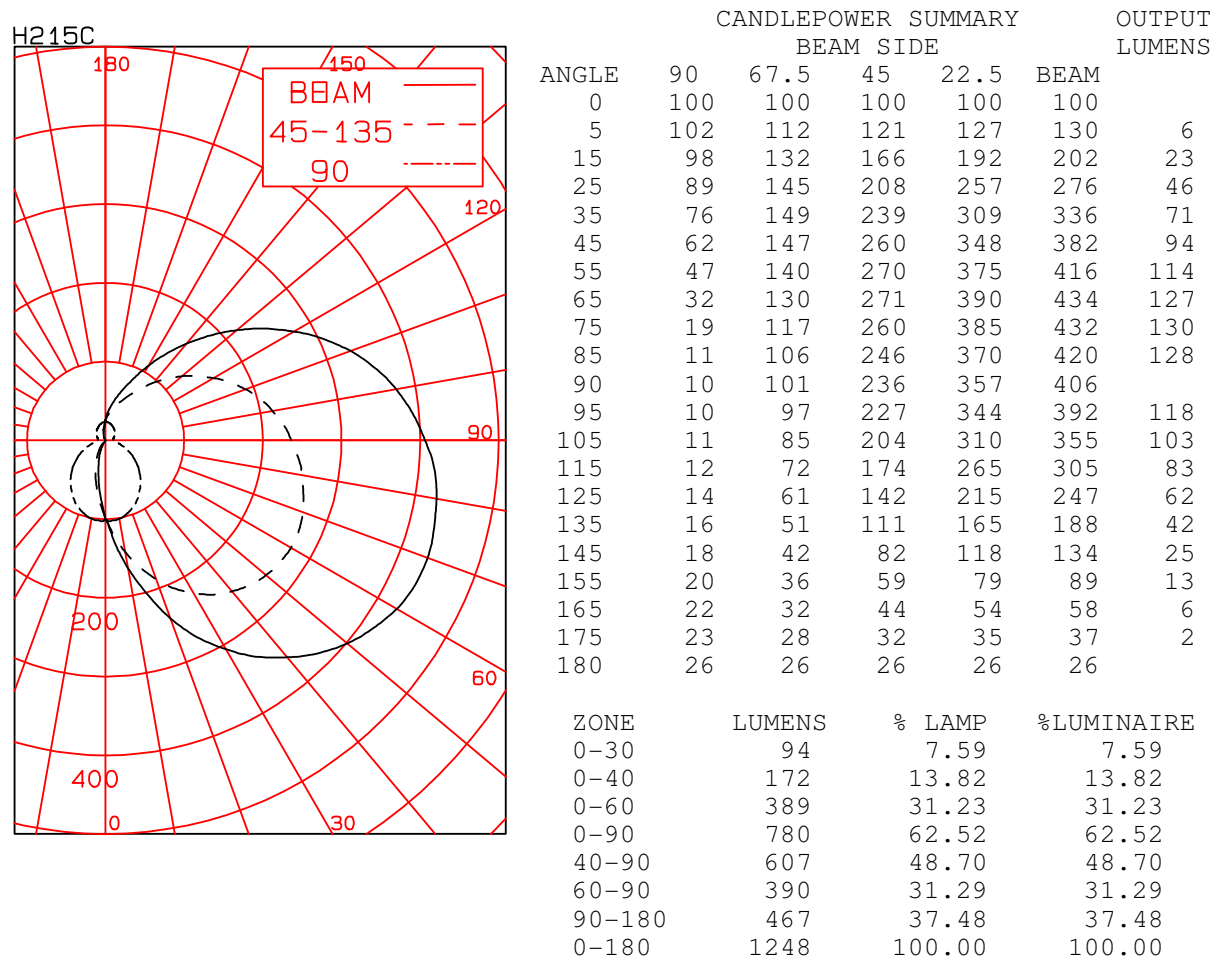


TEST REPORT NO. H215CD  
ACCREDITED BY NVLAP (LAB CODE 500084-0) TO ISO/IES 17025:2005 FOR IES LM-79-08

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)



LUMINANCE SUMMARY-CD. / SQ. M.

BEAM SIDE			
ANGLE	90	45	BEAM SIDE
45	1485	7845	41558
55	1023	7511	50352
65	656	7187	61575
75	379	6789	76649
85	220	6508	103500

PREPARED BY:

*Charles Sison*

DATE:

MAR 4, 2014

PREPARED FOR:

BEGHELLI CANADA  
MARKHAM, ONTARIO

TESTED ACCORDING TO IES LM-79-2008. TEST DISTANCE EXCEEDS FIVE  
TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE.

