	293.85	1.50	295.35
36	39.609731	-7.452051	295.06	1.50	296.56
37	39.607597	-7.452099	311.26	1.50	312.76
38	39.607588	-7.451412	308.92	1.50	310.42
39	39.607191	-7.451421	309.64	1.50	311.14

Name: PV37

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 94,817 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.610744	-7.450311	294.22	1.50	295.72
2	39.610249	-7.450324	291.70	1.50	293.20
3	39.610254	-7.450667	293.78	1.50	295.28
4	39.610155	-7.450670	293.04	1.50	294.54
5	39.610173	-7.452044	296.64	1.50	298.14
6	39.610074	-7.452046	295.36	1.50	296.86
7	39.610083	-7.452733	297.03	1.50	298.53
8	39.609984	-7.452735	296.15	1.50	297.65
9	39.609988	-7.453076	296.69	1.50	298.19
10	39.610187	-7.453074	298.11	1.50	299.61
11	39.610191	-7.453415	298.13	1.50	299.63
12	39.610290	-7.453413	298.85	1.50	300.35
13	39.610295	-7.453757	299.00	1.50	300.50
14	39.610493	-7.453752	300.31	1.50	301.81
15	39.610502	-7.454439	302.12	1.50	303.62
16	39.611447	-7.454418	309.85	1.50	311.35
17	39.611410	-7.451670	305.09	1.50	306.59
18	39.611952	-7.451658	301.04	1.50	302.54
19	39.611956	-7.452002	303.21	1.50	304.71
20	39.612154	-7.451997	300.56	1.50	302.06
21	39.612164	-7.452684	305.40	1.50	306.90
22	39.613108	-7.452663	307.14	1.50	308.64
23	39.613099	-7.451979	303.77	1.50	305.27
24	39.613000	-7.451978	302.80	1.50	304.30
25	39.612996	-7.451637	301.36	1.50	302.86
26	39.612896	-7.451637	300.42	1.50	301.92
27	39.612892	-7.451296	299.27	1.50	300.77
28	39.612793	-7.451298	298.55	1.50	300.05
29	39.612788	-7.450955	297.16	1.50	298.66
30	39.612689	-7.450954	296.57	1.50	298.07
31	39.612685	-7.450613	295.02	1.50	296.52
32	39.612288	-7.450620	295.92	1.50	297.42
33	39.612284	-7.450276	296.78	1.50	298.28
34	39.612482	-7.450272	294.70	1.50	296.20
35	39.612477	-7.449930	295.55	1.50	297.05
36	39.612378	-7.449933	296.34	1.50	297.84
37	39.612374	-7.449589	296.66	1.50	298.16
38	39.612275	-7.449589	297.24	1.50	298.74
39	39.612265	-7.448904	297.86	1.50	299.36
40	39.612264	-7.448902	297.86	1.50	299.36
41	39.612259	-7.448561	295.93	1.50	297.43
42	39.612208	-7.448562	296.16	1.50	297.66
43	39.611864	-7.448570	296.16	1.50	297.66
44	39.611215	-7.448584	289.15	1.50	290.65
45	39.611220	-7.448928	291.81	1.50	293.31
46	39.611023	-7.448932	288.87	1.50	290.37
47	39.611028	-7.449276	290.00	1.50	291.50
48	39.610929	-7.449278	288.96	1.50	290.46
49	39.610933	-7.449619	289.95	1.50	291.45
50	39.610734	-7.449627	289.44	1.50	290.94
51	39.610740	-7.449969	292.54	1.50	294.04
52	39.610744	-7.450311	294.22	1.50	295.72



Name: PV38

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

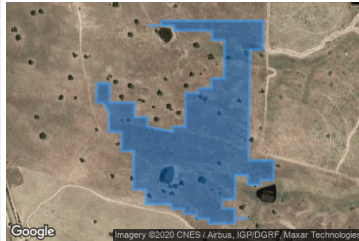
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 84,744 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.613300	-7.453689	311.81	1.50	313.31
2	39.613300	-7.453005	311.32	1.50	312.82
3	39.612900	-7.453015	304.89	1.50	306.39
4	39.612900	-7.453358	305.51	1.50	307.01
5	39.612800	-7.453360	304.35	1.50	305.85
6	39.612800	-7.453702	304.92	1.50	306.42
7	39.613000	-7.453697	307.19	1.50	308.69
8	39.613000	-7.454041	307.18	1.50	308.68
9	39.612500	-7.454054	306.65	1.50	308.15
10	39.612500	-7.454398	311.31	1.50	312.81
11	39.612300	-7.454401	312.03	1.50	313.53
12	39.612300	-7.454057	307.98	1.50	309.48
13	39.612100	-7.454062	309.55	1.50	311.05
14	39.612100	-7.453718	306.90	1.50	308.40
15	39.612100	-7.453719	307.20	1.50	308.70
16	39.612100	-7.454061	309.67	1.50	311.17
17	39.612000	-7.454065	309.77	1.50	311.27
18	39.612000	-7.454406	312.24	1.50	313.74
19	39.612000	-7.454750	314.52	1.50	316.02
20	39.612100	-7.454748	315.03	1.50	316.53
21	39.612100	-7.455091	316.88	1.50	318.38
22	39.612200	-7.455089	317.52	1.50	319.02
23	39.612200	-7.455432	317.99	1.50	319.49
24	39.612300	-7.455430	317.91	1.50	319.41
25	39.612300	-7.455774	317.81	1.50	319.31
26	39.612400	-7.455772	317.12	1.50	318.62
27	39.612400	-7.456459	317.39	1.50	318.89
28	39.612700	-7.456454	315.68	1.50	317.18
29	39.612700	-7.456795	317.25	1.50	318.75
30	39.613500	-7.456778	319.28	1.50	320.78
31	39.613500	-7.457121	321.26	1.50	322.76
32	39.613900	-7.457113	323.61	1.50	325.11
33	39.613900	-7.457456	323.85	1.50	325.35
34	39.614300	-7.457447	324.43	1.50	325.93
35	39.614500	-7.457610	323.98	1.50	325.48
36	39.614500	-7.457786	324.16	1.50	325.66
37	39.614900	-7.457779	323.27	1.50	324.77
38	39.614900	-7.457437	322.34	1.50	323.84
39	39.614500	-7.457446	323.88	1.50	325.38
40	39.614500	-7.456759	322.27	1.50	323.77
41	39.614200	-7.456766	324.53	1.50	326.03
42	39.614200	-7.456422	323.57	1.50	325.07
43	39.614000	-7.456424	323.92	1.50	325.42
44	39.613900	-7.455737	321.66	1.50	323.16
45	39.614000	-7.455735	321.70	1.50	323.20
46	39.614000	-7.455394	320.48	1.50	321.98
47	39.614700	-7.455376	315.58	1.50	317.08
48	39.614700	-7.455035	313.00	1.50	314.50
49	39.614800	-7.455030	312.61	1.50	314.11
50	39.614800	-7.454687	309.12	1.50	310.62
51	39.615000	-7.454682	308.05	1.50	309.55
52	39.615000	-7.454341	305.31	1.50	306.81
53	39.615800	-7.454325	305.38	1.50	306.88
54	39.615800	-7.454666	305.62	1.50	307.12
55	39.616000	-7.454662	309.28	1.50	310.78
56	39.616000	-7.455692	309.33	1.50	310.83
57	39.616100	-7.455690	310.69	1.50	312.19
58	39.616100	-7.456377	311.68	1.50	313.18
59	39.616100	-7.456376	311.99	1.50	313.49
60	39.616100	-7.456032	311.15	1.50	312.65
61	39.616200	-7.456030	312.64	1.50	314.14
62	39.616200	-7.453284	305.66	1.50	307.16

63	39.615600	-7.453296	301.55	1.50	303.05
64	39.615600	-7.453638	304.07	1.50	305.57
65	39.613300	-7.453689	311.81	1.50	313.31

**Name:** PV39

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

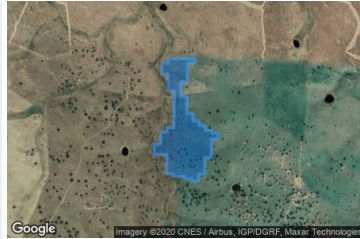
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 74,605 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.611035	-7.442403	288.79	1.50	290.29
2	39.611040	-7.442745	283.54	1.50	285.04
3	39.611733	-7.442729	283.76	1.50	285.26
4	39.611738	-7.443073	281.69	1.50	283.19
5	39.612187	-7.443062	279.76	1.50	281.26
6	39.612183	-7.442721	283.30	1.50	284.80
7	39.612381	-7.442715	282.46	1.50	283.96
8	39.612362	-7.441343	292.86	1.50	294.36
9	39.612210	-7.441346	293.22	1.50	294.72
10	39.612215	-7.441690	293.21	1.50	294.71
11	39.611422	-7.441708	291.75	1.50	293.25
12	39.611427	-7.442049	291.04	1.50	292.54
13	39.610786	-7.442063	289.79	1.50	291.29
14	39.610782	-7.441722	292.58	1.50	294.08
15	39.610088	-7.441735	289.78	1.50	291.28
16	39.610084	-7.441394	292.55	1.50	294.05
17	39.609786	-7.441398	293.88	1.50	295.38
18	39.609782	-7.441057	296.80	1.50	298.30
19	39.609584	-7.441059	297.30	1.50	298.80
20	39.609579	-7.440718	300.13	1.50	301.63
21	39.609381	-7.440722	300.25	1.50	301.75
22	39.609376	-7.440379	302.56	1.50	304.06
23	39.609277	-7.440379	302.33	1.50	303.83
24	39.609273	-7.440038	304.33	1.50	305.83
25	39.609021	-7.440043	302.91	1.50	304.41
26	39.609026	-7.440385	301.44	1.50	302.94
27	39.608233	-7.440405	299.10	1.50	300.60
28	39.608238	-7.440746	298.32	1.50	299.82
29	39.607544	-7.440764	299.28	1.50	300.78
30	39.607549	-7.441105	297.86	1.50	299.36
31	39.607252	-7.441114	296.21	1.50	297.71
32	39.607256	-7.441455	294.15	1.50	295.65
33	39.607355	-7.441453	295.08	1.50	296.58
34	39.607360	-7.441796	292.72	1.50	294.22
35	39.607459	-7.441794	293.77	1.50	295.27
36	39.607468	-7.442481	289.83	1.50	291.33
37	39.607567	-7.442479	289.41	1.50	290.91
38	39.607572	-7.442822	287.86	1.50	289.36
39	39.608365	-7.442805	293.83	1.50	295.33
40	39.608374	-7.443492	287.02	1.50	288.52
41	39.608823	-7.443481	285.25	1.50	286.75
42	39.608819	-7.443138	288.32	1.50	289.82
43	39.609314	-7.443127	283.92	1.50	285.42
44	39.609309	-7.442786	287.47	1.50	288.97
45	39.609508	-7.442779	283.86	1.50	285.36
46	39.609503	-7.442435	285.81	1.50	287.31
47	39.611035	-7.442403	288.79	1.50	290.29

