



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GLL HI 12.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] Q2015102602  
[TESTLAB] QSSI  
[MANUFAC] LumenFocus, LLC  
[ISSUEDATE] 10/26/2105  
[LUMCAT] GLL HI 12  
[LUMINAIRE] 240W 3' LED GROW LIGHT  
[LAMPCAT] C3 LED COBs  
[LAMP] 56 C3 LED COBs

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3481
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	13
Total Luminaire Watts	269.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.00 ft
Luminous Width (90-270)	1.42 ft
Luminous Height	0.02 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2851	2622	3038
55	2486	2670	2700
65	2632	2722	3048
75	1799	1900	1866
85	2470	2392	2274

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION**

	<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>	<u>70</u>	<u>80</u>	<u>90</u>
<b>0.0</b>	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830
<b>2.5</b>	1194.011	1190.111	1198.057	1189.099	1190.472	1188.594	1186.066	1182.743	1183.393	1290.876
<b>5.0</b>	1188.594	1183.538	1181.948	1186.355	1184.332	1185.994	1179.854	1176.603	1176.964	1284.953
<b>7.5</b>	1186.860	1171.619	1176.098	1177.542	1174.292	1175.592	1170.825	1169.019	1167.863	1275.563
<b>10.0</b>	1178.626	1171.836	1162.157	1158.473	1164.251	1163.601	1163.601	1168.513	1160.423	1273.757
<b>12.5</b>	1156.089	1160.062	1156.017	1151.394	1152.477	1160.712	1158.978	1146.265	1149.444	1259.888
<b>15.0</b>	1151.177	1152.333	1144.748	1144.098	1143.087	1141.281	1145.976	1148.216	1143.304	1246.091
<b>17.5</b>	1140.559	1139.114	1144.460	1134.275	1134.058	1138.392	1138.536	1134.419	1132.974	1234.390
<b>20.0</b>	1137.381	1141.426	1135.503	1141.209	1136.081	1129.218	1126.329	1115.639	1129.363	1241.613
<b>22.5</b>	1141.426	1133.119	1134.780	1133.986	1126.040	1122.067	1116.722	1120.623	1120.189	1223.266
<b>25.0</b>	1136.153	1130.013	1120.117	1111.232	1111.594	1112.533	1109.138	1113.110	1118.961	1210.047
<b>27.5</b>	1090.285	1099.025	1094.547	1089.851	1080.317	1086.601	1087.396	1092.957	1107.404	1198.779
<b>30.0</b>	1056.696	1050.195	1058.647	1057.491	1049.184	1051.857	1060.453	1062.836	1069.048	1169.452
<b>32.5</b>	984.102	986.992	1005.772	1015.885	1029.609	1039.866	1034.593	1020.002	1010.178	1098.592
<b>35.0</b>	923.932	931.661	946.252	968.789	991.687	1002.738	986.775	967.200	951.525	1043.333
<b>37.5</b>	867.880	881.532	899.590	919.309	942.857	934.406	919.887	900.746	901.323	985.691
<b>40.0</b>	841.803	840.214	849.460	869.252	883.410	863.257	854.516	864.629	864.846	945.602
<b>42.5</b>	809.732	811.104	805.398	820.133	815.872	798.175	799.041	815.005	826.490	908.113
<b>45.0</b>	801.714	789.579	772.676	759.674	746.384	739.955	749.417	761.986	765.814	860.439
<b>47.5</b>	769.137	761.480	734.898	709.472	697.554	670.756	693.148	696.976	691.631	765.020
<b>50.0</b>	704.344	704.127	677.401	671.984	657.176	645.185	636.373	633.483	633.483	697.554
<b>52.5</b>	640.057	629.655	625.393	630.594	636.228	628.427	611.525	600.184	589.205	657.537
<b>55.0</b>	568.690	567.535	570.207	599.967	623.154	611.958	602.929	596.428	577.358	624.021
<b>57.5</b>	500.864	510.832	523.328	576.275	602.568	591.299	592.816	583.065	575.697	617.664
<b>60.0</b>	454.562	467.636	503.031	544.565	568.835	579.742	574.180	555.255	543.409	593.828
<b>62.5</b>	436.937	456.874	479.338	506.642	529.829	525.856	527.373	520.222	513.432	561.034
<b>65.0</b>	445.678	447.917	449.506	468.937	470.237	467.203	473.921	468.287	476.088	524.267
<b>67.5</b>	417.940	420.829	415.484	418.229	415.918	415.845	405.661	400.315	396.920	448.856
<b>70.0</b>	345.057	347.730	347.224	353.075	356.325	340.651	327.071	320.498	314.719	358.565
<b>72.5</b>	260.689	268.562	267.768	278.025	281.925	267.334	252.527	243.209	236.708	270.296
<b>75.0</b>	188.456	195.390	199.724	206.225	210.054	199.797	195.751	184.122	177.115	200.808
<b>77.5</b>	143.238	148.222	152.917	161.585	161.585	151.039	151.400	143.888	138.037	158.046
<b>80.0</b>	121.063	122.652	125.108	130.886	130.814	125.324	123.807	118.173	114.128	125.830
<b>82.5</b>	104.088	105.966	108.350	111.383	110.517	107.483	105.749	101.271	97.442	106.399
<b>85.0</b>	91.519	93.470	95.492	97.731	96.503	95.853	91.953	86.752	82.996	90.941
<b>87.5</b>	79.745	79.095	82.562	84.007	81.984	78.590	75.628	71.872	63.998	74.544
<b>90.0</b>	60.748	62.265	63.926	62.409	63.782	64.504	59.448	55.042	40.450	42.473
<b>92.5</b>	16.180	18.636	29.038	24.704	29.832	28.099	30.266	26.871	17.914	22.103
<b>95.0</b>	2.745	3.539	4.262	5.273	5.706	7.007	7.151	6.718	7.079	9.174
<b>97.5</b>	2.528	2.745	3.467	4.045	4.478	4.551	4.623	4.623	4.840	5.923
<b>100.0</b>	2.600	2.600	2.817	3.395	3.901	4.117	4.190	4.190	4.117	4.767
<b>102.5</b>	2.528	2.528	2.600	2.889	3.395	3.756	3.901	3.828	3.828	4.478
<b>105.0</b>	2.456	2.528	2.528	2.528	2.889	3.178	3.467	3.539	3.539	4.117
<b>107.5</b>	2.384	2.456	2.456	2.456	2.528	2.817	3.034	3.106	3.178	3.612
<b>110.0</b>	2.384	2.384	2.384	2.456	2.384	2.456	2.600	2.673	2.673	3.250
<b>112.5</b>	2.239	2.311	2.311	2.311	2.311	2.239	2.311	2.384	2.311	2.817
<b>115.0</b>	2.239	2.239	2.239	2.239	2.239	2.239	2.167	2.167	2.095	2.528
<b>117.5</b>	2.095	2.095	2.095	2.167	2.167	2.095	2.095	1.950	1.950	2.384
<b>120.0</b>	2.095	2.023	2.023	2.023	2.023	2.095	2.023	1.950	1.878	2.311
<b>122.5</b>	2.023	2.023	2.023	2.023	1.950	2.023	2.023	1.878	1.950	2.239
<b>125.0</b>	2.023	2.095	2.023	2.023	2.023	1.950	2.023	2.023	1.950	2.311
<b>127.5</b>	2.167	2.095	2.095	2.095	2.095	2.095	2.095	2.095	2.095	2.384
<b>130.0</b>	2.239	2.239	2.239	2.239	2.239	2.239	2.239	2.167	2.167	2.528
<b>132.5</b>	2.384	2.384	2.384	2.456	2.384	2.311	2.384	2.384	2.311	2.745

