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: P1367293

Luminaire Tested: **GSS-SB2C-735-U-T4W**

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: | P1367293 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2C-735-U-T4W |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 102W 70CRI 3500K FIXTURE w/ TYPE IV WIDE DISTRIBUTION OPTIC |
| Light Source: | (52) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 13211.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 129.5 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B2 - U0 - G2 |

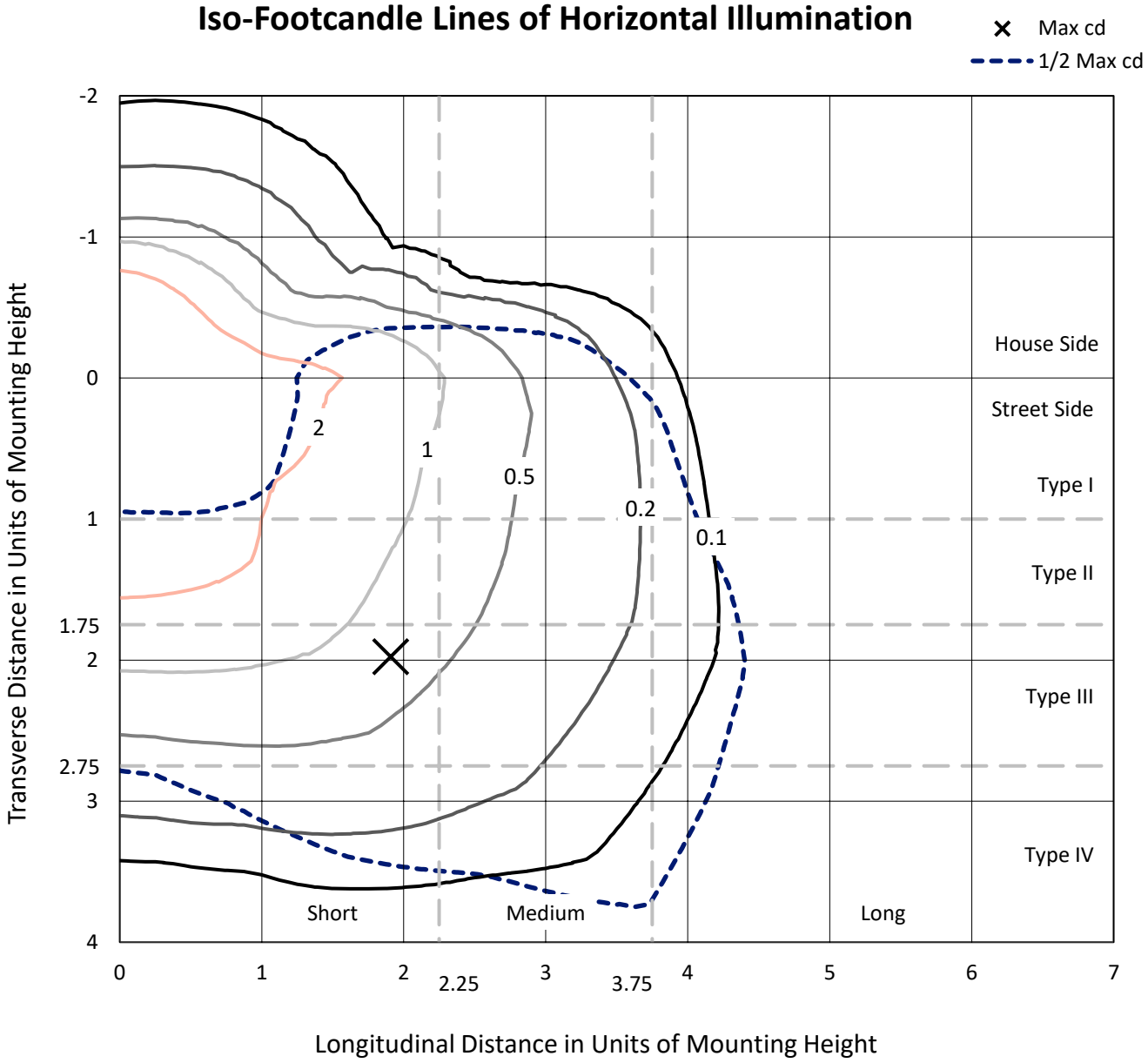
| | |
|---|---|
| Input Watts (W): | 102 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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

