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: P1362609

Luminaire Tested: **GSS-SB1C-722-U-SL2**

Issue Date: 02/18/2026

Report Generated By 670245763

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1362609 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1C-722-U-SL2 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 52W 70CRI 2200K FIXTURE w/ TYPE II SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (26) 2200K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5484.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 105.5 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B1 - U0 - G1 |

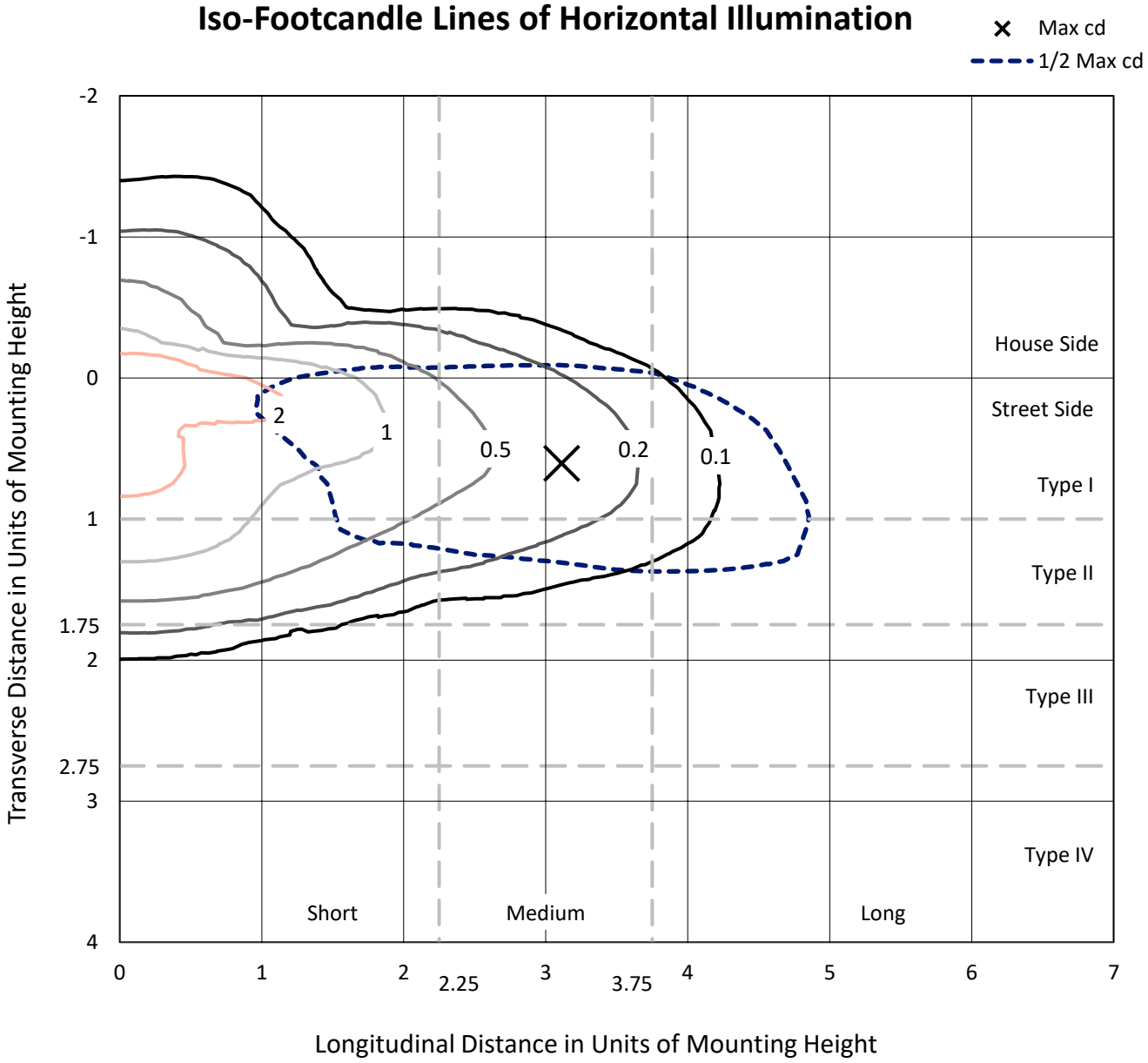
| | |
|---|---|
| Input Watts (W): | 52 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 10.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1362609
CATALOG NUMBER: GSS-SB1C-722-U-SL2

## Iso-Footcandle Lines of Horizontal Illumination



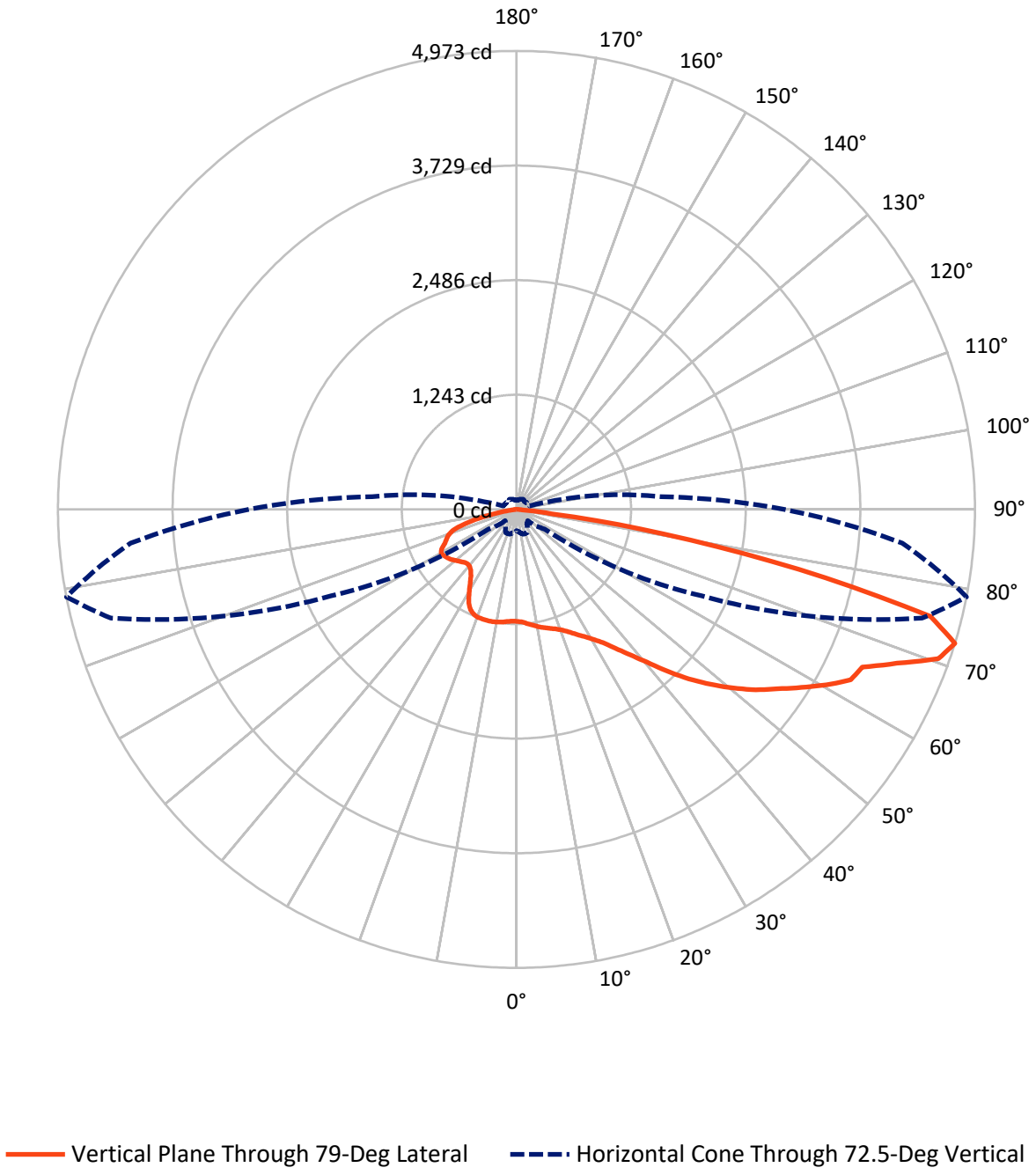

Based on 20 foot mounting height. Maximum calculated value = 3.1 fc
Type II - Medium - N/A

