



June 4, 2024

Sunmodo Corp
14800 NE 65th St
Vancouver, WA 98682
TEL: (360) 844-0048

Attn.: Sunmodo Corp - Engineering Department

Re: Report # 2021-02963vFR.31.0 – Sunmodo SMR100
Subject: Engineering Certification for the State of Washington

PZSE, Inc. – Structural Engineers has provided engineering and span tables for the Sunmodo SMR100 Rail, as presented in PZSE Report # 2021-02963vFR.31.0, "Sunmodo SMR100 Rail, Engineering Certification for Flat Roofs". All information, data, and analysis therein are based on, and comply with, the following building codes and typical specifications:

- Building Codes:
1. ASCE/SEI 7-22, Minimum Design Loads for Buildings and other Structures, by American Society of Civil Engineers
 2. 2021 International Building Code, by International Code Council, Inc.
 3. 2021 International Residential Code, by International Code Council, Inc.
 4. AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012 by ICC-ES
 5. Aluminum Design Manual 2020, by The Aluminum Association, Inc.
 6. ANSI/AWC NDS-2018, National Design Specification for Wood Construction, by the American Wood Council

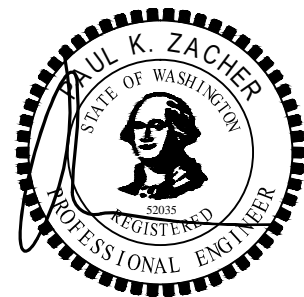
- Design Criteria:
- Risk Category II
 - Seismic Design Category = A - E
 - Exposure Category = B, C & D
 - Basic Wind Speed (ultimate) per ASCE 7-22 = 90 mph to 190 mph
 - Ground Snow Load = 0 to 120 (psf)

This letter certifies that the loading criteria and design basis for the Sunmodo SMR100 Rail Span Tables are in compliance with the above codes.

If you have any questions on the above, do not hesitate to call.

Prepared by:
PZSE, Inc. – Structural Engineers
Roseville, CA

DIGITALLY SIGNED



EXPIRES 08/02/2025



February 1, 2024

SunModo Corp
14800 NE 65th St
Vancouver, WA 98682
TEL: (360) 844-0048

Attn.: Sunmodo - Engineering Department

Re: Report #2021-02963vFR.31.0 SunModo SMR100 Rail Tilt System, Engineering Certification for Flat Roofs.

PZSE, Inc. - Structural Engineers have reviewed SunModo SMR100 Rail Tilt System. All information, data, and analysis contained within the SunModo SMR100 Rail Tilt System span tables are based on and comply with the following codes:

1. Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-22
2. 2021 International Building Code, by the International Code Council, Inc.
3. 2021 International Residential Code, by the International Code Council, Inc.
4. AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012, by ICC-ES
5. Aluminum Design Manual 2020, by The Aluminum Association, Inc.
6. ANSI/AWC NDS-2018, National Design Specification for Wood Construction, by the American Wood Council

The following are typical specifications to meet the above code requirements:

Design Criteria:	Ground Snow Load = 0 - 120 (psf) Basic Wind Speed = 90 - 190 (mph) Roof Mean Height = 0 - 30 (ft) Enclosed and Partially Enclosed Flat Roof Pitch = 0° - 7° (degrees) Exposure Category = B, C & D
Tilt System:	System tilts of 10 and 20 degrees, 8" front leg and 14" or 25" rear leg. Tilt legs not considered in rail spans.
Rail Materials:	The SMR100 Rail Aluminum Alloys: 6005-T5, 6005A-T61, 6061-T6.
Attachment:	No attachment is considered in the rail span.

- Clearance:** 2" minimum and 10" Maximum clear from the top of the roof to the top of the PV panel at the low edge.
- Cantilever:** The maximum cantilever (L_c) is permitted to be $L/3$, where L is the corresponding maximum span noted in the Span Table(s) and the minimum spacing between cantilevers (Y). Where 'Y' is at least (1) module width or module short-dimension, see Figure 1.

A maximum cantilever length of $1/3$ of the installed span is permitted in all other cases.

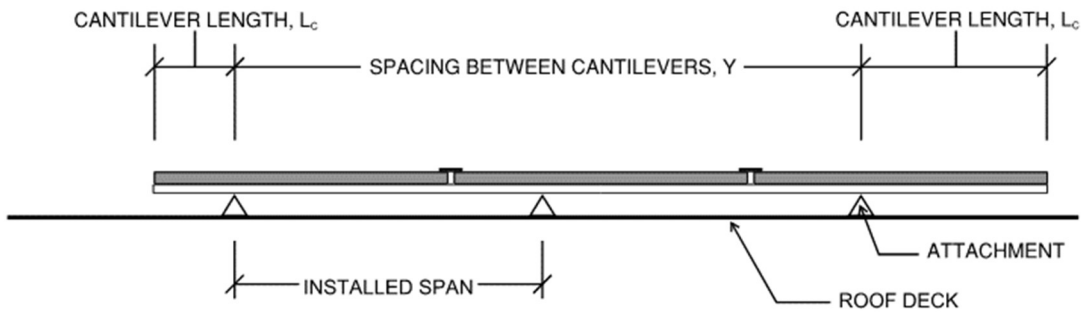


Figure 1: Cantilever Length

- Splice:** Rails installed with (2) Roof Attachments (1 rail span)*: SMR100 Rail Splice, where required, shall be installed within a distance of $L/4$ from either Roof Attachment, where "L" is the rail span.
- Rails installed with (3) or more Roof Attachments (2 or more rail spans)*: SMR100 Rail Splice, where required, shall not be installed within a distance of $L/8$ from any Roof Attachment, where "L" is the rail span.
- *SMR100 Rail Splice may be installed on any portion of the span in instances where the rail is continuous over two roof attachments on both sides of the splice.

- Tolerance(s):** 1.0" tolerance for any specified dimension in this report is allowed for installation.

- Installation Orientation:** Landscape (L) - PV Panel long dimension is parallel to the ridge/eave line of roof, and the PV panel is mounted on the long side.
Portrait (P) - PV Panel short dimension is parallel to the ridge/eave line of roof, and the PV panel is mounted on the short side.

Rail Spacing Tables assume maximum panel dimensions are: 82" x 42"

Roof Zones – Enclosed and Partially Enclosed Gable Roofs, $\theta \leq 7^\circ$:

The zones shall be determined using Figure 29.4-7 of ASCE 7-22. See Figure 2.

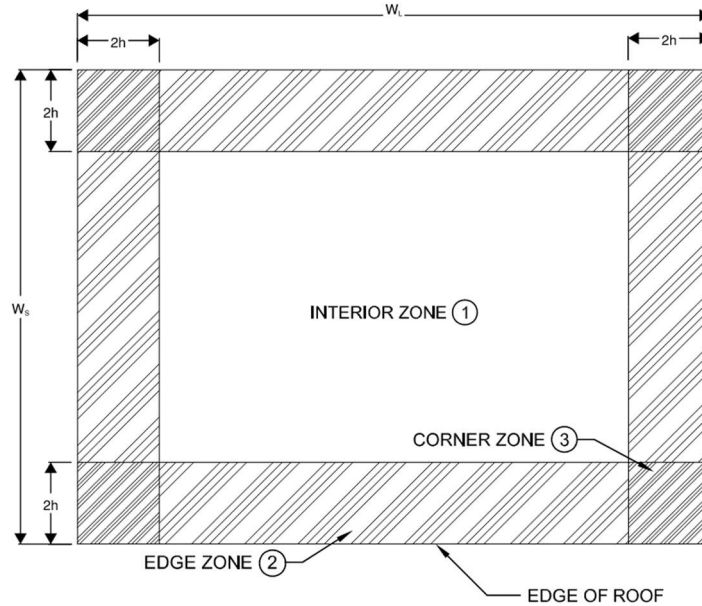


Figure 2: Roof Edge and Corner Zones, Flat roof, $\theta \leq 7^\circ$

Panel Array Edge:

Panels exposed at array edge shall use figure 29.4-7 of ASCE 7-22 to determine “ d_1 ” and “ d_2 ” to apply “Array Edge” spans that apply to an array layout. See Figure 3.

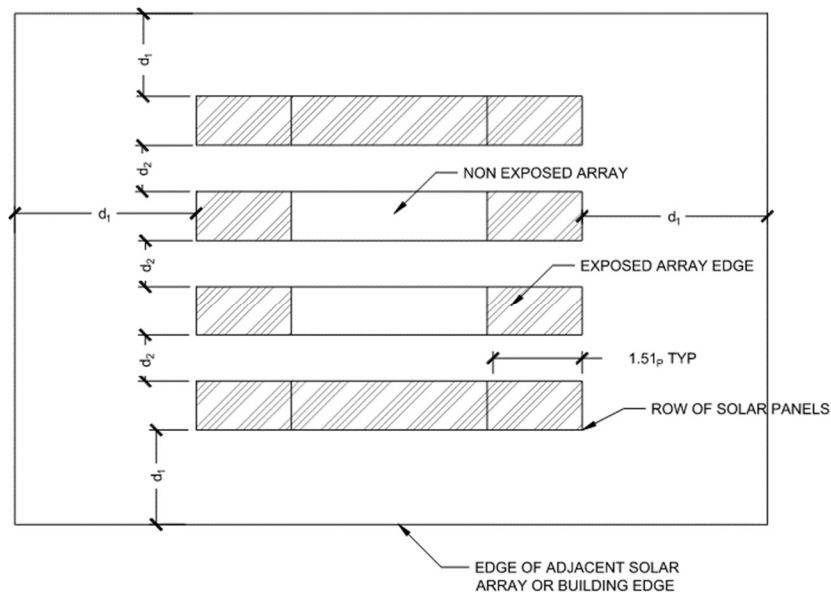


Figure 3: Array Edge



Panel with Support Mounts in Multiple Roof Zones:

Edge and Corner Zone spacings (Zone 2 & 3, respectively) apply only to mounts located in those Zones, not to all the mounts supporting the module.

- Notes:
- 1) Tables are determined for Dual Rail only and do not include roof capacity check.
 - 2) Risk Category II per ASCE 7-22.
 - 3) Topographic factor, k_{zt} is 1.0.
 - 4) Average parapet height is 0.0 ft.
 - 5) Wind speeds are LRFD values.
 - 6) Snow loads consider a Thermal Factor (C_t) of 1.2.
 - 7) Attachment spacing(s) apply to a seismic design category E or less.

Design Responsibility:

These tables are intended for use under the responsible charge of a registered design professional as required by the authority having jurisdiction. In all cases, a design professional with sufficient structural engineering knowledge and experience should direct the use of these tables to:

- Evaluate whether these tables are applicable to the project.
- Understand and determine the appropriate values for all input parameters of these tables.

This letter certifies that the SunModo SMR100 Rail for the Tilt System, when installed according to the limitations of this letter and the attached span tables, complies with the above codes and loading criteria. This certification excludes evaluation of the tilt kit, attachments, and building structure to support the loads imposed on the building by the array, including, but not limited to, strength and deflection of structural framing members, fastening and/or strength of roofing materials, and/or the effects of snow accumulation on the roof. Structures will require additional knowledge of the building and are outside the scope of the certification of this racking system.

If you have any questions on the above, do not hesitate to call.

Prepared by:

