



## IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-FT-LED-27L-40-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-27L-40-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	20706
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	241
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	19767.991
Maximum Candela Angle	45H 67.5V
Maximum Candela (<90 Degrees Vertical)	19767.991
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	2401.734 (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)	1803.6	N.A.	8.7
FM - Front-Medium (30-60)	7515.0	N.A.	36.3
FH - Front-High (60-80)	8933.9	N.A.	43.1
FVH - Front-Very High (80-90)	209.1	N.A.	1.0
BL - Back-Low (0-30)	709.1	N.A.	3.4
BM - Back-Medium (30-60)	1193.3	N.A.	5.8
BH - Back-High (60-80)	337.9	N.A.	1.6
BVH - Back-Very High (80-90)	3.9	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	20705.8	N.A.	100.0
BUG Rating	B2-U0-G4		

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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	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679
2.5	3521.653	3533.336	3535.005	3533.336	3521.653	3513.308	3494.949	3474.920	3434.864	3409.828
5.0	3576.731	3588.414	3590.083	3605.105	3615.119	3635.147	3631.809	3633.478	3593.421	3546.689
7.5	3551.696	3570.055	3578.400	3605.105	3636.816	3675.204	3681.880	3726.944	3726.944	3710.254
10.0	3603.436	3623.464	3628.471	3656.845	3698.570	3745.303	3756.986	3823.748	3860.466	3878.826
12.5	3725.275	3746.972	3750.310	3772.008	3808.726	3857.128	3868.811	3943.918	4015.686	4050.736
