



IES ROAD REPORT
PHOTOMETRIC FILENAME : HLN-5W-LED-32L-50-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
[MANUFACT]LSI INDUSTRIES, INC
[LUMCAT] HLN-5W-LED-32L-50-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	19346
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	62
Total Luminaire Watts	314
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	17897.264
Maximum Candela Angle	50H 70V
Maximum Candela (<90 Degrees Vertical)	17897.264
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	505.277 (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)	1483.5	N.A.	7.7
FM - Front-Medium (30-60)	7860.4	N.A.	40.6
FH - Front-High (60-80)	6913.0	N.A.	35.7
FVH - Front-Very High (80-90)	60.0	N.A.	0.3
BL - Back-Low (0-30)	668.7	N.A.	3.5
BM - Back-Medium (30-60)	1470.1	N.A.	7.6
BH - Back-High (60-80)	884.5	N.A.	4.6
BVH - Back-Very High (80-90)	5.5	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	19345.7	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	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056
2.5	2214.061	2207.520	2196.074	2189.533	2178.086	2169.910	2160.099	2158.464	2143.747	2120.854
5.0	2384.122	2377.581	2362.864	2349.782	2328.525	2305.632	2287.645	2276.198	2240.224	2191.168
7.5	2573.805	2567.264	2550.912	2529.654	2500.221	2465.882	2441.354	2420.096	2362.864	2287.645
10.0	2765.123	2760.218	2745.501	2729.149	2698.080	2657.200	2626.131	2596.698	2514.938	2408.650
12.5	2961.347	2958.077	2961.347	2936.819	2912.291	2871.411	2838.707	2801.098	2696.445	2555.818
15.0	3165.747	3162.477	3173.923	3182.099	3149.395	3113.421	3085.622	3036.566	2907.386	2725.878
17.5	3383.229	3384.864	3414.298	3427.379	3427.379	3401.216	3355.430	3296.563	3142.854	2917.197
20.0	3602.346	3617.062	3648.131	3685.741	3708.634	3692.282	3651.402	3582.723	3402.851	3129.773
22.5	3849.261	3842.720	3891.776	3953.914	4007.875	4007.875	3971.901	3893.411	3680.835	3347.254
25.0	4096.176	4089.635	4153.408	4240.074	4320.198	4343.091	4316.928	4248.250	3973.536	3569.642
27.5	4370.890	4367.619	4437.933	4544.221	4648.874	4699.565	4678.307	4611.264	4282.589	3795.299
30.0	4652.144	4647.238	4732.269	4856.544	4988.995	5064.214	5049.498	4964.467	4581.830	4024.227
32.5	4948.115	4944.845	5039.686	5173.773	5329.117	5451.757	5419.053	5316.035	4895.789	4259.696
35.0	5278.426	5288.237	5371.632	5502.448	5672.509	5811.501	5785.338	5664.333	5201.571	4506.611
37.5	5620.182	5633.264	5713.389	5840.934	6019.171	6174.515	6164.704	6012.630	5510.624	4776.419
40.0	5979.926	5993.008	6082.944	6190.867	6385.456	6532.624	6530.989	6367.469	5819.677	5038.051
42.5	6359.293	6375.645	6463.946	6583.315	6737.024	6885.827	6894.003	6730.483	6133.635	5309.494
45.0	6710.861	6727.213	6822.054	6952.871	7104.944	7255.383	7268.464	7093.498	6455.770	5605.466
47.5	7055.888	7067.335	7188.339	7304.439	7487.581	7680.535	7701.792	7485.946	6786.080	5914.518
50.0	7428.714	7420.538	7531.731	7660.912	7857.136	8110.592	8149.837	7909.463	7131.107	6262.816
52.5	7788.458	7772.106	7883.299	8030.467	8262.666	8589.706	8637.127	8386.941	7538.272	6660.170
55.0	8131.850	8117.133	8267.571	8475.242	8712.346	9152.215	9207.811	8949.450	7991.223	7114.755
57.5	8444.173	8445.808	8610.963	8915.111	9291.207	9886.419	9925.664	9634.599	8573.354	7659.277
60.0	8651.843	8668.195	8967.437	9440.010	10007.424	10789.050	10908.419	10520.877	9286.301	8342.791
62.5	8617.504	8656.749	9184.919	10005.789	10926.407	12013.815	12196.957	11711.303	10180.755	9109.699
65.0	8207.069	8241.408	8942.909	10275.597	12159.347	13982.595	14247.498	13542.727	11683.504	10442.387
67.5	5986.467	6027.347	7086.957	9386.048	12510.915	16957.024	17596.387	16312.755	13138.832	11305.773
70.0	1981.862	1860.858	3031.661	5999.549	10643.517	16636.525	17897.264	16500.803	11915.703	9050.832
72.5	488.925	505.277	640.998	1506.019	5762.445	12687.517	13861.591	12319.597	77453.242	4769.878
75.0	294.336	300.877	328.675	444.774	1219.859	5217.923	6856.394	5263.709	2707.891	1622.118
77.5	174.966	174.966	192.954	233.834	392.448	1071.056	1746.394	1602.496	930.429	606.659
80.0	91.571	93.206	104.653	127.546	176.602	300.877	454.586	505.277	470.938	367.920
82.5	47.421	47.421	53.962	70.314	93.206	140.627	171.696	210.941	291.066	274.714
85.0	19.622	21.258	24.528	32.704	47.421	71.949	89.936	109.558	166.790	228.928
87.5	11.446	11.446	14.717	19.622	26.163	39.245	49.056	67.043	119.370	196.224
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	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056	2093.056
2.5	2106.138	2099.597	2091.421	2061.987	2057.082	2045.635	2034.189	2026.013	2017.837	2012.931
5.0	2148.653	2127.395	2106.138	2050.541	2016.202	1978.592	1944.253	1918.090	1893.562	1877.210
7.5	2212.426	2178.086	2138.842	2052.176	1986.768	1921.360	1860.858	1810.166	1774.192	1739.853
10.0	2300.726	2248.400	2192.803	2068.528	1970.416	1873.939	1787.274	1716.960	1667.904	1627.024
12.5	2416.826	2341.606	2258.211	2093.056	1958.970	1834.694	1726.771	1641.741	1577.968	1538.723
15.0	2542.736	2442.989	2341.606	2125.760	1954.064	1805.261	1679.350	1591.050	1519.101	1474.950
17.5	2681.728	2554.182	2428.272	2161.734	1955.699	1788.909	1658.093	1559.981	1425.894	1239.482
20.0	2825.626	2670.282	2516.573	2205.885	1967.146	1787.274	1653.187	1404.637	1012.189	811.059
22.5	2971.158	2783.110	2603.238	2259.846	1993.309	1808.531	1559.981	982.755	737.475	667.162
25.0	3121.597	2902.480	2694.810	2318.714	2037.459	1842.870	1187.155	750.557	663.891	632.822
27.5	3278.576	3030.026	2799.462	2389.027	2102.867	1730.042	858.480	683.514	645.904	609.930

