

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: P633200

Luminaire Tested: GWS-SA2E-730-U-SLL-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P633200  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-39)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA2E-730-U-SLL-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (32) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

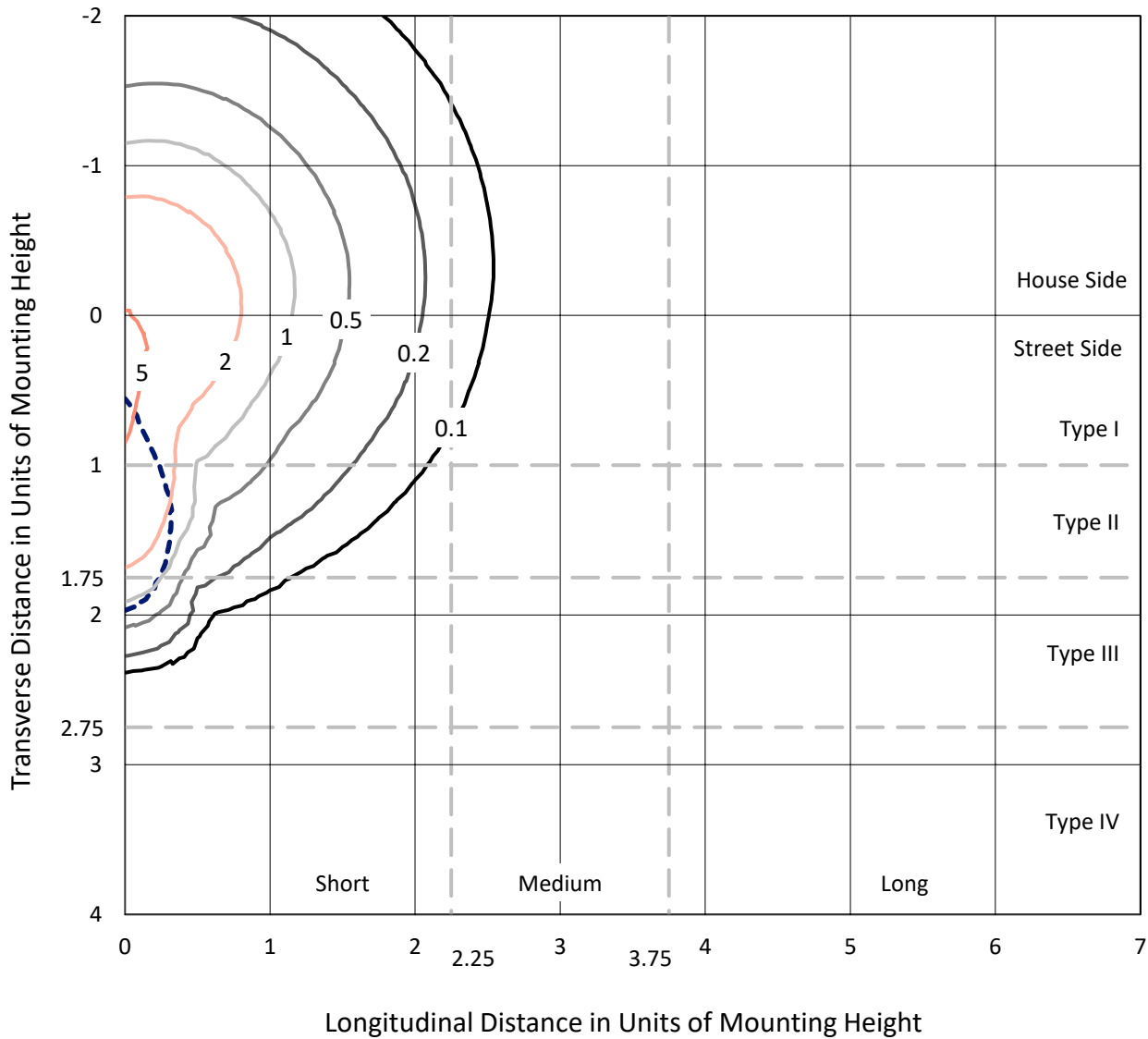
Lumens per Lamp: N/A  
Luminaire Lumens: 10342.2 lumens  
Efficiency: N/A  
Efficacy: 95.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 108.2  
Input Voltage (V): 120  
Input Current (Ain): 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

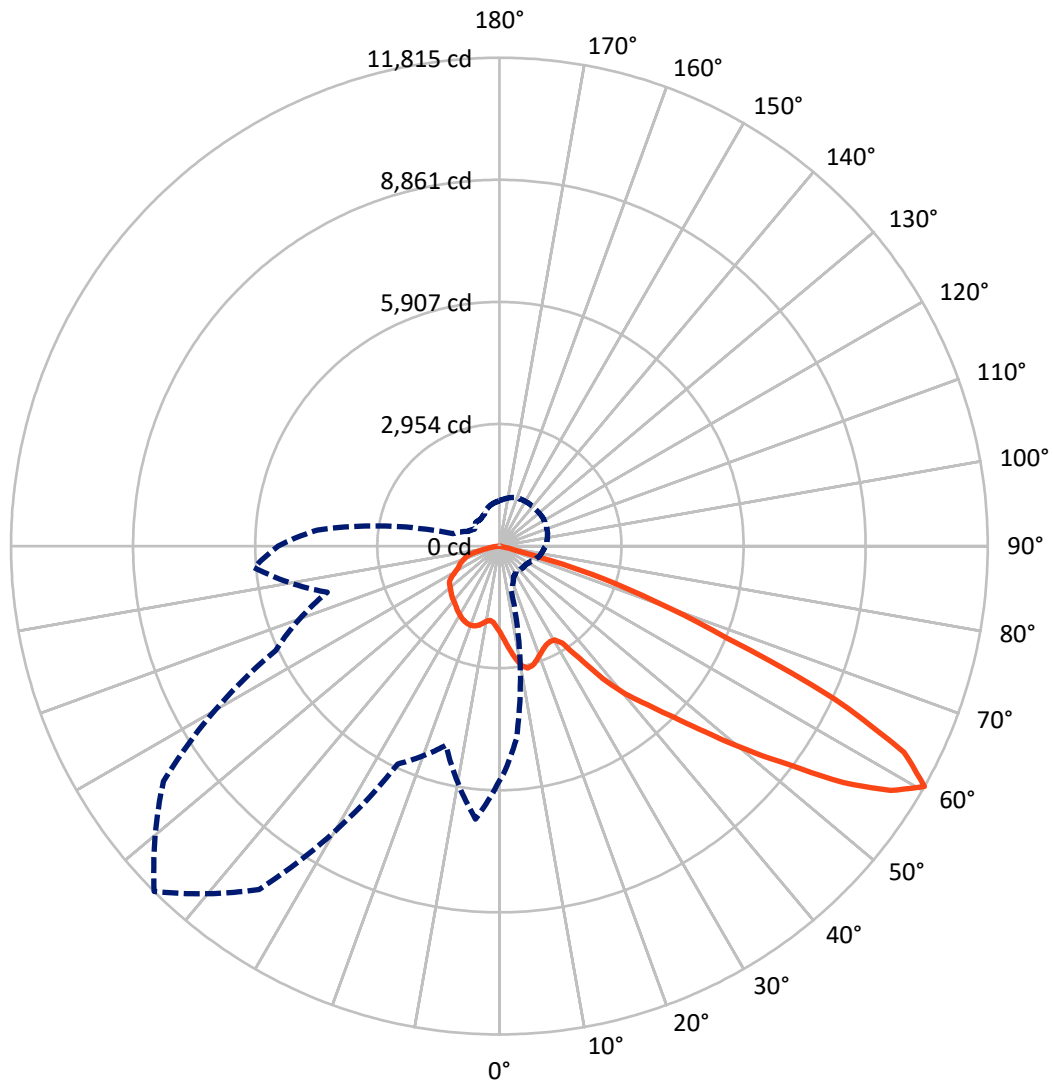
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral    - - - Horizontal Cone Through 60-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3538.0   | 0.0    | 3538.0  |
|                    | % Fixture | 34.2     | 0.0    | 34.2    |
| <b>Street Side</b> | Lumens    | 6804.2   | 0.0    | 6804.2  |
|                    | % Fixture | 65.8     | 0.0    | 65.8    |
| <b>Total</b>       | Lumens    | 10342.2  | 0.0    | 10342.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 203.8   | 2.0       |
| 10°-20°   | 653.7   | 6.3       |
| 20°-30°   | 1064.6  | 10.3      |
| 30°-40°   | 1495.5  | 14.5      |
| 40°-50°   | 2046.4  | 19.8      |
| 50°-60°   | 2625.4  | 25.4      |
| 60°-70°   | 1767.9  | 17.1      |
| 70°-80°   | 442.0   | 4.3       |
| 80°-90°   | 43.1    | 0.4       |
| 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°    | 10342.2 | 100.0     |
| 0°-180°   | 10342.2 | 100.0     |

