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: P1363861

Luminaire Tested: **GSS-SB2C-750-U-SL3-HSS**

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: | P1363861 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB2C-750-U-SL3-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 2SQUARE 102W 70CRI 5000K FIXTURE w/ TYPE III SPILL CONTROL DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (52) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 10416.4 lumens |
| Efficiency: | N/A |
| Efficacy: | 102.1 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B1 - U0 - G2 |

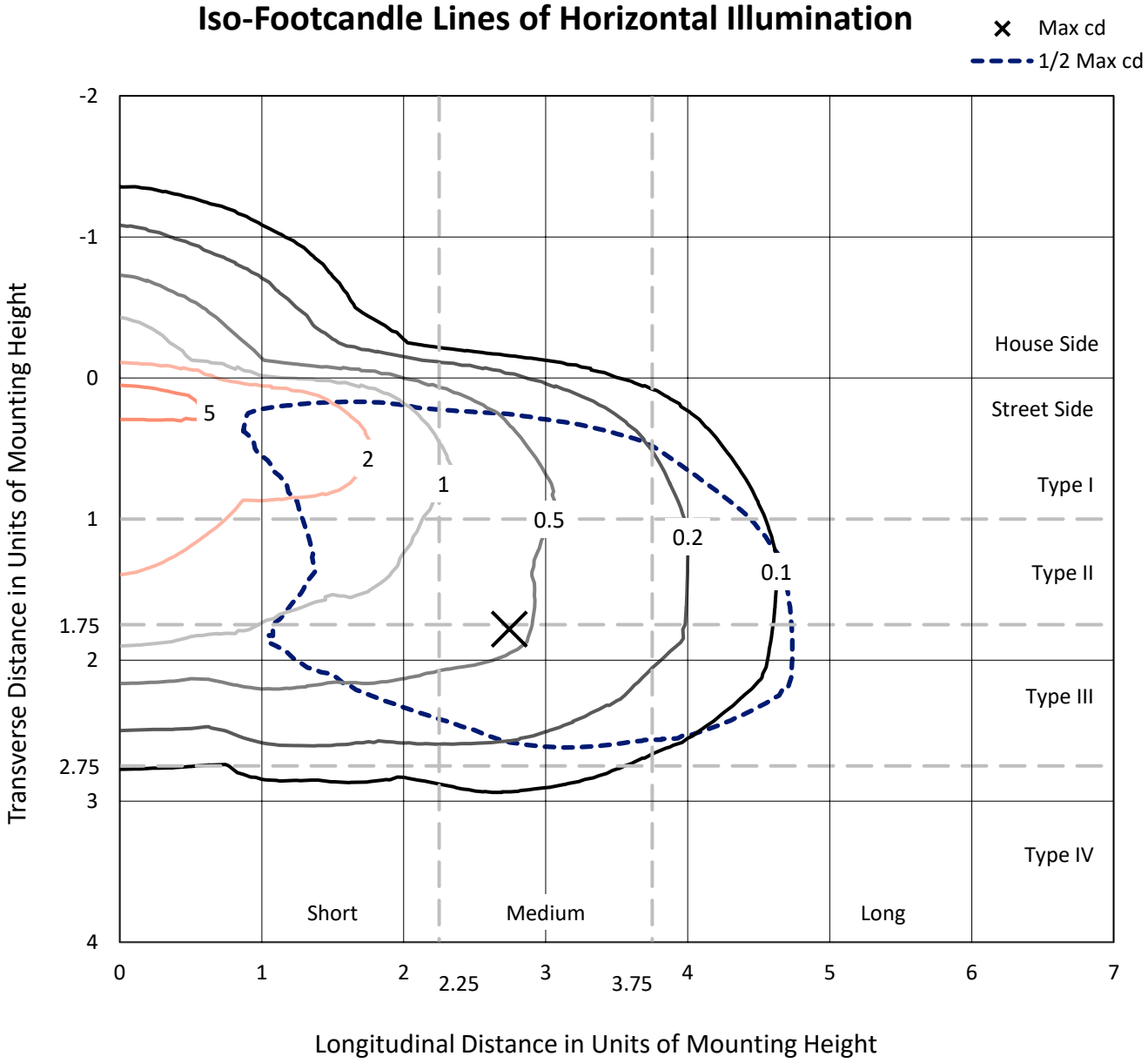
| | |
|---|---|
| Input Watts (W): | 102 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 9.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°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: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

