

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P636888

Luminaire Tested: GWS-SA4B-760-U-SLR-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P636888  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA4B-760-U-SLR-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (64) 5700K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

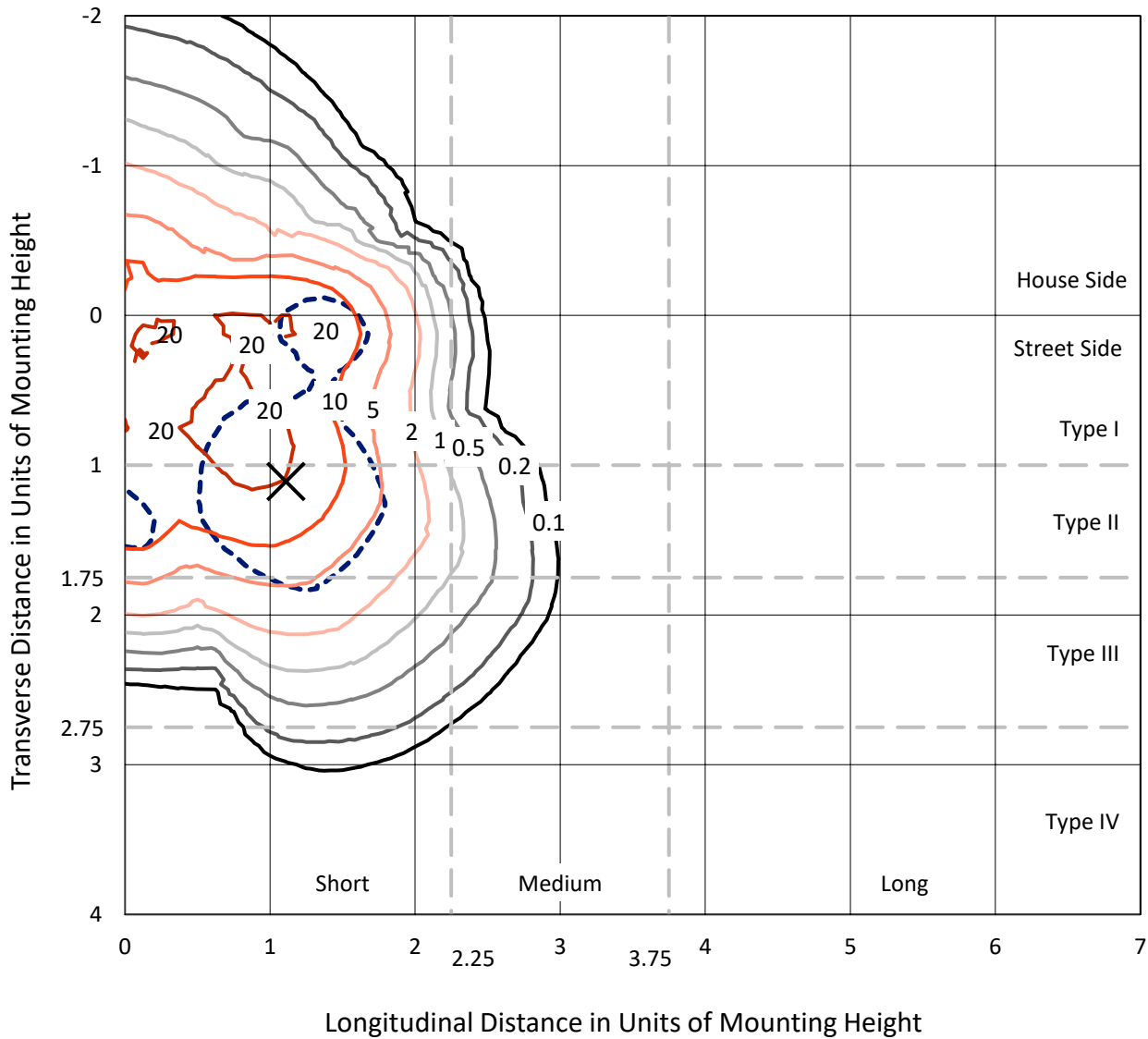
Lumens per Lamp: N/A  
Luminaire Lumens: 7790.7 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G1  
  
Input Watts (W): 94.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

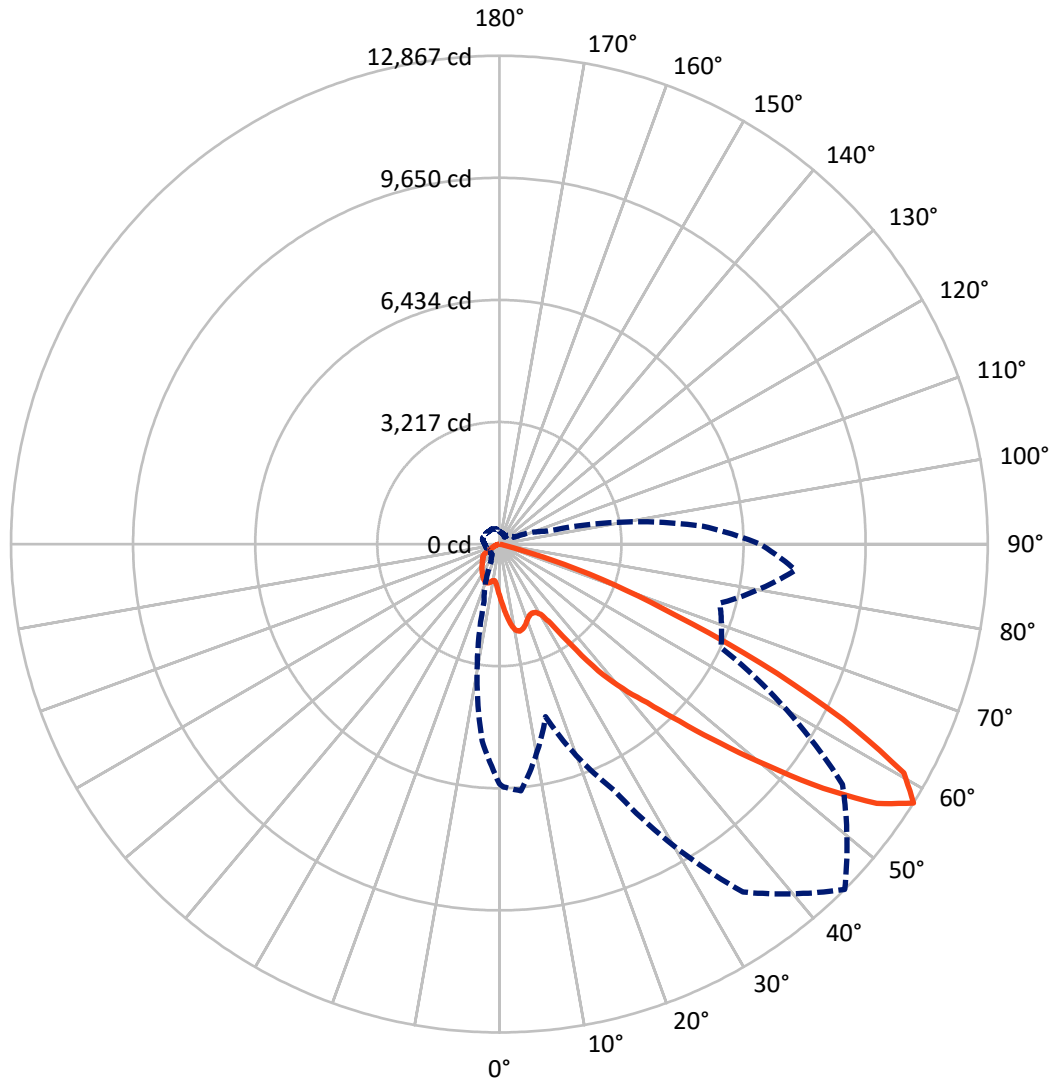
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1744.5   | 0.0    | 1744.5 |
|                    | % Fixture | 22.4     | 0.0    | 22.4   |
| <b>Street Side</b> | Lumens    | 6046.2   | 0.0    | 6046.2 |
|                    | % Fixture | 77.6     | 0.0    | 77.6   |
| <b>Total</b>       | Lumens    | 7790.7   | 0.0    | 7790.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 134.7  | 1.7       |
| 10°-20°   | 435.8  | 5.6       |
| 20°-30°   | 707.9  | 9.1       |
| 30°-40°   | 1093.8 | 14.0      |
| 40°-50°   | 1753.9 | 22.5      |
| 50°-60°   | 2397.1 | 30.8      |
| 60°-70°   | 1161.0 | 14.9      |
| 70°-80°   | 106.3  | 1.4       |
| 80°-90°   | 0.3    | 0.0       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-90°    | 7790.7 | 100.0     |
| 0°-180°   | 7790.7 | 100.0     |

