



8165 E Kaiser Blvd. Anaheim, CA 92808  
p. 714.282.2270  
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Report No: L091603908

Date: 9/29/2016



NVLAP LAB CODE 200927-0

**Report No:** L091603908

**Report Prepared For:** Leotek Electronics USA, LLC  
1955 Lundy Ave, San Jose, 95131

**Model Number:** GCJ2-20H-MV-CW-4-XX-700

**Test:** Electrical and Photometric tests

**Standards Used:** Appropriate part or all test guidelines were used for test performed:  
*IESNA LM79: 2008* Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products  
*ANSI NEMA ANSLG C78.377: 2008* Specification of the Chromaticity of Solid State Lighting Products  
*ANSI C82.77:2002:* Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

**Description of Sample:** Client submitted the sample. Catalog number is GCJ2-20H-MV-CW-4-XX-700 . Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 9/12/16

**Date of Tests:** 9/28/16 - 9/28/16

**Seasoning of Sample:** No seasoning was performed in accordance with IESNA LM-79.

#### Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

## Test Summary

<b>Manufacturer:</b>	Leotek Electronics USA, LLC	
<b>Model Number:</b>	GCJ2-20H-MV-CW-4-XX-700	
<b>Driver Model Number:</b>	PHILIPS ADVANCE XI075C105V070CNY2	
<b>Total Lumens:</b>	5524.20	
<b>Input Voltage (VAC/60Hz):</b>	120.00	
<b>Input Current (Amp):</b>	0.38	
<b>Input Power (W):</b>	44.86	
<b>Input Power Factor:</b>	1.00	
<b>Current ATHD @ 120V(%):</b>	8%	
<b>Current ATHD @ 277V(%):</b>	9% (0.16A, 44.66W, 0.98PF)	
<b>Efficacy:</b>	123	
<b>Color Rendering Index (CRI):</b>	73	
<b>Correlated Color Temperature (K):</b>	4878	
<b>Chromaticity Coordinate x:</b>	0.3493	
<b>Chromaticity Coordinate y:</b>	0.3603	
<b>Ambient Temperature (°C):</b>	25.0	
<b>Stabilization Time (Hours):</b>	0:30	
<b>Total Operating Time (Hours):</b>	2:00	
<b>Off State Power(W):</b>	0.00	

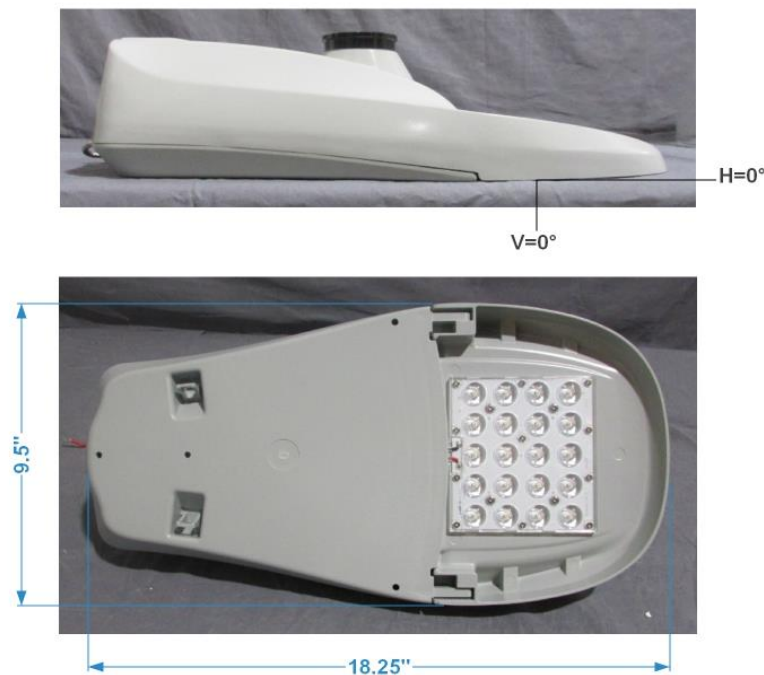
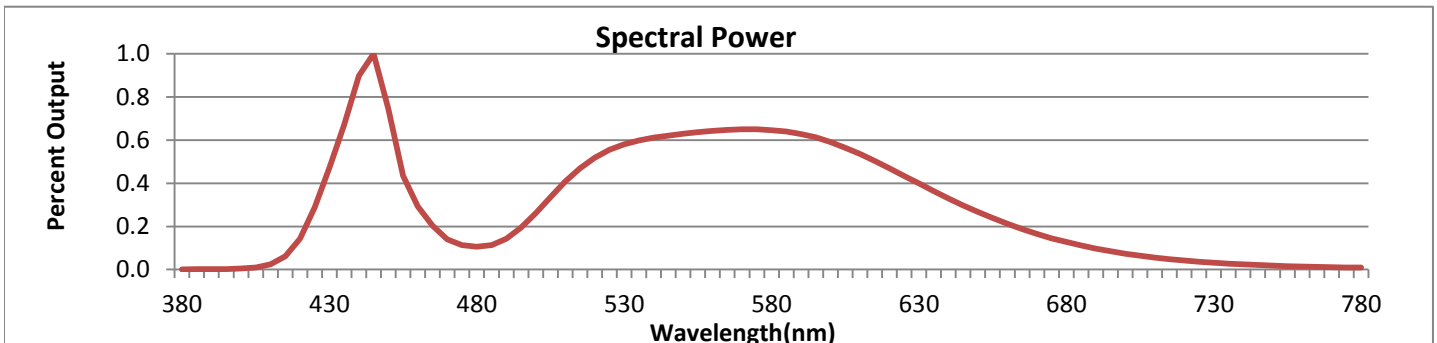


