



## IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-18L-50.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]LED-8431\_Scaled  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]03/10/17  
[TEST DATE]01/09/17  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]HLN-3-LED-18L-50  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[\_ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED  
[OTHER]SCALED FROM ORIGINAL TEST DATA  
[\_SEARCH\_SOURCETYPE] LED  
[\_SEARCH\_APPLICATION] Outdoor

### CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	18641
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	154.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	19635.12
Maximum Candela Angle	60H 67.5V
Maximum Candela (<90 Degrees Vertical)	19635.12
Maximum Candela Angle (<90 Degrees Vertical)	60H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1006.029 (5.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	760.3	N.A.	4.1
FM - Front-Medium (30-60)	7318.5	N.A.	39.3
FH - Front-High (60-80)	6379.0	N.A.	34.2
FVH - Front-Very High (80-90)	146.4	N.A.	0.8
BL - Back-Low (0-30)	827.6	N.A.	4.4
BM - Back-Medium (30-60)	2148.7	N.A.	11.5
BH - Back-High (60-80)	979.0	N.A.	5.3
BVH - Back-Very High (80-90)	81.3	N.A.	0.4
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	18640.8	N.A.	100.0
BUG Rating	B2-U0-G3		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u>0</u>	<u>5</u>	<u>15</u>	<u>25</u>	<u>35</u>	<u>45</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>75</u>
