

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



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P437292

Luminaire Tested: **ISS-SA1C-727-U-SLL-HSS**

Issue Date: 12/9/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P437292  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-074-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/9/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: ISS-SA1C-727-U-SLL-HSS  
Description: IMPACT ELITE LED QUARTER SPHERE LUMINAIRE  
(1) 70 CRI, 2700K, 615mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

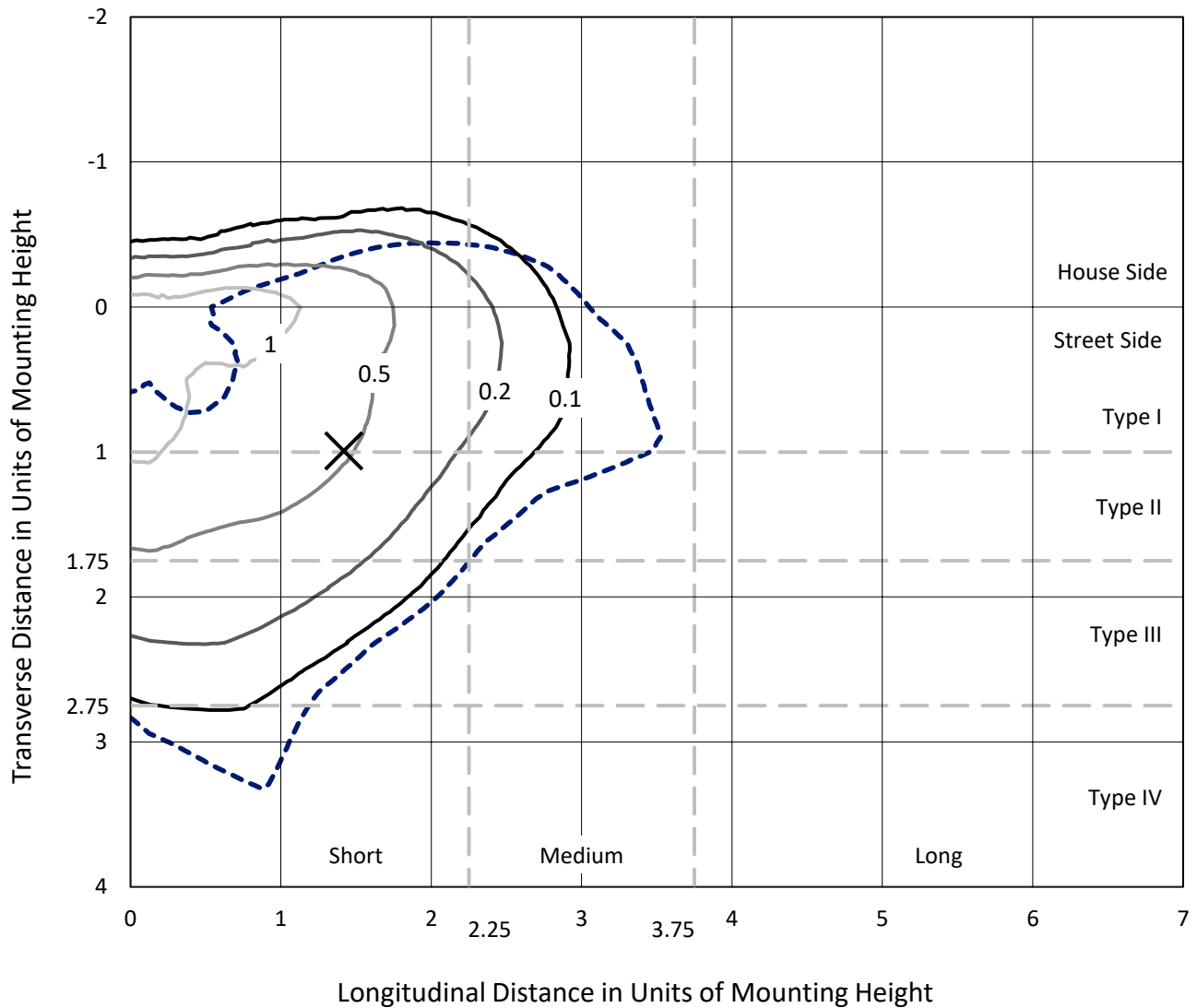
Lumens per Lamp: N/A  
Luminaire Lumens: 2856 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
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

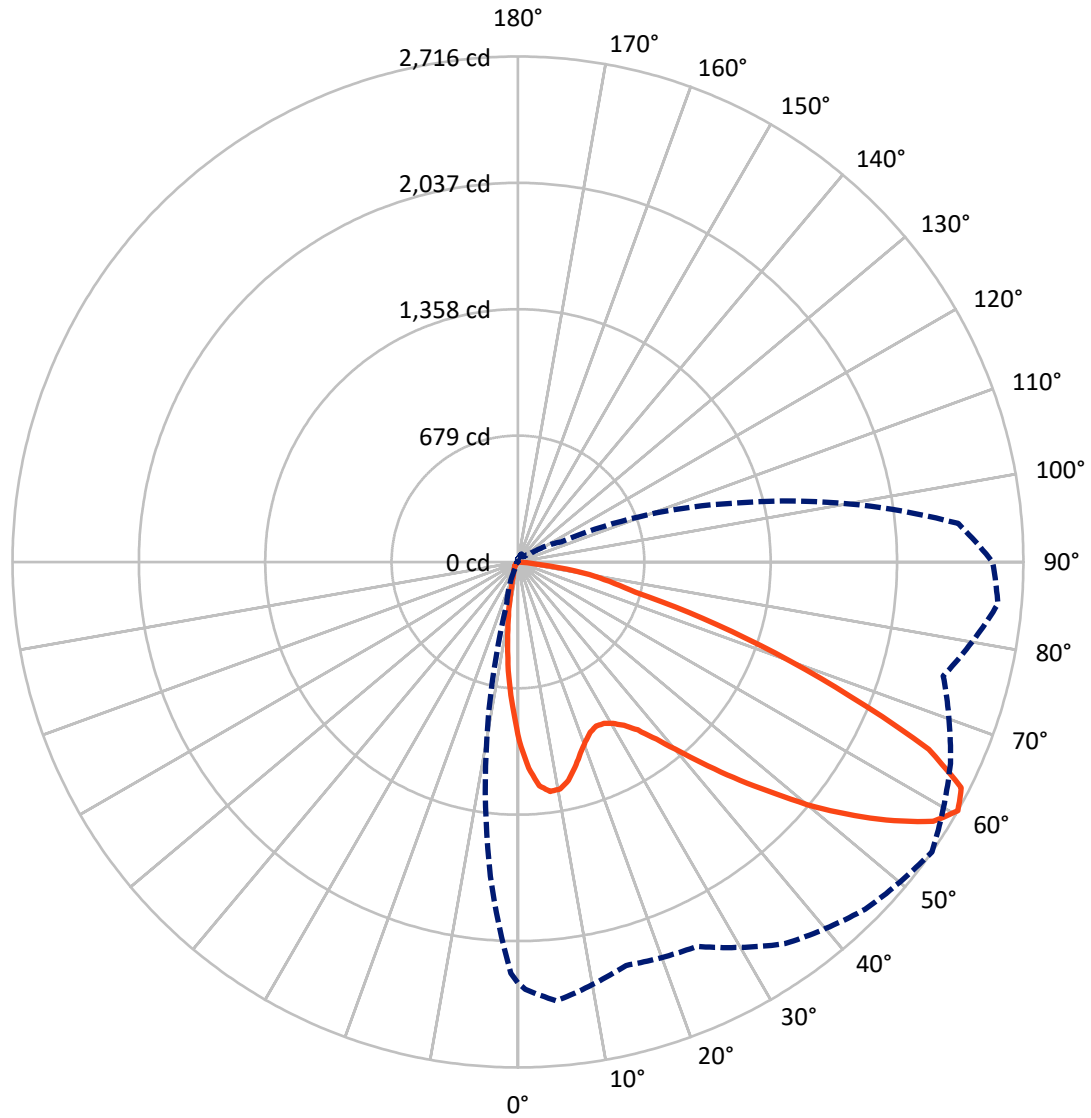
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