**Coefficient of Utilization**



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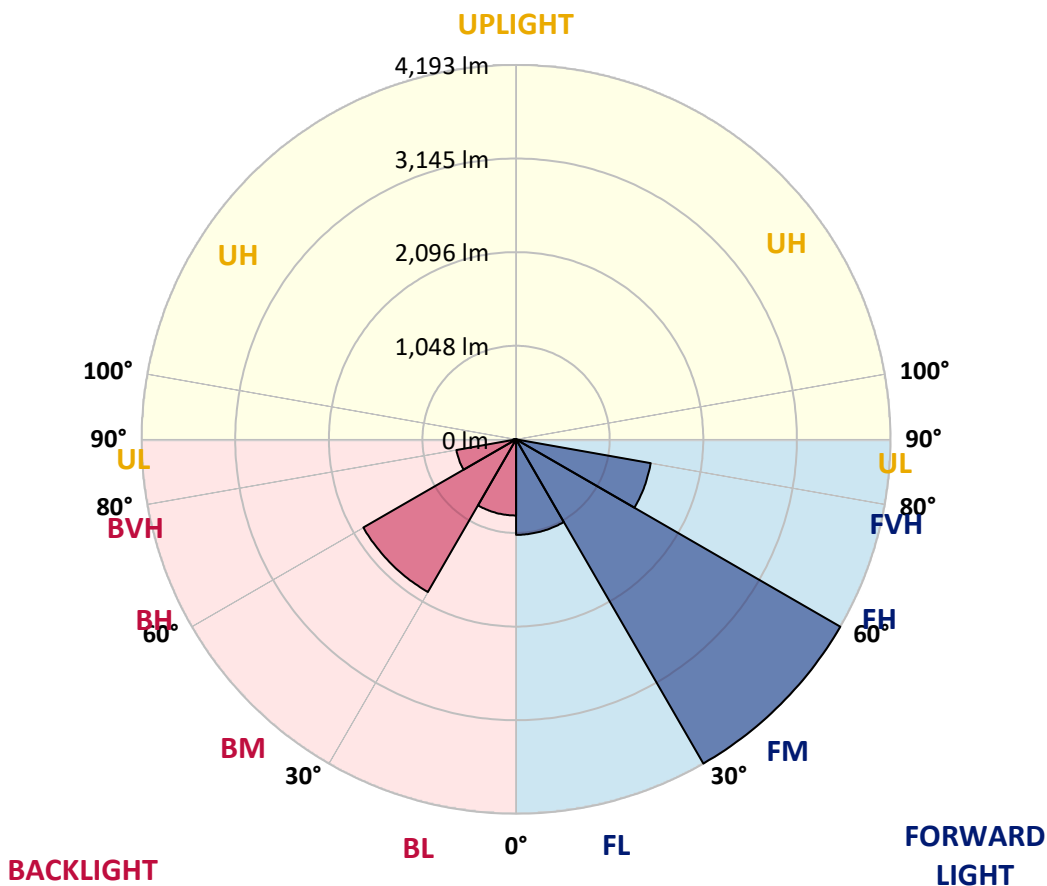
CATALOG NUMBER: GWS-SA2E-730-U-SLL-W-GRSWH

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

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1069.1 | 10.3      |                         |      |         |
| FM (30°-60°)   | 4192.8 | 40.5      |                         |      |         |
| FH (60°-80°)   | 1531.1 | 14.8      |                         |      | G1/1800 |
| FVH (80°-90°)  | 11.2   | 0.1       |                         |      | G1/100  |
| BL (0°-30°)    | 852.9  | 8.2       | B2/1000                 |      |         |
| BM (30°-60°)   | 1974.5 | 19.1      | B2/2500                 |      |         |
| BH (60°-80°)   | 678.7  | 6.6       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 31.9   | 0.3       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**