0.0	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231
2.5	1703.128	1701.122	1700.119	1704.131	1708.143	1716.167	1719.176	1718.173	1727.201	1726.198
5.0	1630.911	1628.905	1628.905	1640.941	1655.986	1676.047	1690.089	1693.098	1709.146	1719.176
7.5	1525.593	1522.584	1528.603	1548.663	1574.741	1613.859	1646.959	1659.998	1686.077	1710.149
10.0	1418.270	1411.249	1425.291	1453.376	1491.491	1543.648	1595.805	1616.868	1655.986	1703.128
12.5	1317.968	1313.956	1330.005	1364.107	1411.249	1474.439	1547.660	1573.738	1623.889	1691.092
15.0	1239.733	1241.739	1258.790	1293.896	1347.056	1419.273	1504.530	1537.630	1592.796	1675.043
17.5	1235.721	1232.712	1245.751	1276.845	1325.993	1396.204	1481.461	1520.578	1575.744	1659.998
20.0	1370.125	1364.107	1365.110	1369.122	1398.210	1459.394	1527.600	1560.699	1607.841	1685.074
22.5	1655.986	1647.962	1635.926	1617.871	1612.856	1632.917	1667.019	1689.086	1722.185	1789.388
25.0	2011.055	2003.031	1995.007	1970.934	1938.838	1922.789	1911.756	1914.765	1925.798	1973.943
27.5	2423.296	2418.281	2408.251	2384.179	2347.067	2307.949	2251.780	2231.720	2213.665	2222.692
30.0	2831.526	2826.510	2824.504	2838.547	2799.429	2759.308	2663.018	2613.870	2571.743	2503.538
32.5	3231.731	3227.719	3235.743	3273.857	3287.900	3238.752	3105.350	3045.169	2953.894	2799.429
35.0	3607.863	3602.848	3620.902	3690.111	3746.280	3719.198	3557.712	3463.428	3316.987	3092.311
