



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

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	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908	4908
5	4896	4878	4904	4919	4918	4919	4904	4878	4896	4878	4904	4919	4918	4919	4904	4878
10	4834	4830	4874	4900	4907	4900	4874	4830	4834	4830	4874	4900	4907	4900	4874	4830
15	4735	4752	4819	4855	4864	4855	4819	4752	4735	4752	4819	4855	4864	4855	4819	4752
20	4602	4641	4721	4779	4796	4779	4721	4641	4602	4641	4721	4779	4796	4779	4721	4641
25	4430	4491	4595	4668	4694	4668	4595	4491	4430	4491	4595	4668	4694	4668	4595	4491
30	4217	4304	4434	4528	4564	4528	4434	4304	4217	4304	4434	4528	4564	4528	4434	4304
35	3973	4084	4240	4371	4422	4371	4240	4084	3973	4084	4240	4371	4422	4371	4240	4084
40	3700	3833	4016	4183	4237	4183	4016	3833	3700	3833	4016	4183	4237	4183	4016	3833
45	3398	3551	3778	3943	3992	3943	3778	3551	3398	3551	3778	3943	3992	3943	3778	3551
50	3059	3237	3500	3665	3722	3665	3500	3237	3059	3237	3500	3665	3722	3665	3500	3237
55	2689	2890	3166	3260	3215	3260	3166	2890	2689	2890	3166	3260	3215	3260	3166	2890
60	2301	2520	2798	2711	2708	2711	2798	2520	2301	2520	2798	2711	2708	2711	2798	2520
65	1878	2115	2241	2331	2401	2331	2241	2115	1878	2115	2241	2331	2401	2331	2241	2115
70	1436	1670	1783	2045	2096	2045	1783	1670	1436	1670	1783	2045	2096	2045	1783	1670
75	976	1162	1433	1470	1467	1470	1433	1162	976	1162	1433	1470	1467	1470	1433	1162
80	535	723	873	801	747	801	873	723	535	723	873	801	747	801	873	723
85	136	289	190	170	162	170	190	289	136	289	190	170	162	170	190	289
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	117.3	45-50	1452.4	90-95	0.0	135-140	0.0
5-10	349.6	50-55	1421.2	95-100	0.0	140-145	0.0
10-15	574.3	55-60	1316.6	100-105	0.0	145-150	0.0
15-20	784.5	60-65	1174.5	105-110	0.0	150-155	0.0
20-25	974.3	65-70	1015.3	110-115	0.0	155-160	0.0
25-30	1138.0	70-75	824.5	115-120	0.0	160-165	0.0
30-35	1272.0	75-80	562.1	120-125	0.0	165-170	0.0
35-40	1372.6	80-85	246.3	125-130	0.0	170-175	0.0
40-45	1434.4	85-90	44.2	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			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	1.114	1.114	1.114	1.114	1.087	1.087	1.087	1.087	1.062	1.062	1.062	1.062
1	1.015	0.964	0.919	0.879	0.988	0.943	0.902	0.865	0.963	0.922	0.884	0.85
2	0.92	0.833	0.762	0.703	0.894	0.815	0.749	0.694	0.869	0.797	0.737	0.686
3	0.836	0.725	0.642	0.575	0.811	0.71	0.632	0.57	0.788	0.695	0.623	0.565
4	0.763	0.638	0.549	0.482	0.74	0.626	0.542	0.478	0.718	0.613	0.535	0.475
5	0.699	0.567	0.477	0.411	0.678	0.556	0.471	0.408	0.658	0.546	0.466	0.406
6	0.644	0.508	0.419	0.355	0.625	0.499	0.414	0.354	0.607	0.49	0.41	0.352
7	0.595	0.459	0.372	0.312	0.578	0.451	0.368	0.31	0.562	0.443	0.365	0.309
8	0.553	0.417	0.333	0.276	0.537	0.41	0.33	0.275	0.523	0.404	0.327	0.274
9	0.515	0.381	0.301	0.247	0.501	0.376	0.299	0.247	0.488	0.37	0.296	0.246
10	0.482	0.351	0.274	0.223	0.47	0.346	0.272	0.223	0.458	0.341	0.27	0.222

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	1.015	1.015	1.015	1.015	0.972	0.972	0.972	0.932	0.932	0.932	0.913
1	0.916	0.883	0.852	0.823	0.847	0.821	0.798	0.813	0.793	0.774	0.755
2	0.824	0.764	0.713	0.67	0.734	0.691	0.654	0.706	0.671	0.639	0.619
3	0.745	0.668	0.606	0.555	0.642	0.589	0.545	0.618	0.574	0.535	0.514
4	0.678	0.59	0.522	0.468	0.568	0.509	0.461	0.548	0.497	0.455	0.434
5	0.622	0.526	0.455	0.401	0.508	0.445	0.397	0.49	0.436	0.392	0.372
6	0.574	0.473	0.402	0.349	0.457	0.394	0.345	0.443	0.386	0.342	0.323
7	0.532	0.429	0.358	0.307	0.415	0.352	0.304	0.403	0.346	0.302	0.283
8	0.496	0.391	0.322	0.273	0.38	0.317	0.271	0.369	0.312	0.269	0.251
9	0.464	0.359	0.292	0.244	0.349	0.287	0.243	0.34	0.283	0.242	0.225
10	0.435	0.332	0.266	0.221	0.323	0.263	0.22	0.315	0.259	0.219	0.202

Average Luminance Table (cd/m²)

	0	45	90
0	10092	10092	10092
45	9882	10987	11609
55	9641	11348	11526
65	9136	10903	11679
75	7753	11386	11656
85	3215	4487	3823

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.

