



## IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-32L-30-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]LED-7762\_Scaled  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]04/03/17  
[TEST DATE]04/28/16  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT] HLN-3-LED-32L-30-IL  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Outdoor  
[OTHER]SCALED FROM ORIGINAL TEST DATA

### CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	24805
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	79
Total Luminaire Watts	314
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	31388.939
Maximum Candela Angle	55H 67.5V
Maximum Candela (<90 Degrees Vertical)	31388.939
Maximum Candela Angle (<90 Degrees Vertical)	55H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1708.953 (6.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1096.5	N.A.	4.4
FM - Front-Medium (30-60)	11220.9	N.A.	45.2
FH - Front-High (60-80)	10339.9	N.A.	41.7
FVH - Front-Very High (80-90)	201.4	N.A.	0.8
BL - Back-Low (0-30)	482.1	N.A.	1.9
BM - Back-Medium (30-60)	1085.2	N.A.	4.4
BH - Back-High (60-80)	372.2	N.A.	1.5
BVH - Back-Very High (80-90)	7.1	N.A.	0.0
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	24805.3	N.A.	100.0
BUG Rating	B2-U0-G4		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0.0</b></u>	<u><b>5.0</b></u>	<u><b>15.0</b></u>	<u><b>25.0</b></u>	<u><b>35.0</b></u>	<u><b>45.0</b></u>	<u><b>55.0</b></u>	<u><b>57.5</b></u>	<u><b>65.0</b></u>	<u><b>75.0</b></u>
