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: P1366903

Luminaire Tested: **GSS-SB1A-735-U-T3R-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: | P1366903 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1A-735-U-T3R-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 31W 70CRI 3500K FIXTURE w/ TYPE III ROADWAY DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (26) 3500K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3259.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 105.2 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B1 - U0 - G1 |

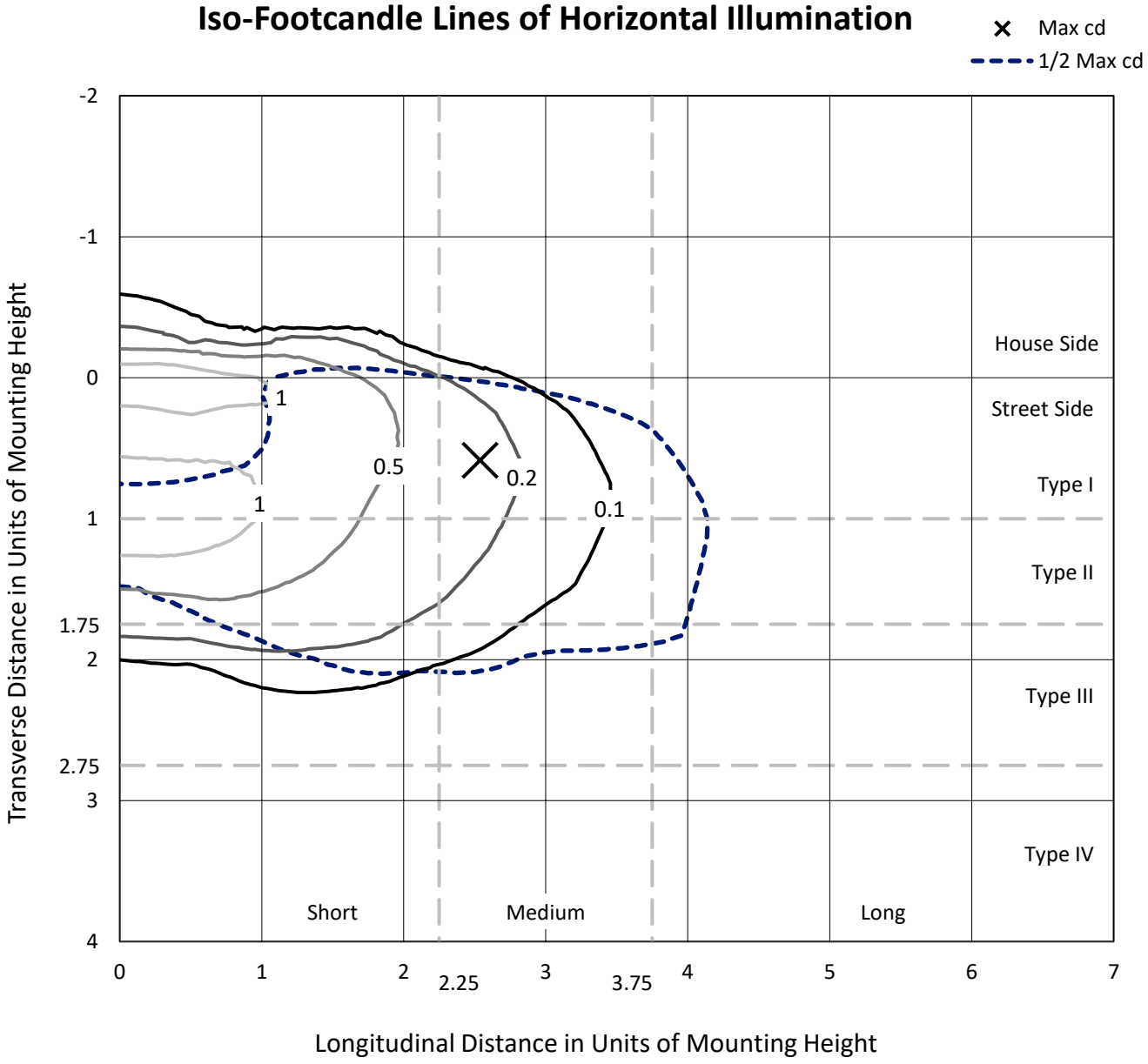
| | |
|---|---|
| Input Watts (W): | 31 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 6.4% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1366903
CATALOG NUMBER: GSS-SB1A-735-U-T3R-HSS

