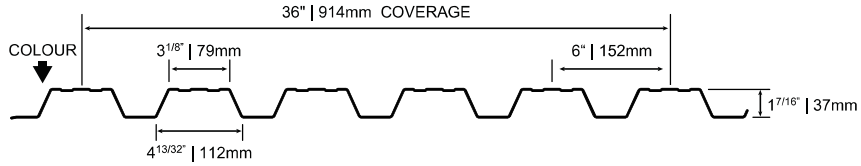
Load Table | Imperial
Ultra Span Roof Profile

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-12.

LIMIT STATES DESIGN



SECTION PROPERTIES | Per Foot of Width

Base Steel Thickness (inches)	Weight [G90] (psf)	Yield Stress (ksi)	Section Modulus		Deflection Moment of Inertia (in^4)	Specified Web Crippling Data			
			Midspan (in^3)	Support (in^3)		Pe1 End (lb)	Pe2 End (lb)	Pi1 Interior (lb)	Pi1 Interior (lb)
0.0180	1.04	33	0.0847	0.0884	0.0754	58.0	14.5	111	18.8
0.0180	1.04	50	0.0778	0.0822	0.0707	87.8	22.0	168	28.5
0.0240	1.36	33	0.128	0.130	0.114	109	27.2	207	35.2
0.0300	1.69	33	0.175	0.176	0.152	176	44.0	335	56.9

LLF = 1.50; IMPF = 0.90; NORMAL OCCUPANCY = 1.0

LOAD TABLE | Maximum Uniformly Distributed Specified Loads (psf).

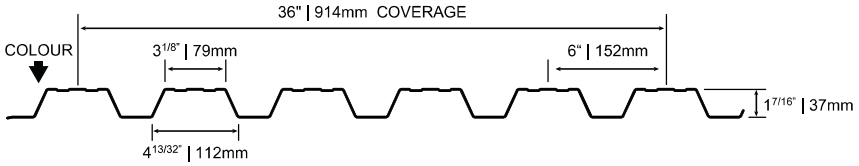
Span Length (ft)		1-Span Base Steel Thickness (inches)						2-Span Base Steel Thickness (inches)						3-Span Base Steel Thickness (inches)					
		0.0180	0.0180	0.0240	0.0300			0.0180	0.0180	0.0240	0.0300			0.0135	0.0180	0.0240	0.0300		
Y.S.* (ksi)		33	50	33	33			33	50	33	33			33	50	33	33		
4.0	S	70	97	106	144			73	103	108	145			91	128	134	181		
4.0	D	114	107	173	230			274	257	414	552			216	202	326	434		
4.5	S	55	77	84	114			58	81	85	115			72	102	106	143		
4.5	D	80	75	121	161			192	180	291	387			152	142	229	305		
5.0	S	45	62	68	92			47	66	69	93			58	82	86	116		
5.0	D	58	55	88	118			140	132	212	282			110	104	167	222		
5.5	S	37	51	56	76			39	54	57	77			48	68	71	96		
5.5	D	44	41	66	88			105	99	159	212			83	78	125	167		
6.0	S	31	43	47	64			32	46	48	64			41	57	60	81		
6.0	D	34	32	51	68			81	76	123	163			64	60	97	129		
6.5	S	26	37	40	55			28	39	41	55			35	49	51	69		
6.5	D	27	25	40	54			64	60	97	129			50	47	76	101		
7.0	S	23	32	35	47			24	34	35	47			30	42	44	59		
7.0	D	21	20	32	43			51	48	77	103			40	38	61	81		
7.5	S	20	28	30	41			21	29	31	41			26	37	38	52		
7.5	D	17	16	26	35			42	39	63	84			33	31	49	66		
8.0	S	17	24	26	36			18	26	27	36			23	32	34	45		
8.0	D	14	13	22	29			34	32	52	69			27	25	41	54		
8.5	S	15	22	23	32			16	23	24	32			20	28	30	40		
8.5	D	12	11	18	24			29	27	43	57			22	21	34	45		
9.0	S	14	19	21	28			14	20	21	29			18	25	27	36		
9.0	D	10	9	15	20			24	23	36	48			19	18	29	38		
9.5	S	12	17	19	26			13	18	19	26			16	23	24	32		
9.5	D	9	8	13	17			20	19	31	41			16	15	24	32		
10.0	S	11	16	17	23			12	16	17	23			15	21	22	29		
10.0	D	7	7	11	15			18	16	27	35			14	13	21	28		

* Y.S. = Yield Strength

Load Table | Metric
Ultra Span Roof Profile

1. Based on ASTM A 653 structural steel.
2. Values in row "S" are based on strength.
3. Values in row "D" are based on deflection of 1/180th span.
4. Web crippling not included in strength calculation. See example.
5. Limit States Design principles were used in accordance with CSA Standard S136-12.

