



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-32L-50.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-50
[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	32890
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	310
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	34644.822
Maximum Candela Angle	60H 67.5V
Maximum Candela (<90 Degrees Vertical)	34644.822
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	1775.069 (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)	1341.5	N.A.	4.1
FM - Front-Medium (30-60)	12913.0	N.A.	39.3
FH - Front-High (60-80)	11255.3	N.A.	34.2
FVH - Front-Very High (80-90)	258.3	N.A.	0.8
BL - Back-Low (0-30)	1460.3	N.A.	4.4
BM - Back-Medium (30-60)	3791.3	N.A.	11.5
BH - Back-High (60-80)	1727.3	N.A.	5.3
BVH - Back-Very High (80-90)	143.4	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	32890.4	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	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224
2.5	3005.053	3001.513	2999.743	3006.822	3013.901	3028.059	3033.369	3031.599	3047.527	3045.757
5.0	2877.630	2874.090	2874.090	2895.327	2921.874	2957.269	2982.046	2987.355	3015.671	3033.369
7.5	2691.805	2686.496	2697.114	2732.509	2778.523	2847.544	2905.946	2928.953	2974.967	3017.441
10.0	2502.441	2490.052	2514.829	2564.382	2631.633	2723.661	2815.688	2852.853	2921.874	3005.053
12.5	2325.465	2318.386	2346.702	2406.874	2490.052	2601.547	2730.740	2776.753	2865.241	2983.815
15.0	2187.423	2190.963	2221.049	2282.990	2376.788	2504.210	2654.640	2713.042	2810.379	2955.499
17.5	2180.344	2175.035	2198.042	2252.904	2339.623	2463.506	2613.936	2682.956	2780.293	2928.953
20.0	2417.492	2406.874	2408.643	2415.722	2467.045	2575.001	2695.344	2753.747	2836.925	2973.197
22.5	2921.874	2907.716	2886.479	2854.623	2845.774	2881.169	2941.341	2980.276	3038.678	3157.252
25.0	3548.369	3534.211	3520.053	3477.578	3420.946	3392.630	3373.163	3378.472	3397.939	3482.888
27.5	4275.740	4266.891	4249.194	4206.720	4141.238	4072.218	3973.111	3937.716	3905.860	3921.788
30.0	4996.033	4987.184	4983.644	5008.421	4939.400	4868.610	4698.713	4611.995	4537.665	4417.321
32.5	5702.167	5695.088	5709.246	5776.497	5801.273	5714.555	5479.177	5372.991	5211.943	4939.400
35.0	6365.827	6356.978	6388.834	6510.947	6610.054	6562.270	6277.339	6110.981	5852.596	5456.170
37.5	7052.494	7043.645	7123.284	7240.088	7394.057	7397.597	7059.573	6820.655	6456.085	5955.242
40.0	7843.576	7831.188	7901.978	8025.862	8190.449	8232.924	7852.425	7487.855	7006.480	6341.050
42.5	8855.879	8898.353	8894.814	8970.914	9093.027	9160.278	8601.034	8142.666	7505.552	6638.370
45.0	10361.945	10351.326	10250.450	10243.371	10207.976	10151.343	9393.347	8779.779	7986.927	6868.439
47.5	12360.004	12347.616	12195.416	12105.158	11754.746	11466.275	10310.622	9478.835	8509.006	7105.586
50.0	15405.761	15426.998	15380.984	14910.228	14058.974	13158.166	11399.024	10335.398	9135.501	7415.294
52.5	18922.274	18996.604	19327.549	19277.996	17782.549	15595.125	12844.918	11473.354	9984.986	7928.525
55.0	21054.835	21175.792	22164.474	23268.805	22366.227	19047.927	14979.249	13129.850	11324.694	8857.649
57.5	20858.392	21001.742	222690.093	24974.853	25820.799	23152.000	17948.906	15586.276	13467.874	10696.430
60.0	17283.476	17384.353	19895.642	223790.884	27794.081	27119.802	222125.540	19862.017	17329.490	13816.516
62.5	10177.890	10216.825	12558.217	18343.563	25442.070	29893.016	27889.648	26224.304	22734.337	17490.538
65.0	3686.410	3893.472	5266.806	9882.340	19842.549	29038.222	32358.292	31126.539	27427.741	20959.268
67.5	1698.970	1714.897	2187.423	3866.926	11995.433	23921.846	33949.306	34644.822	31225.646	22084.835
70.0	973.368	998.145	1194.588	1944.966	5328.747	15880.057	29137.329	331995.491	29413.411	18462.136
72.5	679.588	702.595	860.103	1300.774	2918.334	8224.075	19348.786	22998.031	21178.718	8802.786
75.0	507.921	523.849	651.272	1045.928	2233.437	4017.355	9924.814	11607.856	8687.752	2224.588
77.5	401.736	414.124	527.388	916.736	1847.629	2481.204	3750.121	3852.768	2688.265	955.670
80.0	313.248	322.096	431.821	784.004	1548.540	1775.069	1757.372	1757.372	1343.248	550.395
82.5	221.220	233.608	339.794	601.718	1205.207	1260.069	971.598	890.189	766.306	398.196
85.0	164.588	175.206	258.385	495.533	828.248	794.622	543.316	527.388	488.454	293.780
87.5	139.811	139.811	175.206	375.189	561.014	385.808	304.399	302.629	293.780	208.832
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	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224	3065.224
2.5	3075.843	3065.224	3081.152	3100.620	3109.468	3121.857	3120.087	3123.626	3125.396	3128.936
5.0	3079.382	3077.613	3104.159	3144.864	3171.410	3197.956	3205.035	3220.963	3222.733	3222.733
7.5	3082.922	3090.001	3127.166	3189.108	3226.273	3258.128	3266.977	3297.063	3312.991	3328.919
10.0	3090.001	3107.699	3153.712	3231.582	3274.056	3314.761	3360.774	3401.479	3424.486	3435.104
12.5	3095.310	3118.317	3171.410	3261.668	3309.451	3390.860	3447.493	3488.197	3509.434	3514.743
15.0	3090.001	3120.087	3178.489	3275.826	3344.846	3456.341	3518.283	3557.218	3578.455	3578.455
17.5	3079.382	3111.238	3171.410	3274.056	3373.163	3500.585	3576.685	3612.080	3619.159	3608.541
20.0	3098.850	3118.317	3169.640	3265.207	3385.551	3528.901	3612.080	3633.317	3635.087	3619.159
22.5	3229.812	3212.114	3229.812	3274.056	3387.321	3544.829	3622.699	3638.627	3635.087	3610.310
25.0	3493.506	3428.025	3394.400	3314.761	3380.242	3551.908	3617.389	3626.238	3620.929	3599.692
27.5	3826.221	3697.029	3603.231	3383.781	3362.544	3550.139	3605.001	3606.771	3615.620	3610.310