**Coefficient of Utilization**



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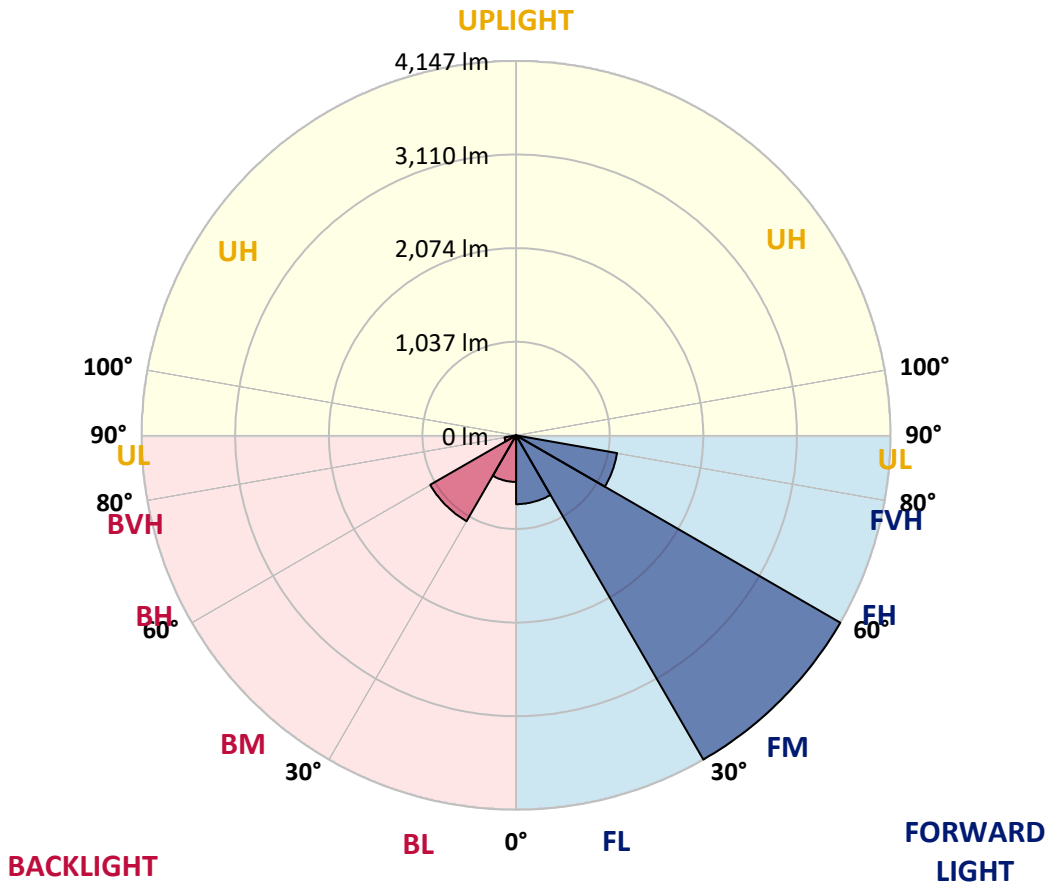
CATALOG NUMBER: GWS-SA4B-760-U-SLR-W-GRSBK

