Layout 1

Layout 1 Traci Herr, 898 United Street, Key West, Florida 33040

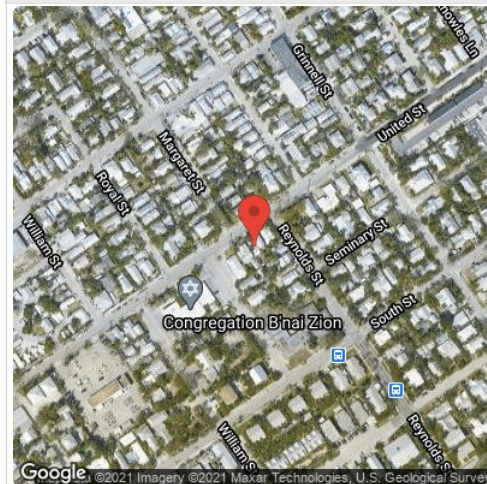## 🔧 Report

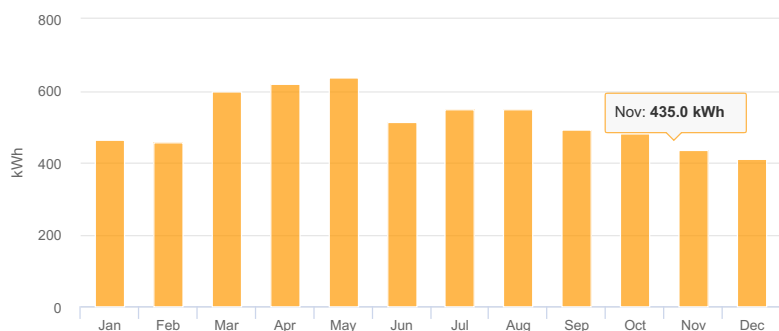|	
Project Name	Traci Herr
Project Address	898 United Street, Key West, Florida 33040
Prepared By	Bob Williams bobw@saltservice.net
	SALTENERGY

📊 System Metrics

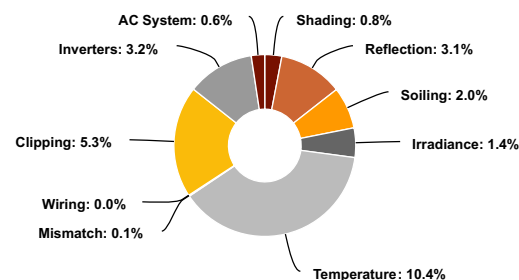|	
Design	Layout 1
Module DC Nameplate	4.10 kW
Inverter AC Nameplate	3.49 kW Load Ratio: 1.17
Annual Production	6.200 MWh
Performance Ratio	75.7%
kWh/kWp	1,512.3
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Simulator Version	453f41678c-09260645b7-b0bd33bbd8-a9fb6c4b03

📍 Project Location

📊 Monthly Production

Nov: 435.0 kWh

◑ Sources of System Loss

- AC System: 0.6%
- Shading: 0.8%
- Inverters: 3.2%
- Reflection: 3.1%
- Clipping: 5.3%
- Soiling: 2.0%
- Irradiance: 1.4%
- Wiring: 0.0%
- Mismatch: 0.1%
- Temperature: 10.4%

⚡ Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,973.7	
	POA Irradiance	1,997.6	1.2%
	Shaded Irradiance	1,981.4	-0.8%
	Irradiance after Reflection	1,920.4	-3.1%
	Irradiance after Soiling	1,882.0	-2.0%
	Total Collector Irradiance	**1,880.8**	**-0.1%**
Energy (kWh)	Nameplate	7,712.0	
	Output at Irradiance Levels	7,603.0	-1.4%
	Output at Cell Temperature Derate	6,815.9	-10.4%
	Output After Mismatch	6,812.4	-0.1%
	Optimal DC Output	6,812.4	0.0%
	Constrained DC Output	6,448.4	-5.3%
	Inverter Output	6,240.6	-3.0%
	Energy to Grid	**6,200.4**	**-0.6%**
Temperature Metrics			
	Avg. Operating Ambient Temp		25.4 °C
	Avg. Operating Cell Temp		45.1 °C
Simulation Metrics			
	Operating Hours		4668
	Solved Hours		4668

