



## IES ROAD REPORT

PHOTOMETRIC FILENAME : XMR-5W-LED-35-30-IL.IES

### DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST]LED-7767  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/21/16  
[TEST DATE]05/02/16  
[MANUFACTURER]LSI INDUSTRIES, INC  
[LUMCAT]XMR-5W-LED-35-30-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 IV                         |
| Longitudinal Classification                     | Medium                          |
| Lumens Per Lamp                                 | N.A. (absolute)                 |
| Total Lamp Lumens                               | N.A. (absolute)                 |
| Luminaire Lumens                                | 17906                           |
| Downward Total Efficiency                       | N.A. (absolute)                 |
| Total Luminaire Efficiency                      | N.A. (absolute)                 |
| Luminaire Efficacy Rating (LER)                 | 57                              |
| Total Luminaire Watts                           | 313.6                           |
| Ballast Factor                                  | 1.00                            |
| Upward Waste Light Ratio                        | 0.00                            |
| Maximum Candela                                 | 14210.64                        |
| Maximum Candela Angle                           | 47.5H 72.5V                     |
| Maximum Candela (<90 Degrees Vertical)          | 14210.64                        |
| Maximum Candela Angle (<90 Degrees Vertical)    | 47.5H 72.5V                     |
| Maximum Candela At 90 Degrees Vertical          | 0 (0.0% Luminaire Lumens)       |
| Maximum Candela from 80 to <90 Degrees Vertical | 1150.68 (6.4% Luminaire Lumens) |
| Cutoff Classification (deprecated)              | N.A. (absolute)                 |

**IES ROAD REPORT**  
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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

|                               | Lumens   | % Lamp | % Luminaire |
|-------------------------------|----------|--------|-------------|
| FL - Front-Low (0-30)         | 1141.8   | N.A.   | 6.4         |
| FM - Front-Medium (30-60)     | 6250.7   | N.A.   | 34.9        |
| FH - Front-High (60-80)       | 6877.1   | N.A.   | 38.4        |
| FVH - Front-Very High (80-90) | 84.7     | N.A.   | 0.5         |
| BL - Back-Low (0-30)          | 863.2    | N.A.   | 4.8         |
| BM - Back-Medium (30-60)      | 1812.0   | N.A.   | 10.1        |
| BH - Back-High (60-80)        | 870.2    | N.A.   | 4.9         |
| BVH - Back-Very High (80-90)  | 6.8      | 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                         | 17906.5  | N.A.   | 100.0       |
| BUG Rating                    | B2-U0-G3 |        |             |

