

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: ITL78309

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ISSUE DATE: 09/12/13

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: MLP5-I2/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: FOUR 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 = 90.1 %

MOUNTING: SUSPENDED

TOTAL INPUT WATTS = 109.7 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	1492	1492	1492	1492	1492	
5	1490	1477	1491	1496	1493	142
15	1411	1413	1455	1496	1508	412
25	1290	1311	1398	1499	1547	649
35	1137	1184	1304	1400	1459	809
45	935	1006	1089	1151	1218	831
55	635	707	762	819	901	676
65	183	213	297	377	424	305
75	22	26	33	49	55	48
85	3	4	4	5	6	6
90	0	0	0	0	0	
95	41	57	49	44	45	67
105	273	358	310	285	278	327
115	536	693	659	618	605	627
125	788	913	1001	972	957	838
135	1014	1095	1219	1269	1270	910
145	1208	1256	1353	1417	1433	837
155	1363	1384	1441	1483	1495	662
165	1468	1468	1500	1513	1516	422
175	1520	1510	1519	1519	1520	145
180	1521	1521	1521	1521	1521	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1202	10.2	13.8
0- 40	2011	17.0	23.1
0- 60	3518	29.8	40.4
0- 90	3877	32.9	44.5
90-120	1021	8.7	11.7
90-130	1859	15.8	21.3
90-150	3606	30.6	41.4
90-180	4834	41.0	55.5
0-180	8711	73.8	100.0

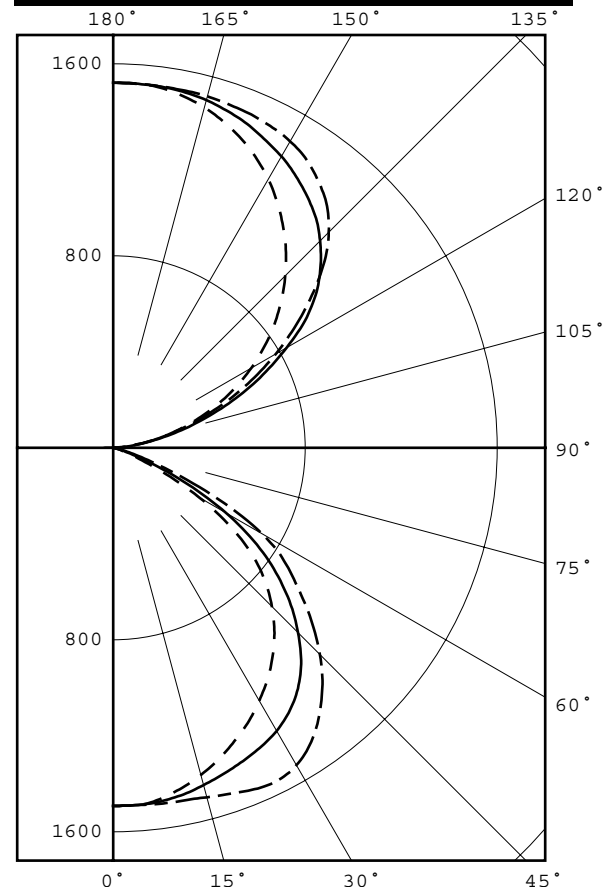
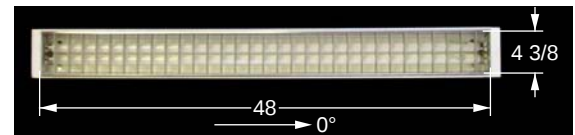
TOTAL LUMINAIRE EFFICIENCY = 73.8 %

CIE TYPE - GENERAL DIFFUSE

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.22 1.48

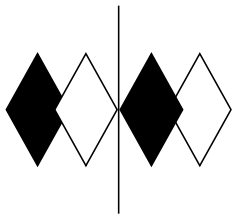
SHIELDING ANGLES : 27 20



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	9760.	11367.	12714.	
55	8171.	9806.	11594.	
65	3196.	5187.	7405.	
75	627.	941.	1568.	
85	254.	339.	508.	



