

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 1</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Portrait						
		Roof Angle: $0 < \theta \leq 7$ degrees												
		Exposure Category: C												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	81	81	81	81	74	69	64	60	58	57	53	
	10	80	80	80	79	78	74	69	64	60	58	57	53	
	20	67	67	67	67	67	67	66	64	60	58	57	53	
	30	57	57	57	57	57	57	57	57	57	57	56	53	
	40	50	50	50	50	50	50	50	50	50	50	50	50	
	50	45	45	45	45	45	45	45	45	45	45	45	45	45
	60	42	42	42	42	42	42	42	42	42	42	42	42	42
	70	39	39	39	39	39	39	39	39	39	39	39	39	39
	80	36	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 2	0	78	70	67	64	58	54	50	48	44	43	41	39	
	10	78	70	67	64	58	54	50	48	44	43	41	39	
	20	67	67	67	64	58	54	50	48	44	43	41	39	
	30	57	57	57	57	57	54	50	48	44	43	41	39	
	40	50	50	50	50	50	50	50	48	44	43	41	39	
	50	45	45	45	45	45	45	45	45	44	43	41	39	
	60	42	42	42	42	42	42	42	42	42	42	41	39	
	70	39	39	39	39	39	39	39	39	39	39	39	39	
	80	36	36	36	36	36	36	36	36	36	36	36	36	
90	34	34	34	34	34	34	34	34	34	34	34	34		
Zone 3	0	61	55	53	50	46	43	40	37	35	34	33	31	
	10	61	55	53	50	46	43	40	37	35	34	33	31	
	20	61	55	53	50	46	43	40	37	35	34	33	31	
	30	57	55	53	50	46	43	40	37	35	34	33	31	
	40	50	50	50	50	46	43	40	37	35	34	33	31	
	50	45	45	45	45	45	43	40	37	35	34	33	31	
	60	42	42	42	42	42	42	40	37	35	34	33	31	
	70	39	39	39	39	39	39	39	37	35	34	33	31	
	80	36	36	36	36	36	36	36	36	35	34	33	31	
90	34	34	34	34	34	34	34	34	34	34	33	31		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 2</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Portrait					
		Roof Angle: $0 < \theta \leq 7$ degrees											
		Exposure Category: D											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	79	72	67	62	58	54	53	51	48
	10	80	79	79	78	72	67	62	58	54	53	51	48
	20	67	67	67	67	67	66	62	58	54	53	51	48
	30	57	57	57	57	57	57	57	56	54	53	51	48
	40	50	50	50	50	50	50	50	50	50	50	50	48
	50	45	45	45	45	45	45	45	45	45	45	45	45
	60	42	42	42	42	42	42	42	42	42	42	42	42
	70	39	39	39	39	39	39	39	39	39	39	39	39
	80	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 2	0	70	63	60	57	53	49	45	42	40	39	37	35
	10	70	63	60	57	53	49	45	42	40	39	37	35
	20	67	63	60	57	53	49	45	42	40	39	37	35
	30	57	57	57	57	53	49	45	42	40	39	37	35
	40	50	50	50	50	50	49	45	42	40	39	37	35
	50	45	45	45	45	45	45	45	42	40	39	37	35
	60	42	42	42	42	42	42	42	42	40	39	37	35
	70	39	39	39	39	39	39	39	39	39	39	37	35
	80	36	36	36	36	36	36	36	36	36	36	36	35
90	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 3	0	55	50	48	45	42	39	36	34	32	31	30	28
	10	55	50	48	45	42	39	36	34	32	31	30	28
	20	55	50	48	45	42	39	36	34	32	31	30	28
	30	55	50	48	45	42	39	36	34	32	31	30	28
	40	50	50	48	45	42	39	36	34	32	31	30	28
	50	45	45	45	45	42	39	36	34	32	31	30	28
	60	42	42	42	42	42	39	36	34	32	31	30	28
	70	39	39	39	39	39	39	36	34	32	31	30	28
	80	36	36	36	36	36	36	36	34	32	31	30	28
90	34	34	34	34	34	34	34	34	32	31	30	28	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 3</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Portrait					
		Roof Angle: $7 < \theta \leq 27$ degrees											
		Exposure Category: C											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	81	81	76	71	66	62	60	59	55
	10	76	75	74	73	71	69	67	66	62	60	59	55
	20	61	61	61	61	60	59	58	56	55	55	54	53
	30	52	52	52	52	52	52	51	50	50	49	49	48
	40	45	45	45	45	45	45	45	45	45	45	45	44
	50	41	41	41	41	41	41	41	41	41	41	41	41
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	78	70	67	64	59	55	51	48	45	43	42	40
	10	76	70	67	64	59	55	51	48	45	43	42	40
	20	61	61	61	61	59	55	51	48	45	43	42	40
	30	52	52	52	52	52	52	51	48	45	43	42	40
	40	45	45	45	45	45	45	45	45	45	43	42	40
	50	41	41	41	41	41	41	41	41	41	41	41	40
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 3	0	62	56	54	52	48	44	41	38	36	35	34	32
	10	62	56	54	52	48	44	41	38	36	35	34	32
	20	61	56	54	52	48	44	41	38	36	35	34	32
	30	52	52	52	52	48	44	41	38	36	35	34	32
	40	45	45	45	45	45	44	41	38	36	35	34	32
	50	41	41	41	41	41	41	41	38	36	35	34	32
	60	38	38	38	38	38	38	38	38	36	35	34	32
	70	35	35	35	35	35	35	35	35	35	35	34	32
	80	33	33	33	33	33	33	33	33	33	33	33	32
90	31	31	31	31	31	31	31	31	31	31	31	31	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 4</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Portrait						
		Roof Angle: $7 < \theta \leq 27$ degrees												
		Exposure Category: D												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	81	81	81	74	69	64	60	56	55	53	50	
	10	74	73	72	71	69	67	64	60	56	55	53	50	
	20	61	61	60	60	58	57	56	55	53	53	52	50	
	30	52	52	52	52	52	51	50	49	48	48	48	46	
	40	45	45	45	45	45	45	45	45	44	44	43	43	
	50	41	41	41	41	41	41	41	41	41	41	41	40	40
	60	38	38	38	38	38	38	38	38	38	38	38	38	37
	70	35	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	70	64	61	58	53	50	46	43	41	39	38	36	
	10	70	64	61	58	53	50	46	43	41	39	38	36	
	20	61	61	60	58	53	50	46	43	41	39	38	36	
	30	52	52	52	52	52	50	46	43	41	39	38	36	
	40	45	45	45	45	45	45	45	43	41	39	38	36	
	50	41	41	41	41	41	41	41	41	41	39	38	36	
	60	38	38	38	38	38	38	38	38	38	38	38	36	
	70	35	35	35	35	35	35	35	35	35	35	35	35	
	80	33	33	33	33	33	33	33	33	33	33	33	33	
90	31	31	31	31	31	31	31	31	31	31	31	31		
Zone 3	0	56	51	49	48	43	40	37	35	33	32	31	29	
	10	56	51	49	48	43	40	37	35	33	32	31	29	
	20	56	51	49	48	43	40	37	35	33	32	31	29	
	30	52	51	49	48	43	40	37	35	33	32	31	29	
	40	45	45	45	45	43	40	37	35	33	32	31	29	
	50	41	41	41	41	41	40	37	35	33	32	31	29	
	60	38	38	38	38	38	38	37	35	33	32	31	29	
	70	35	35	35	35	35	35	35	35	33	32	31	29	
	80	33	33	33	33	33	33	33	33	33	32	31	29	
90	31	31	31	31	31	31	31	31	31	31	31	29		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)											
			100	110	115	120	130	140	150	160	170	175	180	190
Zone 1		0	81	77	75	72	68	65	61	58	55	54	53	50
		10	72	70	68	67	65	62	60	58	55	54	53	50
		20	62	61	60	59	57	56	54	52	51	50	49	48
		30	56	54	54	53	52	51	49	48	48	46	46	45
		40	50	50	49	49	48	48	46	45	44	43	43	42
		50	45	45	45	45	45	44	43	42	41	41	40	40
		60	41	41	41	41	41	41	41	40	39	39	38	38
		70	39	39	39	39	39	39	39	38	37	37	37	36
		80	36	36	36	36	36	36	36	36	36	36	35	35
90	34	34	34	34	34	34	34	34	34	34	34	34	33	
Zone 2		0	81	77	75	72	68	64	60	56	53	51	50	48
		10	72	70	68	67	65	62	60	56	53	51	50	48
		20	62	61	60	59	57	56	54	52	51	50	49	48
		30	56	54	54	53	52	51	49	48	48	46	46	45
		40	50	50	49	49	48	48	46	45	44	43	43	42
		50	45	45	45	45	45	44	43	42	41	41	40	40
		60	41	41	41	41	41	41	41	40	39	39	38	38
		70	39	39	39	39	39	39	39	38	37	37	37	36
		80	36	36	36	36	36	36	36	36	36	36	35	35
90	34	34	34	34	34	34	34	34	34	34	34	34	33	
Zone 3		0	81	77	75	72	68	64	60	56	53	51	50	48
		10	72	70	68	67	65	62	60	56	53	51	50	48
		20	62	61	60	59	57	56	54	52	51	50	49	48
		30	56	54	54	53	52	51	49	48	48	46	46	45
		40	50	50	49	49	48	48	46	45	44	43	43	42
		50	45	45	45	45	45	44	43	42	41	41	40	40
		60	41	41	41	41	41	41	41	40	39	39	38	38
		70	39	39	39	39	39	39	39	38	37	37	37	36
		80	36	36	36	36	36	36	36	36	36	36	35	35
90	34	34	34	34	34	34	34	34	34	34	34	34	33	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 6</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: D											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	77	72	70	68	64	60	57	54	51	50	49	46
	10	70	67	65	64	61	59	57	54	51	50	49	46
	20	61	59	58	57	55	53	51	50	48	48	48	45
	30	54	53	52	52	50	49	48	46	45	44	44	42
	40	50	49	48	48	48	45	44	43	42	42	41	40
	50	45	45	45	44	44	43	42	41	40	39	39	38
	60	41	41	41	41	41	40	40	39	38	38	37	36
	70	39	39	39	39	39	38	38	37	36	36	36	35
	80	36	36	36	36	36	36	36	35	35	34	34	34
90	34	34	34	34	34	34	34	34	34	33	33	33	32
Zone 2	0	77	72	70	68	63	58	54	51	48	48	45	43
	10	70	67	65	64	61	58	54	51	48	48	45	43
	20	61	59	58	57	55	53	51	50	48	48	45	43
	30	54	53	52	52	50	49	48	46	45	44	44	42
	40	50	49	48	48	48	45	44	43	42	42	41	40
	50	45	45	45	44	44	43	42	41	40	39	39	38
	60	41	41	41	41	41	40	40	39	38	38	37	36
	70	39	39	39	39	39	38	38	37	36	36	36	35
	80	36	36	36	36	36	36	36	35	35	34	34	34
90	34	34	34	34	34	34	34	34	34	33	33	33	32
Zone 3	0	77	72	70	68	63	58	54	51	48	48	45	43
	10	70	67	65	64	61	58	54	51	48	48	45	43
	20	61	59	58	57	55	53	51	50	48	48	45	43
	30	54	53	52	52	50	49	48	46	45	44	44	42
	40	50	49	48	48	48	45	44	43	42	42	41	40
	50	45	45	45	44	44	43	42	41	40	39	39	38
	60	41	41	41	41	41	40	40	39	38	38	37	36
	70	39	39	39	39	39	38	38	37	36	36	36	35
	80	36	36	36	36	36	36	36	35	35	34	34	34
90	34	34	34	34	34	34	34	34	34	33	33	33	32