15.0	3878.826	3910.537	3910.537	3930.566	3960.608	4010.679	4009.010	4084.116	4164.230	4225.984
17.5	4042.391	4072.433	4065.757	4090.792	4115.828	4165.899	4159.223	4227.653	4306.097	4397.894
20.0	4205.955	4234.329	4232.660	4235.998	4259.364	4299.421	4301.090	4361.175	4432.944	4528.078
22.5	4356.168	4381.204	4379.535	4377.866	4387.880	4409.577	4411.246	4471.331	4538.092	4633.227
25.0	4493.029	4516.395	4506.381	4506.381	4498.036	4504.712	4501.374	4549.776	4623.213	4718.348
27.5	4621.544	4643.241	4624.882	4608.192	4586.494	4579.818	4576.480	4611.530	4686.636	4786.778
30.0	4738.376	4755.066	4728.362	4694.981	4654.925	4641.572	4638.234	4654.925	4731.700	4835.180
32.5	4828.504	4841.856	4805.137	4760.073	4711.672	4688.305	4689.974	4693.312	4765.081	4866.891
35.0	4903.610	4910.286	4866.891	4805.137	4758.404	4738.376	4740.045	4733.369	4788.447	4893.596
37.5	4977.047	4987.061	4925.307	4853.539	4806.806	4796.792	4808.475	4791.785	4818.489	4915.293
40.0	5078.858	5085.534	5017.104	4935.322	4886.920	4880.244	4905.279	4896.934	4870.229	4948.674
42.5	5260.782	5249.099	5175.662	5085.534	5037.132	5050.485	5063.837	5070.513	4982.054	5008.759
45.0	5547.856	5542.848	5456.059	5359.255	5309.184	5330.882	5350.910	5362.593	5167.317	5122.253
47.5	6033.543	6028.536	5940.078	5833.260	5796.541	5788.196	5814.900	5831.591	5494.447	5390.967
50.0	6799.628	6797.959	6772.924	6602.682	6540.928	6499.203	6535.921	6559.288	6038.550	5754.815
52.5	7897.850	7914.540	7946.252	7817.736	7635.812	7523.987	7572.389	7609.108	6796.290	6278.891