PZSE, Inc. – Structural Engineers
Roseville, CA



SMR100 Rail Tilt-Mount System – ASCE 7-22

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Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	93	86	82	91	84	80	89	82	78	87	79	76	84	77	73	82	75	72	80	73	70
			Array Edge	84	77	73	82	75	71	80	72	68	77	70	65	75	68	63	73	65	60	71	63	58
	C	0 to 7	Array Interior	86	79	75	83	76	73	81	74	70	79	72	68	77	70	65	75	67	62	73	65	60
			Array Edge	77	70	65	74	66	61	72	63	59	70	61	56	67	58	54	64	55	51	62	53	49
	D	0 to 7	Array Interior	82	75	71	80	73	68	77	70	65	75	68	62	73	65	60	71	62	57	69	60	55
			Array Edge	73	65	60	71	61	57	68	58	54	65	55	52	62	53	49	60	50	47	57	48	45
5 psf	B	0 to 7	Array Interior	92	86	82	91	84	80	89	82	78	87	79	76	84	77	73	82	75	72	80	73	70
			Array Edge	84	77	73	82	75	71	80	72	68	77	70	65	75	68	63	73	65	60	71	63	58
	C	0 to 7	Array Interior	86	79	75	83	76	73	81	74	70	79	72	68	77	70	65	75	67	62	73	65	60
			Array Edge	77	70	65	74	66	61	72	63	59	70	61	56	67	58	54	64	55	51	62	53	49
	D	0 to 7	Array Interior	82	75	71	80	73	68	77	70	65	75	68	62	73	65	60	71	62	57	69	60	55
			Array Edge	73	65	60	71	61	57	68	58	54	65	55	52	62	53	49	60	50	47	57	48	45
10 psf	B	0 to 7	Array Interior	87	83	80	86	81	79	84	80	77	83	78	75	82	77	73	80	75	72	79	73	70
			Array Edge	82	77	73	80	75	71	78	72	68	77	70	65	75	68	63	73	65	60	71	63	58
	C	0 to 7	Array Interior	83	78	75	81	76	73	79	74	70	78	72	68	76	70	65	75	67	62	73	65	60
			Array Edge	76	70	65	74	66	61	72	63	59	70	61	56	67	58	54	64	55	51	62	53	49
	D	0 to 7	Array Interior	80	75	71	78	73	68	77	70	65	75	68	62	73	65	60	71	62	57	69	60	55
			Array Edge	73	65	60	71	61	57	68	58	54	65	55	52	62	53	49	60	50	47	57	48	45
15 psf	B	0 to 7	Array Interior	82	79	77	82	78	76	80	76	74	79	75	73	78	74	71	77	73	70	76	71	68
			Array Edge	78	74	71	77	72	70	75	71	67	74	69	65	73	67	63	71	65	60	70	63	58
	C	0 to 7	Array Interior	79	75	72	78	73	71	76	72	69	75	70	67	74	68	65	72	66	62	71	65	60
			Array Edge	73	68	65	72	66	61	70	63	59	69	61	56	66	58	54	64	55	51	62	53	49
	D	0 to 7	Array Interior	77	72	70	75	71	67	74	69	65	72	67	62	71	65	60	70	62	57	68	60	55
			Array Edge	71	65	60	69	61	57	67	58	54	65	55	52	62	53	49	60	50	47	57	48	45
20 psf	B	0 to 7	Array Interior	79	76	74	78	75	73	77	74	72	76	73	70	75	71	69	74	70	67	73	69	66
			Array Edge	75	71	69	74	70	67	73	68	65	71	66	63	70	64	61	69	63	59	67	61	57
	C	0 to 7	Array Interior	76	72	70	75	71	68	73	69	66	72	68	64	71	66	62	70	64	61	68	62	59
			Array Edge	71	66	62	70	63	60	68	61	58	66	59	56	64	58	54	62	55	51	60	53	49
	D	0 to 7	Array Interior	74	70	67	73	68	65	71	66	63	70	64	61	69	62	59	67	61	57	65	59	55
			Array Edge	69	62	59	66	60	57	64	58	54	62	55	52	61	53	49	59	50	47	57	48	45
25 psf	B	0 to 7	Array Interior	78	75	74	77	74	72	76	73	71	76	72	70	75	71	68	74	70	67	73	68	65
			Array Edge	75	71	68	73	69	66	72	67	64	71	66	62	70	64	61	68	62	59	67	60	57
	C	0 to 7	Array Interior	75	72	70	74	70	68	73	69	66	72	67	64	71	65	62	70	63	60	68	62	58
			Array Edge	71	65	62	69	63	60	67	61	58	65	59	56	63	57	54	62	55	51	60	53	49
	D	0 to 7	Array Interior	74	70	67	73	68	65	71	66	63	70	64	61	69	62	59	67	61	57	65	59	55
			Array Edge	69	62	59	66	60	57	64	58	54	62	55	52	61	53	49	59	50	47	57	48	45
30 psf	B	0 to 7	Array Interior	75	73	72	75	72	71	74	71	69	73	70	68	72	69	66	72	67	65	71	66	63
			Array Edge	72	69	66	71	67	64	70	65	62	69	64	61	67	62	59	66	60	57	64	59	56
	C	0 to 7	Array Interior	73	70	67	72	68	65	71	66	64	70	65	62	69	63	60	67	62	59	66	60	57
			Array Edge	68	63	60	67	61	58	65	59	56	63	58	54	62	56	53	60	54	51	58	53	49
	D	0 to 7	Array Interior	73	69	66	71	67	64	70	65	62	69	63	60	67	61	58	65	59	56	64	58	55
			Array Edge	67	61	58	65	59	56	63	57	54	61	55	52	60	53	49	58	50	47	56	48	45

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	77	70	65	74	65	60	71	61	57	67	57	53	63	54	50	60	51	48	57	48	45
			Array Edge	67	58	54	63	53	50	59	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	69	60	55	65	55	52	61	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	64	55	51	60	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
5 psf	B	0 to 7	Array Interior	77	70	65	74	65	60	71	61	57	67	57	53	63	54	50	60	51	48	57	48	45
			Array Edge	67	58	54	63	53	50	59	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	69	60	55	65	55	52	61	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	64	55	51	60	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
10 psf	B	0 to 7	Array Interior	76	70	65	74	65	60	71	61	57	67	57	53	63	54	50	60	51	48	57	48	45
			Array Edge	67	58	54	63	53	50	59	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	69	60	55	65	55	52	61	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	64	55	51	60	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
15 psf	B	0 to 7	Array Interior	74	68	65	71	65	60	69	61	57	66	57	53	63	54	50	60	51	48	57	48	45
			Array Edge	67	58	54	63	53	50	59	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	68	60	55	65	55	52	61	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	64	55	51	60	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
20 psf	B	0 to 7	Array Interior	71	66	62	69	63	59	66	60	57	64	57	53	61	54	50	59	51	48	57	48	45
			Array Edge	64	58	54	61	53	50	58	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	65	59	55	62	55	52	60	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	62	55	51	59	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
25 psf	B	0 to 7	Array Interior	71	65	62	68	62	59	66	60	56	63	57	53	61	54	50	59	51	48	57	48	45
			Array Edge	64	57	54	61	53	50	58	50	47	55	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	65	59	55	62	55	52	59	52	48	57	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	57	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	62	55	51	59	51	48	56	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
30 psf	B	0 to 7	Array Interior	69	63	60	66	61	58	64	58	55	61	56	53	59	53	50	57	51	48	55	48	45
			Array Edge	62	56	53	59	53	50	56	50	47	54	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	63	57	54	60	54	51	58	52	48	55	48	45	53	45	43	50	43	40	48	40	38
			Array Edge	56	48	46	53	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	61	55	51	58	51	48	55	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	73	71	70	73	70	68	72	69	67	71	68	65	71	66	64	70	65	63	68	64	61
			Array Edge	70	66	64	69	65	62	68	63	61	67	62	59	65	60	57	64	59	56	62	57	54
	C	0 to 7	Array Interior	71	67	65	70	66	63	69	64	62	68	63	60	66	61	59	65	60	57	64	58	56
			Array Edge	66	61	58	64	59	57	63	58	55	61	56	53	60	55	52	58	53	50	57	52	49
	D	0 to 7	Array Interior	71	66	64	70	65	62	68	63	60	67	61	58	65	60	57	64	58	55	62	57	54
			Array Edge	65	60	57	63	58	55	61	56	53	60	54	51	58	52	49	57	50	47	55	48	45
40 psf	B	0 to 7	Array Interior	71	69	67	71	68	66	70	67	65	69	66	63	68	64	62	67	63	61	66	62	59
			Array Edge	68	64	62	67	63	60	66	61	59	64	60	57	63	59	56	62	57	55	61	56	53
	C	0 to 7	Array Interior	69	65	63	68	64	61	66	62	60	65	61	58	64	60	57	63	58	56	62	57	54
			Array Edge	64	60	57	63	58	55	61	56	54	60	55	52	58	53	51	57	52	49	56	51	48
	D	0 to 7	Array Interior	69	64	62	67	63	60	66	61	59	65	60	57	63	58	55	62	57	54	61	55	53
			Array Edge	63	58	55	62	56	54	60	55	52	58	53	50	57	51	49	55	50	47	54	48	45
45 psf	B	0 to 7	Array Interior	69	67	65	69	66	64	68	65	63	67	63	61	66	62	60	65	61	59	64	60	58
			Array Edge	66	62	60	65	61	59	64	60	57	62	58	56	61	57	55	60	56	53	59	55	52
	C	0 to 7	Array Interior	67	63	61	65	62	60	64	61	58	63	59	57	62	58	56	61	57	54	60	56	53
			Array Edge	62	58	56	61	56	54	59	55	53	58	54	51	57	52	50	56	51	48	54	50	47
	D	0 to 7	Array Interior	67	63	60	65	61	59	64	60	57	63	58	56	62	57	54	60	56	53	59	54	52
			Array Edge	61	57	54	60	55	53	58	54	51	57	52	49	56	51	48	54	49	46	53	48	45
50 psf	B	0 to 7	Array Interior	67	65	63	66	64	62	65	63	61	65	62	60	64	61	59	63	60	58	62	59	56
			Array Edge	64	61	59	63	59	57	62	58	56	61	57	55	60	56	53	59	55	52	57	53	51
	C	0 to 7	Array Interior	64	61	59	63	60	58	62	59	57	61	58	56	60	57	54	59	55	53	58	54	52
			Array Edge	60	57	54	59	55	53	58	54	51	57	52	50	55	51	49	54	50	47	53	49	46
	D	0 to 7	Array Interior	65	61	59	64	60	57	62	58	56	61	57	55	60	56	53	59	54	52	58	53	51
			Array Edge	60	56	53	59	54	52	57	53	50	56	51	49	54	50	47	53	48	46	52	47	44
60 psf	B	0 to 7	Array Interior	61	61	59	61	60	59	61	59	58	61	58	57	60	57	56	59	57	55	59	56	54
			Array Edge	60	57	56	59	56	55	58	55	53	57	54	52	57	53	51	56	52	50	55	51	49
	C	0 to 7	Array Interior	61	58	56	60	57	55	59	56	54	58	55	53	57	54	52	56	53	51	55	52	50
			Array Edge	57	54	52	56	53	51	55	51	49	54	50	48	53	49	47	52	48	46	51	47	45
	D	0 to 7	Array Interior	61	58	56	60	57	55	59	56	54	58	55	52	57	53	51	56	52	50	55	51	49
			Array Edge	57	53	51	56	52	50	55	51	48	53	49	47	52	48	46	51	47	44	50	46	43
70 psf	B	0 to 7	Array Interior	57	57	56	57	57	56	57	56	55	57	55	54	57	55	53	56	54	52	56	53	52
			Array Edge	57	55	53	56	54	52	55	53	51	55	52	50	54	51	49	53	50	48	52	49	47
	C	0 to 7	Array Interior	57	55	54	57	54	53	56	53	52	55	53	51	55	52	50	54	51	49	53	50	48
			Array Edge	54	52	50	54	51	49	53	50	48	52	48	47	51	47	45	50	46	44	49	45	43
	D	0 to 7	Array Interior	58	56	54	57	55	53	57	53	52	56	52	51	55	51	49	54	50	48	53	49	47
			Array Edge	55	51	49	54	50	48	53	49	47	51	48	46	50	47	44	49	45	43	48	44	42
80 psf	B	0 to 7	Array Interior	54	54	54	54	54	53	54	54	52	54	53	52	54	52	51	54	52	50	53	51	50
			Array Edge	54	52	51	54	51	50	53	51	49	52	50	48	52	49	48	51	48	47	50	47	46
	C	0 to 7	Array Interior	54	53	52	54	52	51	53	51	50	53	50	49	52	50	48	52	49	47	51	48	46
			Array Edge	52	50	48	51	49	47	51	48	46	50	47	45	49	46	44	48	45	43	47	44	42
	D	0 to 7	Array Interior	56	53	52	55	52	51	54	51	50	53	51	49	53	50	48	52	49	47	51	48	46
			Array Edge	53	50	48	52	48	47	51	47	45	50	46	44	49	45	43	48	44	42	47	43	41