**IES ROAD REPORT**  
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**CANDELA TABULATION**

| <b>Vert.<br/>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>47.5</b></u> | <u><b>55.0</b></u> | <u><b>65.0</b></u> | <u><b>75.0</b></u> |
| <b>0.0</b>              | 1952.20                  | 1952.20           | 1952.20            | 1952.20            | 1952.20            | 1952.20            | 1952.20            | 1952.20            | 1952.20            | 1952.20            |
| <b>2.5</b>              | 1976.28                  | 1981.44           | 1978.86            | 1978.86            | 1972.84            | 1972.84            | 1971.98            | 1967.68            | 1965.10            | 1958.22            |
| <b>5.0</b>              | 2021.00                  | 2027.88           | 2023.58            | 2021.86            | 2011.54            | 2008.10            | 2005.52            | 1996.92            | 1990.90            | 1978.00            |
| <b>7.5</b>              | 2083.78                  | 2091.52           | 2086.36            | 2083.78            | 2069.16            | 2061.42            | 2057.12            | 2045.94            | 2034.76            | 2016.70            |
| <b>10.0</b>             | 2160.32                  | 2170.64           | 2165.48            | 2163.76            | 2148.28            | 2139.68            | 2141.40            | 2119.90            | 2101.84            | 2076.90            |
| <b>12.5</b>             | 2252.34                  | 2266.10           | 2261.80            | 2263.52            | 2261.80            | 2243.74            | 2248.04            | 2219.66            | 2193.00            | 2158.60            |
| <b>15.0</b>             | 2366.72                  | 2383.06           | 2383.06            | 2389.08            | 2395.96            | 2377.04            | 2379.62            | 2344.36            | 2304.80            | 2254.92            |
| <b>17.5</b>             | 2499.16                  | 2518.08           | 2524.10            | 2541.30            | 2557.64            | 2547.32            | 2537.86            | 2492.28            | 2435.52            | 2370.16            |
| <b>20.0</b>             | 2641.06                  | 2663.42           | 2678.90            | 2720.18            | 2747.70            | 2737.38            | 2726.20            | 2666.86            | 2588.60            | 2503.46            |
| <b>22.5</b>             | 2795.86                  | 2821.66           | 2855.20            | 2910.24            | 2958.40            | 2956.68            | 2940.34            | 2868.10            | 2768.34            | 2658.26            |
| <b>25.0</b>             | 2968.72                  | 3008.28           | 3042.68            | 3120.08            | 3187.16            | 3194.90            | 3179.42            | 3107.18            | 2973.02            | 2821.66            |
| <b>27.5</b>             | 3157.06                  | 3210.38           | 3269.72            | 3354.00            | 3436.56            | 3452.04            | 3434.84            | 3353.14            | 3185.44            | 2997.10            |
| <b>30.0</b>             | 3339.38                  | 3400.44           | 3483.86            | 3602.54            | 3707.46            | 3728.96            | 3708.32            | 3614.58            | 3415.06            | 3195.76            |
| <b>32.5</b>             | 3536.32                  | 3605.98           | 3704.88            | 3853.66            | 3990.40            | 4026.52            | 4002.44            | 3896.66            | 3685.96            | 3417.64            |
| <b>35.0</b>             | 3744.44                  | 3820.98           | 3943.10            | 4133.16            | 4284.52            | 4333.54            | 4308.60            | 4198.52            | 3951.70            | 3637.80            |
| <b>37.5</b>             | 3976.64                  | 4039.42           | 4191.64            | 4410.94            | 4596.70            | 4655.18            | 4626.80            | 4506.40            | 4222.60            | 3882.90            |
| <b>40.0</b>             | 4183.04                  | 4252.70           | 4431.58            | 4699.04            | 4920.92            | 4998.32            | 4968.22            | 4839.22            | 4519.30            | 4152.08            |
| <b>42.5</b>             | 4445.34                  | 4516.72           | 4698.18            | 4987.14            | 5257.18            | 5375.00            | 5363.82            | 5191.82            | 4828.04            | 4434.16            |
| <b>45.0</b>             | 4729.14                  | 4800.52           | 4989.72            | 5304.48            | 5622.68            | 5732.76            | 5719.00            | 5545.28            | 5139.36            | 4717.10            |
| <b>47.5</b>             | 5019.82                  | 5089.48           | 5286.42            | 5651.06            | 6000.22            | 6118.04            | 6078.48            | 5900.46            | 5477.34            | 5059.38            |
| <b>50.0</b>             | 5372.42                  | 5437.78           | 5622.68            | 5988.18            | 6369.16            | 6505.90            | 6468.06            | 6282.30            | 5839.40            | 5397.36            |
| <b>52.5</b>             | 5706.10                  | 5788.66           | 5981.30            | 6353.68            | 6751.00            | 6908.38            | 6865.38            | 6677.90            | 6210.06            | 5746.52            |
| <b>55.0</b>             | 6070.74                  | 6155.88           | 6348.52            | 6714.02            | 7152.62            | 7322.04            | 7275.60            | 7077.80            | 6640.06            | 6198.02            |
| <b>57.5</b>             | 6546.32                  | 6653.82           | 6824.96            | 7156.92            | 7594.66            | 7819.12            | 7769.24            | 7586.06            | 7114.78            | 6629.74            |