55.0	9254.771	9301.504	9465.069	9520.147	9132.932	8919.296	8994.402	8982.719	7844.441	7048.313
57.5	10438.113	10504.875	10940.491	11337.720	11164.141	10735.201	10806.969	10701.820	9169.651	7881.159
60.0	11386.122	11477.919	12135.517	13016.765	13335.549	13000.074	13217.048	12819.819	10620.038	8829.168
62.5	11958.600	12122.165	13100.216	14615.695	15633.804	15663.846	15797.368	14966.192	11990.311	9373.272
65.0	11200.860	11511.300	12983.384	15678.867	17803.542	18217.462	18165.722	16686.961	12906.609	9391.632
67.5	8710.667	8991.064	11319.361	15310.012	18733.192	19731.272	19767.991	17581.562	12566.127	8204.951
70.0	5567.884	5839.936	7744.299	12813.143	17352.904	19400.804	19614.440	16573.467	10249.513	5831.591
72.5	1979.470	2136.358	3348.074	7233.576	13941.407	16496.692	16683.623	12988.391	7065.004	3256.277
75.0	867.896	941.333	1483.768	2695.483	7295.330	11477.919	11651.498	8799.126	3643.492	1265.125
77.5	634.231	697.655	1096.553	1725.777	2665.441	5456.059	5691.392	4626.551	1537.177	709.338
80.0	472.335	542.435	917.966	1415.337	1755.820	2323.290	2401.734	1914.377	769.423	462.321
82.5	347.158	413.919	762.747	1133.271	1053.158	944.671	856.212	433.948	387.215	290.411
85.0	243.678	282.066	443.962	492.364	370.525	317.116	260.369	136.860	161.896	170.241
87.5	61.754	65.092	101.811	166.903	81.782	61.754	63.423	65.092	70.099	78.444
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	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679	3304.679
2.5	3378.117	3373.110	3328.046	3259.615	3224.566	3154.467	3114.410	3074.353	3034.296	3007.592