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION - (Cont.)**

135.0	2.600	2.600	2.600	2.600	2.600	2.600	2.528	2.600	2.528	3.034
137.5	2.817	2.817	2.817	2.889	2.817	2.817	2.817	2.817	2.817	3.323
140.0	3.250	3.106	3.178	3.178	3.178	3.178	3.178	3.178	3.106	3.684
142.5	3.612	3.539	3.612	3.612	3.539	3.539	3.539	3.539	3.539	4.045
145.0	4.045	3.901	4.045	3.973	3.973	3.973	4.045	3.973	3.973	4.334
147.5	4.478	4.478	4.551	4.478	4.478	4.478	4.478	4.478	4.478	4.840
150.0	5.056	5.056	5.129	5.056	5.056	5.056	5.056	5.056	5.056	5.201
152.5	5.851	5.851	5.923	5.851	5.851	5.923	5.851	5.851	5.851	5.706
155.0	6.862	6.862	6.862	6.790	6.862	6.718	6.790	6.790	6.790	6.429
157.5	7.729	7.729	7.729	7.729	7.801	7.729	7.729	7.801	7.657	7.079
160.0	8.523	8.596	8.596	8.668	8.668	8.668	8.668	8.740	8.596	8.018
162.5	9.029	9.029	9.101	9.246	9.318	9.390	9.318	9.390	9.390	8.885
165.0	9.318	9.318	9.390	9.607	9.679	9.751	9.824	9.896	9.896	9.751
167.5	9.318	9.463	9.535	9.679	9.824	9.896	10.040	10.113	10.185	10.402
170.0	9.318	9.390	9.463	9.607	9.751	9.824	9.896	9.968	9.968	10.763
172.5	9.246	9.318	9.318	9.390	9.463	9.607	9.535	9.607	9.679	10.835
175.0	9.174	9.101	9.174	9.174	9.246	9.246	9.318	9.246	9.318	10.763
177.5	9.174	9.174	9.174	9.101	9.174	9.246	9.246	9.174	9.101	10.402
180.0	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459

