



## IES ROAD REPORT

PHOTOMETRIC FILENAME : XMR-3-LED-29-30-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  
[LUMEN CATEGORY]XMR-3-LED-29-30-IL  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[SEARCH SOURCE TYPE] 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	20130
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	83
Total Luminaire Watts	241.3
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	22162.2
Maximum Candela Angle	55H 70V
Maximum Candela (<90 Degrees Vertical)	22162.2
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	1898.88 (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)	1014.1	N.A.	5.0
FM - Front-Medium (30-60)	8893.6	N.A.	44.2
FH - Front-High (60-80)	7973.5	N.A.	39.6
FVH - Front-Very High (80-90)	198.6	N.A.	1.0
BL - Back-Low (0-30)	592.4	N.A.	2.9
BM - Back-Medium (30-60)	1160.6	N.A.	5.8
BH - Back-High (60-80)	289.6	N.A.	1.4
BVH - Back-Very High (80-90)	7.3	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	20129.7	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>	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40
<b>2.5</b>	2120.76	2088.94	2082.92	2086.36	2084.64	2085.50	2086.36	2063.14	2082.92	2078.62
<b>5.0</b>	2057.12	2029.60	2022.72	2033.04	2038.20	2051.96	2069.16	2051.10	2082.92	2087.22
<b>7.5</b>	1990.04	1968.54	1963.38	1977.14	1996.92	2019.28	2045.08	2033.04	2078.62	2107.00
<b>10.0</b>	1928.12	1907.48	1907.48	1928.12	1956.50	1998.64	2039.06	2029.60	2073.46	2106.14
<b>12.5</b>	1901.46	1886.84	1889.42	1910.92	1942.74	1984.02	2026.16	2021.86	2064.86	2098.40
<b>15.0</b>	1907.48	1896.30	1904.90	1931.56	1966.82	2001.22	2039.06	2036.48	2082.92	2118.18
<b>17.5</b>	1938.44	1928.12	1941.88	1978.00	2027.02	2064.86	2094.10	2088.94	2125.92	2146.56
<b>20.0</b>	1996.06	1981.44	2004.66	2064.00	2124.20	2174.94	2200.74	2192.14	2229.12	2233.42
<b>22.5</b>	2109.58	2089.80	2117.32	2206.76	2288.46	2380.48	2452.72	2455.30	2524.96	2516.36
<b>25.0</b>	2312.54	2300.50	2330.60	2465.62	2594.62	2725.34	2861.22	2879.28	2936.90	2806.18
<b>27.5</b>	2611.82	2599.78	2684.06	2850.04	3022.90	3204.36	3355.72	3404.74	3316.16	3062.46
<b>30.0</b>	3060.74	3044.40	3175.12	3347.98	3558.68	3784.86	3917.30	3906.12	3721.22	3360.02
<b>32.5</b>	3681.66	3657.58	3766.80	3962.02	4210.56	4457.38	4514.14	4484.90	4207.12	3725.52
<b>35.0</b>	4362.78	4353.32	4475.44	4668.94	4963.92	5258.04	5195.26	5147.10	4776.44	4153.80
<b>37.5</b>	4948.44	4949.30	5194.40	5419.72	5792.96	6089.66	6000.22	5877.24	5384.46	4574.34
<b>40.0</b>	5436.92	5446.38	5784.36	6211.78	6682.20	6980.62	6826.68	6649.52	5984.74	4935.54
<b>42.5</b>	5980.44	6047.52	6427.64	7031.36	7659.16	7913.72	7666.90	7426.96	6553.20	5266.64