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 7</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Landscape						
		Roof Angle: $0 < \theta \leq 7$ degrees												
		Exposure Category: C												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	95	95	95	94	87	81	76	74	72	68	
	10	94	94	93	93	92	91	87	81	76	74	72	68	
	20	79	79	79	79	79	79	79	79	76	74	72	68	
	30	70	70	70	70	70	70	70	70	70	70	70	68	
	40	64	64	64	64	64	64	64	64	64	64	64	64	
	50	58	58	58	58	58	58	58	58	58	58	58	58	58
	60	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	49	49	49	49	49	49	49	49	49	49	49	49	49
	80	46	46	46	46	46	46	46	46	46	46	46	46	46
90	44	44	44	44	44	44	44	44	44	44	44	44	44	
Zone 2	0	95	89	85	81	74	69	64	60	56	54	53	50	
	10	94	89	85	81	74	69	64	60	56	54	53	50	
	20	79	79	79	79	74	69	64	60	56	54	53	50	
	30	70	70	70	70	70	69	64	60	56	54	53	50	
	40	64	64	64	64	64	64	64	60	56	54	53	50	
	50	58	58	58	58	58	58	58	58	56	54	53	50	
	60	53	53	53	53	53	53	53	53	53	53	53	50	
	70	49	49	49	49	49	49	49	49	49	49	49	49	
	80	46	46	46	46	46	46	46	46	46	46	46	46	
90	44	44	44	44	44	44	44	44	44	44	44	44		
Zone 3	0	78	70	67	64	59	54	51	48	44	43	42	40	
	10	78	70	67	64	59	54	51	48	44	43	42	40	
	20	78	70	67	64	59	54	51	48	44	43	42	40	
	30	70	70	67	64	59	54	51	48	44	43	42	40	
	40	64	64	64	64	59	54	51	48	44	43	42	40	
	50	58	58	58	58	58	54	51	48	44	43	42	40	
	60	53	53	53	53	53	53	51	48	44	43	42	40	
	70	49	49	49	49	49	49	49	48	44	43	42	40	
	80	46	46	46	46	46	46	46	46	44	43	42	40	
90	44	44	44	44	44	44	44	44	44	43	42	40		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 8</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Landscape						
		Roof Angle: $0 < \theta \leq 7$ degrees												
		Exposure Category: D												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	95	95	92	85	79	73	69	67	65	61	
	10	94	93	92	92	90	85	79	73	69	67	65	61	
	20	79	79	79	79	79	79	78	73	69	67	65	61	
	30	70	70	70	70	70	70	70	70	69	67	65	61	
	40	64	64	64	64	64	64	64	64	64	64	64	61	
	50	58	58	58	58	58	58	58	58	58	58	58	58	58
	60	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	49	49	49	49	49	49	49	49	49	49	49	49	49
	80	46	46	46	46	46	46	46	46	46	46	46	46	46
90	44	44	44	44	44	44	44	44	44	44	44	44	44	
Zone 2	0	89	80	76	73	67	62	58	54	51	49	48	45	
	10	89	80	76	73	67	62	58	54	51	49	48	45	
	20	79	79	76	73	67	62	58	54	51	49	48	45	
	30	70	70	70	70	67	62	58	54	51	49	48	45	
	40	64	64	64	64	64	62	58	54	51	49	48	45	
	50	58	58	58	58	58	58	58	54	51	49	48	45	
	60	53	53	53	53	53	53	53	53	51	49	48	45	
	70	49	49	49	49	49	49	49	49	49	49	48	45	
	80	46	46	46	46	46	46	46	46	46	46	46	45	
90	44	44	44	44	44	44	44	44	44	44	44	44		
Zone 3	0	70	63	60	58	53	49	46	43	40	39	38	36	
	10	70	63	60	58	53	49	46	43	40	39	38	36	
	20	70	63	60	58	53	49	46	43	40	39	38	36	
	30	70	63	60	58	53	49	46	43	40	39	38	36	
	40	64	63	60	58	53	49	46	43	40	39	38	36	
	50	58	58	58	58	53	49	46	43	40	39	38	36	
	60	53	53	53	53	53	49	46	43	40	39	38	36	
	70	49	49	49	49	49	49	46	43	40	39	38	36	
	80	46	46	46	46	46	46	46	43	40	39	38	36	
90	44	44	44	44	44	44	44	44	43	40	39	38	36	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"



**Rail Spans for Quick Mount PV QRail Light System**

<b>Table 9</b>		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Landscape						
		Roof Angle: $7 < \theta \leq 27$ degrees												
		Exposure Category: C												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	95	95	95	95	90	84	79	77	74	70	
	10	93	91	91	90	88	87	85	83	79	77	74	70	
	20	78	78	78	77	76	75	73	72	70	70	69	68	
	30	65	65	65	65	65	65	65	64	63	62	62	61	
	40	58	58	58	58	58	58	58	58	57	57	57	56	
	50	52	52	52	52	52	52	52	52	52	52	52	52	52
	60	48	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 2	0	95	89	85	81	75	69	65	61	57	55	54	51	
	10	93	89	85	81	75	69	65	61	57	55	54	51	
	20	78	78	78	77	75	69	65	61	57	55	54	51	
	30	65	65	65	65	65	65	65	61	57	55	54	51	
	40	58	58	58	58	58	58	58	58	57	55	54	51	
	50	52	52	52	52	52	52	52	52	52	52	52	51	
	60	48	48	48	48	48	48	48	48	48	48	48	48	
	70	45	45	45	45	45	45	45	45	45	45	45	45	
	80	42	42	42	42	42	42	42	42	42	42	42	42	
90	40	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 3	0	79	72	68	65	60	56	52	49	46	44	43	41	
	10	79	72	68	65	60	56	52	49	46	44	43	41	
	20	78	72	68	65	60	56	52	49	46	44	43	41	
	30	65	65	65	65	60	56	52	49	46	44	43	41	
	40	58	58	58	58	58	56	52	49	46	44	43	41	
	50	52	52	52	52	52	52	52	49	46	44	43	41	
	60	48	48	48	48	48	48	48	48	46	44	43	41	
	70	45	45	45	45	45	45	45	45	45	44	43	41	
	80	42	42	42	42	42	42	42	42	42	42	42	41	
90	40	40	40	40	40	40	40	40	40	40	40	40		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 15$ ft					Panel Orientation: Landscape							
<b>Table 10</b>		Roof Angle: $7 < \theta \leq 27$ degrees					Exposure Category: D							
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	95	95	94	87	81	76	72	69	67	64	
	10	91	90	89	88	86	85	81	76	72	69	67	64	
	20	78	77	76	76	74	73	71	69	68	67	66	64	
	30	65	65	65	65	65	65	63	62	61	61	60	59	
	40	58	58	58	58	58	58	58	57	56	56	55	54	
	50	52	52	52	52	52	52	52	52	52	52	51	51	
	60	48	48	48	48	48	48	48	48	48	48	48	48	
	70	45	45	45	45	45	45	45	45	45	45	45	45	
	80	42	42	42	42	42	42	42	42	42	42	42	42	
90	40	40	40	40	40	40	40	40	40	40	40	40		
Zone 2	0	89	81	77	74	68	63	59	55	52	50	49	46	
	10	89	81	77	74	68	63	59	55	52	50	49	46	
	20	78	77	76	74	68	63	59	55	52	50	49	46	
	30	65	65	65	65	65	63	59	55	52	50	49	46	
	40	58	58	58	58	58	58	58	55	52	50	49	46	
	50	52	52	52	52	52	52	52	52	52	50	49	46	
	60	48	48	48	48	48	48	48	48	48	48	48	46	
	70	45	45	45	45	45	45	45	45	45	45	45	45	
	80	42	42	42	42	42	42	42	42	42	42	42	42	
90	40	40	40	40	40	40	40	40	40	40	40	40		
Zone 3	0	72	65	62	59	55	51	48	44	42	40	39	37	
	10	72	65	62	59	55	51	48	44	42	40	39	37	
	20	72	65	62	59	55	51	48	44	42	40	39	37	
	30	65	65	62	59	55	51	48	44	42	40	39	37	
	40	58	58	58	58	55	51	48	44	42	40	39	37	
	50	52	52	52	52	52	51	48	44	42	40	39	37	
	60	48	48	48	48	48	48	48	44	42	40	39	37	
	70	45	45	45	45	45	45	45	44	42	40	39	37	
	80	42	42	42	42	42	42	42	42	42	40	39	37	
90	40	40	40	40	40	40	40	40	40	40	39	37		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 15$ ft					Panel Orientation: Landscape							
<b>Table 11</b>		Roof Angle: $27 < \theta \leq 45$ degrees					Exposure Category: C							
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	93	91	87	82	78	74	70	69	67	64	
	10	92	88	87	85	82	79	76	73	70	69	67	64	
	20	79	77	76	75	73	71	68	66	64	63	62	61	
	30	71	69	68	68	66	64	63	61	60	59	58	57	
	40	63	63	63	62	61	60	58	57	56	55	54	53	
	50	57	57	57	57	57	56	55	54	52	52	51	50	
	60	53	53	53	53	53	52	52	51	50	49	49	48	
	70	49	49	49	49	49	49	49	48	48	48	48	46	
	80	46	46	46	46	46	46	46	46	45	45	45	44	
90	44	44	44	44	44	44	44	44	44	43	43	42		
Zone 2	0	95	95	93	91	87	81	76	71	67	65	63	60	
	10	92	88	87	85	82	79	76	71	67	65	63	60	
	20	79	77	76	75	73	71	68	66	64	63	62	60	
	30	71	69	68	68	66	64	63	61	60	59	58	57	
	40	63	63	63	62	61	60	58	57	56	55	54	53	
	50	57	57	57	57	57	56	55	54	52	52	51	50	
	60	53	53	53	53	53	52	52	51	50	49	49	48	
	70	49	49	49	49	49	49	49	48	48	48	48	46	
	80	46	46	46	46	46	46	46	46	45	45	45	44	
90	44	44	44	44	44	44	44	44	44	43	43	42		
Zone 3	0	95	95	93	91	87	81	76	71	67	65	63	60	
	10	92	88	87	85	82	79	76	71	67	65	63	60	
	20	79	77	76	75	73	71	68	66	64	63	62	60	
	30	71	69	68	68	66	64	63	61	60	59	58	57	
	40	63	63	63	62	61	60	58	57	56	55	54	53	
	50	57	57	57	57	57	56	55	54	52	52	51	50	
	60	53	53	53	53	53	52	52	51	50	49	49	48	
	70	49	49	49	49	49	49	49	48	48	48	48	46	
	80	46	46	46	46	46	46	46	46	45	45	45	44	
90	44	44	44	44	44	44	44	44	44	43	43	42		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 15$ ft						Panel Orientation: Landscape					
<b>Table 12</b>		Roof Angle: $27 < \theta \leq 45$ degrees						Exposure Category: D					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	90	88	86	81	76	72	68	65	63	62	59
	10	88	85	83	81	78	75	72	68	65	63	62	59
	20	77	75	73	72	70	68	65	63	61	60	59	57
	30	69	67	67	66	64	62	60	59	57	56	55	54
	40	63	62	61	61	59	58	56	55	54	53	52	51
	50	57	57	57	57	55	54	53	52	51	50	50	48
	60	53	53	53	53	52	51	50	49	48	48	48	46
	70	49	49	49	49	49	49	48	48	46	46	45	44
	80	46	46	46	46	46	46	46	45	44	44	43	43
90	44	44	44	44	44	44	44	43	43	42	42	41	
Zone 2	0	95	90	88	86	80	74	69	65	61	59	58	54
	10	88	85	83	81	78	74	69	65	61	59	58	54
	20	77	75	73	72	70	68	65	63	61	59	58	54
	30	69	67	67	66	64	62	60	59	57	56	55	54
	40	63	62	61	61	59	58	56	55	54	53	52	51
	50	57	57	57	57	55	54	53	52	51	50	50	48
	60	53	53	53	53	52	51	50	49	48	48	48	46
	70	49	49	49	49	49	49	48	48	46	46	45	44
	80	46	46	46	46	46	46	46	45	44	44	43	43
90	44	44	44	44	44	44	44	43	43	42	42	41	
Zone 3	0	95	90	88	86	80	74	69	65	61	59	58	54
	10	88	85	83	81	78	74	69	65	61	59	58	54
	20	77	75	73	72	70	68	65	63	61	59	58	54
	30	69	67	67	66	64	62	60	59	57	56	55	54
	40	63	62	61	61	59	58	56	55	54	53	52	51
	50	57	57	57	57	55	54	53	52	51	50	50	48
	60	53	53	53	53	52	51	50	49	48	48	48	46
	70	49	49	49	49	49	49	48	48	46	46	45	44
	80	46	46	46	46	46	46	46	45	44	44	43	43
90	44	44	44	44	44	44	44	43	43	42	42	41	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)												
			100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1		0	81	81	81	81	81	81	77	71	67	65	63	59	
		10	80	80	80	80	79	79	77	71	67	65	63	59	
		20	67	67	67	67	67	67	67	67	66	65	63	59	
		30	57	57	57	57	57	57	57	57	57	57	57	57	
		40	50	50	50	50	50	50	50	50	50	50	50	50	
		50	45	45	45	45	45	45	45	45	45	45	45	45	45
		60	42	42	42	42	42	42	42	42	42	42	42	42	42
		70	39	39	39	39	39	39	39	39	39	39	39	39	39
		80	36	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	34		
Zone 2		0	81	78	74	71	65	60	56	52	49	48	46	43	
		10	80	78	74	71	65	60	56	52	49	48	46	43	
		20	67	67	67	67	65	60	56	52	49	48	46	43	
		30	57	57	57	57	57	57	56	52	49	48	46	43	
		40	50	50	50	50	50	50	50	50	49	48	46	43	
		50	45	45	45	45	45	45	45	45	45	45	45	45	43
		60	42	42	42	42	42	42	42	42	42	42	42	42	42
		70	39	39	39	39	39	39	39	39	39	39	39	39	39
		80	36	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	34		
Zone 3		0	68	61	58	56	51	48	44	41	39	38	36	34	
		10	68	61	58	56	51	48	44	41	39	38	36	34	
		20	67	61	58	56	51	48	44	41	39	38	36	34	
		30	57	57	57	56	51	48	44	41	39	38	36	34	
		40	50	50	50	50	50	48	44	41	39	38	36	34	
		50	45	45	45	45	45	45	44	41	39	38	36	34	
		60	42	42	42	42	42	42	42	41	39	38	36	34	
		70	39	39	39	39	39	39	39	39	39	38	36	34	
		80	36	36	36	36	36	36	36	36	36	36	36	36	34
90	34	34	34	34	34	34	34	34	34	34	34	34	34		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft					Panel Orientation: Portrait							
<b>Table 14</b>		Roof Angle: $0 < \theta \leq 7$ degrees					Exposure Category: C							
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	81	81	81	75	69	64	59	56	54	52	49	
	10	80	79	79	78	75	69	64	59	56	54	52	49	
	20	67	67	67	67	67	66	64	59	56	54	52	49	
	30	57	57	57	57	57	57	57	57	56	54	52	49	
	40	50	50	50	50	50	50	50	50	50	50	50	49	
	50	45	45	45	45	45	45	45	45	45	45	45	45	
	60	42	42	42	42	42	42	42	42	42	42	42	42	
	70	39	39	39	39	39	39	39	39	39	39	39	39	
	80	36	36	36	36	36	36	36	36	36	36	36	36	
90	34	34	34	34	34	34	34	34	34	34	34	34		
Zone 2	0	72	65	62	59	54	50	48	44	41	40	38	36	
	10	72	65	62	59	54	50	48	44	41	40	38	36	
	20	67	65	62	59	54	50	48	44	41	40	38	36	
	30	57	57	57	57	54	50	48	44	41	40	38	36	
	40	50	50	50	50	50	50	48	44	41	40	38	36	
	50	45	45	45	45	45	45	45	44	41	40	38	36	
	60	42	42	42	42	42	42	42	42	41	40	38	36	
	70	39	39	39	39	39	39	39	39	39	39	38	36	
	80	36	36	36	36	36	36	36	36	36	36	36	36	
90	34	34	34	34	34	34	34	34	34	34	34	34		
Zone 3	0	57	51	49	48	43	40	37	35	32	32	31	29	
	10	57	51	49	48	43	40	37	35	32	32	31	29	
	20	57	51	49	48	43	40	37	35	32	32	31	29	
	30	57	51	49	48	43	40	37	35	32	32	31	29	
	40	50	50	49	48	43	40	37	35	32	32	31	29	
	50	45	45	45	45	43	40	37	35	32	32	31	29	
	60	42	42	42	42	42	40	37	35	32	32	31	29	
	70	39	39	39	39	39	39	37	35	32	32	31	29	
	80	36	36	36	36	36	36	36	35	32	32	31	29	
90	34	34	34	34	34	34	34	34	32	32	31	29		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Portrait						
<b>Table 15</b>		Roof Angle: $0 < \theta \leq 7$ degrees						Exposure Category: D						
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	81	78	74	68	63	58	54	51	49	48	45	
	10	79	78	78	74	68	63	58	54	51	49	48	45	
	20	67	67	67	67	66	63	58	54	51	49	48	45	
	30	57	57	57	57	57	57	57	54	51	49	48	45	
	40	50	50	50	50	50	50	50	50	50	49	48	45	
	50	45	45	45	45	45	45	45	45	45	45	45	45	45
	60	42	42	42	42	42	42	42	42	42	42	42	42	42
	70	39	39	39	39	39	39	39	39	39	39	39	39	39
	80	36	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 2	0	66	59	56	54	50	46	43	40	37	36	35	33	
	10	66	59	56	54	50	46	43	40	37	36	35	33	
	20	66	59	56	54	50	46	43	40	37	36	35	33	
	30	57	57	56	54	50	46	43	40	37	36	35	33	
	40	50	50	50	50	50	46	43	40	37	36	35	33	
	50	45	45	45	45	45	45	43	40	37	36	35	33	
	60	42	42	42	42	42	42	42	40	37	36	35	33	
	70	39	39	39	39	39	39	39	39	37	36	35	33	
	80	36	36	36	36	36	36	36	36	36	36	35	33	
90	34	34	34	34	34	34	34	34	34	34	34	34	33	
Zone 3	0	52	48	45	43	39	36	34	32	30	29	28	27	
	10	52	48	45	43	39	36	34	32	30	29	28	27	
	20	52	48	45	43	39	36	34	32	30	29	28	27	
	30	52	48	45	43	39	36	34	32	30	29	28	27	
	40	50	48	45	43	39	36	34	32	30	29	28	27	
	50	45	45	45	43	39	36	34	32	30	29	28	27	
	60	42	42	42	42	39	36	34	32	30	29	28	27	
	70	39	39	39	39	39	36	34	32	30	29	28	27	
	80	36	36	36	36	36	36	34	32	30	29	28	27	
90	34	34	34	34	34	34	34	34	32	30	29	28	27	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $7 < \theta \leq 27$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	81	81	81	78	73	69	67	65	61
	10	78	76	75	75	73	71	70	68	67	66	65	61
	20	61	61	61	61	61	60	59	58	57	57	56	55
	30	52	52	52	52	52	52	52	51	51	50	50	49
	40	45	45	45	45	45	45	45	45	45	45	45	45
	50	41	41	41	41	41	41	41	41	41	41	41	41
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	81	78	74	71	65	60	56	53	50	48	48	44
	10	78	76	74	71	65	60	56	53	50	48	48	44
	20	61	61	61	61	61	60	56	53	50	48	48	44
	30	52	52	52	52	52	52	52	51	50	48	48	44
	40	45	45	45	45	45	45	45	45	45	45	45	44
	50	41	41	41	41	41	41	41	41	41	41	41	41
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 3	0	69	62	59	57	52	49	45	42	40	39	38	36
	10	69	62	59	57	52	49	45	42	40	39	38	36
	20	61	61	59	57	52	49	45	42	40	39	38	36
	30	52	52	52	52	52	49	45	42	40	39	38	36
	40	45	45	45	45	45	45	45	42	40	39	38	36
	50	41	41	41	41	41	41	41	41	40	39	38	36
	60	38	38	38	38	38	38	38	38	38	38	38	36
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"