## Iso-Footcandle Lines of Horizontal Illumination



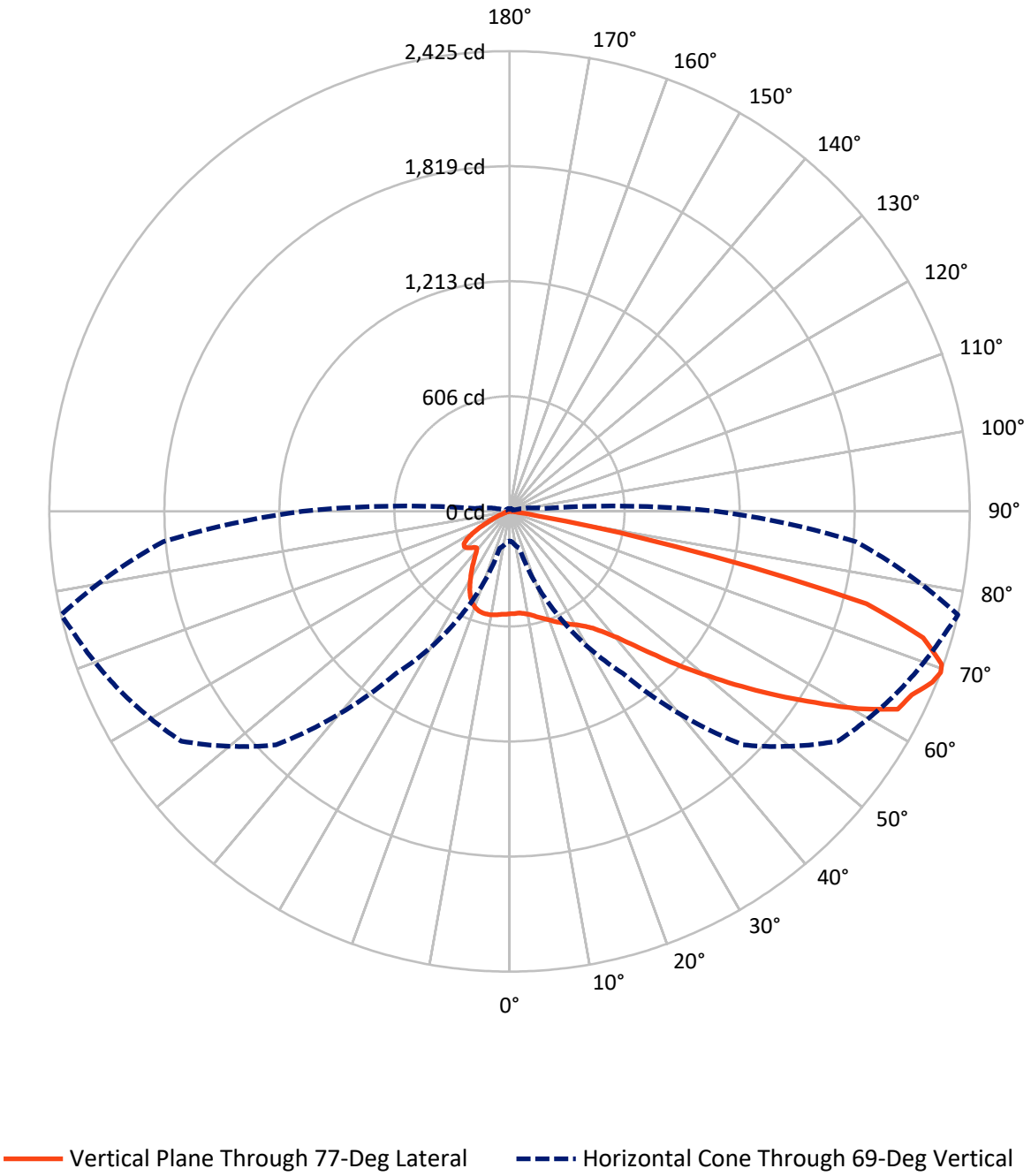

Based on 20 foot mounting height. Maximum calculated value = 1.5 fc
Type III - Medium - N/A

