



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-5W-LED-32L-30-IL.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-7766_Scaled
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]04/03/17
[TEST DATE]04/29/16
[MANUFACTURER]LSI INDUSTRIES, INC
[LUMCAT] HLN-5W-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	17172
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	55
Total Luminaire Watts	314
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	15886.011
Maximum Candela Angle	50H 70V
Maximum Candela (<90 Degrees Vertical)	15886.011
Maximum Candela Angle (<90 Degrees Vertical)	50H 70V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	448.495 (2.6% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1316.8	N.A.	7.7
FM - Front-Medium (30-60)	6977.0	N.A.	40.6
FH - Front-High (60-80)	6136.2	N.A.	35.7
FVH - Front-Very High (80-90)	53.2	N.A.	0.3
BL - Back-Low (0-30)	593.6	N.A.	3.5
BM - Back-Medium (30-60)	1304.9	N.A.	7.6
BH - Back-High (60-80)	785.1	N.A.	4.6
BVH - Back-Very High (80-90)	4.9	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	17171.7	N.A.	100.0
BUG Rating	B2-U0-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>5</u>	<u>15</u>	<u>25</u>	<u>35</u>	<u>45</u>	<u>50</u>	<u>55</u>	<u>65</u>	<u>75</u>
0.0	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843
2.5	1965.250	1959.444	1949.284	1943.478	1933.318	1926.061	1917.352	1915.901	1902.838	1882.518
5.0	2116.199	2110.394	2097.331	2085.719	2066.851	2046.530	2030.565	2020.404	1988.473	1944.930
7.5	2284.567	2278.761	2264.246	2245.378	2219.252	2188.771	2167.000	2148.131	2097.331	2030.565
10.0	2454.385	2450.031	2436.968	2422.453	2394.876	2358.590	2331.013	2304.887	2232.315	2137.971
12.5	2628.558	2625.655	2628.558	2606.786	2585.015	2548.729	2519.700	2486.317	2393.425	2268.601
15.0	2809.988	2807.085	2817.245	2824.502	2795.473	2763.542	2738.867	2695.324	2580.660	2419.550
17.5	3003.029	3004.481	3030.607	3042.218	3042.218	3018.995	2978.355	2926.103	2789.668	2589.369
20.0	3197.522	3210.585	3238.163	3271.546	3291.866	3277.351	3241.065	3180.105	3020.447	2778.056
22.5	3416.690	3410.884	3454.427	3509.582	3557.479	3557.479	3525.548	3455.879	3267.191	2971.098
25.0	3635.857	3630.051	3686.658	3763.584	3834.704	3855.025	3831.802	3770.841	3526.999	3168.493
27.5	3879.699	3876.796	3939.208	4033.552	4126.444	4171.438	4152.570	4093.061	3801.321	3368.792
30.0	4129.347	4124.992	4200.467	4310.777	4428.343	4495.110	4482.047	4406.572	4066.935	3571.994
32.5	4392.057	4389.154	4473.338	4592.356	4730.243	4839.101	4810.072	4718.631	4345.611	3781.001
35.0	4685.248	4693.957	4767.980	4884.096	5035.045	5158.418	5135.195	5027.788	4617.031	4000.169
37.5	4988.599	5000.211	5071.331	5184.544	5342.751	5480.637	5471.929	5336.945	4891.353	4239.656
40.0	5307.916	5319.528	5399.357	5495.152	5667.873	5798.503	5797.051	5651.907	5165.675	4471.887
42.5	5644.650	5659.164	5737.542	5843.497	5979.933	6112.014	6119.271	5974.127	5444.351	4712.826