Type III Short





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CATALOG NUMBER: GWS-SA2E-730-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 |
| 2.5°  | 2206.9 | 2202.1 | 2197.4 | 2160.2 | 2150.7 | 2124.0 | 2105.0 | 2081.1 | 2046.9 | 2027.8 | 2011.6 |
| 5°    | 2345.0 | 2337.4 | 2311.6 | 2235.4 | 2185.9 | 2131.6 | 2086.9 | 2037.3 | 1984.9 | 1950.7 | 1924.0 |
| 7.5°  | 2475.5 | 2473.6 | 2429.8 | 2304.0 | 2224.0 | 2145.9 | 2085.0 | 2012.6 | 1937.3 | 1885.9 | 1851.6 |
| 10°   | 2596.4 | 2582.1 | 2529.8 | 2365.9 | 2261.2 | 2171.6 | 2105.9 | 2025.9 | 1938.3 | 1868.7 | 1823.0 |
| 12.5° | 2703.1 | 2685.0 | 2612.6 | 2423.1 | 2293.6 | 2183.1 | 2111.6 | 2045.9 | 1987.8 | 1929.7 | 1877.3 |
| 15°   | 2790.7 | 2768.8 | 2695.5 | 2476.4 | 2322.1 | 2176.4 | 2076.4 | 2025.0 | 2045.0 | 2070.7 | 2012.6 |
| 17.5° | 2872.7 | 2849.8 | 2760.3 | 2515.5 | 2330.7 | 2135.4 | 1989.7 | 1967.8 | 2068.8 | 2185.9 | 2159.3 |
| 20°   | 2941.2 | 2915.5 | 2811.7 | 2534.5 | 2315.5 | 2057.3 | 1877.3 | 1915.4 | 2048.8 | 2188.8 | 2231.6 |
| 22.5° | 3015.5 | 2994.6 | 2869.8 | 2562.1 | 2296.4 | 1949.7 | 1783.0 | 1876.4 | 2014.5 | 2137.3 | 2202.1 |
| 25°   | 3134.6 | 3108.9 | 2960.3 | 2610.7 | 2286.9 | 1848.7 | 1715.4 | 1838.3 | 1966.9 | 2078.3 | 2128.8 |
| 27.5° | 3307.0 | 3259.4 | 3084.1 | 2695.5 | 2297.4 | 1753.5 | 1672.5 | 1791.6 | 1911.6 | 2006.9 | 2047.8 |
| 30°   | 3494.6 | 3437.5 | 3221.3 | 2783.1 | 2312.6 | 1695.4 | 1649.7 | 1738.3 | 1826.8 | 1922.1 | 1966.9 |
| 32.5° | 3716.5 | 3666.1 | 3367.9 | 2848.8 | 2280.2 | 1668.7 | 1632.5 | 1680.2 | 1750.6 | 1826.8 | 1864.0 |
| 35°   | 3981.3 | 3890.8 | 3528.0 | 2902.2 | 2175.4 | 1629.7 | 1617.3 | 1616.3 | 1653.5 | 1727.8 | 1769.7 |
| 37.5° | 4266.1 | 4169.0 | 3725.1 | 2959.3 | 2012.6 | 1567.8 | 1581.1 | 1541.1 | 1575.4 | 1634.4 | 1682.1 |
| 40°   | 4499.5 | 4397.6 | 3924.2 | 3037.4 | 1808.7 | 1470.6 | 1501.1 | 1458.2 | 1479.2 | 1540.1 | 1593.5 |
| 42.5° | 4728.1 | 4619.5 | 4109.9 | 3126.0 | 1611.6 | 1375.4 | 1390.6 | 1374.4 | 1381.1 | 1444.9 | 1519.2 |
| 45°   | 5028.1 | 4906.2 | 4338.5 | 3188.9 | 1434.4 | 1300.1 | 1285.8 | 1258.2 | 1293.5 | 1376.3 | 1455.4 |
| 47.5° | 5529.1 | 5383.4 | 4712.8 | 3229.8 | 1305.8 | 1257.3 | 1191.5 | 1175.3 | 1219.2 | 1311.6 | 1393.5 |
| 50°   | 6114.9 | 5989.1 | 5311.0 | 3227.9 | 1209.6 | 1221.1 | 1100.1 | 1085.8 | 1158.2 | 1251.5 | 1338.2 |
| 52.5° | 6594.9 | 6467.3 | 5822.5 | 3132.7 | 1130.6 | 1143.9 | 1046.8 | 1006.8 | 1105.8 | 1192.5 | 1279.2 |
| 55°   | 6982.6 | 6838.7 | 6057.7 | 2734.5 | 1030.6 | 1021.0 | 988.7  | 915.3  | 1040.1 | 1133.4 | 1214.4 |
| 57.5° | 6774.0 | 6602.5 | 5772.9 | 2079.2 | 927.7  | 867.7  | 888.7  | 834.4  | 950.6  | 1067.7 | 1145.8 |
| 60°   | 5679.6 | 5525.3 | 4690.0 | 1106.8 | 816.3  | 724.8  | 768.6  | 777.2  | 852.5  | 988.7  | 1068.7 |
| 62.5° | 3901.3 | 3788.9 | 3178.4 | 671.5  | 643.9  | 582.0  | 650.5  | 712.4  | 768.6  | 883.9  | 953.4  |
| 65°   | 1908.8 | 1875.4 | 1589.7 | 430.5  | 450.5  | 470.5  | 539.1  | 614.3  | 697.2  | 798.2  | 871.5  |
| 67.5° | 525.8  | 529.6  | 482.0  | 336.2  | 355.3  | 410.5  | 464.8  | 524.8  | 607.7  | 701.0  | 775.3  |
| 70°   | 231.5  | 235.3  | 242.9  | 259.1  | 295.3  | 345.7  | 401.9  | 463.9  | 540.1  | 618.2  | 689.6  |
| 72.5° | 161.0  | 164.8  | 176.2  | 197.2  | 229.5  | 277.2  | 330.5  | 389.6  | 468.6  | 534.3  | 593.4  |
| 75°   | 99.1   | 101.9  | 112.4  | 130.5  | 152.4  | 188.6  | 241.0  | 295.3  | 364.8  | 424.8  | 477.2  |
| 77.5° | 52.4   | 50.5   | 57.1   | 69.5   | 88.6   | 107.6  | 142.9  | 177.2  | 226.7  | 275.3  | 319.1  |
| 80°   | 28.6   | 27.6   | 31.4   | 38.1   | 43.8   | 59.1   | 82.9   | 105.7  | 134.3  | 161.9  | 185.7  |
| 82.5° | 12.4   | 11.4   | 12.4   | 16.2   | 20.0   | 28.6   | 41.9   | 58.1   | 74.3   | 93.3   | 108.6  |
| 85°   | 0.0    | 0.0    | 0.0    | 1.0    | 4.8    | 7.6    | 14.3   | 21.0   | 30.5   | 41.9   | 51.4   |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 3.8    | 8.6    |
| 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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CATALOG NUMBER: GWS-SA2E-730-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 |
| 2.5°  | 2002.1 | 1978.3 | 1976.4 | 1957.3 | 1959.2 | 1960.2 | 1941.1 | 1933.5 | 1940.2 | 1947.8 | 1944.0 |
| 5°    | 1914.5 | 1889.7 | 1879.2 | 1861.1 | 1859.2 | 1850.7 | 1843.0 | 1833.5 | 1840.2 | 1846.8 | 1850.7 |
| 7.5°  | 1838.3 | 1822.1 | 1815.4 | 1810.6 | 1812.6 | 1808.7 | 1793.5 | 1784.9 | 1784.0 | 1786.8 | 1790.6 |
| 10°   | 1813.5 | 1800.2 | 1808.7 | 1822.1 | 1831.6 | 1838.3 | 1822.1 | 1807.8 | 1794.5 | 1788.7 | 1788.7 |
| 12.5° | 1866.8 | 1849.7 | 1866.8 | 1881.1 | 1900.2 | 1904.9 | 1886.8 | 1871.6 | 1866.8 | 1872.6 | 1884.0 |
| 15°   | 1984.9 | 1944.9 | 1944.0 | 1952.6 | 1967.8 | 1975.4 | 1958.3 | 1950.7 | 1950.7 | 1986.9 | 2015.4 |
| 17.5° | 2103.1 | 2037.3 | 2009.7 | 2005.0 | 2014.5 | 2017.3 | 2003.0 | 1996.4 | 2013.5 | 2084.0 | 2137.3 |
| 20°   | 2185.9 | 2105.9 | 2045.9 | 2034.5 | 2037.3 | 2038.3 | 2026.9 | 2022.1 | 2046.9 | 2132.6 | 2177.3 |
| 22.5° | 2177.3 | 2118.3 | 2045.0 | 2030.7 | 2035.4 | 2033.5 | 2023.0 | 2021.1 | 2041.1 | 2115.4 | 2136.4 |
| 25°   | 2118.3 | 2072.6 | 2010.7 | 2001.1 | 2008.8 | 2007.8 | 1997.3 | 1992.6 | 2001.1 | 2050.7 | 2052.6 |
| 27.5° | 2050.7 | 2010.7 | 1957.3 | 1954.5 | 1966.9 | 1973.5 | 1955.4 | 1941.1 | 1938.3 | 1971.6 | 1964.0 |
| 30°   | 1969.7 | 1940.2 | 1897.3 | 1899.2 | 1922.1 | 1925.9 | 1904.0 | 1883.0 | 1877.3 | 1895.4 | 1884.9 |
| 32.5° | 1873.5 | 1864.0 | 1841.1 | 1845.9 | 1867.8 | 1875.4 | 1852.6 | 1830.6 | 1824.0 | 1829.7 | 1807.8 |
| 35°   | 1791.6 | 1787.8 | 1789.7 | 1798.3 | 1817.3 | 1823.0 | 1804.0 | 1786.8 | 1777.3 | 1757.3 | 1728.7 |
| 37.5° | 1706.8 | 1717.3 | 1744.9 | 1761.1 | 1771.6 | 1769.7 | 1759.2 | 1746.8 | 1731.6 | 1694.4 | 1659.2 |
| 40°   | 1627.8 | 1654.4 | 1704.0 | 1722.1 | 1725.9 | 1726.8 | 1719.2 | 1708.7 | 1689.7 | 1640.2 | 1600.2 |
| 42.5° | 1566.8 | 1596.3 | 1662.1 | 1689.7 | 1691.6 | 1693.5 | 1685.9 | 1677.3 | 1650.6 | 1584.9 | 1545.9 |