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CANDELA TABULATION - (Cont.)

30.0	4183.713	3971.341	3804.984	3440.413	3335.998	3535.981	3580.225	3590.843	3643.936	3679.331
32.5	4558.902	4240.345	3981.960	3468.730	3298.833	3518.283	3546.599	3606.771	3753.661	3895.242
35.0	4935.861	4507.579	4141.238	3454.572	3236.891	3479.348	3518.283	3647.475	3879.314	4153.627
37.5	5277.424	4741.187	4261.582	3401.479	3150.173	3420.946	3472.269	3599.692	3843.919	4158.936
40.0	5553.507	4912.854	4319.984	3302.372	3036.908	3335.998	3357.235	3449.262	3739.503	3925.328
42.5	5741.101	5006.651	4307.596	3166.101	2902.406	3212.114	3228.042	3325.379	3636.857	3620.929
45.0	5849.057	5038.507	4242.115	3001.513	2746.668	3065.224	3123.626	3242.200	3599.692	3265.207
47.5	5934.005	5065.053	4178.403	2836.925	2583.850	2914.795	3035.138	3199.726	3528.901	3113.008
50.0	6079.126	5164.160	4187.252	2702.424	2431.650	2767.905	2948.420	3144.864	3429.795	3051.066
52.5	6385.294	5431.393	4358.919	2656.410	2321.925	2638.712	2851.083	3054.606	3307.681	3010.362
55.0	7183.456	6172.923	4891.617	2721.891	2254.674	2534.296	2739.588	2960.809	3114.778	2943.111
57.5	8751.463	7583.422	5863.215	2914.795	2231.667	2426.341	2633.403	2789.142	2856.393	2796.221
60.0	11075.158	9478.835	6845.432	3088.231	2192.733	2281.221	2498.901	2539.606	2520.138	2707.733
62.5	14101.448	11075.158	6827.734	2904.176	2067.080	2067.080	2282.990	2247.595	2160.877	2603.317
65.0	16559.644	11324.694	5790.655	2350.241	1783.918	1783.918	1966.203	1967.973	1819.313	2479.434
67.5	15598.665	9498.302	4019.125	1642.337	1412.268	1440.585	1576.856	1691.891	1518.454	2300.688
70.0	9769.075	5280.964	2091.856	1058.316	1063.626	1114.949	1235.292	1431.736	1318.471	1982.131
72.5	2681.186	1422.887	780.464	697.285	807.011	867.182	983.987	1219.365	1145.035	1530.842
75.0	874.261	592.870	463.677	534.468	651.272	711.444	807.011	976.908	826.478	1045.928
77.5	447.749	359.261	343.333	456.598	532.698	587.560	633.574	665.430	591.100	762.767
80.0	306.168	276.083	295.550	391.117	445.980	414.124	398.196	516.770	449.519	546.856
82.5	237.148	207.062	245.997	348.643	330.945	284.931	313.248	378.729	269.004	380.498
85.0	171.667	157.509	219.450	315.017	222.990	207.062	221.220	203.522	146.890	242.457
87.5	115.034	122.113	205.292	238.918	145.120	125.653	120.344	120.344	92.028	129.192
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

