

## Photometric Test Report

**IES INDOOR REPORT**
**PHOTOMETRIC FILENAME : L032411904.IES**
**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L032411904  
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
 [ISSUE DATE] 3/27/2024  
 [MANUFAC] Bartco Lighting, Inc.  
 [LUMCAT] BSS111-45-35-ND-R-F: 4550 luminaire lumens (~1202 lm/ft.)  
 [LUMINAIRE] Adjustable cove mount LED luminaire w/frosted lens optic  
 [BALLASTCAT] XI075C200V054BPT1  
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
 [INPUT] 120VAC  
 [TEST PROCEDURE] IESNA:LM-79-19

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4551
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	39.76
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.13 ft
Luminous Width (90-270)	3.38 ft
Luminous Height	0.13 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2423	1676	233
55	3761	2957	2993
65	5930	4881	5403
75	10051	7710	6946
85	16311	13542	11118

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**CANDELA TABULATION**

	<u>0.0</u>	<u>2.5</u>	<u>5.0</u>	<u>7.5</u>	<u>10.0</u>	<u>12.5</u>	<u>15.0</u>	<u>17.5</u>	<u>20.0</u>	<u>22.5</u>
<b>0.0</b>	12	12	12	12	12	12	12	12	12	12
<b>2.5</b>	11	11	11	11	11	11	11	11	11	11
<b>5.0</b>	15	15	15	15	15	15	15	15	15	15
<b>7.5</b>	19	19	18	18	17	17	17	17	17	17
<b>10.0</b>	23	23	23	22	22	21	21	21	20	20
<b>12.5</b>	27	27	27	27	27	27	26	25	25	24
<b>15.0</b>	32	32	32	32	32	32	31	31	31	30
<b>17.5</b>	37	37	37	37	37	37	36	36	35	35
<b>20.0</b>	43	43	43	42	42	41	41	41	40	39
<b>22.5</b>	49	49	49	48	48	47	47	46	45	45
<b>25.0</b>	55	55	55	55	54	53	53	52	51	51
<b>27.5</b>	63	62	62	61	61	60	59	59	58	57
<b>30.0</b>	70	70	70	69	68	68	66	66	64	63
<b>32.5</b>	79	78	78	78	77	76	75	74	72	70
<b>35.0</b>	89	88	88	88	87	86	84	83	82	80
<b>37.5</b>	100	99	99	98	98	96	95	93	92	89
<b>40.0</b>	112	112	111	110	110	108	106	104	102	100
<b>42.5</b>	126	125	124	123	122	120	118	116	114	111
<b>45.0</b>	140	140	139	138	137	135	132	130	128	124
<b>47.5</b>	156	156	155	154	154	151	148	145	142	138
<b>50.0</b>	174	174	173	172	171	168	165	162	158	154
<b>52.5</b>	193	192	191	191	190	187	184	180	176	171
<b>55.0</b>	214	213	213	212	211	207	203	199	194	188
<b>57.5</b>	239	237	237	235	234	229	225	221	216	209
<b>60.0</b>	263	262	261	261	260	255	249	243	238	231
<b>62.5</b>	290	289	289	287	287	281	276	271	265	257
<b>65.0</b>	322	320	318	317	315	309	303	297	291	283
<b>67.5</b>	354	353	352	351	350	343	335	328	320	310
<b>70.0</b>	401	400	398	396	395	388	380	372	364	352
<b>72.5</b>	457	457	456	455	454	447	440	432	424	409
<b>75.0</b>	503	501	501	499	498	491	484	477	470	457
<b>77.5</b>	552	551	549	547	545	538	531	523	516	503
<b>80.0</b>	604	603	602	600	598	590	582	574	565	550
<b>82.5</b>	662	660	658	656	654	646	637	628	619	603
<b>85.0</b>	722	720	719	717	715	704	694	684	673	656
<b>87.5</b>	787	785	782	779	777	766	755	744	733	713
<b>90.0</b>	855	851	848	844	840	828	818	807	795	776
<b>92.5</b>	928	924	920	916	912	898	885	872	858	836
<b>95.0</b>	1002	998	994	989	985	972	959	945	932	908
<b>97.5</b>	1079	1075	1071	1067	1063	1048	1033	1018	1003	979
<b>100.0</b>	1158	1154	1150	1146	1142	1126	1110	1094	1078	1051
<b>102.5</b>	1237	1233	1228	1224	1219	1203	1186	1170	1153	1124
<b>105.0</b>	1315	1311	1306	1302	1297	1279	1262	1244	1226	1196
<b>107.5</b>	1390	1386	1382	1378	1374	1354	1334	1314	1294	1263
<b>110.0</b>	1461	1457	1452	1447	1442	1423	1404	1385	1366	1334
<b>112.5</b>	1527	1523	1519	1514	1509	1487	1465	1443	1421	1388
<b>115.0</b>	1586	1582	1577	1572	1567	1547	1526	1505	1484	1451
<b>117.5</b>	1641	1636	1631	1626	1620	1601	1581	1562	1542	1507
<b>120.0</b>	1688	1684	1679	1674	1669	1648	1627	1606	1585	1550
<b>122.5</b>	1727	1722	1717	1711	1706	1686	1666	1646	1626	1591
<b>125.0</b>	1762	1757	1751	1745	1740	1721	1702	1682	1662	1628
<b>127.5</b>	1787	1782	1777	1771	1766	1747	1727	1708	1689	1655
<b>130.0</b>	1807	1805	1802	1799	1796	1775	1755	1733	1713	1680
<b>132.5</b>	1809	1806	1803	1800	1797	1779	1760	1742	1723	1693

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**CANDELA TABULATION - (Cont.)**