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Scaled Data Report

REPORT NUMBER: P1366903
CATALOG NUMBER: GSS-SB1A-735-U-T3R-HSS

## Luminous Intensity Polar Plot



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Scaled Data Report

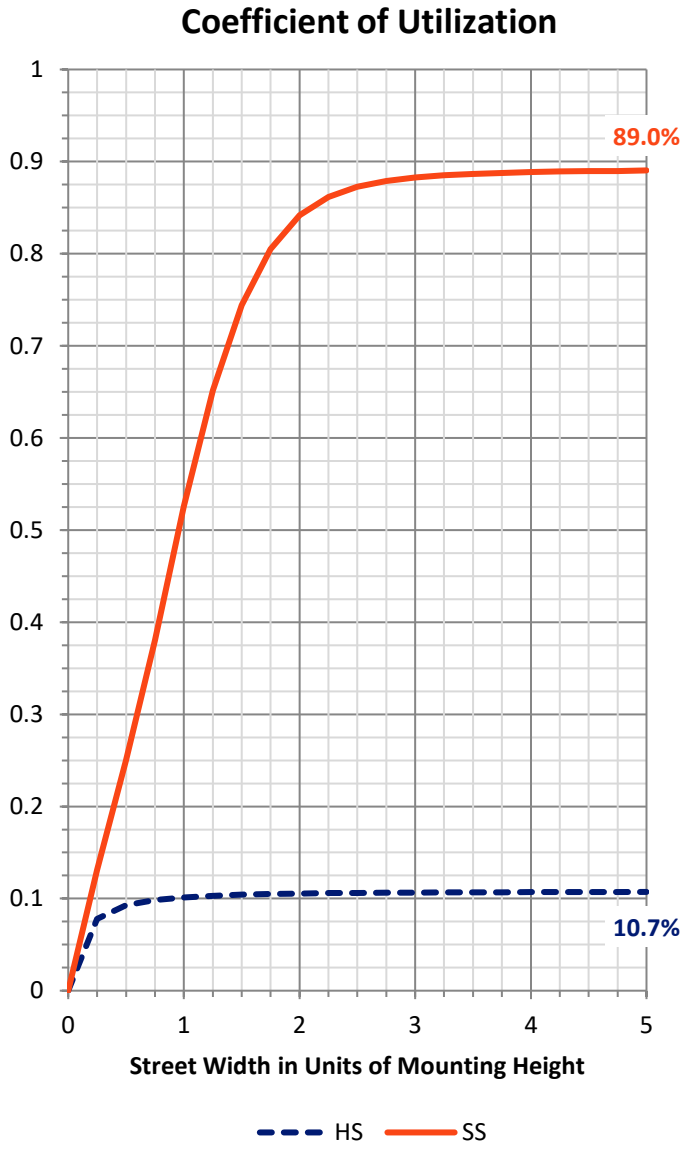
REPORT NUMBER: P1366903
CATALOG NUMBER: GSS-SB1A-735-U-T3R-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 352.3 | 0.0 | 352.3 |
| | % Fixture | 10.8 | 0.0 | 10.8 |
| **Street Side** | Lumens | 2907.4 | 0.0 | 2907.4 |
| | % Fixture | 89.2 | 0.0 | 89.2 |
| **Total** | Lumens | 3259.8 | 0.0 | 3259.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 46.1 | 1.4 |
| 10°-20° | 109.5 | 3.4 |
| 20°-30° | 168.9 | 5.2 |
| 30°-40° | 300.0 | 9.2 |
| 40°-50° | 579.5 | 17.8 |
| 50°-60° | 842.0 | 25.8 |
| 60°-70° | 808.0 | 24.8 |
| 70°-80° | 391.6 | 12.0 |
| 80°-90° | 14.4 | 0.4 |
| 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° | 3259.8 | 100.0 |
| 0°-180° | 3259.8 | 100.0 |