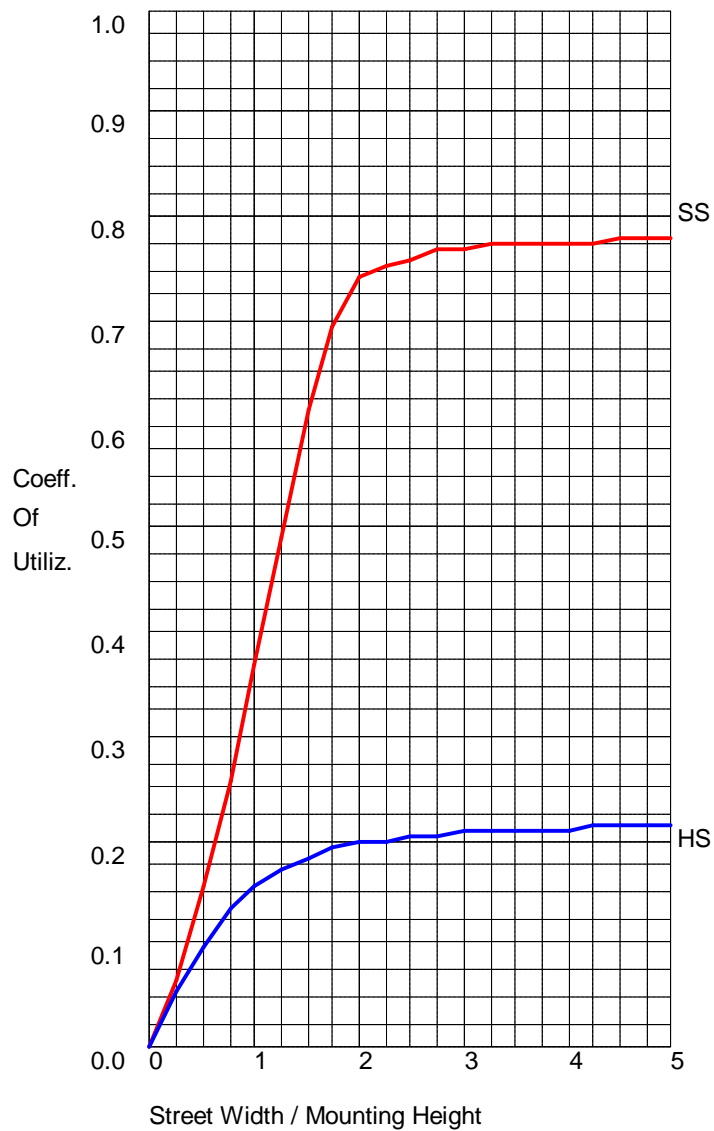
	<u>175</u>	<u>180</u>
0.0	3065.224	3065.224
2.5	3128.936	3120.087
5.0	3222.733	3213.884
7.5	3334.228	3327.149
10.0	3438.644	3429.795
12.5	3518.283	3509.434
15.0	3578.455	3569.606
17.5	3605.001	3594.383
20.0	3606.771	3599.692
22.5	3596.152	3590.843
25.0	3587.304	3580.225
27.5	3610.310	3605.001
30.0	3712.957	3709.417
32.5	4026.204	4033.283
35.0	4410.242	4431.479
37.5	4284.589	4275.740
40.0	3863.386	3824.451
42.5	3217.424	3162.561
45.0	2921.874	2868.781
47.5	2797.991	2741.358
50.0	2711.272	2659.949
52.5	2622.784	2555.533
55.0	2482.973	2394.485
57.5	2279.451	2162.647
60.0	2157.337	1987.440
62.5	2065.310	1838.781
65.0	2045.843	1764.451

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CANDELA TABULATION - (Cont.)

