



## IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-5W-LED-32L-40-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-40-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	18706
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	60
Total Luminaire Watts	314
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	17305.139
Maximum Candela Angle	50H 70V
Maximum Candela (<90 Degrees Vertical)	17305.139
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	488.56 (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)	1434.4	N.A.	7.7
FM - Front-Medium (30-60)	7600.3	N.A.	40.6
FH - Front-High (60-80)	6684.3	N.A.	35.7
FVH - Front-Very High (80-90)	58.0	N.A.	0.3
BL - Back-Low (0-30)	646.6	N.A.	3.5
BM - Back-Medium (30-60)	1421.4	N.A.	7.6
BH - Back-High (60-80)	855.3	N.A.	4.6
BVH - Back-Very High (80-90)	5.3	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	18705.6	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>50</u>	<u>55</u>	<u>65</u>	<u>75</u>	
<b>0.0</b>	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808
<b>2.5</b>	2140.809	2134.485	2123.417	2117.093	2106.025	2098.120	2088.633	2087.052	2072.822	2050.687	
<b>5.0</b>	2305.244	2298.919	2284.689	2272.041	2251.486	2229.351	2211.959	2200.891	2166.107	2118.674	
<b>7.5</b>	2488.651	2482.327	2466.516	2445.962	2417.502	2384.299	2360.582	2340.028	2284.689	2211.959	
<b>10.0</b>	2673.640	2668.897	2654.667	2638.856	2608.815	2569.287	2539.247	2510.787	2431.732	2328.960	
<b>12.5</b>	2863.372	2860.210	2863.372	2839.656	2815.939	2776.412	2744.790	2708.424	2607.234	2471.259	
