

# itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.  
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL65464

DATE: 08/11/10

PREPARED FOR: NUMBER EIGHT LIGHTING COMPANY

CATALOG NUMBER: 801/A-QT-120 WITH FS-P-WH TRIM

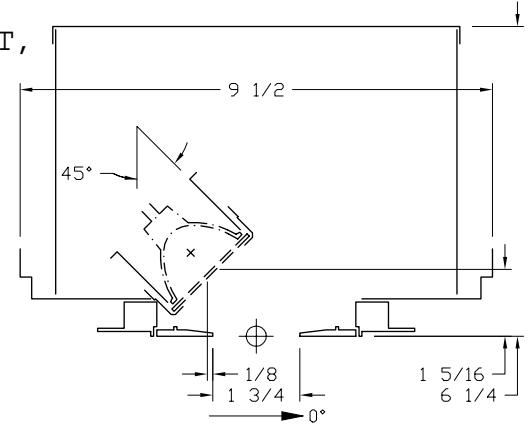
LUMINAIRE: FABRICATED METAL HOUSING WITH BLACK PAINTED GENERAL INTERIOR FINISH, FABRICATED BLACK PAINTED METAL LAMP MOUNTING BRACKET, CLEAR FLAT GLASS LENS IN MACHINED BLACK FINISHED METAL LAMP RETAINING RING, CAST WHITE PAINTED METAL INNER TRIM RING WITH BLACK PAINTED INTERIOR, INNER TRIM RING ATTACHED TO CAST WHITE PAINTED PERFORATED METAL OUTER TRIM RING WITH FOUR MAGNETS.

LAMP: ONE 50-WATT MR-16 HALOGEN INCANDESCENT, GE EXT Q50MR16/C/NS15, TILTED 45-DEGREES FROM VERTICAL BASE-UP POSITION.

MOUNTING: RECESSED

TEST DISTANCE = 25.25 FEET

REPORT IS BASED ON 750 LUMENS PER LAMP.



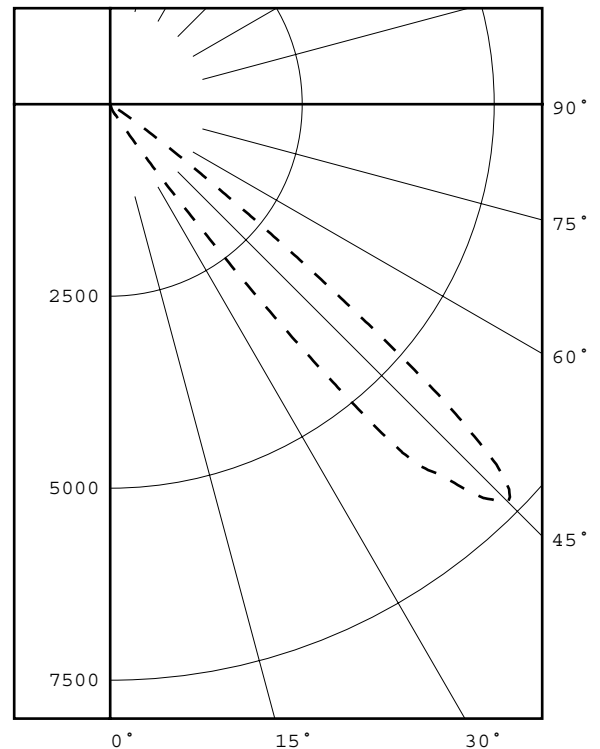
CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	5	5	5	5	5	
5	8	8	5	5	4	1
15	23	11	4	0	0	2
25	142	38	1	0	0	14
35	1268	54	0	0	0	93
45	7326	13	0	0	0	287
55	425	6	0	0	0	53
65	27	2	0	0	0	3
75	1	0	0	0	0	0
85	0	0	0	0	0	0
90	0	0	0	0	0	0

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT
0- 30	17	2.3	3.8
0- 40	111	14.8	24.4
0- 60	451	60.1	99.2
0- 90	454	60.5	100.0
90-180	0	0.0	0.0
0-180	454	60.5	100.0

TOTAL LUMINAIRE EFFICIENCY = 60.5 %

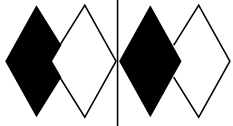
CIE TYPE - DIRECT  
PLANE : 0-DEG 90-DEG 180-DEG  
SPACING CRITERIA : 3.8 0.7 0.3  
LUMINOUS LENGTH : 1.750 1.750

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	5243794.	0.	0.
55	375026.	0.	0.
65	32335.	0.	0.
75	1956.	0.	0.
85	0.	0.	0.



