



## IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-FT-LED-18L-50-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]LED-7771\_Scaled  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]04/03/2017  
[TEST DATE]05/02/16  
[MANUFACT]LSI INDUSTRIES, INC  
[LUMCAT] HLN-FT-LED-18L-50-IL  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[OTHER]SCALED FROM ORIGINAL TEST DATA  
[\_SEARCH\_SOURCETYPE] LED  
[\_SEARCH\_APPLICATION] Outdoor

### CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	14054
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	154
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	13417.357
Maximum Candela Angle	45H 67.5V
Maximum Candela (<90 Degrees Vertical)	13417.357
Maximum Candela Angle (<90 Degrees Vertical)	45H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1630.157 (11.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1224.2	N.A.	8.7
FM - Front-Medium (30-60)	5100.7	N.A.	36.3
FH - Front-High (60-80)	6063.8	N.A.	43.1
FVH - Front-Very High (80-90)	141.9	N.A.	1.0
BL - Back-Low (0-30)	481.3	N.A.	3.4
BM - Back-Medium (30-60)	810.0	N.A.	5.8
BH - Back-High (60-80)	229.4	N.A.	1.6
BVH - Back-Very High (80-90)	2.7	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	14054.0	N.A.	100.0
BUG Rating	B1-U0-G3		

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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>42.5</b></u>	<u><b>45.0</b></u>	<u><b>55.0</b></u>	<u><b>65.0</b></u>	<u><b>75.0</b></u>
