



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-18L-40-IL.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-7762_Scaled
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]04/03/17
[TEST DATE]04/28/16
[MANUFACTURER]LSI INDUSTRIES, INC
[LUMCAT] HLN-3-LED-18L-40-IL
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[OTHER]TEST PROCEDURE: IESNA LM-79-08
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Outdoor
[OTHER]SCALED FROM ORIGINAL TEST DATA

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15407
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	100
Total Luminaire Watts	154
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	19496.466
Maximum Candela Angle	55H 67.5V
Maximum Candela (<90 Degrees Vertical)	19496.466
Maximum Candela Angle (<90 Degrees Vertical)	55H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1061.474 (6.9% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : HLN-3-LED-18L-40-IL.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	681.0	N.A.	4.4
FM - Front-Medium (30-60)	6969.6	N.A.	45.2
FH - Front-High (60-80)	6422.4	N.A.	41.7
FVH - Front-Very High (80-90)	125.1	N.A.	0.8
BL - Back-Low (0-30)	299.5	N.A.	1.9
BM - Back-Medium (30-60)	674.0	N.A.	4.4
BH - Back-High (60-80)	231.2	N.A.	1.5
BVH - Back-Very High (80-90)	4.4	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	15407.2	N.A.	100.0
BUG Rating	B1-U0-G3		

