



LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING
MEMBER
of the
IESNA

905 Harrison Street · Allentown, PA 18103 · 610-770-1044 · Fax 610-770-8912 · www.LuminaireTesting.com

LTL NUMBER: 12732

DATE: 02-22-2008

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: MLP-D1-4-X-DLP-X-120-T5HO

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR, CLEAR LINEAR PRISMATIC PLASTIC LENS.

LAMP: ONE 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMP RATED AT 4400 LUMENS.

LAMP CATALOG NUMBER: PHILIPS F54T5/850/HO/ALTO

BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B254PUNV-D

MOUNTING: WALL

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 48.9 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	FLUX
0	789	789	789	789	789	789	789	789	789	
5	700	705	729	756	788	810	826	828	828	73
15	534	537	576	655	740	803	817	863	871	202
25	477	474	482	515	643	743	872	930	948	310
35	404	405	428	403	508	681	842	925	934	380
45	292	296	326	348	358	605	771	834	835	395
55	224	215	217	252	227	491	629	635	606	345
65	162	152	143	143	136	347	419	384	360	245
75	94	84	76	65	60	170	196	179	164	127
85	26	22	18	12	10	31	36	34	26	29
90	11	8	5	2	1	2	2	2	1	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	585	13.3	27.8
0- 40	965	21.9	45.8
0- 60	1705	38.7	80.9
0- 90	2106	47.9	100.0
90-180	0	0.0	0.0
0-180	2106	47.9	100.0

TOTAL LUMINAIRE EFFICIENCY: 47.9%

CIE TYPE: DIRECT

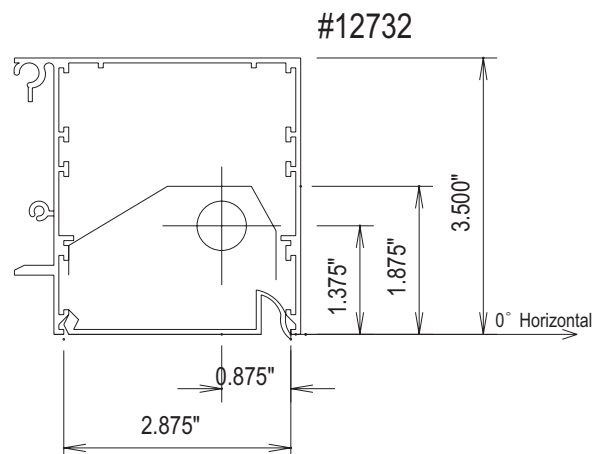
PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 0.8 1.1 1.7

LUMINOUS LENGTH: 2.875 48.000

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	8861.	8861.	8861.
45	4638.	5178.	5686.
55	4386.	4249.	4445.
65	4305.	3800.	3614.
75	4079.	3298.	2604.
85	3350.	2320.	1289.



Approved By: MG

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IESNA PROCEDURES.



