



IES ROAD REPORT

PHOTOMETRIC FILENAME : XMR-2-LED-18-50.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-8225_SCALED
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]11/21/2016
[TEST DATE]10/17/16
[MANUFACTURER]LSI INDUSTRIES, INC
[LUMCAT]XMR-2-LED-18-50
[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 II |
| Longitudinal Classification | Medium |
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 19865 |
| Downward Total Efficiency | N.A. (absolute) |
| Total Luminaire Efficiency | N.A. (absolute) |
| Luminaire Efficacy Rating (LER) | 129 |
| Total Luminaire Watts | 154 |
| Ballast Factor | 1.00 |
| Upward Waste Light Ratio | 0.00 |
| Maximum Candela | 15272.58 |
| Maximum Candela Angle | 82.5H 67.5V |
| Maximum Candela (<90 Degrees Vertical) | 15272.58 |
| Maximum Candela Angle (<90 Degrees Vertical) | 82.5H 67.5V |
| Maximum Candela At 90 Degrees Vertical | 0 (0.0% Luminaire Lumens) |
| Maximum Candela from 80 to <90 Degrees Vertical | 995.79 (5.0% Luminaire Lumens) |
| Cutoff Classification (deprecated) | N.A. (absolute) |

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

| | Lumens | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30) | 1395.7 | N.A. | 7.0 |
| FM - Front-Medium (30-60) | 6915.7 | N.A. | 34.8 |
| FH - Front-High (60-80) | 4447.4 | N.A. | 22.4 |
| FVH - Front-Very High (80-90) | 90.6 | N.A. | 0.5 |
| BL - Back-Low (0-30) | 1138.5 | N.A. | 5.7 |
| BM - Back-Medium (30-60) | 4132.8 | N.A. | 20.8 |
| BH - Back-High (60-80) | 1666.8 | N.A. | 8.4 |
| BVH - Back-Very High (80-90) | 77.2 | 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 | 19864.7 | N.A. | 100.0 |
| BUG Rating | B3-U0-G3 | | |