| 45°   | 1503.0 | 1542.1 | 1619.2 | 1652.5 | 1650.6 | 1649.7 | 1643.0 | 1639.2 | 1607.8 | 1531.6 | 1488.7 |
| 47.5° | 1448.7 | 1494.4 | 1577.3 | 1605.9 | 1604.9 | 1604.0 | 1599.2 | 1599.2 | 1567.8 | 1484.9 | 1436.3 |
| 50°   | 1395.4 | 1447.8 | 1534.4 | 1558.2 | 1560.1 | 1558.2 | 1556.3 | 1559.2 | 1522.0 | 1433.5 | 1385.8 |
| 52.5° | 1337.3 | 1396.3 | 1486.8 | 1508.7 | 1520.1 | 1524.9 | 1524.9 | 1518.2 | 1474.4 | 1382.0 | 1329.6 |
| 55°   | 1273.5 | 1329.6 | 1434.4 | 1463.9 | 1473.5 | 1482.0 | 1482.0 | 1468.7 | 1427.8 | 1334.4 | 1278.2 |
| 57.5° | 1194.4 | 1243.9 | 1326.8 | 1356.3 | 1379.2 | 1384.9 | 1384.9 | 1363.0 | 1329.6 | 1240.1 | 1194.4 |
| 60°   | 1108.7 | 1151.5 | 1207.7 | 1239.2 | 1256.3 | 1244.9 | 1253.5 | 1247.7 | 1221.1 | 1138.2 | 1100.1 |
| 62.5° | 994.4  | 1038.2 | 1100.1 | 1132.5 | 1140.1 | 1128.7 | 1140.1 | 1139.2 | 1103.0 | 1028.7 | 983.0  |
| 65°   | 912.5  | 955.3  | 1016.3 | 1058.2 | 1070.6 | 1067.7 | 1075.3 | 1063.9 | 1019.1 | 948.7  | 904.8  |
| 67.5° | 815.3  | 861.0  | 931.5  | 978.2  | 1003.9 | 1006.8 | 1017.2 | 993.4  | 947.7  | 870.6  | 815.3  |
| 70°   | 722.9  | 762.0  | 816.3  | 860.1  | 896.3  | 914.4  | 916.3  | 882.0  | 824.8  | 761.0  | 721.0  |
| 72.5° | 625.8  | 665.8  | 731.5  | 779.1  | 824.8  | 845.8  | 845.8  | 803.9  | 742.0  | 671.5  | 628.6  |
| 75°   | 507.7  | 544.8  | 604.8  | 656.3  | 708.6  | 735.3  | 734.4  | 698.2  | 629.6  | 562.9  | 518.1  |
| 77.5° | 343.8  | 371.5  | 409.6  | 448.6  | 456.2  | 477.2  | 487.7  | 441.9  | 403.8  | 367.7  | 327.7  |
| 80°   | 200.0  | 217.2  | 238.1  | 260.0  | 264.8  | 271.5  | 254.3  | 237.2  | 217.2  | 193.4  | 175.3  |
| 82.5° | 117.2  | 128.6  | 139.1  | 156.2  | 159.1  | 161.0  | 145.7  | 138.1  | 121.9  | 107.6  | 96.2   |
| 85°   | 57.1   | 61.0   | 70.5   | 79.1   | 75.2   | 73.3   | 66.7   | 59.1   | 52.4   | 46.7   | 41.0   |
| 87.5° | 11.4   | 11.4   | 17.1   | 16.2   | 13.3   | 11.4   | 6.7    | 8.6    | 1.9    | 1.9    | 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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CATALOG NUMBER: GWS-SA2E-730-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 |
| 2.5°  | 1956.4 | 1972.6 | 1992.6 | 2019.2 | 2049.7 | 2082.1 | 2113.5 | 2137.3 | 2161.2 | 2196.4 | 2190.7 |
| 5°    | 1856.4 | 1884.0 | 1915.4 | 1956.4 | 2005.9 | 2062.1 | 2125.0 | 2187.8 | 2255.5 | 2312.6 | 2337.4 |
| 7.5°  | 1798.3 | 1828.7 | 1865.9 | 1919.2 | 1983.0 | 2051.6 | 2140.2 | 2242.1 | 2351.7 | 2426.9 | 2473.6 |
| 10°   | 1798.3 | 1837.3 | 1885.9 | 1937.3 | 1993.5 | 2064.0 | 2173.5 | 2301.2 | 2442.1 | 2541.2 | 2595.5 |
| 12.5° | 1902.1 | 1941.1 | 1951.6 | 1949.7 | 1981.1 | 2059.2 | 2200.2 | 2363.1 | 2531.7 | 2636.4 | 2703.1 |
| 15°   | 2064.0 | 2077.3 | 1998.3 | 1925.9 | 1930.7 | 2025.0 | 2212.6 | 2412.6 | 2608.8 | 2734.5 | 2806.9 |
| 17.5° | 2172.6 | 2137.3 | 1996.4 | 1869.7 | 1843.0 | 1966.9 | 2212.6 | 2460.2 | 2690.7 | 2832.6 | 2900.3 |
| 20°   | 2181.2 | 2093.5 | 1947.8 | 1815.4 | 1746.8 | 1889.7 | 2197.4 | 2496.4 | 2769.8 | 2926.9 | 2999.3 |
| 22.5° | 2105.9 | 2019.2 | 1896.4 | 1768.7 | 1667.8 | 1796.4 | 2172.6 | 2524.0 | 2837.4 | 3015.5 | 3105.1 |
| 25°   | 2020.2 | 1947.8 | 1844.0 | 1721.1 | 1613.5 | 1702.1 | 2149.7 | 2570.7 | 2931.7 | 3135.5 | 3226.0 |
| 27.5° | 1936.4 | 1875.4 | 1781.1 | 1681.1 | 1583.0 | 1620.2 | 2135.4 | 2639.3 | 3044.1 | 3306.0 | 3384.1 |
| 30°   | 1854.5 | 1799.2 | 1713.5 | 1643.0 | 1566.8 | 1566.8 | 2123.1 | 2718.4 | 3192.7 | 3497.5 | 3575.6 |
| 32.5° | 1771.6 | 1719.2 | 1649.7 | 1605.9 | 1557.3 | 1545.9 | 2088.8 | 2792.6 | 3346.0 | 3707.0 | 3787.0 |
| 35°   | 1694.4 | 1642.1 | 1588.7 | 1570.6 | 1552.5 | 1529.7 | 2004.0 | 2850.7 | 3495.6 | 3951.8 | 4020.4 |
| 37.5° | 1622.1 | 1571.6 | 1531.6 | 1526.8 | 1528.7 | 1485.9 | 1870.7 | 2899.3 | 3682.3 | 4202.3 | 4238.5 |
| 40°   | 1559.2 | 1503.0 | 1471.6 | 1470.6 | 1480.1 | 1415.4 | 1702.1 | 2968.9 | 3895.6 | 4414.7 | 4399.5 |
| 42.5° | 1503.0 | 1443.9 | 1405.8 | 1414.4 | 1408.7 | 1344.9 | 1537.3 | 3032.7 | 4081.3 | 4613.8 | 4583.3 |
| 45°   | 1447.8 | 1390.6 | 1337.3 | 1349.7 | 1343.0 | 1301.1 | 1397.3 | 3079.3 | 4287.1 | 4852.8 | 4856.7 |
| 47.5° | 1394.4 | 1338.2 | 1284.9 | 1269.6 | 1268.7 | 1287.7 | 1289.6 | 3094.6 | 4622.3 | 5237.6 | 5151.0 |
| 50°   | 1344.9 | 1288.7 | 1233.5 | 1182.0 | 1202.0 | 1261.1 | 1209.6 | 3083.1 | 5124.3 | 5662.4 | 5420.5 |
| 52.5° | 1293.5 | 1240.1 | 1179.2 | 1086.8 | 1139.2 | 1197.3 | 1138.2 | 3042.2 | 5431.0 | 6037.7 | 5892.9 |
| 55°   | 1234.4 | 1183.9 | 1101.1 | 988.7  | 1052.5 | 1064.9 | 1064.9 | 2646.0 | 5561.5 | 6409.2 | 6498.7 |
| 57.5° | 1155.3 | 1088.7 | 957.2  | 866.7  | 923.9  | 876.3  | 986.8  | 1851.6 | 5346.2 | 6292.0 | 6639.7 |
| 60°   | 1065.8 | 994.4  | 855.3  | 790.6  | 807.7  | 723.9  | 841.0  | 1161.1 | 4430.9 | 5353.8 | 5955.8 |
| 62.5° | 947.7  | 882.0  | 766.7  | 716.3  | 681.0  | 590.5  | 677.2  | 734.4  | 3037.4 | 3975.6 | 4386.1 |
| 65°   | 868.7  | 796.3  | 693.4  | 626.7  | 554.3  | 475.3  | 449.6  | 482.0  | 1633.5 | 2225.0 | 2502.1 |
| 67.5° | 775.3  | 703.9  | 606.7  | 522.9  | 464.8  | 407.7  | 362.9  | 351.5  | 560.1  | 741.0  | 802.0  |
| 70°   | 686.7  | 618.2  | 537.2  | 459.1  | 401.0  | 344.8  | 301.0  | 269.5  | 259.1  | 257.2  | 253.4  |
| 72.5° | 596.2  | 532.4  | 464.8  | 392.4  | 328.6  | 277.2  | 238.1  | 201.9  | 186.7  | 181.9  | 177.2  |
| 75°   | 488.6  | 438.1  | 370.5  | 292.4  | 241.0  | 193.4  | 162.9  | 139.1  | 125.7  | 121.0  | 115.2  |
| 77.5° | 314.3  | 291.5  | 232.4  | 188.6  | 145.7  | 115.2  | 99.1   | 83.8   | 75.2   | 73.3   | 68.6   |
| 80°   | 167.6  | 156.2  | 128.6  | 108.6  | 86.7   | 70.5   | 61.9   | 53.3   | 48.6   | 46.7   | 44.8   |
| 82.5° | 93.3   | 84.8   | 71.4   | 62.9   | 50.5   | 42.9   | 38.1   | 34.3   | 31.4   | 30.5   | 29.5   |
| 85°   | 41.9   | 36.2   | 28.6   | 26.7   | 23.8   | 21.9   | 21.0   | 19.0   | 18.1   | 17.1   | 16.2   |
| 87.5° | 1.9    | 3.8    | 4.8    | 3.8    | 3.8    | 5.7    | 6.7    | 6.7    | 5.7    | 5.7    | 4.8    |
| 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: P633200