45.0	5956.710	5971.224	6055.408	6171.523	6306.507	6440.039	6451.651	6296.347	5730.285	4975.536
47.5	6262.963	6273.124	6380.530	6483.582	6646.144	6817.414	6836.282	6644.692	6023.476	5249.858
50.0	6593.892	6586.635	6685.333	6799.996	6974.169	7199.142	7233.977	7020.615	6329.730	5559.015
52.5	6913.209	6898.694	6997.392	7128.022	7334.126	7624.414	7666.506	7444.436	6691.138	5911.715
55.0	7218.011	7204.948	7338.481	7522.813	7733.272	8123.710	8173.059	7943.731	7093.187	6315.215
57.5	7495.236	7496.687	7643.283	7913.251	8247.082	8775.406	8810.241	8551.884	7609.900	6798.545
60.0	7679.569	7694.083	7959.697	8379.163	8882.813	9576.601	9682.556	9338.565	8242.728	7405.247
62.5	7649.089	7683.923	8152.738	8881.361	9698.522	10663.730	10826.291	10395.213	9036.665	8085.972
65.0	7284.777	7315.257	7937.925	9120.849	10792.908	12411.263	12646.397	12020.826	10370.539	9268.896
67.5	5313.722	5350.008	6290.541	8331.265	11104.967	15051.433	15618.946	14479.565	11662.320	10035.256
70.0	1759.145	1651.739	2690.970	5325.333	9447.423	14766.950	15886.011	14646.481	10576.643	8033.720
72.5	433.981	448.495	568.964	1336.776	5114.874	11261.723	12303.857	10935.149	6615.663	4233.850
75.0	261.259	267.065	291.739	394.792	1082.774	4631.545	6085.888	4672.185	2403.585	1439.828
77.5	155.304	155.304	171.270	207.556	348.346	950.693	1550.138	1422.411	825.869	538.484
80.0	81.281	82.732	92.892	113.212	156.756	267.065	403.500	448.495	418.015	326.574
82.5	42.092	42.092	47.898	62.412	82.732	124.824	152.401	187.236	258.356	243.842
85.0	17.417	18.869	21.772	29.029	42.092	63.863	79.829	97.246	148.047	203.202
87.5	10.160	10.160	13.063	17.417	23.223	34.835	43.543	59.509	105.955	174.173
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles	Horizontal Angles									
	<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	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843	1857.843
2.5	1869.455	1863.649	1856.392	1830.266	1825.911	1815.751	1805.591	1798.334	1791.077	1786.723
5.0	1907.192	1888.323	1869.455	1820.106	1789.625	1756.242	1725.762	1702.539	1680.767	1666.253
7.5	1963.798	1933.318	1898.483	1821.557	1763.500	1705.442	1651.739	1606.744	1574.812	1544.332
10.0	2042.176	1995.730	1946.381	1836.072	1748.985	1663.350	1586.424	1524.012	1480.469	1444.183
12.5	2145.228	2078.462	2004.439	1857.843	1738.825	1628.516	1532.721	1457.246	1400.640	1365.805
15.0	2256.989	2168.451	2078.462	1886.872	1734.471	1602.390	1490.629	1412.251	1348.388	1309.199
17.5	2380.362	2267.149	2155.388	1918.804	1735.922	1587.875	1471.760	1384.674	1265.656	1100.192
20.0	2508.088	2370.201	2233.766	1957.993	1746.082	1586.424	1467.406	1246.787	898.441	719.914
22.5	2637.266	2470.351	2310.692	2005.890	1769.305	1605.293	1384.674	872.315	654.599	592.188
25.0	2770.799	2576.306	2391.973	2058.142	1808.494	1635.773	1053.745	666.211	589.285	561.707
27.5	2910.137	2689.518	2484.865	2120.554	1866.552	1535.623	762.006	606.702	573.319	541.387

