



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-32L-30.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-8431_Scaled
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]03/10/17
[TEST DATE]01/09/17
[MANUFACTURER]LSI INDUSTRIES, INC
[LUMCAT]HLN-3-LED-32L-30
[OTHER]TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED
[OTHER]SCALED FROM ORIGINAL TEST DATA
[_SEARCH_SOURCE TYPE] LED
[_SEARCH_APPLICATION] Outdoor

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	30104
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	310
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	31709.4
Maximum Candela Angle	60H 67.5V
Maximum Candela (<90 Degrees Vertical)	31709.4
Maximum Candela Angle (<90 Degrees Vertical)	60H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1624.669 (5.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1227.9	N.A.	4.1
FM - Front-Medium (30-60)	11818.9	N.A.	39.3
FH - Front-High (60-80)	10301.6	N.A.	34.2
FVH - Front-Very High (80-90)	236.4	N.A.	0.8
BL - Back-Low (0-30)	1336.6	N.A.	4.4
BM - Back-Medium (30-60)	3470.0	N.A.	11.5
BH - Back-High (60-80)	1581.0	N.A.	5.3
BVH - Back-Very High (80-90)	131.2	N.A.	0.4
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	30103.6	N.A.	100.0
BUG Rating	B3-U0-G4		

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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>55</u>	<u>60</u>	<u>65</u>	<u>75</u>
0.0	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511
2.5	2750.437	2747.198	2745.578	2752.057	2758.536	2771.495	2776.354	2774.735	2789.313	2787.693
5.0	2633.811	2630.571	2630.571	2650.009	2674.306	2706.702	2729.380	2734.239	2760.156	2776.354
7.5	2463.731	2458.872	2468.590	2500.987	2543.102	2606.274	2659.728	2680.786	2722.901	2761.776
10.0	2290.411	2279.073	2301.750	2347.105	2408.657	2492.888	2577.118	2611.134	2674.306	2750.437
12.5	2128.430	2121.951	2147.868	2202.942	2279.073	2381.121	2499.367	2541.482	2622.472	2731.000
15.0	2002.085	2005.325	2032.862	2089.555	2175.405	2292.031	2429.715	2483.169	2572.258	2705.083
17.5	1995.606	1990.746	2011.804	2062.018	2141.389	2254.775	2392.459	2455.632	2544.721	2680.786
20.0	2212.660	2202.942	2204.561	2211.041	2258.015	2356.824	2466.971	2520.424	2596.555	2721.281
22.5	2674.306	2661.348	2641.910	2612.754	2604.654	2637.051	2692.124	2727.760	2781.214	2889.741
25.0	3247.719	3234.761	3221.802	3182.927	3131.093	3105.176	3087.358	3092.217	3110.035	3187.786
27.5	3913.461	3905.362	3889.164	3850.288	3790.355	3727.183	3636.473	3604.077	3574.921	3589.499
30.0	4572.724	4564.625	4561.385	4584.062	4520.890	4456.097	4300.596	4221.225	4153.193	4043.046
32.5	5219.028	5212.549	5225.507	5287.060	5309.737	5230.366	5014.932	4917.743	4770.340	4520.890
35.0	5826.457	5818.357	5847.514	5959.281	6049.990	6006.255	5745.466	5593.204	5356.712	4993.874
37.5	6454.943	6446.844	6519.735	6626.643	6767.566	6770.806	6461.422	6242.748	5909.067	5450.661
40.0	7178.998	7167.659	7232.452	7345.838	7496.481	7535.356	7187.097	6853.416	6412.828	5803.779
