



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: 13054

DATE: 04-21-2008

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: MLP-II/D1-4-X-OPP-B-X-120-T5HO

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM UPPER REFLECTOR, FORMED WHITE ENAMEL ALUMINUM LOWER REFLECTOR, 30 CELL, 3/4" DEEP, FORMED SEMI-SPECULAR ALUMINUM BAFFLE.

LAMPS: TWO 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMPS RATED AT 4400 LUMENS EACH.

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

BALLASTS: TWO UNIVERSAL LIGHTING TECHNOLOGIES BB254PUNV-D

MOUNTING: WALL

NOTE: THIS TEST WAS CALCULATED USING MEASURED DATA FROM LTL TEST NUMBERS 12733 AND 12718.

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 112.4 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION										FLUX
	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	
0	960	960	960	960	960	960	960	960	960	
5	973	967	968	959	956	953	960	957	960	92
15	1038	1017	976	927	906	913	950	981	997	273
25	1089	1055	979	873	822	850	948	1034	1071	441
35	961	939	904	796	708	771	904	979	1010	545
45	581	613	673	660	561	655	722	712	714	502
55	196	227	311	408	365	426	381	302	283	298
65	47	60	70	89	94	98	93	75	64	87
75	14	14	14	20	23	21	17	19	19	20
85	2	2	2	2	2	2	3	4	4	3
90	0	0	0	0	0	0	0	0	0	
95	29	30	48	97	31	62	114	101	125	83
105	437	490	486	342	153	100	56	192	231	288
115	858	816	656	686	314	275	224	171	141	450
125	920	925	993	973	478	409	389	269	297	568
135	1269	1276	1373	1041	625	589	546	529	527	661
145	1644	1633	1433	1071	749	732	649	648	662	630
155	1594	1503	1318	1039	848	852	852	766	763	482
165	1332	1261	1147	997	921	943	924	907	908	292
175	1035	1013	1002	974	962	959	979	981	983	94
180	967	967	967	967	967	967	967	967	967	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LAMP	% FIXT
0- 30	805	9.1	13.9
0- 40	1350	15.3	23.2
0- 60	2149	24.4	37.0
0- 90	2260	25.7	38.9
90-120	821	9.3	14.1
90-130	1389	15.8	23.9
90-150	2680	30.5	46.1
90-180	3548	40.3	61.1
0-180	5808	66.0	100.0

