

REPORT NUMBER: ITL70246

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ISSUE DATE: 10/28/11

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: LTS-03-X-4-X-OC0/MPL-X-120-T5

LUMINAIRE: EXTRUDED SEMI-DIFFUSE METAL HOUSING WITH FABRICATED SEMI-DIFFUSE METAL END CAPS, TWO FORMED METAL SIDE REFLECTORS WITH PREMIUM SPECULAR FINISH, FORMED WHITE PAINTED METAL UPPER REFLECTOR, CLEAR FLAT MICRO-PRISMATIC PLASTIC LENS. LENS PRISMS DOWN.

LAMPS: THREE 28-WATT T-5 SYLVANIA FP28/841/ECO LINEAR FLUORESCENTS.

BALLASTS: TWO UNIVERSAL B228PUNV-C

MOUNTING: SUSPENDED

TOTAL REFLECTANCE OF PAINT = 90.4 %

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

TOTAL INPUT WATTS = 83.4 AT 120.0 VOLTS

LUMEN TO CANDELA RATIO USED = 9.17

REPORT IS BASED ON 2600 LUMENS PER LAMP. *

CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	2472	2472	2472	2472	2472	
5	2475	2474	2470	2458	2457	235
15	2402	2405	2413	2411	2414	680
25	2214	2223	2244	2256	2246	1031
35	1916	1927	1960	1999	2013	1219
45	1204	1251	1268	1219	1252	962
55	539	534	519	518	537	483
65	256	287	280	274	281	279
75	162	180	169	161	168	178
85	76	75	74	74	65	75
90	0	0	0	0	0	

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT
0- 30	1946	24.9	37.8
0- 40	3165	40.6	61.5
0- 60	4610	59.1	89.7
0- 90	5142	65.9	100.0
90-180	0	0.0	0.0
0-180	5142	65.9	100.0

TOTAL LUMINAIRE EFFICIENCY = 65.9 % *

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.24 1.28

SHIELDING ANGLES : 90 90

LUMINOUS LENGTH : 44.125 5.500

LUMINANCE DATA IN CANDELA/SQ M

ANGLE AVERAGE AVERAGE AVERAGE

IN DEG 0-DEG 45-DEG 90-DEG

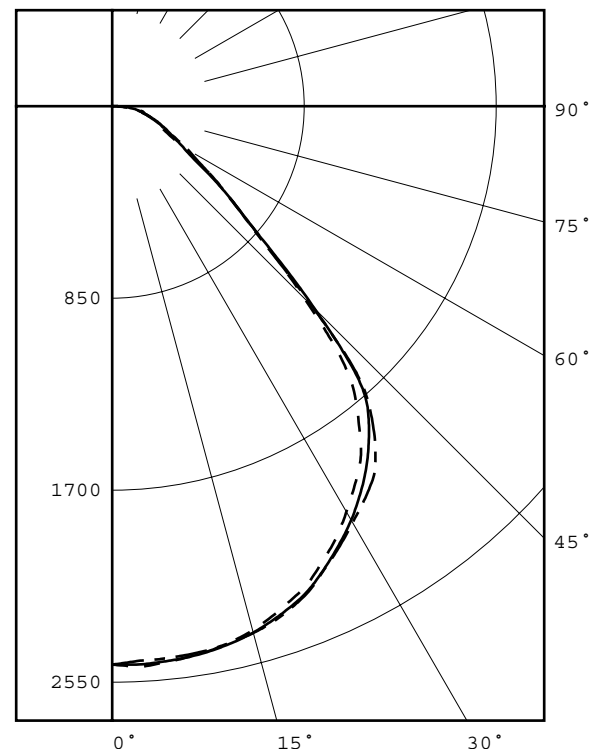
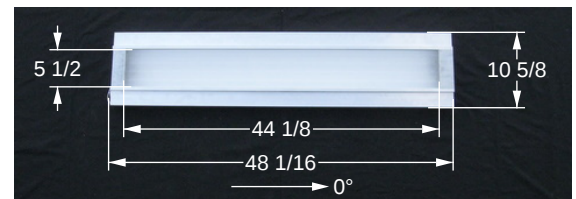
45 10875. 11453. 11309.

55 6002. 5779. 5980.

65 3869. 4232. 4247.

75 3998. 4170. 4146.

85 5569. 5423. 4763.



LEGEND:

0-deg: - - - - -

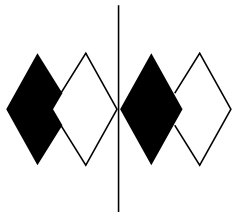
45-deg: ————

90-deg: - - - - -

Checked M. KLOPF

Approved R. BEATTIE
Lighting Engineer

* SEE ADDENDUM FOR FURTHER INFORMATION



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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