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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>65.0</u> | <u>75.0</u> | <u>82.5</u> |
| 0.0 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 |
| 2.5 | 2833.47 | 2832.90 | 2824.92 | 2831.76 | 2827.77 | 2820.36 | 2812.95 | 2816.94 | 2806.68 | 2796.99 |
| 5.0 | 2868.81 | 2867.67 | 2861.97 | 2867.67 | 2864.25 | 2855.13 | 2848.29 | 2850.00 | 2836.32 | 2823.21 |
| 7.5 | 2905.86 | 2905.29 | 2901.30 | 2909.85 | 2905.86 | 2896.17 | 2894.46 | 2893.89 | 2880.78 | 2863.11 |
| 10.0 | 2957.16 | 2956.02 | 2956.02 | 2964.00 | 2962.29 | 2954.88 | 2955.45 | 2955.45 | 2942.91 | 2922.39 |
| 12.5 | 3005.04 | 3006.75 | 3010.17 | 3026.13 | 3033.54 | 3032.97 | 3039.81 | 3048.36 | 3024.99 | 3001.05 |
| 15.0 | 3034.11 | 3036.39 | 3044.94 | 3080.85 | 3108.78 | 3127.59 | 3146.40 | 3163.50 | 3136.14 | 3112.20 |
| 17.5 | 3045.51 | 3050.64 | 3067.74 | 3121.89 | 3174.33 | 3226.77 | 3274.65 | 3302.01 | 3271.23 | 3245.01 |
| 20.0 | 3062.61 | 3067.17 | 3095.10 | 3162.36 | 3238.17 | 3320.25 | 3409.74 | 3459.90 | 3427.98 | 3392.64 |
| 22.5 | 3085.98 | 3092.25 | 3127.59 | 3210.81 | 3302.58 | 3405.18 | 3545.40 | 3637.17 | 3610.95 | 3569.34 |
| 25.0 | 3119.61 | 3125.88 | 3166.92 | 3260.40 | 3366.42 | 3487.26 | 3663.39 | 3826.41 | 3820.71 | 3777.96 |
| 27.5 | 3173.76 | 3180.60 | 3224.49 | 3326.52 | 3442.80 | 3574.47 | 3776.25 | 4027.05 | 4081.20 | 4026.48 |
| 30.0 | 3266.10 | 3269.52 | 3313.98 | 3416.58 | 3539.70 | 3686.19 | 3895.38 | 4227.69 | 4356.51 | 4309.20 |
| 32.5 | 3422.28 | 3430.26 | 3454.77 | 3544.83 | 3673.08 | 3824.70 | 4029.90 | 4426.05 | 4647.78 | 4617.57 |
| 35.0 | 3650.85 | 3656.55 | 3661.11 | 3738.06 | 3838.38 | 3991.14 | 4202.61 | 4620.42 | 4945.89 | 4947.60 |
| 37.5 | 3969.48 | 3972.90 | 3972.90 | 3997.41 | 4060.11 | 4204.32 | 4410.09 | 4809.66 | 5265.09 | 5301.00 |
| 40.0 | 4434.03 | 4433.46 | 4426.62 | 4366.77 | 4366.77 | 4489.89 | 4663.17 | 5008.59 | 5572.32 | 5678.34 |
| 42.5 | 5052.48 | 5080.98 | 5023.98 | 4937.91 | 4810.80 | 4872.93 | 4979.52 | 5244.57 | 5868.72 | 6068.79 |
| 45.0 | 5723.94 | 5751.30 | 5695.44 | 5615.64 | 5453.19 | 5418.99 | 5384.79 | 5482.26 | 6158.28 | 6499.14 |
| 47.5 | 6253.47 | 6272.85 | 6238.65 | 6228.96 | 6229.53 | 6192.48 | 5958.21 | 5785.50 | 6466.65 | 6979.08 |
| 50.0 | 6568.11 | 6562.98 | 6562.98 | 6650.76 | 6847.98 | 7155.21 | 6832.59 | 6210.15 | 6825.75 | 7492.08 |
| 52.5 | 6475.20 | 6497.43 | 6558.42 | 6776.16 | 7242.42 | 7913.88 | 7948.65 | 6812.64 | 7248.12 | 8063.79 |
| 55.0 | 6037.44 | 6077.34 | 6197.04 | 6520.80 | 7256.67 | 8492.43 | 9341.73 | 7677.33 | 7708.68 | 8925.63 |
| 57.5 | 5300.43 | 5316.39 | 5501.07 | 5812.86 | 6757.35 | 8443.41 | 10579.20 | 9094.35 | 8441.70 | 9950.49 |