<b>45.0</b>	6785.40	6894.62	7361.60	8034.12	8820.16	8901.00	8490.78	8172.58	7130.26	5585.70
<b>47.5</b>	7701.30	7743.44	8314.48	9116.00	9975.14	9934.72	9274.24	8882.94	7677.22	5937.44
<b>50.0</b>	8492.50	8536.36	9126.32	10065.44	11011.44	10903.08	9985.46	9558.04	8167.42	6347.66
<b>52.5</b>	9433.34	9536.54	10034.48	10958.12	11793.18	11640.96	10554.78	10100.70	8692.02	6855.06
<b>55.0</b>	10688.08	10805.90	11167.96	11927.34	12666.08	11989.26	10927.16	10481.68	9238.12	7496.62
<b>57.5</b>	12484.62	12589.54	12924.94	13352.36	13679.16	12469.14	11144.74	10791.28	9750.68	8360.06
<b>60.0</b>	13756.56	13936.30	14376.62	15227.16	15194.48	13391.92	11478.42	11208.38	10371.60	9624.26
<b>62.5</b>	12531.06	12453.66	13594.88	15265.00	16927.38	14888.32	12820.88	12454.52	11329.64	10924.58
<b>65.0</b>	6080.20	5848.00	8475.30	12477.74	16620.36	17681.60	14835.86	14323.30	13102.96	12040.00
<b>67.5</b>	2452.72	2397.68	2969.58	6100.84	12767.56	18434.96	18693.82	18102.14	15051.72	12437.32
<b>70.0</b>	1590.14	1591.86	1906.62	2822.52	6029.46	15632.22	22162.20	21671.14	16360.64	10836.00
<b>72.5</b>	1025.12	1035.44	1302.90	2029.60	3166.52	8903.58	20203.98	20292.56	14257.08	5739.64
<b>75.0</b>	684.56	698.32	908.16	1517.90	2335.76	4143.48	12661.78	12531.06	7435.56	1808.58