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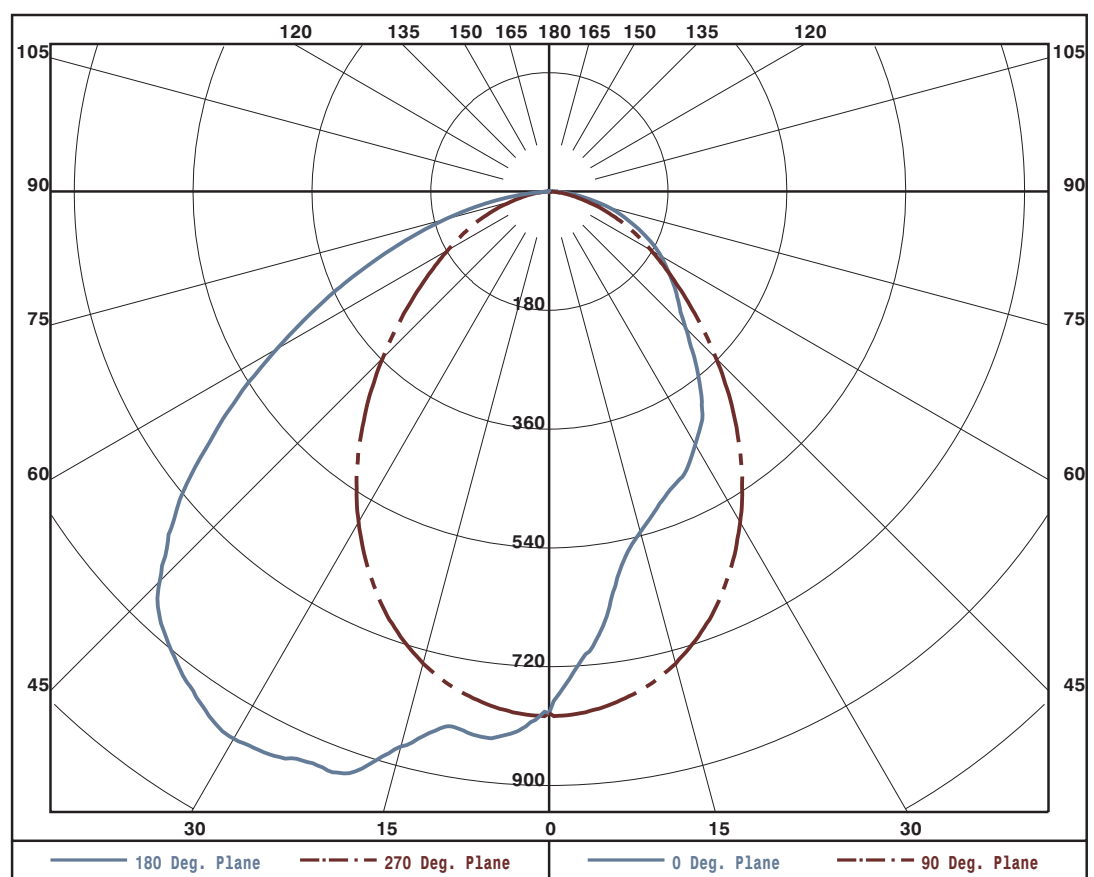
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	789	789	789	789	789	789	789	789	789
5	700	705	729	756	788	810	826	828	828
10	594	615	664	706	770	811	830	827	825
15	534	537	576	655	740	803	817	863	871
20	498	501	513	589	697	779	842	923	937
25	477	474	482	515	643	743	872	930	948
30	443	446	459	449	579	709	865	938	957
35	404	405	428	403	508	681	842	925	934
40	347	354	381	375	433	647	814	885	897
45	292	296	326	348	358	605	771	834	835
50	255	249	270	307	288	552	711	746	734
55	224	215	217	252	227	491	629	635	606
60	195	184	177	194	178	420	533	507	477
65	162	152	143	143	136	347	419	384	360
70	127	117	109	100	96	262	302	274	254
75	94	84	76	65	60	170	196	179	164
80	56	50	44	35	31	91	107	99	88
85	26	22	18	12	10	31	36	34	26
90	11	8	5	2	1	2	2	2	1

ZONAL LUMEN SUMMARY

0- 5	19.
5- 10	55.
10- 15	86.
15- 20	116.
20- 25	143.
25- 30	167.
30- 35	184.
35- 40	196.
40- 45	200.
45- 50	195.
50- 55	183.
55- 60	162.
60- 65	137.
65- 70	108.
70- 75	79.
75- 80	49.
80- 85	24.
85- 90	5.





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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	57	57	57	57	56	56	56	56	53	53	53	51	51	51	49	49	49	48
1	53	51	49	47	51	49	48	46	47	46	45	46	44	43	44	43	42	41
2	48	45	42	39	47	44	41	39	42	40	38	40	39	37	39	37	36	35
3	44	40	36	33	43	39	35	33	37	35	32	36	34	32	35	33	31	30
4	41	35	31	28	40	35	31	28	33	30	28	32	30	27	31	29	27	26
5	37	31	27	24	36	31	27	24	30	26	24	29	26	23	28	25	23	22
6	34	28	24	21	33	27	24	21	27	23	20	26	23	20	25	22	20	19
7	31	25	21	18	31	25	21	18	24	20	18	23	20	18	23	20	18	17
8	29	22	18	16	28	22	18	16	21	18	15	21	18	15	20	17	15	14
9	27	20	16	13	26	20	16	13	19	16	13	19	16	13	18	15	13	12
10	25	18	14	12	24	18	14	12	18	14	12	17	14	12	17	14	12	11

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.

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE DATA FOR OTHER BALLAST/LAMP COMBINATIONS MAY PRODUCE ERRONEOUS RESULTS. 2) ACCORDING TO IESNA PROCEDURES, THE BALLAST(S) AND LAMP(S) ARE PRESUMED TO PRODUCE 100% OF RATED OUTPUT. AN APPROPRIATE BALLAST FACTOR MUST BE APPLIED TO THE LUMEN OUTPUT RATINGS AND LUMINOUS INTENSITY VALUES GIVEN. 3) THIS TEST WAS CONDUCTED IN A CONTROLLED LABORATORY ENVIRONMENT WHERE THE AMBIENT TEMPERATURE WAS HELD AT 25°C ±1°C. FIELD PERFORMANCE MAY DIFFER PARTICULARLY IN REGARDS TO CHANGE IN LUMINOUS OUTPUT AS A RESULT OF DIFFERENCE IN AMBIENT TEMPERATURE AND METHOD OF MOUNTING THE LUMINAIRE.