| 60.0 | 4255.62 | 4259.61 | 4309.20 | 4628.97 | 5668.08 | 7661.94 | 11360.10 | 10839.69 | 9259.08 | 11138.94 |
| 62.5 | 2930.37 | 2918.40 | 2790.15 | 3073.44 | 3999.69 | 6099.57 | 11549.91 | 12656.28 | 10544.43 | 12543.42 |
| 65.0 | 1809.75 | 1761.87 | 1682.64 | 1704.30 | 2313.06 | 3773.40 | 10662.99 | 13721.04 | 11943.21 | 14241.45 |
| 67.5 | 1121.19 | 1101.24 | 1082.43 | 1052.79 | 1284.78 | 1898.67 | 7964.61 | 13652.07 | 13388.73 | 15272.58 |
| 70.0 | 711.36 | 706.23 | 719.91 | 723.33 | 852.72 | 1090.41 | 4143.90 | 11685.00 | 13629.84 | 14374.26 |
| 72.5 | 441.75 | 461.70 | 475.38 | 526.68 | 616.74 | 742.14 | 1864.47 | 7638.00 | 10845.96 | 9210.63 |
| 75.0 | 316.35 | 330.03 | 324.90 | 377.91 | 449.16 | 562.02 | 1013.46 | 3748.89 | 5804.31 | 3280.92 |
| 77.5 | 241.11 | 251.94 | 248.52 | 280.44 | 323.19 | 417.24 | 652.65 | 1804.05 | 2303.37 | 996.36 |
| 80.0 | 203.49 | 213.18 | 196.65 | 211.47 | 237.69 | 308.37 | 399.00 | 920.55 | 995.79 | 532.95 |
| 82.5 | 181.83 | 177.27 | 147.63 | 152.76 | 166.44 | 226.86 | 251.94 | 455.43 | 486.78 | 277.59 |
| 85.0 | 127.68 | 123.69 | 100.32 | 99.18 | 104.88 | 146.49 | 151.62 | 182.40 | 246.24 | 137.94 |
| 87.5 | 60.42 | 60.99 | 53.01 | 51.30 | 49.59 | 64.41 | 63.84 | 60.99 | 62.70 | 51.87 |
| 90.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| 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 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 | 2794.14 |
| 2.5 | 2794.71 | 2786.16 | 2795.28 | 2786.16 | 2790.72 | 2791.29 | 2787.30 | 2783.88 | 2777.04 | 2770.20 |
| 5.0 | 2819.79 | 2806.11 | 2812.95 | 2794.71 | 2783.31 | 2767.92 | 2747.40 | 2729.73 | 2709.78 | 2686.41 |
| 7.5 | 2858.55 | 2839.74 | 2843.16 | 2811.81 | 2777.61 | 2734.86 | 2682.99 | 2630.55 | 2584.95 | 2547.33 |
| 10.0 | 2917.83 | 2898.45 | 2891.61 | 2840.88 | 2774.19 | 2688.12 | 2592.93 | 2500.02 | 2437.89 | 2388.87 |
| 12.5 | 2995.35 | 2970.84 | 2956.59 | 2881.92 | 2769.06 | 2628.27 | 2486.91 | 2375.19 | 2310.78 | 2277.15 |
| 15.0 | 3099.09 | 3068.31 | 3051.21 | 2936.07 | 2764.50 | 2560.44 | 2387.73 | 2289.69 | 2257.20 | 2249.22 |
| 17.5 | 3222.21 | 3183.45 | 3156.09 | 2999.34 | 2757.66 | 2490.90 | 2315.34 | 2265.18 | 2278.29 | 2301.66 |
| 20.0 | 3365.28 | 3323.10 | 3276.93 | 3067.17 | 2740.56 | 2422.50 | 2286.27 | 2298.24 | 2351.82 | 2397.42 |
| 22.5 | 3536.28 | 3487.26 | 3425.13 | 3152.67 | 2717.76 | 2370.63 | 2307.36 | 2370.06 | 2456.70 | 2523.39 |
| 25.0 | 3746.61 | 3682.77 | 3602.97 | 3249.57 | 2690.97 | 2358.66 | 2368.92 | 2474.37 | 2594.64 | 2689.26 |
| 27.5 | 3989.43 | 3918.75 | 3816.15 | 3364.14 | 2675.01 | 2399.13 | 2465.82 | 2615.73 | 2783.88 | 2920.11 |

