



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-27L-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-27L-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	24433
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	238
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	25735.979
Maximum Candela Angle	60H 67.5V
Maximum Candela (<90 Degrees Vertical)	25735.979
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	1318.614 (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)	996.6	N.A.	4.1
FM - Front-Medium (30-60)	9592.5	N.A.	39.3
FH - Front-High (60-80)	8361.0	N.A.	34.2
FVH - Front-Very High (80-90)	191.8	N.A.	0.8
BL - Back-Low (0-30)	1084.8	N.A.	4.4
BM - Back-Medium (30-60)	2816.3	N.A.	11.5
BH - Back-High (60-80)	1283.1	N.A.	5.3
BVH - Back-Very High (80-90)	106.5	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	24432.6	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	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008
2.5	2232.310	2229.680	2228.366	2233.624	2238.883	2249.400	2253.344	2252.030	2263.862	2262.547
5.0	2137.653	2135.024	2135.024	2150.800	2170.520	2196.814	2215.219	2219.163	2240.198	2253.344
7.5	1999.613	1995.669	2003.557	2029.850	2064.032	2115.304	2158.688	2175.779	2209.960	2241.512
10.0	1858.943	1849.741	1868.146	1904.957	1954.914	2023.277	2091.640	2119.248	2170.520	2232.310
12.5	1727.476	1722.218	1743.252	1787.951	1849.741	1932.565	2028.536	2062.717	2128.451	2216.534
15.0	1624.932	1627.561	1649.911	1695.924	1765.602	1860.258	1972.005	2015.389	2087.696	2195.499
17.5	1619.673	1615.729	1632.820	1673.575	1737.994	1830.021	1941.768	1993.040	2065.347	2175.779
20.0	1795.839	1787.951	1789.266	1794.525	1832.650	1912.845	2002.242	2045.626	2107.416	2208.646
22.5	2170.520	2160.003	2144.227	2120.563	2113.989	2140.283	2184.981	2213.904	2257.288	2345.371
25.0	2635.913	2625.396	2614.879	2583.326	2541.257	2520.222	2505.761	2509.705	2524.166	2587.270
27.5	3176.243	3169.669	3156.523	3124.971	3076.328	3025.056	2951.434	2925.141	2901.477	2913.309
30.0	3711.313	3704.740	3702.111	3720.516	3669.244	3616.657	3490.449	3426.030	3370.814	3281.416
32.5	4235.867	4230.608	4241.125	4291.083	4309.488	4245.069	4070.218	3991.338	3871.703	3669.244
35.0	4728.868	4722.295	4745.959	4836.671	4910.292	4874.796	4663.134	4539.555	4347.614	4053.128
37.5	5238.960	5232.386	5291.547	5378.315	5492.691	5495.320	5244.218	5066.738	4795.916	4423.864
40.0	5826.617	5817.415	5870.001	5962.028	6084.293	6115.845	5833.191	5562.369	5204.778	4710.462
42.5	6578.609	6610.161	6607.531	6664.062	6754.774	6804.732	6389.296	6048.797	5575.515	4931.327
45.0	7697.393	7689.505	7614.568	7609.310	7583.016	7540.947	6975.639	6522.078	5933.106	5102.234
47.5	9181.655	9172.452	9059.391	8992.343	8732.038	8517.747	7659.267	7041.372	6320.933	5278.400
50.0	11444.202	11459.978	11425.797	11076.094	10443.738	9774.571	8467.789	7677.673	6786.326	5508.467
52.5	14056.451	14111.667	14357.511	14320.700	13209.804	11584.872	9541.875	8523.005	7417.368	5889.721
55.0	15640.629	15730.026	16464.927	17285.281	16614.799	14149.793	11127.367	9753.536	8412.573	6579.923
57.5	15494.700	15601.188	16855.384	18552.623	19181.035	17198.513	13333.383	11578.298	10004.638	7945.865
60.0	12839.067	12914.003	14779.520	17673.108	20646.892	20146.003	16436.004	14754.541	12873.248	10263.628
62.5	7560.667	7589.590	9328.898	13626.554	18899.695	22206.090	20717.884	19480.780	16888.250	12992.883
65.0	2738.458	2892.274	3912.458	7341.117	14740.080	21571.105	24037.426	23122.415	20374.755	15569.636
67.5	1262.083	1273.915	1624.932	2872.554	8910.833	17770.394	25219.314	25735.979	23196.037	16405.767
70.0	723.068	741.474	887.402	1444.822	3958.471	11796.534	21644.726	23767.918	21849.815	13714.637
72.5	504.833	521.924	638.930	966.282	2167.891	6109.271	14373.287	17084.136	15732.655	6539.168
75.0	377.310	389.142	483.799	776.970	1659.113	2984.301	7372.669	8622.920	6453.715	1652.540
77.5	298.430	307.633	391.772	680.999	1372.515	1843.167	2785.786	2862.037	1996.984	709.922
80.0	232.697	239.270	320.779	582.399	1150.336	1318.614	1305.467	1305.467	997.835	408.862
82.5	164.334	173.536	252.417	446.988	895.290	936.045	721.754	661.279	569.252	295.801
85.0	122.264	130.152	191.942	368.108	615.266	590.287	403.604	391.772	362.849	218.235
87.5	103.859	103.859	130.152	278.710	416.750	286.598	226.123	224.809	218.235	155.131
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	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008	2277.008
2.5	2284.896	2277.008	2288.840	2303.302	2309.875	2319.078	2317.763	2320.392	2321.707	2324.337
5.0	2287.526	2286.211	2305.931	2336.169	2355.889	2375.609	2380.867	2392.699	2394.014	2394.014
7.5	2290.155	2295.414	2323.022	2369.035	2396.643	2420.307	2426.881	2449.230	2461.062	2472.894
10.0	2295.414	2308.560	2342.742	2400.587	2432.139	2462.377	2496.558	2526.796	2543.886	2551.774
12.5	2299.358	2316.448	2355.889	2422.937	2458.433	2518.908	2560.977	2591.215	2606.991	2610.935
15.0	2295.414	2317.763	2361.147	2433.454	2484.726	2567.550	2613.564	2642.487	2658.263	2658.263
17.5	2287.526	2311.190	2355.889	2432.139	2505.761	2600.417	2656.948	2683.241	2688.500	2680.612
20.0	2301.987	2316.448	2354.574	2425.566	2514.964	2621.452	2683.241	2699.017	2700.332	2688.500
22.5	2399.273	2386.126	2399.273	2432.139	2516.278	2633.284	2691.129	2702.961	2700.332	2681.927
25.0	2595.159	2546.516	2521.537	2462.377	2511.020	2638.543	2687.185	2693.759	2689.815	2674.039
27.5	2842.316	2746.346	2676.668	2513.649	2497.873	2637.228	2677.983	2679.297	2685.871	2681.927