**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Portrait					
<b>Table 17</b>		Roof Angle: $7 < \theta \leq 27$ degrees						Exposure Category: C					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	81	76	71	66	61	58	56	54	52
	10	75	73	72	71	69	67	65	61	58	56	54	52
	20	61	61	60	60	59	58	56	55	54	53	53	52
	30	52	52	52	52	52	51	50	49	49	48	48	48
	40	45	45	45	45	45	45	45	45	44	44	44	43
	50	41	41	41	41	41	41	41	41	41	41	41	40
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	72	65	62	60	55	51	48	44	42	40	39	37
	10	72	65	62	60	55	51	48	44	42	40	39	37
	20	61	61	60	60	55	51	48	44	42	40	39	37
	30	52	52	52	52	52	51	48	44	42	40	39	37
	40	45	45	45	45	45	45	45	44	42	40	39	37
	50	41	41	41	41	41	41	41	41	41	40	39	37
	60	38	38	38	38	38	38	38	38	38	38	38	37
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 3	0	58	52	50	48	44	41	38	36	34	33	32	30
	10	58	52	50	48	44	41	38	36	34	33	32	30
	20	58	52	50	48	44	41	38	36	34	33	32	30
	30	52	52	50	48	44	41	38	36	34	33	32	30
	40	45	45	45	45	44	41	38	36	34	33	32	30
	50	41	41	41	41	41	41	38	36	34	33	32	30
	60	38	38	38	38	38	38	38	36	34	33	32	30
	70	35	35	35	35	35	35	35	35	34	33	32	30
	80	33	33	33	33	33	33	33	33	33	33	32	30
90	31	31	31	31	31	31	31	31	31	31	31	30	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)												
			100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1		0	81	81	79	76	70	65	60	56	53	51	50	48	
		10	73	71	70	69	67	65	60	56	53	51	50	48	
		20	61	60	59	59	57	56	55	53	52	51	50	48	
		30	52	52	52	52	51	50	49	48	48	48	46	45	
		40	45	45	45	45	45	45	45	44	43	43	43	42	
		50	41	41	41	41	41	41	41	41	40	40	40	39	
		60	38	38	38	38	38	38	38	38	38	38	38	37	37
		70	35	35	35	35	35	35	35	35	35	35	35	35	35
		80	33	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	31		
Zone 2		0	66	60	57	55	50	48	43	41	38	37	36	34	
		10	66	60	57	55	50	48	43	41	38	37	36	34	
		20	61	60	57	55	50	48	43	41	38	37	36	34	
		30	52	52	52	52	50	48	43	41	38	37	36	34	
		40	45	45	45	45	45	45	43	41	38	37	36	34	
		50	41	41	41	41	41	41	41	41	38	37	36	34	
		60	38	38	38	38	38	38	38	38	38	37	36	34	
		70	35	35	35	35	35	35	35	35	35	35	35	34	
		80	33	33	33	33	33	33	33	33	33	33	33	33	
90	31	31	31	31	31	31	31	31	31	31	31	31			
Zone 3		0	53	48	46	44	40	38	35	33	31	30	29	27	
		10	53	48	46	44	40	38	35	33	31	30	29	27	
		20	53	48	46	44	40	38	35	33	31	30	29	27	
		30	52	48	46	44	40	38	35	33	31	30	29	27	
		40	45	45	45	44	40	38	35	33	31	30	29	27	
		50	41	41	41	41	40	38	35	33	31	30	29	27	
		60	38	38	38	38	38	38	35	33	31	30	29	27	
		70	35	35	35	35	35	35	35	33	31	30	29	27	
		80	33	33	33	33	33	33	33	33	31	30	29	27	
90	31	31	31	31	31	31	31	31	31	30	29	27			