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 762.2  | 9.8       |                         |      |         |
| FM (30°-60°)   | 4147.2 | 53.2      |                         |      |         |
| FH (60°-80°)   | 1136.5 | 14.6      |                         |      | G1/1800 |
| FVH (80°-90°)  | 0.3    | 0.0       |                         |      | G0/10   |
| BL (0°-30°)    | 516.2  | 6.6       | B2/1000                 |      |         |
| BM (30°-60°)   | 1097.6 | 14.1      | B2/2500                 |      |         |
| BH (60°-80°)   | 130.8  | 1.7       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 0.0    | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°     | 45°     | 55°     | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|
| 0°    | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3  | 1369.3  | 1369.3  | 1369.3 | 1369.3 | 1369.3 |
| 2.5°  | 1483.4 | 1492.8 | 1508.5 | 1542.0 | 1570.3 | 1589.1  | 1597.5  | 1595.4  | 1583.9 | 1575.5 | 1558.8 |
| 5°    | 1642.5 | 1642.5 | 1672.9 | 1749.3 | 1807.9 | 1844.6  | 1863.4  | 1851.9  | 1828.9 | 1792.2 | 1735.7 |
| 7.5°  | 1781.8 | 1787.0 | 1838.3 | 1947.2 | 2036.2 | 2088.5  | 2118.9  | 2112.6  | 2071.7 | 2001.6 | 1888.5 |
| 10°   | 1890.6 | 1896.9 | 1965.0 | 2097.9 | 2202.6 | 2256.0  | 2301.0  | 2305.2  | 2260.2 | 2167.0 | 2037.2 |
| 12.5° | 1996.4 | 2002.7 | 2073.8 | 2201.6 | 2293.7 | 2315.7  | 2355.4  | 2371.1  | 2359.6 | 2293.7 | 2158.6 |
| 15°   | 2110.5 | 2125.1 | 2185.9 | 2281.1 | 2319.9 | 2293.7  | 2319.9  | 2348.1  | 2386.9 | 2380.6 | 2259.1 |
| 17.5° | 2222.5 | 2233.0 | 2294.7 | 2328.2 | 2285.3 | 2217.3  | 2229.8  | 2263.3  | 2351.3 | 2437.1 | 2358.6 |
| 20°   | 2326.1 | 2340.8 | 2392.1 | 2348.1 | 2218.3 | 2112.6  | 2113.6  | 2157.6  | 2291.6 | 2471.6 | 2460.1 |
| 22.5° | 2435.0 | 2457.0 | 2493.6 | 2370.1 | 2156.5 | 2029.9  | 2035.1  | 2074.9  | 2244.5 | 2504.1 | 2575.3 |
| 25°   | 2577.4 | 2598.3 | 2622.4 | 2424.5 | 2136.7 | 1989.0  | 2008.9  | 2045.6  | 2244.5 | 2559.6 | 2717.7 |
| 27.5° | 2770.0 | 2784.7 | 2785.7 | 2526.1 | 2171.2 | 1995.3  | 2037.2  | 2079.1  | 2311.5 | 2670.6 | 2908.2 |
| 30°   | 3011.8 | 3034.9 | 3004.5 | 2684.2 | 2279.0 | 2079.1  | 2140.8  | 2193.2  | 2455.9 | 2857.9 | 3188.8 |
| 32.5° | 3306.0 | 3338.5 | 3297.6 | 2918.7 | 2504.1 | 2368.0  | 2480.0  | 2510.4  | 2686.3 | 3129.1 | 3507.0 |
| 35°   | 3651.5 | 3678.7 | 3634.7 | 3243.2 | 3029.6 | 3054.8  | 3257.8  | 3219.1  | 3149.0 | 3463.0 | 3878.6 |
| 37.5° | 4030.4 | 4055.6 | 3970.8 | 3735.2 | 3806.4 | 3915.3  | 4239.8  | 4106.9  | 3880.7 | 3893.3 | 4281.7 |
| 40°   | 4378.0 | 4405.2 | 4272.3 | 4270.2 | 4416.7 | 4615.6  | 5007.2  | 4824.0  | 4516.2 | 4456.5 | 4659.6 |
| 42.5° | 4738.1 | 4757.0 | 4636.6 | 4554.9 | 4887.8 | 5297.1  | 5711.7  | 5464.6  | 4937.0 | 4872.1 | 5132.8 |
| 45°   | 5252.1 | 5291.9 | 5077.3 | 4695.2 | 5311.8 | 6081.2  | 6659.1  | 6176.5  | 5223.9 | 5171.5 | 5857.2 |
| 47.5° | 6008.0 | 6037.3 | 5599.7 | 4783.1 | 5706.5 | 7058.0  | 7843.1  | 7099.8  | 5476.1 | 5356.8 | 6847.5 |
| 50°   | 6632.9 | 6652.8 | 6080.2 | 4879.4 | 6126.3 | 8111.1  | 9192.5  | 8194.9  | 5759.9 | 5663.5 | 7771.9 |
| 52.5° | 7093.6 | 7168.9 | 6711.5 | 5077.3 | 6678.0 | 9349.5  | 10686.4 | 9491.9  | 6202.7 | 6256.1 | 8538.2 |
| 55°   | 7188.8 | 7291.4 | 7142.8 | 5198.7 | 7163.7 | 10611.0 | 12066.2 | 10652.9 | 6644.5 | 6705.2 | 8795.8 |
| 57.5° | 6317.8 | 6399.5 | 6523.0 | 4708.8 | 7152.2 | 11188.9 | 12867.0 | 11038.1 | 6443.5 | 6013.2 | 7831.6 |
| 60°   | 4732.9 | 4789.4 | 5013.4 | 3599.1 | 6577.5 | 10678.0 | 12243.1 | 10382.8 | 5634.2 | 4588.4 | 5967.1 |
| 62.5° | 2806.6 | 2831.8 | 3115.5 | 2331.4 | 5459.4 | 9195.7  | 10153.5 | 8959.1  | 4452.3 | 3086.2 | 3654.6 |
| 65°   | 1077.2 | 1066.8 | 1283.5 | 1150.5 | 4014.7 | 7324.9  | 7552.1  | 6829.7  | 3054.8 | 1414.3 | 1393.4 |
| 67.5° | 166.5  | 159.1  | 214.6  | 340.2  | 2895.6 | 5076.2  | 4983.1  | 4922.4  | 1913.7 | 329.8  | 287.9  |
| 70°   | 37.7   | 37.7   | 46.1   | 100.5  | 1769.2 | 2982.5  | 3191.9  | 3043.2  | 1224.8 | 70.1   | 37.7   |
| 72.5° | 17.8   | 17.8   | 22.0   | 42.9   | 640.7  | 1229.0  | 1432.1  | 1410.1  | 397.8  | 23.0   | 13.6   |
| 75°   | 6.3    | 7.3    | 7.3    | 9.4    | 38.7   | 63.9    | 146.6   | 104.7   | 25.1   | 0.0    | 0.0    |
| 77.5° | 2.1    | 2.1    | 2.1    | 2.1    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |
| 80°   | 1.0    | 1.0    | 1.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |
| 82.5° | 1.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 |
| 2.5°  | 1522.1 | 1514.8 | 1487.6 | 1451.0 | 1415.4 | 1384.0 | 1351.5 | 1312.8 | 1284.5 | 1252.1 | 1241.6 |
| 5°    | 1691.7 | 1645.7 | 1571.3 | 1493.9 | 1422.7 | 1362.0 | 1303.3 | 1240.5 | 1194.5 | 1148.4 | 1132.7 |
| 7.5°  | 1835.2 | 1767.1 | 1646.7 | 1530.5 | 1433.2 | 1347.3 | 1262.5 | 1176.7 | 1109.7 | 1055.2 | 1038.5 |
| 10°   | 1963.9 | 1885.4 | 1724.2 | 1580.8 | 1458.3 | 1358.8 | 1256.2 | 1148.4 | 1061.5 | 996.6  | 980.9  |
| 12.5° | 2074.9 | 1983.8 | 1790.1 | 1618.5 | 1468.8 | 1354.6 | 1255.2 | 1169.3 | 1090.8 | 1016.5 | 996.6  |
| 15°   | 2168.1 | 2067.6 | 1845.6 | 1643.6 | 1453.0 | 1302.3 | 1215.4 | 1201.8 | 1195.5 | 1113.9 | 1075.1 |
| 17.5° | 2259.1 | 2146.1 | 1890.6 | 1655.1 | 1409.1 | 1210.2 | 1147.4 | 1209.1 | 1275.1 | 1221.7 | 1172.5 |
| 20°   | 2354.4 | 2225.6 | 1936.7 | 1657.2 | 1335.8 | 1106.5 | 1096.1 | 1193.4 | 1277.2 | 1260.4 | 1214.4 |
| 22.5° | 2466.4 | 2325.1 | 1994.3 | 1656.1 | 1243.7 | 1018.6 | 1058.4 | 1163.1 | 1231.1 | 1230.1 | 1193.4 |
| 25°   | 2628.7 | 2450.7 | 2071.7 | 1662.4 | 1143.2 | 950.6  | 1016.5 | 1111.8 | 1167.3 | 1165.2 | 1134.8 |
| 27.5° | 2802.5 | 2600.4 | 2172.2 | 1678.1 | 1057.3 | 910.8  | 967.3  | 1041.6 | 1089.8 | 1087.7 | 1061.5 |
| 30°   | 3046.4 | 2773.1 | 2268.6 | 1679.2 | 995.6  | 889.8  | 912.9  | 964.2  | 1010.2 | 1005.0 | 985.1  |
| 32.5° | 3342.6 | 2967.9 | 2349.2 | 1619.5 | 956.8  | 869.9  | 856.3  | 882.5  | 918.1  | 910.8  | 905.5  |
| 35°   | 3700.7 | 3199.2 | 2418.3 | 1488.6 | 897.2  | 830.2  | 793.5  | 798.8  | 823.9  | 828.1  | 826.0  |
| 37.5° | 4108.9 | 3474.5 | 2504.1 | 1315.9 | 816.6  | 772.6  | 723.4  | 719.2  | 733.9  | 747.5  | 757.9  |
| 40°   | 4512.0 | 3784.4 | 2620.3 | 1141.1 | 743.3  | 699.3  | 652.2  | 641.7  | 648.0  | 672.1  | 694.1  |
| 42.5° | 4965.3 | 4143.5 | 2745.9 | 991.4  | 693.0  | 618.7  | 573.7  | 553.8  | 571.6  | 610.3  | 636.5  |
| 45°   | 5618.5 | 4647.0 | 2868.4 | 872.0  | 672.1  | 547.5  | 486.8  | 484.7  | 504.6  | 554.8  | 584.2  |
| 47.5° | 6535.6 | 5298.2 | 2949.0 | 778.9  | 671.0  | 492.0  | 419.8  | 432.4  | 455.4  | 504.6  | 538.1  |
| 50°   | 7429.6 | 6113.7 | 2860.0 | 707.7  | 649.1  | 455.4  | 369.5  | 394.7  | 417.7  | 460.6  | 495.2  |
| 52.5° | 7968.7 | 6552.3 | 2513.5 | 640.7  | 581.0  | 438.6  | 320.3  | 364.3  | 368.5  | 407.2  | 443.9  |
| 55°   | 7912.2 | 6268.6 | 1925.2 | 537.0  | 480.5  | 414.6  | 269.0  | 328.7  | 330.8  | 360.1  | 391.5  |
| 57.5° | 6867.4 | 5381.9 | 1322.2 | 435.5  | 361.2  | 342.3  | 221.9  | 277.4  | 297.3  | 315.1  | 338.1  |
| 60°   | 5118.1 | 3926.8 | 589.4  | 353.8  | 229.3  | 231.4  | 189.5  | 209.4  | 239.7  | 260.7  | 280.6  |
| 62.5° | 3016.0 | 2259.1 | 239.7  | 212.5  | 126.7  | 145.5  | 152.8  | 152.8  | 171.7  | 187.4  | 200.0  |
| 65°   | 1140.0 | 790.4  | 97.4   | 106.8  | 66.0   | 68.0   | 90.0   | 111.0  | 125.6  | 139.2  | 156.0  |
| 67.5° | 200.0  | 138.2  | 50.2   | 39.8   | 38.7   | 34.5   | 46.1   | 72.2   | 80.6   | 91.1   | 98.4   |
| 70°   | 33.5   | 28.3   | 20.9   | 19.9   | 17.8   | 18.8   | 30.4   | 51.3   | 56.5   | 59.7   | 62.8   |
| 72.5° | 9.4    | 8.4    | 6.3    | 5.2    | 4.2    | 5.2    | 18.8   | 39.8   | 41.9   | 44.0   | 47.1   |
| 75°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 7.3    | 28.3   | 30.4   | 31.4   | 34.5   |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 6.3    | 8.4    | 10.5   | 8.4    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |