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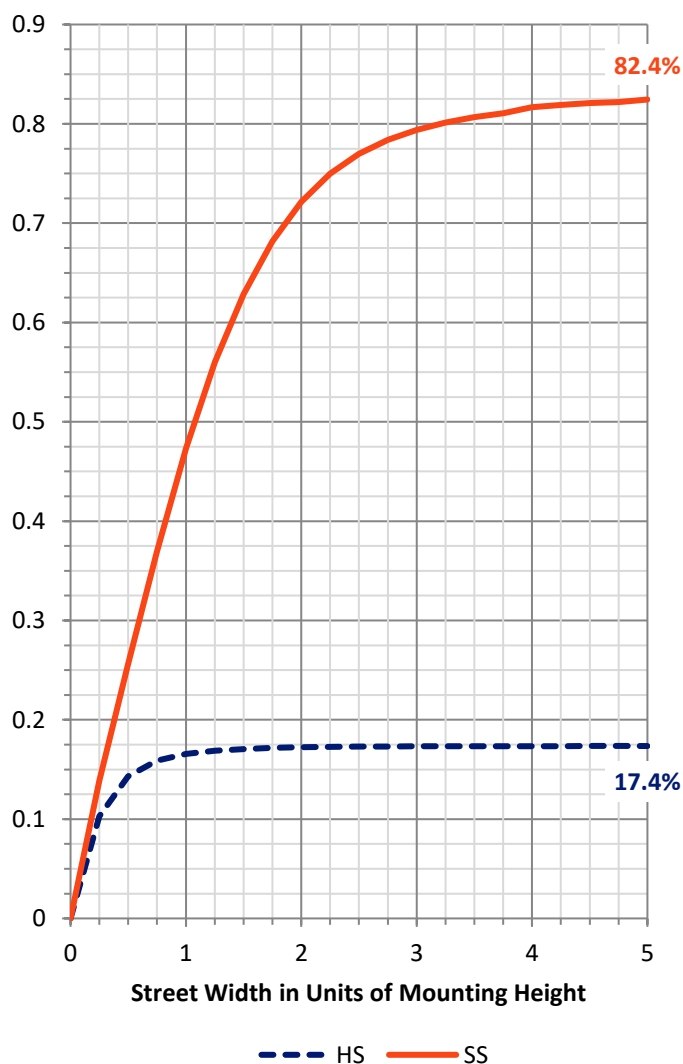
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 500.3    | 0.0    | 500.3  |
|                    | % Fixture | 17.5     | 0.0    | 17.5   |
| <b>Street Side</b> | Lumens    | 2355.7   | 0.0    | 2355.7 |
|                    | % Fixture | 82.5     | 0.0    | 82.5   |
| <b>Total</b>       | Lumens    | 2856.0   | 0.0    | 2856.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 71.8   | 2.5       |
| 10°-20°   | 140.6  | 4.9       |
| 20°-30°   | 206.8  | 7.2       |
| 30°-40°   | 309.2  | 10.8      |
| 40°-50°   | 457.5  | 16.0      |
| 50°-60°   | 657.5  | 23.0      |
| 60°-70°   | 704.8  | 24.7      |
| 70°-80°   | 284.7  | 10.0      |
| 80°-90°   | 23.1   | 0.8       |
| 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°    | 2856.0 | 100.0     |
| 0°-180°   | 2856.0 | 100.0     |