<b>15.0</b>	3061.010	3057.847	3068.915	3076.821	3045.199	3010.414	2983.536	2936.103	2811.196	2635.694	
<b>17.5</b>	3271.296	3272.877	3301.337	3313.986	3313.986	3288.688	3244.417	3187.498	3038.874	2820.682	
<b>20.0</b>	3483.163	3497.393	3527.434	3563.799	3585.935	3570.124	3530.596	3464.190	3290.269	3026.225	
<b>22.5</b>	3721.909	3715.585	3763.018	3823.100	3875.276	3875.276	3840.492	3764.599	3559.056	3236.512	
<b>25.0</b>	3960.655	3954.331	4015.994	4099.792	4177.266	4199.402	4174.104	4107.698	3842.073	3451.541	
<b>27.5</b>	4226.280	4223.118	4291.105	4393.877	4495.067	4544.081	4523.527	4458.702	4140.901	3669.733	
<b>30.0</b>	4498.229	4493.486	4575.703	4695.867	4823.936	4896.667	4882.437	4800.220	4430.242	3891.087	
<b>32.5</b>	4784.409	4781.246	4872.950	5002.600	5152.805	5271.387	5239.765	5140.156	4733.813	4118.765	
<b>35.0</b>	5103.791	5113.277	5193.913	5320.401	5484.836	5619.229	5593.932	5476.930	5029.479	4357.512	
<b>37.5</b>	5434.241	5446.889	5524.363	5647.689	5820.029	5970.234	5960.747	5813.705	5328.307	4618.393	
<b>40.0</b>	5782.083	5794.731	5881.692	5986.045	6174.195	6316.494	6314.913	6156.803	5627.135	4871.369	
<b>42.5</b>	6148.898	6164.709	6250.088	6365.509	6514.132	6658.012	6665.918	6507.808	5930.706	5133.832	
<b>45.0</b>	6488.834	6504.645	6596.349	6722.837	6869.879	7015.341	7027.989	6858.812	6242.183	5420.011	
<b>47.5</b>	6822.446	6833.514	6950.516	7062.774	7239.857	7426.427	7446.981	7238.276	6561.565	5718.839	
<b>50.0</b>	7182.937	7175.032	7282.547	7407.453	7597.185	7842.256	7880.202	7647.781	6895.177	6055.613	
<b>52.5</b>	7530.779	7514.968	7622.483	7764.782	7989.298	8305.518	8351.370	8109.462	7288.871	6439.820	