LUMENTRA, INC.  
160 FROBISHER DRIVE, UNIT 5  
WATERLOO, ONTARIO

TEST REPORT NO. H215CD  
COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

# COEFFICIENTS OF UTILIZATION

## ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	1.10	1.10	1.10	1.10	1.03	1.03	1.03	1.03	.90	.90	.90	.78	.78	.78	.68	.68	.68	.63	.63	.63	.63
1	.96	.90	.84	.79	.89	.84	.79	.74	.72	.68	.65	.62	.59	.56	.53	.50	.48	.43	.43	.43	.43
2	.85	.76	.67	.60	.79	.70	.63	.57	.61	.55	.50	.52	.47	.43	.44	.40	.37	.32	.32	.32	.32
3	.77	.65	.56	.48	.71	.60	.52	.45	.52	.45	.40	.44	.39	.34	.37	.33	.29	.25	.25	.25	.25
4	.70	.57	.47	.40	.65	.53	.44	.37	.45	.38	.33	.39	.33	.29	.32	.28	.24	.21	.21	.21	.21
5	.64	.49	.40	.33	.59	.46	.37	.31	.40	.33	.27	.34	.28	.24	.28	.24	.20	.17	.17	.17	.17
6	.58	.44	.34	.28	.54	.41	.32	.26	.35	.28	.23	.30	.24	.20	.25	.20	.17	.14	.14	.14	.14
7	.53	.39	.30	.24	.49	.36	.28	.22	.31	.24	.19	.27	.21	.16	.22	.18	.14	.11	.11	.11	.11
8	.49	.35	.26	.20	.45	.33	.25	.19	.28	.21	.17	.24	.18	.14	.20	.16	.12	.10	.10	.10	.10
9	.45	.32	.23	.17	.42	.30	.22	.16	.25	.19	.14	.22	.16	.12	.18	.14	.10	.08	.08	.08	.08
10	.42	.29	.20	.15	.39	.27	.19	.14	.23	.17	.12	.20	.14	.11	.17	.12	.09	.07	.07	.07	.07

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES  
LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.  
ABSOLUTE PHOTOMETRY TAKEN.

LUMENTRA, INC.  
160 FROBISHER DRIVE, UNIT 5  
WATERLOO, ONTARIO

TEST REPORT NO. H215CD  
COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

BEAM SIDE  
CANDLEPOWER DATA

ANGLE	90	67.5	45	PLANE 22.5	BEAM SIDE	AVERAGE	OUTPUT LUMENS
0	100	100	100	100	100	100	
5	102	112	121	127	130	119	6
10	101	123	144	159	165	140	
15	98	132	166	192	202	160	23
20	94	139	188	226	240	180	
25	89	145	208	257	276	198	46
30	83	147	224	284	306	212	
35	76	149	239	309	336	226	71
40	69	148	251	329	360	236	
45	62	147	260	348	382	244	94
50	55	144	266	364	401	251	
55	47	140	270	375	416	254	114
60	40	136	273	385	428	257	
65	32	130	271	390	434	256	127
70	26	124	267	389	436	253	
75	19	117	260	385	432	247	130
80	15	112	253	378	427	241	
85	11	106	246	370	420	234	128
90	10	101	236	357	406	226	
95	10	97	227	344	392	217	118
100	10	91	216	328	375	207	
105	11	85	204	310	355	195	103
110	11	79	190	289	332	182	
115	12	72	174	265	305	168	83
120	13	67	158	241	277	153	
125	14	61	142	215	247	137	62
130	15	56	127	190	218	122	
135	16	51	111	165	188	107	42
140	17	46	96	141	161	93	
145	18	42	82	118	134	80	25
150	19	39	69	97	110	67	
155	20	36	59	79	89	57	13
160	21	34	51	65	71	49	
165	22	32	44	54	58	42	6
170	23	31	38	44	47	37	
175	23	28	32	35	37	31	2
180	26	26	26	26	26	26	

LUMENTRA, INC.  
 160 FROBISHER DRIVE, UNIT 5  
 WATERLOO, ONTARIO

TEST REPORT NO. H215CD  
 COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
 WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
 80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
 CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