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	79	77	73	70	66	63	60	59	57	55
	10	75	72	71	70	68	65	63	61	59	58	57	55
	20	64	62	62	61	59	58	56	55	53	52	52	50
	30	56	56	55	55	53	52	51	50	49	48	48	48
	40	50	50	50	50	49	48	48	46	45	45	45	44
	50	45	45	45	45	45	45	44	43	43	42	42	41
	60	41	41	41	41	41	41	41	41	40	40	40	39
	70	39	39	39	39	39	39	39	39	38	38	38	37
	80	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 2	0	81	81	79	77	73	70	66	62	58	56	55	52
	10	75	72	71	70	68	65	63	61	58	56	55	52
	20	64	62	62	61	59	58	56	55	53	52	52	50
	30	56	56	55	55	53	52	51	50	49	48	48	48
	40	50	50	50	50	49	48	48	46	45	45	45	44
	50	45	45	45	45	45	45	44	43	43	42	42	41
	60	41	41	41	41	41	41	41	41	40	40	40	39
	70	39	39	39	39	39	39	39	39	38	38	38	37
	80	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	
Zone 3	0	81	81	79	77	73	70	66	62	58	56	55	52
	10	75	72	71	70	68	65	63	61	58	56	55	52
	20	64	62	62	61	59	58	56	55	53	52	52	50
	30	56	56	55	55	53	52	51	50	49	48	48	48
	40	50	50	50	50	49	48	48	46	45	45	45	44
	50	45	45	45	45	45	45	44	43	43	42	42	41
	60	41	41	41	41	41	41	41	41	40	40	40	39
	70	39	39	39	39	39	39	39	39	38	38	38	37
	80	36	36	36	36	36	36	36	36	36	36	36	36
90	34	34	34	34	34	34	34	34	34	34	34	34	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Portrait					
<b>Table 20</b>		Roof Angle: $27 < \theta \leq 45$ degrees						Exposure Category: C					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	78	73	71	69	65	61	58	55	52	51	50	48
	10	70	68	66	65	62	60	57	55	52	51	50	48
	20	61	59	58	57	56	54	52	50	49	48	48	46
	30	55	53	53	52	51	49	48	48	45	45	44	43
	40	50	49	49	48	48	46	45	44	43	42	42	40
	50	45	45	45	45	44	43	42	41	40	40	39	38
	60	41	41	41	41	41	41	40	39	38	38	37	37
	70	39	39	39	39	39	39	38	37	37	36	36	35
	80	36	36	36	36	36	36	36	36	35	35	34	34
90	34	34	34	34	34	34	34	34	34	34	33	33	33
Zone 2	0	78	73	71	69	64	60	56	52	49	48	46	44
	10	70	68	66	65	62	60	56	52	49	48	46	44
	20	61	59	58	57	56	54	52	50	49	48	46	44
	30	55	53	53	52	51	49	48	48	45	45	44	43
	40	50	49	49	48	48	46	45	44	43	42	42	40
	50	45	45	45	45	44	43	42	41	40	40	39	38
	60	41	41	41	41	41	41	40	39	38	38	37	37
	70	39	39	39	39	39	39	38	37	37	36	36	35
	80	36	36	36	36	36	36	36	36	35	35	34	34
90	34	34	34	34	34	34	34	34	34	34	33	33	33
Zone 3	0	78	73	71	69	64	60	56	52	49	48	46	44
	10	70	68	66	65	62	60	56	52	49	48	46	44
	20	61	59	58	57	56	54	52	50	49	48	46	44
	30	55	53	53	52	51	49	48	48	45	45	44	43
	40	50	49	49	48	48	46	45	44	43	42	42	40
	50	45	45	45	45	44	43	42	41	40	40	39	38
	60	41	41	41	41	41	41	40	39	38	38	37	37
	70	39	39	39	39	39	39	38	37	37	36	36	35
	80	36	36	36	36	36	36	36	36	35	35	34	34
90	34	34	34	34	34	34	34	34	34	34	33	33	33

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Portrait					
<b>Table 21</b>		Roof Angle: $27 < \theta \leq 45$ degrees						Exposure Category: D					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	74	69	67	65	61	57	54	51	49	48	46	44
	10	68	65	64	62	59	57	54	51	49	48	46	44
	20	60	58	57	56	54	52	50	48	46	46	45	43
	30	54	52	51	51	49	48	46	45	44	43	42	41
	40	49	48	48	48	46	44	43	42	41	40	40	39
	50	45	45	44	44	43	42	41	40	39	38	38	37
	60	41	41	41	41	40	40	39	38	37	37	36	35
	70	39	39	39	39	38	38	37	36	36	35	35	34
	80	36	36	36	36	36	36	35	35	34	34	33	33
90	34	34	34	34	34	34	34	34	33	33	33	32	32
Zone 2	0	74	69	67	64	59	55	51	48	45	44	43	40
	10	68	65	64	62	59	55	51	48	45	44	43	40
	20	60	58	57	56	54	52	50	48	45	44	43	40
	30	54	52	51	51	49	48	46	45	44	43	42	40
	40	49	48	48	48	46	44	43	42	41	40	40	39
	50	45	45	44	44	43	42	41	40	39	38	38	37
	60	41	41	41	41	40	40	39	38	37	37	36	35
	70	39	39	39	39	38	38	37	36	36	35	35	34
	80	36	36	36	36	36	36	35	35	34	34	33	33
90	34	34	34	34	34	34	34	34	33	33	33	32	32
Zone 3	0	74	69	67	64	59	55	51	48	45	44	43	40
	10	68	65	64	62	59	55	51	48	45	44	43	40
	20	60	58	57	56	54	52	50	48	45	44	43	40
	30	54	52	51	51	49	48	46	45	44	43	42	40
	40	49	48	48	48	46	44	43	42	41	40	40	39
	50	45	45	44	44	43	42	41	40	39	38	38	37
	60	41	41	41	41	40	40	39	38	37	37	36	35
	70	39	39	39	39	38	38	37	36	36	35	35	34
	80	36	36	36	36	36	36	35	35	34	34	33	33
90	34	34	34	34	34	34	34	34	33	33	33	32	32

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 67.5"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)													
			100	110	115	120	130	140	150	160	170	175	180	190		
Zone 1		0	95	95	95	95	95	95	95	95	91	85	82	80	75	
		10	94	94	94	94	93	92	91	90	90	85	82	80	75	
		20	79	79	79	79	79	79	79	79	79	79	79	79	78	75
		30	70	70	70	70	70	70	70	70	70	70	70	70	70	70
		40	64	64	64	64	64	64	64	64	64	64	64	64	64	64
		50	58	58	58	58	58	58	58	58	58	58	58	58	58	58
		60	53	53	53	53	53	53	53	53	53	53	53	53	53	53
		70	49	49	49	49	49	49	49	49	49	49	49	49	49	49
		80	46	46	46	46	46	46	46	46	46	46	46	46	46	46
90	44	44	44	44	44	44	44	44	44	44	44	44	44	44		
Zone 2		0	95	95	94	90	82	76	71	66	62	60	58	55		
		10	94	94	94	90	82	76	71	66	62	60	58	55		
		20	79	79	79	79	79	76	71	66	62	60	58	55		
		30	70	70	70	70	70	70	70	66	62	60	58	55		
		40	64	64	64	64	64	64	64	64	62	60	58	55		
		50	58	58	58	58	58	58	58	58	58	58	58	58	55	
		60	53	53	53	53	53	53	53	53	53	53	53	53	53	
		70	49	49	49	49	49	49	49	49	49	49	49	49	49	
		80	46	46	46	46	46	46	46	46	46	46	46	46	46	
90	44	44	44	44	44	44	44	44	44	44	44	44	44			
Zone 3		0	86	78	74	71	65	60	56	52	49	48	46	44		
		10	86	78	74	71	65	60	56	52	49	48	46	44		
		20	79	78	74	71	65	60	56	52	49	48	46	44		
		30	70	70	70	70	65	60	56	52	49	48	46	44		
		40	64	64	64	64	64	60	56	52	49	48	46	44		
		50	58	58	58	58	58	58	56	52	49	48	46	44		
		60	53	53	53	53	53	53	53	52	49	48	46	44		
		70	49	49	49	49	49	49	49	49	49	48	46	44		
		80	46	46	46	46	46	46	46	46	46	46	46	46	44	
90	44	44	44	44	44	44	44	44	44	44	44	44	44			

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft					Panel Orientation: Landscape							
<b>Table 23</b>		Roof Angle: $0 < \theta \leq 7$ degrees					Exposure Category: C							
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	95	95	95	95	95	87	81	75	71	69	67	63	
	10	94	93	92	92	91	87	81	75	71	69	67	63	
	20	79	79	79	79	79	79	78	75	71	69	67	63	
	30	70	70	70	70	70	70	70	70	70	69	67	63	
	40	64	64	64	64	64	64	64	64	64	64	64	63	
	50	58	58	58	58	58	58	58	58	58	58	58	58	58
	60	53	53	53	53	53	53	53	53	53	53	53	53	53
	70	49	49	49	49	49	49	49	49	49	49	49	49	49
	80	46	46	46	46	46	46	46	46	46	46	46	46	46
90	44	44	44	44	44	44	44	44	44	44	44	44	44	
Zone 2	0	91	82	78	75	69	64	59	55	52	50	49	46	
	10	91	82	78	75	69	64	59	55	52	50	49	46	
	20	79	79	78	75	69	64	59	55	52	50	49	46	
	30	70	70	70	70	69	64	59	55	52	50	49	46	
	40	64	64	64	64	64	64	59	55	52	50	49	46	
	50	58	58	58	58	58	58	58	55	52	50	49	46	
	60	53	53	53	53	53	53	53	53	52	50	49	46	
	70	49	49	49	49	49	49	49	49	49	49	49	46	
	80	46	46	46	46	46	46	46	46	46	46	46	46	
90	44	44	44	44	44	44	44	44	44	44	44	44		
Zone 3	0	72	65	62	59	55	50	48	44	41	40	39	37	
	10	72	65	62	59	55	50	48	44	41	40	39	37	
	20	72	65	62	59	55	50	48	44	41	40	39	37	
	30	70	65	62	59	55	50	48	44	41	40	39	37	
	40	64	64	62	59	55	50	48	44	41	40	39	37	
	50	58	58	58	58	55	50	48	44	41	40	39	37	
	60	53	53	53	53	53	50	48	44	41	40	39	37	
	70	49	49	49	49	49	49	48	44	41	40	39	37	
	80	46	46	46	46	46	46	46	44	41	40	39	37	
90	44	44	44	44	44	44	44	44	41	40	39	37		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Landscape					
<b>Table 24</b>		Roof Angle: $0 < \theta \leq 7$ degrees						Exposure Category: D					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	95	95	94	86	80	74	69	65	63	61	58
	10	93	92	91	91	86	80	74	69	65	63	61	58
	20	79	79	79	79	79	78	74	69	65	63	61	58
	30	70	70	70	70	70	70	70	69	65	63	61	58
	40	64	64	64	64	64	64	64	64	64	63	61	58
	50	58	58	58	58	58	58	58	58	58	58	58	57
	60	53	53	53	53	53	53	53	53	53	53	53	53
	70	49	49	49	49	49	49	49	49	49	49	49	49
	80	46	46	46	46	46	46	46	46	46	46	46	46
90	44	44	44	44	44	44	44	44	44	44	44	44	
Zone 2	0	83	75	72	69	63	58	54	51	48	46	45	42
	10	83	75	72	69	63	58	54	51	48	46	45	42
	20	79	75	72	69	63	58	54	51	48	46	45	42
	30	70	70	70	69	63	58	54	51	48	46	45	42
	40	64	64	64	64	63	58	54	51	48	46	45	42
	50	58	58	58	58	58	58	54	51	48	46	45	42
	60	53	53	53	53	53	53	53	51	48	46	45	42
	70	49	49	49	49	49	49	49	49	48	46	45	42
	80	46	46	46	46	46	46	46	46	46	46	45	42
90	44	44	44	44	44	44	44	44	44	44	44	42	
Zone 3	0	66	59	57	54	50	46	43	40	38	37	36	34
	10	66	59	57	54	50	46	43	40	38	37	36	34
	20	66	59	57	54	50	46	43	40	38	37	36	34
	30	66	59	57	54	50	46	43	40	38	37	36	34
	40	64	59	57	54	50	46	43	40	38	37	36	34
	50	58	58	57	54	50	46	43	40	38	37	36	34
	60	53	53	53	53	50	46	43	40	38	37	36	34
	70	49	49	49	49	49	46	43	40	38	37	36	34
	80	46	46	46	46	46	46	43	40	38	37	36	34
90	44	44	44	44	44	44	44	43	40	38	37	36	34