<b>55.0</b>	7862.810	7848.580	7994.042	8194.841	8424.101	8849.417	8903.174	8653.360	7726.836	6879.366	
<b>57.5</b>	8164.800	8166.381	8326.073	8620.157	8983.810	9559.331	9597.277	9315.841	8289.707	7405.872	
<b>60.0</b>	8365.600	8381.411	8670.752	9127.690	9676.332	10432.098	10547.518	10172.797	8979.067	8066.772	
<b>62.5</b>	8332.397	8370.343	8881.039	9674.751	10564.910	11616.342	11793.425	11323.838	9843.929	8808.308	
<b>65.0</b>	7935.541	7968.744	8647.036	9935.632	11757.060	13519.986	13776.124	13094.670	11296.959	10096.905	
<b>67.5</b>	5788.407	5827.935	6852.487	9075.514	12096.996	16396.007	17014.217	15773.053	12704.138	10931.725	
<b>70.0</b>	1916.293	1799.292	2931.359	5801.056	10291.380	16086.111	17305.139	15954.880	11521.476	8751.388	
<b>72.5</b>	472.749	488.560	619.791	1456.193	5571.796	12267.755	13402.985	11912.007	7206.654	4612.069	
<b>75.0</b>	284.598	290.922	317.801	430.059	1179.501	5045.290	6629.552	5089.561	2618.302	1568.451	
<b>77.5</b>	169.178	169.178	186.570	226.097	379.464	1035.620	1688.615	1549.478	899.646	586.588	
<b>80.0</b>	88.542	90.123	101.190	123.326	170.759	290.922	439.546	488.560	455.357	355.747	
<b>82.5</b>	45.852	45.852	52.176	67.987	90.123	135.975	166.015	203.962	281.436	265.625	
<b>85.0</b>	18.973	20.554	23.716	31.622	45.852	69.568	86.960	105.934	161.272	221.354	
<b>87.5</b>	11.068	11.068	14.230	18.973	25.298	37.946	47.433	64.825	115.420	189.732	
<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>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>	
<b>0.0</b>	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808	2023.808
