



## IES ROAD REPORT

PHOTOMETRIC FILENAME : XMR-3-LED-29-40-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]LED-7784  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/21/16  
[TEST DATE]05/05/16  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XMR-3-LED-29-40-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	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	22471
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	241.3
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	24739.457
Maximum Candela Angle	55H 70V
Maximum Candela (<90 Degrees Vertical)	24739.457
Maximum Candela Angle (<90 Degrees Vertical)	55H 70V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2119.702 (9.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1132.1	N.A.	5.0
FM - Front-Medium (30-60)	9927.9	N.A.	44.2
FH - Front-High (60-80)	8900.8	N.A.	39.6
FVH - Front-Very High (80-90)	221.7	N.A.	1.0
BL - Back-Low (0-30)	661.3	N.A.	2.9
BM - Back-Medium (30-60)	1295.6	N.A.	5.8
BH - Back-High (60-80)	323.2	N.A.	1.4
BVH - Back-Very High (80-90)	8.1	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	22470.7	N.A.	100.0
BUG Rating	B2-U0-G4		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0.0</b></u>	<u><b>5.0</b></u>	<u><b>15.0</b></u>	<u><b>25.0</b></u>	<u><b>35.0</b></u>	<u><b>45.0</b></u>	<u><b>55.0</b></u>	<u><b>57.5</b></u>	<u><b>65.0</b></u>	<u><b>75.0</b></u>
<b>0.0</b>	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424