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CANDELA TABULATION - (Cont.)

30.0	3445.366	3172.288	2920.467	2478.963	2178.086	1347.405	727.664	670.432	631.187	591.942
32.5	3621.968	3327.632	3056.189	2591.792	2258.211	990.931	698.230	662.256	616.470	569.050
35.0	3814.922	3499.328	3206.627	2722.608	2184.627	799.613	694.960	655.715	601.754	547.792
37.5	4024.227	3693.917	3386.499	2874.682	1882.115	748.922	693.325	649.174	587.037	526.534
40.0	4269.507	3916.304	3600.710	3062.730	1497.843	750.557	696.595	647.539	567.414	462.762
42.5	4514.787	4174.666	3831.274	3270.400	1141.370	760.368	704.771	637.728	474.208	359.744
45.0	4812.394	4459.190	4099.446	3494.422	940.240	776.720	714.582	551.062	349.933	281.254
47.5	5126.352	4769.878	4426.486	3657.942	899.360	799.613	703.136	405.530	268.173	232.198
50.0	5468.109	5113.270	4756.797	3518.950	923.888	820.870	590.307	291.066	220.752	196.224
52.5	5868.733	5517.165	5152.515	3121.597	961.498	838.858	412.070	225.658	188.048	170.061
55.0	6346.211	5993.008	5608.736	2609.779	1007.283	763.638	279.619	189.683	161.885	145.533
57.5	6885.827	6530.989	6136.906	2147.018	1066.150	536.346	210.941	163.520	138.992	119.370
60.0	7554.624	7193.245	6831.866	1909.914	1157.722	322.134	178.237	140.627	111.194	91.571
62.5	8329.709	8004.304	7580.787	2014.566	1183.885	207.670	150.438	112.829	86.666	86.666
65.0	9525.040	9198.000	8695.994	2240.224	1023.635	156.979	124.275	103.018	106.288	155.344
67.5	10169.309	9824.282	9173.472	2230.413	902.630	168.426	155.344	271.443	191.318	215.846
70.0	7770.471	7584.058	6614.384	1633.565	755.462	209.306	235.469	248.550	201.130	359.744
72.5	3872.154	3841.085	2752.042	573.955	390.813	210.941	214.211	325.405	358.109	384.272
75.0	1260.739	1231.306	758.733	202.765	156.979	89.936	222.387	354.838	224.022	134.086
77.5	446.410	400.624	238.739	96.477	62.138	37.610	138.992	145.533	32.704	8.176
80.0	284.525	237.104	140.627	53.962	22.893	9.811	27.798	13.082	1.635	0.000
82.5	199.494	150.438	89.936	21.258	6.541	3.270	6.541	1.635	0.000	0.000
85.0	129.181	86.666	40.880	1.635	1.635	1.635	1.635	0.000	0.000	0.000
87.5	75.219	31.069	4.906	1.635	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

