



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : HLN-FT-LED-18L-30-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  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT] HLN-FT-LED-18L-30-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	13299
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	154
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	12696.531
Maximum Candela Angle	45H 67.5V
Maximum Candela (<90 Degrees Vertical)	12696.531
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	1542.579 (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)	1158.4	N.A.	8.7
FM - Front-Medium (30-60)	4826.7	N.A.	36.3
FH - Front-High (60-80)	5738.0	N.A.	43.1
FVH - Front-Very High (80-90)	134.3	N.A.	1.0
BL - Back-Low (0-30)	455.5	N.A.	3.4
BM - Back-Medium (30-60)	766.4	N.A.	5.8
BH - Back-High (60-80)	217.1	N.A.	1.6
BVH - Back-Very High (80-90)	2.5	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	13298.9	N.A.	100.0
BUG Rating	B1-U0-G3		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>35.0</u>	<u>42.5</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>
0.0	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520
2.5	2261.878	2269.382	2270.454	2269.382	2261.878	2256.518	2244.726	2231.862	2206.135	2190.055
5.0	2297.253	2304.757	2305.829	2315.477	2321.909	2334.772	2332.628	2333.700	2307.973	2277.957
7.5	2281.173	2292.965	2298.325	2315.477	2335.844	2360.500	2364.788	2393.731	2393.731	2383.012
10.0	2314.405	2327.269	2330.485	2348.708	2375.508	2405.523	2413.027	2455.906	2479.490	2491.282
