



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-FT-LED-18L-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-18L-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	14011
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	154
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	13376.258
Maximum Candela Angle	45H 67.5V
Maximum Candela (<90 Degrees Vertical)	13376.258
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	1625.163 (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)	1220.4	N.A.	8.7
FM - Front-Medium (30-60)	5085.1	N.A.	36.3
FH - Front-High (60-80)	6045.2	N.A.	43.1
FVH - Front-Very High (80-90)	141.5	N.A.	1.0
BL - Back-Low (0-30)	479.8	N.A.	3.4
BM - Back-Medium (30-60)	807.5	N.A.	5.8
BH - Back-High (60-80)	228.7	N.A.	1.6
BVH - Back-Very High (80-90)	2.7	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	14010.9	N.A.	100.0
BUG Rating	B1-U0-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<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	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153
2.5	2382.971	2390.876	2392.006	2390.876	2382.971	2377.324	2364.901	2351.348	2324.243	2307.303
5.0	2420.240	2428.145	2429.275	2439.439	2446.215	2459.768	2457.509	2458.638	2431.534	2399.911
7.5	2403.299	2415.722	2421.369	2439.439	2460.897	2486.873	2491.390	2521.883	2521.883	2510.589
10.0	2438.310	2451.862	2455.250	2474.450	2502.684	2534.306	2542.212	2587.387	2612.233	2624.656
12.5	2520.754	2535.436	2537.694	2552.376	2577.222	2609.974	2617.880	2668.701	2717.264	2740.981
15.0	2624.656	2646.114	2646.114	2659.666	2679.995	2713.876	2712.747	2763.568	2817.778	2859.565
17.5	2735.334	2755.663	2751.145	2768.086	2785.026	2818.907	2814.390	2860.694	2913.775	2975.890
20.0	2846.012	2865.212	2864.082	2866.341	2882.152	2909.257	2910.386	2951.044	2999.607	3063.981
22.5	2947.656	2964.596	2963.467	2962.337	2969.114	2983.795	2984.925	3025.582	3070.757	3135.131
25.0	3040.264	3056.075	3049.299	3049.299	3043.652	3048.170	3045.911	3078.663	3128.355	3192.729
27.5	3127.225	3141.907	3129.484	3118.190	3103.509	3098.991	3096.732	3120.449	3171.271	3239.033
30.0	3206.281	3217.575	3199.505	3176.918	3149.813	3140.778	3138.519	3149.813	3201.764	3271.785
32.5	3267.267	3276.302	3251.456	3220.963	3188.211	3172.400	3173.530	3175.788	3224.351	3293.243
35.0	3318.089	3322.606	3293.243	3251.456	3219.834	3206.281	3207.411	3202.893	3240.162	3311.313
37.5	3367.781	3374.557	3332.771	3284.208	3252.586	3245.809	3253.715	3242.421	3260.491	3325.995
40.0	3436.673	3441.190	3394.886	3339.547	3306.795	3302.278	3319.218	3313.572	3295.502	3348.582
42.5	3559.774	3551.869	3502.176	3441.190	3408.439	3417.474	3426.509	3431.026	3371.169	3389.239
45.0	3754.026	3750.638	3691.910	3626.407	3592.526	3607.208	3620.760	3628.666	3496.529	3466.036
47.5	4082.672	4079.284	4019.428	3947.148	3922.302	3916.655	3934.725	3946.019	3717.886	3647.865
50.0	4601.053	4599.924	4582.983	4467.788	4426.001	4397.767	4422.613	4438.424	4086.061	3894.068
52.5	5344.179	5355.472	5376.930	5289.969	5166.868	5091.200	5123.952	5148.798	4598.795	4248.690
55.0	6262.357	6293.979	6404.657	6441.926	6179.912	6035.353	6086.175	6078.269	5308.039	4769.329
57.5	7063.080	7108.255	7403.020	7671.810	7554.356	7264.108	7312.671	7241.520	6204.759	5332.885
60.0	7704.562	7766.677	8211.649	8807.956	9023.666	8796.663	8943.481	8674.691	7186.181	5974.367
62.5	8091.936	8202.614	8864.425	9889.893	10578.809	10599.137	10689.487	10127.061	8113.394	6342.542
65.0	7579.202	7789.265	8785.369	10609.302	12046.990	12327.073	12292.063	11291.441	8733.418	6354.965
67.5	5894.182	6083.916	7659.387	10359.711	12676.049	13351.412	13376.258	11896.783	8503.027	5551.983
70.0	3767.578	3951.666	5240.277	8670.173	11742.060	13127.797	13272.356	11214.644	6935.461	3946.019
72.5	1339.433	1445.594	2265.516	4894.689	9433.627	11162.693	11289.182	8788.757	4780.623	2203.401
75.0	587.272	636.965	1004.010	1823.933	4936.476	7766.677	7884.132	5954.039	2465.415	856.062
77.5	429.161	472.077	741.996	1167.769	1803.604	3691.910	3851.152	3130.614	1040.150	479.982
80.0	319.612	367.045	621.153	957.706	1188.097	1572.083	1625.163	1295.387	520.640	312.835
82.5	234.909	280.084	516.122	766.842	712.632	639.223	579.367	293.636	262.014	196.510
85.0	164.888	190.864	300.412	333.164	250.720	214.580	176.182	92.608	109.549	115.196
87.5	41.787	44.045	68.892	112.937	55.339	41.787	42.916	44.045	47.434	53.080
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>85.0</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	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153	2236.153
2.5	2285.845	2282.457	2251.964	2205.660	2181.943	2134.509	2107.404	2080.299	2053.195	2035.125
5.0	2345.701	2319.726	2256.481	2135.639	2037.383	1916.541	1820.544	1727.936	1643.233	1584.506
7.5	2440.569	2388.617	2288.104	2079.170	1880.401	1660.174	1454.629	1285.223	1166.639	1096.618
10.0	2552.376	2474.450	2329.890	2021.572	1697.443	1374.443	1128.241	991.587	920.437	879.779
12.5	2676.607	2571.575	2376.194	1956.069	1508.838	1147.440	958.835	869.615	806.370	755.549
15.0	2807.614	2678.866	2425.887	1887.177	1340.562	1017.562	878.650	775.877	716.021	685.528
17.5	2927.327	2772.603	2463.156	1804.733	1215.202	946.412	808.629	723.926	679.881	650.517
20.0	3028.970	2850.530	2483.485	1731.324	1131.629	909.143	762.325	700.209	652.776	621.153
22.5	3117.061	2911.516	2490.261	1675.985	1076.290	866.227	743.125	674.234	624.542	591.790
25.0	3182.565	2963.467	2491.390	1638.716	1054.832	836.863	723.926	646.000	597.437	566.944
27.5	3235.645	2997.348	2485.743	1616.128	1051.443	823.311	699.080	620.024	542.098	469.818

