



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: 18185 DATE: 02-22-2010
 PREPARED FOR: RENOVA LIGHTING SYSTEMS
 CATALOG NUMBER: EFK-22-W-2LT8-V
 LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING, FORMED WHITE ENAMEL ALUMINUM REFLECTOR, NO ENCLOSURE.
 LAMP: TWO 17 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 1350 LUMENS EACH.
 LAMP CATALOG NUMBER: PHILIPS F17/T8/TL835
 BALLAST: ONE SYLVANIA "QUICKTRONIC" QHE2X32T8/UNV-ISL-SC
 MOUNTING: RECESSED
 ELECTRICAL VALUES: 120.0VAC, 0.2248A, 26.89W

Candela Distribution

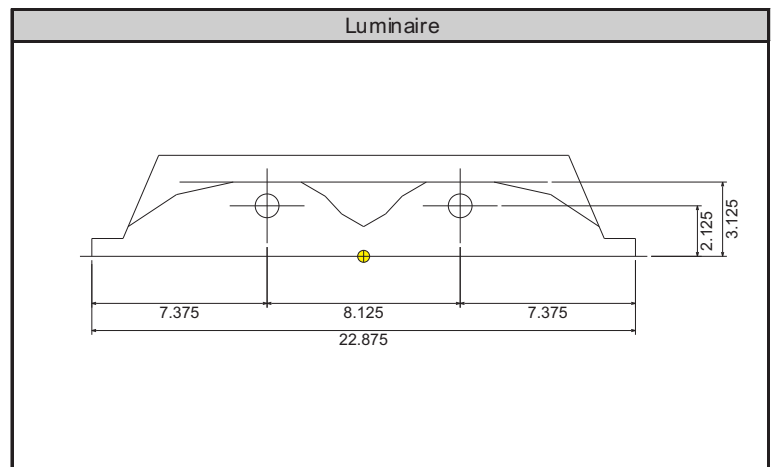
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	
5	726	726	727	728	727	728	727	726	726	726	727	728	727	728	727	726	69.3
15	703	707	717	725	727	725	717	707	703	707	717	725	727	725	717	707	202.4
25	656	669	688	703	709	703	688	669	656	669	688	703	709	703	688	669	316.6
35	587	610	642	668	678	668	642	610	587	610	642	668	678	668	642	610	399.9
45	495	529	579	628	646	628	579	529	495	529	579	628	646	628	579	529	444.7
55	383	427	506	552	566	552	506	427	383	427	506	552	566	552	506	427	437.2
65	257	312	386	443	461	443	386	312	257	312	386	443	461	443	386	312	368.4
75	119	170	227	217	199	217	227	170	119	170	227	217	199	217	227	170	201.2
85	20	23	19	19	19	19	19	23	20	23	19	19	19	19	19	23	28.1
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	588.2	21.8%	23.8%
0-40	988.1	36.6%	40.0%
0-60	1870.0	69.3%	75.8%
0-90	2467.7	91.4%	100.0%
90-180	0.0	0.0%	0.0%
0-180	2467.7	91.4%	100.0%

Total luminaire efficiency: 91.4%
 CIE Type: Direct
 Spacing Criterion: 0 deg: 1.27 90 deg: 1.43
 180 deg: 1.27 270 deg: 1.43