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CANDELA TABULATION - (Cont.)

30.0	3107.880	2950.119	2826.540	2555.718	2478.153	2626.711	2659.577	2667.465	2706.905	2733.199
32.5	3386.590	3149.949	2958.007	2576.753	2450.545	2613.564	2634.599	2679.297	2788.415	2893.589
35.0	3666.615	3348.464	3076.328	2566.236	2404.531	2584.641	2613.564	2709.535	2881.757	3085.530
37.5	3920.346	3522.001	3165.725	2526.796	2340.113	2541.257	2579.382	2674.039	2855.463	3089.474
40.0	4125.434	3649.524	3209.109	2453.174	2255.974	2478.153	2493.929	2562.292	2777.898	2915.938
42.5	4264.789	3719.201	3199.907	2351.945	2156.059	2386.126	2397.958	2470.265	2701.647	2689.815
45.0	4344.984	3742.865	3151.264	2229.680	2040.368	2277.008	2320.392	2408.475	2674.039	2425.566
47.5	4408.088	3762.585	3103.936	2107.416	1919.418	2165.261	2254.659	2376.923	2621.452	2312.504
50.0	4515.891	3836.207	3110.509	2007.501	1806.357	2056.144	2190.240	2336.169	2547.830	2266.491
52.5	4743.329	4034.722	3238.032	1973.320	1724.847	1960.173	2117.933	2269.120	2457.118	2236.254
55.0	5336.245	4585.569	3633.748	2021.962	1674.890	1882.607	2035.109	2199.443	2313.819	2186.296
57.5	6501.043	5633.361	4355.502	2165.261	1657.799	1802.413	1956.229	2071.920	2121.877	2077.179
60.0	8227.205	7041.372	5085.143	2294.099	1628.876	1694.610	1856.314	1886.551	1872.090	2011.445
62.5	10475.290	8227.205	5071.997	2157.373	1535.535	1535.535	1695.924	1669.631	1605.212	1933.880
65.0	12301.367	8412.573	4301.600	1745.882	1325.187	1325.187	1460.598	1461.913	1351.481	1841.853
67.5	11587.501	7055.834	2985.615	1220.014	1049.107	1070.141	1171.371	1256.824	1127.987	1709.071
70.0	7256.978	3922.975	1553.940	786.173	790.117	828.242	917.640	1063.568	979.429	1472.430
72.5	1991.725	1056.995	579.769	517.980	599.490	644.188	730.957	905.808	850.591	1137.190
75.0	649.447	440.414	344.444	397.030	483.799	528.497	599.490	725.698	613.951	776.970
77.5	332.612	266.878	255.046	339.185	395.716	436.470	470.652	494.316	439.100	566.623
80.0	227.438	205.089	219.550	290.542	331.297	307.633	295.801	383.884	333.926	406.233
82.5	176.166	153.816	182.739	258.990	245.843	211.662	232.697	281.339	199.830	282.654
85.0	127.523	117.006	163.019	234.011	165.648	153.816	164.334	151.187	109.118	180.110
87.5	85.454	90.712	152.502	177.480	107.803	93.342	89.398	89.398	68.363	95.971
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

