



8165 E Kaiser Blvd. Anaheim, CA 92808
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Report No: L091603905

Date: 9/30/2016



NVLAP LAB CODE 200927-0

Report No: L091603905

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

Model Number: GCJ2-20H-MV-CW-5-XX-1A

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-5-XX-1A . 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: 9/29/16 - 9/29/16

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

Manufacturer:	Leotek Electronics USA, LLC	
Model Number:	GCJ2-20H-MV-CW-5-XX-1A	
Driver Model Number:	PHILIPS ADVANCE XI075C105V070CNY2	
Total Lumens:	7465.60	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.57	
Input Power (W):	68.09	
Input Power Factor:	1.00	
Current ATHD @ 120V(%):	5%	
Current ATHD @ 277V(%):	7% (0.24A, 66.97W, 0.99PF)	
Efficacy:	110	
Color Rendering Index (CRI):	73	
Correlated Color Temperature (K):	4914	
Chromaticity Coordinate x:	0.3481	
Chromaticity Coordinate y:	0.3591	
Ambient Temperature (°C):	25.0	
Stabilization Time (Hours):	0:45	
Total Operating Time (Hours):	5:45	
Off State Power(W):	0.00	

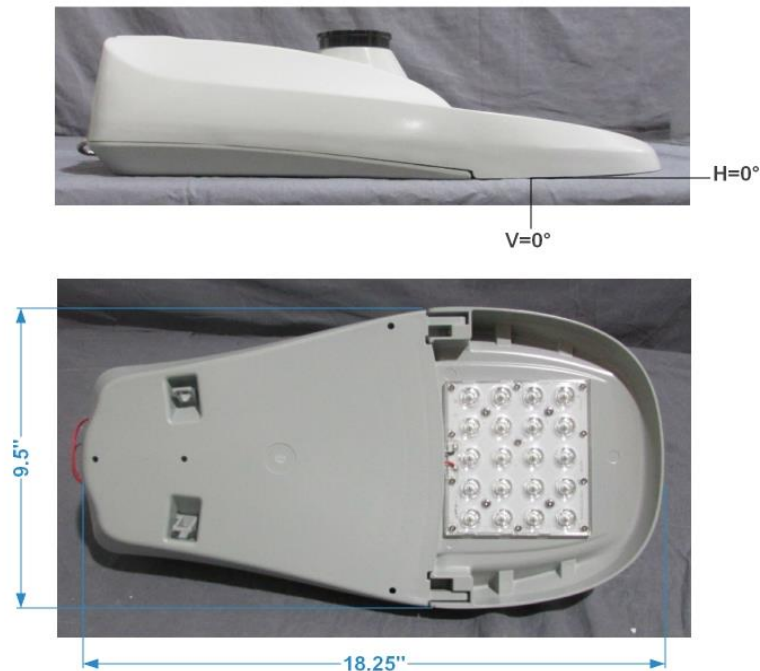
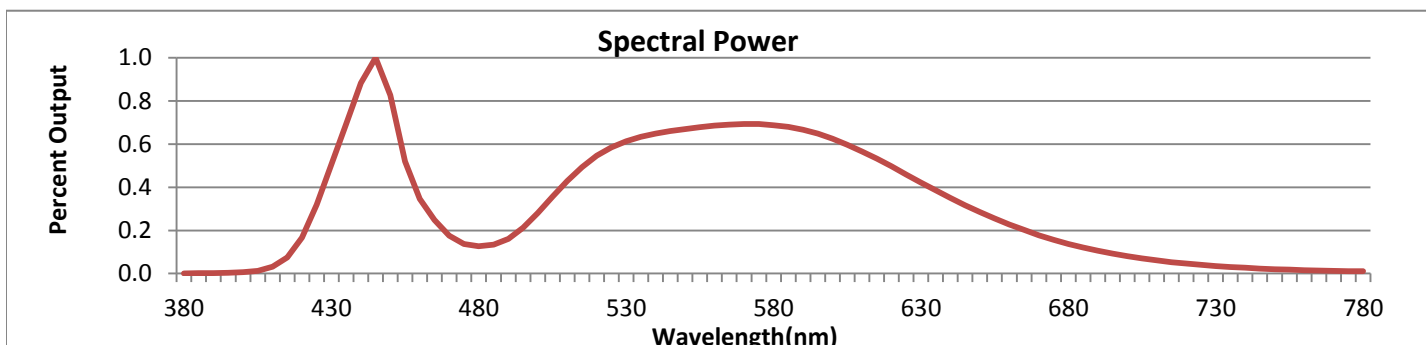


FIG. 1 LUMINAIRE



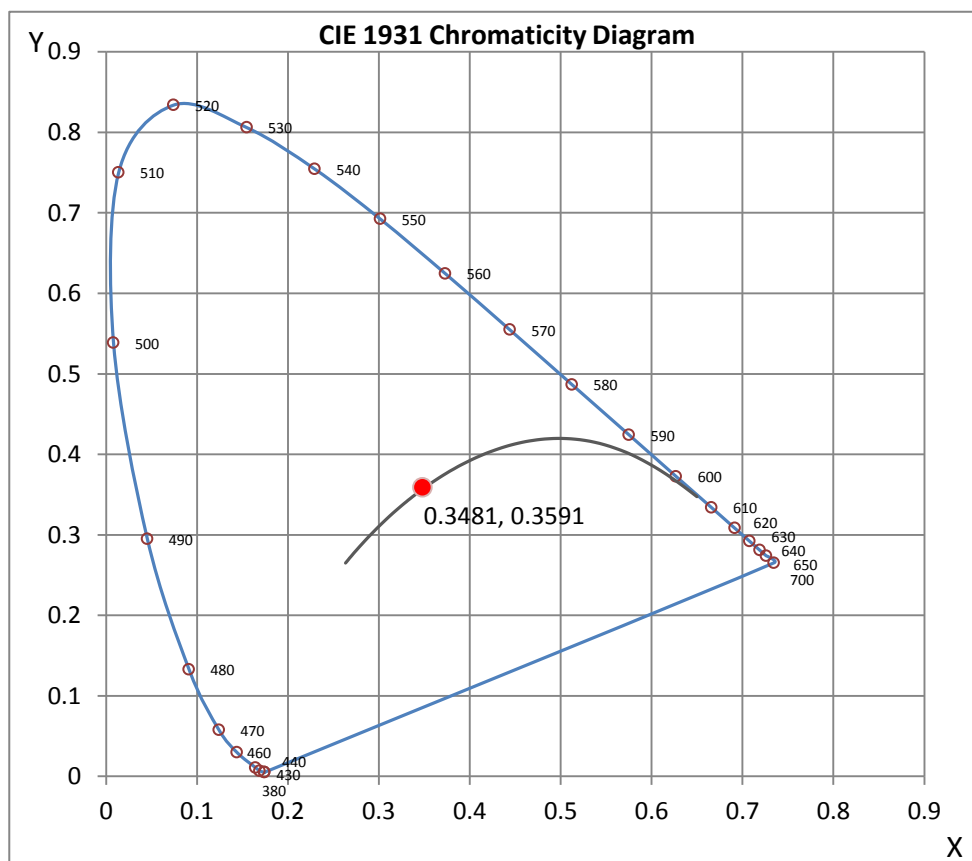
Wavelength	W/m ² nm	440	0.8840	510	0.4293	580	0.6876	650	0.2854	720	0.0462
380	0.0012	450	0.8277	520	0.5460	590	0.6662	660	0.2276	730	0.0350
390	0.0020	460	0.3468	530	0.6138	600	0.6259	670	0.1775	740	0.0265
400	0.0059	470	0.1751	540	0.6489	610	0.5665	680	0.1376	750	0.0201
410	0.0311	480	0.1269	550	0.6704	620	0.4971	690	0.1057	760	0.0153
420	0.1666	490	0.1614	560	0.6866	630	0.4223	700	0.0803	770	0.0117
430	0.5072	500	0.2810	570	0.6942	640	0.3505	710	0.0610	780	0.0103

