



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: 15060

DATE: 04-17-2009

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

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

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 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, 0.2417A, 28.76W

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	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
5	16	15	16	18	20	23	25	25	26	25	25	23	20	18	16	15	1.9
15	10	9	11	14	19	26	27	29	31	29	27	26	19	14	11	9	5.5
25	5	5	8	11	18	24	26	25	24	25	26	24	18	11	8	5	7.5
35	2	3	5	10	16	21	17	14	13	14	17	21	16	10	5	3	7.3
45	3	4	4	8	14	14	9	6	6	6	9	14	14	8	4	4	6.1
55	21	7	5	6	10	7	3	1	1	1	3	7	10	6	5	7	6.5
65	95	66	15	6	5	2	0	0	0	0	0	2	5	6	15	66	15.7
75	17	19	18	3	1	0	0	0	0	0	0	0	1	3	18	19	7.4
85	5	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4	1.2
90	6	5	2	0	0	0	0	0	0	0	0	0	0	0	2	5	
95	134	131	124	103	15	30	39	40	41	40	39	30	15	103	124	131	79.0
105	458	453	408	249	90	91	106	110	109	110	106	91	90	249	408	453	233.3
115	631	587	485	349	179	167	169	179	183	179	169	167	179	349	485	587	312.0
125	675	639	555	421	265	254	237	237	240	237	237	254	265	421	555	639	342.7
135	712	691	613	422	344	337	316	306	304	306	316	337	344	422	613	691	341.9
145	739	713	613	477	412	407	393	379	376	379	393	407	412	477	613	713	309.0
155	666	622	555	495	466	462	455	449	446	449	455	462	466	495	555	622	235.1
165	585	580	545	486	503	504	498	496	496	496	498	504	503	486	545	580	146.5
175	501	498	496	506	523	529	525	524	524	524	525	529	523	506	496	498	49.1
180	526	526	526	526	526	526	526	526	526	526	526	526	526	526	526	526	

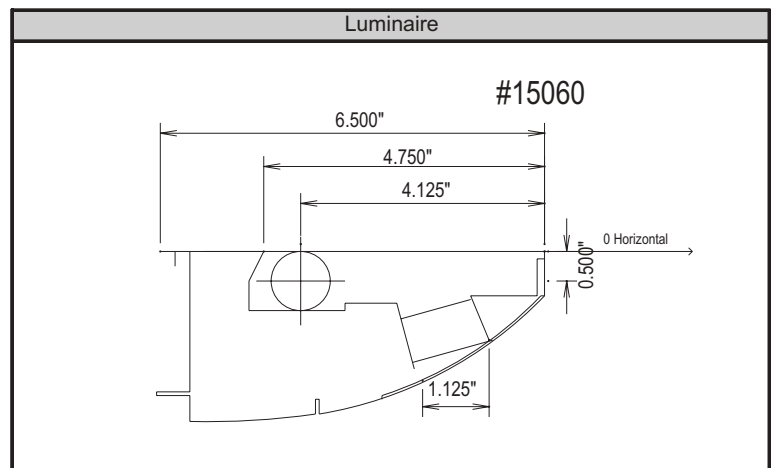
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	14.9	0.5%	0.7%
0-40	22.2	0.8%	1.1%
0-60	34.8	1.2%	1.7%
0-90	59.1	2.1%	2.8%
90-180	2048.7	71.9%	97.2%
0-180	2107.8	74.0%	100.0%

