



itl boulder

THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL78305

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ISSUE DATE: 09/10/13

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: MLS5-I1/D2-4-PB-120-T8

LUMINAIRE: EXTRUDED 2-PIECE METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH, FABRICATED WHITE PAINTED METAL END CAPS AND 2 DISTINCT OPTICAL COMPARTMENTS, TOP OPTICAL COMPARTMENT CONSISTS OF: FORMED WHITE PAINTED METAL REFLECTOR, FORMED SPECULAR METAL SOCKET MOUNTING BRACKETS. BOTTOM OPTICAL COMPARTMENT CONSISTS OF: FORMED WHITE PAINTED METAL REFLECTOR AND SOCKET MOUNTING BRACKETS, FABRICATED SEMI-DIFFUSE METAL PARABOLIC 32-CELL LOUVER. OPEN TOP.

LAMPS: THREE 32-WATT T-8 FO32/835 LINEAR FLUORESCENTS.

BALLAST: UNIVERSAL B232IUNV-C, UNIVERSAL B232IUNVHP-N

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

TOTAL REFLECTANCE OF PAINT = 90.0 %

MOUNTING: SUSPENDED

TOTAL INPUT WATTS = 87.7 AT 120.0 VOLTS

REPORT IS BASED ON 2950 LUMENS PER LAMP.

CANDELA DISTRIBUTION

FLUX

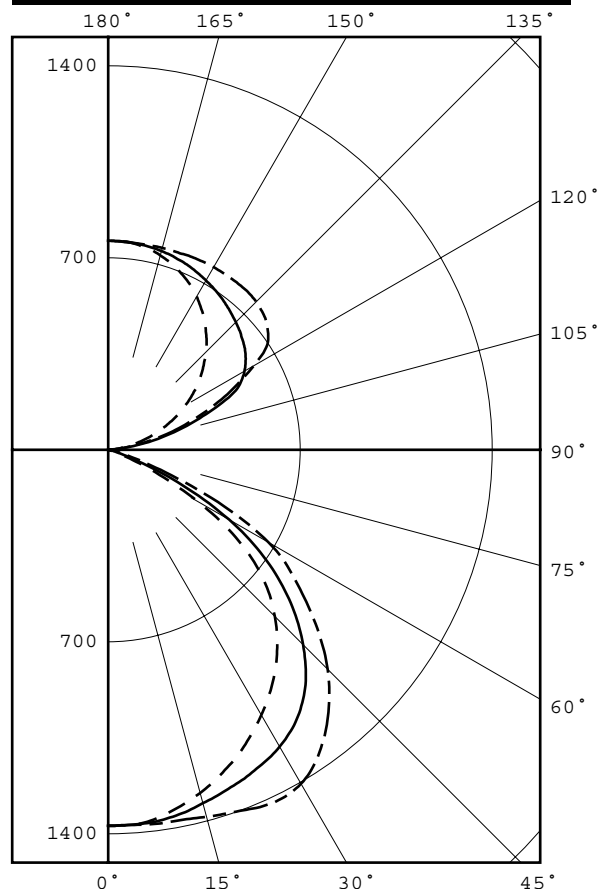
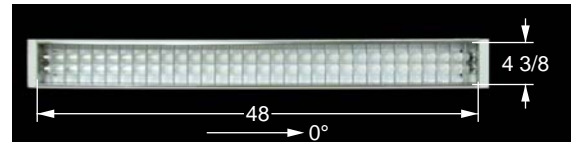
	0.0	22.5	45.0	67.5	90.0	
0	1371	1371	1371	1371	1371	
5	1367	1357	1369	1374	1372	130
15	1295	1298	1334	1373	1385	378
25	1184	1203	1282	1375	1420	595
35	1043	1087	1199	1287	1344	744
45	859	928	1005	1063	1131	767
55	584	655	706	758	835	626
65	173	196	279	364	416	288
75	20	23	29	46	51	45
85	2	3	4	5	5	5
90	0	0	0	0	0	
95	20	45	35	37	38	49
105	128	284	249	227	221	244
115	261	395	514	491	479	434
125	389	473	611	691	712	518
135	504	555	658	738	763	499
145	603	631	697	751	769	433
155	681	691	728	757	767	335
165	734	734	750	760	762	212
175	762	755	760	760	760	72
180	762	762	762	762	762	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1104	12.5	17.3
0- 40	1848	20.9	29.0
0- 60	3240	36.6	50.8
0- 90	3578	40.4	56.1
90-120	726	8.2	11.4
90-130	1244	14.1	19.5
90-150	2177	24.6	34.1
90-180	2795	31.6	43.9
0-180	6374	72.0	100.0

TOTAL LUMINAIRE EFFICIENCY = 72.0 %

CIE TYPE - GENERAL DIFFUSE
 PLANE : 0-DEG 90-DEG
 SPACING CRITERIA : 1.22 1.48
 SHIELDING ANGLES : 27 20



LEGEND:
 0-deg -----
 45-deg _____
 90-deg - . - . - .