42.5	8105.529	8144.405	8141.165	8210.817	8322.584	8384.136	7872.277	7452.746	6869.614	6075.907
45.0	9483.987	9474.269	9381.939	9375.460	9343.064	9291.230	8594.712	8035.877	7310.202	6286.483
47.5	11312.753	11301.414	11162.111	11079.500	10758.778	10494.749	9437.013	8675.702	7788.046	6503.537
50.0	14100.446	14119.884	14077.769	13646.899	12867.771	12043.287	10433.196	9459.690	8361.459	6787.004
52.5	17319.008	17387.040	17689.945	17644.590	16275.851	14273.766	11756.581	10501.228	9138.968	7256.749
55.0	19270.879	19381.026	20286.500	21297.262	220471.159	17434.015	13710.072	12017.370	10365.164	8107.149
57.5	19091.080	19222.285	20767.584	22858.759	23633.028	21190.354	16428.113	14265.667	12326.754	9790.132
60.0	15819.064	15911.393	18209.904	21775.106	25439.116	24821.968	20250.864	18179.127	15861.179	12645.857
62.5	9315.527	9351.163	11494.172	16789.330	23286.388	27360.210	25526.586	24002.344	20808.079	16008.582
65.0	3374.064	3563.582	4820.555	9045.019	18161.310	26577.842	29616.606	28489.218	25103.815	19183.410
67.5	1555.018	1569.596	2002.085	3539.285	10979.072	21894.972	31072.815	31709.400	28579.927	20213.609
70.0	890.895	913.573	1093.372	1780.171	4877.248	14534.555	26668.552	29284.545	26921.242	16897.858
72.5	622.007	643.065	787.228	1190.560	2671.067	7527.257	17709.383	21049.431	19384.266	8056.935
75.0	464.885	479.464	596.090	957.308	2044.200	3676.969	9083.894	10624.334	7951.647	2036.101
77.5	367.697	379.036	482.703	839.062	1691.082	2270.974	3432.377	3526.326	2460.491	874.697
80.0	286.706	294.805	395.234	717.576	1417.334	1624.669	1608.471	1608.471	1229.436	503.761
82.5	202.476	213.815	311.004	550.735	1103.091	1153.305	889.276	814.764	701.378	364.457
85.0	150.642	160.361	236.492	453.547	758.071	727.295	497.282	482.703	447.068	268.888
87.5	127.965	127.965	160.361	343.400	513.480	353.119	278.607	276.988	268.888	191.138
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	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511	2805.511
2.5	2815.230	2805.511	2820.089	2837.907	2846.006	2857.345	2855.725	2858.965	2860.584	2863.824
5.0	2818.469	2816.850	2841.147	2878.402	2902.699	2926.997	2933.476	2948.054	2949.674	2949.674
7.5	2821.709	2828.188	2862.204	2918.898	2952.914	2982.070	2990.169	3017.706	3032.284	3046.863
10.0	2828.188	2844.386	2886.501	2957.773	2996.648	3033.904	3076.019	3113.275	3134.332	3144.051
12.5	2833.048	2854.105	2902.699	2985.310	3029.045	3103.556	3155.390	3192.645	3212.083	3216.943
15.0	2828.188	2855.725	2909.179	2998.268	3061.441	3163.489	3220.182	3255.818	3275.256	3275.256
17.5	2818.469	2847.626	2902.699	2996.648	3087.358	3203.984	3273.636	3306.032	3312.511	3302.793
20.0	2836.287	2854.105	2901.080	2988.549	3098.697	3229.901	3306.032	3325.470	3327.090	3312.511
22.5	2956.153	2939.955	2956.153	2996.648	3100.316	3244.479	3315.751	3330.329	3327.090	3304.412
25.0	3197.505	3137.572	3106.796	3033.904	3093.837	3250.959	3310.892	3318.991	3314.131	3294.694
27.5	3502.029	3383.783	3297.933	3097.077	3077.639	3249.339	3299.553	3301.173	3309.272	3304.412