Total luminaire efficiency: 74.0%

CIE Type: Indirect

Spacing Criterion: 0 deg: 0.44 90 deg: 1.22
180 deg: 1.21 270 deg: 1.22



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	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
5	16	15	16	18	20	23	25	25	26	25	25	23	20	18	16	15
10	13	12	13	16	20	25	27	27	29	27	27	25	20	16	13	12
15	10	9	11	14	19	26	27	29	31	29	27	26	19	14	11	9
20	7	7	9	13	19	26	27	29	30	29	27	26	19	13	9	7
25	5	5	8	11	18	24	26	25	24	25	26	24	18	11	8	5
30	3	3	6	11	17	23	23	18	18	18	23	23	17	11	6	3
35	2	3	5	10	16	21	17	14	13	14	17	21	16	10	5	3
40	3	3	4	9	15	18	13	10	10	10	13	18	15	9	4	3
45	3	4	4	8	14	14	9	6	6	6	9	14	14	8	4	4
50	4	4	5	7	12	10	6	3	3	3	6	10	12	7	5	4
55	21	7	5	6	10	7	3	1	1	1	3	7	10	6	5	7
60	60	35	5	6	8	4	0	0	0	0	0	4	8	6	5	35
65	95	66	15	6	5	2	0	0	0	0	0	2	5	6	15	66
70	61	52	28	5	3	0	0	0	0	0	0	0	3	5	28	52
75	17	19	18	3	1	0	0	0	0	0	0	0	1	3	18	19
80	6	5	3	1	0	0	0	0	0	0	0	0	0	1	3	5
85	5	4	2	0	0	0	0	0	0	0	0	0	0	0	2	4
90	6	5	2	0	0	0	0	0	0	0	0	0	0	0	2	5
95	134	131	124	103	15	30	39	40	41	40	39	30	15	103	124	131
100	298	293	275	204	49	60	69	78	80	78	69	60	49	204	275	293
105	458	453	408	249	90	91	106	110	109	110	106	91	90	249	408	453
110	601	563	445	296	134	126	138	147	149	147	138	126	134	296	445	563
115	631	587	485	349	179	167	169	179	183	179	169	167	179	349	485	587
120	653	619	515	388	223	210	201	208	211	208	201	210	223	388	515	619
125	675	639	555	421	265	254	237	237	240	237	237	254	265	421	555	639
130	686	661	594	424	306	297	276	270	270	270	276	297	306	424	594	661
135	712	691	613	422	344	337	316	306	304	306	316	337	344	422	613	691
140	738	710	628	448	380	373	355	343	340	343	355	373	380	448	628	710
145	739	713	613	477	412	407	393	379	376	379	393	407	412	477	613	713
150	730	697	564	500	441	436	428	416	413	416	428	436	441	500	564	697
155	666	622	555	495	466	462	455	449	446	449	455	462	466	495	555	622
160	593	582	563	485	487	484	479	475	474	475	479	484	487	485	563	582
165	585	580	545	486	503	504	498	496	496	496	498	504	503	486	545	580
170	546	532	504	490	515	519	512	511	511	511	512	519	515	490	504	532
175	501	498	496	506	523	529	525	524	524	524	525	529	523	506	496	498
180	526	526	526	526	526	526	526	526	526	526	526	526	526	526	526	526

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.5	45-50	2.9	90-95	17.7	135-140	169.2
5-10	1.4	50-55	2.6	95-100	61.3	140-145	161.4
10-15	2.3	55-60	3.9	100-105	100.8	145-150	147.6
15-20	3.1	60-65	7.1	105-110	132.5	150-155	128.5
20-25	3.7	65-70	8.7	110-115	150.6	155-160	106.6
25-30	3.8	70-75	5.7	115-120	161.5	160-165	85.0
30-35	3.7	75-80	1.7	120-125	169.5	165-170	61.5
35-40	3.5	80-85	0.7	125-130	173.1	170-175	36.7
40-45	3.3	85-90	0.5	130-135	172.7	175-180	12.4



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	0.814	0.814	0.814	0.814	0.709	0.709	0.709	0.709	0.609	0.609	0.609	0.609
1	0.742	0.705	0.672	0.643	0.645	0.615	0.588	0.564	0.552	0.529	0.507	0.488
2	0.675	0.613	0.563	0.52	0.586	0.535	0.494	0.458	0.501	0.461	0.427	0.398
3	0.616	0.537	0.477	0.43	0.533	0.469	0.419	0.38	0.456	0.404	0.363	0.331
4	0.562	0.472	0.408	0.36	0.486	0.413	0.36	0.319	0.415	0.356	0.312	0.278
5	0.514	0.418	0.352	0.304	0.445	0.366	0.31	0.27	0.38	0.315	0.27	0.236
6	0.471	0.372	0.306	0.26	0.408	0.326	0.27	0.231	0.348	0.281	0.235	0.202
7	0.433	0.333	0.269	0.225	0.375	0.292	0.237	0.199	0.32	0.252	0.207	0.175
8	0.4	0.299	0.237	0.195	0.346	0.262	0.21	0.173	0.296	0.227	0.183	0.152
9	0.37	0.27	0.211	0.171	0.321	0.237	0.186	0.152	0.274	0.206	0.163	0.133
10	0.343	0.245	0.188	0.15	0.298	0.216	0.167	0.134	0.255	0.187	0.145	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	0.422	0.422	0.422	0.422	0.251	0.251	0.251	0.095	0.095	0.095	0.021
1	0.381	0.367	0.354	0.342	0.219	0.212	0.206	0.082	0.08	0.078	0.016
2	0.345	0.32	0.3	0.282	0.191	0.18	0.171	0.071	0.068	0.065	0.013
3	0.313	0.281	0.256	0.235	0.168	0.154	0.143	0.063	0.058	0.054	0.011
4	0.285	0.248	0.221	0.198	0.148	0.133	0.121	0.055	0.05	0.046	0.009
5	0.26	0.22	0.191	0.169	0.132	0.116	0.103	0.049	0.044	0.039	0.007
6	0.239	0.197	0.167	0.145	0.118	0.102	0.089	0.044	0.039	0.034	0.006
7	0.22	0.177	0.147	0.126	0.106	0.09	0.077	0.04	0.034	0.03	0.006
8	0.203	0.159	0.13	0.109	0.096	0.08	0.067	0.036	0.03	0.026	0.005
9	0.189	0.145	0.116	0.096	0.087	0.071	0.059	0.033	0.027	0.023	0.005
10	0.176	0.132	0.104	0.085	0.08	0.064	0.052	0.03	0.025	0.02	0.004

Average Luminance Table (cd/m²)

	0	45	90
0	811	811	811
45	149	195	741
55	1071	261	677
65	5895	1052	478
75	1417	1705	142
85	643	306	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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