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**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 |
| 2.5°  | 1235.3 | 1214.4 | 1202.8 | 1196.6 | 1196.6 | 1188.2 | 1178.8 | 1175.6 | 1189.2 | 1189.2 | 1212.3 |
| 5°    | 1112.8 | 1096.1 | 1077.2 | 1065.7 | 1047.9 | 1051.1 | 1040.6 | 1039.5 | 1053.1 | 1059.4 | 1083.5 |
| 7.5°  | 1028.0 | 1007.1 | 995.6  | 988.2  | 978.8  | 974.6  | 965.2  | 962.1  | 969.4  | 979.9  | 1002.9 |
| 10°   | 971.5  | 968.3  | 967.3  | 972.5  | 972.5  | 967.3  | 958.9  | 953.7  | 955.8  | 975.7  | 1001.8 |
| 12.5° | 986.1  | 992.4  | 994.5  | 1002.9 | 1007.1 | 1002.9 | 996.6  | 998.7  | 1012.3 | 1049.0 | 1087.7 |
| 15°   | 1050.0 | 1044.8 | 1042.7 | 1046.9 | 1050.0 | 1045.8 | 1043.7 | 1059.4 | 1106.5 | 1158.9 | 1202.8 |
| 17.5° | 1118.1 | 1084.6 | 1069.9 | 1069.9 | 1072.0 | 1069.9 | 1072.0 | 1102.3 | 1178.8 | 1231.1 | 1263.6 |
| 20°   | 1152.6 | 1090.8 | 1067.8 | 1062.6 | 1066.8 | 1067.8 | 1075.1 | 1109.7 | 1193.4 | 1230.1 | 1237.4 |
| 22.5° | 1142.1 | 1064.7 | 1038.5 | 1034.3 | 1038.5 | 1042.7 | 1050.0 | 1079.3 | 1157.8 | 1176.7 | 1173.5 |
| 25°   | 1089.8 | 1013.4 | 992.4  | 992.4  | 1001.8 | 1000.8 | 1003.9 | 1024.9 | 1089.8 | 1101.3 | 1096.1 |
| 27.5° | 1023.8 | 951.6  | 933.8  | 944.3  | 952.6  | 950.6  | 951.6  | 969.4  | 1017.6 | 1020.7 | 1015.5 |
| 30°   | 956.8  | 894.0  | 877.3  | 889.8  | 901.4  | 899.3  | 900.3  | 918.1  | 948.5  | 945.3  | 938.0  |
| 32.5° | 888.8  | 842.7  | 830.2  | 837.5  | 855.3  | 853.2  | 857.4  | 876.2  | 887.7  | 874.1  | 865.8  |
| 35°   | 826.0  | 801.9  | 792.5  | 796.7  | 810.3  | 813.4  | 820.7  | 833.3  | 833.3  | 816.6  | 801.9  |
| 37.5° | 767.4  | 764.2  | 757.9  | 752.7  | 765.3  | 774.7  | 785.1  | 799.8  | 778.9  | 754.8  | 741.2  |
| 40°   | 712.9  | 726.5  | 718.1  | 704.5  | 711.9  | 725.5  | 746.4  | 757.9  | 732.8  | 708.7  | 685.7  |
| 42.5° | 662.7  | 685.7  | 682.6  | 665.8  | 672.1  | 684.6  | 708.7  | 718.1  | 688.8  | 661.6  | 639.6  |
| 45°   | 614.5  | 647.0  | 649.1  | 628.1  | 634.4  | 647.0  | 675.2  | 678.4  | 640.7  | 611.4  | 595.7  |
| 47.5° | 572.6  | 608.2  | 609.3  | 593.6  | 595.7  | 613.5  | 639.6  | 640.7  | 597.8  | 570.5  | 550.7  |
| 50°   | 532.9  | 573.7  | 576.8  | 563.2  | 565.3  | 586.2  | 608.2  | 604.0  | 558.0  | 529.7  | 511.9  |
| 52.5° | 484.7  | 540.2  | 547.5  | 541.2  | 549.6  | 566.4  | 580.0  | 565.3  | 511.9  | 483.7  | 467.9  |
| 55°   | 432.4  | 504.6  | 520.3  | 516.1  | 525.5  | 539.1  | 542.3  | 532.9  | 465.9  | 437.6  | 422.9  |
| 57.5° | 371.6  | 415.6  | 442.8  | 434.4  | 441.8  | 455.4  | 464.8  | 457.5  | 407.2  | 385.2  | 372.7  |
| 60°   | 307.8  | 337.1  | 343.4  | 329.8  | 323.5  | 347.6  | 369.5  | 360.1  | 317.2  | 303.6  | 288.9  |
| 62.5° | 225.1  | 258.6  | 262.8  | 245.0  | 237.6  | 263.8  | 282.7  | 273.2  | 226.1  | 211.5  | 200.0  |
| 65°   | 180.1  | 211.5  | 219.8  | 203.1  | 198.9  | 218.8  | 230.3  | 207.3  | 173.8  | 158.1  | 145.5  |
| 67.5° | 118.3  | 143.4  | 165.4  | 164.4  | 156.0  | 162.3  | 153.9  | 135.0  | 111.0  | 102.6  | 94.2   |
| 70°   | 73.3   | 87.9   | 101.5  | 106.8  | 105.7  | 103.6  | 92.1   | 78.5   | 71.2   | 68.0   | 63.9   |
| 72.5° | 56.5   | 71.2   | 81.7   | 84.8   | 85.8   | 82.7   | 73.3   | 60.7   | 53.4   | 49.2   | 46.1   |
| 75°   | 41.9   | 53.4   | 61.8   | 66.0   | 68.0   | 66.0   | 56.5   | 48.2   | 40.8   | 37.7   | 34.5   |
| 77.5° | 14.7   | 17.8   | 22.0   | 24.1   | 23.0   | 22.0   | 19.9   | 19.9   | 15.7   | 14.7   | 12.6   |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P636888