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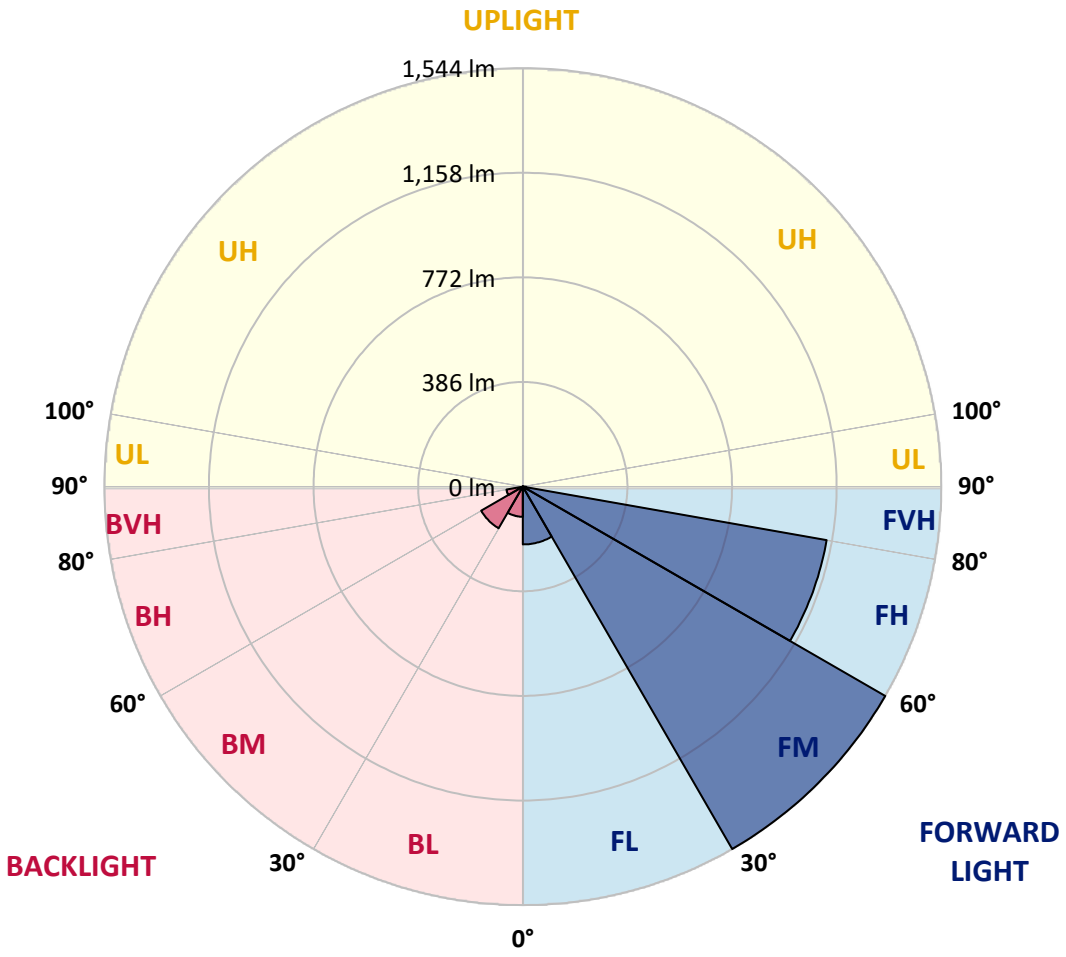
Scaled Data Report

REPORT NUMBER: P1366903
CATALOG NUMBER: GSS-SB1A-735-U-T3R-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 213.3 | 6.5 | | | |
| FM | (30°-60°) | 1544.0 | 47.4 | | | |
| FH | (60°-80°) | 1138.1 | 34.9 | | | G1/1800 |
| FVH | (80°-90°) | 12.1 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 111.2 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 177.5 | 5.4 | B0/220 | | |
| BH | (60°-80°) | 61.4 | 1.9 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.3 | 0.1 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