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CANDELA TABULATION - (Cont.)

30.0	3829.231	3634.854	3482.591	3148.911	3053.342	3236.380	3276.876	3286.594	3335.189	3367.585
32.5	4172.631	3881.065	3644.572	3174.828	3019.326	3220.182	3246.099	3301.173	3435.617	3565.202
35.0	4517.650	4125.656	3790.355	3161.869	2962.632	3184.546	3220.182	3338.428	3550.623	3801.694
37.5	4830.273	4339.471	3900.502	3113.275	2883.262	3131.093	3178.067	3294.694	3518.227	3806.553
40.0	5082.964	4496.593	3953.956	3022.565	2779.594	3053.342	3072.780	3157.010	3422.658	3592.739
42.5	5254.664	4582.442	3942.618	2897.840	2656.488	2939.955	2954.533	3043.623	3328.710	3314.131
45.0	5353.472	4611.599	3882.685	2747.198	2513.945	2805.511	2858.965	2967.492	3294.694	2988.549
47.5	5431.223	4635.896	3824.371	2596.555	2364.923	2667.827	2777.974	2928.616	3229.901	2849.246
50.0	5564.047	4726.606	3832.470	2473.450	2225.619	2533.383	2698.603	2878.402	3139.192	2792.552
52.5	5844.274	4971.197	3989.592	2431.335	2125.191	2415.137	2609.514	2795.792	3027.425	2755.297
55.0	6574.809	5649.897	4477.155	2491.268	2063.638	2319.568	2507.466	2709.942	2850.866	2693.744
57.5	8009.960	6940.886	5366.430	2667.827	2042.580	2220.759	2410.277	2552.821	2614.373	2559.300
60.0	10136.771	8675.702	6265.425	2826.568	2006.945	2087.935	2287.172	2324.427	2306.609	2478.309
62.5	12906.646	10136.771	6249.227	2658.108	1891.938	1891.938	2089.555	2057.159	1977.788	2382.740
65.0	15156.562	10365.164	5300.018	2151.108	1632.768	1632.768	1799.609	1801.229	1665.165	2269.354
67.5	14277.005	8693.520	3678.588	1503.184	1292.608	1318.525	1443.251	1548.538	1389.797	2105.753
70.0	8941.351	4833.513	1914.615	968.646	973.506	1020.480	1130.627	1310.426	1206.758	1814.187
72.5	2454.012	1302.327	714.336	638.205	738.633	793.707	900.614	1116.049	1048.017	1401.136
75.0	800.186	542.636	424.390	489.183	596.090	651.164	738.633	894.135	756.451	957.308
77.5	409.812	328.821	314.243	417.911	487.563	537.777	579.892	609.049	541.017	698.138
80.0	280.227	252.690	270.508	357.978	408.192	379.036	364.457	472.985	411.432	500.521
82.5	217.055	189.518	225.154	319.103	302.904	260.789	286.706	346.639	246.211	348.259
85.0	157.122	144.163	200.856	288.326	204.096	189.518	202.476	186.278	134.444	221.914
87.5	105.288	111.767	187.898	218.674	132.824	115.007	110.147	110.147	84.230	118.246
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

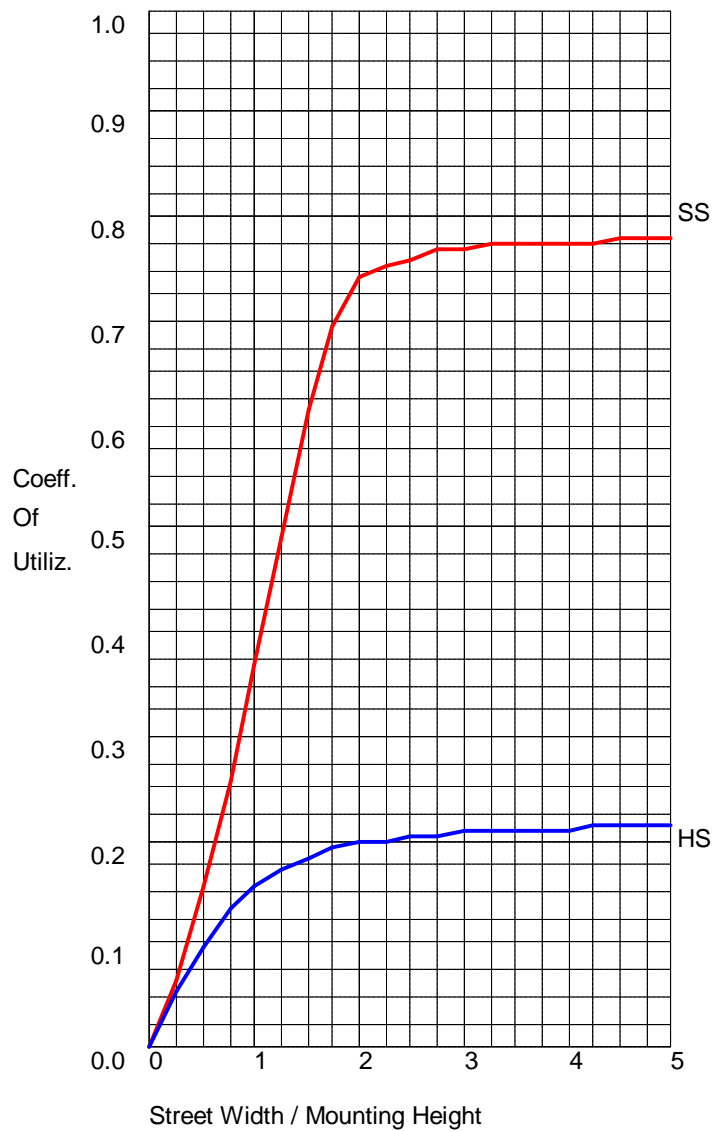
	175	180
0.0	2805.511	2805.511
2.5	2863.824	2855.725
5.0	2949.674	2941.575
7.5	3051.722	3045.243
10.0	3147.291	3139.192
12.5	3220.182	3212.083
15.0	3275.256	3267.157
17.5	3299.553	3289.834
20.0	3301.173	3294.694
22.5	3291.454	3286.594
25.0	3283.355	3276.876
27.5	3304.412	3299.553
30.0	3398.361	3395.122
32.5	3685.068	3691.547
35.0	4036.566	4056.004
37.5	3921.560	3913.461
40.0	3536.045	3500.409
42.5	2944.815	2894.600
45.0	2674.306	2625.712
47.5	2560.920	2509.086
50.0	2481.549	2434.574
52.5	2400.558	2339.006
55.0	2272.593	2191.603
57.5	2086.315	1979.408
60.0	1974.548	1819.047
62.5	1890.318	1682.983
65.0	1872.500	1614.951