CATALOG NUMBER: GWS-SA4B-760-U-SLR-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 | 1369.3 |
| 2.5°  | 1238.4 | 1257.3 | 1291.8 | 1323.2 | 1356.7 | 1391.3 | 1429.0 | 1467.7 | 1485.5 | 1483.4 |
| 5°    | 1120.1 | 1161.0 | 1217.5 | 1279.3 | 1348.4 | 1422.7 | 1505.4 | 1590.2 | 1626.8 | 1642.5 |
| 7.5°  | 1045.8 | 1103.4 | 1177.7 | 1256.2 | 1347.3 | 1453.0 | 1577.6 | 1710.6 | 1764.0 | 1781.8 |
| 10°   | 1055.2 | 1122.2 | 1184.0 | 1260.4 | 1357.8 | 1494.9 | 1649.9 | 1807.9 | 1870.7 | 1890.6 |
| 12.5° | 1131.7 | 1146.3 | 1163.1 | 1225.9 | 1348.4 | 1526.3 | 1715.8 | 1904.2 | 1976.5 | 1996.4 |
| 15°   | 1200.8 | 1132.7 | 1101.3 | 1158.9 | 1314.9 | 1548.3 | 1782.8 | 2007.9 | 2087.4 | 2110.5 |
| 17.5° | 1203.9 | 1101.3 | 1031.2 | 1076.2 | 1260.4 | 1557.7 | 1848.8 | 2113.6 | 2200.5 | 2222.5 |
| 20°   | 1165.2 | 1066.8 | 976.7  | 977.8  | 1186.1 | 1555.6 | 1903.2 | 2208.9 | 2306.2 | 2326.1 |
| 22.5° | 1108.6 | 1025.9 | 932.8  | 900.3  | 1106.5 | 1551.5 | 1962.9 | 2310.4 | 2416.2 | 2435.0 |
| 25°   | 1045.8 | 973.6  | 890.9  | 841.7  | 1027.0 | 1555.6 | 2046.6 | 2443.4 | 2559.6 | 2577.4 |
| 27.5° | 977.8  | 916.0  | 858.4  | 818.6  | 960.0  | 1571.3 | 2147.1 | 2613.0 | 2751.2 | 2770.0 |
| 30°   | 906.6  | 860.5  | 837.5  | 813.4  | 918.1  | 1575.5 | 2256.0 | 2810.8 | 2985.7 | 3011.8 |
| 32.5° | 836.4  | 811.3  | 812.4  | 816.6  | 878.3  | 1546.2 | 2355.4 | 3030.7 | 3264.1 | 3306.0 |
| 35°   | 771.5  | 764.2  | 785.1  | 806.1  | 820.7  | 1470.8 | 2442.3 | 3290.3 | 3608.5 | 3651.5 |
| 37.5° | 716.1  | 722.3  | 748.5  | 769.4  | 757.9  | 1364.1 | 2557.5 | 3614.8 | 3993.8 | 4030.4 |
| 40°   | 662.7  | 678.4  | 708.7  | 718.1  | 709.8  | 1239.5 | 2695.7 | 3927.8 | 4327.7 | 4378.0 |
| 42.5° | 613.5  | 625.0  | 667.9  | 670.0  | 696.2  | 1112.8 | 2828.6 | 4264.9 | 4711.9 | 4738.1 |
| 45°   | 573.7  | 571.6  | 615.6  | 629.2  | 714.0  | 972.5  | 2958.4 | 4714.0 | 5214.4 | 5252.1 |
| 47.5° | 534.9  | 532.9  | 543.3  | 605.1  | 721.3  | 842.7  | 3087.2 | 5371.5 | 5943.1 | 6008.0 |
| 50°   | 498.3  | 501.4  | 469.0  | 593.6  | 681.5  | 743.3  | 3145.8 | 5979.7 | 6605.7 | 6632.9 |
| 52.5° | 465.9  | 454.3  | 397.8  | 555.9  | 596.7  | 649.1  | 2979.4 | 6256.1 | 7016.1 | 7093.6 |
| 55°   | 419.8  | 355.9  | 327.7  | 451.2  | 471.1  | 566.4  | 2440.2 | 6095.9 | 7051.7 | 7188.8 |
| 57.5° | 359.1  | 279.5  | 278.5  | 332.9  | 332.9  | 525.5  | 1563.0 | 5208.2 | 6077.1 | 6317.8 |
| 60°   | 276.4  | 216.7  | 230.3  | 231.4  | 213.6  | 383.2  | 877.3  | 3772.9 | 4493.1 | 4732.9 |
| 62.5° | 196.8  | 165.4  | 173.8  | 138.2  | 122.5  | 191.6  | 420.8  | 2172.2 | 2773.1 | 2806.6 |
| 65°   | 131.9  | 112.0  | 91.1   | 76.4   | 75.4   | 81.7   | 173.8  | 785.1  | 954.7  | 1077.2 |
| 67.5° | 86.9   | 68.0   | 48.2   | 48.2   | 54.4   | 54.4   | 66.0   | 129.8  | 182.2  | 166.5  |
| 70°   | 56.5   | 47.1   | 30.4   | 29.3   | 35.6   | 35.6   | 33.5   | 35.6   | 37.7   | 37.7   |
| 72.5° | 41.9   | 35.6   | 17.8   | 15.7   | 19.9   | 20.9   | 18.8   | 17.8   | 17.8   | 17.8   |
| 75°   | 31.4   | 25.1   | 10.5   | 7.3    | 9.4    | 12.6   | 10.5   | 7.3    | 7.3    | 6.3    |
| 77.5° | 12.6   | 9.4    | 4.2    | 3.1    | 5.2    | 7.3    | 6.3    | 3.1    | 2.1    | 2.1    |
| 80°   | 1.0    | 2.1    | 2.1    | 2.1    | 3.1    | 4.2    | 5.2    | 2.1    | 1.0    | 1.0    |
| 82.5° | 0.0    | 1.0    | 1.0    | 1.0    | 2.1    | 3.1    | 4.2    | 2.1    | 1.0    | 1.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 2.1    | 3.1    | 2.1    | 1.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    | 3.1    | 2.1    | 1.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-9-R4

Test Date: 10/23/2019

Luminaire Tested: SA1C-760-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

**Test Information**

Test Method: LM-79-2008  
 Report Number: SP1-1908-441-9-R4  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 10/28/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGRAW-EDISON  
 Catalog Number: **SA1C-760-U-5WQ**  
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