<b>0.0</b>	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023
<b>2.5</b>	2390.292	2398.222	2399.355	2398.222	2390.292	2384.628	2372.167	2358.573	2331.385	2314.392
<b>5.0</b>	2427.676	2435.606	2436.739	2446.934	2453.732	2467.326	2465.060	2466.193	2439.005	2407.285
<b>7.5</b>	2410.684	2423.145	2428.809	2446.934	2468.458	2494.514	2499.045	2529.632	2529.632	2518.303
<b>10.0</b>	2445.802	2459.396	2462.794	2482.053	2510.374	2542.093	2550.023	2595.337	2620.259	2632.720
<b>12.5</b>	2528.499	2543.226	2545.492	2560.218	2585.141	2617.993	2625.923	2676.901	2725.613	2749.403
<b>15.0</b>	2632.720	2654.244	2654.244	2667.838	2688.229	2722.215	2721.082	2772.060	2826.436	2868.351
<b>17.5</b>	2743.739	2764.130	2759.598	2776.591	2793.584	2827.569	2823.037	2869.484	2922.727	2985.033
<b>20.0</b>	2854.757	2874.015	2872.882	2875.148	2891.008	2918.196	2919.329	2960.111	3008.823	3073.395
<b>22.5</b>	2956.712	2973.705	2972.572	2971.439	2978.236	2992.963	2994.096	3034.878	3080.192	3144.764
<b>25.0</b>	3049.605	3065.465	3058.668	3058.668	3053.004	3057.535	3055.270	3088.122	3137.967	3202.539
<b>27.5</b>	3136.834	3151.561	3139.100	3127.771	3113.044	3108.513	3106.247	3130.037	3181.015	3248.985
<b>30.0</b>	3216.133	3227.461	3209.336	3186.679	3159.491	3150.428	3148.162	3159.491	3211.602	3281.838
<b>32.5</b>	3277.306	3286.369	3261.446	3230.860	3198.007	3182.148	3183.281	3185.546	3234.258	3303.362