## Iso-Footcandle Lines of Horizontal Illumination



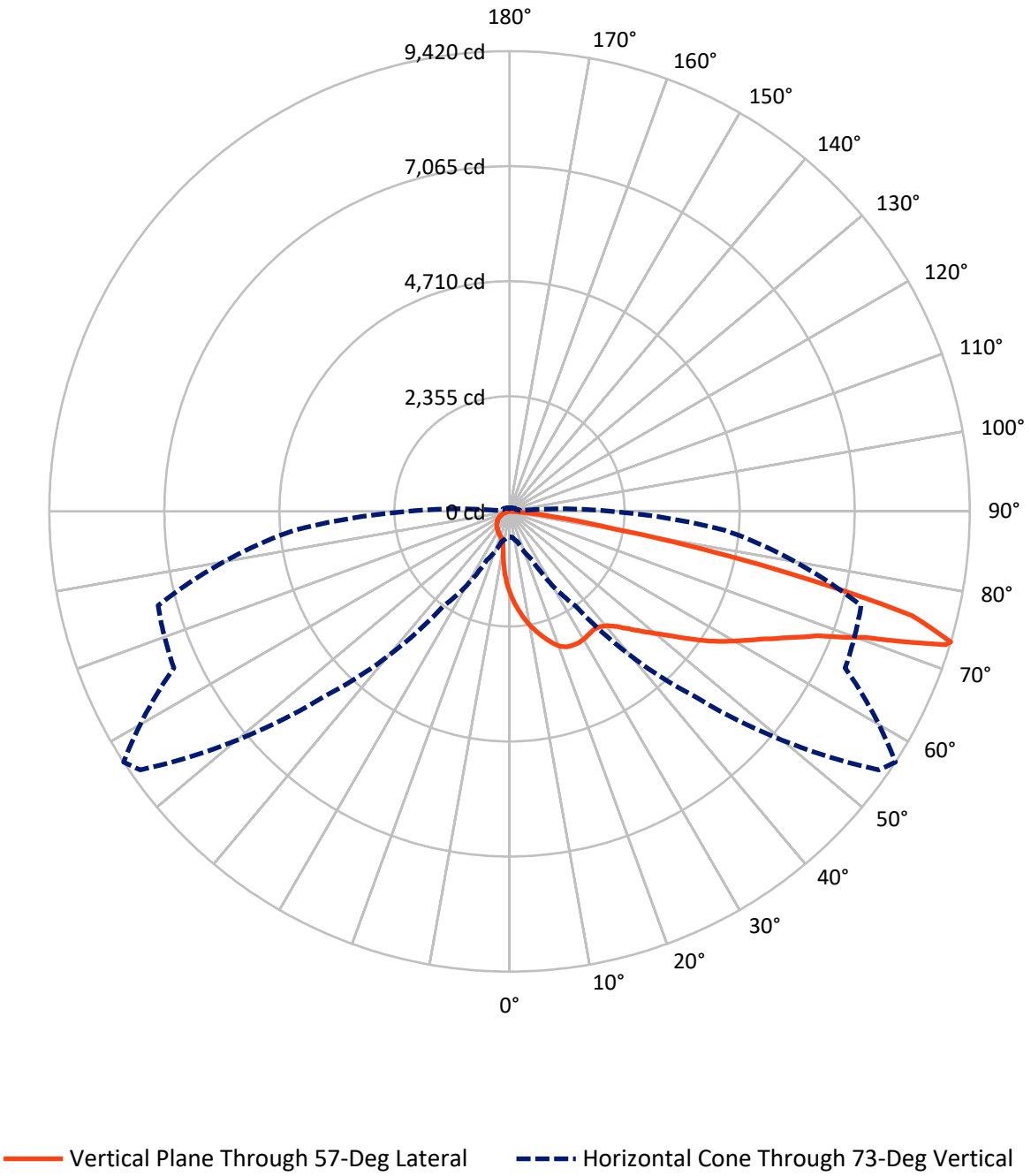

Based on 20 foot mounting height. Maximum calculated value = 6.1 fc
Type III - Medium - N/A

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

Scaled Data Report

REPORT NUMBER: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

## Luminous Intensity Polar Plot



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

Scaled Data Report

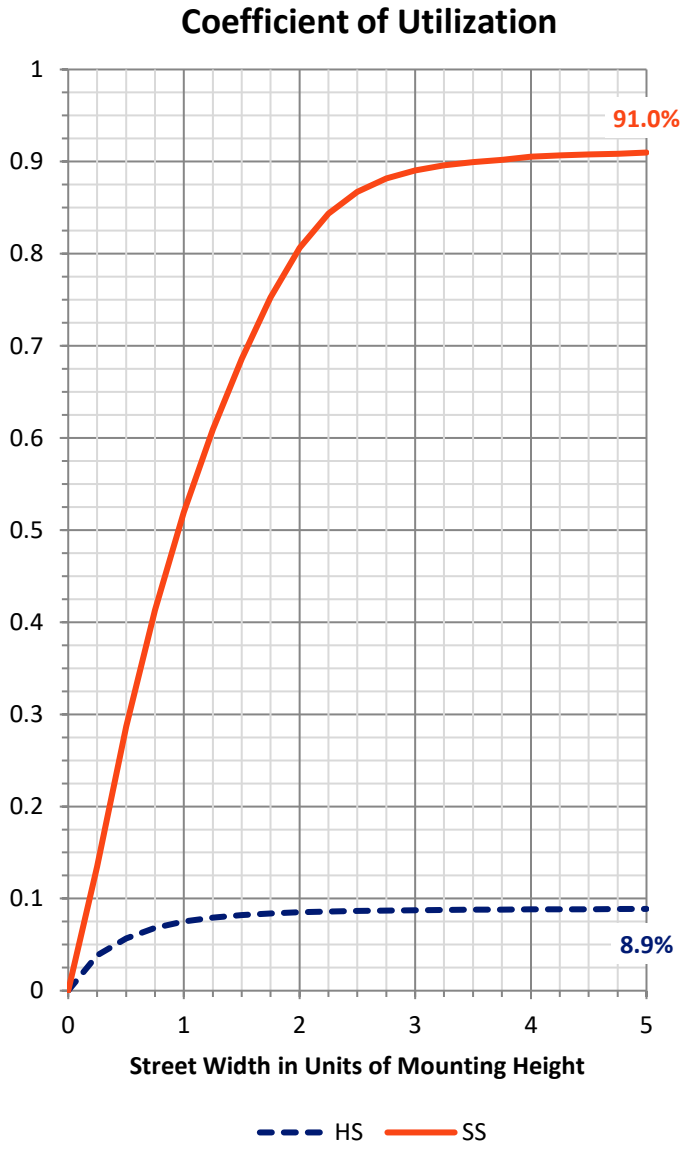
REPORT NUMBER: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 933.0 | 0.0 | 933.0 |
| | % Fixture | 9.0 | 0.0 | 9.0 |
| **Street Side** | Lumens | 9483.4 | 0.0 | 9483.4 |
| | % Fixture | 91.0 | 0.0 | 91.0 |
| **Total** | Lumens | 10416.4 | 0.0 | 10416.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 155.3 | 1.5 |
| 10°-20° | 445.5 | 4.3 |
| 20°-30° | 676.1 | 6.5 |
| 30°-40° | 979.2 | 9.4 |
| 40°-50° | 1462.4 | 14.0 |
| 50°-60° | 2117.4 | 20.3 |
| 60°-70° | 2565.2 | 24.6 |
| 70°-80° | 1852.7 | 17.8 |
| 80°-90° | 162.5 | 1.6 |
| 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° | 10416.4 | 100.0 |
| 0°-180° | 10416.4 | 100.0 |