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

| | | | | | | | | | | |
|------|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| 30.0 | 4285.83 | 4195.77 | 4069.23 | 3484.41 | 2680.71 | 2480.07 | 2609.46 | 2810.67 | 3039.24 | 3212.52 |
| 32.5 | 4595.91 | 4497.87 | 4345.68 | 3613.23 | 2720.61 | 2608.89 | 2796.42 | 3058.62 | 3327.09 | 3531.15 |
| 35.0 | 4931.07 | 4823.91 | 4635.24 | 3727.23 | 2808.39 | 2786.73 | 3024.42 | 3313.98 | 3597.27 | 3805.89 |
| 37.5 | 5289.60 | 5171.61 | 4953.30 | 3836.10 | 2949.18 | 2994.78 | 3244.44 | 3548.82 | 3847.50 | 4045.29 |
| 40.0 | 5671.50 | 5564.91 | 5278.77 | 3944.40 | 3127.59 | 3199.41 | 3425.70 | 3735.21 | 4032.75 | 4224.27 |
| 42.5 | 6069.36 | 5961.06 | 5620.77 | 4051.56 | 3315.69 | 3367.56 | 3559.08 | 3844.65 | 4107.42 | 4234.53 |
| 45.0 | 6494.01 | 6377.16 | 5985.00 | 4148.46 | 3470.16 | 3479.28 | 3622.92 | 3810.45 | 3925.59 | 3935.85 |
| 47.5 | 6967.68 | 6863.94 | 6353.79 | 4227.12 | 3568.20 | 3514.05 | 3548.25 | 3543.69 | 3517.47 | 3471.87 |
| 50.0 | 7498.35 | 7378.08 | 6743.67 | 4282.98 | 3594.42 | 3434.25 | 3293.46 | 3142.98 | 3030.12 | 2949.75 |
| 52.5 | 8112.24 | 7921.86 | 7147.23 | 4315.47 | 3557.37 | 3201.69 | 2952.03 | 2713.20 | 2545.62 | 2463.54 |
| 55.0 | 8974.08 | 8618.97 | 7558.20 | 4349.67 | 3474.15 | 2925.24 | 2560.44 | 2306.22 | 2148.33 | 2063.97 |
| 57.5 | 10016.61 | 9537.24 | 7963.47 | 4397.55 | 3369.84 | 2640.81 | 2230.41 | 2010.96 | 1838.25 | 1804.05 |
| 60.0 | 11189.10 | 10473.75 | 8356.77 | 4468.80 | 3284.34 | 2385.45 | 1987.02 | 1837.11 | 1623.93 | 1586.88 |
| 62.5 | 12546.84 | 11379.48 | 8797.38 | 4493.31 | 3202.83 | 2180.82 | 1808.61 | 1708.29 | 1377.69 | 1313.85 |
| 65.0 | 13933.65 | 12099.39 | 8727.84 | 4333.14 | 3021.57 | 1965.36 | 1625.64 | 1485.99 | 1100.67 | 999.78 |
| 67.5 | 14610.81 | 11783.04 | 7534.83 | 3712.41 | 2583.81 | 1603.98 | 1316.13 | 1173.63 | 799.14 | 697.11 |
| 70.0 | 13155.60 | 9284.73 | 4898.01 | 2461.26 | 1861.62 | 1165.08 | 970.71 | 836.76 | 579.69 | 523.83 |
| 72.5 | 7905.90 | 5010.30 | 2375.19 | 1371.99 | 1127.46 | 762.09 | 694.26 | 590.52 | 418.95 | 367.65 |
| 75.0 | 2527.95 | 1751.61 | 1130.88 | 735.30 | 667.47 | 550.05 | 490.20 | 404.13 | 298.68 | 267.33 |
| 77.5 | 831.06 | 648.09 | 580.83 | 473.10 | 452.01 | 428.64 | 335.73 | 283.29 | 233.70 | 206.34 |
| 80.0 | 435.48 | 354.54 | 324.33 | 352.83 | 352.83 | 294.12 | 230.85 | 204.06 | 258.21 | 210.90 |
| 82.5 | 229.14 | 185.82 | 173.85 | 259.92 | 247.38 | 177.84 | 160.74 | 160.74 | 365.94 | 350.55 |
| 85.0 | 129.96 | 99.75 | 92.91 | 167.01 | 104.88 | 106.59 | 110.01 | 184.68 | 385.32 | 241.11 |
| 87.5 | 53.01 | 36.48 | 32.49 | 35.34 | 35.34 | 33.63 | 25.65 | 20.52 | 78.66 | 11.40 |
| 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