<b>135.0</b>	1824	1819	1814	1809	1803	1786	1768	1751	1733	1702
<b>137.5</b>	1811	1809	1807	1805	1803	1786	1769	1752	1735	1706
<b>140.0</b>	1811	1807	1803	1798	1794	1777	1761	1744	1727	1700
<b>142.5</b>	1801	1796	1791	1786	1781	1767	1752	1737	1723	1696
<b>145.0</b>	1779	1774	1769	1764	1759	1745	1732	1718	1705	1678
<b>147.5</b>	1749	1745	1741	1737	1733	1719	1707	1694	1680	1655
<b>150.0</b>	1712	1709	1705	1702	1698	1686	1675	1663	1652	1628
<b>152.5</b>	1669	1666	1662	1659	1656	1645	1634	1623	1612	1591
<b>155.0</b>	1618	1616	1614	1612	1609	1598	1588	1577	1567	1547
<b>157.5</b>	1562	1560	1558	1556	1554	1545	1536	1527	1518	1500
<b>160.0</b>	1499	1498	1497	1495	1494	1486	1478	1470	1462	1446
<b>162.5</b>	1432	1431	1430	1429	1428	1421	1414	1407	1400	1386
<b>165.0</b>	1360	1359	1358	1357	1356	1350	1345	1339	1334	1321
<b>167.5</b>	1285	1284	1283	1283	1282	1278	1273	1269	1265	1254
<b>170.0</b>	1206	1206	1207	1207	1207	1203	1200	1197	1194	1185
<b>172.5</b>	1128	1128	1128	1129	1129	1127	1124	1122	1120	1113
<b>175.0</b>	1050	1050	1051	1051	1051	1050	1049	1048	1047	1043
<b>177.5</b>	974	975	975	975	976	976	975	975	975	972
<b>180.0</b>	850	850	850	850	850	850	850	850	850	850

**Vert. Angles**      **Horizontal Angles**

	<u><b>25.0</b></u>	<u><b>27.5</b></u>	<u><b>30.0</b></u>	<u><b>32.5</b></u>	<u><b>35.0</b></u>	<u><b>37.5</b></u>	<u><b>40.0</b></u>	<u><b>42.5</b></u>	<u><b>45.0</b></u>	<u><b>47.5</b></u>
<b>0.0</b>	12	12	12	12	12	12	12	12	12	12
<b>2.5</b>	12	12	12	12	12	12	12	12	12	12
<b>5.0</b>	15	15	15	15	15	15	15	15	15	14
<b>7.5</b>	17	17	17	17	17	17	16	16	16	16
<b>10.0</b>	20	19	19	19	19	19	19	19	19	19
<b>12.5</b>	24	23	23	23	22	22	21	21	21	21
<b>15.0</b>	29	28	27	26	25	25	24	23	23	23
<b>17.5</b>	34	33	32	31	30	29	27	27	26	25
<b>20.0</b>	39	37	37	35	34	33	31	30	29	28
<b>22.5</b>	44	43	42	41	39	37	36	35	33	31
<b>25.0</b>	49	49	47	46	45	43	41	39	38	36
<b>27.5</b>	55	54	53	51	49	48	46	44	43	41
<b>30.0</b>	62	61	59	57	55	53	51	49	47	45
<b>32.5</b>	69	67	65	63	61	59	57	54	52	49
<b>35.0</b>	78	75	73	70	68	65	63	60	57	54
<b>37.5</b>	87	84	82	78	76	72	69	66	63	59
<b>40.0</b>	97	94	91	88	84	80	76	72	69	65
<b>42.5</b>	108	104	101	97	93	89	85	80	76	70
<b>45.0</b>	120	117	113	108	103	98	93	88	84	79
<b>47.5</b>	134	130	125	120	114	109	104	99	95	90
<b>50.0</b>	149	144	140	134	128	122	116	113	109	106
<b>52.5</b>	166	160	155	150	144	138	132	130	127	124
<b>55.0</b>	183	177	171	166	160	154	148	146	142	140
<b>57.5</b>	203	197	190	184	179	173	167	164	160	156
<b>60.0</b>	223	215	208	203	199	193	189	185	180	176
<b>62.5</b>	249	240	231	226	220	215	209	204	199	194
<b>65.0</b>	273	265	255	249	242	235	228	222	217	211
<b>67.5</b>	299	289	279	272	265	259	252	245	239	231
<b>70.0</b>	339	326	313	301	289	277	265	258	251	243
<b>72.5</b>	394	378	362	344	326	309	291	280	269	258
<b>75.0</b>	445	432	420	400	380	360	340	322	305	287
<b>77.5</b>	489	475	462	444	426	408	389	368	346	324
<b>80.0</b>	535	519	503	483	463	443	424	401	378	356

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**CANDELA TABULATION - (Cont.)**

82.5	588	572	556	533	510	487	463	438	413	387
85.0	640	623	606	583	560	536	513	483	453	424
87.5	694	674	654	629	604	578	553	521	489	458
90.0	756	737	717	688	659	630	600	566	532	497
92.5	814	791	769	739	709	679	649	614	579	545
95.0	885	861	838	805	771	737	704	667	629	592
97.5	954	930	905	871	836	803	768	727	686	644
100.0	1023	995	967	930	894	856	819	776	733	690
102.5	1096	1068	1039	999	959	919	878	836	793	751
105.0	1166	1136	1105	1065	1025	985	946	901	856	811
107.5	1231	1200	1169	1127	1086	1044	1002	959	917	874
110.0	1301	1268	1235	1191	1146	1101	1056	1014	971	930
112.5	1355	1323	1289	1249	1208	1167	1126	1084	1041	999
115.0	1418	1385	1352	1309	1265	1221	1178	1134	1090	1046
117.5	1473	1438	1404	1358	1313	1267	1221	1176	1130	1084
120.0	1515	1479	1444	1400	1354	1310	1265	1217	1170	1122
122.5	1557	1521	1487	1443	1400	1356	1312	1263	1214	1166
125.0	1594	1560	1525	1480	1435	1389	1344	1294	1243	1194
127.5	1621	1587	1553	1510	1467	1424	1381	1327	1273	1219
130.0	1648	1615	1582	1537	1492	1447	1402	1352	1301	1251
132.5	1662	1631	1600	1555	1510	1464	1419	1370	1321	1271
135.0	1670	1639	1608	1567	1526	1485	1444	1396	1349	1302
137.5	1678	1648	1620	1580	1541	1501	1461	1415	1369	1323
140.0	1671	1643	1614	1577	1540	1503	1465	1423	1380	1337
142.5	1668	1640	1612	1577	1541	1505	1469	1426	1384	1340
145.0	1652	1625	1598	1565	1531	1497	1463	1422	1382	1341
147.5	1630	1605	1580	1549	1517	1485	1453	1415	1377	1338
150.0	1606	1582	1559	1529	1498	1467	1437	1402	1368	1334
152.5	1570	1549	1527	1499	1471	1442	1414	1382	1350	1318
155.0	1527	1506	1486	1461	1436	1412	1386	1357	1327	1298
157.5	1482	1464	1446	1422	1398	1374	1350	1323	1296	1269
160.0	1429	1412	1396	1374	1353	1332	1311	1288	1265	1242
162.5	1372	1358	1344	1326	1308	1290	1272	1249	1227	1204
165.0	1309	1296	1283	1268	1253	1237	1222	1204	1186	1168
167.5	1243	1232	1221	1209	1196	1184	1171	1156	1140	1125
170.0	1177	1168	1160	1150	1140	1129	1119	1106	1093	1080
172.5	1106	1099	1092	1084	1077	1069	1062	1053	1043	1034
175.0	1037	1033	1028	1022	1017	1011	1005	999	992	985
177.5	969	965	962	959	956	953	950	946	942	938
180.0	850	850	850	850	850	850	850	850	850	850