37.5	3997.035	3992.020	4037.156	4103.355	4190.618	4192.624	4001.047	3865.639	3659.017	3375.162
40.0	4445.385	4438.364	4478.485	4548.696	4641.977	4666.049	4450.400	4243.778	3970.956	3593.821
42.5	5019.112	5043.185	5041.179	5084.309	5153.517	5191.632	4874.677	4614.895	4253.808	3762.328
45.0	5872.682	5866.664	5809.492	5805.480	5785.420	5753.323	5322.024	4975.982	4526.629	3892.721
47.5	7005.092	6998.071	6911.811	6860.657	6662.059	6498.567	5843.595	5372.175	4822.520	4027.125
50.0	8731.290	8743.326	8717.247	8450.444	7967.991	7457.454	6460.452	5857.637	5177.589	4202.654
52.5	10724.290	10766.417	10953.982	10925.897	10078.345	8838.613	7279.920	6502.579	5659.039	4493.530
55.0	11932.930	12001.135	12561.823	13187.708	12676.167	10795.505	8489.562	7441.406	6418.325	5020.115
57.5	11821.594	11902.839	12859.720	14154.619	14634.063	13121.508	10172.629	8833.598	7632.983	6062.253
60.0	9795.494	9852.666	11275.951	13483.599	15752.430	15370.279	12539.757	11256.894	9821.572	7830.578
62.5	5768.368	5790.435	7117.430	10396.303	14419.416	16942.012	15806.593	14862.751	12884.796	9912.847
65.0	2089.291	2206.644	2984.988	5600.864	11245.861	16457.553	18339.219	17641.117	15544.805	11878.766
67.5	962.899	971.926	1239.733	2191.599	6798.470	13557.822	19240.934	19635.120	17697.286	12516.687
70.0	551.661	565.703	677.039	1102.319	3020.093	9000.099	16513.722	18133.599	16670.193	10463.505
72.5	385.160	398.199	487.468	737.220	1653.980	4661.034	10966.018	13034.246	12003.141	4989.022