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Scaled Data Report

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## Luminous Intensity Polar Plot



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Scaled Data Report

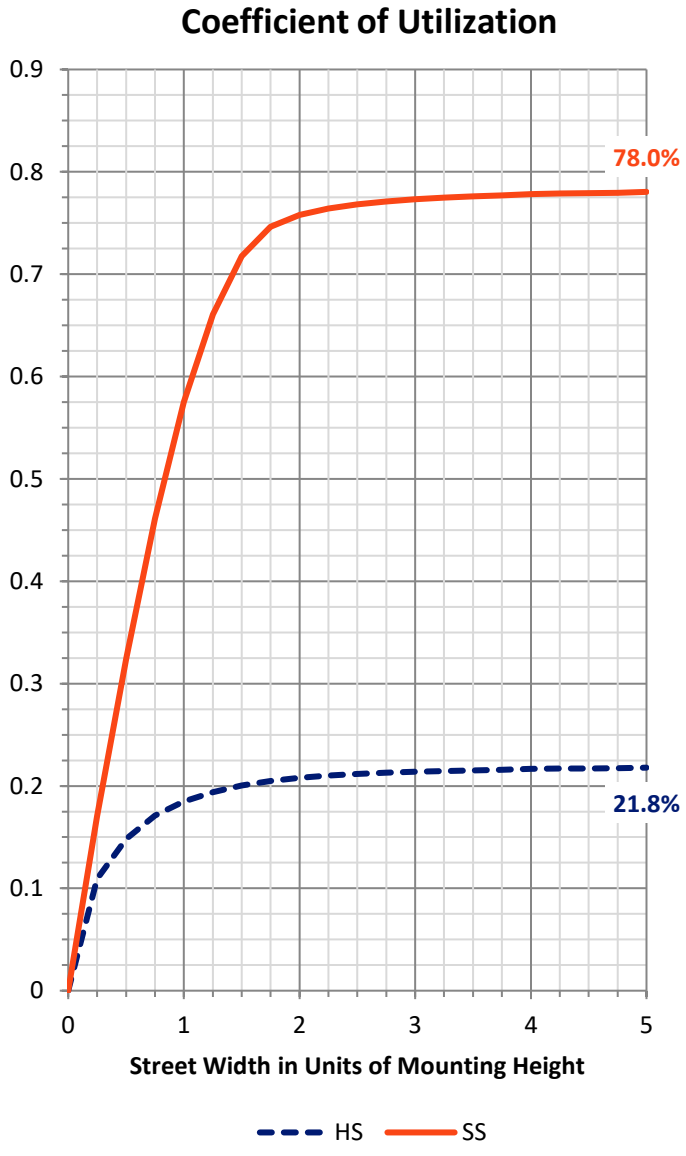
REPORT NUMBER: P1362609
CATALOG NUMBER: GSS-SB1C-722-U-SL2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1204.8 | 0.0 | 1204.8 |
| | % Fixture | 22.0 | 0.0 | 22.0 |
| **Street Side** | Lumens | 4279.7 | 0.0 | 4279.7 |
| | % Fixture | 78.0 | 0.0 | 78.0 |
| **Total** | Lumens | 5484.5 | 0.0 | 5484.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 112.8 | 2.1 |
| 10°-20° | 280.0 | 5.1 |
| 20°-30° | 440.9 | 8.0 |
| 30°-40° | 657.9 | 12.0 |
| 40°-50° | 935.5 | 17.1 |
| 50°-60° | 1181.7 | 21.5 |
| 60°-70° | 1106.1 | 20.2 |
| 70°-80° | 702.6 | 12.8 |
| 80°-90° | 67.0 | 1.2 |
| 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° | 5484.5 | 100.0 |
| 0°-180° | 5484.5 | 100.0 |



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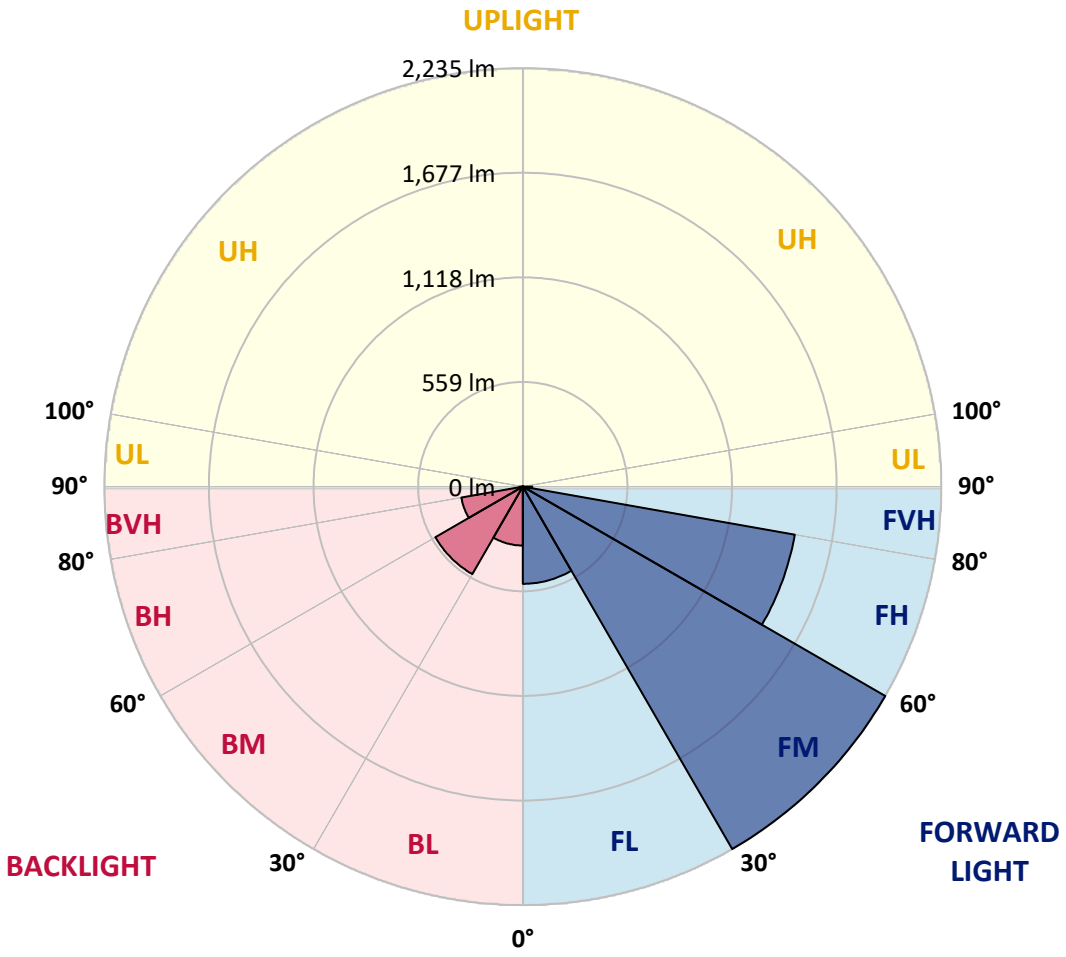
Scaled Data Report

REPORT NUMBER: P1362609
CATALOG NUMBER: GSS-SB1C-722-U-SL2

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 519.1 | 9.5 | | | |
| FM | (30°-60°) | 2235.5 | 40.8 | | | |
| FH | (60°-80°) | 1475.2 | 26.9 | | | G1/1800 |
| FVH | (80°-90°) | 49.9 | 0.9 | | | G1/100 |
| BL | (0°-30°) | 314.5 | 5.7 | B1/500 | | |
| BM | (30°-60°) | 539.6 | 9.8 | B1/1000 | | |
| BH | (60°-80°) | 333.5 | 6.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 17.1 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G1**
Type II Medium