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"



**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Landscape					
<b>Table 25</b>		Roof Angle: $7 < \theta \leq 27$ degrees						Exposure Category: B					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	95	95	95	95	95	95	93	87	85	82	78
	10	94	93	92	92	90	89	87	86	85	83	82	78
	20	78	78	78	78	78	76	75	74	73	72	71	70
	30	65	65	65	65	65	65	65	65	65	64	64	63
	40	58	58	58	58	58	58	58	58	58	58	58	57
	50	52	52	52	52	52	52	52	52	52	52	52	52
	60	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 2	0	95	95	94	90	83	77	72	67	63	61	59	56
	10	94	93	92	90	83	77	72	67	63	61	59	56
	20	78	78	78	78	78	76	72	67	63	61	59	56
	30	65	65	65	65	65	65	65	65	63	61	59	56
	40	58	58	58	58	58	58	58	58	58	58	58	56
	50	52	52	52	52	52	52	52	52	52	52	52	52
	60	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 3	0	87	79	76	72	67	62	58	54	51	49	48	45
	10	87	79	76	72	67	62	58	54	51	49	48	45
	20	78	78	76	72	67	62	58	54	51	49	48	45
	30	65	65	65	65	65	62	58	54	51	49	48	45
	40	58	58	58	58	58	58	58	54	51	49	48	45
	50	52	52	52	52	52	52	52	52	51	49	48	45
	60	48	48	48	48	48	48	48	48	48	48	48	45
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Landscape					
<b>Table 26</b>		Roof Angle: $7 < \theta \leq 27$ degrees						Exposure Category: C					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	95	95	95	95	90	83	78	73	71	69	65
	10	92	90	89	89	87	85	83	78	73	71	69	65
	20	78	78	77	76	75	73	72	70	69	68	67	65
	30	65	65	65	65	65	65	64	63	62	61	61	59
	40	58	58	58	58	58	58	58	57	56	56	56	55
	50	52	52	52	52	52	52	52	52	52	52	52	51
	60	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 2	0	91	83	79	76	70	65	60	56	53	51	50	48
	10	91	83	79	76	70	65	60	56	53	51	50	48
	20	78	78	77	76	70	65	60	56	53	51	50	48
	30	65	65	65	65	65	65	60	56	53	51	50	48
	40	58	58	58	58	58	58	58	56	53	51	50	48
	50	52	52	52	52	52	52	52	52	52	51	50	48
	60	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 3	0	73	67	64	61	56	52	48	45	43	41	40	38
	10	73	67	64	61	56	52	48	45	43	41	40	38
	20	73	67	64	61	56	52	48	45	43	41	40	38
	30	65	65	64	61	56	52	48	45	43	41	40	38
	40	58	58	58	58	56	52	48	45	43	41	40	38
	50	52	52	52	52	52	52	48	45	43	41	40	38
	60	48	48	48	48	48	48	48	45	43	41	40	38
	70	45	45	45	45	45	45	45	45	43	41	40	38
	80	42	42	42	42	42	42	42	42	42	41	40	38
90	40	40	40	40	40	40	40	40	40	40	40	38	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Landscape					
<b>Table 27</b>		Roof Angle: $7 < \theta \leq 27$ degrees						Exposure Category: D					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	95	95	95	89	82	77	72	67	65	63	60
	10	90	89	88	87	85	82	77	72	67	65	63	60
	20	78	76	75	75	73	71	70	68	66	65	63	60
	30	65	65	65	65	65	64	62	61	60	59	59	58
	40	58	58	58	58	58	58	57	56	55	55	54	53
	50	52	52	52	52	52	52	52	52	51	51	51	50
	60	48	48	48	48	48	48	48	48	48	48	48	48
	70	45	45	45	45	45	45	45	45	45	45	45	45
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 2	0	84	76	73	69	64	59	55	52	49	48	46	43
	10	84	76	73	69	64	59	55	52	49	48	46	43
	20	78	76	73	69	64	59	55	52	49	48	46	43
	30	65	65	65	65	64	59	55	52	49	48	46	43
	40	58	58	58	58	58	58	55	52	49	48	46	43
	50	52	52	52	52	52	52	52	52	49	48	46	43
	60	48	48	48	48	48	48	48	48	48	48	46	43
	70	45	45	45	45	45	45	45	45	45	45	45	43
	80	42	42	42	42	42	42	42	42	42	42	42	42
90	40	40	40	40	40	40	40	40	40	40	40	40	
Zone 3	0	67	61	58	56	51	48	44	42	39	38	37	35
	10	67	61	58	56	51	48	44	42	39	38	37	35
	20	67	61	58	56	51	48	44	42	39	38	37	35
	30	65	61	58	56	51	48	44	42	39	38	37	35
	40	58	58	58	56	51	48	44	42	39	38	37	35
	50	52	52	52	52	51	48	44	42	39	38	37	35
	60	48	48	48	48	48	48	44	42	39	38	37	35
	70	45	45	45	45	45	45	44	42	39	38	37	35
	80	42	42	42	42	42	42	42	42	39	38	37	35
90	40	40	40	40	40	40	40	40	39	38	37	35	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

Table 28		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Landscape					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	95	95	95	92	88	84	80	76	74	73	70
	10	95	92	90	89	86	83	80	77	75	74	72	70
	20	81	79	78	77	75	73	71	69	68	67	66	64
	30	71	71	70	69	68	66	65	64	62	61	61	59
	40	63	63	63	63	62	61	60	59	58	57	57	55
	50	57	57	57	57	57	57	56	55	54	54	53	52
	60	53	53	53	53	53	53	53	52	51	51	50	50
	70	49	49	49	49	49	49	49	49	49	48	48	48
	80	46	46	46	46	46	46	46	46	46	46	46	45
90	44	44	44	44	44	44	44	44	44	44	44	43	
Zone 2	0	95	95	95	95	92	88	84	78	74	72	70	66
	10	95	92	90	89	86	83	80	77	74	72	70	66
	20	81	79	78	77	75	73	71	69	68	67	66	64
	30	71	71	70	69	68	66	65	64	62	61	61	59
	40	63	63	63	63	62	61	60	59	58	57	57	55
	50	57	57	57	57	57	57	56	55	54	54	53	52
	60	53	53	53	53	53	53	53	52	51	51	50	50
	70	49	49	49	49	49	49	49	49	49	48	48	48
	80	46	46	46	46	46	46	46	46	46	46	46	45
90	44	44	44	44	44	44	44	44	44	44	44	43	
Zone 3	0	95	95	95	95	92	88	84	78	74	72	70	66
	10	95	92	90	89	86	83	80	77	74	72	70	66
	20	81	79	78	77	75	73	71	69	68	67	66	64
	30	71	71	70	69	68	66	65	64	62	61	61	59
	40	63	63	63	63	62	61	60	59	58	57	57	55
	50	57	57	57	57	57	57	56	55	54	54	53	52
	60	53	53	53	53	53	53	53	52	51	51	50	50
	70	49	49	49	49	49	49	49	49	49	48	48	48
	80	46	46	46	46	46	46	46	46	46	46	46	45
90	44	44	44	44	44	44	44	44	44	44	44	43	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $15 < h \leq 30$ ft						Panel Orientation: Landscape					
<b>Table 29</b>		Roof Angle: $27 < \theta \leq 45$ degrees						Exposure Category: C					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	95	92	90	87	82	78	74	70	66	65	63	60
	10	89	86	84	82	79	76	73	70	66	65	63	60
	20	78	75	74	73	71	68	66	64	62	61	60	58
	30	70	68	67	66	64	63	61	59	58	57	56	55
	40	63	62	62	61	60	58	57	55	54	53	53	51
	50	57	57	57	57	56	55	53	52	51	51	50	49
	60	53	53	53	53	53	52	51	50	49	48	48	48
	70	49	49	49	49	49	49	48	48	46	46	46	45
	80	46	46	46	46	46	46	46	45	45	44	44	43
90	44	44	44	44	44	44	44	43	43	42	42	41	
Zone 2	0	95	92	90	87	81	76	71	66	62	61	59	56
	10	89	86	84	82	79	76	71	66	62	61	59	56
	20	78	75	74	73	71	68	66	64	62	61	59	56
	30	70	68	67	66	64	63	61	59	58	57	56	55
	40	63	62	62	61	60	58	57	55	54	53	53	51
	50	57	57	57	57	56	55	53	52	51	51	50	49
	60	53	53	53	53	53	52	51	50	49	48	48	48
	70	49	49	49	49	49	49	48	48	46	46	46	45
	80	46	46	46	46	46	46	46	45	45	44	44	43
90	44	44	44	44	44	44	44	43	43	42	42	41	
Zone 3	0	95	92	90	87	81	76	71	66	62	61	59	56
	10	89	86	84	82	79	76	71	66	62	61	59	56
	20	78	75	74	73	71	68	66	64	62	61	59	56
	30	70	68	67	66	64	63	61	59	58	57	56	55
	40	63	62	62	61	60	58	57	55	54	53	53	51
	50	57	57	57	57	56	55	53	52	51	51	50	49
	60	53	53	53	53	53	52	51	50	49	48	48	48
	70	49	49	49	49	49	49	48	48	46	46	46	45
	80	46	46	46	46	46	46	46	45	45	44	44	43
90	44	44	44	44	44	44	44	43	43	42	42	41	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)										
			100	110	115	120	130	140	150	160	170	175	180
Zone 1	0	92	88	85	82	77	73	69	65	62	60	59	56
	10	86	82	81	79	76	72	69	65	62	60	59	56
	20	76	73	72	71	68	66	63	61	59	58	57	55
	30	68	66	65	64	62	61	59	57	55	54	54	52
	40	62	61	60	60	58	57	55	54	52	51	51	49
	50	57	57	56	56	54	53	52	51	49	49	48	48
	60	53	53	53	52	51	50	49	48	48	48	46	45
	70	49	49	49	49	49	48	48	46	45	45	44	43
	80	46	46	46	46	46	46	45	44	43	43	43	42
Zone 2	90	44	44	44	44	44	44	43	43	42	41	41	40
	0	92	88	85	81	75	70	65	61	57	56	54	51
	10	86	82	81	79	75	70	65	61	57	56	54	51
	20	76	73	72	71	68	66	63	61	57	56	54	51
	30	68	66	65	64	62	61	59	57	55	54	54	51
	40	62	61	60	60	58	57	55	54	52	51	51	49
	50	57	57	56	56	54	53	52	51	49	49	48	48
	60	53	53	53	52	51	50	49	48	48	48	46	45
	70	49	49	49	49	49	48	48	46	45	45	44	43
Zone 3	80	46	46	46	46	46	46	45	44	43	43	43	42
	90	44	44	44	44	44	44	43	43	42	41	41	40
	0	92	88	85	81	75	70	65	61	57	56	54	51
	10	86	82	81	79	75	70	65	61	57	56	54	51
	20	76	73	72	71	68	66	63	61	57	56	54	51
	30	68	66	65	64	62	61	59	57	55	54	54	51
	40	62	61	60	60	58	57	55	54	52	51	51	49
	50	57	57	56	56	54	53	52	51	49	49	48	48
	60	53	53	53	52	51	50	49	48	48	48	46	45
70	49	49	49	49	49	48	48	46	45	45	44	43	
80	46	46	46	46	46	46	45	44	43	43	43	42	
90	44	44	44	44	44	44	44	43	43	42	41	41	40