75.0	287.867	296.894	369.111	592.785	1265.811	2276.856	5624.936	6578.808	4923.825	1260.796
77.5	227.686	234.707	298.900	519.564	1047.153	1406.234	2125.399	2183.575	1523.587	541.631
80.0	177.535	182.550	244.737	444.338	877.643	1006.029	995.999	995.999	761.292	311.939
82.5	125.378	132.399	192.580	341.027	683.057	714.150	550.658	504.519	434.308	225.680
85.0	93.281	99.299	146.441	280.846	469.413	450.356	307.927	298.900	276.834	166.501
87.5	79.239	79.239	99.299	212.640	317.957	218.658	172.519	171.516	166.501	118.356
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u>85</u>	<u>90</u>	<u>95</u>	<u>105</u>	<u>115</u>	<u>125</u>	<u>135</u>	<u>145</u>	<u>155</u>	<u>165</u>
0.0	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231	1737.231
2.5	1743.249	1737.231	1746.258	1757.291	1762.306	1769.327	1768.324	1770.330	1771.333	1773.339
5.0	1745.255	1744.252	1759.297	1782.367	1797.412	1812.457	1816.469	1825.496	1826.500	1826.500
7.5	1747.261	1751.273	1772.336	1807.442	1828.506	1846.560	1851.575	1868.626	1877.654	1886.681
10.0	1751.273	1761.303	1787.382	1831.515	1855.587	1878.657	1904.735	1927.805	1940.844	1946.862
12.5	1754.282	1767.321	1797.412	1848.566	1875.647	1921.786	1953.883	1976.953	1988.989	1991.998
15.0	1751.273	1768.324	1801.424	1856.590	1895.708	1958.898	1994.004	2016.070	2028.107	2028.107
17.5	1745.255	1763.309	1797.412	1855.587	1911.756	1983.974	2027.104	2047.164	2051.176	2045.158