<b>0.0</b>	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969
<b>2.5</b>	2206.738	2197.226	2165.520	2151.252	2124.302	2108.449	2071.987	2054.549	2037.110	1991.137
<b>5.0</b>	2425.509	2422.338	2412.827	2403.315	2381.121	2365.268	2309.782	2274.905	2216.249	2105.278
<b>7.5</b>	2360.512	2360.512	2368.438	2395.388	2408.071	2425.509	2417.582	2403.315	2357.341	2217.835
<b>10.0</b>	2201.982	2201.982	2219.420	2265.394	2317.709	2387.462	2438.191	2436.606	2431.850	2314.538
<b>12.5</b>	2049.793	2051.378	2071.987	2129.058	2194.055	2292.344	2395.388	2409.656	2447.703	2373.194
<b>15.0</b>	1924.554	1926.139	1953.090	2010.160	2097.352	2201.982	2320.879	2344.659	2433.435	2414.412
<b>17.5</b>	1853.216	1854.801	1884.922	1948.334	2040.281	2149.667	2278.076	2308.197	2420.753	2457.215
<b>20.0</b>	1889.678	1894.433	1929.310	2008.575	2091.011	2200.396	2327.220	2363.682	2477.824	2539.651
<b>22.5</b>	2138.570	2141.740	2173.446	2249.541	2308.197	2395.388	2509.530	2549.162	2645.866	2723.545
<b>25.0</b>	2653.792	2653.792	2695.010	2707.692	2728.301	2763.178	2877.319	2883.661	2966.096	3029.508
<b>27.5</b>	3346.568	3389.371	3392.542	3367.177	3341.812	3306.936	3378.274	3379.860	3417.907	3427.419
<b>30.0</b>	4082.147	4128.121	4147.145	4142.389	4096.415	4010.809	4015.565	3998.127	3966.421	3849.108
<b>32.5</b>	4855.774	4835.165	4873.212	4909.674	4908.089	4870.042	4765.412	4719.438	4565.664	4308.845
<b>35.0</b>	5456.602	5448.676	5539.038	5632.571	5700.739	5737.201	5572.329	5493.064	5212.466	4790.777