IES ROAD REPORT
PHOTOMETRIC FILENAME : HLN-3-LED-18L-40-IL.IES

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>45.0</u>	<u>55.0</u>	<u>57.5</u>	<u>65.0</u>	<u>75.0</u>
0.0	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405
2.5	1370.661	1364.753	1345.059	1336.197	1319.458	1309.611	1286.964	1276.132	1265.301	1236.745
5.0	1506.545	1504.576	1498.668	1492.760	1478.974	1469.128	1434.664	1413.001	1376.569	1307.642
7.5	1466.174	1466.174	1471.097	1487.836	1495.714	1506.545	1501.622	1492.760	1464.204	1377.553
10.0	1367.707	1367.707	1378.538	1407.093	1439.588	1482.913	1514.422	1513.438	1510.484	1437.618
12.5	1273.178	1274.163	1286.964	1322.412	1362.783	1423.833	1487.836	1496.698	1520.330	1474.051
15.0	1195.389	1196.374	1213.113	1248.562	1302.718	1367.707	1441.557	1456.327	1511.468	1499.652
17.5	1151.079	1152.064	1170.773	1210.159	1267.270	1335.212	1414.971	1433.679	1503.591	1526.238
20.0	1173.727	1176.681	1198.343	1247.577	1298.780	1366.722	1445.496	1468.143	1539.039	1577.441
22.5	1328.320	1330.289	1349.983	1397.247	1433.679	1487.836	1558.733	1583.349	1643.414	1691.663
25.0	1648.338	1648.338	1673.939	1681.816	1694.617	1716.280	1787.176	1791.115	1842.318	1881.704
27.5	2078.638	2105.224	2107.194	2091.439	2075.684	2054.022	2098.332	2099.316	2122.948	2128.857
30.0	2535.525	2564.081	2575.897	2572.943	2544.387	2491.215	2494.169	2483.338	2463.644	2390.779
32.5	3016.044	3003.243	3026.876	3049.523	3048.538	3024.906	2959.918	2931.363	2835.850	2676.333
35.0	3389.234	3384.311	3440.437	3498.532	3540.873	3563.521	3461.115	3411.881	3237.595	2975.673
37.5	3738.792	3755.531	3819.535	3918.002	4005.637	4114.936	3974.128	3908.155	3643.279	3271.074
40.0	4142.507	4161.215	4229.158	4330.579	4468.432	4630.903	4517.666	4400.490	4038.132	3544.812
42.5	4662.412	4680.136	4756.941	4794.358	4979.476	5152.778	5020.832	4903.657	4397.536	3771.286
45.0	5340.850	5358.574	5436.363	5424.547	5563.385	5719.948	5520.060	5379.252	4726.416	3966.251
47.5	6223.114	6245.762	6341.275	6284.164	6379.677	6359.983	6019.288	5825.308	5069.081	4149.399
50.0	7416.534	7464.783	7671.564	7627.254	7515.986	7132.949	6526.393	6277.271	5388.114	4372.919
52.5	9201.741	9282.484	9511.912	9422.307	9138.722	8130.420	7123.103	6781.422	5771.151	4709.677
55.0	11267.579	11462.543	11686.063	11715.603	11294.165	9478.433	7878.345	7455.921	6319.612	5205.950
57.5	12241.417	12375.332	13125.651	13856.276	13778.487	11486.175	9060.933	8518.380	7180.214	6021.257
60.0	10963.316	11205.544	12550.604	14335.810	16468.605	14388.982	10858.941	10205.120	8556.782	7385.025
62.5	6500.791	6672.124	9143.645	12548.634	16434.142	16953.063	13666.235	13175.869	10598.003	9166.293
65.0	1854.134	1933.892	3003.243	6904.506	13745.993	17334.130	16849.673	16447.927	13066.571	110738.811
67.5	739.487	773.951	1043.750	1977.217	7766.092	15143.240	19496.466	19492.527	14981.754	11231.146
70.0	500.212	519.906	612.465	1022.087	2508.939	10150.963	17658.087	18599.431	15903.405	9299.223
72.5	403.715	421.439	473.626	747.365	1452.388	4362.088	13317.662	14581.978	12554.542	5267.000
75.0	318.048	327.895	377.129	635.112	1142.217	2108.178	6637.660	7824.188	6571.687	1619.782
77.5	243.213	257.984	299.340	555.354	996.486	1296.810	2440.012	3085.956	1863.980	582.925
80.0	169.363	179.210	224.505	467.718	839.923	900.973	926.574	1061.474	778.874	312.140
82.5	101.421	107.329	147.700	385.991	640.035	619.357	416.515	381.067	362.359	200.873
85.0	65.973	69.912	102.406	321.002	508.090	333.803	168.379	177.241	181.179	129.976
87.5	41.356	44.310	70.896	239.275	250.106	115.206	73.850	72.866	74.835	74.835
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	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405	1194.405
2.5	1216.067	1205.236	1191.451	1162.895	1141.233	1117.600	1095.938	1064.428	1043.750	1046.704
5.0	1240.684	1205.236	1167.819	1092.984	1021.103	956.115	896.050	859.617	835.000	827.123
7.5	1264.316	1204.251	1141.233	1017.164	908.850	833.031	792.659	762.135	735.548	718.809
10.0	1284.994	1198.343	1110.708	939.375	822.199	766.073	720.778	688.284	663.668	646.928
12.5	1304.688	1190.466	1081.168	869.464	768.043	707.978	666.622	639.051	616.403	604.587
15.0	1322.412	1181.604	1049.658	816.291	727.671	673.514	628.219	607.541	593.756	585.879
17.5	1341.121	1175.696	1019.133	777.889	700.100	653.821	611.480	591.787	582.925	573.078
20.0	1378.538	1192.435	1011.256	756.227	700.100	642.989	610.495	581.940	566.185	561.262
22.5	1483.898	1267.270	1058.520	765.089	728.656	656.775	614.434	574.063	548.461	545.507
25.0	1641.445	1388.385	1160.926	794.629	767.058	690.254	615.419	566.185	531.722	498.243
27.5	1838.379	1557.748	1281.056	836.969	805.460	727.671	626.250	551.415	455.902	386.975

IES ROAD REPORT
PHOTOMETRIC FILENAME : HLN-3-LED-18L-40-IL.IES

CANDELA TABULATION - (Cont.)