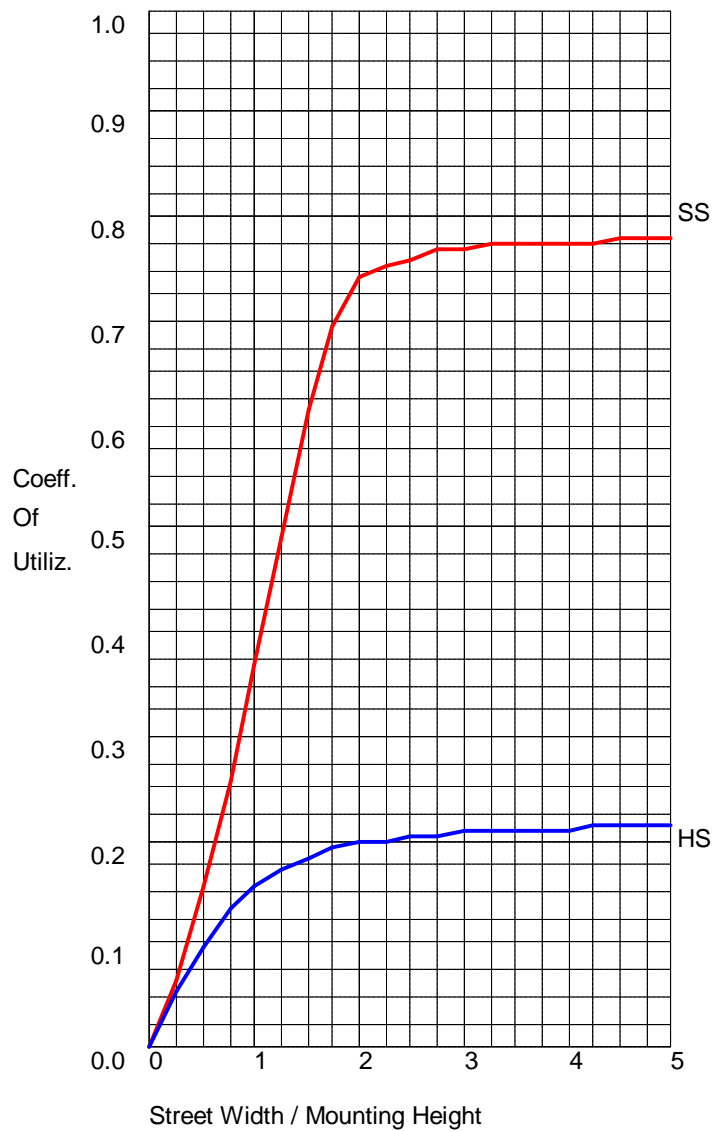
	175	180
0.0	2277.008	2277.008
2.5	2324.337	2317.763
5.0	2394.014	2387.441
7.5	2476.838	2471.580
10.0	2554.404	2547.830
12.5	2613.564	2606.991
15.0	2658.263	2651.689
17.5	2677.983	2670.095
20.0	2679.297	2674.039
22.5	2671.409	2667.465
25.0	2664.836	2659.577
27.5	2681.927	2677.983
30.0	2758.178	2755.548
32.5	2990.874	2996.133
35.0	3276.158	3291.934
37.5	3182.816	3176.243
40.0	2869.925	2841.002
42.5	2390.070	2349.315
45.0	2170.520	2131.080
47.5	2078.493	2036.424
50.0	2014.074	1975.949
52.5	1948.341	1898.383
55.0	1844.482	1778.748
57.5	1693.295	1606.527
60.0	1602.583	1476.374
62.5	1534.220	1365.942
65.0	1519.758	1310.726

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CANDELA TABULATION - (Cont.)