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

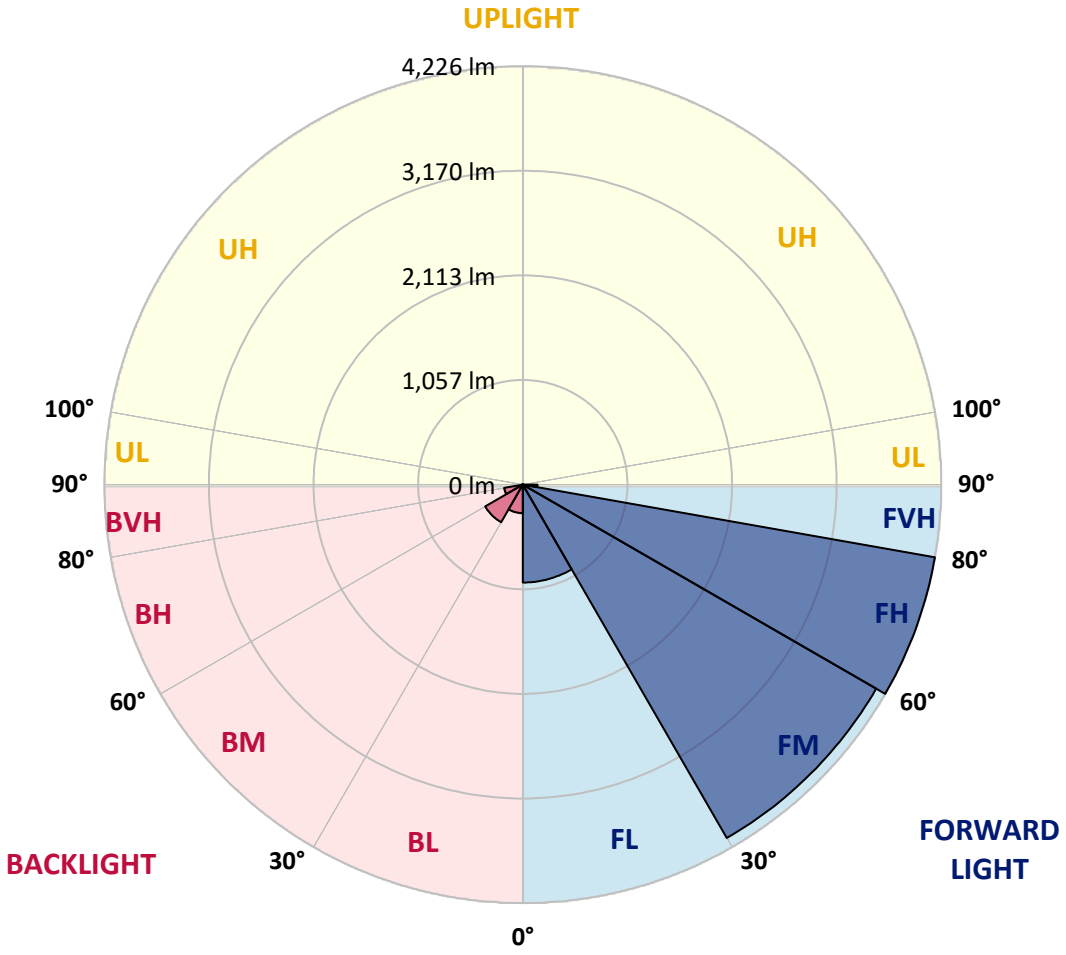
Scaled Data Report

REPORT NUMBER: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 988.6 | 9.5 | | | |
| FM | (30°-60°) | 4120.2 | 39.6 | | | |
| FH | (60°-80°) | 4226.2 | 40.6 | | | G2/5000 |
| FVH | (80°-90°) | 148.4 | 1.4 | | | G2/225 |
| BL | (0°-30°) | 288.4 | 2.8 | B1/500 | | |
| BM | (30°-60°) | 438.8 | 4.2 | B1/1000 | | |
| BH | (60°-80°) | 191.7 | 1.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 14.1 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G2**
Type III Medium