<b>35.0</b>	3328.284	3332.815	3303.362	3261.446	3229.727	3216.133	3217.266	3212.734	3250.118	3321.487
<b>37.5</b>	3378.129	3384.926	3343.011	3294.299	3262.579	3255.782	3263.712	3252.384	3270.509	3336.214
<b>40.0</b>	3447.232	3451.764	3405.317	3349.808	3316.956	3312.424	3329.417	3323.753	3305.627	3358.871
<b>42.5</b>	3570.712	3562.782	3512.937	3451.764	3418.911	3427.974	3437.037	3441.568	3381.528	3399.653
<b>45.0</b>	3765.560	3762.162	3703.254	3637.549	3603.564	3618.291	3631.885	3639.815	3507.273	3476.686
<b>47.5</b>	4095.217	4091.818	4031.778	3959.276	3934.353	3928.689	3946.815	3958.143	3729.309	3659.073
<b>50.0</b>	4615.190	4614.057	4597.065	4481.515	4439.600	4411.279	4436.202	4452.061	4098.615	3906.032
<b>52.5</b>	5360.599	5371.927	5393.451	5306.223	5182.743	5106.843	5139.695	5164.618	4612.925	4261.744
<b>55.0</b>	6281.598	6313.318	6424.336	6461.720	6198.901	6053.897	6104.875	6096.945	5324.348	4783.983
<b>57.5</b>	7084.782	7130.095	7425.766	7695.382	7577.567	7286.427	7335.139	7263.770	6223.823	5349.271
<b>60.0</b>	7728.235	7790.541	8236.880	8835.019	9051.392	8823.691	8970.960	8701.344	7208.261	5992.724
<b>62.5</b>	8116.799	8227.817	8891.661	9920.280	10611.313	10631.704	10722.331	10158.177	8138.323	6362.030
<b>65.0</b>	7602.489	7813.198	8812.363	10641.899	12084.005	12364.949	12329.831	11326.135	8760.252	6374.491