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CANDELA TABULATION - (Cont.)

30.0	3058.184	2815.794	2592.272	2200.383	1933.318	1195.987	645.891	595.090	560.256	525.421
32.5	3214.940	2953.680	2712.741	2300.532	2004.439	879.573	619.765	587.833	547.193	505.101
35.0	3386.209	3106.082	2846.274	2416.648	1939.124	709.754	616.862	582.027	534.130	486.232
37.5	3571.994	3278.803	3005.932	2551.631	1670.607	664.760	615.411	576.222	521.067	467.364
40.0	3789.710	3476.199	3196.071	2718.547	1329.519	666.211	618.313	574.770	503.650	410.758
42.5	4007.426	3705.526	3400.724	2902.880	1013.105	674.920	625.571	566.062	420.918	319.317
45.0	4271.588	3958.077	3638.760	3101.727	834.578	689.434	634.279	489.135	310.608	249.648
47.5	4550.264	4233.850	3929.048	3246.871	798.292	709.754	624.119	359.957	238.036	206.104
50.0	4853.615	4538.653	4222.239	3123.499	820.064	728.623	523.970	258.356	195.944	174.173
52.5	5209.218	4897.158	4573.487	2770.799	853.447	744.589	365.763	200.299	166.916	150.950
55.0	5633.039	5319.528	4978.439	2316.498	894.087	677.822	248.196	168.367	143.693	129.178
57.5	6112.014	5797.051	5447.254	1905.741	946.339	476.072	187.236	145.144	123.372	105.955
60.0	6705.653	6384.884	6064.116	1695.282	1027.620	285.934	158.207	124.824	98.698	81.281
62.5	7393.635	7104.799	6728.876	1788.174	1050.843	184.333	133.532	100.149	76.926	76.926
65.0	8454.638	8164.350	7718.758	1988.473	908.601	139.338	110.309	91.441	94.344	137.887
67.5	9026.505	8720.251	8142.578	1979.764	801.195	149.498	137.887	240.939	169.818	191.590
70.0	6897.243	6731.779	5871.075	1449.989	670.565	185.784	209.007	220.619	178.527	319.317
72.5	3437.010	3409.433	2442.773	509.455	346.894	187.236	190.139	288.837	317.865	341.088
75.0	1119.060	1092.934	673.468	179.979	139.338	79.829	197.396	314.962	198.847	119.018
77.5	396.243	355.603	211.910	85.635	55.155	33.383	123.372	129.178	29.029	7.257
80.0	252.551	210.459	124.824	47.898	20.320	8.709	24.674	11.612	1.451	0.000
82.5	177.076	133.532	79.829	18.869	5.806	2.903	5.806	1.451	0.000	0.000
85.0	114.664	76.926	36.286	1.451	1.451	1.451	1.451	0.000	0.000	0.000
87.5	66.766	27.577	4.354	1.451	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

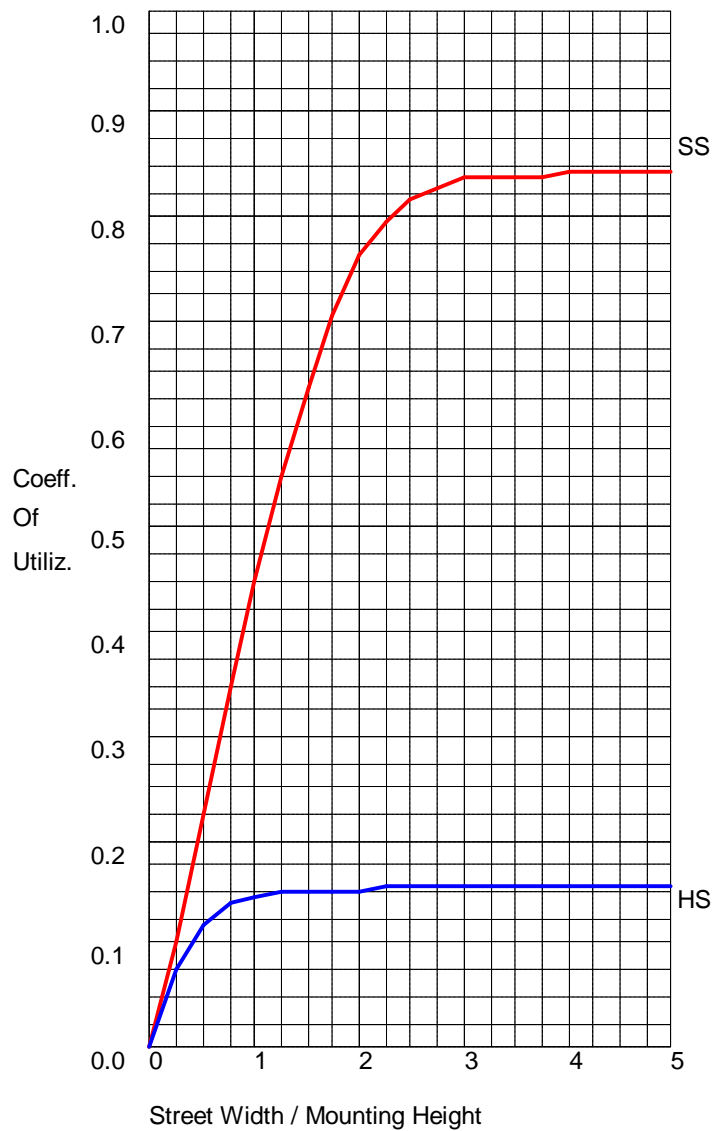
	175	180
0.0	1857.843	1857.843
2.5	1775.111	1772.208
5.0	1650.287	1647.384
7.5	1532.721	1526.915
10.0	1426.765	1420.960
12.5	1348.388	1341.131
15.0	1287.427	1281.621
17.5	1023.265	1011.654
20.0	674.920	667.662
22.5	571.867	567.513
25.0	547.193	542.839
27.5	525.421	521.067
30.0	503.650	499.295
32.5	480.427	476.072
35.0	460.106	454.301
37.5	432.529	426.723
40.0	362.860	358.506
42.5	284.482	283.031
45.0	230.779	229.328
47.5	194.493	194.493
50.0	166.916	168.367
52.5	143.693	142.241
55.0	121.921	120.470
57.5	95.795	94.344
60.0	72.572	71.121
62.5	79.829	75.475
65.0	120.470	100.149

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CANDELA TABULATION - (Cont.)