Scaled Data Report

REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

## Iso-Footcandle Lines of Horizontal Illumination



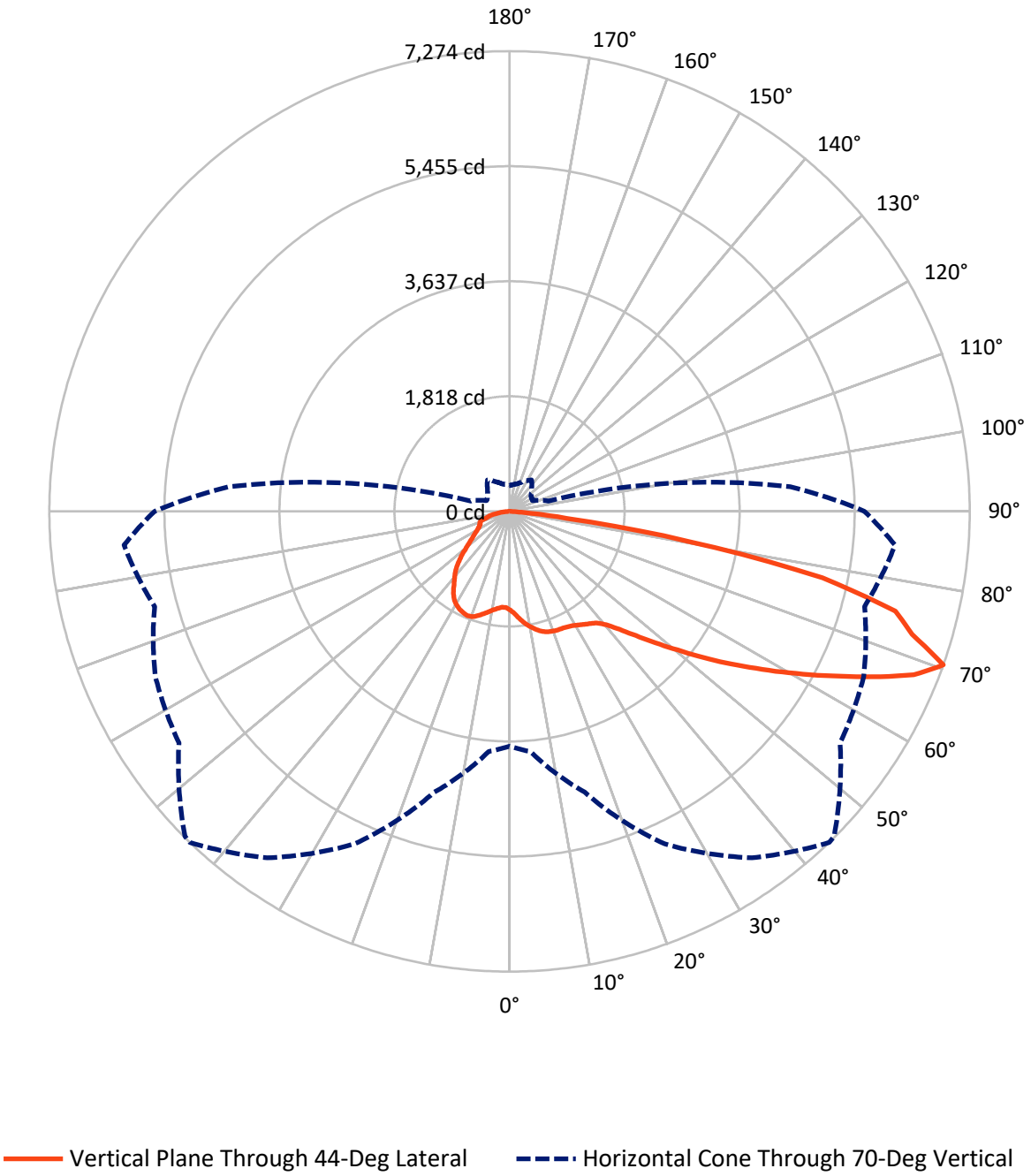

Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
Type IV - Short - N/A

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

Scaled Data Report

REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

## Luminous Intensity Polar Plot



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

Scaled Data Report

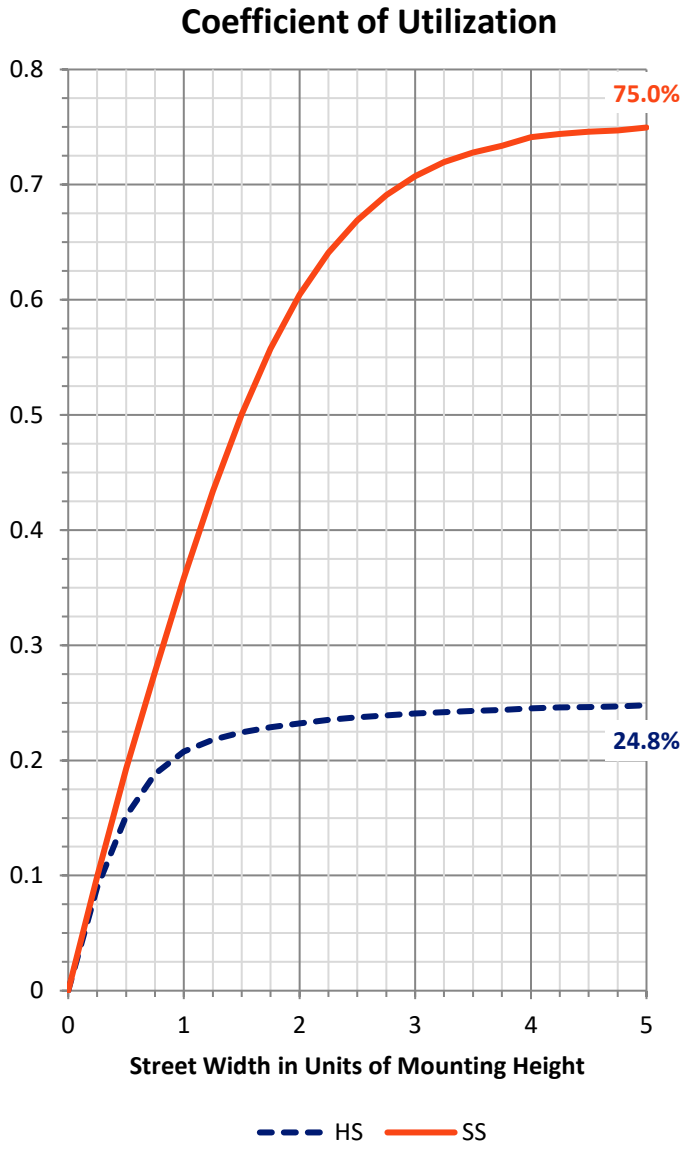
REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 3310.4 | 0.0 | 3310.4 |
| | % Fixture | 25.1 | 0.0 | 25.1 |
| **Street Side** | Lumens | 9901.0 | 0.0 | 9901.0 |
| | % Fixture | 74.9 | 0.0 | 74.9 |
| **Total** | Lumens | 13211.4 | 0.0 | 13211.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 157.6 | 1.2 |
| 10°-20° | 517.2 | 3.9 |
| 20°-30° | 890.0 | 6.7 |
| 30°-40° | 1254.6 | 9.5 |
| 40°-50° | 1736.1 | 13.1 |
| 50°-60° | 2578.2 | 19.5 |
| 60°-70° | 3445.7 | 26.1 |
| 70°-80° | 2430.7 | 18.4 |
| 80°-90° | 201.3 | 1.5 |
| 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° | 13211.4 | 100.0 |
| 0°-180° | 13211.4 | 100.0 |



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

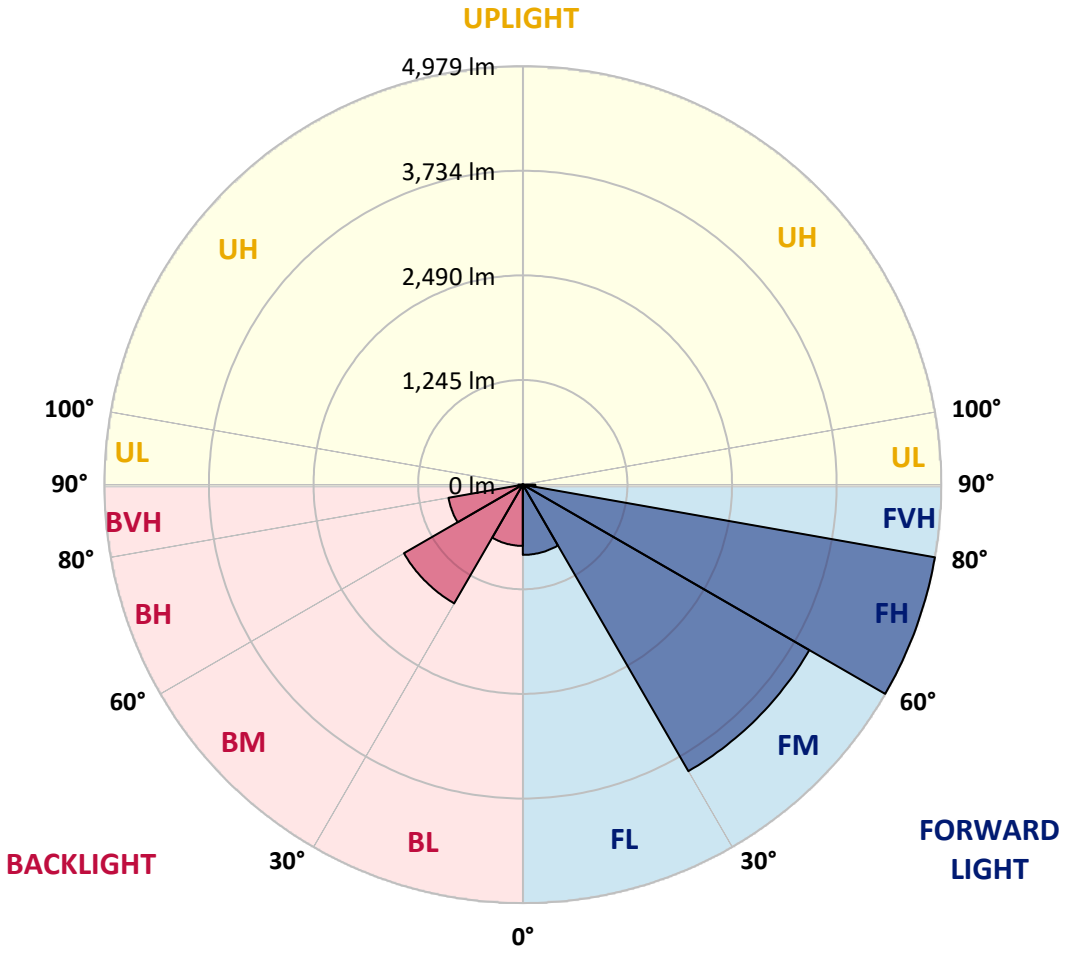
Scaled Data Report

REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 836.1 | 6.3 | | | |
| FM | (30°-60°) | 3936.7 | 29.8 | | | |
| FH | (60°-80°) | 4979.3 | 37.7 | | | G2/5000 |
| FVH | (80°-90°) | 149.0 | 1.1 | | | G2/225 |
| BL | (0°-30°) | 728.6 | 5.5 | B2/1000 | | |
| BM | (30°-60°) | 1632.2 | 12.4 | B2/2500 | | |
| BH | (60°-80°) | 897.2 | 6.8 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 52.3 | 0.4 | | | 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 IV Short