**Vert.  
Angles**

**Horizontal Angles**

	<u>100</u>	<u>110</u>	<u>120</u>	<u>130</u>	<u>140</u>	<u>150</u>	<u>160</u>	<u>170</u>	<u>180</u>	<u>190</u>
0.0	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830
2.5	1272.167	1254.109	1233.162	1222.038	1217.198	1214.526	1204.341	1199.646	1197.840	1190.905
5.0	1265.739	1241.541	1228.394	1216.042	1206.074	1205.063	1194.517	1189.461	1189.822	1181.298
7.5	1257.938	1238.218	1216.331	1214.742	1205.641	1192.639	1189.461	1184.910	1180.648	1179.059
10.0	1251.798	1229.911	1216.693	1200.296	1184.115	1179.781	1176.170	1170.175	1162.518	1154.933
12.5	1235.979	1215.826	1200.079	1192.639	1181.660	1170.030	1163.601	1155.295	1155.728	1149.155
15.0	1225.216	1204.774	1188.449	1178.337	1162.518	1156.739	1149.227	1139.764	1131.458	1143.665
17.5	1214.092	1195.889	1182.021	1166.924	1161.001	1150.888	1137.886	1136.297	1136.081	1133.408
20.0	1206.941	1193.217	1175.953	1158.906	1167.646	1145.688	1140.848	1132.541	1138.031	1131.241
22.5	1199.068	1181.948	1171.619	1151.972	1147.566	1133.769	1136.514	1134.058	1130.446	1129.652
25.0	1183.754	1161.723	1142.220	1132.902	1133.914	1132.902	1126.546	1126.040	1124.162	1117.300
27.5	1164.396	1133.986	1112.533	1101.264	1104.876	1098.447	1105.670	1102.420	1093.319	1085.951
30.0	1128.352	1098.086	1084.940	1061.319	1056.913	1058.936	1059.080	1052.724	1035.604	1029.103
32.5	1083.567	1069.120	1050.918	1027.803	1018.846	1011.334	991.326	977.457	963.155	970.089
35.0	1036.832	1035.027	1021.013	999.849	981.141	953.042	918.226	901.323	903.563	905.079
37.5	984.463	990.676	994.793	964.022	935.490	893.594	867.735	856.322	849.316	856.611
40.0	933.250	929.639	935.634	930.867	892.655	857.478	836.892	827.935	814.933	818.111
42.5	884.132	870.408	864.051	863.762	845.126	825.623	815.222	816.161	799.258	798.319
45.0	828.079	810.454	786.256	791.240	796.080	796.513	800.558	801.786	796.152	769.498
47.5	758.230	746.095	731.937	728.975	745.589	755.918	768.198	769.787	759.963	736.199
50.0	686.358	680.290	671.550	686.213	693.003	711.278	724.641	713.373	715.973	692.570
52.5	637.890	641.646	645.691	652.119	656.309	657.248	659.776	648.002	646.485	636.012
55.0	615.425	615.208	622.576	634.711	618.387	601.412	595.561	577.720	585.160	579.959
57.5	600.979	599.823	605.746	610.152	581.114	551.716	532.213	517.405	516.755	519.427
60.0	584.076	594.189	578.442	573.097	544.059	499.925	476.955	458.968	462.436	470.887
62.5	557.567	569.196	556.266	534.669	508.376	470.670	448.350	427.258	433.687	447.267
65.0	512.276	507.509	499.997	480.061	465.325	441.921	438.960	420.685	427.114	430.292
67.5	441.344	439.032	438.815	426.102	415.123	412.234	405.733	397.859	390.492	394.826
70.0	358.059	355.892	358.709	349.752	345.202	351.269	344.985	339.640	338.267	339.278
72.5	272.535	271.090	275.280	269.574	269.068	272.174	265.384	260.833	261.556	254.694
75.0	200.158	206.659	207.598	208.681	203.697	200.374	198.713	189.973	190.406	193.079
77.5	154.145	152.990	156.529	157.540	154.073	149.378	149.161	145.333	147.283	148.656
80.0	124.024	125.324	124.313	125.902	121.279	118.751	121.207	120.340	123.157	123.591