CRI & CCT

x	0.3481
y	0.3591
u'	0.2106
v'	0.4887
CRI	73.00
CCT	4914
Duv	0.00255

R Values

R1	71.35
R2	76.44
R3	80.45
R4	74.70
R5	71.67
R6	68.14
R7	80.81
R8	60.35
R9	-18.94
R10	44.27
R11	72.92
R12	47.20
R13	71.33
R14	88.49





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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: 17*

**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 : L091603905.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L091603905
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 9/30/2016
[MANUFAC] Leotek Electronics USA, LLC
[LUMCAT] GCJ2-20H-MV-CW-5-XX-1A
[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, 68.09W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type VS
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7466
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	110
Total Luminaire Watts	68.09
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	2959
Maximum Candela Angle	50H 66.5V
Maximum Candela (<90 Degrees Vertical)	2959
Maximum Candela Angle (<90 Degrees Vertical)	50H 66.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	118 (1.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L091603905.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	418.8	N.A.	5.6
FM - Front-Medium (30-60)	1732.4	N.A.	23.2
FH - Front-High (60-80)	1564.4	N.A.	21.0
FVH - Front-Very High (80-90)	17.2	N.A.	0.2
BL - Back-Low (0-30)	418.8	N.A.	5.6
BM - Back-Medium (30-60)	1732.4	N.A.	23.2
BH - Back-High (60-80)	1564.4	N.A.	21.0
BVH - Back-Very High (80-90)	17.2	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	7465.6	N.A.	100.0
BUG Rating	B3-U0-G1		

ZONAL LUMEN SUMMARY

Zone	%
0-20	4.4
0-30	11.2
0-40	21.6
0-60	57.6
0-80	99.5
0-90	100
10-90	99
20-40	17.2
20-50	31.3
40-70	66.2
60-80	41.9
70-80	11.7
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

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	10	15	20	25	30	35	40	45
0.0	737	737	737	737	737	737	737	737	737	737
0.5	738	738	738	737	737	737	737	738	737	737
1.0	738	738	738	738	738	738	738	738	738	737
1.5	739	739	739	739	739	739	739	739	738	738
2.0	740	741	740	740	740	740	740	740	739	738
2.5	742	742	742	741	742	741	741	741	741	740
3.0	745	745	744	744	744	744	744	744	743	742
3.5	748	748	747	747	747	747	747	747	746	745
4.0	751	752	751	750	751	751	751	751	750	749
4.5	755	755	755	754	755	755	754	755	754	753
5.0	759	759	758	758	759	759	759	759	758	757
5.5	763	764	763	763	764	763	763	764	763	762
6.0	768	769	768	768	769	769	768	769	768	767
6.5	773	773	773	773	774	774	774	774	774	773
7.0	778	779	778	778	779	779	780	780	779	779
7.5	784	784	783	784	785	785	786	786	785	785
8.0	790	790	789	790	791	792	792	793	792	792
8.5	796	796	795	796	798	798	799	800	799	799
9.0	802	802	802	802	804	805	806	807	807	806
9.5	808	809	808	809	811	812	813	815	814	814
10.0	814	815	815	816	818	819	821	822	822	822
10.5	821	822	822	823	826	827	828	830	830	830
11.0	827	828	828	830	833	834	836	839	839	838
11.5	834	835	835	837	840	842	844	847	847	847
12.0	840	842	842	844	848	850	852	856	856	856
12.5	847	848	849	851	855	858	861	864	865	864
13.0	854	855	856	859	863	866	869	873	874	874
13.5	860	862	863	866	870	874	878	882	884	883
14.0	867	868	870	873	878	882	887	891	893	893
14.5	874	875	877	880	886	890	895	901	903	903
15.0	881	882	884	888	894	898	904	910	912	912
15.5	888	889	891	895	901	907	913	919	922	923
16.0	895	897	899	903	909	915	922	929	932	933
16.5	902	904	906	910	918	923	931	939	942	943
17.0	909	911	914	918	926	931	940	949	953	953
17.5	917	919	921	926	934	940	949	958	963	964
18.0	924	926	929	934	942	949	958	968	974	975
18.5	932	934	937	942	950	957	967	978	985	986
19.0	940	942	945	950	959	966	977	988	995	997
19.5	948	950	953	958	967	976	987	999	1006	1008
20.0	956	958	961	967	976	985	997	1009	1017	1019
20.5	966	967	970	976	986	995	1007	1019	1028	1031
21.0	975	977	980	986	996	1005	1017	1030	1039	1042
21.5	984	986	989	995	1006	1015	1028	1041	1050	1053
22.0	994	996	999	1005	1016	1026	1038	1052	1062	1065
22.5	1003	1005	1009	1015	1026	1037	1049	1063	1073	1076
23.0	1011	1014	1018	1025	1036	1048	1061	1074	1084	1088
23.5	1020	1023	1027	1034	1047	1059	1073	1086	1096	1099
24.0	1028	1031	1035	1044	1057	1071	1085	1098	1107	1111
24.5	1036	1039	1044	1053	1068	1082	1097	1111	1119	1123
25.0	1044	1047	1053	1063	1078	1093	1109	1123	1132	1136
25.5	1052	1055	1061	1071	1087	1104	1121	1136	1147	1152
26.0	1059	1062	1068	1080	1097	1114	1133	1150	1163	1169

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CANDELA TABULATION - (Cont.)