<b>2.5</b>	2367.385	2331.864	2325.144	2328.984	2327.064	2328.024	2328.984	2303.064	2325.144	2320.344
<b>5.0</b>	2296.344	2265.624	2257.944	2269.464	2275.224	2290.584	2309.784	2289.624	2325.144	2329.944
<b>7.5</b>	2221.463	2197.463	2191.703	2207.063	2229.143	2254.103	2282.904	2269.464	2320.344	2352.024
<b>10.0</b>	2152.342	2129.302	2129.302	2152.342	2184.023	2231.063	2276.184	2265.624	2314.584	2351.064
<b>12.5</b>	2122.582	2106.262	2109.142	2133.142	2168.663	2214.743	2261.784	2256.983	2304.984	2342.424
<b>15.0</b>	2129.302	2116.822	2126.422	2156.182	2195.543	2233.943	2276.184	2273.304	2325.144	2364.505
<b>17.5</b>	2163.863	2152.342	2167.703	2208.023	2262.744	2304.984	2337.624	2331.864	2373.145	2396.185
<b>20.0</b>	2228.183	2211.863	2237.783	2304.024	2371.225	2427.865	2456.666	2447.065	2488.346	2493.146
<b>22.5</b>	2354.905	2332.824	2363.545	2463.386	2554.587	2657.308	2737.948	2740.829	2818.589	2808.989
<b>25.0</b>	2581.467	2568.027	2601.627	2752.349	2896.350	3042.272	3193.953	3214.113	3278.434	3132.513
<b>27.5</b>	2915.550	2902.110	2996.191	3181.473	3374.435	3576.997	3745.959	3800.680	3701.799	3418.596
<b>30.0</b>	3416.676	3398.435	3544.357	3737.319	3972.521	4225.004	4372.846	4360.365	4153.963	3750.759
<b>32.5</b>	4109.803	4082.922	4204.844	4422.766	4700.209	4975.732	5039.092	5006.452	4696.369	4158.763
<b>35.0</b>	4870.131	4859.571	4995.892	5211.894	5541.178	5869.501	5799.420	5745.660	5331.895	4636.848
<b>37.5</b>	5523.897	5524.858	5798.460	6049.983	6466.627	6797.831	6697.990	6560.708	6010.623	5106.293