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
35 psf	B	0 to 7	Array Interior	66	61	59	64	59	56	62	57	54	60	54	52	58	52	49	56	50	48	54	48	45
			Array Edge	60	55	52	57	52	49	55	50	47	53	46	44	51	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	61	56	53	59	53	50	56	51	48	54	48	45	52	45	43	50	43	40	48	40	38
			Array Edge	54	48	46	52	45	42	49	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	59	54	51	57	51	48	54	47	45	52	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	52	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
40 psf	B	0 to 7	Array Interior	64	60	57	62	57	55	60	55	53	58	53	51	56	51	49	55	49	47	53	48	45
			Array Edge	58	53	51	56	51	48	54	49	46	52	46	44	50	44	41	48	41	39	46	39	37
	C	0 to 7	Array Interior	59	54	52	57	52	49	55	50	47	53	48	45	51	45	43	49	43	40	47	40	38
			Array Edge	53	48	45	51	45	42	48	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	58	53	50	56	50	47	53	47	45	51	44	42	49	41	39	46	39	37	44	37	35
			Array Edge	51	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
45 psf	B	0 to 7	Array Interior	62	58	56	60	56	54	58	54	51	57	52	50	55	50	48	53	49	46	52	47	44
			Array Edge	57	52	50	55	50	47	53	48	45	51	46	43	49	44	41	47	41	39	46	39	37
	C	0 to 7	Array Interior	58	53	51	56	51	48	54	49	46	52	47	44	50	45	43	48	43	40	47	40	38
			Array Edge	52	47	45	50	45	42	48	42	40	46	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	57	52	49	54	49	47	52	47	44	50	44	42	48	41	39	46	39	37	44	37	35
			Array Edge	50	44	42	48	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
50 psf	B	0 to 7	Array Interior	60	57	54	59	55	52	57	53	50	55	51	49	54	49	47	52	48	45	51	46	44
			Array Edge	55	51	49	53	49	47	52	47	45	50	45	43	48	43	41	46	41	39	45	39	37
	C	0 to 7	Array Interior	56	52	50	54	50	48	53	48	46	51	46	44	49	44	42	47	43	40	46	40	38
			Array Edge	51	46	44	49	44	42	47	42	40	45	39	37	43	37	35	41	35	33	38	33	31
	D	0 to 7	Array Interior	55	51	48	53	48	46	51	46	44	49	44	42	47	41	39	46	39	37	44	37	35
			Array Edge	49	44	42	47	41	39	45	38	37	42	36	34	40	34	32	37	32	30	35	30	29
60 psf	B	0 to 7	Array Interior	57	54	52	56	52	50	54	51	49	53	49	47	51	48	45	50	46	44	49	45	42
			Array Edge	53	49	47	51	47	45	50	46	43	48	44	42	46	42	40	45	41	38	43	39	37
	C	0 to 7	Array Interior	54	50	48	52	48	46	50	46	44	49	45	42	47	43	41	46	42	39	44	40	38
			Array Edge	49	45	43	47	43	41	45	41	39	44	39	37	42	37	35	40	35	33	38	33	31
	D	0 to 7	Array Interior	53	49	47	51	47	45	49	45	43	48	43	41	46	41	39	44	39	37	43	37	35
			Array Edge	48	43	41	46	41	39	44	38	37	42	36	34	40	34	32	37	32	30	35	30	29
70 psf	B	0 to 7	Array Interior	55	52	50	53	50	48	52	49	47	51	47	45	49	46	44	48	45	43	47	43	41
			Array Edge	51	47	46	49	46	44	48	44	42	46	43	40	45	41	39	44	40	37	42	38	36
	C	0 to 7	Array Interior	52	48	46	50	47	45	49	45	43	47	43	41	46	42	40	44	40	38	43	39	37
			Array Edge	47	44	41	46	42	40	44	40	38	42	38	36	41	37	35	39	35	33	38	33	31
	D	0 to 7	Array Interior	51	47	45	49	46	43	48	44	42	46	42	40	45	41	38	43	39	37	42	37	35
			Array Edge	46	42	40	44	40	38	43	38	36	41	36	34	39	34	32	37	32	30	35	30	29
80 psf	B	0 to 7	Array Interior	52	50	48	51	48	47	50	47	45	49	46	44	48	45	43	47	43	41	46	42	40
			Array Edge	49	46	44	48	44	43	46	43	41	45	41	39	44	40	38	42	39	37	41	37	35
	C	0 to 7	Array Interior	50	47	45	48	45	43	47	44	42	46	42	40	44	41	39	43	39	38	42	38	36
			Array Edge	46	42	40	44	41	39	43	39	37	41	37	35	40	36	34	38	35	33	37	33	31
	D	0 to 7	Array Interior	49	46	44	48	44	42	46	43	41	45	41	39	43	40	38	42	38	36	41	37	35
			Array Edge	45	41	39	43	39	37	42	38	36	40	36	34	39	34	32	37	32	30	35	30	29

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	51	51	51	51	51	51	51	51	50	51	51	50	51	50	49	51	50	48	51	49	48
			Array Edge	51	50	49	51	49	48	51	49	47	50	48	47	50	47	46	49	47	45	48	46	44
	C	0 to 7	Array Interior	51	51	50	51	50	49	51	49	48	51	49	47	50	48	47	50	47	46	49	46	45
			Array Edge	50	48	46	49	47	46	49	46	45	48	45	44	47	44	43	46	44	42	46	43	41
	D	0 to 7	Array Interior	53	51	50	53	50	49	52	50	48	51	49	47	51	48	46	50	47	45	49	46	45
			Array Edge	51	48	46	50	47	45	49	46	44	48	45	43	47	44	42	46	43	41	45	42	40
100 psf	B	0 to 7	Array Interior	48	48	48	48	48	48	48	48	48	48	48	48	48	48	47	48	48	47	48	47	46
			Array Edge	48	48	47	48	48	47	48	47	46	48	46	45	48	46	44	47	45	44	47	44	43
	C	0 to 7	Array Interior	48	48	48	48	48	47	48	47	46	48	47	46	48	46	45	48	46	44	47	45	44
			Array Edge	48	46	45	48	45	44	47	45	43	46	44	42	46	43	42	45	42	41	44	42	40
	D	0 to 7	Array Interior	51	50	48	51	49	48	50	48	47	50	47	46	49	47	45	48	46	44	48	45	43
			Array Edge	49	46	45	48	46	44	47	45	43	47	44	42	46	43	41	45	42	40	44	41	39
110 psf	B	0 to 7	Array Interior	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	45	46	46	45
			Array Edge	46	46	46	46	46	45	46	46	44	46	45	44	46	44	43	46	44	43	45	43	42
	C	0 to 7	Array Interior	46	46	46	46	46	46	46	46	45	46	45	44	46	45	44	46	44	43	46	44	42
			Array Edge	46	45	44	46	44	43	45	43	42	45	43	41	44	42	41	44	41	40	43	41	39
	D	0 to 7	Array Interior	48	48	47	48	47	46	48	47	45	48	46	45	47	45	44	47	44	43	46	44	42
			Array Edge	47	45	44	47	44	43	46	43	42	45	43	41	44	42	40	44	41	39	43	40	38
120 psf	B	0 to 7	Array Interior	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	43
			Array Edge	44	44	44	44	44	44	44	44	43	44	44	43	44	43	42	44	42	41	44	42	41
	C	0 to 7	Array Interior	44	44	44	44	44	44	44	44	44	44	44	43	44	43	42	44	43	42	44	42	41
			Array Edge	44	43	42	44	43	42	44	42	41	43	41	40	43	41	40	42	40	39	42	40	38
	D	0 to 7	Array Interior	46	46	45	46	46	45	46	45	44	46	45	43	46	44	43	45	43	42	45	43	41
			Array Edge	46	44	43	45	43	42	45	42	41	44	42	40	43	41	39	43	40	38	42	39	38

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	50	48	47	49	47	45	48	46	44	47	44	43	46	43	42	45	42	40	44	41	39
			Array Edge	47	44	43	46	43	41	45	42	40	44	40	39	42	39	37	41	38	36	40	37	35
	C	0 to 7	Array Interior	48	45	44	47	44	42	45	42	41	44	41	39	43	40	38	42	39	37	41	37	35
			Array Edge	44	41	39	43	40	38	41	38	36	40	37	35	39	35	33	38	34	32	36	33	31
	D	0 to 7	Array Interior	48	45	43	46	43	41	45	42	40	44	40	38	42	39	37	41	37	35	40	36	34
			Array Edge	44	40	38	42	39	37	41	37	35	39	35	33	38	34	32	36	32	30	35	30	29
100 psf	B	0 to 7	Array Interior	48	46	45	47	45	44	46	44	43	46	43	42	45	42	40	44	41	39	43	40	38
			Array Edge	46	43	42	45	42	40	43	41	39	42	39	38	41	38	36	40	37	35	39	36	34
	C	0 to 7	Array Interior	46	44	42	45	42	41	44	41	40	43	40	38	42	39	37	41	38	36	40	37	35
			Array Edge	43	40	38	42	39	37	40	37	36	39	36	34	38	35	33	37	33	32	36	32	30
	D	0 to 7	Array Interior	46	44	42	45	42	40	44	41	39	43	39	37	41	38	36	40	37	35	39	35	34
			Array Edge	43	39	38	41	38	36	40	36	34	38	35	33	37	33	32	36	32	30	35	30	29
110 psf	B	0 to 7	Array Interior	46	45	44	46	44	43	45	43	42	44	42	40	43	41	39	42	40	38	42	39	37
			Array Edge	44	42	41	43	41	39	42	40	38	41	38	37	40	37	36	39	36	35	38	35	33
	C	0 to 7	Array Interior	45	42	41	44	41	40	43	40	39	42	39	38	41	38	36	40	37	35	39	36	34
			Array Edge	42	39	38	41	38	36	39	36	35	38	35	34	37	34	32	36	33	31	35	32	30
	D	0 to 7	Array Interior	45	42	41	44	41	39	43	40	38	42	38	37	40	37	35	39	36	34	38	35	33
			Array Edge	42	39	37	40	37	35	39	36	34	38	34	32	36	33	31	35	32	30	34	30	29
120 psf	B	0 to 7	Array Interior	44	43	42	44	43	41	44	42	40	43	41	39	42	40	39	41	39	38	41	38	37
			Array Edge	43	41	40	42	40	38	41	39	37	40	38	36	39	37	35	38	35	34	37	34	33
	C	0 to 7	Array Interior	43	41	40	42	40	39	42	39	38	41	38	37	40	37	36	39	36	35	38	35	34
			Array Edge	41	38	37	40	37	35	38	36	34	37	35	33	36	33	32	35	32	31	34	31	30
	D	0 to 7	Array Interior	44	41	40	43	40	39	42	39	37	41	38	36	39	37	35	38	35	34	37	34	33
			Array Edge	41	38	36	39	36	35	38	35	33	37	34	32	36	32	31	34	31	30	33	30	28

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	90	82	78	88	80	76	86	78	73	83	76	71	81	73	69	79	72	66	77	70	64
			Array Edge	81	73	69	79	71	66	76	68	63	74	65	60	72	63	57	70	60	54	68	58	52
	C	0 to 7	Array Interior	83	75	71	80	73	68	78	70	65	76	68	62	74	65	59	72	62	56	70	60	54
			Array Edge	74	65	59	71	61	56	69	58	53	66	55	50	63	53	48	60	50	46	58	48	44
	D	0 to 7	Array Interior	79	71	66	76	68	63	74	65	60	72	62	57	70	60	54	67	57	52	65	55	49
			Array Edge	70	60	54	67	56	51	63	53	48	61	51	46	58	48	44	55	46	42	53	44	40
5 psf	B	0 to 7	Array Interior	90	82	78	88	80	76	86	78	73	83	76	71	81	73	69	79	72	66	77	70	64
			Array Edge	81	73	69	79	71	66	76	68	63	74	65	60	72	63	57	70	60	54	68	58	52
	C	0 to 7	Array Interior	83	75	71	80	73	68	78	70	65	76	68	62	74	65	59	72	62	56	70	60	54
			Array Edge	74	65	59	71	61	56	69	58	53	66	55	50	63	53	48	60	50	46	58	48	44
	D	0 to 7	Array Interior	79	71	66	76	68	63	74	65	60	72	62	57	70	60	54	67	57	52	65	55	49
			Array Edge	70	60	54	67	56	51	63	53	48	61	51	46	58	48	44	55	46	42	53	44	40
10 psf	B	0 to 7	Array Interior	85	80	77	84	79	76	82	77	73	81	75	71	79	73	69	78	72	66	77	70	64
			Array Edge	79	73	69	78	71	66	76	68	63	74	65	60	72	63	57	70	60	54	68	58	52
	C	0 to 7	Array Interior	80	75	71	79	73	68	77	70	65	75	68	62	74	65	59	72	62	56	70	60	54
			Array Edge	74	65	59	71	61	56	69	58	53	66	55	50	63	53	48	60	50	46	58	48	44
	D	0 to 7	Array Interior	78	71	66	76	68	63	74	65	60	72	62	57	70	60	54	67	57	52	65	55	49
			Array Edge	70	60	54	67	56	51	63	53	48	61	51	46	58	48	44	55	46	42	53	44	40
15 psf	B	0 to 7	Array Interior	81	77	74	80	76	73	79	74	71	77	73	70	76	71	68	75	70	66	74	68	64
			Array Edge	76	71	68	75	70	65	73	67	63	72	65	60	70	63	57	69	60	54	67	58	52
	C	0 to 7	Array Interior	77	72	69	76	71	67	74	69	65	73	67	62	71	65	59	70	62	56	68	60	54
			Array Edge	71	65	59	70	61	56	68	58	53	65	55	50	63	53	48	60	50	46	58	48	44
	D	0 to 7	Array Interior	75	70	66	73	67	63	72	65	60	70	62	57	69	60	54	67	57	52	65	55	49
			Array Edge	68	60	54	66	56	51	63	53	48	61	51	46	58	48	44	55	46	42	53	44	40
20 psf	B	0 to 7	Array Interior	78	74	72	77	73	71	76	72	69	75	70	67	73	69	65	72	67	63	71	66	62
			Array Edge	73	69	65	72	67	63	71	65	61	70	63	59	68	61	57	66	59	54	64	57	52
	C	0 to 7	Array Interior	74	70	67	73	68	64	72	66	62	71	64	60	69	62	59	67	61	56	66	59	54
			Array Edge	69	62	58	67	60	56	65	58	53	63	55	50	61	53	48	59	50	46	58	48	44
	D	0 to 7	Array Interior	72	67	63	71	65	61	69	63	59	68	61	57	66	59	54	64	57	52	62	55	49
			Array Edge	66	59	54	64	56	51	62	53	48	60	51	46	58	48	44	55	46	42	53	44	40
25 psf	B	0 to 7	Array Interior	77	74	71	76	72	70	75	71	68	74	70	67	73	68	65	72	67	63	71	65	61
			Array Edge	73	68	65	72	66	63	70	64	61	69	62	59	67	61	57	65	59	54	64	57	52
	C	0 to 7	Array Interior	74	70	66	72	68	64	71	66	62	70	64	60	68	62	58	67	60	56	65	58	54
			Array Edge	68	62	58	66	60	56	64	58	53	62	55	50	61	53	48	59	50	46	57	48	44
	D	0 to 7	Array Interior	72	67	63	71	65	61	69	63	59	68	61	57	66	59	54	64	57	52	62	55	49
			Array Edge	66	59	54	64	56	51	62	53	48	60	51	46	58	48	44	55	46	42	53	44	40
30 psf	B	0 to 7	Array Interior	75	72	70	74	71	68	73	69	66	72	68	64	71	66	63	70	65	61	69	63	60
			Array Edge	71	66	63	70	64	61	68	62	59	67	61	57	65	59	55	63	57	54	62	56	52
	C	0 to 7	Array Interior	72	67	64	71	65	62	69	64	60	68	62	58	66	60	57	65	59	55	63	57	54
			Array Edge	66	60	57	64	58	55	62	56	53	61	54	50	59	53	48	57	50	46	56	48	44
	D	0 to 7	Array Interior	71	66	62	70	64	60	68	62	58	66	60	56	64	58	54	63	56	52	61	55	49
			Array Edge	64	58	54	62	56	51	60	53	48	59	51	46	57	48	44	55	46	42	53	44	40