☁ Condition Set

Description	Condition Set 1
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Solar Angle Location	Meteo Lat/Lng
Transposition Model	Perez Model
Temperature Model	Sandia Model

Temperature Model Parameters	Rack Type	a	b	Temperature Delta
	Fixed Tilt	-3.56	-0.075	3°C
	Flush Mount	-2.81	-0.0455	0°C

Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2

Irradiation Variance	5%
Cell Temperature Spread	4° C
Module Binning Range	-2.5% to 2.5%
AC System Derate	0.50%

Module Characterizations	Module	Uploaded By	Characterization
	SPR-A410-G-AC (SunPower)	Folsom Labs	Sunpower_SPR_A410_G_AC.PAN, PAN

Component Characterizations	Device	Uploaded By	Characterization
	IQ7A-72-2-US (240V) (error) (Enphase)	Folsom Labs	Spec Sheet

🖨 Components

Component	Name	Count
Inverters	IQ7A-72-2-US (240V) (error) (Enphase)	10 (3.49 kW)
AC Panels	1 input AC Panel	1
AC Home Runs	500 MCM (Copper)	1 (42.1 ft)
AC Branches	10 AWG (Copper)	1 (0.2 ft)
Module	SunPower, SPR-A410-G-AC (410W)	10 (4.10 kW)

⛓ Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

▦ Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	30°	236.94418°	0.0 ft	1x1	7	7	2.87 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	0°	145.87146°	0.0 ft	1x1	3	3	1.23 kW

Detailed Layout

Layout 1T

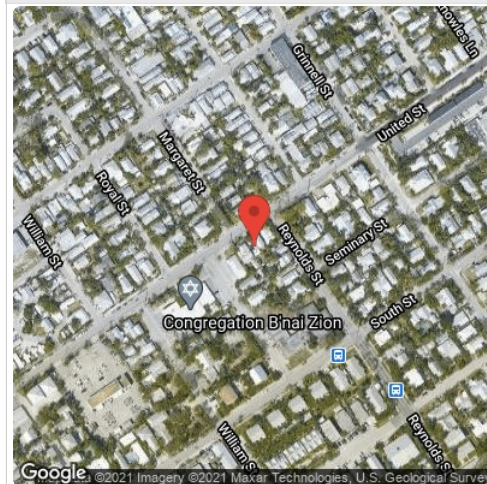# Layout 1 Revised Traci Herr, 898 United Street, Key West, Florida 33040

🔧 Report

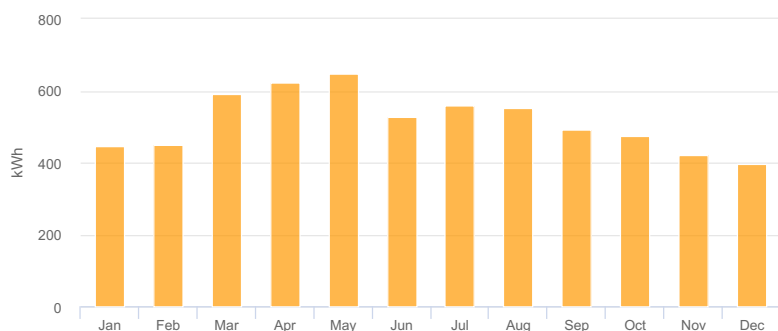|	
Project Name	Traci Herr
Project Address	898 United Street, Key West, Florida 33040
Prepared By	Bob Williams bobw@saltservice.net
	SALTENERGY