Name: PV4

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 75,239 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.612084	-7.480175	302.76	1.50	304.26
2	39.612183	-7.480173	302.65	1.50	304.15
3	39.612165	-7.478801	298.23	1.50	299.73
4	39.610976	-7.478825	300.92	1.50	302.42
5	39.610972	-7.478484	300.63	1.50	302.13
6	39.610575	-7.478493	303.04	1.50	304.54
7	39.610571	-7.478149	302.35	1.50	303.85
8	39.610419	-7.478152	303.10	1.50	304.60
9	39.610423	-7.478494	303.91	1.50	305.41
10	39.610324	-7.478498	304.43	1.50	305.93
11	39.610392	-7.483648	317.65	1.50	319.15
12	39.610643	-7.483643	317.21	1.50	318.71
13	39.610638	-7.483299	316.51	1.50	318.01
14	39.611332	-7.483284	315.45	1.50	316.95
15	39.611327	-7.482943	313.93	1.50	315.43
16	39.612021	-7.482926	313.43	1.50	314.93
17	39.612016	-7.482582	312.27	1.50	313.77
18	39.612116	-7.482580	312.25	1.50	313.75
19	39.612084	-7.480175	302.76	1.50	304.26

Name: PV40

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 76,409 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.615660	-7.443328	279.41	1.50	280.91
2	39.615646	-7.442300	286.64	1.50	288.14
3	39.615448	-7.442304	285.58	1.50	287.08
4	39.615438	-7.441617	290.33	1.50	291.83
5	39.615141	-7.441622	289.77	1.50	291.27
6	39.615127	-7.440594	294.04	1.50	295.54
7	39.614929	-7.440596	292.72	1.50	294.22
8	39.614920	-7.439911	295.35	1.50	296.85
9	39.614524	-7.439917	293.75	1.50	295.25
10	39.614519	-7.439576	295.78	1.50	297.28
11	39.612980	-7.439611	301.61	1.50	303.11
12	39.612984	-7.439952	300.63	1.50	302.13
13	39.612885	-7.439957	299.93	1.50	301.43
14	39.612890	-7.440298	298.28	1.50	299.78
15	39.612791	-7.440302	297.70	1.50	299.20
16	39.612795	-7.440646	295.06	1.50	296.56
17	39.612696	-7.440648	294.44	1.50	295.94
18	39.612701	-7.440992	290.69	1.50	292.19
19	39.612503	-7.440996	290.94	1.50	292.44
20	39.612507	-7.441340	291.74	1.50	293.24
21	39.612408	-7.441342	292.51	1.50	294.01
22	39.612422	-7.442370	288.18	1.50	289.68
23	39.613710	-7.442341	284.00	1.50	285.50
24	39.613719	-7.443028	280.09	1.50	281.59
25	39.614268	-7.443016	281.35	1.50	282.85
26	39.614263	-7.442672	280.94	1.50	282.44
27	39.614805	-7.442660	281.71	1.50	283.21
28	39.614814	-7.443347	278.23	1.50	279.73
29	39.615660	-7.443328	279.41	1.50	280.91

**Name:** PV41

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 83,381 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.617675	-7.453251	314.70	1.50	316.20
2	39.616235	-7.453283	306.10	1.50	307.60
3	39.616276	-7.456373	313.84	1.50	315.34
4	39.615735	-7.456387	312.12	1.50	313.62
5	39.615730	-7.456044	309.77	1.50	311.27
6	39.615631	-7.456046	310.90	1.50	312.40
7	39.615626	-7.455702	307.82	1.50	309.32
8	39.615527	-7.455702	308.91	1.50	310.41
9	39.615518	-7.455017	304.91	1.50	306.41
10	39.615366	-7.455021	306.75	1.50	308.25
11	39.615375	-7.455705	310.51	1.50	312.01
12	39.615276	-7.455710	311.16	1.50	312.66
13	39.615285	-7.456395	316.48	1.50	317.98
14	39.615087	-7.456401	316.19	1.50	317.69
15	39.615092	-7.456743	318.30	1.50	319.80
16	39.615191	-7.456740	318.48	1.50	319.98
17	39.615195	-7.457084	320.55	1.50	322.05
18	39.615294	-7.457082	320.63	1.50	322.13
19	39.615304	-7.457769	323.26	1.50	324.76
20	39.615997	-7.457753	321.56	1.50	323.06
21	39.616002	-7.458097	324.20	1.50	325.70
22	39.617191	-7.458071	331.88	1.50	333.38
23	39.617244	-7.458072	332.54	1.50	334.04
24	39.617686	-7.458060	334.77	1.50	336.27
25	39.617691	-7.458403	334.91	1.50	336.41
26	39.617744	-7.458402	334.93	1.50	336.43
27	39.617675	-7.453251	314.70	1.50	316.20

Name: PV42

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

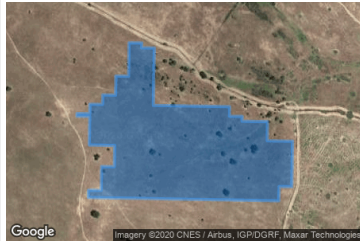
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 98,186 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618880	-7.458377	335.01	1.50	336.51
2	39.619474	-7.458364	331.04	1.50	332.54
3	39.619479	-7.458707	333.00	1.50	334.50
4	39.619532	-7.458706	332.84	1.50	334.34
5	39.619527	-7.458362	330.59	1.50	332.09
6	39.619725	-7.458358	329.64	1.50	331.14
7	39.619721	-7.458017	326.55	1.50	328.05
8	39.619919	-7.458010	325.36	1.50	326.86
9	39.619914	-7.457666	323.47	1.50	324.97
10	39.620311	-7.457658	327.51	1.50	329.01
11	39.620306	-7.457314	324.58	1.50	326.08
12	39.621000	-7.457299	324.41	1.50	325.91
13	39.620995	-7.456957	322.53	1.50	324.03
14	39.620896	-7.456960	320.93	1.50	322.43
15	39.620891	-7.456616	319.36	1.50	320.86
16	39.619702	-7.456643	325.65	1.50	327.15
17	39.619675	-7.454581	307.96	1.50	309.46
18	39.619477	-7.454583	310.97	1.50	312.47
19	39.619472	-7.454242	308.37	1.50	309.87
20	39.619373	-7.454242	308.65	1.50	310.15
21	39.619364	-7.453557	300.12	1.50	301.62
22	39.618968	-7.453564	303.69	1.50	305.19
23	39.618959	-7.452879	304.26	1.50	305.76
24	39.618014	-7.452900	313.62	1.50	315.12
25	39.618018	-7.453241	315.08	1.50	316.58
26	39.617721	-7.453250	314.68	1.50	316.18
27	39.617790	-7.458401	334.94	1.50	336.44
28	39.617942	-7.458398	335.04	1.50	336.54
29	39.617937	-7.458054	334.86	1.50	336.36
30	39.618433	-7.458043	336.21	1.50	337.71
31	39.618428	-7.457699	334.67	1.50	336.17
32	39.618870	-7.457690	333.37	1.50	334.87
33	39.618880	-7.458377	335.01	1.50	336.51

Name: PV43

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

Rated power: -

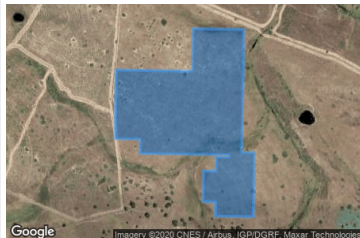
Panel material: Smooth glass with AR coating

Vary reflectivity with sun position? Yes

Correlate slope error with surface type? Yes

Slope error: 8.43 mrad

Approx. area: 79,131 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.615498	-7.446083	291.50	1.50	293.00
2	39.616390	-7.446061	284.45	1.50	285.95
3	39.616372	-7.444689	276.00	1.50	277.50
4	39.613795	-7.444745	276.81	1.50	278.31
5	39.613791	-7.444403	277.86	1.50	279.36
6	39.612450	-7.444433	289.49	1.50	290.99
7	39.612464	-7.445462	285.09	1.50	286.59
8	39.612761	-7.445455	285.37	1.50	286.87
9	39.612765	-7.445798	281.46	1.50	282.96
10	39.613413	-7.445784	278.69	1.50	280.19
11	39.613408	-7.445443	280.37	1.50	281.87
12	39.613706	-7.445434	277.83	1.50	279.33
13	39.613701	-7.445090	278.32	1.50	279.82
14	39.613747	-7.445089	277.69	1.50	279.19
15	39.613779	-7.447494	284.14	1.50	285.64
16	39.614076	-7.447487	286.70	1.50	288.20
17	39.614086	-7.448174	283.85	1.50	285.35
18	39.615526	-7.448142	295.89	1.50	297.39
19	39.615498	-7.446083	291.50	1.50	293.00

Name: PV44

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 81,251 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.624459	-7.464095	327.23	1.50	328.73
2	39.624455	-7.463754	325.82	1.50	327.32
3	39.624356	-7.463756	325.65	1.50	327.15
4	39.624351	-7.463413	323.98	1.50	325.48
5	39.624252	-7.463415	323.97	1.50	325.47
6	39.624247	-7.463071	322.54	1.50	324.04
7	39.624148	-7.463074	322.70	1.50	324.20
8	39.624139	-7.462386	323.84	1.50	325.34
9	39.623941	-7.462391	324.36	1.50	325.86
10	39.623937	-7.462047	326.13	1.50	327.63
11	39.623639	-7.462052	327.01	1.50	328.51
12	39.623635	-7.461710	328.41	1.50	329.91
13	39.622987	-7.461725	330.80	1.50	332.30
14	39.622992	-7.462068	329.65	1.50	331.15
15	39.622794	-7.462073	330.55	1.50	332.05
16	39.622798	-7.462414	329.78	1.50	331.28
17	39.622501	-7.462423	331.93	1.50	333.43
18	39.622506	-7.462766	331.84	1.50	333.34
19	39.620478	-7.462811	332.08	1.50	333.58
20	39.620473	-7.462468	332.60	1.50	334.10
21	39.620176	-7.462474	330.81	1.50	332.31
22	39.620172	-7.462131	331.21	1.50	332.71
23	39.619973	-7.462133	330.04	1.50	331.54
24	39.619969	-7.461791	330.38	1.50	331.88
25	39.619771	-7.461794	329.23	1.50	330.73
26	39.619766	-7.461452	329.00	1.50	330.50
27	39.619667	-7.461454	328.23	1.50	329.73
28	39.619663	-7.461111	328.12	1.50	329.62
29	39.619563	-7.461111	327.37	1.50	328.87
30	39.619559	-7.460770	327.19	1.50	328.69
31	39.619460	-7.460769	326.32	1.50	327.82
32	39.619451	-7.460085	329.66	1.50	331.16
33	39.619352	-7.460087	329.53	1.50	331.03
34	39.619343	-7.459400	334.23	1.50	335.73
35	39.619144	-7.459402	333.33	1.50	334.83
36	39.619140	-7.459061	334.21	1.50	335.71
37	39.618790	-7.459068	333.68	1.50	335.18
38	39.618808	-7.460443	324.75	1.50	326.25
39	39.618709	-7.460445	324.48	1.50	325.98
40	39.618736	-7.462504	324.06	1.50	325.56
41	39.619430	-7.462488	326.16	1.50	327.66
42	39.619434	-7.462832	326.63	1.50	328.13
43	39.620128	-7.462817	330.39	1.50	331.89
44	39.620132	-7.463160	329.69	1.50	331.19
45	39.620727	-7.463147	332.79	1.50	334.29
46	39.620731	-7.463491	331.71	1.50	333.21
47	39.621623	-7.463473	334.91	1.50	336.41
48	39.621627	-7.463814	333.73	1.50	335.23
49	39.622222	-7.463804	332.80	1.50	334.30
50	39.622226	-7.464145	331.47	1.50	332.97
51	39.624459	-7.464095	327.23	1.50	328.73



