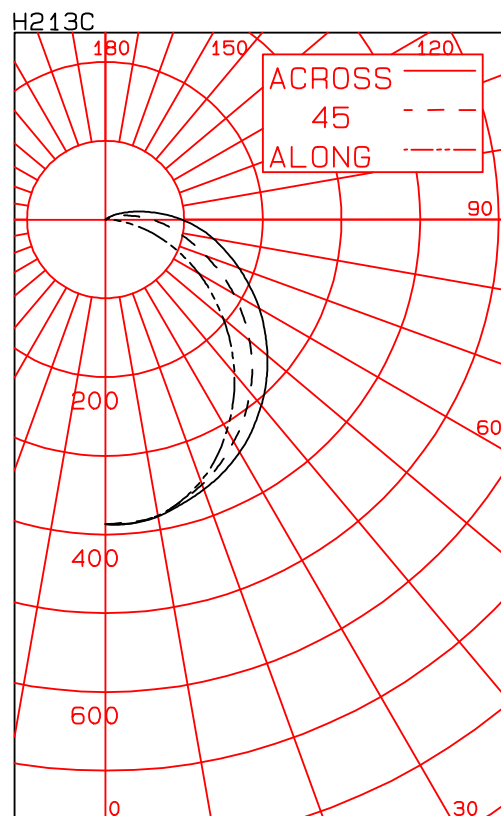


TEST REPORT NO. H213C
ACCREDITED BY NVLAP (LAB CODE 500084-0) TO ISO/IES 17025:2005 FOR IES LM-79-08

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
80 WHITE LEDS. LUMEN OUTPUT = 1307 LMS.
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)



CANDLEPOWER SUMMARY

OUTPUT LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	387	387	387	387	387	
5	387	385	386	386	387	37
15	370	369	371	373	374	105
25	333	336	343	351	354	158
35	283	290	307	321	326	191
45	225	238	264	283	289	201
55	165	182	214	239	247	188
65	108	125	162	192	203	157
75	56	75	114	147	159	118
85	15	38	76	107	119	79
90	7	25	59	87	97	
95	6	15	43	67	75	46
105	4	4	19	33	39	21
115	2	1	4	13	16	7
125	0	0	0	1	3	1
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	299	22.93	22.93
0-40	490	37.53	37.53
0-60	879	67.25	67.25
0-90	1232	94.29	94.29
40-90	742	56.76	56.76
60-90	353	27.05	27.05
90-180	74	5.71	5.71
0-180	1307	100.00	100.00

LUMINANCE SUMMARY-CD. / SQ. M.

S/MH = 1.3

SC (ALONG) = 1.2, SC (ACROSS) = 1.3

ANGLE	ALONG	45	ACROSS
45	6077	6404	6956
55	5358	5989	6844
65	4558	5566	6859
75	3518	5255	7186
85	1941	5644	8445

PREPARED BY:

Charles Lison

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. H213C
COMPUTED BY LSC PROGRAM **TEST-LITE**

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
80 WHITE LEDS. LUMEN OUTPUT = 1307 LMS.
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

CANDLEPOWER DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	387	387	387	387	387	387	
5	387	385	386	386	387	386	37
10	382	380	382	382	383	382	
15	370	369	371	373	374	371	105
20	354	354	358	363	365	358	
25	333	336	343	351	354	343	158
30	309	313	326	337	341	325	
35	283	290	307	321	326	306	191
40	255	265	286	303	308	284	
45	225	238	264	283	289	260	201
50	195	210	239	262	269	236	
55	165	182	214	239	247	210	188
60	137	153	188	216	226	185	
65	108	125	162	192	203	159	157
70	81	99	137	169	181	134	
75	56	75	114	147	159	111	118
80	33	54	94	127	139	90	
85	15	38	76	107	119	72	79
90	7	25	59	87	97	56	
95	6	15	43	67	75	41	46
100	5	9	29	49	56	29	
105	4	4	19	33	39	19	21
110	3	2	11	22	26	12	
115	2	1	4	13	16	7	7
120	1	0	0	6	9	3	
125	0	0	0	1	3	1	1
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	

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

TEST REPORT NO. H213C
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BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
 WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
 80 WHITE LEDS. LUMEN OUTPUT = 1307 LMS.
 CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

AVERAGE LUMINANCE DATA

		CD. / SQ. M.		(FOOTLAMBERTS)			
ANGLE	ALONG	22.5	45	67.5	ACROSS		
0	7864(2295)	7864(2295)	7864(2295)	7864(2295)	7864(2295)		
30	6982(2037)	6835(1994)	6915(2018)	7071(2063)	7174(2093)		
40	6402(1868)	6311(1842)	6568(1917)	6851(1999)	7001(2043)		
45	6077(1773)	6018(1756)	6404(1869)	6747(1969)	6956(2030)		
50	5730(1672)	5720(1669)	6181(1804)	6637(1937)	6866(2004)		
55	5358(1564)	5388(1572)	5989(1748)	6536(1907)	6844(1997)		
60	4998(1458)	5053(1474)	5775(1685)	6465(1886)	6822(1991)		
65	4558(1330)	4661(1360)	5566(1624)	6400(1867)	6859(2002)		
70	4102(1197)	4291(1252)	5378(1569)	6399(1867)	6933(2023)		
75	3518(1026)	3910(1141)	5255(1534)	6505(1898)	7186(2097)		
80	2805(818)	3596(1049)	5325(1554)	6804(1985)	7627(2226)		
85	1941(566)	3480(1015)	5644(1647)	7387(2156)	8445(2464)		