📊 System Metrics

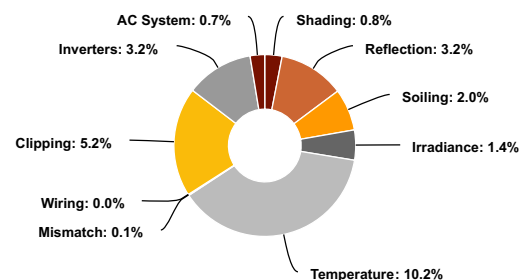|	
Design	Layout 1 Revised
Module DC Nameplate	4.10 kW
Inverter AC Nameplate	3.49 kW Load Ratio: 1.17
Annual Production	6.185 MWh
Performance Ratio	75.8%
kWh/kWp	1,508.5
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Simulator Version	453f41678c-09260645b7-b0bd33bbd8-a9fb6c4b03

📍 Project Location

📊 Monthly Production

◑ Sources of System Loss

AC System: 0.7%
Shading: 0.8%
Inverters: 3.2%
Reflection: 3.2%
Clipping: 5.2%
Soiling: 2.0%
Irradiance: 1.4%
Wiring: 0.0%
Mismatch: 0.1%
Temperature: 10.2%

⚡ Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,973.7	
	POA Irradiance	1,990.5	0.8%
	Shaded Irradiance	1,974.1	-0.8%
	Irradiance after Reflection	1,911.9	-3.2%
	Irradiance after Soiling	1,873.6	-2.0%
	Total Collector Irradiance	**1,872.7**	**-0.1%**
Energy (kWh)	Nameplate	7,680.0	
	Output at Irradiance Levels	7,569.9	-1.4%
	Output at Cell Temperature Derate	6,794.1	-10.2%
	Output After Mismatch	6,790.5	-0.1%
	Optimal DC Output	6,790.5	0.0%
	Constrained DC Output	6,436.2	-5.2%
	Inverter Output	6,228.5	-3.0%
	Energy to Grid	**6,185.0**	**-0.7%**
Temperature Metrics			
	Avg. Operating Ambient Temp		25.4 °C
	Avg. Operating Cell Temp		45.1 °C
Simulation Metrics			
	Operating Hours		4668
	Solved Hours		4668

☁ Condition Set

Description	Condition Set 1
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Solar Angle Location	Meteo Lat/Lng
Transposition Model	Perez Model
Temperature Model	Sandia Model

Temperature Model Parameters	Rack Type	a	b	Temperature Delta
	Fixed Tilt	-3.56	-0.075	3°C
	Flush Mount	-2.81	-0.0455	0°C

Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2

Irradiation Variance	5%
Cell Temperature Spread	4° C
Module Binning Range	-2.5% to 2.5%
AC System Derate	0.50%

Module Characterizations	Module	Uploaded By	Characterization
	SPR-A410-G-AC (SunPower)	Folsom Labs	Sunpower_SPR_A410_G_AC.PAN, PAN

Component Characterizations	Device	Uploaded By	Characterization
	IQ7A-72-2-US (240V) (error) (Enphase)	Folsom Labs	Spec Sheet

🖨 Components

Component	Name	Count
Inverters	IQ7A-72-2-US (240V) (error) (Enphase)	10 (3.49 kW)
AC Panels	1 input AC Panel	1
AC Home Runs	500 MCM (Copper)	1 (18.1 ft)
AC Branches	10 AWG (Copper)	1 (0.0 ft)
Module	SunPower, SPR-A410-G-AC (410W)	10 (4.10 kW)

⊓ Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

⊞ Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2	Flush Mount	Portrait (Vertical)	0°	236.7683°	0.0 ft	1x1	8	5	2.05 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	30°	236.91862°	0.0 ft	1x1	5	5	2.05 kW