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REPORT NUMBER: P1362609
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | *1214.6* | 1214.6 |
| 2.5° | 1243.2 | 1244.5 | 1239.3 | 1239.3 | 1240.6 | 1235.4 | 1228.9 | 1227.6 | 1222.4 | *1222.4* | 1222.4 |
| 5° | 1249.6 | 1249.6 | 1248.3 | 1254.8 | 1257.4 | 1261.3 | 1256.1 | 1252.2 | 1244.5 | *1244.5* | 1234.1 |
| 7.5° | 1180.9 | 1178.3 | 1188.7 | 1218.5 | 1249.6 | 1266.5 | 1276.9 | 1276.9 | 1273.0 | *1266.5* | 1257.4 |
| 10° | 1051.1 | 1055.0 | 1070.6 | 1110.8 | 1167.9 | 1244.5 | 1286.0 | 1302.8 | 1296.4 | *1293.8* | 1278.2 |
| 12.5° | 982.3 | 981.0 | 992.7 | 1022.6 | 1071.9 | 1165.3 | 1267.8 | 1321.0 | 1322.3 | *1315.8* | 1297.7 |
| 15° | 974.5 | 970.6 | 975.8 | 986.2 | 1018.7 | 1093.9 | 1213.3 | 1327.5 | 1340.5 | *1337.9* | 1317.1 |
| 17.5° | 1018.7 | 1017.4 | 1009.6 | 1007.0 | 1005.7 | 1047.2 | 1160.1 | 1322.3 | 1365.1 | *1362.5* | 1339.2 |
| 20° | 1095.2 | 1088.7 | 1074.5 | 1061.5 | 1034.2 | 1038.1 | 1118.6 | 1315.8 | 1398.9 | *1395.0* | 1371.6 |
| 22.5° | 1177.0 | 1179.6 | 1166.6 | 1135.4 | 1087.4 | 1065.4 | 1105.6 | 1306.7 | 1444.3 | *1441.7* | 1410.5 |
| 25° | 1276.9 | 1274.3 | 1258.7 | 1223.7 | 1160.1 | 1112.1 | 1119.9 | 1304.1 | 1496.2 | *1498.8* | 1461.2 |
| 27.5° | 1379.4 | 1376.8 | 1357.3 | 1313.2 | 1239.3 | 1169.2 | 1152.3 | 1314.5 | 1562.4 | *1561.1* | 1514.4 |
| 30° | 1493.6 | 1494.9 | 1470.2 | 1410.5 | 1321.0 | 1240.6 | 1204.2 | 1341.8 | 1628.6 | *1632.4* | 1575.4 |
| 32.5° | 1596.1 | 1602.6 | 1588.3 | 1532.5 | 1420.9 | 1314.5 | 1267.8 | 1385.9 | 1716.8 | *1723.3* | 1653.2 |
| 35° | 1661.0 | 1664.9 | 1663.6 | 1637.6 | 1527.3 | 1398.9 | 1331.4 | 1441.7 | 1823.2 | *1847.9* | 1757.0 |
| 37.5° | 1723.3 | 1732.4 | 1733.7 | 1714.2 | 1631.2 | 1498.8 | 1406.7 | 1519.6 | 1959.5 | *1999.7* | 1893.3 |
| 40° | 1790.8 | 1788.2 | 1806.3 | 1783.0 | 1724.6 | 1605.2 | 1484.5 | 1607.8 | 2110.0 | *2176.2* | 2052.9 |
| 42.5° | 1831.0 | 1837.5 | 1860.8 | 1855.6 | 1797.3 | 1703.8 | 1572.8 | 1706.4 | 2298.1 | *2395.5* | 2246.2 |
| 45° | 1856.9 | 1863.4 | 1897.2 | 1902.4 | 1871.2 | 1771.3 | 1655.8 | 1801.1 | 2470.7 | *2622.6* | 2453.9 |
| 47.5° | 1866.0 | 1869.9 | 1914.0 | 1934.8 | 1921.8 | 1814.1 | 1720.7 | 1908.8 | 2640.7 | *2836.7* | 2661.5 |
| 50° | 1829.7 | 1844.0 | 1901.1 | 1947.8 | 1956.9 | 1836.2 | 1776.5 | 2023.0 | 2823.7 | *3044.3* | 2870.4 |
| 52.5° | 1773.9 | 1781.7 | 1850.5 | 1950.4 | 1978.9 | 1872.5 | 1845.3 | 2143.7 | 2996.3 | *3251.9* | 3049.5 |
| 55° | 1664.9 | 1680.5 | 1766.1 | 1907.6 | 1991.9 | 1920.5 | 1934.8 | 2280.0 | 3175.4 | *3433.6* | 3244.1 |
| 57.5° | 1356.0 | 1383.3 | 1524.7 | 1724.6 | 1956.9 | 2015.3 | 2068.5 | 2448.7 | 3371.3 | *3643.8* | 3418.0 |
| 60° | 850.0 | 886.3 | 1034.2 | 1357.3 | 1758.3 | 2071.1 | 2281.3 | 2668.0 | 3604.9 | *3864.4* | 3611.4 |
| 62.5° | 460.7 | 459.4 | 503.5 | 694.2 | 1267.8 | 1925.7 | 2464.2 | 3048.2 | 3905.9 | *4069.4* | 3724.3 |
| 65° | 399.7 | 399.7 | 404.9 | 403.6 | 547.6 | 1420.9 | 2282.6 | 3275.3 | 4113.6 | *4123.9* | 3628.2 |
| 67.5° | 359.5 | 359.5 | 367.2 | 347.8 | 298.5 | 635.9 | 1670.1 | 3140.3 | 4457.4 | *4451.0* | 3751.5 |
| 70° | 316.6 | 317.9 | 330.9 | 319.2 | 240.1 | 258.2 | 913.5 | 2860.0 | 4714.4 | *4853.2* | 3996.8 |
| 72.5° | *232.3* | *240.1* | *277.7* | *277.7* | *197.2* | *173.9* | *371.1* | *2217.7* | *4553.5* | *4972.6* | *4200.5* |
| 75° | 163.5 | 164.8 | 184.3 | 198.5 | 155.7 | 131.1 | 180.4 | 1484.5 | 4177.1 | *4639.1* | 4018.8 |
| 77.5° | 124.6 | 125.9 | 132.4 | 158.3 | 106.4 | 96.0 | 124.6 | 811.0 | 3013.2 | *3132.5* | 2607.0 |
| 80° | 83.0 | 81.8 | 90.8 | 111.6 | 75.3 | 64.9 | 80.5 | 271.2 | 1690.8 | *1613.0* | 1088.7 |
| 82.5° | 41.5 | 42.8 | 49.3 | 58.4 | 44.1 | 38.9 | 46.7 | 140.1 | 663.1 | *385.4* | 158.3 |
| 85° | 11.7 | 14.3 | 16.9 | 23.4 | 18.2 | 16.9 | 22.1 | 49.3 | 84.3 | *62.3* | 42.8 |
| 87.5° | 1.3 | 1.3 | 2.6 | 2.6 | 2.6 | 3.9 | 6.5 | 10.4 | 14.3 | *14.3* | 14.3 |
| 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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Scaled Data Report