<b>37.5</b>	6019.384	6046.334	6149.379	6307.909	6449.000	6624.969	6398.271	6292.056	5865.610	5266.366
<b>40.0</b>	6669.357	6699.478	6808.863	6972.149	7194.091	7455.666	7273.356	7084.706	6501.315	5707.080
<b>42.5</b>	7506.395	7534.931	7658.584	7718.826	8016.862	8295.875	8083.445	7894.794	7079.950	6071.699
<b>45.0</b>	8598.667	8627.202	8752.441	8733.418	8956.945	9209.008	8887.192	8660.494	7609.440	6385.588
<b>47.5</b>	10019.096	10055.558	10209.332	10117.384	10271.158	10239.452	9690.939	9378.635	8161.124	6680.454
<b>50.0</b>	11940.479	12018.159	12351.072	12279.734	12100.595	11483.913	10507.368	10106.287	8674.761	7040.317
<b>52.5</b>	14814.628	14944.623	15313.998	15169.735	14713.169	13089.822	11468.060	10917.961	9291.443	7582.490
<b>55.0</b>	18140.588	18454.477	18814.340	18861.899	18183.391	15260.097	12683.985	12003.891	10174.455	8381.481
<b>57.5</b>	19708.449	19924.050	21132.049	22308.341	22183.102	18492.524	14587.930	13714.430	11560.007	9694.109
<b>60.0</b>	17650.730	18040.714	20206.233	23080.382	226514.142	23165.988	17482.688	16430.049	13776.257	11889.750
<b>62.5</b>	10466.150	10741.993	114721.096	20203.063	26458.656	27294.110	22002.378	21212.899	17062.584	14757.557
<b>65.0</b>	2985.120	3113.529	4835.165	11116.123	22130.788	27907.621	27127.653	26480.851	21036.931	17289.281
<b>67.5</b>	1190.560	1246.046	1680.418	3183.282	12503.261	24380.328	31388.939	31382.598	24120.339	18081.931
<b>70.0</b>	805.332	837.038	986.057	1645.541	4039.344	16342.857	28429.184	29944.731	25604.180	14971.573