Detailed Layout

Layout 2

Layout 2 Traci Herr, 898 United Street, Key West, Florida 33040
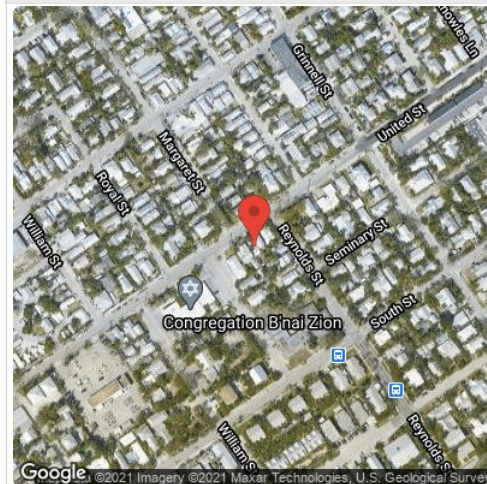
Report

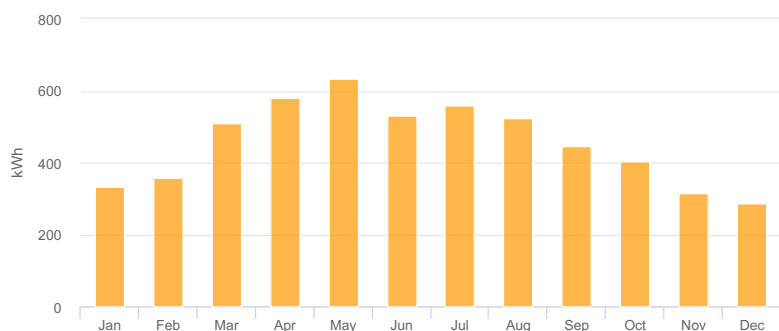|	
Project Name	Traci Herr
Project Address	898 United Street, Key West, Florida 33040
Prepared By	Bob Williams bobw@saltservice.net
	SALT ENERGY

System Metrics

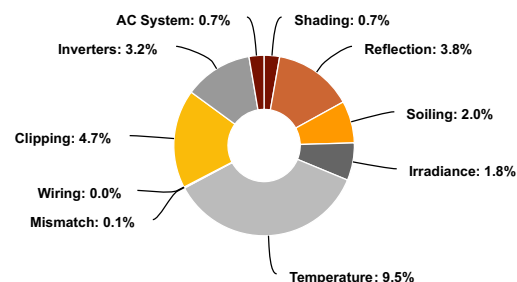|	
Design	Layout 2
Module DC Nameplate	4.10 kW
Inverter AC Nameplate	3.49 kW Load Ratio: 1.17
Annual Production	5.487 MWh
Performance Ratio	76.4%
kWh/kWp	1,338.4
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Simulator Version	453f41678c-09260645b7-b0bd33bbd8-a9fb6c4b03

Project Location

©2021 Imagery ©2021 Maxar Technologies, U.S. Geological Survey

Monthly Production

Sources of System Loss

AC System: 0.7%
Shading: 0.7%
Inverters: 3.2%
Reflection: 3.8%
Clipping: 4.7%
Soiling: 2.0%
Wiring: 0.0%
Irradiance: 1.8%
Mismatch: 0.1%
Temperature: 9.5%

Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,973.7	
	POA Irradiance	1,751.9	-11.2%
	Shaded Irradiance	1,739.0	-0.7%
	Irradiance after Reflection	1,673.4	-3.8%
	Irradiance after Soiling	1,639.9	-2.0%
	Total Collector Irradiance	**1,644.6**	**0.3%**
Energy (kWh)	Nameplate	6,748.3	
	Output at Irradiance Levels	6,628.0	-1.8%
	Output at Cell Temperature Derate	5,996.5	-9.5%
	Output After Mismatch	5,993.3	-0.1%
	Optimal DC Output	5,993.3	0.0%
	Constrained DC Output	5,712.2	-4.7%
	Inverter Output	5,526.7	-3.0%
	Energy to Grid	**5,487.4**	**-0.7%**
Temperature Metrics			
	Avg. Operating Ambient Temp		25.4 °C
	Avg. Operating Cell Temp		42.6 °C
Simulation Metrics			
	Operating Hours		4668
	Solved Hours		4668