Checked M KLOPF
 Approved R BEATTIE
 Lighting Engineer



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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 48.000 4.375

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE	AVERAGE	AVERAGE	AVERAGE
IN DEG	0-DEG	45-DEG	90-DEG
45	8966.	10490.	11806.
55	7515.	9085.	10745.
65	3021.	4873.	7265.
75	570.	827.	1454.
85	169.	339.	423.



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CANDELA DISTRIBUTION LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1371	1371	1371	1371	1371
5.0	1367	1357	1369	1374	1372
10.0	1337	1334	1358	1374	1375
15.0	1295	1298	1334	1373	1385
20.0	1243	1255	1309	1374	1401
25.0	1184	1203	1282	1375	1420
30.0	1117	1148	1250	1351	1406
35.0	1043	1087	1199	1287	1344
40.0	958	1016	1119	1187	1249
45.0	859	928	1005	1063	1131
50.0	741	814	869	916	987
55.0	584	655	706	758	835
60.0	379	435	508	592	676
65.0	173	196	279	364	416
70.0	53	62	91	147	167
75.0	20	23	29	46	51
80.0	8	9	12	15	17
85.0	2	3	4	5	5
90.0	0	0	0	0	0
95.0	20	45	35	37	38
100.0	67	155	127	108	103
105.0	128	284	249	227	221
110.0	194	352	379	357	344
115.0	261	395	514	491	479
120.0	326	433	574	629	614
125.0	389	473	611	691	712
130.0	448	515	636	721	747
135.0	504	555	658	738	763
140.0	555	595	678	746	769
145.0	603	631	697	751	769
150.0	645	664	713	755	769
155.0	681	691	728	757	767
160.0	711	715	740	758	763
165.0	734	734	750	760	762
170.0	751	747	757	760	760
175.0	762	755	760	760	760
180.0	762	762	762	762	762



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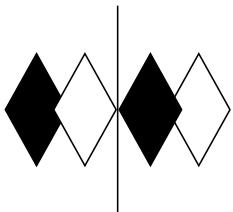
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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	33
5- 10	97
10- 15	160
15- 20	218
20- 25	273
25- 30	322
30- 35	360
35- 40	384
40- 45	390
45- 50	377
50- 55	342
55- 60	284
60- 65	194
65- 70	94
70- 75	33
75- 80	12
80- 85	4
85- 90	1
90- 95	9
95-100	40
100-105	94
105-110	150
110-115	198
115-120	235
120-125	257
125-130	261
130-135	255
135-140	244
140-145	227
145-150	206
150-155	182
155-160	153
160-165	122
165-170	89
170-175	54
175-180	18

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	130
0- 20	508
0- 30	1104
0- 40	1848
0- 50	2614
0- 60	3240
0- 70	3529
0- 80	3573
0- 90	3578
0-100	3627
0-110	3871
0-120	4304
0-130	4822
0-140	5321
0-150	5755
0-160	6090
0-170	6301
0-180	6374



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	78	78	78	78	73	73	73	73	62	62	62	53	53	53	44	44	44	44	40
1	72	69	67	64	67	65	62	60	56	54	53	48	47	46	40	40	39	39	36
2	66	61	57	53	61	57	53	50	50	47	45	43	41	39	36	35	34	34	31
3	61	54	49	45	56	51	46	43	44	41	38	38	35	33	32	31	29	29	26
4	55	48	42	38	51	45	40	36	39	35	32	34	31	29	29	27	25	25	23
5	51	43	37	33	47	40	35	31	35	31	28	31	27	25	26	24	22	22	20
6	47	38	33	29	44	36	31	27	32	28	25	28	24	22	24	21	19	19	17
7	43	35	29	25	40	33	28	24	29	25	22	25	22	19	22	19	17	17	15
8	40	31	26	22	37	30	25	21	26	22	19	23	20	17	20	17	15	15	14
9	37	29	23	20	35	27	22	19	24	20	17	21	18	15	18	16	14	14	12
10	35	26	21	18	33	25	20	17	22	18	15	19	16	14	17	14	13	13	11

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.