



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: 15056 DATE: 04-13-2009
 PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
 CATALOG NUMBER: LM3P-01-X-PB-X-120-T5HO
 LUMINAIRE: FORMED STEEL AND EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR, 28 CELL, 3/4" DEEP, FORMED SEMI-SPECULAR ALUMINUM LOUVER, OPEN TOP.
 LAMP: ONE 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMP RATED AT 4400 LUMENS.
 LAMP CATALOG NUMBER: SYLVANIA FP54/841/HO/ECO
 BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B254PUNV-D
 MOUNTING: WALL
 ELECTRICAL VALUES: 120.0VAC, 0.5201A, 62.20W

Candela Distribution

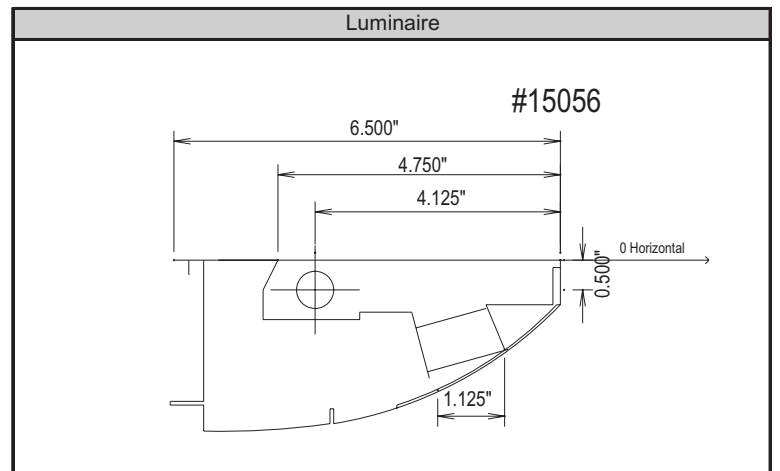
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	
5	14	13	13	16	22	32	43	57	66	57	43	32	22	16	13	13	3.7
15	4	3	5	10	23	82	159	206	224	206	159	82	23	10	5	3	20.8
25	1	0	1	5	25	127	164	147	126	147	164	127	25	5	1	0	28.8
35	0	0	0	2	28	121	53	18	15	18	53	121	28	2	0	0	18.2
45	0	0	0	1	26	49	6	4	5	4	6	49	26	1	0	0	8.7
55	0	0	0	0	15	3	0	0	1	0	0	3	15	0	0	0	2.4
65	70	40	18	2	0	0	0	0	0	0	0	0	0	2	18	40	12.9
75	14	27	36	0	0	0	0	0	0	0	0	0	0	0	36	27	11.1
85	25	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2.1
90	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	296	289	289	233	19	42	132	183	192	183	132	42	19	233	289	289	178.9
105	930	894	756	513	113	88	68	122	155	122	68	88	113	513	756	894	406.8
115	1197	1108	988	697	226	226	162	132	125	132	162	226	226	697	988	1108	522.5
125	1466	1451	1220	664	340	373	302	262	250	262	302	373	340	664	1220	1451	607.2
135	1564	1473	1148	701	447	508	460	409	396	409	460	508	447	701	1148	1473	590.9
145	1394	1276	965	701	537	638	591	567	557	567	591	638	537	701	965	1276	491.7
155	1092	1057	900	689	611	750	710	681	676	681	710	750	611	689	900	1057	362.7
165	872	838	759	669	663	774	806	793	790	793	806	774	663	669	759	838	217.9
175	685	678	662	663	688	727	758	780	791	780	758	727	688	663	662	678	69.3
180	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	53.3	1.2%	1.5%
0-40	71.5	1.6%	2.0%
0-60	82.7	1.9%	2.3%
0-90	108.8	2.5%	3.1%
90-180	3447.8	78.4%	96.9%
0-180	3556.6	80.8%	100.0%

Total luminaire efficiency: 80.8%

CIE Type: Indirect
 Spacing Criterion: 0 deg: 0.22 90 deg: 1.77
 180 deg: 1.31 270 deg: 1.77