<b>67.5</b>	5912.292	6102.609	7682.921	10391.542	12714.997	13392.435	13417.357	11933.337	8529.153	5569.042
<b>70.0</b>	3779.154	3963.807	5256.378	8696.813	11778.138	13168.133	13313.136	11249.102	6956.771	3958.143
<b>72.5</b>	1343.548	1450.035	2272.477	4909.729	9462.613	11196.991	11323.869	8815.761	4795.312	2210.171
<b>75.0</b>	589.077	638.922	1007.095	1829.537	4951.644	7790.541	7908.356	5972.333	2472.990	858.693
<b>77.5</b>	430.479	473.527	744.276	1171.357	1809.146	3703.254	3862.985	3140.233	1043.346	481.457
<b>80.0</b>	320.594	368.173	623.062	960.648	1191.748	1576.913	1630.157	1299.368	522.239	313.797
<b>82.5</b>	235.631	280.944	517.708	769.198	714.822	641.187	581.147	294.538	262.819	197.114
<b>85.0</b>	165.395	191.450	301.335	334.188	251.490	215.240	176.723	92.893	109.885	115.550
<b>87.5</b>	41.915	44.181	69.103	113.284	55.509	41.915	43.048	44.181	47.579	53.243
<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>	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023	2243.023
<b>2.5</b>	2292.868	2289.470	2258.883	2212.437	2188.647	2141.068	2113.880	2086.691	2059.503	2041.378
<b>5.0</b>	2352.909	2326.853	2263.414	2142.201	2043.643	1922.430	1826.138	1733.245	1648.282	1589.375
<b>7.5</b>	2448.067	2395.957	2295.134	2085.559	1886.179	1665.275	1459.098	1289.172	1170.224	1099.988
<b>10.0</b>	2560.218	2482.053	2337.049	2027.784	1702.659	1378.666	1131.707	994.634	923.265	882.482
<b>12.5</b>	2684.831	2579.477	2383.495	1962.079	1513.474	1150.965	961.781	872.287	808.848	757.870