12.5	2392.659	2406.595	2408.739	2422.675	2446.258	2477.346	2484.850	2533.089	2579.184	2601.695
15.0	2491.282	2511.649	2511.649	2524.513	2543.809	2575.968	2574.896	2623.135	2674.590	2714.253
17.5	2596.336	2615.631	2611.343	2627.423	2643.503	2675.662	2671.374	2715.325	2765.708	2824.667
20.0	2701.390	2719.613	2718.541	2720.685	2735.693	2761.420	2762.492	2801.084	2847.179	2908.282
22.5	2797.868	2813.947	2812.876	2811.804	2818.235	2832.171	2833.243	2871.834	2914.714	2975.816
25.0	2885.770	2900.778	2894.346	2894.346	2888.986	2893.274	2891.130	2922.217	2969.385	3030.487
27.5	2968.313	2982.248	2970.457	2959.737	2945.801	2941.513	2939.369	2961.881	3010.120	3074.439
30.0	3043.351	3054.071	3036.919	3015.480	2989.752	2981.176	2979.032	2989.752	3039.063	3105.526
32.5	3101.238	3109.814	3086.230	3057.287	3026.200	3011.192	3012.264	3014.408	3060.503	3125.894
35.0	3149.477	3153.765	3125.894	3086.230	3056.215	3043.351	3044.423	3040.135	3075.511	3143.045
37.5	3196.644	3203.076	3163.413	3117.318	3087.302	3080.871	3088.374	3077.655	3094.806	3156.981
40.0	3262.035	3266.323	3222.372	3169.845	3138.757	3134.470	3150.549	3145.189	3128.038	3178.421
42.5	3378.881	3371.377	3324.210	3266.323	3235.236	3243.811	3252.387	3256.675	3199.860	3217.012
45.0	3563.262	3560.046	3504.303	3442.128	3409.968	3423.904	3436.768	3444.272	3318.850	3289.907
47.5	3875.208	3871.992	3815.177	3746.570	3722.987	3717.627	3734.778	3745.498	3528.958	3462.495
50.0	4367.247	4366.175	4350.095	4240.753	4201.090	4174.290	4197.874	4212.881	3878.424	3696.187