\*\*\*THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.\*\*\*TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

**Spectral Parameters**

|                           |        |           |      |      |       |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K):                  | 5474   | CRI (Ra): | 71.7 | R9:  | -27.1 |
| CIE u':                   | 0.2052 | R1:       | 70.6 | R10: | 40.8  |
| CIE v':                   | 0.4804 | R2:       | 74.6 | R11: | 74.6  |
| Duv:                      | 0.0025 | R3:       | 78.3 | R12: | 50.4  |
| CIE x:                    | 0.3330 | R4:       | 73.8 | R13: | 70.0  |
| CIE y:                    | 0.3466 | R5:       | 72.4 | R14: | 87.8  |
| CIE z:                    | 0.3204 | R6:       | 67.5 |      |       |
| Peak Wavelength (nm):     | 442    | R7:       | 77.5 |      |       |
| Dominant Wavelength (nm): | 554    | R8:       | 58.9 |      |       |
| Purity:                   | 4.1    |           |      |      |       |
| Rf:                       | 72.1   |           |      |      |       |
| Rg:                       | 97.2   |           |      |      |       |



**Test Conditions**

Stabilization Time: 240M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.6/31%  
 Sphere Temperature (°C): 25.9

REPORT NUMBER: SP1-1908-441-9-R4

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/28/2019        | 12/28/2019           |
| Power Meter                    | IN0071                | 12/5/2018        | 12/5/2019            |
| AC Power Source                | IN0063                | 12/5/2018        | 12/5/2019            |
| DC Power Source                | IN0208                | 12/5/2018        | 12/5/2019            |
| Sphere Thermometer             | IN0085                | 12/5/2018        | 12/5/2019            |
| Room Thermometer               | IN0046                | 12/5/2018        | 12/5/2019            |

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5700K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-9-R4

**Photopic Flux vs. Wavelength**



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| $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 3540                                 | NR                             | 490               | 33363                                | NR                             | 620               | 80193                                | NR                             | 750               | 4663                                 | NR                             | 880               | 4678                                 | NR                             |
| 365               | 2862                                 | NR                             | 495               | 44177                                | NR                             | 625               | 73091                                | NR                             | 755               | 4147                                 | NR                             | 885               | 4128                                 | NR                             |
| 370               | 2865                                 | NR                             | 500               | 57019                                | NR                             | 630               | 66269                                | NR                             | 760               | 4040                                 | NR                             | 890               | 4504                                 | NR                             |
| 375               | 3254                                 | NR                             | 505               | 70030                                | NR                             | 635               | 60012                                | NR                             | 765               | 3474                                 | NR                             | 895               | 4371                                 | NR                             |
| 380               | 3076                                 | NR                             | 510               | 81972                                | NR                             | 640               | 53914                                | NR                             | 770               | 3469                                 | NR                             | 900               | 4082                                 | NR                             |
| 385               | 2904                                 | NR                             | 515               | 92590                                | NR                             | 645               | 48385                                | NR                             | 775               | 3181                                 | NR                             | 905               | 2982                                 | NR                             |
| 390               | 2689                                 | NR                             | 520               | 100305                               | NR                             | 650               | 43219                                | NR                             | 780               | 2969                                 | NR                             | 910               | 4351                                 | NR                             |
| 395               | 2619                                 | NR                             | 525               | 107452                               | NR                             | 655               | 38562                                | NR                             | 785               | 3132                                 | NR                             | 915               | 3365                                 | NR                             |
| 400               | 2679                                 | NR                             | 530               | 111373                               | NR                             | 660               | 34110                                | NR                             | 790               | 2507                                 | NR                             | 920               | 3430                                 | NR                             |
| 405               | 3515                                 | NR                             | 535               | 114505                               | NR                             | 665               | 30085                                | NR                             | 795               | 2968                                 | NR                             | 925               | 4264                                 | NR                             |
| 410               | 6934                                 | NR                             | 540               | 116408                               | NR                             | 670               | 26205                                | NR                             | 800               | 2758                                 | NR                             | 930               | 4095                                 | NR                             |
| 415               | 14943                                | NR                             | 545               | 118700                               | NR                             | 675               | 22906                                | NR                             | 805               | 2872                                 | NR                             | 935               | 5048                                 | NR                             |
| 420               | 31939                                | NR                             | 550               | 119209                               | NR                             | 680               | 20058                                | NR                             | 810               | 3094                                 | NR                             | 940               | 4074                                 | NR                             |
| 425               | 64701                                | NR                             | 555               | 120742                               | NR                             | 685               | 17413                                | NR                             | 815               | 3222                                 | NR                             | 945               | 4949                                 | NR                             |
| 430               | 110939                               | NR                             | 560               | 121594                               | NR                             | 690               | 15447                                | NR                             | 820               | 3238                                 | NR                             | 950               | 4387                                 | NR                             |
| 435               | 164597                               | NR                             | 565               | 121913                               | NR                             | 695               | 13398                                | NR                             | 825               | 3524                                 | NR                             | 955               | 4978                                 | NR                             |
| 440               | 207696                               | NR                             | 570               | 122147                               | NR                             | 700               | 11777                                | NR                             | 830               | 2921                                 | NR                             | 960               | 4706                                 | NR                             |
| 445               | 201830                               | NR                             | 575               | 121605                               | NR                             | 705               | 10412                                | NR                             | 835               | 3595                                 | NR                             | 965               | 5083                                 | NR                             |
| 450               | 145410                               | NR                             | 580               | 120248                               | NR                             | 710               | 9544                                 | NR                             | 840               | 3016                                 | NR                             | 970               | 4522                                 | NR                             |
| 455               | 89594                                | NR                             | 585               | 117717                               | NR                             | 715               | 8940                                 | NR                             | 845               | 4032                                 | NR                             | 975               | 4740                                 | NR                             |
| 460               | 58321                                | NR                             | 590               | 114359                               | NR                             | 720               | 7897                                 | NR                             | 850               | 3579                                 | NR                             | 980               | 6122                                 | NR                             |
| 465               | 39318                                | NR                             | 595               | 109974                               | NR                             | 725               | 7045                                 | NR                             | 855               | 4571                                 | NR                             | 985               | 6450                                 | NR                             |
| 470               | 27693                                | NR                             | 600               | 105269                               | NR                             | 730               | 6483                                 | NR                             | 860               | 4485                                 | NR                             | 990               | 4875                                 | NR                             |
| 475               | 23081                                | NR                             | 605               | 99453                                | NR                             | 735               | 5838                                 | NR                             | 865               | 3978                                 | NR                             | 995               | 4764                                 | NR                             |
| 480               | 23002                                | NR                             | 610               | 92921                                | NR                             | 740               | 5261                                 | NR                             | 870               | 4298                                 | NR                             | 1000              | 3640                                 | NR                             |
| 485               | 26201                                | NR                             | 615               | 86989                                | NR                             | 745               | 4760                                 | NR                             | 875               | 4356                                 | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-1908-441-9-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13759.3 S/P: 1.85