26.5	1066	1070	1076	1088	1106	1124	1144	1164	1179	1185
27.0	1073	1077	1084	1096	1115	1134	1156	1177	1195	1202
27.5	1080	1084	1091	1104	1124	1144	1167	1190	1210	1219
28.0	1087	1090	1098	1112	1132	1152	1176	1203	1226	1236
28.5	1093	1097	1105	1119	1140	1160	1186	1215	1240	1252
29.0	1099	1103	1111	1126	1148	1168	1194	1227	1254	1267
29.5	1105	1109	1117	1133	1156	1176	1203	1238	1268	1282
30.0	1111	1114	1123	1140	1163	1183	1211	1249	1280	1295
30.5	1116	1120	1129	1146	1169	1190	1218	1257	1290	1305
31.0	1121	1125	1134	1151	1175	1197	1225	1264	1297	1313
31.5	1125	1129	1139	1157	1181	1203	1231	1270	1305	1321
32.0	1130	1134	1143	1162	1187	1210	1238	1276	1311	1327
32.5	1134	1138	1148	1166	1192	1215	1244	1282	1316	1333
33.0	1138	1142	1151	1170	1196	1221	1249	1286	1320	1336
33.5	1141	1145	1155	1174	1200	1225	1255	1290	1323	1338
34.0	1144	1148	1158	1178	1205	1230	1260	1293	1325	1340
34.5	1147	1151	1162	1182	1208	1234	1264	1296	1328	1342
35.0	1150	1154	1165	1185	1212	1239	1269	1299	1330	1343
35.5	1153	1158	1169	1189	1216	1242	1273	1302	1332	1345
36.0	1156	1161	1172	1192	1219	1246	1276	1306	1334	1347
36.5	1160	1164	1176	1196	1223	1249	1279	1309	1336	1348
37.0	1163	1168	1180	1200	1227	1252	1282	1312	1337	1350
37.5	1167	1172	1183	1204	1230	1256	1285	1315	1339	1352
38.0	1172	1176	1188	1208	1234	1260	1289	1318	1342	1354
38.5	1176	1181	1192	1212	1239	1263	1292	1321	1344	1356
39.0	1181	1186	1197	1216	1243	1267	1295	1324	1347	1358
39.5	1187	1191	1202	1221	1248	1271	1299	1327	1350	1361
40.0	1192	1197	1207	1226	1252	1276	1303	1330	1353	1364
40.5	1199	1203	1214	1232	1258	1281	1307	1333	1356	1367
41.0	1205	1210	1220	1238	1263	1286	1311	1337	1360	1371
41.5	1213	1217	1227	1244	1269	1291	1316	1341	1364	1375
42.0	1220	1224	1235	1251	1276	1297	1321	1346	1368	1379
42.5	1229	1233	1243	1259	1283	1303	1327	1351	1373	1384
43.0	1238	1242	1252	1268	1291	1310	1333	1356	1378	1389
43.5	1249	1253	1262	1277	1300	1318	1340	1363	1385	1395
44.0	1260	1263	1273	1288	1309	1327	1347	1370	1391	1401
44.5	1272	1275	1284	1298	1319	1336	1356	1378	1399	1409
45.0	1284	1287	1295	1310	1330	1347	1365	1387	1407	1417
45.5	1297	1300	1308	1323	1343	1359	1376	1397	1416	1426
46.0	1311	1314	1322	1336	1357	1373	1389	1409	1427	1437
46.5	1326	1329	1336	1351	1372	1387	1402	1421	1439	1448
47.0	1340	1343	1351	1365	1387	1402	1416	1435	1452	1461
47.5	1355	1359	1366	1380	1403	1418	1432	1450	1466	1475
48.0	1371	1374	1381	1396	1419	1436	1451	1469	1484	1492
48.5	1386	1390	1397	1412	1436	1455	1471	1489	1504	1511
49.0	1402	1406	1413	1428	1453	1474	1492	1510	1525	1532
49.5	1419	1422	1430	1445	1471	1495	1513	1533	1547	1554
50.0	1436	1439	1447	1463	1490	1516	1537	1557	1572	1578
50.5	1454	1457	1465	1482	1511	1539	1562	1584	1601	1607
51.0	1472	1475	1484	1503	1532	1563	1588	1613	1632	1638
51.5	1491	1494	1504	1524	1555	1588	1616	1643	1664	1671
52.0	1511	1514	1524	1545	1578	1614	1645	1674	1699	1706
52.5	1532	1535	1545	1568	1603	1642	1675	1708	1735	1744
53.0	1557	1560	1571	1595	1632	1673	1710	1746	1777	1787
53.5	1582	1586	1598	1623	1663	1706	1746	1786	1821	1833
54.0	1609	1612	1625	1651	1695	1739	1784	1828	1866	1880

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CANDELA TABULATION - (Cont.)