FIG. 1 LUMINAIRE



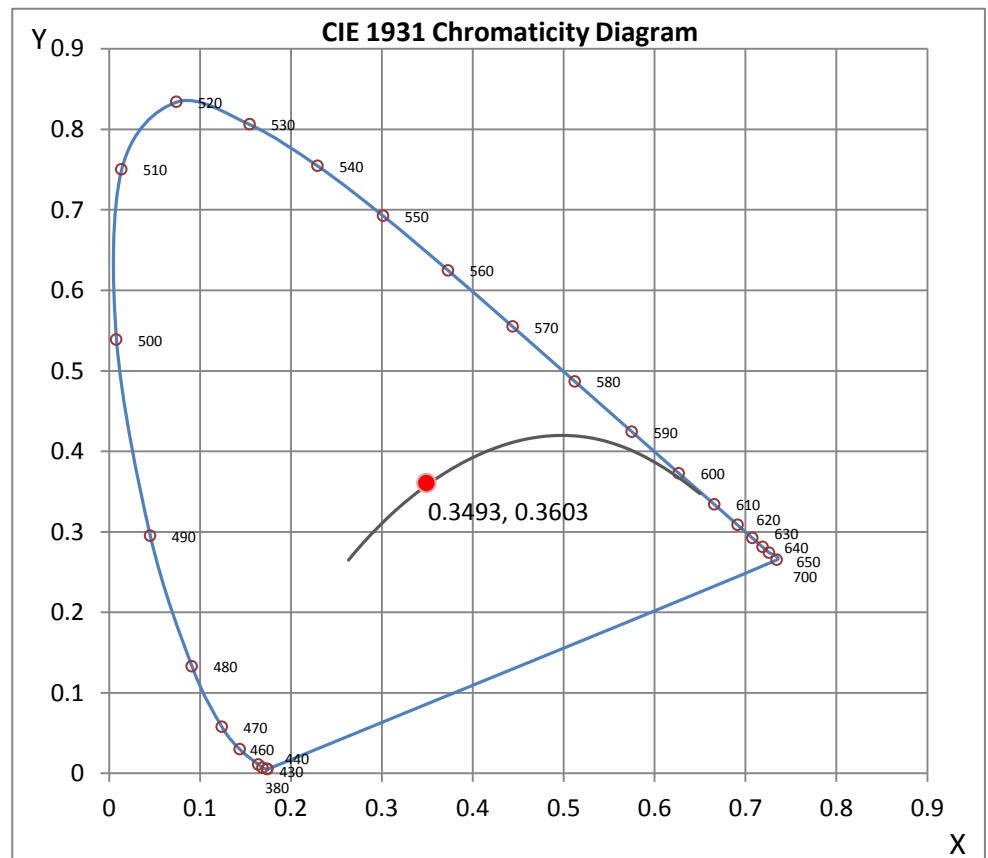
Wavelength	W/m <sup>2</sup> nm	440	0.8986	510	0.4082	580	0.6467	650	0.2676	720	0.0417
380	0.0011	450	0.7451	520	0.5191	590	0.6286	660	0.2127	730	0.0316
390	0.0019	460	0.2928	530	0.5810	600	0.5912	670	0.1650	740	0.0238
400	0.0045	470	0.1401	540	0.6117	610	0.5357	680	0.1274	750	0.0180
410	0.0239	480	0.1055	550	0.6293	620	0.4701	690	0.0972	760	0.0136
420	0.1436	490	0.1426	560	0.6436	630	0.3989	700	0.0733	770	0.0104
430	0.4730	500	0.2624	570	0.6511	640	0.3302	710	0.0553	780	0.0091

**CRI & CCT**

x	0.3493
y	0.3603
u'	0.2109
v'	0.4895
CRI	72.60
CCT	4878
Duv	0.00267

**R Values**

R1	71.17
R2	75.85
R3	79.76
R4	74.49
R5	71.48
R6	67.55
R7	80.10
R8	60.04
R9	-19.78
R10	43.14
R11	73.22
R12	46.47
R13	70.97
R14	88.13





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## Test Methods

### Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

### Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : JEFF AHN

Test Report Released by:

Jeff Ahn  
Engineering Manager

Test Report Reviewed by:

Steve Kang  
Quality Assurance

*\*Attached are photometric data reports. Total number of pages: 14*

*\*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.*



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## Photometric Test Report

### IES ROAD REPORT

PHOTOMETRIC FILENAME : L091603908.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] L091603908  
[TESTLAB] LIGHT LABORATORY, INC.  
[ISSUEDATE] 9/29/2016  
[MANUFAC] Leotek Electronics USA, LLC  
[LUMCAT] GCJ2-20H-MV-CW-4-XX-700  
[LUMINAIRE] 18.25"L. X 9.5"W. X 4.5"H. LED STREET LIGHT  
[BALLASTCAT] PHILIPS ADVANCE XI075C105V070CNY2  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[\_INPUT] 120VAC, 44.86W  
[\_TEST PROCEDURE] IESNA:LM-79-08

### CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5524
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	44.86
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	3065
Maximum Candela Angle	80H 71V
Maximum Candela (<90 Degrees Vertical)	3065
Maximum Candela Angle (<90 Degrees Vertical)	80H 71V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	241 (4.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091603908.IES**

**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	532.3	N.A.	9.6
FM - Front-Medium (30-60)	1452.4	N.A.	26.3
FH - Front-High (60-80)	1455.0	N.A.	26.3
FVH - Front-Very High (80-90)	19.9	N.A.	0.4
BL - Back-Low (0-30)	461.6	N.A.	8.4
BM - Back-Medium (30-60)	1173.6	N.A.	21.2
BH - Back-High (60-80)	421.2	N.A.	7.6
BVH - Back-Very High (80-90)	8.4	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	5524.4	N.A.	100.0
BUG Rating	B2-U0-G1		