Name: PV45

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 78,264 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618663	-7.460443	324.42	1.50	325.92
2	39.618762	-7.460441	324.61	1.50	326.11
3	39.618744	-7.459069	333.62	1.50	335.12
4	39.618644	-7.459072	333.47	1.50	334.97
5	39.618640	-7.458728	334.76	1.50	336.26
6	39.617992	-7.458742	334.26	1.50	335.76
7	39.617997	-7.459086	332.92	1.50	334.42
8	39.617257	-7.459102	330.53	1.50	332.03
9	39.617253	-7.458759	332.45	1.50	333.95
10	39.615866	-7.458790	324.60	1.50	326.10
11	39.615861	-7.458446	325.00	1.50	326.50
12	39.615709	-7.458449	324.52	1.50	326.02
13	39.615736	-7.460508	318.13	1.50	319.63
14	39.615637	-7.460513	317.56	1.50	319.06
15	39.615646	-7.461198	315.80	1.50	317.30
16	39.616439	-7.461180	320.09	1.50	321.59
17	39.616444	-7.461524	317.45	1.50	318.95
18	39.617289	-7.461505	318.17	1.50	319.67
19	39.617285	-7.461164	319.49	1.50	320.99
20	39.617628	-7.461154	320.00	1.50	321.50
21	39.617637	-7.461841	318.46	1.50	319.96
22	39.617835	-7.461836	319.28	1.50	320.78
23	39.617840	-7.462180	320.12	1.50	321.62
24	39.618632	-7.462162	323.11	1.50	324.61
25	39.618637	-7.462506	323.73	1.50	325.23
26	39.618690	-7.462505	323.92	1.50	325.42
27	39.618663	-7.460443	324.42	1.50	325.92

Name: PV5

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 78,271 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.612162	-7.482579	312.21	1.50	313.71
2	39.612710	-7.482567	310.04	1.50	311.54
3	39.612706	-7.482226	309.04	1.50	310.54
4	39.613300	-7.482211	306.45	1.50	307.95
5	39.613296	-7.481869	305.04	1.50	306.54
6	39.613989	-7.481852	304.64	1.50	306.14
7	39.613985	-7.481511	303.48	1.50	304.98
8	39.614579	-7.481495	303.52	1.50	305.02
9	39.614575	-7.481152	302.10	1.50	303.60
10	39.615268	-7.481137	302.31	1.50	303.81
11	39.615264	-7.480793	300.61	1.50	302.11
12	39.615660	-7.480784	300.40	1.50	301.90
13	39.615646	-7.479756	292.58	1.50	294.08
14	39.614953	-7.479771	294.27	1.50	295.77
15	39.614948	-7.479428	292.49	1.50	293.99
16	39.613759	-7.479451	295.44	1.50	296.94
17	39.613755	-7.479110	294.42	1.50	295.92
18	39.613260	-7.479119	296.94	1.50	298.44
19	39.613255	-7.478778	295.48	1.50	296.98
20	39.613004	-7.478783	296.31	1.50	297.81
21	39.613008	-7.479124	297.77	1.50	299.27
22	39.612216	-7.479144	298.85	1.50	300.35
23	39.612229	-7.480172	302.57	1.50	304.07
24	39.612130	-7.480177	302.73	1.50	304.23
25	39.612162	-7.482579	312.21	1.50	313.71

**Name:** PV6

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**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

**Approx. area:** 88,479 sq-m



Vertex	Latitude	Longitude	Ground elevation	Height above ground	Total elevation
	deg	deg	m	m	m
1	39.614345	-7.478751	292.38	1.50	293.88
2	39.614340	-7.478410	292.65	1.50	294.15
3	39.614241	-7.478412	292.97	1.50	294.47
4	39.614205	-7.475664	294.57	1.50	296.07
5	39.614007	-7.475668	297.49	1.50	298.99
6	39.614003	-7.475325	294.72	1.50	296.22
7	39.613950	-7.475326	295.70	1.50	297.20
8	39.613963	-7.476354	296.57	1.50	298.07
9	39.612827	-7.476379	304.03	1.50	305.53
10	39.612818	-7.475695	303.15	1.50	304.65
11	39.612422	-7.475703	304.43	1.50	305.93
12	39.612417	-7.475360	303.26	1.50	304.76
13	39.610185	-7.475406	309.49	1.50	310.99
14	39.610194	-7.476093	310.50	1.50	312.00
15	39.610293	-7.476091	310.31	1.50	311.81
16	39.610302	-7.476781	308.18	1.50	309.68
17	39.610306	-7.477122	305.73	1.50	307.23
18	39.610603	-7.477115	306.32	1.50	307.82
19	39.610608	-7.477459	303.16	1.50	304.66
20	39.611004	-7.477450	304.64	1.50	306.14
21	39.611009	-7.477794	302.18	1.50	303.68
22	39.611207	-7.477792	303.00	1.50	304.50
23	39.611211	-7.478133	300.65	1.50	302.15
24	39.613193	-7.478092	297.55	1.50	299.05
25	39.613198	-7.478433	295.88	1.50	297.38
26	39.613792	-7.478422	296.18	1.50	297.68
27	39.613796	-7.478763	295.14	1.50	296.64
28	39.614345	-7.478751	292.38	1.50	293.88



**Note:** PV array encompasses a large surface area (greater than 25 acres). Accuracy of path receptor glare analysis may be affected by footprint size. Additional analyses of array sub-sections may provide more information on expected glare. ✕

**Name:** PV7

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

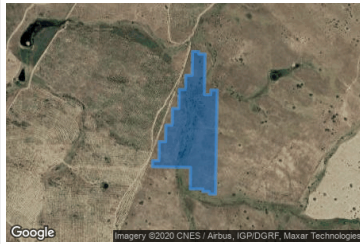
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 103,180 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.614571	-7.477372	294.17	1.50	295.67
2	39.614576	-7.477715	293.22	1.50	294.72
3	39.614675	-7.477713	294.12	1.50	295.62
4	39.614679	-7.478057	293.21	1.50	294.71
5	39.614778	-7.478055	294.01	1.50	295.51
6	39.614787	-7.478742	292.36	1.50	293.86
7	39.615679	-7.478722	293.09	1.50	294.59
8	39.615706	-7.480783	300.22	1.50	301.72
9	39.615957	-7.480778	298.55	1.50	300.05
10	39.615953	-7.480434	296.88	1.50	298.38
11	39.616745	-7.480417	297.64	1.50	299.14
12	39.616741	-7.480074	296.22	1.50	297.72
13	39.617434	-7.480058	295.38	1.50	296.88
14	39.617430	-7.479715	294.05	1.50	295.55
15	39.618123	-7.479700	292.73	1.50	294.23
16	39.618119	-7.479358	291.06	1.50	292.56
17	39.618912	-7.479339	290.53	1.50	292.03
18	39.618907	-7.478997	288.10	1.50	289.60
19	39.619502	-7.478982	289.85	1.50	291.35
20	39.619497	-7.478639	288.80	1.50	290.30
21	39.620488	-7.478617	286.71	1.50	288.21
22	39.620483	-7.478276	285.31	1.50	286.81
23	39.620384	-7.478278	286.35	1.50	287.85
24	39.620380	-7.477934	284.34	1.50	285.84
25	39.618695	-7.477969	292.28	1.50	293.78
26	39.618691	-7.477628	292.21	1.50	293.71
27	39.618889	-7.477621	289.29	1.50	290.79
28	39.618885	-7.477280	288.34	1.50	289.84
29	39.614571	-7.477372	294.17	1.50	295.67

**Note:** PV array encompasses a large surface area (greater than 25 acres). Accuracy of path receptor glare analysis may be affected by footprint size. Additional analyses of array sub-sections may provide more information on expected glare. ✕

**Name:** PV8

**Axis tracking:** Fixed (no rotation)

**Tilt:** 30.0 deg

**Orientation:** 180.0 deg

**Rated power:** -

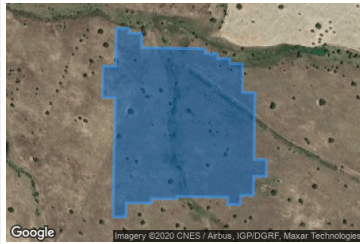
**Panel material:** Smooth glass with AR coating

**Vary reflectivity with sun position?** Yes

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

**Slope error:** 8.43 mrad

**Approx. area:** 113,401 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.613904	-7.475325	296.69	1.50	298.19
2	39.613899	-7.474984	295.48	1.50	296.98
3	39.613800	-7.474983	296.56	1.50	298.06
4	39.613796	-7.474642	296.22	1.50	297.72
5	39.613498	-7.474649	297.88	1.50	299.38
6	39.613476	-7.472931	298.16	1.50	299.66
7	39.613377	-7.472933	300.00	1.50	301.50
8	39.613372	-7.472590	298.19	1.50	299.69
9	39.613273	-7.472592	300.22	1.50	301.72
10	39.613269	-7.472248	298.15	1.50	299.65
11	39.613169	-7.472248	298.95	1.50	300.45
12	39.613165	-7.471907	298.90	1.50	300.40
13	39.612570	-7.471918	304.75	1.50	306.25
14	39.612566	-7.471576	305.71	1.50	307.21
15	39.611179	-7.471607	308.67	1.50	310.17
16	39.611177	-7.471263	310.14	1.50	311.64
17	39.610824	-7.471271	310.84	1.50	312.34
18	39.610829	-7.471615	309.55	1.50	311.05
19	39.610432	-7.471624	310.14	1.50	311.64
20	39.610437	-7.471965	308.56	1.50	310.06
21	39.610239	-7.471971	307.97	1.50	309.47
22	39.610243	-7.472313	306.40	1.50	307.90
23	39.610395	-7.472309	306.84	1.50	308.34
24	39.610413	-7.473686	300.96	1.50	302.46
25	39.610360	-7.473687	301.15	1.50	302.65
26	39.610369	-7.474374	304.12	1.50	305.62
27	39.610270	-7.474376	304.79	1.50	306.29
28	39.610279	-7.475063	307.83	1.50	309.33
29	39.609982	-7.475070	309.07	1.50	310.57
30	39.609986	-7.475411	310.06	1.50	311.56
31	39.612463	-7.475356	303.15	1.50	304.65
32	39.612468	-7.475700	304.34	1.50	305.84
33	39.613115	-7.475686	302.09	1.50	303.59
34	39.613111	-7.475342	301.50	1.50	303.00
35	39.613904	-7.475325	296.69	1.50	298.19

Name: PV9

Axis tracking: Fixed (no rotation)