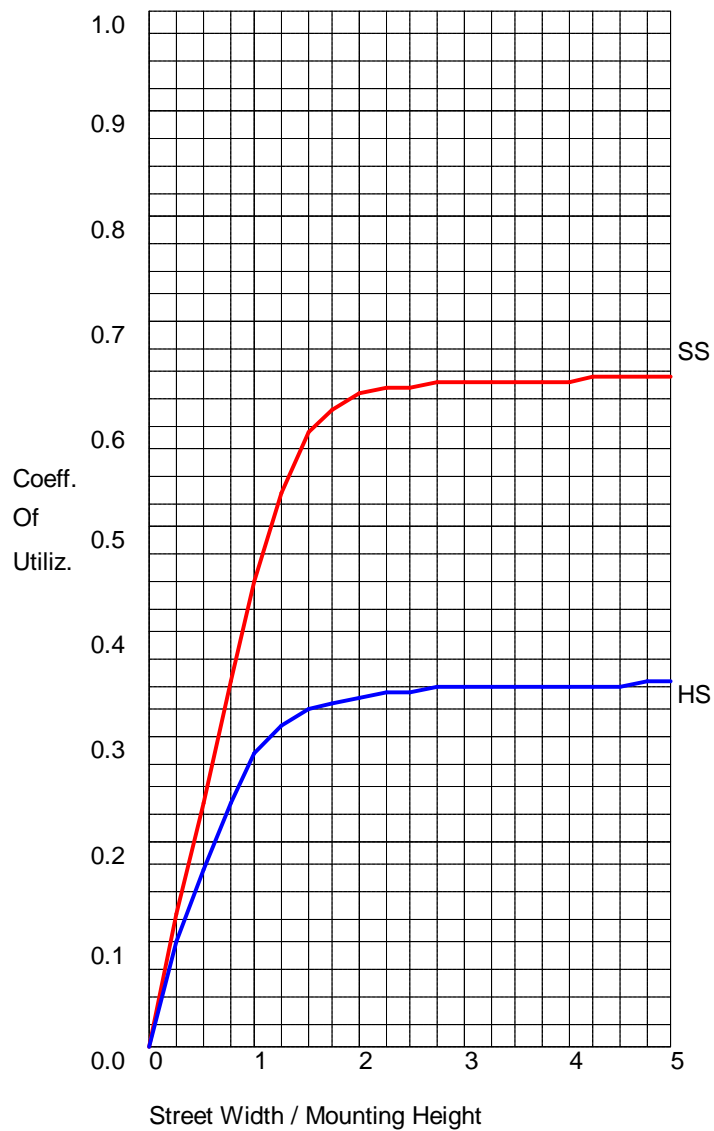
| | 175.0 | 180.0 |
|------|--------------|--------------|
| 0.0 | 2794.14 | 2794.14 |
| 2.5 | 2766.78 | 2762.22 |
| 5.0 | 2680.71 | 2675.58 |
| 7.5 | 2531.94 | 2526.24 |
| 10.0 | 2367.78 | 2361.51 |
| 12.5 | 2262.90 | 2256.63 |
| 15.0 | 2249.22 | 2243.52 |
| 17.5 | 2312.49 | 2307.93 |
| 20.0 | 2424.78 | 2415.09 |
| 22.5 | 2562.15 | 2552.46 |
| 25.0 | 2744.55 | 2732.01 |
| 27.5 | 2997.06 | 3008.46 |
| 30.0 | 3302.58 | 3313.98 |
| 32.5 | 3621.78 | 3613.23 |
| 35.0 | 3889.11 | 3877.14 |
| 37.5 | 4115.40 | 4101.15 |
| 40.0 | 4271.58 | 4256.76 |
| 42.5 | 4227.69 | 4205.46 |
| 45.0 | 3901.65 | 3874.86 |
| 47.5 | 3415.44 | 3413.16 |
| 50.0 | 2891.61 | 2893.89 |
| 52.5 | 2401.41 | 2354.10 |
| 55.0 | 1990.44 | 1971.06 |
| 57.5 | 1764.15 | 1746.48 |
| 60.0 | 1527.03 | 1507.65 |
| 62.5 | 1242.60 | 1220.37 |
| 65.0 | 908.01 | 881.79 |

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

| | | |
|-------------|--------|--------|
| 67.5 | 657.78 | 644.10 |
| 70.0 | 497.04 | 471.96 |
| 72.5 | 369.93 | 368.22 |
| 75.0 | 268.47 | 287.28 |
| 77.5 | 197.79 | 201.78 |
| 80.0 | 185.25 | 186.96 |
| 82.5 | 226.86 | 223.44 |
| 85.0 | 103.74 | 98.61 |
| 87.5 | 0.57 | 0.00 |
| 90.0 | 0.00 | 0.00 |

