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: P1366431

Luminaire Tested: **GSS-SB3A-740-U-T3R**

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: | P1366431 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3A-740-U-T3R |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 85W 70CRI 4000K FIXTURE w/ TYPE III ROADWAY DISTRIBUTION OPTIC |
| Light Source: | (78) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 13188 lumens |
| Efficiency: | N/A |
| Efficacy: | 155.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B2 - U0 - G2 |

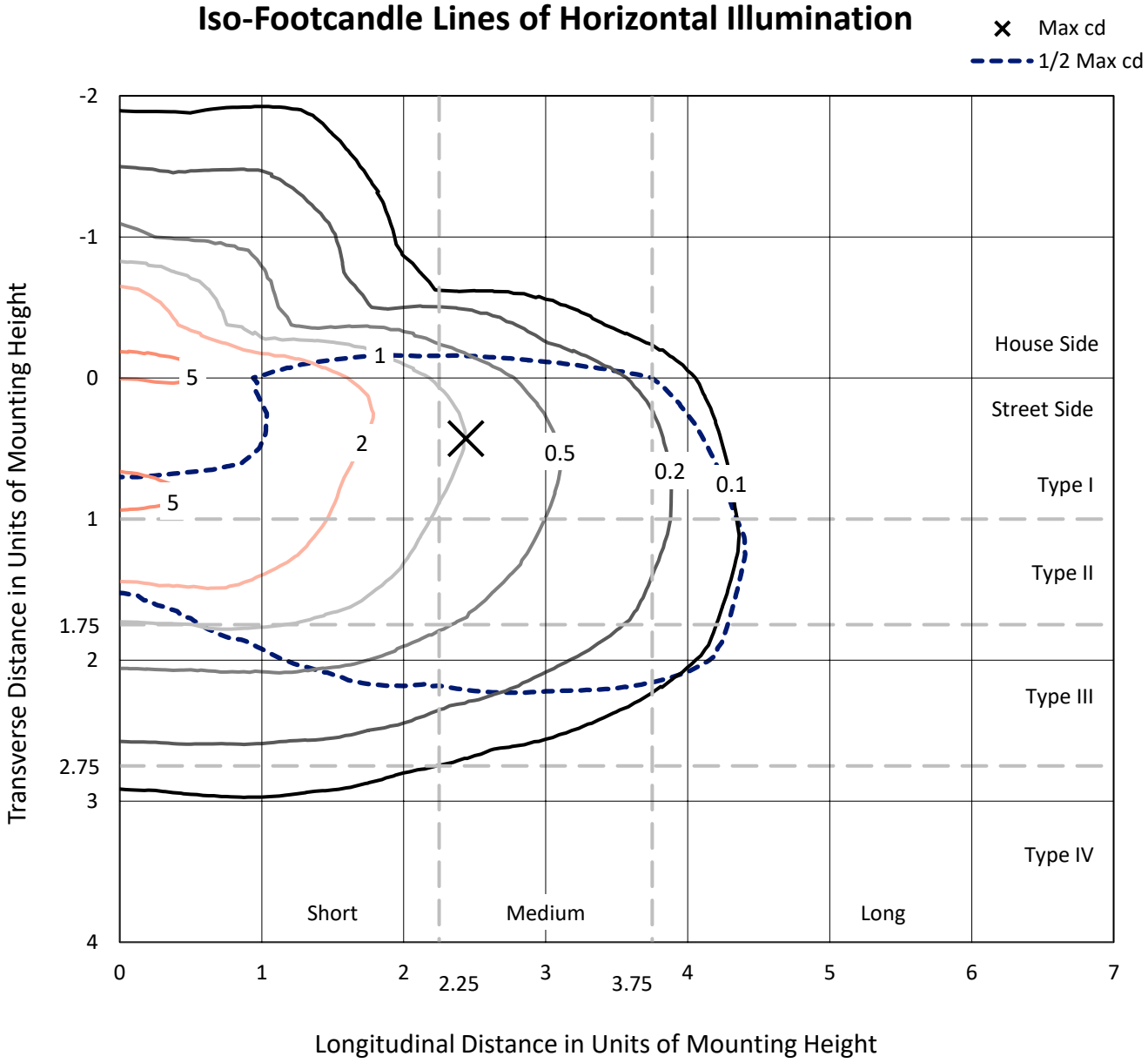
| | |
|---|---|
| Input Watts (W): | 85 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 11.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1366431
CATALOG NUMBER: GSS-SB3A-740-U-T3R

