



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: 18155

DATE: 07-27-2010

PREPARED FOR: MERCURY LIGHTING

CATALOG NUMBER: HB80-632-OCT-ELBH-UNI-42

LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING, FORMED SPECULAR
ALUMINUM REFLECTORS, NO ENCLOSURE.

LAMP: SIX 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS
EACH.

LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO

BALLAST: ONE SYLVANIA "QUICKTRONIC" QHE4X32T8/UNV-ISH AND
ONE SYLVANIA "QUICKTRONIC" QHE2X32T8/UNV-ISH-SC

MOUNTING: PENDANT

ELECTRICAL VALUES: 120.0VAC, 1.7905A, 214.7W

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	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	
5	6232	6170	6091	6034	6009	6034	6091	6170	6232	6170	6091	6034	6009	6034	6091	6170	575.5
15	6008	5771	5481	5194	5100	5194	5481	5771	6008	5771	5481	5194	5100	5194	5481	5771	1549.3
25	5569	5112	4629	4533	4465	4533	4629	5112	5569	5112	4629	4533	4465	4533	4629	5112	2225.0
35	4919	4171	3965	3866	3881	3866	3965	4171	4919	4171	3965	3866	3881	3866	3965	4171	2574.5
45	4116	3401	3260	3020	2903	3020	3260	3401	4116	3401	3260	3020	2903	3020	3260	3401	2534.6
55	3160	2547	2232	2025	2019	2025	2232	2547	3160	2547	2232	2025	2019	2025	2232	2547	2096.3
65	2113	1648	1401	1408	1413	1408	1401	1648	2113	1648	1401	1408	1413	1408	1401	1648	1534.0
75	1043	741	800	876	887	876	800	741	1043	741	800	876	887	876	800	741	890.4
85	136	207	250	258	253	258	250	207	136	207	250	258	253	258	250	207	256.4
90	2	3	6	8	8	8	6	3	2	3	6	8	8	8	6	3	
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	

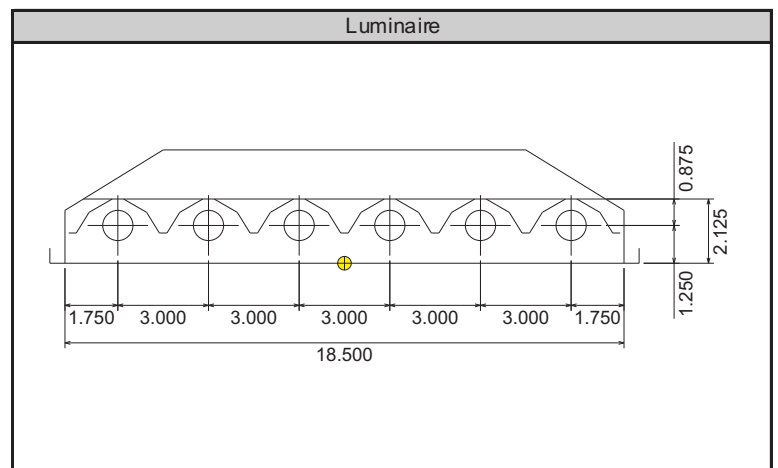
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	4349.8	25.4%	30.6%
0-40	6924.4	40.5%	48.6%
0-60	11555.3	67.6%	81.2%
0-90	14236.1	83.3%	100.0%
90-180	0.0	0.0%	0.0%
0-180	14236.1	83.3%	100.0%