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

Scaled Data Report

REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 44° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | *1561.2* | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 |
| 2.5° | 1676.6 | 1667.0 | 1657.3 | 1654.1 | 1641.3 | *1622.1* | 1622.1 | 1615.7 | 1599.6 | 1586.8 | 1577.2 |
| 5° | 1785.6 | 1788.8 | 1772.7 | 1759.9 | 1740.7 | *1708.6* | 1711.8 | 1683.0 | 1650.9 | 1615.7 | 1590.0 |
| 7.5° | 1891.3 | 1891.3 | 1872.1 | 1856.1 | 1830.4 | *1792.0* | 1792.0 | 1747.1 | 1708.6 | 1660.5 | 1625.3 |
| 10° | 1987.5 | 1981.1 | 1955.5 | 1936.2 | 1901.0 | *1859.3* | 1856.1 | 1811.2 | 1763.1 | 1708.6 | 1660.5 |
| 12.5° | 2061.2 | 2061.2 | 2035.6 | 2003.5 | 1965.1 | *1920.2* | 1917.0 | 1868.9 | 1820.8 | 1763.1 | 1705.4 |
| 15° | 2131.8 | 2115.7 | 2093.3 | 2051.6 | 2006.8 | *1971.5* | 1965.1 | 1923.4 | 1875.3 | 1824.0 | 1759.9 |
| 17.5° | 2157.4 | 2151.0 | 2122.2 | 2080.5 | 2038.8 | *2000.3* | 2000.3 | 1961.9 | 1926.6 | 1875.3 | 1811.2 |
| 20° | 2151.0 | 2141.4 | 2115.7 | 2080.5 | 2048.4 | *2016.4* | 2016.4 | 1987.5 | 1968.3 | 1920.2 | 1862.5 |
| 22.5° | 2119.0 | 2109.3 | 2093.3 | 2061.2 | 2045.2 | *2026.0* | 2026.0 | 2010.0 | 2003.5 | 1974.7 | 1920.2 |
| 25° | 2109.3 | 2102.9 | 2080.5 | 2051.6 | 2035.6 | *2032.4* | 2035.6 | 2038.8 | 2045.2 | 2022.8 | 1977.9 |
| 27.5° | 2115.7 | 2115.7 | 2096.5 | 2067.7 | 2048.4 | *2051.6* | 2054.8 | 2074.1 | 2093.3 | 2080.5 | 2042.0 |
| 30° | 2157.4 | 2147.8 | 2135.0 | 2106.1 | 2083.7 | *2086.9* | 2086.9 | 2125.4 | 2144.6 | 2128.6 | 2099.7 |
| 32.5° | 2227.9 | 2218.3 | 2199.1 | 2138.2 | 2115.7 | *2131.8* | 2138.2 | 2170.2 | 2183.1 | 2167.0 | 2154.2 |
| 35° | 2391.4 | 2401.1 | 2336.9 | 2227.9 | 2167.0 | *2179.9* | 2186.3 | 2208.7 | 2224.7 | 2218.3 | 2205.5 |
| 37.5° | 2689.6 | 2692.8 | 2612.6 | 2417.1 | 2276.0 | *2237.6* | 2240.8 | 2272.8 | 2292.1 | 2269.6 | 2260.0 |
| 40° | 3061.4 | 3064.6 | 2952.4 | 2686.4 | 2449.1 | *2353.0* | 2349.8 | 2356.2 | 2385.0 | 2346.6 | 2340.1 |
| 42.5° | 3465.3 | 3420.5 | 3324.3 | 3019.7 | 2705.6 | *2545.3* | 2516.5 | 2497.2 | 2532.5 | 2484.4 | 2452.3 |
| 45° | 3850.0 | 3818.0 | 3686.5 | 3372.4 | 3013.3 | *2798.6* | 2769.7 | 2673.5 | 2731.2 | 2692.8 | 2635.1 |
| 47.5° | 4170.6 | 4144.9 | 4045.6 | 3753.8 | 3362.8 | *3103.1* | 3058.2 | 2907.5 | 3010.1 | 2990.9 | 2920.4 |
| 50° | 4407.8 | 4382.2 | 4314.8 | 4135.3 | 3805.1 | *3442.9* | 3401.2 | 3218.5 | 3324.3 | 3359.5 | 3305.1 |
| 52.5° | 4580.9 | 4574.5 | 4548.9 | 4520.0 | 4253.9 | *3837.2* | 3789.1 | 3561.5 | 3734.6 | 3801.9 | 3785.9 |
| 55° | 4843.8 | 4831.0 | 4840.6 | 4888.7 | 4734.8 | *4257.1* | 4186.6 | 3920.5 | 4157.8 | 4282.8 | 4308.4 |
| 57.5° | 5093.8 | 5093.8 | 5177.2 | 5302.2 | 5283.0 | *4709.1* | 4625.8 | 4340.5 | 4670.7 | 4731.6 | 4853.4 |
| 60° | 5327.8 | 5350.3 | 5465.7 | 5741.4 | 5795.9 | *5199.6* | 5100.2 | 4824.5 | 5157.9 | 5225.3 | 5446.4 |
| 62.5° | 5228.5 | 5283.0 | 5651.6 | 6097.2 | 6276.7 | *5725.3* | 5626.0 | 5356.7 | 5706.1 | 5626.0 | 5824.7 |
| 65° | 4722.0 | 4805.3 | 5375.9 | 6119.6 | 6744.7 | *6302.4* | 6219.0 | 5956.1 | 6007.4 | 5686.9 | 6036.3 |
| 67.5° | 4189.8 | 4311.6 | 4975.2 | 5847.2 | 6866.6 | *6892.2* | 6818.5 | 6324.8 | 6004.2 | 5751.0 | 6251.1 |
| 70° | *3712.2* | *3811.5* | *4593.7* | *5799.1* | *6683.8* | *7273.7* | *7257.7* | *6379.3* | *6177.3* | *5808.7* | *6116.4* |
| 72.5° | 2603.0 | 2740.9 | 3542.3 | 5353.5 | 6738.3 | *6651.8* | 6616.5 | 6760.8 | 6305.6 | 5597.1 | 5420.8 |
| 75° | 936.1 | 990.6 | 1836.9 | 3622.4 | 5356.7 | *6299.2* | 6328.0 | 6263.9 | 6180.5 | 5013.7 | 4074.4 |
| 77.5° | 278.9 | 298.1 | 522.5 | 1436.1 | 3003.7 | *5055.4* | 5103.4 | 4933.5 | 4645.0 | 3023.0 | 1541.9 |
| 80° | 150.7 | 163.5 | 246.8 | 419.9 | 1125.2 | *2853.1* | 2984.5 | 2526.1 | 1673.4 | 798.2 | 346.2 |
| 82.5° | 73.7 | 80.1 | 128.2 | 205.2 | 484.1 | *907.2* | 910.4 | 807.8 | 545.0 | 240.4 | 128.2 |
| 85° | 25.6 | 28.9 | 41.7 | 76.9 | 166.7 | *185.9* | 185.9 | 173.1 | 160.3 | 118.6 | 57.7 |
| 87.5° | 6.4 | 6.4 | 9.6 | 12.8 | 16.0 | *19.2* | 19.2 | 22.4 | 25.6 | 28.9 | 28.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Scaled Data Report

