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STANDING SEAM METAL ROOF PANEL

WESTERN LOCK®

12" WIDE PANEL – LOAD TABLES

WSMR UL Certificate Number: R40094

Issue Date: 7/23/2020

Load Tables extracted from UL report number R14692

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New Tech 675 Snap-On Panel

Width	12.00 in
Alloy	ASTM A653, G50 (Fy= 50 ksi)
Gauge	24 (0.024 in)

ALLOWABLE STRENGTH DESIGN (ASD)

Wind Load Factor = 1.0

ALLOWABLE UNIFORM LOAD (PSF)

SPAN	DEFLECTION	SPAN LENGTH (Feet)								
		2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00
1	L/180	307	242	196	162	136	115	99	86	76
	L/240	307	242	196	162	136	115	99	86	76
	L/360	307	242	196	162	136	115	99	86	76
2	L/180	307	242	196	162	136	115	99	86	76
	L/240	307	242	196	162	136	115	99	86	76
	L/360	307	242	196	162	136	115	99	86	76
3	L/180	347	275	224	186	156	133	115	100	88
	L/240	347	275	224	186	156	133	115	100	88
	L/360	347	275	224	186	156	133	115	100	88

1. Formula's used in Load Tables for FLEXURE and DEFLECTION are:

One Span - $M_p = .125wl^2$, $M_n = .125wl^2$, $x = .0130wl^4/EI$
 Two Span - $M_p = .125wl^2$, $M_n = .096wl^2$, $x = .0092wl^4/EI$
 Three Span - $M_p = .080wl^2$, $M_n = .107wl^2$, $x = .0069wl^4/EI$
 Modulus of Elasticity (E) = 29,500 ksi

2. Allowable uniform loads are determined per the following:

- a) Allowable Shear Stress (Fv) [AISI C3.2]
- b) Combined Bending and Shear [AISI C3.3]
- c) Combined Bending & Web Crippling [AISI C3.5]

3. Factors of Safety used to determine uniform loads:

Ω (Bending) = 1.67
 Ω (Shear) = 1.67
 Ω (Web Crippling) = 1.85

4. Allowance has been made for member Dead Weight.

5. Minimum panel support bearing length = 2.00 in

6. Concentrated load = 150 lb at mid-span, load width = 4 in

Simple Span : Max. Span = 5.459 ft (L/180)
 Two Span : Max. Span = 6.599 ft (L/180)
 Three Span +: Max. Span = 7.107 ft (L/180)

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 ALLOWABLE UNIFORM LOAD (PSF)

SPAN	DEFLECTION	SPAN LENGTH (Feet)								
		4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
1	L/180	67	59	53	48	43	39	36	33	30
	L/240	67	59	53	48	43	39	36	33	30
	L/360	67	57	49	42	36	31	27	24	21
2	L/180	67	59	53	48	43	39	36	33	30
	L/240	67	59	53	48	43	39	36	33	30
	L/360	67	59	53	48	43	39	36	33	30
3	L/180	78	69	62	56	51	46	42	38	35
	L/240	78	69	62	56	51	46	42	38	35
	L/360	78	69	62	56	51	46	42	38	35

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- Minimum panel support bearing length = 2.00 in
- Concentrated load = 150 lb at mid-span, load width = 4 in
 - Simple Span : Max. Span = 5.459 ft (L/180)
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ALLOWABLE STRENGTH DESIGN (ASD)

Wind Load Factor = 1.0

ALLOWABLE UNIFORM LOAD (PSF)

SPAN DEFLECTION		SPAN LENGTH (Feet)								
		6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1	L/180	28	26	24	22	20	19	18	17	16
	L/240	28	25	23	21	19	17	15	14	13
	L/360	19	17	15	14	12	11	10	9	8
2	L/180	28	26	24	22	20	19	18	17	16
	L/240	28	26	24	22	20	19	18	17	16
	L/360	27	24	22	19	17	16	14	13	12
3	L/180	32	30	28	26	24	22	21	20	18
	L/240	32	30	28	26	24	22	21	20	18
	L/360	32	30	28	26	23	21	19	18	16

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SPAN	DEFLECTION	SPAN LENGTH (Feet)								
		8.50	8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50
1	L/180	16	15	14	13	12	11	10	10	9
	L/240	13	12	11	10	9	8	8	7	7
	L/360	8	8	7	7	6	6	5	5	5
2	L/180	16	15	14	13	12	11	11	10	10
	L/240	16	15	14	13	12	11	11	10	10
	L/360	12	11	10	9	9	8	7	7	6
3	L/180	18	17	16	15	14	14	13	12	12
	L/240	18	17	16	15	14	14	13	12	12
	L/360	16	15	13	12	11	11	10	9	8

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