**ZONAL LUMEN SUMMARY**

Zone	%
0-20	7.9
0-30	18
0-40	32.2
0-60	65.5
0-80	99.5
0-90	100
10-90	98
20-40	24.3
20-50	40.7
40-70	52.5
60-80	34
70-80	14.8
80-90	0.5
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091603908.IES**

**CANDELA TABULATION**

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0.0</b>	1130	1130	1130	1130	1130	1130	1130	1130	1130	1130
<b>2.5</b>	1139	1140	1140	1139	1139	1140	1140	1139	1136	1135
<b>5.0</b>	1153	1153	1153	1153	1152	1150	1150	1148	1146	1143
<b>7.5</b>	1169	1170	1169	1167	1166	1166	1165	1163	1160	1156
<b>10.0</b>	1187	1189	1186	1185	1186	1186	1185	1183	1180	1174
<b>12.5</b>	1206	1208	1206	1207	1208	1209	1209	1207	1203	1197
<b>15.0</b>	1225	1226	1225	1227	1229	1231	1232	1231	1229	1224
<b>17.5</b>	1241	1243	1244	1247	1251	1252	1253	1254	1253	1249
<b>20.0</b>	1259	1261	1263	1265	1271	1273	1277	1280	1279	1272
<b>22.5</b>	1278	1280	1283	1286	1291	1296	1303	1306	1304	1297
<b>25.0</b>	1292	1296	1301	1307	1316	1324	1332	1337	1333	1323
<b>27.5</b>	1296	1303	1312	1322	1338	1353	1367	1372	1367	1351
<b>30.0</b>	1293	1300	1312	1328	1352	1378	1396	1407	1403	1381
<b>32.5</b>	1272	1280	1292	1312	1347	1382	1412	1431	1433	1412
<b>35.0</b>	1250	1257	1268	1290	1329	1372	1414	1445	1454	1440
<b>37.5</b>	1230	1236	1246	1268	1307	1358	1410	1452	1473	1461
<b>40.0</b>	1195	1200	1208	1227	1269	1328	1396	1450	1473	1462
<b>42.5</b>	1136	1140	1149	1169	1208	1278	1360	1416	1439	1433
<b>45.0</b>	1066	1070	1080	1101	1135	1211	1297	1366	1407	1399
<b>47.5</b>	1010	1013	1022	1038	1073	1135	1216	1316	1373	1369
<b>50.0</b>	965	968	976	991	1024	1072	1150	1255	1342	1351
<b>52.5</b>	933	936	942	956	983	1028	1101	1205	1311	1341
<b>55.0</b>	901	904	912	926	949	995	1071	1174	1281	1328
<b>56.0</b>	898	900	907	920	942	987	1063	1165	1273	1324
<b>57.0</b>	899	901	907	917	939	985	1057	1159	1266	1320
<b>58.0</b>	901	904	910	918	940	983	1052	1152	1259	1317
<b>59.0</b>	905	908	915	920	942	983	1050	1144	1255	1317
<b>60.0</b>	911	914	921	925	949	989	1056	1145	1254	1318
<b>61.0</b>	922	925	929	936	958	997	1062	1149	1259	1324
<b>62.0</b>	942	947	947	952	972	1010	1070	1158	1266	1331
<b>63.0</b>	983	987	980	982	998	1032	1087	1175	1279	1344
<b>64.0</b>	1035	1037	1028	1028	1041	1066	1116	1197	1299	1364
<b>65.0</b>	1122	1118	1103	1095	1101	1120	1160	1230	1326	1395
<b>66.0</b>	1241	1229	1211	1197	1190	1196	1226	1287	1375	1443
<b>67.0</b>	1370	1352	1335	1317	1305	1299	1313	1363	1443	1508
<b>68.0</b>	1501	1487	1469	1451	1436	1424	1426	1459	1528	1591
<b>69.0</b>	1635	1624	1605	1590	1580	1565	1561	1581	1640	1699
<b>70.0</b>	1779	1772	1758	1746	1736	1724	1716	1731	1779	1837
<b>71.0</b>	1882	1878	1878	1890	1896	1894	1888	1902	1951	2019
<b>72.0</b>	1918	1913	1922	1953	1999	2035	2055	2083	2154	2237
<b>73.0</b>	1854	1854	1878	1923	1990	2054	2121	2198	2311	2389
<b>74.0</b>	1682	1692	1733	1804	1880	1965	2043	2156	2286	2336
<b>75.0</b>	1347	1372	1478	1599	1684	1768	1842	1950	2030	2090
<b>76.0</b>	829	861	994	1171	1346	1479	1559	1620	1628	1752
<b>77.0</b>	343	367	506	695	846	1051	1176	1197	1239	1363
<b>78.0</b>	159	172	207	334	459	583	695	778	869	940
<b>79.0</b>	96	99	117	170	233	291	345	420	493	524
<b>80.0</b>	65	66	74	99	130	152	172	210	236	241
<b>82.5</b>	34	33	34	36	44	49	52	52	53	56
<b>85.0</b>	22	21	22	22	22	22	22	21	19	18
<b>87.5</b>	17	17	17	16	16	15	15	14	13	13
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091603908.IES**