Tilt: 30.0 deg

Orientation: 180.0 deg

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

Approx. area: 73,277 sq-m



Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.618785	-7.477280	290.38	1.50	291.88
2	39.618781	-7.476938	288.72	1.50	290.22
3	39.618682	-7.476941	289.73	1.50	291.23
4	39.618677	-7.476597	289.69	1.50	291.19
5	39.618479	-7.476599	293.30	1.50	294.80
6	39.618475	-7.476258	291.39	1.50	292.89
7	39.618376	-7.476260	293.43	1.50	294.93
8	39.618362	-7.475229	294.16	1.50	295.66
9	39.614544	-7.475313	296.75	1.50	298.25
10	39.614549	-7.475654	295.20	1.50	296.70
11	39.614648	-7.475652	296.06	1.50	297.56
12	39.614652	-7.475996	294.93	1.50	296.43
13	39.614751	-7.475993	295.54	1.50	297.04
14	39.614756	-7.476339	295.17	1.50	296.67
15	39.614657	-7.476342	294.63	1.50	296.13
16	39.614661	-7.476685	295.00	1.50	296.50
17	39.614562	-7.476687	294.09	1.50	295.59
18	39.614567	-7.477028	294.30	1.50	295.80
19	39.614571	-7.477372	294.17	1.50	295.67
20	39.618785	-7.477280	290.38	1.50	291.88

## Route Receptor(s)

Name: EX-374

Route type Two-way

View angle: 50.0 deg




Vertex	Latitude deg	Longitude deg	Ground elevation m	Height above ground m	Total elevation m
1	39.625867	-7.463940	322.18	0.00	322.18
2	39.624016	-7.464648	327.28	0.00	327.28
3	39.623074	-7.464756	327.66	0.00	327.66
4	39.611834	-7.459949	319.66	0.00	319.66
5	39.610826	-7.459778	320.51	0.00	320.51
6	39.609817	-7.460042	324.51	0.00	324.51
7	39.608330	-7.460804	332.16	0.00	332.16
8	39.607338	-7.461094	333.00	0.00	333.00
9	39.606230	-7.461201	331.59	0.00	331.59
10	39.605040	-7.461008	331.87	0.00	331.87
11	39.602444	-7.460085	327.71	0.00	327.71
12	39.601072	-7.459420	328.57	0.00	328.57
13	39.600345	-7.458712	326.65	0.00	326.65
14	39.595963	-7.451566	317.43	0.00	317.43
15	39.594888	-7.449678	318.82	0.00	318.82

## PV Array Results

### Summary of PV Glare Analysis PV configuration and predicted glare

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PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File 
	deg	deg	min	min	kWh	
PV1	30.0	180.0	0	0	-	-
PV10	30.0	180.0	0	0	-	-
PV11	30.0	180.0	0	0	-	-
PV12	30.0	180.0	0	0	-	-
PV13	30.0	180.0	0	0	-	-
PV14	30.0	180.0	0	0	-	-
PV15	30.0	180.0	0	0	-	-
PV16	30.0	180.0	0	0	-	-
PV17	30.0	180.0	0	3,176	-	-
PV18	30.0	180.0	0	0	-	-
PV19	30.0	180.0	0	77	-	-
PV2	30.0	180.0	0	0	-	-
PV20	30.0	180.0	0	0	-	-
PV21	30.0	180.0	0	6,892	-	-
PV22	30.0	180.0	0	3,564	-	-
PV23	30.0	180.0	0	0	-	-
PV24	30.0	180.0	8	7,504	-	-
PV25	30.0	180.0	0	0	-	-
PV26	30.0	180.0	0	1,624	-	-
PV27	30.0	180.0	0	0	-	-
PV28	30.0	180.0	0	0	-	-
PV29	30.0	180.0	0	0	-	-
PV3	30.0	180.0	362	67	-	-
PV30	30.0	180.0	0	0	-	-
PV31	30.0	180.0	0	0	-	-
PV32	30.0	180.0	0	0	-	-
PV33	30.0	180.0	0	0	-	-
PV34	30.0	180.0	0	2,738	-	-
PV35	30.0	180.0	0	0	-	-
PV36	30.0	180.0	0	0	-	-
PV37	30.0	180.0	0	96	-	-
PV38	30.0	180.0	0	0	-	-
PV39	30.0	180.0	21	0	-	-
PV4	30.0	180.0	756	0	-	-
PV40	30.0	180.0	0	17	-	-
PV41	30.0	180.0	0	0	-	-
PV42	30.0	180.0	0	0	-	-
PV43	30.0	180.0	0	0	-	-
PV44	30.0	180.0	0	0	-	-
PV45	30.0	180.0	0	9,169	-	-
PV5	30.0	180.0	465	0	-	-
PV6	30.0	180.0	0	0	-	-
PV7	30.0	180.0	0	0	-	-
PV8	30.0	180.0	0	0	-	-
PV9	30.0	180.0	0	0	-	-

Click the name of the PV array to scroll to its results

## PV & Receptor Analysis Results detailed results for each PV array and receptor

**PV1** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

**PV10** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

**PV11** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

**PV12** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

**PV13** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

**PV14** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV15** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV16** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV17** potential temporary after-image

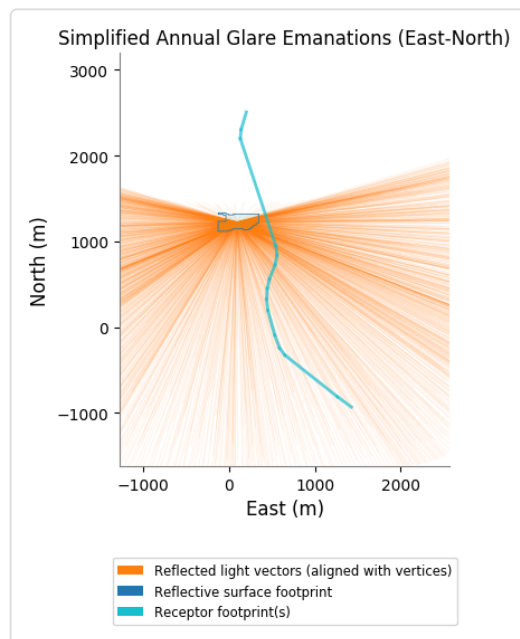
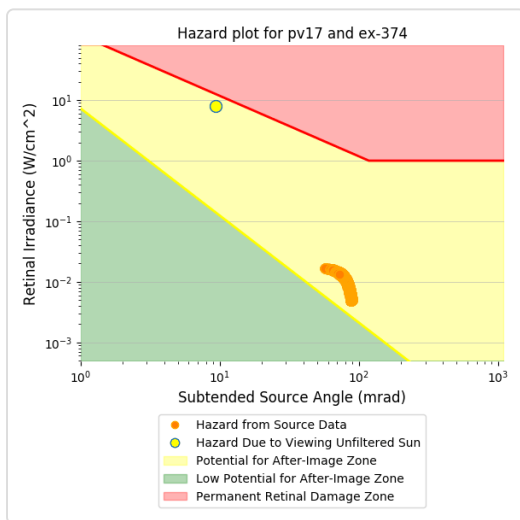
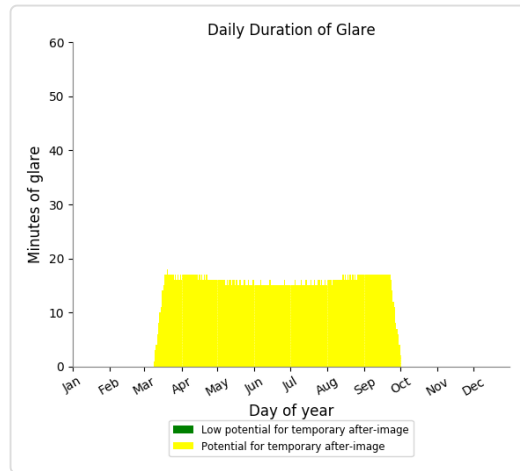
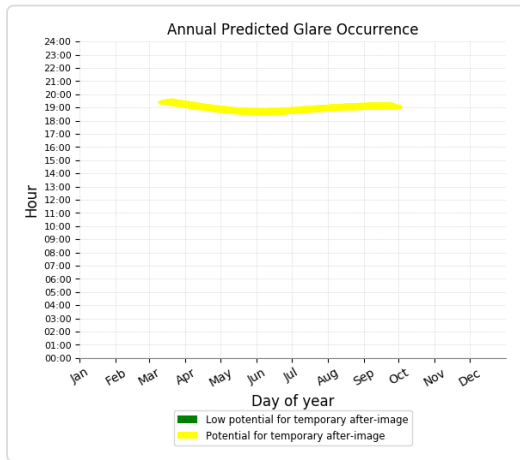


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	3176

## PV17 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,176 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.



**PV18** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV19** potential temporary after-image

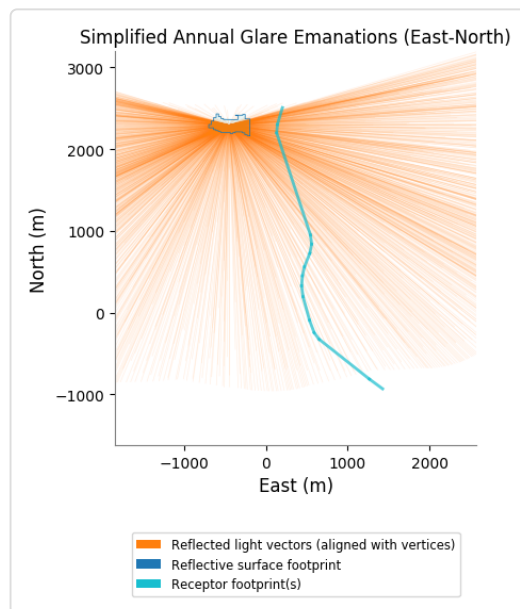
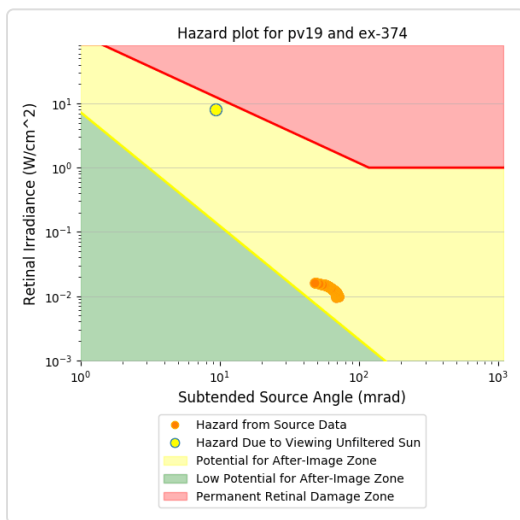
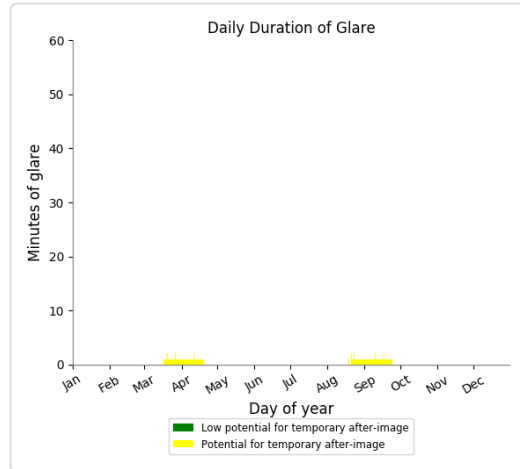
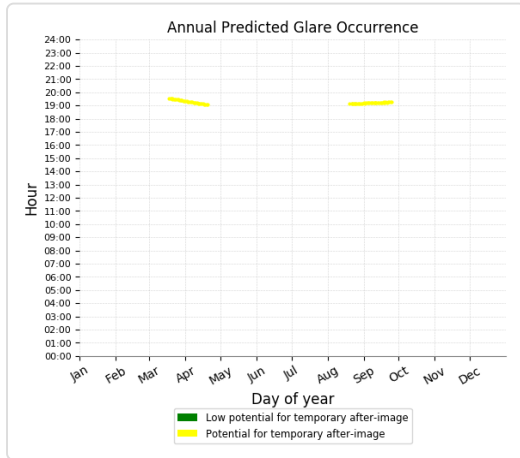