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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

TEST REPORT NO. H213C
 COMPUTED BY LSC PROGRAM **TEST-LITE**

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
 WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
 80 WHITE LEDS. LUMEN OUTPUT = 1307 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	1.18	1.18	1.18	1.18	1.14	1.14	1.14	1.14	1.08	1.08	1.08	1.02	1.02	1.02	.97	.97	.97	.97	.97	.97	.94
1	1.06	1.01	.96	.92	1.03	.98	.94	.90	.93	.89	.86	.88	.85	.82	.83	.81	.79	.83	.81	.79	.76
2	.96	.88	.81	.75	.93	.85	.79	.73	.81	.75	.71	.77	.72	.68	.73	.69	.66	.73	.69	.66	.63
3	.88	.77	.69	.62	.85	.75	.67	.61	.71	.65	.59	.68	.62	.57	.64	.60	.56	.64	.60	.56	.53
4	.81	.69	.60	.53	.78	.67	.59	.52	.64	.57	.51	.61	.55	.50	.58	.53	.49	.58	.53	.49	.46
5	.74	.61	.52	.45	.72	.60	.51	.45	.57	.50	.44	.54	.48	.43	.52	.46	.42	.52	.46	.42	.40
6	.68	.55	.46	.39	.66	.53	.45	.39	.51	.44	.38	.49	.42	.37	.47	.41	.36	.47	.41	.36	.34
7	.63	.49	.40	.34	.61	.48	.40	.34	.46	.38	.33	.44	.37	.32	.42	.36	.32	.42	.36	.32	.30
8	.58	.44	.36	.30	.56	.43	.35	.30	.42	.34	.29	.40	.33	.28	.38	.32	.28	.38	.32	.28	.26
9	.54	.41	.32	.26	.52	.40	.32	.26	.38	.31	.26	.36	.30	.25	.35	.29	.25	.35	.29	.25	.23
10	.50	.37	.29	.23	.49	.36	.28	.23	.35	.28	.23	.33	.27	.22	.32	.26	.22	.32	.26	.22	.20

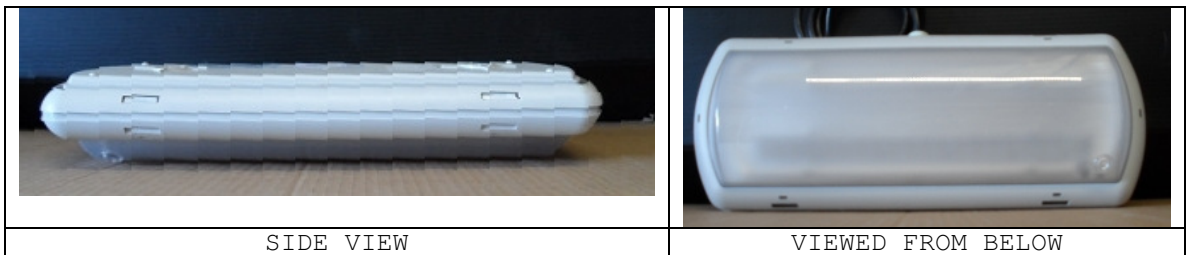
DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
 ABSOLUTE PHOTOMETRY TAKEN.

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

TEST REPORT NO. H213C

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
80 WHITE LEDS. LUMEN OUTPUT = 1307 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