**CANDELA TABULATION - (Cont.)**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<b>50</b>	<b>55</b>	<b>60</b>	<b>65</b>	<b>70</b>	<b>75</b>	<b>80</b>	<b>85</b>	<b>90</b>	<b>95</b>
<b>0.0</b>	1130	1130	1130	1130	1130	1130	1130	1130	1130	1130
<b>2.5</b>	1133	1131	1130	1128	1128	1128	1128	1126	1126	1124
<b>5.0</b>	1141	1139	1137	1134	1132	1132	1130	1128	1127	1124
<b>7.5</b>	1153	1150	1147	1143	1140	1139	1136	1133	1131	1127
<b>10.0</b>	1170	1165	1160	1156	1152	1151	1147	1142	1140	1134
<b>12.5</b>	1192	1185	1180	1176	1171	1169	1164	1159	1155	1148
<b>15.0</b>	1218	1210	1202	1196	1190	1189	1185	1180	1176	1167
<b>17.5</b>	1243	1235	1228	1221	1215	1214	1212	1208	1203	1193
<b>20.0</b>	1267	1260	1253	1247	1244	1246	1247	1244	1240	1224
<b>22.5</b>	1289	1281	1275	1272	1270	1278	1284	1285	1281	1264
<b>25.0</b>	1311	1297	1291	1293	1299	1313	1327	1332	1330	1313
<b>27.5</b>	1332	1313	1305	1312	1326	1353	1374	1385	1385	1367
<b>30.0</b>	1354	1331	1321	1331	1355	1391	1419	1434	1438	1422
<b>32.5</b>	1380	1349	1334	1344	1376	1419	1456	1477	1483	1473
<b>35.0</b>	1409	1372	1343	1350	1385	1433	1476	1502	1515	1506
<b>37.5</b>	1430	1385	1343	1343	1382	1438	1484	1514	1531	1526
<b>40.0</b>	1421	1366	1323	1328	1372	1428	1480	1512	1532	1536
<b>42.5</b>	1390	1333	1293	1305	1352	1407	1456	1489	1517	1540
<b>45.0</b>	1355	1304	1265	1274	1322	1376	1415	1448	1485	1525
<b>47.5</b>	1324	1273	1236	1241	1285	1337	1380	1417	1453	1493
<b>50.0</b>	1307	1252	1209	1212	1253	1304	1356	1398	1433	1465
<b>52.5</b>	1301	1243	1197	1195	1233	1292	1348	1391	1422	1438
<b>55.0</b>	1299	1243	1197	1188	1225	1288	1348	1392	1415	1421
<b>56.0</b>	1299	1244	1198	1186	1220	1281	1349	1395	1415	1420
<b>57.0</b>	1298	1245	1197	1184	1219	1280	1352	1397	1416	1423
<b>58.0</b>	1297	1246	1195	1181	1217	1280	1353	1398	1420	1429
<b>59.0</b>	1298	1246	1194	1180	1213	1283	1357	1403	1427	1437
<b>60.0</b>	1300	1247	1192	1181	1216	1291	1363	1407	1439	1451
<b>61.0</b>	1308	1250	1194	1182	1219	1296	1367	1415	1460	1475
<b>62.0</b>	1313	1256	1199	1187	1223	1300	1373	1437	1493	1515
<b>63.0</b>	1328	1269	1209	1195	1229	1308	1392	1470	1549	1578
<b>64.0</b>	1350	1285	1228	1206	1240	1325	1424	1531	1638	1671
<b>65.0</b>	1383	1317	1255	1228	1263	1358	1491	1650	1814	1883
<b>66.0</b>	1428	1361	1295	1266	1304	1426	1642	2009	2238	2171
<b>67.0</b>	1493	1424	1352	1327	1396	1598	2152	2565	2583	2264
<b>68.0</b>	1580	1514	1441	1435	1600	2103	2669	2799	2600	2162
<b>69.0</b>	1696	1641	1586	1650	2069	2505	2890	2899	2613	2049
<b>70.0</b>	1844	1805	1806	2101	2447	2700	3049	2991	2590	1858
<b>71.0</b>	2037	2032	2213	2442	2609	2824	3065	2806	2248	1425
<b>72.0</b>	2256	2346	2528	2549	2659	2815	2825	2348	1654	768
<b>73.0</b>	2421	2497	2545	2539	2611	2642	2332	1682	1157	505
<b>74.0</b>	2378	2367	2415	2435	2502	2244	1620	1095	520	277
<b>75.0</b>	2146	2157	2180	2309	2156	1604	723	483	273	187
<b>76.0</b>	1840	1865	1894	1910	1479	712	403	251	178	118
<b>77.0</b>	1459	1470	1381	1126	629	347	206	163	106	77
<b>78.0</b>	986	931	678	471	308	184	128	101	61	47
<b>79.0</b>	492	442	342	222	159	120	89	62	37	35
<b>80.0</b>	234	220	191	135	110	84	56	37	31	30
<b>82.5</b>	61	74	61	51	36	29	24	22	22	22
<b>85.0</b>	17	16	16	17	17	17	16	15	15	15
<b>87.5</b>	13	13	13	13	12	12	12	11	11	11
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091603908.IES**