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION - (Cont.)**

82.5	103.871	104.738	104.160	105.171	104.016	100.259	104.232	104.593	106.399	107.122
85.0	88.919	90.725	90.002	92.386	91.519	87.330	92.458	93.542	94.264	94.770
87.5	74.328	75.556	74.906	78.662	80.684	78.301	80.540	82.201	81.840	83.068
90.0	57.136	60.315	61.326	62.626	63.276	62.915	66.599	64.215	61.615	67.755
92.5	30.916	33.877	38.283	34.022	27.521	29.182	24.993	22.464	13.508	18.925
95.0	9.679	8.957	7.296	6.718	5.129	4.623	3.901	3.106	3.034	3.684
97.5	5.634	5.129	4.840	4.551	4.334	3.684	2.962	2.889	2.962	3.034
100.0	4.623	4.478	4.334	3.973	3.612	3.034	2.817	2.817	2.889	2.889
102.5	4.262	4.117	3.828	3.539	3.106	2.817	2.745	2.817	2.889	2.817
105.0	3.901	3.684	3.395	3.106	2.745	2.745	2.745	2.745	2.817	2.817
107.5	3.467	3.323	2.962	2.817	2.673	2.673	2.673	2.600	2.745	2.817
110.0	3.034	2.889	2.745	2.600	2.600	2.528	2.528	2.600	2.673	2.673
112.5	2.673	2.600	2.528	2.528	2.528	2.528	2.456	2.528	2.600	2.600
115.0	2.456	2.456	2.456	2.456	2.384	2.384	2.384	2.384	2.456	2.456
117.5	2.384	2.311	2.311	2.311	2.239	2.311	2.311	2.311	2.311	2.384
120.0	2.311	2.239	2.239	2.239	2.239	2.167	2.167	2.167	2.239	2.239
122.5	2.239	2.239	2.167	2.167	2.167	2.167	2.167	2.167	2.239	2.167
125.0	2.239	2.239	2.167	2.167	2.167	2.239	2.167	2.167	2.239	2.311
127.5	2.311	2.311	2.311	2.239	2.239	2.239	2.239	2.311	2.239	2.384
130.0	2.456	2.456	2.456	2.384	2.456	2.456	2.384	2.456	2.456	2.528
132.5	2.745	2.673	2.600	2.673	2.673	2.600	2.600	2.673	2.673	2.673
135.0	2.962	2.962	2.889	2.889	2.817	2.817	2.817	2.889	2.817	2.889
137.5	3.250	3.250	3.178	3.178	3.178	3.106	3.106	3.178	3.178	3.178
140.0	3.612	3.539	3.467	3.467	3.467	3.395	3.467	3.467	3.467	3.395
142.5	3.973	3.901	3.828	3.828	3.756	3.756	3.756	3.756	3.828	3.756
145.0	4.406	4.262	4.262	4.190	4.117	4.117	4.117	4.190	4.190	4.190
147.5	4.767	4.695	4.695	4.623	4.551	4.551	4.551	4.551	4.551	4.551
150.0	5.201	5.056	5.056	5.056	4.984	4.984	4.984	4.984	5.056	4.984
152.5	5.634	5.634	5.562	5.562	5.490	5.490	5.490	5.490	5.490	5.490
155.0	6.284	6.284	6.212	6.140	6.140	6.140	6.068	6.068	6.068	6.140
157.5	7.079	7.079	6.934	6.934	6.862	6.790	6.790	6.790	6.718	6.790
160.0	7.801	7.801	7.729	7.729	7.584	7.512	7.512	7.440	7.368	7.440
162.5	8.740	8.668	8.523	8.451	8.379	8.235	8.162	8.162	8.090	8.162
165.0	9.535	9.463	9.318	9.174	9.101	8.957	8.812	8.812	8.740	8.740
167.5	10.185	10.040	9.968	9.751	9.607	9.463	9.390	9.318	9.318	9.246
170.0	10.546	10.402	10.257	10.040	9.968	9.751	9.679	9.607	9.607	9.535
172.5	10.618	10.474	10.329	10.113	9.968	9.824	9.751	9.679	9.607	9.679
175.0	10.474	10.402	10.185	10.040	9.824	9.751	9.607	9.535	9.535	9.535
177.5	10.185	10.113	9.968	9.751	9.679	9.535	9.463	9.390	9.390	9.390
180.0	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459

**Vert.  
Angles**

**Horizontal Angles**

	<u>200</u>	<u>210</u>	<u>220</u>	<u>230</u>	<u>240</u>	<u>250</u>	<u>260</u>	<u>270</u>	<u>280</u>	<u>290</u>
0.0	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830
2.5	1185.055	1183.754	1187.438	1183.538	1182.310	1182.960	1183.465	1288.926	1263.788	1244.863
5.0	1181.371	1179.637	1177.542	1180.865	1170.825	1170.319	1173.281	1274.407	1254.254	1242.335
7.5	1166.707	1168.947	1167.285	1166.491	1164.035	1166.635	1164.468	1271.012	1243.274	1229.911
10.0	1162.012	1163.023	1161.940	1155.728	1157.173	1152.911	1151.394	1256.348	1237.568	1219.076
12.5	1145.688	1151.900	1143.665	1152.261	1146.771	1149.371	1144.243	1249.920	1223.555	1210.914
15.0	1133.914	1143.232	1144.460	1137.886	1142.004	1141.715	1137.814	1235.256	1214.453	1195.167
17.5	1135.792	1137.020	1135.864	1136.947	1138.103	1125.751	1125.173	1222.471	1203.691	1186.788
20.0	1132.902	1132.324	1133.552	1128.568	1124.812	1121.778	1124.018	1224.783	1192.639	1176.386
22.5	1123.873	1129.002	1129.074	1117.228	1115.277	1128.207	1121.923	1213.803	1195.167	1169.452
25.0	1110.004	1103.504	1092.452	1101.770	1106.537	1101.553	1119.395	1214.815	1181.154	1154.789
27.5	1073.816	1062.692	1061.897	1055.830	1063.775	1081.689	1097.436	1191.844	1152.261	1132.252