67.5	146.595	123.372
70.0	249.648	226.425
72.5	213.362	188.687
75.0	65.315	46.446
77.5	0.000	0.000
80.0	0.000	0.000
82.5	0.000	0.000
85.0	0.000	0.000
87.5	0.000	0.000
90.0	0.000	0.000

COEFFICIENTS OF UTILIZATION

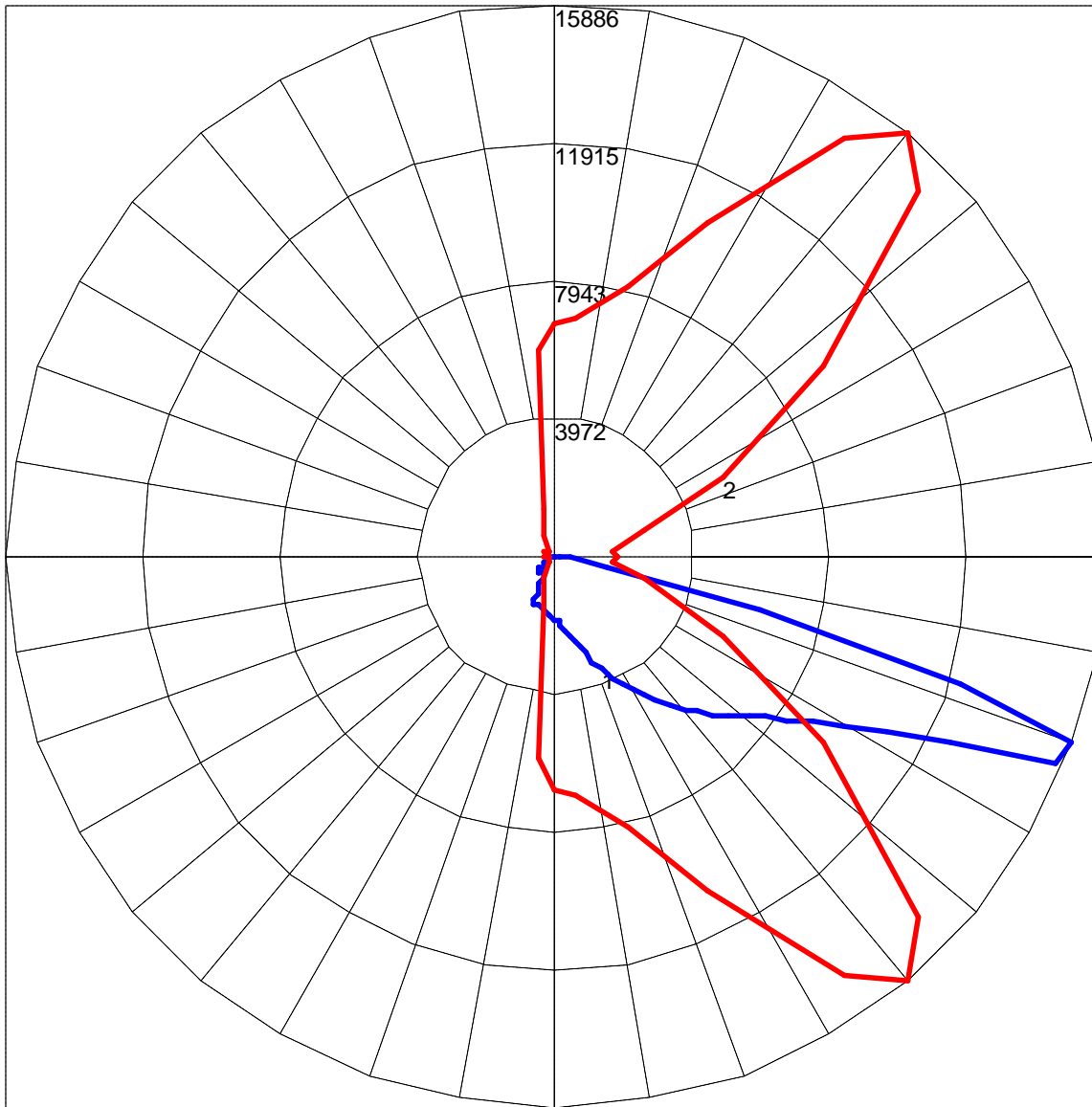


FLUX DISTRIBUTION