<b>77.5</b>	429.14	455.80	604.58	1197.98	1820.62	2536.14	5409.40	4489.20	2408.86	932.24
<b>80.0</b>	264.02	280.36	388.72	854.84	1290.86	1672.70	1898.88	1732.90	1283.98	539.22
<b>82.5</b>	173.72	184.90	279.50	681.98	888.38	883.22	859.14	835.06	669.94	325.94
<b>85.0</b>	119.54	126.42	208.98	548.68	611.46	406.78	246.82	263.16	301.00	196.08
<b>87.5</b>	73.96	81.70	152.22	358.62	188.34	105.78	89.44	93.74	97.18	104.92
<b>90.0</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<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>	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40	2055.40
<b>2.5</b>	2071.74	2081.20	2076.90	2064.86	2053.68	2043.36	2027.88	2006.38	1988.32	1975.42
<b>5.0</b>	2082.06	2089.80	2077.76	2033.90	1979.72	1914.36	1835.24	1773.32	1720.00	1685.60
<b>7.5</b>	2113.88	2118.18	2095.82	1998.64	1864.48	1733.76	1614.22	1527.36	1461.14	1421.58
<b>10.0</b>	2125.92	2128.50	2094.10	1928.12	1724.30	1553.16	1447.38	1409.54	1382.02	1350.20
<b>12.5</b>	2132.80	2132.80	2080.34	1829.22	1577.24	1468.02	1419.86	1355.36	1290.86	1244.42
<b>15.0</b>	2156.02	2156.02	2081.20	1738.06	1506.72	1451.68	1369.12	1264.20	1171.32	1116.28
<b>17.5</b>	2171.50	2165.48	2063.14	1653.78	1504.14	1424.16	1279.68	1161.00	1094.78	1052.64
<b>20.0</b>	2229.12	2204.18	2066.58	1631.42	1533.38	1377.72	1209.16	1122.30	1067.26	1030.28