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360    | 3540          | NR            | 490    | 33363         | NR            | 620    | 80193         | NR            | 750    | 4663          | NR            | 880    | 4678          | NR            |
| 365    | 2862          | NR            | 495    | 44177         | NR            | 625    | 73091         | NR            | 755    | 4147          | NR            | 885    | 4128          | NR            |
| 370    | 2865          | NR            | 500    | 57019         | NR            | 630    | 66269         | NR            | 760    | 4040          | NR            | 890    | 4504          | NR            |
| 375    | 3254          | NR            | 505    | 70030         | NR            | 635    | 60012         | NR            | 765    | 3474          | NR            | 895    | 4371          | NR            |
| 380    | 3076          | NR            | 510    | 81972         | NR            | 640    | 53914         | NR            | 770    | 3469          | NR            | 900    | 4082          | NR            |
| 385    | 2904          | NR            | 515    | 92590         | NR            | 645    | 48385         | NR            | 775    | 3181          | NR            | 905    | 2982          | NR            |
| 390    | 2689          | NR            | 520    | 100305        | NR            | 650    | 43219         | NR            | 780    | 2969          | NR            | 910    | 4351          | NR            |
| 395    | 2619          | NR            | 525    | 107452        | NR            | 655    | 38562         | NR            | 785    | 3132          | NR            | 915    | 3365          | NR            |
| 400    | 2679          | NR            | 530    | 111373        | NR            | 660    | 34110         | NR            | 790    | 2507          | NR            | 920    | 3430          | NR            |
| 405    | 3515          | NR            | 535    | 114505        | NR            | 665    | 30085         | NR            | 795    | 2968          | NR            | 925    | 4264          | NR            |
| 410    | 6934          | NR            | 540    | 116408        | NR            | 670    | 26205         | NR            | 800    | 2758          | NR            | 930    | 4095          | NR            |
| 415    | 14943         | NR            | 545    | 118700        | NR            | 675    | 22906         | NR            | 805    | 2872          | NR            | 935    | 5048          | NR            |
| 420    | 31939         | NR            | 550    | 119209        | NR            | 680    | 20058         | NR            | 810    | 3094          | NR            | 940    | 4074          | NR            |
| 425    | 64701         | NR            | 555    | 120742        | NR            | 685    | 17413         | NR            | 815    | 3222          | NR            | 945    | 4949          | NR            |
| 430    | 110939        | NR            | 560    | 121594        | NR            | 690    | 15447         | NR            | 820    | 3238          | NR            | 950    | 4387          | NR            |
| 435    | 164597        | NR            | 565    | 121913        | NR            | 695    | 13398         | NR            | 825    | 3524          | NR            | 955    | 4978          | NR            |
| 440    | 207696        | NR            | 570    | 122147        | NR            | 700    | 11777         | NR            | 830    | 2921          | NR            | 960    | 4706          | NR            |
| 445    | 201830        | NR            | 575    | 121605        | NR            | 705    | 10412         | NR            | 835    | 3595          | NR            | 965    | 5083          | NR            |
| 450    | 145410        | NR            | 580    | 120248        | NR            | 710    | 9544          | NR            | 840    | 3016          | NR            | 970    | 4522          | NR            |
| 455    | 89594         | NR            | 585    | 117717        | NR            | 715    | 8940          | NR            | 845    | 4032          | NR            | 975    | 4740          | NR            |
| 460    | 58321         | NR            | 590    | 114359        | NR            | 720    | 7897          | NR            | 850    | 3579          | NR            | 980    | 6122          | NR            |
| 465    | 39318         | NR            | 595    | 109974        | NR            | 725    | 7045          | NR            | 855    | 4571          | NR            | 985    | 6450          | NR            |
| 470    | 27693         | NR            | 600    | 105269        | NR            | 730    | 6483          | NR            | 860    | 4485          | NR            | 990    | 4875          | NR            |
| 475    | 23081         | NR            | 605    | 99453         | NR            | 735    | 5838          | NR            | 865    | 3978          | NR            | 995    | 4764          | NR            |
| 480    | 23002         | NR            | 610    | 92921         | NR            | 740    | 5261          | NR            | 870    | 4298          | NR            | 1000   | 3640          | NR            |
| 485    | 26201         | NR            | 615    | 86989         | NR            | 745    | 4760          | NR            | 875    | 4356          | NR            |        |               |               |



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**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 5527.6 M/P: 0.74**

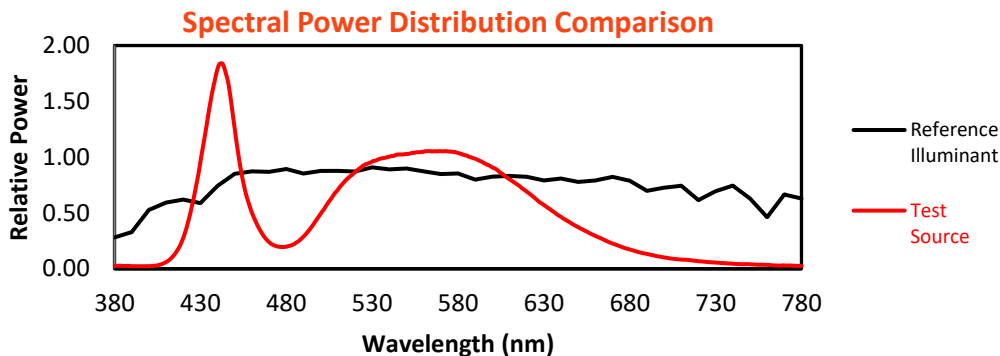
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360    | 3540          | NR            | 490    | 33363         | NR            | 620    | 80193         | NR            | 750    | 4663          | NR            | 880    | 4678          | NR            |
| 365    | 2862          | NR            | 495    | 44177         | NR            | 625    | 73091         | NR            | 755    | 4147          | NR            | 885    | 4128          | NR            |
| 370    | 2865          | NR            | 500    | 57019         | NR            | 630    | 66269         | NR            | 760    | 4040          | NR            | 890    | 4504          | NR            |
| 375    | 3254          | NR            | 505    | 70030         | NR            | 635    | 60012         | NR            | 765    | 3474          | NR            | 895    | 4371          | NR            |
| 380    | 3076          | NR            | 510    | 81972         | NR            | 640    | 53914         | NR            | 770    | 3469          | NR            | 900    | 4082          | NR            |
| 385    | 2904          | NR            | 515    | 92590         | NR            | 645    | 48385         | NR            | 775    | 3181          | NR            | 905    | 2982          | NR            |
| 390    | 2689          | NR            | 520    | 100305        | NR            | 650    | 43219         | NR            | 780    | 2969          | NR            | 910    | 4351          | NR            |
| 395    | 2619          | NR            | 525    | 107452        | NR            | 655    | 38562         | NR            | 785    | 3132          | NR            | 915    | 3365          | NR            |
| 400    | 2679          | NR            | 530    | 111373        | NR            | 660    | 34110         | NR            | 790    | 2507          | NR            | 920    | 3430          | NR            |
| 405    | 3515          | NR            | 535    | 114505        | NR            | 665    | 30085         | NR            | 795    | 2968          | NR            | 925    | 4264          | NR            |
| 410    | 6934          | NR            | 540    | 116408        | NR            | 670    | 26205         | NR            | 800    | 2758          | NR            | 930    | 4095          | NR            |
| 415    | 14943         | NR            | 545    | 118700        | NR            | 675    | 22906         | NR            | 805    | 2872          | NR            | 935    | 5048          | NR            |
| 420    | 31939         | NR            | 550    | 119209        | NR            | 680    | 20058         | NR            | 810    | 3094          | NR            | 940    | 4074          | NR            |
| 425    | 64701         | NR            | 555    | 120742        | NR            | 685    | 17413         | NR            | 815    | 3222          | NR            | 945    | 4949          | NR            |
| 430    | 110939        | NR            | 560    | 121594        | NR            | 690    | 15447         | NR            | 820    | 3238          | NR            | 950    | 4387          | NR            |
| 435    | 164597        | NR            | 565    | 121913        | NR            | 695    | 13398         | NR            | 825    | 3524          | NR            | 955    | 4978          | NR            |
| 440    | 207696        | NR            | 570    | 122147        | NR            | 700    | 11777         | NR            | 830    | 2921          | NR            | 960    | 4706          | NR            |
| 445    | 201830        | NR            | 575    | 121605        | NR            | 705    | 10412         | NR            | 835    | 3595          | NR            | 965    | 5083          | NR            |
| 450    | 145410        | NR            | 580    | 120248        | NR            | 710    | 9544          | NR            | 840    | 3016          | NR            | 970    | 4522          | NR            |
| 455    | 89594         | NR            | 585    | 117717        | NR            | 715    | 8940          | NR            | 845    | 4032          | NR            | 975    | 4740          | NR            |
| 460    | 58321         | NR            | 590    | 114359        | NR            | 720    | 7897          | NR            | 850    | 3579          | NR            | 980    | 6122          | NR            |
| 465    | 39318         | NR            | 595    | 109974        | NR            | 725    | 7045          | NR            | 855    | 4571          | NR            | 985    | 6450          | NR            |
| 470    | 27693         | NR            | 600    | 105269        | NR            | 730    | 6483          | NR            | 860    | 4485          | NR            | 990    | 4875          | NR            |
| 475    | 23081         | NR            | 605    | 99453         | NR            | 735    | 5838          | NR            | 865    | 3978          | NR            | 995    | 4764          | NR            |
| 480    | 23002         | NR            | 610    | 92921         | NR            | 740    | 5261          | NR            | 870    | 4298          | NR            | 1000   | 3640          | NR            |
| 485    | 26201         | NR            | 615    | 86989         | NR            | 745    | 4760          | NR            | 875    | 4356          | NR            |        |               |               |