BEAM SIDE  
 AVERAGE LUMINANCE DATA

		CD. / SQ. M.		(FOOTLAMBERTS)				
ANGLE	90	67.5		45		22.5		BEAM SIDE
0	10147 ( 2961)	10147 ( 2961)		10147 ( 2961)		10147 ( 2961)		10147 ( 2961)
30	2506 ( 731)	4621 ( 1348)		8290 ( 2419)		14619 ( 4266)		30241 ( 8826)
40	1762 ( 514)	3955 ( 1154)		7990 ( 2332)		15293 ( 4463)		37433 ( 10925)
45	1485 ( 433)	3682 ( 1074)		7845 ( 2289)		15584 ( 4548)		41558 ( 12129)
50	1249 ( 364)	3428 ( 1000)		7674 ( 2240)		15814 ( 4615)		45619 ( 13314)
55	1023 ( 298)	3192 ( 931)		7511 ( 2192)		15987 ( 4666)		50352 ( 14695)
60	841 ( 245)	2997 ( 874)		7365 ( 2149)		16196 ( 4727)		55467 ( 16188)
65	656 ( 191)	2797 ( 816)		7187 ( 2097)		16304 ( 4758)		61575 ( 17971)
70	524 ( 153)	2620 ( 764)		6993 ( 2041)		16330 ( 4766)		68146 ( 19889)
75	379 ( 110)	2457 ( 717)		6789 ( 1981)		16307 ( 4759)		76649 ( 22371)
80	299 ( 87)	2342 ( 683)		6635 ( 1936)		16328 ( 4765)		87462 ( 25527)
85	220 ( 64)	2246 ( 655)		6508 ( 1899)		16404 ( 4787)		103500 ( 30208)

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMENTRA, INC.  
160 FROBISHER DRIVE, UNIT 5  
WATERLOO, ONTARIO

TEST REPORT NO. H215CD  
COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

OPPOSITE SIDE TO BEAM  
CANDLEPOWER DATA

ANGLE	PLANE				NON- BEAM	AVERAGE	OUTPUT LUMENS
	90	112.5	135	157.5			
0	100	100	100	100	100	100	
5	102	90	80	74	72	83	4
10	101	78	63	54	51	68	
15	98	68	49	39	36	56	8
20	94	58	37	27	24	45	
25	89	48	27	18	15	36	8
30	83	40	19	11	9	29	
35	76	32	13	5	3	23	7
40	69	25	8	1	0	17	
45	62	19	3	0	0	13	5
50	55	14	0	0	0	11	
55	47	10	0	0	0	8	4
60	40	6	0	0	0	7	
65	32	4	0	0	0	5	3
70	26	4	0	0	0	4	
75	19	4	0	0	0	4	2
80	15	4	0	0	0	3	
85	11	4	0	0	0	3	1
90	10	4	0	0	0	2	
95	10	4	0	0	0	2	1
100	10	4	0	0	0	2	
105	11	4	0	0	0	2	1
110	11	3	0	0	0	2	
115	12	3	0	0	0	2	1
120	13	3	0	0	0	3	
125	14	4	0	0	0	3	1
130	15	5	1	0	0	3	
135	16	6	2	0	0	4	2
140	17	7	3	1	1	5	
145	18	8	4	2	2	6	2
150	19	10	6	4	3	8	
155	20	12	8	6	5	9	2
160	21	13	10	8	7	11	
165	22	15	12	10	10	14	2
170	23	18	15	13	13	16	
175	23	20	19	18	18	19	1
180	26	26	26	26	26	26	

LUMENTRA, INC.  
 160 FROBISHER DRIVE, UNIT 5  
 WATERLOO, ONTARIO

TEST REPORT NO. H215CD  
 COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
 WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
 80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
 CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

OPPOSITE SIDE TO BEAM  
 AVERAGE LUMINANCE DATA

		CD. / SQ. M.		(FOOTLAMBERTS)						
ANGLE	90		112.5		135		157.5		NON-BEAM	
0	10147 (	2961)	10147 (	2961)	10147 (	2961)	10147 (	2961)	10147 (	2961)
30	2506 (	731)	1252 (	365)	717 (	209)	566 (	165)	856 (	249)
40	1762 (	514)	673 (	196)	242 (	70)	37 (	11)	7 (	2)
45	1485 (	433)	486 (	142)	92 (	26)	0 (	0)	0 (	0)
50	1249 (	364)	341 (	99)	11 (	3)	0 (	0)	0 (	0)
55	1023 (	298)	227 (	66)	7 (	2)	0 (	0)	8 (	2)
60	841 (	245)	139 (	40)	5 (	1)	2 (	0)	8 (	2)
65	656 (	191)	90 (	26)	3 (	1)	2 (	0)	19 (	5)
70	524 (	153)	89 (	25)	3 (	1)	5 (	1)	31 (	9)
75	379 (	110)	89 (	26)	3 (	1)	8 (	2)	48 (	14)
80	299 (	87)	88 (	25)	3 (	1)	11 (	3)	69 (	20)
85	220 (	64)	88 (	25)	3 (	1)	12 (	3)	83 (	24)