| <b>60.0</b>             | 7125.96                  | 7177.56           | 7320.32            | 7656.58            | 8138.18            | 8400.48            | 8346.30            | 8098.62            | 7622.18            | 7232.60            |
| <b>62.5</b>             | 7713.34                  | 7767.52           | 7907.70            | 8240.52            | 8790.92            | 9122.88            | 9152.12            | 8773.72            | 8200.10            | 7752.90            |
| <b>65.0</b>             | 8230.20                  | 8287.82           | 8477.02            | 8872.62            | 9631.14            | 10075.76           | 10066.30           | 9549.44            | 8950.88            | 8624.08            |
| <b>67.5</b>             | 8334.26                  | 8408.22           | 8749.64            | 9478.92            | 10869.54           | 11446.60           | 11502.50           | 10932.32           | 10078.34           | 9503.00            |
| <b>70.0</b>             | 7027.06                  | 7242.92           | 8137.32            | 9318.96            | 11831.88           | 13948.34           | 13864.06           | 12427.86           | 10670.02           | 9054.94            |
| <b>72.5</b>             | 2303.08                  | 2370.16           | 3738.42            | 6926.44            | 10653.68           | 14029.18           | 14210.64           | 11757.06           | 8257.72            | 5806.72            |
| <b>75.0</b>             | 521.16                   | 509.98            | 719.82             | 1810.30            | 5903.90            | 10745.70           | 10647.66           | 8096.04            | 4335.26            | 2407.14            |
| <b>77.5</b>             | 245.10                   | 238.22            | 282.08             | 484.18             | 1355.36            | 4097.04            | 4981.12            | 3421.08            | 1534.24            | 860.00             |
| <b>80.0</b>             | 121.26                   | 126.42            | 138.46             | 180.60             | 392.16             | 980.40             | 1150.68            | 1023.40            | 726.70             | 460.96             |
| <b>82.5</b>             | 62.78                    | 64.50             | 72.24              | 93.74              | 148.78             | 248.54             | 266.60             | 403.34             | 398.18             | 288.10             |
| <b>85.0</b>             | 29.24                    | 30.96             | 35.26              | 48.16              | 73.10              | 113.52             | 118.68             | 135.88             | 186.62             | 204.68             |
| <b>87.5</b>             | 17.20                    | 18.06             | 21.50              | 25.80              | 33.54              | 43.00              | 47.30              | 69.66              | 104.92             | 158.24             |
| <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.<br/>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>              | 1952.20                  | 1952.20            | 1952.20            | 1952.20             | 1952.20             | 1952.20             | 1952.20             | 1952.20             | 1952.20             | 1952.20             |
| <b>2.5</b>              | 1950.48                  | 1951.34            | 1956.50            | 1942.74             | 1949.62             | 1950.48             | 1950.48             | 1946.18             | 1942.74             | 1941.02             |
| <b>5.0</b>              | 1965.96                  | 1963.38            | 1967.68            | 1953.06             | 1956.50             | 1955.64             | 1954.78             | 1947.90             | 1944.46             | 1941.88             |
| <b>7.5</b>              | 1998.64                  | 1993.48            | 1996.06            | 1983.16             | 1984.88             | 1982.30             | 1980.58             | 1975.42             | 1965.96             | 1963.38             |
| <b>10.0</b>             | 2051.10                  | 2050.24            | 2046.80            | 2034.76             | 2036.48             | 2034.76             | 2031.32             | 2022.72             | 2006.38             | 1999.50             |
| <b>12.5</b>             | 2131.94                  | 2121.62            | 2117.32            | 2107.86             | 2113.88             | 2114.74             | 2109.58             | 2093.24             | 2071.74             | 2050.24             |
| <b>15.0</b>             | 2217.94                  | 2204.18            | 2208.48            | 2198.16             | 2213.64             | 2219.66             | 2210.20             | 2188.70             | 2156.88             | 2123.34             |
| <b>17.5</b>             | 2317.70                  | 2301.36            | 2306.52            | 2302.22             | 2332.32             | 2346.08             | 2341.78             | 2304.80             | 2211.92             | 2081.20             |
| <b>20.0</b>             | 2437.24                  | 2419.18            | 2425.20            | 2440.68             | 2473.36             | 2497.44             | 2489.70             | 2295.34             | 1925.54             | 1651.20             |
| <b>22.5</b>             | 2572.26                  | 2550.76            | 2557.64            | 2587.74             | 2635.04             | 2677.18             | 2514.64             | 1964.24             | 1495.54             | 1223.78             |
| <b>25.0</b>             | 2713.30                  | 2686.64            | 2696.10            | 2741.68             | 2809.62             | 2832.84             | 2249.76             | 1542.84             | 1090.48             | 921.06              |
| <b>27.5</b>             | 2864.66                  | 2833.70            | 2847.46            | 2907.66             | 3012.58             | 2802.74             | 1844.70             | 1135.20             | 932.24              | 899.56              |