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CANDELA TABULATION - (Cont.)

30.0	3275.173	3015.418	2477.838	1605.964	1052.573	810.888	676.493	561.297	416.738	329.776
32.5	3297.760	3014.288	2472.191	1603.705	1043.538	797.335	640.353	435.937	299.283	264.273
35.0	3309.054	3006.383	2474.450	1601.447	1026.597	780.395	545.486	329.776	264.273	234.909
37.5	3316.960	2997.348	2486.873	1595.800	996.104	737.479	426.902	297.024	238.297	202.157
40.0	3327.124	2995.089	2510.589	1586.765	952.059	635.835	369.304	267.661	204.416	177.311
42.5	3353.099	3010.900	2545.600	1567.566	869.615	484.500	319.612	229.262	179.570	193.122
45.0	3408.439	3066.239	2607.715	1540.461	730.702	367.045	256.367	189.734	161.500	206.675
47.5	3540.575	3189.341	2713.876	1499.803	538.709	277.825	197.640	154.724	194.252	125.360
50.0	3724.662	3359.876	2860.694	1418.489	354.622	217.968	161.500	129.878	156.982	100.514
52.5	4031.851	3652.382	3062.851	1282.964	257.496	181.829	134.395	114.066	115.196	89.220
55.0	4422.613	3985.547	3295.502	1107.912	221.357	162.629	115.196	98.255	92.608	102.773
57.5	4807.728	4307.417	3498.788	937.377	202.157	143.430	97.126	83.573	98.255	95.996
60.0	5120.563	4525.385	3497.659	778.136	182.958	115.196	83.573	85.832	73.409	55.339
62.5	5167.997	4489.246	3150.942	618.895	155.853	91.479	80.185	60.986	45.175	39.528
65.0	4848.385	4058.956	2430.404	517.251	125.360	80.185	66.633	39.528	32.752	40.657
67.5	3894.068	3117.061	1516.744	367.045	86.961	77.927	46.304	32.752	47.434	41.787
70.0	2483.485	1971.880	730.702	210.063	60.986	55.339	35.010	42.916	33.881	28.234
72.5	996.104	726.185	315.094	105.031	46.304	32.752	35.010	31.622	25.976	19.199
75.0	451.748	346.717	144.559	63.245	32.752	22.587	21.458	22.587	9.035	3.388
77.5	290.248	219.098	93.738	39.528	18.070	14.682	12.423	5.647	2.259	2.259
80.0	170.535	131.007	64.374	21.458	10.164	10.164	4.517	2.259	1.129	1.129
82.5	114.066	84.703	38.399	10.164	6.776	4.517	3.388	1.129	0.000	0.000
85.0	67.762	41.787	13.552	3.388	2.259	1.129	1.129	0.000	0.000	0.000
87.5	28.234	11.294	3.388	1.129	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