<b>15.0</b>	2816.240	2687.097	2433.340	1892.976	1344.681	1020.689	881.350	778.261	718.221	687.634
<b>17.5</b>	2936.321	2781.122	2470.724	1810.278	1218.936	949.320	811.113	726.150	681.970	652.516
<b>20.0</b>	3038.277	2859.288	2491.115	1736.644	1135.106	911.936	764.667	702.361	654.782	623.062
<b>22.5</b>	3126.639	2920.462	2497.912	1681.135	1079.597	868.888	745.409	676.306	626.461	593.608
<b>25.0</b>	3192.343	2972.572	2499.045	1643.751	1058.073	839.434	726.150	647.985	599.272	568.686
<b>27.5</b>	3245.587	3006.557	2493.381	1621.094	1054.674	825.840	701.228	621.929	543.763	471.261

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**CANDELA TABULATION - (Cont.)**

30.0	3285.236	3024.683	2485.451	1610.899	1055.807	813.379	678.571	563.021	418.018	330.789
32.5	3307.893	3023.550	2479.787	1608.633	1046.744	799.785	642.320	437.276	300.203	265.085
35.0	3319.221	3015.620	2482.053	1606.367	1029.752	782.792	547.162	330.789	265.085	235.631
37.5	3327.151	3006.557	2494.514	1600.703	999.165	739.745	428.214	297.937	239.029	202.778
40.0	3337.347	3004.292	2518.303	1591.640	954.984	637.789	370.439	268.483	205.044	177.856
42.5	3363.402	3020.152	2553.421	1572.382	872.287	485.988	320.594	229.967	180.122	193.716
45.0	3418.911	3075.661	2615.728	1545.194	732.948	368.173	257.155	190.317	161.996	207.310
47.5	3551.454	3199.140	2722.215	1504.412	540.365	278.679	198.247	155.199	194.848	125.745