**Vert. Horizontal Angles**

	<u>50.0</u>	<u>52.5</u>	<u>55.0</u>	<u>57.5</u>	<u>60.0</u>	<u>62.5</u>	<u>65.0</u>	<u>67.5</u>	<u>70.0</u>	<u>72.5</u>
0.0	12	12	12	12	12	12	12	12	12	12
2.5	12	12	12	11	11	11	11	11	11	11
5.0	14	14	14	13	13	13	13	13	12	12
7.5	16	16	16	15	15	15	15	15	14	13
10.0	18	17	17	17	16	16	16	15	15	15
12.5	20	19	19	19	18	17	17	16	15	15
15.0	22	21	21	20	19	19	18	17	16	15
17.5	25	24	23	22	21	20	19	18	17	17
20.0	27	26	25	24	23	21	21	19	18	17
22.5	30	29	27	26	25	23	22	20	19	17
25.0	34	32	30	28	26	25	23	21	19	18
27.5	39	37	35	32	30	28	25	23	21	19

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**CANDELA TABULATION - (Cont.)**

30.0	42	39	37	35	32	29	27	25	22	20
32.5	47	44	41	39	36	33	30	27	24	22
35.0	51	48	45	42	39	35	33	29	26	23
37.5	55	52	49	45	41	38	35	31	27	25
40.0	61	57	53	49	45	41	37	33	29	26
42.5	66	61	57	53	48	44	40	35	31	28
45.0	74	72	68	66	63	59	55	52	48	41
47.5	86	84	81	79	76	73	70	67	64	60
50.0	102	99	96	94	91	88	85	82	78	74
52.5	121	118	115	112	109	105	101	96	92	88
55.0	136	133	130	126	122	118	115	111	107	103
57.5	152	148	144	140	136	131	126	121	116	111
60.0	172	166	162	156	151	146	140	134	129	124
62.5	189	182	176	170	163	157	151	144	138	133
65.0	205	197	191	184	176	169	162	155	148	141
67.5	225	217	209	200	192	184	176	168	159	152
70.0	236	227	217	207	198	189	179	170	160	152
72.5	247	237	226	215	205	193	182	170	158	148
75.0	269	254	239	223	208	195	181	168	154	143
77.5	303	281	260	238	216	201	186	170	155	142
80.0	333	309	285	260	235	215	196	176	156	142
82.5	362	338	315	291	267	241	216	191	166	149
85.0	394	368	341	315	288	264	240	216	192	170
87.5	426	396	367	337	307	282	256	231	205	182
90.0	463	432	401	370	339	311	282	253	224	199
92.5	509	473	438	401	365	336	309	280	251	224
95.0	554	517	481	444	408	375	342	310	277	250
97.5	602	565	526	488	449	416	384	350	317	287
100.0	646	607	569	529	490	457	424	390	357	325
102.5	708	668	627	586	545	508	470	433	395	362
105.0	766	724	682	640	598	559	520	481	442	408
107.5	831	786	741	695	650	612	574	537	499	462
110.0	887	844	801	758	715	674	634	593	553	513
112.5	956	909	861	814	766	725	686	645	604	565
115.0	1001	954	906	859	811	769	725	683	640	598
117.5	1039	991	944	895	847	801	755	709	663	622
120.0	1074	1027	981	934	886	842	797	752	707	664
122.5	1116	1068	1020	971	923	875	827	779	731	688
125.0	1143	1096	1049	1001	954	906	856	808	759	716
127.5	1165	1118	1073	1026	979	932	884	836	788	744
130.0	1201	1152	1102	1053	1004	952	900	848	795	752
132.5	1221	1171	1120	1069	1019	969	919	868	819	775
135.0	1255	1205	1155	1105	1055	1000	945	890	834	792
137.5	1276	1225	1175	1124	1073	1023	973	922	872	828
140.0	1294	1245	1196	1148	1098	1049	1000	951	902	859
142.5	1298	1252	1207	1161	1115	1066	1017	967	918	876
145.0	1301	1257	1213	1169	1125	1078	1032	985	938	898
147.5	1300	1259	1217	1176	1134	1090	1047	1003	960	924
150.0	1299	1260	1221	1182	1143	1099	1056	1012	968	933
152.5	1286	1248	1211	1173	1135	1097	1059	1021	983	948
155.0	1268	1233	1199	1164	1130	1094	1059	1023	988	956
157.5	1242	1211	1182	1151	1120	1088	1056	1024	991	961
160.0	1219	1190	1162	1134	1105	1076	1047	1018	989	962
162.5	1182	1157	1133	1108	1084	1059	1033	1007	981	958
165.0	1150	1128	1108	1086	1065	1041	1017	993	969	949
167.5	1110	1092	1074	1057	1039	1019	998	978	957	940

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**CANDELA TABULATION - (Cont.)**