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

67.5	1968.069	1704.040
70.0	2086.315	1891.938
72.5	1979.408	1916.235
75.0	1755.874	1934.053
77.5	1452.970	1676.503
80.0	1073.934	1214.857
82.5	714.336	808.285
85.0	477.844	536.157
87.5	286.706	395.234
90.0	0.000	0.000

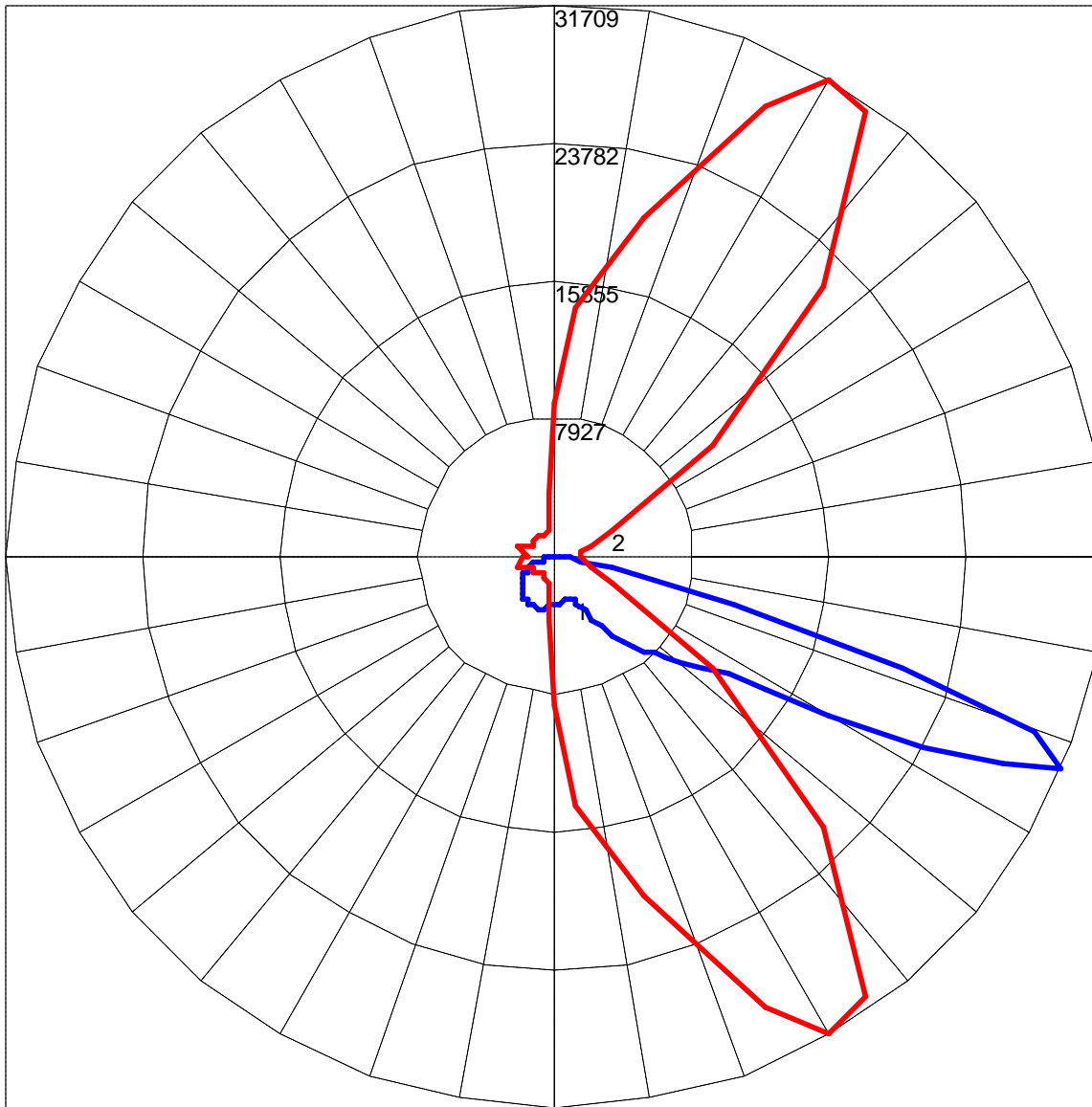
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

