LTL 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: 16917 DATE: 11-07-2006
PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
CATALOG NUMBER: 0505S-03-R-4-OP/PB-X-120T5HO-IR
LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS, 29 CELL, 3/4" DEEP, FORMED SEMI-SPECULAR ALUMINUM LOUVER, OPEN TOP.
LAMP: TWO 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMPS RATED AT 4400 LUMENS EACH.
LAMP CATALOG NUMBER: PHILIPS F54T5/841/HO/ALTO
BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B254PUNV-D
MOUNTING: PENDANT
AS TESTED ELECTRICAL VALUES: 120.0VAC, 1.2825A, 153.5W
PRORATED ELECTRICAL VALUES: 120.0VAC, 0.855A, 102.33W
NOTE: THIS TEST WAS GENERATED USING MEASURED PHOTOMETRIC DATA FROM LTL TEST#10599 TO SHOW PHOTOMETRIC DATA FROM 90-180.

Candela Distribution

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	38	5	4	3	0	3	4	5	38	5	4	3	0	3	4	5	11.8
105	310	260	73	16	7	16	73	260	310	260	73	16	7	16	73	260	146.2
115	626	747	531	346	277	346	531	747	626	747	531	346	277	346	531	747	514.9
125	956	1145	1107	937	865	937	1107	1145	956	1145	1107	937	865	937	1107	1145	912.9
135	1261	1452	1565	1518	1476	1518	1565	1452	1261	1452	1565	1518	1476	1518	1565	1452	1133.1
145	1520	1654	1825	1872	1879	1872	1825	1654	1520	1654	1825	1872	1879	1872	1825	1654	1102.2
155	1721	1792	1950	2021	2036	2021	1950	1792	1721	1792	1950	2021	2036	2021	1950	1792	881.1
165	1866	1883	1960	2015	2030	2015	1960	1883	1866	1883	1960	2015	2030	2015	1960	1883	552.9
175	1944	1938	1948	1942	1936	1942	1948	1938	1944	1938	1948	1942	1936	1942	1948	1938	185.7
180	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	

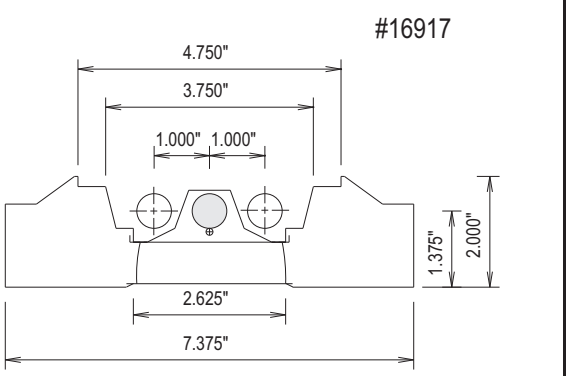
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	0.0	0.0%	0.0%
0-40	0.0	0.0%	0.0%
0-60	0.0	0.0%	0.0%
0-90	0.0	0.0%	0.0%
90-180	5440.8	61.8%	100.0%
0-180	5440.8	61.8%	100.0%