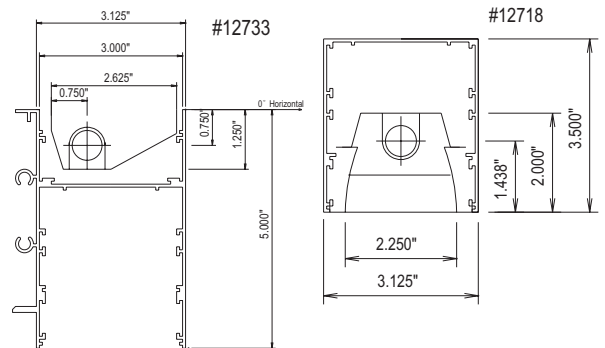
TOTAL LUMINAIRE EFFICIENCY: 66.0%

CIE TYPE: SEMI-INDIRECT

PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 1.5 1.2 1.5

SHIELDING ANGLES: 41 29



Approved By: MG

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



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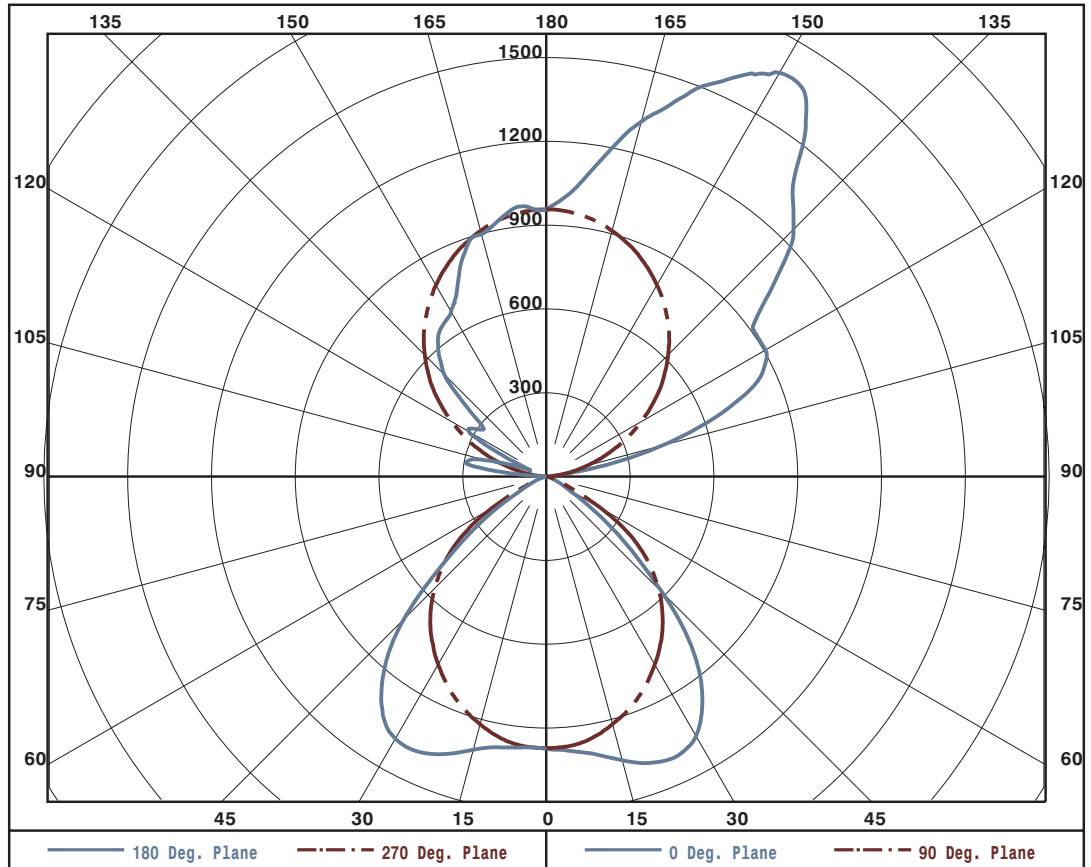
ZONAL LUMEN SUMMARY

0- 5	23.
5- 10	69.
10- 15	114.
15- 20	159.
20- 25	201.
25- 30	239.
30- 35	267.
35- 40	278.
40- 45	269.
45- 50	233.
50- 55	180.
55- 60	117.
60- 65	59.
65- 70	27.
70- 75	14.
75- 80	7.
80- 85	3.
85- 90	0.
90- 95	11.
95-100	72.
100-105	128.
105-110	160.
110-115	205.
115-120	246.
120-125	273.
125-130	295.
130-135	326.
135-140	335.
140-145	328.
145-150	302.
150-155	262.
155-160	220.
160-165	171.
165-170	121.
170-175	71.
175-180	23.

PLANE: 0-DEG 90-DEG
 LUMINOUS LENGTH: 2.250 44.875

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	14736.	14736.	14736.
45	12613.	14610.	12178.
55	5245.	8323.	9768.
65	1707.	2543.	3414.
75	830.	830.	1364.
85	352.	352.	352.





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CANDELA DISTRIBUTION

Table with 10 columns representing candela values at different angles (0.0 to 180.0) and 19 rows representing different beam diameters (0 to 180).



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

Table with 17 columns (RC, RW, and 15 numerical values) and 11 rows (0-10). It lists coefficients of utilization for various room cavity ratios (RC) and room widths (RW).

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.