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**CANDELA TABULATION - (Cont.)**

|      |         |         |         |         |         |         |         |         |        |        |
|------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| 30.0 | 3044.40 | 3008.28 | 3022.04 | 3090.84 | 3207.80 | 2556.78 | 1410.40 | 978.68  | 933.96 | 900.42 |
| 32.5 | 3239.62 | 3199.20 | 3211.24 | 3289.50 | 3326.48 | 2139.68 | 1090.48 | 981.26  | 942.56 | 903.00 |
| 35.0 | 3432.26 | 3387.54 | 3398.72 | 3495.90 | 3277.46 | 1687.32 | 1031.14 | 994.16  | 950.30 | 896.12 |
| 37.5 | 3642.10 | 3593.94 | 3603.40 | 3708.32 | 3083.10 | 1300.32 | 1044.90 | 1007.92 | 930.52 | 814.42 |
| 40.0 | 3908.70 | 3840.76 | 3856.24 | 3938.80 | 2732.22 | 1134.34 | 1064.68 | 995.02  | 831.62 | 663.06 |
| 42.5 | 4166.70 | 4118.54 | 4104.78 | 4160.68 | 2265.24 | 1111.12 | 1079.30 | 912.46  | 662.20 | 495.36 |
| 45.0 | 4439.32 | 4380.84 | 4378.26 | 4250.12 | 1769.02 | 1124.02 | 1054.36 | 749.06  | 470.42 | 347.44 |
| 47.5 | 4768.70 | 4703.34 | 4694.74 | 4241.52 | 1451.68 | 1139.50 | 946.00  | 550.40  | 321.64 | 270.04 |
| 50.0 | 5088.62 | 5024.12 | 5007.78 | 4091.02 | 1234.96 | 1131.76 | 757.66  | 361.20  | 252.84 | 224.46 |
| 52.5 | 5452.40 | 5392.20 | 5364.68 | 3843.34 | 1158.42 | 1053.50 | 527.18  | 258.00  | 210.70 | 186.62 |
| 55.0 | 5895.30 | 5829.08 | 5794.68 | 3471.82 | 1169.60 | 888.38  | 331.10  | 209.84  | 174.58 | 153.08 |
| 57.5 | 6301.22 | 6235.86 | 6197.16 | 2978.18 | 1171.32 | 629.52  | 227.90  | 172.86  | 140.18 | 119.54 |
| 60.0 | 6876.56 | 6804.32 | 6787.98 | 2679.76 | 1155.84 | 388.72  | 185.76  | 138.46  | 107.50 | 104.92 |
| 62.5 | 7406.32 | 7364.18 | 7260.98 | 2426.06 | 1108.54 | 227.90  | 150.50  | 105.78  | 114.38 | 123.84 |
| 65.0 | 8328.24 | 8243.10 | 7831.16 | 2178.38 | 1010.50 | 162.54  | 116.10  | 112.66  | 125.56 | 157.38 |
| 67.5 | 9141.80 | 9046.34 | 7873.30 | 2021.00 | 892.68  | 139.32  | 111.80  | 159.96  | 156.52 | 226.18 |
| 70.0 | 7912.00 | 7709.04 | 6480.96 | 1639.16 | 770.56  | 173.72  | 209.84  | 221.88  | 237.36 | 293.26 |
| 72.5 | 4627.66 | 4399.76 | 3683.38 | 850.54  | 456.66  | 188.34  | 256.28  | 248.54  | 253.70 | 251.98 |
| 75.0 | 1638.30 | 1499.84 | 1190.24 | 313.90  | 139.32  | 114.38  | 190.06  | 236.50  | 151.36 | 86.86  |
| 77.5 | 584.80  | 525.46  | 392.16  | 126.42  | 60.20   | 36.98   | 142.76  | 98.90   | 34.40  | 18.06  |
| 80.0 | 353.46  | 309.60  | 219.30  | 57.62   | 24.94   | 18.92   | 37.84   | 17.20   | 6.88   | 2.58   |
| 82.5 | 209.84  | 158.24  | 107.50  | 21.50   | 9.46    | 7.74    | 10.32   | 3.44    | 0.00   | 0.00   |
| 85.0 | 125.56  | 83.42   | 41.28   | 4.30    | 0.86    | 1.72    | 0.86    | 0.00    | 0.00   | 0.00   |
| 87.5 | 73.10   | 28.38   | 12.04   | 0.86    | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 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. Angles**      **Horizontal Angles**