**CANDELA TABULATION - (Cont.)**

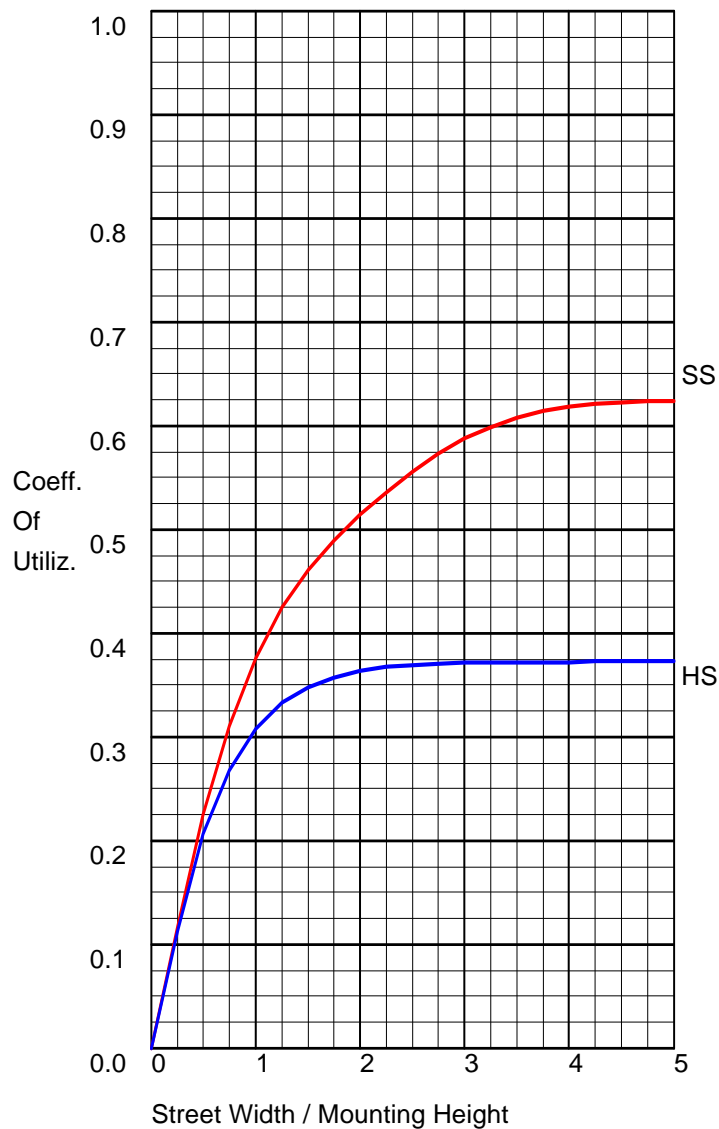
<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<b><u>100</u></b>	<b><u>105</u></b>	<b><u>110</u></b>	<b><u>115</u></b>	<b><u>120</u></b>	<b><u>125</u></b>	<b><u>130</u></b>	<b><u>135</u></b>	<b><u>140</u></b>	<b><u>145</u></b>
<b>0.0</b>	1130	1130	1130	1130	1130	1130	1130	1130	1130	1130
<b>2.5</b>	1123	1123	1122	1121	1122	1123	1121	1121	1121	1121
<b>5.0</b>	1123	1120	1119	1117	1116	1116	1115	1113	1111	1111
<b>7.5</b>	1124	1121	1118	1114	1113	1111	1108	1105	1103	1101
<b>10.0</b>	1129	1124	1119	1112	1108	1104	1099	1095	1091	1089
<b>12.5</b>	1141	1133	1124	1113	1105	1098	1089	1084	1080	1077
<b>15.0</b>	1157	1144	1130	1114	1103	1093	1083	1075	1069	1066
<b>17.5</b>	1177	1160	1141	1120	1104	1091	1078	1069	1062	1056
<b>20.0</b>	1205	1184	1156	1131	1108	1091	1074	1063	1052	1044
<b>22.5</b>	1238	1210	1176	1141	1114	1094	1071	1053	1037	1026
<b>25.0</b>	1282	1245	1203	1158	1122	1092	1064	1041	1022	1008
<b>27.5</b>	1336	1292	1238	1183	1135	1093	1057	1031	1009	993
<b>30.0</b>	1389	1343	1281	1215	1152	1103	1054	1024	1001	987
<b>32.5</b>	1439	1389	1328	1254	1179	1109	1055	1019	996	981
<b>35.0</b>	1475	1434	1371	1297	1206	1116	1053	1017	990	973
<b>37.5</b>	1507	1478	1416	1325	1222	1120	1052	1005	974	955
<b>40.0</b>	1536	1513	1450	1346	1227	1120	1036	982	949	928
<b>42.5</b>	1557	1537	1465	1359	1220	1093	1005	956	919	895
<b>45.0</b>	1550	1536	1468	1341	1198	1061	975	921	888	861
<b>47.5</b>	1519	1510	1447	1317	1156	1031	940	892	860	830
<b>50.0</b>	1480	1468	1404	1290	1118	985	906	860	820	786
<b>52.5</b>	1444	1431	1373	1230	1071	942	867	812	771	746
<b>55.0</b>	1420	1397	1325	1176	1012	903	818	756	720	708
<b>56.0</b>	1418	1387	1306	1158	1002	878	794	729	696	689
<b>57.0</b>	1416	1378	1294	1141	979	856	768	701	672	669
<b>58.0</b>	1419	1375	1276	1121	956	832	738	677	649	649
<b>59.0</b>	1424	1376	1265	1106	932	803	707	653	632	621
<b>60.0</b>	1435	1382	1253	1080	904	776	681	635	611	574
<b>61.0</b>	1457	1391	1241	1047	881	748	662	614	572	519
<b>62.0</b>	1489	1408	1239	1022	853	719	635	586	518	477
<b>63.0</b>	1539	1435	1230	995	823	693	613	541	473	450
<b>64.0</b>	1625	1475	1220	964	778	662	582	487	442	421
<b>65.0</b>	1771	1499	1187	905	716	611	516	434	401	377
<b>66.0</b>	1860	1447	1081	805	647	551	446	389	353	342
<b>67.0</b>	1791	1312	928	690	554	458	380	348	321	313
<b>68.0</b>	1618	1122	754	552	451	354	310	287	279	270
<b>69.0</b>	1452	940	595	444	352	279	252	237	234	230
<b>70.0</b>	1190	648	396	297	233	196	175	172	170	167
<b>71.0</b>	688	386	240	190	149	129	122	121	120	119
<b>72.0</b>	404	220	177	127	104	92	88	87	88	88
<b>73.0</b>	229	161	117	94	79	72	68	67	67	68
<b>74.0</b>	181	114	94	77	66	61	58	57	57	57
<b>75.0</b>	119	94	80	66	58	54	52	50	50	50
<b>76.0</b>	93	79	70	59	53	49	47	46	45	44
<b>77.0</b>	70	65	58	51	47	45	43	42	40	39
<b>78.0</b>	54	52	47	43	41	40	39	37	36	36
<b>79.0</b>	44	42	38	36	35	35	34	33	33	32
<b>80.0</b>	35	34	32	31	30	30	28	29	29	29
<b>82.5</b>	23	23	22	22	21	20	19	19	20	20
<b>85.0</b>	15	15	15	15	14	14	14	14	14	15
<b>87.5</b>	11	11	12	12	12	12	12	13	13	13
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0