54.5	1635	1639	1652	1680	1727	1773	1822	1871	1912	1929
55.0	1662	1666	1680	1710	1760	1809	1862	1915	1960	1979
55.5	1689	1695	1710	1742	1794	1848	1905	1964	2012	2032
56.0	1716	1723	1739	1774	1829	1887	1949	2013	2065	2087
56.5	1739	1747	1767	1807	1865	1927	1994	2064	2119	2143
57.0	1760	1770	1793	1838	1901	1967	2039	2115	2175	2199
57.5	1778	1788	1814	1865	1936	2009	2084	2166	2231	2257
58.0	1794	1804	1832	1888	1968	2050	2129	2217	2287	2315
58.5	1805	1816	1847	1905	1995	2088	2177	2268	2343	2372
59.0	1813	1826	1860	1921	2019	2123	2224	2319	2398	2429
59.5	1819	1832	1869	1933	2037	2153	2268	2370	2454	2486
60.0	1823	1836	1875	1943	2051	2179	2309	2420	2508	2541
60.5	1825	1839	1879	1949	2063	2196	2342	2468	2560	2595
61.0	1828	1842	1882	1953	2072	2210	2370	2513	2611	2647
61.5	1832	1847	1885	1955	2076	2221	2390	2550	2660	2695
62.0	1838	1853	1889	1958	2077	2229	2404	2581	2706	2741
62.5	1848	1863	1897	1963	2077	2229	2411	2607	2746	2785
63.0	1859	1874	1905	1969	2076	2227	2413	2626	2781	2827
63.5	1874	1889	1917	1978	2078	2222	2409	2632	2805	2865
64.0	1888	1903	1930	1986	2081	2217	2402	2631	2820	2899
64.5	1900	1915	1942	1996	2086	2215	2393	2625	2824	2925
65.0	1906	1922	1949	2001	2088	2211	2381	2615	2821	2944
65.5	1895	1913	1941	1995	2083	2205	2371	2601	2812	2948
66.0	1876	1896	1926	1983	2072	2195	2358	2584	2798	2945
66.5	1852	1871	1902	1960	2049	2175	2341	2562	2781	2935
67.0	1823	1841	1873	1930	2020	2148	2319	2535	2759	2918
67.5	1788	1805	1836	1892	1982	2113	2288	2503	2727	2889
68.0	1748	1764	1794	1848	1939	2072	2250	2466	2689	2852
68.5	1703	1719	1748	1799	1886	2018	2201	2422	2643	2805
69.0	1655	1671	1697	1746	1829	1958	2147	2373	2591	2750
69.5	1603	1618	1645	1691	1771	1895	2086	2315	2535	2686
70.0	1542	1557	1585	1630	1709	1828	2019	2252	2473	2615
70.5	1458	1475	1506	1558	1639	1761	1948	2181	2401	2537
71.0	1359	1378	1413	1474	1559	1687	1871	2105	2324	2455
71.5	1231	1252	1291	1359	1457	1596	1783	2025	2247	2372
72.0	1090	1113	1156	1231	1342	1493	1685	1935	2165	2281
72.5	934	956	1004	1084	1199	1362	1562	1824	2073	2171
73.0	782	803	853	935	1050	1220	1428	1698	1966	2047
73.5	667	686	728	797	904	1070	1279	1547	1817	1895
74.0	559	575	611	666	763	918	1124	1385	1647	1728
74.5	433	452	497	552	638	773	962	1211	1445	1536
75.0	313	333	388	445	521	633	802	1033	1238	1339
75.5	225	240	286	342	410	510	655	851	1044	1148
76.0	155	164	198	251	309	398	518	675	858	961
76.5	119	124	149	191	234	302	397	526	690	783
77.0	96	99	115	145	173	219	291	393	534	616
77.5	82	84	95	116	136	166	214	289	396	468
78.0	74	75	82	96	109	127	153	204	277	339
78.5	65	66	72	82	92	104	120	152	201	246
79.0	59	60	64	73	80	89	98	116	147	176
79.5	54	55	58	66	71	77	84	96	117	141
80.0	50	51	54	60	64	67	73	83	99	118
80.5	47	47	49	55	57	59	64	70	82	98
81.0	44	44	46	50	52	53	56	61	70	82
81.5	42	42	43	46	48	49	51	54	61	70
82.0	40	41	41	43	45	45	47	50	55	61

IES ROAD REPORT
PHOTOMETRIC FILENAME : L091603905.IES

CANDELA TABULATION - (Cont.)

82.5	39	40	40	41	43	43	44	46	51	54
83.0	37	37	38	38	40	40	40	41	44	46
83.5	36	36	36	36	37	36	37	37	39	40
84.0	34	34	34	34	34	34	34	34	34	35
84.5	33	33	33	33	32	32	31	31	31	31
85.0	32	32	31	31	31	30	29	29	28	28
85.5	31	31	31	30	30	29	28	27	26	25
86.0	30	30	30	30	29	28	26	25	24	23
86.5	30	30	30	29	28	27	25	24	23	22
87.0	29	29	29	28	27	26	24	22	21	21
87.5	28	28	27	27	26	24	22	21	20	20
88.0	23	23	23	22	21	20	19	17	17	16
88.5	18	18	18	17	17	16	15	14	13	13
89.0	12	12	12	12	11	11	10	10	9	9
89.5	6	6	6	6	6	6	5	5	5	5
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	737	737	737	737	737	737	737	737	737
0.5	737	737	737	737	737	737	737	737	737
1.0	738	737	737	737	737	737	738	737	738
1.5	738	738	737	737	738	738	738	738	738
2.0	739	738	738	738	738	739	739	739	739
2.5	740	739	739	739	739	740	740	740	740
3.0	743	742	741	741	742	742	742	742	742
3.5	746	745	745	744	745	745	746	745	746
4.0	749	749	748	748	748	749	749	749	749
4.5	753	753	752	752	752	752	753	753	753
5.0	758	757	756	756	756	756	757	757	757
5.5	762	762	761	761	761	761	761	761	761
6.0	768	767	766	765	765	766	766	765	765
6.5	773	772	771	771	771	771	771	770	770
7.0	779	778	777	776	776	776	776	775	775
7.5	785	784	783	782	781	781	781	780	780
8.0	792	791	789	788	787	787	787	786	786
8.5	799	798	796	795	794	793	793	792	791
9.0	806	805	803	801	800	799	799	798	797
9.5	814	812	810	808	807	806	805	804	804
10.0	821	819	817	815	814	812	811	810	810
10.5	829	827	825	823	820	819	818	816	816
11.0	838	835	833	830	828	826	824	823	822
11.5	846	843	841	838	835	833	831	829	829
12.0	855	852	849	846	842	840	838	836	836
12.5	863	860	857	854	850	847	845	843	842
13.0	873	869	865	861	857	854	852	850	849
13.5	882	878	874	869	865	862	859	856	856
14.0	892	888	882	877	872	869	866	863	862
14.5	901	897	891	885	880	876	873	871	869
15.0	911	906	900	894	888	883	880	878	877
15.5	921	916	909	902	896	891	888	885	884
16.0	931	926	918	911	904	899	896	893	892
16.5	941	935	928	919	912	907	904	901	899
17.0	952	945	937	928	921	916	912	909	907
17.5	962	955	947	937	929	924	920	917	915