<b>170.0</b>	1067	1052	1037	1022	1007	991	976	961	946	931
<b>172.5</b>	1025	1013	1000	988	976	964	952	941	929	918
<b>175.0</b>	979	970	961	953	944	936	927	918	910	901
<b>177.5</b>	934	928	922	916	910	904	899	894	888	884
<b>180.0</b>	850	850	850	850	850	850	850	850	850	850

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<b>75.0</b>	<b>77.5</b>	<b>80.0</b>	<b>82.5</b>	<b>85.0</b>	<b>87.5</b>	<b>90.0</b>	<b>92.5</b>	<b>95.0</b>	<b>97.5</b>
<b>0.0</b>	12	12	12	12	12	12	12	12	12	12
<b>2.5</b>	11	11	11	11	11	11	11	11	11	11
<b>5.0</b>	12	12	12	12	12	11	11	11	11	11
<b>7.5</b>	13	13	12	12	12	11	11	11	11	11
<b>10.0</b>	14	13	13	13	12	12	11	11	11	11
<b>12.5</b>	15	14	13	13	12	11	11	11	11	11
<b>15.0</b>	15	15	14	13	13	11	11	11	11	11
<b>17.5</b>	16	15	14	13	12	11	10	10	10	10
<b>20.0</b>	16	15	14	13	12	11	10	10	10	10
<b>22.5</b>	17	15	14	13	12	11	9	9	9	9
<b>25.0</b>	17	15	14	13	12	11	9	9	9	9
<b>27.5</b>	17	16	14	13	11	10	9	9	9	9
<b>30.0</b>	19	17	15	13	11	10	8	8	8	8
<b>32.5</b>	19	17	15	13	11	10	8	8	8	8
<b>35.0</b>	21	18	15	13	11	9	7	7	7	7
<b>37.5</b>	21	19	15	13	11	9	7	7	7	7
<b>40.0</b>	23	19	16	14	11	9	7	7	7	7
<b>42.5</b>	24	21	17	14	12	9	7	7	7	6
<b>45.0</b>	33	25	17	15	12	9	7	7	7	6
<b>47.5</b>	56	52	48	44	40	35	31	28	24	21
<b>50.0</b>	70	66	61	57	53	48	43	40	37	33
<b>52.5</b>	84	80	76	72	68	64	60	56	52	48
<b>55.0</b>	98	94	90	86	82	78	74	72	68	66
<b>57.5</b>	106	101	96	92	88	83	79	76	73	70
<b>60.0</b>	118	112	107	102	98	94	89	86	82	79
<b>62.5</b>	127	122	116	111	106	102	97	94	91	88
<b>65.0</b>	134	128	121	116	111	106	101	98	95	92
<b>67.5</b>	144	136	129	124	119	114	108	105	102	99
<b>70.0</b>	144	136	128	122	117	112	106	104	101	98
<b>72.5</b>	138	128	118	112	106	100	94	92	89	86
<b>75.0</b>	132	121	110	104	97	91	84	82	79	76
<b>77.5</b>	129	116	102	96	89	82	75	72	70	66
<b>80.0</b>	128	113	98	91	84	76	68	66	63	60
<b>82.5</b>	133	116	100	90	80	71	61	59	55	53
<b>85.0</b>	149	127	105	93	81	69	57	54	51	48
<b>87.5</b>	160	136	114	99	84	70	55	52	49	45
<b>90.0</b>	174	148	122	105	88	71	54	51	47	43
<b>92.5</b>	197	170	142	122	102	82	61	56	51	46
<b>95.0</b>	223	195	168	146	125	103	82	74	66	59
<b>97.5</b>	257	227	196	172	149	125	101	92	82	72
<b>100.0</b>	293	261	229	205	180	156	132	119	107	94
<b>102.5</b>	330	298	265	240	215	189	164	149	134	119
<b>105.0</b>	374	340	306	279	251	223	196	180	164	148
<b>107.5</b>	425	388	351	323	295	267	239	221	202	184
<b>110.0</b>	473	434	394	365	336	307	279	259	239	220
<b>112.5</b>	525	486	446	417	387	358	328	305	283	259
<b>115.0</b>	557	515	474	442	409	376	344	320	298	275

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**CANDELA TABULATION - (Cont.)**

117.5	581	541	499	467	436	404	372	346	320	295
120.0	620	577	534	501	468	435	402	374	347	320
122.5	644	600	557	523	490	456	422	394	366	338
125.0	674	630	588	553	517	482	447	415	383	350
127.5	701	657	613	574	535	495	455	424	393	362
130.0	709	666	622	585	548	510	473	440	406	373
132.5	731	688	644	606	567	529	490	459	428	396
135.0	749	706	663	626	589	552	515	491	467	444
137.5	784	740	696	658	621	583	545	517	490	462
140.0	817	773	731	692	654	616	577	549	519	491
142.5	836	795	753	717	680	644	607	577	547	517
145.0	859	819	779	745	710	676	641	611	582	552
147.5	886	850	813	775	737	700	662	636	608	582
150.0	898	862	827	794	760	727	693	665	636	608
152.5	914	879	844	813	781	749	717	690	662	635
155.0	924	892	859	828	798	767	737	711	687	662
157.5	930	899	868	841	815	787	761	736	711	687
160.0	935	908	881	855	830	804	778	755	733	709
162.5	934	911	887	863	839	815	791	771	751	731
165.0	929	909	888	868	848	827	807	788	769	750
167.5	924	906	889	872	854	836	819	803	786	770
170.0	916	902	887	872	856	841	826	813	800	787
172.5	906	896	884	872	861	849	837	826	815	805
175.0	893	884	876	868	860	851	842	834	826	818
177.5	879	874	870	864	858	852	846	841	836	831
180.0	850	850	850	850	850	850	850	850	850	850

