





# LUMINAIRE TESTING LABORATORY, INC.

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IESNA

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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	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
5	311	311	311	308	304	308	311	311	311	311	311	308	304	308	311	311
10	270	273	279	277	270	277	279	273	270	273	279	277	270	277	279	273
15	219	223	233	236	229	236	233	223	219	223	233	236	229	236	233	223
20	190	191	200	201	197	201	200	191	190	191	200	201	197	201	200	191
25	175	174	179	180	175	180	179	174	175	174	179	180	175	180	179	174
30	162	161	168	170	162	170	168	161	162	161	168	170	162	170	168	161
35	151	154	165	169	160	169	165	154	151	154	165	169	160	169	165	154
40	151	157	176	183	178	183	176	157	151	157	176	183	178	183	176	157
45	168	178	215	228	225	228	215	178	168	178	215	228	225	228	215	178
50	214	234	294	308	307	308	294	234	214	234	294	308	307	308	294	234
55	294	325	415	430	418	430	415	325	294	325	415	430	418	430	415	325
60	409	454	580	585	532	585	580	454	409	454	580	585	532	585	580	454
65	559	617	794	765	683	765	794	617	559	617	794	765	683	765	794	617
70	776	846	1056	942	798	942	1056	846	776	846	1056	942	798	942	1056	846
75	1035	1080	1016	444	240	444	1016	1080	1035	1080	1016	444	240	444	1016	1080
80	1283	690	302	200	131	200	302	690	1283	690	302	200	131	200	302	690
85	240	166	166	114	36	114	166	166	240	166	166	114	36	114	166	166
90	154	85	72	44	0	44	72	85	154	85	72	44	0	44	72	85
95	93	42	27	3	0	3	27	42	93	42	27	3	0	3	27	42
100	27	9	4	1	0	1	4	9	27	9	4	1	0	1	4	9
105	2	2	2	0	0	0	2	2	2	2	2	0	0	0	2	2
110	2	1	1	0	0	0	1	1	2	1	1	0	0	0	1	1
115	1	0	0	0	0	0	0	0	1	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	7.5	45-50	95.5	90-95	26.9	135-140	0.0
5-10	20.9	50-55	141.2	95-100	9.6	140-145	0.0
10-15	29.7	55-60	208.0	100-105	1.3	145-150	0.0
15-20	34.7	60-65	295.7	105-110	0.5	150-155	0.0
20-25	38.9	65-70	407.7	110-115	0.2	155-160	0.0
25-30	43.2	70-75	472.4	115-120	0.0	160-165	0.0
30-35	47.7	75-80	339.5	120-125	0.0	165-170	0.0
35-40	54.7	80-85	148.4	125-130	0.0	170-175	0.0
40-45	68.4	85-90	56.2	130-135	0.0	175-180	0.0



Utilization of Lumens - 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)	** Values are expressed as Lumens delivered to the task surface **											
0	3104	3104	3104	3104	3025	3025	3025	3025	2951	2951	2951	2951
1	2637	2404	2196	2009	2547	2334	2143	1970	2462	2267	2091	1932
2	2264	1894	1591	1339	2172	1833	1553	1317	2085	1775	1516	1296
3	1979	1540	1205	940.8	1891	1488	1176	927	1809	1438	1148	913.3
4	1761	1292	953.6	698.7	1681	1248	931.1	689.2	1604	1206	909.2	679.8
5	1589	1111	783.1	544.2	1516	1074	765.3	537.3	1448	1039	747.9	530.5
6	1449	974.1	661.7	440.6	1383	943	647.4	435.3	1322	913	633.4	430.1
7	1332	867.1	572	367.9	1273	840.7	560.3	363.8	1218	815.2	548.8	359.7
8	1233	781.4	503.5	315	1181	758.9	493.8	311.7	1131	737.2	484.3	308.4
9	1147	711.4	449.7	275.2	1101	692	441.6	272.5	1057	673.3	433.7	269.8
10	1073	653	406.5	244.5	1032	636.4	399.7	242.2	992.6	620.2	393	240

  

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **										
0	2811	2811	2811	2811	2683	2683	2683	2566	2566	2566	2511
1	2303	2142	1995	1860	2027	1905	1792	1921	1821	1728	1658
2	1924	1666	1445	1254	1565	1378	1215	1472	1316	1177	1099
3	1656	1345	1094	886.8	1258	1042	861.3	1178	994	836.6	758.7
4	1465	1126	867	661.5	1053	826.7	643.7	984.2	788.4	626.3	550.8
5	1321	971.6	714.3	517	909	682.1	503.9	850.7	651.2	491.1	419.2
6	1209	856.1	606.2	419.8	802.9	580	409.8	753.1	554.9	399.9	332.2
7	1117	766.7	526.5	351.6	721.3	505	343.6	678.7	484.2	335.8	272.3
8	1041	695.7	465.8	301.9	656.7	448	295.4	620	430.7	289.1	229.6
9	976.1	637.6	418.2	264.5	604	403.2	259.2	572.2	388.7	254	198.1
10	920	589.3	380	235.5	560.1	367.3	231.1	532.5	354.9	226.8	174.3

Average Luminance Table (cd/m<sup>2</sup>)

	0	45	90
0	3980	3980	3980
45	2960	5012	3953
55	6300	10444	9052
65	12993	22424	20095
75	27117	33836	11527
85	7460	7011	5152

THIS TEST WAS CONDUCTED USING PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IES 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) 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.