## Iso-Footcandle Lines of Horizontal Illumination



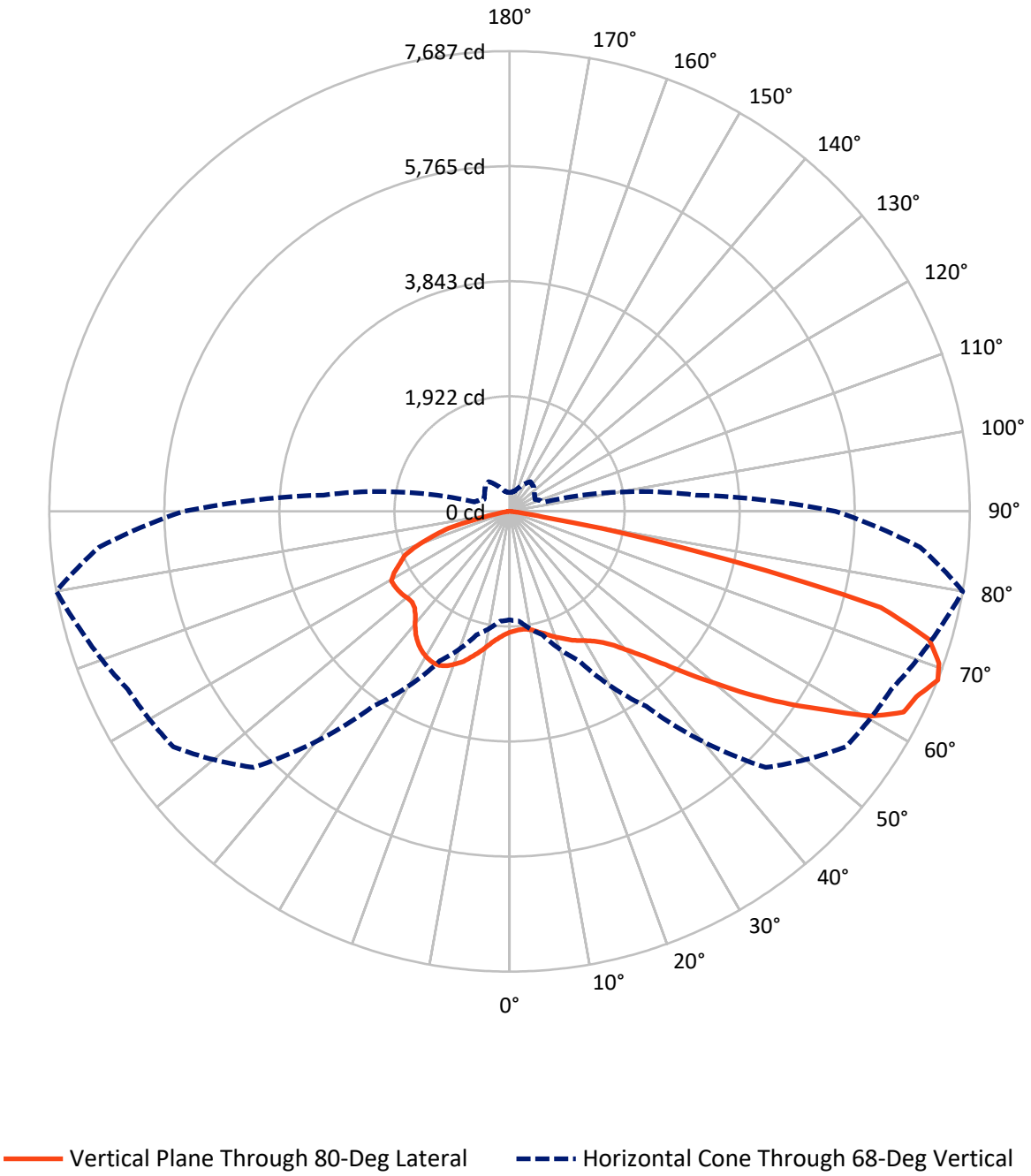

Based on 20 foot mounting height. Maximum calculated value = 5.7 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

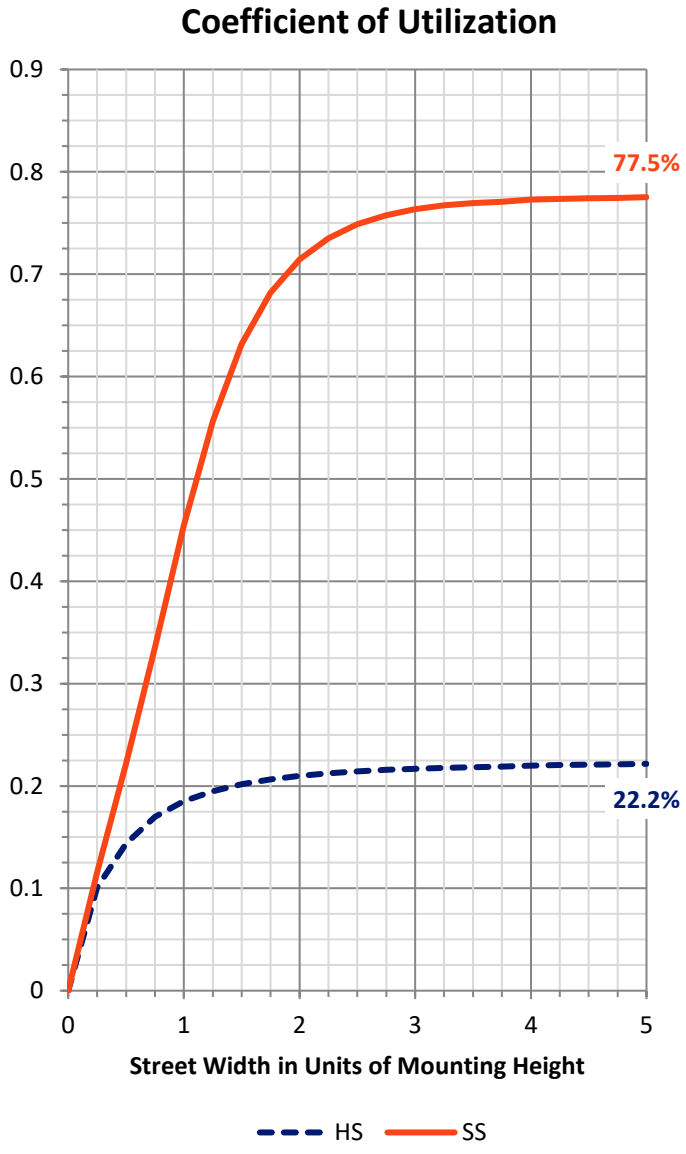
REPORT NUMBER: P1366431
CATALOG NUMBER: GSS-SB3A-740-U-T3R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2947.0 | 0.0 | 2947.0 |
| | % Fixture | 22.3 | 0.0 | 22.3 |
| **Street Side** | Lumens | 10241.0 | 0.0 | 10241.0 |
| | % Fixture | 77.7 | 0.0 | 77.7 |
| **Total** | Lumens | 13188.0 | 0.0 | 13188.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 195.0 | 1.5 |
| 10°-20° | 556.8 | 4.2 |
| 20°-30° | 918.0 | 7.0 |
| 30°-40° | 1409.4 | 10.7 |
| 40°-50° | 2176.2 | 16.5 |
| 50°-60° | 3005.9 | 22.8 |
| 60°-70° | 3080.7 | 23.4 |
| 70°-80° | 1744.8 | 13.2 |
| 80°-90° | 101.2 | 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° | 13188.0 | 100.0 |
| 0°-180° | 13188.0 | 100.0 |



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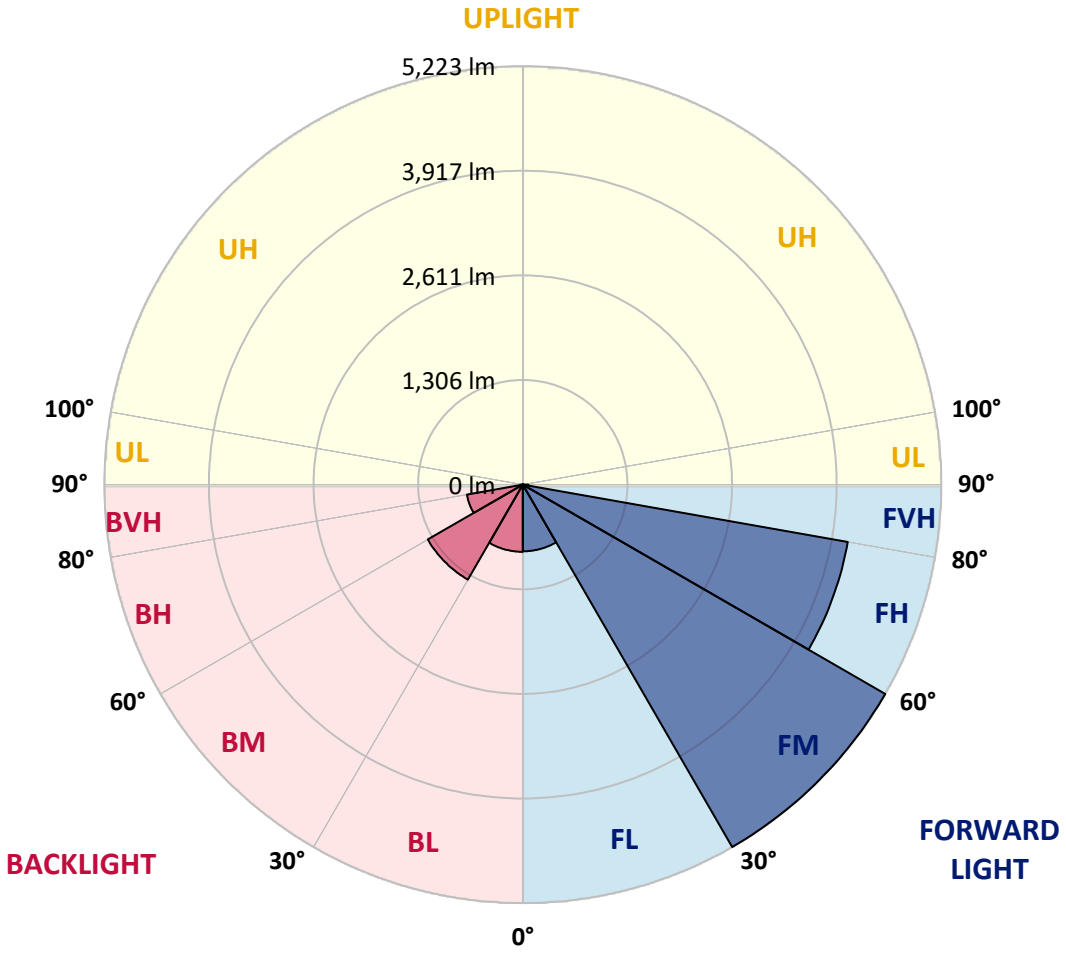
Scaled Data Report