67.5	1597.324	1383.033
70.0	1693.295	1535.535
72.5	1606.527	1555.255
75.0	1425.102	1569.716
77.5	1179.259	1360.683
80.0	871.626	986.002
82.5	579.769	656.020
85.0	387.828	435.156
87.5	232.697	320.779
90.0	0.000	0.000

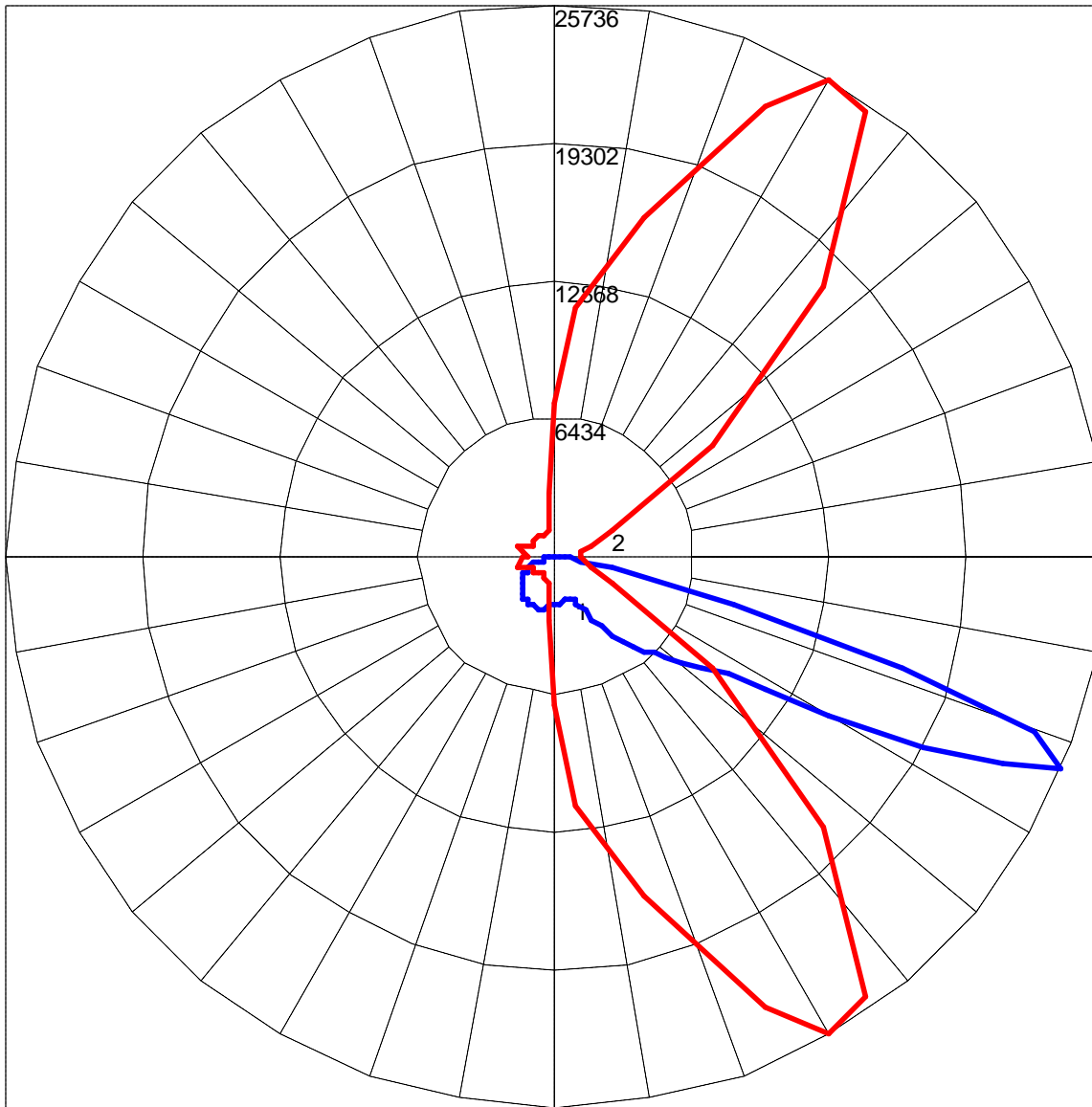
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