☁ Condition Set

Description	Condition Set 1										
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)										
Solar Angle Location	Meteo Lat/Lng										
Transposition Model	Perez Model										
Temperature Model	Sandia Model										

Temperature Model Parameters	Rack Type	a	b	Temperature Delta
	Fixed Tilt	-3.56	-0.075	3°C
	Flush Mount	-2.81	-0.0455	0°C

Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2

Irradiation Variance	5%
Cell Temperature Spread	4° C
Module Binning Range	-2.5% to 2.5%
AC System Derate	0.50%

Module Characterizations	Module	Uploaded By	Characterization
	SPR-A410-G-AC (SunPower)	Folsom Labs	Sunpower_SPR_A410_G_AC.PAN, PAN

Component Characterizations	Device	Uploaded By	Characterization
	IQ7A-72-2-US (240V) (error) (Enphase)	Folsom Labs	Spec Sheet

🖶 Components

Component	Name	Count
Inverters	IQ7A-72-2-US (240V) (error) (Enphase)	10 (3.49 kW)
AC Panels	1 input AC Panel	1
AC Home Runs	500 MCM (Copper)	1 (39.1 ft)
Module	SunPower, SPR-A410-G-AC (410W)	10 (4.10 kW)

⛓ Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

▦ Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2	Flush Mount	Portrait (Vertical)	0°	145.87146°	0.0 ft	1x1	6	3	1.23 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	30°	57.02527960963539°	0.0 ft	1x1	7	7	2.87 kW

Detailed Layout

Layout 2T

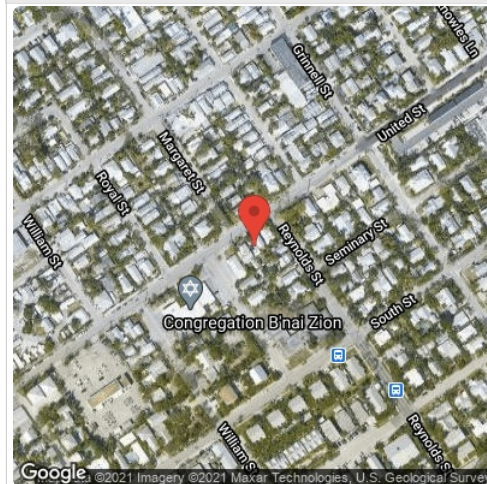# Layout 2 Revised Traci Herr, 898 United Street, Key West, Florida 33040

🔧 Report

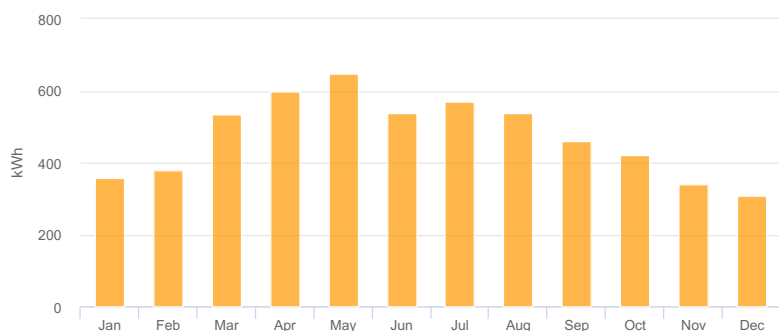|	
Project Name	Traci Herr
Project Address	898 United Street, Key West, Florida 33040
Prepared By	Bob Williams bobw@saltservice.net
	SALTENERGY