Total luminaire efficiency: 61.8%

CIE Type: Indirect

Luminaire



Approved By: MG

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

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Candela Tabulation (5 degree Vertical Increments)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	38	5	4	3	0	3	4	5	38	5	4	3	0	3	4	5
100	156	64	4	1	0	1	4	64	156	64	4	1	0	1	4	64
105	310	260	73	16	7	16	73	260	310	260	73	16	7	16	73	260
110	467	504	259	131	90	131	259	504	467	504	259	131	90	131	259	504
115	626	747	531	346	277	346	531	747	626	747	531	346	277	346	531	747
120	788	958	816	631	558	631	816	958	788	958	816	631	558	631	816	958
125	956	1145	1107	937	865	937	1107	1145	956	1145	1107	937	865	937	1107	1145
130	1111	1311	1363	1250	1194	1250	1363	1311	1111	1311	1363	1250	1194	1250	1363	1311
135	1261	1452	1565	1518	1476	1518	1565	1452	1261	1452	1565	1518	1476	1518	1565	1452
140	1401	1568	1718	1729	1716	1729	1718	1568	1401	1568	1718	1729	1716	1729	1718	1568
145	1520	1654	1825	1872	1879	1872	1825	1654	1520	1654	1825	1872	1879	1872	1825	1654
150	1629	1734	1907	1968	1979	1968	1907	1734	1629	1734	1907	1968	1979	1968	1907	1734
155	1721	1792	1950	2021	2036	2021	1950	1792	1721	1792	1950	2021	2036	2021	1950	1792
160	1807	1844	1966	2040	2060	2040	1966	1844	1807	1844	1966	2040	2060	2040	1966	1844
165	1866	1883	1960	2015	2030	2015	1960	1883	1866	1883	1960	2015	2030	2015	1960	1883
170	1918	1914	1948	1972	1975	1972	1948	1914	1918	1914	1948	1972	1975	1972	1948	1914
175	1944	1938	1948	1942	1936	1942	1948	1938	1944	1938	1948	1942	1936	1942	1948	1938
180	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens		Zone	Lumens		Zone	Lumens		Zone	Lumens
0-5	0.0		45-50	0.0		90-95	1.3		135-140	578.6
5-10	0.0		50-55	0.0		95-100	10.5		140-145	569.0
10-15	0.0		55-60	0.0		100-105	40.1		145-150	533.2
15-20	0.0		60-65	0.0		105-110	106.0		150-155	476.3
20-25	0.0		65-70	0.0		110-115	202.7		155-160	404.8
25-30	0.0		70-75	0.0		115-120	312.3		160-165	321.5
30-35	0.0		75-80	0.0		120-125	413.7		165-170	231.4
35-40	0.0		80-85	0.0		125-130	499.2		170-175	139.2
40-45	0.0		85-90	0.0		130-135	554.5		175-180	46.5