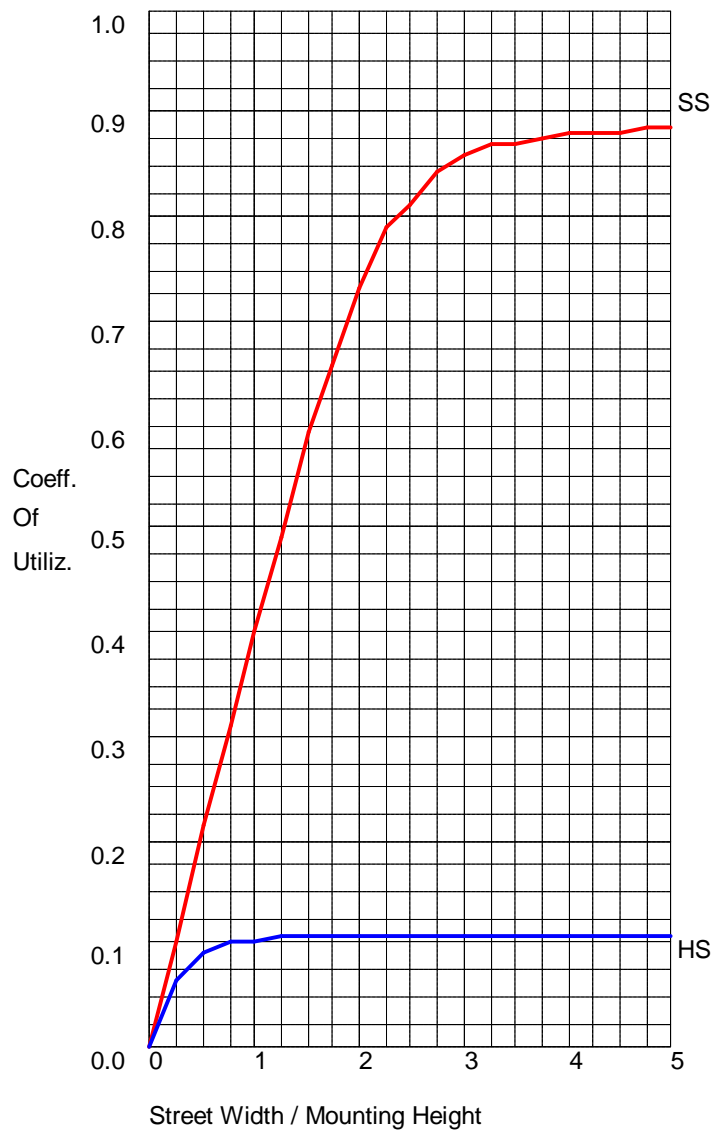
	175.0	180.0
0.0	2236.153	2236.153
2.5	2043.030	2030.607
5.0	1555.142	1568.695
7.5	1067.255	1074.031
10.0	863.968	863.968
12.5	730.702	725.056
15.0	670.846	666.328
17.5	639.223	634.706
20.0	608.730	604.213
22.5	581.626	577.108
25.0	548.874	543.227
27.5	428.031	421.255
30.0	290.248	284.601
32.5	250.720	248.461
35.0	224.745	222.486
37.5	187.475	185.217
40.0	168.276	168.276
42.5	191.993	176.182
45.0	126.489	121.972
47.5	106.161	105.031
50.0	94.867	93.738
52.5	91.479	90.350
55.0	111.808	111.808
57.5	90.350	83.573
60.0	49.692	45.175
62.5	32.752	30.493
65.0	49.692	49.692

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CANDELA TABULATION - (Cont.)