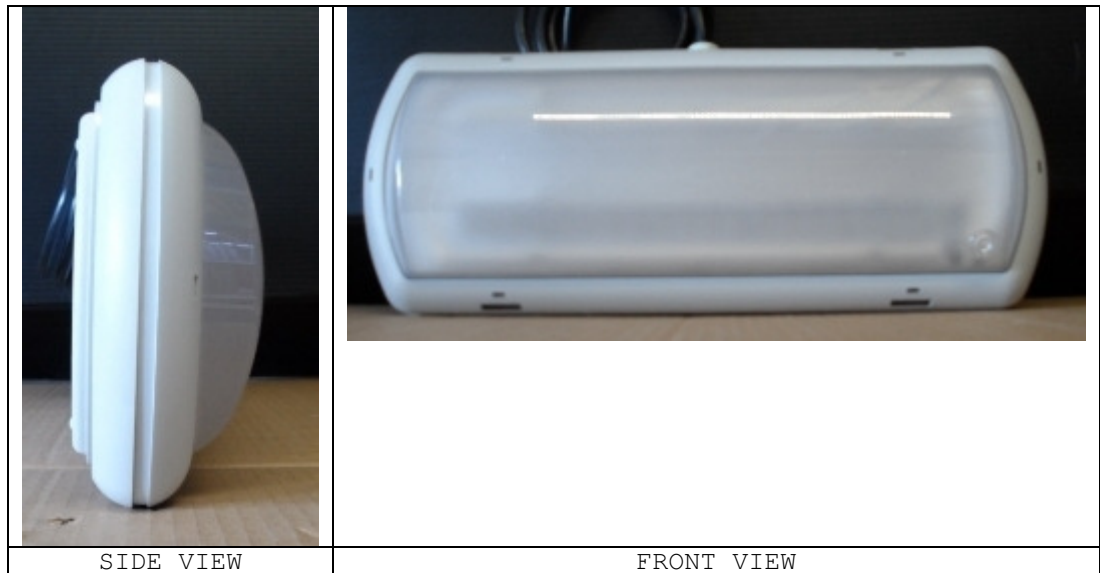
DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMENTRA, INC.  
160 FROBISHER DRIVE, UNIT 5  
WATERLOO, ONTARIO

TEST REPORT NO. H215C

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

AMBIENT TEMPERATURE: 24.4 °C  
STABILIZATION TIME: 10 MINUTES  
THE LUMINAIRE WAS OPERATED IN THE ORIENTATION INDICATED BY THE PICTURES BELOW  
LSI MOVING MIRROR GONIOPHOTOMETER 6240T WAS USED

