



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: 18156 DATE: 08-02-2010
 PREPARED FOR: MERCURY LIGHTING
 CATALOG NUMBER: HB80FR-632-OCT-ELBH-UNI-ASC-42
 LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS, CLEAR PLASTIC ENCLOSURE.
 LAMP: SIX 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS EACH.
 LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO
 BALLAST: ONE GE "PROLINE" GE-432-MV-H AND ONE GE "PROLINE" GE-232-MV-H
 MOUNTING: PENDANT
 ELECTRICAL VALUES: 120.0VAC, 1.6674A, 198.2W

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	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	
5	5281	5209	5115	5051	5027	5051	5115	5209	5281	5209	5115	5051	5027	5051	5115	5209	482.0
15	5089	4782	4538	4411	4377	4411	4538	4782	5089	4782	4538	4411	4377	4411	4538	4782	1301.3
25	4696	4205	3977	3998	4021	3998	3977	4205	4696	4205	3977	3998	4021	3998	3977	4205	1907.4
35	4121	3544	3559	3549	3553	3549	3559	3544	4121	3544	3559	3549	3553	3549	3559	3544	2263.6
45	3391	2894	2936	2701	2573	2701	2936	2894	3391	2894	2936	2701	2573	2701	2936	2894	2212.9
55	2516	2189	1912	1753	1759	1753	1912	2189	2516	2189	1912	1753	1759	1753	1912	2189	1786.3
65	1550	1318	1141	1149	1177	1149	1141	1318	1550	1318	1141	1149	1177	1149	1141	1318	1223.3
75	606	492	523	548	553	548	523	492	606	492	523	548	553	548	523	492	568.8
85	37	55	59	54	52	54	59	55	37	55	59	54	52	54	59	55	86.4
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

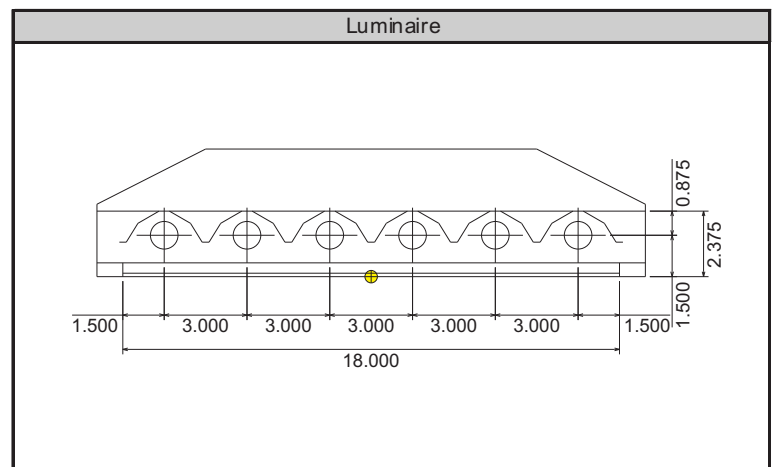
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	3690.7	21.6%	31.2%
0-40	5954.3	34.8%	50.3%
0-60	9953.5	58.2%	84.1%
0-90	11832.0	69.2%	100.0%
90-180	0.0	0.0%	0.0%
0-180	11832.0	69.2%	100.0%