Total luminaire efficiency: 83.3%

CIE Type: Direct

Spacing Criterion: 0 deg: 1.25 90 deg: 1.01
180 deg: 1.25 270 deg: 1.01



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	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240	6240
5	6232	6170	6091	6034	6009	6034	6091	6170	6232	6170	6091	6034	6009	6034	6091	6170
10	6150	5992	5855	5730	5666	5730	5855	5992	6150	5992	5855	5730	5666	5730	5855	5992
15	6008	5771	5481	5194	5100	5194	5481	5771	6008	5771	5481	5194	5100	5194	5481	5771
20	5814	5494	4979	4829	4814	4829	4979	5494	5814	5494	4979	4829	4814	4829	4979	5494
25	5569	5112	4629	4533	4465	4533	4629	5112	5569	5112	4629	4533	4465	4533	4629	5112
30	5267	4645	4333	4271	4204	4271	4333	4645	5267	4645	4333	4271	4204	4271	4333	4645
35	4919	4171	3965	3866	3881	3866	3965	4171	4919	4171	3965	3866	3881	3866	3965	4171
40	4534	3773	3598	3597	3497	3597	3598	3773	4534	3773	3598	3597	3497	3597	3598	3773
45	4116	3401	3260	3020	2903	3020	3260	3401	4116	3401	3260	3020	2903	3020	3260	3401
50	3654	2940	2812	2416	2327	2416	2812	2940	3654	2940	2812	2416	2327	2416	2812	2940
55	3160	2547	2232	2025	2019	2025	2232	2547	3160	2547	2232	2025	2019	2025	2232	2547
60	2641	2088	1711	1712	1709	1712	1711	2088	2641	2088	1711	1712	1709	1712	1711	2088
65	2113	1648	1401	1408	1413	1408	1401	1648	2113	1648	1401	1408	1413	1408	1401	1648
70	1568	1096	1083	1124	1142	1124	1083	1096	1568	1096	1083	1124	1142	1124	1083	1096
75	1043	741	800	876	887	876	800	741	1043	741	800	876	887	876	800	741
80	540	447	546	578	588	578	546	447	540	447	546	578	588	578	546	447
85	136	207	250	258	253	258	250	207	136	207	250	258	253	258	250	207
90	2	3	6	8	8	8	6	3	2	3	6	8	8	8	6	3
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	147.5	45-50	1231.7	90-95	0.0	135-140	0.0
5-10	428.0	50-55	1115.7	95-100	0.0	140-145	0.0
10-15	673.9	55-60	980.6	100-105	0.0	145-150	0.0
15-20	875.4	60-65	847.2	105-110	0.0	150-155	0.0
20-25	1046.5	65-70	686.8	110-115	0.0	155-160	0.0
25-30	1178.5	70-75	522.0	115-120	0.0	160-165	0.0
30-35	1261.5	75-80	368.4	120-125	0.0	165-170	0.0
35-40	1313.1	80-85	207.4	125-130	0.0	170-175	0.0
40-45	1302.9	85-90	49.0	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	1.015	1.015	1.015	1.015	0.991	0.991	0.991	0.991	0.968	0.968	0.968	0.968
1	0.932	0.89	0.852	0.818	0.909	0.87	0.836	0.805	0.886	0.851	0.82	0.791
2	0.852	0.779	0.72	0.67	0.829	0.763	0.708	0.662	0.808	0.747	0.697	0.654
3	0.781	0.687	0.616	0.56	0.759	0.674	0.608	0.555	0.738	0.661	0.6	0.55
4	0.717	0.611	0.535	0.478	0.697	0.6	0.529	0.475	0.678	0.589	0.523	0.471
5	0.661	0.548	0.471	0.414	0.643	0.539	0.466	0.412	0.626	0.529	0.461	0.41
6	0.612	0.495	0.418	0.364	0.595	0.487	0.414	0.362	0.579	0.479	0.41	0.36
7	0.568	0.45	0.375	0.323	0.553	0.443	0.372	0.322	0.539	0.436	0.369	0.321
8	0.529	0.412	0.339	0.289	0.516	0.406	0.336	0.289	0.503	0.4	0.334	0.288
9	0.495	0.378	0.308	0.262	0.483	0.373	0.306	0.261	0.471	0.368	0.304	0.26
10	0.464	0.35	0.283	0.238	0.453	0.345	0.281	0.238	0.443	0.341	0.279	0.237

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	0.925	0.925	0.925	0.925	0.886	0.886	0.886	0.85	0.85	0.85	0.833
1	0.844	0.816	0.79	0.766	0.783	0.762	0.743	0.754	0.737	0.721	0.704
2	0.768	0.718	0.675	0.639	0.691	0.655	0.624	0.666	0.636	0.61	0.592
3	0.701	0.636	0.584	0.541	0.613	0.569	0.531	0.592	0.554	0.522	0.504
4	0.643	0.568	0.511	0.465	0.549	0.499	0.459	0.531	0.488	0.452	0.435
5	0.594	0.512	0.451	0.405	0.495	0.442	0.401	0.48	0.434	0.396	0.379
6	0.551	0.464	0.403	0.357	0.45	0.396	0.354	0.437	0.389	0.351	0.334
7	0.513	0.424	0.363	0.318	0.412	0.357	0.316	0.401	0.351	0.314	0.297
8	0.479	0.389	0.329	0.286	0.379	0.324	0.284	0.369	0.32	0.283	0.267
9	0.45	0.359	0.3	0.259	0.35	0.296	0.258	0.342	0.292	0.256	0.241
10	0.423	0.333	0.276	0.236	0.325	0.272	0.235	0.318	0.269	0.234	0.22

Average Luminance Table (cd/m²)

	0	45	90
0	10892	10892	10892
45	10161	8047	7167
55	9616	6793	6145
65	8725	5786	5835
75	7036	5399	5979
85	2730	5010	5069

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.