5.0	3466.575	3428.188	3334.722	3156.136	3010.930	2832.344	2690.476	2553.616	2428.439	2341.649
7.5	3606.774	3529.998	3381.455	3072.684	2778.935	2453.474	2149.711	1899.356	1724.108	1620.628
10.0	3772.008	3656.845	3443.209	2987.564	2508.552	2031.209	1667.361	1465.408	1360.259	1300.174
12.5	3955.601	3800.381	3511.639	2890.760	2229.824	1695.734	1417.006	1285.153	1191.687	1116.581
15.0	4149.208	3958.939	3585.076	2788.949	1981.139	1503.796	1298.505	1146.624	1058.165	1013.101
17.5	4326.126	4097.469	3640.154	2667.110	1795.876	1398.647	1195.025	1069.848	1004.756	961.361
20.0	4476.338	4212.632	3670.197	2558.623	1672.368	1343.569	1126.595	1034.799	964.699	917.966
22.5	4606.523	4302.759	3680.211	2476.840	1590.586	1280.146	1098.222	996.411	922.974	874.572
25.0	4703.326	4379.535	3681.880	2421.762	1558.874	1236.751	1069.848	954.685	882.917	837.853
27.5	4781.771	4429.605	3673.535	2388.382	1553.867	1216.723	1033.130	916.297	801.134	694.316

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**CANDELA TABULATION - (Cont.)**

30.0	4840.187	4456.310	3661.852	2373.361	1555.536	1198.364	999.749	829.508	615.872	487.357
32.5	4873.567	4454.641	3653.507	2370.023	1542.184	1178.335	946.340	644.246	442.293	390.553
35.0	4890.258	4442.958	3656.845	2366.684	1517.148	1153.300	806.141	487.357	390.553	347.158
37.5	4901.941	4429.605	3675.204	2358.339	1472.084	1089.877	630.893	438.955	352.165	298.756
40.0	4916.962	4426.267	3710.254	2344.987	1406.992	939.664	545.773	395.560	302.094	262.038