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	74	65	59	70	60	55	66	56	51	63	53	48	59	49	45	56	46	42	53	44	40
			Array Edge	63	53	48	59	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	65	55	50	61	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	60	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
5 psf	B	0 to 7	Array Interior	74	65	59	70	60	55	66	56	51	63	53	48	59	49	45	56	46	42	53	44	40
			Array Edge	63	53	48	59	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	65	55	50	61	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	60	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
10 psf	B	0 to 7	Array Interior	74	65	59	70	60	55	66	56	51	63	53	48	59	49	45	56	46	42	53	44	40
			Array Edge	63	53	48	59	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	65	55	50	61	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	60	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
15 psf	B	0 to 7	Array Interior	72	65	59	69	60	55	66	56	51	63	53	48	59	49	45	56	46	42	53	44	40
			Array Edge	63	53	48	59	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	65	55	50	61	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	60	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
20 psf	B	0 to 7	Array Interior	69	62	59	66	59	55	64	56	51	61	53	48	59	49	45	56	46	42	53	44	40
			Array Edge	61	53	48	58	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	63	55	50	60	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	59	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
25 psf	B	0 to 7	Array Interior	69	62	58	66	59	55	63	56	51	61	53	48	58	49	45	56	46	42	53	44	40
			Array Edge	61	53	48	58	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	62	55	50	59	51	46	56	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	59	50	45	56	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
30 psf	B	0 to 7	Array Interior	66	60	57	64	58	54	61	55	51	59	53	48	57	49	45	55	46	42	53	44	40
			Array Edge	59	53	48	56	49	44	54	46	41	51	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	60	54	50	58	51	46	55	47	43	53	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	53	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	58	50	45	55	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	73	70	67	72	68	65	71	67	64	70	65	62	69	64	61	68	63	59	66	61	58
			Array Edge	69	64	61	67	62	59	66	61	57	64	59	56	63	57	54	62	56	53	60	54	51
	C	0 to 7	Array Interior	70	65	62	68	63	60	67	62	59	65	60	57	64	59	55	63	57	54	61	56	52
			Array Edge	64	58	55	62	57	53	61	55	52	59	53	50	57	52	48	56	50	46	55	48	44
	D	0 to 7	Array Interior	69	64	60	67	62	58	66	60	57	64	58	55	63	57	53	61	55	52	60	54	49
			Array Edge	63	57	53	61	55	51	59	53	48	57	51	46	56	48	44	54	46	42	52	44	40
40 psf	B	0 to 7	Array Interior	71	67	65	70	66	63	69	65	62	68	63	61	67	62	59	65	61	58	64	59	57
			Array Edge	66	62	59	65	60	58	64	59	56	62	57	54	61	56	53	60	55	52	59	53	50
	C	0 to 7	Array Interior	67	63	60	66	61	59	65	60	57	63	58	56	62	57	54	61	56	53	60	54	51
			Array Edge	62	57	54	60	55	52	59	54	51	58	52	49	56	51	48	55	49	46	53	48	44
	D	0 to 7	Array Interior	67	62	59	65	60	57	64	59	55	62	57	54	61	55	52	60	54	51	58	53	49
			Array Edge	61	55	52	59	54	50	58	52	48	56	50	46	54	48	44	53	46	42	51	44	40
45 psf	B	0 to 7	Array Interior	68	65	63	67	64	62	66	63	60	65	61	59	64	60	58	63	59	56	62	58	55
			Array Edge	64	60	58	63	59	56	62	57	55	61	56	53	59	55	52	58	53	51	57	52	49
	C	0 to 7	Array Interior	65	61	59	64	60	57	63	58	56	61	57	54	60	56	53	59	54	52	58	53	50
			Array Edge	60	56	53	59	54	51	57	53	50	56	51	48	55	50	47	53	48	45	52	47	44
	D	0 to 7	Array Interior	65	60	58	64	59	56	62	57	54	61	56	53	59	54	51	58	53	50	57	52	48
			Array Edge	59	54	51	58	53	49	56	51	48	55	49	46	53	48	44	52	46	42	51	44	40
50 psf	B	0 to 7	Array Interior	66	63	61	65	62	60	64	61	59	63	60	57	62	59	56	61	58	55	61	56	54
			Array Edge	62	59	56	61	57	55	60	56	53	59	55	52	58	53	51	57	52	50	56	51	48
	C	0 to 7	Array Interior	63	59	57	62	58	56	61	57	54	60	56	53	59	54	52	58	53	51	57	52	49
			Array Edge	59	54	52	57	53	50	56	51	49	55	50	47	54	49	46	52	47	45	51	46	43
	D	0 to 7	Array Interior	63	59	56	62	57	55	61	56	53	59	55	52	58	53	50	57	52	49	56	51	48
			Array Edge	58	53	50	57	52	49	55	50	47	54	49	46	52	47	44	51	46	42	50	44	40
60 psf	B	0 to 7	Array Interior	61	59	58	61	59	57	61	58	56	60	57	55	59	56	54	58	55	53	57	54	52
			Array Edge	59	56	54	58	55	52	57	53	51	56	52	50	55	51	49	54	50	48	53	49	47
	C	0 to 7	Array Interior	60	56	54	59	55	53	58	54	52	57	53	51	56	52	50	55	51	49	54	50	48
			Array Edge	56	52	50	55	51	48	54	49	47	52	48	46	51	47	45	50	46	43	49	45	42
	D	0 to 7	Array Interior	60	56	54	59	55	53	58	54	51	57	52	50	56	51	49	54	50	47	53	49	46
			Array Edge	55	51	49	54	50	47	53	48	46	52	47	44	50	46	43	49	44	42	48	43	40
70 psf	B	0 to 7	Array Interior	57	56	55	57	56	54	57	55	53	57	54	52	56	53	51	55	52	51	55	52	50
			Array Edge	56	53	51	55	52	50	54	51	49	54	50	48	53	49	47	52	48	46	51	47	45
	C	0 to 7	Array Interior	56	54	52	56	53	51	55	52	50	54	51	49	53	50	48	52	49	47	52	48	46
			Array Edge	53	50	48	52	49	47	51	48	45	50	47	44	49	45	43	48	44	42	47	43	41
	D	0 to 7	Array Interior	57	54	52	56	53	51	55	52	49	54	51	48	53	49	47	52	48	46	51	47	45
			Array Edge	53	49	47	52	48	46	51	47	44	50	46	43	49	44	42	48	43	41	47	42	40
80 psf	B	0 to 7	Array Interior	54	54	53	54	53	52	54	52	51	54	52	50	53	51	49	53	50	49	52	50	48
			Array Edge	53	51	49	53	50	48	52	49	48	51	48	47	51	48	46	50	47	45	49	46	44
	C	0 to 7	Array Interior	54	52	50	53	51	49	53	50	48	52	49	47	51	48	46	50	47	45	50	46	45
			Array Edge	51	48	46	50	47	45	49	46	44	48	45	43	48	44	42	47	43	41	46	42	40
	D	0 to 7	Array Interior	55	52	50	54	51	49	53	50	48	52	49	47	51	48	46	50	47	45	50	46	44
			Array Edge	51	48	46	50	47	44	49	45	43	48	44	42	47	43	41	46	42	40	45	41	39

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	64	59	55	62	56	53	60	54	50	57	52	48	55	49	45	53	46	42	52	44	40
			Array Edge	58	52	48	55	49	44	53	46	41	50	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	59	53	50	56	50	46	54	47	43	52	44	40	50	41	38	47	39	35	44	37	33
			Array Edge	52	44	40	49	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	57	50	45	54	46	42	52	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
40 psf	B	0 to 7	Array Interior	62	57	54	60	55	52	58	53	50	56	51	47	54	49	45	52	46	42	50	44	40
			Array Edge	56	51	48	54	48	44	52	46	41	49	43	39	48	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	57	52	49	55	49	46	53	47	43	51	44	40	49	41	38	47	39	35	44	37	33
			Array Edge	51	44	40	48	41	37	46	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	56	50	45	53	46	42	51	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	49	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
45 psf	B	0 to 7	Array Interior	60	56	53	58	54	51	56	51	49	55	50	47	53	48	45	51	46	42	50	44	40
			Array Edge	55	50	47	53	47	44	51	45	41	49	43	39	47	40	36	45	38	34	43	36	32
	C	0 to 7	Array Interior	56	51	48	54	48	46	52	46	43	50	44	40	48	41	38	46	39	35	44	37	33
			Array Edge	50	44	40	48	41	37	45	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	54	49	45	52	46	42	50	43	39	48	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	48	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
50 psf	B	0 to 7	Array Interior	59	54	52	57	52	50	55	50	48	53	49	46	52	47	44	50	45	42	49	44	40
			Array Edge	54	49	46	52	47	44	50	45	41	48	43	39	46	40	36	44	38	34	43	36	32
	C	0 to 7	Array Interior	54	50	47	52	48	45	51	46	43	49	44	40	47	41	38	45	39	35	44	37	33
			Array Edge	49	44	40	47	41	37	45	38	35	43	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	53	48	45	51	46	42	49	43	39	47	40	37	45	38	34	43	36	32	40	34	31
			Array Edge	47	41	37	45	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
60 psf	B	0 to 7	Array Interior	56	52	50	54	50	48	53	49	46	51	47	44	50	45	43	48	44	41	47	42	40
			Array Edge	51	47	45	50	45	43	48	43	41	46	42	39	45	40	36	43	38	34	42	36	32
	C	0 to 7	Array Interior	52	48	45	50	46	43	49	44	42	47	42	40	45	41	38	44	39	35	42	37	33
			Array Edge	47	43	40	45	41	37	43	38	35	42	36	32	40	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	51	47	44	49	45	42	47	43	39	46	40	37	44	38	34	42	36	32	40	34	31
			Array Edge	46	41	37	44	38	34	42	35	32	39	33	30	37	31	28	35	29	26	33	27	25
70 psf	B	0 to 7	Array Interior	53	50	48	52	48	46	51	47	45	49	45	43	48	44	42	47	43	40	45	41	39
			Array Edge	49	46	43	48	44	41	46	42	40	45	40	38	43	39	36	42	37	34	40	36	32
	C	0 to 7	Array Interior	50	46	44	49	45	42	47	43	41	45	41	39	44	40	37	43	38	35	41	37	33
			Array Edge	46	41	39	44	40	37	42	38	35	41	36	32	39	34	30	38	32	29	36	30	27
	D	0 to 7	Array Interior	50	45	43	48	43	41	46	42	39	44	40	37	43	38	34	41	36	32	40	34	31
			Array Edge	45	40	37	43	38	34	41	35	32	39	33	30	37	31	28	35	29	26	33	27	25
80 psf	B	0 to 7	Array Interior	51	48	46	50	47	45	49	45	43	47	44	42	46	43	41	45	41	39	44	40	38
			Array Edge	48	44	42	46	43	40	45	41	39	43	39	37	42	38	36	41	37	34	39	35	32
	C	0 to 7	Array Interior	48	45	43	47	43	41	45	42	40	44	40	38	43	39	37	41	38	35	40	36	33
			Array Edge	44	40	38	43	39	36	41	37	35	40	35	32	38	34	30	37	32	29	35	30	27
	D	0 to 7	Array Interior	48	44	42	46	42	40	45	41	38	43	39	37	42	38	34	40	36	32	39	34	31
			Array Edge	43	39	37	42	37	34	40	35	32	38	33	30	37	31	28	35	29	26	33	27	25