REPORT NUMBER: P1366431
CATALOG NUMBER: GSS-SB3A-740-U-T3R

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 831.4 | 6.3 | | | |
| FM | (30°-60°) | 5222.5 | 39.6 | | | |
| FH | (60°-80°) | 4117.3 | 31.2 | | | G2/5000 |
| FVH | (80°-90°) | 69.7 | 0.5 | | | G1/100 |
| BL | (0°-30°) | 838.4 | 6.4 | B2/1000 | | |
| BM | (30°-60°) | 1369.0 | 10.4 | B2/2500 | | |
| BH | (60°-80°) | 708.2 | 5.4 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 31.4 | 0.2 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G2**
Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | *2014.7* | 2014.7 |
| 2.5° | 1873.2 | 1867.1 | 1864.0 | 1870.1 | 1879.4 | 1897.8 | 1919.3 | 1934.7 | 1971.6 | *1993.2* | 2011.6 |
| 5° | 1774.8 | 1771.7 | 1771.7 | 1787.1 | 1802.5 | 1824.0 | 1854.7 | 1882.4 | 1937.8 | *1980.9* | 2011.6 |
| 7.5° | 1657.9 | 1654.8 | 1654.8 | 1688.7 | 1719.4 | 1768.6 | 1817.8 | 1864.0 | 1931.6 | *1987.0* | 2036.2 |
| 10° | 1534.9 | 1534.9 | 1541.0 | 1584.1 | 1636.4 | 1707.1 | 1790.2 | 1860.9 | 1947.0 | *2011.6* | 2079.3 |
| 12.5° | 1482.6 | 1479.5 | 1482.6 | 1522.6 | 1574.8 | 1670.2 | 1765.5 | 1873.2 | 1977.8 | *2060.8* | 2140.8 |
| 15° | 1494.9 | 1488.7 | 1482.6 | 1516.4 | 1556.4 | 1651.7 | 1765.5 | 1897.8 | 2030.1 | *2110.0* | 2220.8 |
| 17.5° | 1559.5 | 1556.4 | 1537.9 | 1547.2 | 1574.8 | 1661.0 | 1780.9 | 1934.7 | 2082.4 | *2177.7* | 2297.7 |
| 20° | 1685.6 | 1676.3 | 1648.7 | 1633.3 | 1636.4 | 1691.7 | 1808.6 | 1983.9 | 2131.6 | *2245.4* | 2380.7 |
| 22.5° | 1894.7 | 1888.6 | 1842.4 | 1780.9 | 1740.9 | 1756.3 | 1857.8 | 2039.3 | 2199.2 | *2306.9* | 2476.1 |
| 25° | 2171.6 | 2156.2 | 2085.4 | 1987.0 | 1894.7 | 1860.9 | 1919.3 | 2113.1 | 2263.8 | *2380.7* | 2565.3 |
| 27.5° | 2466.8 | 2469.9 | 2405.3 | 2257.7 | 2097.7 | 1983.9 | 1999.3 | 2186.9 | 2337.7 | *2442.2* | 2642.2 |
| 30° | 2811.3 | 2796.0 | 2725.2 | 2571.4 | 2337.7 | 2147.0 | 2082.4 | 2257.7 | 2405.3 | *2503.8* | 2734.4 |
| 32.5° | 3266.6 | 3269.6 | 3143.5 | 2906.7 | 2614.5 | 2346.9 | 2190.0 | 2331.5 | 2482.2 | *2583.7* | 2848.3 |
| 35° | 3817.1 | 3804.8 | 3654.1 | 3368.1 | 2971.3 | 2577.6 | 2328.4 | 2426.9 | 2574.5 | *2688.3* | 2980.5 |
| 37.5° | 4309.3 | 4275.5 | 4186.3 | 3912.5 | 3420.4 | 2891.3 | 2516.1 | 2553.0 | 2719.1 | *2839.0* | 3177.4 |
| 40° | 4749.1 | 4733.8 | 4718.4 | 4509.2 | 3934.0 | 3281.9 | 2762.1 | 2746.7 | 2897.5 | *3054.3* | 3420.4 |
| 42.5° | 5112.1 | 5109.0 | 5115.2 | 5069.0 | 4561.5 | 3771.0 | 3106.6 | 2999.0 | 3149.7 | *3309.6* | 3706.4 |
| 45° | 5376.6 | 5370.5 | 5435.1 | 5530.4 | 5173.6 | 4355.4 | 3512.6 | 3312.7 | 3469.6 | *3651.1* | 4069.4 |
| 47.5° | 5659.6 | 5662.7 | 5751.9 | 5911.8 | 5770.3 | 4936.8 | 3974.0 | 3703.3 | 3844.8 | *4075.5* | 4503.1 |
| 50° | 5770.3 | 5770.3 | 5982.6 | 6210.2 | 6250.2 | 5555.0 | 4524.6 | 4167.8 | 4312.4 | *4558.4* | 4939.8 |
| 52.5° | 5530.4 | 5576.5 | 5948.7 | 6376.3 | 6563.9 | 6127.1 | 5105.9 | 4672.2 | 4795.3 | *5112.1* | 5373.5 |
| 55° | 4189.3 | 4352.3 | 5690.4 | 6296.3 | 6680.8 | 6576.2 | 5684.2 | 5232.0 | 5367.4 | *5681.1* | 5819.5 |
| 57.5° | 3617.2 | 3660.3 | 4463.1 | 6016.4 | 6533.1 | 6819.2 | 6219.4 | 5828.8 | 5951.8 | *6259.4* | 6284.0 |
| 60° | 3180.4 | 3238.9 | 3731.0 | 5542.7 | 6240.9 | 6794.6 | 6665.4 | 6379.3 | 6551.6 | *6942.2* | 6754.6 |
| 62.5° | 2577.6 | 2639.1 | 3054.3 | 4429.2 | 5856.4 | 6622.3 | 7013.0 | 6899.2 | 7062.2 | *7388.2* | 6948.4 |
| 65° | 2270.0 | 2291.5 | 2589.9 | 3395.8 | 5149.0 | 6474.7 | 7191.4 | 7120.6 | 7191.4 | *7465.1* | 6850.0 |
| 67.5° | 1891.7 | 1934.7 | 2223.9 | 2882.1 | 4158.6 | 6161.0 | 6926.8 | 7028.4 | 7379.0 | *7649.7* | 6923.8 |
| 68° | *1811.7* | *1842.4* | *2137.7* | *2756.0* | *3974.0* | *6047.2* | *6856.1* | *7034.5* | *7452.8* | *7686.6* | *6883.8* |
| 70° | 1479.5 | 1522.6 | 1784.0 | 2310.0 | 3331.2 | 4841.4 | 6579.3 | 7154.5 | 7505.1 | *7609.7* | 6665.4 |
| 72.5° | 732.1 | 809.0 | 1230.3 | 1630.2 | 2405.3 | 3500.3 | 5767.2 | 7000.7 | 7397.5 | *7332.9* | 6204.0 |
| 75° | 258.4 | 276.8 | 575.2 | 882.8 | 1165.8 | 2266.9 | 4078.6 | 6382.4 | 6782.3 | *6404.0* | 5201.3 |
| 77.5° | 184.6 | 199.9 | 326.0 | 446.0 | 479.8 | 1138.1 | 2614.5 | 4220.1 | 4010.9 | *3106.6* | 2368.4 |
| 80° | 144.6 | 156.9 | 243.0 | 249.1 | 239.9 | 399.9 | 892.0 | 1279.6 | 901.2 | *566.0* | 409.1 |