REPORT NUMBER: P1362609
CATALOG NUMBER: GSS-SB1C-722-U-SL2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 | 1214.6 |
| 2.5° | 1219.8 | 1215.9 | 1210.7 | 1202.9 | 1202.9 | 1193.8 | 1188.7 | 1178.3 | 1182.2 | 1177.0 | 1174.4 |
| 5° | 1231.5 | 1226.3 | 1214.6 | 1201.6 | 1188.7 | 1169.2 | 1153.6 | 1131.6 | 1129.0 | 1123.8 | 1116.0 |
| 7.5° | 1252.2 | 1239.3 | 1225.0 | 1195.1 | 1170.5 | 1126.4 | 1091.3 | 1047.2 | 1022.6 | 1007.0 | 1008.3 |
| 10° | 1273.0 | 1256.1 | 1226.3 | 1187.4 | 1134.1 | 1061.5 | 970.6 | 883.7 | 817.5 | 779.9 | 787.7 |
| 12.5° | 1287.3 | 1269.1 | 1228.9 | 1166.6 | 1068.0 | 922.6 | 753.9 | 630.7 | 582.6 | 558.0 | 558.0 |
| 15° | 1301.5 | 1278.2 | 1225.0 | 1122.5 | 943.4 | 695.5 | 561.9 | 515.2 | 502.2 | 494.4 | 491.8 |
| 17.5° | 1319.7 | 1292.5 | 1213.3 | 1040.7 | 743.6 | 543.7 | 497.0 | 482.7 | 482.7 | 481.4 | 478.8 |
| 20° | 1341.8 | 1309.3 | 1199.0 | 911.0 | 571.0 | 487.9 | 474.9 | 472.3 | 474.9 | 473.6 | 472.3 |
| 22.5° | 1375.5 | 1330.1 | 1162.7 | 731.9 | 490.5 | 462.0 | 460.7 | 447.7 | 450.3 | 452.9 | 451.6 |
| 25° | 1418.3 | 1356.0 | 1093.9 | 559.3 | 450.3 | 445.1 | 432.1 | 420.4 | 419.1 | 420.4 | 420.4 |
| 27.5° | 1458.6 | 1375.5 | 982.3 | 460.7 | 421.7 | 420.4 | 408.8 | 398.4 | 398.4 | 399.7 | 399.7 |
| 30° | 1502.7 | 1387.2 | 811.0 | 410.1 | 404.9 | 398.4 | 394.5 | 390.6 | 391.9 | 395.8 | 395.8 |
| 32.5° | 1561.1 | 1398.9 | 643.6 | 381.5 | 388.0 | 378.9 | 381.5 | 380.2 | 382.8 | 389.3 | 390.6 |
| 35° | 1632.4 | 1404.1 | 515.2 | 364.6 | 364.6 | 356.9 | 358.2 | 353.0 | 353.0 | 356.9 | 359.5 |
| 37.5° | 1727.2 | 1406.7 | 433.4 | 355.6 | 346.5 | 342.6 | 340.0 | 333.5 | 324.4 | 317.9 | 319.2 |
| 40° | 1829.7 | 1413.1 | 389.3 | 349.1 | 338.7 | 337.4 | 332.2 | 323.1 | 297.2 | 276.4 | 275.1 |
| 42.5° | 1965.9 | 1431.3 | 367.2 | 338.7 | 338.7 | 338.7 | 330.9 | 290.7 | 269.9 | 255.6 | 254.3 |
| 45° | 2103.5 | 1479.3 | 355.6 | 329.6 | 337.4 | 338.7 | 303.7 | 279.0 | 262.1 | 246.6 | 242.7 |
| 47.5° | 2256.6 | 1548.1 | 350.4 | 324.4 | 328.3 | 330.9 | 285.5 | 273.8 | 254.3 | 236.2 | 232.3 |
| 50° | 2408.4 | 1620.8 | 345.2 | 315.3 | 315.3 | 298.5 | 281.6 | 268.6 | 249.1 | 229.7 | 227.1 |
| 52.5° | 2569.4 | 1705.1 | 340.0 | 299.8 | 298.5 | 280.3 | 277.7 | 267.3 | 246.6 | 221.9 | 216.7 |
| 55° | 2709.5 | 1781.7 | 330.9 | 281.6 | 280.3 | 262.1 | 275.1 | 262.1 | 231.0 | 202.4 | 197.2 |
| 57.5° | 2843.2 | 1844.0 | 319.2 | 262.1 | 264.7 | 247.9 | 264.7 | 251.7 | 216.7 | 188.2 | 185.6 |
| 60° | 2970.3 | 1908.8 | 303.7 | 245.3 | 245.3 | 234.9 | 251.7 | 234.9 | 202.4 | 173.9 | 170.0 |
| 62.5° | 3008.0 | 1888.1 | 277.7 | 227.1 | 225.8 | 218.0 | 234.9 | 215.4 | 184.3 | 158.3 | 154.4 |
| 65° | 2878.2 | 1781.7 | 246.6 | 208.9 | 205.0 | 198.5 | 210.2 | 192.1 | 163.5 | 142.7 | 141.4 |
| 67.5° | 2896.4 | 1740.2 | 211.5 | 185.6 | 181.7 | 176.5 | 180.4 | 166.1 | 144.0 | 128.5 | 127.2 |
| 70° | 2919.7 | 1694.7 | 179.1 | 163.5 | 154.4 | 145.3 | 154.4 | 142.7 | 127.2 | 114.2 | 112.9 |
| 72.5° | *2901.6* | *1568.9* | *147.9* | *137.6* | *131.1* | *120.7* | *132.4* | *123.3* | *110.3* | *99.9* | *97.3* |
| 75° | 2639.4 | 1261.3 | 120.7 | 112.9 | 105.1 | 98.6 | 106.4 | 103.8 | 93.4 | 92.1 | 83.0 |
| 77.5° | 1775.2 | 808.4 | 93.4 | 86.9 | 84.3 | 77.9 | 83.0 | 79.2 | 74.0 | 68.8 | 64.9 |
| 80° | 769.5 | 362.0 | 67.5 | 61.0 | 58.4 | 54.5 | 59.7 | 58.4 | 55.8 | 51.9 | 50.6 |
| 82.5° | 110.3 | 85.6 | 45.4 | 41.5 | 35.0 | 32.4 | 35.0 | 37.6 | 54.5 | 66.2 | 64.9 |
| 85° | 31.1 | 26.0 | 22.1 | 19.5 | 15.6 | 13.0 | 14.3 | 23.4 | 31.1 | 19.5 | 16.9 |
| 87.5° | 14.3 | 13.0 | 10.4 | 6.5 | 3.9 | 3.9 | 2.6 | 1.3 | 1.3 | 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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# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-2

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-722-U-5WQ

Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

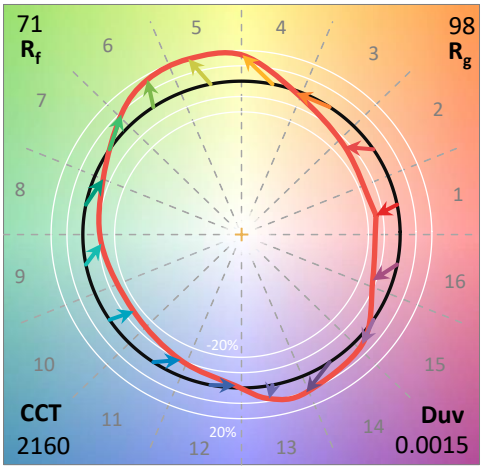
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-2 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-722-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2200K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2160 |
| CIE u': | 0.2927 |
| CIE v': | 0.5388 |
| Duv: | 0.0015 |
| CIE x: | 0.5130 |
| CIE y: | 0.4197 |
| CIE z: | 0.0674 |
| Peak Wavelength (nm): | 609 |
| Dominant Wavelength (nm): | 587 |
| Purity: | 79.96089 |
| Rf: | 70.6 |
| Rg: | 97.6 |

| | |
|---|---|
| CRI (Ra): | 71.9 |
| R1: | 68.7 |
| R2: | 82.6 |
| R3: | 95.5 |
| R4: | 66.4 |
| R5: | 65.4 |
| R6: | 75.9 |
| R7: | 77.2 |
| R8: | 43.5 |
| R9: | -17.8 |
| R10: | 60.5 |
| R11: | 60.2 |
| R12: | 48.2 |
| R13: | 70.7 |
| R14: | 96.8 |
| R15: | 61.8 |