67.5	2150.258	1861.788
70.0	2279.451	2067.080
72.5	2162.647	2093.626
75.0	1918.420	2113.093
77.5	1587.475	1831.702
80.0	1173.351	1327.320
82.5	780.464	883.110
85.0	522.079	585.791
87.5	313.248	431.821
90.0	0.000	0.000

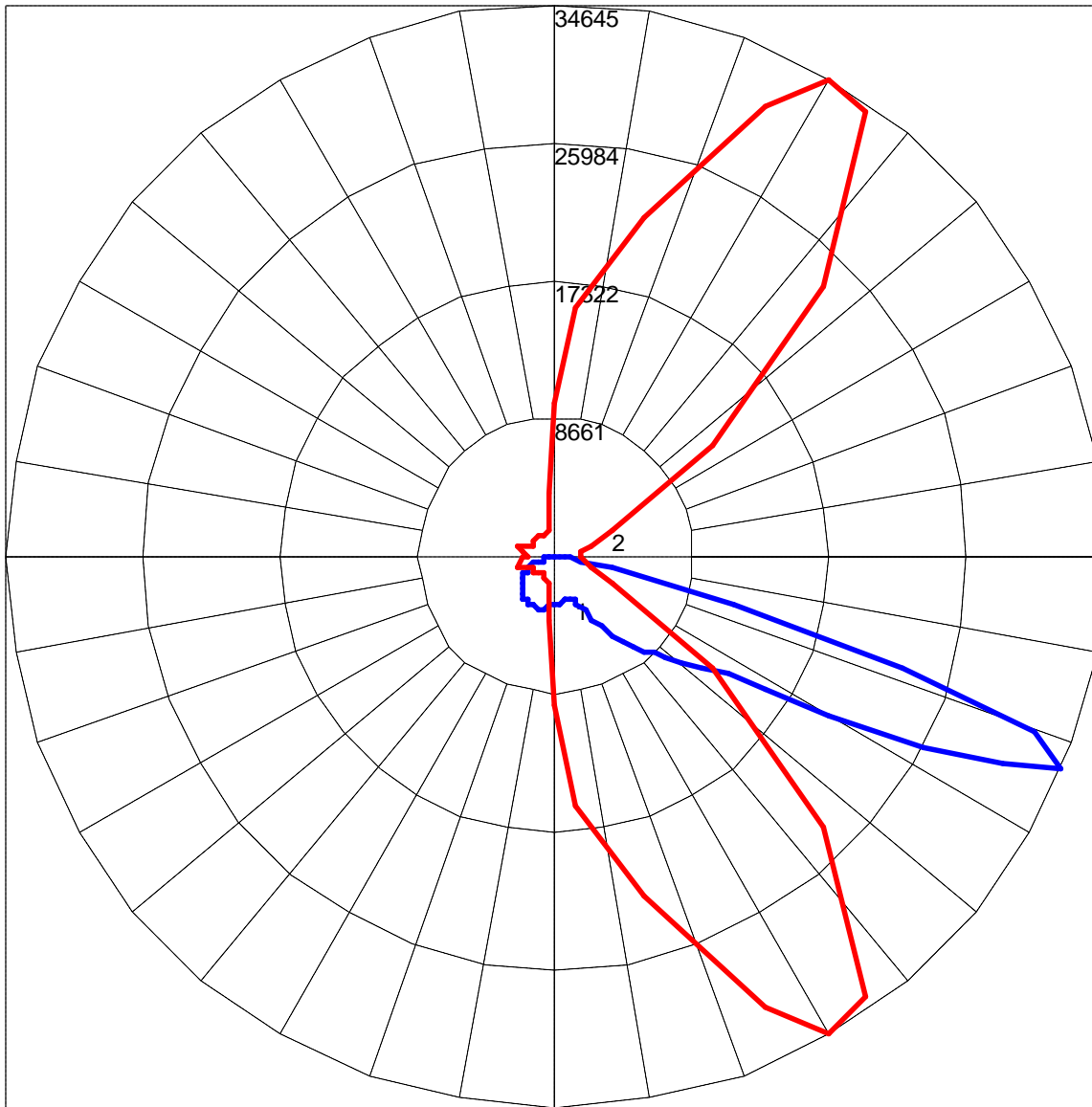
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