	Lumens	Percent Of Luminaire
Downward Street Side	14483.2	84.3
Downward House Side	2688.4	15.7
Downward Total	17171.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	17171.6	100.0

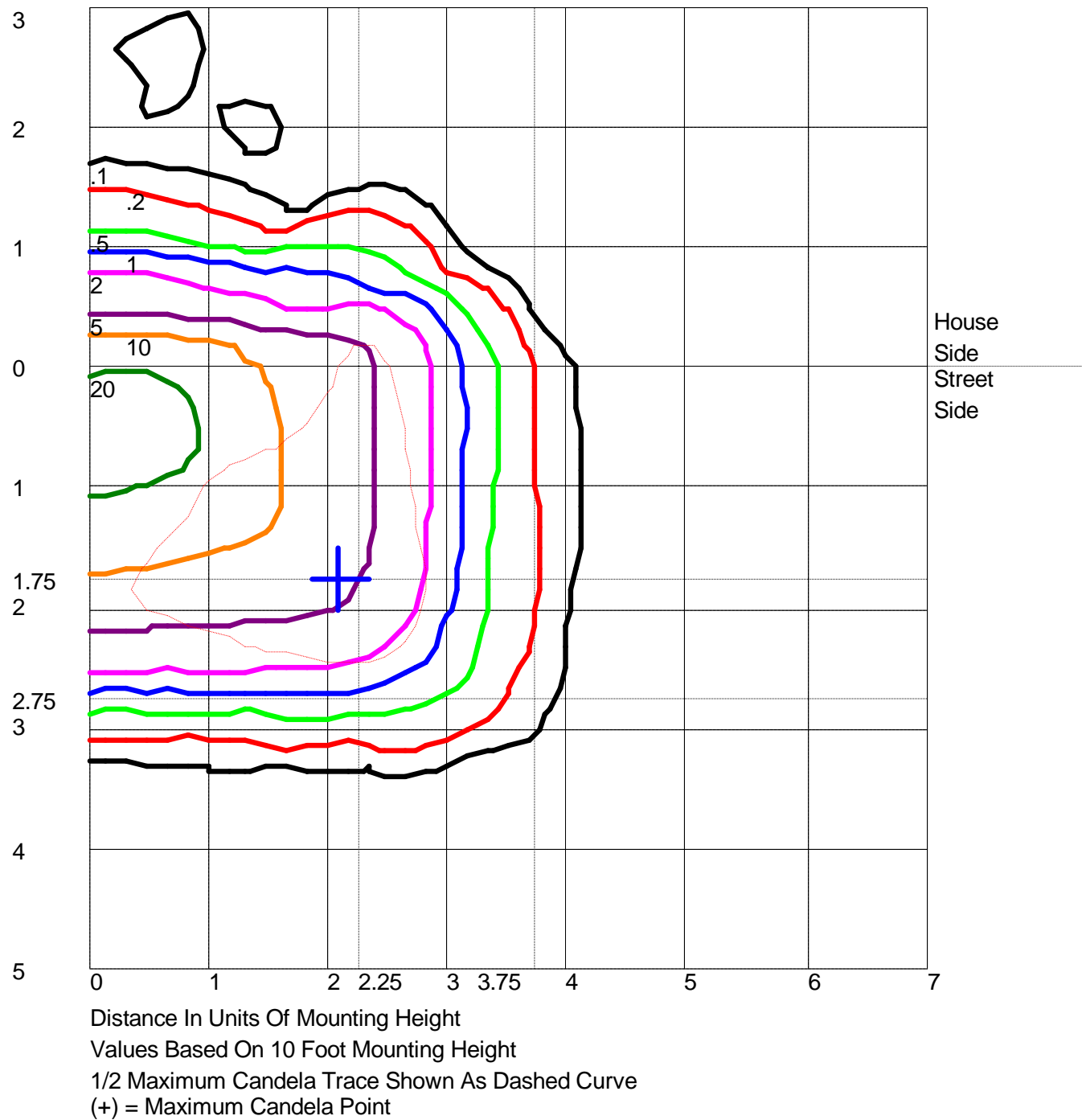
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POLAR GRAPH