LEGEND:  
0-deg: - - - - -  
90-deg: = = = = =  
180-deg: - - - - -

Checked N. WHITE  
Approved R. BEATTIE



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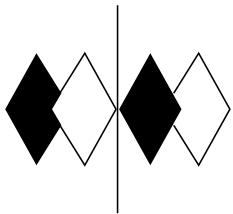
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## CANDELA DISTRIBUTION

### LATERAL ANGLE

	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	15.0	20.0	22.5
0.0	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2.5	6	6	6	6	6	6	6	6	6	6	6	6	6	6
5.0	8	8	8	7	8	8	8	8	9	9	9	9	9	9
7.5	8	9	9	9	9	10	9	9	9	10	10	10	10	11
10.0	11	11	11	9	10	10	9	9	9	10	10	11	10	11
12.5	14	14	14	14	14	14	13	13	14	13	13	13	12	12
15.0	23	24	23	23	23	23	23	23	23	23	23	21	19	19
17.5	31	31	31	30	30	30	30	30	30	30	30	28	26	25
20.0	74	74	73	73	73	72	71	70	69	68	66	58	50	44
22.5	115	115	115	120	114	118	114	113	112	114	115	103	93	86
25.0	142	142	141	140	140	139	137	136	136	136	135	128	121	110
27.5	174	173	171	169	169	167	166	165	163	162	163	153	141	132
30.0	293	293	290	287	280	276	269	263	257	250	241	198	167	151
31.0	366	365	363	357	350	340	330	318	310	299	288	230	179	162
32.0	475	475	466	460	454	445	430	411	394	374	351	269	192	170
33.0	639	633	622	617	605	589	572	551	526	487	453	313	208	177
34.0	888	875	868	860	831	796	764	730	688	648	598	365	229	184
35.0	1268	1250	1220	1193	1159	1118	1067	999	921	838	762	438	249	192
35.5	1549	1531	1497	1441	1372	1295	1218	1136	1046	944	846	482	260	196
36.0	1881	1872	1837	1764	1684	1568	1442	1314	1205	1070	951	540	266	201
36.5	2283	2279	2243	2166	2041	1898	1738	1560	1402	1228	1072	582	272	206
37.0	2796	2770	2731	2610	2497	2319	2110	1864	1634	1430	1222	615	281	211
37.5	3306	3294	3227	3121	2947	2723	2494	2217	1916	1639	1397	642	290	214
38.0	3860	3854	3825	3667	3476	3174	2917	2589	2234	1861	1579	674	298	216
38.5	4436	4430	4366	4226	3972	3645	3321	2961	2566	2114	1756	719	307	217
39.0	4967	5001	4901	4734	4481	4102	3729	3316	2909	2421	1960	766	314	217
39.5	5508	5501	5412	5201	4899	4480	4077	3663	3213	2703	2177	798	321	213
40.0	5922	5950	5823	5605	5275	4833	4413	3957	3504	2963	2396	823	322	210
40.5	6181	6214	6140	5973	5669	5189	4722	4235	3748	3193	2607	869	322	203
41.0	6310	6331	6290	6212	5971	5487	5002	4511	4007	3414	2819	904	320	198
41.5	6415	6439	6399	6366	6207	5764	5245	4745	4216	3583	2978	929	316	192