REPORT NUMBER: P1367293
CATALOG NUMBER: GSS-SB2C-735-U-T4W

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 | 1561.2 |
| 2.5° | 1570.8 | 1558.0 | 1548.3 | 1538.7 | 1532.3 | 1519.5 | 1516.3 | 1516.3 | 1513.1 | 1516.3 | 1513.1 |
| 5° | 1580.4 | 1561.2 | 1545.1 | 1532.3 | 1525.9 | 1519.5 | 1519.5 | 1522.7 | 1519.5 | 1522.7 | 1519.5 |
| 7.5° | 1599.6 | 1586.8 | 1570.8 | 1551.5 | 1548.3 | 1545.1 | 1548.3 | 1554.8 | 1558.0 | 1561.2 | 1554.8 |
| 10° | 1638.1 | 1618.9 | 1596.4 | 1586.8 | 1580.4 | 1577.2 | 1586.8 | 1599.6 | 1602.8 | 1609.2 | 1602.8 |
| 12.5° | 1683.0 | 1660.5 | 1644.5 | 1622.1 | 1622.1 | 1625.3 | 1634.9 | 1650.9 | 1660.5 | 1670.2 | 1660.5 |
| 15° | 1734.3 | 1711.8 | 1689.4 | 1670.2 | 1667.0 | 1673.4 | 1689.4 | 1705.4 | 1708.6 | 1711.8 | 1705.4 |
| 17.5° | 1785.6 | 1763.1 | 1734.3 | 1711.8 | 1708.6 | 1724.7 | 1731.1 | 1731.1 | 1724.7 | 1724.7 | 1715.0 |
| 20° | 1836.9 | 1820.8 | 1792.0 | 1750.3 | 1763.1 | 1769.5 | 1750.3 | 1734.3 | 1724.7 | 1721.4 | 1711.8 |
| 22.5° | 1897.8 | 1872.1 | 1840.1 | 1795.2 | 1804.8 | 1779.2 | 1743.9 | 1737.5 | 1727.9 | 1731.1 | 1721.4 |
| 25° | 1955.5 | 1939.4 | 1888.1 | 1830.4 | 1804.8 | 1763.1 | 1740.7 | 1740.7 | 1731.1 | 1737.5 | 1734.3 |
| 27.5° | 2022.8 | 2003.5 | 1933.0 | 1849.7 | 1782.4 | 1737.5 | 1734.3 | 1734.3 | 1718.2 | 1721.4 | 1718.2 |
| 30° | 2090.1 | 2061.2 | 1968.3 | 1833.6 | 1727.9 | 1699.0 | 1708.6 | 1705.4 | 1699.0 | 1708.6 | 1715.0 |
| 32.5° | 2147.8 | 2125.4 | 1987.5 | 1795.2 | 1660.5 | 1647.7 | 1654.1 | 1670.2 | 1686.2 | 1695.8 | 1708.6 |
| 35° | 2208.7 | 2183.1 | 2003.5 | 1727.9 | 1586.8 | 1567.6 | 1564.4 | 1612.5 | 1641.3 | 1657.3 | 1667.0 |
| 37.5° | 2272.8 | 2240.8 | 2013.2 | 1654.1 | 1516.3 | 1458.6 | 1468.2 | 1506.7 | 1538.7 | 1567.6 | 1590.0 |
| 40° | 2359.4 | 2327.3 | 2026.0 | 1574.0 | 1442.6 | 1365.6 | 1352.8 | 1362.4 | 1384.9 | 1426.5 | 1449.0 |
| 42.5° | 2487.6 | 2436.3 | 2026.0 | 1471.4 | 1336.8 | 1282.3 | 1237.4 | 1202.1 | 1189.3 | 1215.0 | 1227.8 |
| 45° | 2663.9 | 2587.0 | 2013.2 | 1365.6 | 1215.0 | 1176.5 | 1102.8 | 1045.1 | 993.8 | 968.1 | 961.7 |
| 47.5° | 2955.6 | 2821.0 | 2000.3 | 1263.0 | 1099.5 | 1051.5 | 961.7 | 894.4 | 820.7 | 753.3 | 737.3 |
| 50° | 3346.7 | 3131.9 | 2003.5 | 1160.5 | 984.1 | 920.0 | 839.9 | 769.4 | 682.8 | 618.7 | 609.1 |
| 52.5° | 3862.8 | 3567.9 | 2022.8 | 1048.3 | 871.9 | 814.2 | 746.9 | 676.4 | 589.8 | 541.8 | 538.6 |
| 55° | 4462.3 | 4093.6 | 2090.1 | 923.2 | 769.4 | 724.5 | 676.4 | 609.1 | 535.3 | 493.7 | 487.3 |
| 57.5° | 5161.1 | 4702.7 | 2224.7 | 791.8 | 676.4 | 660.4 | 621.9 | 557.8 | 496.9 | 455.2 | 448.8 |
| 60° | 5850.4 | 5292.6 | 2327.3 | 676.4 | 602.7 | 602.7 | 567.4 | 519.3 | 436.0 | 400.7 | 394.3 |
| 62.5° | 6170.9 | 5475.3 | 2131.8 | 583.4 | 545.0 | 554.6 | 532.1 | 464.8 | 439.2 | 423.1 | 413.5 |
| 65° | 6247.9 | 5372.7 | 1602.8 | 512.9 | 496.9 | 528.9 | 493.7 | 496.9 | 474.4 | 458.4 | 448.8 |
| 67.5° | 6154.9 | 5081.0 | 1025.8 | 452.0 | 461.6 | 496.9 | 545.0 | 548.2 | 474.4 | 439.2 | 432.8 |
| 70° | *5609.9* | *4455.9* | *631.5* | *400.7* | *413.5* | *490.5* | *605.9* | *516.1* | *448.8* | *419.9* | *407.1* |
| 72.5° | 4680.3 | 3676.9 | 442.4 | 352.6 | 352.6 | 464.8 | 545.0 | 484.1 | 413.5 | 397.5 | 381.5 |
| 75° | 3285.8 | 2487.6 | 323.8 | 294.9 | 294.9 | 362.2 | 503.3 | 442.4 | 387.9 | 394.3 | 387.9 |
| 77.5° | 1118.8 | 807.8 | 234.0 | 227.6 | 218.0 | 311.0 | 448.8 | 423.1 | 359.0 | 339.8 | 314.2 |
| 80° | 330.2 | 259.7 | 173.1 | 160.3 | 157.1 | 250.0 | 378.3 | 311.0 | 256.5 | 234.0 | 218.0 |
| 82.5° | 128.2 | 115.4 | 112.2 | 102.6 | 99.4 | 166.7 | 250.0 | 214.8 | 192.3 | 160.3 | 157.1 |
| 85° | 51.3 | 51.3 | 57.7 | 57.7 | 51.3 | 89.8 | 150.7 | 118.6 | 112.2 | 99.4 | 96.2 |
| 87.5° | 25.6 | 25.6 | 22.4 | 16.0 | 16.0 | 19.2 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