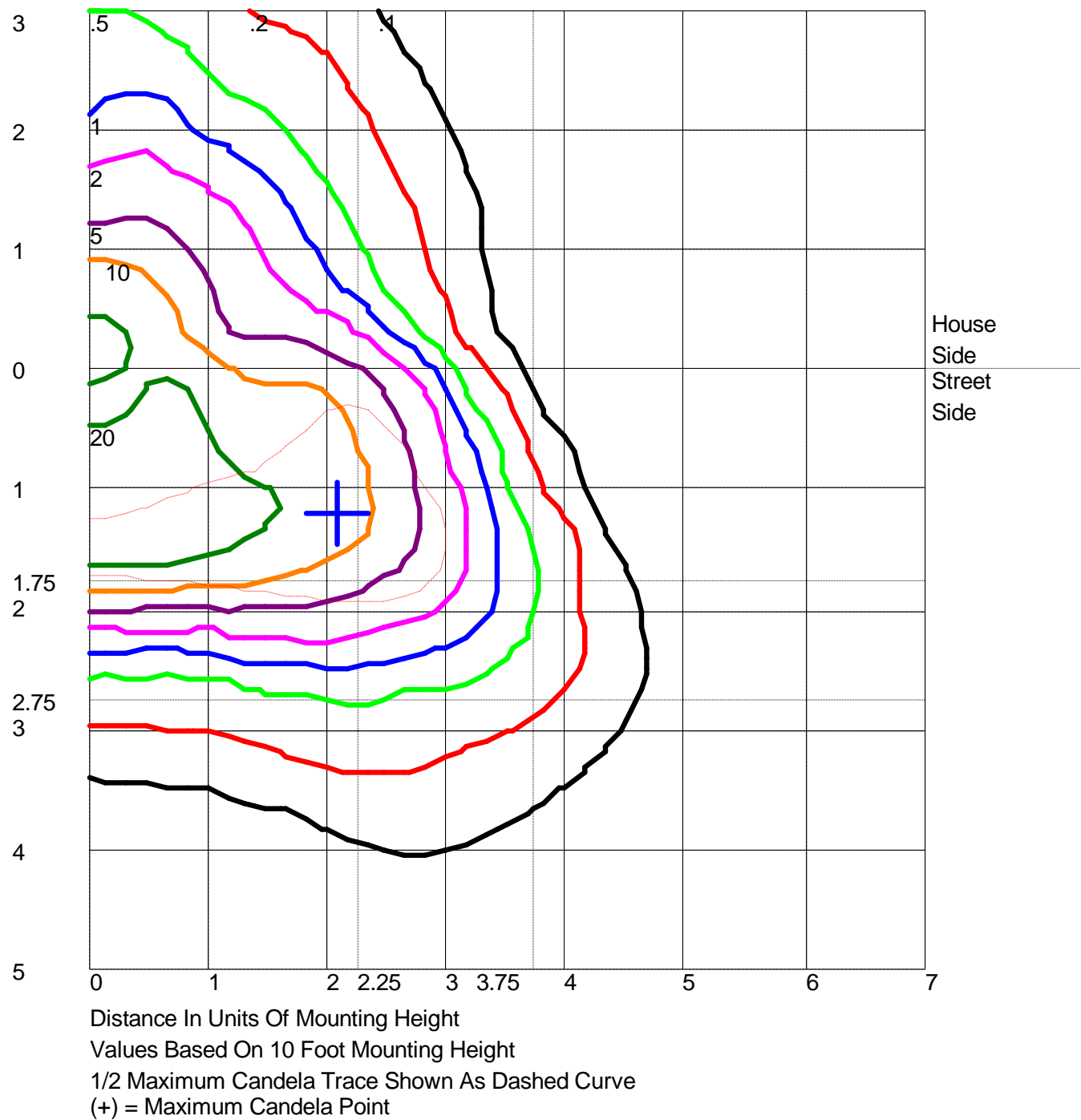
	Lumens	Percent Of Luminaire
Downward Street Side	19141.9	78.3
Downward House Side	5290.8	21.7
Downward Total	24432.7	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	24432.7	100.0