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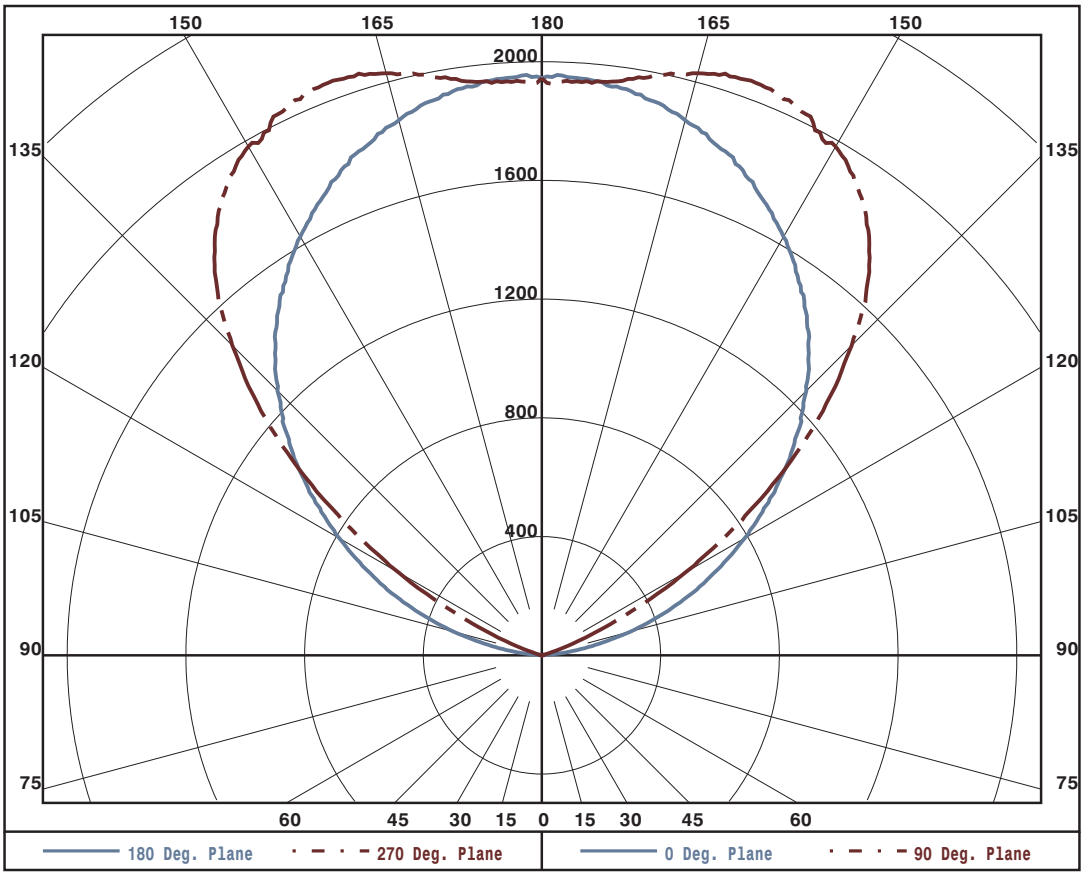
Coefficients of Utilization - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	0.679	0.679	0.679	0.679	0.589	0.589	0.589	0.589	0.503	0.503	0.503	0.503
1	0.619	0.588	0.561	0.536	0.535	0.511	0.489	0.469	0.457	0.437	0.419	0.403
2	0.563	0.512	0.47	0.435	0.487	0.445	0.411	0.382	0.415	0.381	0.354	0.33
3	0.514	0.448	0.399	0.36	0.444	0.39	0.349	0.317	0.377	0.335	0.301	0.274
4	0.469	0.395	0.341	0.301	0.405	0.344	0.3	0.266	0.344	0.295	0.259	0.231
5	0.429	0.349	0.294	0.254	0.37	0.304	0.259	0.225	0.314	0.261	0.224	0.196
6	0.393	0.31	0.256	0.217	0.339	0.271	0.225	0.192	0.288	0.233	0.195	0.168
7	0.361	0.278	0.224	0.188	0.312	0.242	0.198	0.166	0.265	0.209	0.171	0.145
8	0.333	0.249	0.198	0.163	0.288	0.218	0.174	0.144	0.245	0.188	0.151	0.126
9	0.308	0.225	0.176	0.143	0.266	0.197	0.155	0.126	0.227	0.17	0.134	0.11
10	0.286	0.205	0.157	0.125	0.247	0.179	0.138	0.111	0.211	0.154	0.12	0.097

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.343	0.343	0.343	0.343	0.197	0.197	0.197	0.063	0.063	0.063	0.000
1	0.31	0.299	0.288	0.279	0.172	0.167	0.162	0.055	0.054	0.052	0.000
2	0.281	0.261	0.245	0.23	0.151	0.142	0.135	0.048	0.046	0.044	0.000
3	0.255	0.23	0.209	0.193	0.133	0.122	0.113	0.043	0.04	0.037	0.000
4	0.232	0.203	0.18	0.162	0.117	0.106	0.096	0.038	0.034	0.032	0.000
5	0.212	0.18	0.156	0.138	0.104	0.092	0.082	0.034	0.03	0.027	0.000
6	0.195	0.161	0.136	0.119	0.093	0.08	0.07	0.03	0.026	0.023	0.000
7	0.179	0.144	0.12	0.103	0.084	0.071	0.061	0.027	0.023	0.02	0.000
8	0.166	0.13	0.106	0.089	0.076	0.063	0.053	0.024	0.021	0.018	0.000
9	0.154	0.118	0.095	0.078	0.069	0.056	0.047	0.022	0.018	0.015	0.000
10	0.143	0.107	0.084	0.069	0.062	0.05	0.041	0.02	0.016	0.014	0.000

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.


150
165
180
165
150
2000
1600
1200
800
400
135
120
105
90
75
60
45
30
15
0
15
30
45
60
180 Deg. Plane
270 Deg. Plane
0 Deg. Plane
90 Deg. Plane