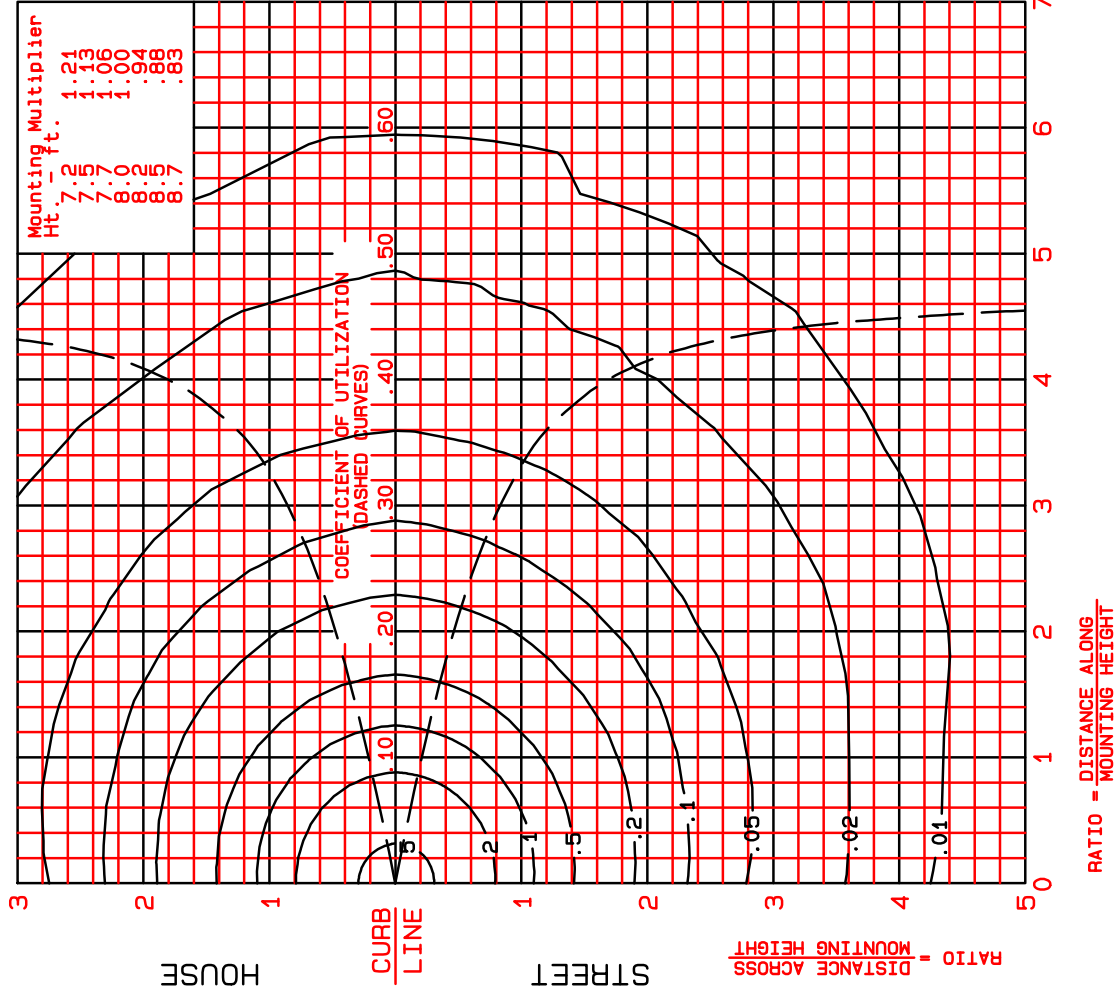


ISOFOOTCANDLE

TEST REPORT NO. H213C

BEGHELLI TEMPESTA LED EMERGENCY LUMINAIRE CAT. NO. TA LED ACEM C (ON BATTERY)
WITH SPECULAR INTERIOR AND LINEAR PRISMATIC DIFFUSING LENS
80 WHITE LEDS. LUMEN OUTPUT = 1307 LMS.
CUSTOM BEGHELLI LED CHARGER DRIVER (ON BATTERY POWER)

MOUNTING HEIGHT FOR ISOFC 8.0 FEET



TEST REPORT NO. H213C

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

LATERAL RATIOS															
-3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.035	.038	.036	.033	.028	.024	.019	.015	.012	.010	.008	.007	.005	.004	.004
-2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.072	.074	.068	.057	.046	.036	.027	.021	.016	.012	.010	.008	.006	.005	.004
-2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.16	.16	.13	.10	.075	.053	.038	.027	.020	.015	.012	.009	.007	.006	.005
-1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.42	.39	.29	.19	.12	.078	.052	.035	.025	.018	.013	.010	.008	.006	.005
-1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1.2	1.0	.63	.34	.18	.10	.066	.043	.029	.020	.015	.011	.009	.007	.005
-.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3.5	2.5	1.2	.53	.25	.13	.079	.049	.032	.022	.016	.012	.009	.007	.006
HOUSE		CURB LINE													
-----	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
STREET	6.0	3.9	1.5	.64	.29	.15	.086	.053	.035	.024	.017	.013	.010	.007	.006
.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	3.6	2.6	1.2	.53	.25	.13	.079	.049	.032	.022	.016	.012	.009	.007	.006
1.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	1.2	1.0	.64	.34	.18	.10	.066	.043	.029	.020	.015	.011	.009	.007	.005
1.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.42	.40	.29	.19	.12	.079	.052	.035	.025	.018	.013	.010	.008	.006	.005
2.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.16	.16	.14	.10	.077	.054	.038	.028	.020	.015	.012	.009	.007	.006	.005
2.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.074	.077	.070	.059	.047	.036	.028	.021	.016	.013	.010	.008	.006	.005	.004
3.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.037	.039	.038	.034	.029	.024	.020	.016	.013	.010	.008	.007	.005	.005	.004
3.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.020	.022	.022	.021	.019	.016	.014	.012	.010	.008	.007	.006	.005	.004	.003
4.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.012	.013	.013	.013	.012	.011	.010	.009	.008	.006	.005	.005	.004	.003	.003
4.50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.007	.008	.009	.009	.008	.008	.007	.007	.006	.005	.004	.004	.003	.003	.003
5.00	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	.005	.005	.006	.006	.006	.006	.005	.005	.004	.004	.004	.003	.003	.002	.002
	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