LIMIT STATES DESIGN



SECTION PROPERTIES | Per Metre of Width

Base Steel Thickness (mm)	Mass [Z275] (kg/m²)	Yield Stress (MPa)	Section Modulus		Deflection Moment of Inertia (x10⁶ mm⁴)	Specified Web Crippling Data			
			Midspan (x10³mm³)	Support (x10³mm³)		Pe1 End (kN)	Pe2 End (kN)	Pi1 Interior (kN)	Pi1 Interior (kN)
0.457	5.06	230	4.54	4.74	0.103	0.855	0.214	1.63	0.277
0.457	5.06	345	4.18	4.42	0.0965	1.28	0.321	2.45	0.416
0.610	6.66	230	6.87	7.00	0.155	1.60	0.401	3.06	0.519
0.762	8.26	230	9.37	9.43	0.207	2.60	0.649	4.94	0.840

LLF = 1.50; IMPF = 0.90; NORMAL OCCUPANCY = 1.0

LOAD TABLE | Maximum Uniformly Distributed Specified Loads (kPa).

Span Length (m)		1-Span Base Steel Thickness (mm)						2-Span Base Steel Thickness (mm)						3-Span Base Steel Thickness (mm)					
		0.457	0.457	0.610	0.762			0.457	0.457	0.610	0.762			0.457	0.457	0.610	0.762		
Y.S.* (MPa)		230	345	230	230			230	345	230	230			230	345	230	230		
1.0	S	5.01	6.92	7.59	10.4			5.24	7.32	7.72	10.4			6.55	9.15	9.66	13.0		
1.0	D	9.89	9.29	15.0	19.9			23.7	22.3	35.9	47.8			18.7	17.6	28.3	37.6		
1.2	S	3.48	4.81	5.27	7.19			3.64	5.08	5.36	7.23			4.55	6.35	6.71	9.04		
1.2	D	5.72	5.38	8.65	11.5			13.7	12.9	20.8	27.7			10.8	10.2	16.4	21.8		
1.4	S	2.56	3.53	3.87	5.28			2.67	3.73	3.94	5.31			3.34	4.67	4.93	6.64		
1.4	D	3.60	3.39	5.45	7.26			8.65	8.12	13.1	17.4			6.81	6.40	10.3	13.7		
1.6	S	1.96	2.70	2.96	4.04			2.05	2.86	3.02	4.07			2.56	3.57	3.77	5.08		
1.6	D	2.41	2.27	3.65	4.86			5.79	5.44	8.76	11.7			4.56	4.29	6.90	9.19		
1.8	S	1.55	2.14	2.34	3.19			1.62	2.26	2.38	3.21			2.02	2.82	2.98	4.02		
1.8	D	1.70	1.59	2.56	3.41			4.07	3.82	6.15	8.19			3.20	3.01	4.84	6.45		
2.0	S	1.25	1.73	1.90	2.59			1.31	1.83	1.93	2.60			1.64	2.29	2.41	3.25		
2.0	D	1.24	1.16	1.87	2.49			2.97	2.79	4.48	5.97			2.34	2.19	3.53	4.70		
2.2	S	1.04	1.43	1.57	2.14			1.08	1.51	1.60	2.15			1.35	1.89	1.99	2.69		
2.2	D	0.93	0.87	1.40	1.87			2.23	2.09	3.37	4.49			1.76	1.65	2.65	3.53		
2.4	S	0.87	1.20	1.32	1.80			0.91	1.27	1.34	1.81			1.14	1.59	1.68	2.26		
2.4	D	0.72	0.67	1.08	1.44			1.72	1.61	2.60	3.46			1.35	1.27	2.04	2.72		
2.6	S	0.74	1.02	1.12	1.53			0.77	1.08	1.14	1.54			0.97	1.35	1.43	1.93		
2.6	D	0.56	0.53	0.85	1.13			1.35	1.27	2.04	2.72			1.06	1.00	1.61	2.14		
2.8	S	0.64	0.88	0.97	1.32			0.67	0.93	0.99	1.33			0.83	1.17	1.23	1.66		
2.8	D	0.45	0.42	0.68	0.91			1.08	1.02	1.63	2.18			0.85	0.80	1.29	1.71		
3.0	S	0.56	0.77	0.84	1.15			0.58	0.81	0.86	1.16			0.73	1.02	1.07	1.45		
3.0	D	0.37	0.34	0.55	0.74			0.88	0.83	1.33	1.77			0.69	0.65	1.05	1.39		

* Y.S. = Yield Strength

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