CATALOG NUMBER: GWS-SA2E-730-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°    | 325°    | 335°   | 345°   | 355°   | 359°   | 360°   |
|-------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|
| 0°    | 2085.9 | 2085.9 | 2085.9 | 2085.9  | 2085.9  | 2085.9 | 2085.9 | 2085.9 | 2085.9 | 2085.9 |
| 2.5°  | 2225.9 | 2254.5 | 2257.4 | 2266.9  | 2254.5  | 2251.6 | 2231.6 | 2220.2 | 2209.7 | 2206.9 |
| 5°    | 2399.3 | 2456.4 | 2479.3 | 2495.5  | 2480.2  | 2472.6 | 2428.8 | 2383.1 | 2357.4 | 2345.0 |
| 7.5°  | 2577.4 | 2663.1 | 2707.9 | 2727.9  | 2729.8  | 2695.5 | 2620.2 | 2534.5 | 2491.7 | 2475.5 |
| 10°   | 2736.4 | 2842.2 | 2901.2 | 2939.3  | 2926.0  | 2884.1 | 2781.2 | 2665.0 | 2610.7 | 2596.4 |
| 12.5° | 2854.6 | 2955.5 | 3001.2 | 3026.0  | 3025.0  | 3002.2 | 2905.0 | 2779.3 | 2717.4 | 2703.1 |
| 15°   | 2930.8 | 2990.8 | 2993.6 | 2999.3  | 3015.5  | 3046.0 | 2995.5 | 2879.3 | 2810.7 | 2790.7 |
| 17.5° | 2990.8 | 2966.9 | 2922.2 | 2906.9  | 2943.1  | 3027.9 | 3058.4 | 2964.1 | 2889.8 | 2872.7 |
| 20°   | 3028.9 | 2908.8 | 2829.8 | 2800.3  | 2842.2  | 2980.3 | 3096.5 | 3040.3 | 2963.1 | 2941.2 |
| 22.5° | 3058.4 | 2854.6 | 2726.9 | 2706.9  | 2750.7  | 2928.8 | 3135.5 | 3130.8 | 3046.0 | 3015.5 |
| 25°   | 3105.1 | 2818.4 | 2654.5 | 2640.3  | 2681.2  | 2904.1 | 3187.9 | 3253.6 | 3178.4 | 3134.6 |
| 27.5° | 3178.4 | 2814.6 | 2617.4 | 2612.6  | 2668.8  | 2926.0 | 3263.2 | 3433.7 | 3339.4 | 3307.0 |
| 30°   | 3280.3 | 2850.7 | 2626.0 | 2635.5  | 2704.1  | 3005.0 | 3380.3 | 3639.4 | 3545.1 | 3494.6 |
| 32.5° | 3427.0 | 2947.9 | 2756.5 | 2797.4  | 2847.9  | 3131.7 | 3551.8 | 3862.3 | 3790.8 | 3716.5 |
| 35°   | 3620.3 | 3214.6 | 3142.2 | 3316.5  | 3268.9  | 3408.9 | 3758.5 | 4132.8 | 4046.1 | 3981.3 |
| 37.5° | 3878.5 | 3761.3 | 3828.0 | 4068.0  | 3952.8  | 3932.8 | 4010.9 | 4378.5 | 4330.9 | 4266.1 |
| 40°   | 4240.4 | 4264.2 | 4387.1 | 4702.4  | 4535.7  | 4407.1 | 4320.4 | 4563.3 | 4579.5 | 4499.5 |
| 42.5° | 4480.4 | 4590.0 | 4886.2 | 5244.3  | 5014.8  | 4707.1 | 4579.5 | 4799.5 | 4800.5 | 4728.1 |
| 45°   | 4570.0 | 4856.7 | 5475.8 | 5888.2  | 5504.3  | 4878.6 | 4722.4 | 5120.5 | 5111.0 | 5028.1 |
| 47.5° | 4537.6 | 5081.4 | 6088.2 | 6718.7  | 6133.0  | 5000.5 | 4702.4 | 5577.7 | 5654.8 | 5529.1 |
| 50°   | 4469.9 | 5307.2 | 6803.5 | 7736.0  | 6904.5  | 5130.0 | 4671.9 | 6084.4 | 6212.0 | 6114.9 |
| 52.5° | 4538.5 | 5558.6 | 7649.3 | 8787.5  | 7872.2  | 5336.7 | 4877.6 | 6734.9 | 6712.1 | 6594.9 |
| 55°   | 4755.7 | 5855.8 | 8677.0 | 10108.6 | 8935.1  | 5686.3 | 5406.2 | 7355.0 | 7122.6 | 6982.6 |
| 57.5° | 4745.2 | 6068.2 | 9578.0 | 11153.4 | 9860.0  | 5972.9 | 5590.1 | 7420.7 | 6951.1 | 6774.0 |
| 60°   | 4307.1 | 5971.0 | 9920.9 | 11814.5 | 10139.1 | 5814.8 | 4985.2 | 6628.2 | 5865.3 | 5679.6 |
| 62.5° | 3214.6 | 5298.6 | 9256.1 | 10986.8 | 9349.5  | 5022.4 | 3748.9 | 4757.6 | 4214.7 | 3901.3 |
| 65°   | 2056.4 | 4145.2 | 7781.7 | 8900.8  | 7706.4  | 3841.3 | 2232.6 | 2550.7 | 1998.3 | 1908.8 |
| 67.5° | 875.3  | 2926.0 | 6049.1 | 5949.1  | 5765.3  | 2488.8 | 862.0  | 718.2  | 535.3  | 525.8  |
| 70°   | 289.6  | 1990.7 | 3728.9 | 3968.0  | 3443.2  | 1714.4 | 284.8  | 241.0  | 240.0  | 231.5  |
| 72.5° | 189.5  | 1068.7 | 2099.2 | 2337.4  | 2215.4  | 986.8  | 172.4  | 161.0  | 164.8  | 161.0  |
| 75°   | 113.3  | 232.4  | 353.4  | 459.1   | 353.4   | 165.7  | 103.8  | 101.9  | 103.8  | 99.1   |
| 77.5° | 66.7   | 64.8   | 62.9   | 62.9    | 61.9    | 57.1   | 52.4   | 50.5   | 51.4   | 52.4   |
| 80°   | 42.9   | 41.0   | 39.1   | 38.1    | 33.3    | 31.4   | 29.5   | 27.6   | 27.6   | 28.6   |
| 82.5° | 27.6   | 25.7   | 23.8   | 21.0    | 17.1    | 14.3   | 13.3   | 11.4   | 11.4   | 12.4   |
| 85°   | 14.3   | 11.4   | 8.6    | 6.7     | 3.8     | 1.9    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 2.9    | 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    |