**Coefficient of Utilization**

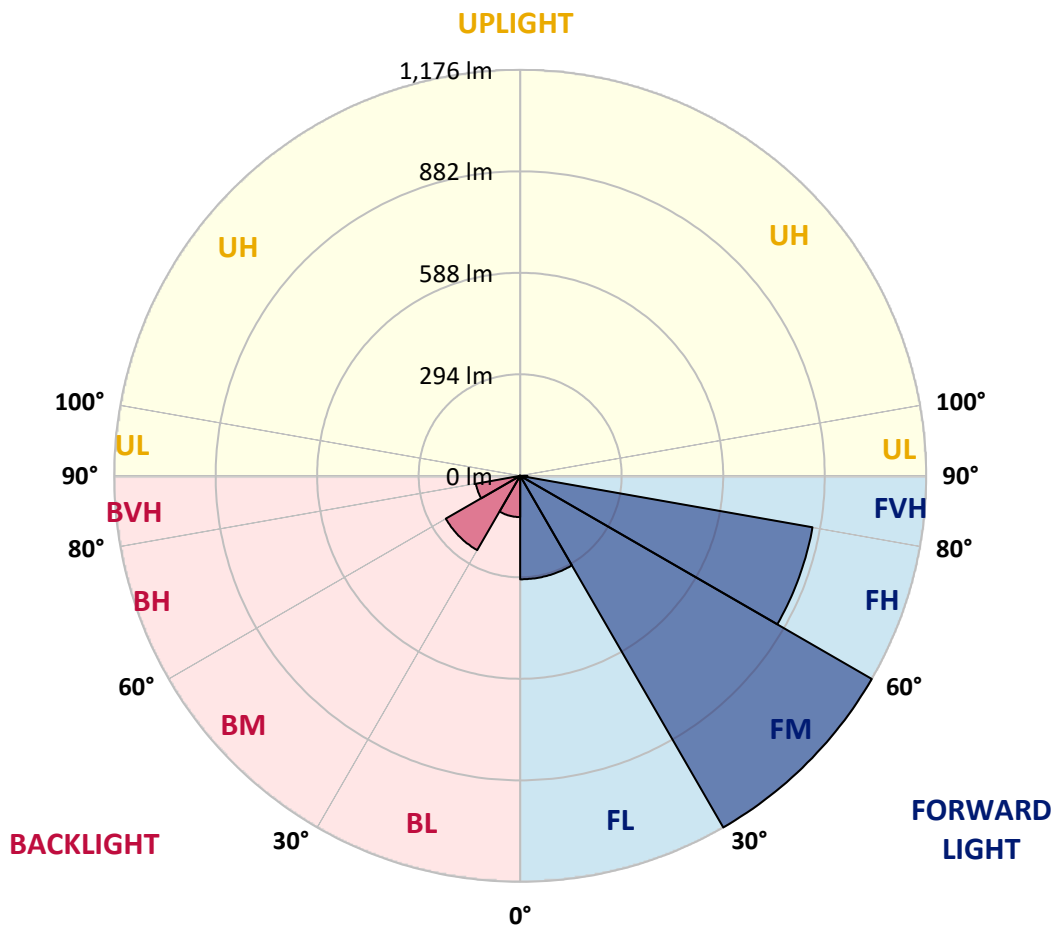


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 299.7  | 10.5      |                         |      |         |
| FM (30°-60°)   | 1175.6 | 41.2      |                         |      |         |
| FH (60°-80°)   | 859.4  | 30.1      |                         |      | G1/1800 |
| FVH (80°-90°)  | 21.0   | 0.7       |                         |      | G1/100  |
| BL (0°-30°)    | 119.5  | 4.2       | B1/500                  |      |         |
| BM (30°-60°)   | 248.6  | 8.7       | B1/1000                 |      |         |
| BH (60°-80°)   | 130.1  | 4.6       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 2.1    | 0.1       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G1**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 1°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  | 963.6  |
| 2.5°  | 1035.3 | 1035.3 | 1043.6 | 1068.4 | 1096.0 | 1109.8 | 1124.9 | 1109.8 | 1107.0 | 1085.0 | 1068.4 |
| 5°    | 1003.6 | 1010.5 | 1036.7 | 1102.9 | 1173.2 | 1209.0 | 1228.3 | 1207.7 | 1170.4 | 1122.2 | 1061.5 |
| 7.5°  | 931.9  | 940.2  | 970.5  | 1078.1 | 1174.6 | 1246.3 | 1280.7 | 1244.9 | 1181.5 | 1093.2 | 1005.0 |
| 10°   | 854.7  | 869.9  | 909.9  | 1032.6 | 1144.2 | 1229.7 | 1278.0 | 1240.7 | 1162.2 | 1049.1 | 940.2  |
| 12.5° | 803.7  | 814.8  | 868.5  | 991.2  | 1111.2 | 1187.0 | 1213.2 | 1204.9 | 1133.2 | 1028.4 | 914.0  |
| 15°   | 795.5  | 809.2  | 865.8  | 988.5  | 1079.5 | 1124.9 | 1134.6 | 1145.6 | 1120.8 | 1031.2 | 922.3  |
| 17.5° | 831.3  | 846.5  | 909.9  | 1009.1 | 1050.5 | 1050.5 | 1060.2 | 1082.2 | 1105.6 | 1058.8 | 971.9  |
| 20°   | 904.4  | 925.0  | 995.4  | 1062.9 | 1035.3 | 1002.2 | 1003.6 | 1032.6 | 1096.0 | 1120.8 | 1060.2 |
| 22.5° | 1002.2 | 1029.8 | 1115.3 | 1147.0 | 1051.9 | 976.1  | 969.2  | 994.0  | 1097.4 | 1184.2 | 1181.5 |
| 25°   | 1131.8 | 1164.9 | 1247.6 | 1246.3 | 1091.9 | 965.0  | 958.1  | 976.1  | 1109.8 | 1253.2 | 1287.6 |
| 27.5° | 1249.0 | 1276.6 | 1359.3 | 1324.8 | 1131.8 | 978.8  | 963.6  | 982.9  | 1119.4 | 1304.2 | 1382.7 |
| 30°   | 1348.3 | 1371.7 | 1444.8 | 1381.4 | 1166.3 | 1002.2 | 976.1  | 1006.4 | 1140.1 | 1331.7 | 1468.2 |
| 32.5° | 1424.1 | 1458.6 | 1526.1 | 1425.5 | 1207.7 | 1032.6 | 1005.0 | 1046.4 | 1174.6 | 1367.6 | 1542.7 |
| 35°   | 1526.1 | 1544.0 | 1624.0 | 1469.6 | 1262.8 | 1097.4 | 1053.3 | 1108.4 | 1231.1 | 1414.5 | 1625.4 |
| 37.5° | 1614.4 | 1661.2 | 1713.6 | 1515.1 | 1330.4 | 1177.3 | 1129.1 | 1207.7 | 1308.3 | 1468.2 | 1721.9 |
| 40°   | 1719.1 | 1772.9 | 1829.4 | 1579.9 | 1392.4 | 1282.1 | 1261.4 | 1338.6 | 1424.1 | 1546.8 | 1817.0 |
| 42.5° | 1815.6 | 1865.3 | 1903.9 | 1655.7 | 1468.2 | 1400.7 | 1415.8 | 1497.2 | 1542.7 | 1628.1 | 1898.3 |
| 45°   | 1892.8 | 1936.9 | 1994.8 | 1708.1 | 1552.3 | 1533.0 | 1610.2 | 1673.6 | 1659.8 | 1698.4 | 1971.4 |
| 47.5° | 1972.8 | 2026.6 | 2050.0 | 1763.2 | 1661.2 | 1706.7 | 1844.6 | 1858.4 | 1782.5 | 1763.2 | 2034.8 |
| 50°   | 2027.9 | 2067.9 | 2083.1 | 1830.8 | 1795.0 | 1935.6 | 2045.9 | 2069.3 | 1916.3 | 1814.3 | 2117.5 |
| 52.5° | 2095.5 | 2134.1 | 2152.0 | 1910.8 | 1938.3 | 2141.0 | 2269.2 | 2263.7 | 2045.9 | 1898.3 | 2198.9 |
| 55°   | 2215.4 | 2251.3 | 2269.2 | 2008.6 | 2040.3 | 2317.4 | 2459.4 | 2453.9 | 2200.3 | 2019.7 | 2320.2 |
| 57.5° | 2300.9 | 2331.2 | 2360.2 | 2118.9 | 2167.2 | 2430.5 | 2589.0 | 2630.4 | 2386.4 | 2172.7 | 2452.5 |
| 60°   | 2262.3 | 2296.8 | 2367.1 | 2244.4 | 2278.8 | 2503.6 | 2638.7 | 2715.9 | 2564.2 | 2365.7 | 2589.0 |
| 62.5° | 2153.4 | 2204.4 | 2277.5 | 2343.6 | 2365.7 | 2516.0 | 2569.7 | 2673.1 | 2659.3 | 2560.1 | 2651.1 |
| 65°   | 2015.5 | 2067.9 | 2138.2 | 2357.4 | 2346.4 | 2331.2 | 2362.9 | 2425.0 | 2521.5 | 2653.8 | 2620.7 |
| 67.5° | 1767.4 | 1843.2 | 1931.4 | 2196.1 | 2040.3 | 1953.5 | 1961.8 | 1927.3 | 2121.7 | 2518.7 | 2466.3 |
| 70°   | 1439.3 | 1516.5 | 1611.6 | 1862.5 | 1573.0 | 1458.6 | 1487.5 | 1465.5 | 1618.5 | 2161.7 | 2113.4 |
| 72.5° | 1013.3 | 1096.0 | 1213.2 | 1552.3 | 1096.0 | 911.3  | 980.2  | 1038.1 | 1220.1 | 1734.3 | 1552.3 |
| 75°   | 671.4  | 730.7  | 814.8  | 1169.1 | 781.7  | 612.1  | 627.3  | 650.7  | 816.1  | 1311.1 | 980.2  |
| 77.5° | 347.4  | 406.7  | 443.9  | 625.9  | 483.9  | 482.5  | 471.5  | 501.8  | 510.1  | 787.2  | 511.5  |
| 80°   | 194.4  | 213.7  | 233.0  | 304.7  | 242.6  | 286.8  | 296.4  | 362.6  | 336.4  | 394.3  | 213.7  |
| 82.5° | 95.1   | 119.9  | 131.0  | 187.5  | 155.8  | 114.4  | 56.5   | 118.6  | 199.9  | 213.7  | 99.3   |
| 85°   | 1.4    | 2.8    | 6.9    | 15.2   | 4.1    | 4.1    | 0.0    | 4.1    | 20.7   | 26.2   | 34.5   |
| 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°    | 963.6  | 963.6  | 963.6  | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 |
| 2.5°  | 1050.5 | 1039.5 | 1007.8 | 980.2 | 937.5 | 919.5 | 890.6 | 883.7 | 860.3 | 836.8 | 823.0 |
| 5°    | 1031.2 | 999.5  | 934.7  | 871.3 | 813.4 | 759.6 | 719.6 | 686.5 | 649.3 | 634.2 | 643.8 |
| 7.5°  | 954.0  | 909.9  | 816.1  | 741.7 | 659.0 | 596.9 | 540.4 | 511.5 | 477.0 | 463.2 | 453.6 |
| 10°   | 890.6  | 836.8  | 729.3  | 631.4 | 552.8 | 504.6 | 470.1 | 428.7 | 388.8 | 357.1 | 352.9 |
| 12.5° | 850.6  | 792.7  | 672.8  | 569.4 | 511.5 | 464.6 | 424.6 | 370.8 | 325.4 | 295.0 | 281.2 |
| 15°   | 849.2  | 777.5  | 654.8  | 545.9 | 478.4 | 419.1 | 368.1 | 307.4 | 260.6 | 222.0 | 208.2 |
| 17.5° | 898.9  | 812.0  | 663.1  | 521.1 | 431.5 | 354.3 | 288.1 | 224.7 | 179.2 | 153.0 | 139.2 |
| 20°   | 985.7  | 890.6  | 678.3  | 496.3 | 386.0 | 288.1 | 202.7 | 153.0 | 122.7 | 110.3 | 104.8 |