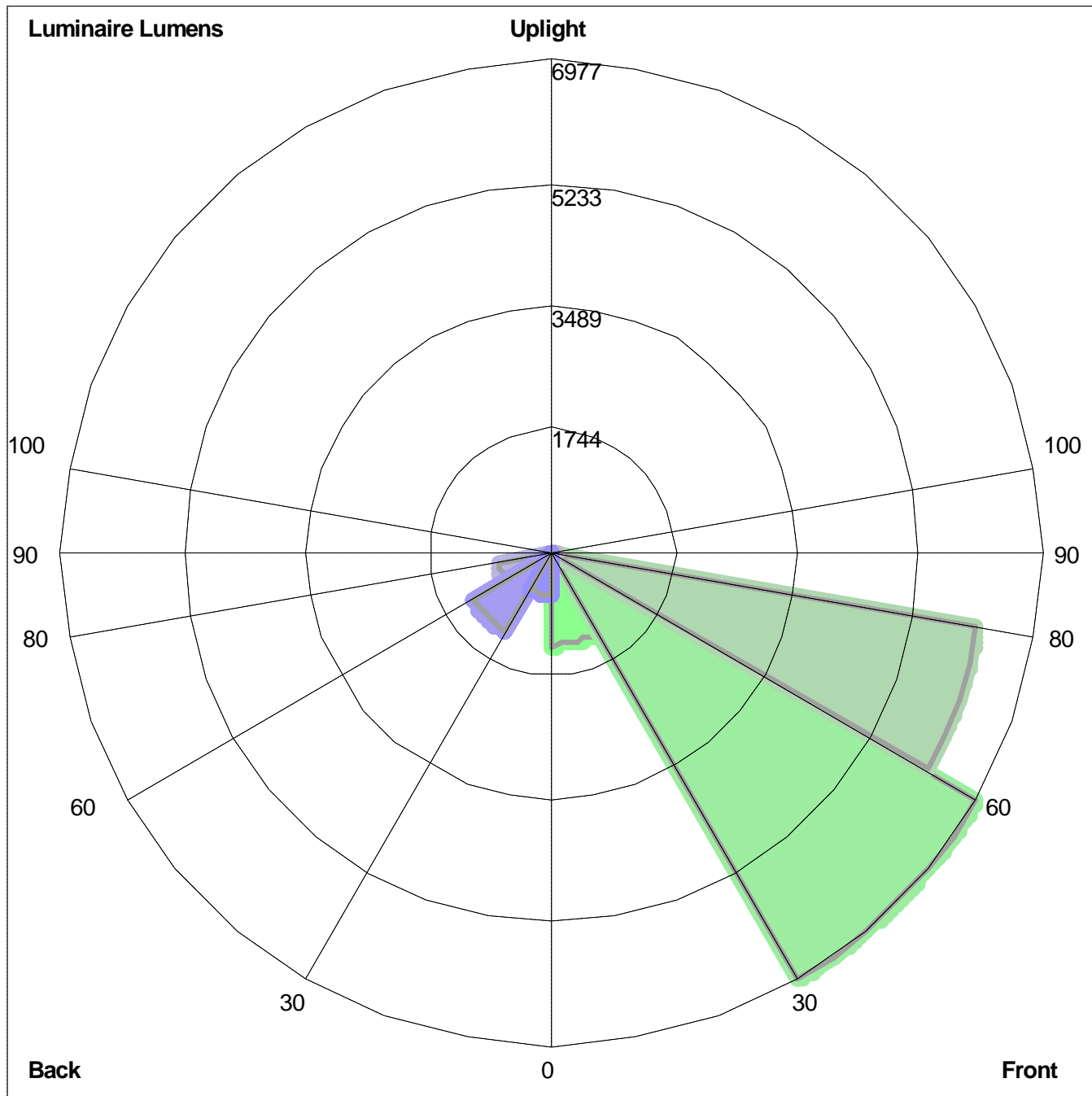


Maximum Candela = 15886.011 Located At Horizontal Angle = 50, Vertical Angle = 70
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1316.8, Medium= 6977.0, High=6136.2, Very High=53.2
Back: Low=593.6, Medium=1304.9, High=785.1, Very High=4.9
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3