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: SP1-1908-441-2-R4

Test Date: 10/03/2019

Luminaire Tested: SA1C-730-U-5WQ

Data in this report applies to families of products SA1C-730-U-5WQ .

**Test Information**

Test Method: LM-79-2008  
 Report Number: SP1-1908-441-2-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-730-U-5WQ**  
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

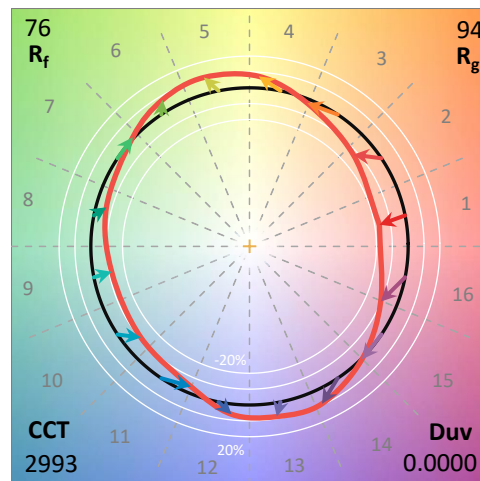
\*\*\*THIS IS A REVISION OF SP1-1908-441-2-R3. TO UPDATE THE CATALOG INFORMATION.\*\*\*TESTED IN SITU. (1) 70 CRI, 3000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

**Spectral Parameters**

CCT (K): 2993  
 CIE u': 0.2508  
 CIE v': 0.5215  
 Duv: 0.0000  
 CIE x: 0.4374  
 CIE y: 0.4043  
 CIE z: 0.1583  
 Peak Wavelength (nm): 593  
 Dominant Wavelength (nm): 582  
 Purity: 53

|           |      |      |       |
|-----------|------|------|-------|
| CRI (Ra): | 71.8 |      |       |
| R1:       | 67.5 | R9:  | -38.3 |
| R2:       | 82.9 | R10: | 62.5  |
| R3:       | 94.7 | R11: | 63.7  |
| R4:       | 67.7 | R12: | 57.8  |
| R5:       | 67.9 | R13: | 70.4  |
| R6:       | 77.6 | R14: | 97.3  |
| R7:       | 76.0 |      |       |
| R8:       | 40.5 |      |       |

Rf: 75.7  
 Rg: 93.9



**Test Conditions**  
 Stabilization Time: 53M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.0./44%  
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-2-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            |

REPORT NUMBER: SP1-1908-441-2-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-2-R4