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in landscape orientation with a maximum width of 42"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
<b>Table 31</b>		Roof Angle: $0 < \theta \leq 7$ degrees						Exposure Category: B					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	81	81	78	72	67	62	61	59	55
	10	77	77	77	77	76	75	72	67	62	61	59	55
	20	63	63	63	63	63	63	63	63	62	61	59	55
	30	53	53	53	53	53	53	53	53	53	53	53	53
	40	48	48	48	48	48	48	48	48	48	48	48	48
	50	42	42	42	42	42	42	42	42	42	42	42	42
	60	39	39	39	39	39	39	39	39	39	39	39	39
	70	36	36	36	36	36	36	36	36	36	36	36	36
	80	34	34	34	34	34	34	34	34	34	34	34	34
90	32	32	32	32	32	32	32	32	32	32	32	32	
Zone 2	0	81	73	69	66	61	56	52	49	46	44	43	41
	10	77	73	69	66	61	56	52	49	46	44	43	41
	20	63	63	63	63	61	56	52	49	46	44	43	41
	30	53	53	53	53	53	53	52	49	46	44	43	41
	40	48	48	48	48	48	48	48	48	46	44	43	41
	50	42	42	42	42	42	42	42	42	42	42	42	41
	60	39	39	39	39	39	39	39	39	39	39	39	39
	70	36	36	36	36	36	36	36	36	36	36	36	36
	80	34	34	34	34	34	34	34	34	34	34	34	34
90	32	32	32	32	32	32	32	32	32	32	32	32	
Zone 3	0	64	57	55	52	48	44	41	39	36	35	34	32
	10	64	57	55	52	48	44	41	39	36	35	34	32
	20	63	57	55	52	48	44	41	39	36	35	34	32
	30	53	53	53	52	48	44	41	39	36	35	34	32
	40	48	48	48	48	48	44	41	39	36	35	34	32
	50	42	42	42	42	42	42	41	39	36	35	34	32
	60	39	39	39	39	39	39	39	39	36	35	34	32
	70	36	36	36	36	36	36	36	36	36	35	34	32
	80	34	34	34	34	34	34	34	34	34	34	34	32
90	32	32	32	32	32	32	32	32	32	32	32	32	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft					Panel Orientation: Portrait							
		Roof Angle: $0 < \theta \leq 7$ degrees												
		Exposure Category: C												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	81	80	76	70	64	60	56	52	51	49	46	
	10	77	76	75	75	70	64	60	56	52	51	49	46	
	20	63	63	63	63	63	62	60	56	52	51	49	46	
	30	53	53	53	53	53	53	53	53	52	51	49	46	
	40	48	48	48	48	48	48	48	48	48	48	48	46	
	50	42	42	42	42	42	42	42	42	42	42	42	42	
	60	39	39	39	39	39	39	39	39	39	39	39	39	
	70	36	36	36	36	36	36	36	36	36	36	36	36	
	80	34	34	34	34	34	34	34	34	34	34	34	34	
90	32	32	32	32	32	32	32	32	32	32	32	32		
Zone 2	0	67	61	58	55	51	48	44	41	38	37	36	34	
	10	67	61	58	55	51	48	44	41	38	37	36	34	
	20	63	61	58	55	51	48	44	41	38	37	36	34	
	30	53	53	53	53	51	48	44	41	38	37	36	34	
	40	48	48	48	48	48	48	44	41	38	37	36	34	
	50	42	42	42	42	42	42	42	41	38	37	36	34	
	60	39	39	39	39	39	39	39	39	38	37	36	34	
	70	36	36	36	36	36	36	36	36	36	36	36	34	
	80	34	34	34	34	34	34	34	34	34	34	34	34	
90	32	32	32	32	32	32	32	32	32	32	32	32		
Zone 3	0	53	48	46	44	40	37	35	32	30	29	29	27	
	10	53	48	46	44	40	37	35	32	30	29	29	27	
	20	53	48	46	44	40	37	35	32	30	29	29	27	
	30	53	48	46	44	40	37	35	32	30	29	29	27	
	40	48	48	46	44	40	37	35	32	30	29	29	27	
	50	42	42	42	42	40	37	35	32	30	29	29	27	
	60	39	39	39	39	39	37	35	32	30	29	29	27	
	70	36	36	36	36	36	36	35	32	30	29	29	27	
	80	34	34	34	34	34	34	34	32	30	29	29	27	
90	32	32	32	32	32	32	32	32	30	29	29	27		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"



**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $0 < \theta \leq 7$ degrees											
		Exposure Category: D											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	77	73	69	64	59	54	51	48	46	45	42
	10	76	75	73	69	64	59	54	51	48	46	45	42
	20	63	63	63	63	62	59	54	51	48	46	45	42
	30	53	53	53	53	53	53	53	51	48	46	45	42
	40	48	48	48	48	48	48	48	48	48	46	45	42
	50	42	42	42	42	42	42	42	42	42	42	42	42
	60	39	39	39	39	39	39	39	39	39	39	39	39
	70	36	36	36	36	36	36	36	36	36	36	36	36
	80	34	34	34	34	34	34	34	34	34	34	34	34
90	32	32	32	32	32	32	32	32	32	32	32	32	
Zone 2	0	61	55	53	50	46	43	40	37	35	34	33	31
	10	61	55	53	50	46	43	40	37	35	34	33	31
	20	61	55	53	50	46	43	40	37	35	34	33	31
	30	53	53	53	50	46	43	40	37	35	34	33	31
	40	48	48	48	48	46	43	40	37	35	34	33	31
	50	42	42	42	42	42	42	40	37	35	34	33	31
	60	39	39	39	39	39	39	39	37	35	34	33	31
	70	36	36	36	36	36	36	36	36	35	34	33	31
	80	34	34	34	34	34	34	34	34	34	34	33	31
90	32	32	32	32	32	32	32	32	32	32	32	31	
Zone 3	0	48	44	42	40	37	34	32	30	28	27	26	25
	10	48	44	42	40	37	34	32	30	28	27	26	25
	20	48	44	42	40	37	34	32	30	28	27	26	25
	30	48	44	42	40	37	34	32	30	28	27	26	25
	40	48	44	42	40	37	34	32	30	28	27	26	25
	50	42	42	42	40	37	34	32	30	28	27	26	25
	60	39	39	39	39	37	34	32	30	28	27	26	25
	70	36	36	36	36	36	34	32	30	28	27	26	25
	80	34	34	34	34	34	34	32	30	28	27	26	25
90	32	32	32	32	32	32	32	30	28	27	26	25	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $7 < \theta \leq 27$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	81	81	79	73	69	64	62	61	57
	10	73	71	71	70	68	67	65	64	62	62	61	57
	20	57	57	57	57	57	56	55	54	53	53	53	52
	30	48	48	48	48	48	48	48	48	48	48	48	46
	40	42	42	42	42	42	42	42	42	42	42	42	42
	50	38	38	38	38	38	38	38	38	38	38	38	38
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	80	73	69	66	61	57	53	49	46	45	44	41
	10	73	71	69	66	61	57	53	49	46	45	44	41
	20	57	57	57	57	57	56	53	49	46	45	44	41
	30	48	48	48	48	48	48	48	48	46	45	44	41
	40	42	42	42	42	42	42	42	42	42	42	42	41
	50	38	38	38	38	38	38	38	38	38	38	38	38
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 3	0	64	58	56	53	49	45	42	40	37	36	35	33
	10	64	58	56	53	49	45	42	40	37	36	35	33
	20	57	57	56	53	49	45	42	40	37	36	35	33
	30	48	48	48	48	48	45	42	40	37	36	35	33
	40	42	42	42	42	42	42	42	40	37	36	35	33
	50	38	38	38	38	38	38	38	38	37	36	35	33
	60	35	35	35	35	35	35	35	35	35	35	35	33
	70	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $7 < \theta \leq 27$ degrees											
		Exposure Category: C											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	81	81	81	78	71	66	62	58	54	52	51	48
	10	70	68	67	67	65	63	61	58	54	52	51	48
	20	57	57	57	56	55	54	53	52	51	50	49	48
	30	48	48	48	48	48	48	48	46	45	45	45	44
	40	42	42	42	42	42	42	42	42	42	41	41	40
	50	38	38	38	38	38	38	38	38	38	38	38	38
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	67	61	58	56	51	48	44	41	39	38	37	35
	10	67	61	58	56	51	48	44	41	39	38	37	35
	20	57	57	57	56	51	48	44	41	39	38	37	35
	30	48	48	48	48	48	48	44	41	39	38	37	35
	40	42	42	42	42	42	42	42	41	39	38	37	35
	50	38	38	38	38	38	38	38	38	38	38	37	35
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 3	0	54	49	48	45	41	38	36	33	31	30	30	28
	10	54	49	48	45	41	38	36	33	31	30	30	28
	20	54	49	48	45	41	38	36	33	31	30	30	28
	30	48	48	48	45	41	38	36	33	31	30	30	28
	40	42	42	42	42	41	38	36	33	31	30	30	28
	50	38	38	38	38	38	38	36	33	31	30	30	28
	60	35	35	35	35	35	35	35	33	31	30	30	28
	70	33	33	33	33	33	33	33	33	31	30	30	28
	80	31	31	31	31	31	31	31	31	31	30	30	28
90	29	29	29	29	29	29	29	29	29	29	29	28	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait						
		Roof Angle: $7 < \theta \leq 27$ degrees												
		Exposure Category: D												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	81	78	74	71	65	61	56	53	50	48	48	44	
	10	69	67	66	65	63	61	56	53	50	48	48	44	
	20	57	56	56	55	54	52	51	50	49	48	48	44	
	30	48	48	48	48	48	48	46	45	44	44	43	42	
	40	42	42	42	42	42	42	42	41	41	40	40	39	
	50	38	38	38	38	38	38	38	38	38	38	38	37	37
	60	35	35	35	35	35	35	35	35	35	35	35	35	35
	70	33	33	33	33	33	33	33	33	33	33	33	33	33
	80	31	31	31	31	31	31	31	31	31	31	31	31	31
90	29	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	62	56	53	51	48	44	41	38	36	35	34	32	
	10	62	56	53	51	48	44	41	38	36	35	34	32	
	20	57	56	53	51	48	44	41	38	36	35	34	32	
	30	48	48	48	48	48	44	41	38	36	35	34	32	
	40	42	42	42	42	42	42	41	38	36	35	34	32	
	50	38	38	38	38	38	38	38	38	36	35	34	32	
	60	35	35	35	35	35	35	35	35	35	35	34	32	
	70	33	33	33	33	33	33	33	33	33	33	33	32	
	80	31	31	31	31	31	31	31	31	31	31	31	31	
90	29	29	29	29	29	29	29	29	29	29	29	29		
Zone 3	0	50	45	43	41	38	35	33	31	29	28	27	26	
	10	50	45	43	41	38	35	33	31	29	28	27	26	
	20	50	45	43	41	38	35	33	31	29	28	27	26	
	30	48	45	43	41	38	35	33	31	29	28	27	26	
	40	42	42	42	41	38	35	33	31	29	28	27	26	
	50	38	38	38	38	38	35	33	31	29	28	27	26	
	60	35	35	35	35	35	35	33	31	29	28	27	26	
	70	33	33	33	33	33	33	33	31	29	28	27	26	
	80	31	31	31	31	31	31	31	31	29	28	27	26	
90	29	29	29	29	29	29	29	29	29	28	27	26		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait						
		Roof Angle: $27 < \theta \leq 45$ degrees												
		Exposure Category: B												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	80	76	74	72	69	65	62	59	56	55	54	51	
	10	70	68	66	65	63	61	59	57	55	54	53	51	
	20	60	58	58	57	56	54	53	51	50	49	48	48	
	30	52	52	52	51	50	49	48	48	46	45	45	44	
	40	46	46	46	46	46	45	44	43	43	42	42	41	
	50	42	42	42	42	42	42	41	41	40	40	39	38	
	60	39	39	39	39	39	39	39	39	38	38	37	37	36
	70	36	36	36	36	36	36	36	36	36	36	36	35	35
	80	34	34	34	34	34	34	34	34	34	34	34	34	33
90	32	32	32	32	32	32	32	32	32	32	32	32	32	
Zone 2	0	80	76	74	72	69	65	62	58	54	53	51	49	
	10	70	68	66	65	63	61	59	57	54	53	51	49	
	20	60	58	58	57	56	54	53	51	50	49	48	48	
	30	52	52	52	51	50	49	48	48	46	45	45	44	
	40	46	46	46	46	46	45	44	43	43	42	42	41	
	50	42	42	42	42	42	42	41	41	40	40	39	38	
	60	39	39	39	39	39	39	39	39	38	38	37	37	36
	70	36	36	36	36	36	36	36	36	36	36	36	35	35
	80	34	34	34	34	34	34	34	34	34	34	34	34	33
90	32	32	32	32	32	32	32	32	32	32	32	32	32	
Zone 3	0	80	76	74	72	69	65	62	58	54	53	51	49	
	10	70	68	66	65	63	61	59	57	54	53	51	49	
	20	60	58	58	57	56	54	53	51	50	49	48	48	
	30	52	52	52	51	50	49	48	48	46	45	45	44	
	40	46	46	46	46	46	45	44	43	43	42	42	41	
	50	42	42	42	42	42	42	41	41	40	40	39	38	
	60	39	39	39	39	39	39	39	39	38	38	37	37	36
	70	36	36	36	36	36	36	36	36	36	36	36	35	35
	80	34	34	34	34	34	34	34	34	34	34	34	34	33
90	32	32	32	32	32	32	32	32	32	32	32	32	32	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: C											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	73	69	66	64	61	57	54	51	49	48	48	44
	10	66	63	62	61	58	56	54	51	49	48	48	44
	20	57	55	55	54	52	50	49	48	46	45	44	43
	30	51	50	49	49	48	46	45	44	42	42	41	40
	40	46	46	45	45	44	43	42	41	40	39	39	38
	50	42	42	42	42	41	40	39	38	38	37	37	36
	60	39	39	39	39	39	38	37	37	36	35	35	34
	70	36	36	36	36	36	36	35	35	34	34	34	33
	80	34	34	34	34	34	34	34	34	33	33	32	32
90	32	32	32	32	32	32	32	32	32	31	31	31	30
Zone 2	0	73	69	66	64	60	56	52	49	46	45	43	41
	10	66	63	62	61	58	56	52	49	46	45	43	41
	20	57	55	55	54	52	50	49	48	46	45	43	41
	30	51	50	49	49	48	46	45	44	42	42	41	40
	40	46	46	45	45	44	43	42	41	40	39	39	38
	50	42	42	42	42	41	40	39	38	38	37	37	36
	60	39	39	39	39	39	38	37	37	36	35	35	34
	70	36	36	36	36	36	36	35	35	34	34	34	33
	80	34	34	34	34	34	34	34	34	33	33	32	32
90	32	32	32	32	32	32	32	32	32	31	31	31	30
Zone 3	0	73	69	66	64	60	56	52	49	46	45	43	41
	10	66	63	62	61	58	56	52	49	46	45	43	41
	20	57	55	55	54	52	50	49	48	46	45	43	41
	30	51	50	49	49	48	46	45	44	42	42	41	40
	40	46	46	45	45	44	43	42	41	40	39	39	38
	50	42	42	42	42	41	40	39	38	38	37	37	36
	60	39	39	39	39	39	38	37	37	36	35	35	34
	70	36	36	36	36	36	36	35	35	34	34	34	33
	80	34	34	34	34	34	34	34	34	33	33	32	32
90	32	32	32	32	32	32	32	32	32	31	31	31	30