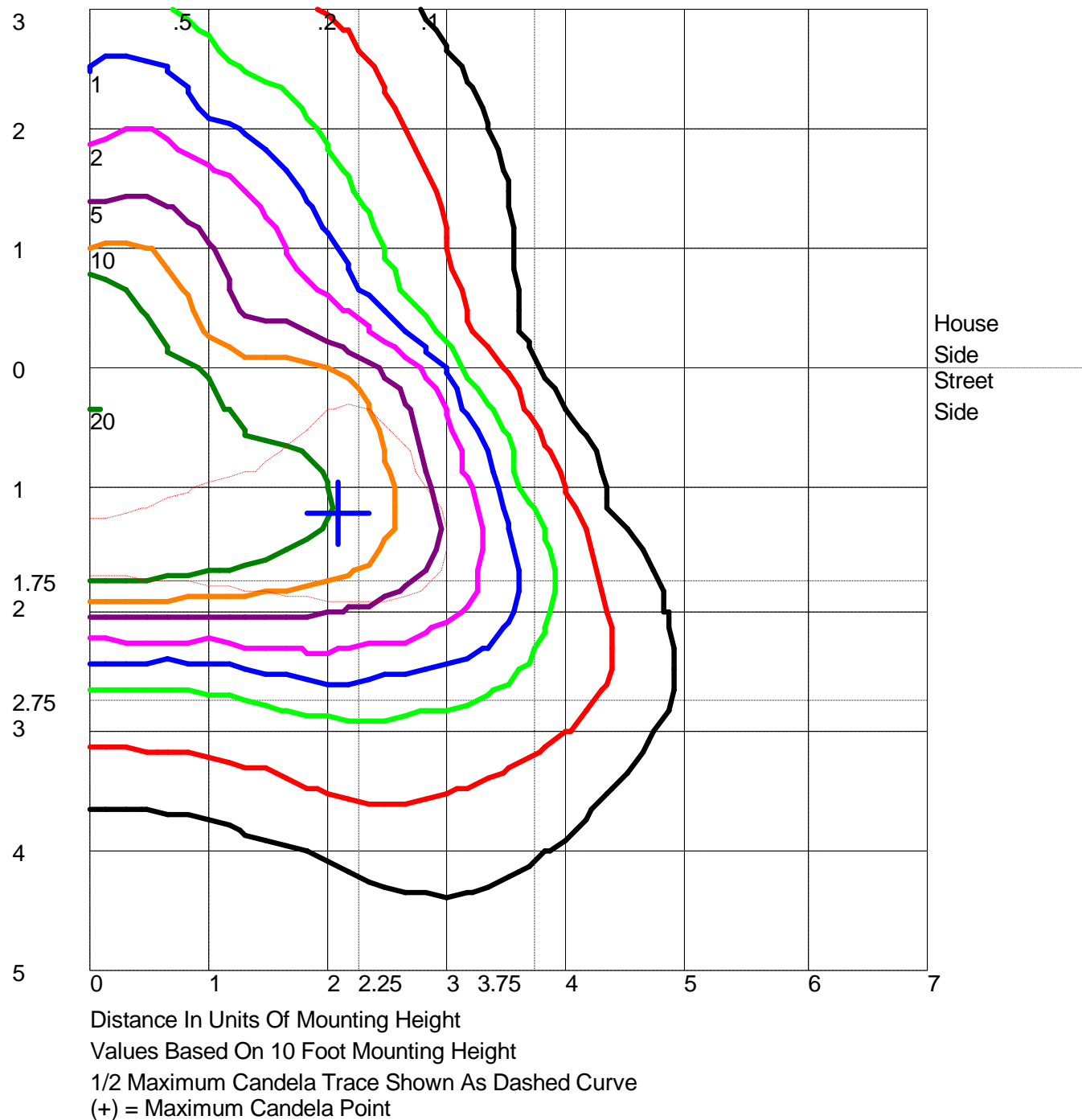
	Lumens	Percent Of Luminaire
Downward Street Side	25768.1	78.3
Downward House Side	7122.2	21.7
Downward Total	32890.3	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	32890.3	100.0