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION - (Cont.)**

30.0	1028.381	1026.864	1021.736	1022.386	1028.959	1042.972	1039.433	1134.202	1124.307	1102.420
32.5	981.791	980.996	990.820	998.838	1001.366	986.269	981.213	1056.769	1065.798	1069.626
35.0	927.111	940.979	954.631	962.938	950.586	936.429	927.038	1000.138	1011.912	1012.201
37.5	872.141	906.018	916.781	907.247	891.500	885.504	886.877	962.216	944.591	940.040
40.0	823.312	854.227	870.480	848.882	844.332	840.142	846.787	916.203	891.211	875.753
42.5	792.107	805.470	799.114	793.335	797.669	801.570	797.091	861.667	829.163	813.488
45.0	755.340	744.650	721.535	725.508	740.460	747.250	731.070	789.579	764.947	745.011
47.5	710.267	684.913	671.045	667.288	662.882	673.501	661.365	714.746	699.866	696.471
50.0	665.844	642.224	632.761	626.693	622.287	607.118	605.746	656.381	651.614	652.481
52.5	628.933	614.919	608.996	594.333	584.943	574.397	571.002	623.732	622.215	627.560
55.0	583.209	595.272	603.579	579.959	567.968	565.512	572.735	621.059	609.646	608.563
57.5	544.348	567.607	586.821	569.702	557.350	553.594	554.027	595.128	593.394	589.277
60.0	503.031	526.217	547.960	559.011	559.589	529.540	514.155	551.354	559.589	545.359
62.5	461.352	491.618	513.866	518.272	509.459	502.308	495.374	523.761	507.076	480.205
65.0	434.409	452.540	465.469	456.151	454.635	447.772	445.316	466.192	452.251	425.019
67.5	393.381	399.449	404.144	395.042	387.313	364.849	361.671	376.406	370.555	353.364
70.0	330.755	327.866	326.132	313.130	304.751	284.092	283.442	301.428	286.621	290.810
72.5	254.405	260.328	252.093	243.209	232.446	221.683	214.026	226.667	211.643	229.990
75.0	189.323	196.979	193.007	188.889	179.499	166.497	167.075	167.581	155.590	177.332
77.5	148.078	152.628	151.256	148.944	143.310	135.004	134.426	136.087	122.435	131.970
80.0	123.446	125.902	125.541	122.868	119.184	114.634	111.022	113.478	108.927	109.505
82.5	105.605	106.833	106.255	105.966	102.426	99.031	97.515	97.226	96.576	94.986
85.0	93.614	94.697	94.120	92.530	89.136	83.357	82.635	81.118	84.224	83.501
87.5	83.357	82.707	82.779	80.034	72.811	66.599	60.170	50.419	68.910	67.032
90.0	62.337	64.360	63.637	61.181	51.791	46.518	32.216	27.232	38.283	43.629
92.5	21.381	16.975	17.553	17.264	15.313	16.903	11.918	9.174	13.291	11.774
95.0	4.695	4.551	5.923	6.212	6.429	6.429	6.068	5.779	6.429	5.995
97.5	3.395	3.828	4.190	4.695	4.840	5.056	4.840	4.623	5.056	4.695
100.0	3.034	3.323	3.612	3.901	3.973	4.045	4.190	4.190	4.117	3.901
102.5	2.889	3.034	3.250	3.539	3.684	3.756	3.973	3.901	3.828	3.612
105.0	2.889	2.817	2.962	3.106	3.395	3.539	3.684	3.539	3.467	3.178
107.5	2.745	2.745	2.745	2.817	3.034	3.178	3.395	3.178	3.034	2.817
110.0	2.673	2.673	2.745	2.673	2.673	2.889	2.889	2.745	2.600	2.456
112.5	2.528	2.600	2.600	2.600	2.528	2.528	2.528	2.456	2.456	2.384
115.0	2.456	2.456	2.528	2.456	2.456	2.456	2.384	2.384	2.311	2.311
117.5	2.384	2.384	2.384	2.384	2.384	2.384	2.311	2.311	2.239	2.239
120.0	2.311	2.239	2.239	2.239	2.239	2.239	2.239	2.239	2.239	2.167
122.5	2.239	2.239	2.167	2.239	2.239	2.239	2.239	2.167	2.167	2.167
125.0	2.311	2.239	2.239	2.239	2.239	2.167	2.239	2.239	2.167	2.167
127.5	2.311	2.384	2.311	2.311	2.311	2.311	2.311	2.311	2.311	2.239
130.0	2.528	2.456	2.456	2.456	2.456	2.456	2.456	2.528	2.456	2.384
132.5	2.673	2.600	2.673	2.673	2.673	2.673	2.673	2.673	2.600	2.528
135.0	2.889	2.889	2.889	2.889	2.889	2.889	2.889	2.889	2.817	2.817
137.5	3.178	3.178	3.178	3.178	3.178	3.178	3.178	3.178	3.106	3.034
140.0	3.467	3.395	3.395	3.467	3.467	3.467	3.467	3.612	3.467	3.395
142.5	3.828	3.756	3.828	3.828	3.828	3.756	3.828	4.045	3.901	3.828
145.0	4.190	4.190	4.190	4.117	4.190	4.190	4.117	4.478	4.334	4.262
147.5	4.551	4.551	4.551	4.551	4.551	4.551	4.551	4.912	4.840	4.767
150.0	4.984	4.984	4.840	4.912	4.912	4.912	4.912	5.634	5.490	5.417
152.5	5.490	5.490	5.417	5.417	5.417	5.417	5.417	6.429	6.357	6.212
155.0	6.068	6.068	6.140	6.068	6.068	5.995	6.068	7.729	7.368	7.223
157.5	6.718	6.718	6.790	6.790	6.718	6.718	6.718	8.596	8.451	8.162
160.0	7.368	7.368	7.440	7.440	7.512	7.512	7.512	9.607	9.390	9.174
162.5	8.090	8.090	8.090	8.162	8.235	8.235	8.379	10.402	10.185	9.896
165.0	8.812	8.740	8.812	8.957	8.957	9.101	9.101	11.052	10.763	10.402
167.5	9.318	9.390	9.390	9.463	9.607	9.607	9.679	11.268	10.907	10.618