<b>72.5</b>	649.973	678.508	762.529	1203.243	2338.317	7022.879	21441.182	23476.707	20212.575	8479.770
<b>75.0</b>	512.052	527.905	607.170	1022.518	1838.948	3394.127	10686.507	12596.794	10580.292	2607.818
<b>77.5</b>	391.569	415.349	481.931	894.109	1604.324	2087.840	3928.373	4968.330	3000.973	938.498
<b>80.0</b>	272.672	288.525	361.448	753.017	1352.261	1450.549	1491.767	1708.953	1253.972	502.540
<b>82.5</b>	163.286	172.798	237.795	621.438	1030.445	997.154	670.582	613.511	583.390	323.401
<b>85.0</b>	106.215	112.556	164.871	516.808	818.015	537.417	271.086	285.354	291.695	209.260
<b>87.5</b>	66.583	71.338	114.142	385.228	402.666	185.480	118.897	117.312	120.483	120.483
<b>90.0</b>	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><b>85.0</b></u>	<u><b>90.0</b></u>	<u><b>95.0</b></u>	<u><b>105.0</b></u>	<u><b>115.0</b></u>	<u><b>125.0</b></u>	<u><b>135.0</b></u>	<u><b>145.0</b></u>	<u><b>155.0</b></u>	<u><b>165.0</b></u>
<b>0.0</b>	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969	1922.969
<b>2.5</b>	1957.845	1940.407	1918.213	1872.239	1837.363	1799.315	1764.439	1713.709	1680.418	1685.174
<b>5.0</b>	1997.478	1940.407	1880.166	1759.683	1643.956	1539.326	1442.623	1383.967	1344.334	1331.652
<b>7.5</b>	2035.525	1938.822	1837.363	1637.615	1463.232	1341.164	1276.166	1227.022	1184.219	1157.269
<b>10.0</b>	2068.816	1929.310	1788.218	1512.376	1323.725	1233.363	1160.440	1108.125	1068.492	1041.542
<b>12.5</b>	2100.522	1916.628	1740.659	1399.820	1236.534	1139.831	1073.248	1028.860	992.398	973.374