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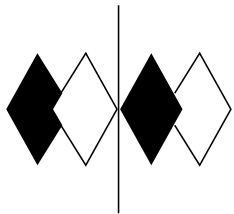
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0.0	2472	2472	2472	2472	2472
2.5	2483	2478	2474	2461	2459
5.0	2475	2474	2470	2458	2457
7.5	2464	2464	2463	2453	2452
10.0	2450	2450	2452	2444	2445
12.5	2429	2430	2435	2430	2431
15.0	2402	2405	2413	2411	2414
17.5	2365	2375	2382	2389	2389
20.0	2324	2328	2347	2353	2353
22.5	2279	2278	2303	2311	2308
25.0	2214	2223	2244	2256	2246
27.5	2151	2156	2182	2193	2189
30.0	2074	2091	2116	2133	2129
32.5	1996	2015	2041	2062	2073
35.0	1916	1927	1960	1999	2013
37.5	1797	1826	1866	1910	1914
40.0	1671	1700	1762	1768	1784
42.5	1486	1540	1583	1588	1600
45.0	1204	1251	1268	1219	1252
47.5	963	962	980	956	949
50.0	768	769	772	786	765
52.5	638	627	640	646	641
55.0	539	534	519	518	537
57.5	438	455	418	423	446
60.0	358	376	362	354	390
62.5	297	323	315	312	329
65.0	256	287	280	274	281
67.5	227	250	252	237	243
70.0	203	223	216	205	224
72.5	186	204	187	184	194
75.0	162	180	169	161	168
77.5	137	150	145	141	146
80.0	138	124	123	123	121
82.5	105	100	103	105	92
85.0	76	75	74	74	65
87.5	42	44	40	38	33
90.0	0	0	0	0	0



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5-DEGREE

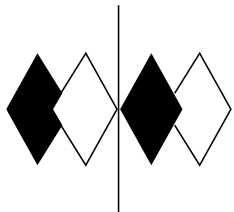
ZONAL LUMEN SUMMARY

0- 5	59.
5- 10	176.
10- 15	288.
15- 20	392.
20- 25	481.
25- 30	550.
30- 35	600.
35- 40	619.
40- 45	564.
45- 50	397.
50- 55	280.
55- 60	203.
60- 65	155.
65- 70	124.
70- 75	100.
75- 80	78.
80- 85	55.
85- 90	21.

10-DEGREE

ZONAL LUMEN SUMMARY

0- 10	235.
0- 20	915.
0- 30	1946.
0- 40	3165.
0- 50	4126.
0- 60	4610.
0- 70	4888.
0- 80	5066.
0- 90	5142.
0-100	5142.
0-110	5142.
0-120	5142.
0-130	5142.
0-140	5142.
0-150	5142.
0-160	5142.
0-170	5142.
0-180	5142.



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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	77	77	77	77	73	73	73	70	70	70	67	67	67	66
1	73	70	68	66	71	69	67	65	66	64	63	63	62	61	61	60	59	58
2	67	63	59	56	66	62	58	55	59	56	54	57	55	53	55	53	52	50
3	62	56	52	48	61	55	51	48	54	50	47	52	49	46	50	48	45	44
4	58	51	46	42	56	50	46	42	49	45	41	47	44	41	46	43	40	39
5	54	46	41	37	52	46	41	37	44	40	37	43	39	36	42	39	36	35
6	50	42	37	33	49	42	37	33	41	36	33	39	36	33	38	35	32	31
7	47	39	33	30	46	38	33	30	37	33	30	36	32	29	35	32	29	28
8	44	36	30	27	43	35	30	27	34	30	27	34	30	27	33	29	26	25
9	41	33	28	25	40	32	28	24	32	27	24	31	27	24	30	27	24	23
10	39	30	26	22	38	30	26	22	30	25	22	29	25	22	28	25	22	21

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.



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ADDENDUM

SPECIAL TEST PROCEDURES FOR T-5 LAMPS INCLUDING EXPLANATION OF THE IMPORTANCE OF LAMP LUMEN RATINGS.

This test was performed using standard relative photometric practices in accordance with recommendations of the Illuminating Engineering Society of North America. Fluorescent testing using the guidelines of relative photometric practice presupposes that the lamps will be operated at their nominal electrical characteristics (e.g., a 40 watt lamp will operate very nearly at 40 watts, and at the voltage and current required for 40-watt operation). Fluorescent lamps in general are temperature sensitive, the lumen output varies with ambient temperature and follows a characteristic curve. The T-5 fluorescent lamps used in this test produce maximum light output in an ambient temperature other than 25 degrees C. A critical step in relative photometric testing involves measurement of the total flux output from the lamp(s) suspended in free air at a 25 degree C ambient temperature per IES LM41-1998. This measurement process is a separate step from the photometric exploration of the luminaire itself. This "bare lamp" measurement is made with the lamp(s) operated by the same ballast(s) which are to be used in the luminaire. Since the test procedure involves measuring the bare lamp flux output at 25 degrees C and this lamp type peaks at a temperature other than 25 degrees C, the flux measured for this lamp type will be less than the maximum output the lamp is designed to produce.

As a result, the measurement of the "bare lamp" total flux output is lower than it would be if the lamps were operated at their optimum operating temperature and at nominal electrical characteristics. When this "bare lamp" measurement is incorporated into the luminaire test report, the net effect is that total luminaire efficiency on the report is higher than what the lighting industry would expect this luminaire to produce. These lighting industry expectations are based on comparisons to the total luminaire efficiency of the same luminaire with T-12 or T-8 lamps.

On this particular test, the lamp lumen rating shown is for a 25 degree C ambient temperature. Since this report was based the lumen lamp lumen rating at 25 degrees C, the candela values in this report should be accurate, as long as the lamp(s) used for this test follow the manufacturer's light output vs. temperature curve.

T5TEMP3.DIS