<b>40.0</b>	6069.183	6079.743	6457.027	6934.152	7459.278	7792.401	7620.559	7422.797	6680.710	5509.497
<b>42.5</b>	6675.909	6750.790	7175.115	7849.042	8549.849	8834.012	8558.489	8290.646	7315.276	5879.101
<b>45.0</b>	7574.479	7696.400	8217.686	8968.413	9845.862	9936.103	9478.179	9122.975	7959.443	6235.265
<b>47.5</b>	8596.889	8643.930	9281.377	10176.106	11135.156	11090.035	10352.748	9915.943	8570.009	6627.909
<b>50.0</b>	9480.099	9529.059	10187.626	11235.957	12291.968	12171.007	11146.676	10669.551	9117.215	7085.834
<b>52.5</b>	10530.350	10645.551	11201.397	12232.447	13164.617	12994.695	11782.203	11275.317	9702.821	7652.240
<b>55.0</b>	11931.004	12062.526	12466.690	13314.379	14139.027	13383.499	12197.887	11700.602	10312.427	8368.407
<b>57.5</b>	13936.465	14053.586	14427.990	14905.115	15269.919	13919.185	12440.769	12046.205	10884.593	9332.257
<b>60.0</b>	15356.320	15556.962	16048.487	16997.937	16961.457	14949.276	12813.253	12511.810	11577.721	10743.472
<b>62.5</b>	13988.306	13901.905	15175.838	17040.177	18895.877	16619.693	14311.829	13902.865	12647.172	12195.007
<b>65.0</b>	6787.271	6528.068	9460.898	13928.785	18553.153	19737.805	16561.132	15988.966	14626.712	13440.140
<b>67.5</b>	2737.948	2676.508	3314.915	6810.311	14252.308	20578.774	20867.737	20207.250	16802.095	13883.665
<b>70.0</b>	1775.058	1776.978	2128.342	3150.753	6730.630	17450.102	24739.457	24191.292	18263.230	12096.126