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



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REPORT NUMBER: P1366903
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | *539.6* | 539.6 |
| 2.5° | 518.8 | 520.7 | 517.9 | 519.8 | 522.6 | 524.5 | 529.2 | 531.1 | 537.7 | *539.6* | 541.5 |
| 5° | 493.3 | 495.2 | 495.2 | 499.0 | 503.7 | 509.4 | 516.9 | 524.5 | 536.8 | *537.7* | 546.2 |
| 7.5° | 463.1 | 462.1 | 465.0 | 472.5 | 482.0 | 496.1 | 509.4 | 522.6 | 540.6 | *543.4* | 558.5 |
| 10° | 424.3 | 424.3 | 430.0 | 440.4 | 455.5 | 479.1 | 501.8 | 521.7 | 545.3 | *551.9* | 571.8 |
| 12.5° | 402.6 | 403.5 | 406.4 | 414.9 | 436.6 | 464.0 | 494.3 | 526.4 | 557.6 | *564.2* | 591.6 |
| 15° | 394.1 | 395.0 | 398.8 | 407.3 | 424.3 | 456.5 | 492.4 | 532.1 | 570.8 | *579.3* | 612.4 |
| 17.5° | 395.0 | 394.1 | 396.9 | 403.5 | 420.5 | 451.7 | 494.3 | 541.5 | 585.0 | *595.4* | 634.1 |
| 20° | 400.7 | 400.7 | 400.7 | 405.4 | 421.5 | 451.7 | 499.9 | 554.7 | 602.9 | *612.4* | 660.6 |
| 22.5° | 411.1 | 409.2 | 410.1 | 412.0 | 427.2 | 457.4 | 508.4 | 568.9 | 620.9 | *632.2* | 685.2 |
| 25° | 418.7 | 417.7 | 417.7 | 421.5 | 435.7 | 463.1 | 516.9 | 590.7 | 640.7 | *651.1* | 710.7 |
| 27.5° | 465.9 | 461.2 | 446.1 | 433.8 | 445.1 | 475.4 | 529.2 | 609.6 | 661.5 | *672.9* | 734.3 |
| 30° | 614.3 | 606.7 | 560.4 | 494.3 | 465.9 | 489.5 | 545.3 | 629.4 | 684.2 | *693.7* | 764.5 |
| 32.5° | 837.3 | 827.9 | 756.0 | 629.4 | 534.9 | 517.9 | 567.0 | 653.0 | 709.7 | *720.1* | 800.5 |
| 35° | 1070.7 | 1058.5 | 987.6 | 843.9 | 681.4 | 581.2 | 600.1 | 683.3 | 744.7 | *756.0* | 851.5 |
| 37.5° | 1242.7 | 1234.2 | 1184.1 | 1065.1 | 869.4 | 701.2 | 654.9 | 726.7 | 793.8 | *806.1* | 921.4 |
| 40° | 1385.4 | 1379.8 | 1364.6 | 1265.4 | 1081.1 | 875.1 | 747.5 | 793.8 | 860.9 | *874.2* | 1006.5 |
| 42.5° | 1510.2 | 1508.3 | 1514.9 | 1470.5 | 1318.3 | 1076.4 | 887.4 | 892.1 | 952.6 | *966.8* | 1114.2 |
| 45° | 1613.2 | 1614.1 | 1640.6 | 1662.3 | 1562.2 | 1296.6 | 1049.0 | 1009.3 | 1063.2 | *1082.1* | 1231.4 |
| 47.5° | 1714.3 | 1706.8 | 1754.9 | 1802.2 | 1766.3 | 1519.6 | 1216.3 | 1141.6 | 1199.3 | *1221.0* | 1361.8 |
| 50° | 1728.5 | 1731.3 | 1814.5 | 1892.9 | 1924.1 | 1730.4 | 1397.7 | 1290.0 | 1343.9 | *1364.6* | 1500.7 |
| 52.5° | 1648.2 | 1665.2 | 1790.9 | 1934.5 | 2016.7 | 1916.6 | 1586.7 | 1448.8 | 1497.0 | *1532.9* | 1643.4 |
| 55° | 1256.0 | 1295.7 | 1707.7 | 1889.1 | 2031.8 | 2042.2 | 1761.6 | 1600.0 | 1668.0 | *1711.5* | 1777.6 |
| 57.5° | 1092.5 | 1103.8 | 1329.7 | 1794.6 | 1980.8 | 2109.3 | 1909.0 | 1751.2 | 1853.2 | *1901.4* | 1913.7 |