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

18.0	973	965	956	946	938	933	928	925	923
18.5	984	976	966	956	947	941	936	933	931
19.0	995	986	975	965	956	950	945	941	939
19.5	1006	997	985	975	966	959	953	949	947
20.0	1017	1007	995	984	975	968	962	957	956
20.5	1028	1018	1006	995	985	977	971	966	965
21.0	1039	1029	1016	1005	995	987	980	976	974
21.5	1050	1040	1027	1016	1005	996	990	985	983
22.0	1062	1051	1038	1026	1015	1006	999	995	993
22.5	1073	1062	1049	1037	1025	1016	1008	1004	1002
23.0	1085	1074	1061	1049	1036	1026	1018	1013	1011
23.5	1096	1086	1073	1060	1047	1036	1028	1023	1021
24.0	1108	1098	1086	1072	1058	1046	1038	1032	1030
24.5	1121	1111	1098	1084	1069	1056	1047	1041	1039
25.0	1133	1123	1110	1095	1079	1066	1057	1050	1048
25.5	1148	1137	1122	1106	1089	1075	1065	1058	1056
26.0	1164	1151	1135	1117	1099	1084	1073	1066	1064
26.5	1180	1165	1147	1127	1109	1092	1081	1074	1071
27.0	1196	1179	1158	1137	1118	1101	1089	1081	1078
27.5	1212	1193	1170	1147	1127	1109	1096	1088	1085
28.0	1227	1205	1180	1156	1135	1116	1103	1095	1092
28.5	1242	1218	1190	1165	1143	1123	1110	1101	1098
29.0	1256	1229	1199	1174	1151	1130	1116	1108	1104
29.5	1270	1241	1208	1182	1158	1137	1122	1114	1110
30.0	1283	1251	1217	1189	1165	1144	1128	1119	1116
30.5	1292	1259	1224	1196	1171	1150	1134	1125	1121
31.0	1300	1266	1231	1203	1177	1156	1139	1130	1126
31.5	1307	1272	1238	1209	1183	1162	1144	1134	1131
32.0	1313	1278	1244	1215	1189	1167	1149	1139	1135
32.5	1319	1284	1250	1220	1194	1172	1153	1143	1140
33.0	1322	1289	1255	1225	1199	1177	1157	1147	1143
33.5	1325	1293	1260	1230	1204	1180	1161	1150	1147
34.0	1328	1297	1264	1235	1208	1184	1165	1154	1150
34.5	1331	1301	1268	1239	1213	1188	1169	1157	1153
35.0	1333	1304	1273	1244	1217	1192	1172	1161	1157
35.5	1335	1307	1277	1248	1221	1195	1176	1165	1160
36.0	1337	1310	1281	1252	1224	1199	1180	1168	1164
36.5	1339	1313	1285	1257	1228	1203	1183	1172	1167
37.0	1341	1316	1289	1261	1232	1207	1187	1176	1171
37.5	1343	1319	1293	1265	1236	1211	1191	1180	1175
38.0	1345	1323	1297	1269	1240	1215	1196	1184	1180
38.5	1348	1326	1300	1273	1245	1220	1200	1189	1185
39.0	1350	1329	1304	1277	1249	1226	1205	1193	1190
39.5	1353	1332	1308	1282	1254	1231	1210	1198	1195
40.0	1356	1336	1312	1286	1259	1236	1216	1204	1200
40.5	1360	1340	1316	1291	1265	1242	1221	1209	1206
41.0	1364	1344	1321	1296	1270	1247	1227	1214	1212
41.5	1368	1349	1326	1301	1276	1253	1233	1220	1218
42.0	1373	1354	1331	1307	1282	1259	1239	1227	1224
42.5	1378	1359	1336	1313	1289	1265	1246	1234	1231
43.0	1384	1365	1342	1320	1296	1273	1255	1243	1240
43.5	1390	1371	1349	1327	1305	1282	1264	1253	1250
44.0	1396	1378	1356	1336	1313	1291	1274	1264	1261
44.5	1404	1386	1364	1344	1322	1301	1284	1275	1272
45.0	1412	1394	1373	1354	1333	1312	1295	1287	1283
45.5	1421	1404	1384	1366	1345	1324	1308	1299	1296