**Photopic Flux vs. Wavelength**



#####

| 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    | 2397          | NR            | 490    | 24908         | NR            | 620    | 118784        | NR            | 750    | 5037          | NR            | 880    | 2677          | NR            |
| 365    | 2084          | NR            | 495    | 30998         | NR            | 625    | 108951        | NR            | 755    | 4413          | NR            | 885    | 2940          | NR            |
| 370    | 2143          | NR            | 500    | 37103         | NR            | 630    | 99573         | NR            | 760    | 4189          | NR            | 890    | 3116          | NR            |
| 375    | 2413          | NR            | 505    | 42987         | NR            | 635    | 90444         | NR            | 765    | 3677          | NR            | 895    | 3345          | NR            |
| 380    | 2172          | NR            | 510    | 48702         | NR            | 640    | 80749         | NR            | 770    | 3366          | NR            | 900    | 2312          | NR            |
| 385    | 1997          | NR            | 515    | 53741         | NR            | 645    | 71664         | NR            | 775    | 3211          | NR            | 905    | 2829          | NR            |
| 390    | 1830          | NR            | 520    | 57283         | NR            | 650    | 63936         | NR            | 780    | 2682          | NR            | 910    | 2783          | NR            |
| 395    | 1861          | NR            | 525    | 61876         | NR            | 655    | 56611         | NR            | 785    | 2804          | NR            | 915    | 2662          | NR            |
| 400    | 1717          | NR            | 530    | 65398         | NR            | 660    | 49763         | NR            | 790    | 2581          | NR            | 920    | 3047          | NR            |
| 405    | 1761          | NR            | 535    | 69597         | NR            | 665    | 42891         | NR            | 795    | 2711          | NR            | 925    | 2256          | NR            |
| 410    | 2680          | NR            | 540    | 74214         | NR            | 670    | 36939         | NR            | 800    | 2609          | NR            | 930    | 2976          | NR            |
| 415    | 4374          | NR            | 545    | 79911         | NR            | 675    | 31946         | NR            | 805    | 2581          | NR            | 935    | 3503          | NR            |
| 420    | 8071          | NR            | 550    | 86153         | NR            | 680    | 27385         | NR            | 810    | 2404          | NR            | 940    | 4226          | NR            |
| 425    | 15169         | NR            | 555    | 93952         | NR            | 685    | 23504         | NR            | 815    | 2556          | NR            | 945    | 2930          | NR            |
| 430    | 26038         | NR            | 560    | 102904        | NR            | 690    | 20210         | NR            | 820    | 2742          | NR            | 950    | 2115          | NR            |
| 435    | 41316         | NR            | 565    | 112009        | NR            | 695    | 17459         | NR            | 825    | 2014          | NR            | 955    | 2634          | NR            |
| 440    | 59674         | NR            | 570    | 121662        | NR            | 700    | 15207         | NR            | 830    | 2488          | NR            | 960    | 4200          | NR            |
| 445    | 72751         | NR            | 575    | 130476        | NR            | 705    | 13322         | NR            | 835    | 2625          | NR            | 965    | 1982          | NR            |
| 450    | 65091         | NR            | 580    | 137926        | NR            | 710    | 11676         | NR            | 840    | 2754          | NR            | 970    | 3613          | NR            |
| 455    | 44894         | NR            | 585    | 143406        | NR            | 715    | 10626         | NR            | 845    | 2708          | NR            | 975    | 4034          | NR            |
| 460    | 32712         | NR            | 590    | 147039        | NR            | 720    | 9416          | NR            | 850    | 2608          | NR            | 980    | 3922          | NR            |
| 465    | 25296         | NR            | 595    | 147365        | NR            | 725    | 8333          | NR            | 855    | 2605          | NR            | 985    | 1909          | NR            |
| 470    | 19318         | NR            | 600    | 145800        | NR            | 730    | 7134          | NR            | 860    | 1765          | NR            | 990    | 3617          | NR            |
| 475    | 17265         | NR            | 605    | 141363        | NR            | 735    | 6437          | NR            | 865    | 2581          | NR            | 995    | 4767          | NR            |
| 480    | 18260         | NR            | 610    | 134199        | NR            | 740    | 5834          | NR            | 870    | 3016          | NR            | 1000   | 2528          | NR            |
| 485    | 20845         | NR            | 615    | 127683        | NR            | 745    | 5500          | NR            | 875    | 3952          | NR            |        |               |               |

REPORT NUMBER: SP1-1908-441-2-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 8494.8

S/P: 1.23

| 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    | 2397          | NR            | 490    | 24908         | NR            | 620    | 118784        | NR            | 750    | 5037          | NR            | 880    | 2677          | NR            |
| 365    | 2084          | NR            | 495    | 30998         | NR            | 625    | 108951        | NR            | 755    | 4413          | NR            | 885    | 2940          | NR            |
| 370    | 2143          | NR            | 500    | 37103         | NR            | 630    | 99573         | NR            | 760    | 4189          | NR            | 890    | 3116          | NR            |
| 375    | 2413          | NR            | 505    | 42987         | NR            | 635    | 90444         | NR            | 765    | 3677          | NR            | 895    | 3345          | NR            |
| 380    | 2172          | NR            | 510    | 48702         | NR            | 640    | 80749         | NR            | 770    | 3366          | NR            | 900    | 2312          | NR            |
| 385    | 1997          | NR            | 515    | 53741         | NR            | 645    | 71664         | NR            | 775    | 3211          | NR            | 905    | 2829          | NR            |
| 390    | 1830          | NR            | 520    | 57283         | NR            | 650    | 63936         | NR            | 780    | 2682          | NR            | 910    | 2783          | NR            |
| 395    | 1861          | NR            | 525    | 61876         | NR            | 655    | 56611         | NR            | 785    | 2804          | NR            | 915    | 2662          | NR            |
| 400    | 1717          | NR            | 530    | 65398         | NR            | 660    | 49763         | NR            | 790    | 2581          | NR            | 920    | 3047          | NR            |
| 405    | 1761          | NR            | 535    | 69597         | NR            | 665    | 42891         | NR            | 795    | 2711          | NR            | 925    | 2256          | NR            |
| 410    | 2680          | NR            | 540    | 74214         | NR            | 670    | 36939         | NR            | 800    | 2609          | NR            | 930    | 2976          | NR            |
| 415    | 4374          | NR            | 545    | 79911         | NR            | 675    | 31946         | NR            | 805    | 2581          | NR            | 935    | 3503          | NR            |
| 420    | 8071          | NR            | 550    | 86153         | NR            | 680    | 27385         | NR            | 810    | 2404          | NR            | 940    | 4226          | NR            |
| 425    | 15169         | NR            | 555    | 93952         | NR            | 685    | 23504         | NR            | 815    | 2556          | NR            | 945    | 2930          | NR            |
| 430    | 26038         | NR            | 560    | 102904        | NR            | 690    | 20210         | NR            | 820    | 2742          | NR            | 950    | 2115          | NR            |
| 435    | 41316         | NR            | 565    | 112009        | NR            | 695    | 17459         | NR            | 825    | 2014          | NR            | 955    | 2634          | NR            |
| 440    | 59674         | NR            | 570    | 121662        | NR            | 700    | 15207         | NR            | 830    | 2488          | NR            | 960    | 4200          | NR            |
| 445    | 72751         | NR            | 575    | 130476        | NR            | 705    | 13322         | NR            | 835    | 2625          | NR            | 965    | 1982          | NR            |
| 450    | 65091         | NR            | 580    | 137926        | NR            | 710    | 11676         | NR            | 840    | 2754          | NR            | 970    | 3613          | NR            |
| 455    | 44894         | NR            | 585    | 143406        | NR            | 715    | 10626         | NR            | 845    | 2708          | NR            | 975    | 4034          | NR            |
| 460    | 32712         | NR            | 590    | 147039        | NR            | 720    | 9416          | NR            | 850    | 2608          | NR            | 980    | 3922          | NR            |
| 465    | 25296         | NR            | 595    | 147365        | NR            | 725    | 8333          | NR            | 855    | 2605          | NR            | 985    | 1909          | NR            |
| 470    | 19318         | NR            | 600    | 145800        | NR            | 730    | 7134          | NR            | 860    | 1765          | NR            | 990    | 3617          | NR            |
| 475    | 17265         | NR            | 605    | 141363        | NR            | 735    | 6437          | NR            | 865    | 2581          | NR            | 995    | 4767          | NR            |
| 480    | 18260         | NR            | 610    | 134199        | NR            | 740    | 5834          | NR            | 870    | 3016          | NR            | 1000   | 2528          | NR            |
| 485    | 20845         | NR            | 615    | 127683        | NR            | 745    | 5500          | NR            | 875    | 3952          | NR            |        |               |               |