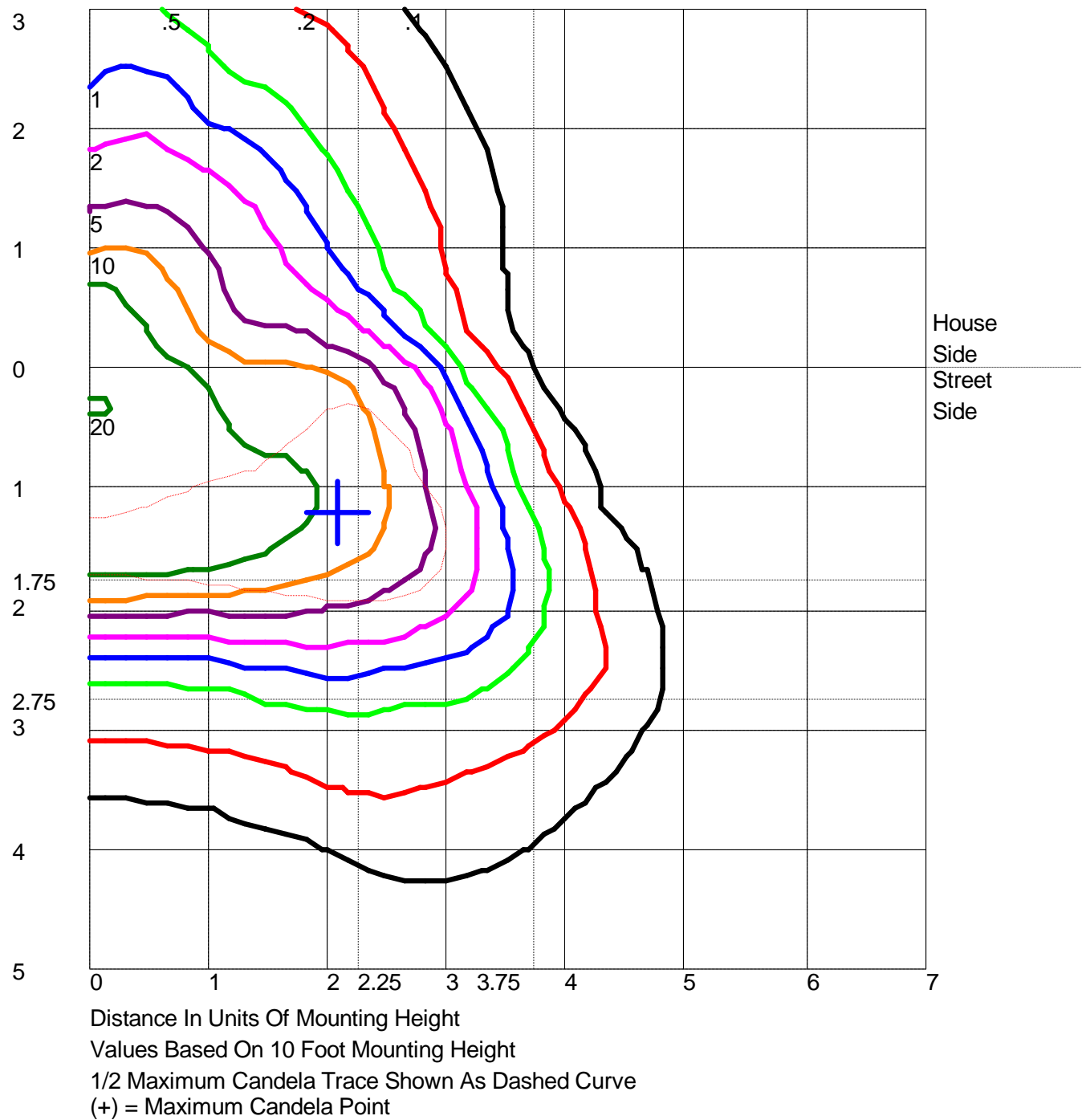
	Lumens	Percent Of Luminaire
Downward Street Side	23584.8	78.3
Downward House Side	6518.8	21.7
Downward Total	30103.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	30103.6	100.0