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	77

## PV19 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV2** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

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**PV20** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

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**PV21** potential temporary after-image

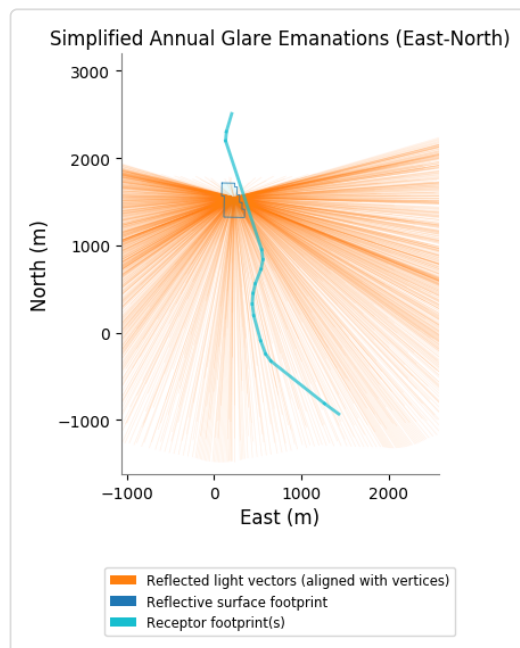
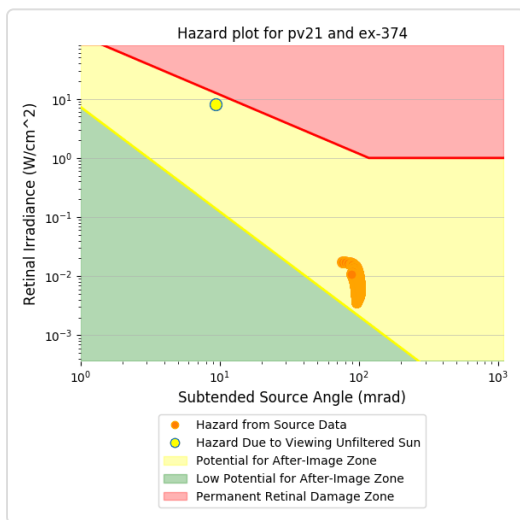
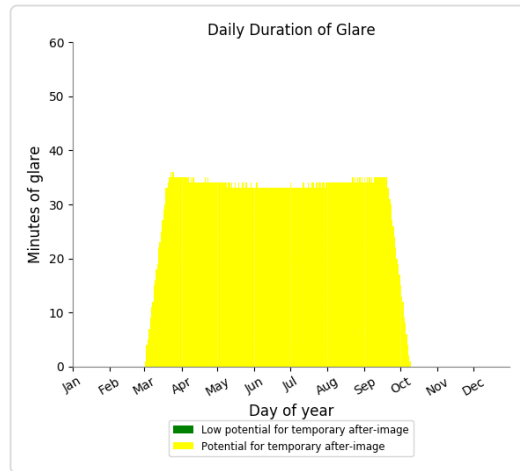
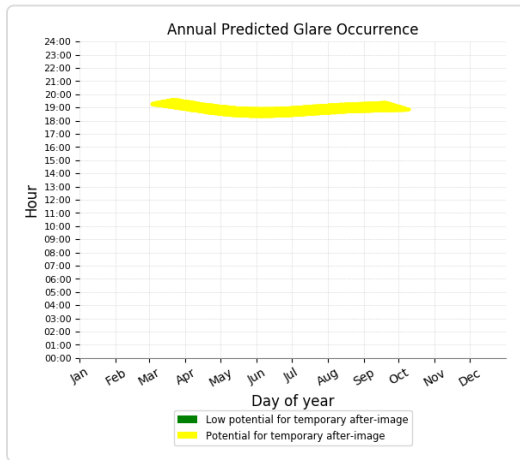


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	6892

## PV21 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 6,892 minutes of "yellow" glare with potential to cause temporary after-image.



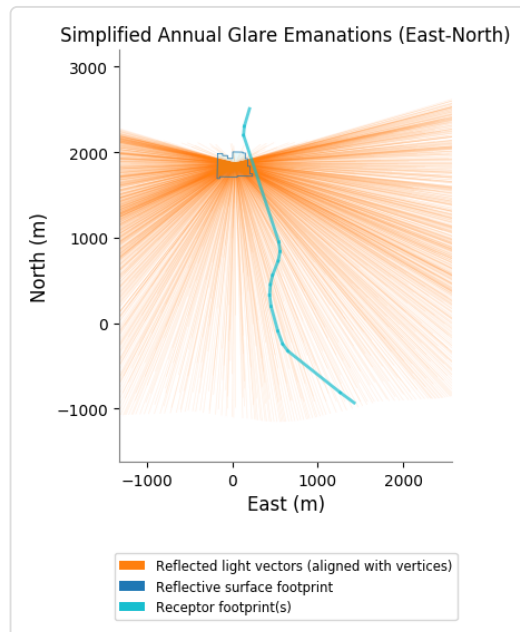
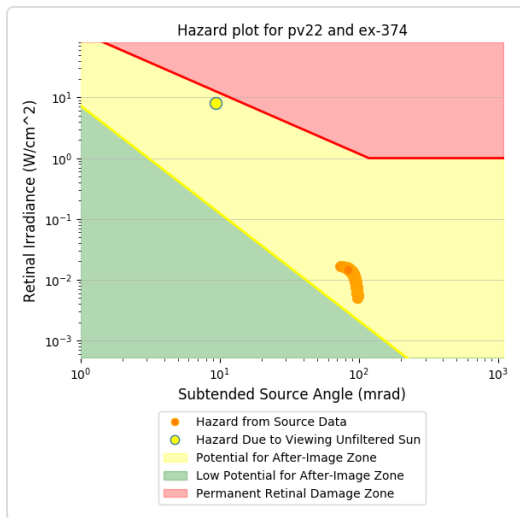
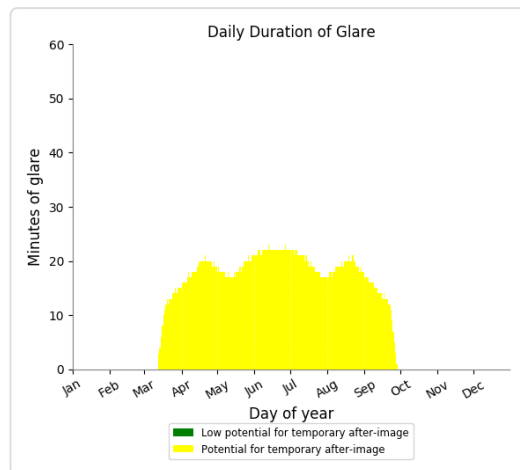
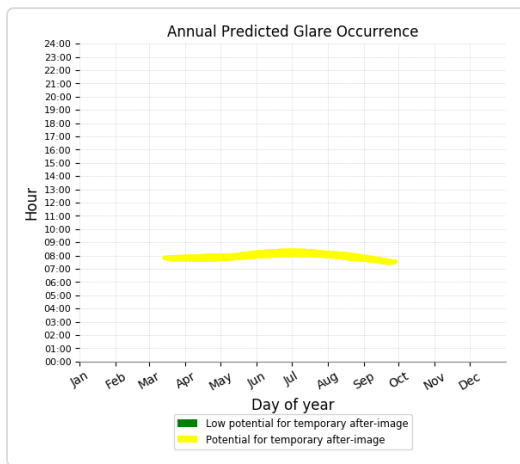
re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	3564

### PV22 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 3,564 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV23** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV24** potential temporary after-image

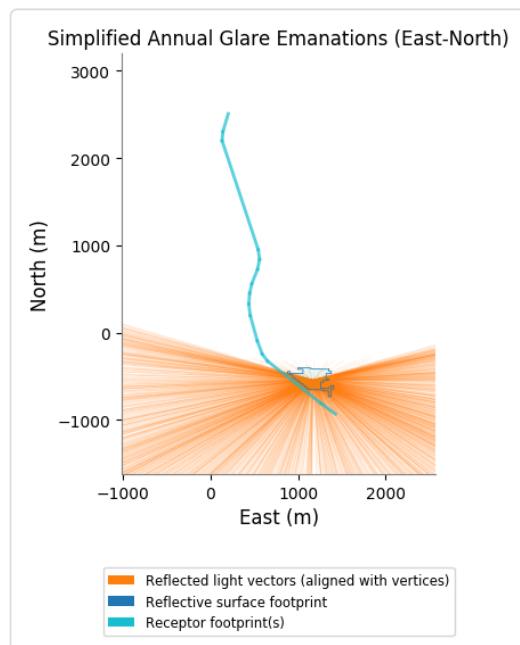
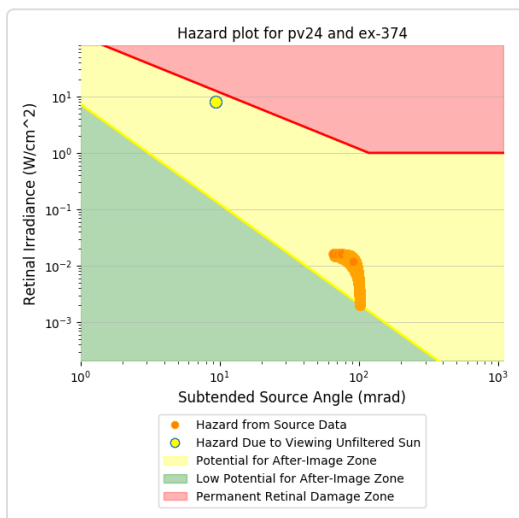
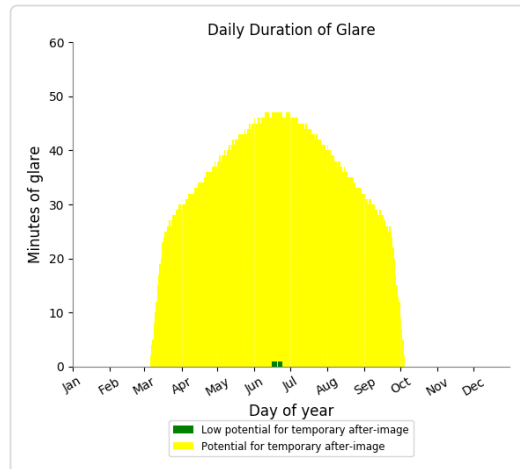
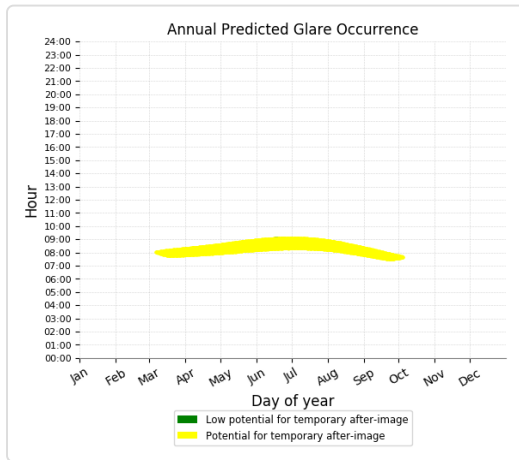


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	8	7504

## PV24 - Route Receptor (EX-374)

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

- 8 minutes of "green" glare with low potential to cause temporary after-image.
- 7,504 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.