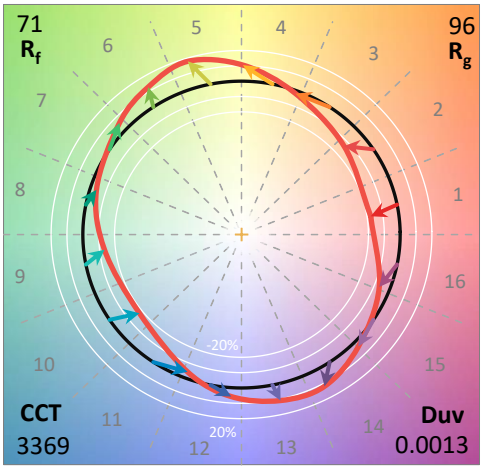
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-5 |
| 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-735-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3369 |
| CIE u': | 0.2386 |
| CIE v': | 0.5156 |
| Duv: | 0.0013 |
| CIE x: | 0.4143 |
| CIE y: | 0.3980 |
| CIE z: | 0.1877 |
| Peak Wavelength (nm): | 590 |
| Dominant Wavelength (nm): | 580 |
| Purity: | 43.80166 |
| Rf: | 71.4 |
| Rg: | 96 |

| | |
|---|---|
| CRI (Ra): | 70.1 |
| R1: | 66.6 |
| R2: | 77.6 |
| R3: | 88.5 |
| R4: | 69.5 |
| R5: | 66.4 |
| R6: | 69.6 |
| R7: | 77.5 |
| R8: | 44.9 |
| R9: | -40.2 |
| R10: | 49.1 |
| R11: | 66.3 |
| R12: | 45.7 |
| R13: | 68.0 |
| R14: | 93.4 |
| R15: | 57.6 |




## Test Conditions

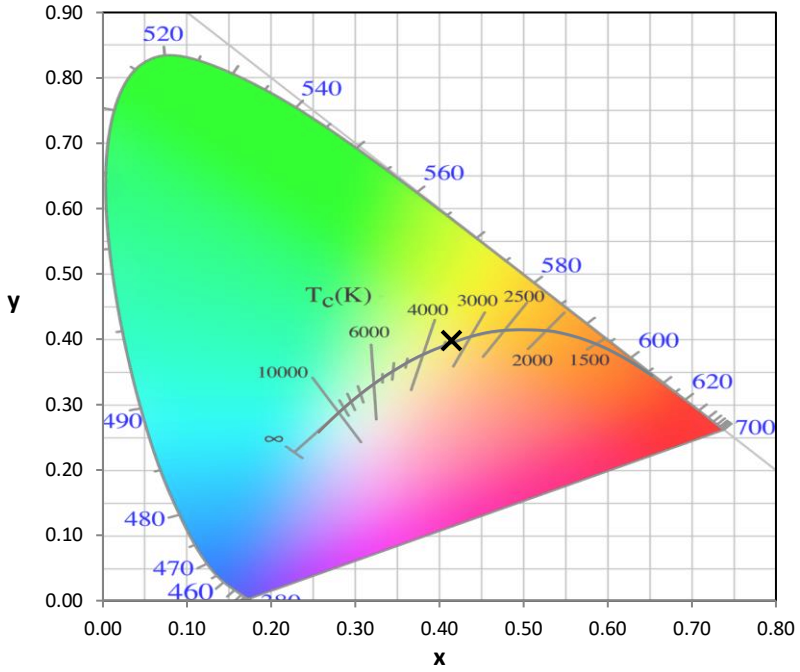
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-5

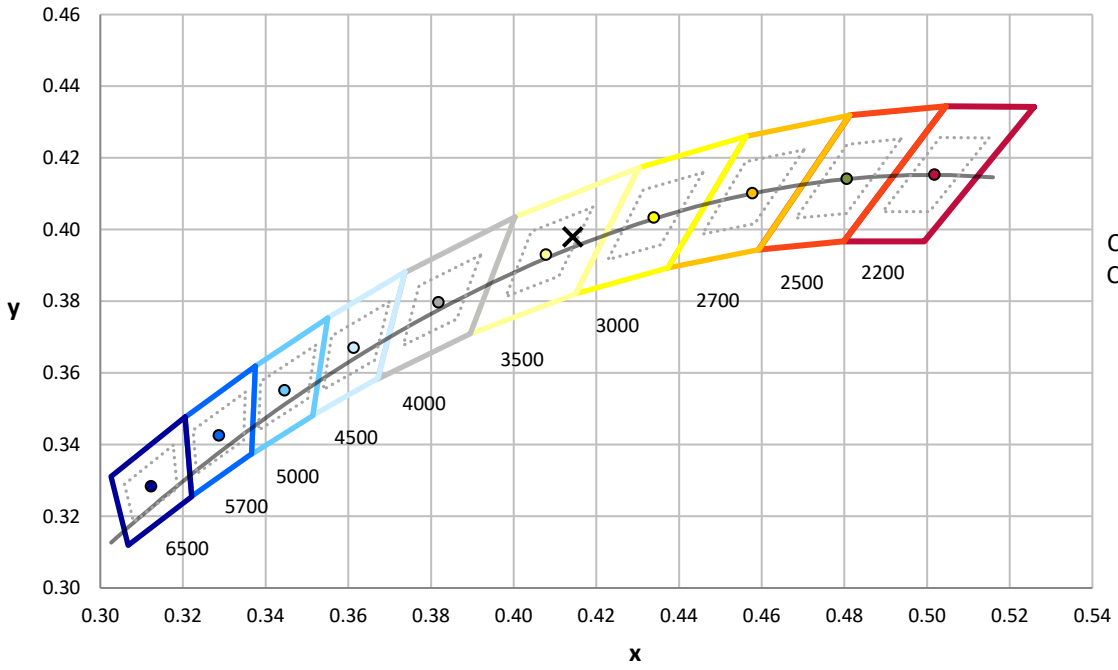
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-5