30.0	2035.313	1705.448	1390.354	883.249	839.923	762.135	628.219	470.672	354.481	337.742
32.5	2249.971	1875.796	1509.499	925.590	870.448	788.721	584.894	391.899	341.680	348.573
35.0	2473.491	2040.236	1632.583	951.191	884.234	797.583	510.059	383.037	343.650	358.420
37.5	2682.241	2197.783	1736.958	960.053	875.372	749.334	492.335	365.313	312.140	313.125
40.0	2870.313	2333.668	1817.701	950.207	840.908	655.790	483.473	340.696	267.830	250.106
42.5	3029.830	2440.012	1872.842	920.666	770.997	578.986	443.101	318.048	242.229	210.719
45.0	3158.821	2525.679	1906.321	872.418	639.051	462.795	382.052	292.447	258.968	188.072
47.5	3293.721	2626.115	1948.662	808.414	464.764	335.772	297.370	257.984	246.167	178.225
50.0	3472.931	2784.647	2026.451	738.502	340.696	246.167	223.520	235.336	238.290	174.287
52.5	3746.669	3041.646	2193.845	689.269	258.968	195.949	174.287	207.765	214.658	178.225
55.0	4174.016	3476.870	2473.491	653.821	232.382	174.287	144.746	174.287	168.379	189.057
57.5	4893.810	4074.564	2882.129	593.756	218.597	160.501	126.038	144.746	130.961	135.884
60.0	6042.920	4808.144	3107.618	511.044	206.781	141.792	109.298	103.390	78.774	105.360
62.5	7657.778	5354.635	2930.378	427.347	182.164	117.176	108.314	64.004	53.172	82.712
65.0	8472.101	5333.957	2174.151	345.619	141.792	103.390	77.789	50.218	38.402	79.758
67.5	8099.895	4326.640	1296.810	238.290	105.360	77.789	51.203	42.341	37.417	61.050
70.0	5286.693	2719.658	644.959	153.609	77.789	47.264	31.509	34.463	28.555	45.295
72.5	2319.882	1084.122	239.275	98.467	57.111	27.571	23.632	22.647	18.709	30.525
75.0	581.940	369.251	144.746	72.866	36.433	20.678	14.770	14.770	6.893	11.816
77.5	276.692	184.133	100.436	52.188	21.663	13.785	7.877	4.923	1.969	2.954
80.0	171.333	122.099	73.850	34.463	11.816	5.908	4.923	2.954	0.985	0.000
82.5	114.222	82.712	53.172	19.693	5.908	5.908	4.923	1.969	0.000	0.000
85.0	72.866	57.111	37.417	10.831	5.908	4.923	3.939	1.969	0.000	0.000
87.5	41.356	30.525	18.709	5.908	6.893	6.893	5.908	2.954	0.985	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

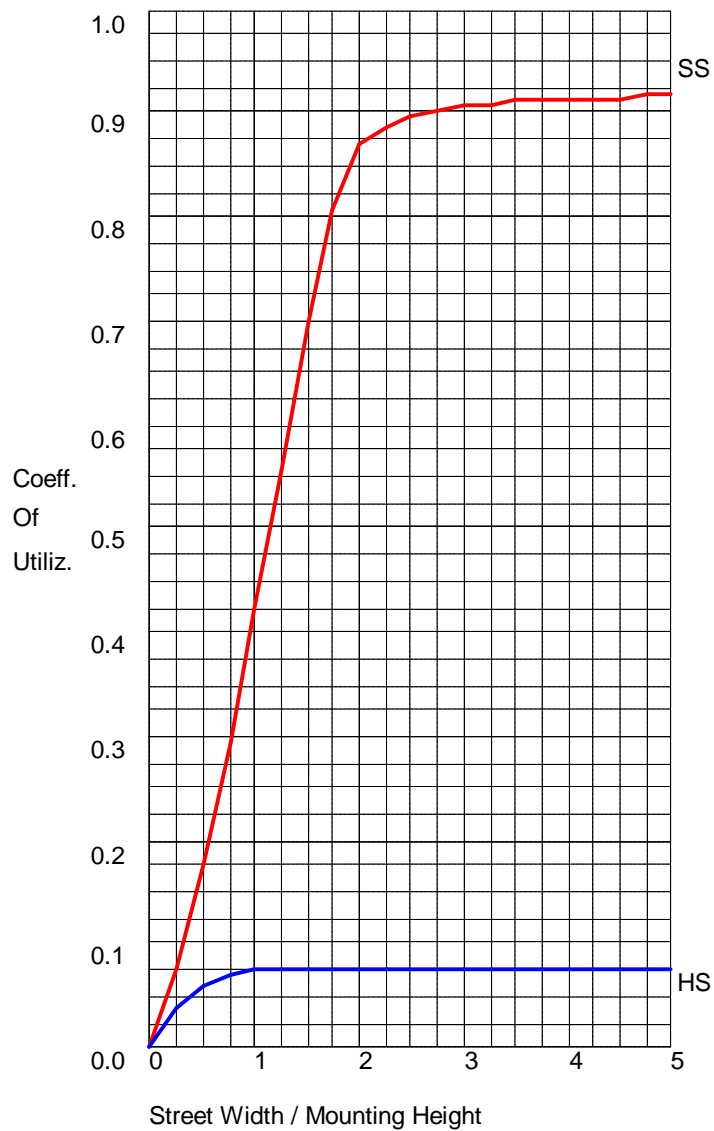
	175.0	180.0
0.0	1194.405	1194.405
2.5	1038.827	1040.796
5.0	821.215	819.245
7.5	715.855	713.886
10.0	642.989	639.051
12.5	599.664	596.710
15.0	582.925	578.001
17.5	569.139	564.216
20.0	555.354	549.446
22.5	539.599	534.676
25.0	471.657	465.749
27.5	358.420	353.497
30.0	339.711	336.757
32.5	364.328	359.405
35.0	385.006	381.067
37.5	321.002	316.079
40.0	242.229	234.351
42.5	182.164	180.195
45.0	163.455	158.532
47.5	148.685	145.731
50.0	134.900	128.992
52.5	141.792	136.869
55.0	138.838	131.946
57.5	85.666	72.866
60.0	65.973	55.142
62.5	57.111	44.310
65.0	69.912	53.172