<b>15.0</b>	2129.058	1902.360	1689.930	1314.214	1171.537	1084.345	1011.421	978.130	955.936	943.253
<b>17.5</b>	2159.179	1892.848	1640.785	1252.387	1127.148	1052.639	984.471	952.765	938.498	922.645
<b>20.0</b>	2219.420	1919.798	1628.103	1217.510	1127.148	1035.201	982.886	936.912	911.547	903.621
<b>22.5</b>	2389.047	2040.281	1704.197	1231.778	1173.122	1057.395	989.227	924.230	883.012	878.256
<b>25.0</b>	2642.695	2235.273	1869.069	1279.337	1234.949	1111.295	990.812	911.547	856.062	802.162
<b>27.5</b>	2959.755	2507.945	2062.475	1347.505	1296.775	1171.537	1008.251	887.768	733.994	623.023

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**CANDELA TABULATION - (Cont.)**

30.0	3276.815	2745.740	2238.444	1422.014	1352.261	1227.022	1011.421	757.773	570.708	543.758
32.5	3622.410	3019.996	2430.265	1490.182	1401.405	1269.825	941.668	630.949	550.099	561.196
35.0	3982.274	3284.742	2628.427	1531.400	1423.599	1284.093	821.185	616.682	553.270	577.049
37.5	4318.357	3538.390	2796.469	1545.667	1409.332	1206.413	792.650	588.146	502.540	504.125
40.0	4621.149	3757.161	2926.464	1529.814	1353.846	1055.810	778.382	548.514	431.202	402.666
42.5	4877.968	3928.373	3015.241	1482.255	1241.290	932.156	713.385	512.052	389.984	339.254
45.0	5085.642	4066.294	3069.141	1404.576	1028.860	745.091	615.096	470.834	416.934	302.792
47.5	5302.828	4227.995	3137.309	1301.531	748.262	540.587	478.761	415.349	396.325	286.939
50.0	5591.353	4483.228	3262.547	1188.975	548.514	396.325	359.863	378.887	383.643	280.598