📊 System Metrics

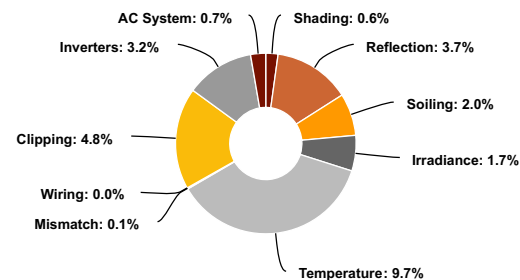|	
Design	Layout 2 Revised
Module DC Nameplate	4.10 kW
Inverter AC Nameplate	3.49 kW Load Ratio: 1.17
Annual Production	5.691 MWh
Performance Ratio	76.5%
kWh/kWp	1,388.0
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Simulator Version	453f41678c-09260645b7-b0bd33bbd8-a9fb6c4b03

📍 Project Location

📊 Monthly Production

◑ Sources of System Loss

AC System: 0.7%
Shading: 0.6%
Inverters: 3.2%
Reflection: 3.7%
Clipping: 4.8%
Soiling: 2.0%
Wiring: 0.0%
Irradiance: 1.7%
Mismatch: 0.1%
Temperature: 9.7%

⚡ Annual Production

	Description	Output	% Delta
Irradiance (kWh/m²)	Annual Global Horizontal Irradiance	1,973.7	
	POA Irradiance	1,815.4	-8.0%
	Shaded Irradiance	1,804.8	-0.6%
	Irradiance after Reflection	1,739.0	-3.7%
	Irradiance after Soiling	1,704.2	-2.0%
	Total Collector Irradiance	**1,709.9**	**0.3%**
Energy (kWh)	Nameplate	7,014.9	
	Output at Irradiance Levels	6,896.8	-1.7%
	Output at Cell Temperature Derate	6,227.1	-9.7%
	Output After Mismatch	6,223.8	-0.1%
	Optimal DC Output	6,223.8	0.0%
	Constrained DC Output	5,923.9	-4.8%
	Inverter Output	5,731.8	-3.0%
	Energy to Grid	**5,690.7**	**-0.7%**
Temperature Metrics			
	Avg. Operating Ambient Temp		25.4 °C
	Avg. Operating Cell Temp		43.3 °C
Simulation Metrics			
	Operating Hours		4668
	Solved Hours		4668

☁ Condition Set

Description	Condition Set 1
Weather Dataset	TMY, 10km grid (24.55,-81.75), NREL (prospector)
Solar Angle Location	Meteo Lat/Lng
Transposition Model	Perez Model
Temperature Model	Sandia Model

Temperature Model Parameters	Rack Type	a	b	Temperature Delta
	Fixed Tilt	-3.56	-0.075	3°C
	Flush Mount	-2.81	-0.0455	0°C

Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2

Irradiation Variance	5%
Cell Temperature Spread	4° C
Module Binning Range	-2.5% to 2.5%
AC System Derate	0.50%

Module Characterizations	Module	Uploaded By	Characterization
	SPR-A410-G-AC (SunPower)	Folsom Labs	Sunpower_SPR_A410_G_AC.PAN, PAN

Component Characterizations	Device	Uploaded By	Characterization
	IQ7A-72-2-US (240V) (error) (Enphase)	Folsom Labs	Spec Sheet

🖶 Components

Component	Name	Count
Inverters	IQ7A-72-2-US (240V) (error) (Enphase)	10 (3.49 kW)
AC Panels	1 input AC Panel	1
AC Home Runs	500 MCM (Copper)	1 (37.0 ft)
AC Branches	10 AWG (Copper)	1 (0.0 ft)
Module	SunPower, SPR-A410-G-AC (410W)	10 (4.10 kW)

⊹ Wiring Zones

Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

▦ Field Segments

Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 2	Flush Mount	Portrait (Vertical)	0°	236.7683°	0.0 ft	1x1	5	5	2.05 kW
Field Segment 2	Flush Mount	Portrait (Vertical)	30°	57.21151°	0.0 ft	1x1	5	5	2.05 kW

🌐 Detailed Layout