IES ROAD REPORT
PHOTOMETRIC FILENAME : HLN-3-LED-18L-40-IL.IES

CANDELA TABULATION - (Cont.)

67.5	64.004	46.279
70.0	53.172	36.433
72.5	35.448	24.617
75.0	10.831	6.893
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

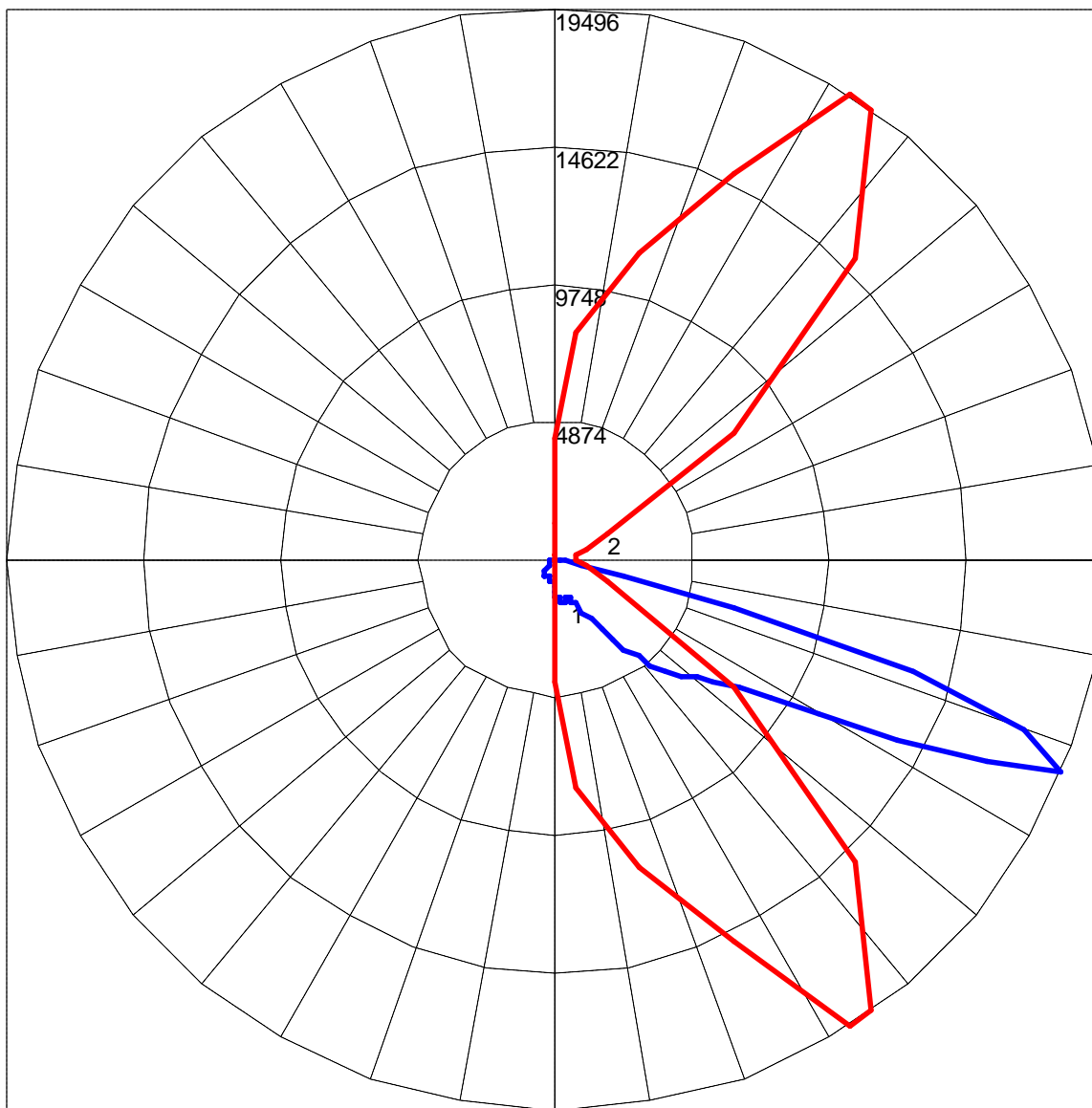
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