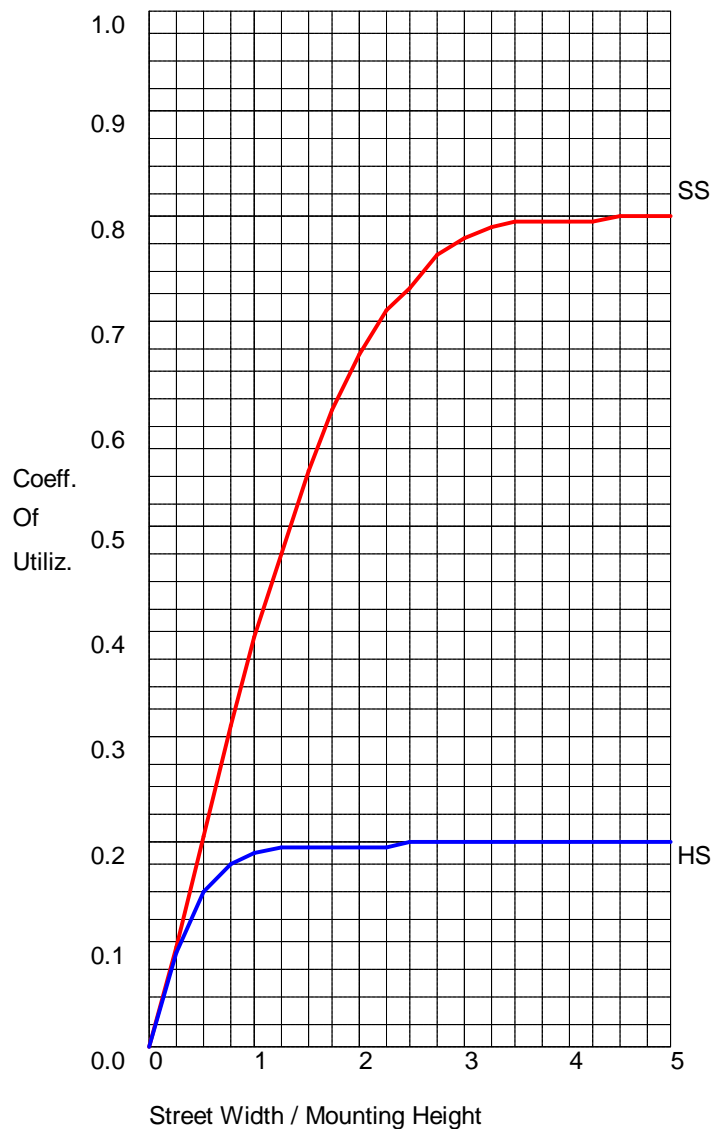
|      | <u>175.0</u> | <u>180.0</u> |
|------|--------------|--------------|
| 0.0  | 1952.20      | 1952.20      |
| 2.5  | 1938.44      | 1934.14      |
| 5.0  | 1939.30      | 1935.00      |
| 7.5  | 1961.66      | 1956.50      |
| 10.0 | 1994.34      | 1988.32      |
| 12.5 | 2040.78      | 2034.76      |
| 15.0 | 2104.42      | 2097.54      |
| 17.5 | 1984.02      | 1970.26      |
| 20.0 | 1546.28      | 1532.52      |
| 22.5 | 1105.10      | 1111.98      |
| 25.0 | 891.82       | 884.94       |
| 27.5 | 883.22       | 877.20       |
| 30.0 | 883.22       | 876.34       |
| 32.5 | 883.22       | 876.34       |
| 35.0 | 854.84       | 845.38       |
| 37.5 | 742.18       | 728.42       |
| 40.0 | 583.08       | 571.04       |
| 42.5 | 425.70       | 416.24       |
| 45.0 | 310.46       | 307.02       |
| 47.5 | 255.42       | 253.70       |
| 50.0 | 212.42       | 212.42       |
| 52.5 | 176.30       | 172.86       |
| 55.0 | 141.90       | 139.32       |
| 57.5 | 106.64       | 104.92       |
| 60.0 | 110.94       | 110.08       |
| 62.5 | 111.80       | 104.92       |
| 65.0 | 134.16       | 117.82       |

