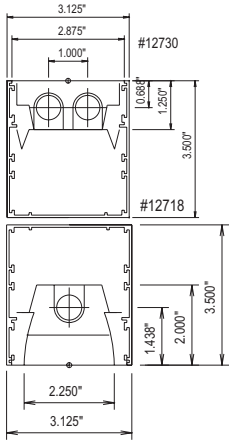
LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING MEMBER of the IESNA

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

LTL TEST: 13042 DATE: 04-11-2008
PREPARED FOR: PRECISION ARCHITECTURAL STAR LIGHTING
CATALOG NUMBER: MLS-I2/D1-4-X-OP/PB-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 LOWER BAFFLE, OPEN TOP.
LAMPS: THREE 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMPS RATED AT 4400 LUMENS EACH.
LAMP CATALOG NUMBER: PHILIPS F54T5/835/HO/ALTO AND F54T5/850/HP/ALTO
BALLASTS: TWO UNIVERSAL LIGHTING TECHNOLOGIES B254PUNV-D
MOUNTING: PENDANT
NOTE: THIS TEST WAS CALCULATED USING MEASURED DATA FROM LTL TEST NUMBERS 12730 AND 12718.
LUMEN TO CANDELA RATIO USED = 9.18
TOTAL INPUT WATTS =112.4 AT 120.0 VOLTS
THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

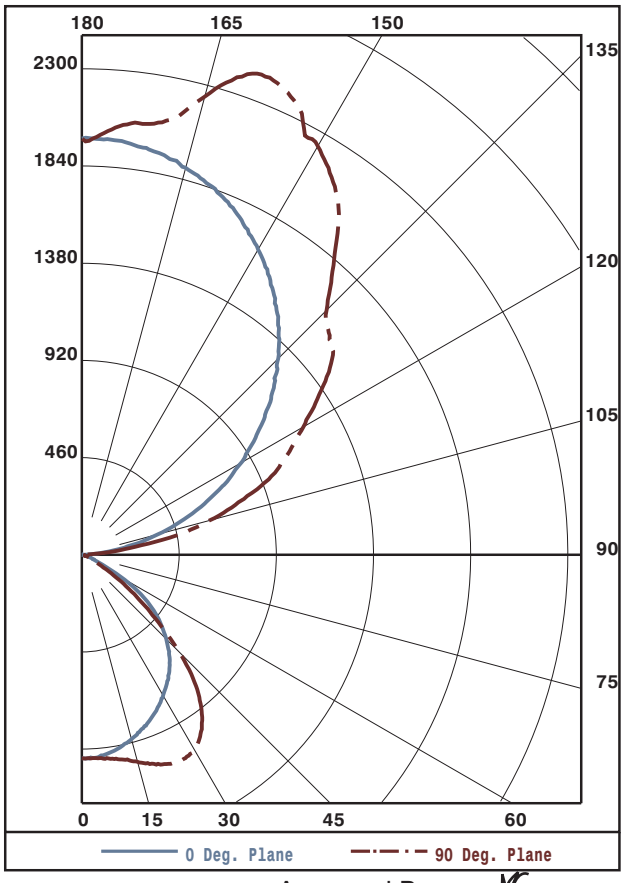


CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	960	960	960	960	960	
5	956	956	964	962	966	92
15	906	920	963	999	1018	273
25	822	861	963	1045	1080	441
35	708	784	904	959	985	545
45	561	658	698	662	647	502
55	365	417	346	265	240	298
65	94	93	81	67	56	87
75	23	20	16	17	16	20
85	2	2	2	3	3	3
90	0	0	0	0	0	
95	83	151	132	119	112	135
105	371	518	603	621	625	591
115	704	909	967	1020	1052	939
125	1018	1371	1282	1387	1395	1177
135	1314	1762	1770	1662	1638	1286
145	1559	1884	2117	2099	2096	1240
155	1763	1916	2281	2368	2373	993
165	1896	2003	2078	2191	2244	594
175	1966	1981	2027	2038	2034	193
180	1966	1966	1966	1966	1966	

ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT
0- 30	805	6.1	8.6
0- 40	1350	10.2	14.3
0- 60	2149	16.3	22.8
0- 90	2259	17.1	24.0
90-120	1665	12.6	17.7
90-130	2842	21.5	30.2
90-150	5368	40.7	57.1
90-180	7147	54.1	76.0
0-180	9407	71.3	100.0

TOTAL LUMINAIRE EFFICIENCY: 71.3%

CIE TYPE:	SEMI-INDIRECT	
PLANE:	0-DEG	90-DEG
SPACING CRITERIA:	1.2	1.5
SHIELDING ANGLES:	29	41



Approved By: MG

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

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

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

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	14736.	14736.	14736.
45	12178.	15152.	14045.
55	9768.	9260.	6423.
65	3414.	2942.	2034.
75	1364.	949.	949.
85	352.	352.	528.

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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	960	960	960	960	960
5	956	956	964	962	966
10	938	943	965	975	983
15	906	920	963	999	1018
20	868	893	965	1029	1059
25	822	861	963	1045	1080
30	768	825	947	1027	1063
35	708	784	904	959	985
40	641	731	824	837	851
45	561	658	698	662	647
50	472	556	536	447	420
55	365	417	346	265	240
60	223	247	185	132	110
65	94	93	81	67	56
70	47	42	34	37	31
75	23	20	16	17	16
80	11	10	8	9	9
85	2	2	2	3	3
90	0	0	0	0	0
95	83	151	132	119	112
100	212	338	380	372	351
105	371	518	603	621	625
110	540	688	784	852	856
115	704	909	967	1020	1052
120	869	1159	1164	1195	1210
125	1018	1371	1282	1387	1395
130	1170	1587	1519	1504	1542
135	1314	1762	1770	1662	1638
140	1444	1860	1945	1911	1861
145	1559	1884	2117	2099	2096
150	1667	1891	2255	2236	2232
155	1763	1916	2281	2368	2373
160	1841	1966	2176	2377	2422
165	1896	2003	2078	2191	2244
170	1937	2001	2073	2073	2076
175	1966	1981	2027	2038	2034
180	1966	1966	1966	1966	1966

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	17.
95-100	118.
100-105	245.
105-110	346.
110-115	431.
115-120	508.
120-125	567.
125-130	611.
130-135	635.
135-140	651.
140-145	640.
145-150	600.
150-155	537.
155-160	455.
160-165	350.
165-170	243.
170-175	145.
175-180	47.

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.