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	51	51	50	51	51	50	51	50	49	51	50	48	51	49	48	51	48	47	50	48	46
			Array Edge	51	49	48	51	48	47	50	47	46	49	47	45	49	46	44	48	45	43	47	44	43
	C	0 to 7	Array Interior	51	50	48	51	49	47	50	48	47	50	47	46	49	47	45	49	46	44	48	45	43
			Array Edge	49	46	45	48	46	44	48	45	43	47	44	42	46	43	41	45	42	40	44	41	39
	D	0 to 7	Array Interior	53	50	48	52	49	47	51	48	46	50	47	45	50	46	44	49	45	44	48	45	43
			Array Edge	49	46	44	49	45	43	48	44	42	47	43	41	46	42	40	45	41	39	44	40	38
100 psf	B	0 to 7	Array Interior	48	48	48	48	48	48	48	48	47	48	48	47	48	47	46	48	47	45	48	46	45
			Array Edge	48	47	46	48	47	45	48	46	44	48	45	44	47	44	43	46	44	42	46	43	41
	C	0 to 7	Array Interior	48	48	47	48	47	46	48	46	45	48	46	44	47	45	44	47	44	43	46	44	42
			Array Edge	47	45	43	47	44	43	46	43	42	45	42	41	45	42	40	44	41	39	43	40	38
	D	0 to 7	Array Interior	51	48	47	50	48	46	49	47	45	49	46	44	48	45	43	47	44	42	47	43	42
			Array Edge	48	45	43	47	44	42	46	43	41	45	42	40	44	41	39	44	40	38	43	39	37
110 psf	B	0 to 7	Array Interior	46	46	46	46	46	46	46	46	46	46	46	45	46	46	45	46	45	44	46	45	43
			Array Edge	46	46	45	46	45	44	46	44	43	46	44	42	45	43	42	45	43	41	44	42	40
	C	0 to 7	Array Interior	46	46	45	46	46	44	46	45	44	46	44	43	46	44	42	45	43	42	45	42	41
			Array Edge	46	44	42	45	43	41	45	42	41	44	41	40	43	41	39	43	40	38	42	39	37
	D	0 to 7	Array Interior	48	47	45	48	46	45	48	45	44	47	45	43	46	44	42	46	43	41	45	42	41
			Array Edge	46	44	42	46	43	41	45	42	40	44	41	39	43	40	38	43	39	37	42	38	37
120 psf	B	0 to 7	Array Interior	44	44	44	44	44	44	44	44	44	44	44	44	44	44	43	44	44	43	44	43	42
			Array Edge	44	44	43	44	44	43	44	43	42	44	43	41	44	42	41	44	41	40	43	41	39
	C	0 to 7	Array Interior	44	44	44	44	44	43	44	44	42	44	43	42	44	42	41	44	42	41	43	41	40
			Array Edge	44	42	41	44	42	40	43	41	40	43	40	39	42	40	38	41	39	37	41	38	37
	D	0 to 7	Array Interior	46	45	44	46	45	43	46	44	43	46	43	42	45	43	41	45	42	40	44	41	40
			Array Edge	45	43	41	44	42	40	44	41	39	43	40	38	42	39	38	41	38	37	41	38	36

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (P)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	49	47	45	48	45	43	47	44	42	46	43	41	45	42	40	44	40	38	43	39	37
			Array Edge	46	43	41	45	41	39	43	40	38	42	39	36	41	37	35	40	36	34	39	35	32
	C	0 to 7	Array Interior	47	44	42	45	42	40	44	41	39	43	39	37	42	38	36	40	37	35	39	35	33
			Array Edge	43	39	37	41	38	36	40	36	34	39	35	32	37	33	30	36	32	29	35	30	27
	D	0 to 7	Array Interior	46	43	41	45	41	39	44	40	37	42	38	36	41	37	34	39	35	32	38	34	31
			Array Edge	42	38	36	41	37	34	39	35	32	37	33	30	36	31	28	35	29	26	33	27	25
100 psf	B	0 to 7	Array Interior	47	45	44	46	44	42	45	43	41	44	42	40	43	40	39	43	39	37	42	38	36
			Array Edge	45	42	40	43	40	38	42	39	37	41	38	36	40	36	34	39	35	33	38	34	32
	C	0 to 7	Array Interior	45	42	41	44	41	39	43	40	38	42	38	36	41	37	35	39	36	34	38	35	33
			Array Edge	42	38	37	40	37	35	39	36	34	38	34	32	36	33	30	35	32	29	34	30	27
	D	0 to 7	Array Interior	45	42	40	44	40	38	42	39	37	41	37	35	40	36	34	39	35	32	37	34	31
			Array Edge	41	38	35	40	36	34	38	34	32	37	33	30	35	31	28	34	29	26	33	27	25
110 psf	B	0 to 7	Array Interior	46	44	42	45	43	41	44	42	40	43	40	39	42	39	38	41	38	37	40	37	36
			Array Edge	43	41	39	42	39	38	41	38	36	40	37	35	39	36	34	38	35	33	37	33	32
	C	0 to 7	Array Interior	44	41	40	43	40	38	42	39	37	41	38	36	40	36	34	38	35	33	37	34	32
			Array Edge	41	38	36	39	36	34	38	35	33	37	34	32	36	32	30	35	31	29	34	30	27
	D	0 to 7	Array Interior	44	41	39	43	39	38	41	38	36	40	37	35	39	35	33	38	34	32	37	33	31
			Array Edge	40	37	35	39	35	33	37	34	32	36	32	30	35	31	28	34	29	26	32	27	25
120 psf	B	0 to 7	Array Interior	44	42	41	44	41	40	43	40	39	42	39	38	41	39	37	40	38	36	39	37	35
			Array Edge	42	40	38	41	38	37	40	37	36	39	36	34	38	35	33	37	34	32	36	33	31
	C	0 to 7	Array Interior	42	40	39	41	39	37	41	38	36	40	37	35	39	36	34	38	35	33	37	34	32
			Array Edge	40	37	35	38	35	34	37	34	32	36	33	31	35	32	30	34	31	29	33	30	27
	D	0 to 7	Array Interior	43	40	38	42	39	37	40	37	35	39	36	34	38	35	33	37	34	32	36	33	31
			Array Edge	39	36	34	38	35	33	37	33	31	35	32	30	34	31	28	33	29	26	32	27	25

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	116	108	103	114	105	100	111	102	97	108	99	95	106	97	92	103	94	90	101	92	87
			Array Edge	106	96	92	102	93	89	99	91	86	97	88	84	94	86	81	92	83	79	89	81	77
	C	0 to 7	Array Interior	108	98	94	104	95	91	101	93	88	99	90	85	96	87	83	94	85	81	91	83	79
			Array Edge	96	87	83	93	85	80	90	82	78	88	80	75	85	77	73	83	75	71	81	73	69
	D	0 to 7	Array Interior	103	94	89	100	91	86	97	88	84	94	85	81	91	83	79	89	81	77	87	79	75
			Array Edge	91	83	79	88	80	76	86	78	74	83	75	72	81	73	69	79	71	66	77	68	64
5 psf	B	0 to 7	Array Interior	115	108	103	114	105	100	111	102	97	108	99	95	106	97	92	103	94	90	101	92	87
			Array Edge	106	96	92	102	93	89	99	91	86	97	88	84	94	86	81	92	83	79	89	81	77
	C	0 to 7	Array Interior	108	98	94	104	95	91	101	93	88	99	90	85	96	87	83	94	85	81	91	83	79
			Array Edge	96	87	83	93	85	80	90	82	78	88	80	75	85	77	73	83	75	71	81	73	69
	D	0 to 7	Array Interior	103	94	89	100	91	86	97	88	84	94	85	81	91	83	79	89	81	77	87	79	75
			Array Edge	91	83	79	88	80	76	86	78	74	83	75	72	81	73	69	79	71	66	77	68	64
10 psf	B	0 to 7	Array Interior	108	104	100	107	102	98	106	100	96	104	98	94	102	96	92	100	94	90	99	92	87
			Array Edge	102	96	92	100	93	89	98	91	86	96	88	84	94	86	81	92	83	79	89	81	77
	C	0 to 7	Array Interior	103	97	94	101	95	91	99	93	88	97	90	85	95	87	83	94	85	81	91	83	79
			Array Edge	95	87	83	93	85	80	90	82	78	88	80	75	85	77	73	83	75	71	81	73	69
	D	0 to 7	Array Interior	100	94	89	98	91	86	96	88	84	94	85	81	91	83	79	89	81	77	87	79	75
			Array Edge	91	83	79	88	80	76	86	78	74	83	75	72	81	73	69	79	71	66	77	68	64
15 psf	B	0 to 7	Array Interior	103	99	96	102	97	95	101	96	93	99	94	91	98	92	89	96	91	88	95	89	86
			Array Edge	98	92	89	96	90	87	94	89	85	92	87	84	91	85	81	89	83	79	88	81	77
	C	0 to 7	Array Interior	99	94	91	97	92	89	95	90	87	94	88	85	92	86	83	90	85	81	89	83	79
			Array Edge	92	86	83	90	84	80	88	82	78	86	80	75	85	77	73	83	75	71	81	73	69
	D	0 to 7	Array Interior	96	91	87	94	89	85	92	87	84	91	85	81	89	83	79	87	81	77	86	79	75
			Array Edge	89	83	79	87	80	76	85	78	74	83	75	72	81	73	69	79	71	66	77	68	64
20 psf	B	0 to 7	Array Interior	98	95	93	98	94	91	96	92	90	95	91	88	94	89	87	93	88	85	92	87	84
			Array Edge	94	89	87	92	88	85	91	86	83	89	84	81	88	83	80	87	81	78	85	80	77
	C	0 to 7	Array Interior	95	90	88	93	89	86	92	87	84	90	85	83	89	84	81	88	82	80	86	81	78
			Array Edge	89	84	81	87	82	79	86	80	77	84	79	75	82	77	73	81	75	71	79	73	69
	D	0 to 7	Array Interior	93	88	85	91	86	83	89	84	81	88	83	80	86	81	78	85	80	77	84	78	75
			Array Edge	86	81	78	85	79	76	83	77	74	81	75	72	80	73	69	78	71	66	76	68	64
25 psf	B	0 to 7	Array Interior	98	94	92	97	93	91	96	92	89	95	90	88	93	89	86	92	87	85	91	86	83
			Array Edge	93	89	86	92	87	84	90	85	83	89	84	81	87	82	80	86	81	78	85	79	77
	C	0 to 7	Array Interior	94	90	87	93	88	86	91	87	84	90	85	82	89	84	81	87	82	79	86	81	78
			Array Edge	88	83	81	87	82	79	85	80	77	84	78	75	82	77	73	81	75	71	79	73	69
	D	0 to 7	Array Interior	93	88	85	91	86	83	89	84	81	88	83	80	86	81	78	85	80	77	84	78	75
			Array Edge	86	81	78	85	79	76	83	77	74	81	75	72	80	73	69	78	71	66	76	68	64
30 psf	B	0 to 7	Array Interior	94	92	90	94	90	88	93	89	87	92	88	86	91	87	84	90	85	83	88	84	82
			Array Edge	91	87	84	89	85	83	88	84	81	87	82	80	85	81	78	84	79	77	83	78	75
	C	0 to 7	Array Interior	91	87	85	90	86	84	89	85	82	88	83	81	86	82	79	85	80	78	84	79	76
			Array Edge	86	82	79	85	80	77	83	78	76	82	77	74	80	75	73	79	74	71	78	72	69
	D	0 to 7	Array Interior	91	86	84	89	85	82	88	83	80	87	82	79	85	80	77	84	79	76	82	77	74
			Array Edge	85	80	77	83	78	75	82	76	74	80	75	72	79	73	69	77	71	66	76	68	64