42.5	4955.350	4449.634	3761.994	2316.614	1285.153	716.014	472.335	338.813	265.376	285.404
45.0	5037.132	4531.416	3853.790	2276.557	1079.862	542.435	378.870	280.397	238.671	305.432
47.5	5232.409	4713.341	4010.679	2216.472	796.127	410.581	292.080	228.657	287.073	185.262
50.0	5504.461	4965.364	4227.653	2096.302	524.075	322.123	238.671	191.938	231.995	148.544
52.5	5958.437	5397.643	4526.409	1896.018	380.539	268.714	198.615	168.572	170.241	131.853
55.0	6535.921	5890.007	4870.229	1637.318	327.130	240.340	170.241	145.206	136.860	151.882
57.5	7105.061	6365.680	5170.655	1385.295	298.756	211.967	143.537	123.508	145.206	141.868
60.0	7567.382	6687.803	5168.986	1149.962	270.383	170.241	123.508	126.846	108.487	81.782
62.5	7637.481	6634.394	4656.594	914.628	230.326	135.191	118.501	90.128	66.761	58.416
65.0	7165.146	5998.494	3591.752	764.416	185.262	118.501	98.473	58.416	48.402	60.085
67.5	5754.815	4606.523	2241.507	542.435	128.515	115.163	68.430	48.402	70.099	61.754
70.0	3670.197	2914.126	1079.862	310.440	90.128	81.782	51.740	63.423	50.071	41.726
72.5	1472.084	1073.186	465.659	155.220	68.430	48.402	51.740	46.733	38.388	28.374
75.0	667.612	512.392	213.636	93.466	48.402	33.381	31.712	33.381	13.352	5.007
77.5	428.941	323.792	138.529	58.416	26.704	21.697	18.359	8.345	3.338	3.338
80.0	252.024	193.607	95.135	31.712	15.021	15.021	6.676	3.338	1.669	1.669
82.5	168.572	125.177	56.747	15.021	10.014	6.676	5.007	1.669	0.000	0.000
85.0	100.142	61.754	20.028	5.007	3.338	1.669	1.669	0.000	0.000	0.000
87.5	41.726	16.690	5.007	1.669	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**