| 60° | 938.4 | 944.1 | 1118.0 | 1644.4 | 1892.9 | 2081.9 | 2032.8 | 1927.9 | 2054.5 | *2110.3* | 2030.0 |
| 62.5° | 551.9 | 596.3 | 791.0 | 1325.0 | 1783.3 | 2046.0 | 2127.3 | 2110.3 | 2245.4 | *2295.5* | 2044.1 |
| 65° | 279.7 | 304.3 | 422.4 | 981.9 | 1593.3 | 2026.2 | 2213.3 | 2213.3 | 2281.3 | *2329.5* | 1940.2 |
| 67.5° | 181.4 | 190.9 | 238.2 | 729.6 | 1238.0 | 1951.5 | 2177.4 | 2215.2 | 2350.3 | *2403.3* | 1897.7 |
| 69° | *155.9* | *162.5* | *202.2* | *604.8* | *1042.4* | *1739.8* | *2111.2* | *2255.8* | *2392.9* | *2425.0* | *1830.6* |
| 70° | 139.9 | 145.5 | 184.3 | 527.3 | 905.4 | 1467.7 | 2073.4 | 2268.1 | 2386.2 | *2415.5* | 1762.5 |
| 72.5° | 97.3 | 98.3 | 137.0 | 311.9 | 573.6 | 932.8 | 1682.2 | 2168.9 | 2279.4 | *2279.4* | 1552.7 |
| 75° | 40.6 | 48.2 | 77.5 | 137.0 | 239.1 | 516.9 | 814.6 | 1849.5 | 1978.0 | *1944.0* | 1196.4 |
| 77.5° | 32.1 | 37.8 | 67.1 | 75.6 | 86.9 | 213.6 | 289.2 | 1082.1 | 943.2 | *890.2* | 391.2 |
| 80° | 23.6 | 27.4 | 56.7 | 51.0 | 32.1 | 62.4 | 71.8 | 246.7 | 176.7 | *155.0* | 59.5 |
| 82.5° | 10.4 | 13.2 | 43.5 | 32.1 | 18.0 | 19.8 | 26.5 | 52.0 | 51.0 | *45.4* | 24.6 |
| 85° | 5.7 | 8.5 | 18.9 | 11.3 | 7.6 | 7.6 | 10.4 | 16.1 | 14.2 | *14.2* | 10.4 |
| 87.5° | 0.0 | 0.0 | 0.9 | 0.9 | 1.9 | 2.8 | 3.8 | 5.7 | 6.6 | *6.6* | 6.6 |
| 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: P1366903
CATALOG NUMBER: GSS-SB1A-735-U-T3R-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 | 539.6 |
| 2.5° | 541.5 | 542.5 | 542.5 | 539.6 | 536.8 | 533.0 | 526.4 | 522.6 | 520.7 | 518.8 | 517.9 |
| 5° | 546.2 | 548.1 | 543.4 | 531.1 | 516.0 | 495.2 | 476.3 | 461.2 | 448.0 | 445.1 | 442.3 |
| 7.5° | 558.5 | 560.4 | 546.2 | 515.0 | 476.3 | 441.3 | 403.5 | 377.1 | 355.3 | 350.6 | 351.6 |
| 10° | 574.6 | 576.5 | 547.2 | 493.3 | 434.7 | 375.2 | 323.2 | 277.8 | 248.5 | 241.9 | 233.4 |
| 12.5° | 597.3 | 595.4 | 544.3 | 465.9 | 381.8 | 297.7 | 227.8 | 178.6 | 154.0 | 138.9 | 141.8 |
| 15° | 619.0 | 614.3 | 538.7 | 431.9 | 314.7 | 212.6 | 143.6 | 116.2 | 107.7 | 106.8 | 106.8 |
| 17.5° | 645.5 | 634.1 | 528.3 | 387.5 | 238.2 | 142.7 | 108.7 | 103.0 | 101.1 | 102.1 | 101.1 |
| 20° | 670.0 | 649.2 | 511.3 | 331.7 | 171.1 | 109.6 | 101.1 | 98.3 | 97.3 | 96.4 | 96.4 |
| 22.5° | 696.5 | 661.5 | 485.8 | 267.4 | 122.9 | 100.2 | 96.4 | 93.6 | 90.7 | 89.8 | 89.8 |
| 25° | 722.0 | 670.0 | 451.7 | 203.2 | 101.1 | 94.5 | 89.8 | 86.0 | 83.2 | 81.3 | 81.3 |
| 27.5° | 743.8 | 672.9 | 409.2 | 148.4 | 92.6 | 88.8 | 82.2 | 77.5 | 73.7 | 72.8 | 72.8 |