52.5	5072.609	5083.329	5103.697	5021.154	4904.308	4832.486	4863.573	4887.157	4365.103	4032.789
55.0	5944.129	5974.145	6079.199	6114.574	5865.875	5728.661	5776.900	5769.396	5038.306	4526.972
57.5	6704.163	6747.042	7026.829	7281.960	7170.474	6894.975	6941.070	6873.536	5889.458	5061.890
60.0	7313.048	7372.006	7794.367	8360.372	8565.120	8349.652	8489.010	8233.878	6821.009	5670.774
62.5	7680.737	7785.791	8413.971	9387.329	10041.237	10060.532	10146.291	9612.445	7701.104	6020.240
65.0	7194.058	7393.446	8338.932	10070.180	11434.811	11700.662	11667.430	10717.656	8289.621	6032.031
67.5	5594.664	5774.756	7270.168	9833.273	12031.904	12672.948	12696.531	11292.237	8070.937	5269.854
70.0	3576.125	3750.858	4973.987	8229.590	11145.376	12460.696	12597.909	10644.761	6583.029	3745.498
72.5	1271.368	1372.134	2150.392	4645.961	8954.249	10595.450	10715.512	8342.148	4537.691	2091.433
75.0	557.430	604.597	952.990	1731.248	4685.625	7372.006	7483.492	5651.479	2340.132	812.561
77.5	407.352	448.088	704.291	1108.427	1711.952	3504.303	3655.452	2971.529	987.294	455.591
80.0	303.370	348.393	589.589	909.039	1127.723	1492.196	1542.579	1229.561	494.183	296.938
82.5	222.972	265.851	489.895	727.874	676.419	606.741	549.926	278.715	248.699	186.525
85.0	156.509	181.165	285.147	316.234	237.980	203.676	167.229	87.902	103.982	109.342
87.5	39.663	41.807	65.391	107.198	52.527	39.663	40.735	41.807	45.023	50.383
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>85.0</u>	<u>90.0</u>	<u>95.0</u>	<u>105.0</u>	<u>115.0</u>	<u>125.0</u>	<u>135.0</u>	<u>145.0</u>	<u>155.0</u>	<u>165.0</u>