## Test Conditions

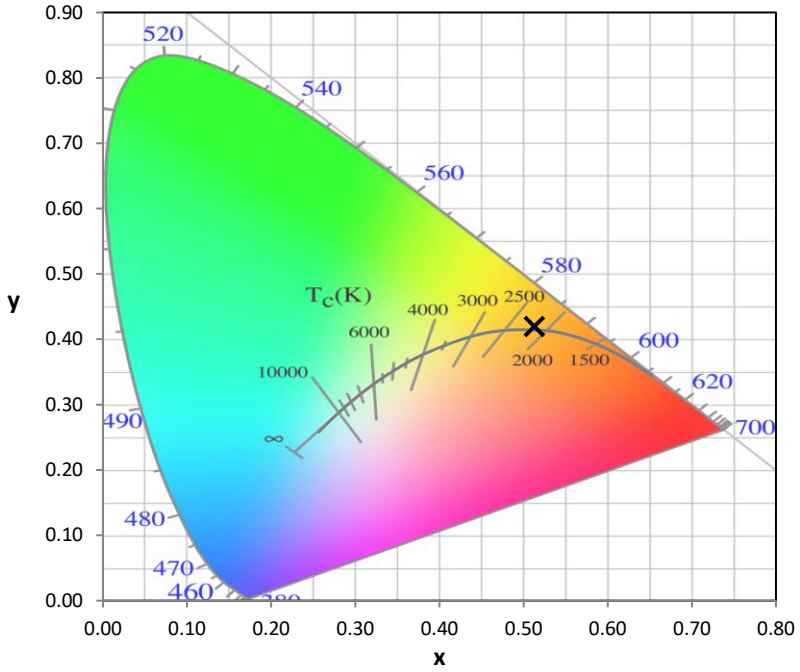
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-2

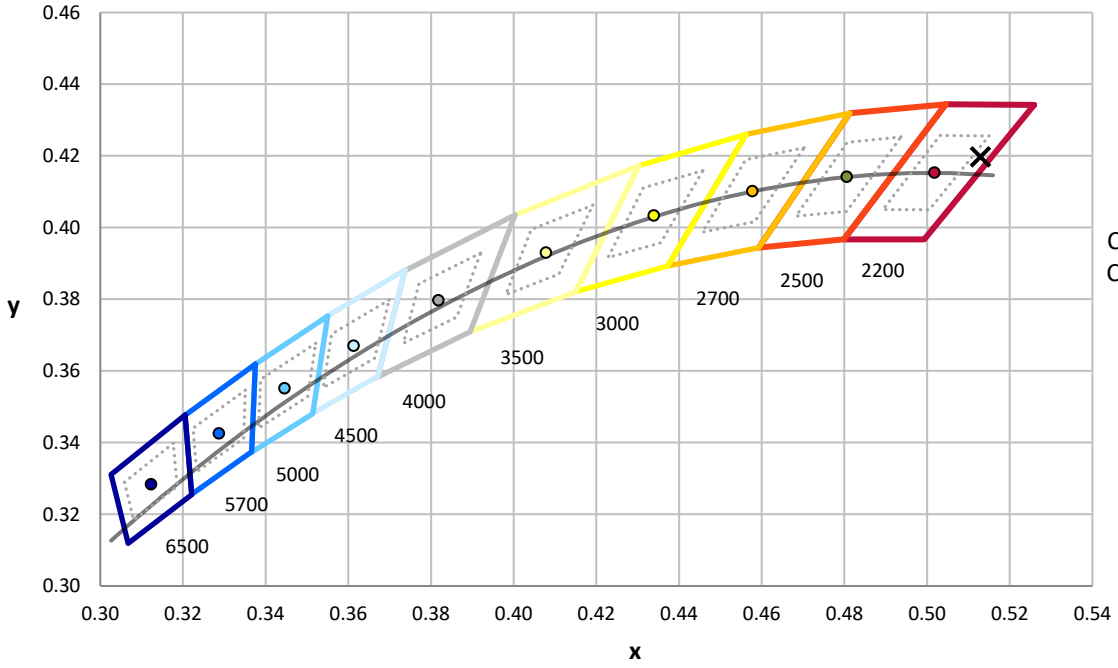
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

REPORT NUMBER: SP1-2407-184-2

## CIE 1931 Chromaticity Diagram




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

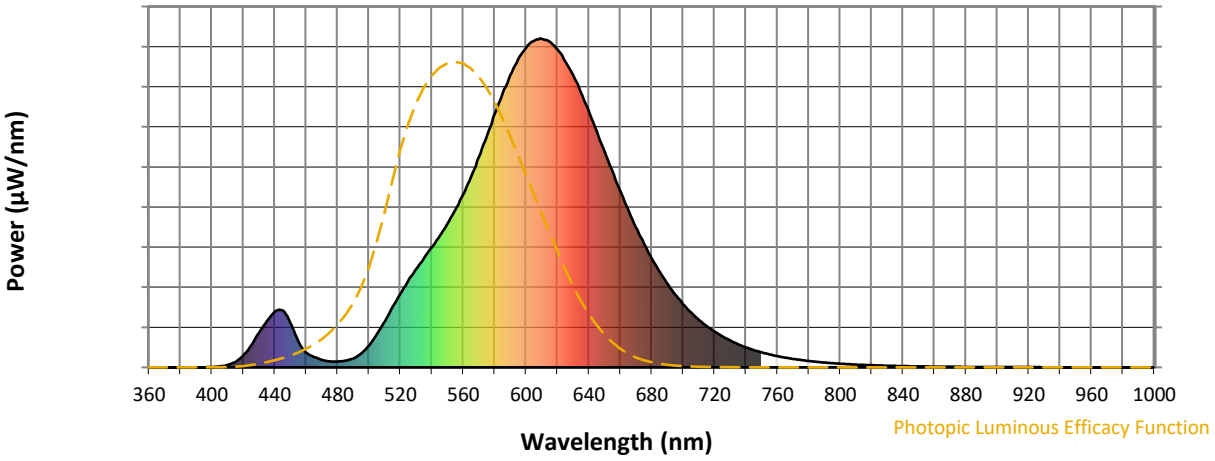



CCT = 2160K
CIE x = 0.5130
CIE y = 0.4197
Duv = 0.0015

Point lies inside the ANSI 2200K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-2