**CIE 1931 Chromaticity Diagram**




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

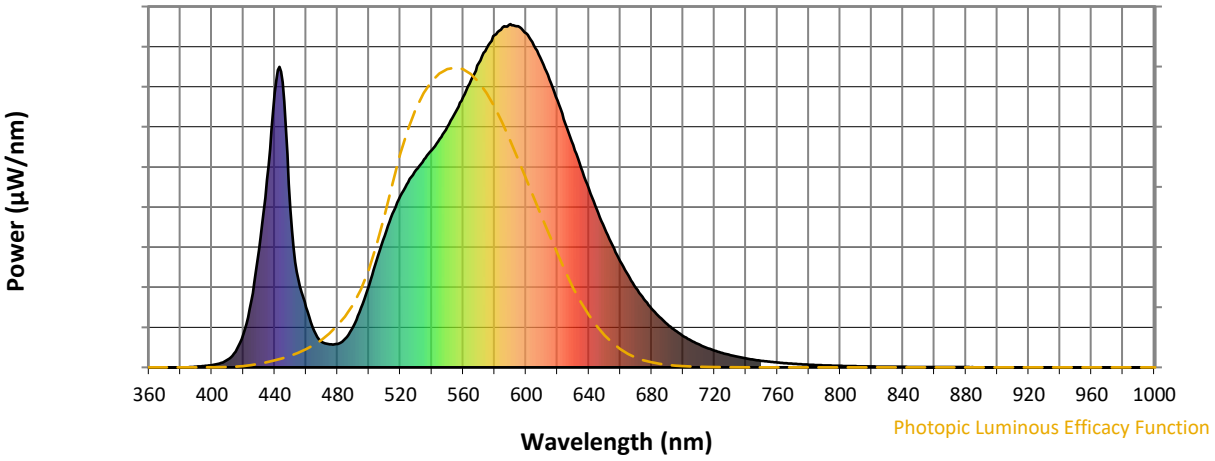



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-5

## Photopic Flux vs. Wavelength

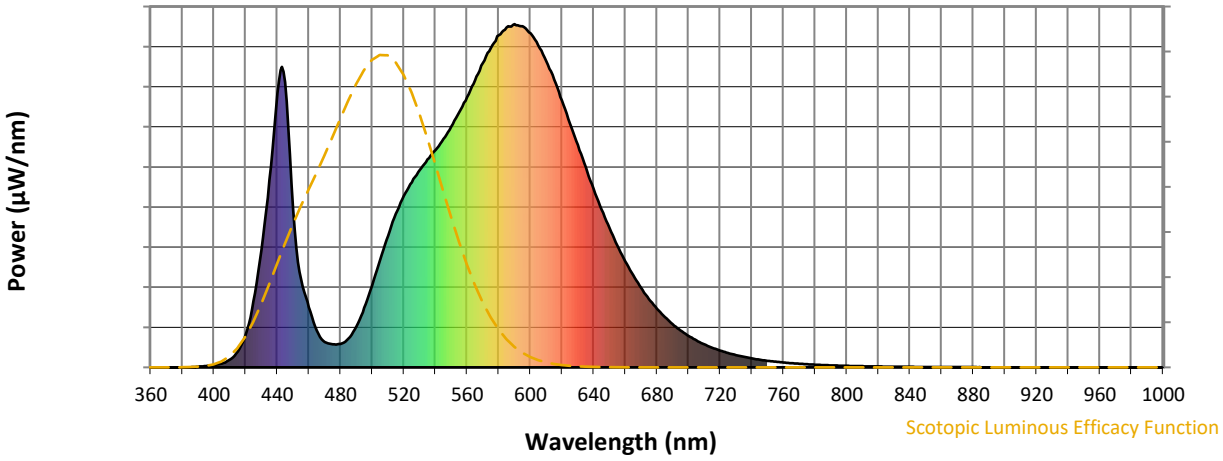



## Photopic Lumens: NR

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-5

## Scotopic Flux vs. Wavelength

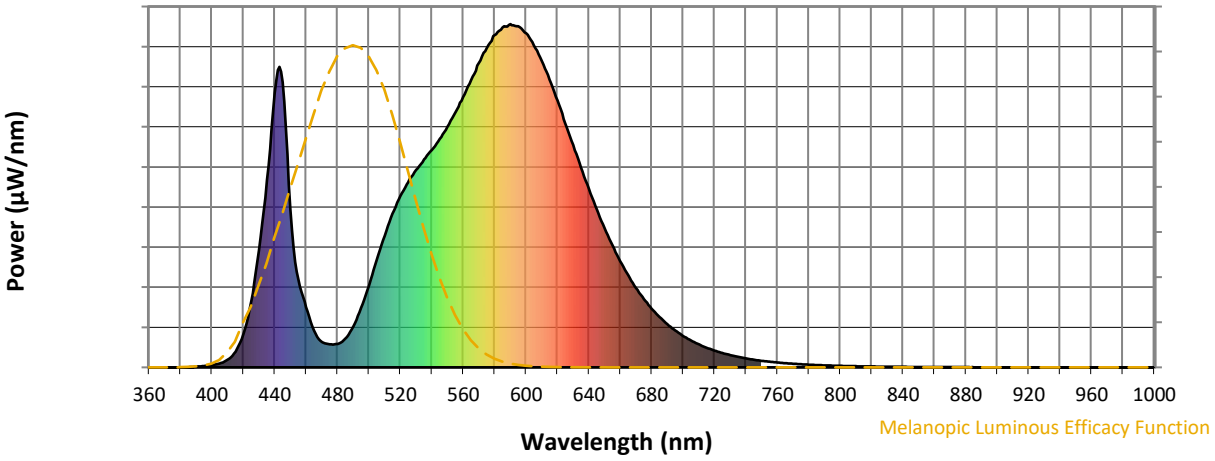



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-5

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.36**

| 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 | 119 | NR | 620 | 778 | NR | 750 | 19 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 173 | NR | 625 | 711 | NR | 755 | 16 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 239 | NR | 630 | 648 | NR | 760 | 14 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 313 | NR | 635 | 582 | NR | 765 | 12 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 383 | NR | 640 | 520 | NR | 770 | 11 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 448 | NR | 645 | 460 | NR | 775 | 9 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 500 | NR | 650 | 406 | NR | 780 | 8 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 539 | NR | 655 | 355 | NR | 785 | 7 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 575 | NR | 660 | 309 | NR | 790 | 6 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 606 | NR | 665 | 269 | NR | 795 | 5 | NR | 925 | 0 | NR |
| 410 | 22 | NR | 540 | 633 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 45 | NR | 545 | 666 | NR | 675 | 199 | NR | 805 | 4 | NR | 935 | 0 | NR |
| 420 | 96 | NR | 550 | 701 | NR | 680 | 171 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 193 | NR | 555 | 743 | NR | 685 | 147 | NR | 815 | 3 | NR | 945 | 0 | NR |
| 430 | 341 | NR | 560 | 788 | NR | 690 | 126 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 547 | NR | 565 | 837 | NR | 695 | 107 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 799 | NR | 570 | 887 | NR | 700 | 92 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 831 | NR | 575 | 931 | NR | 705 | 78 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 461 | NR | 580 | 967 | NR | 710 | 67 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 256 | NR | 585 | 990 | NR | 715 | 57 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 176 | NR | 590 | 1000 | NR | 720 | 49 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 107 | NR | 595 | 994 | NR | 725 | 42 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 74 | NR | 600 | 973 | NR | 730 | 36 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 67 | NR | 605 | 938 | NR | 735 | 31 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 68 | NR | 610 | 892 | NR | 740 | 26 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 84 | NR | 615 | 838 | NR | 745 | 22 | NR | 875 | 1 | NR | | | |