POLAR GRAPH

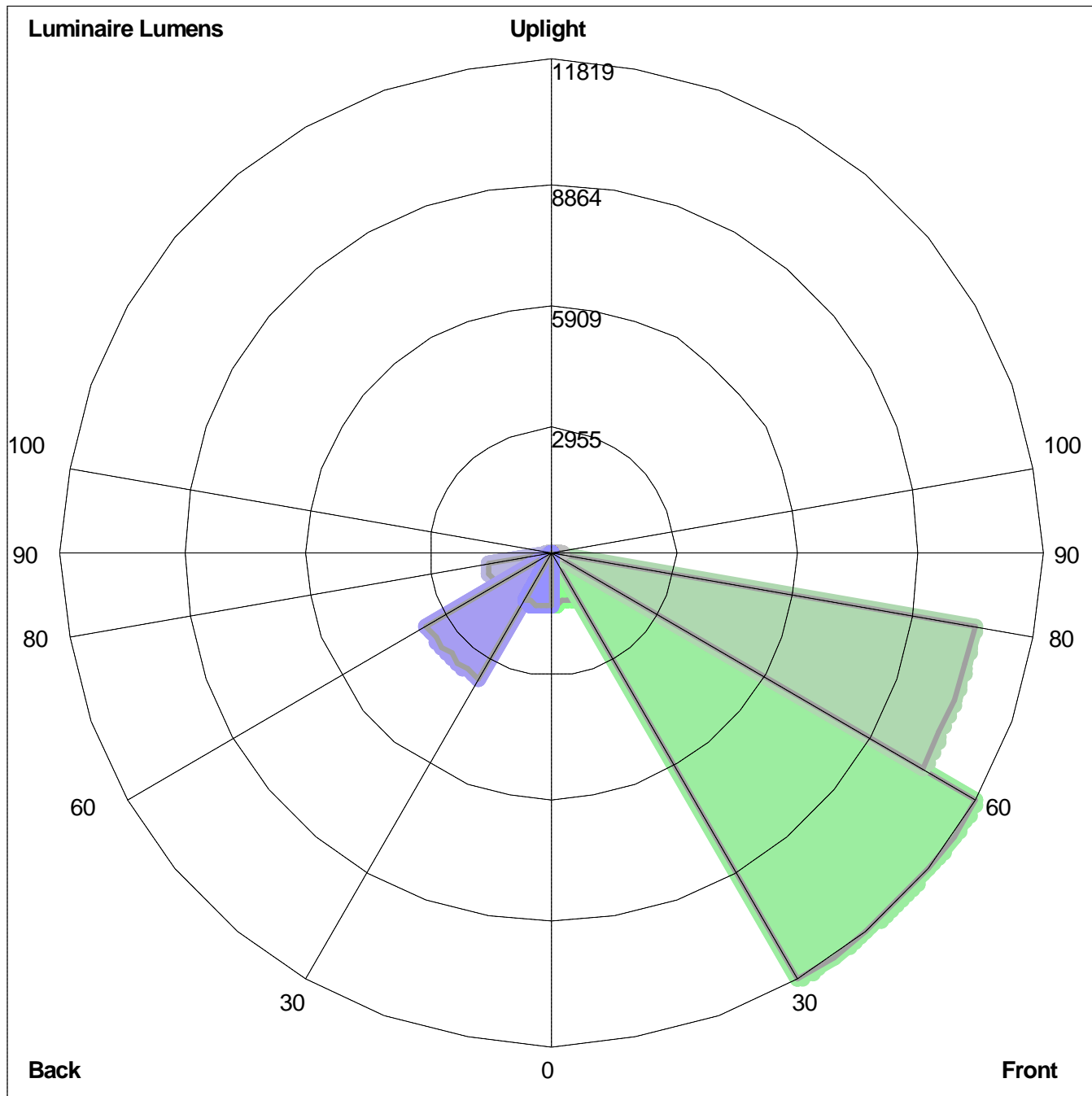


Maximum Candela = 31709.4 Located At Horizontal Angle = 60, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1227.9, Medium=11818.9, High=10301.6, Very High=236.4
Back: Low=1336.6, Medium= 3470.0, High= 1581.0, Very High=131.2
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4