POLAR GRAPH

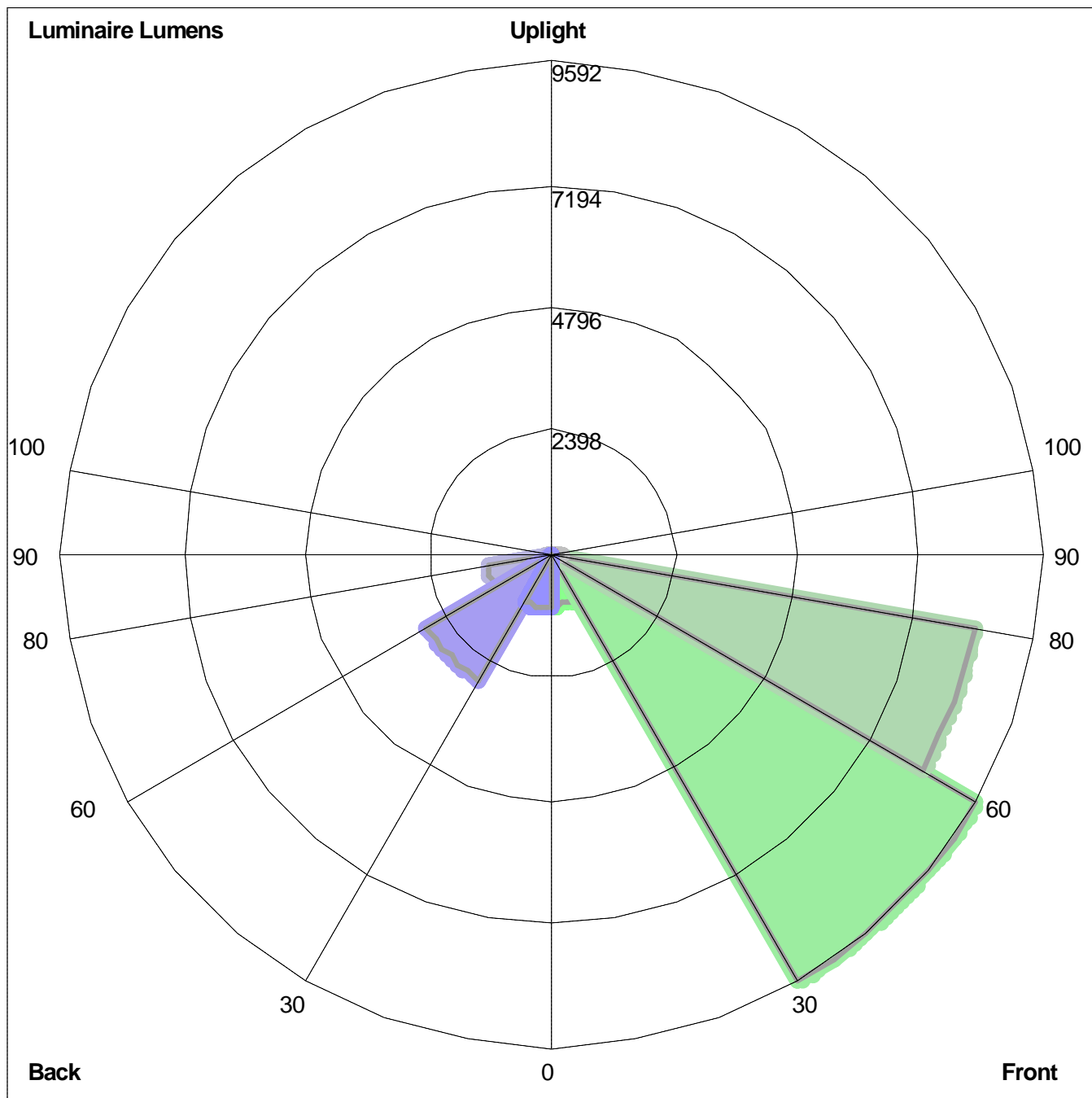


Maximum Candela = 25735.979 Located At Horizontal Angle = 60, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=996.6, Medium=9592.5, High= 8361.0, Very High=191.8
Back: Low=1084.8, Medium=2816.3, High=1283.1, Very High=106.5
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4