67.5	37.269	36.140
70.0	24.846	24.846
72.5	15.811	14.682
75.0	1.129	0.000
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

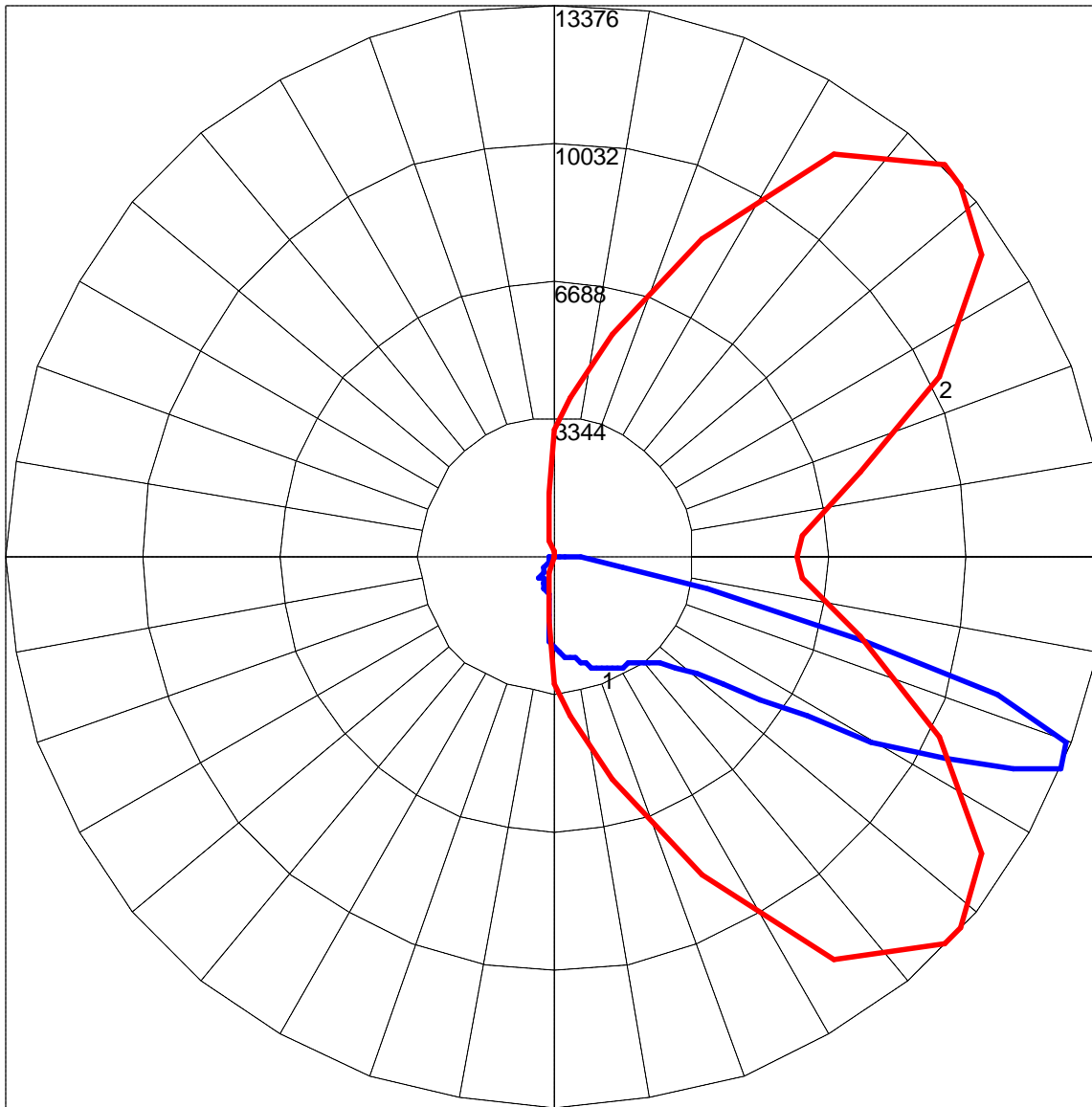
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