| 22.5° | 1090.5 | 977.4  | 705.8  | 477.0 | 339.1 | 217.8 | 143.4 | 110.3 | 96.5  | 88.2  | 86.9  |
| 25°   | 1217.3 | 1087.7 | 744.4  | 463.2 | 296.4 | 168.2 | 111.7 | 91.0  | 82.7  | 77.2  | 74.4  |
| 27.5° | 1329.0 | 1193.9 | 802.4  | 452.2 | 255.0 | 137.9 | 95.1  | 80.0  | 71.7  | 67.6  | 66.2  |
| 30°   | 1411.7 | 1280.7 | 868.5  | 427.4 | 222.0 | 119.9 | 89.6  | 75.8  | 66.2  | 60.7  | 59.3  |
| 32.5° | 1506.8 | 1346.9 | 900.2  | 402.6 | 202.7 | 106.2 | 78.6  | 67.6  | 60.7  | 55.1  | 53.8  |
| 35°   | 1611.6 | 1439.3 | 931.9  | 383.3 | 190.2 | 95.1  | 71.7  | 59.3  | 51.0  | 45.5  | 44.1  |
| 37.5° | 1732.9 | 1541.3 | 960.9  | 366.7 | 183.4 | 88.2  | 67.6  | 55.1  | 46.9  | 41.4  | 38.6  |
| 40°   | 1868.0 | 1621.2 | 980.2  | 355.7 | 173.7 | 84.1  | 64.8  | 52.4  | 44.1  | 37.2  | 35.8  |
| 42.5° | 1975.5 | 1713.6 | 985.7  | 351.5 | 164.1 | 82.7  | 62.0  | 51.0  | 41.4  | 35.8  | 33.1  |
| 45°   | 2052.8 | 1795.0 | 1005.0 | 347.4 | 157.2 | 77.2  | 60.7  | 49.6  | 38.6  | 33.1  | 30.3  |
| 47.5° | 2109.3 | 1881.8 | 1022.9 | 343.3 | 150.3 | 70.3  | 64.8  | 49.6  | 37.2  | 30.3  | 27.6  |
| 50°   | 2214.0 | 1983.8 | 1057.4 | 332.2 | 140.6 | 63.4  | 64.8  | 48.3  | 35.8  | 29.0  | 26.2  |
| 52.5° | 2327.1 | 2116.2 | 1134.6 | 319.8 | 128.2 | 56.5  | 59.3  | 48.3  | 34.5  | 27.6  | 24.8  |
| 55°   | 2434.6 | 2277.5 | 1206.3 | 303.3 | 107.5 | 51.0  | 55.1  | 48.3  | 31.7  | 26.2  | 23.4  |
| 57.5° | 2513.2 | 2385.0 | 1244.9 | 282.6 | 85.5  | 45.5  | 45.5  | 45.5  | 27.6  | 22.1  | 20.7  |
| 60°   | 2550.4 | 2374.0 | 1227.0 | 256.4 | 68.9  | 40.0  | 37.2  | 46.9  | 24.8  | 19.3  | 17.9  |
| 62.5° | 2521.5 | 2259.5 | 1148.4 | 228.8 | 60.7  | 34.5  | 30.3  | 41.4  | 22.1  | 16.5  | 15.2  |
| 65°   | 2431.9 | 2066.5 | 1017.4 | 206.8 | 59.3  | 29.0  | 24.8  | 24.8  | 17.9  | 13.8  | 12.4  |
| 67.5° | 2209.9 | 1812.9 | 861.6  | 186.1 | 60.7  | 24.8  | 20.7  | 19.3  | 15.2  | 11.0  | 9.7   |
| 70°   | 1837.7 | 1457.2 | 652.1  | 176.5 | 60.7  | 20.7  | 17.9  | 15.2  | 11.0  | 9.7   | 8.3   |
| 72.5° | 1167.7 | 904.4  | 452.2  | 155.8 | 60.7  | 16.5  | 15.2  | 13.8  | 8.3   | 6.9   | 4.1   |
| 75°   | 692.1  | 550.1  | 212.3  | 119.9 | 51.0  | 13.8  | 11.0  | 8.3   | 4.1   | 2.8   | 2.8   |
| 77.5° | 406.7  | 352.9  | 92.4   | 66.2  | 22.1  | 8.3   | 5.5   | 2.8   | 1.4   | 0.0   | 0.0   |
| 80°   | 166.8  | 144.8  | 34.5   | 19.3  | 9.7   | 4.1   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 97.9   | 102.0  | 12.4   | 8.3   | 2.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 30.3   | 46.9   | 0.0    | 1.4   | 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°    | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 |
| 2.5°  | 821.7 | 807.9 | 802.4 | 794.1 | 787.2 | 778.9 | 789.9 | 799.6 | 788.6 | 801.0 | 820.3 |
| 5°    | 634.2 | 613.5 | 641.1 | 623.1 | 632.8 | 621.8 | 606.6 | 609.3 | 612.1 | 606.6 | 621.8 |
| 7.5°  | 439.8 | 449.4 | 456.3 | 454.9 | 463.2 | 448.0 | 448.0 | 438.4 | 424.6 | 430.1 | 427.4 |
| 10°   | 333.6 | 314.3 | 321.2 | 319.8 | 335.0 | 314.3 | 300.5 | 285.4 | 284.0 | 286.8 | 284.0 |
| 12.5° | 266.1 | 242.6 | 227.5 | 219.2 | 217.8 | 208.2 | 195.8 | 180.6 | 170.9 | 169.6 | 177.8 |
| 15°   | 199.9 | 182.0 | 168.2 | 155.8 | 154.4 | 135.1 | 118.6 | 107.5 | 97.9  | 99.3  | 104.8 |
| 17.5° | 137.9 | 132.3 | 128.2 | 117.2 | 110.3 | 93.7  | 80.0  | 73.1  | 70.3  | 70.3  | 71.7  |
| 20°   | 100.6 | 97.9  | 95.1  | 91.0  | 84.1  | 71.7  | 63.4  | 60.7  | 59.3  | 59.3  | 60.7  |
| 22.5° | 84.1  | 80.0  | 77.2  | 75.8  | 70.3  | 60.7  | 55.1  | 52.4  | 52.4  | 52.4  | 52.4  |
| 25°   | 71.7  | 68.9  | 67.6  | 64.8  | 60.7  | 52.4  | 48.3  | 46.9  | 45.5  | 45.5  | 46.9  |
| 27.5° | 64.8  | 59.3  | 56.5  | 56.5  | 52.4  | 46.9  | 42.7  | 41.4  | 40.0  | 40.0  | 41.4  |
| 30°   | 57.9  | 53.8  | 51.0  | 48.3  | 45.5  | 40.0  | 37.2  | 35.8  | 35.8  | 35.8  | 35.8  |
| 32.5° | 51.0  | 48.3  | 45.5  | 42.7  | 38.6  | 35.8  | 33.1  | 31.7  | 30.3  | 30.3  | 30.3  |
| 35°   | 41.4  | 38.6  | 38.6  | 37.2  | 33.1  | 30.3  | 27.6  | 26.2  | 24.8  | 26.2  | 26.2  |
| 37.5° | 35.8  | 31.7  | 31.7  | 31.7  | 29.0  | 26.2  | 23.4  | 22.1  | 20.7  | 20.7  | 22.1  |
| 40°   | 33.1  | 27.6  | 26.2  | 26.2  | 26.2  | 22.1  | 19.3  | 17.9  | 16.5  | 16.5  | 17.9  |
| 42.5° | 29.0  | 24.8  | 22.1  | 20.7  | 22.1  | 19.3  | 15.2  | 13.8  | 13.8  | 13.8  | 13.8  |
| 45°   | 27.6  | 22.1  | 19.3  | 16.5  | 17.9  | 16.5  | 12.4  | 11.0  | 11.0  | 11.0  | 11.0  |
| 47.5° | 24.8  | 19.3  | 16.5  | 12.4  | 12.4  | 12.4  | 9.7   | 8.3   | 8.3   | 8.3   | 8.3   |
| 50°   | 23.4  | 17.9  | 12.4  | 11.0  | 9.7   | 9.7   | 8.3   | 6.9   | 5.5   | 5.5   | 6.9   |
| 52.5° | 22.1  | 16.5  | 11.0  | 8.3   | 6.9   | 6.9   | 5.5   | 5.5   | 4.1   | 4.1   | 4.1   |
| 55°   | 20.7  | 13.8  | 9.7   | 6.9   | 5.5   | 4.1   | 4.1   | 4.1   | 4.1   | 2.8   | 4.1   |
| 57.5° | 17.9  | 12.4  | 6.9   | 5.5   | 2.8   | 2.8   | 2.8   | 2.8   | 2.8   | 2.8   | 2.8   |
| 60°   | 16.5  | 9.7   | 5.5   | 2.8   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   |
| 62.5° | 13.8  | 8.3   | 4.1   | 2.8   | 1.4   | 0.0   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   |
| 65°   | 11.0  | 6.9   | 2.8   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 8.3   | 5.5   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 6.9   | 2.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 4.1   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 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: P437292  
 CATALOG NUMBER: ISS-SA1C-727-U-SLL-HSS