**Vert. Horizontal Angles**  
**Angles**

	<u>100.0</u>	<u>102.5</u>	<u>105.0</u>	<u>107.5</u>	<u>110.0</u>	<u>112.5</u>	<u>115.0</u>	<u>117.5</u>	<u>120.0</u>	<u>122.5</u>
0.0	12	12	12	12	12	12	12	12	12	12
2.5	11	11	11	11	11	11	11	11	11	11
5.0	11	11	11	11	11	11	11	11	11	11
7.5	11	11	11	11	11	11	11	11	11	11
10.0	11	11	11	11	11	11	11	11	11	11
12.5	11	11	11	11	11	11	11	11	11	11
15.0	11	11	11	11	11	11	11	11	11	11
17.5	10	10	10	10	10	10	11	11	11	11
20.0	10	10	10	10	10	10	10	10	10	10
22.5	9	9	9	9	9	9	10	10	10	10
25.0	9	9	9	9	9	9	9	9	9	9
27.5	9	9	9	9	9	9	9	9	9	9
30.0	8	8	9	9	9	9	9	9	9	9
32.5	8	8	8	8	8	8	8	8	8	8
35.0	7	7	7	7	7	7	8	8	8	8
37.5	7	7	7	7	7	7	7	7	7	7
40.0	7	7	7	7	7	7	7	7	7	7
42.5	6	6	7	7	7	7	7	7	7	7
45.0	6	6	7	7	7	7	7	7	7	7
47.5	17	14	11	9	6	6	7	7	7	7
50.0	29	24	19	13	8	8	7	7	7	7
52.5	44	38	33	27	21	17	14	11	7	7
55.0	63	57	51	46	40	32	25	17	9	9
57.5	66	61	55	50	44	37	29	22	15	13
60.0	76	70	65	60	55	47	40	33	25	21
62.5	85	80	74	68	63	56	49	41	34	28

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**CANDELA TABULATION - (Cont.)**

65.0	88	83	78	73	68	61	53	46	39	31
67.5	96	90	84	78	72	65	58	51	43	35
70.0	95	90	85	80	74	67	61	53	46	38
72.5	83	78	73	68	63	57	49	43	35	30
75.0	73	68	63	57	52	45	38	31	24	21
77.5	64	59	53	48	43	36	29	22	15	15
80.0	57	52	47	41	35	30	24	19	13	13
82.5	49	44	39	33	28	24	21	17	13	13
85.0	45	40	35	30	25	22	19	16	13	13
87.5	42	37	31	26	21	19	17	15	13	14
90.0	40	35	29	24	19	17	16	15	13	14
92.5	41	35	31	25	20	19	17	15	13	14
95.0	51	45	40	34	29	27	25	23	21	22
97.5	63	57	51	45	39	37	33	31	27	28
100.0	82	74	66	59	51	47	43	39	34	34
102.5	104	95	86	77	68	61	55	48	41	41
105.0	132	122	111	101	90	81	72	62	53	51
107.5	165	152	140	128	115	104	94	82	72	68
110.0	200	187	173	160	146	134	122	110	98	89
112.5	237	221	205	190	174	160	146	132	118	108
115.0	251	234	217	200	183	168	152	136	121	112
117.5	269	250	231	212	193	177	161	144	128	120
120.0	293	272	251	231	210	191	172	154	134	128
122.5	309	287	264	241	219	201	184	166	149	143
125.0	318	294	269	245	220	207	194	181	168	161
127.5	330	307	284	260	237	224	211	199	186	178
130.0	340	319	299	279	258	246	234	222	210	201
132.5	365	346	326	307	287	274	261	248	235	225
135.0	420	394	367	340	314	300	285	271	257	246
137.5	434	412	389	366	343	328	313	297	282	271
140.0	461	439	417	394	372	356	340	324	308	296
142.5	487	465	443	420	398	382	366	350	334	322
145.0	522	499	475	451	428	412	395	379	362	350
147.5	555	531	507	482	458	441	424	406	388	376
150.0	580	556	533	509	485	469	452	436	420	407
152.5	608	585	563	540	517	501	485	468	451	438
155.0	636	614	591	568	545	529	513	497	481	467
157.5	662	640	618	596	574	559	544	528	513	500
160.0	687	666	646	624	604	589	574	559	545	532
162.5	711	692	674	654	636	621	606	591	576	565
165.0	731	714	697	680	663	650	637	624	610	600
167.5	753	738	723	707	692	680	669	658	646	636
170.0	773	760	747	733	719	709	699	689	679	671
172.5	793	782	770	759	747	739	731	723	715	709
175.0	810	801	792	783	774	768	763	757	751	745
177.5	826	820	813	807	801	797	794	790	787	784
180.0	850	850	850	850	850	850	850	850	850	850

**Vert. Horizontal Angles**

	<u>125.0</u>	<u>127.5</u>	<u>130.0</u>	<u>132.5</u>	<u>135.0</u>	<u>137.5</u>	<u>140.0</u>	<u>142.5</u>	<u>145.0</u>	<u>147.5</u>
0.0	12	12	12	12	12	12	12	12	12	12
2.5	11	11	11	11	11	11	11	11	11	11
5.0	11	11	11	11	11	11	11	11	11	11
7.5	11	11	11	11	11	11	11	11	11	11
10.0	11	11	11	11	11	11	11	11	11	11



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**CANDELA TABULATION - (Cont.)**