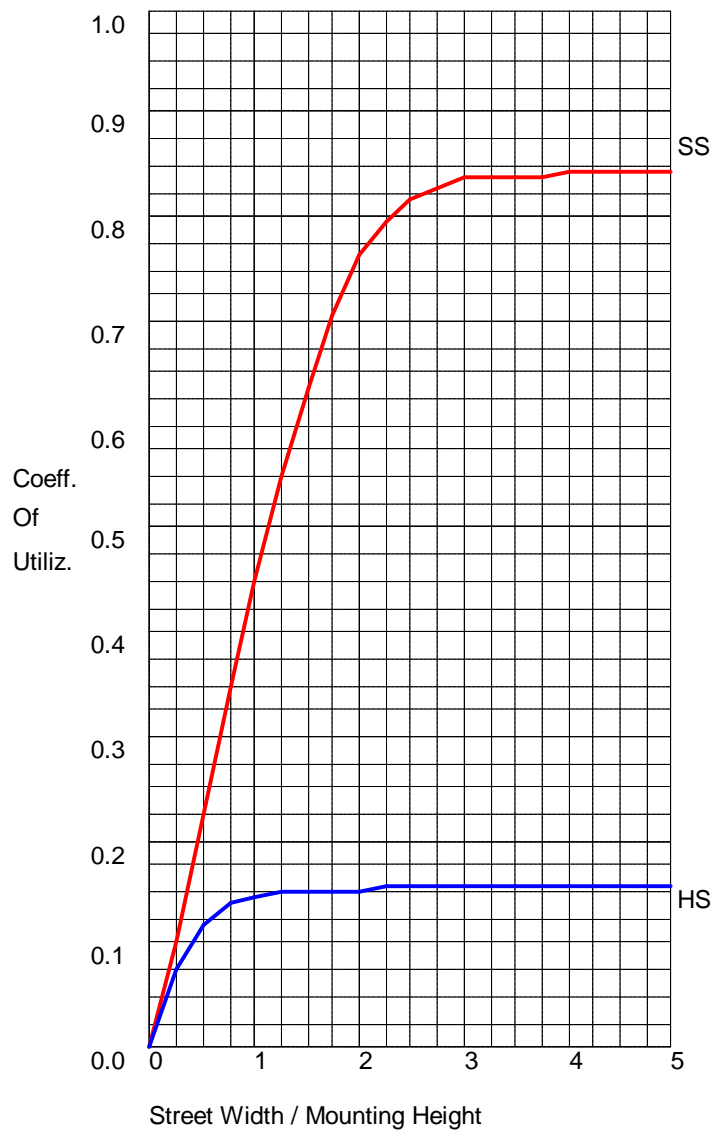
	175	180
0.0	2093.056	2093.056
2.5	1999.850	1996.579
5.0	1859.222	1855.952
7.5	1726.771	1720.230
10.0	1607.402	1600.861
12.5	1519.101	1510.925
15.0	1450.422	1443.882
17.5	1152.816	1139.734
20.0	760.368	752.192
22.5	644.269	639.363
25.0	616.470	611.565
27.5	591.942	587.037
30.0	567.414	562.509
32.5	541.251	536.346
35.0	518.358	511.818
37.5	487.290	480.749
40.0	408.800	403.894
42.5	320.499	318.864
45.0	259.997	258.362
47.5	219.117	219.117
50.0	188.048	189.683
52.5	161.885	160.250
55.0	137.357	135.722
57.5	107.923	106.288
60.0	81.760	80.125
62.5	89.936	85.030
65.0	135.722	112.829

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CANDELA TABULATION - (Cont.)