<b>22.5</b>	2424.34	2340.06	2132.80	1641.74	1542.84	1354.50	1216.90	1116.28	1049.20	999.32
<b>25.0</b>	2591.18	2450.14	2164.62	1650.34	1519.62	1350.20	1257.32	1124.88	1027.70	965.78
<b>27.5</b>	2722.76	2512.92	2153.44	1634.00	1490.38	1364.82	1272.80	1137.78	991.58	890.10

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**CANDELA TABULATION - (Cont.)**

30.0	2874.12	2587.74	2150.86	1608.20	1484.36	1377.72	1273.66	1119.72	908.16	767.98
32.5	3071.92	2680.62	2168.06	1560.90	1469.74	1376.00	1255.60	1032.86	813.56	731.00
35.0	3312.72	2804.46	2209.34	1511.88	1442.22	1338.16	1187.66	923.64	817.00	870.32
37.5	3535.46	2924.00	2254.06	1472.32	1406.10	1284.84	1061.24	870.32	973.52	1145.52
40.0	3738.42	3031.50	2287.60	1432.76	1357.08	1191.10	956.32	858.28	1120.58	1141.22
42.5	3927.62	3136.42	2321.14	1388.90	1291.72	1067.26	883.22	845.38	1064.68	906.44
45.0	4117.68	3254.24	2369.30	1345.04	1204.86	936.54	798.08	753.36	1015.66	662.20
47.5	4353.32	3415.06	2452.72	1309.78	1059.52	769.70	667.36	651.88	955.46	543.52
50.0	4646.58	3614.58	2573.12	1276.24	817.86	557.28	492.78	535.78	873.76	479.88
52.5	5024.12	3870.86	2714.16	1180.78	564.16	402.48	357.76	432.58	762.82	443.76
55.0	5368.12	4061.78	2845.74	1004.48	430.00	344.86	294.98	331.96	582.22	414.52
57.5	5536.68	4177.88	2936.90	921.92	383.56	324.22	260.58	262.30	372.38	405.06