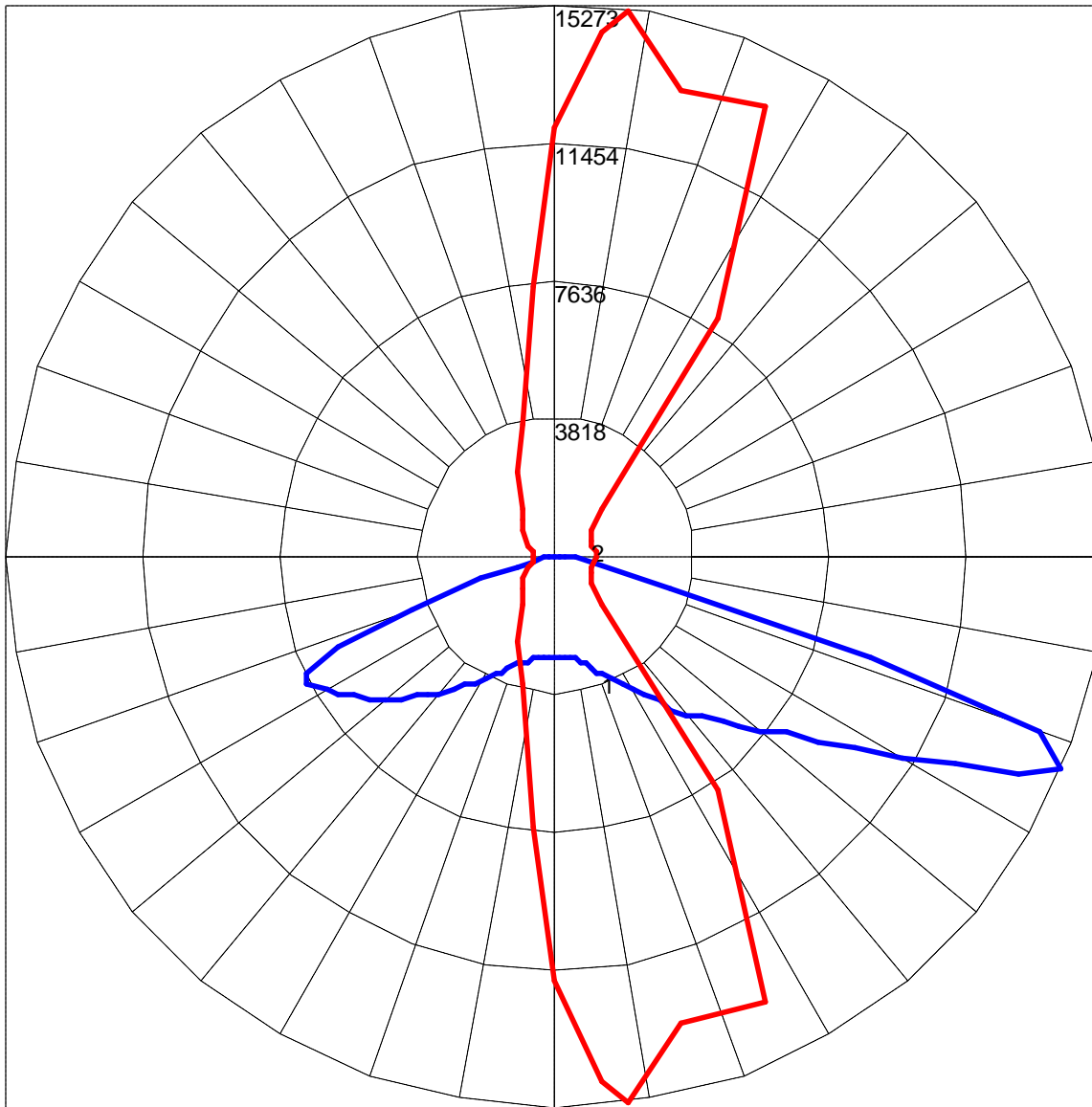
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