67.5	165.155	138.992
70.0	281.254	255.091
72.5	240.374	212.576
75.0	73.584	52.326
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

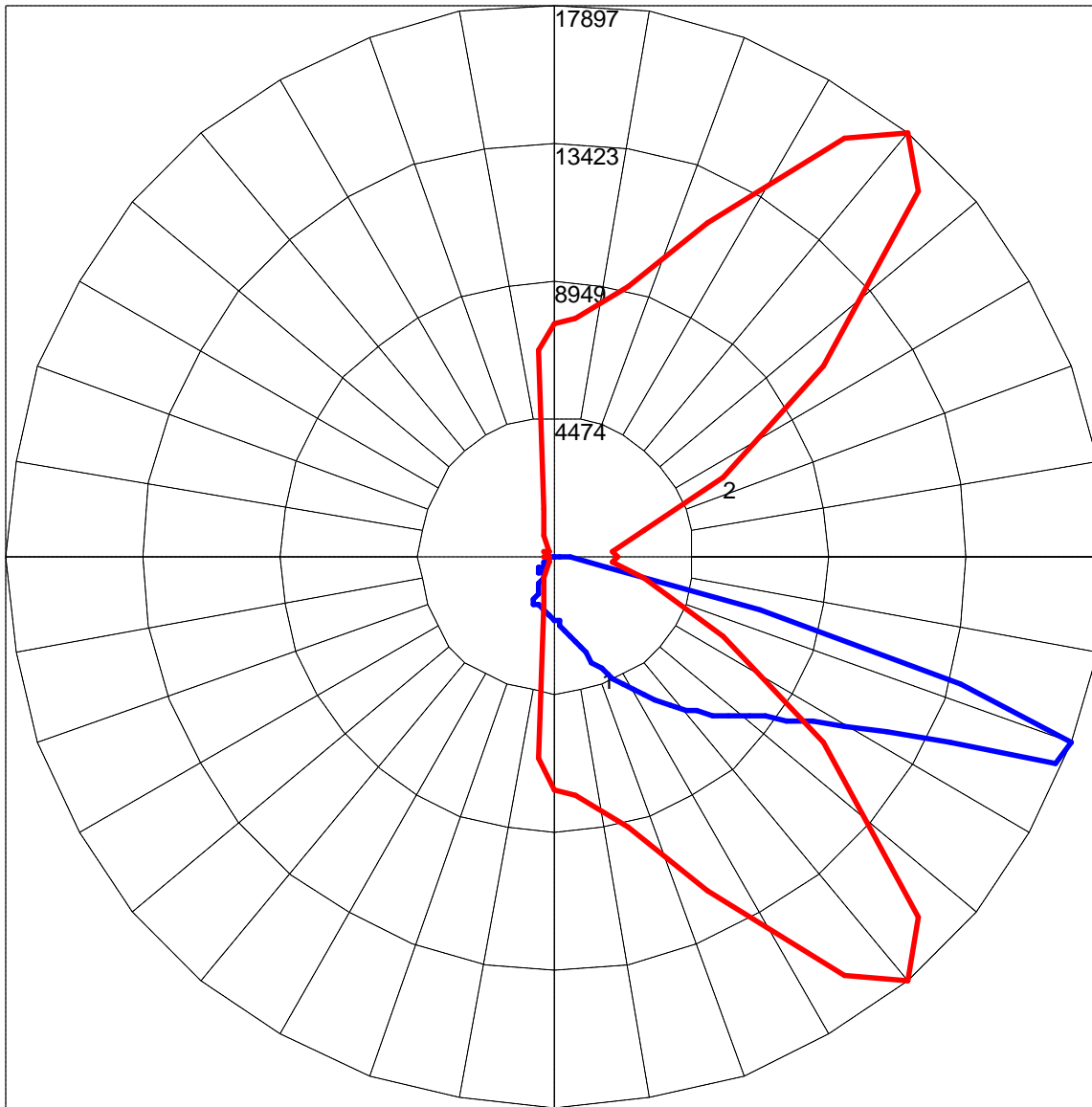
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