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	96	88	83	92	84	79	88	80	76	85	77	73	82	74	70	79	71	67	76	67	63
			Array Edge	85	77	73	81	74	70	78	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	87	79	75	83	75	72	80	72	68	77	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	77	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	83	75	71	79	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
5 psf	B	0 to 7	Array Interior	96	88	83	92	84	79	88	80	76	85	77	73	82	74	70	79	71	67	76	67	63
			Array Edge	85	77	73	81	74	70	78	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	87	79	75	83	75	72	80	72	68	77	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	77	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	83	75	71	79	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
10 psf	B	0 to 7	Array Interior	96	88	83	92	84	79	88	80	76	85	77	73	82	74	70	79	71	67	76	67	63
			Array Edge	85	77	73	81	74	70	78	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	87	79	75	83	75	72	80	72	68	77	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	77	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	83	75	71	79	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
15 psf	B	0 to 7	Array Interior	92	86	83	89	84	79	87	80	76	84	77	73	82	74	70	79	71	67	76	67	63
			Array Edge	85	77	73	81	74	70	78	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	86	79	75	83	75	72	80	72	68	77	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	77	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	83	75	71	79	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
20 psf	B	0 to 7	Array Interior	89	84	81	87	81	79	85	79	76	82	77	73	80	74	70	78	71	67	76	67	63
			Array Edge	82	77	73	80	74	70	78	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	84	78	75	81	75	72	79	72	68	76	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	77	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	81	75	71	78	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
25 psf	B	0 to 7	Array Interior	89	84	81	86	81	78	84	79	76	82	76	73	80	74	70	78	71	67	76	67	63
			Array Edge	82	77	73	80	74	70	77	70	66	75	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	83	78	75	81	75	72	78	72	68	76	67	64	74	63	60	70	60	57	67	56	54
			Array Edge	76	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	81	75	71	78	71	67	76	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
30 psf	B	0 to 7	Array Interior	86	82	79	84	80	77	82	77	75	80	75	72	78	73	70	77	71	67	75	67	63
			Array Edge	80	75	73	78	73	70	76	70	66	74	65	62	72	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	82	77	74	79	74	71	77	72	68	75	67	64	73	63	60	70	60	57	67	56	54
			Array Edge	75	68	64	73	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	80	74	71	77	71	67	75	66	62	73	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	73	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	92	89	87	91	88	86	90	87	85	89	86	84	88	85	82	87	83	81	86	82	80
			Array Edge	88	85	82	87	83	81	86	82	79	85	80	78	83	79	77	82	78	75	81	77	74
	C	0 to 7	Array Interior	89	85	83	88	84	82	87	83	80	85	81	79	84	80	78	83	79	76	82	78	75
			Array Edge	84	80	78	83	79	76	82	77	75	80	76	73	79	74	72	78	73	70	76	71	68
	D	0 to 7	Array Interior	89	85	82	87	83	81	86	82	79	85	80	78	83	79	76	82	77	75	81	76	73
			Array Edge	83	79	76	82	77	74	80	75	73	79	74	71	77	72	69	76	71	66	75	68	64
40 psf	B	0 to 7	Array Interior	89	87	85	89	86	84	88	85	83	87	84	82	86	83	81	85	82	80	84	81	79
			Array Edge	86	83	81	85	81	79	84	80	78	83	79	77	82	78	75	81	77	74	80	75	73
	C	0 to 7	Array Interior	87	83	82	86	82	80	85	81	79	84	80	78	83	79	76	82	77	75	80	76	74
			Array Edge	82	79	76	81	77	75	80	76	73	79	74	72	78	73	71	76	72	69	75	71	67
	D	0 to 7	Array Interior	87	83	81	85	82	79	84	80	78	83	79	76	82	77	75	81	76	74	80	75	72
			Array Edge	82	77	75	80	76	73	79	74	72	78	73	70	76	71	68	75	70	66	74	68	64
45 psf	B	0 to 7	Array Interior	87	85	83	86	84	82	86	83	81	85	82	80	84	81	79	83	80	78	83	79	77
			Array Edge	84	81	79	83	80	78	82	79	77	81	78	75	80	76	74	79	75	73	78	74	72
	C	0 to 7	Array Interior	85	82	80	84	81	79	83	79	78	82	78	76	81	77	75	80	76	74	79	75	73
			Array Edge	81	77	75	80	76	74	78	75	72	77	73	71	76	72	70	75	71	68	74	69	66
	D	0 to 7	Array Interior	85	81	79	84	80	78	83	79	77	82	78	75	80	76	74	79	75	73	78	74	71
			Array Edge	80	76	74	79	75	72	78	73	71	76	72	69	75	71	67	74	69	65	73	67	63
50 psf	B	0 to 7	Array Interior	85	83	82	84	82	81	84	81	80	83	80	79	82	80	78	82	79	77	81	78	76
			Array Edge	82	79	78	81	78	77	80	77	75	80	76	74	79	75	73	78	74	72	77	73	71
	C	0 to 7	Array Interior	83	80	78	82	79	77	81	78	76	80	77	75	79	76	74	78	75	73	78	74	72
			Array Edge	79	76	74	78	75	73	77	73	71	76	72	70	75	71	68	74	70	66	73	68	65
	D	0 to 7	Array Interior	83	80	78	82	79	77	81	78	75	80	76	74	79	75	73	78	74	72	77	73	71
			Array Edge	79	75	73	78	74	71	76	72	70	75	71	68	74	70	66	73	68	64	72	66	62
60 psf	B	0 to 7	Array Interior	80	80	79	80	79	78	80	78	77	80	77	76	79	77	75	79	76	74	78	75	74
			Array Edge	79	77	75	78	76	74	78	75	73	77	74	72	76	73	71	75	72	70	74	71	69
	C	0 to 7	Array Interior	80	77	76	79	76	75	78	75	74	77	75	73	77	74	72	76	73	71	75	72	70
			Array Edge	77	74	72	76	72	71	75	71	69	74	70	68	73	69	66	72	67	64	71	66	63
	D	0 to 7	Array Interior	80	77	76	79	76	75	78	75	73	77	74	72	77	73	71	76	72	70	75	71	69
			Array Edge	77	73	71	75	72	70	74	71	68	73	69	66	72	67	64	71	66	62	70	64	61
70 psf	B	0 to 7	Array Interior	76	76	76	76	76	75	76	76	74	76	75	74	76	74	73	76	74	72	75	73	72
			Array Edge	76	74	73	76	73	72	75	73	71	74	72	70	74	71	69	73	70	68	72	69	66
	C	0 to 7	Array Interior	76	75	74	76	74	73	75	73	72	75	72	71	74	72	70	73	71	69	73	70	67
			Array Edge	74	72	70	73	71	68	72	69	67	72	68	65	71	66	64	70	65	62	69	64	61
	D	0 to 7	Array Interior	78	75	74	77	74	73	76	73	72	75	72	71	74	71	69	74	70	68	73	69	66
			Array Edge	74	71	69	73	70	67	72	69	66	71	67	64	70	65	62	69	64	61	68	62	59
80 psf	B	0 to 7	Array Interior	73	73	73	73	73	73	73	73	72	73	73	72	73	72	71	73	72	70	73	71	70
			Array Edge	73	72	71	73	71	70	73	71	69	72	70	68	72	69	67	71	68	65	70	67	64
	C	0 to 7	Array Interior	73	73	71	73	72	71	73	71	70	73	70	69	72	70	67	71	68	66	71	67	65
			Array Edge	72	70	67	71	68	66	70	67	65	70	66	63	69	64	62	67	63	60	66	62	59
	D	0 to 7	Array Interior	75	73	72	75	72	71	74	71	70	73	71	68	72	70	67	72	68	66	71	67	64
			Array Edge	72	69	67	71	68	65	71	66	64	70	65	62	68	63	61	67	62	59	66	60	58

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	84	80	78	82	78	76	81	76	73	79	74	71	77	72	69	75	70	67	74	67	63
			Array Edge	79	74	72	77	72	69	75	70	66	73	65	62	71	61	58	68	58	55	64	55	52
	C	0 to 7	Array Interior	80	75	73	78	73	70	76	71	67	74	67	64	72	63	60	70	60	57	67	56	54
			Array Edge	74	68	64	72	63	60	69	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	78	73	71	76	71	67	74	66	62	72	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	72	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
40 psf	B	0 to 7	Array Interior	83	79	76	81	77	74	79	75	72	77	73	70	76	71	68	74	69	65	73	67	63
			Array Edge	78	73	71	76	71	68	74	68	65	72	65	62	70	61	58	67	58	55	64	55	52
	C	0 to 7	Array Interior	78	74	72	76	72	69	75	70	66	73	67	63	71	63	60	69	60	57	66	56	54
			Array Edge	73	67	63	71	63	60	68	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	77	72	70	75	70	66	73	66	62	71	62	59	68	58	55	65	55	52	61	52	50
			Array Edge	71	62	59	68	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
45 psf	B	0 to 7	Array Interior	81	77	75	79	75	73	78	74	71	76	72	69	75	70	67	73	68	64	72	66	62
			Array Edge	76	72	70	74	70	66	73	67	63	71	64	61	69	61	58	66	58	55	64	55	52
	C	0 to 7	Array Interior	77	73	71	75	71	68	73	69	65	72	66	62	70	63	60	68	60	57	65	56	54
			Array Edge	72	66	62	70	63	59	67	58	56	64	55	52	61	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	76	72	69	74	69	65	72	66	62	70	62	59	67	58	55	65	55	52	61	52	50
			Array Edge	70	62	59	67	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
50 psf	B	0 to 7	Array Interior	79	76	74	78	74	72	76	73	70	75	71	68	73	69	66	72	67	63	71	65	61
			Array Edge	75	71	68	73	69	65	71	66	63	70	63	60	67	61	57	65	58	55	63	55	52
	C	0 to 7	Array Interior	76	72	70	74	70	67	72	67	64	71	65	61	69	62	59	66	60	56	64	56	54
			Array Edge	71	65	61	68	62	58	66	58	56	63	55	52	60	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	75	71	68	73	68	64	71	65	61	69	62	59	66	58	55	64	55	52	61	52	50
			Array Edge	69	62	59	66	58	55	63	54	51	59	50	48	55	47	45	52	44	43	49	42	41
60 psf	B	0 to 7	Array Interior	77	74	72	75	72	70	74	71	68	73	69	66	71	67	64	70	65	61	68	63	59
			Array Edge	73	69	66	71	66	63	69	64	61	67	61	58	65	59	56	63	57	54	61	55	52
	C	0 to 7	Array Interior	73	70	67	72	68	65	70	65	62	68	63	60	66	60	57	64	58	55	62	56	53
			Array Edge	69	63	60	66	60	57	63	57	54	61	55	52	59	51	49	57	48	47	54	46	44
	D	0 to 7	Array Interior	73	69	65	71	66	63	69	63	60	67	61	57	64	58	55	62	55	52	60	52	50
			Array Edge	67	61	57	64	58	54	61	54	51	59	50	48	55	47	45	52	44	43	49	42	41
70 psf	B	0 to 7	Array Interior	74	72	70	73	70	68	72	68	66	71	66	64	69	64	62	68	63	60	66	61	58
			Array Edge	71	67	64	69	64	61	67	62	59	65	60	57	63	58	55	61	56	53	59	54	51
	C	0 to 7	Array Interior	71	68	65	70	65	62	68	63	60	66	61	58	64	59	56	62	57	54	60	55	52
			Array Edge	66	61	58	64	58	56	62	56	53	59	54	51	57	51	49	55	48	47	53	46	44
	D	0 to 7	Array Interior	71	66	64	69	64	61	67	61	58	65	59	56	63	57	54	61	55	52	59	52	50
			Array Edge	65	59	56	62	56	53	60	54	51	57	50	48	55	47	45	52	44	43	49	42	41
80 psf	B	0 to 7	Array Interior	72	70	68	71	68	66	70	66	64	68	64	62	67	62	60	65	61	58	64	59	56
			Array Edge	69	64	62	67	62	60	65	60	57	63	58	55	61	56	53	59	54	51	58	52	50
	C	0 to 7	Array Interior	69	65	63	68	63	61	66	61	59	64	59	56	62	57	54	60	55	53	59	54	51
			Array Edge	64	59	57	62	57	54	60	55	52	58	53	50	56	51	48	54	48	46	52	46	44
	D	0 to 7	Array Interior	69	64	62	67	62	59	65	60	57	63	58	55	61	56	53	59	54	51	57	52	49
			Array Edge	63	58	55	61	55	52	58	53	50	56	50	48	54	47	45	52	44	43	49	42	41

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	71	71	71	71	71	71	71	71	70	71	71	70	71	70	69	71	70	68	71	69	67
			Array Edge	71	70	69	71	69	68	71	68	67	70	67	65	70	66	64	69	65	63	68	64	62
	C	0 to 7	Array Interior	71	71	69	71	70	68	71	69	67	71	68	66	70	67	65	69	66	64	69	65	63
			Array Edge	70	67	65	69	66	64	68	65	63	67	63	61	66	62	60	65	61	59	64	60	58
	D	0 to 7	Array Interior	73	71	70	73	70	69	72	70	68	71	68	66	71	67	65	70	66	64	69	65	63
			Array Edge	71	67	65	70	66	63	69	64	62	67	63	60	66	62	59	65	60	58	64	59	56
100 psf	B	0 to 7	Array Interior	68	68	68	68	68	68	68	68	68	68	68	67	68	68	66	68	67	66	68	66	65
			Array Edge	68	68	66	68	67	65	68	66	64	68	65	63	67	64	62	66	63	61	66	62	60
	C	0 to 7	Array Interior	68	68	67	68	67	66	68	67	65	68	66	64	68	65	63	67	64	62	66	63	61
			Array Edge	68	65	63	67	64	62	66	63	61	65	62	60	64	60	58	63	59	57	62	58	56
	D	0 to 7	Array Interior	71	69	68	71	68	67	70	67	65	70	66	64	69	65	63	68	64	62	67	63	61
			Array Edge	69	65	63	67	64	62	66	63	60	65	61	59	64	60	58	63	59	56	62	58	55
110 psf	B	0 to 7	Array Interior	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	63	64	64	63
			Array Edge	64	64	64	64	64	63	64	64	62	64	63	61	64	62	61	64	61	60	63	60	59
	C	0 to 7	Array Interior	64	64	64	64	64	64	64	64	63	64	64	62	64	63	61	64	62	60	64	61	59
			Array Edge	64	63	61	64	62	60	64	61	59	63	60	58	62	59	57	61	58	56	60	57	55
	D	0 to 7	Array Interior	68	67	66	68	66	65	68	65	64	67	64	62	66	63	61	66	62	60	65	61	59
			Array Edge	66	63	61	65	62	60	64	61	59	63	60	58	62	59	56	61	57	55	60	56	54
120 psf	B	0 to 7	Array Interior	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	61
			Array Edge	62	62	62	62	62	61	62	62	61	62	61	60	62	60	59	62	60	58	61	59	57
	C	0 to 7	Array Interior	62	62	62	62	62	62	62	62	61	62	62	60	62	61	59	62	60	59	62	59	58
			Array Edge	62	61	59	62	60	58	62	59	57	61	58	56	60	57	55	59	56	54	59	55	54
	D	0 to 7	Array Interior	65	65	64	65	64	63	65	63	62	65	62	61	64	62	60	64	61	59	63	60	58
			Array Edge	64	62	60	63	60	59	63	59	57	62	58	56	61	57	55	60	56	54	59	55	53