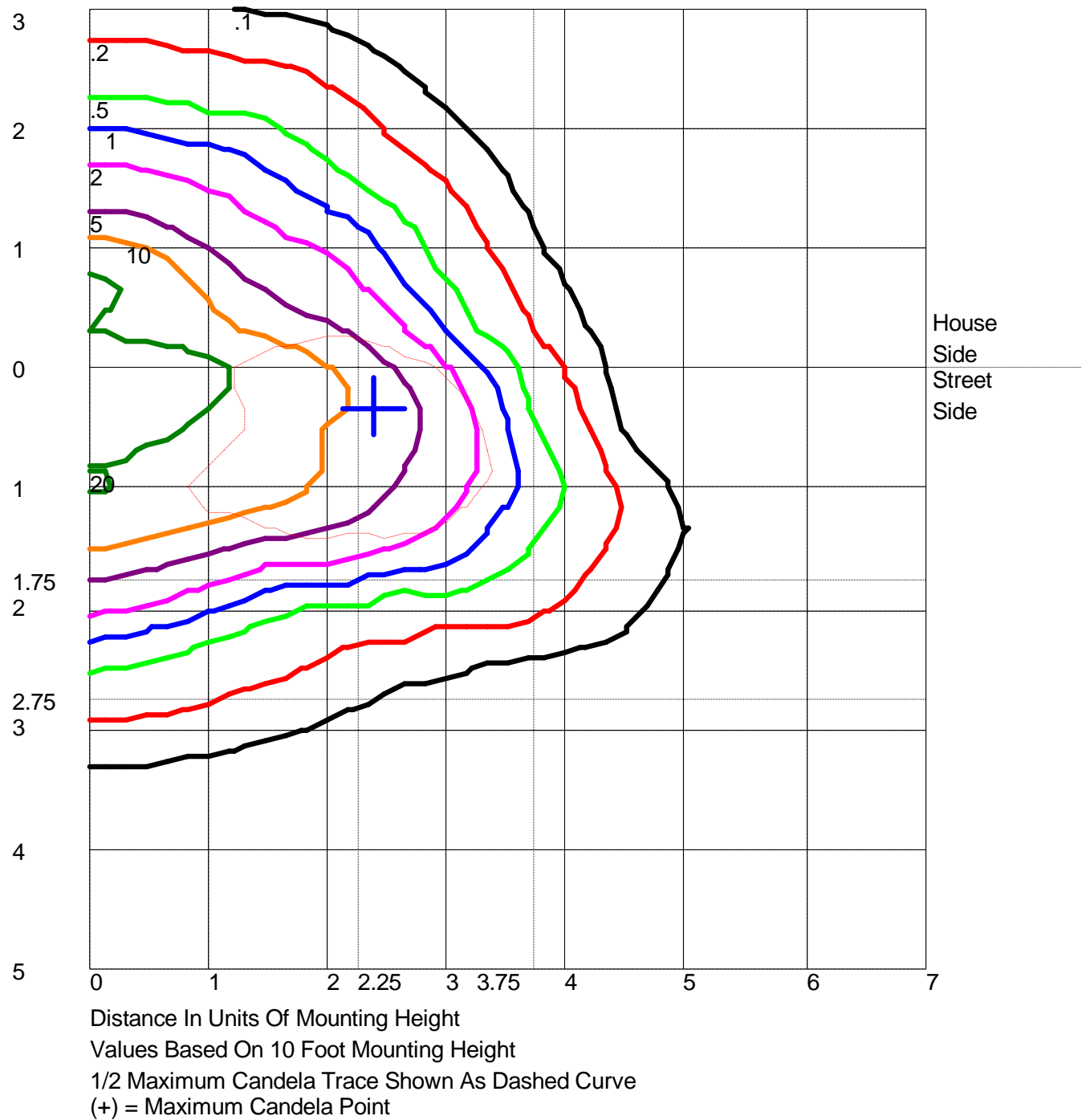
| | Lumens | Percent Of Luminaire |
|----------------------|---------|-------------------------|
| Downward Street Side | 12849.3 | 64.7 |
| Downward House Side | 7015.2 | 35.3 |
| Downward Total | 19864.5 | 100.0 |
| Upward Street Side | 0.0 | 0.0 |
| Upward House Side | 0.0 | 0.0 |
| Upward Total | 0.0 | 0.0 |
| Total Flux | 19864.5 | 100.0 |