42.0	6569	6590	6531	6439	6303	5983	5482	4966	4420	3742	3112	940	310	187
42.5	6752	6764	6691	6548	6403	6139	5703	5130	4570	3877	3213	954	300	183
43.0	6927	6944	6866	6735	6557	6277	5867	5257	4654	3979	3299	970	287	180
43.5	7072	7066	7025	6901	6676	6418	6014	5331	4713	4002	3338	974	274	177
44.0	7153	7153	7159	7032	6854	6521	6084	5352	4722	4006	3330	968	258	173
44.5	7257	7251	7228	7147	6957	6573	6079	5320	4695	3971	3257	954	247	169
45.0	7326	7323	7276	7195	6967	6586	6038	5277	4631	3894	3180	938	238	168
45.5	7295	7281	7314	7180	6977	6563	5893	5165	4514	3751	3077	931	231	165
46.0	7219	7198	7193	7085	6869	6410	5734	5016	4327	3592	2946	895	223	161
46.5	7073	7065	7050	6926	6624	6077	5510	4812	4141	3425	2790	860	217	158
47.0	6868	6850	6785	6653	6310	5769	5198	4525	3900	3233	2625	816	213	156
47.5	6517	6532	6482	6314	5953	5470	4892	4223	3609	2988	2433	768	209	152
48.0	6143	6189	6129	5943	5551	5067	4493	3898	3321	2706	2228	724	203	148
48.5	5709	5748	5682	5456	5088	4606	4123	3575	3031	2458	2028	674	197	142
49.0	5126	5145	5079	4863	4521	4117	3695	3206	2699	2221	1819	623	192	136
49.5	4519	4502	4441	4296	4021	3676	3312	2826	2380	1969	1628	575	186	133
50.0	3870	3906	3861	3717	3496	3206	2865	2436	2062	1732	1493	541	177	124
50.5	3346	3347	3269	3165	2972	2717	2435	2084	1807	1551	1352	497	167	119
51.0	2789	2789	2736	2621	2466	2255	2000	1763	1566	1377	1189	450	154	110
51.5	2305	2309	2253	2147	2026	1872	1705	1521	1362	1196	1040	407	142	102
52.0	1865	1872	1823	1750	1675	1564	1437	1302	1169	1018	904	367	137	95
52.5	1497	1503	1487	1447	1394	1309	1209	1093	994	889	793	337	118	90
53.0	1212	1208	1194	1168	1125	1057	983	906	829	755	688	304	108	85
53.5	962	970	958	937	913	874	814	754	699	637	581	262	102	75
54.0	730	745	745	740	728	696	666	621	572	527	482	217	95	64
54.5	551	557	572	571	572	559	535	499	466	428	395	178	81	57
55.0	425	425	437	436	437	433	420	396	378	342	314	140	69	50
56.0	224	223	231	236	243	242	234	224	216	194	175	81	46	37
57.0	125	124	122	123	116	114	109	108	101	89	82	46	36	33
58.0	52	53	52	51	50	49	48	46	45	43	40	31	32	31
59.0	31	31	31	31	30	30	29	28	29	27	27	27	28	27
60.0	26	26	26	26	26	26	25	26	25	24	24	25	28	22
62.5	25	25	25	25	26	28	28	30	29	30	30	26	17	14
65.0	27	28	27	28	27	27	26	25	24	23	23	16	11	9