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

Scaled Data Report

REPORT NUMBER: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 57° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 |
| 2.5° | 2014.8 | 2021.6 | 1997.9 | 1984.3 | 1957.2 | 1913.1 | 1869.0 | 1869.0 | 1818.1 | 1770.6 | 1709.6 |
| 5° | 2313.3 | 2293.0 | 2282.8 | 2248.9 | 2198.0 | 2143.7 | 2065.7 | 2045.4 | 1964.0 | 1862.2 | 1740.1 |
| 7.5° | 2540.6 | 2516.9 | 2506.7 | 2476.2 | 2418.5 | 2347.3 | 2242.1 | 2225.2 | 2106.4 | 1957.2 | 1780.8 |
| 10° | 2679.7 | 2662.7 | 2662.7 | 2639.0 | 2594.9 | 2520.3 | 2415.1 | 2391.4 | 2248.9 | 2045.4 | 1807.9 |
| 12.5° | 2618.6 | 2611.8 | 2652.5 | 2706.8 | 2727.2 | 2683.1 | 2571.1 | 2540.6 | 2377.8 | 2143.7 | 1841.9 |
| 15° | 2340.5 | 2333.7 | 2408.3 | 2550.8 | 2723.8 | 2798.4 | 2713.6 | 2686.5 | 2516.9 | 2245.5 | 1875.8 |
| 17.5° | 2072.5 | 2062.3 | 2133.6 | 2276.0 | 2533.8 | 2812.0 | 2862.8 | 2828.9 | 2655.9 | 2347.3 | 1913.1 |
| 20° | 1919.9 | 1909.7 | 1957.2 | 2072.5 | 2306.6 | 2703.4 | 2940.9 | 2947.6 | 2808.6 | 2459.2 | 1950.4 |
| 22.5° | 1865.6 | 1862.2 | 1886.0 | 1964.0 | 2130.2 | 2516.9 | 2971.4 | 3012.1 | 2974.8 | 2588.1 | 2004.7 |
| 25° | 1889.3 | 1875.8 | 1882.6 | 1913.1 | 2031.8 | 2367.6 | 2954.4 | 3032.4 | 3113.9 | 2744.1 | 2075.9 |
| 27.5° | 1950.4 | 1940.2 | 1930.0 | 1930.0 | 1991.1 | 2259.1 | 2910.3 | 3039.2 | 3256.3 | 2913.7 | 2137.0 |
| 30° | 2052.2 | 2038.6 | 2008.1 | 1970.8 | 1991.1 | 2191.2 | 2859.5 | 3022.3 | 3378.4 | 3096.9 | 2221.8 |
| 32.5° | 2282.8 | 2272.6 | 2184.4 | 2065.7 | 2038.6 | 2174.3 | 2801.8 | 2991.7 | 3510.7 | 3314.0 | 2320.1 |
| 35° | 2510.1 | 2499.9 | 2438.8 | 2269.2 | 2120.0 | 2187.8 | 2764.5 | 2971.4 | 3673.5 | 3578.6 | 2435.5 |
| 37.5° | 2611.8 | 2594.9 | 2547.4 | 2455.8 | 2310.0 | 2265.9 | 2774.7 | 2995.1 | 3907.6 | 3870.3 | 2577.9 |
| 40° | 2740.7 | 2713.6 | 2642.4 | 2557.6 | 2493.1 | 2445.6 | 2856.1 | 3076.5 | 4168.8 | 4206.1 | 2734.0 |
| 42.5° | 2930.7 | 2900.2 | 2795.0 | 2676.3 | 2601.7 | 2696.6 | 3012.1 | 3222.4 | 4491.0 | 4579.2 | 2923.9 |
| 45° | 3191.9 | 3151.2 | 3015.5 | 2859.5 | 2767.9 | 2822.1 | 3222.4 | 3429.3 | 4850.6 | 5003.2 | 3144.4 |
| 47.5° | 3429.3 | 3419.1 | 3266.5 | 3086.7 | 2978.2 | 2906.9 | 3449.7 | 3670.1 | 5230.5 | 5478.1 | 3371.6 |
| 50° | 3653.2 | 3615.9 | 3466.6 | 3290.2 | 3198.7 | 3079.9 | 3700.7 | 3938.1 | 5610.4 | 5912.3 | 3615.9 |
| 52.5° | 3897.4 | 3856.7 | 3653.2 | 3453.1 | 3361.5 | 3334.3 | 4026.3 | 4257.0 | 5942.8 | 6370.2 | 3863.5 |
| 55° | 4087.4 | 4029.7 | 3805.8 | 3639.6 | 3493.8 | 3585.3 | 4375.7 | 4640.3 | 6237.9 | 6784.0 | 4114.5 |
| 57.5° | 4324.8 | 4250.2 | 3931.3 | 3809.2 | 3697.3 | 3839.7 | 4769.2 | 5023.6 | 6546.6 | 7133.4 | 4365.5 |
| 60° | 4531.7 | 4474.1 | 4165.4 | 4012.7 | 3907.6 | 4128.1 | 5152.5 | 5376.3 | 6787.4 | 7431.9 | 4596.2 |
| 62.5° | 3900.8 | 3894.0 | 3975.4 | 4433.3 | 4277.3 | 4565.6 | 5562.9 | 5759.6 | 6933.3 | 7632.0 | 4691.1 |
| 65° | 2767.9 | 2788.2 | 3015.5 | 4440.1 | 4996.4 | 5298.3 | 6102.2 | 6231.1 | 6940.0 | 7404.7 | 4504.6 |
| 67.5° | 1760.4 | 1740.1 | 2021.6 | 3717.6 | 5023.6 | 6743.3 | 6923.1 | 6794.2 | 6628.0 | 7160.5 | 4528.3 |
| 70° | 1054.9 | 1061.7 | 1156.7 | 2696.6 | 4141.6 | 7072.3 | 8069.6 | 7737.2 | 6814.5 | 7340.3 | 4548.7 |
| 72.5° | 573.2 | 586.8 | 722.5 | 1322.9 | 2744.1 | 5627.3 | 9283.9 | 9331.4 | 7452.2 | 7425.1 | 4470.7 |
| 73° | 522.4 | 525.8 | 647.9 | 1105.8 | 2374.4 | 5349.2 | 9226.2 | 9419.6 | 7581.1 | 7448.8 | 4419.8 |
| 75° | 346.0 | 346.0 | 441.0 | 627.5 | 1041.3 | 4158.6 | 7659.1 | 8513.9 | 8018.7 | 7204.6 | 4022.9 |
| 77.5° | 213.7 | 227.3 | 305.3 | 434.2 | 379.9 | 2092.9 | 4504.6 | 5210.1 | 7150.3 | 5420.4 | 2527.0 |
| 80° | 78.0 | 84.8 | 190.0 | 284.9 | 220.5 | 793.7 | 1889.3 | 2167.5 | 3314.0 | 2750.9 | 912.4 |
| 82.5° | 40.7 | 44.1 | 118.7 | 145.9 | 118.7 | 206.9 | 844.6 | 902.3 | 1336.4 | 715.7 | 169.6 |
| 85° | 20.4 | 23.7 | 50.9 | 61.1 | 47.5 | 67.8 | 210.3 | 196.7 | 301.9 | 95.0 | 47.5 |
| 87.5° | 0.0 | 0.0 | 3.4 | 6.8 | 10.2 | 13.6 | 20.4 | 20.4 | 23.7 | 27.1 | 27.1 |
| 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: P1363861
CATALOG NUMBER: GSS-SB2C-750-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 | 1675.6 |
| 2.5° | 1672.3 | 1645.1 | 1580.7 | 1516.2 | 1468.7 | 1417.9 | 1370.4 | 1329.7 | 1305.9 | 1295.7 | 1305.9 |
| 5° | 1675.6 | 1618.0 | 1485.7 | 1353.4 | 1224.5 | 1119.4 | 1021.0 | 949.8 | 898.9 | 881.9 | 875.1 |
| 7.5° | 1675.6 | 1580.7 | 1373.8 | 1156.7 | 966.7 | 827.6 | 729.3 | 685.2 | 661.4 | 658.0 | 658.0 |
| 10° | 1672.3 | 1536.6 | 1248.3 | 963.3 | 746.2 | 651.3 | 620.7 | 614.0 | 614.0 | 614.0 | 617.3 |
| 12.5° | 1668.9 | 1495.9 | 1105.8 | 776.8 | 627.5 | 597.0 | 586.8 | 586.8 | 590.2 | 593.6 | 597.0 |
| 15° | 1662.1 | 1434.8 | 956.5 | 647.9 | 583.4 | 573.2 | 566.5 | 566.5 | 569.9 | 576.6 | 576.6 |
| 17.5° | 1655.3 | 1373.8 | 810.7 | 590.2 | 563.1 | 552.9 | 549.5 | 546.1 | 552.9 | 559.7 | 559.7 |
| 20° | 1641.7 | 1295.7 | 688.6 | 559.7 | 542.7 | 535.9 | 532.5 | 529.2 | 532.5 | 539.3 | 542.7 |
| 22.5° | 1624.8 | 1197.4 | 607.2 | 539.3 | 525.8 | 515.6 | 512.2 | 508.8 | 508.8 | 522.4 | 522.4 |
| 25° | 1607.8 | 1088.8 | 559.7 | 519.0 | 505.4 | 495.2 | 488.4 | 485.1 | 488.4 | 498.6 | 498.6 |
| 27.5° | 1573.9 | 970.1 | 529.2 | 502.0 | 488.4 | 474.9 | 468.1 | 461.3 | 464.7 | 474.9 | 474.9 |
| 30° | 1523.0 | 844.6 | 512.2 | 485.1 | 468.1 | 451.1 | 441.0 | 434.2 | 437.6 | 447.7 | 451.1 |
| 32.5° | 1448.4 | 736.1 | 505.4 | 471.5 | 451.1 | 427.4 | 413.8 | 403.6 | 407.0 | 420.6 | 420.6 |
| 35° | 1370.4 | 658.0 | 502.0 | 457.9 | 430.8 | 407.0 | 383.3 | 369.7 | 376.5 | 390.1 | 393.5 |
| 37.5° | 1289.0 | 614.0 | 502.0 | 451.1 | 417.2 | 386.7 | 352.8 | 339.2 | 342.6 | 356.2 | 359.6 |
| 40° | 1217.7 | 593.6 | 505.4 | 444.4 | 400.3 | 362.9 | 325.6 | 308.7 | 315.5 | 332.4 | 329.0 |
| 42.5° | 1190.6 | 590.2 | 505.4 | 427.4 | 383.3 | 339.2 | 298.5 | 281.5 | 288.3 | 298.5 | 301.9 |
| 45° | 1221.1 | 603.8 | 498.6 | 410.4 | 359.6 | 312.1 | 278.1 | 261.2 | 264.6 | 271.4 | 278.1 |
| 47.5° | 1326.3 | 620.7 | 488.4 | 390.1 | 339.2 | 291.7 | 257.8 | 244.2 | 237.4 | 247.6 | 251.0 |
| 50° | 1472.1 | 630.9 | 471.5 | 369.7 | 322.2 | 271.4 | 240.8 | 223.9 | 217.1 | 220.5 | 223.9 |
| 52.5° | 1638.3 | 630.9 | 454.5 | 349.4 | 305.3 | 251.0 | 227.3 | 210.3 | 196.7 | 200.1 | 200.1 |
| 55° | 1804.5 | 624.1 | 410.4 | 332.4 | 288.3 | 237.4 | 213.7 | 190.0 | 179.8 | 179.8 | 176.4 |
| 57.5° | 1977.5 | 614.0 | 356.2 | 308.7 | 268.0 | 220.5 | 196.7 | 176.4 | 162.8 | 156.0 | 156.0 |
| 60° | 2147.1 | 600.4 | 325.6 | 284.9 | 244.2 | 206.9 | 179.8 | 162.8 | 145.9 | 135.7 | 132.3 |
| 62.5° | 2235.3 | 563.1 | 291.7 | 254.4 | 220.5 | 186.6 | 162.8 | 145.9 | 125.5 | 111.9 | 108.5 |
| 65° | 2187.8 | 485.1 | 251.0 | 227.3 | 200.1 | 166.2 | 145.9 | 128.9 | 105.2 | 88.2 | 88.2 |
| 67.5° | 2238.7 | 407.0 | 213.7 | 193.3 | 173.0 | 142.5 | 122.1 | 111.9 | 91.6 | 78.0 | 78.0 |
| 70° | 2255.7 | 318.8 | 179.8 | 166.2 | 149.2 | 118.7 | 105.2 | 98.4 | 81.4 | 67.8 | 64.4 |
| 72.5° | 2130.2 | 237.4 | 145.9 | 139.1 | 122.1 | 91.6 | 88.2 | 81.4 | 67.8 | 54.3 | 54.3 |
| 73° | *2079.3* | *220.5* | *139.1* | *132.3* | *115.3* | *88.2* | *84.8* | *78.0* | *64.4* | *54.3* | *50.9* |
| 75° | 1831.7 | 169.6 | 115.3 | 108.5 | 91.6 | 74.6 | 71.2 | 64.4 | 54.3 | 44.1 | 44.1 |
| 77.5° | 1214.3 | 122.1 | 88.2 | 81.4 | 67.8 | 57.7 | 54.3 | 47.5 | 40.7 | 33.9 | 33.9 |
| 80° | 447.7 | 81.4 | 64.4 | 57.7 | 50.9 | 47.5 | 40.7 | 33.9 | 27.1 | 27.1 | 23.7 |
| 82.5° | 91.6 | 54.3 | 47.5 | 40.7 | 37.3 | 33.9 | 27.1 | 23.7 | 20.4 | 20.4 | 20.4 |
| 85° | 37.3 | 33.9 | 27.1 | 27.1 | 27.1 | 23.7 | 20.4 | 20.4 | 17.0 | 17.0 | 13.6 |
| 87.5° | 23.7 | 20.4 | 20.4 | 17.0 | 17.0 | 13.6 | 13.6 | 13.6 | 13.6 | 13.6 | 13.6 |
| 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: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