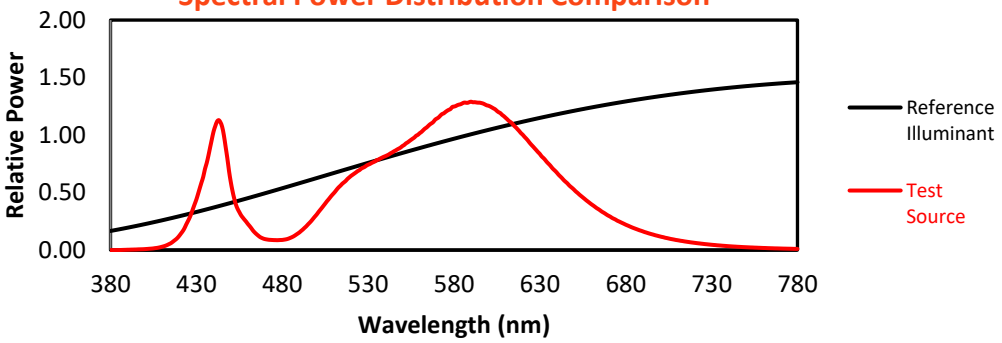
REPORT NUMBER: SP1-2407-184-5

# TM-30-18

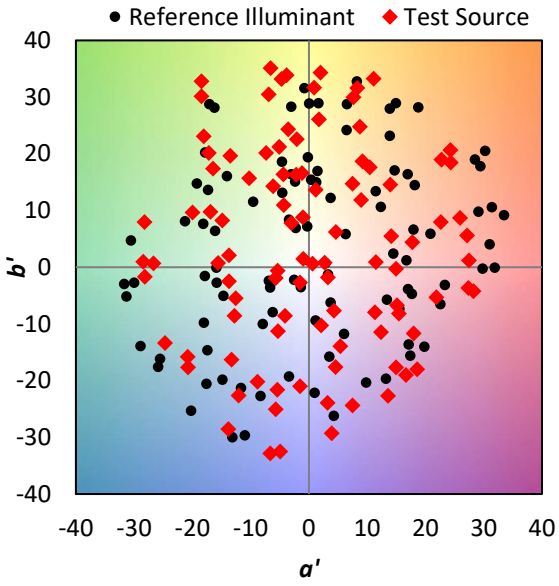
## Summary

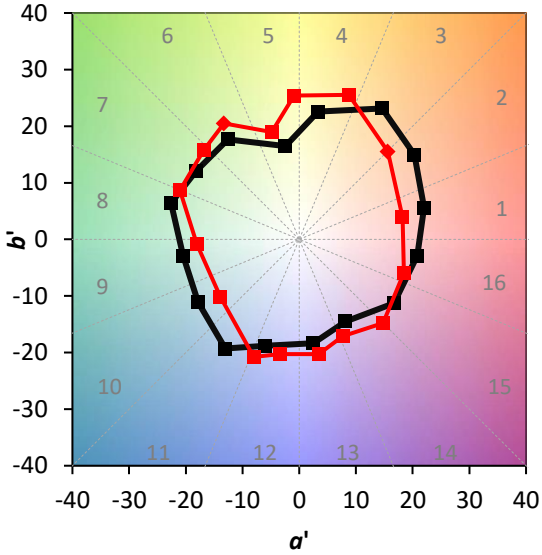
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

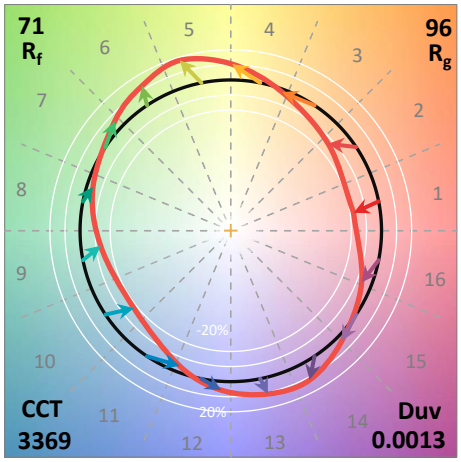
## Spectral Power Distribution Comparison

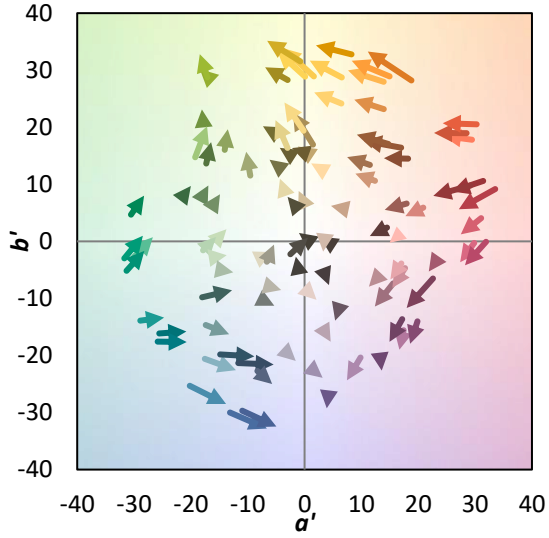



## Color Vector Graphics



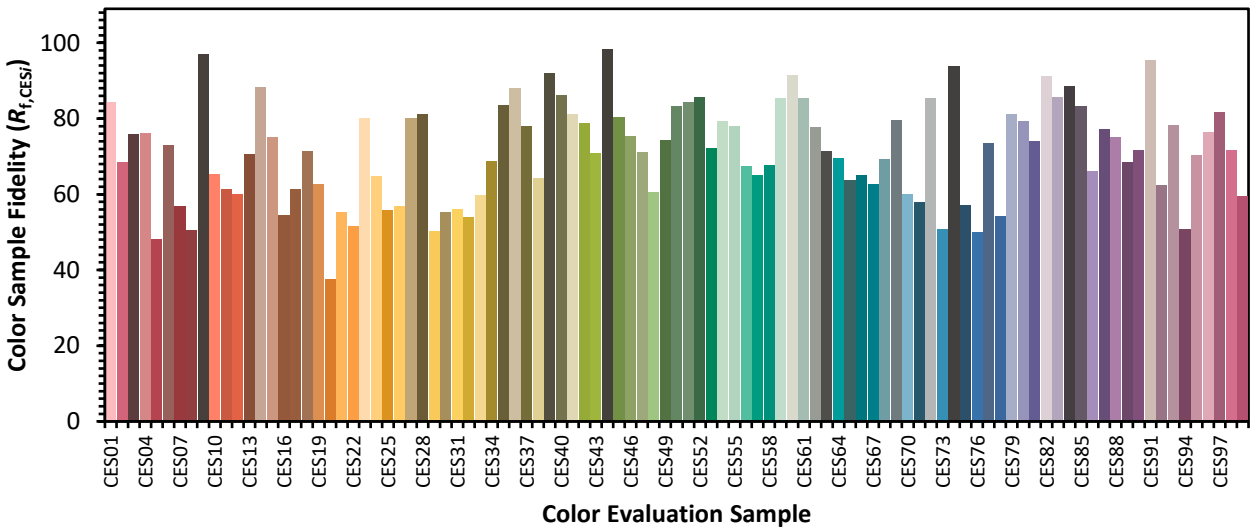



REPORT NUMBER: SP1-2407-184-5

# TM-30-18

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

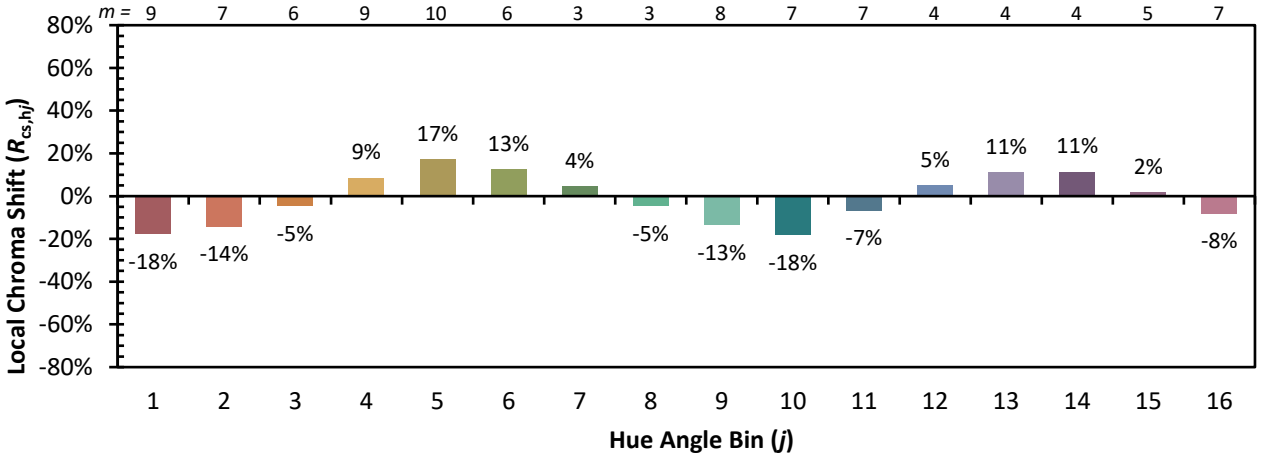
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 | |