20.0	1756.288	1767.321	1796.409	1850.572	1918.777	2000.022	2047.164	2059.200	2060.203	2051.176
22.5	1830.512	1820.481	1830.512	1855.587	1919.780	2009.049	2053.182	2062.209	2060.203	2046.161
25.0	1979.962	1942.850	1923.792	1878.657	1915.768	2013.061	2050.173	2055.188	2052.179	2040.143
27.5	2168.529	2095.309	2042.149	1917.774	1905.738	2012.058	2043.152	2044.155	2049.170	2046.161

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**CANDELA TABULATION - (Cont.)**

30.0	2371.139	2250.777	2156.493	1949.871	1890.693	2004.034	2029.110	2035.128	2065.218	2085.279
32.5	2583.780	2403.236	2256.795	1965.919	1869.629	1994.004	2010.052	2044.155	2127.406	2207.647
35.0	2797.423	2554.692	2347.067	1957.895	1834.524	1971.937	1994.004	2067.224	2198.620	2354.088
37.5	2991.006	2687.091	2415.272	1927.805	1785.376	1938.838	1967.925	2040.143	2178.560	2357.097
40.0	3147.477	2784.384	2448.372	1871.635	1721.182	1890.693	1902.729	1954.886	2119.381	2224.698
42.5	3253.797	2837.544	2441.351	1794.403	1644.953	1820.481	1829.509	1884.675	2061.206	2052.179
45.0	3314.981	2855.598	2404.239	1701.122	1556.687	1737.231	1770.330	1837.533	2040.143	1850.572
47.5	3363.126	2870.643	2368.130	1607.841	1464.409	1651.974	1720.179	1813.460	2000.022	1764.312
50.0	3445.374	2926.813	2373.145	1531.612	1378.150	1568.723	1671.031	1782.367	1943.853	1729.207
52.5	3618.896	3078.269	2470.438	1505.533	1315.962	1495.503	1615.865	1731.213	1874.644	1706.137
55.0	4071.258	3498.534	2772.347	1542.645	1277.848	1436.325	1552.675	1678.053	1765.315	1668.022