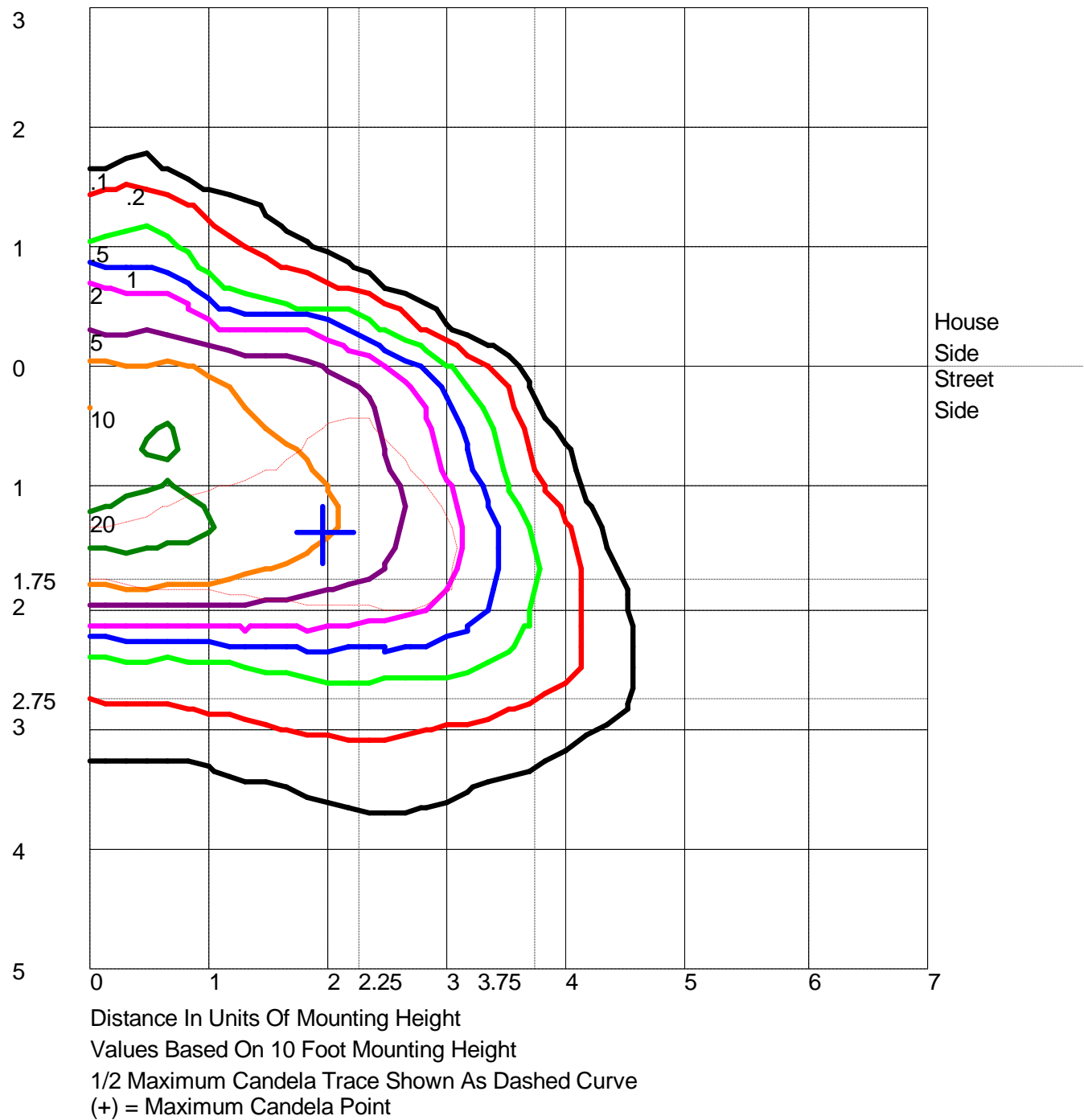
	Lumens	Percent Of Luminaire
Downward Street Side	14198.1	92.2
Downward House Side	1209.1	7.8
Downward Total	15407.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	15407.2	100.0