60.0	6079.34	4728.28	2953.24	857.42	352.60	295.84	227.04	215.00	244.24	318.20
62.5	7506.08	5182.36	2578.28	702.62	323.36	242.52	191.78	165.98	140.18	268.32
65.0	8907.02	5032.72	1928.98	527.18	263.16	194.36	174.58	109.22	94.60	216.72
67.5	8983.56	4035.12	1215.18	344.00	198.66	153.08	115.24	85.14	73.10	184.04
70.0	5850.58	2212.78	598.56	214.14	139.32	102.34	71.38	66.22	67.94	137.60
72.5	2088.94	877.20	286.38	157.38	100.62	62.78	47.30	49.02	50.74	100.62
75.0	817.86	398.18	202.10	123.84	73.10	42.14	38.70	35.26	32.68	75.68
77.5	460.96	245.10	151.36	89.44	45.58	34.40	24.94	27.52	13.76	41.28
80.0	275.20	165.98	113.52	58.48	29.24	21.50	13.76	9.46	5.16	16.34
82.5	181.46	111.80	78.26	35.26	17.20	11.18	8.60	5.16	1.72	0.00
85.0	111.80	67.08	48.16	18.92	8.60	7.74	6.02	3.44	0.86	0.00
87.5	56.76	31.82	24.08	8.60	8.60	8.60	7.74	4.30	1.72	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert. Horizontal Angles**  
**Angles**

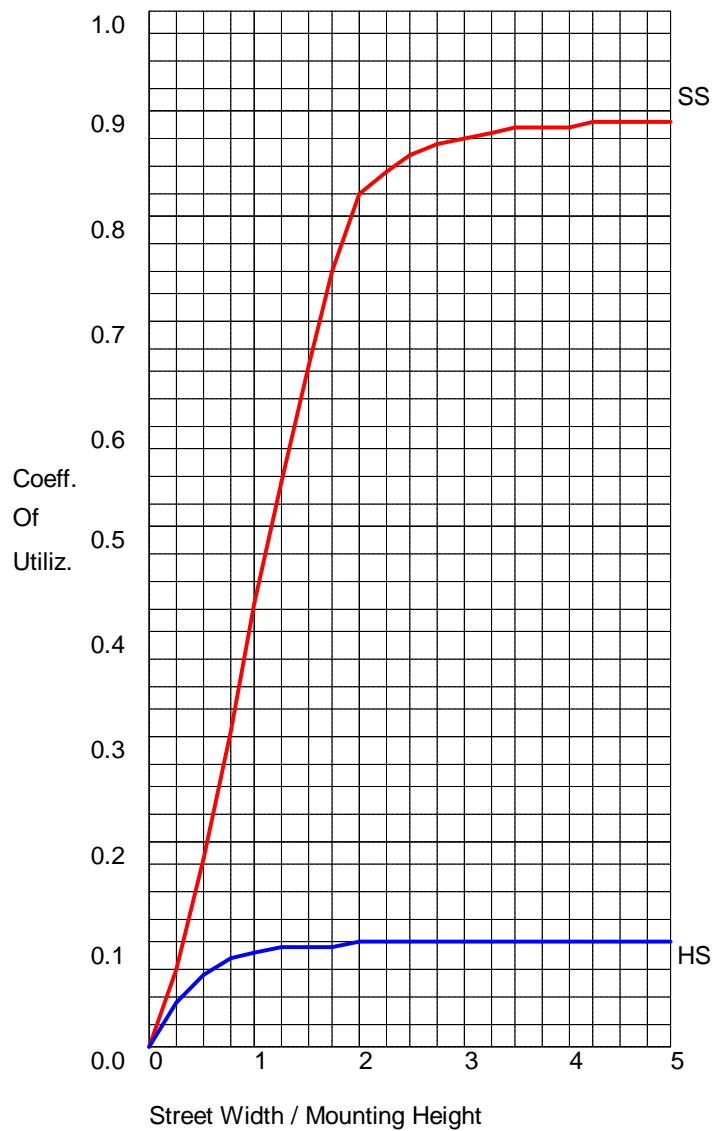
	<b>175.0</b>	<b>180.0</b>
0.0	2055.40	2055.40
2.5	1975.42	1967.68
5.0	1664.10	1670.98
7.5	1400.94	1400.94
10.0	1326.98	1324.40
12.5	1215.18	1203.14
15.0	1089.62	1080.16
17.5	1032.86	1028.56
20.0	1006.20	1001.04
22.5	967.50	963.20
25.0	918.48	911.60
27.5	823.88	812.70
30.0	710.36	699.18
32.5	695.74	688.86
35.0	858.28	829.04
37.5	997.60	946.00
