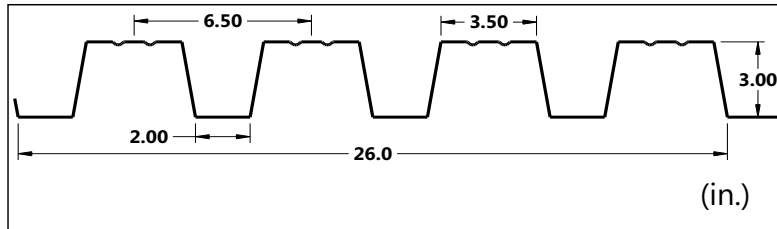


ACCUFORM METAL LTD. ACOUSTIC AFRD 3-26 ROOF DECK



SECTION PROPERTIES (PER FOOT OF WIDTH)

IMPERIAL	Base Steel Thickness (in.)	Weight G90 (psf)	Yield Stress (ksi)	Sec. Modulus		Deflection Moment of Inertia (in ⁴)	Specified Web Crippling Data			
				Midspan	Support		P _{e1} End (lb)	P _{e2} End (lb)	P _{i1} Interior (lb)	P _{i2} Interior (lb)
				(in ³)	(in ³)					
	0.030	2.32	33	0.447	0.461	0.801	57.8	37.0	156	51.4
	0.036	2.77	33	0.573	0.582	1.00	93.9	60.1	241	79.4
	0.048	3.68	33	0.785	0.819	1.40	194	124	469	155
	0.060	4.58	33	0.998	1.02	1.76	332	212	776	256

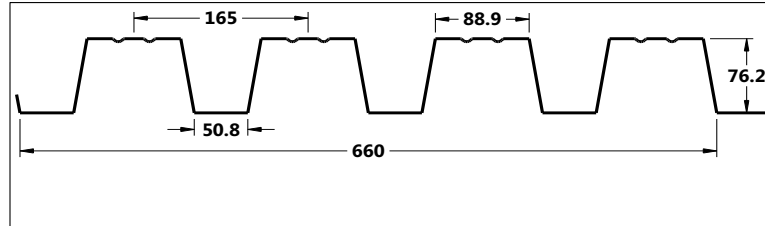
Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (psf)

SPAN LENGTH (ft)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)				BASE STEEL THICKNESS (in.)			
		0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060	0.030	0.036	0.048	0.060
6.0	S	148	189	259	329	152	192	270	335	190	240	338	419
	D	256	321	447	561	584	731	1019	1280	460	576	803	1008
6.5	S	126	161	221	281	130	164	230	286	162	205	288	357
	D	201	252	352	442	459	575	802	1007	362	453	631	793
7.0	S	108	139	190	242	112	141	199	246	140	176	248	308
	D	161	202	282	354	368	461	642	806	290	363	506	635
7.5	S	94	121	166	211	97	123	173	215	122	154	216	268
	D	131	164	229	287	299	374	522	655	235	295	411	516
8.0	S	83	106	146	185	86	108	152	189	107	135	190	236
	D	108	135	189	237	246	309	430	540	194	243	339	425
8.5	S	74	94	129	164	76	96	135	167	95	120	168	209
	D	90	113	157	197	205	257	359	450	162	203	282	355
9.0	S	66	84	115	146	68	85	120	149	85	107	150	186
	D	76	95	132	166	173	217	302	379	136	171	238	299
9.5	S	59	75	103	131	61	77	108	134	76	96	135	167
	D	65	81	113	141	147	184	257	323	116	145	202	254
10.0	S	53	68	93	119	55	69	97	121	69	86	122	151
	D	55	69	97	121	126	158	220	277	99	124	173	218
10.5	S	48	62	85	108	50	63	88	109	62	78	110	137
	D	48	60	83	105	109	136	190	239	86	107	150	188
11.0	S	44	56	77	98	45	57	80	100	57	71	101	125
	D	42	52	73	91	95	119	165	208	75	93	130	164
11.5	S	40	51	71	90	41	52	74	91	52	65	92	114
	D	36	46	64	80	83	104	145	182	65	82	114	143
12.0	S	37	47	65	82	38	48	68	84	48	60	84	105
	D	32	40	56	70	73	91	127	160	57	72	100	126
12.5	S	34	44	60	76	35	44	62	77	44	55	78	97
	D	28	35	49	62	65	81	113	142	51	64	89	111
13.0	S	31	40	55	70	32	41	58	71	41	51	72	89
	D	25	32	44	55	57	72	100	126	45	57	79	99
13.5	S	29	37	51	65	30	38	53	66	38	47	67	83
	D	22	28	39	49	51	64	90	112	40	51	70	89
14.0	S	27	35	48	60	28	35	50	62	35	44	62	77
	D	20	25	35	44	46	58	80	101	36	45	63	79

- Notes:**
- Based on ASTM A653 Grade 33 structural steel.
 - Values in row "S" are based on strength.
 - Values in row "D" are based on deflection of 1/240th span.
 - Bending strength and stiffness considerations were based on CSSBI Sheet Steel Facts 27, September 2010.
 - Web crippling strength consideration was based on CSSBI Sheet Steel Facts 30, September 2010.
 - Web crippling not included in strength calculations. See Example.
 - Limit States Design principles were used in accordance with CSA Standard S136-16.
 - Prepared by Dr. R.M. Schuster, P. Eng., Distinguished Professor Emeritus, University of Waterloo.