POLAR GRAPH

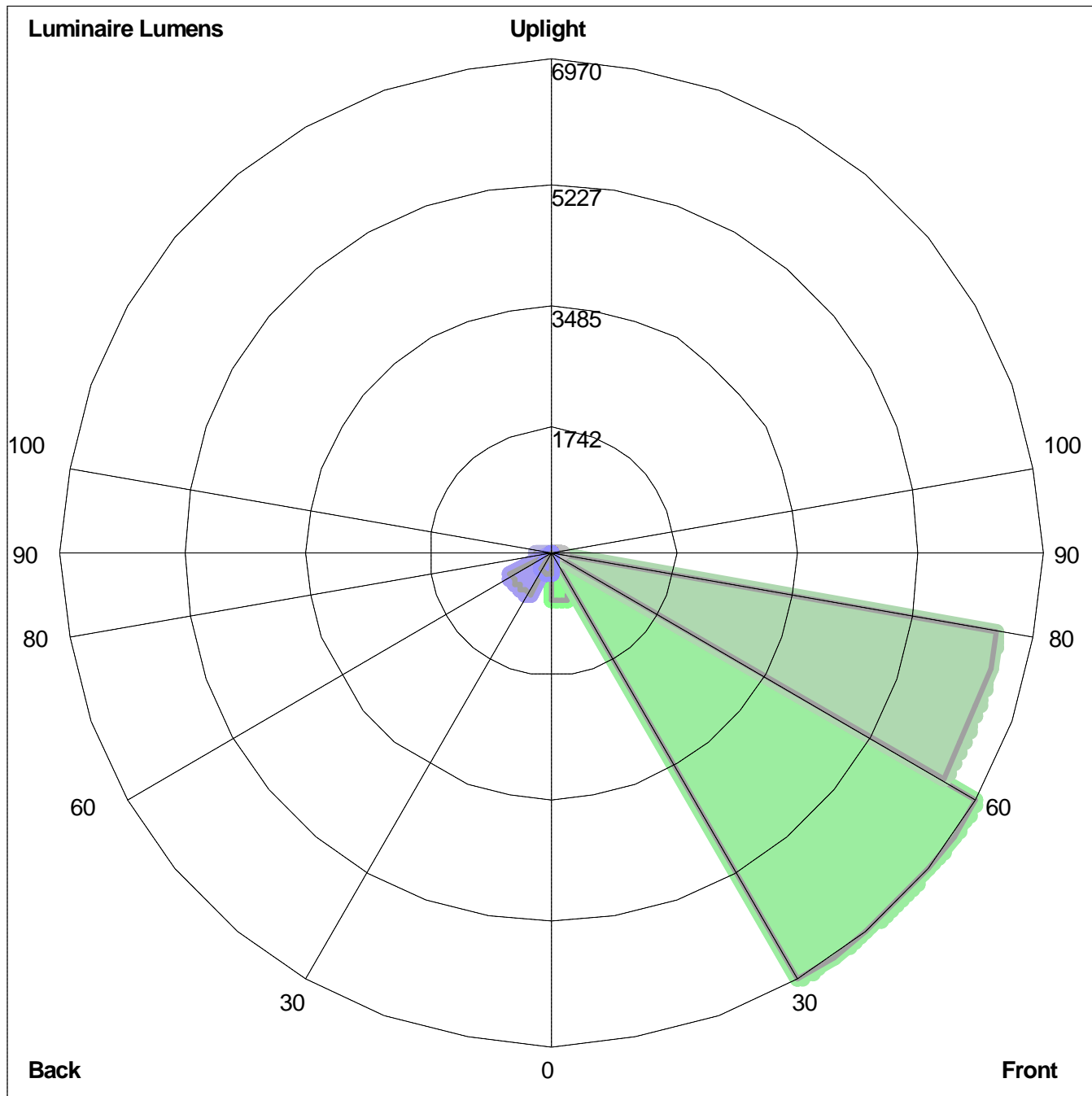


Maximum Candela = 19496.466 Located At Horizontal Angle = 55, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=681.0, Medium=6969.6, High=6422.4, Very High=125.1
Back: Low=299.5, Medium=674.0, High=231.2, Very High=4.4
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G3