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## CANDELA DISTRIBUTION

### LATERAL ANGLE

	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	15.0	20.0	22.5
67.5	18	19	18	18	18	17	17	17	17	15	14	9	6	6
70.0	8	8	8	7	8	8	7	7	7	7	6	6	4	4
72.5	6	5	5	5	5	5	5	5	4	5	4	2	1	1
75.0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
77.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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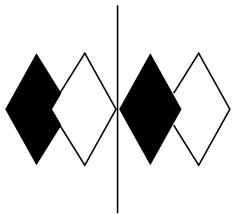
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CANDELA DISTRIBUTION  
 LATERAL ANGLE

	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	5	5	5	5	5	5	5
2.5	6	6	5	5	5	5	4
5.0	8	6	5	5	5	5	4
7.5	11	8	5	5	4	4	4
10.0	11	8	4	4	2	1	0
12.5	11	9	4	4	1	0	0
15.0	11	10	4	2	0	0	0
17.5	12	11	4	1	0	0	0
20.0	15	11	3	0	0	0	0
22.5	24	11	3	0	0	0	0
25.0	38	11	1	0	0	0	0
27.5	58	11	1	0	0	0	0
30.0	70	11	1	0	0	0	0
31.0	72	9	0	0	0	0	0
32.0	73	9	0	0	0	0	0
33.0	73	9	0	0	0	0	0
34.0	65	8	0	0	0	0	0
35.0	54	8	0	0	0	0	0
35.5	48	7	0	0	0	0	0
36.0	43	7	0	0	0	0	0
36.5	39	6	0	0	0	0	0
37.0	37	6	0	0	0	0	0
37.5	33	6	0	0	0	0	0
38.0	29	6	0	0	0	0	0
38.5	27	6	0	0	0	0	0
39.0	24	6	0	0	0	0	0
39.5	24	6	0	0	0	0	0
40.0	24	6	0	0	0	0	0
40.5	22	6	0	0	0	0	0
41.0	21	6	0	0	0	0	0
41.5	19	6	0	0	0	0	0
42.0	18	6	0	0	0	0	0
42.5	17	6	0	0	0	0	0
43.0	17	6	0	0	0	0	0
43.5	16	6	0	0	0	0	0
44.0	15	6	0	0	0	0	0
44.5	14	6	0	0	0	0	0
45.0	13	6	0	0	0	0	0
45.5	12	6	0	0	0	0	0
46.0	13	6	0	0	0	0	0
46.5	12	6	0	0	0	0	0
47.0	12	6	0	0	0	0	0
47.5	11	6	0	0	0	0	0
48.0	10	6	0	0	0	0	0
48.5	10	5	0	0	0	0	0
49.0	10	5	0	0	0	0	0
49.5	10	5	0	0	0	0	0
50.0	10	5	0	0	0	0	0
50.5	9	5	0	0	0	0	0
51.0	9	4	0	0	0	0	0
51.5	9	3	0	0	0	0	0
52.0	8	3	0	0	0	0	0
52.5	8	2	0	0	0	0	0
53.0	8	2	0	0	0	0	0
53.5	7	1	0	0	0	0	0
54.0	7	1	0	0	0	0	0
54.5	6	1	0	0	0	0	0
55.0	6	0	0	0	0	0	0
56.0	6	0	0	0	0	0	0
57.0	6	0	0	0	0	0	0
58.0	6	0	0	0	0	0	0
59.0	5	0	0	0	0	0	0
60.0	5	0	0	0	0	0	0
62.5	5	0	0	0	0	0	0
65.0	2	0	0	0	0	0	0



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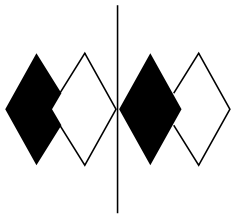
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## CANDELA DISTRIBUTION

### LATERAL ANGLE

	45.0	67.5	90.0	112.5	135.0	157.5	180.0
67.5	0	0	0	0	0	0	0
70.0	0	0	0	0	0	0	0
72.5	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0
77.5	0	0	0	0	0	0	0
80.0	0	0	0	0	0	0	0
82.5	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0
87.5	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0



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5-DEGREE

ZONAL LUMEN SUMMARY

0- 5	0.
5- 10	0.
10- 15	1.
15- 20	2.
20- 25	5.
25- 30	10.
30- 35	21.
35- 40	72.
40- 45	149.
45- 50	138.
50- 55	47.
55- 60	6.
60- 65	2.
65- 70	1.
70- 75	0.
75- 80	0.
80- 85	0.
85- 90	0.

10-DEGREE

ZONAL LUMEN SUMMARY

0- 10	1.
0- 20	3.
0- 30	17.
0- 40	111.
0- 50	397.
0- 60	451.
0- 70	454.
0- 80	454.
0- 90	454.
0-100	454.
0-110	454.
0-120	454.
0-130	454.
0-140	454.
0-150	454.
0-160	454.
0-170	454.
0-180	454.



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	72	72	72	72	70	70	70	70	67	67	67	64	64	64	62	62	62	60
1	67	64	62	60	65	63	61	59	61	59	57	58	57	56	56	55	54	53
2	61	57	53	50	60	56	52	49	54	51	48	52	49	47	50	48	46	45
3	56	50	45	41	54	49	44	41	47	43	40	45	42	40	44	41	39	38
4	50	43	38	34	49	43	38	34	41	37	34	40	36	33	38	35	33	31
5	46	38	32	28	44	37	32	28	36	31	28	35	31	28	34	30	27	26
6	41	33	28	24	40	33	27	23	31	27	23	30	26	23	29	26	23	22
7	38	29	24	20	37	29	23	20	28	23	19	27	22	19	26	22	19	18
8	34	26	20	16	33	25	20	16	24	20	16	24	19	16	23	19	16	15
9	31	23	17	14	30	22	17	14	21	17	14	21	17	13	20	16	13	12
10	29	20	15	11	28	20	15	11	19	15	11	18	14	11	18	14	11	10

ALL CANDELA, LUMENS, LUMINANCE, COEFFICIENT OF UTILIZATION AND VCP VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.000. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.