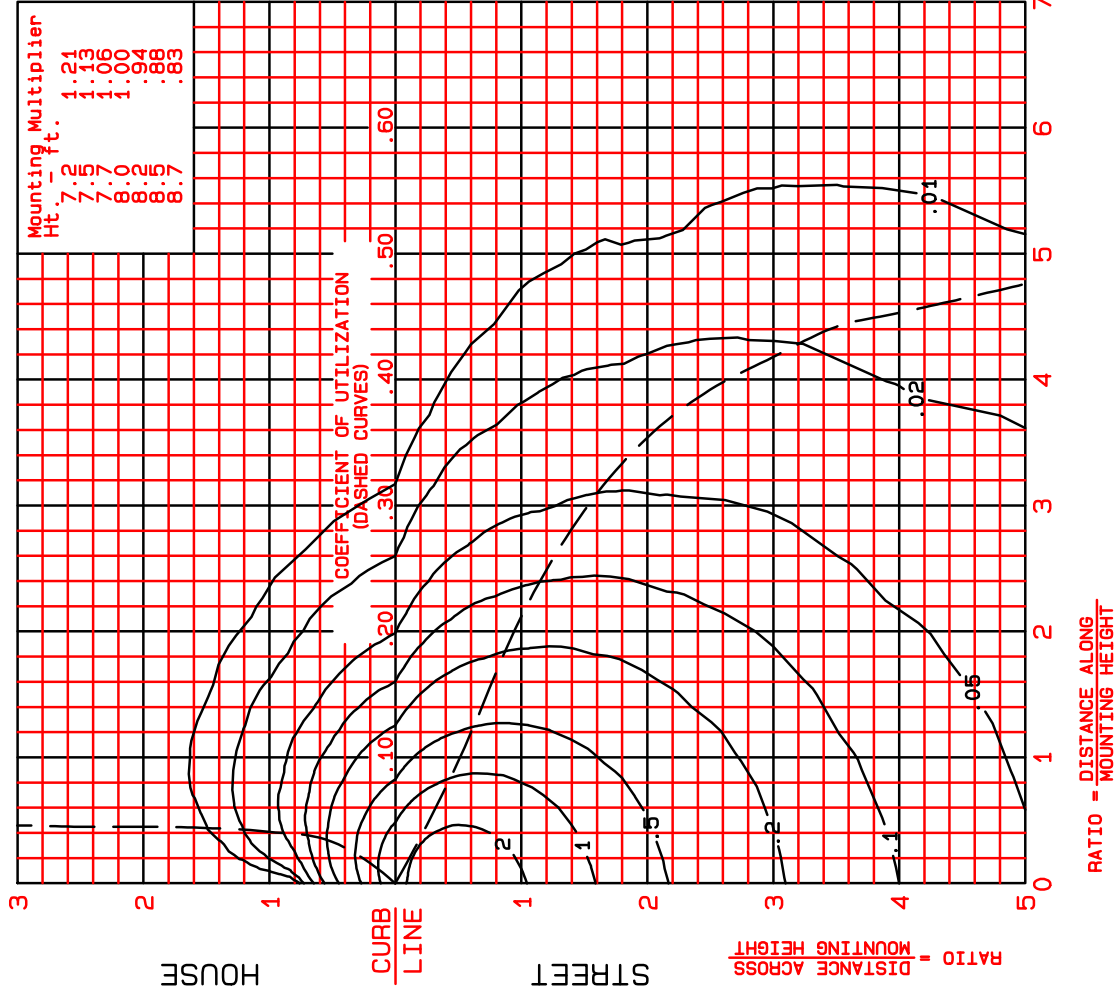


# ISOFOOTCANDLE

TEST REPORT NO. H215C

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM W (ON BATTERY)  
WITH SPECULAR INTERIOR PRISMATIC DIFFUSING LENS  
80 WHITE LEDS. LUMEN OUTPUT = 1248 LMS.  
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

MOUNTING HEIGHT FOR ISOFC 8.0 FEET





TEST REPORT NO. H215C

\*\* FOOTCANDLE TABLE FOR SINGLE LUMINAIRE AT 8.0 FT. \*\*

LATERAL  
RATIOS

-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.001	.001	.001	.001	.001	.001	.001	.001	.001	.000	.000	.000	.000	.000
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.001	.002	.002	.002	.002	.001	.001	.001	.001	.001	.000	.000	.000	.000
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.003	.005	.005	.004	.003	.002	.002	.001	.001	.001	.001	.001	.000	.000
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.010	.013	.010	.007	.005	.003	.002	.002	.001	.001	.001	.001	.000	.000
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.000	.039	.035	.023	.013	.008	.005	.004	.002	.002	.001	.001	.001	.001	.000
-.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.14	.22	.12	.059	.028	.015	.009	.005	.003	.002	.002	.001	.001	.001	.001
HOUSE		CURB LINE													
-----	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
STREET	1.5	.97	.34	.12	.048	.022	.012	.007	.004	.003	.002	.001	.001	.001	.001
.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3.1	1.8	.75	.28	.12	.059	.031	.018	.011	.007	.005	.003	.002	.002	.001
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	2.1	1.4	.75	.34	.16	.081	.045	.026	.017	.011	.007	.005	.004	.003	.002
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1.1	.87	.54	.30	.16	.091	.053	.032	.020	.014	.009	.007	.005	.004	.003
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.60	.50	.36	.23	.14	.088	.054	.035	.023	.015	.011	.008	.006	.004	.003
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.34	.30	.23	.17	.11	.077	.051	.034	.024	.016	.012	.008	.006	.005	.004
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.21	.19	.15	.12	.090	.064	.045	.032	.023	.017	.012	.009	.007	.005	.004
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.14	.12	.11	.090	.070	.052	.039	.029	.021	.016	.012	.009	.007	.005	.004
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.096	.089	.079	.066	.054	.043	.033	.025	.020	.015	.012	.009	.007	.006	.004
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.069	.064	.058	.050	.042	.035	.028	.022	.017	.014	.011	.009	.007	.006	.004
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.051	.048	.043	.039	.033	.028	.023	.019	.015	.012	.010	.008	.007	.005	.004
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	LONGITUDINAL MOUNTING HEIGHT RATIOS														

CORRECTION FACTORS FOR OTHER MOUNTING HEIGHTS: SEE ISOFOOTCANDLE PAGE