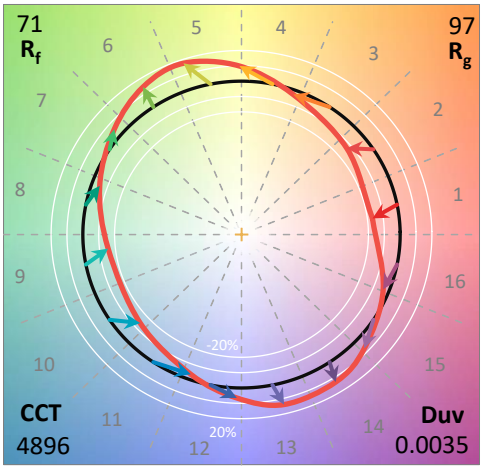
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| 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-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

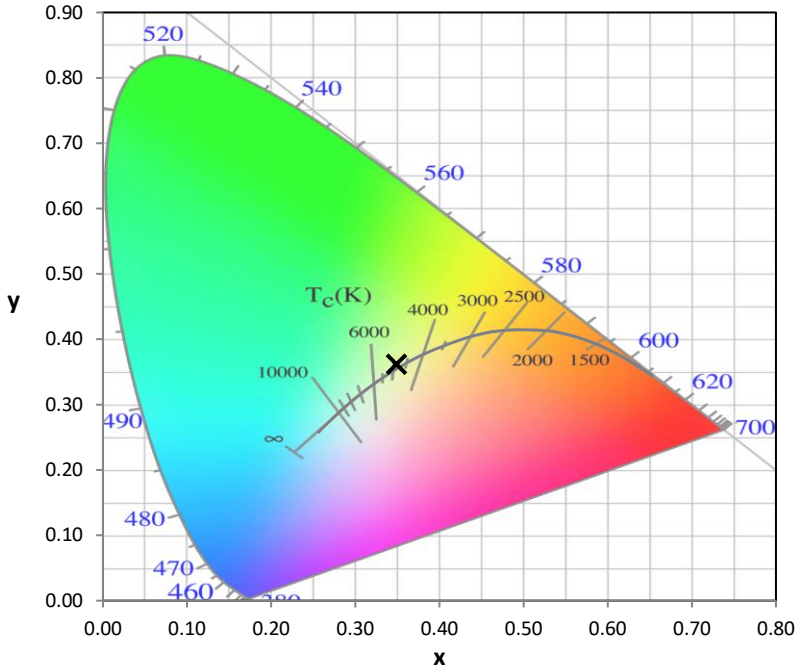
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

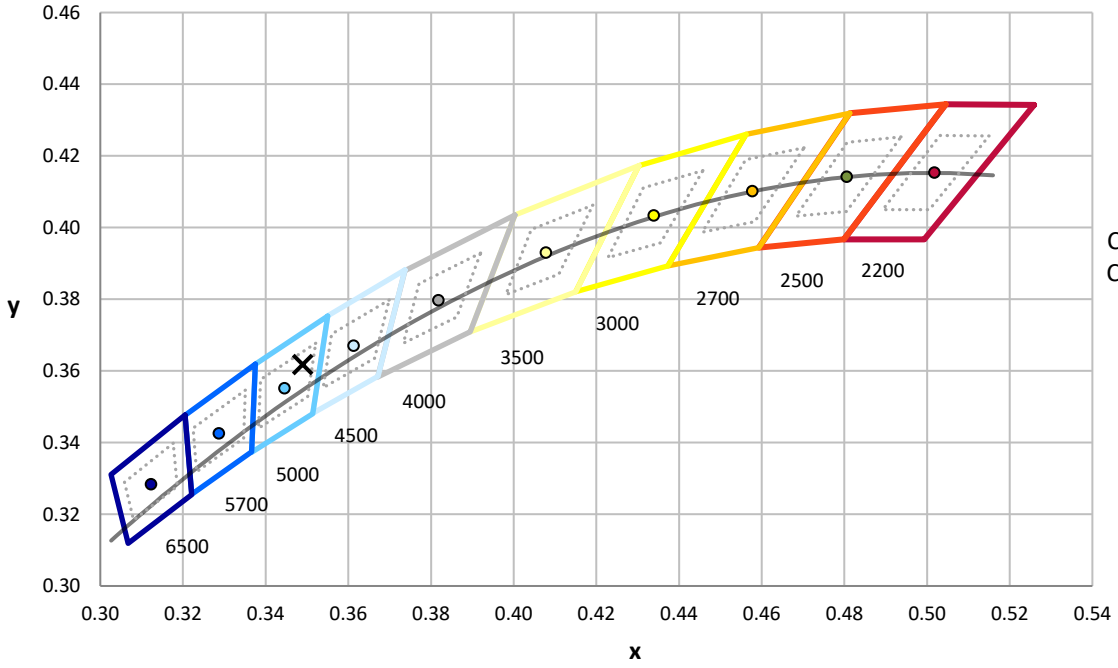
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