<b>2.5</b>	2036.457	2030.132	2022.227	1993.767	1989.024	1977.956	1966.888	1958.983	1951.077	1946.334	
<b>5.0</b>	2077.565	2057.011	2036.457	1982.699	1949.496	1913.131	1879.928	1854.630	1830.914	1815.103	
<b>7.5</b>	2139.228	2106.025	2068.079	1984.280	1921.036	1857.792	1799.292	1750.278	1715.493	1682.290	
<b>10.0</b>	2224.608	2174.012	2120.255	2000.091	1905.225	1811.941	1728.142	1660.155	1612.722	1573.194	
<b>12.5</b>	2336.866	2264.135	2183.499	2023.808	1894.158	1773.994	1669.642	1587.424	1525.761	1487.815	
<b>15.0</b>	2458.610	2362.163	2264.135	2055.430	1889.414	1745.534	1623.790	1538.410	1468.842	1426.152	
<b>17.5</b>	2593.004	2469.678	2347.933	2090.214	1890.996	1729.723	1603.235	1508.369	1378.719	1198.474	
<b>20.0</b>	2732.141	2581.936	2433.313	2132.904	1902.063	1728.142	1598.492	1358.165	978.701	784.226	
<b>22.5</b>	2872.859	2691.032	2517.111	2185.080	1927.361	1748.697	1508.369	950.241	713.076	645.089	
<b>25.0</b>	3018.320	2806.452	2605.653	2242.000	1970.051	1781.900	1147.879	725.725	641.927	611.886	
<b>27.5</b>	3170.105	2929.778	2706.843	2309.987	2033.295	1672.804	830.077	660.900	624.534	589.750	

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**CANDELA TABULATION - (Cont.)**

30.0	3331.378	3067.334	2823.845	2396.948	2106.025	1302.826	703.589	648.251	610.305	572.358
32.5	3502.136	3217.538	2955.076	2506.043	2183.499	958.147	675.130	640.345	596.075	550.223
35.0	3688.706	3383.554	3100.537	2632.531	2112.350	773.158	671.967	634.021	581.845	529.668
37.5	3891.087	3571.705	3274.458	2779.574	1819.846	724.144	670.386	627.697	567.615	509.114
40.0	4128.252	3786.734	3481.582	2961.400	1448.288	725.725	673.549	626.116	548.642	447.451