**CANDELA DISTRIBUTION (continued):**

|       | 285°  | 295°  | 305°  | 315°  | 325°  | 335°  | 345°  | 355°   | 359°   | 360°   |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 0°    | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6 | 963.6  | 963.6  | 963.6  |
| 2.5°  | 818.9 | 827.2 | 857.5 | 885.1 | 915.4 | 948.5 | 976.1 | 1016.0 | 1028.4 | 1035.3 |
| 5°    | 619.0 | 649.3 | 686.5 | 719.6 | 778.9 | 834.1 | 898.9 | 969.2  | 998.1  | 1003.6 |
| 7.5°  | 446.7 | 467.3 | 507.3 | 573.5 | 627.3 | 710.0 | 794.1 | 887.8  | 931.9  | 931.9  |
| 10°   | 307.4 | 341.9 | 392.9 | 454.9 | 526.6 | 599.7 | 697.6 | 803.7  | 845.1  | 854.7  |
| 12.5° | 195.8 | 234.4 | 303.3 | 370.8 | 453.6 | 525.3 | 623.1 | 743.1  | 789.9  | 803.7  |
| 15°   | 113.0 | 139.2 | 202.7 | 277.1 | 376.4 | 467.3 | 577.6 | 723.8  | 781.7  | 795.5  |
| 17.5° | 75.8  | 85.5  | 119.9 | 184.7 | 295.0 | 416.3 | 563.9 | 744.4  | 814.8  | 831.3  |
| 20°   | 63.4  | 67.6  | 80.0  | 114.4 | 208.2 | 362.6 | 558.3 | 789.9  | 875.4  | 904.4  |
| 22.5° | 55.1  | 59.3  | 67.6  | 84.1  | 148.9 | 306.1 | 554.2 | 856.1  | 971.9  | 1002.2 |
| 25°   | 48.3  | 52.4  | 59.3  | 71.7  | 104.8 | 249.5 | 561.1 | 949.9  | 1096.0 | 1131.8 |
| 27.5° | 42.7  | 46.9  | 53.8  | 62.0  | 84.1  | 193.0 | 562.5 | 1038.1 | 1211.8 | 1249.0 |
| 30°   | 37.2  | 41.4  | 46.9  | 53.8  | 67.6  | 148.9 | 537.7 | 1127.7 | 1305.5 | 1348.3 |
| 32.5° | 33.1  | 35.8  | 41.4  | 46.9  | 56.5  | 115.8 | 486.6 | 1196.6 | 1382.7 | 1424.1 |
| 35°   | 27.6  | 30.3  | 35.8  | 40.0  | 49.6  | 93.7  | 430.1 | 1260.0 | 1475.1 | 1526.1 |
| 37.5° | 23.4  | 26.2  | 30.3  | 35.8  | 44.1  | 73.1  | 373.6 | 1315.2 | 1564.7 | 1614.4 |
| 40°   | 19.3  | 23.4  | 27.6  | 31.7  | 40.0  | 56.5  | 311.6 | 1374.5 | 1666.7 | 1719.1 |
| 42.5° | 16.5  | 19.3  | 23.4  | 29.0  | 34.5  | 45.5  | 256.4 | 1411.7 | 1753.6 | 1815.6 |
| 45°   | 12.4  | 16.5  | 22.1  | 29.0  | 29.0  | 35.8  | 220.6 | 1439.3 | 1815.6 | 1892.8 |
| 47.5° | 9.7   | 13.8  | 19.3  | 27.6  | 26.2  | 30.3  | 202.7 | 1487.5 | 1901.1 | 1972.8 |
| 50°   | 8.3   | 11.0  | 19.3  | 23.4  | 22.1  | 26.2  | 208.2 | 1530.3 | 1965.9 | 2027.9 |
| 52.5° | 6.9   | 9.7   | 16.5  | 17.9  | 19.3  | 23.4  | 219.2 | 1608.8 | 2047.2 | 2095.5 |
| 55°   | 5.5   | 8.3   | 12.4  | 15.2  | 16.5  | 22.1  | 237.1 | 1706.7 | 2153.4 | 2215.4 |
| 57.5° | 4.1   | 6.9   | 9.7   | 12.4  | 15.2  | 20.7  | 249.5 | 1768.8 | 2252.6 | 2300.9 |
| 60°   | 4.1   | 5.5   | 8.3   | 11.0  | 13.8  | 19.3  | 231.6 | 1695.7 | 2209.9 | 2262.3 |
| 62.5° | 2.8   | 5.5   | 6.9   | 9.7   | 11.0  | 15.2  | 170.9 | 1535.8 | 2081.7 | 2153.4 |
| 65°   | 1.4   | 4.1   | 5.5   | 6.9   | 8.3   | 11.0  | 97.9  | 1342.8 | 1930.1 | 2015.5 |
| 67.5° | 0.0   | 2.8   | 4.1   | 5.5   | 5.5   | 8.3   | 45.5  | 1083.6 | 1680.5 | 1767.4 |
| 70°   | 0.0   | 1.4   | 2.8   | 2.8   | 4.1   | 6.9   | 23.4  | 765.1  | 1322.1 | 1439.3 |
| 72.5° | 1.4   | 1.4   | 2.8   | 2.8   | 2.8   | 5.5   | 15.2  | 463.2  | 889.2  | 1013.3 |
| 75°   | 1.4   | 1.4   | 1.4   | 1.4   | 2.8   | 4.1   | 9.7   | 297.8  | 559.7  | 671.4  |
| 77.5° | 1.4   | 2.8   | 1.4   | 1.4   | 1.4   | 2.8   | 5.5   | 165.4  | 306.1  | 347.4  |
| 80°   | 1.4   | 1.4   | 1.4   | 1.4   | 1.4   | 2.8   | 2.8   | 15.2   | 144.8  | 194.4  |
| 82.5° | 0.0   | 0.0   | 0.0   | 0.0   | 1.4   | 1.4   | 1.4   | 1.4    | 74.4   | 95.1   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 1.4   | 0.0   | 0.0    | 1.4    | 1.4    |
| 87.5° | 0.0   | 0.0   | 0.0   | 1.4   | 1.4   | 1.4   | 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    |