12.5	11	11	11	11	11	11	11	11	11	11
15.0	11	11	11	11	11	11	11	11	11	11
17.5	11	11	11	11	11	11	11	11	11	11
20.0	10	10	10	10	11	11	11	11	11	11
22.5	10	10	10	10	10	10	10	10	10	10
25.0	9	9	9	9	10	10	10	10	10	10
27.5	9	9	9	9	9	9	9	9	9	9
30.0	9	9	9	9	9	9	9	9	9	9
32.5	9	9	9	9	9	9	9	9	9	9
35.0	8	8	8	8	9	9	9	9	9	9
37.5	8	8	8	8	8	8	8	8	9	9
40.0	8	8	8	8	8	8	8	8	9	9
42.5	7	7	7	7	8	8	8	8	8	8
45.0	7	7	7	7	8	8	8	8	8	8
47.5	7	7	7	7	8	8	8	8	8	8
50.0	7	7	7	7	8	8	8	8	8	8
52.5	7	7	7	7	8	8	8	8	9	9
55.0	9	8	8	8	9	9	9	9	9	9
57.5	11	10	8	9	9	9	9	9	9	9
60.0	17	13	9	9	9	9	9	10	10	11
62.5	22	15	9	10	10	11	11	11	11	11
65.0	25	17	10	11	11	11	11	11	12	12
67.5	27	19	11	11	12	12	12	13	13	13
70.0	30	22	14	14	14	13	13	13	14	14
72.5	24	19	13	13	13	14	14	14	15	15
75.0	19	16	13	14	14	15	15	15	15	16
77.5	15	14	13	14	15	15	15	16	16	17
80.0	13	14	14	15	15	15	15	16	16	17
82.5	13	14	14	15	15	15	16	17	17	17
85.0	14	14	15	15	15	16	16	17	17	17
87.5	14	15	15	15	15	16	16	17	17	17
90.0	14	15	15	15	15	16	16	17	17	17
92.5	14	15	15	15	16	16	17	17	17	18
95.0	23	23	23	24	24	25	25	25	25	26
97.5	28	29	29	29	29	30	30	31	31	31
100.0	34	34	34	34	35	35	35	35	35	35
102.5	41	41	41	41	41	41	41	41	41	41
105.0	50	49	47	47	47	47	47	47	46	46
107.5	64	59	55	55	54	53	53	53	52	52
110.0	81	72	64	63	62	61	60	59	59	58
112.5	96	86	74	73	71	70	68	67	66	65
115.0	103	94	85	83	81	78	76	75	74	72
117.5	112	104	96	94	92	89	86	84	83	81
120.0	122	116	109	106	103	100	96	94	92	90
122.5	137	130	124	120	116	112	108	106	103	100
125.0	154	147	140	135	130	125	120	118	114	112
127.5	171	163	155	150	145	140	134	131	128	124
130.0	193	184	175	169	163	156	150	146	143	139
132.5	214	204	193	187	180	174	167	163	158	154
135.0	235	225	214	207	199	192	185	180	176	171
137.5	259	247	236	228	220	212	204	199	193	188
140.0	284	271	259	251	243	234	225	219	213	207
142.5	311	298	286	277	267	257	248	242	236	229
145.0	337	324	312	302	291	281	271	265	259	252
147.5	363	350	338	328	318	308	298	291	285	277
150.0	394	381	368	357	346	336	325	318	311	305

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**CANDELA TABULATION - (Cont.)**

152.5	425	411	398	387	376	365	354	347	340	332
155.0	455	442	428	418	408	398	388	380	371	363
157.5	487	474	461	450	440	430	419	411	404	396
160.0	520	507	495	485	474	464	453	445	438	430
162.5	553	542	531	521	511	501	491	483	475	467
165.0	590	580	569	559	549	539	529	522	515	508
167.5	627	617	607	598	588	579	570	563	557	549
170.0	662	654	646	638	630	623	615	608	602	594
172.5	701	695	688	681	674	667	660	654	648	643
175.0	741	735	730	725	719	713	708	703	699	694
177.5	781	778	775	771	767	763	759	755	751	748
180.0	850	850	850	850	850	850	850	850	850	850

Vert. Angles	Horizontal Angles									
	<u>150.0</u>	<u>152.5</u>	<u>155.0</u>	<u>157.5</u>	<u>160.0</u>	<u>162.5</u>	<u>165.0</u>	<u>167.5</u>	<u>170.0</u>	<u>172.5</u>
0.0	12	12	12	12	12	12	12	12	12	12
2.5	11	11	11	11	11	11	11	11	11	11
5.0	11	11	11	11	11	11	11	11	11	11
7.5	11	11	11	11	11	11	11	11	11	11
10.0	11	11	11	11	11	11	11	11	11	11
12.5	11	11	11	11	11	11	11	11	11	11
15.0	11	11	11	11	11	11	11	11	11	11
17.5	11	11	11	11	11	11	11	11	11	11
20.0	11	11	11	11	11	11	11	11	11	11
22.5	10	10	10	10	10	10	10	10	10	10
25.0	10	10	10	10	10	10	10	10	10	10
27.5	9	9	10	10	10	10	10	9	9	9
30.0	9	9	9	9	9	9	9	9	9	9
32.5	9	9	9	9	9	9	9	9	9	9
35.0	9	9	9	9	9	9	9	9	9	9
37.5	9	9	9	9	9	9	9	9	9	9
40.0	9	9	9	9	9	9	9	9	9	9
42.5	8	8	9	9	9	9	9	9	9	9
45.0	8	8	8	8	8	8	9	9	9	9
47.5	8	8	8	8	8	8	9	9	9	9
50.0	8	8	9	9	9	9	9	9	9	9
52.5	9	9	9	9	9	9	9	9	9	9
55.0	9	9	9	9	9	9	10	10	10	10
57.5	9	9	10	10	10	10	11	11	11	11
60.0	11	11	11	11	11	11	11	11	11	11
62.5	11	11	12	12	12	12	12	12	12	12
65.0	12	12	13	13	13	13	13	13	13	13
67.5	13	13	14	14	14	14	15	15	15	15
70.0	14	15	15	15	15	15	15	15	15	15
72.5	15	15	15	16	16	16	16	16	16	16
75.0	16	16	17	17	17	17	17	17	17	17
77.5	17	17	17	17	17	17	18	18	18	18
80.0	17	17	17	18	18	18	19	19	19	19
82.5	17	17	18	18	18	18	19	19	19	19
85.0	17	18	18	19	19	19	19	19	19	19
87.5	17	18	18	19	19	19	19	19	19	19
90.0	17	18	18	19	19	19	19	19	19	19
92.5	18	18	19	19	19	19	19	19	19	19
95.0	26	26	26	26	26	26	26	26	26	26
97.5	31	31	32	32	32	32	33	33	33	33

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**CANDELA TABULATION - (Cont.)**