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	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
5	14	13	13	16	22	32	43	57	66	57	43	32	22	16	13	13
10	8	8	8	12	22	50	107	144	159	144	107	50	22	12	8	8
15	4	3	5	10	23	82	159	206	224	206	159	82	23	10	5	3
20	2	1	2	7	24	111	190	189	182	189	190	111	24	7	2	1
25	1	0	1	5	25	127	164	147	126	147	164	127	25	5	1	0
30	0	0	0	4	27	131	122	46	31	46	122	131	27	4	0	0
35	0	0	0	2	28	121	53	18	15	18	53	121	28	2	0	0
40	0	0	0	1	28	87	16	9	8	9	16	87	28	1	0	0
45	0	0	0	1	26	49	6	4	5	4	6	49	26	1	0	0
50	0	0	0	0	23	18	2	2	3	2	2	18	23	0	0	0
55	0	0	0	0	15	3	0	0	1	0	0	3	15	0	0	0
60	1	4	3	0	3	0	0	0	0	0	0	0	3	0	3	4
65	70	40	18	2	0	0	0	0	0	0	0	0	0	2	18	40
70	121	109	34	6	0	0	0	0	0	0	0	0	0	6	34	109
75	14	27	36	0	0	0	0	0	0	0	0	0	0	0	36	27
80	3	3	1	0	0	0	0	0	0	0	0	0	0	0	1	3
85	25	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
90	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
95	296	289	289	233	19	42	132	183	192	183	132	42	19	233	289	289
100	686	669	577	371	61	39	101	196	229	196	101	39	61	371	577	669
105	930	894	756	513	113	88	68	122	155	122	68	88	113	513	756	894
110	1111	1057	829	640	169	151	102	95	103	95	102	151	169	640	829	1057
115	1197	1108	988	697	226	226	162	132	125	132	162	226	226	697	988	1108
120	1263	1236	1168	691	284	301	229	194	183	194	229	301	284	691	1168	1236
125	1466	1451	1220	664	340	373	302	262	250	262	302	373	340	664	1220	1451
130	1579	1493	1221	675	396	440	380	334	321	334	380	440	396	675	1221	1493
135	1564	1473	1148	701	447	508	460	409	396	409	460	508	447	701	1148	1473
140	1525	1413	1051	702	494	575	530	494	476	494	530	575	494	702	1051	1413
145	1394	1276	965	701	537	638	591	567	557	567	591	638	537	701	965	1276
150	1222	1114	968	697	577	697	648	629	625	629	648	697	577	697	968	1114
155	1092	1057	900	689	611	750	710	681	676	681	710	750	611	689	900	1057
160	1012	957	821	680	638	783	764	742	736	742	764	783	638	680	821	957
165	872	838	759	669	663	774	806	793	790	793	806	774	663	669	759	838
170	766	746	704	658	679	754	816	831	832	831	816	754	679	658	704	746
175	685	678	662	663	688	727	758	780	791	780	758	727	688	663	662	678
180	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.6	45-50	3.4	90-95	41.8	135-140	286.9
5-10	3.1	50-55	1.7	95-100	137.1	140-145	261.3
10-15	7.8	55-60	0.7	100-105	185.7	145-150	230.4
15-20	13.0	60-65	2.3	105-110	221.1	150-155	197.8
20-25	15.3	65-70	10.5	110-115	248.2	155-160	164.9
25-30	13.5	70-75	9.7	115-120	274.3	160-165	127.8
30-35	10.6	75-80	1.4	120-125	297.8	165-170	90.0
35-40	7.6	80-85	0.7	125-130	309.4	170-175	52.5
40-45	5.3	85-90	1.4	130-135	304.0	175-180	16.8



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	0.89	0.89	0.89	0.89	0.776	0.776	0.776	0.776	0.667	0.667	0.667	0.667
1	0.812	0.771	0.736	0.704	0.706	0.673	0.644	0.618	0.605	0.579	0.556	0.535
2	0.74	0.672	0.617	0.571	0.642	0.587	0.542	0.504	0.55	0.506	0.469	0.438
3	0.675	0.589	0.524	0.473	0.585	0.515	0.461	0.419	0.5	0.444	0.4	0.365
4	0.616	0.519	0.449	0.397	0.534	0.455	0.396	0.352	0.457	0.392	0.345	0.308
5	0.564	0.46	0.388	0.336	0.488	0.403	0.343	0.299	0.418	0.348	0.299	0.261
6	0.517	0.409	0.338	0.288	0.448	0.359	0.299	0.256	0.383	0.311	0.261	0.225
7	0.476	0.367	0.297	0.249	0.413	0.322	0.263	0.222	0.353	0.279	0.23	0.195
8	0.439	0.33	0.263	0.217	0.381	0.29	0.233	0.193	0.326	0.251	0.203	0.17
9	0.407	0.299	0.234	0.19	0.353	0.263	0.207	0.17	0.303	0.228	0.181	0.149
10	0.378	0.271	0.209	0.168	0.328	0.239	0.185	0.15	0.282	0.207	0.162	0.132

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	0.463	0.463	0.463	0.463	0.276	0.276	0.276	0.105	0.105	0.105	0.025
1	0.418	0.403	0.389	0.376	0.241	0.234	0.228	0.092	0.09	0.088	0.021
2	0.379	0.353	0.33	0.311	0.212	0.2	0.19	0.081	0.078	0.074	0.018
3	0.345	0.311	0.283	0.261	0.187	0.173	0.16	0.072	0.067	0.063	0.016
4	0.314	0.275	0.245	0.221	0.166	0.15	0.137	0.065	0.059	0.055	0.014
5	0.288	0.244	0.213	0.189	0.148	0.131	0.117	0.058	0.052	0.047	0.013
6	0.264	0.219	0.186	0.162	0.133	0.115	0.101	0.052	0.046	0.042	0.012
7	0.244	0.197	0.165	0.141	0.12	0.102	0.089	0.048	0.041	0.037	0.011
8	0.225	0.178	0.146	0.123	0.109	0.091	0.078	0.044	0.037	0.033	0.01
9	0.209	0.162	0.13	0.109	0.099	0.081	0.069	0.04	0.034	0.029	0.009
10	0.195	0.147	0.117	0.096	0.09	0.073	0.061	0.037	0.031	0.026	0.008

Average Luminance Table (cd/m²)

	0	45	90
0	897	897	897
45	0	0	1453
55	0	4	1011
65	4367	1249	0
75	1187	3414	0
85	3129	0	0

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 values 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.

LTL Test Number 15056 - Page 3