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

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-1-R4

Test Date: 08/20/2019

Luminaire Tested: SA1C-727-U-5WQ

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**Test Information**

Test Method: LM-79-2008  
 Report Number: SP1-1908-441-1-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-727-U-5WQ**  
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

\*\*\*THIS IS A REVISION OF SP1-1908-441-1-R3. TO UPDATE THE CATALOG NUMBER.\*\*\*TESTED IN  
 SITU. (1) 70 CRI, 2700K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

**Spectral Parameters**

CCT (K): 2741  
 CIE u': 0.2605  
 CIE v': 0.5272  
 Duv: 0.0005  
 CIE x: 0.4573  
 CIE y: 0.4113  
 CIE z: 0.1313  
 Peak Wavelength (nm): 602  
 Dominant Wavelength (nm): 583  
 Purity: 61.2

|           |      |      |       |
|-----------|------|------|-------|
| CRI (Ra): | 71.5 |      |       |
| R1:       | 69.2 | R9:  | -16.1 |
| R2:       | 79.4 | R10: | 51.4  |
| R3:       | 87.8 | R11: | 63.1  |
| R4:       | 69.4 | R12: | 42.0  |
| R5:       | 66.4 | R13: | 70.2  |
| R6:       | 69.8 | R14: | 92.4  |
| R7:       | 79.8 |      |       |
| R8:       | 50.1 |      |       |

Rf: 69.9  
 Rg: 98.3



**Test Conditions**

Stabilization Time: 56M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 25.3./42%  
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-1-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: SP1-1908-441-1-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-1-R4

**Photopic Flux vs. Wavelength**



**Photopic Lumens: 6211.7**

| $\lambda$ (nm) | Power ( $\mu\text{W}/\text{nm}$ ) | Lumens ( $\phi/\text{nm}$ ) | $\lambda$ (nm) | Power ( $\mu\text{W}/\text{nm}$ ) | Lumens ( $\phi/\text{nm}$ ) | $\lambda$ (nm) | Power ( $\mu\text{W}/\text{nm}$ ) | Lumens ( $\phi/\text{nm}$ ) | $\lambda$ (nm) | Power ( $\mu\text{W}/\text{nm}$ ) | Lumens ( $\phi/\text{nm}$ ) | $\lambda$ (nm) | Power ( $\mu\text{W}/\text{nm}$ ) | Lumens ( $\phi/\text{nm}$ ) |
|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|
| 360            | 2044                              | 0.0                         | 490            | 7179                              | 1.0                         | 620            | 118034                            | 30.7                        | 750            | 8362                              | 0.0                         | 880            | 3128                              | 0.0                         |
| 365            | 2016                              | 0.0                         | 495            | 10476                             | 1.9                         | 625            | 111884                            | 24.7                        | 755            | 7635                              | 0.0                         | 885            | 3110                              | 0.0                         |
| 370            | 2020                              | 0.0                         | 500            | 15549                             | 3.4                         | 630            | 106119                            | 19.2                        | 760            | 6582                              | 0.0                         | 890            | 2632                              | 0.0                         |
| 375            | 2137                              | 0.0                         | 505            | 22477                             | 6.3                         | 635            | 99706                             | 15.0                        | 765            | 5777                              | 0.0                         | 895            | 2709                              | 0.0                         |
| 380            | 2046                              | 0.0                         | 510            | 30417                             | 10.4                        | 640            | 92142                             | 11.0                        | 770            | 5474                              | 0.0                         | 900            | 2016                              | 0.0                         |
| 385            | 1925                              | 0.0                         | 515            | 39274                             | 16.3                        | 645            | 84987                             | 8.2                         | 775            | 4977                              | 0.0                         | 905            | 1748                              | 0.0                         |
| 390            | 1893                              | 0.0                         | 520            | 47282                             | 22.9                        | 650            | 78016                             | 5.7                         | 780            | 4723                              | 0.0                         | 910            | 2046                              | 0.0                         |
| 395            | 1695                              | 0.0                         | 525            | 55413                             | 29.7                        | 655            | 71541                             | 4.1                         | 785            | 4219                              | 0.0                         | 915            | 1844                              | 0.0                         |
| 400            | 1633                              | 0.0                         | 530            | 62377                             | 36.7                        | 660            | 64863                             | 2.7                         | 790            | 3969                              | 0.0                         | 920            | 2734                              | 0.0                         |
| 405            | 2065                              | 0.0                         | 535            | 68520                             | 42.5                        | 665            | 58485                             | 1.9                         | 795            | 4122                              | 0.0                         | 925            | 2307                              | 0.0                         |
| 410            | 3449                              | 0.0                         | 540            | 73435                             | 47.8                        | 670            | 51641                             | 1.1                         | 800            | 2864                              | 0.0                         | 930            | 2039                              | 0.0                         |
| 415            | 7117                              | 0.0                         | 545            | 78677                             | 52.4                        | 675            | 46030                             | 0.8                         | 805            | 3151                              | 0.0                         | 935            | 1784                              | 0.0                         |
| 420            | 13992                             | 0.0                         | 550            | 83331                             | 56.6                        | 680            | 40590                             | 0.5                         | 810            | 3022                              | 0.0                         | 940            | 2464                              | 0.0                         |
| 425            | 25176                             | 0.1                         | 555            | 89120                             | 60.9                        | 685            | 35691                             | 0.3                         | 815            | 3471                              | 0.0                         | 945            | 2794                              | 0.0                         |
| 430            | 38151                             | 0.3                         | 560            | 94613                             | 64.3                        | 690            | 31631                             | 0.2                         | 820            | 2749                              | 0.0                         | 950            | 3090                              | 0.0                         |
| 435            | 49673                             | 0.6                         | 565            | 99818                             | 66.4                        | 695            | 27437                             | 0.1                         | 825            | 2729                              | 0.0                         | 955            | 1866                              | 0.0                         |
| 440            | 57273                             | 0.9                         | 570            | 106526                            | 69.3                        | 700            | 24589                             | 0.1                         | 830            | 2282                              | 0.0                         | 960            | 3110                              | 0.0                         |
| 445            | 54802                             | 1.1                         | 575            | 111610                            | 69.4                        | 705            | 21832                             | 0.0                         | 835            | 3140                              | 0.0                         | 965            | 3880                              | 0.0                         |
| 450            | 39184                             | 1.0                         | 580            | 117163                            | 69.6                        | 710            | 19500                             | 0.0                         | 840            | 2365                              | 0.0                         | 970            | 3243                              | 0.0                         |
| 455            | 22506                             | 0.8                         | 585            | 122201                            | 67.9                        | 715            | 17870                             | 0.0                         | 845            | 3024                              | 0.0                         | 975            | 2014                              | 0.0                         |
| 460            | 13692                             | 0.6                         | 590            | 125662                            | 65.0                        | 720            | 15924                             | 0.0                         | 850            | 2510                              | 0.0                         | 980            | 1688                              | 0.0                         |
| 465            | 9446                              | 0.5                         | 595            | 127415                            | 60.4                        | 725            | 14268                             | 0.0                         | 855            | 2739                              | 0.0                         | 985            | 2827                              | 0.0                         |
| 470            | 6698                              | 0.4                         | 600            | 129155                            | 55.7                        | 730            | 12438                             | 0.0                         | 860            | 3515                              | 0.0                         | 990            | 4172                              | 0.0                         |
| 475            | 5328                              | 0.4                         | 605            | 128057                            | 49.6                        | 735            | 11255                             | 0.0                         | 865            | 3600                              | 0.0                         | 995            | 3177                              | 0.0                         |
| 480            | 5081                              | 0.5                         | 610            | 126031                            | 43.3                        | 740            | 9951                              | 0.0                         | 870            | 3609                              | 0.0                         | 1000           | 3241                              | 0.0                         |
| 485            | 5579                              | 0.7                         | 615            | 123059                            | 37.1                        | 745            | 8870                              | 0.0                         | 875            | 3208                              | 0.0                         |                |                                   |                             |