**PV25** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV26** potential temporary after-image

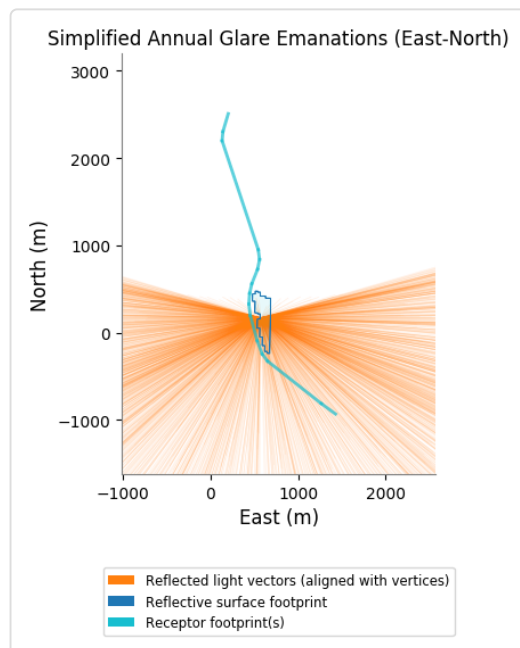
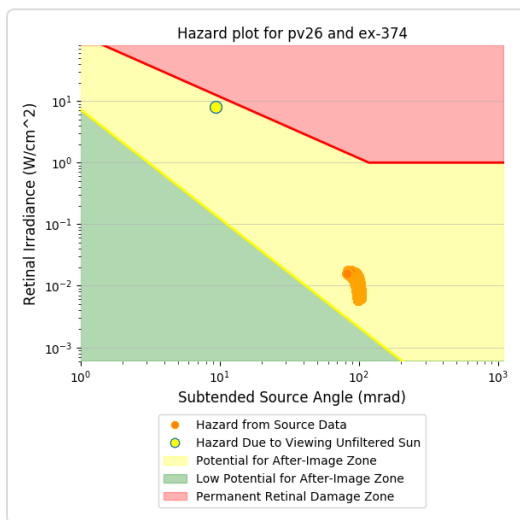
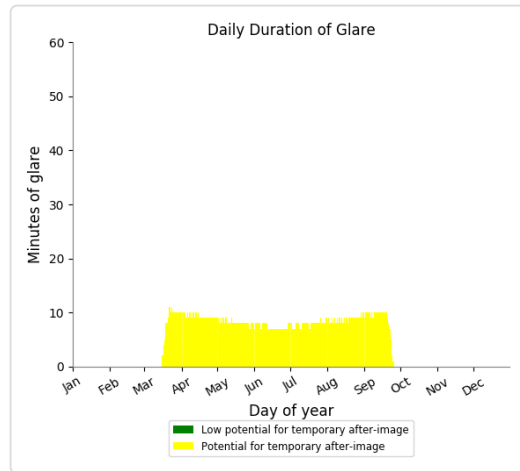
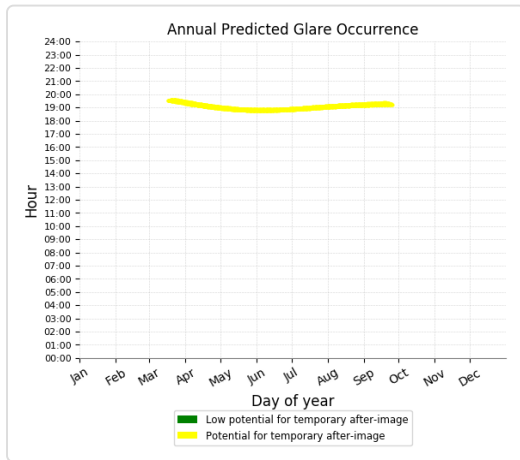


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	1624

## PV26 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 1,624 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

PV27 no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

PV28 no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

PV29 no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

PV3 potential temporary after-image

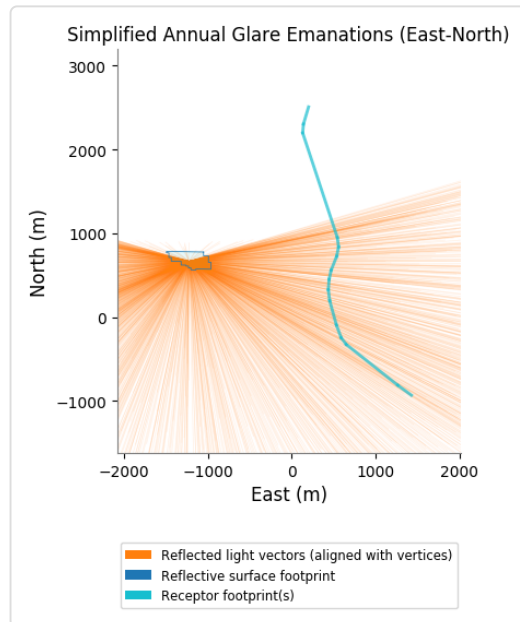
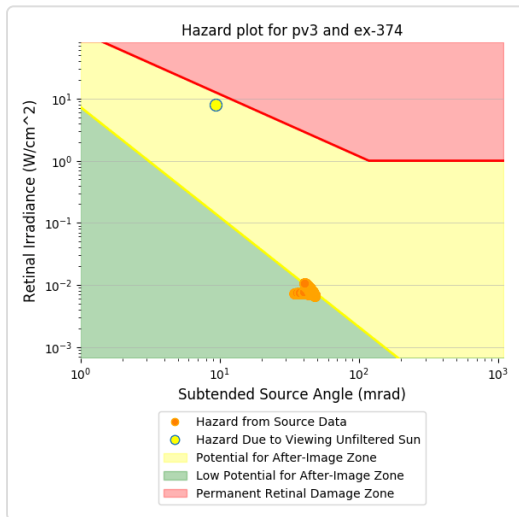
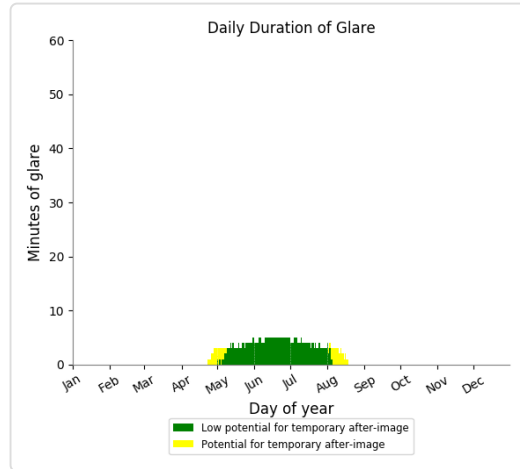
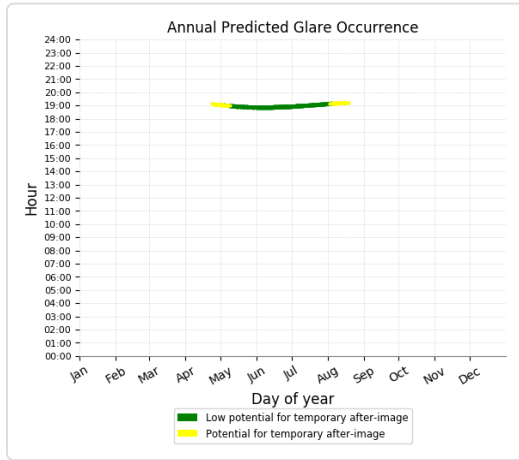


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	362	67

## PV3 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV30** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV31** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV32** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV33** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV34** potential temporary after-image

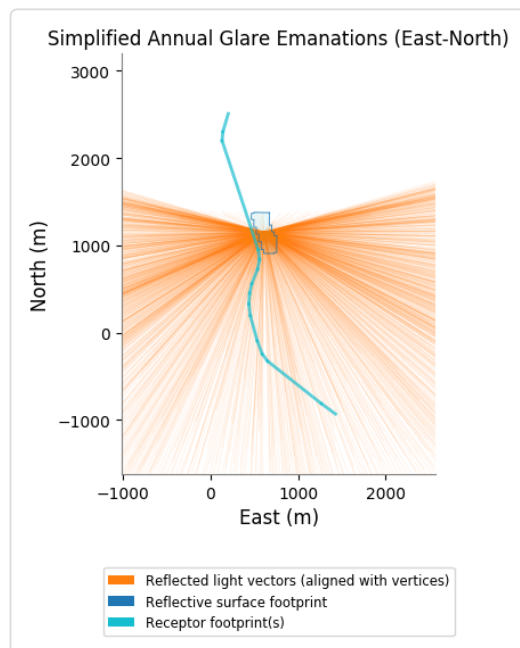
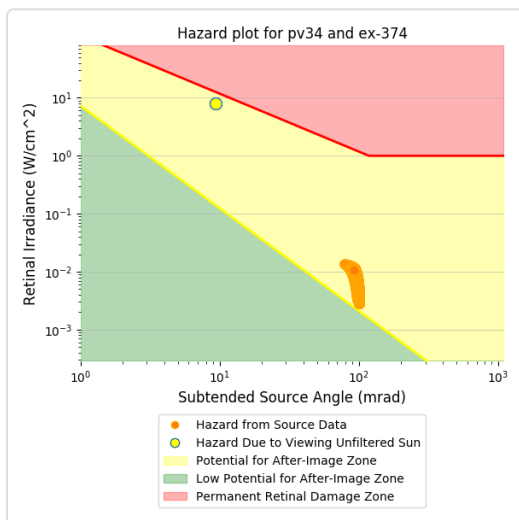
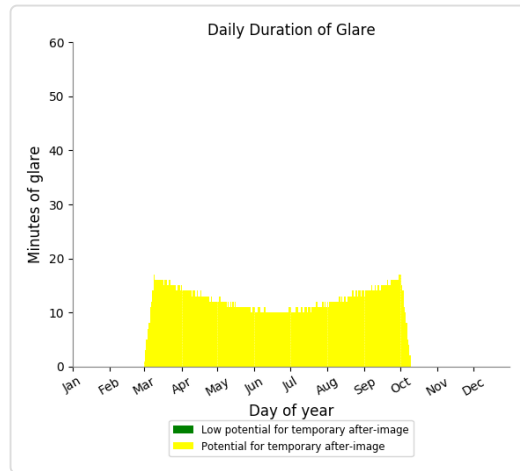
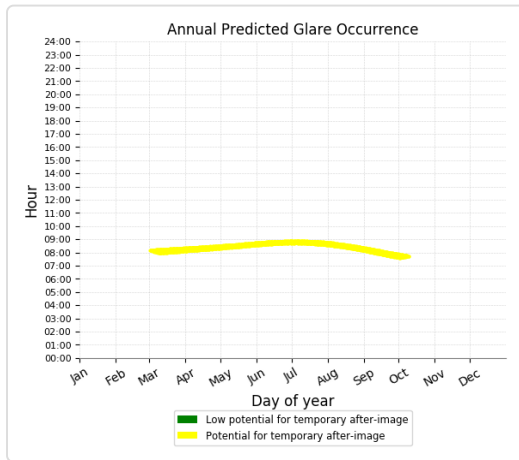


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	2738

## PV34 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 2,738 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV35** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV36** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV37** potential temporary after-image



