



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: 14710
 PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
 CATALOG NUMBER: LM3S-02-X-4-X-PBW-X-120-T8
 LUMINAIRE: FORMED STEEL AND EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM CENTER REFLECTOR, 48 CELL, 3/4" DEEP, FORMED WHITE ENAMEL ALUMINUM LOUVER, OPEN TOP.
 LAMP: TWO 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS EACH.
 LAMP CATALOG NUMBER: SYLVANIA F032/741/ECO
 BALLAST: ONE SYLVANIA QTP2X32T8/UNV-ISN-SC
 MOUNTING: PENDANT
 ELECTRICAL VALUES: 120.0VAC, 0.4729A, 56.62W

DATE: 02-27-2009

Candela Distribution

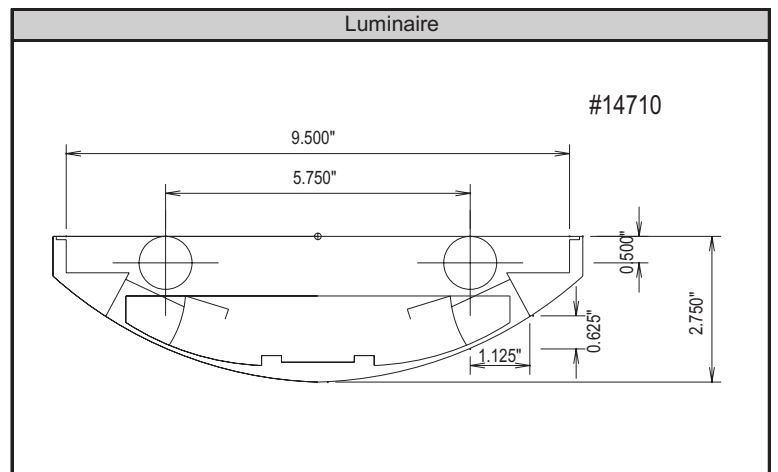
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	
5	346	344	345	348	350	348	345	344	346	344	345	348	350	348	345	344	32.9
15	314	318	332	348	355	348	332	318	314	318	332	348	355	348	332	318	94.2
25	272	283	315	352	368	352	315	283	272	283	315	352	368	352	315	283	146.1
35	223	242	287	314	328	314	287	242	223	242	287	314	328	314	287	242	174.3
45	168	198	228	237	246	237	228	198	168	198	228	237	246	237	228	198	167.1
55	107	138	153	154	159	154	153	138	107	138	153	154	159	154	153	138	129.2
65	58	77	86	88	89	88	86	77	58	77	86	88	89	88	86	77	81.2
75	27	29	48	67	77	67	48	29	27	29	48	67	77	67	48	29	51.2
85	1	11	27	38	43	38	27	11	1	11	27	38	43	38	27	11	28.1
90	0	9	26	40	46	40	26	9	0	9	26	40	46	40	26	9	
95	27	181	242	263	269	263	242	181	27	181	242	263	269	263	242	181	227.4
105	159	362	638	695	708	695	638	362	159	362	638	695	708	695	638	362	556.1
115	318	431	705	921	995	921	705	431	318	431	705	921	995	921	705	431	670.2
125	472	550	715	896	966	896	715	550	472	550	715	896	966	896	715	550	645.8
135	612	667	766	869	918	869	766	667	612	667	766	869	918	869	766	667	593.8
145	733	769	834	892	916	892	834	769	733	769	834	892	916	892	834	769	520.2
155	829	847	886	918	933	918	886	847	829	847	886	918	933	918	886	847	407.9
165	896	902	918	934	941	934	918	902	896	902	918	934	941	934	918	902	259.6
175	931	929	931	935	937	935	931	929	931	929	931	935	937	935	931	929	88.8
180	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	273.3	4.8%	5.6%
0-40	447.6	7.9%	9.2%
0-60	743.8	13.0%	15.3%
0-90	904.3	15.9%	18.6%
90-180	3969.6	69.6%	81.4%
0-180	4873.9	85.5%	100.0%

Total luminaire efficiency: 85.5%

CIE Type: Semi-Indirect
 Spacing Criterion: 0 deg: 1.08 90 deg: 1.43
 180 deg: 1.08 270 deg: 1.43
 Shielding angle: 0 deg: 31 90 deg: 26