ACCUFORM METAL LTD. ACOUSTIC AFRD 3-26 ROOF DECK



SECTION PROPERTIES (PER METRE OF WIDTH)

METRIC	Base Steel Thickness (mm)	Mass Z275 (kg/m ²)	Yield Stress (MPa)	Sec. Modulus		Deflection Moment of Inertia (x10 ⁶ mm ⁴)	Specified Web Crippling Data			
				Midspan	Support		P _{e1} End (kN)	P _{e2} End (kN)	P _{i1} Interior (kN)	P _{i2} Interior (kN)
				(x10 ³ mm ³)	(x10 ³ mm ³)					
	0.762	12.0	230	24.0	24.8	1.09	0.853	0.546	2.30	0.758
	0.914	14.3	230	30.8	31.3	1.37	1.39	0.887	3.55	1.17
	1.22	19.0	230	42.2	44.0	1.91	2.86	1.83	6.91	2.28
	1.52	23.7	230	53.6	54.6	2.40	4.90	3.13	11.4	3.78

Live load factor = 1.5; Importance factor = 0.90; Importance Category = 1.0

MAXIMUM UNIFORMLY DISTRIBUTED SPECIFIED LOAD (kPa)

SPAN LENGTH (m)		1-SPAN				2-SPAN				3-SPAN			
		BASE STEEL THICKNESS (mm)				BASE STEEL THICKNESS (mm)				BASE STEEL THICKNESS (mm)			
		0.762	0.914	1.22	1.52	0.762	0.914	1.22	1.52	0.762	0.914	1.22	1.52
2.0	S	5.96	7.64	10.5	13.3	6.15	7.77	10.9	13.6	7.69	9.71	13.7	17.0
	D	9.36	11.7	16.4	20.6	21.4	26.7	37.3	46.9	16.8	21.1	29.4	36.9
2.2	S	4.93	6.32	8.66	11.0	5.08	6.42	9.04	11.2	6.35	8.02	11.3	14.0
	D	7.03	8.81	12.3	15.4	16.0	20.1	28.0	35.2	12.6	15.8	22.1	27.7
2.4	S	4.14	5.31	7.27	9.25	4.27	5.39	7.59	9.42	5.34	6.74	9.49	11.8
	D	5.42	6.79	9.47	11.9	12.4	15.5	21.6	27.1	9.73	12.2	17.0	21.4
2.5	S	3.81	4.89	6.70	8.52	3.94	4.97	7.00	8.68	4.92	6.21	8.75	10.9
	D	4.79	6.00	8.38	10.5	10.9	13.7	19.1	24.0	8.61	10.8	15.0	18.9
2.6	S	3.53	4.52	6.20	7.88	3.64	4.59	6.47	8.03	4.55	5.74	8.09	10.0
	D	4.26	5.34	7.45	9.36	9.72	12.2	17.0	21.3	7.65	9.58	13.4	16.8
2.8	S	3.04	3.90	5.34	6.80	3.14	3.96	5.58	6.92	3.92	4.95	6.97	8.65
	D	3.41	4.27	5.96	7.49	7.78	9.74	13.6	17.1	6.13	7.67	10.7	13.5
3.0	S	2.65	3.40	4.66	5.92	2.73	3.45	4.86	6.03	3.42	4.31	6.08	7.54
	D	2.77	3.47	4.85	6.09	6.32	7.92	11.1	13.9	4.98	6.24	8.70	10.9
3.2	S	2.33	2.99	4.09	5.20	2.40	3.03	4.27	5.30	3.00	3.79	5.34	6.62
	D	2.29	2.86	3.99	5.02	5.21	6.53	9.11	11.4	4.10	5.14	7.17	9.01
3.4	S	2.06	2.64	3.62	4.61	2.13	2.69	3.78	4.69	2.66	3.36	4.73	5.87
	D	1.91	2.39	3.33	4.18	4.34	5.44	7.59	9.54	3.42	4.29	5.98	7.51
3.5	S	1.95	2.50	3.42	4.35	2.01	2.54	3.57	4.43	2.51	3.17	4.46	5.54
	D	1.75	2.19	3.05	3.84	3.98	4.99	6.96	8.74	3.14	3.93	5.48	6.89
3.6	S	1.84	2.36	3.23	4.11	1.90	2.40	3.38	4.19	2.37	3.00	4.22	5.23
	D	1.61	2.01	2.81	3.52	3.66	4.59	6.40	8.04	2.88	3.61	5.04	6.33
3.8	S	1.65	2.12	2.90	3.69	1.70	2.15	3.03	3.76	2.13	2.69	3.79	4.70
	D	1.36	1.71	2.39	3.00	3.11	3.90	5.44	6.83	2.45	3.07	4.28	5.38
4.0	S	1.49	1.91	2.62	3.33	1.54	1.94	2.73	3.39	1.92	2.43	3.42	4.24
	D	1.17	1.47	2.04	2.57	2.67	3.34	4.66	5.86	2.10	2.63	3.67	4.61

- Notes:**
- Based on ASTM A653M Grade 230 structural steel.
 - Values in row "S" are based on strength.
 - Values in row "D" are based on deflection of 1/240th span.
 - Bending strength and stiffness considerations were based on CSSBI Sheet Steel Facts 27, September 2010.
 - Web crippling strength consideration was based on CSSBI Sheet Steel Facts 30, September 2010.
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