## CIE 1931 Chromaticity Diagram




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

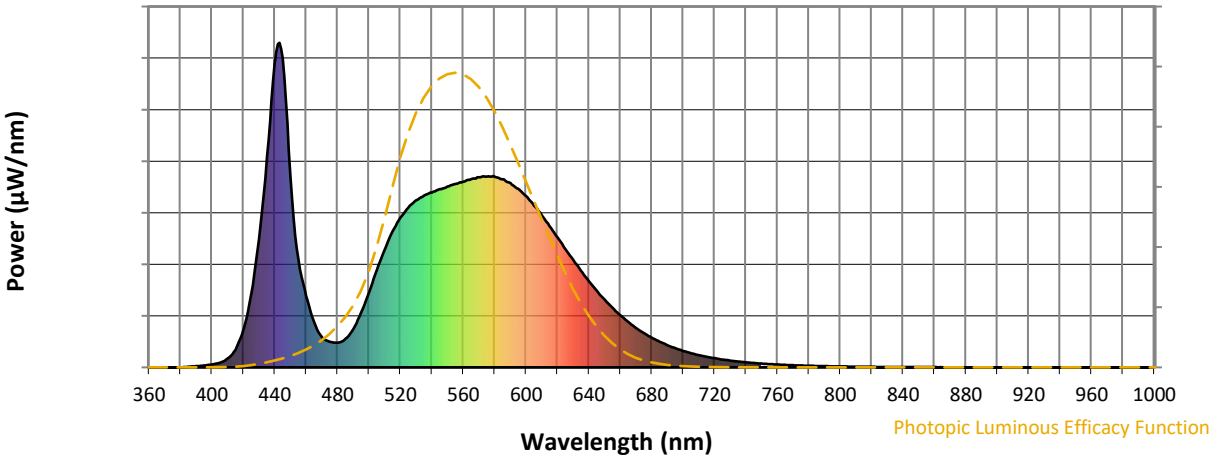



CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-6

## Photopic Flux vs. Wavelength

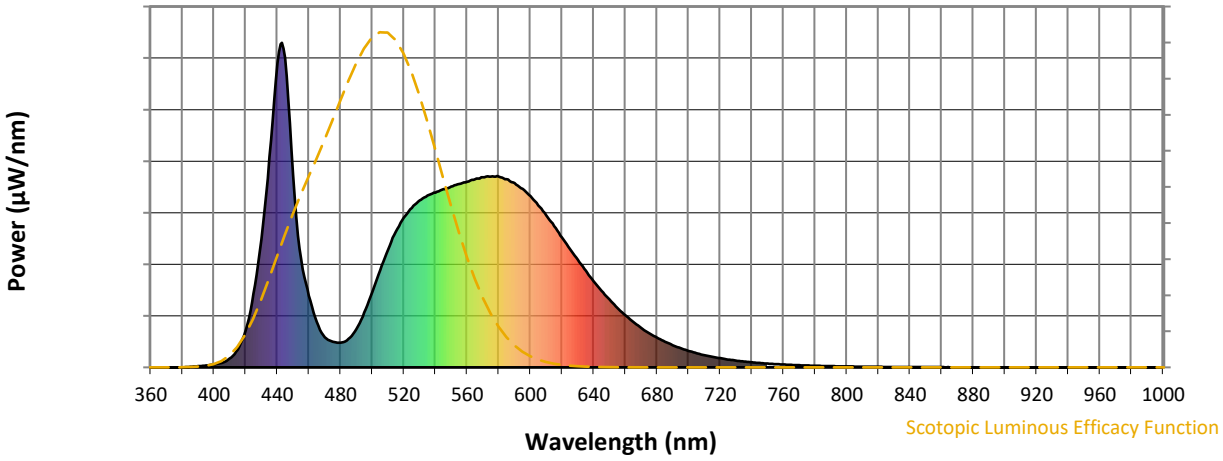



## Photopic Lumens: NR

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Scotopic Flux vs. Wavelength