| 82.5° | 89.2 | 107.7 | 181.5 | 150.7 | 110.7 | 126.1 | 209.2 | 344.5 | 246.1 | *156.9* | 126.1 |
| 85° | 33.8 | 43.1 | 83.0 | 58.4 | 36.9 | 49.2 | 70.7 | 92.3 | 70.7 | *52.3* | 46.1 |
| 87.5° | 3.1 | 3.1 | 6.2 | 6.2 | 9.2 | 12.3 | 18.5 | 24.6 | 27.7 | *27.7* | 27.7 |
| 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: P1366431
CATALOG NUMBER: GSS-SB3A-740-U-T3R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 | 2014.7 |
| 2.5° | 2023.9 | 2033.1 | 2073.1 | 2094.7 | 2134.7 | 2165.4 | 2183.9 | 2193.1 | 2202.3 | 2208.5 | 2205.4 |
| 5° | 2045.5 | 2073.1 | 2150.0 | 2208.5 | 2254.6 | 2285.4 | 2300.7 | 2313.1 | 2316.1 | 2322.3 | 2319.2 |
| 7.5° | 2085.4 | 2128.5 | 2245.4 | 2313.1 | 2353.0 | 2365.3 | 2353.0 | 2346.9 | 2337.7 | 2328.4 | 2328.4 |
| 10° | 2150.0 | 2217.7 | 2356.1 | 2405.3 | 2408.4 | 2389.9 | 2350.0 | 2303.8 | 2270.0 | 2257.7 | 2251.5 |
| 12.5° | 2233.1 | 2328.4 | 2469.9 | 2482.2 | 2442.2 | 2356.1 | 2242.3 | 2147.0 | 2085.4 | 2039.3 | 2036.2 |
| 15° | 2334.6 | 2445.3 | 2568.3 | 2531.4 | 2417.6 | 2236.2 | 2048.5 | 1913.2 | 1842.4 | 1802.5 | 1784.0 |
| 17.5° | 2439.2 | 2580.7 | 2657.5 | 2556.0 | 2316.1 | 2020.8 | 1796.3 | 1688.7 | 1624.1 | 1602.5 | 1587.1 |
| 20° | 2556.0 | 2691.4 | 2719.1 | 2519.1 | 2131.6 | 1780.9 | 1577.9 | 1510.2 | 1510.2 | 1504.1 | 1497.9 |
| 22.5° | 2676.0 | 2805.2 | 2752.9 | 2417.6 | 1888.6 | 1544.1 | 1421.0 | 1445.7 | 1488.7 | 1501.0 | 1501.0 |
| 25° | 2786.7 | 2903.6 | 2752.9 | 2236.2 | 1599.5 | 1350.3 | 1359.5 | 1418.0 | 1473.3 | 1504.1 | 1504.1 |
| 27.5° | 2894.4 | 2965.1 | 2697.5 | 1980.9 | 1338.0 | 1251.9 | 1307.2 | 1378.0 | 1467.2 | 1513.3 | 1516.4 |
| 30° | 3002.0 | 3011.3 | 2599.1 | 1654.8 | 1150.4 | 1181.1 | 1245.7 | 1338.0 | 1436.4 | 1494.9 | 1501.0 |
| 32.5° | 3115.9 | 3054.3 | 2460.7 | 1331.8 | 1064.2 | 1113.5 | 1190.4 | 1264.2 | 1341.1 | 1384.1 | 1387.2 |
| 35° | 3245.0 | 3094.3 | 2282.3 | 1082.7 | 1008.9 | 1067.3 | 1125.8 | 1150.4 | 1171.9 | 1196.5 | 1211.9 |
| 37.5° | 3386.5 | 3146.6 | 2048.5 | 956.6 | 956.6 | 1024.3 | 1058.1 | 1008.9 | 1002.7 | 999.7 | 990.4 |
| 40° | 3543.4 | 3202.0 | 1756.3 | 892.0 | 916.6 | 978.1 | 950.4 | 892.0 | 848.9 | 802.8 | 805.9 |
| 42.5° | 3740.3 | 3272.7 | 1424.1 | 861.2 | 888.9 | 941.2 | 864.3 | 793.6 | 676.7 | 645.9 | 652.1 |
| 45° | 3964.8 | 3361.9 | 1159.6 | 833.6 | 867.4 | 907.4 | 805.9 | 670.5 | 596.7 | 627.5 | 649.0 |
| 47.5° | 4201.6 | 3478.8 | 968.9 | 812.0 | 858.2 | 867.4 | 769.0 | 615.2 | 566.0 | 633.6 | 661.3 |
| 50° | 4481.5 | 3586.5 | 879.7 | 790.5 | 855.1 | 855.1 | 704.4 | 605.9 | 541.4 | 599.8 | 627.5 |
| 52.5° | 4764.5 | 3691.0 | 833.6 | 765.9 | 845.9 | 852.0 | 689.0 | 593.6 | 507.5 | 526.0 | 538.3 |
| 55° | 5041.3 | 3749.5 | 809.0 | 732.1 | 836.6 | 836.6 | 695.1 | 572.1 | 473.7 | 473.7 | 479.8 |
| 57.5° | 5321.2 | 3789.5 | 787.4 | 692.1 | 805.9 | 790.5 | 695.1 | 556.7 | 461.4 | 449.1 | 455.2 |
| 60° | 5631.9 | 3814.1 | 765.9 | 645.9 | 762.8 | 735.1 | 692.1 | 544.4 | 446.0 | 427.5 | 430.6 |
| 62.5° | 5681.1 | 3641.8 | 725.9 | 596.7 | 704.4 | 689.0 | 679.8 | 529.0 | 421.4 | 384.5 | 384.5 |
| 65° | 5505.8 | 3383.5 | 676.7 | 535.2 | 627.5 | 642.9 | 655.2 | 510.6 | 396.8 | 353.7 | 356.8 |
| 67.5° | 5487.3 | 3189.7 | 624.4 | 479.8 | 526.0 | 584.4 | 624.4 | 479.8 | 359.9 | 323.0 | 319.9 |
| 68° | *5444.3* | *3118.9* | *609.0* | *467.5* | *507.5* | *572.1* | *605.9* | *467.5* | *353.7* | *316.8* | *316.8* |
| 70° | 5167.5 | 2811.3 | 516.7 | 412.2 | 449.1 | 467.5 | 532.1 | 415.2 | 316.8 | 286.1 | 289.1 |
| 72.5° | 4629.2 | 2291.5 | 396.8 | 335.3 | 359.9 | 359.9 | 461.4 | 384.5 | 289.1 | 261.4 | 261.4 |
| 75° | 3860.2 | 1811.7 | 301.4 | 264.5 | 252.2 | 292.2 | 375.3 | 347.6 | 255.3 | 233.8 | 224.5 |
| 77.5° | 1753.2 | 781.3 | 196.9 | 184.6 | 187.6 | 227.6 | 298.4 | 298.4 | 243.0 | 190.7 | 169.2 |
| 80° | 387.6 | 243.0 | 120.0 | 110.7 | 110.7 | 144.6 | 209.2 | 215.3 | 175.3 | 132.3 | 113.8 |
| 82.5° | 129.2 | 98.4 | 73.8 | 67.7 | 64.6 | 76.9 | 129.2 | 141.5 | 104.6 | 76.9 | 76.9 |
| 85° | 49.2 | 46.1 | 40.0 | 36.9 | 30.8 | 30.8 | 40.0 | 64.6 | 55.4 | 36.9 | 36.9 |
| 87.5° | 24.6 | 24.6 | 21.5 | 15.4 | 12.3 | 9.2 | 6.2 | 6.2 | 6.2 | 9.2 | 6.2 |
| 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: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