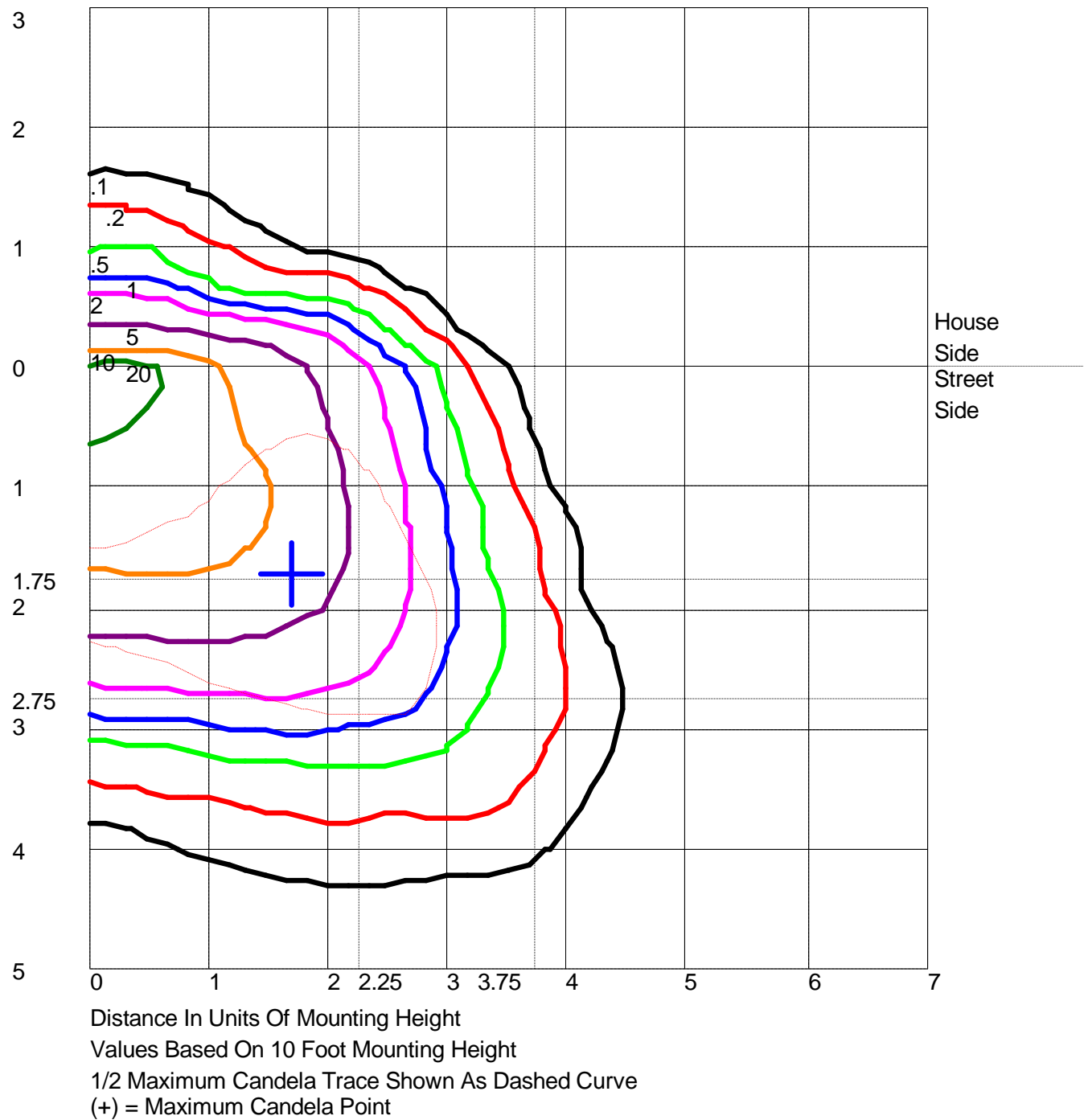
	Lumens	Percent Of Luminaire
Downward Street Side	12492.3	89.2
Downward House Side	1518.7	10.8
Downward Total	14011.0	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	14011.0	100.0