**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : L091603908.IES**

**CANDELA TABULATION - (Cont.)**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>						
	<b><u>150</u></b>	<b><u>155</u></b>	<b><u>160</u></b>	<b><u>165</u></b>	<b><u>170</u></b>	<b><u>175</u></b>	<b><u>180</u></b>
<b>0.0</b>	1130	1130	1130	1130	1130	1130	1130
<b>2.5</b>	1123	1123	1123	1122	1122	1122	1122
<b>5.0</b>	1111	1111	1111	1110	1109	1110	1109
<b>7.5</b>	1101	1100	1099	1097	1097	1097	1096
<b>10.0</b>	1089	1088	1086	1084	1084	1084	1084
<b>12.5</b>	1076	1075	1075	1074	1073	1074	1073
<b>15.0</b>	1065	1064	1064	1064	1063	1064	1064
<b>17.5</b>	1053	1051	1050	1051	1050	1052	1052
<b>20.0</b>	1039	1034	1032	1032	1031	1032	1033
<b>22.5</b>	1018	1011	1008	1006	1006	1006	1007
<b>25.0</b>	997	988	983	981	981	981	983
<b>27.5</b>	982	973	969	966	967	967	969
<b>30.0</b>	975	965	960	957	956	955	956
<b>32.5</b>	969	956	947	941	936	934	934
<b>35.0</b>	959	944	932	921	914	909	908
<b>37.5</b>	938	921	906	893	883	876	874
<b>40.0</b>	909	889	872	855	841	831	829
<b>42.5</b>	874	847	822	799	778	762	759
<b>45.0</b>	833	803	773	744	717	698	694
<b>47.5</b>	799	767	742	718	693	674	669
<b>50.0</b>	763	742	723	702	677	655	649
<b>52.5</b>	735	731	726	713	689	665	657
<b>55.0</b>	712	723	730	711	675	638	624
<b>56.0</b>	698	713	706	678	632	598	585
<b>57.0</b>	682	682	665	637	599	569	554
<b>58.0</b>	648	633	621	607	576	543	528
<b>59.0</b>	599	587	589	579	553	523	512
<b>60.0</b>	548	550	558	555	540	514	503
<b>61.0</b>	507	513	525	535	523	500	490
<b>62.0</b>	471	477	504	521	512	489	479
<b>63.0</b>	440	458	487	506	501	484	478
<b>64.0</b>	414	429	453	470	466	452	447
<b>65.0</b>	376	388	410	429	428	420	421
<b>66.0</b>	339	348	367	382	380	376	378
<b>67.0</b>	305	303	313	325	322	322	326
<b>68.0</b>	262	259	268	278	276	276	280
<b>69.0</b>	224	220	219	222	218	218	220
<b>70.0</b>	163	158	157	159	157	157	157
<b>71.0</b>	118	116	117	119	118	119	118
<b>72.0</b>	87	87	87	87	82	81	79
<b>73.0</b>	68	68	64	61	56	51	47
<b>74.0</b>	57	53	51	48	43	38	37
<b>75.0</b>	47	46	44	41	36	32	31
<b>76.0</b>	42	41	40	36	31	28	28
<b>77.0</b>	38	37	36	31	27	26	25
<b>78.0</b>	35	34	32	27	24	23	23
<b>79.0</b>	32	31	29	24	23	22	22
<b>80.0</b>	28	26	24	22	21	20	20
<b>82.5</b>	20	19	18	18	17	17	16
<b>85.0</b>	15	15	15	15	15	15	15
<b>87.5</b>	14	14	14	14	14	14	14
<b>90.0</b>	0	0	0	0	0	0	0