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION - (Cont.)**

<b>170.0</b>	9.607	9.679	9.679	9.824	9.896	9.968	9.968	10.979	10.690	10.402
<b>172.5</b>	9.679	9.751	9.896	9.896	9.968	10.040	10.040	10.618	10.402	9.968
<b>175.0</b>	9.607	9.607	9.679	9.751	9.896	9.968	9.968	10.257	10.185	9.751
<b>177.5</b>	9.390	9.463	9.463	9.535	9.607	9.679	9.607	10.185	9.824	9.679
<b>180.0</b>	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459	9.459

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

	<b>300</b>	<b>310</b>	<b>320</b>	<b>330</b>	<b>340</b>	<b>350</b>	<b>360</b>
<b>0.0</b>	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830	1211.830
<b>2.5</b>	1231.645	1225.649	1209.180	1204.630	1206.002	1201.307	1194.011
<b>5.0</b>	1223.771	1210.842	1208.241	1200.368	1194.806	1193.578	1188.594
<b>7.5</b>	1219.582	1204.485	1200.296	1196.251	1187.872	1190.761	1186.860
<b>10.0</b>	1211.347	1197.912	1197.912	1184.043	1174.509	1173.858	1178.626
<b>12.5</b>	1200.729	1195.167	1187.583	1174.147	1169.597	1159.701	1156.089
<b>15.0</b>	1185.921	1185.199	1167.863	1164.179	1161.001	1158.545	1151.177
<b>17.5</b>	1177.398	1169.741	1171.330	1157.100	1152.694	1148.866	1140.559
<b>20.0</b>	1167.357	1166.129	1152.983	1156.089	1153.561	1146.193	1137.381
<b>22.5</b>	1154.211	1150.816	1154.428	1143.665	1141.426	1146.049	1141.426
<b>25.0</b>	1138.681	1129.869	1124.812	1123.006	1129.796	1127.629	1136.153
<b>27.5</b>	1114.411	1095.558	1095.919	1106.176	1098.736	1100.181	1090.285
<b>30.0</b>	1082.700	1071.576	1059.225	1056.263	1050.773	1055.613	1056.696
<b>32.5</b>	1059.225	1031.054	1021.302	1003.461	995.154	995.299	984.102
<b>35.0</b>	1019.280	994.721	981.574	954.487	930.650	924.799	923.932
<b>37.5</b>	954.704	937.657	919.887	898.362	881.820	881.893	867.880
<b>40.0</b>	881.315	879.942	872.141	852.205	849.966	851.771	841.803
<b>42.5</b>	800.414	808.287	812.405	817.244	819.483	823.745	809.732
<b>45.0</b>	738.005	730.709	758.519	788.423	797.813	799.403	801.714
<b>47.5</b>	691.053	699.721	705.861	745.661	765.309	763.864	769.137
<b>50.0</b>	650.314	661.510	657.537	684.913	706.583	695.893	704.344
<b>52.5</b>	621.204	630.955	615.570	623.588	633.989	620.698	640.057
<b>55.0</b>	595.994	620.481	584.509	566.596	568.763	544.131	568.690
<b>57.5</b>	572.808	588.916	564.934	523.473	507.003	483.817	500.864
<b>60.0</b>	543.770	546.587	522.028	486.200	459.546	437.732	454.562
<b>62.5</b>	503.970	503.464	487.356	452.395	450.517	432.459	436.937
<b>65.0</b>	450.301	452.973	443.800	430.075	435.493	440.694	445.678
<b>67.5</b>	379.368	388.108	385.580	394.320	405.516	403.566	417.940
<b>70.0</b>	302.512	308.146	321.292	323.748	326.927	336.100	345.057
<b>72.5</b>	230.929	231.796	246.603	245.376	253.032	256.788	260.689
<b>75.0</b>	172.781	182.966	178.704	177.765	182.461	182.966	188.456
<b>77.5</b>	134.353	137.965	137.171	135.076	138.254	137.171	143.238
<b>80.0</b>	110.517	110.300	108.205	108.133	112.322	115.356	121.063
<b>82.5</b>	95.348	95.853	92.964	87.402	94.914	100.548	104.088
<b>85.0</b>	82.273	83.863	81.551	79.384	82.923	88.991	91.519
<b>87.5</b>	70.210	71.077	70.716	68.621	73.316	77.434	79.745
<b>90.0</b>	43.484	52.441	43.701	54.175	58.364	58.148	60.748
<b>92.5</b>	11.991	11.702	11.846	9.968	11.196	12.424	16.180
<b>95.0</b>	5.851	5.490	4.623	4.117	3.250	2.673	2.745
<b>97.5</b>	4.190	4.117	3.612	3.178	2.600	2.600	2.528
<b>100.0</b>	3.828	3.612	3.106	2.745	2.600	2.528	2.600
<b>102.5</b>	3.467	3.106	2.745	2.600	2.600	2.528	2.528
<b>105.0</b>	3.034	2.673	2.528	2.528	2.528	2.456	2.456
<b>107.5</b>	2.673	2.456	2.528	2.456	2.456	2.456	2.384
<b>110.0</b>	2.456	2.456	2.456	2.384	2.311	2.456	2.384
<b>112.5</b>	2.384	2.384	2.384	2.384	2.311	2.384	2.239
<b>115.0</b>	2.311	2.311	2.239	2.239	2.239	2.239	2.239