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

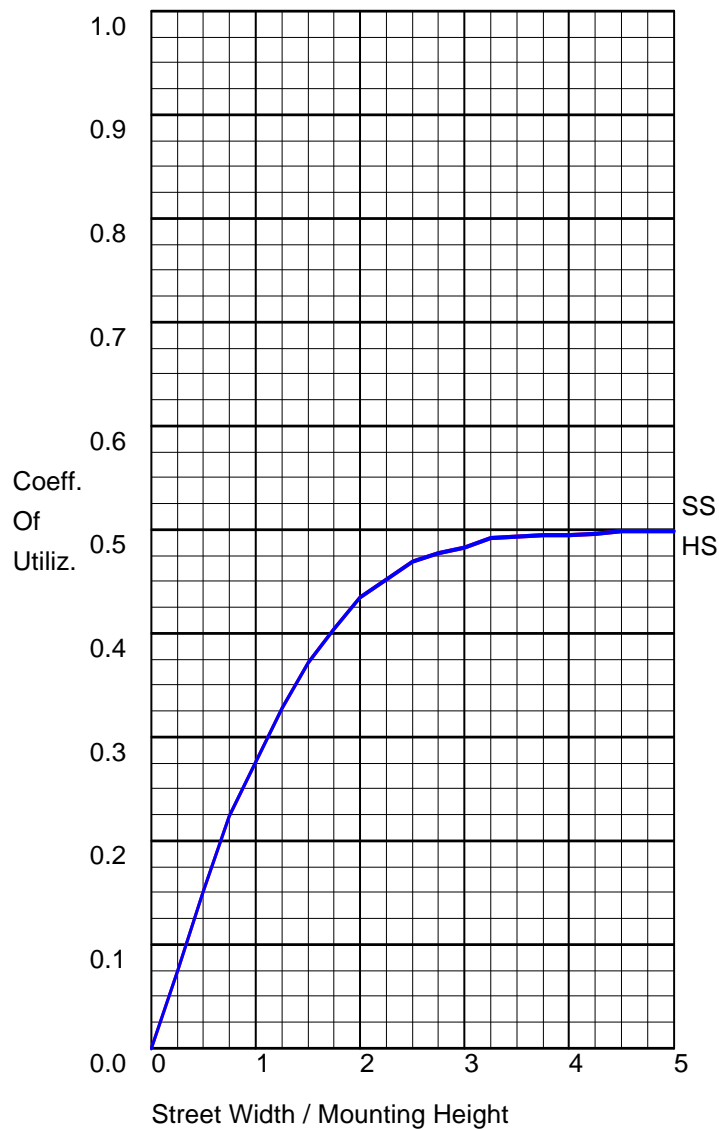
46.0	1432	1415	1396	1378	1358	1338	1322	1313	1310
46.5	1443	1427	1409	1392	1372	1352	1336	1327	1323
47.0	1456	1439	1423	1406	1386	1366	1350	1341	1338
47.5	1470	1454	1438	1421	1401	1381	1365	1356	1352
48.0	1487	1472	1455	1439	1418	1397	1380	1371	1368
48.5	1506	1491	1474	1457	1435	1414	1396	1386	1383
49.0	1526	1512	1494	1476	1453	1431	1412	1402	1399
49.5	1548	1533	1515	1496	1471	1448	1429	1419	1416
50.0	1572	1557	1537	1517	1490	1467	1447	1436	1433
50.5	1600	1583	1562	1539	1512	1486	1466	1455	1452
51.0	1630	1611	1588	1563	1534	1507	1486	1474	1472
51.5	1662	1640	1615	1588	1557	1528	1506	1494	1492
52.0	1695	1671	1643	1614	1581	1550	1528	1515	1513
52.5	1731	1703	1673	1641	1606	1573	1550	1537	1534
53.0	1772	1741	1708	1673	1635	1600	1575	1562	1559
53.5	1816	1780	1745	1706	1665	1628	1601	1587	1584
54.0	1861	1822	1783	1740	1696	1657	1628	1613	1609
54.5	1907	1864	1822	1775	1727	1687	1655	1639	1635
55.0	1955	1908	1862	1811	1759	1717	1683	1666	1662
55.5	2007	1956	1905	1848	1793	1748	1712	1693	1689
56.0	2060	2006	1948	1887	1828	1781	1742	1721	1717
56.5	2116	2057	1993	1926	1863	1813	1772	1750	1746
57.0	2172	2108	2039	1966	1898	1845	1802	1779	1775
57.5	2228	2162	2084	2006	1934	1877	1832	1809	1805
58.0	2285	2215	2130	2047	1969	1909	1863	1838	1834
58.5	2343	2267	2175	2086	2006	1942	1894	1868	1862
59.0	2399	2319	2221	2125	2042	1974	1924	1897	1891
59.5	2455	2371	2266	2164	2078	2006	1955	1926	1920
60.0	2509	2422	2311	2203	2113	2038	1985	1955	1949
60.5	2562	2471	2354	2241	2147	2068	2014	1983	1976
61.0	2613	2519	2395	2278	2179	2098	2042	2010	2002
61.5	2661	2564	2434	2312	2210	2127	2070	2036	2027
62.0	2707	2607	2471	2344	2240	2155	2096	2062	2054
62.5	2749	2644	2505	2376	2266	2183	2127	2093	2086
63.0	2787	2678	2537	2405	2291	2210	2155	2123	2117
63.5	2825	2710	2566	2431	2316	2237	2181	2148	2142
64.0	2858	2738	2592	2454	2339	2260	2202	2169	2162
64.5	2887	2762	2613	2472	2355	2274	2216	2181	2174
65.0	2911	2782	2629	2485	2364	2280	2222	2186	2178
65.5	2934	2797	2638	2488	2363	2276	2218	2181	2173
66.0	2951	2805	2640	2482	2351	2262	2204	2168	2159
66.5	2959	2806	2634	2464	2323	2228	2174	2139	2129
67.0	2956	2798	2617	2434	2284	2183	2135	2102	2091
67.5	2930	2776	2584	2388	2231	2128	2084	2057	2048
68.0	2891	2743	2539	2330	2169	2067	2026	2005	1997
68.5	2831	2690	2478	2258	2096	1998	1959	1943	1934
69.0	2761	2625	2407	2178	2018	1925	1887	1874	1866
69.5	2683	2540	2325	2094	1939	1853	1812	1803	1794
70.0	2597	2442	2236	2006	1856	1776	1729	1721	1712
70.5	2500	2326	2141	1918	1771	1685	1627	1614	1607
71.0	2394	2202	2038	1824	1677	1581	1512	1493	1487
71.5	2275	2079	1921	1715	1551	1445	1366	1342	1339
72.0	2150	1951	1791	1594	1415	1301	1215	1187	1188
72.5	2024	1810	1629	1444	1269	1157	1080	1053	1052
73.0	1890	1660	1455	1286	1123	1016	946	922	918
73.5	1740	1489	1272	1134	991	883	810	786	779

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

74.0	1579	1315	1093	984	863	754	677	652	642
74.5	1398	1148	943	844	731	626	555	524	507
75.0	1210	988	801	707	602	504	440	402	380
75.5	1019	840	660	564	481	396	327	289	271
76.0	837	697	526	429	370	300	229	192	181
76.5	693	553	408	326	283	229	170	142	136
77.0	560	420	304	241	211	173	129	110	107
77.5	426	319	232	186	165	137	105	92	90
78.0	305	236	176	145	130	111	89	80	79
78.5	227	184	142	118	107	93	77	70	69
79.0	169	146	118	100	91	81	67	61	60
79.5	138	123	102	87	80	72	59	54	53
80.0	118	107	90	78	72	66	53	48	48
80.5	99	91	77	68	63	58	47	43	43
81.0	85	78	67	60	56	52	42	39	39
81.5	73	68	59	54	51	46	39	36	36
82.0	65	60	52	48	46	42	36	34	34
82.5	58	54	47	44	43	38	34	33	33
83.0	49	46	41	39	38	34	31	30	30
83.5	42	40	36	35	34	31	29	27	28
84.0	36	34	32	31	30	28	26	25	25
84.5	31	30	28	28	27	26	24	23	24
85.0	27	27	26	25	25	24	23	22	22
85.5	25	24	24	24	23	22	22	21	21
86.0	23	23	23	23	22	21	21	20	20
86.5	22	22	22	22	21	21	20	19	19
87.0	21	22	22	21	21	20	19	18	18
87.5	20	20	21	20	19	19	18	17	17
88.0	17	17	18	17	16	16	15	15	14
88.5	13	14	14	13	13	12	12	11	11
89.0	9	10	10	9	9	9	8	8	8
89.5	5	5	5	5	5	5	4	4	4
90.0	0	0	0	0	0	0	0	0	0