50.0	3736.106	3370.199	2869.484	1422.847	355.712	218.638	161.996	130.277	157.465	100.823
52.5	4044.239	3663.605	3072.262	1286.906	258.288	182.387	134.808	114.417	115.550	89.494
55.0	4436.202	3997.792	3305.627	1111.316	222.037	163.129	115.550	98.557	92.893	103.088
57.5	4822.500	4320.652	3509.538	940.257	202.778	143.871	97.424	83.830	98.557	96.291
60.0	5136.297	4539.290	3508.406	780.527	183.520	115.550	83.830	86.096	73.635	55.509
62.5	5183.876	4503.039	3160.624	620.796	156.332	91.760	80.432	61.173	45.314	39.649
65.0	4863.282	4071.427	2437.872	518.841	125.745	80.432	66.838	39.649	32.852	40.782
67.5	3906.032	3126.639	1521.404	368.173	87.229	78.166	46.446	32.852	47.579	41.915
70.0	2491.115	1977.939	732.948	210.708	61.173	55.509	35.118	43.048	33.985	28.321
72.5	999.165	728.416	316.062	105.354	46.446	32.852	35.118	31.720	26.055	19.258
75.0	453.136	347.782	145.004	63.439	32.852	22.657	21.524	22.657	9.063	3.399
77.5	291.140	219.771	94.026	39.649	18.125	14.727	12.461	5.664	2.266	2.266
80.0	171.059	131.409	64.572	21.524	10.196	10.196	4.531	2.266	1.133	1.133
82.5	114.417	84.963	38.517	10.196	6.797	4.531	3.399	1.133	0.000	0.000
85.0	67.970	41.915	13.594	3.399	2.266	1.133	1.133	0.000	0.000	0.000
87.5	28.321	11.328	3.399	1.133	0.000	0.000	0.000	0.000	0.000	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**

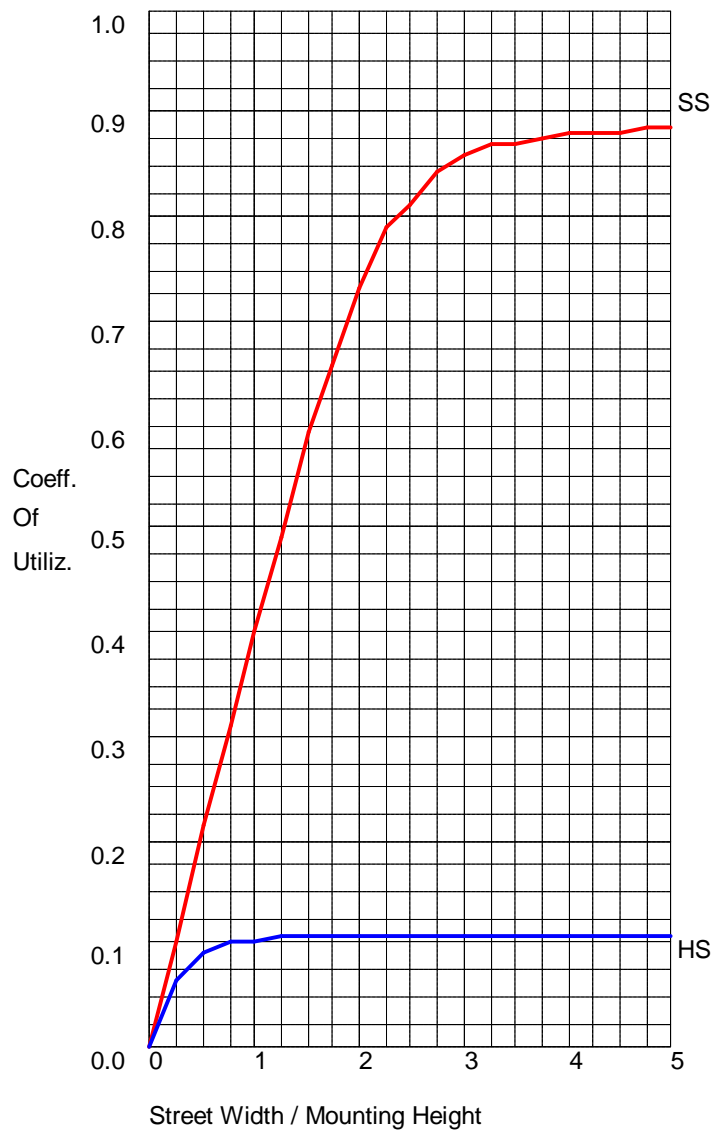
	<b>175.0</b>	<b>180.0</b>
0.0	2243.023	2243.023