## Photopic Flux vs. Wavelength

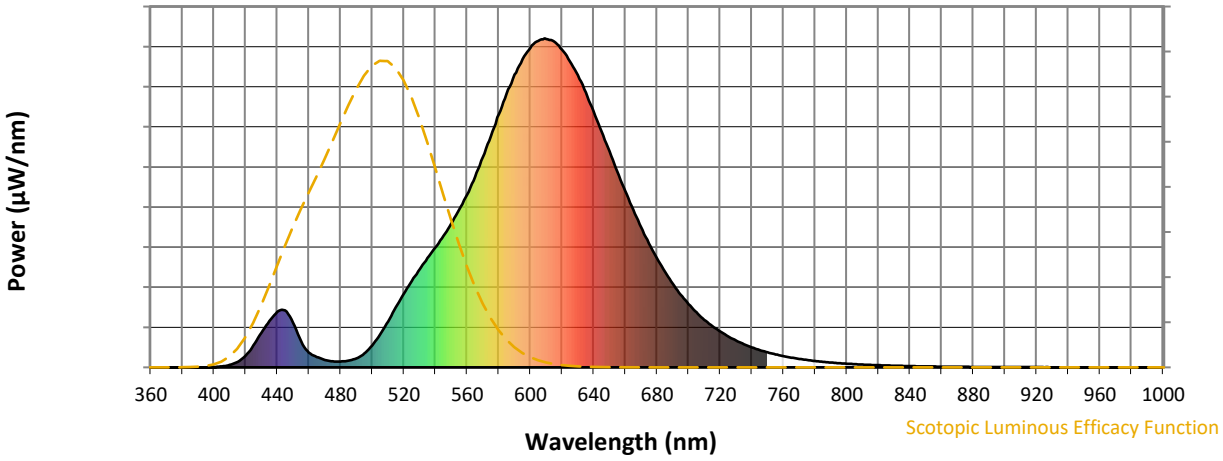



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-2

## Scotopic Flux vs. Wavelength

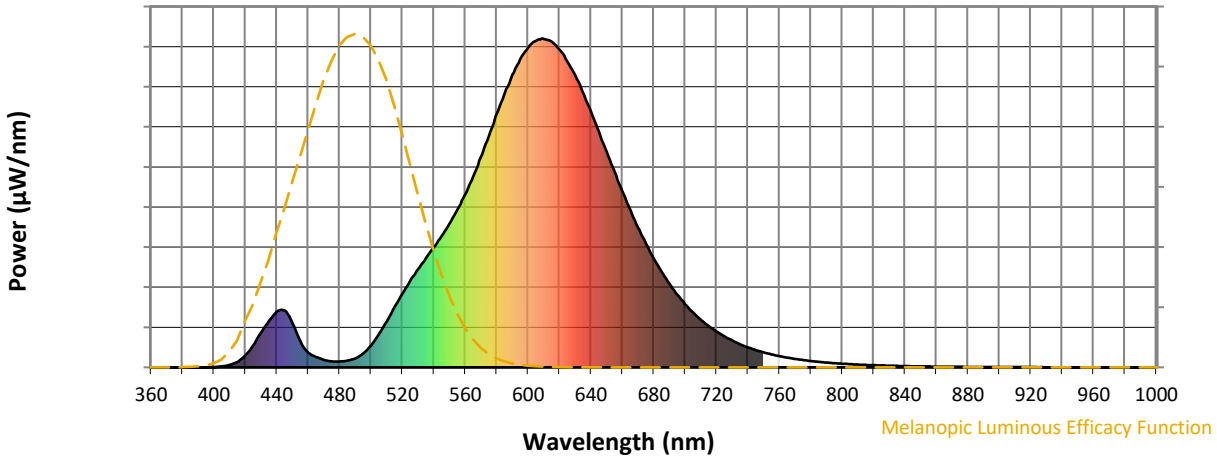



**Scotopic Lumens: NR** **S/P: 0.8**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

REPORT NUMBER: SP1-2407-184-2

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.21**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 27 | NR | 620 | 966 | NR | 750 | 46 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 42 | NR | 625 | 930 | NR | 755 | 39 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 67 | NR | 630 | 888 | NR | 760 | 34 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 101 | NR | 635 | 835 | NR | 765 | 30 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 139 | NR | 640 | 778 | NR | 770 | 26 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 183 | NR | 645 | 717 | NR | 775 | 22 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 224 | NR | 650 | 656 | NR | 780 | 19 | NR | 910 | 1 | NR |
| 395 | 0 | NR | 525 | 262 | NR | 655 | 595 | NR | 785 | 17 | NR | 915 | 1 | NR |
| 400 | 1 | NR | 530 | 299 | NR | 660 | 536 | NR | 790 | 15 | NR | 920 | 1 | NR |
| 405 | 3 | NR | 535 | 332 | NR | 665 | 480 | NR | 795 | 13 | NR | 925 | 1 | NR |
| 410 | 7 | NR | 540 | 365 | NR | 670 | 425 | NR | 800 | 11 | NR | 930 | 1 | NR |
| 415 | 17 | NR | 545 | 400 | NR | 675 | 376 | NR | 805 | 10 | NR | 935 | 0 | NR |
| 420 | 36 | NR | 550 | 437 | NR | 680 | 332 | NR | 810 | 8 | NR | 940 | 0 | NR |
| 425 | 67 | NR | 555 | 479 | NR | 685 | 291 | NR | 815 | 8 | NR | 945 | 0 | NR |
| 430 | 105 | NR | 560 | 525 | NR | 690 | 255 | NR | 820 | 7 | NR | 950 | 0 | NR |
| 435 | 141 | NR | 565 | 579 | NR | 695 | 221 | NR | 825 | 6 | NR | 955 | 0 | NR |
| 440 | 169 | NR | 570 | 639 | NR | 700 | 192 | NR | 830 | 5 | NR | 960 | 0 | NR |
| 445 | 173 | NR | 575 | 703 | NR | 705 | 167 | NR | 835 | 4 | NR | 965 | 0 | NR |
| 450 | 136 | NR | 580 | 769 | NR | 710 | 144 | NR | 840 | 4 | NR | 970 | 0 | NR |
| 455 | 80 | NR | 585 | 832 | NR | 715 | 125 | NR | 845 | 3 | NR | 975 | 0 | NR |
| 460 | 45 | NR | 590 | 890 | NR | 720 | 109 | NR | 850 | 3 | NR | 980 | 0 | NR |
| 465 | 32 | NR | 595 | 937 | NR | 725 | 94 | NR | 855 | 3 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 972 | NR | 730 | 81 | NR | 860 | 2 | NR | 990 | 0 | NR |
| 475 | 18 | NR | 605 | 992 | NR | 735 | 70 | NR | 865 | 2 | NR | 995 | 0 | NR |
| 480 | 18 | NR | 610 | 998 | NR | 740 | 61 | NR | 870 | 2 | NR | 1000 | 0 | NR |
| 485 | 20 | NR | 615 | 990 | NR | 745 | 53 | NR | 875 | 2 | NR | | | |

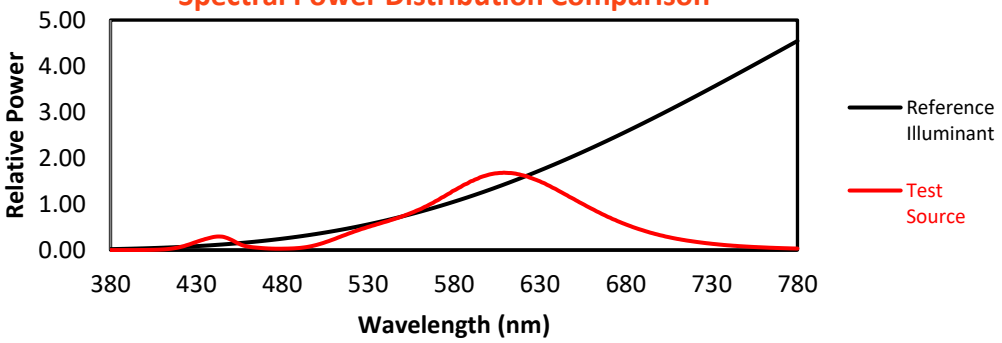
REPORT NUMBER: SP1-2407-184-2

# TM-30-18

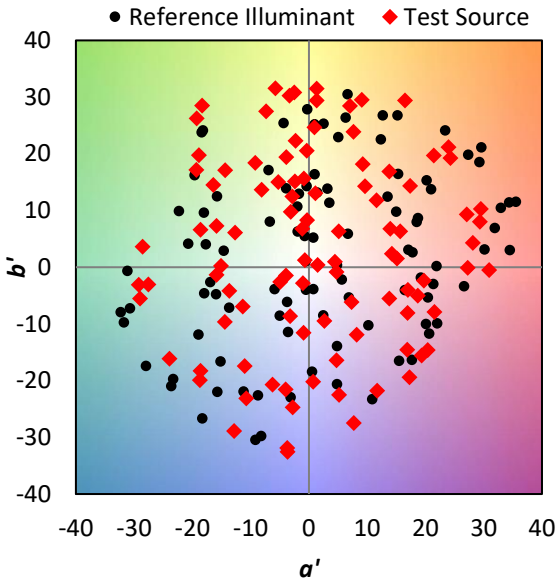
## Summary

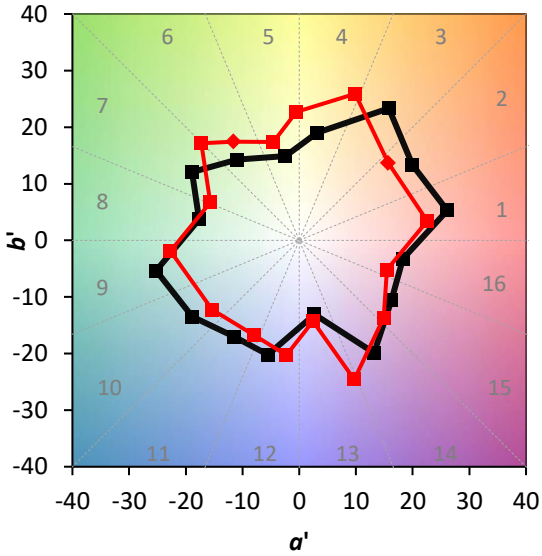
$R_f$ = 70.6
$R_g$ = 97.6
CIE $R_a$ = 71.9
$R_9$ = -17.8