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**CANDELA TABULATION - (Cont.)**

|             |        |        |
|-------------|--------|--------|
| <b>67.5</b> | 188.34 | 170.28 |
| <b>70.0</b> | 228.76 | 206.40 |
| <b>72.5</b> | 185.76 | 168.56 |
| <b>75.0</b> | 49.02  | 40.42  |
| <b>77.5</b> | 0.86   | 0.00   |
| <b>80.0</b> | 0.00   | 0.00   |
| <b>82.5</b> | 0.00   | 0.00   |
| <b>85.0</b> | 0.00   | 0.00   |
| <b>87.5</b> | 0.00   | 0.00   |
| <b>90.0</b> | 0.00   | 0.00   |

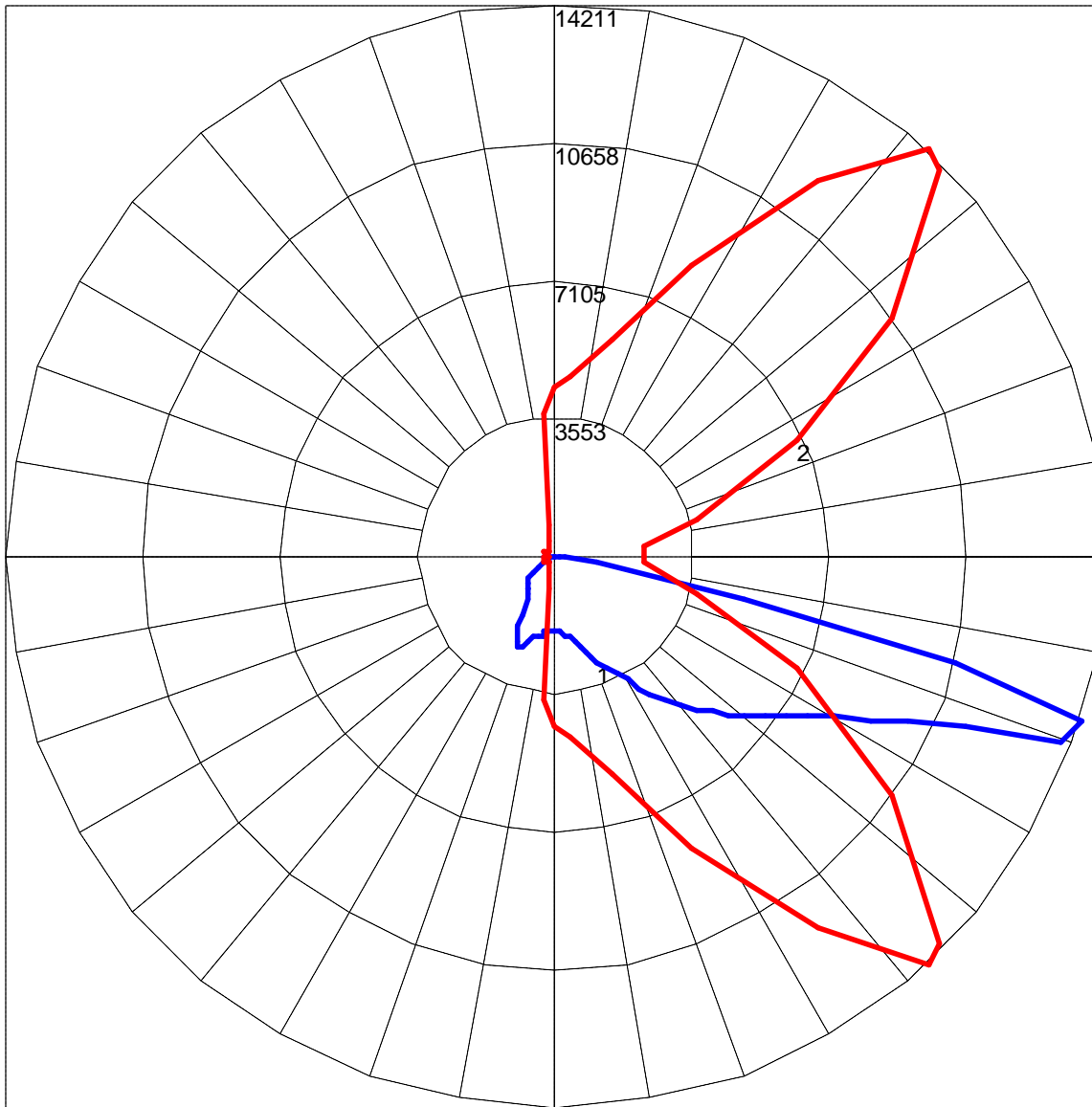
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