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**CANDELA TABULATION - (Cont.)**

117.5	2.167	2.095	2.167	2.167	2.167	2.167	2.095
120.0	2.095	2.095	2.095	2.095	2.095	2.095	2.095
122.5	2.095	2.023	2.023	2.095	2.095	2.095	2.023
125.0	2.095	2.167	2.095	2.095	2.095	2.095	2.023
127.5	2.239	2.239	2.167	2.167	2.167	2.167	2.167
130.0	2.384	2.384	2.311	2.311	2.239	2.239	2.239
132.5	2.528	2.528	2.456	2.456	2.456	2.456	2.384
135.0	2.745	2.673	2.673	2.600	2.600	2.600	2.600
137.5	3.034	2.962	2.889	2.889	2.889	2.889	2.817
140.0	3.323	3.323	3.323	3.250	3.250	3.250	3.250
142.5	3.756	3.684	3.684	3.612	3.612	3.612	3.612
145.0	4.190	4.190	4.117	4.045	4.117	4.045	4.045
147.5	4.695	4.695	4.623	4.551	4.551	4.551	4.478
150.0	5.273	5.273	5.201	5.129	5.129	5.129	5.056
152.5	6.140	6.140	5.995	5.923	5.923	5.923	5.851
155.0	7.151	7.007	7.007	6.862	6.934	6.862	6.862
157.5	8.162	8.018	7.946	7.873	7.801	7.873	7.729
160.0	9.029	8.957	8.740	8.668	8.668	8.523	8.523
162.5	9.679	9.463	9.246	9.174	9.101	9.029	9.029
165.0	10.113	9.824	9.607	9.463	9.390	9.318	9.318
167.5	10.185	9.896	9.679	9.535	9.463	9.318	9.318
170.0	10.040	9.751	9.679	9.463	9.390	9.318	9.318
172.5	9.824	9.607	9.535	9.390	9.318	9.246	9.246
175.0	9.535	9.390	9.318	9.246	9.246	9.174	9.174
177.5	9.607	9.463	9.318	9.318	9.246	9.174	9.174
180.0	9.459	9.459	9.459	9.459	9.459	9.459	9.459

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	444.13	N.A.	12.80
0-30	962.18	N.A.	27.60
0-40	1566.63	N.A.	45.00
0-60	2693.88	N.A.	77.40
0-80	3349.55	N.A.	96.20
0-90	3446.17	N.A.	99.00
10-90	3331.92	N.A.	95.70
20-40	1122.5	N.A.	32.20
20-50	1716.94	N.A.	49.30
40-70	1568.8	N.A.	45.10
60-80	655.67	N.A.	18.80
70-80	214.12	N.A.	6.20
80-90	96.62	N.A.	2.80
90-110	19.60	N.A.	0.60
90-120	21.94	N.A.	0.60
90-130	23.91	N.A.	0.70
90-150	28.68	N.A.	0.80
90-180	35.22	N.A.	1.00
110-180	15.61	N.A.	0.40
0-180	3481.39	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	114.25
10-20	329.88
20-30	518.05
30-40	604.46
40-50	594.44
50-60	532.80
60-70	441.55
70-80	214.12
80-90	96.62
90-100	16.35
100-110	3.25
110-120	2.34
120-130	1.97
130-140	2.17
140-150	2.60
150-160	3.00
160-170	2.60
170-180	0.93