Total luminaire efficiency: 69.2%

CIE Type: Direct

Spacing Criterion: 0 deg: 1.24 90 deg: 1.08
 180 deg: 1.24 270 deg: 1.08



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	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299	5299
5	5281	5209	5115	5051	5027	5051	5115	5209	5281	5209	5115	5051	5027	5051	5115	5209
10	5210	5012	4838	4734	4693	4734	4838	5012	5210	5012	4838	4734	4693	4734	4838	5012
15	5089	4782	4538	4411	4377	4411	4538	4782	5089	4782	4538	4411	4377	4411	4538	4782
20	4919	4514	4238	4161	4160	4161	4238	4514	4919	4514	4238	4161	4160	4161	4238	4514
25	4696	4205	3977	3998	4021	3998	3977	4205	4696	4205	3977	3998	4021	3998	3977	4205
30	4431	3876	3764	3830	3813	3830	3764	3876	4431	3876	3764	3830	3813	3830	3764	3876
35	4121	3544	3559	3549	3553	3549	3559	3544	4121	3544	3559	3549	3553	3549	3559	3544
40	3770	3212	3252	3247	3158	3247	3252	3212	3770	3212	3252	3247	3158	3247	3252	3212
45	3391	2894	2936	2701	2573	2701	2936	2894	3391	2894	2936	2701	2573	2701	2936	2894
50	2967	2565	2486	2110	2047	2110	2486	2565	2967	2565	2486	2110	2047	2110	2486	2565
55	2516	2189	1912	1753	1759	1753	1912	2189	2516	2189	1912	1753	1759	1753	1912	2189
60	2035	1772	1439	1450	1452	1450	1439	1772	2035	1772	1439	1450	1452	1450	1439	1772
65	1550	1318	1141	1149	1177	1149	1141	1318	1550	1318	1141	1149	1177	1149	1141	1318
70	1053	810	799	874	894	874	799	810	1053	810	799	874	894	874	799	810
75	606	492	523	548	553	548	523	492	606	492	523	548	553	548	523	492
80	243	221	250	272	275	272	250	221	243	221	250	272	275	272	250	221
85	37	55	59	54	52	54	59	55	37	55	59	54	52	54	59	55
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens		Zone	Lumens		Zone	Lumens		Zone	Lumens
0-5	124.5		45-50	1069.5		90-95	0.0		135-140	0.0
5-10	357.4		50-55	958.0		95-100	0.0		140-145	0.0
10-15	562.4		55-60	828.2		100-105	0.0		145-150	0.0
15-20	738.9		60-65	692.1		105-110	0.0		150-155	0.0
20-25	890.3		65-70	531.2		110-115	0.0		155-160	0.0
25-30	1017.1		70-75	363.4		115-120	0.0		160-165	0.0
30-35	1107.1		75-80	205.4		120-125	0.0		165-170	0.0
35-40	1156.5		80-85	77.8		125-130	0.0		170-175	0.0
40-45	1143.4		85-90	8.6		130-135	0.0		175-180	0.0



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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	0.844	0.844	0.844	0.844	0.824	0.824	0.824	0.824	0.805	0.805	0.805	0.805
1	0.779	0.746	0.717	0.69	0.76	0.73	0.703	0.679	0.741	0.714	0.69	0.668
2	0.714	0.656	0.609	0.569	0.696	0.643	0.599	0.562	0.678	0.63	0.59	0.556
3	0.655	0.58	0.523	0.478	0.637	0.569	0.516	0.474	0.621	0.558	0.509	0.47
4	0.602	0.517	0.455	0.408	0.586	0.507	0.45	0.406	0.57	0.498	0.444	0.403
5	0.555	0.463	0.4	0.354	0.54	0.455	0.396	0.352	0.526	0.448	0.392	0.35
6	0.514	0.418	0.355	0.311	0.5	0.412	0.352	0.31	0.487	0.405	0.349	0.308
7	0.477	0.38	0.319	0.276	0.465	0.374	0.316	0.275	0.453	0.369	0.313	0.274
8	0.445	0.348	0.288	0.247	0.433	0.343	0.286	0.247	0.423	0.338	0.284	0.246
9	0.416	0.319	0.262	0.223	0.405	0.315	0.26	0.223	0.396	0.311	0.258	0.222
10	0.39	0.295	0.24	0.203	0.381	0.291	0.238	0.203	0.372	0.288	0.237	0.202

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	0.769	0.769	0.769	0.769	0.736	0.736	0.736	0.706	0.706	0.706	0.692
1	0.707	0.685	0.665	0.647	0.659	0.642	0.627	0.634	0.621	0.609	0.595
2	0.645	0.606	0.572	0.543	0.583	0.555	0.531	0.563	0.54	0.519	0.505
3	0.59	0.538	0.496	0.461	0.519	0.483	0.453	0.502	0.472	0.446	0.431
4	0.542	0.481	0.434	0.397	0.465	0.425	0.392	0.451	0.416	0.387	0.372
5	0.5	0.433	0.384	0.347	0.42	0.377	0.343	0.407	0.37	0.339	0.325
6	0.464	0.393	0.343	0.306	0.381	0.337	0.303	0.371	0.331	0.3	0.287
7	0.431	0.358	0.308	0.272	0.349	0.304	0.27	0.339	0.299	0.268	0.255
8	0.403	0.329	0.28	0.244	0.32	0.276	0.243	0.312	0.272	0.241	0.229
9	0.378	0.303	0.255	0.221	0.296	0.252	0.22	0.289	0.249	0.219	0.207
10	0.356	0.281	0.234	0.201	0.275	0.231	0.201	0.269	0.229	0.2	0.188

Average Luminance Table (cd/m²)

	0	45	90
0	10015	10015	10015
45	9066	7850	6877
55	8292	6300	5798
65	6933	5102	5264
75	4429	3821	4038
85	807	1286	1120

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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