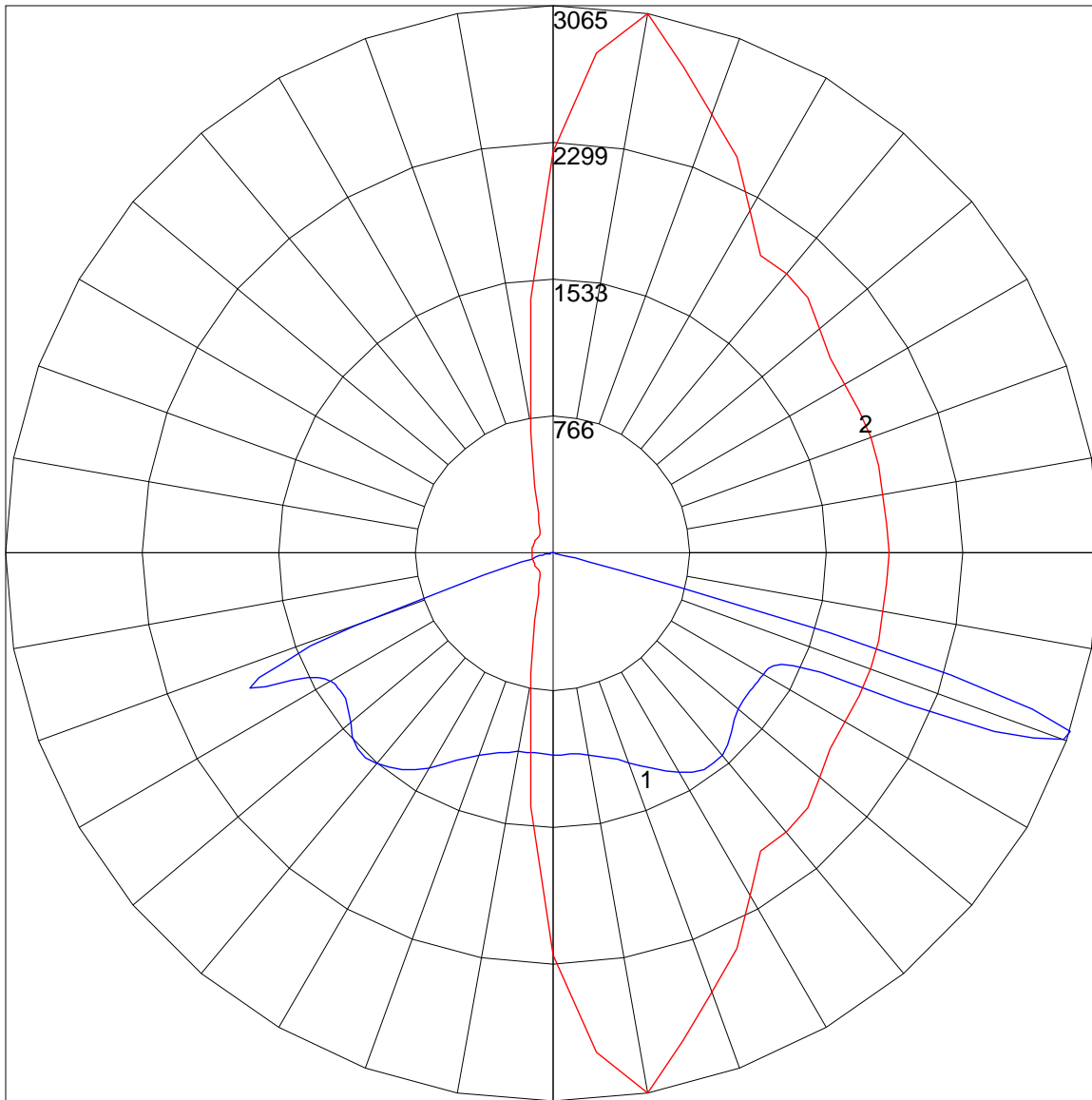
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

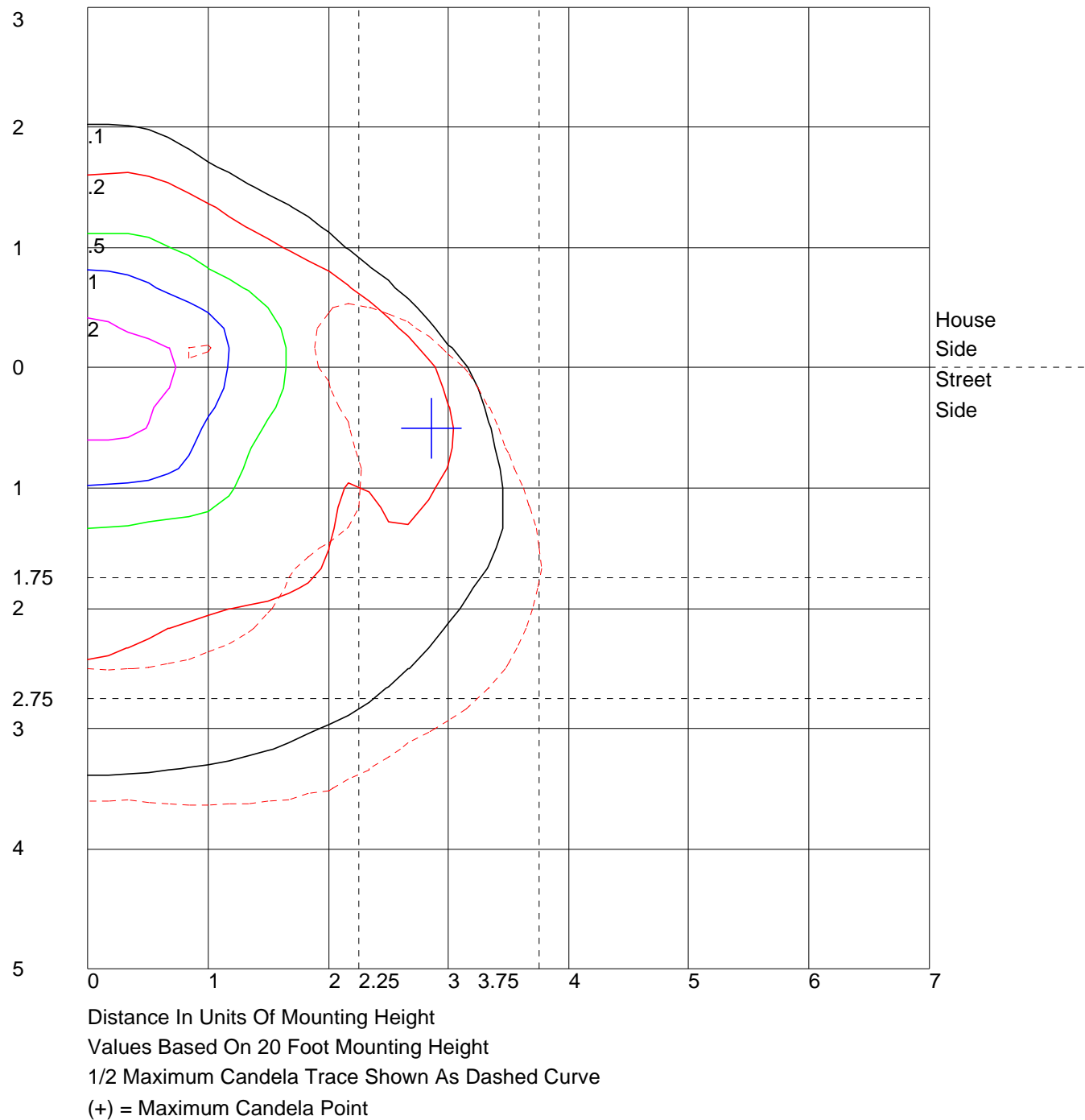
	Lumens	Percent Of Luminaire
Downward Street Side	3459.5	62.6
Downward House Side	2064.7	37.4
Downward Total	5524.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	5524.2	100.0