0.0	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520	2122.520
2.5	2169.688	2166.472	2137.528	2093.577	2071.065	2026.042	2000.315	1974.587	1948.860	1931.708
5.0	2226.502	2201.847	2141.816	2027.114	1933.852	1819.150	1728.032	1640.129	1559.731	1503.988
7.5	2316.549	2267.238	2171.831	1973.515	1784.847	1575.811	1380.710	1219.913	1107.355	1040.893
10.0	2422.675	2348.708	2211.495	1918.844	1611.186	1304.600	1070.908	941.198	873.664	835.072
12.5	2540.593	2440.898	2255.446	1856.669	1432.165	1089.132	910.111	825.425	765.394	717.155
15.0	2664.942	2542.737	2302.613	1791.279	1272.440	965.854	834.000	736.450	679.635	650.692
17.5	2778.572	2631.711	2337.988	1713.024	1153.450	898.319	767.538	687.139	645.332	617.460
20.0	2875.050	2705.678	2357.284	1643.345	1074.124	862.944	723.586	664.628	619.604	589.589
22.5	2958.665	2763.564	2363.716	1590.818	1021.597	822.209	705.363	639.972	592.805	561.718
25.0	3020.840	2812.876	2364.788	1555.443	1001.229	794.337	687.139	613.173	567.077	538.134
27.5	3071.223	2845.035	2359.428	1534.003	998.013	781.473	663.556	588.517	514.550	445.944

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**CANDELA TABULATION - (Cont.)**

30.0	3108.742	2862.187	2351.924	1524.356	999.085	769.682	642.116	532.774	395.561	313.018
32.5	3130.182	2861.115	2346.564	1522.212	990.510	756.818	607.813	413.784	284.075	250.843
35.0	3140.901	2853.611	2348.708	1520.068	974.430	740.738	517.766	313.018	250.843	222.972
37.5	3148.405	2845.035	2360.500	1514.708	945.486	700.003	405.208	281.931	226.188	191.884