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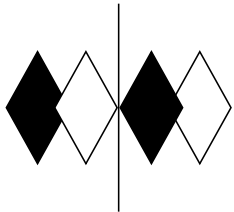
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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1492	1492	1492	1492	1492
5.0	1490	1477	1491	1496	1493
10.0	1458	1453	1479	1497	1498
15.0	1411	1413	1455	1496	1508
20.0	1354	1366	1427	1498	1528
25.0	1290	1311	1398	1499	1547
30.0	1217	1249	1362	1471	1527
35.0	1137	1184	1304	1400	1459
40.0	1044	1104	1215	1287	1352
45.0	935	1006	1089	1151	1218
50.0	806	882	940	991	1060
55.0	635	707	762	819	901
60.0	413	468	544	635	714
65.0	183	213	297	377	424
70.0	56	68	98	151	172
75.0	22	26	33	49	55
80.0	9	11	13	17	19
85.0	3	4	4	5	6
90.0	0	0	0	0	0
95.0	41	57	49	44	45
100.0	147	190	161	150	148
105.0	273	358	310	285	278
110.0	402	544	479	445	433
115.0	536	693	659	618	605
120.0	664	812	835	797	782
125.0	788	913	1001	972	957
130.0	904	1006	1124	1142	1128
135.0	1014	1095	1219	1269	1270
140.0	1116	1179	1295	1355	1369
145.0	1208	1256	1353	1417	1433
150.0	1292	1326	1402	1457	1474
155.0	1363	1384	1441	1483	1495
160.0	1421	1431	1475	1500	1507
165.0	1468	1468	1500	1513	1516
170.0	1501	1495	1514	1519	1518
175.0	1520	1510	1519	1519	1520
180.0	1521	1521	1521	1521	1521



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5-DEGREE

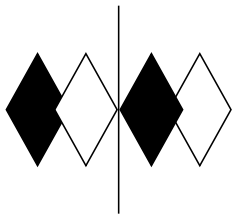
ZONAL LUMEN SUMMARY

0- 5	36
5- 10	106
10- 15	174
15- 20	238
20- 25	298
25- 30	351
30- 35	392
35- 40	417
40- 45	423
45- 50	408
50- 55	370
55- 60	306
60- 65	207
65- 70	99
70- 75	35
75- 80	13
80- 85	5
85- 90	1
90- 95	11
95-100	56
100-105	124
105-110	203
110-115	280
115-120	347
120-125	400
125-130	438
130-135	456
135-140	454
140-145	435
145-150	402
150-155	358
155-160	304
160-165	244
165-170	178
170-175	108
175-180	36

10-DEGREE

ZONAL LUMEN SUMMARY

0- 10	142
0- 20	554
0- 30	1202
0- 40	2011
0- 50	2842
0- 60	3518
0- 70	3823
0- 80	3871
0- 90	3877
0-100	3944
0-110	4271
0-120	4898
0-130	5736
0-140	6646
0-150	7482
0-160	8144
0-170	8567
0-180	8711



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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	72	72	72	72	59	59	59	48	48	48	38	38	38	33
1	72	69	66	64	66	63	61	59	53	51	50	43	42	41	34	34	33	29
2	66	61	56	53	60	56	52	49	47	44	42	38	37	35	31	29	28	25
3	60	54	48	44	55	49	45	41	41	38	36	34	32	30	27	26	25	21
4	55	47	42	38	50	44	39	35	37	33	30	31	28	26	25	23	21	18
5	51	42	37	32	46	39	34	30	33	29	26	27	25	22	22	20	19	16
6	47	38	32	28	43	35	30	26	30	26	23	25	22	20	20	18	16	14
7	43	34	28	24	39	32	27	23	27	23	20	22	20	17	18	16	14	13
8	40	31	25	22	37	29	24	20	25	21	18	21	18	15	17	15	13	11
9	37	28	23	19	34	26	21	18	22	19	16	19	16	14	15	13	12	10
10	35	26	21	17	32	24	19	16	21	17	14	17	14	12	14	12	11	9

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.