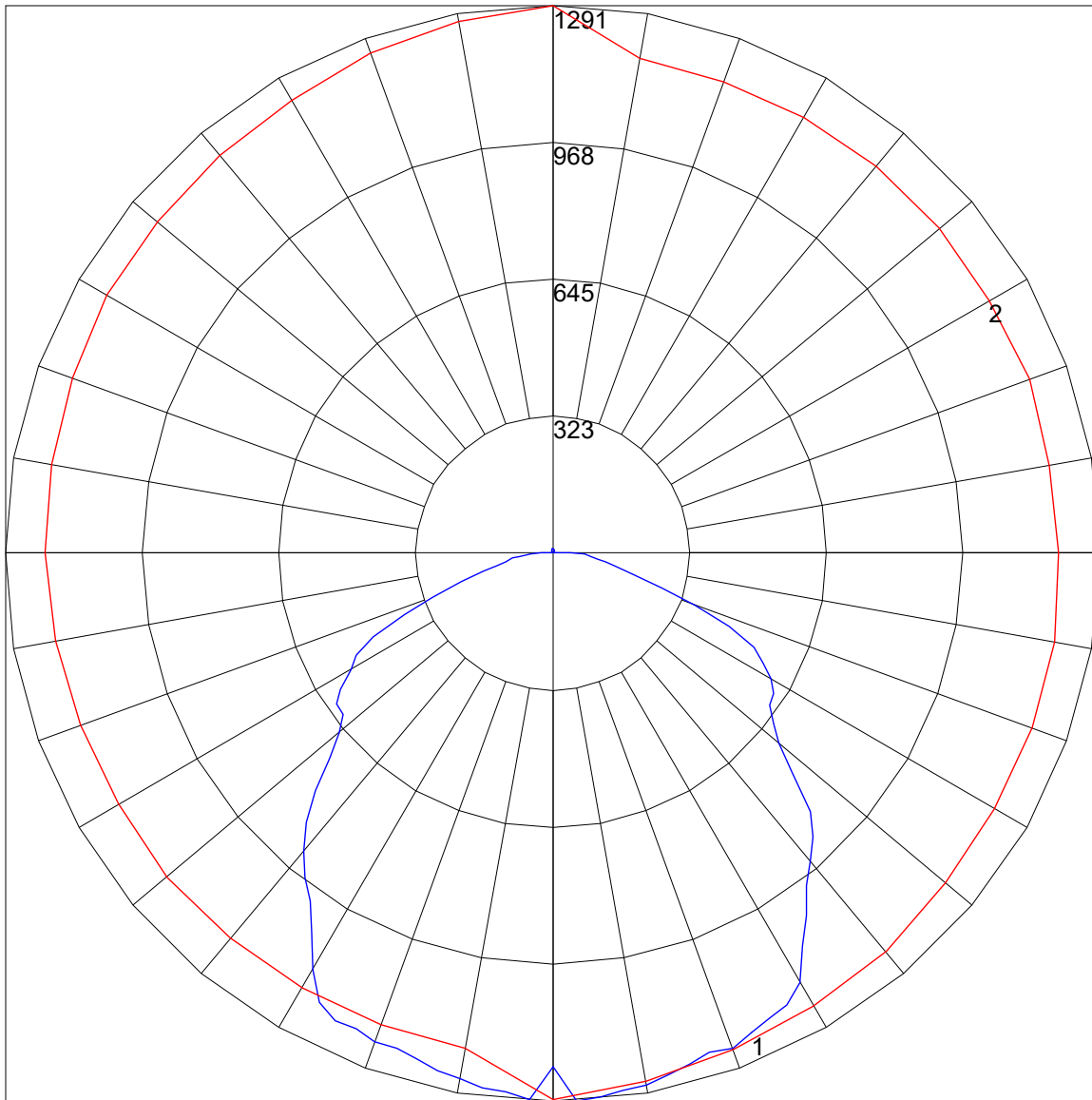
**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GLL HI 12.IES**

**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	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	108	103	99	95	105	101	97	93	97	93	90	92	90	87	89	87	85	82
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	74	68	62	71	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	57	52	61	56	52	49
5	76	63	54	47	73	62	53	47	59	52	46	57	51	45	55	49	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

POLAR GRAPH



Maximum Candela = 1290.876 Located At Horizontal Angle = 90, Vertical Angle = 2.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)