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: D											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	69	65	62	60	57	54	51	48	45	44	43	41
	10	63	61	59	58	56	53	51	48	45	44	43	41
	20	56	54	53	52	50	48	48	45	44	43	42	41
	30	50	49	48	48	46	45	43	42	41	40	39	38
	40	46	45	44	44	43	42	41	39	38	38	37	36
	50	42	42	41	41	40	39	38	37	36	36	36	35
	60	39	39	39	39	38	37	36	35	35	34	34	33
	70	36	36	36	36	36	35	35	34	33	33	33	32
	80	34	34	34	34	34	34	33	33	32	32	31	31
90	32	32	32	32	32	32	32	31	31	30	30	30	
Zone 2	0	69	65	62	60	55	51	48	45	42	41	40	38
	10	63	61	59	58	55	51	48	45	42	41	40	38
	20	56	54	53	52	50	48	48	45	42	41	40	38
	30	50	49	48	48	46	45	43	42	41	40	39	38
	40	46	45	44	44	43	42	41	39	38	38	37	36
	50	42	42	41	41	40	39	38	37	36	36	36	35
	60	39	39	39	39	38	37	36	35	35	34	34	33
	70	36	36	36	36	36	35	35	34	33	33	33	32
	80	34	34	34	34	34	34	33	33	32	32	31	31
90	32	32	32	32	32	32	32	31	31	30	30	30	
Zone 3	0	69	65	62	60	55	51	48	45	42	41	40	38
	10	63	61	59	58	55	51	48	45	42	41	40	38
	20	56	54	53	52	50	48	48	45	42	41	40	38
	30	50	49	48	48	46	45	43	42	41	40	39	38
	40	46	45	44	44	43	42	41	39	38	38	37	36
	50	42	42	41	41	40	39	38	37	36	36	36	35
	60	39	39	39	39	38	37	36	35	35	34	34	33
	70	36	36	36	36	36	35	35	34	33	33	33	32
	80	34	34	34	34	34	34	33	33	32	32	31	31
90	32	32	32	32	32	32	32	31	31	30	30	30	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 77"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait						
		Roof Angle: $0 < \theta \leq 7$ degrees												
		Exposure Category: B												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	76	76	76	76	76	76	70	65	61	59	58	54	
	10	76	76	76	76	75	74	70	65	61	59	58	54	
	20	62	62	62	62	62	62	62	61	61	59	58	54	
	30	52	52	52	52	52	52	52	52	52	52	52	52	
	40	46	46	46	46	46	46	46	46	46	46	46	46	
	50	42	42	42	42	42	42	42	42	42	42	42	42	42
	60	38	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	76	72	68	65	60	55	51	48	45	43	42	40	
	10	76	72	68	65	60	55	51	48	45	43	42	40	
	20	62	62	62	62	60	55	51	48	45	43	42	40	
	30	52	52	52	52	52	52	51	48	45	43	42	40	
	40	46	46	46	46	46	46	46	46	45	43	42	40	
	50	42	42	42	42	42	42	42	42	42	42	42	40	
	60	38	38	38	38	38	38	38	38	38	38	38	38	
	70	35	35	35	35	35	35	35	35	35	35	35	35	
	80	33	33	33	33	33	33	33	33	33	33	33	33	
90	31	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 3	0	62	56	54	51	48	43	40	38	35	34	33	32	
	10	62	56	54	51	48	43	40	38	35	34	33	32	
	20	62	56	54	51	48	43	40	38	35	34	33	32	
	30	52	52	52	51	48	43	40	38	35	34	33	32	
	40	46	46	46	46	46	43	40	38	35	34	33	32	
	50	42	42	42	42	42	42	40	38	35	34	33	32	
	60	38	38	38	38	38	38	38	38	35	34	33	32	
	70	35	35	35	35	35	35	35	35	35	34	33	32	
	80	33	33	33	33	33	33	33	33	33	33	33	32	
90	31	31	31	31	31	31	31	31	31	31	31	31	31	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"