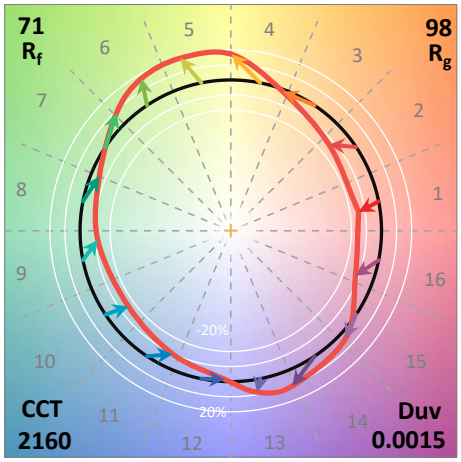
## Spectral Power Distribution Comparison

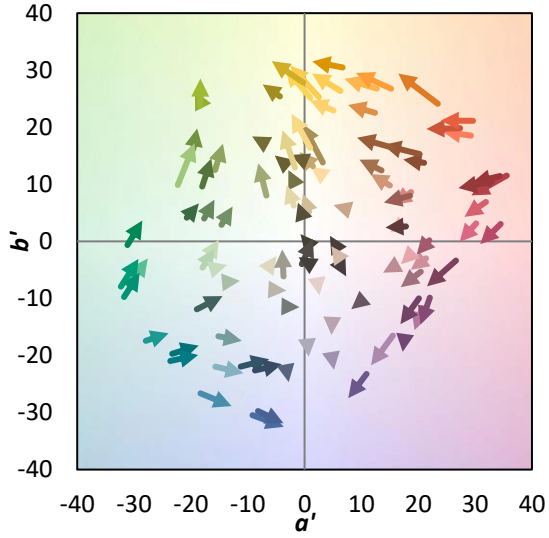



## Color Vector Graphics



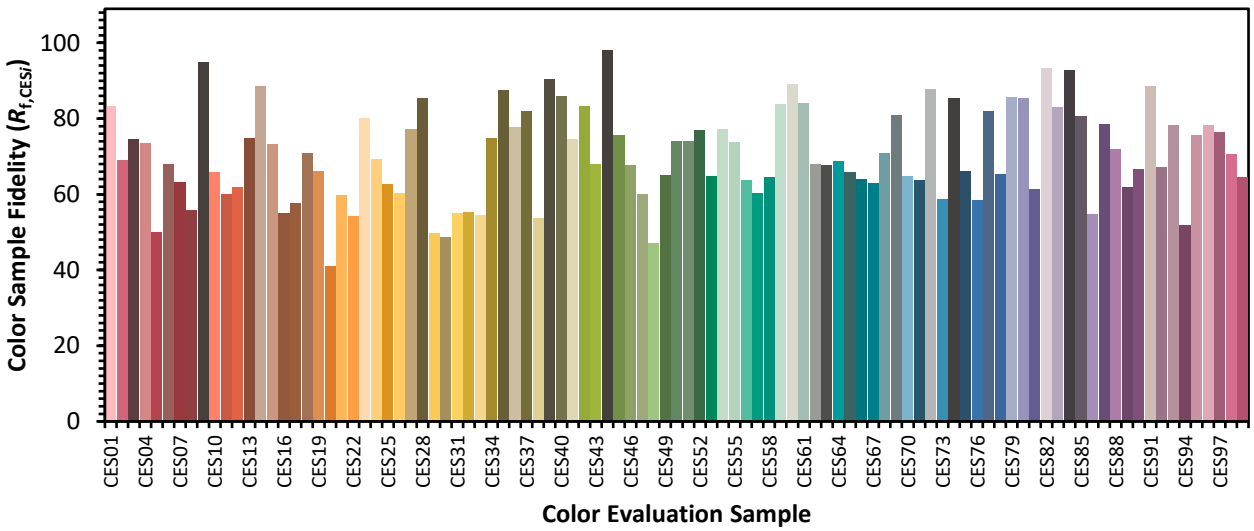



REPORT NUMBER: SP1-2407-184-2

# TM-30-18

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

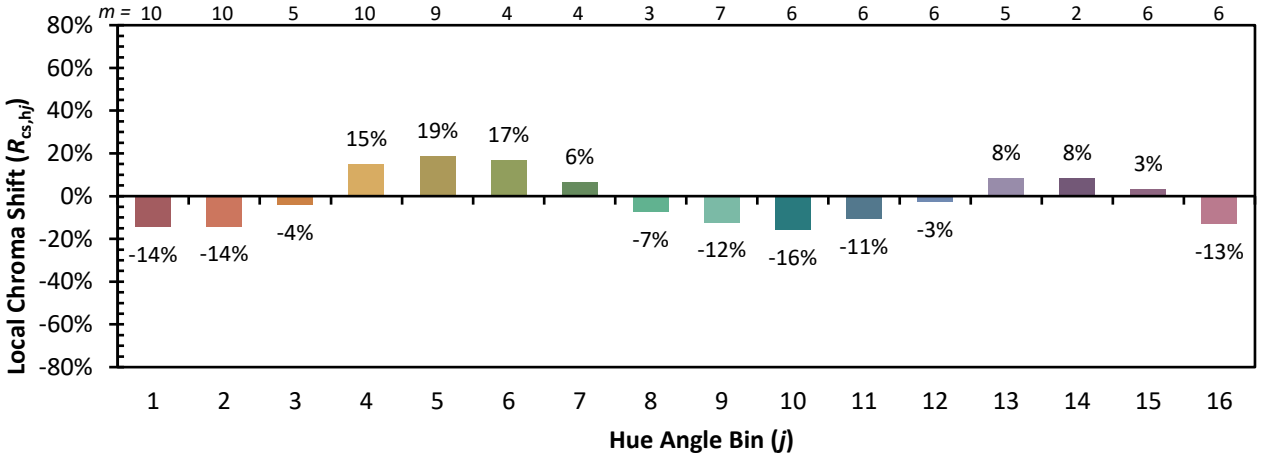
| | | | |
|---|---|---|---|
| CES01 = 87 | CES26 = 60 | CES51 = 74 | CES76 = 58 |
| CES02 = 65 | CES27 = 77 | CES52 = 77 | CES77 = 82 |
| CES03 = 32 | CES28 = 85 | CES53 = 65 | CES78 = 65 |
| CES04 = 72 | CES29 = 50 | CES54 = 77 | CES79 = 86 |
| CES05 = 52 | CES30 = 49 | CES55 = 74 | CES80 = 85 |
| CES06 = 53 | CES31 = 55 | CES56 = 64 | CES81 = 61 |
| CES07 = 44 | CES32 = 55 | CES57 = 60 | CES82 = 93 |
| CES08 = 43 | CES33 = 55 | CES58 = 64 | CES83 = 83 |
| CES09 = 29 | CES34 = 75 | CES59 = 84 | CES84 = 93 |
| CES10 = 79 | CES35 = 88 | CES60 = 89 | CES85 = 81 |
| CES11 = 62 | CES36 = 78 | CES61 = 84 | CES86 = 55 |
| CES12 = 68 | CES37 = 82 | CES62 = 68 | CES87 = 79 |
| CES13 = 45 | CES38 = 54 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 86 | CES65 = 66 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 89 |
| CES17 = 51 | CES42 = 83 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 68 | CES68 = 71 | CES93 = 78 |
| CES19 = 74 | CES44 = 98 | CES69 = 81 | CES94 = 52 |
| CES20 = 68 | CES45 = 76 | CES70 = 65 | CES95 = 76 |
| CES21 = 89 | CES46 = 68 | CES71 = 64 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 88 | CES97 = 76 |
| CES23 = 92 | CES48 = 47 | CES73 = 59 | CES98 = 71 |
| CES24 = 92 | CES49 = 65 | CES74 = 85 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 | |