57.5	4959.934	4297.941	3323.005	1651.974	1264.808	1375.140	1492.494	1580.760	1618.874	1584.772
60.0	6276.899	5372.175	3879.682	1750.270	1242.742	1292.893	1416.264	1439.334	1428.301	1534.621
62.5	7992.064	6276.899	3869.651	1645.956	1171.527	1171.527	1293.896	1273.835	1224.687	1475.442
65.0	9385.259	6418.325	3281.882	1332.011	1011.044	1011.044	1114.355	1115.358	1031.105	1405.231
67.5	8840.619	5383.209	2277.859	930.803	800.410	816.458	893.691	958.887	860.591	1303.926
70.0	5536.671	2993.012	1185.570	599.806	602.815	631.903	700.108	811.443	747.250	1123.382
72.5	1519.575	806.428	442.332	395.190	457.377	491.480	557.679	691.081	648.954	867.612
75.0	495.492	336.012	262.791	302.912	369.111	403.214	457.377	553.667	468.410	592.785
77.5	253.764	203.613	194.586	258.779	301.909	333.003	359.081	377.136	335.009	432.302
80.0	173.522	156.471	167.504	221.667	252.761	234.707	225.680	292.882	254.767	309.933
82.5	134.405	117.353	139.420	197.595	187.565	161.486	177.535	214.646	152.459	215.649
85.0	97.293	89.269	124.374	178.538	126.381	117.353	125.378	115.347	83.251	137.414
87.5	65.196	69.208	116.350	135.408	82.248	71.214	68.205	68.205	52.157	73.220
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

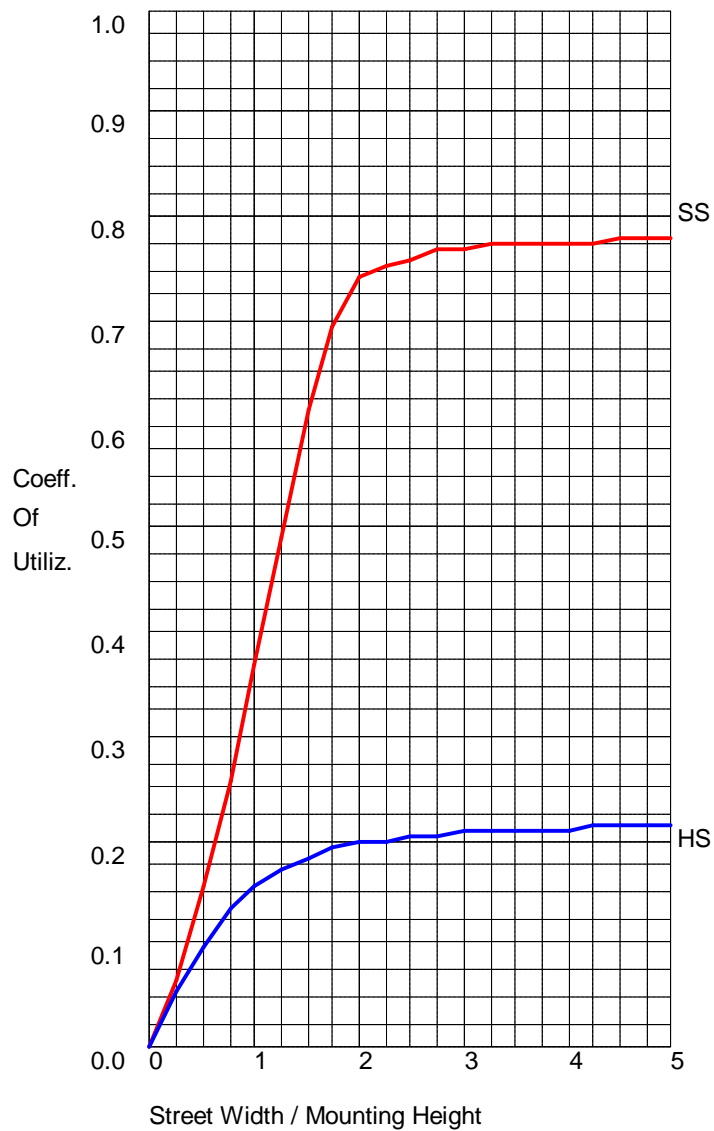
	<b>175</b>	<b>180</b>
0.0	1737.231	1737.231
2.5	1773.339	1768.324
5.0	1826.500	1821.484
7.5	1889.690	1885.678
10.0	1948.868	1943.853
12.5	1994.004	1988.989
15.0	2028.107	2023.091