<b>72.5</b>	1144.332	1155.852	1454.415	2265.624	3534.757	9938.983	22553.515	22652.396	15915.046	6407.107
<b>75.0</b>	764.168	779.528	1013.771	1694.418	2607.387	4625.328	14134.227	13988.306	8300.246	2018.901
<b>77.5</b>	479.045	508.805	674.887	1337.294	2032.341	2831.069	6038.463	5011.252	2688.988	1040.651
<b>80.0</b>	294.723	312.963	433.925	954.250	1440.975	1867.219	2119.702	1934.420	1433.295	601.926
<b>82.5</b>	193.922	206.402	312.003	761.288	991.690	985.930	959.050	932.170	747.848	363.844
<b>85.0</b>	133.441	141.121	233.282	612.486	682.567	454.085	275.523	293.763	336.003	218.882
<b>87.5</b>	82.561	91.201	169.922	400.324	210.242	118.081	99.841	104.641	108.481	117.121
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>85.0</b></u>	<u><b>90.0</b></u>	<u><b>95.0</b></u>	<u><b>105.0</b></u>	<u><b>115.0</b></u>	<u><b>125.0</b></u>	<u><b>135.0</b></u>	<u><b>145.0</b></u>	<u><b>155.0</b></u>	<u><b>165.0</b></u>
<b>0.0</b>	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424	2294.424
<b>2.5</b>	2312.664	2323.224	2318.424	2304.984	2292.504	2280.984	2263.704	2239.703	2219.543	2205.143
<b>5.0</b>	2324.184	2332.824	2319.384	2270.424	2209.943	2136.982	2048.661	1979.541	1920.020	1881.620
<b>7.5</b>	2359.705	2364.505	2339.544	2231.063	2081.302	1935.380	1801.939	1704.978	1631.057	1586.897
<b>10.0</b>	2373.145	2376.025	2337.624	2152.342	1924.820	1733.778	1615.697	1573.456	1542.736	1507.216
<b>12.5</b>	2380.825	2380.825	2322.264	2041.941	1760.658	1638.737	1584.976	1512.976	1440.975	1389.134