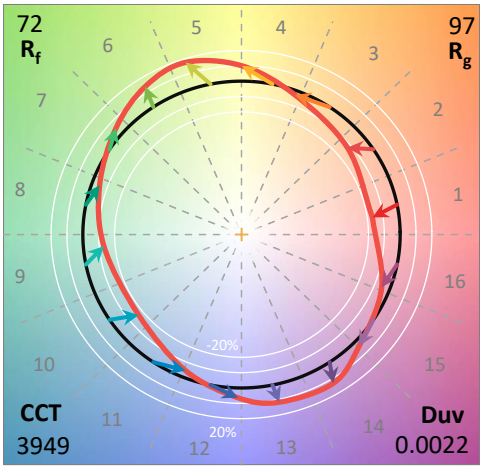
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| 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-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

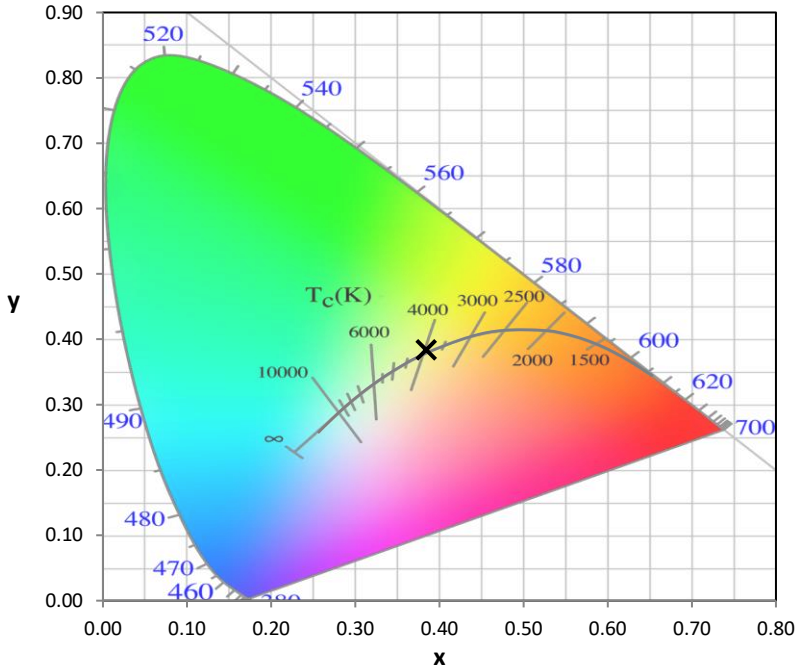
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

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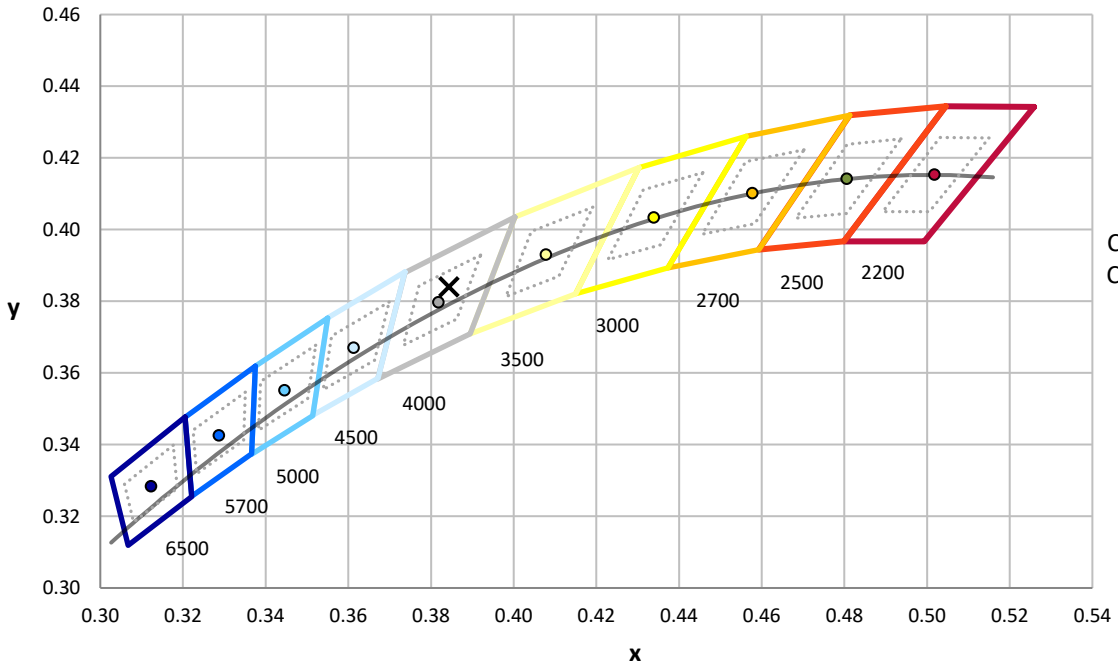
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

