



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: 15054

DATE: 04-17-2009

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: LM3P-01-X-PBW-X-120-T8

LUMINAIRE: FORMED STEEL AND EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR, 28 CELL, 3/4" DEEP, FORMED WHITE ENAMEL ALUMINUM LOUVER, OPEN TOP.

LAMP: ONE 32 WATT T8 LINEAR FLUORESCENT LAMP RATED AT 2850 LUMENS.

LAMP CATALOG NUMBER: SYLVANIA FO32/741/ECO

BALLAST: ONE SYLVANIA QTP1X32T8/UNV-ISN-SC

MOUNTING: WALL

ELECTRICAL VALUES: 120.0VAC, 0.2425A, 28.86W

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	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	
5	13	13	15	22	34	48	58	64	67	64	58	48	34	22	15	13	3.7
15	4	4	5	10	33	68	94	108	114	108	94	68	33	10	5	4	13.4
25	1	1	1	6	31	78	97	78	54	78	97	78	31	6	1	1	17.7
35	0	0	0	3	28	66	23	8	7	8	23	66	28	3	0	0	10.6
45	0	0	0	1	23	28	3	2	2	2	3	28	23	1	0	0	5.6
55	12	3	1	0	11	1	0	0	0	0	0	1	11	0	1	3	3.7
65	83	66	24	2	0	0	0	0	0	0	0	0	0	2	24	66	14.4
75	3	9	15	0	0	0	0	0	0	0	0	0	0	0	15	9	5.1
85	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1.2
90	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
95	139	136	127	105	11	39	76	84	84	84	76	39	11	105	127	136	92.5
105	469	463	418	254	71	65	94	144	162	144	94	65	71	254	418	463	238.1
115	670	624	515	347	146	129	130	139	146	139	130	129	146	347	515	624	302.3
125	737	697	593	401	223	200	191	192	194	192	191	200	223	401	593	697	330.7
135	775	741	623	386	295	275	257	252	252	252	257	275	295	386	623	741	323.2
145	760	722	590	434	357	342	321	314	312	314	321	342	357	434	590	722	283.1
155	639	590	518	444	407	395	384	376	374	376	384	395	407	444	518	590	210.0
165	545	538	495	430	442	437	428	425	425	425	428	437	442	430	495	538	129.8
175	444	441	437	446	461	465	460	458	458	458	460	465	461	446	437	441	43.2
180	464	464	464	464	464	464	464	464	464	464	464	464	464	464	464	464	

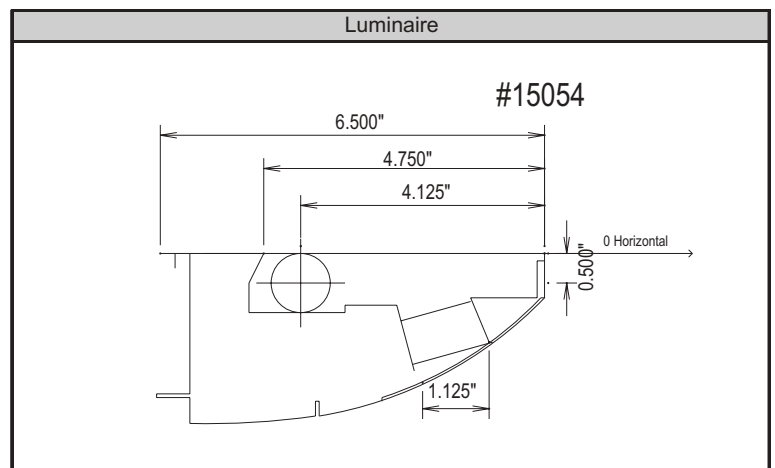
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	34.8	1.2%	1.7%
0-40	45.4	1.6%	2.2%
0-60	54.7	1.9%	2.7%
0-90	75.3	2.6%	3.7%
90-180	1952.8	68.5%	96.3%
0-180	2028.1	71.2%	100.0%