POLAR GRAPH

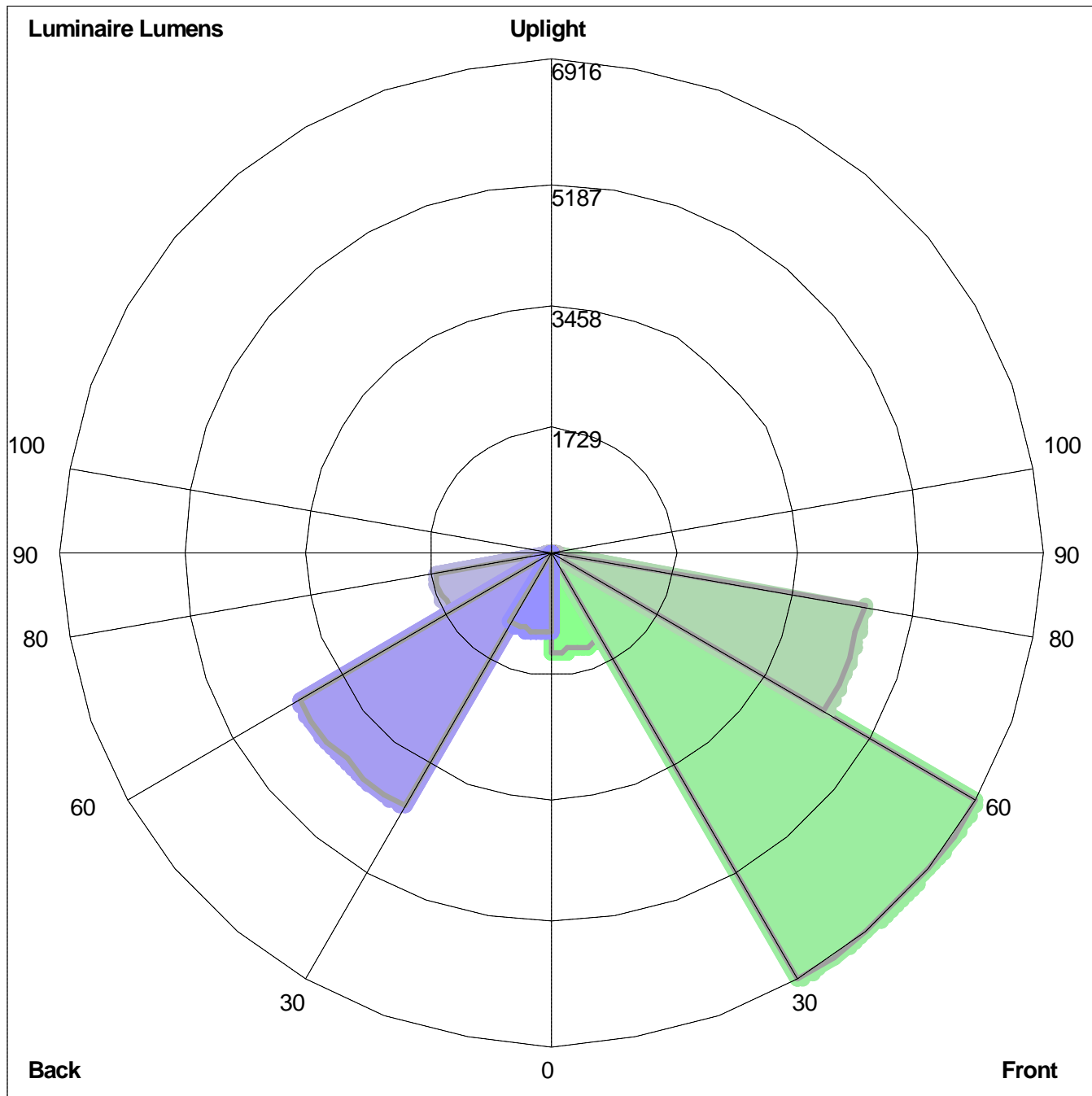


Maximum Candela = 15272.58 Located At Horizontal Angle = 82.5, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (82.5 - 262.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1395.7, Medium=6915.7, High=4447.4, Very High=90.6
Back: Low=1138.5, Medium=4132.8, High=1666.8, Very High=77.2
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G3