Maximum Rail Spans (Inches)			SMR100 Rail 10° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	70	67	65	69	65	63	67	64	62	66	62	60	65	61	58	63	59	57	62	57	55
			Array Edge	66	62	60	64	60	58	63	58	56	61	57	54	59	55	52	58	53	50	56	51	49
	C	0 to 7	Array Interior	67	63	61	65	61	59	64	59	57	62	58	55	60	56	53	59	54	51	57	52	50
			Array Edge	62	58	55	60	56	53	58	53	51	56	51	49	54	50	47	53	48	45	51	46	43
	D	0 to 7	Array Interior	67	63	60	65	60	58	63	58	56	61	56	54	59	54	52	58	52	50	56	51	48
			Array Edge	61	56	54	59	54	51	57	52	49	55	50	47	53	47	45	51	44	43	49	42	41
100 psf	B	0 to 7	Array Interior	68	65	63	66	63	61	65	62	60	64	60	58	63	59	57	61	57	55	60	56	54
			Array Edge	64	60	58	62	59	56	61	57	55	59	55	53	58	53	51	56	52	49	55	50	48
	C	0 to 7	Array Interior	65	61	59	63	60	57	62	58	56	60	56	54	59	54	52	57	53	50	56	51	49
			Array Edge	60	56	54	58	54	52	57	52	50	55	50	48	53	49	46	52	47	44	50	45	43
	D	0 to 7	Array Interior	65	61	59	63	59	57	61	57	54	60	55	53	58	53	51	56	51	49	55	50	47
			Array Edge	60	55	53	58	53	50	56	51	48	54	49	46	52	47	44	50	44	42	48	42	41
110 psf	B	0 to 7	Array Interior	64	63	61	64	61	60	63	60	58	62	59	57	61	57	55	60	56	54	58	55	53
			Array Edge	62	59	57	61	57	55	59	55	53	58	54	52	56	52	50	55	51	48	54	49	47
	C	0 to 7	Array Interior	63	60	58	61	58	56	60	56	54	58	55	53	57	53	51	56	52	49	54	50	48
			Array Edge	59	55	53	57	53	51	55	51	49	54	49	47	52	48	45	51	46	44	49	45	42
	D	0 to 7	Array Interior	63	59	57	61	58	55	60	56	53	58	54	52	57	52	50	55	51	48	54	49	46
			Array Edge	58	54	52	56	52	49	54	50	47	53	48	45	51	46	44	49	44	42	48	42	40
120 psf	B	0 to 7	Array Interior	62	61	59	62	60	58	61	58	57	60	57	55	59	56	54	58	55	53	57	53	51
			Array Edge	60	57	55	59	56	54	58	54	52	56	53	51	55	51	49	54	50	48	52	48	46
	C	0 to 7	Array Interior	61	58	56	60	56	55	58	55	53	57	53	51	56	52	50	54	51	49	53	49	47
			Array Edge	57	54	52	56	52	50	54	50	48	52	48	46	51	47	45	50	45	43	48	44	42
	D	0 to 7	Array Interior	61	58	56	60	56	54	58	55	52	57	53	51	55	51	49	54	50	47	52	48	46
			Array Edge	57	53	51	55	51	49	53	49	47	52	47	45	50	46	43	48	44	41	47	42	40

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	113	103	98	110	100	95	107	97	92	104	95	89	102	92	87	99	90	85	97	87	82
			Array Edge	101	92	87	98	89	84	95	86	81	93	84	79	90	81	77	88	79	75	86	77	73
	C	0 to 7	Array Interior	103	94	89	100	91	86	97	88	83	95	85	81	92	83	78	90	81	76	87	79	74
			Array Edge	92	83	78	89	80	76	86	78	73	84	75	70	82	73	67	79	71	64	77	68	61
	D	0 to 7	Array Interior	99	89	84	96	86	81	93	84	79	90	81	77	88	79	74	85	77	72	83	75	69
			Array Edge	88	79	74	85	76	71	82	74	68	80	71	64	77	68	61	75	65	59	73	62	56
5 psf	B	0 to 7	Array Interior	113	103	98	110	100	95	107	97	92	104	95	89	102	92	87	99	90	85	97	87	82
			Array Edge	101	92	87	98	89	84	95	86	81	93	84	79	90	81	77	88	79	75	86	77	73
	C	0 to 7	Array Interior	103	94	89	100	91	86	97	88	83	95	85	81	92	83	78	90	81	76	87	79	74
			Array Edge	92	83	78	89	80	76	86	78	73	84	75	70	82	73	67	79	71	64	77	68	61
	D	0 to 7	Array Interior	99	89	84	96	86	81	93	84	79	90	81	77	88	79	74	85	77	72	83	75	69
			Array Edge	88	79	74	85	76	71	82	74	68	80	71	64	77	68	61	75	65	59	73	62	56
10 psf	B	0 to 7	Array Interior	107	100	97	105	98	95	103	96	92	101	94	89	99	92	87	98	90	85	96	87	82
			Array Edge	99	92	87	97	89	84	95	86	81	93	84	79	90	81	77	88	79	75	86	77	73
	C	0 to 7	Array Interior	101	94	89	98	91	86	96	88	83	94	85	81	92	83	78	90	81	76	87	79	74
			Array Edge	92	83	78	89	80	76	86	78	73	84	75	70	82	73	67	79	71	64	77	68	61
	D	0 to 7	Array Interior	97	89	84	95	86	81	93	84	79	90	81	77	88	79	74	85	77	72	83	75	69
			Array Edge	88	79	74	85	76	71	82	74	68	80	71	64	77	68	61	75	65	59	73	62	56
15 psf	B	0 to 7	Array Interior	102	96	93	100	95	91	98	93	89	97	91	88	95	89	86	94	88	84	92	86	82
			Array Edge	95	89	86	93	87	84	92	85	81	90	84	79	88	81	77	87	79	75	85	77	73
	C	0 to 7	Array Interior	96	91	87	95	89	85	93	87	83	91	85	81	89	83	78	88	81	76	86	79	74
			Array Edge	89	83	78	87	80	76	86	78	73	84	75	70	82	73	67	79	71	64	77	68	61
	D	0 to 7	Array Interior	94	87	84	92	85	81	90	84	79	88	81	77	86	79	74	85	77	72	83	75	69
			Array Edge	86	79	74	84	76	71	82	74	68	80	71	64	77	68	61	75	65	59	73	62	56
20 psf	B	0 to 7	Array Interior	97	93	90	96	91	88	95	90	87	93	88	85	92	87	84	91	85	82	89	84	81
			Array Edge	92	87	83	90	85	82	89	83	80	87	81	78	86	80	77	84	78	75	83	77	73
	C	0 to 7	Array Interior	93	88	85	91	86	83	90	84	81	88	83	79	87	81	78	85	80	76	84	78	74
			Array Edge	87	81	78	85	79	76	83	77	73	82	75	70	80	73	67	78	71	64	77	68	61
	D	0 to 7	Array Interior	90	85	82	89	83	80	87	81	78	86	80	76	84	78	74	83	77	72	81	75	69
			Array Edge	84	78	74	82	76	71	80	74	68	79	71	64	77	68	61	75	65	59	73	62	56
25 psf	B	0 to 7	Array Interior	97	92	89	95	91	88	94	89	86	93	88	85	91	86	83	90	85	82	89	83	80
			Array Edge	91	86	83	90	84	81	88	83	80	87	81	78	85	80	76	84	78	75	82	77	73
	C	0 to 7	Array Interior	92	87	84	91	86	82	89	84	81	88	82	79	86	81	77	85	79	76	84	78	74
			Array Edge	86	81	77	85	79	75	83	77	73	81	75	70	80	73	67	78	71	64	77	68	61
	D	0 to 7	Array Interior	90	85	82	89	83	80	87	81	78	86	80	76	84	78	74	83	77	72	81	75	69
			Array Edge	84	78	74	82	76	71	80	74	68	79	71	64	77	68	61	75	65	59	73	62	56
30 psf	B	0 to 7	Array Interior	93	90	87	92	88	86	91	87	84	90	86	83	89	84	81	88	83	80	87	82	79
			Array Edge	89	84	81	87	83	80	86	81	78	85	80	77	83	78	75	82	77	74	81	75	72
	C	0 to 7	Array Interior	90	85	82	88	84	81	87	82	79	86	81	78	84	79	76	83	78	75	82	76	73
			Array Edge	84	79	76	83	77	74	81	76	73	80	74	70	78	73	67	77	71	64	75	68	61
	D	0 to 7	Array Interior	89	84	81	87	82	79	86	80	77	84	79	76	83	77	74	81	76	72	80	74	69
			Array Edge	83	77	74	81	75	71	79	74	68	78	71	64	76	68	61	75	65	59	73	62	56

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
0 psf	B	0 to 7	Array Interior	92	83	78	88	79	75	85	76	71	81	73	67	78	69	63	76	65	59	73	62	56
			Array Edge	82	73	67	78	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	83	75	69	80	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	79	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
5 psf	B	0 to 7	Array Interior	92	83	78	88	79	75	85	76	71	81	73	67	78	69	63	76	65	59	73	62	56
			Array Edge	82	73	67	78	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	83	75	69	80	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	79	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
10 psf	B	0 to 7	Array Interior	92	83	78	88	79	75	85	76	71	81	73	67	78	69	63	76	65	59	73	62	56
			Array Edge	82	73	67	78	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	83	75	69	80	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	79	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
15 psf	B	0 to 7	Array Interior	90	83	78	87	79	75	84	76	71	81	73	67	78	69	63	76	65	59	73	62	56
			Array Edge	82	73	67	78	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	83	75	69	80	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	79	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
20 psf	B	0 to 7	Array Interior	87	81	78	84	79	75	82	76	71	80	73	67	78	69	63	76	65	59	73	62	56
			Array Edge	80	73	67	77	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	81	75	69	79	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	78	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
25 psf	B	0 to 7	Array Interior	86	81	77	84	78	75	82	76	71	79	73	67	77	69	63	75	65	59	73	62	56
			Array Edge	80	73	67	77	69	62	75	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	81	75	69	78	71	64	76	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	78	70	64	76	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
30 psf	B	0 to 7	Array Interior	84	79	76	82	77	74	80	75	71	78	72	67	76	69	63	74	65	59	72	62	56
			Array Edge	78	73	67	76	69	62	74	64	58	71	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	79	74	69	77	71	64	75	66	60	73	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	73	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	77	70	64	75	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	91	87	85	90	86	84	89	85	82	88	84	81	87	82	80	86	81	79	85	80	77
			Array Edge	87	82	80	85	81	78	84	79	77	83	78	75	82	77	74	80	75	72	79	74	71
	C	0 to 7	Array Interior	87	83	81	86	82	79	85	80	78	84	79	76	83	78	75	81	76	74	80	75	72
			Array Edge	82	78	75	81	76	73	80	75	72	78	73	70	77	72	67	75	70	64	74	68	61
	D	0 to 7	Array Interior	87	82	79	85	81	78	84	79	76	83	78	75	81	76	73	80	75	72	79	73	69
			Array Edge	81	76	73	80	74	71	78	73	68	77	71	64	75	68	61	74	65	59	72	62	56
40 psf	B	0 to 7	Array Interior	88	85	83	87	84	82	87	83	81	86	82	80	85	81	78	84	80	77	83	79	76
			Array Edge	85	81	78	83	79	77	82	78	75	81	77	74	80	75	73	79	74	71	78	73	70
	C	0 to 7	Array Interior	85	82	79	84	80	78	83	79	76	82	78	75	81	76	74	80	75	72	79	74	71
			Array Edge	81	76	74	79	75	72	78	73	71	77	72	69	76	71	67	74	69	64	73	67	61
	D	0 to 7	Array Interior	85	81	78	84	79	77	82	78	75	81	76	74	80	75	72	79	74	71	77	72	69
			Array Edge	80	75	72	78	73	70	77	72	68	75	70	64	74	68	61	73	65	59	71	62	56
45 psf	B	0 to 7	Array Interior	86	83	82	85	82	80	85	81	79	84	80	78	83	79	77	82	78	76	81	77	75
			Array Edge	83	79	77	82	78	76	81	77	74	80	75	73	79	74	72	77	73	70	76	72	69
	C	0 to 7	Array Interior	83	80	78	82	79	76	81	78	75	80	76	74	79	75	73	78	74	71	77	73	70
			Array Edge	79	75	73	78	74	71	77	72	70	76	71	67	74	70	65	73	68	64	72	66	61
	D	0 to 7	Array Interior	83	79	77	82	78	75	81	77	74	80	75	73	79	74	71	77	73	70	76	71	68
			Array Edge	79	74	71	77	72	69	76	71	67	74	69	64	73	67	61	72	65	59	71	62	56
50 psf	B	0 to 7	Array Interior	84	82	80	83	81	79	83	80	78	82	79	77	81	78	76	80	77	75	80	76	74
			Array Edge	81	78	76	80	77	74	79	75	73	78	74	72	77	73	71	76	72	69	75	71	68
	C	0 to 7	Array Interior	82	78	76	81	77	75	80	76	74	79	75	73	78	74	72	77	73	71	76	72	69
			Array Edge	78	74	72	77	73	70	76	71	68	74	70	66	73	68	64	72	66	63	71	65	61
	D	0 to 7	Array Interior	82	78	76	81	77	74	80	75	73	78	74	72	77	73	70	76	72	69	75	71	67
			Array Edge	77	73	70	76	71	68	75	70	66	73	68	64	72	66	61	71	64	59	70	62	56
60 psf	B	0 to 7	Array Interior	80	79	77	80	78	76	79	77	75	79	76	74	78	75	73	77	74	73	77	74	72
			Array Edge	78	75	73	77	74	72	76	73	71	76	72	70	75	71	69	74	70	67	73	69	65
	C	0 to 7	Array Interior	79	76	74	78	75	73	77	74	72	76	73	71	75	72	70	74	71	68	74	70	67
			Array Edge	75	72	70	74	71	68	73	69	66	72	68	64	71	66	62	70	64	61	69	63	59
	D	0 to 7	Array Interior	79	76	74	78	75	72	77	73	71	76	72	70	75	71	68	74	70	66	73	69	65
			Array Edge	75	71	68	74	70	66	73	68	64	72	66	62	70	64	60	69	62	58	67	61	56
70 psf	B	0 to 7	Array Interior	76	76	75	76	75	74	76	74	73	76	74	72	76	73	71	75	72	71	74	72	70
			Array Edge	75	73	71	75	72	70	74	71	69	73	70	68	72	69	66	72	68	65	71	66	63
	C	0 to 7	Array Interior	76	74	72	75	73	71	75	72	70	74	71	69	73	70	67	72	69	66	72	67	64
			Array Edge	73	70	67	72	68	65	71	67	64	70	65	62	69	64	61	68	62	59	66	61	58
	D	0 to 7	Array Interior	77	74	72	76	73	71	75	72	69	74	71	68	73	69	66	72	68	64	71	66	63
			Array Edge	73	69	66	72	67	64	71	66	62	70	64	60	68	62	59	67	61	57	65	59	56
80 psf	B	0 to 7	Array Interior	73	73	72	73	73	72	73	72	71	73	72	70	73	71	69	73	70	68	72	70	67
			Array Edge	73	71	69	73	70	68	72	69	67	71	68	65	71	67	64	70	65	63	69	64	61
	C	0 to 7	Array Interior	73	71	70	73	71	69	72	70	67	72	69	66	71	67	65	70	66	64	70	65	62
			Array Edge	71	67	65	70	66	63	69	65	62	68	63	60	67	62	59	65	60	57	64	59	56
	D	0 to 7	Array Interior	74	72	70	74	71	69	73	70	67	72	68	66	71	67	64	70	66	63	70	64	61
			Array Edge	71	67	64	70	65	62	69	64	61	67	62	59	66	61	57	65	59	56	63	58	54