Total luminaire efficiency: 71.2%

CIE Type: Indirect

Spacing Criterion: 0 deg: 0.11 90 deg: 1.25
180 deg: 1.05 270 deg: 1.25



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	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
5	13	13	15	22	34	48	58	64	67	64	58	48	34	22	15	13
10	7	7	8	14	33	59	79	92	97	92	79	59	33	14	8	7
15	4	4	5	10	33	68	94	108	114	108	94	68	33	10	5	4
20	2	2	3	7	32	74	99	113	117	113	99	74	32	7	3	2
25	1	1	1	6	31	78	97	78	54	78	97	78	31	6	1	1
30	0	0	0	4	29	75	71	19	15	19	71	75	29	4	0	0
35	0	0	0	3	28	66	23	8	7	8	23	66	28	3	0	0
40	0	0	0	2	26	50	8	4	4	4	8	50	26	2	0	0
45	0	0	0	1	23	28	3	2	2	2	3	28	23	1	0	0
50	0	0	0	0	19	8	1	1	1	1	1	8	19	0	0	0
55	12	3	1	0	11	1	0	0	0	0	0	1	11	0	1	3
60	51	33	6	0	3	0	0	0	0	0	0	0	3	0	6	33
65	83	66	24	2	0	0	0	0	0	0	0	0	0	2	24	66
70	47	46	36	4	0	0	0	0	0	0	0	0	0	4	36	46
75	3	9	15	0	0	0	0	0	0	0	0	0	0	0	15	9
80	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2
85	7	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
90	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
95	139	136	127	105	11	39	76	84	84	84	76	39	11	105	127	136
100	305	299	280	205	37	43	102	157	175	157	102	43	37	205	280	299
105	469	463	418	254	71	65	94	144	162	144	94	65	71	254	418	463
110	610	584	466	302	107	95	104	132	147	132	104	95	107	302	466	584
115	670	624	515	347	146	129	130	139	146	139	130	129	146	347	515	624
120	705	668	553	378	185	164	159	164	166	164	159	164	185	378	553	668
125	737	697	593	401	223	200	191	192	194	192	191	200	223	401	593	697
130	756	723	620	393	260	239	224	222	223	222	224	239	260	393	620	723
135	775	741	623	386	295	275	257	252	252	252	257	275	295	386	623	741
140	782	740	623	409	327	310	289	283	282	283	289	310	327	409	623	740
145	760	722	590	434	357	342	321	314	312	314	321	342	357	434	590	722
150	727	683	529	453	384	370	356	343	342	343	356	370	384	453	529	683
155	639	590	518	444	407	395	384	376	374	376	384	395	407	444	518	590
160	558	546	520	431	427	417	409	402	401	402	409	417	427	431	520	546
165	545	538	495	430	442	437	428	425	425	425	428	437	442	430	495	538
170	495	480	450	432	454	453	444	441	441	441	444	453	454	432	450	480
175	444	441	437	446	461	465	460	458	458	458	460	465	461	446	437	441
180	464	464	464	464	464	464	464	464	464	464	464	464	464	464	464	464

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.8	45-50	2.1	90-95	20.5	135-140	158.7
5-10	2.9	50-55	1.2	95-100	72.0	140-145	149.0
10-15	5.4	55-60	2.5	100-105	106.8	145-150	134.1
15-20	8.0	60-65	6.2	105-110	131.3	150-155	115.2
20-25	9.6	65-70	8.2	110-115	146.2	155-160	94.8
25-30	8.1	70-75	4.5	115-120	156.1	160-165	75.5
30-35	6.1	75-80	0.6	120-125	164.0	165-170	54.3
35-40	4.5	80-85	0.3	125-130	166.7	170-175	32.3
40-45	3.4	85-90	0.9	130-135	164.4	175-180	10.9



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	0.784	0.784	0.784	0.784	0.684	0.684	0.684	0.684	0.588	0.588	0.588	0.588
1	0.715	0.68	0.648	0.62	0.622	0.594	0.568	0.545	0.534	0.511	0.491	0.472
2	0.652	0.592	0.544	0.503	0.566	0.518	0.478	0.444	0.485	0.446	0.414	0.387
3	0.594	0.519	0.462	0.417	0.516	0.454	0.407	0.369	0.442	0.392	0.353	0.322
4	0.543	0.457	0.396	0.349	0.471	0.401	0.349	0.31	0.403	0.346	0.304	0.271
5	0.497	0.405	0.342	0.296	0.431	0.355	0.302	0.263	0.369	0.307	0.263	0.231
6	0.456	0.361	0.298	0.254	0.395	0.317	0.264	0.226	0.338	0.274	0.23	0.198
7	0.419	0.323	0.262	0.22	0.364	0.284	0.232	0.196	0.312	0.246	0.203	0.172
8	0.387	0.291	0.231	0.191	0.336	0.256	0.205	0.171	0.288	0.222	0.18	0.15
9	0.359	0.263	0.206	0.168	0.312	0.232	0.183	0.15	0.267	0.201	0.16	0.132
10	0.333	0.239	0.184	0.148	0.29	0.211	0.164	0.132	0.249	0.183	0.143	0.117

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	0.41	0.41	0.41	0.41	0.247	0.247	0.247	0.097	0.097	0.097	0.026
1	0.371	0.357	0.345	0.334	0.216	0.209	0.203	0.085	0.083	0.081	0.022
2	0.336	0.313	0.293	0.276	0.189	0.179	0.17	0.075	0.071	0.068	0.019
3	0.305	0.275	0.251	0.231	0.167	0.154	0.143	0.066	0.062	0.058	0.016
4	0.278	0.244	0.217	0.196	0.148	0.134	0.122	0.059	0.054	0.05	0.015
5	0.255	0.217	0.188	0.167	0.132	0.117	0.105	0.053	0.048	0.044	0.013
6	0.234	0.194	0.165	0.144	0.119	0.103	0.091	0.048	0.043	0.038	0.012
7	0.216	0.174	0.146	0.125	0.107	0.091	0.079	0.044	0.038	0.034	0.011
8	0.2	0.158	0.13	0.11	0.097	0.081	0.069	0.04	0.034	0.03	0.01
9	0.186	0.143	0.116	0.097	0.089	0.073	0.061	0.037	0.031	0.027	0.009
10	0.173	0.131	0.104	0.085	0.081	0.066	0.055	0.034	0.028	0.024	0.009

Average Luminance Table (cd/m²)

	0	45	90
0	1358	1358	1358
45	0	0	1247
55	625	46	751
65	5133	1653	0
75	285	1424	0
85	857	20	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.

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