REPORT NUMBER: SP1-1908-441-2-R4

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 3101.5 M/P: 0.45**

| 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    | 2397          | NR            | 490    | 24908         | NR            | 620    | 118784        | NR            | 750    | 5037          | NR            | 880    | 2677          | NR            |
| 365    | 2084          | NR            | 495    | 30998         | NR            | 625    | 108951        | NR            | 755    | 4413          | NR            | 885    | 2940          | NR            |
| 370    | 2143          | NR            | 500    | 37103         | NR            | 630    | 99573         | NR            | 760    | 4189          | NR            | 890    | 3116          | NR            |
| 375    | 2413          | NR            | 505    | 42987         | NR            | 635    | 90444         | NR            | 765    | 3677          | NR            | 895    | 3345          | NR            |
| 380    | 2172          | NR            | 510    | 48702         | NR            | 640    | 80749         | NR            | 770    | 3366          | NR            | 900    | 2312          | NR            |
| 385    | 1997          | NR            | 515    | 53741         | NR            | 645    | 71664         | NR            | 775    | 3211          | NR            | 905    | 2829          | NR            |
| 390    | 1830          | NR            | 520    | 57283         | NR            | 650    | 63936         | NR            | 780    | 2682          | NR            | 910    | 2783          | NR            |
| 395    | 1861          | NR            | 525    | 61876         | NR            | 655    | 56611         | NR            | 785    | 2804          | NR            | 915    | 2662          | NR            |
| 400    | 1717          | NR            | 530    | 65398         | NR            | 660    | 49763         | NR            | 790    | 2581          | NR            | 920    | 3047          | NR            |
| 405    | 1761          | NR            | 535    | 69597         | NR            | 665    | 42891         | NR            | 795    | 2711          | NR            | 925    | 2256          | NR            |
| 410    | 2680          | NR            | 540    | 74214         | NR            | 670    | 36939         | NR            | 800    | 2609          | NR            | 930    | 2976          | NR            |
| 415    | 4374          | NR            | 545    | 79911         | NR            | 675    | 31946         | NR            | 805    | 2581          | NR            | 935    | 3503          | NR            |
| 420    | 8071          | NR            | 550    | 86153         | NR            | 680    | 27385         | NR            | 810    | 2404          | NR            | 940    | 4226          | NR            |
| 425    | 15169         | NR            | 555    | 93952         | NR            | 685    | 23504         | NR            | 815    | 2556          | NR            | 945    | 2930          | NR            |
| 430    | 26038         | NR            | 560    | 102904        | NR            | 690    | 20210         | NR            | 820    | 2742          | NR            | 950    | 2115          | NR            |
| 435    | 41316         | NR            | 565    | 112009        | NR            | 695    | 17459         | NR            | 825    | 2014          | NR            | 955    | 2634          | NR            |
| 440    | 59674         | NR            | 570    | 121662        | NR            | 700    | 15207         | NR            | 830    | 2488          | NR            | 960    | 4200          | NR            |
| 445    | 72751         | NR            | 575    | 130476        | NR            | 705    | 13322         | NR            | 835    | 2625          | NR            | 965    | 1982          | NR            |
| 450    | 65091         | NR            | 580    | 137926        | NR            | 710    | 11676         | NR            | 840    | 2754          | NR            | 970    | 3613          | NR            |
| 455    | 44894         | NR            | 585    | 143406        | NR            | 715    | 10626         | NR            | 845    | 2708          | NR            | 975    | 4034          | NR            |
| 460    | 32712         | NR            | 590    | 147039        | NR            | 720    | 9416          | NR            | 850    | 2608          | NR            | 980    | 3922          | NR            |
| 465    | 25296         | NR            | 595    | 147365        | NR            | 725    | 8333          | NR            | 855    | 2605          | NR            | 985    | 1909          | NR            |
| 470    | 19318         | NR            | 600    | 145800        | NR            | 730    | 7134          | NR            | 860    | 1765          | NR            | 990    | 3617          | NR            |
| 475    | 17265         | NR            | 605    | 141363        | NR            | 735    | 6437          | NR            | 865    | 2581          | NR            | 995    | 4767          | NR            |
| 480    | 18260         | NR            | 610    | 134199        | NR            | 740    | 5834          | NR            | 870    | 3016          | NR            | 1000   | 2528          | NR            |
| 485    | 20845         | NR            | 615    | 127683        | NR            | 745    | 5500          | NR            | 875    | 3952          | NR            |        |               |               |

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**Summary**

$R_f = 75.7$   
 $R_g = 93.9$   
 CIE  $R_a = 71.8$   
 $R_9 = -38.3$



**Color Vector Graphics**



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 67 | CES51 = 87 | CES76 = 63 |
| CES02 = 63 | CES27 = 88 | CES52 = 86 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 66 | CES54 = 84 | CES79 = 87 |
| CES05 = 49 | CES30 = 73 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 70 | CES56 = 75 | CES81 = 71 |
| CES07 = 41 | CES32 = 65 | CES57 = 74 | CES82 = 94 |
| CES08 = 40 | CES33 = 73 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 79 | CES59 = 85 | CES84 = 89 |
| CES10 = 76 | CES35 = 89 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 97 | CES61 = 84 | CES86 = 61 |
| CES12 = 65 | CES37 = 87 | CES62 = 91 | CES87 = 78 |
| CES13 = 43 | CES38 = 81 | CES63 = 77 | CES88 = 77 |
| CES14 = 74 | CES39 = 95 | CES64 = 72 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 68 | CES90 = 76 |
| CES16 = 47 | CES41 = 88 | CES66 = 69 | CES91 = 89 |
| CES17 = 50 | CES42 = 89 | CES67 = 67 | CES92 = 58 |
| CES18 = 56 | CES43 = 79 | CES68 = 72 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 81 | CES94 = 49 |
| CES20 = 66 | CES45 = 85 | CES70 = 66 | CES95 = 68 |
| CES21 = 87 | CES46 = 80 | CES71 = 67 | CES96 = 76 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 69 | CES73 = 59 | CES98 = 75 |
| CES24 = 91 | CES49 = 80 | CES74 = 95 | CES99 = 62 |
| CES25 = 73 | CES50 = 87 | CES75 = 69 |            |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)