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
35 psf	B	0 to 7	Array Interior	83	78	75	81	76	73	79	73	70	77	71	67	75	69	63	73	65	59	71	62	56
			Array Edge	77	72	67	75	69	62	72	64	58	70	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	78	73	69	76	70	64	74	66	60	72	62	56	69	58	53	65	55	50	62	52	47
			Array Edge	72	62	56	69	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	76	70	64	74	65	59	72	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
40 psf	B	0 to 7	Array Interior	81	76	74	79	74	72	77	72	69	75	70	66	74	68	63	72	65	59	70	62	56
			Array Edge	76	71	67	73	68	62	71	64	58	69	60	54	67	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	77	72	68	74	69	64	72	66	60	71	62	56	68	58	53	65	55	50	62	52	47
			Array Edge	71	62	56	68	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	75	70	64	73	65	59	71	61	55	68	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	68	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
45 psf	B	0 to 7	Array Interior	79	75	73	78	73	71	76	71	68	74	69	65	73	67	63	71	64	59	69	62	56
			Array Edge	74	70	66	72	66	62	71	63	58	68	60	54	65	56	51	63	53	48	60	50	45
	C	0 to 7	Array Interior	75	71	67	73	68	64	71	65	60	70	62	56	67	58	53	65	55	50	62	52	47
			Array Edge	70	62	56	67	58	52	64	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	74	69	64	72	65	59	70	61	55	67	57	51	64	53	48	60	50	46	57	47	43
			Array Edge	67	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
50 psf	B	0 to 7	Array Interior	78	74	72	76	72	70	75	70	67	73	68	64	72	66	62	70	63	59	68	61	56
			Array Edge	73	68	64	71	65	61	69	63	58	67	60	54	64	56	51	62	53	48	60	50	45
	C	0 to 7	Array Interior	74	70	66	72	67	63	71	64	60	68	61	56	66	58	53	63	55	50	61	52	47
			Array Edge	68	61	56	65	58	52	63	54	49	60	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	73	68	63	71	64	59	69	61	55	66	57	51	63	53	48	60	50	46	57	47	43
			Array Edge	66	57	52	63	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
60 psf	B	0 to 7	Array Interior	75	72	70	74	70	67	73	68	65	71	66	62	70	64	60	68	61	58	66	59	56
			Array Edge	71	66	62	69	63	60	67	61	57	65	58	54	62	56	51	60	53	48	58	50	45
	C	0 to 7	Array Interior	72	67	64	70	65	61	68	62	58	66	60	56	64	57	53	62	55	50	60	52	47
			Array Edge	66	60	56	63	57	52	61	54	49	58	50	45	56	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	71	65	62	69	63	59	67	60	55	64	57	51	62	53	48	59	50	46	57	47	43
			Array Edge	64	57	52	61	53	48	59	49	45	55	46	42	52	43	39	49	41	37	46	39	35
70 psf	B	0 to 7	Array Interior	73	70	67	72	68	65	71	66	63	69	64	60	67	62	58	65	60	56	64	58	54
			Array Edge	69	64	61	67	61	58	65	59	56	63	57	53	61	55	51	59	53	48	57	50	45
	C	0 to 7	Array Interior	70	65	62	68	62	59	66	60	57	64	58	55	62	56	52	60	54	50	58	52	47
			Array Edge	64	58	55	61	56	52	59	53	49	57	50	45	55	47	43	53	44	40	50	42	38
	D	0 to 7	Array Interior	69	64	60	67	61	57	65	58	55	62	56	51	60	53	48	58	50	46	56	47	43
			Array Edge	62	56	52	60	53	48	57	49	45	55	46	42	52	43	39	49	41	37	46	39	35
80 psf	B	0 to 7	Array Interior	71	68	65	70	66	63	68	64	61	67	62	59	65	60	57	63	58	55	62	56	53
			Array Edge	67	62	59	65	60	57	63	57	54	61	55	52	59	53	50	57	51	48	55	50	45
	C	0 to 7	Array Interior	68	63	60	66	61	58	64	59	55	62	56	53	60	54	51	58	53	49	56	51	47
			Array Edge	62	57	54	60	54	51	58	52	49	55	50	45	53	47	43	52	44	40	50	42	38
	D	0 to 7	Array Interior	67	62	59	65	59	56	63	57	54	61	55	51	59	53	48	57	50	46	55	47	43
			Array Edge	61	55	52	58	52	48	56	49	45	54	46	42	52	43	39	49	41	37	46	39	35

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	90 mph			95 mph			100 mph			105 mph			110 mph			115 mph			120 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
90 psf	B	0 to 7	Array Interior	71	71	70	71	71	70	71	70	69	71	70	68	71	69	67	71	68	66	70	67	65
			Array Edge	71	69	67	71	68	66	70	67	64	69	65	63	68	64	62	67	63	61	66	62	60
	C	0 to 7	Array Interior	71	69	68	71	68	66	70	67	65	70	66	64	69	65	63	68	64	62	67	63	61
			Array Edge	69	65	63	68	64	61	67	63	60	66	61	59	64	60	57	63	59	56	62	58	55
	D	0 to 7	Array Interior	72	70	68	72	69	66	71	68	65	70	66	64	69	65	62	68	64	61	67	63	60
			Array Edge	69	65	62	68	63	61	67	62	59	65	60	58	64	59	56	63	58	55	62	56	53
100 psf	B	0 to 7	Array Interior	68	68	68	68	68	67	68	68	66	68	67	65	68	66	65	68	66	64	68	65	63
			Array Edge	68	66	65	68	65	63	67	64	62	67	63	61	66	62	60	65	61	59	64	60	58
	C	0 to 7	Array Interior	68	67	65	68	66	64	68	65	63	67	64	62	66	63	61	66	62	60	65	61	59
			Array Edge	66	63	61	65	62	60	64	61	58	63	60	57	62	58	56	61	57	55	60	56	54
	D	0 to 7	Array Interior	71	68	66	70	67	64	69	65	63	68	64	62	67	63	61	66	62	59	65	61	58
			Array Edge	67	63	61	66	62	59	65	60	58	64	59	56	62	58	55	61	56	54	60	55	52
110 psf	B	0 to 7	Array Interior	64	64	64	64	64	64	64	64	64	64	64	63	64	64	63	64	63	62	64	63	61
			Array Edge	64	64	63	64	63	62	64	62	61	64	61	60	64	61	59	63	60	58	62	59	57
	C	0 to 7	Array Interior	64	64	63	64	64	62	64	63	61	64	62	60	64	61	59	63	60	58	63	59	57
			Array Edge	64	61	59	63	60	58	62	59	57	61	58	56	61	57	55	60	56	53	59	55	52
	D	0 to 7	Array Interior	68	66	64	68	65	63	67	64	61	66	62	60	65	61	59	64	60	58	63	59	57
			Array Edge	65	61	59	64	60	58	63	59	56	62	58	55	61	56	54	60	55	52	59	54	51
120 psf	B	0 to 7	Array Interior	62	62	62	62	62	62	62	62	62	62	62	61	62	62	61	62	62	60	62	61	59
			Array Edge	62	62	61	62	61	60	62	61	59	62	60	58	62	59	57	61	58	56	60	57	55
	C	0 to 7	Array Interior	62	62	61	62	62	60	62	61	59	62	60	59	62	59	58	62	59	57	61	58	56
			Array Edge	62	59	58	61	58	57	61	57	55	60	56	54	59	55	53	58	54	52	57	54	51
	D	0 to 7	Array Interior	65	64	62	65	63	61	65	62	60	64	61	59	63	60	58	62	59	57	62	58	56
			Array Edge	63	60	58	62	59	56	61	57	55	60	56	54	59	55	53	58	54	51	57	53	50

Maximum Rail Spans (Inches)			SMR100 Rail 20° Tilt-Mount on 0 to 30 Foot Roof -- ASCE 7-22 -- 82" x 42" (L)																					
Ground Snow Load	Exposure Category	Panel Angle	Wind Speed ->	130 mph			140 mph			150 mph			160 mph			170 mph			180 mph			190 mph		
			Roof Zone ->	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3			
90 psf	B	0 to 7	Array Interior	69	65	63	67	63	61	66	62	59	64	60	57	63	58	55	61	57	54	60	55	52
			Array Edge	64	60	57	63	58	55	61	56	53	59	54	51	57	52	49	56	50	47	54	49	45
	C	0 to 7	Array Interior	65	61	58	63	59	56	62	57	54	60	55	52	58	53	50	57	51	49	55	50	47
			Array Edge	60	55	52	58	53	50	56	51	48	54	49	45	52	47	43	51	44	40	49	42	38
	D	0 to 7	Array Interior	65	60	57	63	58	55	61	56	53	59	54	50	57	52	48	55	50	46	54	47	43
			Array Edge	59	54	51	57	51	48	55	49	45	53	46	42	51	43	39	49	41	37	46	39	35
100 psf	B	0 to 7	Array Interior	66	63	61	65	61	59	64	60	58	62	58	56	61	57	54	60	55	53	58	54	51
			Array Edge	62	58	56	61	56	54	59	55	52	57	53	50	56	51	48	54	49	47	53	48	45
	C	0 to 7	Array Interior	63	59	57	62	57	55	60	56	53	58	54	51	57	52	49	55	50	48	54	49	46
			Array Edge	58	54	51	57	52	49	55	50	47	53	48	45	51	46	43	50	44	40	48	42	38
	D	0 to 7	Array Interior	63	59	56	61	57	54	59	54	52	58	53	50	56	51	48	54	49	46	52	47	43
			Array Edge	58	53	50	56	50	47	54	48	45	52	46	42	50	43	39	48	41	37	46	39	35
110 psf	B	0 to 7	Array Interior	64	61	59	63	60	58	62	58	56	61	57	54	59	55	53	58	54	51	57	53	50
			Array Edge	61	57	55	59	55	53	58	53	51	56	52	49	55	50	47	53	48	46	52	47	44
	C	0 to 7	Array Interior	61	58	55	60	56	54	58	54	52	57	53	50	55	51	48	54	49	47	53	48	45
			Array Edge	57	53	50	55	51	48	53	49	46	52	47	44	50	45	43	49	44	40	47	42	38
	D	0 to 7	Array Interior	62	57	55	60	55	53	58	53	51	56	52	49	55	50	47	53	48	45	51	46	43
			Array Edge	56	52	49	54	49	47	52	47	45	51	45	42	49	43	39	47	41	37	45	39	35
120 psf	B	0 to 7	Array Interior	62	59	58	61	58	56	60	57	55	59	55	53	58	54	52	57	53	50	55	51	49
			Array Edge	59	55	53	58	54	52	56	52	50	55	51	48	53	49	47	52	48	45	51	46	44
	C	0 to 7	Array Interior	60	56	54	58	55	52	57	53	51	55	51	49	54	50	48	53	49	46	51	47	45
			Array Edge	56	52	49	54	50	47	52	48	45	51	46	44	49	45	42	48	43	40	46	42	38
	D	0 to 7	Array Interior	60	56	54	58	54	52	57	52	50	55	51	48	54	49	46	52	47	45	51	46	43
			Array Edge	55	51	48	53	49	46	51	47	44	50	45	42	48	43	39	46	41	37	45	39	35