40.0	3158.053	2842.891	2383.012	1506.132	903.679	603.525	350.537	254.059	194.028	168.301
42.5	3182.709	2857.899	2416.243	1487.908	825.425	459.879	303.370	217.612	170.445	183.309
45.0	3235.236	2910.426	2475.202	1462.181	693.571	348.393	243.339	180.093	153.293	196.172
47.5	3360.657	3027.272	2575.968	1423.589	511.334	263.707	187.596	146.861	184.381	118.990
50.0	3535.390	3189.140	2715.325	1346.407	336.602	206.892	153.293	123.278	149.005	95.406
52.5	3826.969	3466.783	2907.210	1217.769	244.411	172.589	127.566	108.270	109.342	84.686
55.0	4197.874	3783.017	3128.038	1051.612	210.108	154.365	109.342	93.262	87.902	97.550
57.5	4563.419	4088.532	3320.994	889.743	191.884	136.141	92.190	79.327	93.262	91.118
60.0	4860.357	4295.424	3319.922	738.594	173.661	109.342	79.327	81.470	69.679	52.527
62.5	4905.380	4261.120	2990.824	587.445	147.933	86.830	76.111	57.887	42.879	37.519
65.0	4602.010	3852.696	2306.901	490.967	118.990	76.111	63.247	37.519	31.087	38.591
67.5	3696.187	2958.665	1439.669	348.393	82.542	73.967	43.951	31.087	45.023	39.663
70.0	2357.284	1871.677	693.571	199.388	57.887	52.527	33.231	40.735	32.159	26.799
72.5	945.486	689.283	299.082	99.694	43.951	31.087	33.231	30.015	24.656	18.224
75.0	428.792	329.098	137.213	60.031	31.087	21.440	20.368	21.440	8.576	3.216
77.5	275.499	207.964	88.974	37.519	17.152	13.936	11.792	5.360	2.144	2.144
80.0	161.869	124.350	61.103	20.368	9.648	9.648	4.288	2.144	1.072	1.072
82.5	108.270	80.398	36.447	9.648	6.432	4.288	3.216	1.072	0.000	0.000
85.0	64.319	39.663	12.864	3.216	2.144	1.072	1.072	0.000	0.000	0.000