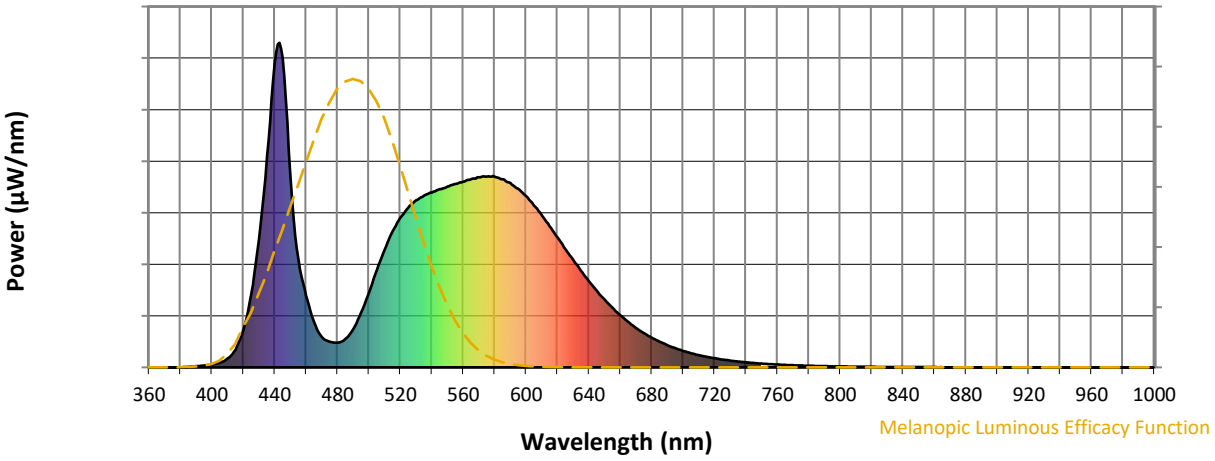



**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2407-184-6

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

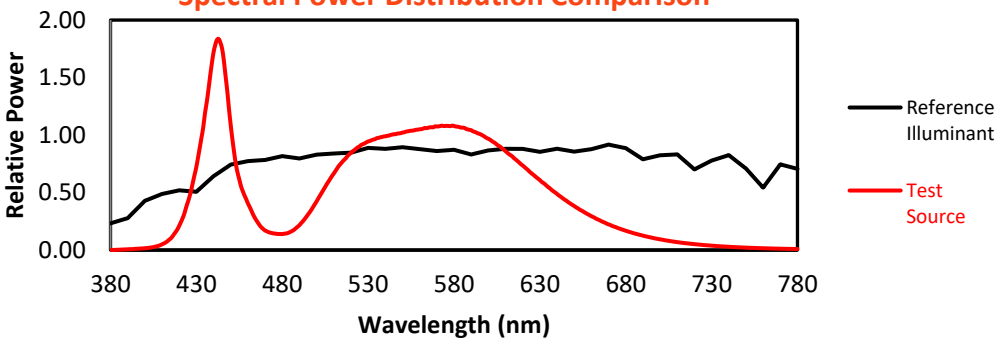
REPORT NUMBER: SP1-2407-184-6

# TM-30-18

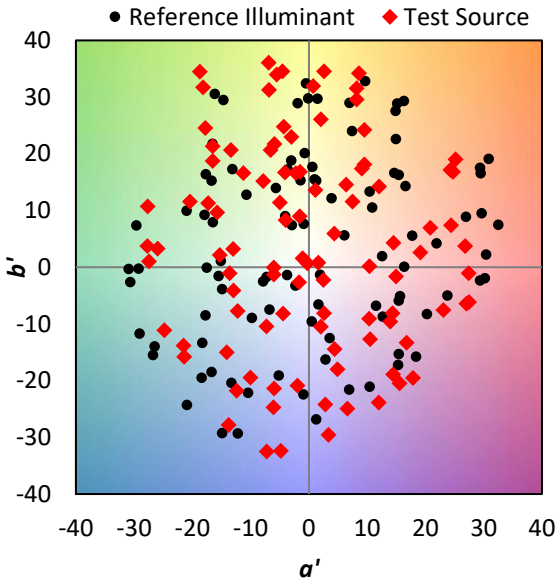
## Summary

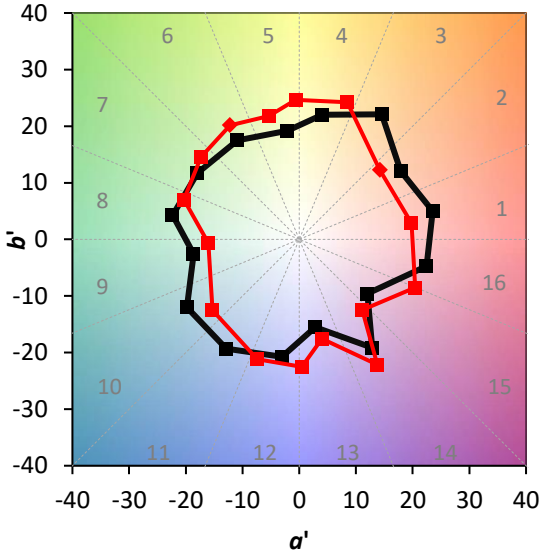
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

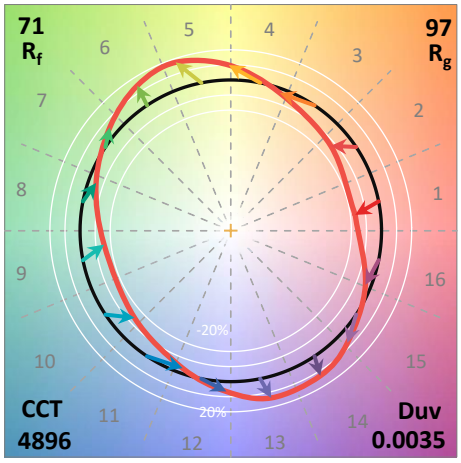
## Spectral Power Distribution Comparison

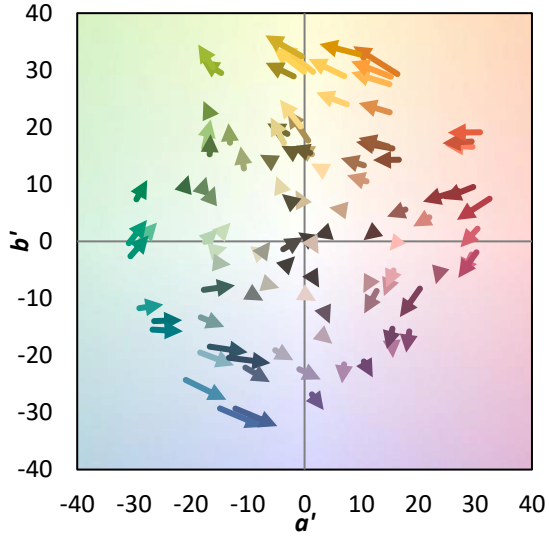



## Color Vector Graphics



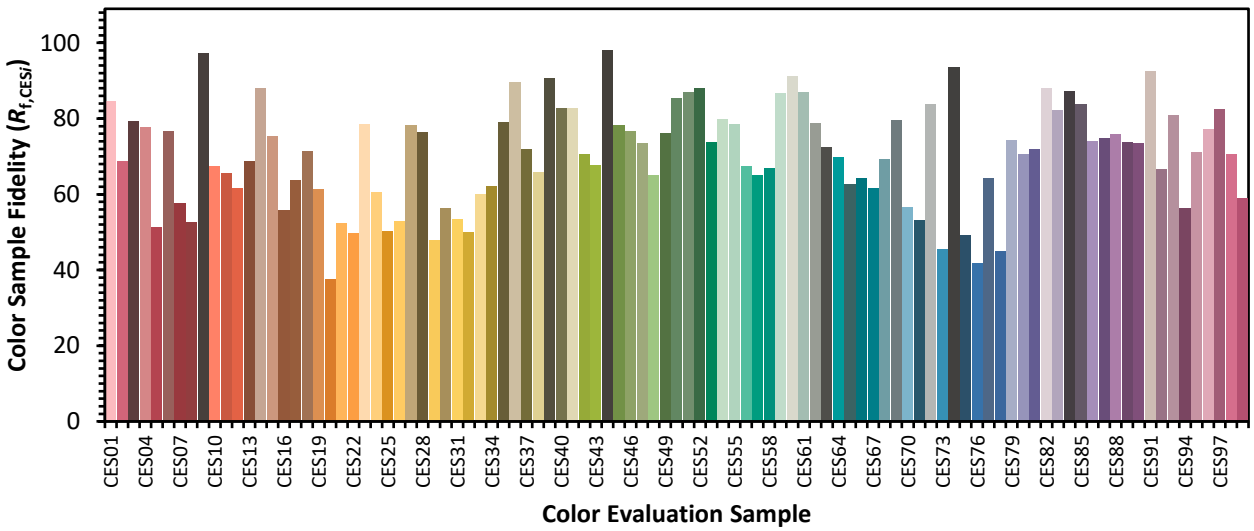



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

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

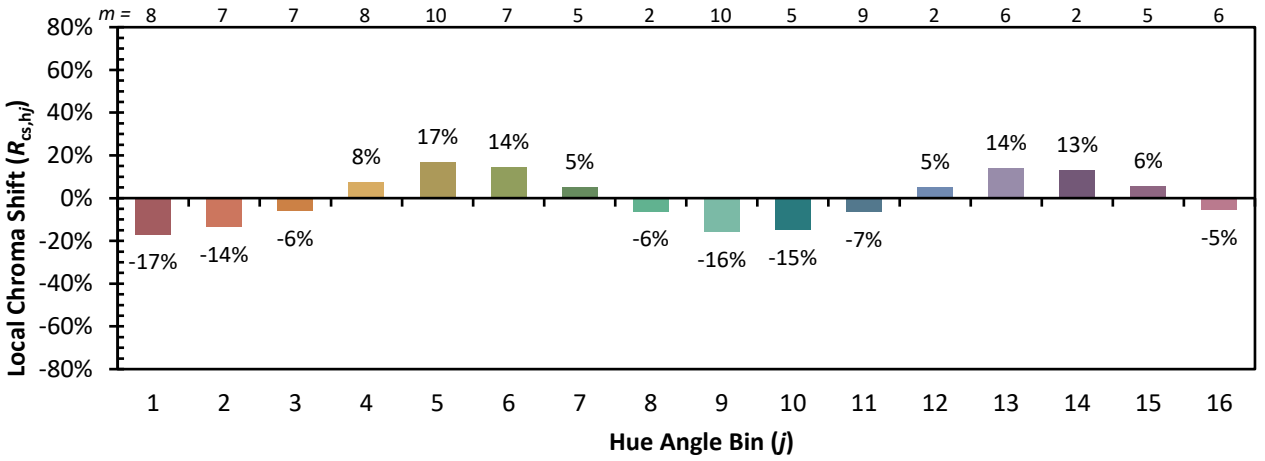
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |