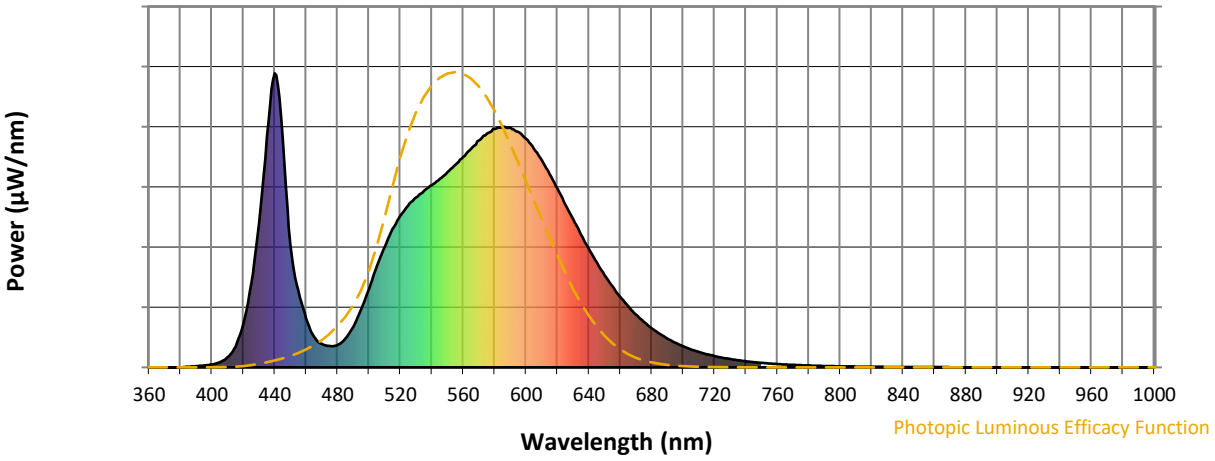



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

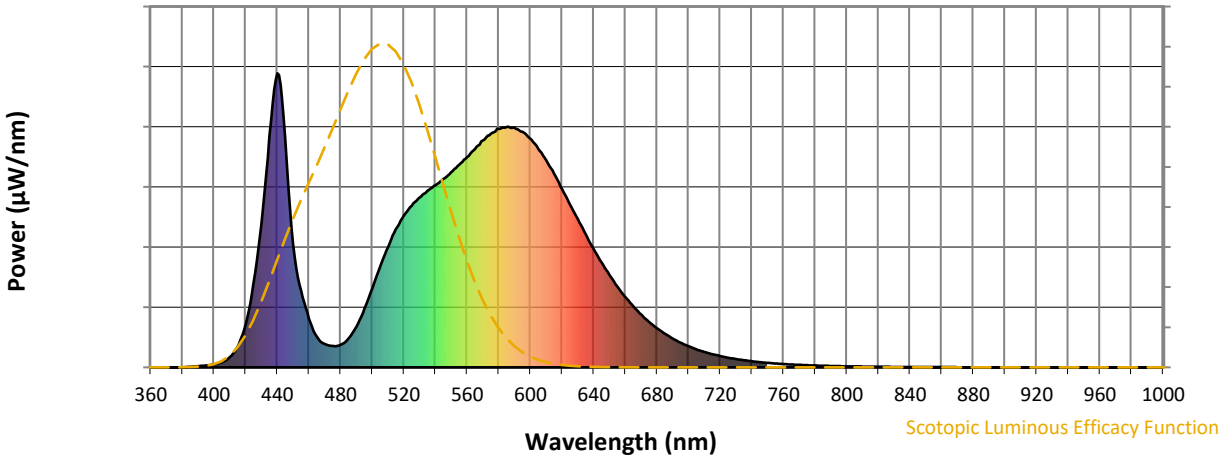



## Photopic Lumens: NR

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

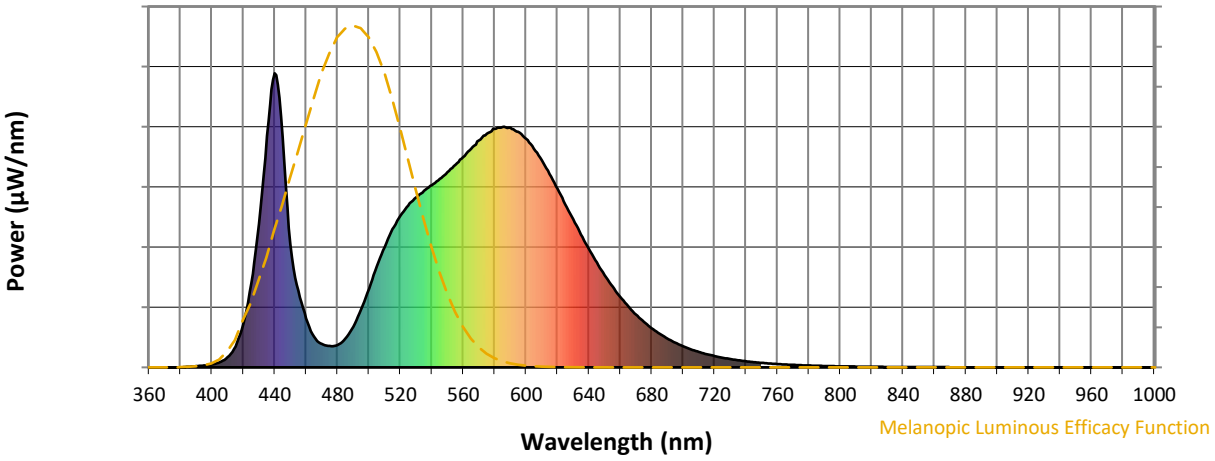



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| 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 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

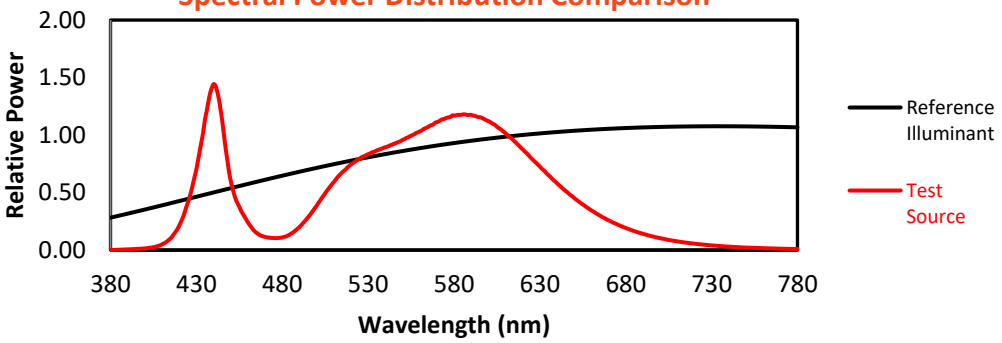
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# TM-30-18