POLAR GRAPH

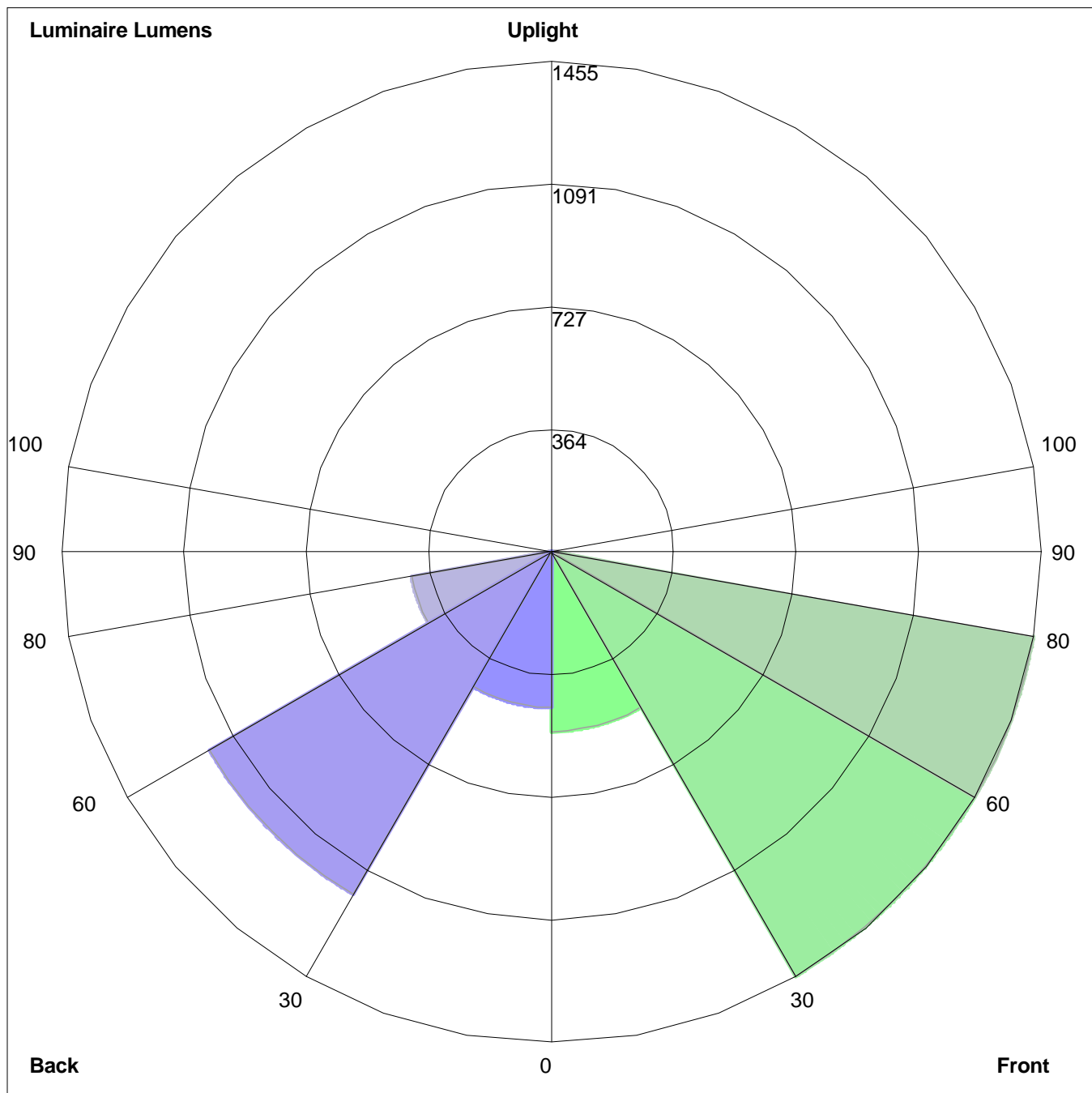


Maximum Candela = 3065 Located At Horizontal Angle = 80, Vertical Angle = 71  
# 1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (71) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=532.3, Medium=1452.4, High= 1455.0, Very High=19.9  
Back: Low=461.6, Medium=1173.6, High=421.2, Very High=8.4  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G1