<b>15.0</b>	2406.745	2406.745	2323.224	1940.180	1681.938	1620.497	1528.336	1411.215	1307.534	1246.093
<b>17.5</b>	2424.025	2417.305	2303.064	1846.099	1679.057	1589.777	1428.495	1296.013	1222.093	1175.052
<b>20.0</b>	2488.346	2460.506	2306.904	1821.139	1711.698	1537.936	1349.774	1252.813	1191.372	1150.092
<b>22.5</b>	2706.268	2612.187	2380.825	1832.659	1722.258	1512.016	1358.414	1246.093	1171.212	1115.532
<b>25.0</b>	2892.510	2735.068	2416.345	1842.259	1696.338	1507.216	1403.535	1255.693	1147.212	1078.091
<b>27.5</b>	3039.392	2805.149	2403.865	1824.019	1663.697	1523.536	1420.815	1270.093	1106.892	993.610

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**CANDELA TABULATION - (Cont.)**

30.0	3208.353	2888.670	2400.985	1795.219	1656.977	1537.936	1421.775	1249.933	1013.771	857.289
32.5	3429.156	2992.351	2420.185	1742.418	1640.657	1536.016	1401.615	1152.972	908.169	816.008
35.0	3697.958	3130.593	2466.266	1687.698	1609.937	1493.776	1325.774	1031.051	912.009	971.530
37.5	3946.601	3264.034	2516.186	1643.537	1569.616	1434.255	1184.652	971.530	1086.731	1278.733
40.0	4173.163	3384.035	2553.627	1599.377	1514.896	1329.614	1067.531	958.090	1250.893	1273.933
42.5	4384.366	3501.156	2591.067	1550.416	1441.935	1191.372	985.930	943.690	1188.492	1011.851
45.0	4596.528	3632.678	2644.828	1501.456	1344.974	1045.451	890.889	840.969	1133.772	739.208
47.5	4859.571	3812.200	2737.948	1462.095	1182.732	859.209	744.968	727.688	1066.571	606.726
50.0	5186.934	4034.922	2872.350	1424.655	912.970	622.086	550.086	598.086	975.370	535.686