87.5	26.799	10.720	3.216	1.072	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**

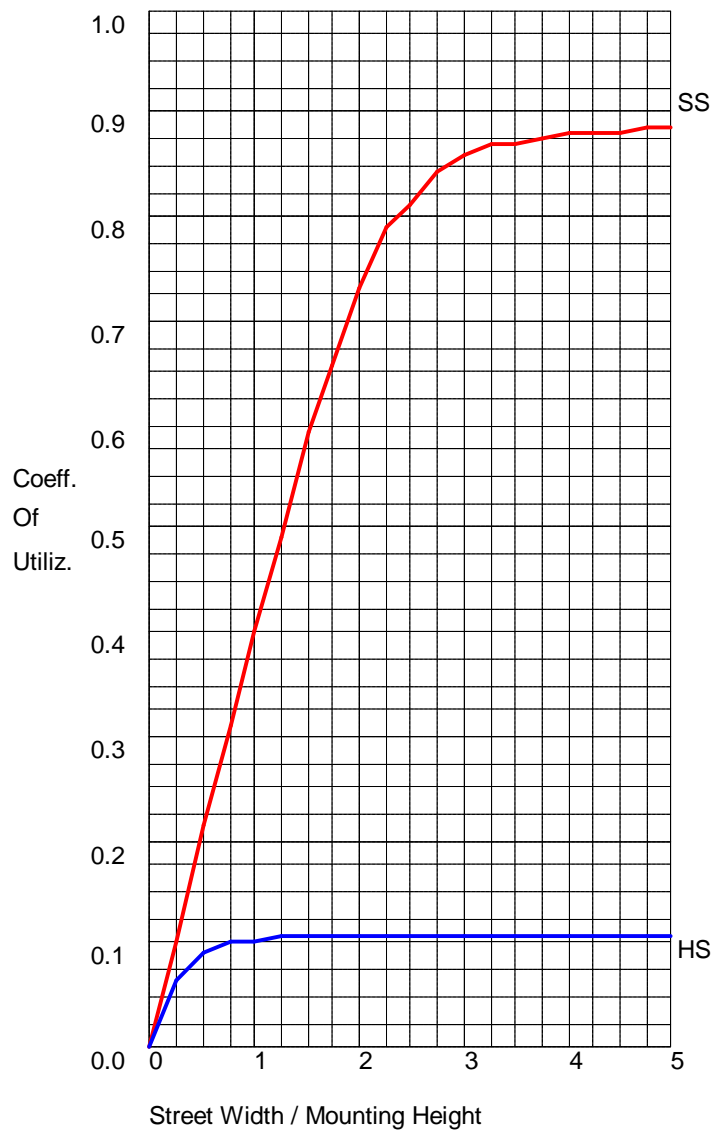
	<b>175.0</b>	<b>180.0</b>
0.0	2122.520	2122.520
2.5	1939.212	1927.420
5.0	1476.116	1488.980
7.5	1013.021	1019.453
10.0	820.065	820.065
12.5	693.571	688.211
15.0	636.756	632.468
17.5	606.741	602.453
20.0	577.797	573.509
22.5	552.070	547.782
25.0	520.982	515.622
27.5	406.280	399.849
30.0	275.499	270.139
32.5	237.980	235.836
35.0	213.324	211.180
37.5	177.949	175.805
40.0	159.725	159.725
42.5	182.237	167.229
45.0	120.062	115.774
47.5	100.766	99.694
50.0	90.046	88.974
52.5	86.830	85.758
55.0	106.126	106.126
57.5	85.758	79.327
60.0	47.167	42.879
62.5	31.087	28.943
65.0	47.167	47.167

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	35.375	34.303
<b>70.0</b>	23.584	23.584
<b>72.5</b>	15.008	13.936
<b>75.0</b>	1.072	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

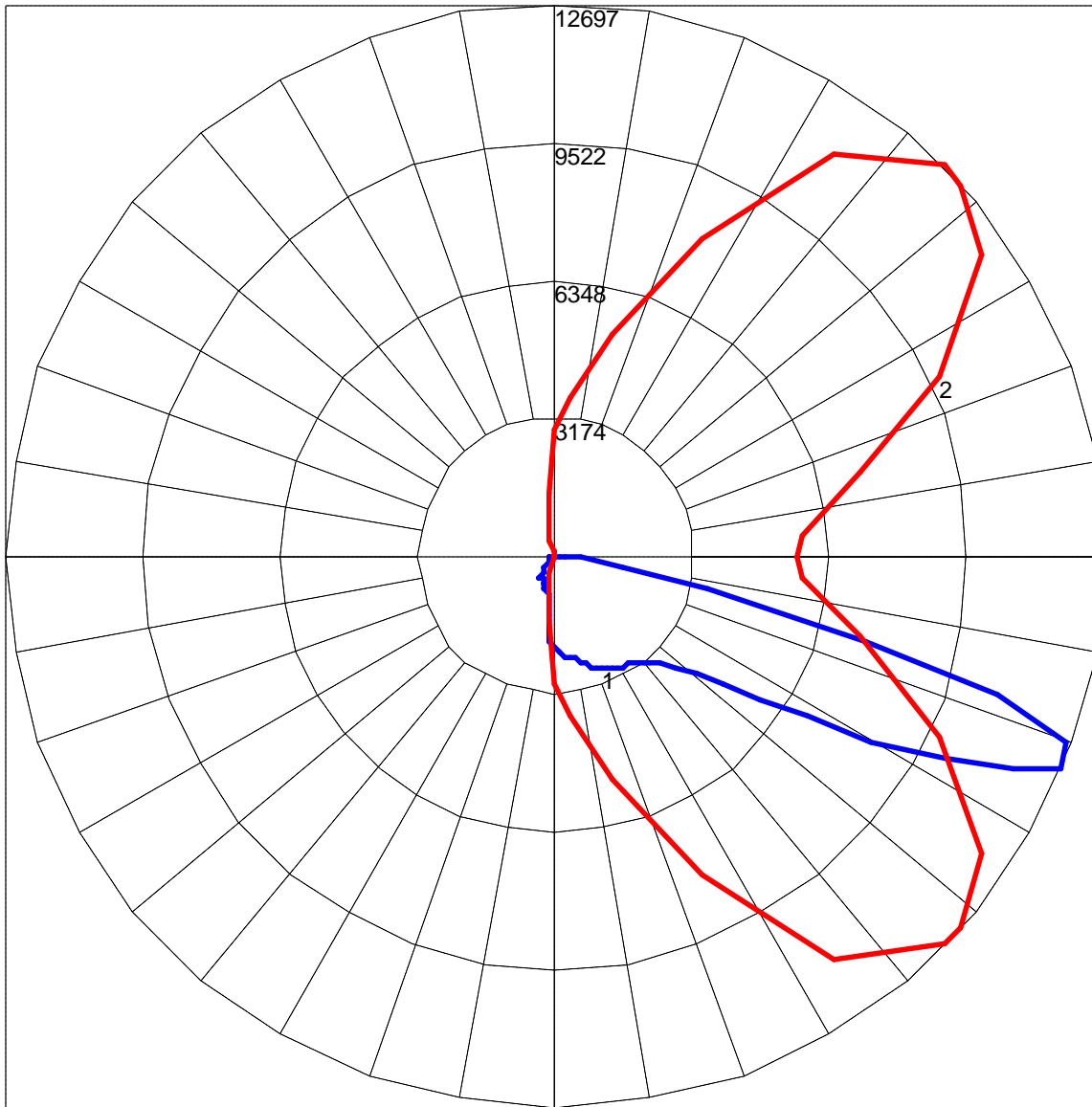
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

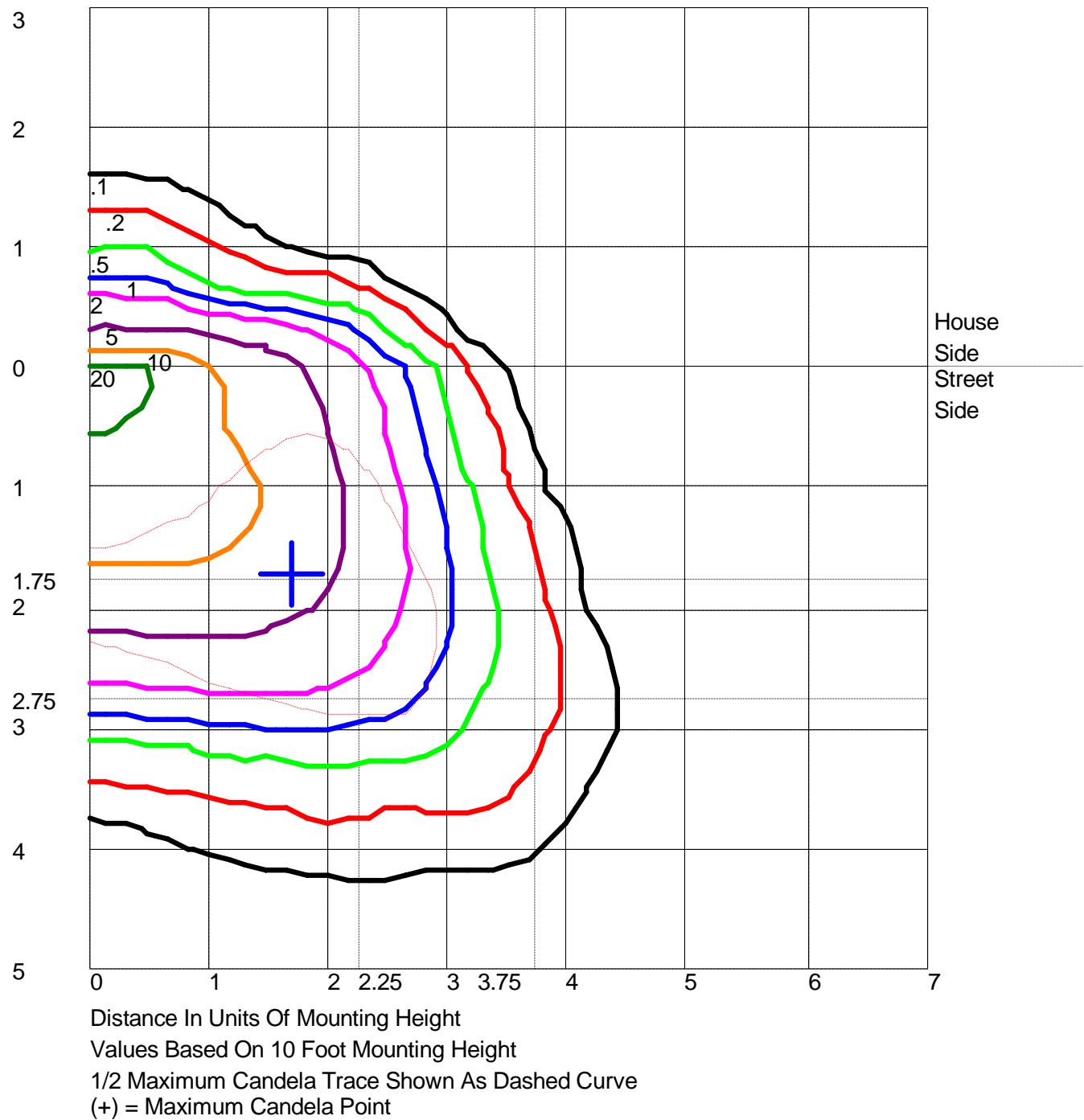
	Lumens	Percent Of Luminaire
Downward Street Side	11857.5	89.2
Downward House Side	1441.5	10.8
Downward Total	13299.0	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	13299.0	100.0

POLAR GRAPH



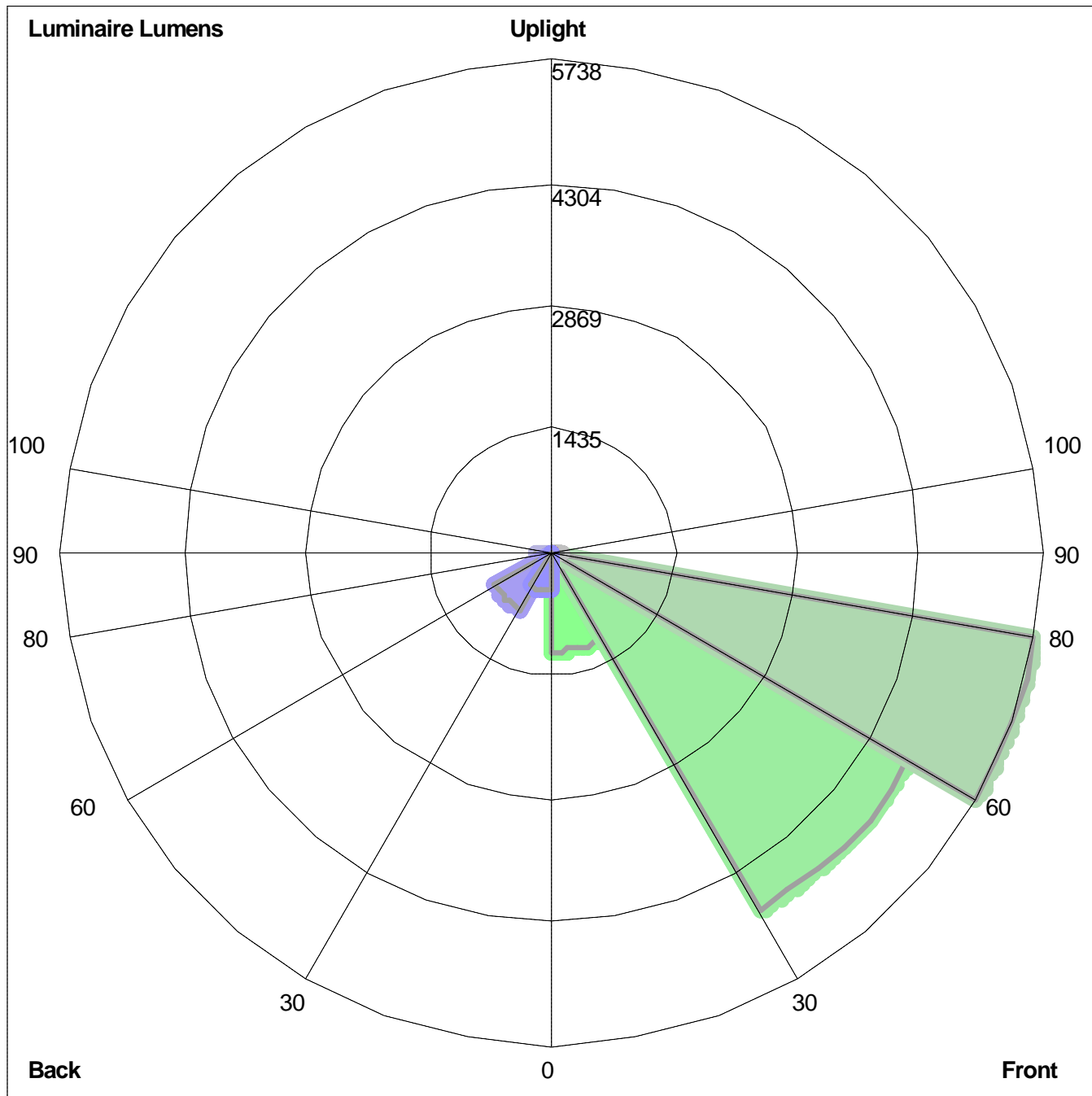
Maximum Candela = 12696.531 Located At Horizontal Angle = 45, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1158.4, Medium=4826.7, High= 5738.0, Very High=134.3  
Back: Low=455.5, Medium=766.4, High=217.1, Very High=2.5  
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G3