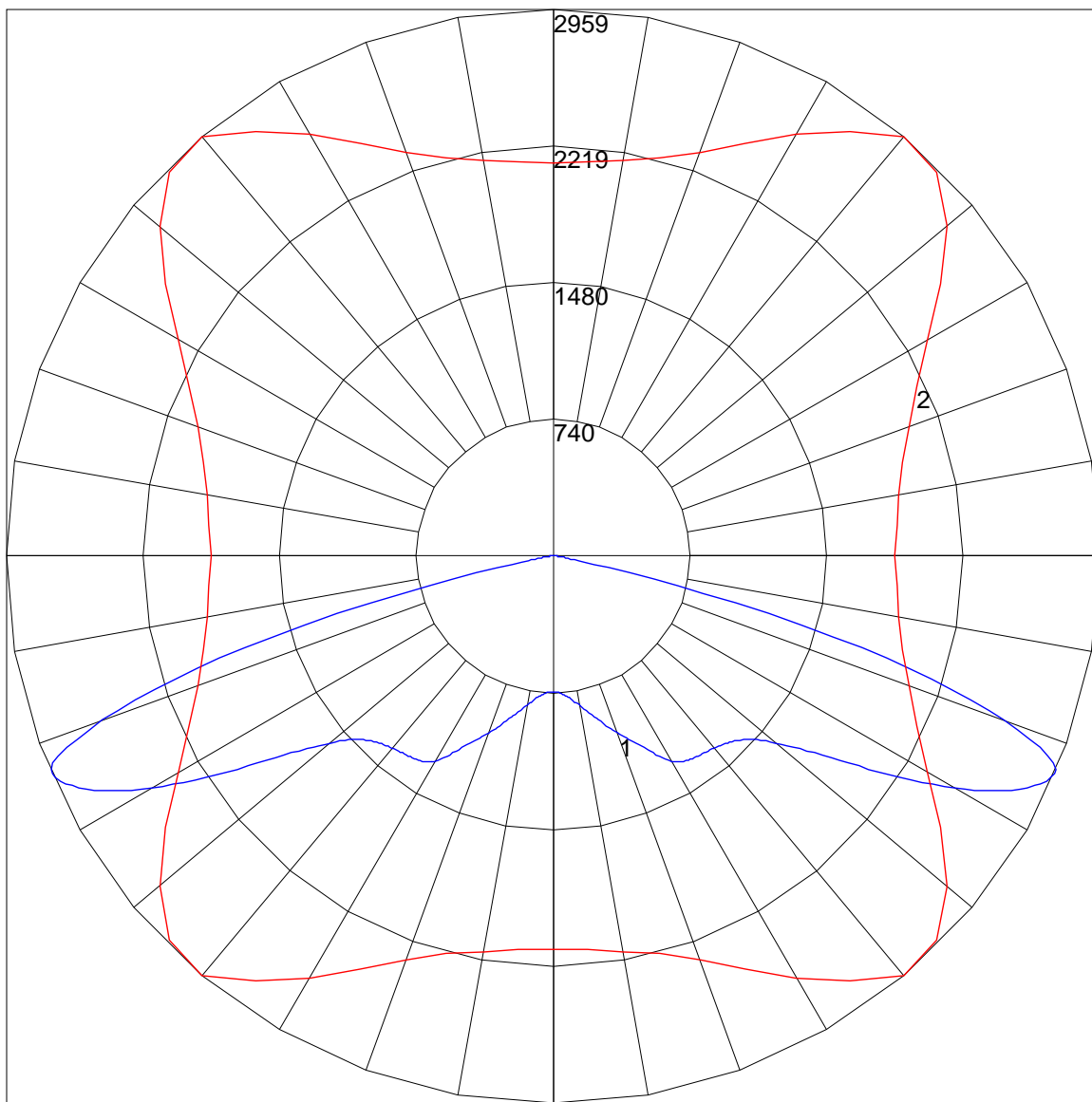
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