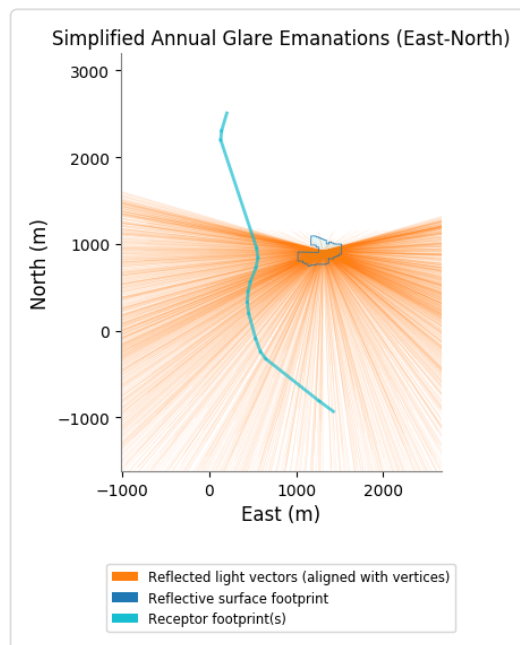
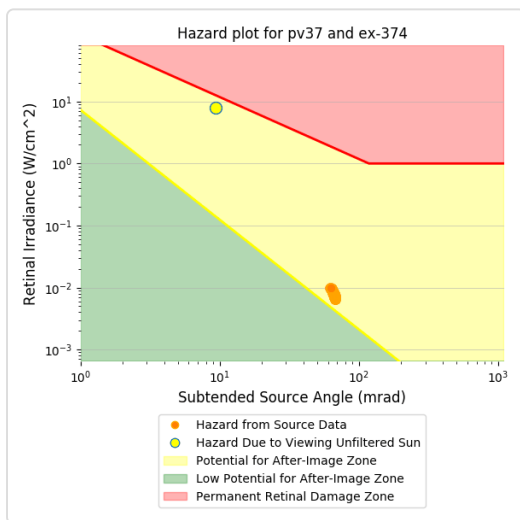
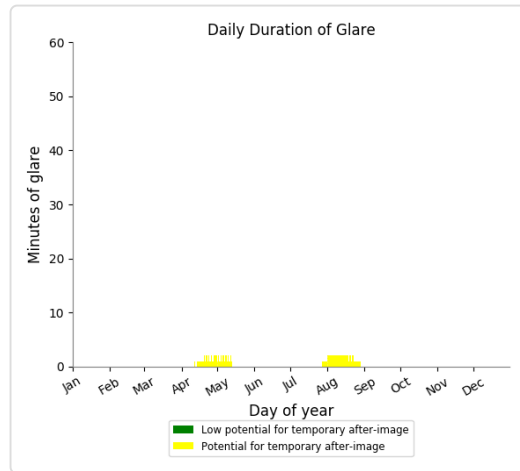
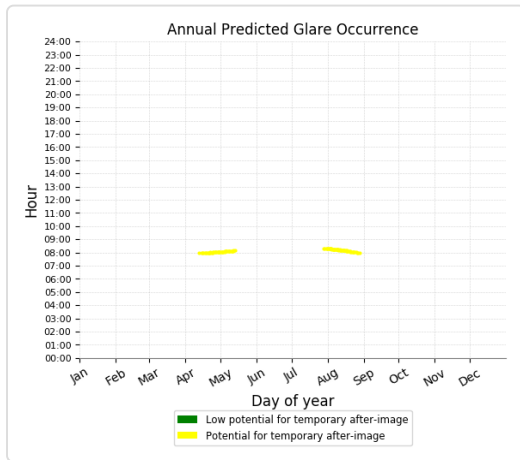
Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	96



## PV37 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV38** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

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**PV39** low potential for temporary after-image

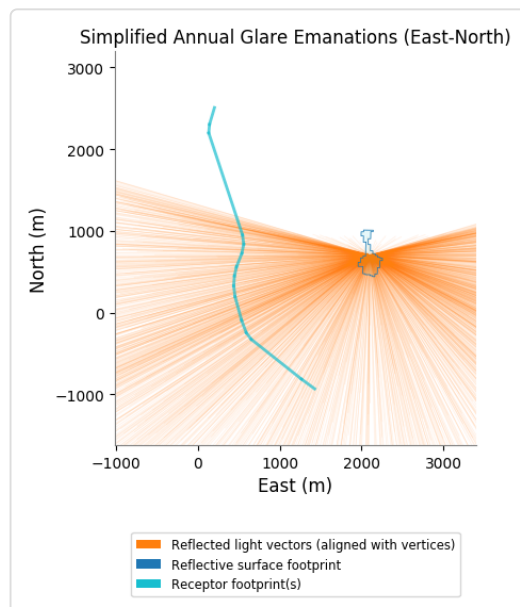
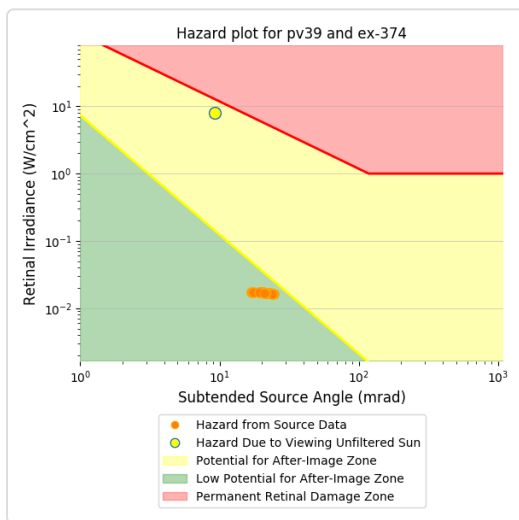
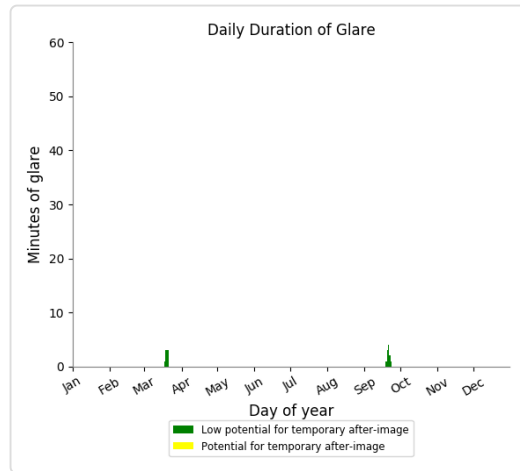
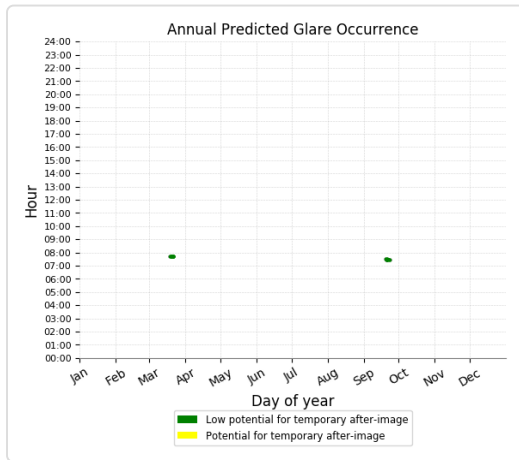


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	21	0

## PV39 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

PV4 low potential for temporary after-image

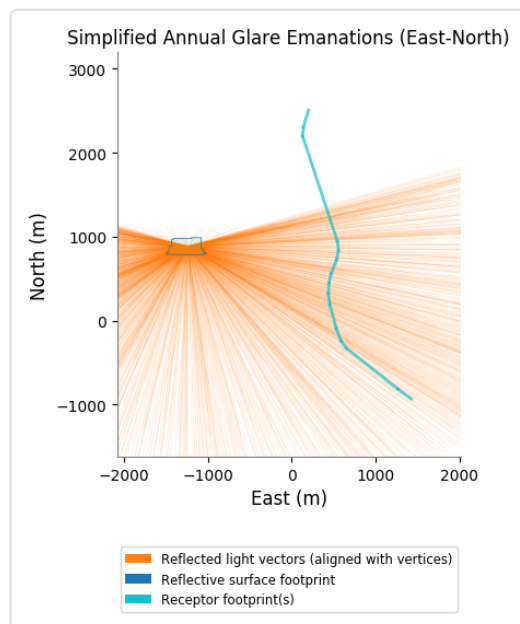
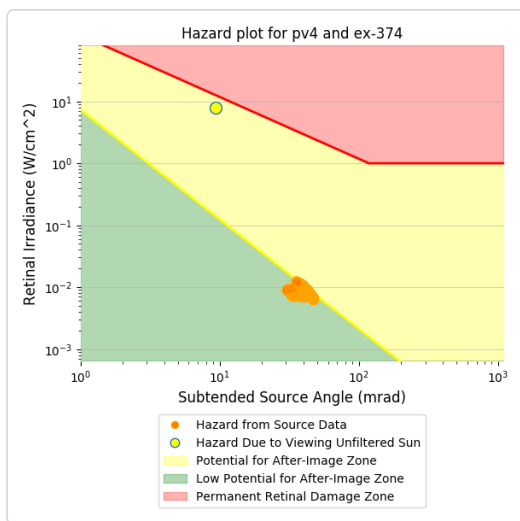
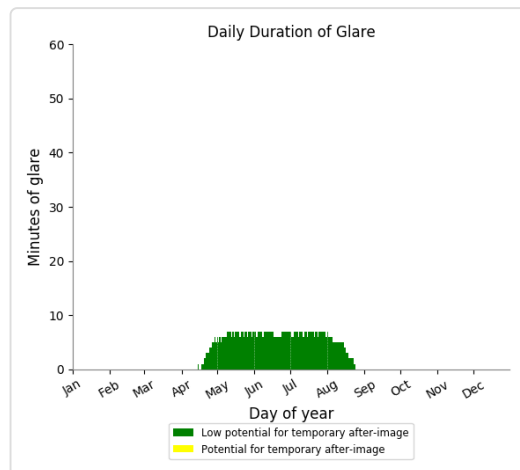
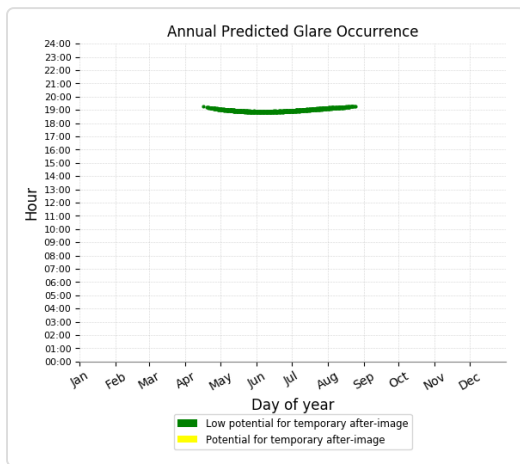


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	756	0

PV4 - Route Receptor (EX-374)