40.0	767.12	706.92
42.5	507.40	460.10
45.0	400.76	371.52
47.5	349.16	327.66
50.0	314.76	294.12
52.5	282.08	260.58
55.0	288.10	262.30
57.5	301.86	261.44
60.0	253.70	196.94
62.5	242.52	187.48
65.0	224.46	182.32

**IES ROAD REPORT**  
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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	218.44	189.20
<b>70.0</b>	179.74	162.54
<b>72.5</b>	141.90	131.58
<b>75.0</b>	107.50	99.76
<b>77.5</b>	54.18	49.02
<b>80.0</b>	20.64	20.64
<b>82.5</b>	0.86	3.44
<b>85.0</b>	0.00	0.00
<b>87.5</b>	0.00	0.00
<b>90.0</b>	0.00	0.00

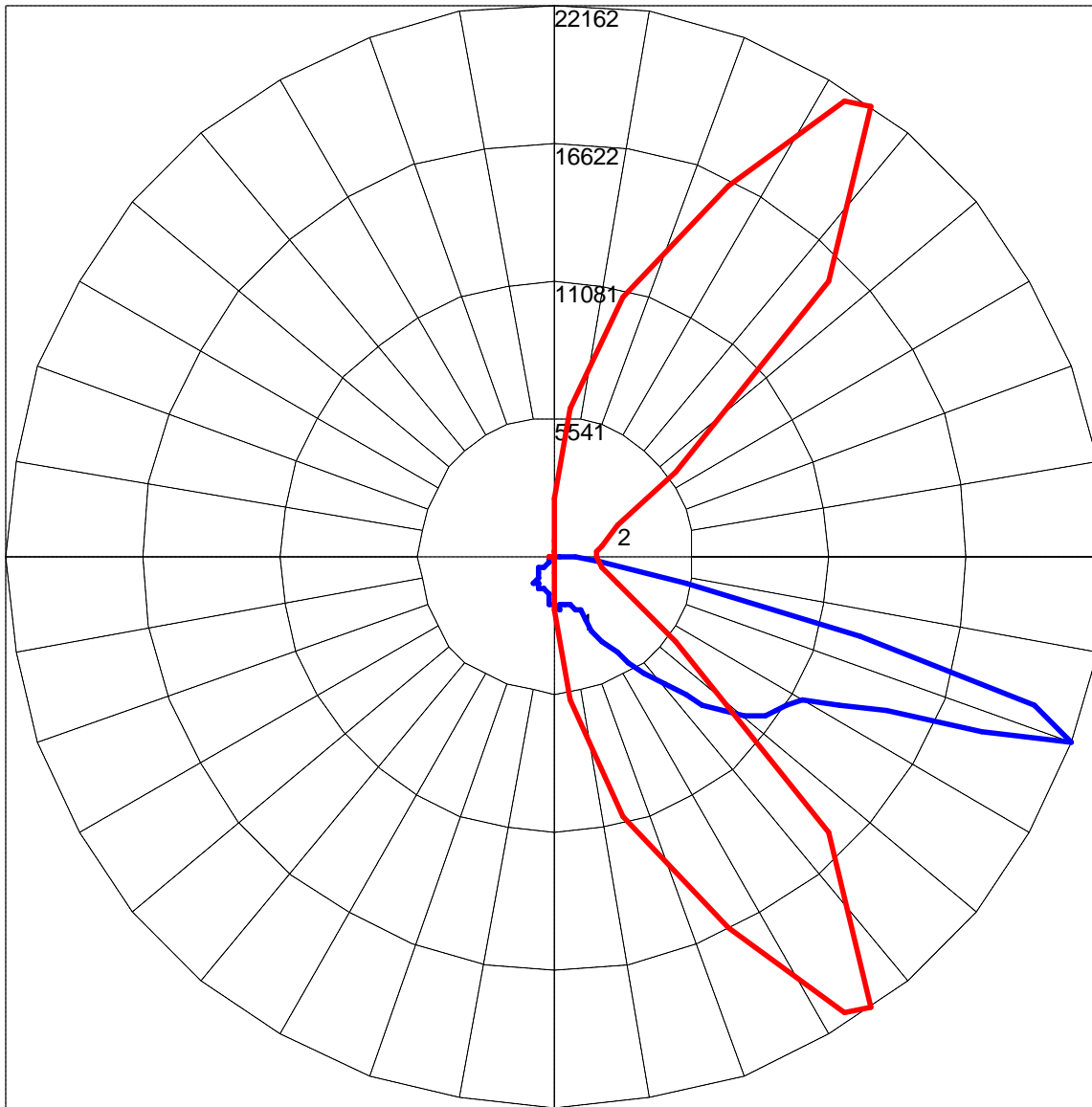
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

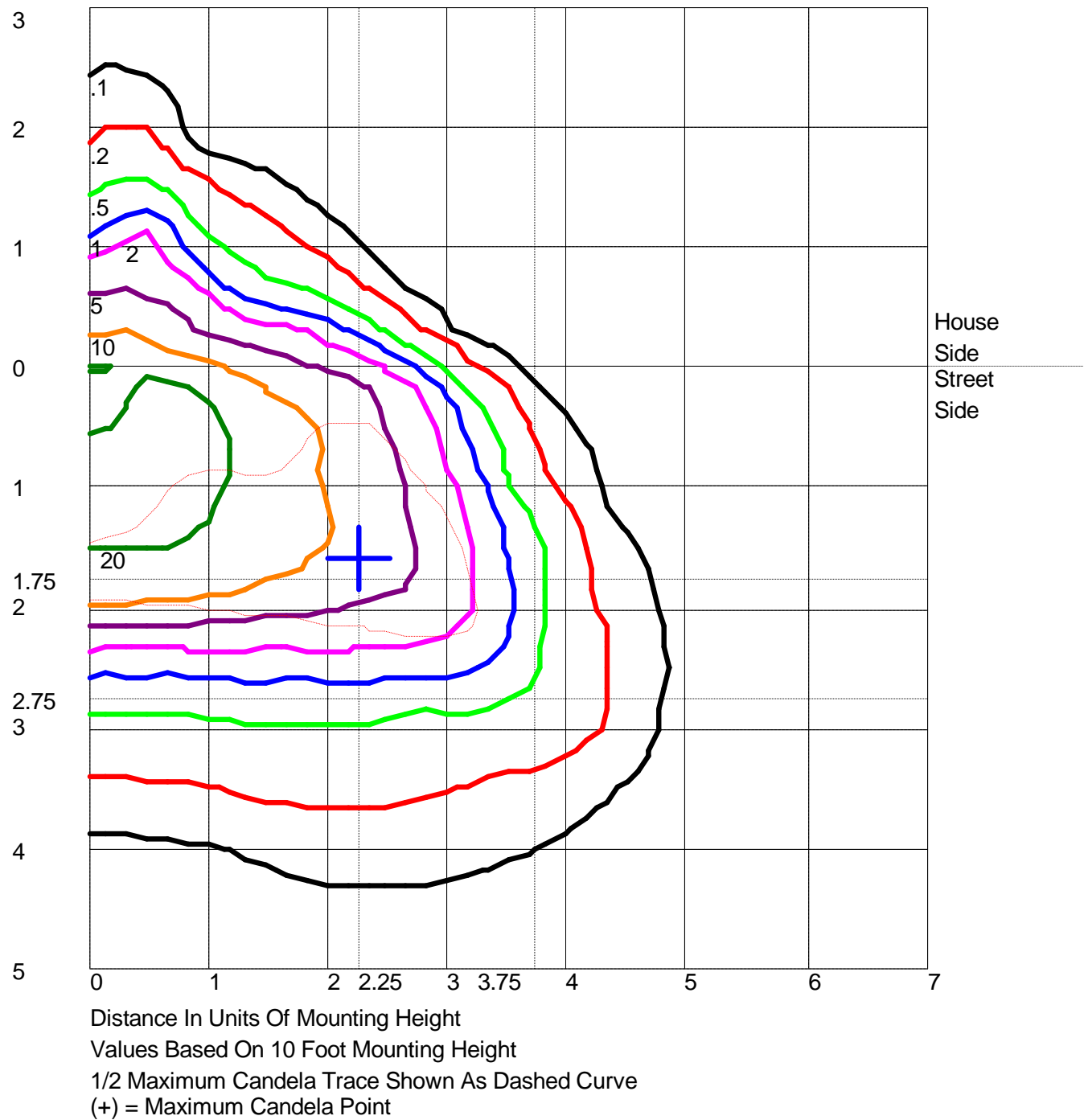
	Lumens	Percent Of Luminaire
Downward Street Side	18079.8	89.8
Downward House Side	2049.8	10.2
Downward Total	20129.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	20129.6	100.0

POLAR GRAPH



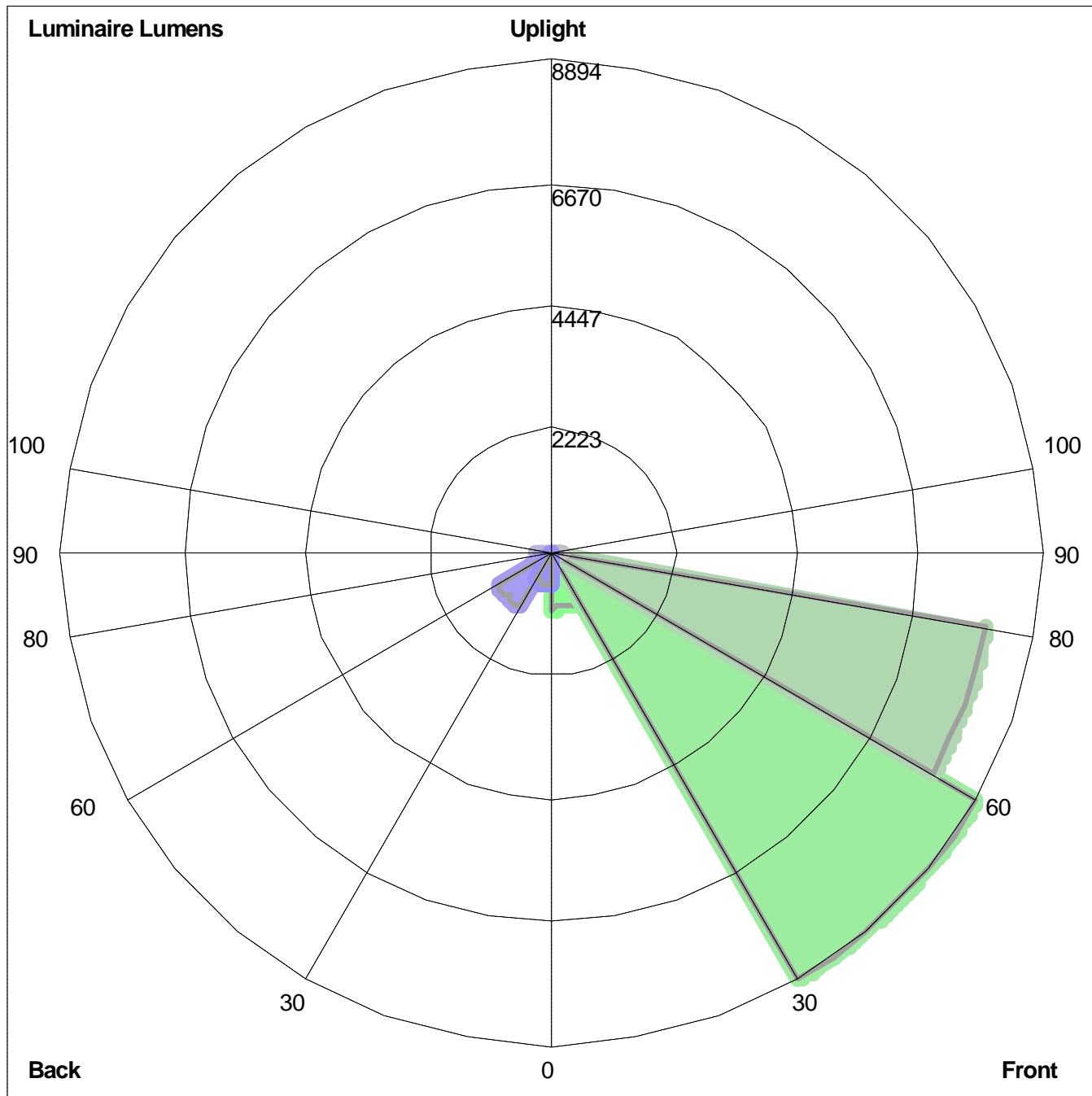
Maximum Candela = 22162.2 Located At Horizontal Angle = 55, Vertical Angle = 70  
# 1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (70) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1014.1, Medium=8893.6, High=7973.5, Very High=198.6  
Back: Low=592.4, Medium=1160.6, High=289.6, Very High=7.3  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G4