Total reflectance of paint: 91.8



Approved By: _____

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	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729	729
5	726	726	727	728	727	728	727	726	726	726	727	728	727	728	727	726
10	717	719	723	728	729	728	723	719	717	719	723	728	729	728	723	719
15	703	707	717	725	727	725	717	707	703	707	717	725	727	725	717	707
20	682	691	706	716	719	716	706	691	682	691	706	716	719	716	706	691
25	656	669	688	703	709	703	688	669	656	669	688	703	709	703	688	669
30	624	642	667	687	695	687	667	642	624	642	667	687	695	687	667	642
35	587	610	642	668	678	668	642	610	587	610	642	668	678	668	642	610
40	543	572	612	647	662	647	612	572	543	572	612	647	662	647	612	572
45	495	529	579	628	646	628	579	529	495	529	579	628	646	628	579	529
50	442	480	545	599	612	599	545	480	442	480	545	599	612	599	545	480
55	383	427	506	552	566	552	506	427	383	427	506	552	566	552	506	427
60	321	369	450	498	513	498	450	369	321	369	450	498	513	498	450	369
65	257	312	386	443	461	443	386	312	257	312	386	443	461	443	386	312
70	188	244	315	363	367	363	315	244	188	244	315	363	367	363	315	244
75	119	170	227	217	199	217	227	170	119	170	227	217	199	217	227	170
80	56	97	91	62	56	62	91	97	56	97	91	62	56	62	91	97
85	20	23	19	19	19	19	19	23	20	23	19	19	19	19	19	23
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	17.4	45-50	225.3	90-95	0.0	135-140	0.0
5-10	51.9	50-55	223.6	95-100	0.0	140-145	0.0
10-15	85.4	55-60	213.6	100-105	0.0	145-150	0.0
15-20	117.0	60-65	196.6	105-110	0.0	150-155	0.0
20-25	145.7	65-70	171.8	110-115	0.0	155-160	0.0
25-30	170.9	70-75	130.6	115-120	0.0	160-165	0.0
30-35	191.9	75-80	70.6	120-125	0.0	165-170	0.0
35-40	208.0	80-85	23.0	125-130	0.0	170-175	0.0
40-45	219.4	85-90	5.1	130-135	0.0	175-180	0.0



Coefficients of Utilization - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	1.115	1.115	1.115	1.115	1.088	1.088	1.088	1.088	1.063	1.063	1.063	1.063
1	1.017	0.968	0.923	0.884	0.991	0.946	0.905	0.869	0.966	0.925	0.888	0.855
2	0.921	0.835	0.764	0.705	0.895	0.816	0.751	0.696	0.871	0.799	0.739	0.688
3	0.836	0.726	0.642	0.575	0.811	0.71	0.632	0.57	0.788	0.696	0.623	0.565
4	0.762	0.637	0.548	0.48	0.739	0.624	0.541	0.476	0.717	0.612	0.534	0.473
5	0.698	0.565	0.474	0.408	0.677	0.554	0.469	0.405	0.657	0.544	0.463	0.403
6	0.642	0.505	0.416	0.352	0.623	0.496	0.411	0.35	0.605	0.487	0.407	0.349
7	0.593	0.456	0.368	0.308	0.576	0.448	0.365	0.307	0.56	0.44	0.361	0.305
8	0.551	0.414	0.33	0.272	0.535	0.407	0.327	0.271	0.52	0.401	0.324	0.271
9	0.513	0.378	0.297	0.243	0.499	0.372	0.295	0.243	0.486	0.367	0.293	0.242
10	0.48	0.348	0.27	0.219	0.467	0.343	0.268	0.219	0.455	0.338	0.266	0.218

Ceiling Cavity Reflectance	50				30			10			0
	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	1.016	1.016	1.016	1.016	0.972	0.972	0.972	0.933	0.933	0.933	0.914
1	0.919	0.886	0.855	0.828	0.85	0.825	0.802	0.817	0.797	0.778	0.759
2	0.825	0.766	0.715	0.672	0.736	0.693	0.656	0.708	0.673	0.641	0.621
3	0.745	0.668	0.606	0.555	0.642	0.589	0.545	0.619	0.574	0.535	0.514
4	0.678	0.589	0.52	0.466	0.567	0.508	0.46	0.547	0.495	0.453	0.433
5	0.621	0.524	0.453	0.398	0.505	0.443	0.394	0.488	0.433	0.389	0.369
6	0.572	0.47	0.399	0.345	0.455	0.391	0.342	0.44	0.383	0.339	0.319
7	0.53	0.426	0.355	0.303	0.412	0.348	0.301	0.4	0.342	0.298	0.279
8	0.493	0.388	0.318	0.269	0.377	0.313	0.267	0.366	0.308	0.265	0.247
9	0.461	0.356	0.288	0.241	0.346	0.284	0.239	0.337	0.28	0.238	0.221
10	0.433	0.329	0.263	0.217	0.32	0.259	0.216	0.312	0.255	0.215	0.199

Average Luminance Table (cd/m²)

	0	45	90
0	2158	2158	2158
45	2073	2426	2705
55	1980	2614	2926
65	1802	2704	3231
75	1363	2595	2274
85	669	630	640

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.