REPORT NUMBER: SP1-1908-441-1-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 6474.3

S/P: 1.04

| 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    | 2044          | 0.0           | 490    | 7179          | 6.0           | 620    | 118034        | 0.1           | 750    | 8362          | 0.0           | 880    | 3128          | 0.0           |
| 365    | 2016          | 0.0           | 495    | 10476         | 8.6           | 625    | 111884        | 0.1           | 755    | 7635          | 0.0           | 885    | 3110          | 0.0           |
| 370    | 2020          | 0.0           | 500    | 15549         | 12.5          | 630    | 106119        | 0.0           | 760    | 6582          | 0.0           | 890    | 2632          | 0.0           |
| 375    | 2137          | 0.0           | 505    | 22477         | 17.3          | 635    | 99706         | 0.0           | 765    | 5777          | 0.0           | 895    | 2709          | 0.0           |
| 380    | 2046          | 0.0           | 510    | 30417         | 21.8          | 640    | 92142         | 0.0           | 770    | 5474          | 0.0           | 900    | 2016          | 0.0           |
| 385    | 1925          | 0.0           | 515    | 39274         | 25.7          | 645    | 84987         | 0.0           | 775    | 4977          | 0.0           | 905    | 1748          | 0.0           |
| 390    | 1893          | 0.0           | 520    | 47282         | 27.5          | 650    | 78016         | 0.0           | 780    | 4723          | 0.0           | 910    | 2046          | 0.0           |
| 395    | 1695          | 0.0           | 525    | 55413         | 28.1          | 655    | 71541         | 0.0           | 785    | 4219          | 0.0           | 915    | 1844          | 0.0           |
| 400    | 1633          | 0.0           | 530    | 62377         | 27.0          | 660    | 64863         | 0.0           | 790    | 3969          | 0.0           | 920    | 2734          | 0.0           |
| 405    | 2065          | 0.0           | 535    | 68520         | 24.7          | 665    | 58485         | 0.0           | 795    | 4122          | 0.0           | 925    | 2307          | 0.0           |
| 410    | 3449          | 0.1           | 540    | 73435         | 21.5          | 670    | 51641         | 0.0           | 800    | 2864          | 0.0           | 930    | 2039          | 0.0           |
| 415    | 7117          | 0.5           | 545    | 78677         | 18.3          | 675    | 46030         | 0.0           | 805    | 3151          | 0.0           | 935    | 1784          | 0.0           |
| 420    | 13992         | 1.6           | 550    | 83331         | 15.0          | 680    | 40590         | 0.0           | 810    | 3022          | 0.0           | 940    | 2464          | 0.0           |
| 425    | 25176         | 3.9           | 555    | 89120         | 12.0          | 685    | 35691         | 0.0           | 815    | 3471          | 0.0           | 945    | 2794          | 0.0           |
| 430    | 38151         | 8.1           | 560    | 94613         | 9.3           | 690    | 31631         | 0.0           | 820    | 2749          | 0.0           | 950    | 3090          | 0.0           |
| 435    | 49673         | 13.3          | 565    | 99818         | 7.0           | 695    | 27437         | 0.0           | 825    | 2729          | 0.0           | 955    | 1866          | 0.0           |
| 440    | 57273         | 19.1          | 570    | 106526        | 5.2           | 700    | 24589         | 0.0           | 830    | 2282          | 0.0           | 960    | 3110          | 0.0           |
| 445    | 54802         | 21.6          | 575    | 111610        | 3.7           | 705    | 21832         | 0.0           | 835    | 3140          | 0.0           | 965    | 3880          | 0.0           |
| 450    | 39184         | 18.1          | 580    | 117163        | 2.6           | 710    | 19500         | 0.0           | 840    | 2365          | 0.0           | 970    | 3243          | 0.0           |
| 455    | 22506         | 11.8          | 585    | 122201        | 1.8           | 715    | 17870         | 0.0           | 845    | 3024          | 0.0           | 975    | 2014          | 0.0           |
| 460    | 13692         | 8.1           | 590    | 125662        | 1.2           | 720    | 15924         | 0.0           | 850    | 2510          | 0.0           | 980    | 1688          | 0.0           |
| 465    | 9446          | 6.2           | 595    | 127415        | 0.8           | 725    | 14268         | 0.0           | 855    | 2739          | 0.0           | 985    | 2827          | 0.0           |
| 470    | 6698          | 4.8           | 600    | 129155        | 0.5           | 730    | 12438         | 0.0           | 860    | 3515          | 0.0           | 990    | 4172          | 0.0           |
| 475    | 5328          | 4.1           | 605    | 128057        | 0.4           | 735    | 11255         | 0.0           | 865    | 3600          | 0.0           | 995    | 3177          | 0.0           |
| 480    | 5081          | 4.1           | 610    | 126031        | 0.2           | 740    | 9951          | 0.0           | 870    | 3609          | 0.0           | 1000   | 3241          | 0.0           |
| 485    | 5579          | 4.6           | 615    | 123059        | 0.1           | 745    | 8870          | 0.0           | 875    | 3208          | 0.0           |        |               |               |



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Melanopic Flux vs. Wavelength