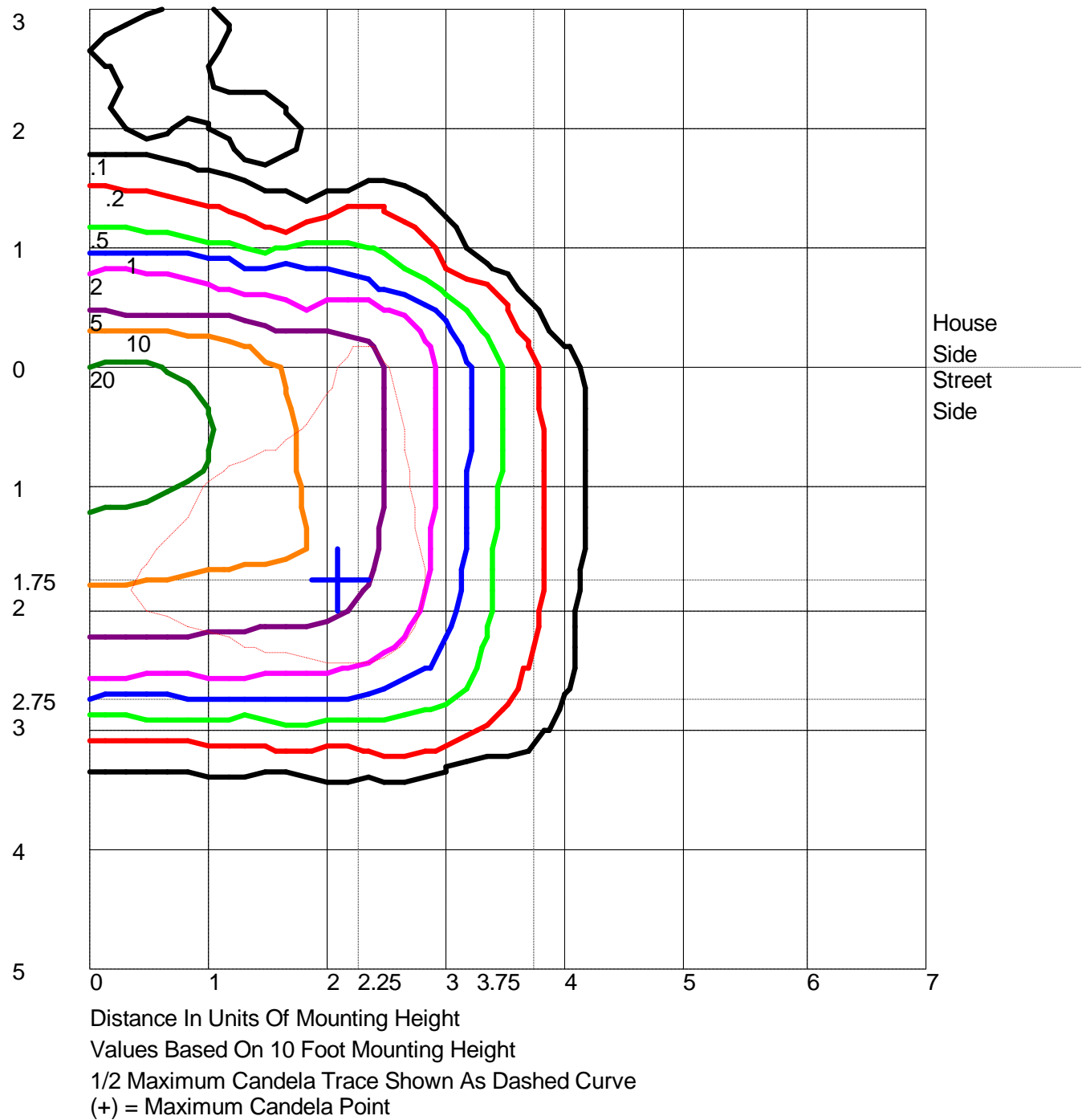
	Lumens	Percent Of Luminaire
Downward Street Side	16316.8	84.3
Downward House Side	3028.8	15.7
Downward Total	19345.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	19345.6	100.0