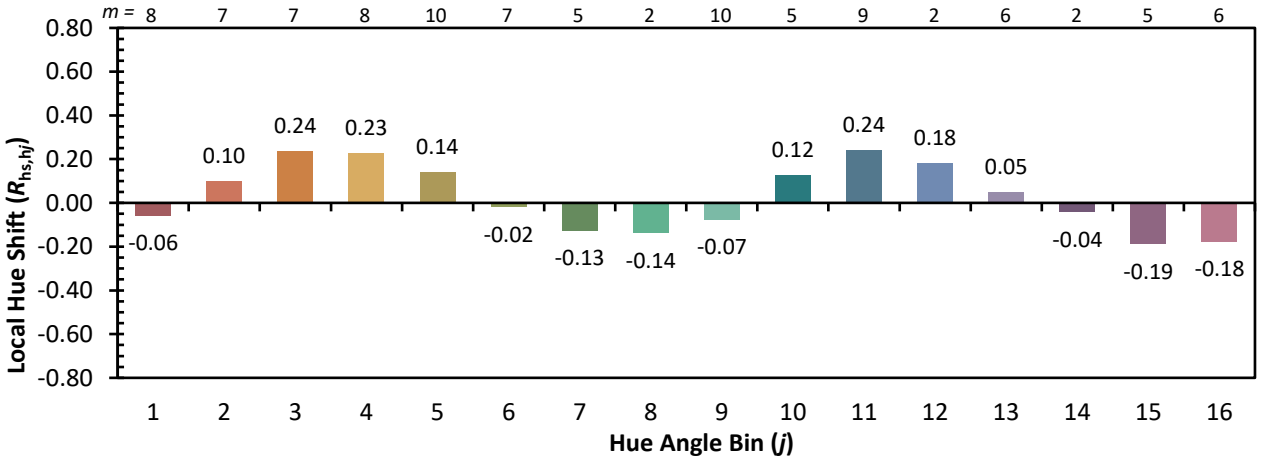


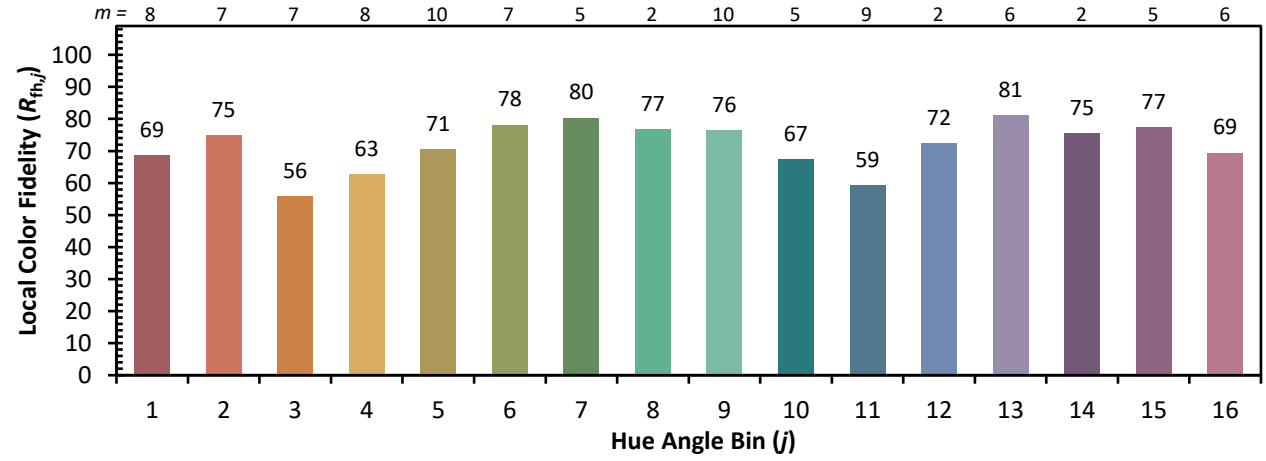
REPORT NUMBER: SP1-2407-184-6

**TM-30-18**

## Color Rendition by Hue-Angle Bin



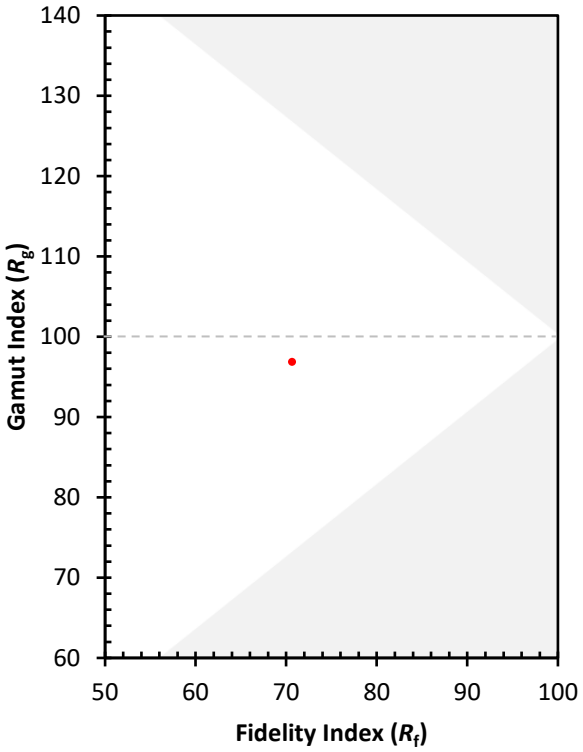



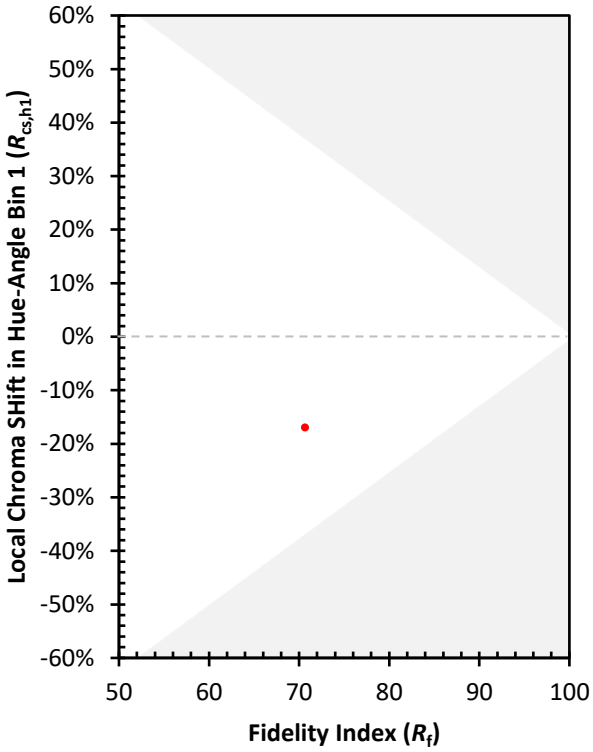



REPORT NUMBER: SP1-2407-184-6

# TM-30-18

## Measure Comparisons




(END OF REPORT)