100.0	35	35	36	36	36	36	37	37	37	37
102.5	41	41	41	41	41	41	41	41	41	41
105.0	45	45	45	45	45	45	45	45	45	45
107.5	51	51	51	51	50	50	50	49	49	49
110.0	57	57	57	56	55	55	55	55	55	55
112.5	64	63	63	62	61	61	61	61	60	60
115.0	71	70	70	68	68	67	67	66	66	66
117.5	79	78	77	76	75	74	74	73	72	72
120.0	88	86	85	84	82	82	81	80	79	79
122.5	98	96	94	93	91	90	89	88	87	87
125.0	108	106	104	102	100	100	98	98	96	96
127.5	121	118	116	114	111	110	109	108	106	106
130.0	135	132	130	126	124	122	121	120	118	118
132.5	150	147	144	141	138	136	135	133	131	130
135.0	166	163	160	156	153	151	149	147	145	144
137.5	183	180	176	172	169	167	165	162	160	160
140.0	201	197	194	190	186	184	182	180	177	176
142.5	223	219	215	211	206	203	201	199	196	195
145.0	246	241	237	233	228	225	223	219	217	215
147.5	271	266	261	256	251	248	245	242	239	238
150.0	297	293	287	283	277	274	271	267	264	263
152.5	324	320	315	310	305	301	298	295	291	290
155.0	354	350	345	340	335	332	328	324	321	320
157.5	388	383	378	373	368	364	360	356	352	351
160.0	422	418	412	408	402	398	395	391	387	386
162.5	459	455	450	445	440	437	433	430	426	424
165.0	501	496	491	486	481	477	473	470	466	465
167.5	543	539	534	530	525	522	518	515	511	509
170.0	588	584	580	576	572	569	566	563	559	558
172.5	637	634	630	627	624	620	618	614	611	610
175.0	690	687	684	682	679	676	673	670	667	666
177.5	744	743	741	739	737	735	733	731	728	727
180.0	850	850	850	850	850	850	850	850	850	850

Vert. Angles	Horizontal Angles		
	<u>175.0</u>	<u>177.5</u>	<u>180.0</u>
0.0	12	12	12
2.5	11	11	11
5.0	11	11	11
7.5	11	11	11
10.0	11	11	11
12.5	11	11	11
15.0	11	11	11
17.5	11	11	11
20.0	11	10	10
22.5	10	10	10
25.0	10	10	10
27.5	10	10	10
30.0	9	9	9
32.5	9	9	9
35.0	9	9	9
37.5	9	9	9
40.0	9	9	9
42.5	9	9	9
45.0	9	9	9

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L032411904.IES**

**CANDELA TABULATION - (Cont.)**

47.5	9	9	9
50.0	9	9	9
52.5	9	9	9
55.0	10	10	10
57.5	11	11	11
60.0	11	11	11
62.5	13	13	13
65.0	13	13	13
67.5	15	15	15
70.0	16	16	16
72.5	17	17	17
75.0	18	18	18
77.5	19	19	19
80.0	19	19	19
82.5	19	19	19
85.0	19	19	19
87.5	19	19	19
90.0	19	19	19
92.5	19	19	19
95.0	27	27	27
97.5	33	33	33
100.0	37	36	36
102.5	41	40	40
105.0	45	45	45
107.5	49	49	49
110.0	54	54	53
112.5	59	59	59
115.0	65	65	64
117.5	72	71	70
120.0	78	78	78
122.5	86	86	86
125.0	95	94	94
127.5	106	105	104
130.0	117	116	116
132.5	130	129	128
135.0	144	142	142
137.5	159	158	157
140.0	176	174	174
142.5	194	193	192
145.0	215	213	212
147.5	237	236	235
150.0	262	261	260
152.5	289	288	287
155.0	318	317	316
157.5	350	349	348
160.0	385	384	382
162.5	423	421	420
165.0	464	463	461
167.5	509	507	506
170.0	557	556	555
172.5	609	608	606
175.0	666	664	664
177.5	726	725	724
180.0	850	850	850

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L032411904.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	6.13	N.A.	0.10
0-30	16.74	N.A.	0.40
0-40	36.46	N.A.	0.80
0-60	149.27	N.A.	3.30
0-80	454.65	N.A.	10.00
0-90	702.58	N.A.	15.40
10-90	701.34	N.A.	15.40
20-40	30.33	N.A.	0.70
20-50	67.41	N.A.	1.50
40-70	238.52	N.A.	5.20
60-80	305.38	N.A.	6.70
70-80	179.67	N.A.	3.90
80-90	247.93	N.A.	5.40
90-110	821.03	N.A.	18.00
90-120	1402.65	N.A.	30.80
90-130	2016.9	N.A.	44.30
90-150	3125.19	N.A.	68.70
90-180	3848.82	N.A.	84.60
110-180	3027.79	N.A.	66.50
0-180	4551.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	1.24
10-20	4.89
20-30	10.61
30-40	19.72
40-50	37.08
50-60	75.73
60-70	125.71
70-80	179.67
80-90	247.93
90-100	346.37
100-110	474.66
110-120	581.62
120-130	614.26
130-140	589.90
140-150	518.38
150-160	397.44
160-170	244.62
170-180	81.57

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L032411904.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	
0	99	99	99	99	87	87	87	87	64	64	64	43	43	43	24	24	24	15
1	87	82	78	73	76	72	68	64	52	49	47	34	32	31	17	16	15	8
2	79	70	64	58	68	61	56	51	44	40	37	29	26	24	14	13	11	5
3	71	61	53	47	62	53	47	41	38	34	30	25	22	19	12	10	9	3
4	65	54	45	39	56	47	40	34	34	29	25	21	18	16	10	8	7	2
5	59	47	39	33	51	41	34	29	30	25	21	19	16	13	9	7	6	2
6	54	42	34	28	47	37	30	25	26	22	18	17	14	11	8	6	5	1
7	50	38	30	24	43	33	26	21	24	19	15	15	12	10	7	5	4	1
8	46	34	26	21	40	30	23	18	21	17	13	14	11	8	7	5	4	1
9	43	31	23	18	37	27	20	16	19	15	12	13	10	7	6	4	3	1
10	40	28	21	16	34	24	18	14	18	13	10	11	9	6	6	4	3	1