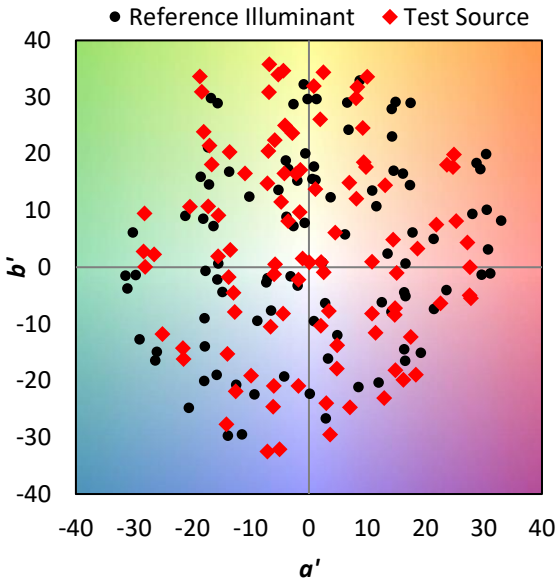
## Summary

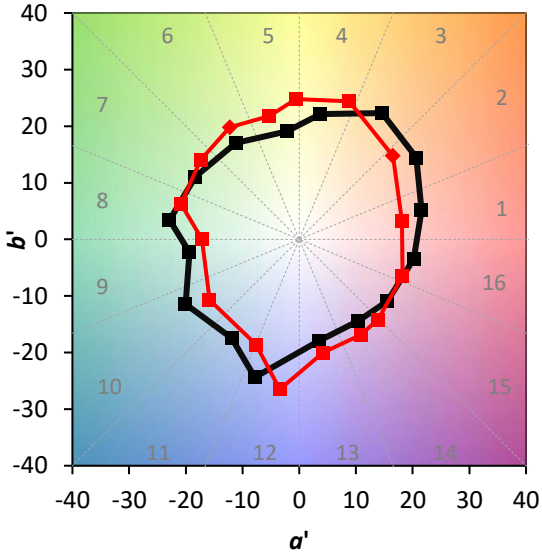
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

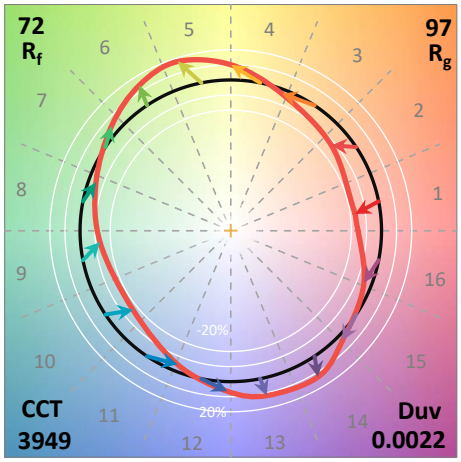
## Spectral Power Distribution Comparison

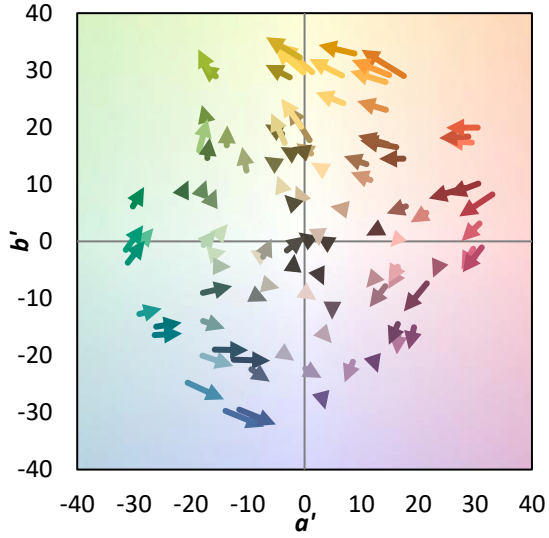



## Color Vector Graphics



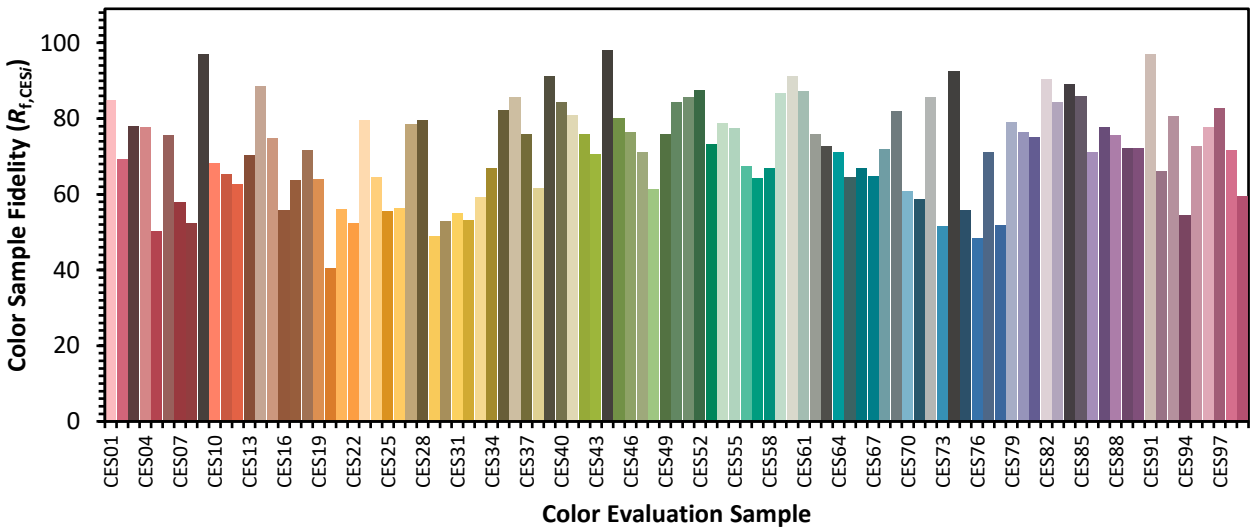



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**Individual Sample Fidelity Index ($R_{f,i}$)**

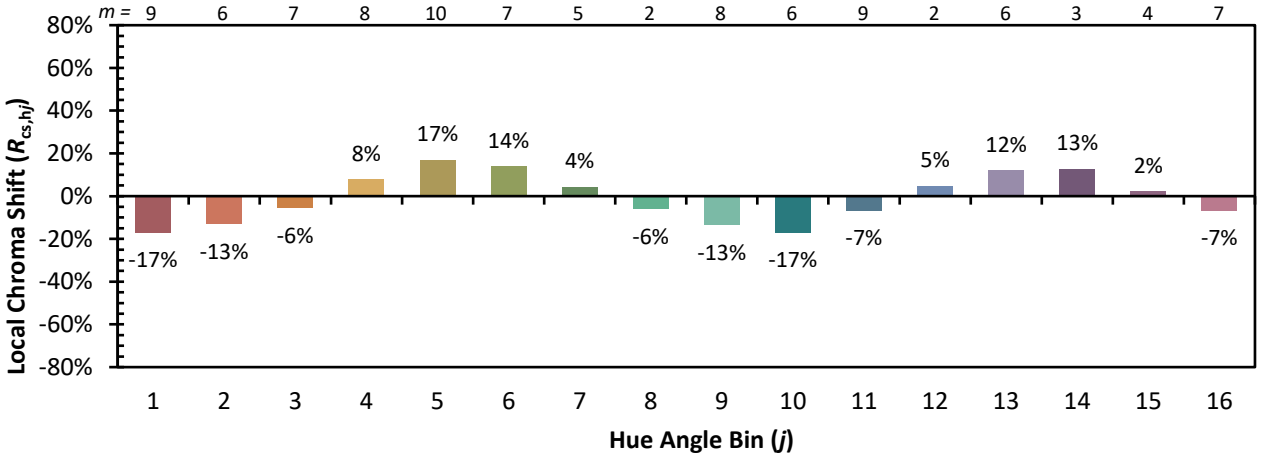
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |