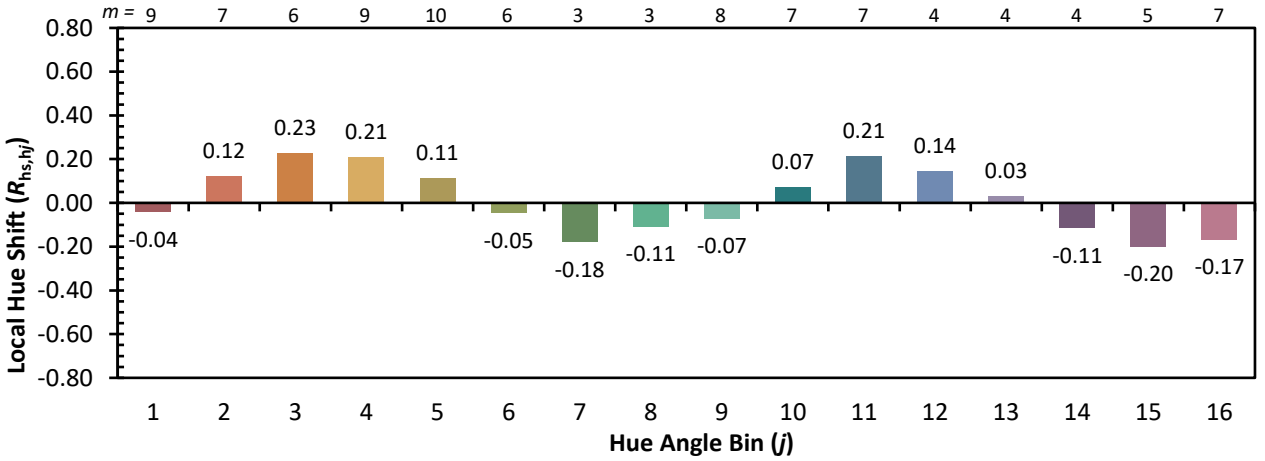


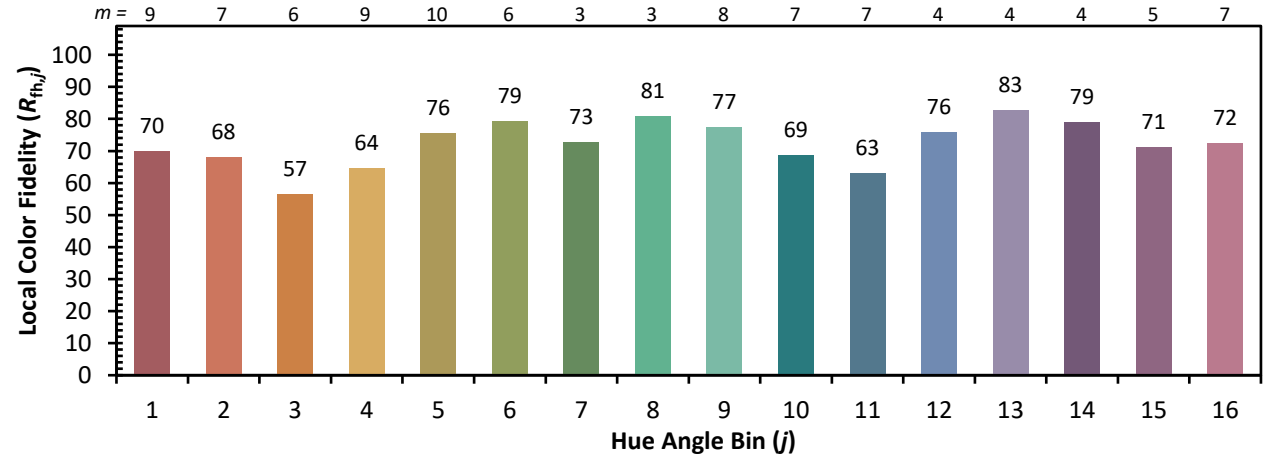
REPORT NUMBER: SP1-2407-184-5

**TM-30-18**

## Color Rendition by Hue-Angle Bin



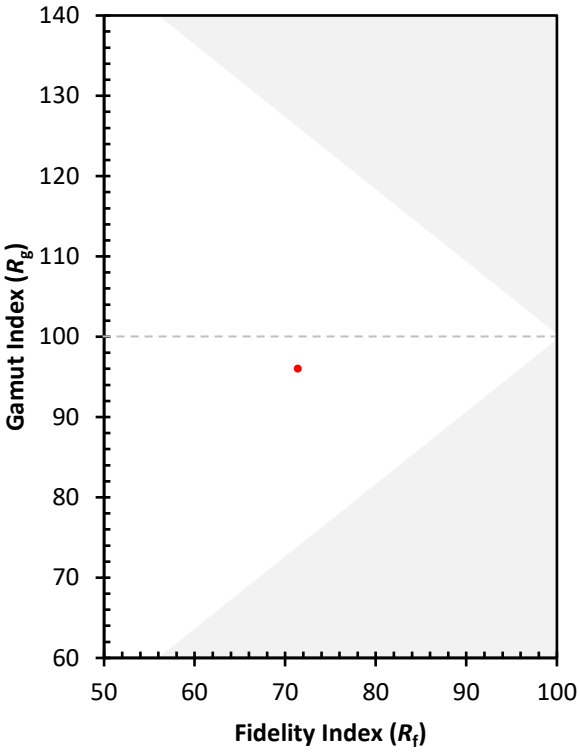



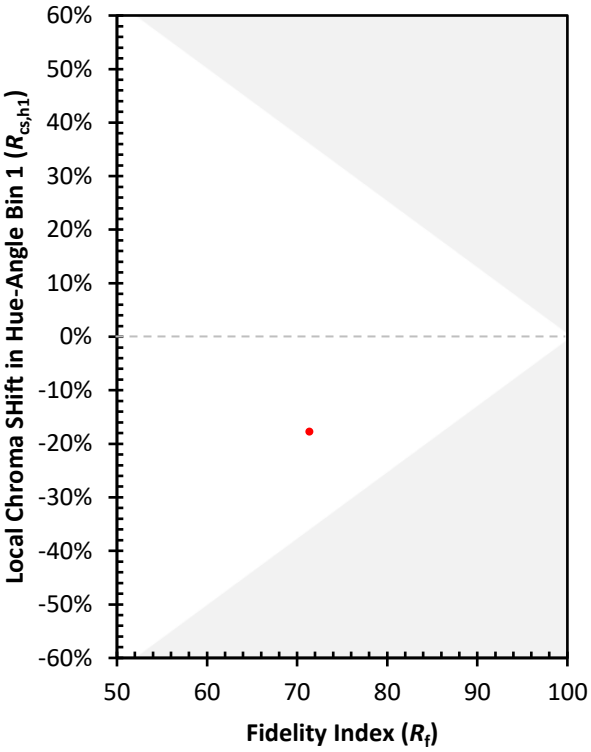



REPORT NUMBER: SP1-2407-184-5

# TM-30-18

## Measure Comparisons




(END OF REPORT)