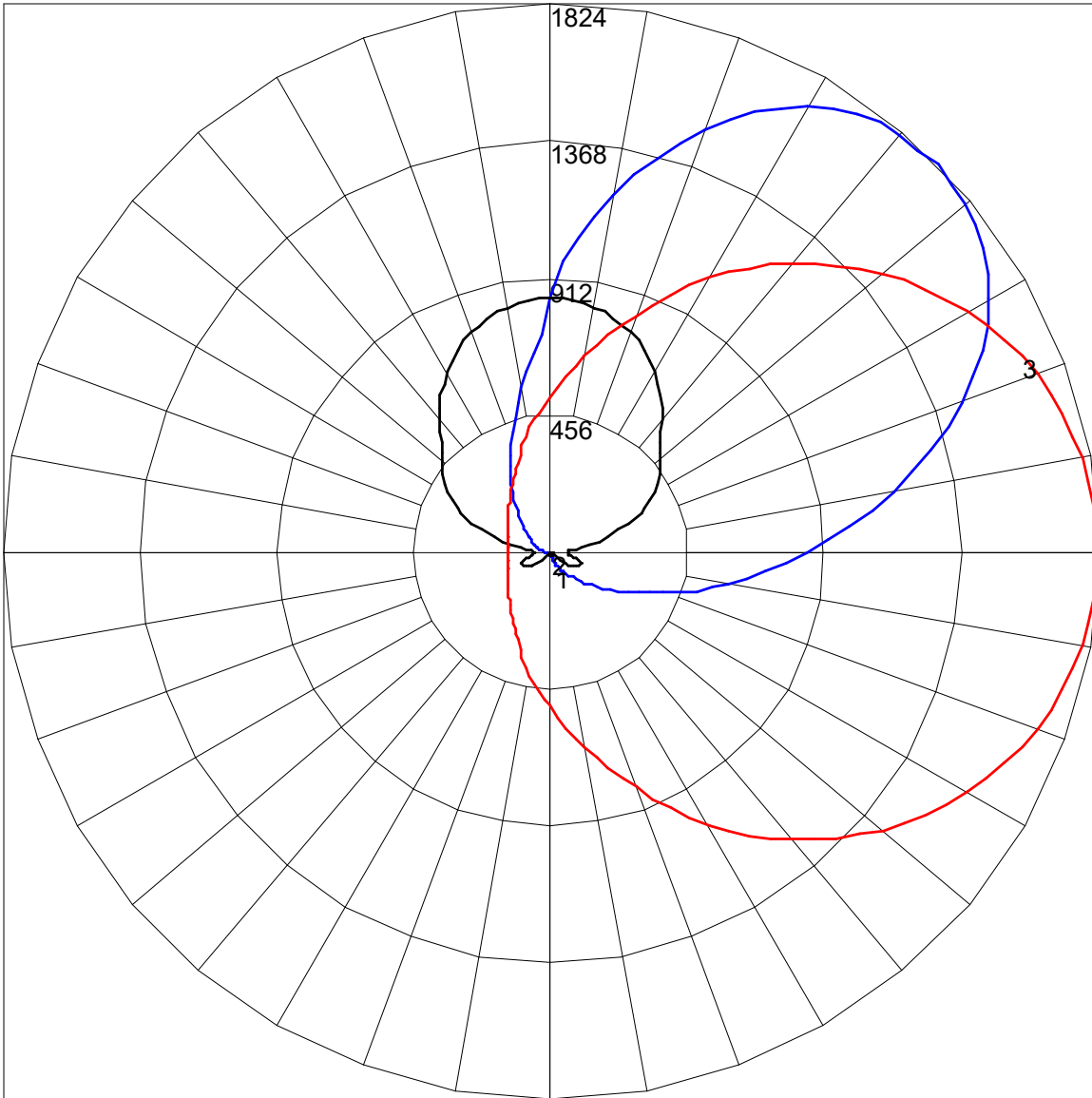
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L032411904.IES**

**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	12.3	13.0	13.5	14.2	15.8	5.3	5.3	5.4	6.1	7.7
	3H	18.4	19.0	19.6	20.2	21.9	8.2	8.8	9.4	10.0	11.7
	4H	21.7	22.3	22.9	23.5	25.2	9.3	9.9	10.5	11.1	12.8
	6H	25.1	25.6	26.3	26.8	28.5	10.2	10.7	11.4	11.9	13.7
	8H	26.8	27.3	28.0	28.5	30.2	10.5	11.1	11.8	12.3	14.0
	12H	28.7	29.2	29.9	30.4	32.1	10.9	11.4	12.1	12.6	14.3
4H	2H	12.8	13.4	14.0	14.6	16.3	6.9	7.5	8.1	8.7	10.4
	3H	19.0	19.5	20.2	20.7	22.4	10.5	11.0	11.7	12.2	13.9
	4H	22.5	23.0	23.7	24.2	25.9	11.7	12.2	12.9	13.4	15.1
	6H	26.0	26.4	27.3	27.7	29.4	12.7	13.1	13.9	14.3	16.0
	8H	27.9	28.3	29.1	29.5	31.2	13.0	13.4	14.3	14.6	16.4
	12H	29.8	30.2	31.1	31.4	33.2	13.4	13.7	14.6	15.0	16.7
8H	4H	22.7	23.1	23.9	24.3	26.0	14.3	14.7	15.5	15.9	17.6
	6H	26.4	26.8	27.7	28.0	29.8	15.5	15.9	16.8	17.1	18.8
	8H	28.4	28.7	29.7	30.0	31.7	16.1	16.3	17.3	17.6	19.3
	12H	30.6	30.9	31.8	32.1	33.9	16.5	16.7	17.7	18.0	19.7
12H	4H	22.7	23.0	23.9	24.3	26.0	15.4	15.8	16.7	17.0	18.8
	6H	26.5	26.8	27.7	28.0	29.8	16.9	17.2	18.2	18.5	20.2
	8H	28.5	28.8	29.8	30.0	31.8	17.6	17.9	18.9	19.1	20.9

Maximum UGR = 33.9

POLAR GRAPH



Maximum Candela = 1824 Located At Horizontal Angle = 0, Vertical Angle = 135  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 3 - Horizontal Cone Through Vertical Angle (135) (Through Max. Cd.)