17.5	2043.152	2037.134
20.0	2044.155	2040.143
22.5	2038.137	2035.128
25.0	2033.122	2029.110
27.5	2046.161	2043.152
30.0	2104.336	2102.330
32.5	2281.871	2285.883
35.0	2499.526	2511.562
37.5	2428.312	2423.296
40.0	2189.593	2167.526
42.5	1823.490	1792.397
45.0	1655.986	1625.895
47.5	1585.775	1553.678
50.0	1536.627	1507.539
52.5	1486.476	1448.361
55.0	1407.237	1357.086
57.5	1291.890	1225.690
60.0	1222.681	1126.392
62.5	1170.524	1042.138
65.0	1159.491	1000.011

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	1218.669	1055.177
<b>70.0</b>	1291.890	1171.527
<b>72.5</b>	1225.690	1186.573
<b>75.0</b>	1087.274	1197.606
<b>77.5</b>	899.709	1038.126
<b>80.0</b>	665.002	752.265
<b>82.5</b>	442.332	500.507
<b>85.0</b>	295.891	332.000
<b>87.5</b>	177.535	244.737
<b>90.0</b>	0.000	0.000

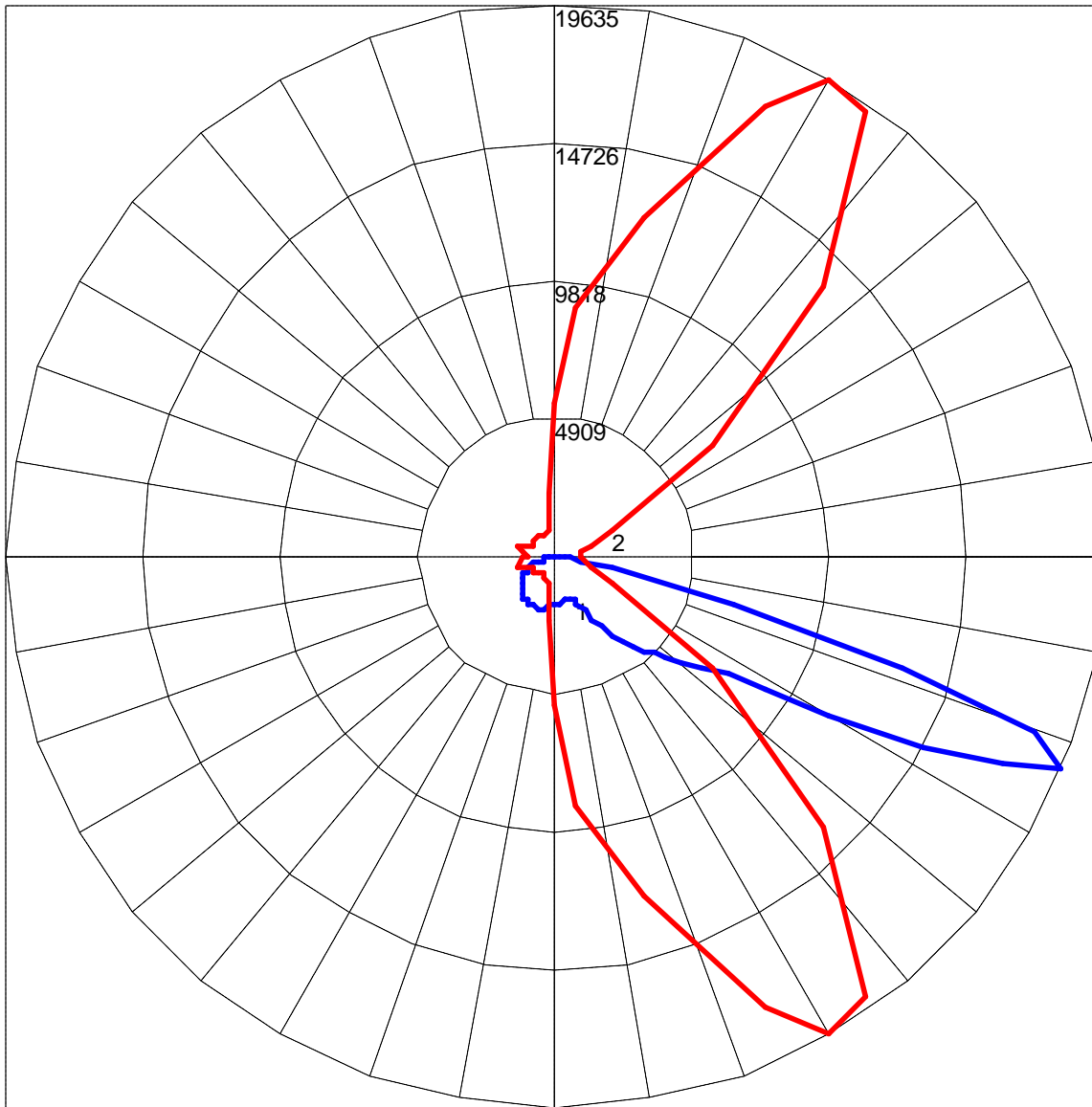
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

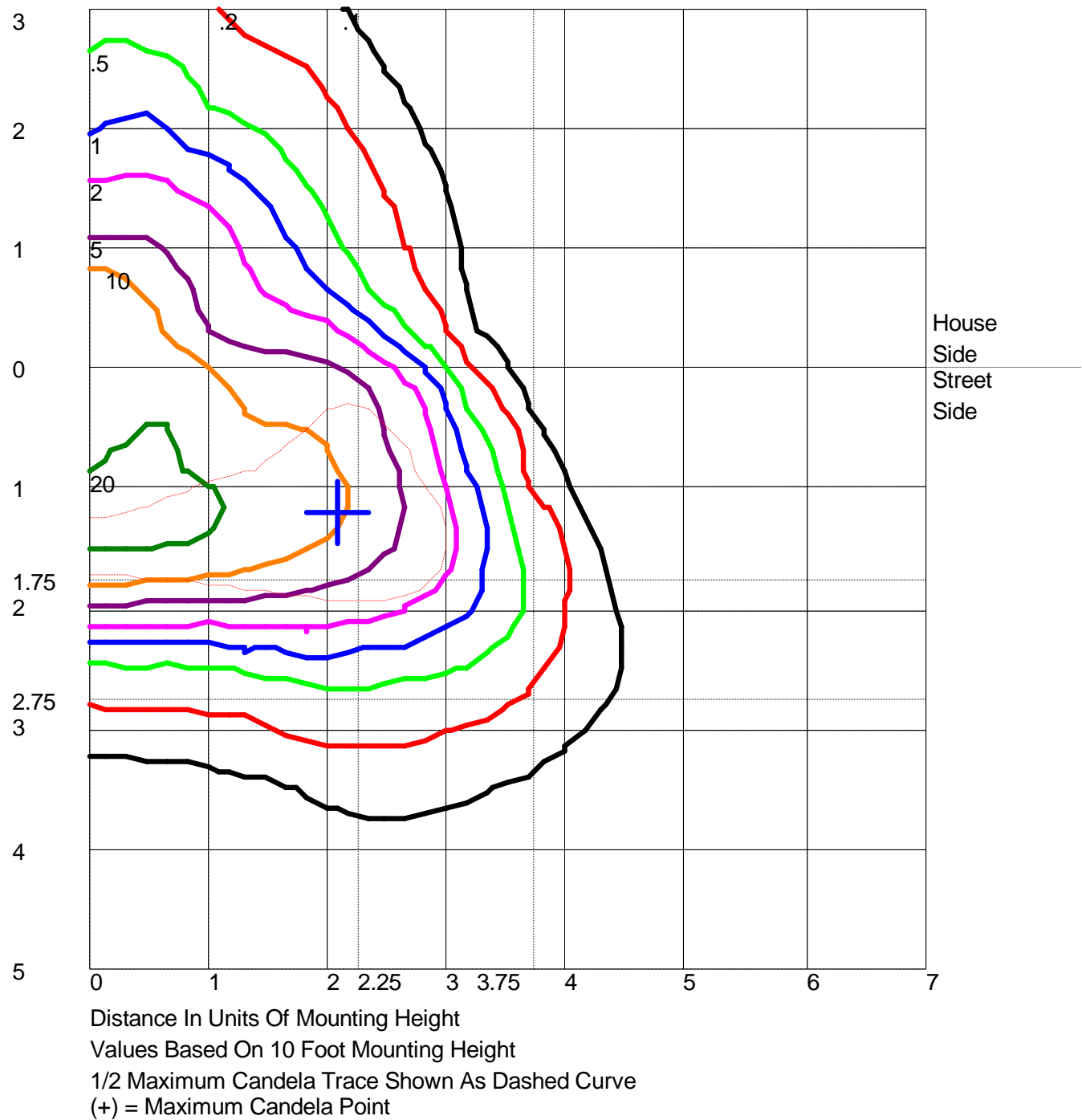
	Lumens	Percent Of Luminaire
Downward Street Side	14604.2	78.3
Downward House Side	4036.6	21.7
Downward Total	18640.8	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	18640.8	100.0

POLAR GRAPH



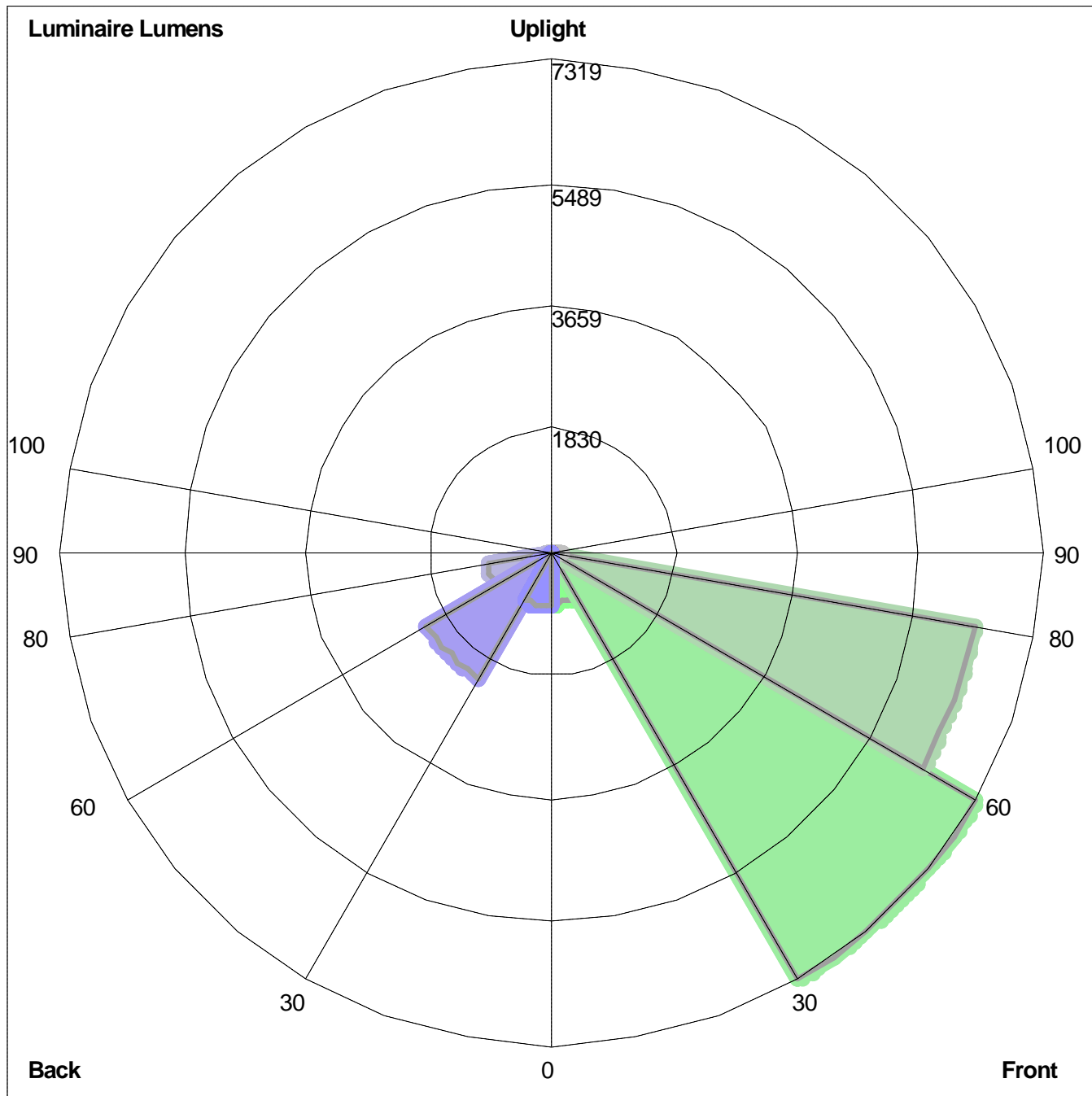
Maximum Candela = 19635.12 Located At Horizontal Angle = 60, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=760.3, Medium=7318.5, High= 6379.0, Very High=146.4  
Back: Low=827.6, Medium=2148.7, High=979.0, Very High=81.3  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3