Melanopic Lumens: 2145.7 M/P: 0.35

| 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    | 2044          | 0.0           | 490    | 7179          | 11.1          | 620    | 118034        | 1.5           | 750    | 8362          | 0.0           | 880    | 3128          | 0.0           |
| 365    | 2016          | 0.0           | 495    | 10476         | 16.9          | 625    | 111884        | 0.9           | 755    | 7635          | 0.0           | 885    | 3110          | 0.0           |
| 370    | 2020          | 0.0           | 500    | 15549         | 26.0          | 630    | 106119        | 0.6           | 760    | 6582          | 0.0           | 890    | 2632          | 0.0           |
| 375    | 2137          | 0.0           | 505    | 22477         | 38.2          | 635    | 99706         | 0.4           | 765    | 5777          | 0.0           | 895    | 2709          | 0.0           |
| 380    | 2046          | 0.0           | 510    | 30417         | 51.6          | 640    | 92142         | 0.2           | 770    | 5474          | 0.0           | 900    | 2016          | 0.0           |
| 385    | 1925          | 0.0           | 515    | 39274         | 65.1          | 645    | 84987         | 0.1           | 775    | 4977          | 0.0           | 905    | 1748          | 0.0           |
| 390    | 1893          | 0.0           | 520    | 47282         | 75.2          | 650    | 78016         | 0.1           | 780    | 4723          | 0.0           | 910    | 2046          | 0.0           |
| 395    | 1695          | 0.0           | 525    | 55413         | 82.9          | 655    | 71541         | 0.1           | 785    | 4219          | 0.0           | 915    | 1844          | 0.0           |
| 400    | 1633          | 0.0           | 530    | 62377         | 86.0          | 660    | 64863         | 0.0           | 790    | 3969          | 0.0           | 920    | 2734          | 0.0           |
| 405    | 2065          | 0.1           | 535    | 68520         | 85.4          | 665    | 58485         | 0.0           | 795    | 4122          | 0.0           | 925    | 2307          | 0.0           |
| 410    | 3449          | 0.2           | 540    | 73435         | 81.1          | 670    | 51641         | 0.0           | 800    | 2864          | 0.0           | 930    | 2039          | 0.0           |
| 415    | 7117          | 0.7           | 545    | 78677         | 75.4          | 675    | 46030         | 0.0           | 805    | 3151          | 0.0           | 935    | 1784          | 0.0           |
| 420    | 13992         | 2.3           | 550    | 83331         | 68.1          | 680    | 40590         | 0.0           | 810    | 3022          | 0.0           | 940    | 2464          | 0.0           |
| 425    | 25176         | 6.2           | 555    | 89120         | 60.9          | 685    | 35691         | 0.0           | 815    | 3471          | 0.0           | 945    | 2794          | 0.0           |
| 430    | 38151         | 13.0          | 560    | 94613         | 52.9          | 690    | 31631         | 0.0           | 820    | 2749          | 0.0           | 950    | 3090          | 0.0           |
| 435    | 49673         | 22.2          | 565    | 99818         | 44.8          | 695    | 27437         | 0.0           | 825    | 2729          | 0.0           | 955    | 1866          | 0.0           |
| 440    | 57273         | 32.0          | 570    | 106526        | 37.6          | 700    | 24589         | 0.0           | 830    | 2282          | 0.0           | 960    | 3110          | 0.0           |
| 445    | 54802         | 36.7          | 575    | 111610        | 30.4          | 705    | 21832         | 0.0           | 835    | 3140          | 0.0           | 965    | 3880          | 0.0           |
| 450    | 39184         | 30.4          | 580    | 117163        | 24.1          | 710    | 19500         | 0.0           | 840    | 2365          | 0.0           | 970    | 3243          | 0.0           |
| 455    | 22506         | 19.7          | 585    | 122201        | 18.7          | 715    | 17870         | 0.0           | 845    | 3024          | 0.0           | 975    | 2014          | 0.0           |
| 460    | 13692         | 13.2          | 590    | 125662        | 14.0          | 720    | 15924         | 0.0           | 850    | 2510          | 0.0           | 980    | 1688          | 0.0           |
| 465    | 9446          | 10.0          | 595    | 127415        | 10.2          | 725    | 14268         | 0.0           | 855    | 2739          | 0.0           | 985    | 2827          | 0.0           |
| 470    | 6698          | 7.7           | 600    | 129155        | 7.3           | 730    | 12438         | 0.0           | 860    | 3515          | 0.0           | 990    | 4172          | 0.0           |
| 475    | 5328          | 6.7           | 605    | 128057        | 5.0           | 735    | 11255         | 0.0           | 865    | 3600          | 0.0           | 995    | 3177          | 0.0           |
| 480    | 5081          | 6.9           | 610    | 126031        | 3.4           | 740    | 9951          | 0.0           | 870    | 3609          | 0.0           | 1000   | 3241          | 0.0           |
| 485    | 5579          | 8.1           | 615    | 123059        | 2.3           | 745    | 8870          | 0.0           | 875    | 3208          | 0.0           |        |               |               |

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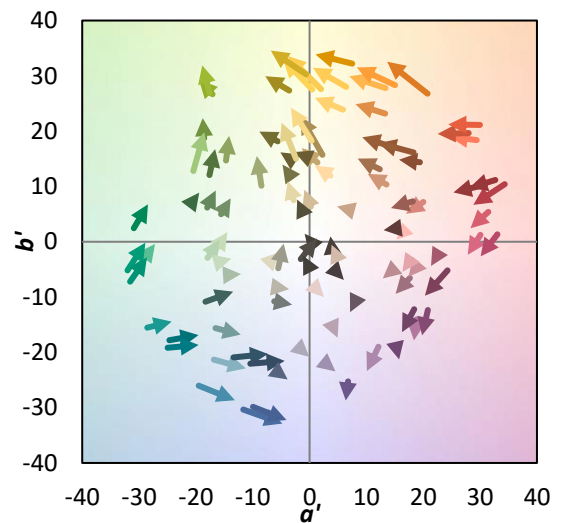
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**Summary**

$R_f = 69.9$   
 $R_g = 98.3$   
 CIE  $R_a = 71.5$   
 $R_9 = -16.1$



**Color Vector Graphics**



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

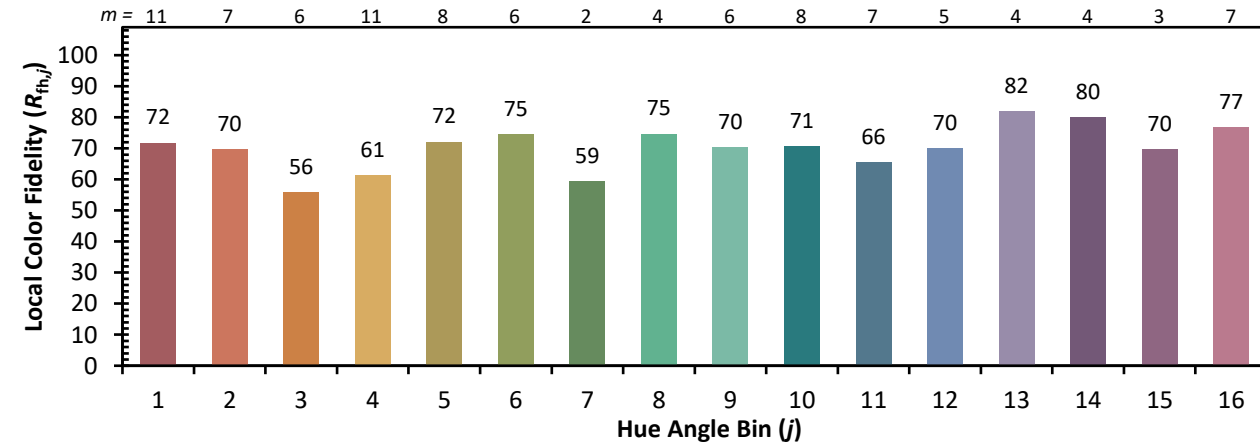
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|------------|------------|------------|------------|
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| CES02 = 63 | CES27 = 74 | CES52 = 80 | CES77 = 75 |
| CES03 = 31 | CES28 = 80 | CES53 = 66 | CES78 = 56 |
| CES04 = 71 | CES29 = 44 | CES54 = 77 | CES79 = 81 |
| CES05 = 50 | CES30 = 46 | CES55 = 74 | CES80 = 80 |
| CES06 = 52 | CES31 = 50 | CES56 = 63 | CES81 = 73 |
| CES07 = 42 | CES32 = 49 | CES57 = 60 | CES82 = 91 |
| CES08 = 41 | CES33 = 53 | CES58 = 63 | CES83 = 84 |
| CES09 = 29 | CES34 = 66 | CES59 = 85 | CES84 = 90 |
| CES10 = 77 | CES35 = 82 | CES60 = 89 | CES85 = 87 |
| CES11 = 60 | CES36 = 78 | CES61 = 85 | CES86 = 65 |
| CES12 = 66 | CES37 = 75 | CES62 = 69 | CES87 = 78 |
| CES13 = 43 | CES38 = 53 | CES63 = 68 | CES88 = 73 |
| CES14 = 74 | CES39 = 91 | CES64 = 68 | CES89 = 68 |
| CES15 = 71 | CES40 = 85 | CES65 = 65 | CES90 = 68 |
| CES16 = 48 | CES41 = 76 | CES66 = 62 | CES91 = 91 |
| CES17 = 50 | CES42 = 76 | CES67 = 60 | CES92 = 71 |
| CES18 = 57 | CES43 = 65 | CES68 = 68 | CES93 = 82 |
| CES19 = 73 | CES44 = 98 | CES69 = 77 | CES94 = 57 |
| CES20 = 67 | CES45 = 75 | CES70 = 60 | CES95 = 78 |
| CES21 = 88 | CES46 = 70 | CES71 = 57 | CES96 = 80 |
| CES22 = 80 | CES47 = 63 | CES72 = 86 | CES97 = 79 |
| CES23 = 92 | CES48 = 51 | CES73 = 52 | CES98 = 71 |
| CES24 = 91 | CES49 = 68 | CES74 = 90 | CES99 = 64 |
| CES25 = 73 | CES50 = 77 | CES75 = 58 |            |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)