Approved By: MG

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



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	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349
5	346	344	345	348	350	348	345	344	346	344	345	348	350	348	345	344
10	332	333	340	348	352	348	340	333	332	333	340	348	352	348	340	333
15	314	318	332	348	355	348	332	318	314	318	332	348	355	348	332	318
20	294	301	322	352	365	352	322	301	294	301	322	352	365	352	322	301
25	272	283	315	352	368	352	315	283	272	283	315	352	368	352	315	283
30	248	262	305	340	356	340	305	262	248	262	305	340	356	340	305	262
35	223	242	287	314	328	314	287	242	223	242	287	314	328	314	287	242
40	196	221	261	278	289	278	261	221	196	221	261	278	289	278	261	221
45	168	198	228	237	246	237	228	198	168	198	228	237	246	237	228	198
50	138	169	190	194	202	194	190	169	138	169	190	194	202	194	190	169
55	107	138	153	154	159	154	153	138	107	138	153	154	159	154	153	138
60	75	107	117	118	123	118	117	107	75	107	117	118	123	118	117	107
65	58	77	86	88	89	88	86	77	58	77	86	88	89	88	86	77
70	42	47	62	70	79	70	62	47	42	47	62	70	79	70	62	47
75	27	29	48	67	77	67	48	29	27	29	48	67	77	67	48	29
80	14	19	38	52	57	52	38	19	14	19	38	52	57	52	38	19
85	1	11	27	38	43	38	27	11	1	11	27	38	43	38	27	11
90	0	9	26	40	46	40	26	9	0	9	26	40	46	40	26	9
95	27	181	242	263	269	263	242	181	27	181	242	263	269	263	242	181
100	86	321	443	517	545	517	443	321	86	321	443	517	545	517	443	321
105	159	362	638	695	708	695	638	362	159	362	638	695	708	695	638	362
110	238	390	695	884	919	884	695	390	238	390	695	884	919	884	695	390
115	318	431	705	921	995	921	705	431	318	431	705	921	995	921	705	431
120	397	488	709	913	988	913	709	488	397	488	709	913	988	913	709	488
125	472	550	715	896	966	896	715	550	472	550	715	896	966	896	715	550
130	544	610	733	879	940	879	733	610	544	610	733	879	940	879	733	610
135	612	667	766	869	918	869	766	667	612	667	766	869	918	869	766	667
140	675	720	802	876	908	876	802	720	675	720	802	876	908	876	802	720
145	733	769	834	892	916	892	834	769	733	769	834	892	916	892	834	769
150	785	810	861	909	927	909	861	810	785	810	861	909	927	909	861	810
155	829	847	886	918	933	918	886	847	829	847	886	918	933	918	886	847
160	866	878	905	928	939	928	905	878	866	878	905	928	939	928	905	878
165	896	902	918	934	941	934	918	902	896	902	918	934	941	934	918	902
170	917	919	926	935	939	935	926	919	917	919	926	935	939	935	926	919
175	931	929	931	935	937	935	931	929	931	929	931	935	937	935	931	929
180	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	8.3	45-50	80.4	90-95	57.8	135-140	289.3
5-10	24.6	50-55	70.6	95-100	169.6	140-145	271.5
10-15	39.9	55-60	58.6	100-105	248.2	145-150	248.7
15-20	54.3	60-65	46.3	105-110	307.8	150-155	220.5
20-25	67.6	65-70	34.9	110-115	334.8	155-160	187.4
25-30	78.6	70-75	28.3	115-120	335.4	160-165	150.1
30-35	85.8	75-80	23.0	120-125	328.3	165-170	109.4
35-40	88.5	80-85	16.3	125-130	317.5	170-175	66.5
40-45	86.7	85-90	11.8	130-135	304.5	175-180	22.3



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	0.958	0.958	0.958	0.958	0.852	0.852	0.852	0.852	0.751	0.751	0.751	0.751
1	0.874	0.831	0.793	0.759	0.776	0.74	0.709	0.68	0.683	0.654	0.628	0.604
2	0.797	0.725	0.666	0.617	0.706	0.647	0.597	0.556	0.621	0.572	0.531	0.496
3	0.728	0.636	0.567	0.512	0.644	0.568	0.509	0.463	0.566	0.503	0.454	0.414
4	0.665	0.561	0.487	0.43	0.589	0.502	0.438	0.39	0.517	0.445	0.391	0.35
5	0.609	0.498	0.421	0.366	0.539	0.446	0.38	0.332	0.473	0.395	0.34	0.299
6	0.559	0.444	0.368	0.315	0.495	0.398	0.333	0.286	0.435	0.354	0.298	0.258
7	0.515	0.399	0.324	0.273	0.457	0.358	0.294	0.249	0.401	0.318	0.263	0.224
8	0.476	0.36	0.288	0.239	0.422	0.323	0.261	0.218	0.372	0.288	0.234	0.197
9	0.442	0.326	0.257	0.21	0.392	0.293	0.233	0.192	0.345	0.262	0.209	0.174
10	0.411	0.297	0.23	0.186	0.365	0.267	0.209	0.17	0.322	0.239	0.188	0.154

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	0.563	0.563	0.563	0.563	0.391	0.391	0.391	0.233	0.233	0.233	0.159
1	0.51	0.492	0.475	0.459	0.342	0.333	0.323	0.205	0.2	0.196	0.133
2	0.463	0.431	0.404	0.381	0.301	0.285	0.271	0.181	0.173	0.166	0.113
3	0.421	0.38	0.347	0.32	0.266	0.246	0.229	0.161	0.151	0.142	0.096
4	0.385	0.337	0.301	0.272	0.237	0.214	0.196	0.144	0.132	0.122	0.083
5	0.352	0.301	0.262	0.233	0.212	0.188	0.169	0.13	0.117	0.106	0.073
6	0.324	0.27	0.231	0.202	0.191	0.166	0.147	0.117	0.104	0.093	0.064
7	0.3	0.243	0.205	0.176	0.173	0.148	0.129	0.107	0.093	0.083	0.057
8	0.278	0.221	0.182	0.155	0.157	0.132	0.114	0.098	0.084	0.074	0.051
9	0.259	0.201	0.164	0.137	0.144	0.119	0.102	0.09	0.076	0.066	0.046
10	0.241	0.184	0.148	0.122	0.132	0.108	0.091	0.083	0.07	0.06	0.042

Average Luminance Table (cd/m²)

	0	45	90
0	1905	1905	1905
45	1293	1866	1897
55	1018	1499	1501
65	744	1088	1073
75	575	897	1328
85	55	1027	1378

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.