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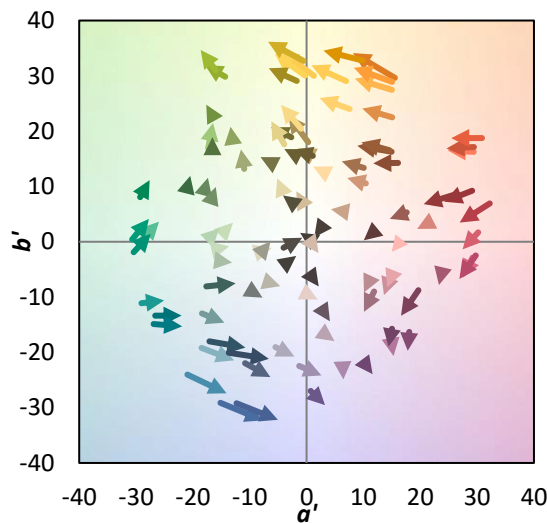
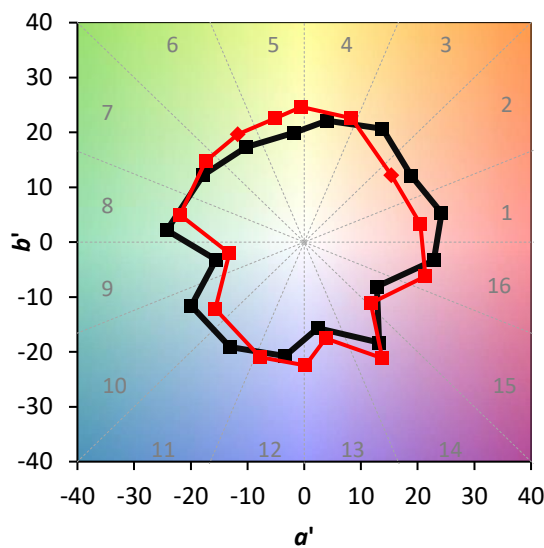
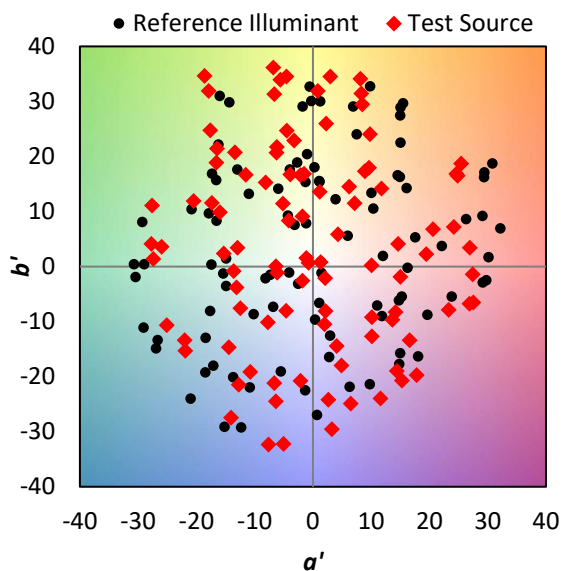
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**Summary**

$R_f = 72.1$   
 $R_g = 97.2$   
 CIE  $R_a = 71.7$   
 $R_9 = -27.1$



**Color Vector Graphics**



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**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 54 | CES51 = 88 | CES76 = 43 |
| CES02 = 59 | CES27 = 79 | CES52 = 90 | CES77 = 64 |
| CES03 = 30 | CES28 = 77 | CES53 = 77 | CES78 = 46 |
| CES04 = 69 | CES29 = 50 | CES54 = 81 | CES79 = 74 |
| CES05 = 46 | CES30 = 59 | CES55 = 80 | CES80 = 70 |
| CES06 = 50 | CES31 = 55 | CES56 = 70 | CES81 = 71 |
| CES07 = 38 | CES32 = 52 | CES57 = 68 | CES82 = 88 |
| CES08 = 38 | CES33 = 63 | CES58 = 70 | CES83 = 82 |
| CES09 = 29 | CES34 = 63 | CES59 = 88 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 92 | CES85 = 84 |
| CES11 = 55 | CES36 = 90 | CES61 = 88 | CES86 = 76 |
| CES12 = 61 | CES37 = 72 | CES62 = 81 | CES87 = 75 |
| CES13 = 41 | CES38 = 68 | CES63 = 75 | CES88 = 77 |
| CES14 = 74 | CES39 = 91 | CES64 = 72 | CES89 = 76 |
| CES15 = 70 | CES40 = 83 | CES65 = 65 | CES90 = 76 |
| CES16 = 46 | CES41 = 84 | CES66 = 66 | CES91 = 92 |
| CES17 = 48 | CES42 = 70 | CES67 = 64 | CES92 = 70 |
| CES18 = 55 | CES43 = 69 | CES68 = 71 | CES93 = 83 |
| CES19 = 70 | CES44 = 98 | CES69 = 80 | CES94 = 60 |
| CES20 = 64 | CES45 = 79 | CES70 = 58 | CES95 = 73 |
| CES21 = 85 | CES46 = 78 | CES71 = 55 | CES96 = 79 |
| CES22 = 77 | CES47 = 76 | CES72 = 84 | CES97 = 84 |
| CES23 = 91 | CES48 = 68 | CES73 = 47 | CES98 = 73 |
| CES24 = 90 | CES49 = 78 | CES74 = 94 | CES99 = 62 |
| CES25 = 71 | CES50 = 87 | CES75 = 51 |            |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)