POLAR GRAPH

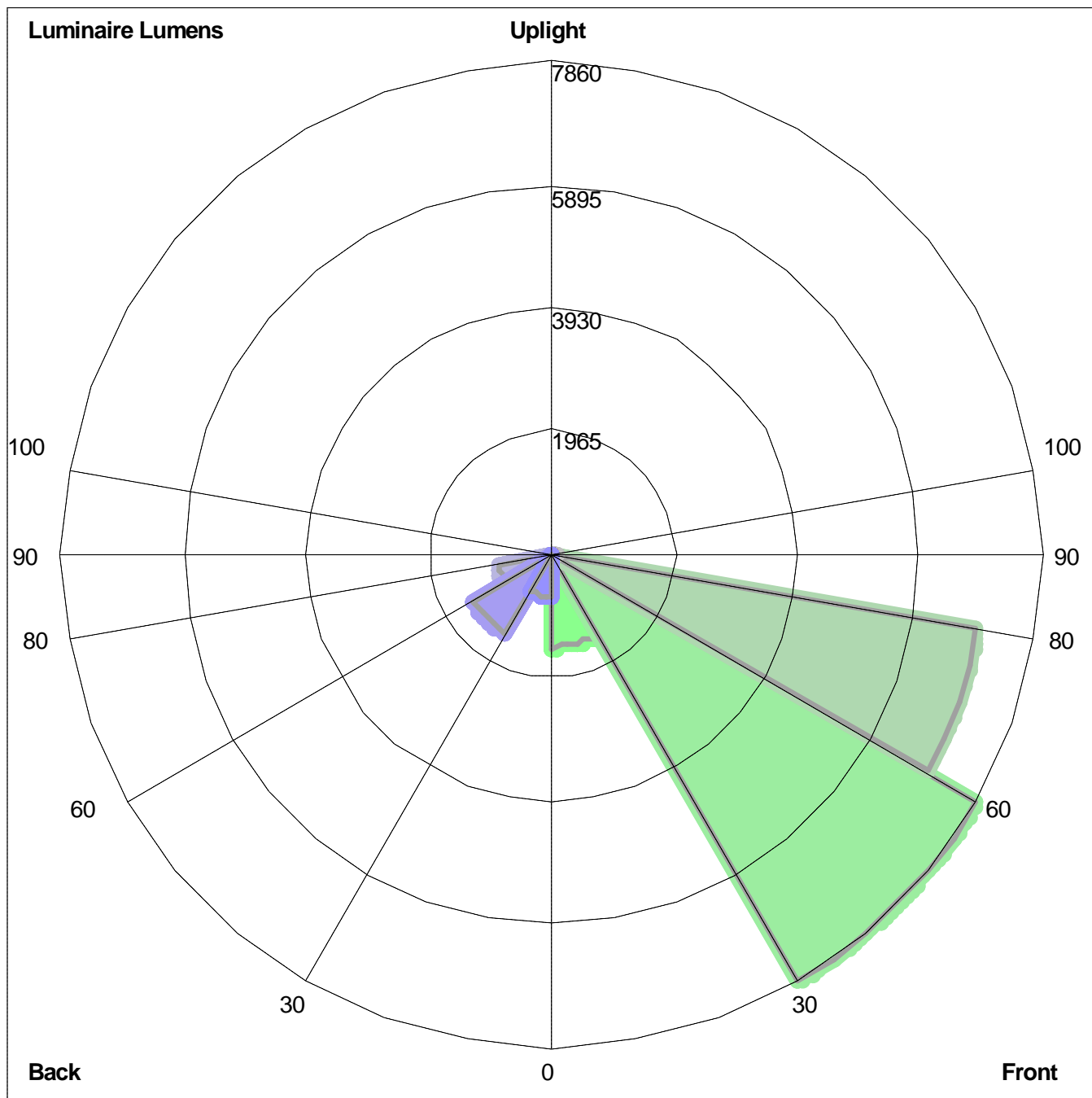


Maximum Candela = 17897.264 Located At Horizontal Angle = 50, Vertical Angle = 70
1 - Vertical Plane Through Horizontal Angles (50 - 230) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1483.5, Medium=7860.4, High= 6913.0, Very High=60.0
Back: Low=668.7, Medium=1470.1, High=884.5, Very High=5.5
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3