42.5	4365.417	4036.548	3704.517	3162.200	1103.608	735.211	681.454	616.629	458.519	347.842
45.0	4653.177	4311.660	3963.818	3378.811	909.132	751.022	690.941	532.831	338.355	271.949
47.5	4956.748	4612.069	4280.038	3536.921	869.605	773.158	679.873	392.113	259.300	224.516
50.0	5287.198	4944.100	4599.420	3402.527	893.321	793.712	570.777	281.436	213.448	189.732
52.5	5674.568	5334.631	4982.046	3018.320	929.687	811.104	398.437	218.192	181.826	164.434
55.0	6136.249	5794.731	5423.173	2523.436	973.958	738.374	270.368	183.408	156.529	140.718
57.5	6658.012	6314.913	5933.868	2075.984	1030.877	518.601	203.962	158.110	134.393	115.420
60.0	7304.682	6955.259	6605.836	1846.725	1119.419	311.477	172.340	135.975	107.515	88.542
62.5	8054.123	7739.484	7329.980	1947.915	1144.716	200.800	145.461	109.096	83.798	83.798
65.0	9209.907	8893.687	8408.290	2166.107	989.769	151.786	120.164	99.609	102.771	150.204
67.5	9832.861	9499.249	8869.971	2156.620	872.767	162.853	150.204	262.463	184.989	208.705
70.0	7513.387	7333.142	6395.549	1579.519	730.468	202.381	227.678	240.327	194.475	347.842
72.5	3744.045	3714.004	2660.991	554.966	377.883	203.962	207.124	314.639	346.261	371.558
75.0	1219.028	1190.568	733.630	196.056	151.786	86.960	215.030	343.099	216.611	129.650
77.5	431.640	387.369	230.841	93.285	60.082	36.365	134.393	140.718	31.622	7.905
80.0	275.111	229.259	135.975	52.176	22.135	9.487	26.879	12.649	1.581	0.000
82.5	192.894	145.461	86.960	20.554	6.324	3.162	6.324	1.581	0.000	0.000
85.0	124.907	83.798	39.527	1.581	1.581	1.581	1.581	0.000	0.000	0.000