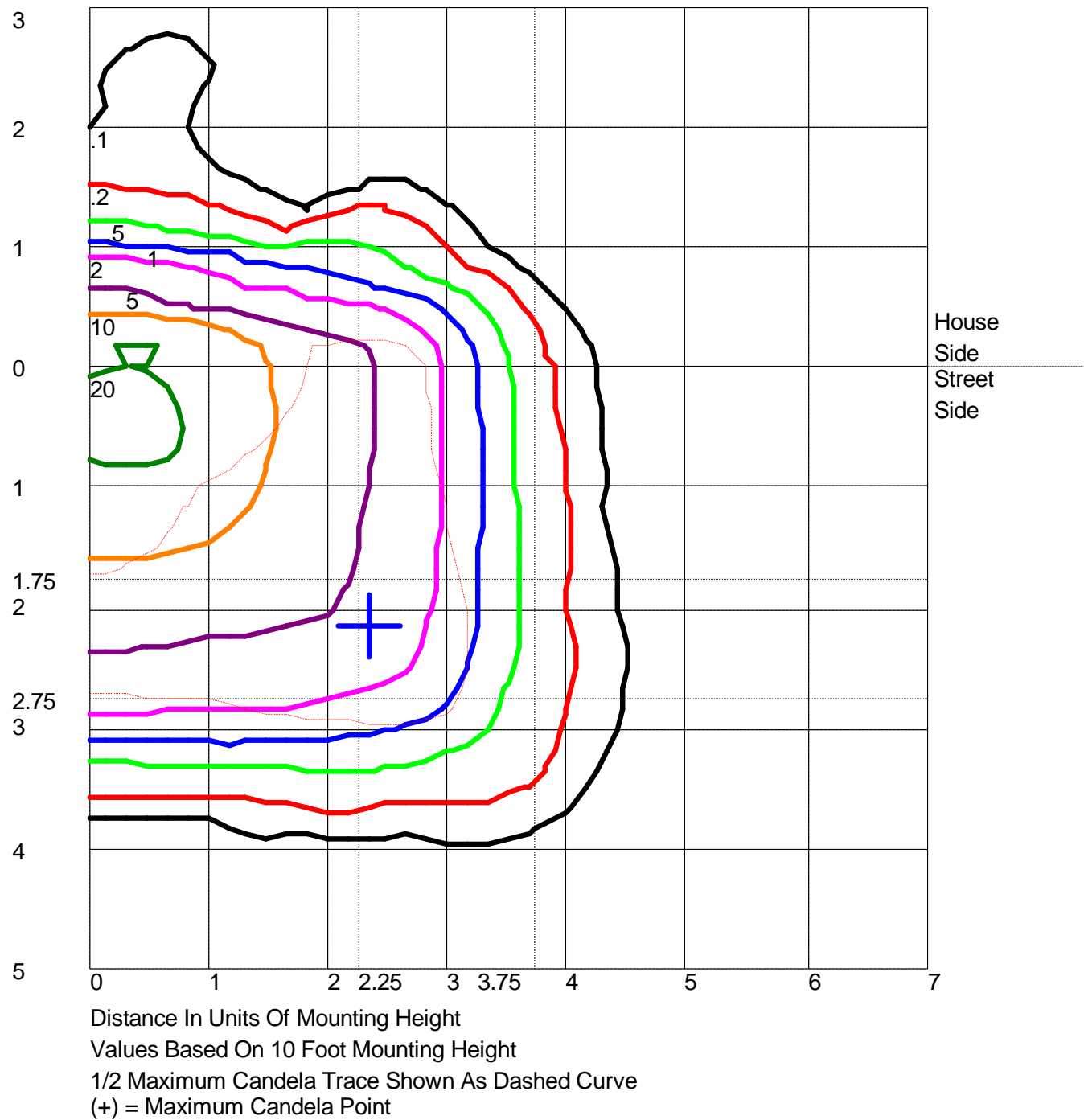
|                      | Lumens  | Percent<br>Of Luminaire |
|----------------------|---------|-------------------------|
| Downward Street Side | 14354.2 | 80.2                    |
| Downward House Side  | 3552.2  | 19.8                    |
| Downward Total       | 17906.5 | 100.0                   |
| Upward Street Side   | 0.0     | 0.0                     |
| Upward House Side    | 0.0     | 0.0                     |
| Upward Total         | 0.0     | 0.0                     |
| Total Flux           | 17906.5 | 100.0                   |