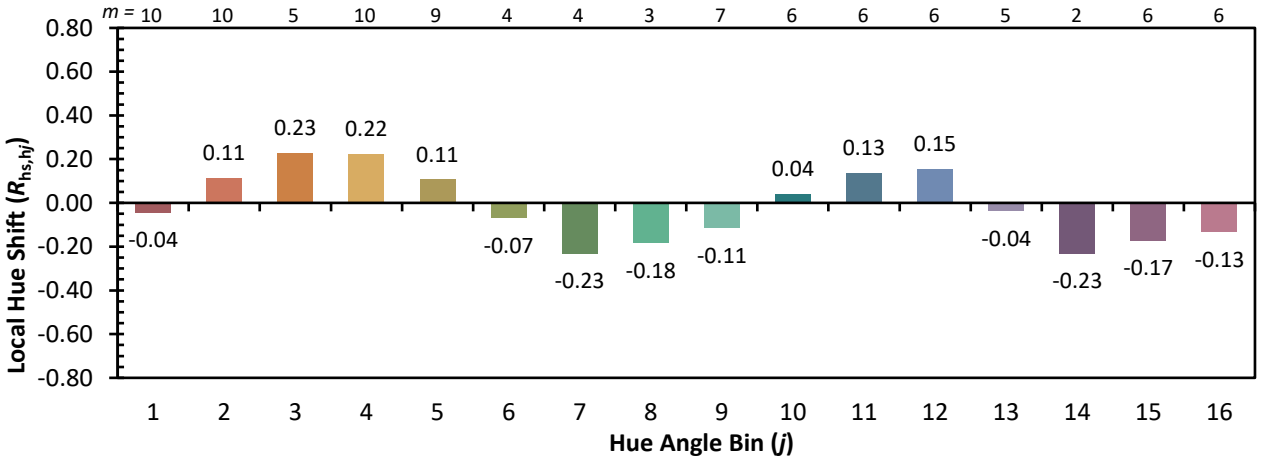


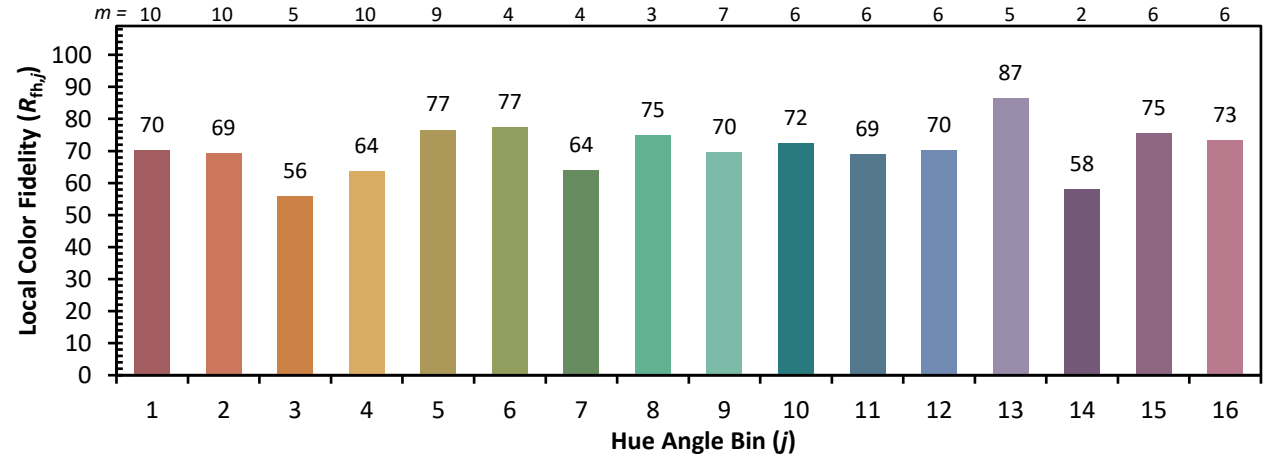
REPORT NUMBER: SP1-2407-184-2

**TM-30-18**

## Color Rendition by Hue-Angle Bin



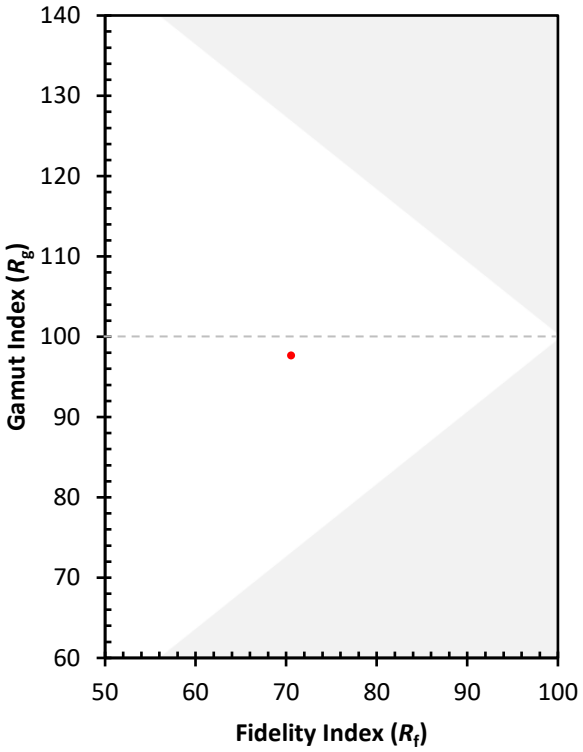



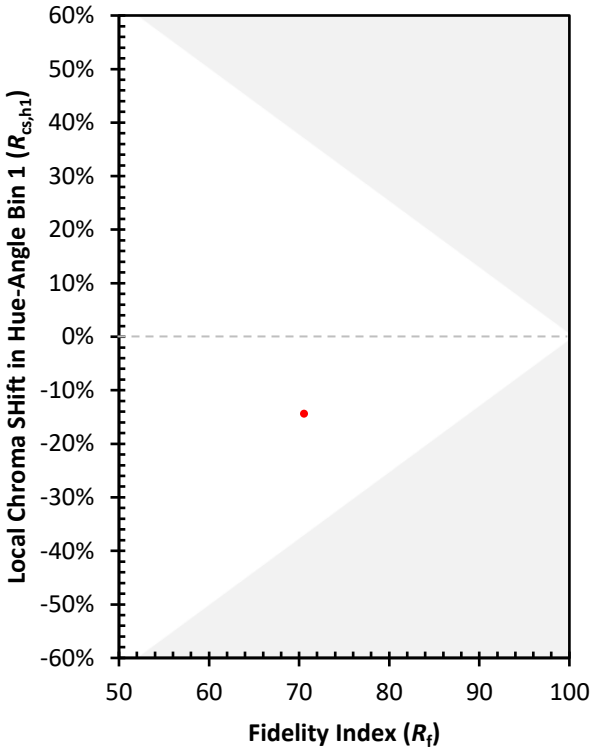



REPORT NUMBER: SP1-2407-184-2

# TM-30-18

## Measure Comparisons




(END OF REPORT)