2.5	2049.308	2036.846
5.0	1559.921	1573.515
7.5	1070.534	1077.331
10.0	866.623	866.623
12.5	732.948	727.283
15.0	672.907	668.376
17.5	641.187	636.656
20.0	610.601	606.069
22.5	583.413	578.881
25.0	550.560	544.896
27.5	429.346	422.549
30.0	291.140	285.476
32.5	251.490	249.225
35.0	225.435	223.169
37.5	188.051	185.786
40.0	168.793	168.793
42.5	192.583	176.723
45.0	126.878	122.347
47.5	106.487	105.354
50.0	95.159	94.026
52.5	91.760	90.627
55.0	112.151	112.151
57.5	90.627	83.830
60.0	49.845	45.314
62.5	32.852	30.587
65.0	49.845	49.845

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

<b>67.5</b>	37.384	36.251
<b>70.0</b>	24.922	24.922
<b>72.5</b>	15.860	14.727
<b>75.0</b>	1.133	0.000
<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

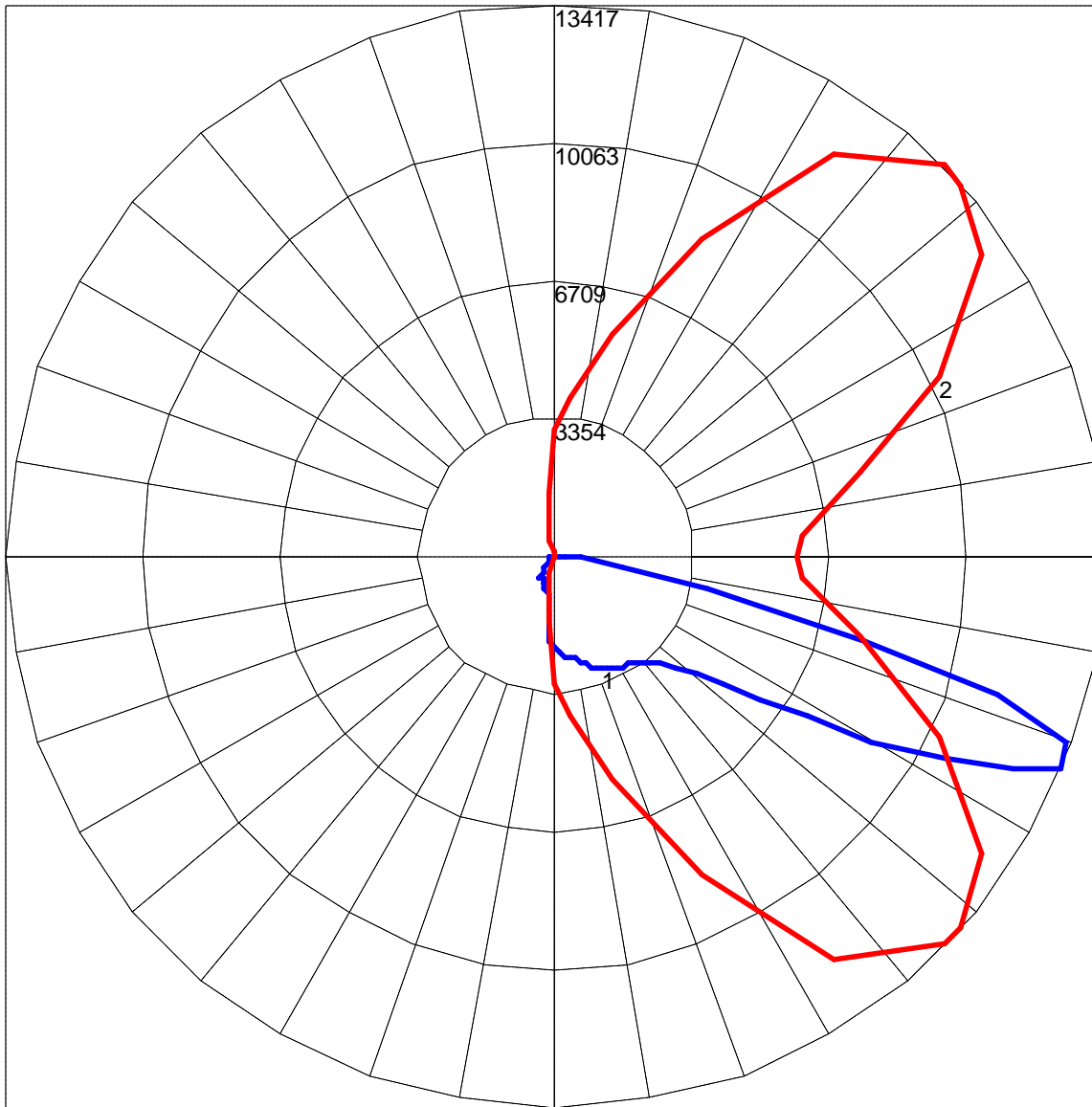
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

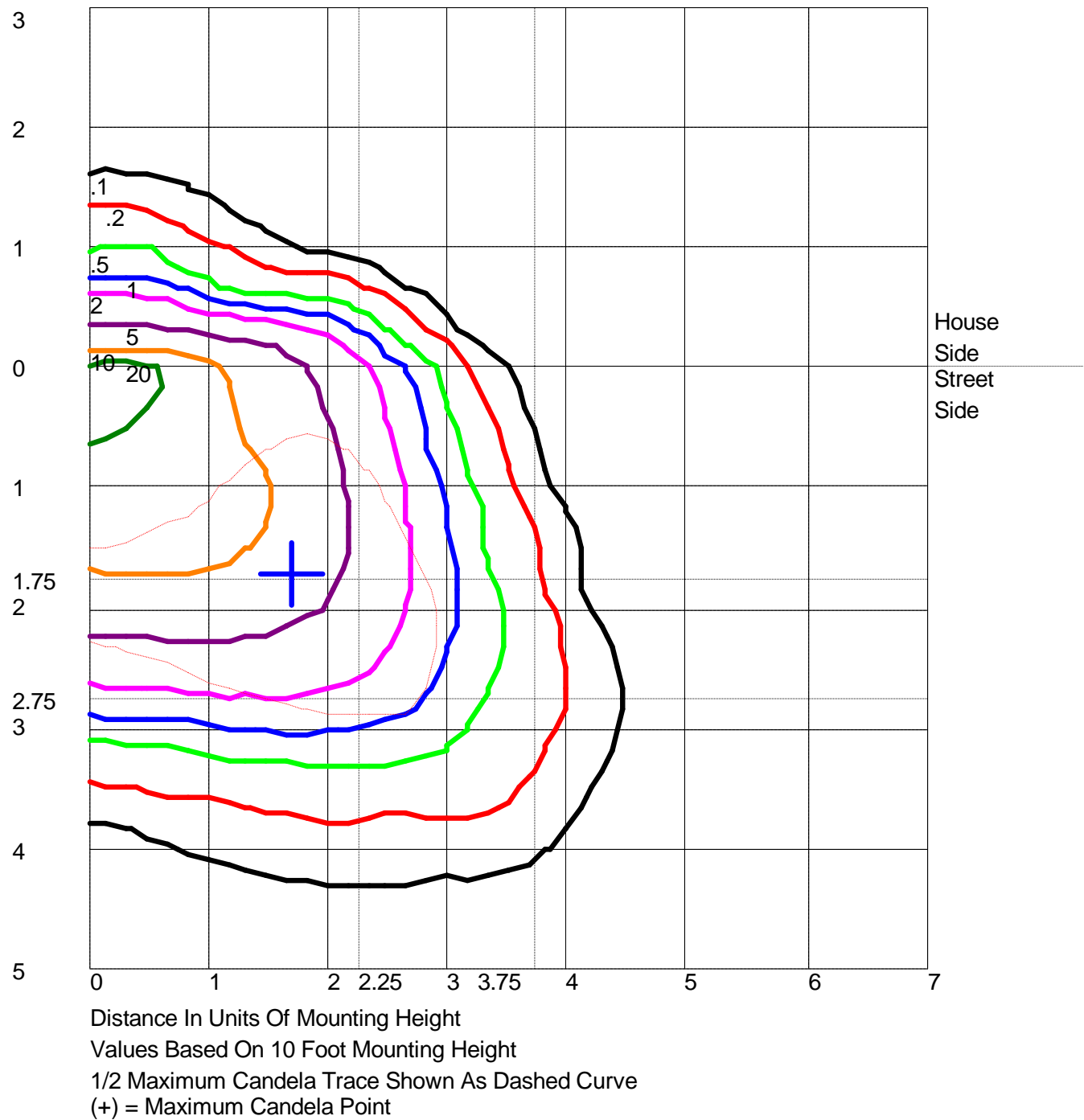
	Lumens	Percent Of Luminaire
Downward Street Side	12530.6	89.2
Downward House Side	1523.3	10.8
Downward Total	14053.9	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	14053.9	100.0

POLAR GRAPH



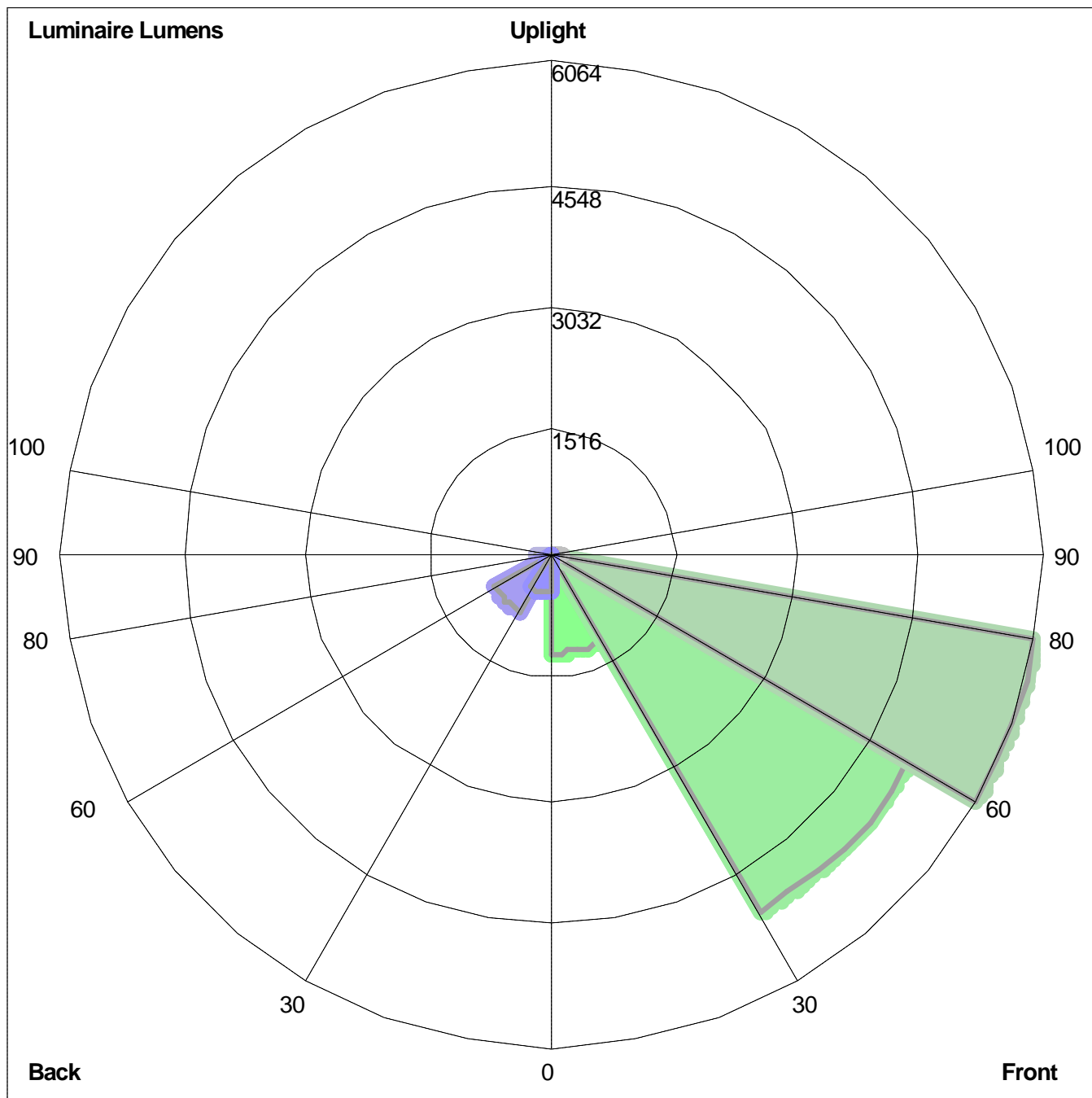
Maximum Candela = 13417.357 Located At Horizontal Angle = 45, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1224.2, Medium=5100.7, High=6063.8, Very High=141.9  
Back: Low=481.3, Medium=810.0, High=229.4, Very High=2.7  
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G3