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

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



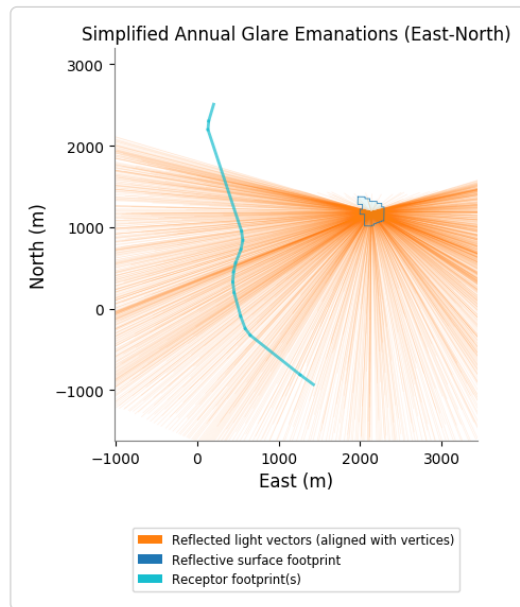
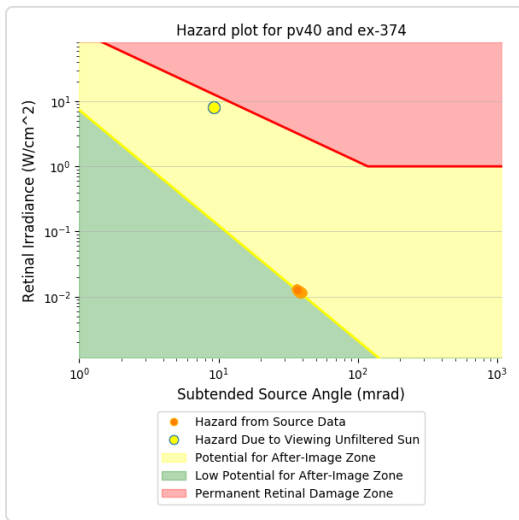
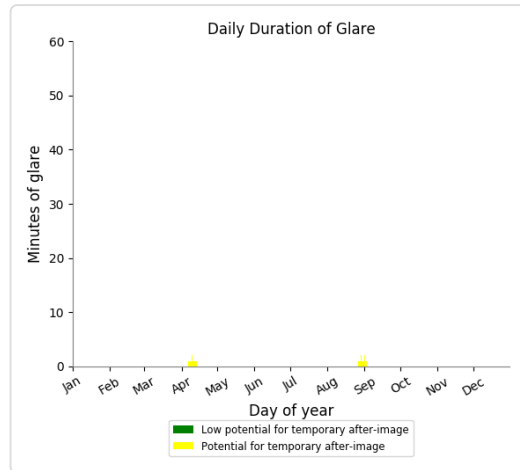
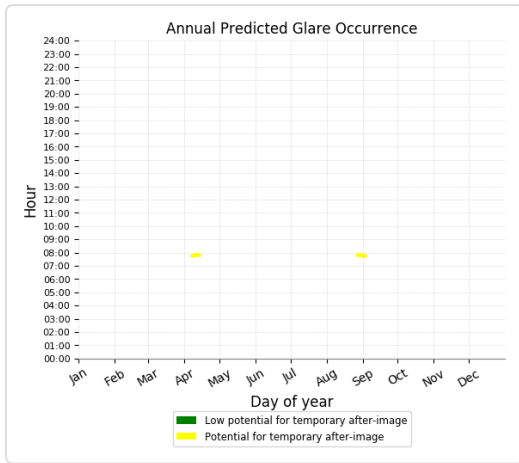
re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	17

### PV40 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

**PV41** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV42** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV43** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV44** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

No glare found

**PV45** potential temporary after-image

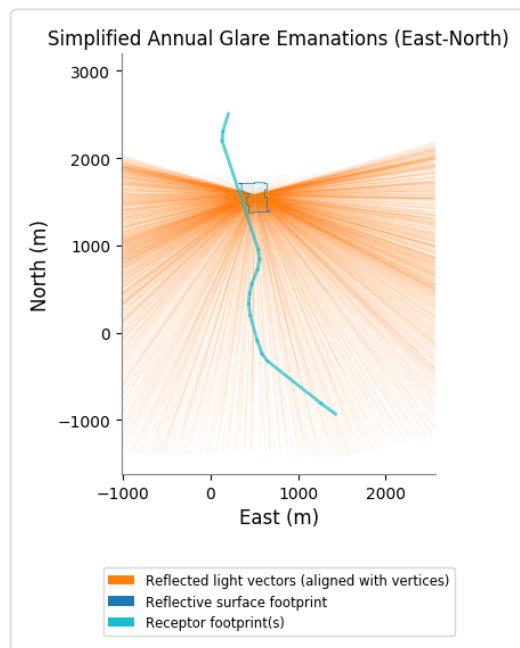
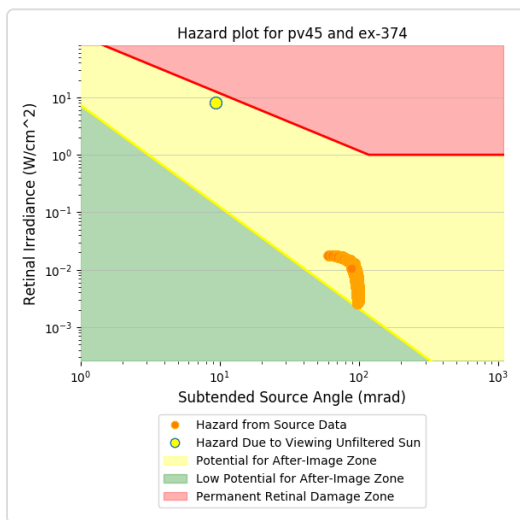
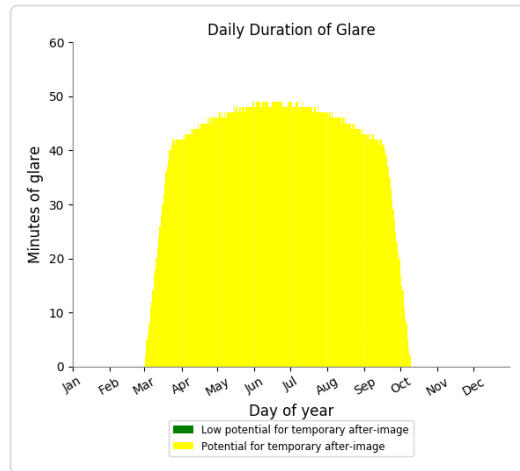
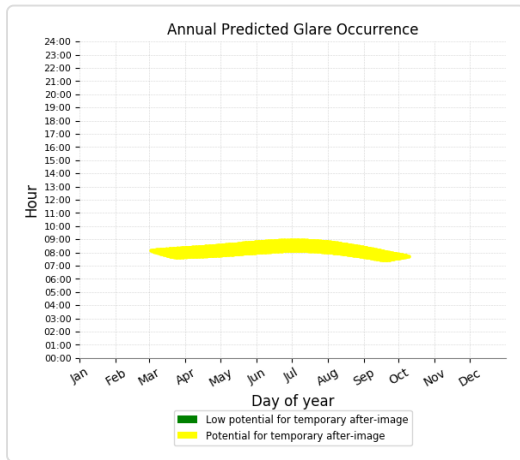


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	9169

## PV45 - Route Receptor (EX-374)

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

- 0 minutes of "green" glare with low potential to cause temporary after-image.
- 9,169 minutes of "yellow" glare with potential to cause temporary after-image.



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.

PV5 low potential for temporary after-image

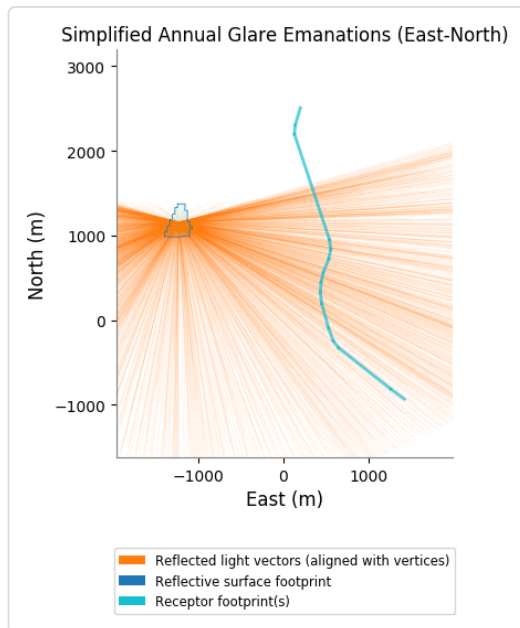
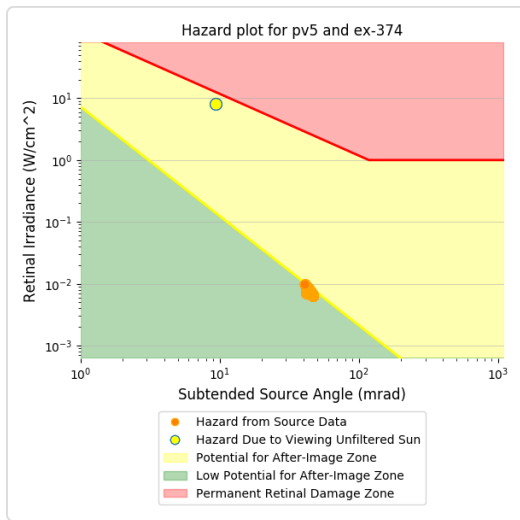
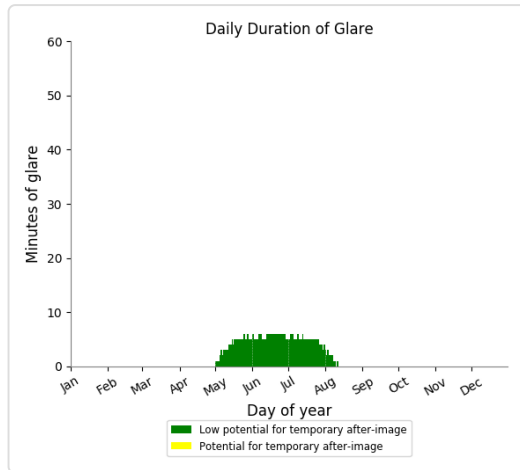
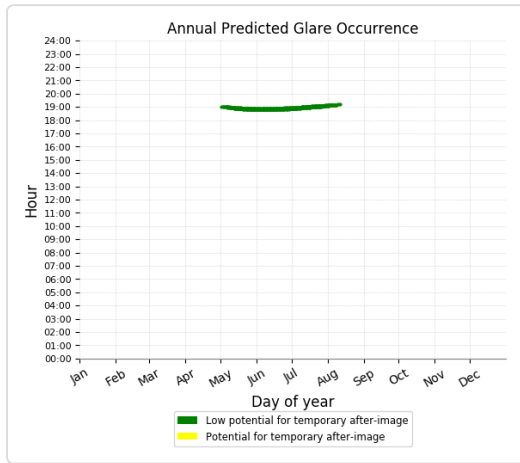


Component	Green glare (min)	Yellow glare (min)
Route: EX-374	465	0

PV5 - Route Receptor (EX-374)

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

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



re vectors placed at PV centroid for clarity. Actual glare-spot locations vary.



**PV6** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

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**PV7** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV8** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

---

**PV9** no glare found



Component	Green glare (min)	Yellow glare (min)
Route: EX-374	0	0

*No glare found*

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## Assumptions

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- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- 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 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Glare vector plots are simplified representations of analysis data. Actual glare emanations and results may differ.
- Glare analysis methods used: OP V1, FP V1, Route V1
- Refer to the **Help page** for assumptions and limitations not listed here.