**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft					Panel Orientation: Portrait							
<b>Table 41</b>		Roof Angle: $0 < \theta \leq 7$ degrees					Exposure Category: C							
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	76	76	76	75	68	63	58	55	51	50	48	45	
	10	76	75	74	74	68	63	58	55	51	50	48	45	
	20	62	62	62	62	62	61	58	55	51	50	48	45	
	30	52	52	52	52	52	52	52	52	51	50	48	45	
	40	46	46	46	46	46	46	46	46	46	46	46	45	
	50	42	42	42	42	42	42	42	42	42	42	42	42	
	60	38	38	38	38	38	38	38	38	38	38	38	38	
	70	35	35	35	35	35	35	35	35	35	35	35	35	
	80	33	33	33	33	33	33	33	33	33	33	33	33	
90	31	31	31	31	31	31	31	31	31	31	31	31		
Zone 2	0	66	60	57	54	50	46	43	40	37	36	35	33	
	10	66	60	57	54	50	46	43	40	37	36	35	33	
	20	62	60	57	54	50	46	43	40	37	36	35	33	
	30	52	52	52	52	50	46	43	40	37	36	35	33	
	40	46	46	46	46	46	46	43	40	37	36	35	33	
	50	42	42	42	42	42	42	42	40	37	36	35	33	
	60	38	38	38	38	38	38	38	38	37	36	35	33	
	70	35	35	35	35	35	35	35	35	35	35	35	33	
	80	33	33	33	33	33	33	33	33	33	33	33	33	
90	31	31	31	31	31	31	31	31	31	31	31	31		
Zone 3	0	52	48	45	43	39	36	34	32	30	29	28	27	
	10	52	48	45	43	39	36	34	32	30	29	28	27	
	20	52	48	45	43	39	36	34	32	30	29	28	27	
	30	52	48	45	43	39	36	34	32	30	29	28	27	
	40	46	46	45	43	39	36	34	32	30	29	28	27	
	50	42	42	42	42	39	36	34	32	30	29	28	27	
	60	38	38	38	38	38	36	34	32	30	29	28	27	
	70	35	35	35	35	35	35	34	32	30	29	28	27	
	80	33	33	33	33	33	33	33	32	30	29	28	27	
90	31	31	31	31	31	31	31	31	30	29	28	27		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
<b>Table 42</b>		Roof Angle: $0 < \theta \leq 7$ degrees						Exposure Category: D					
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	76	75	71	68	62	58	53	50	48	45	44	42
	10	75	74	71	68	62	58	53	50	48	45	44	42
	20	62	62	62	62	61	58	53	50	48	45	44	42
	30	52	52	52	52	52	52	52	50	48	45	44	42
	40	46	46	46	46	46	46	46	46	46	45	44	42
	50	42	42	42	42	42	42	42	42	42	42	42	41
	60	38	38	38	38	38	38	38	38	38	38	38	38
	70	35	35	35	35	35	35	35	35	35	35	35	35
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 2	0	60	54	52	49	45	42	39	37	34	33	32	31
	10	60	54	52	49	45	42	39	37	34	33	32	31
	20	60	54	52	49	45	42	39	37	34	33	32	31
	30	52	52	52	49	45	42	39	37	34	33	32	31
	40	46	46	46	46	45	42	39	37	34	33	32	31
	50	42	42	42	42	42	42	39	37	34	33	32	31
	60	38	38	38	38	38	38	38	37	34	33	32	31
	70	35	35	35	35	35	35	35	35	34	33	32	31
	80	33	33	33	33	33	33	33	33	33	33	32	31
90	31	31	31	31	31	31	31	31	31	31	31	31	
Zone 3	0	48	43	41	39	36	33	31	29	27	26	26	24
	10	48	43	41	39	36	33	31	29	27	26	26	24
	20	48	43	41	39	36	33	31	29	27	26	26	24
	30	48	43	41	39	36	33	31	29	27	26	26	24
	40	46	43	41	39	36	33	31	29	27	26	26	24
	50	42	42	41	39	36	33	31	29	27	26	26	24
	60	38	38	38	38	36	33	31	29	27	26	26	24
	70	35	35	35	35	35	33	31	29	27	26	26	24
	80	33	33	33	33	33	33	31	29	27	26	26	24
90	31	31	31	31	31	31	31	29	27	26	26	24	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $7 < \theta \leq 27$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	76	76	76	76	76	76	72	67	63	61	59	56
	10	71	70	69	69	67	66	64	63	61	60	59	56
	20	56	56	56	56	56	55	54	53	52	52	52	51
	30	48	48	48	48	48	48	48	48	48	46	46	45
	40	42	42	42	42	42	42	42	42	42	42	42	41
	50	38	38	38	38	38	38	38	38	38	38	38	38
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	32	32	32	32	32	32	32	32	32	32	32	32
	80	30	30	30	30	30	30	30	30	30	30	30	30
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	76	71	68	65	60	56	52	48	45	44	43	41
	10	71	70	68	65	60	56	52	48	45	44	43	41
	20	56	56	56	56	56	55	52	48	45	44	43	41
	30	48	48	48	48	48	48	48	48	45	44	43	41
	40	42	42	42	42	42	42	42	42	42	42	42	41
	50	38	38	38	38	38	38	38	38	38	38	38	38
	60	35	35	35	35	35	35	35	35	35	35	35	35
	70	32	32	32	32	32	32	32	32	32	32	32	32
	80	30	30	30	30	30	30	30	30	30	30	30	30
90	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 3	0	63	57	55	52	48	45	42	39	37	35	34	33
	10	63	57	55	52	48	45	42	39	37	35	34	33
	20	56	56	55	52	48	45	42	39	37	35	34	33
	30	48	48	48	48	48	45	42	39	37	35	34	33
	40	42	42	42	42	42	42	42	39	37	35	34	33
	50	38	38	38	38	38	38	38	38	37	35	34	33
	60	35	35	35	35	35	35	35	35	35	35	34	33
	70	32	32	32	32	32	32	32	32	32	32	32	32
	80	30	30	30	30	30	30	30	30	30	30	30	30
90	29	29	29	29	29	29	29	29	29	29	29	29	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait						
<b>Table 44</b>		Roof Angle: $7 < \theta \leq 27$ degrees						Exposure Category: C						
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	76	76	76	76	70	65	60	56	53	51	50	48	
	10	69	67	66	65	64	62	60	56	53	51	50	48	
	20	56	56	56	55	54	53	52	51	50	49	48	48	
	30	48	48	48	48	48	48	46	45	45	44	44	43	
	40	42	42	42	42	42	42	42	41	41	40	40	40	
	50	38	38	38	38	38	38	38	38	38	38	38	37	37
	60	35	35	35	35	35	35	35	35	35	35	35	35	35
	70	32	32	32	32	32	32	32	32	32	32	32	32	32
	80	30	30	30	30	30	30	30	30	30	30	30	30	30
90	29	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	66	60	57	55	50	48	43	41	38	37	36	34	
	10	66	60	57	55	50	48	43	41	38	37	36	34	
	20	56	56	56	55	50	48	43	41	38	37	36	34	
	30	48	48	48	48	48	48	43	41	38	37	36	34	
	40	42	42	42	42	42	42	42	41	38	37	36	34	
	50	38	38	38	38	38	38	38	38	38	37	36	34	
	60	35	35	35	35	35	35	35	35	35	35	35	34	
	70	32	32	32	32	32	32	32	32	32	32	32	32	
	80	30	30	30	30	30	30	30	30	30	30	30	30	
90	29	29	29	29	29	29	29	29	29	29	29	29		
Zone 3	0	53	48	46	44	40	38	35	33	31	30	29	27	
	10	53	48	46	44	40	38	35	33	31	30	29	27	
	20	53	48	46	44	40	38	35	33	31	30	29	27	
	30	48	48	46	44	40	38	35	33	31	30	29	27	
	40	42	42	42	42	40	38	35	33	31	30	29	27	
	50	38	38	38	38	38	38	35	33	31	30	29	27	
	60	35	35	35	35	35	35	35	33	31	30	29	27	
	70	32	32	32	32	32	32	32	32	31	30	29	27	
	80	30	30	30	30	30	30	30	30	30	30	29	27	
90	29	29	29	29	29	29	29	29	29	29	29	27		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait						
		Roof Angle: $7 < \theta \leq 27$ degrees												
		Exposure Category: D												
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)												
		100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1	0	76	76	73	70	64	59	55	52	49	48	46	43	
	10	67	65	64	63	62	59	55	52	49	48	46	43	
	20	56	55	54	54	53	51	50	49	48	48	46	43	
	30	48	48	48	48	48	46	45	44	43	43	42	42	
	40	42	42	42	42	42	42	41	41	40	40	39	38	
	50	38	38	38	38	38	38	38	38	38	37	37	37	36
	60	35	35	35	35	35	35	35	35	35	35	35	34	34
	70	32	32	32	32	32	32	32	32	32	32	32	32	32
	80	30	30	30	30	30	30	30	30	30	30	30	30	30
90	29	29	29	29	29	29	29	29	29	29	29	29	29	
Zone 2	0	61	55	52	50	46	43	40	37	35	34	33	31	
	10	61	55	52	50	46	43	40	37	35	34	33	31	
	20	56	55	52	50	46	43	40	37	35	34	33	31	
	30	48	48	48	48	46	43	40	37	35	34	33	31	
	40	42	42	42	42	42	42	40	37	35	34	33	31	
	50	38	38	38	38	38	38	38	37	35	34	33	31	
	60	35	35	35	35	35	35	35	35	35	34	33	31	
	70	32	32	32	32	32	32	32	32	32	32	32	31	
	80	30	30	30	30	30	30	30	30	30	30	30	30	
90	29	29	29	29	29	29	29	29	29	29	29	29		
Zone 3	0	49	44	42	40	37	34	32	30	28	27	27	25	
	10	49	44	42	40	37	34	32	30	28	27	27	25	
	20	49	44	42	40	37	34	32	30	28	27	27	25	
	30	48	44	42	40	37	34	32	30	28	27	27	25	
	40	42	42	42	40	37	34	32	30	28	27	27	25	
	50	38	38	38	38	37	34	32	30	28	27	27	25	
	60	35	35	35	35	35	34	32	30	28	27	27	25	
	70	32	32	32	32	32	32	32	30	28	27	27	25	
	80	30	30	30	30	30	30	30	30	28	27	27	25	
90	29	29	29	29	29	29	29	29	28	27	27	25		

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: B											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	76	75	73	71	67	64	61	58	55	54	53	50
	10	68	66	65	64	62	60	58	56	54	53	52	50
	20	59	57	57	56	54	53	52	50	49	48	48	46
	30	51	51	51	50	49	48	48	46	45	44	44	43
	40	46	46	46	46	45	44	43	43	42	41	41	40
	50	41	41	41	41	41	41	41	40	39	39	38	38
	60	38	38	38	38	38	38	38	38	37	37	36	36
	70	35	35	35	35	35	35	35	35	35	35	35	34
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	32	32	32	32	32	32	32	32	32	32	32	31	
Zone 2	0	76	75	73	71	67	64	60	57	53	52	50	48
	10	68	66	65	64	62	60	58	56	53	52	50	48
	20	59	57	57	56	54	53	52	50	49	48	48	46
	30	51	51	51	50	49	48	48	46	45	44	44	43
	40	46	46	46	46	45	44	43	43	42	41	41	40
	50	41	41	41	41	41	41	41	40	39	39	38	38
	60	38	38	38	38	38	38	38	38	37	37	36	36
	70	35	35	35	35	35	35	35	35	35	35	35	34
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	32	32	32	32	32	32	32	32	32	32	32	31	
Zone 3	0	76	75	73	71	67	64	60	57	53	52	50	48
	10	68	66	65	64	62	60	58	56	53	52	50	48
	20	59	57	57	56	54	53	52	50	49	48	48	46
	30	51	51	51	50	49	48	48	46	45	44	44	43
	40	46	46	46	46	45	44	43	43	42	41	41	40
	50	41	41	41	41	41	41	41	40	39	39	38	38
	60	38	38	38	38	38	38	38	38	37	37	36	36
	70	35	35	35	35	35	35	35	35	35	35	35	34
	80	33	33	33	33	33	33	33	33	33	33	33	33
90	32	32	32	32	32	32	32	32	32	32	32	31	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

		Mean Roof Height: $0 < h \leq 30$ ft						Panel Orientation: Portrait					
		Roof Angle: $27 < \theta \leq 45$ degrees											
		Exposure Category: C											
Roof Wind Zone	Ground Snow Load	Wind Speed (mph)											
		100	110	115	120	130	140	150	160	170	175	180	190
Zone 1	0	72	67	65	63	60	56	53	50	48	48	46	44
	10	65	62	61	60	57	55	53	50	48	48	46	44
	20	56	54	54	53	51	49	48	46	45	44	43	42
	30	50	49	48	48	48	45	44	43	42	41	40	39
	40	46	45	45	44	43	42	41	40	39	39	38	37
	50	41	41	41	41	40	39	39	38	37	37	36	35
	60	38	38	38	38	38	37	37	36	35	35	34	34
	70	35	35	35	35	35	35	35	34	34	33	33	32
	80	33	33	33	33	33	33	33	33	32	32	32	31
90	32	32	32	32	32	32	32	32	31	31	31	30	
Zone 2	0	72	67	65	63	59	55	51	48	45	44	43	40
	10	65	62	61	60	57	55	51	48	45	44	43	40
	20	56	54	54	53	51	49	48	46	45	44	43	40
	30	50	49	48	48	48	45	44	43	42	41	40	39
	40	46	45	45	44	43	42	41	40	39	39	38	37
	50	41	41	41	41	40	39	39	38	37	37	36	35
	60	38	38	38	38	38	37	37	36	35	35	34	34
	70	35	35	35	35	35	35	35	34	34	33	33	32
	80	33	33	33	33	33	33	33	33	32	32	32	31
90	32	32	32	32	32	32	32	32	31	31	31	30	
Zone 3	0	72	67	65	63	59	55	51	48	45	44	43	40
	10	65	62	61	60	57	55	51	48	45	44	43	40
	20	56	54	54	53	51	49	48	46	45	44	43	40
	30	50	49	48	48	48	45	44	43	42	41	40	39
	40	46	45	45	44	43	42	41	40	39	39	38	37
	50	41	41	41	41	40	39	39	38	37	37	36	35
	60	38	38	38	38	38	37	37	36	35	35	34	34
	70	35	35	35	35	35	35	35	34	34	33	33	32
	80	33	33	33	33	33	33	33	33	32	32	32	31
90	32	32	32	32	32	32	32	32	31	31	31	30	

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"

**Rail Spans for Quick Mount PV QRail Light System**

Roof Wind Zone		Ground Snow Load	Wind Speed (mph)												
			100	110	115	120	130	140	150	160	170	175	180	190	
Zone 1		0	68	63	61	59	56	53	50	48	45	43	42	40	
		10	62	60	58	57	55	52	50	48	45	43	42	40	
		20	55	53	52	51	49	48	46	44	43	42	41	40	
		30	49	48	48	46	45	44	42	41	40	39	39	38	
		40	45	44	44	43	42	41	40	39	38	37	37	36	
		50	41	41	41	40	39	38	37	37	36	35	35	34	
		60	38	38	38	38	37	36	36	35	34	34	34	33	33
		70	35	35	35	35	35	35	34	33	33	32	32	32	31
		80	33	33	33	33	33	33	33	32	32	31	31	31	30
		90	32	32	32	32	32	32	32	31	31	30	30	30	29
Zone 2		0	68	63	61	59	54	50	48	44	41	40	39	37	
		10	62	60	58	57	54	50	48	44	41	40	39	37	
		20	55	53	52	51	49	48	46	44	41	40	39	37	
		30	49	48	48	46	45	44	42	41	40	39	39	37	
		40	45	44	44	43	42	41	40	39	38	37	37	36	
		50	41	41	41	40	39	38	37	37	36	35	35	34	
		60	38	38	38	38	37	36	36	35	34	34	34	33	33
		70	35	35	35	35	35	35	34	33	33	32	32	32	31
		80	33	33	33	33	33	33	33	32	32	31	31	31	30
		90	32	32	32	32	32	32	32	31	31	30	30	30	29
Zone 3		0	68	63	61	59	54	50	48	44	41	40	39	37	
		10	62	60	58	57	54	50	48	44	41	40	39	37	
		20	55	53	52	51	49	48	46	44	41	40	39	37	
		30	49	48	48	46	45	44	42	41	40	39	39	37	
		40	45	44	44	43	42	41	40	39	38	37	37	36	
		50	41	41	41	40	39	38	37	37	36	35	35	34	
		60	38	38	38	38	37	36	36	35	34	34	34	33	33
		70	35	35	35	35	35	35	34	33	33	32	32	32	31
		80	33	33	33	33	33	33	33	32	32	31	31	31	30
		90	32	32	32	32	32	32	32	31	31	30	30	30	29

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable design loads per the 2015 Aluminum Design Manual.
2. Panels are assumed to be in portrait orientation with a maximum length of 80"