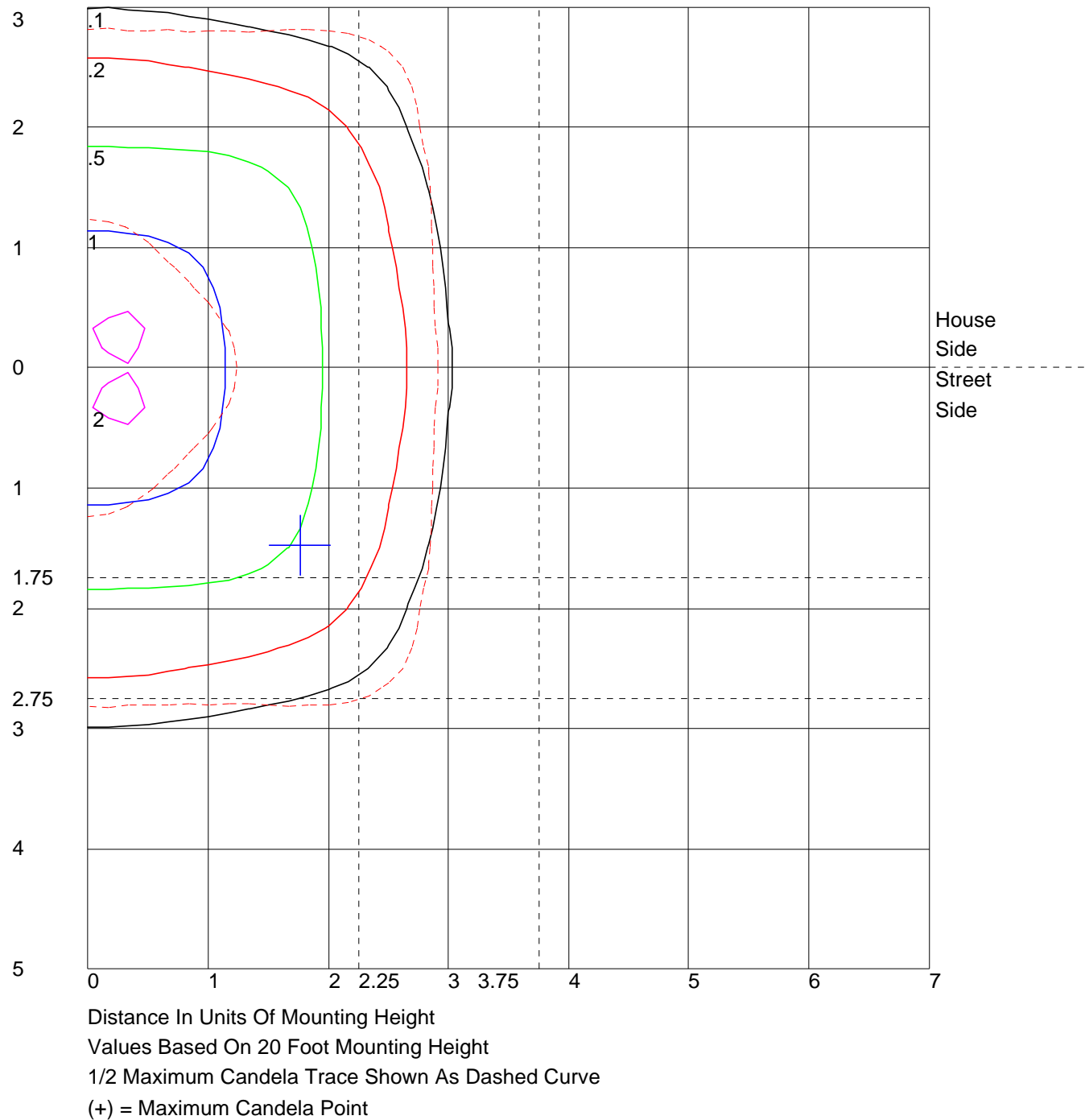
	Lumens	Percent Of Luminaire
Downward Street Side	3732.8	50.0
Downward House Side	3732.8	50.0
Downward Total	7465.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	7465.6	100.0

POLAR GRAPH

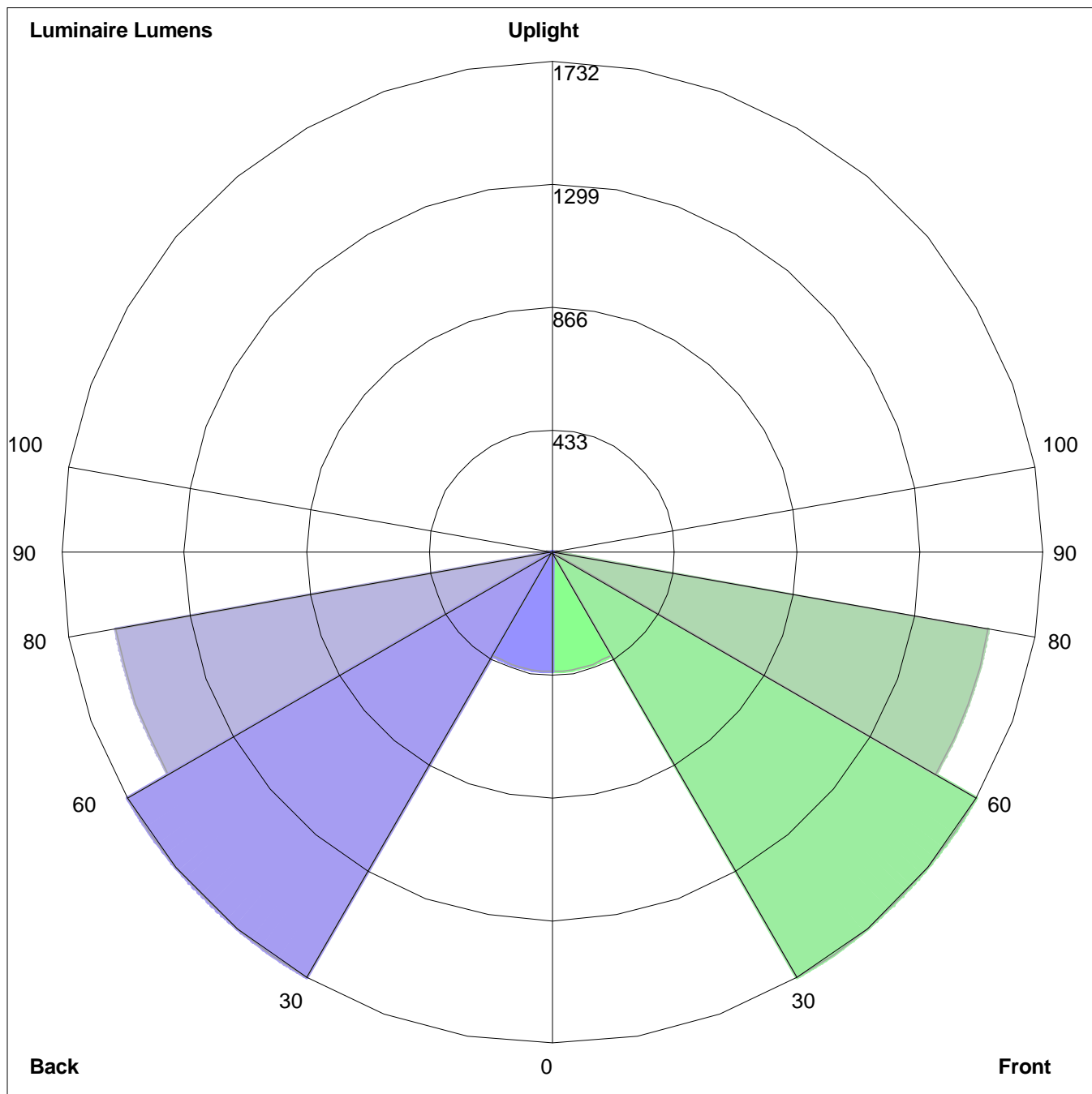


Maximum Candela = 2959 Located At Horizontal Angle = 50, Vertical Angle = 66.5
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (66.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=418.8, Medium=1732.4, High=1564.4, Very High=17.2
Back: Low=418.8, Medium=1732.4, High=1564.4, Very High=17.2
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G1