52.5	6032.066	4896.992	3532.048	1109.710	416.934	315.475	280.598	334.498	345.595	286.939
55.0	6720.087	5597.694	3982.274	1052.639	374.131	280.598	233.039	280.598	271.086	304.378
57.5	7878.941	6559.971	4640.173	955.936	351.937	258.404	202.918	233.039	210.845	218.771
60.0	9728.986	7741.020	5003.207	822.771	332.913	228.283	175.968	166.456	126.824	169.627
62.5	12328.878	8620.861	4717.853	688.020	293.280	188.651	174.383	103.044	85.606	133.165
65.0	13639.921	8587.570	3500.342	556.440	228.283	166.456	125.239	80.850	61.827	128.409
67.5	13040.678	6965.808	2087.840	383.643	169.627	125.239	82.436	68.168	60.241	98.289
70.0	8511.476	4378.599	1038.371	247.307	125.239	76.094	50.730	55.485	45.974	72.924
72.5	3734.967	1745.415	385.228	158.530	91.947	44.388	38.047	36.462	30.121	49.144
75.0	936.912	594.487	233.039	117.312	58.656	33.291	23.779	23.779	11.097	19.024
77.5	445.469	296.451	161.701	84.021	34.877	22.194	12.682	7.926	3.171	4.756
80.0	275.842	196.577	118.897	55.485	19.024	9.512	7.926	4.756	1.585	0.000
82.5	183.895	133.165	85.606	31.706	9.512	9.512	7.926	3.171	0.000	0.000
85.0	117.312	91.947	60.241	17.438	9.512	7.926	6.341	3.171	0.000	0.000
87.5	66.583	49.144	30.121	9.512	11.097	11.097	9.512	4.756	1.585	0.000
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**

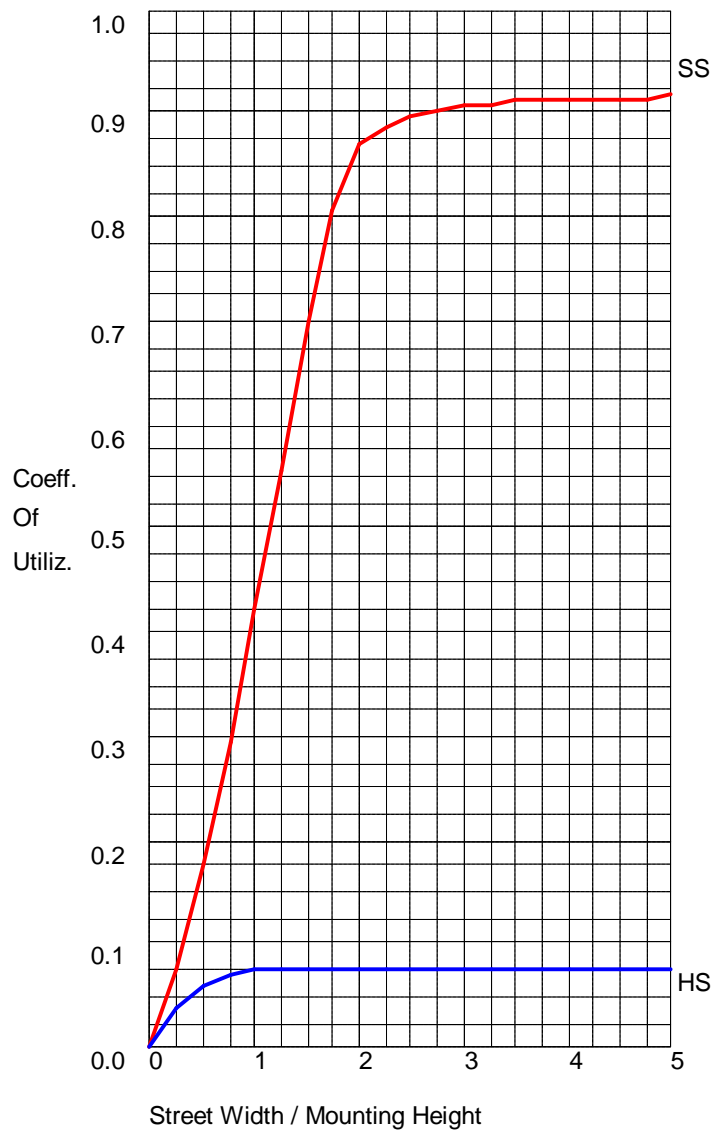
	<b>175.0</b>	<b>180.0</b>
0.0	1922.969	1922.969
2.5	1672.491	1675.662
5.0	1322.140	1318.970
7.5	1152.513	1149.342
10.0	1035.201	1028.860