POLAR GRAPH

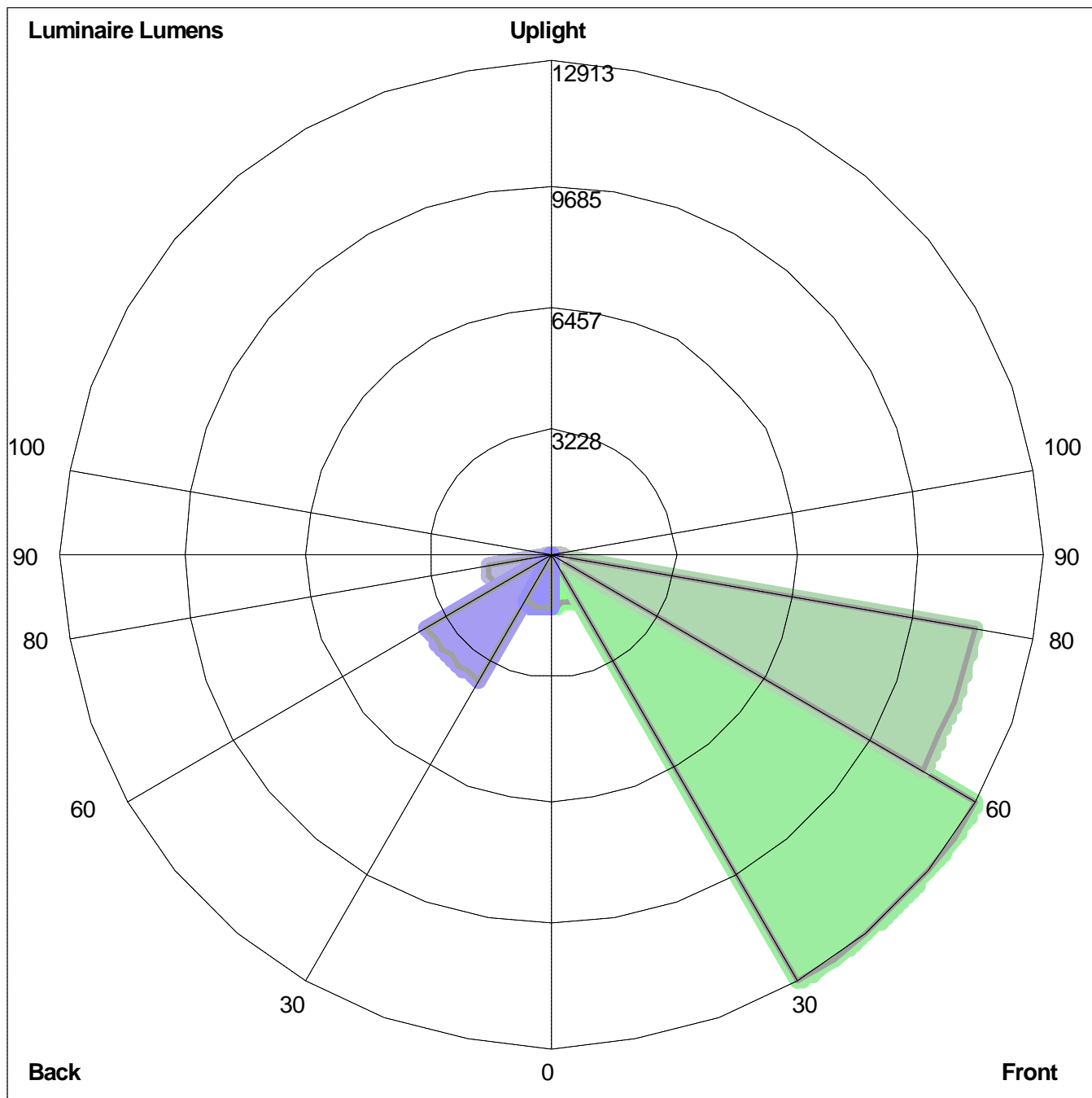


Maximum Candela = 34644.822 Located At Horizontal Angle = 60, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1341.5, Medium= 12913.0, High=11255.3, Very High=258.3
Back: Low=1460.3, Medium=3791.3, High=1727.3, Very High=143.4
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4