52.5	5608.378	4321.005	3029.792	1318.094	629.767	449.285	399.364	482.885	851.529	495.365
55.0	5992.382	4534.127	3176.673	1121.292	480.005	384.964	329.283	370.564	649.927	462.725
57.5	6180.544	4663.729	3278.434	1029.131	428.164	361.924	290.883	292.803	415.684	452.165
60.0	6786.311	5278.135	3296.674	957.130	393.604	330.243	253.443	240.002	272.643	355.204
62.5	8378.967	5785.020	2878.110	784.328	360.964	270.723	214.082	185.282	156.482	299.523
65.0	9942.823	5617.978	2153.302	588.486	293.763	216.962	194.882	121.921	105.601	241.923
67.5	10028.264	4504.367	1356.494	384.004	221.762	170.882	128.641	95.041	81.601	205.442
70.0	6530.948	2470.106	668.167	239.042	155.522	114.241	79.681	73.921	75.841	153.602
72.5	2331.864	979.210	319.683	175.682	112.321	70.081	52.801	54.721	56.641	112.321
75.0	912.970	444.485	225.602	138.241	81.601	47.040	43.200	39.360	36.480	84.481
77.5	514.565	273.603	168.962	99.841	50.881	38.400	27.840	30.720	15.360	46.080
80.0	307.203	185.282	126.721	65.281	32.640	24.000	15.360	10.560	5.760	18.240
82.5	202.562	124.801	87.361	39.360	19.200	12.480	9.600	5.760	1.920	0.000
85.0	124.801	74.881	53.761	21.120	9.600	8.640	6.720	3.840	0.960	0.000
87.5	63.361	35.520	26.880	9.600	9.600	9.600	8.640	4.800	1.920	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**

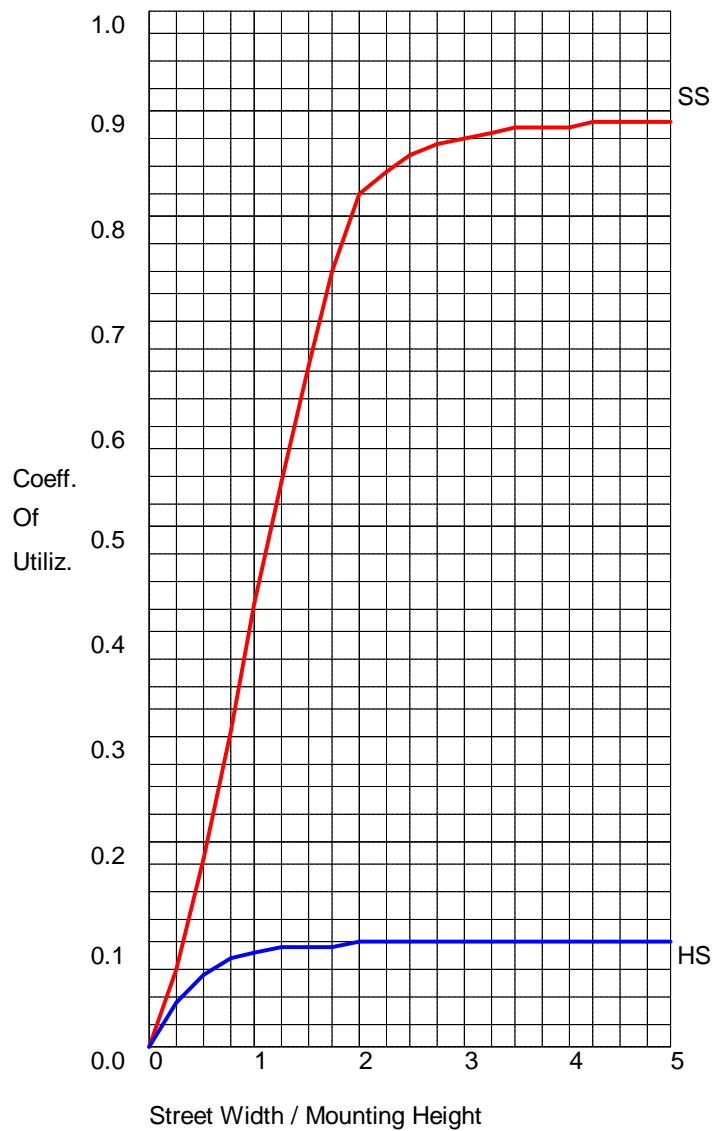
	<b>175.0</b>	<b>180.0</b>
0.0	2294.424	2294.424
2.5	2205.143	2196.503
5.0	1857.619	1865.299
7.5	1563.856	1563.856