POLAR GRAPH



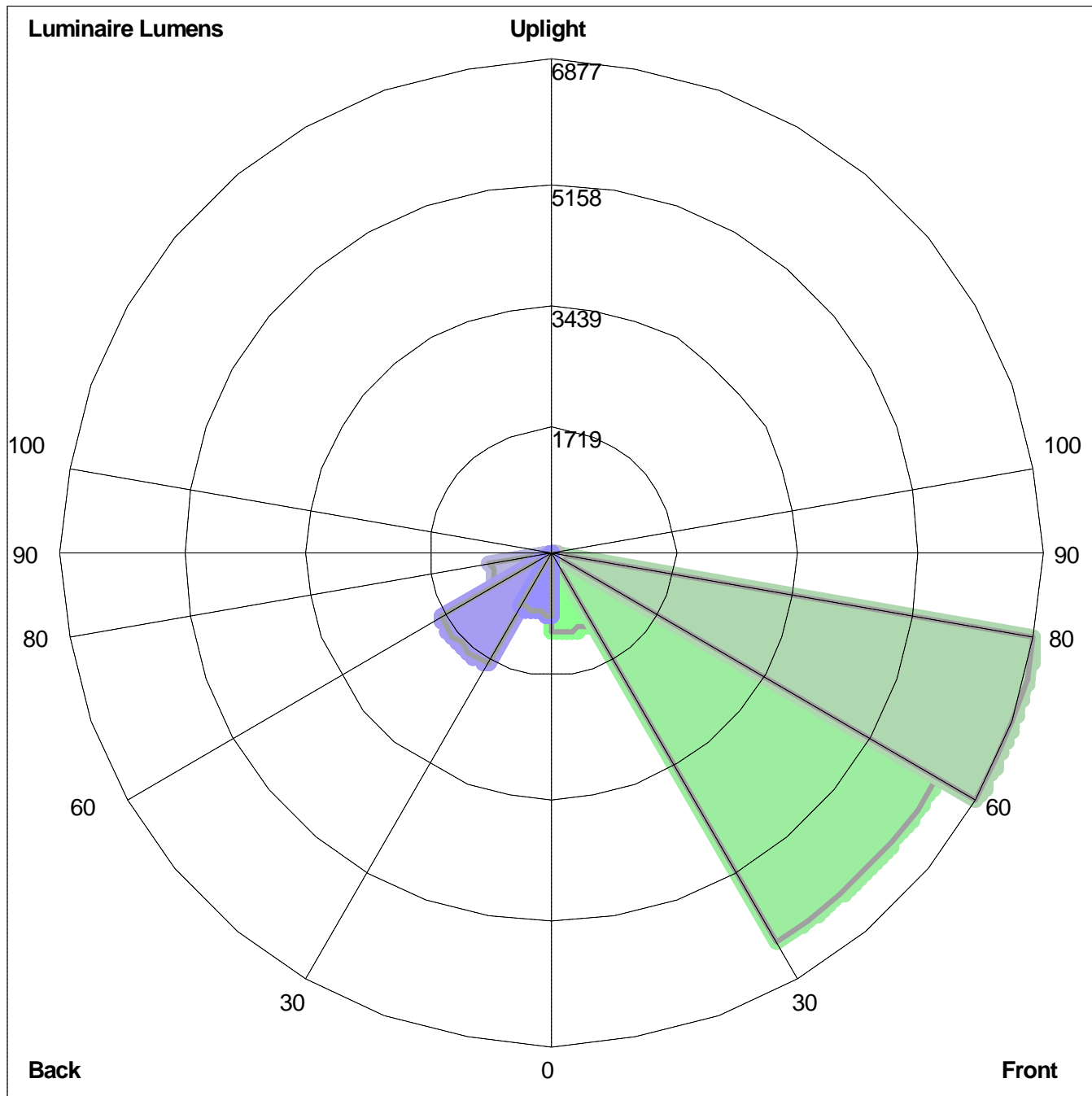
Maximum Candela = 14210.64 Located At Horizontal Angle = 47.5, Vertical Angle = 72.5  
# 1 - Vertical Plane Through Horizontal Angles (47.5 - 227.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (72.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1141.8, Medium=6250.7, High=6877.1, Very High=84.7  
Back: Low=863.2, Medium= 1812.0, High=870.2, Very High=6.8  
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3