POLAR GRAPH

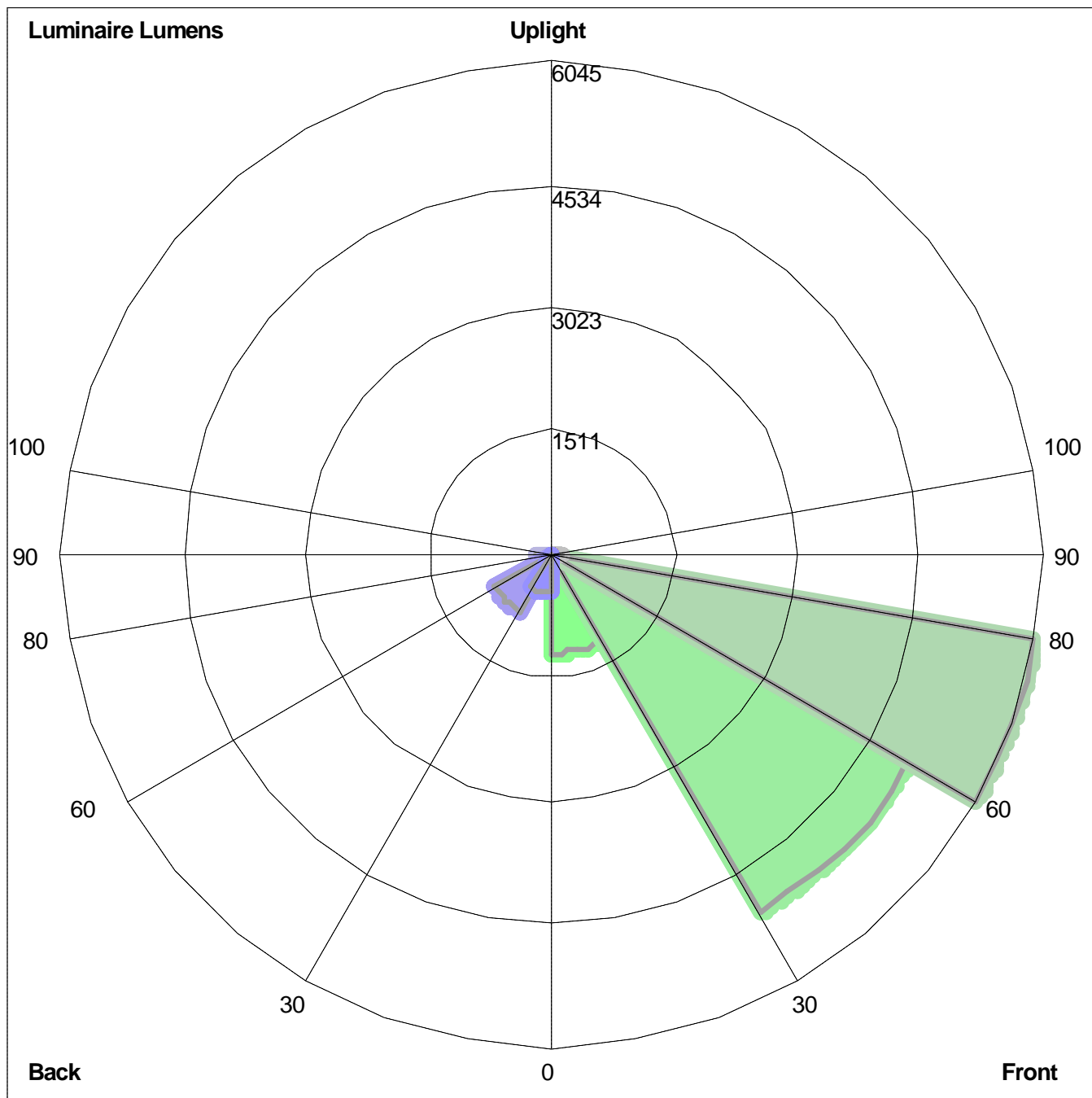


Maximum Candela = 13376.258 Located At Horizontal Angle = 45, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1220.4, Medium=5085.1, High=6045.2, Very High=141.5
Back: Low=479.8, Medium=807.5, High=228.7, Very High=2.7
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G3