10.0	1481.295	1478.415
12.5	1356.494	1343.054
15.0	1216.333	1205.773
17.5	1152.972	1148.172
20.0	1123.212	1117.452
22.5	1080.011	1075.211
25.0	1025.291	1017.611
27.5	919.690	907.209
30.0	792.968	780.488
32.5	776.648	768.968
35.0	958.090	925.450
37.5	1113.612	1056.011
40.0	856.329	789.128
42.5	566.406	513.605
45.0	447.365	414.724
47.5	389.764	365.764
50.0	351.364	328.323
52.5	314.883	290.883
55.0	321.603	292.803
57.5	336.964	291.843
60.0	283.203	219.842
62.5	270.723	209.282
65.0	250.563	203.522

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	243.843	211.202
<b>70.0</b>	200.642	181.442
<b>72.5</b>	158.402	146.882
<b>75.0</b>	120.001	111.361
<b>77.5</b>	60.481	54.721
<b>80.0</b>	23.040	23.040
<b>82.5</b>	0.960	3.840
<b>85.0</b>	0.000	0.000
<b>87.5</b>	0.000	0.000
<b>90.0</b>	0.000	0.000

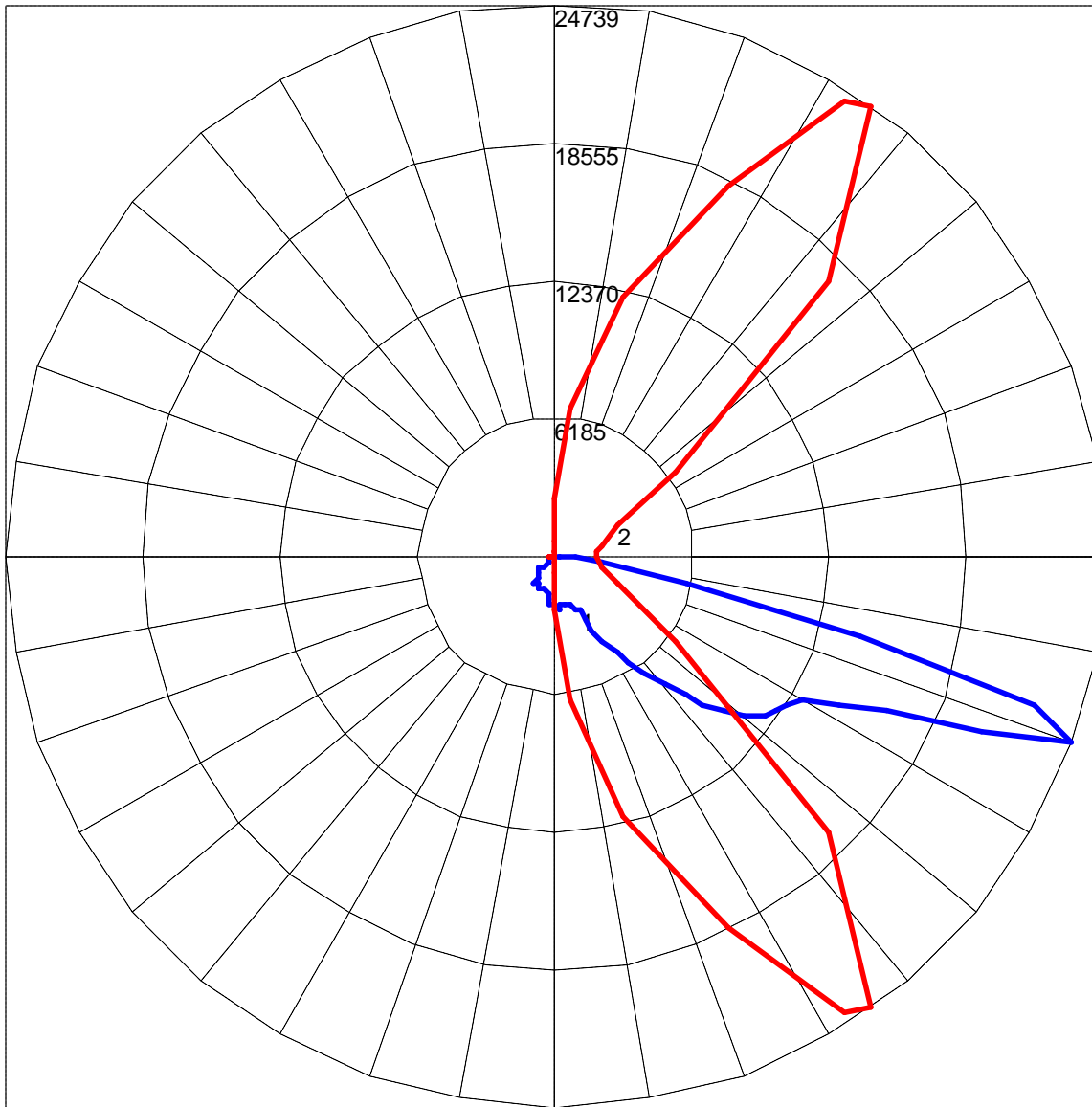
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

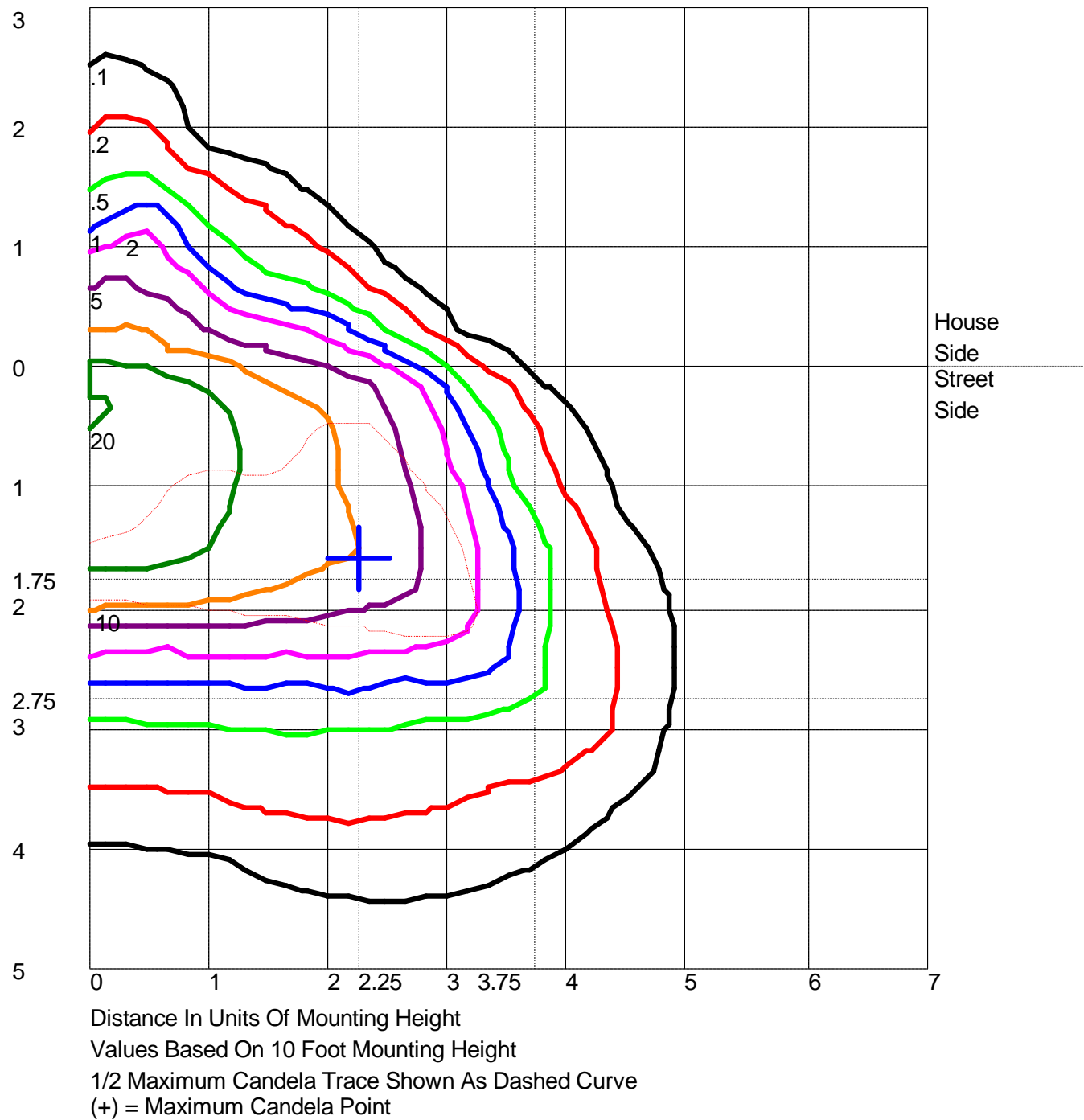
	Lumens	Percent Of Luminaire
Downward Street Side	20182.4	89.8
Downward House Side	2288.2	10.2
Downward Total	22470.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	22470.6	100.0

POLAR GRAPH



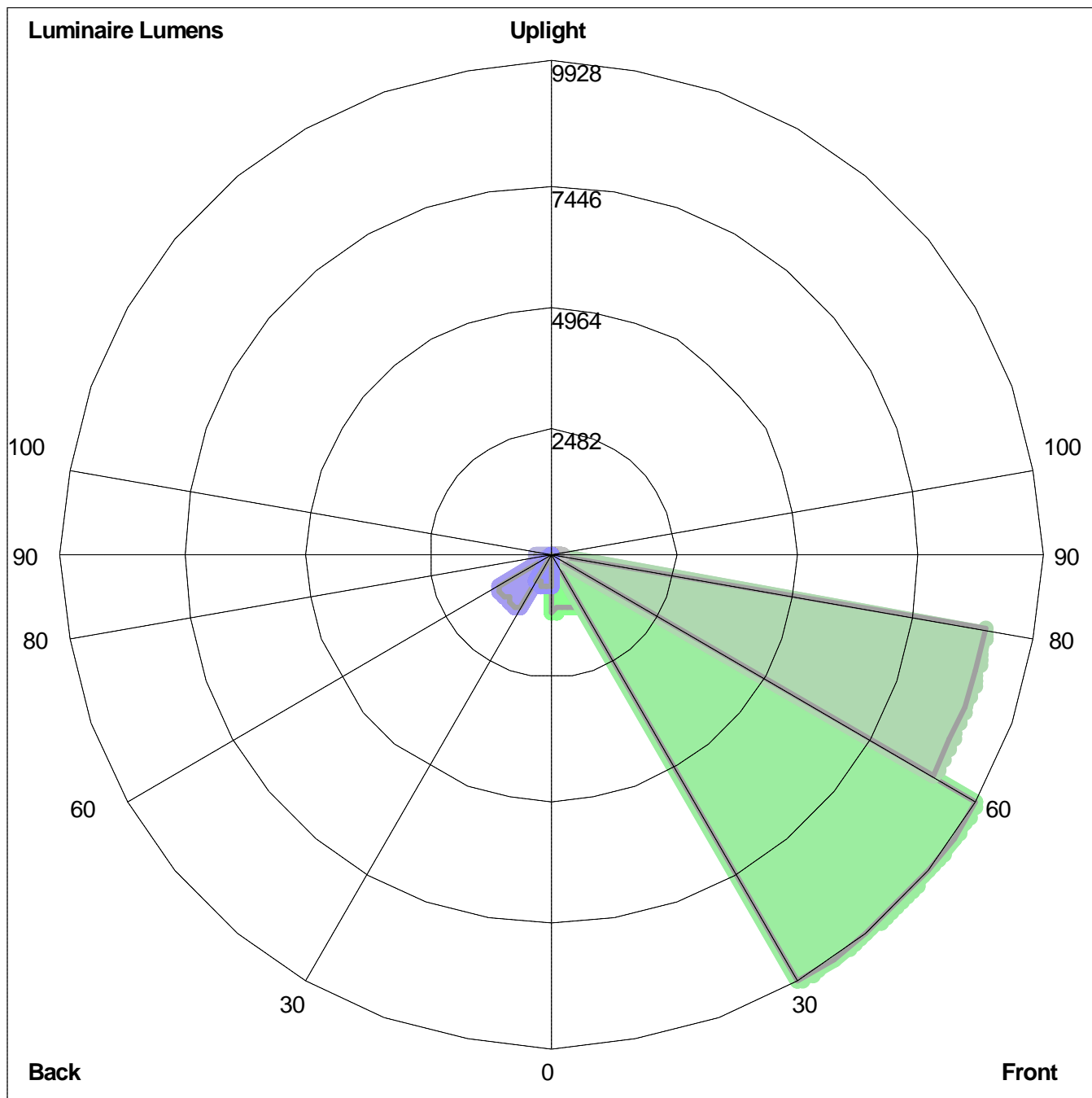
Maximum Candela = 24739.457 Located At Horizontal Angle = 55, Vertical Angle = 70  
# 1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1132.1, Medium=9927.9, High=8900.8, Very High=221.7  
Back: Low=661.3, Medium=1295.6, High=323.2, Very High=8.1  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G4