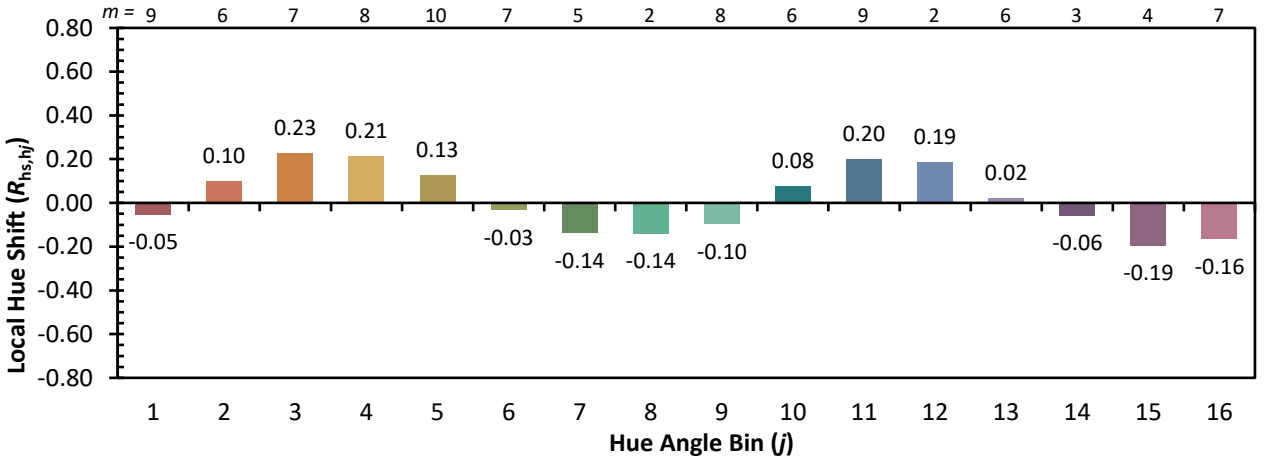


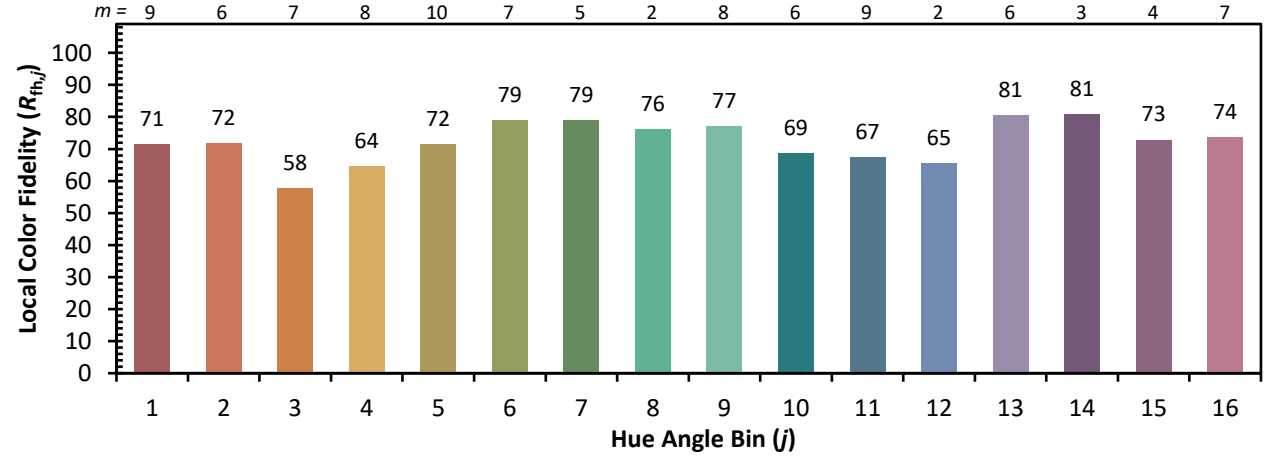
REPORT NUMBER: SP1-2407-184-1

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## Color Rendition by Hue-Angle Bin



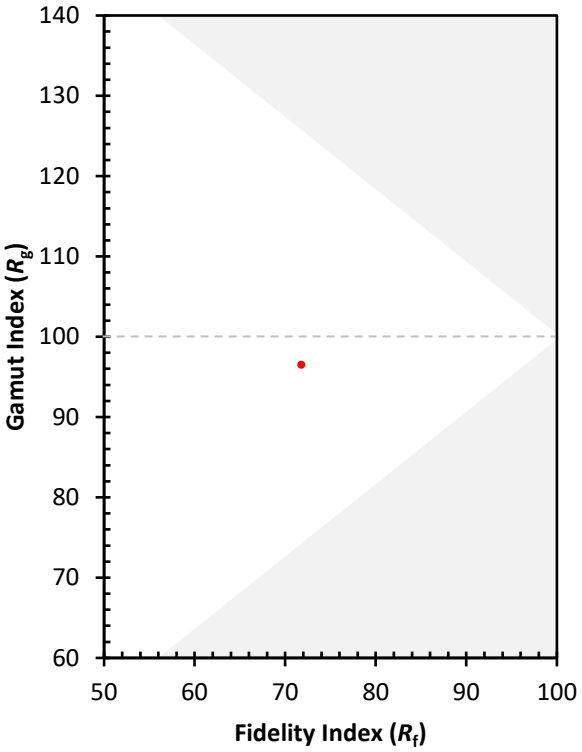



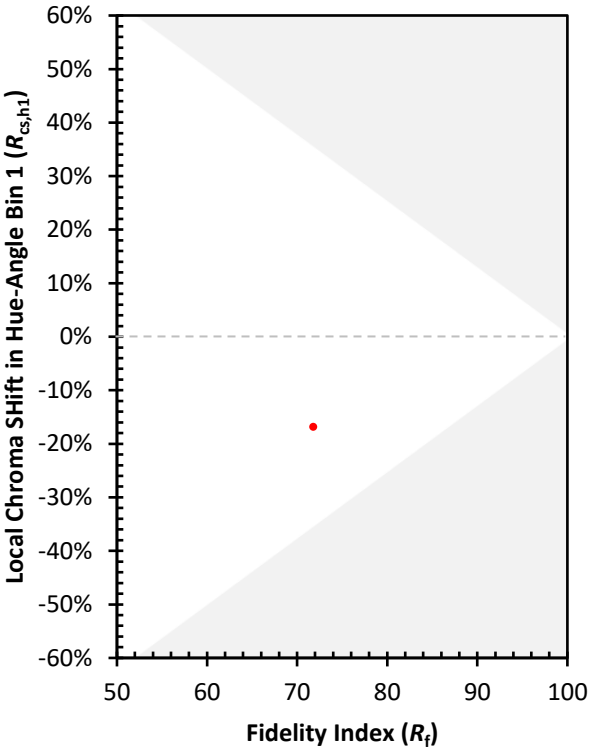



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## Measure Comparisons




(END OF REPORT)