12.5	965.448	960.692
15.0	938.498	930.571
17.5	916.303	908.377
20.0	894.109	884.597
22.5	868.744	860.818
25.0	759.359	749.847
27.5	577.049	569.123
30.0	546.928	542.173
32.5	586.561	578.634
35.0	619.852	613.511
37.5	516.808	508.881
40.0	389.984	377.301
42.5	293.280	290.110
45.0	263.160	255.233
47.5	239.380	234.624
50.0	217.186	207.674
52.5	228.283	220.357
55.0	223.527	212.430
57.5	137.921	117.312
60.0	106.215	88.777
62.5	91.947	71.338
65.0	112.556	85.606

**IES ROAD REPORT**  
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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	103.044	74.509
<b>70.0</b>	85.606	58.656
<b>72.5</b>	57.071	39.632
<b>75.0</b>	17.438	11.097
<b>77.5</b>	0.000	0.000
<b>80.0</b>	0.000	0.000
<b>82.5</b>	0.000	0.000
<b>85.0</b>	0.000	0.000
<b>87.5</b>	0.000	0.000
<b>90.0</b>	0.000	0.000

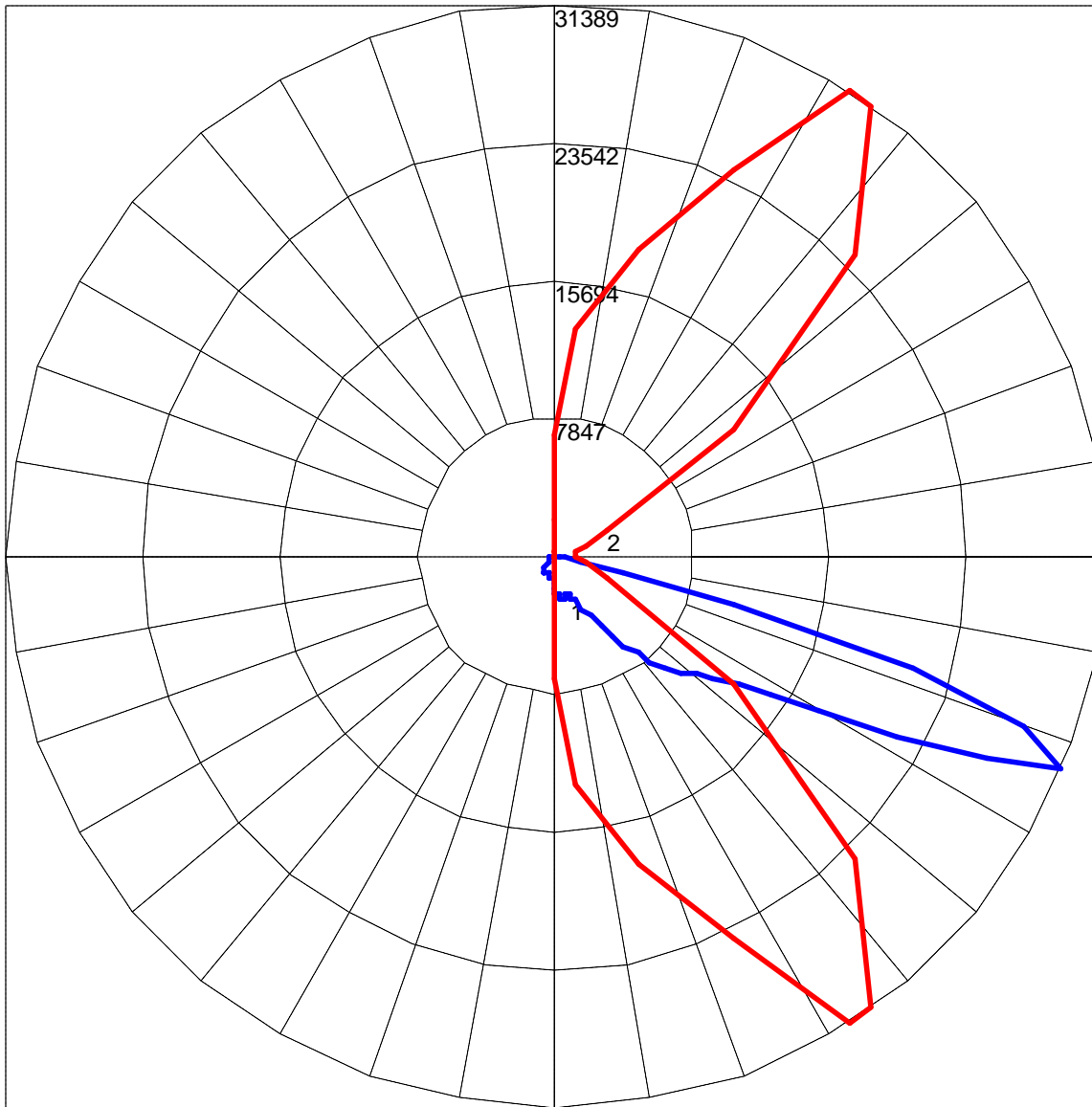
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

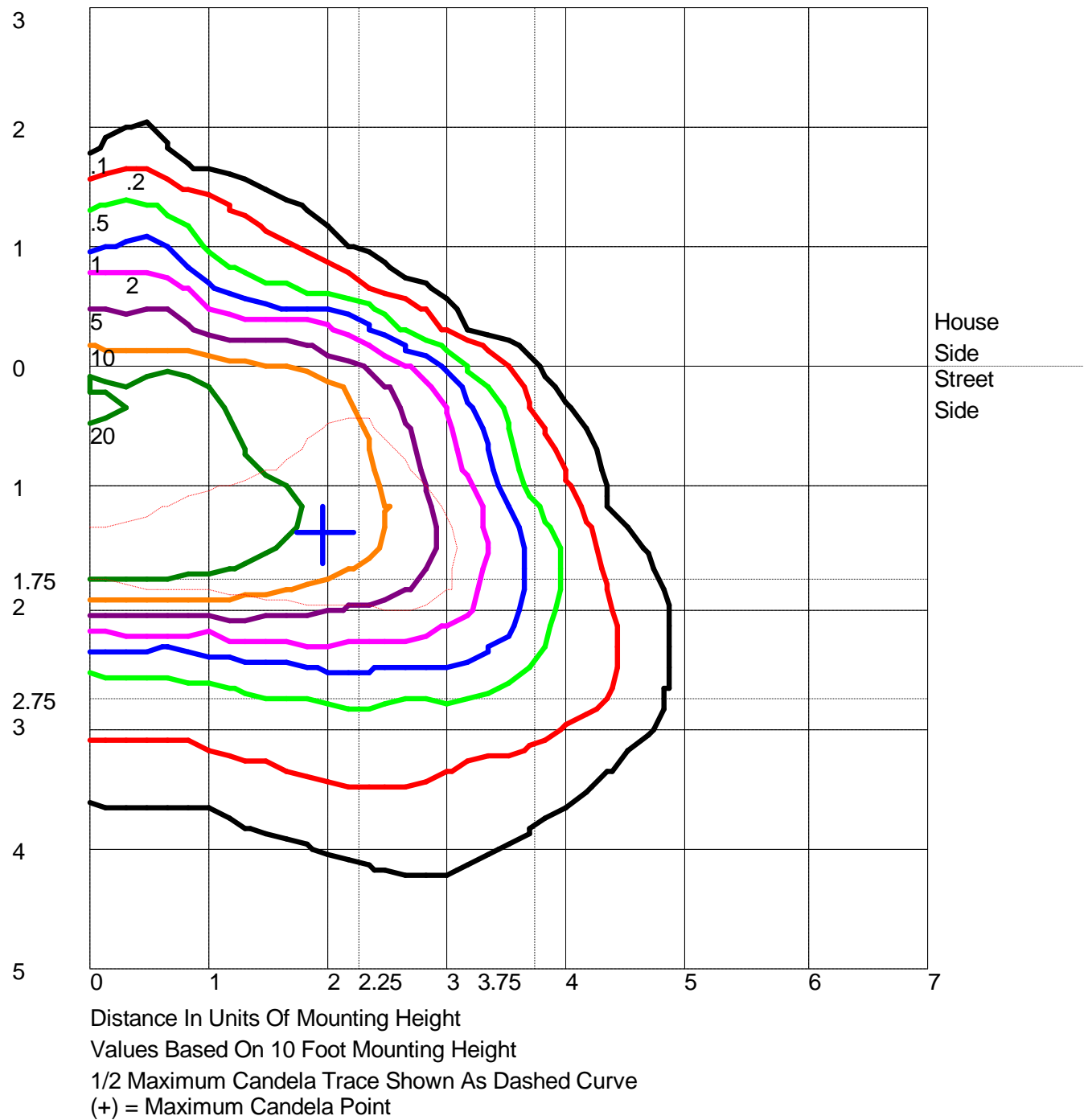
	Lumens	Percent Of Luminaire
Downward Street Side	22858.6	92.2
Downward House Side	1946.7	7.8
Downward Total	24805.3	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	24805.3	100.0

POLAR GRAPH



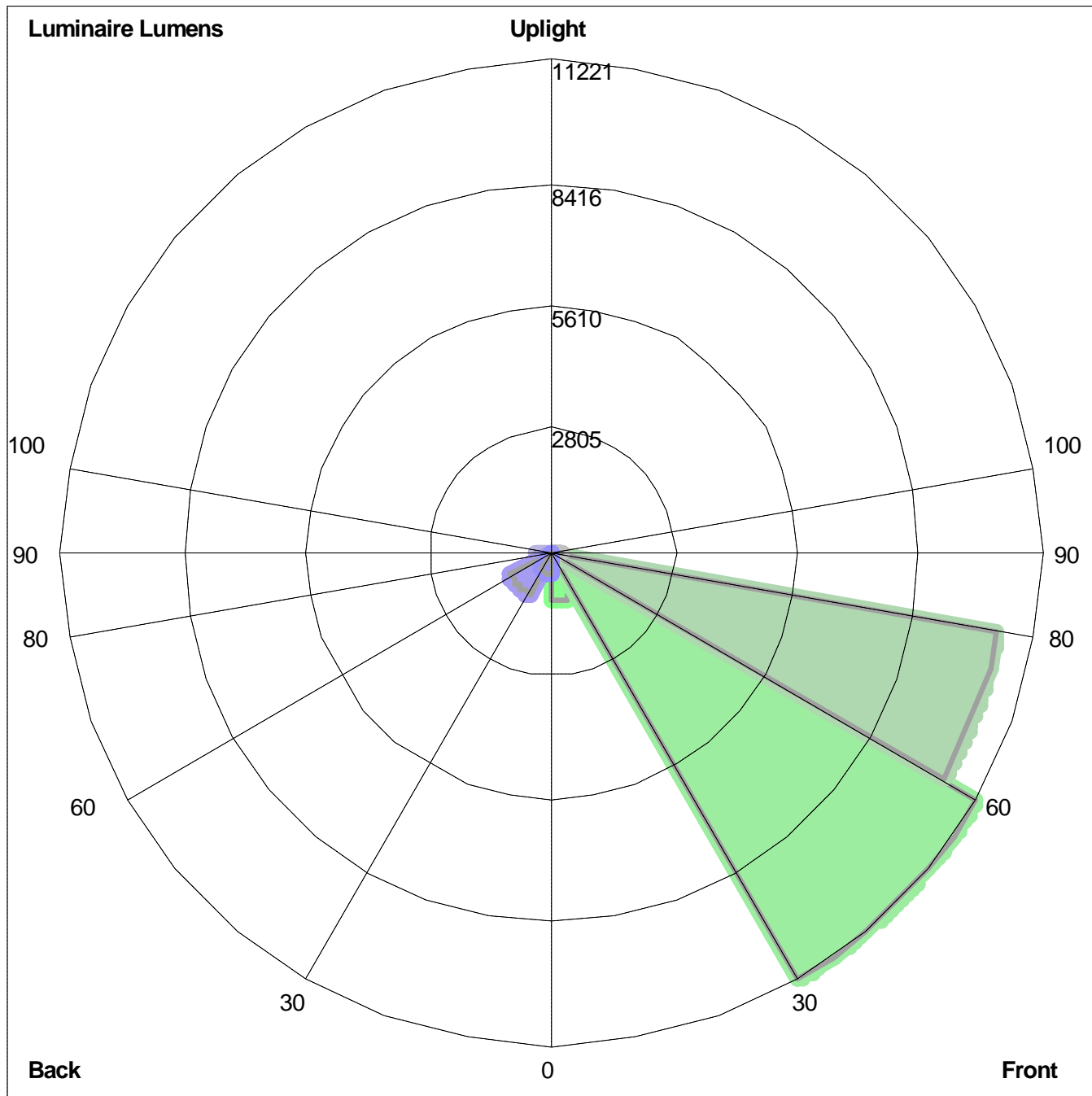
Maximum Candela = 31388.939 Located At Horizontal Angle = 55, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1096.5, Medium=11220.9, High=10339.9, Very High=201.4  
Back: Low=482.1, Medium=1085.2, High=372.2, Very High=7.1  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G4