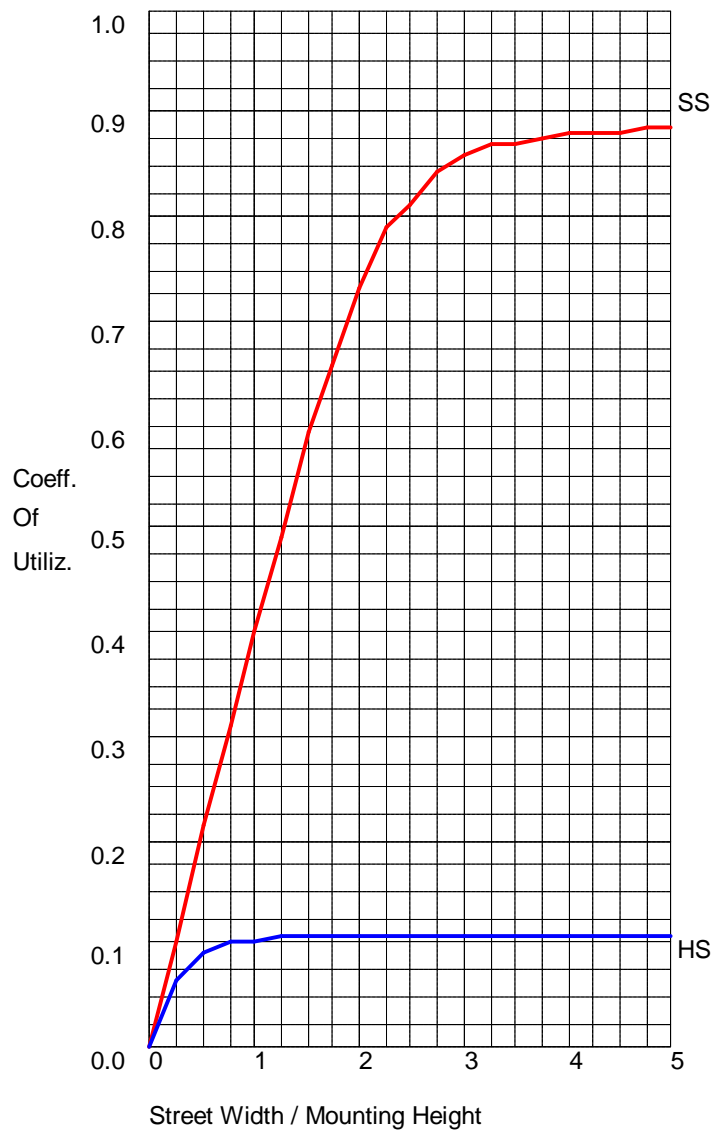
	<b>175.0</b>	<b>180.0</b>
0.0	3304.679	3304.679
2.5	3019.275	3000.916
5.0	2298.254	2318.283
7.5	1577.233	1587.247
10.0	1276.808	1276.808
12.5	1079.862	1071.517
15.0	991.404	984.728
17.5	944.671	937.995
20.0	899.607	892.931
22.5	859.550	852.874
25.0	811.149	802.803
27.5	632.562	622.548
30.0	428.941	420.596
32.5	370.525	367.187
35.0	332.137	328.799
37.5	277.059	273.721
40.0	248.685	248.685
42.5	283.735	260.369
45.0	186.931	180.255
47.5	156.889	155.220
50.0	140.199	138.529
52.5	135.191	133.522
55.0	165.234	165.234
57.5	133.522	123.508
60.0	73.437	66.761
62.5	48.402	45.064
65.0	73.437	73.437

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	55.078	53.409
<b>70.0</b>	36.719	36.719
<b>72.5</b>	23.366	21.697
<b>75.0</b>	1.669	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

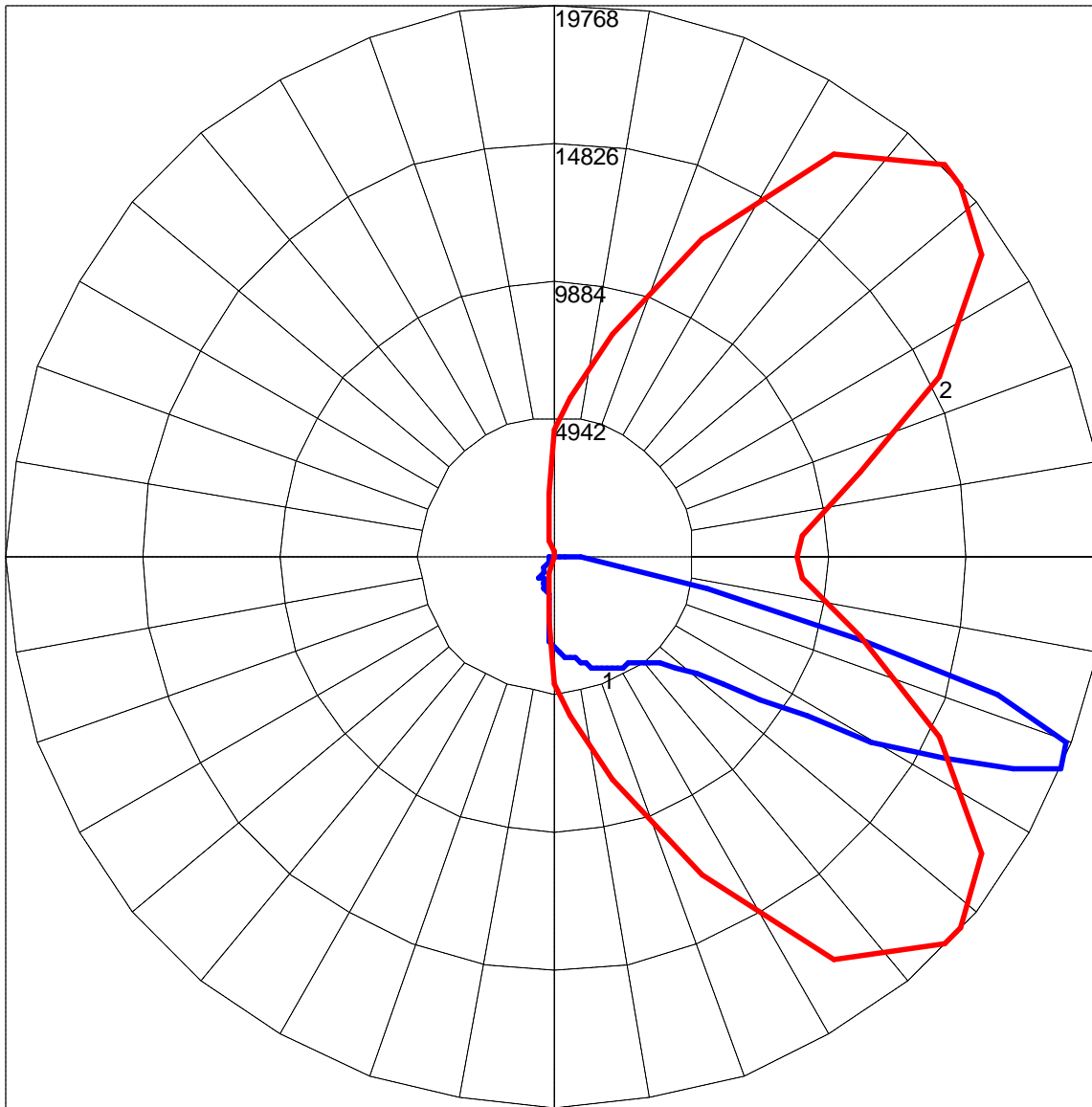
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

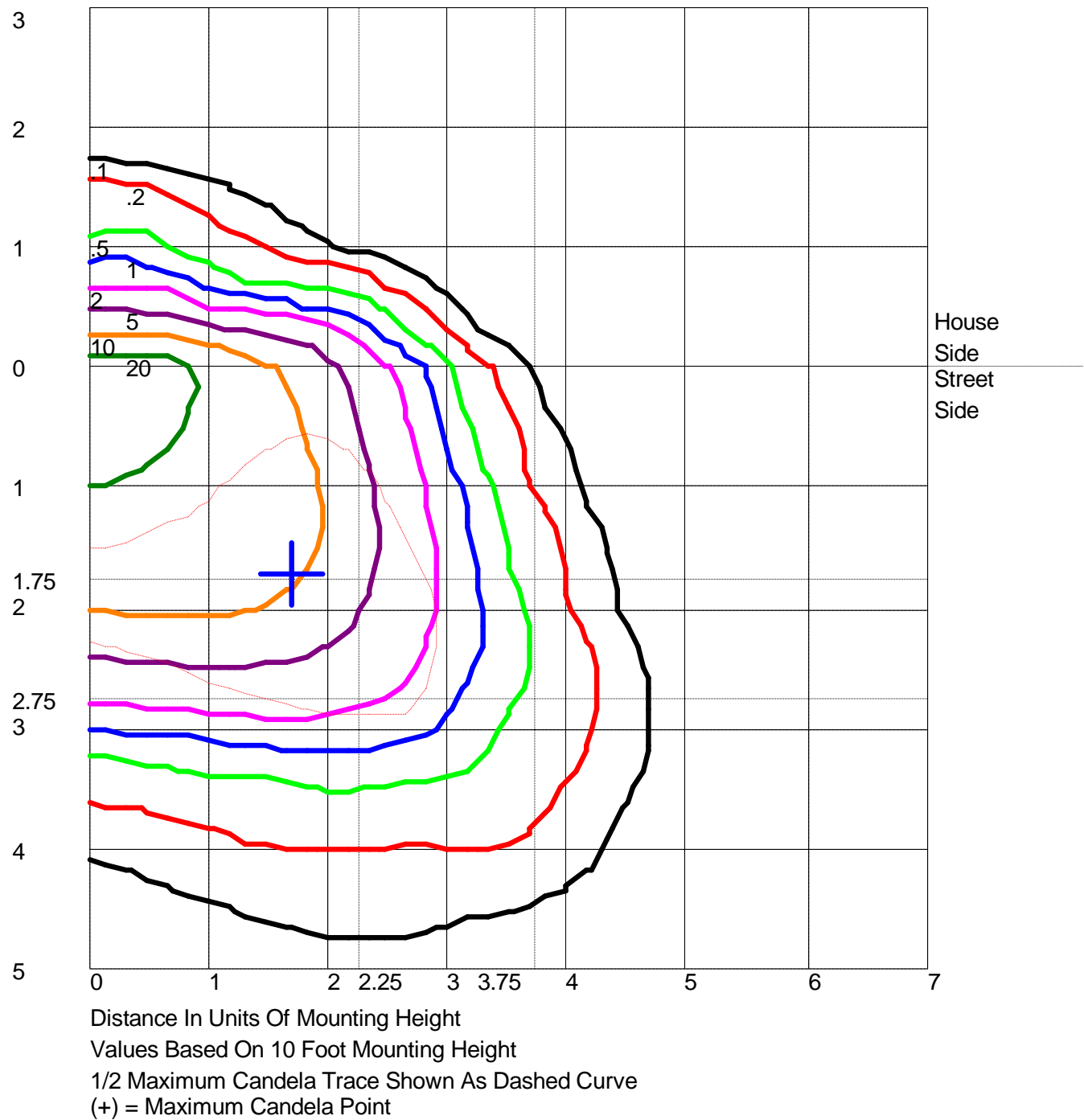
	Lumens	Percent Of Luminaire
Downward Street Side	18461.6	89.2
Downward House Side	2244.4	10.8
Downward Total	20706.0	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	20706.0	100.0

POLAR GRAPH



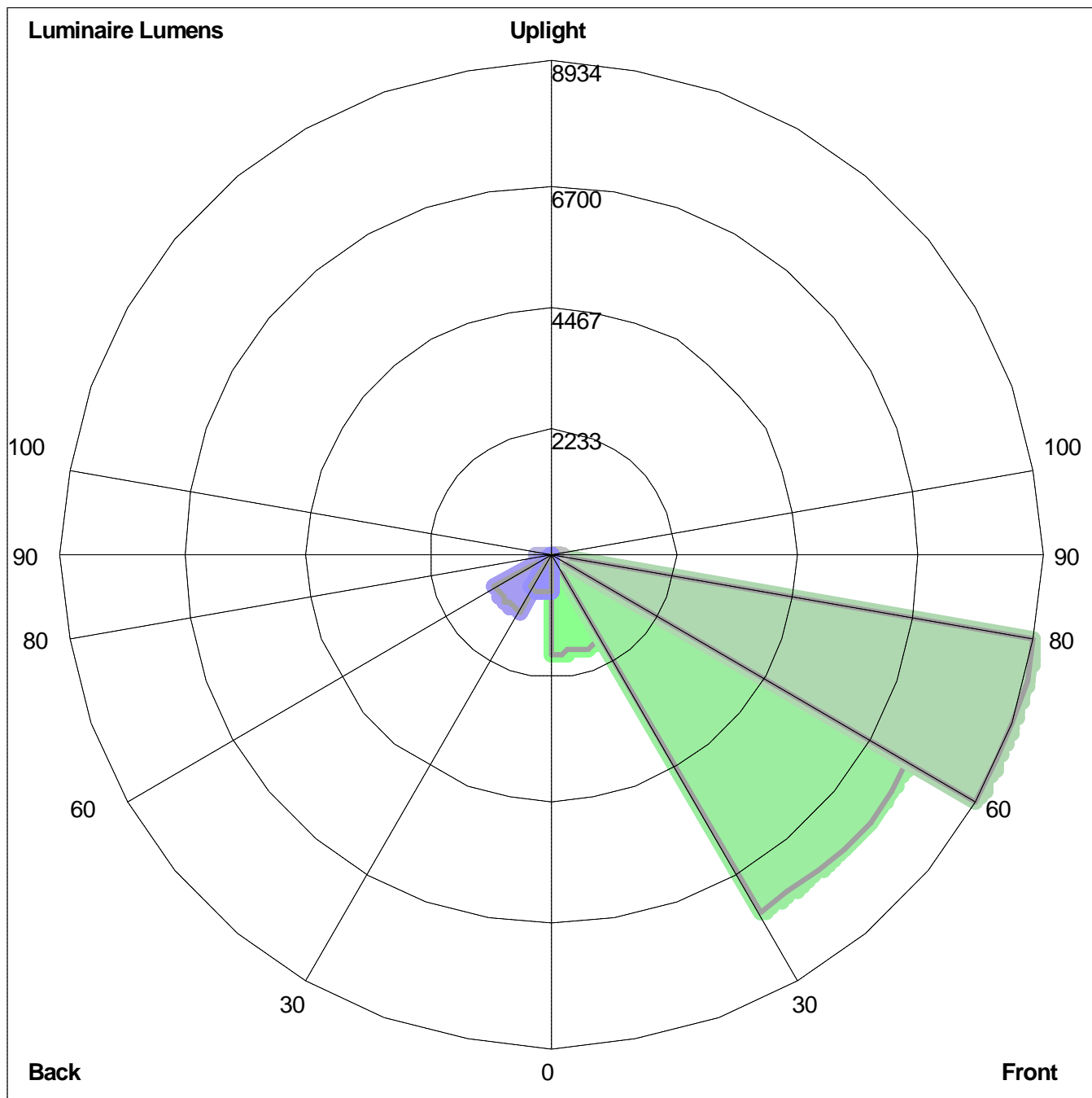
Maximum Candela = 19767.991 Located At Horizontal Angle = 45, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1803.6, Medium= 7515.0, High=8933.9, Very High=209.1  
Back: Low=709.1, Medium=1193.3, High=337.9, Very High=3.9  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G4