87.5	72.731	30.041	4.743	1.581	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**

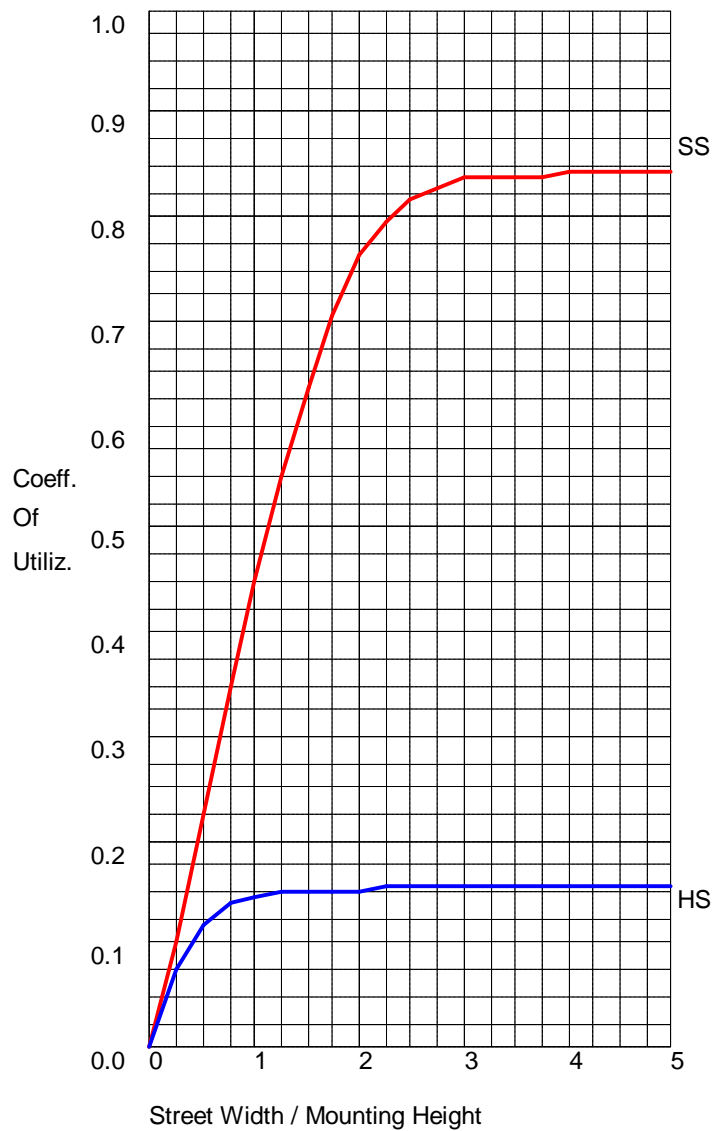
	<b>175</b>	<b>180</b>
0.0	2023.808	2023.808
2.5	1933.685	1930.523
5.0	1797.711	1794.548
7.5	1669.642	1663.317
10.0	1554.221	1547.897
12.5	1468.842	1460.936
15.0	1402.436	1396.111
17.5	1114.675	1102.027
20.0	735.211	727.306
22.5	622.953	618.210
25.0	596.075	591.331
27.5	572.358	567.615
30.0	548.642	543.898
32.5	523.344	518.601
35.0	501.209	494.884
37.5	471.168	464.843
40.0	395.275	390.532
42.5	309.896	308.314
45.0	251.395	249.814
47.5	211.867	211.867
50.0	181.826	183.408
52.5	156.529	154.948
55.0	132.812	131.231
57.5	104.353	102.771
60.0	79.055	77.474
62.5	86.960	82.217
65.0	131.231	109.096

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

<b>67.5</b>	159.691	134.393
<b>70.0</b>	271.949	246.652
<b>72.5</b>	232.422	205.543
<b>75.0</b>	71.149	50.595
<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

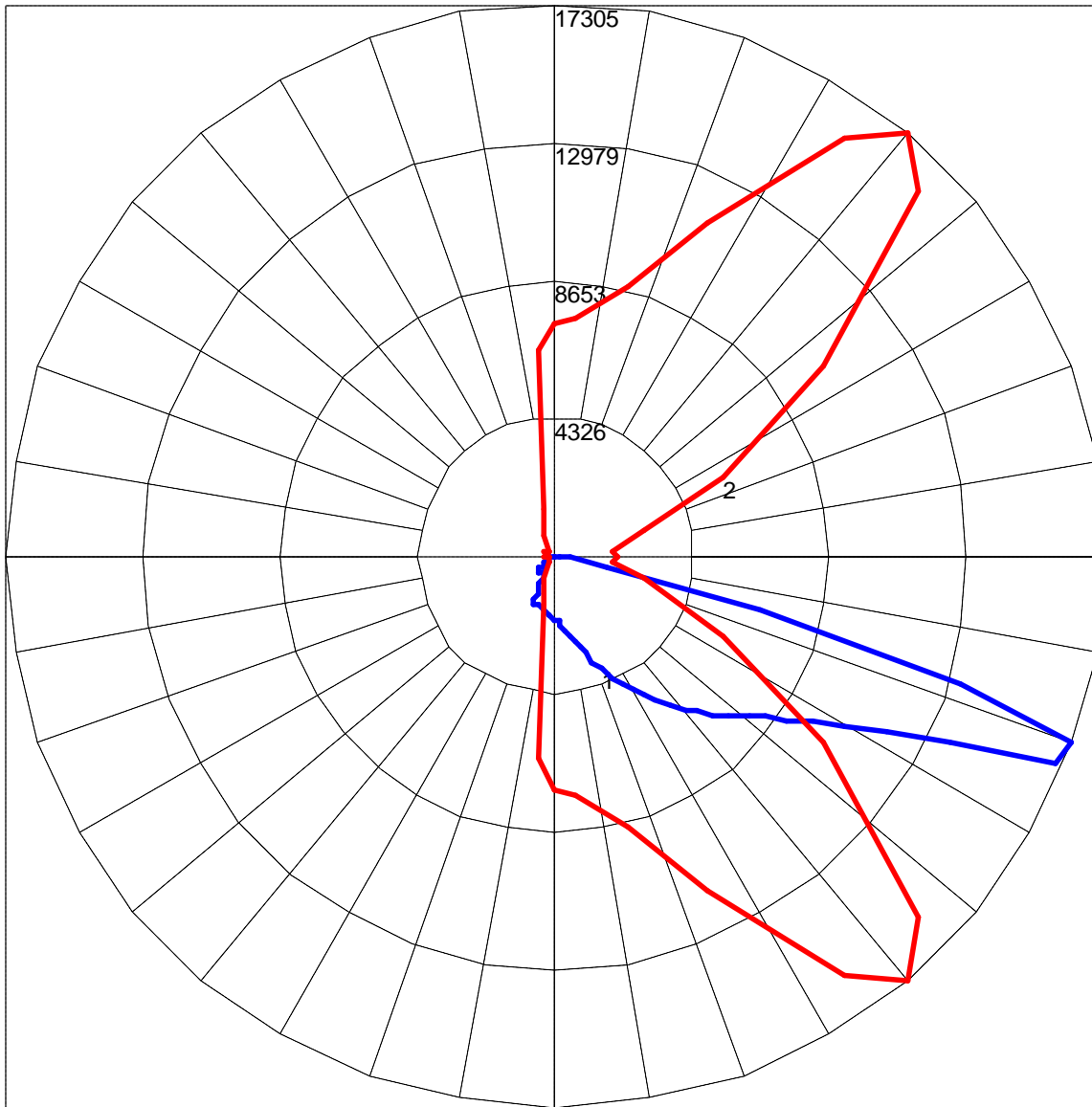
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

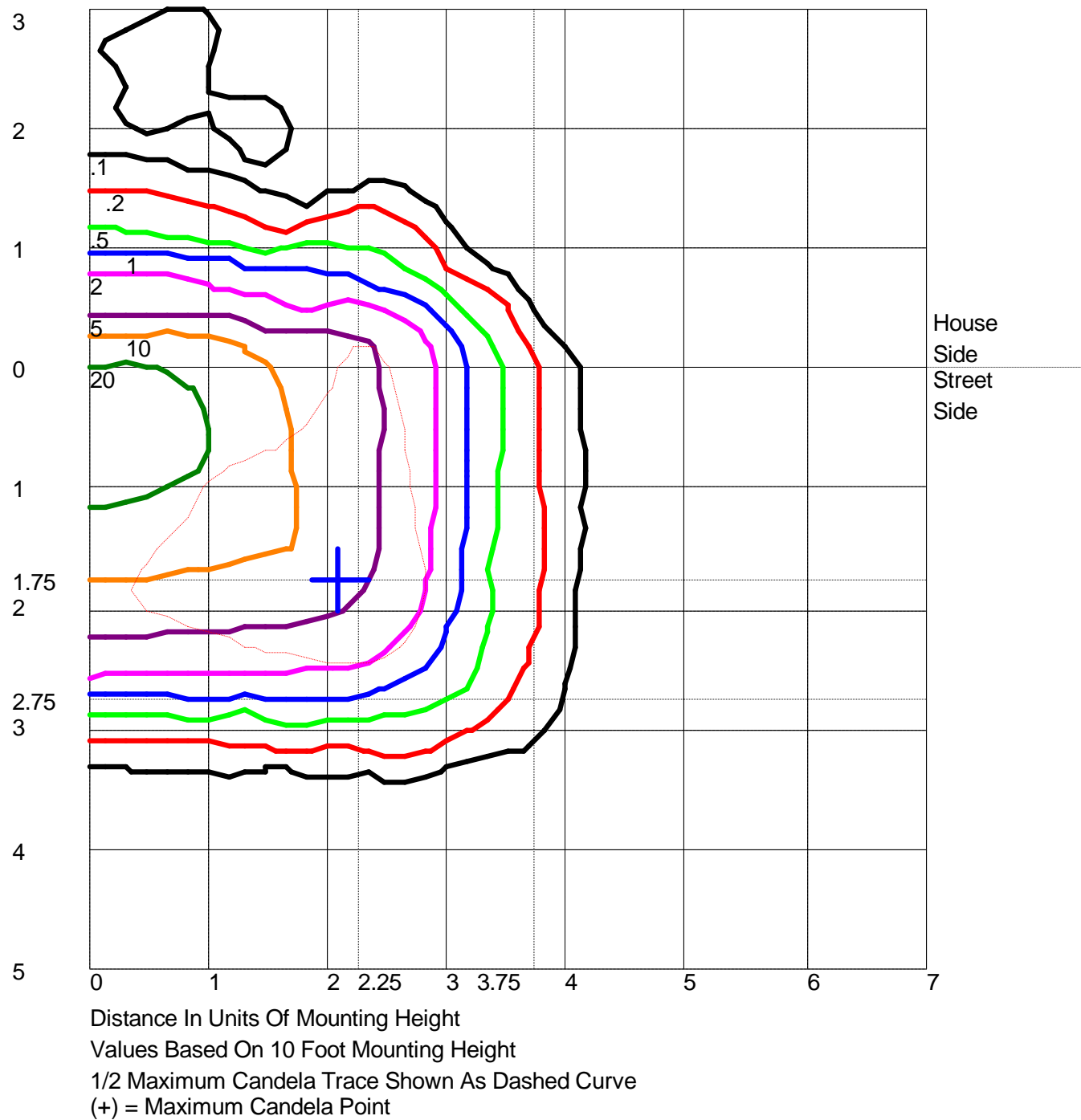
	Lumens	Percent Of Luminaire
Downward Street Side	15777.0	84.3
Downward House Side	2928.6	15.7
Downward Total	18705.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	18705.6	100.0

POLAR GRAPH



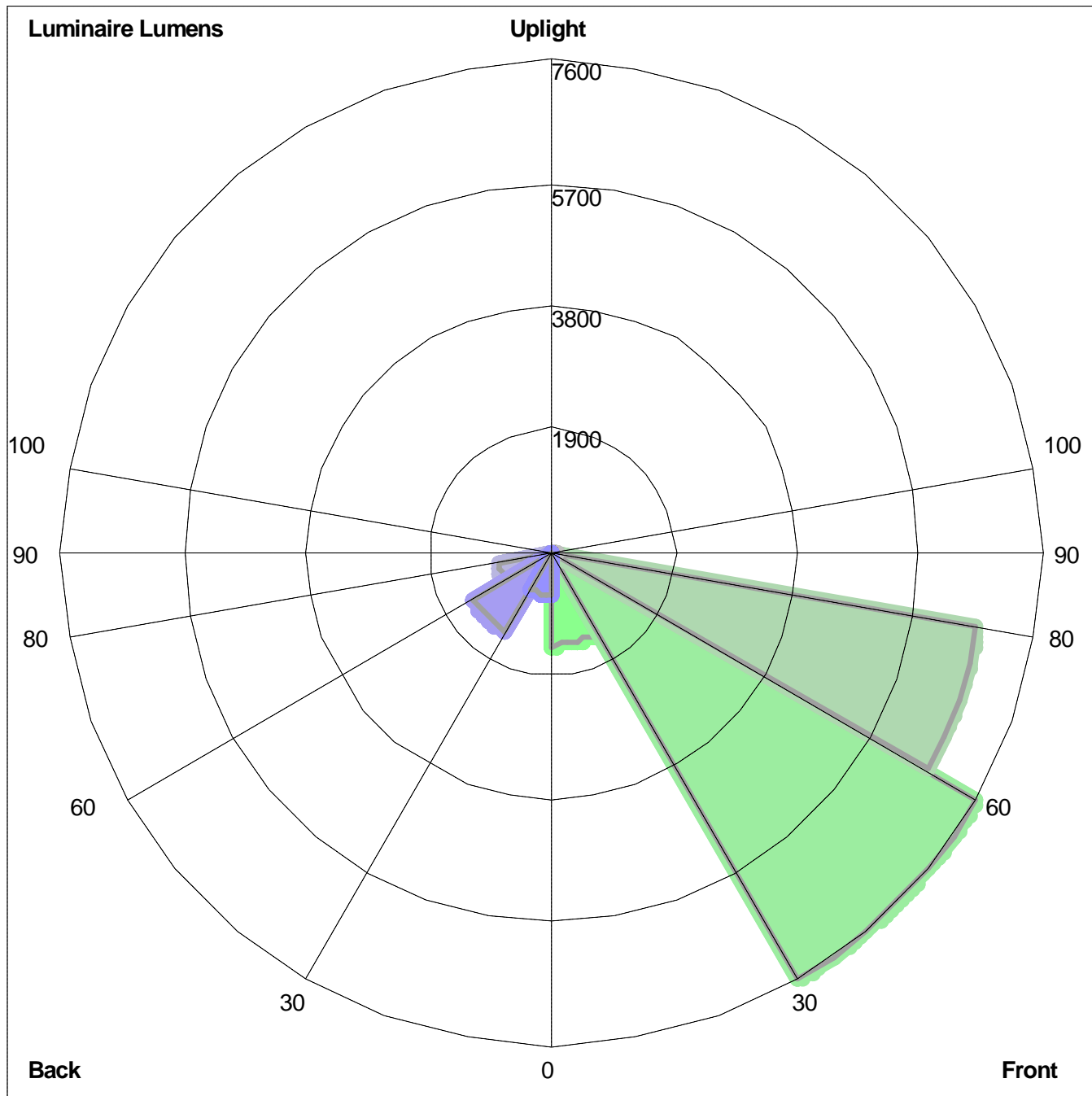
Maximum Candela = 17305.139 Located At Horizontal Angle = 50, Vertical Angle = 70  
# 1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1434.4, Medium=7600.3, High=6684.3, Very High=58.0  
Back: Low=646.6, Medium=1421.4, High=855.3, Very High=5.3  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3