| 30° | 769.3 | 671.9 | 357.2 | 111.5 | 86.9 | 81.3 | 73.7 | 67.1 | 64.3 | 65.2 | 65.2 |
| 32.5° | 795.7 | 675.7 | 305.2 | 93.6 | 81.3 | 72.8 | 62.4 | 56.7 | 54.8 | 54.8 | 55.8 |
| 35° | 829.7 | 681.4 | 256.1 | 87.9 | 75.6 | 62.4 | 52.9 | 46.3 | 45.4 | 47.3 | 47.3 |
| 37.5° | 874.2 | 688.0 | 208.9 | 86.9 | 70.9 | 53.9 | 43.5 | 39.7 | 38.7 | 39.7 | 39.7 |
| 40° | 936.5 | 708.8 | 164.4 | 86.9 | 67.1 | 48.2 | 36.9 | 35.0 | 35.0 | 35.0 | 35.0 |
| 42.5° | 1025.4 | 756.0 | 134.2 | 86.0 | 65.2 | 44.4 | 33.1 | 31.2 | 31.2 | 32.1 | 32.1 |
| 45° | 1120.8 | 827.9 | 124.7 | 83.2 | 63.3 | 44.4 | 31.2 | 29.3 | 30.2 | 30.2 | 30.2 |
| 47.5° | 1212.5 | 900.6 | 127.6 | 78.4 | 61.4 | 45.4 | 30.2 | 28.4 | 28.4 | 28.4 | 28.4 |
| 50° | 1293.8 | 951.7 | 132.3 | 71.8 | 57.6 | 44.4 | 30.2 | 26.5 | 27.4 | 27.4 | 27.4 |
| 52.5° | 1378.8 | 973.4 | 134.2 | 62.4 | 52.0 | 42.5 | 30.2 | 25.5 | 25.5 | 26.5 | 26.5 |
| 55° | 1450.6 | 966.8 | 126.6 | 52.9 | 45.4 | 39.7 | 28.4 | 24.6 | 24.6 | 24.6 | 24.6 |
| 57.5° | 1511.1 | 918.6 | 103.0 | 44.4 | 38.7 | 33.1 | 26.5 | 23.6 | 23.6 | 23.6 | 23.6 |
| 60° | 1532.9 | 797.6 | 75.6 | 37.8 | 31.2 | 27.4 | 24.6 | 22.7 | 21.7 | 21.7 | 20.8 |
| 62.5° | 1449.7 | 615.2 | 52.0 | 32.1 | 26.5 | 23.6 | 21.7 | 20.8 | 19.8 | 18.0 | 17.0 |
| 65° | 1292.8 | 423.4 | 37.8 | 26.5 | 22.7 | 19.8 | 19.8 | 18.9 | 16.1 | 14.2 | 13.2 |
| 67.5° | 1173.7 | 259.9 | 30.2 | 21.7 | 18.9 | 17.0 | 17.0 | 17.0 | 15.1 | 12.3 | 12.3 |
| 69° | *1091.5* | *180.5* | *27.4* | *19.8* | *17.0* | *15.1* | *15.1* | *16.1* | *14.2* | *11.3* | *11.3* |
| 70° | 1020.6 | 141.8 | 25.5 | 18.0 | 15.1 | 14.2 | 14.2 | 15.1 | 13.2 | 10.4 | 10.4 |
| 72.5° | 851.5 | 69.9 | 21.7 | 15.1 | 12.3 | 11.3 | 12.3 | 12.3 | 11.3 | 8.5 | 8.5 |
| 75° | 620.9 | 41.6 | 18.0 | 12.3 | 9.5 | 8.5 | 10.4 | 10.4 | 8.5 | 6.6 | 6.6 |
| 77.5° | 201.3 | 24.6 | 14.2 | 10.4 | 8.5 | 7.6 | 8.5 | 7.6 | 6.6 | 4.7 | 4.7 |
| 80° | 42.5 | 15.1 | 10.4 | 7.6 | 6.6 | 5.7 | 5.7 | 4.7 | 4.7 | 3.8 | 3.8 |
| 82.5° | 18.9 | 11.3 | 7.6 | 6.6 | 4.7 | 4.7 | 3.8 | 3.8 | 2.8 | 2.8 | 2.8 |
| 85° | 9.5 | 7.6 | 5.7 | 4.7 | 3.8 | 3.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 87.5° | 6.6 | 5.7 | 4.7 | 2.8 | 2.8 | 2.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| 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
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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

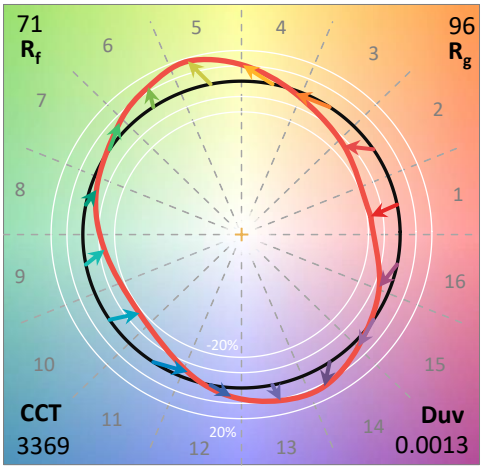
## Test Information

| | |
|---|---|
| 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

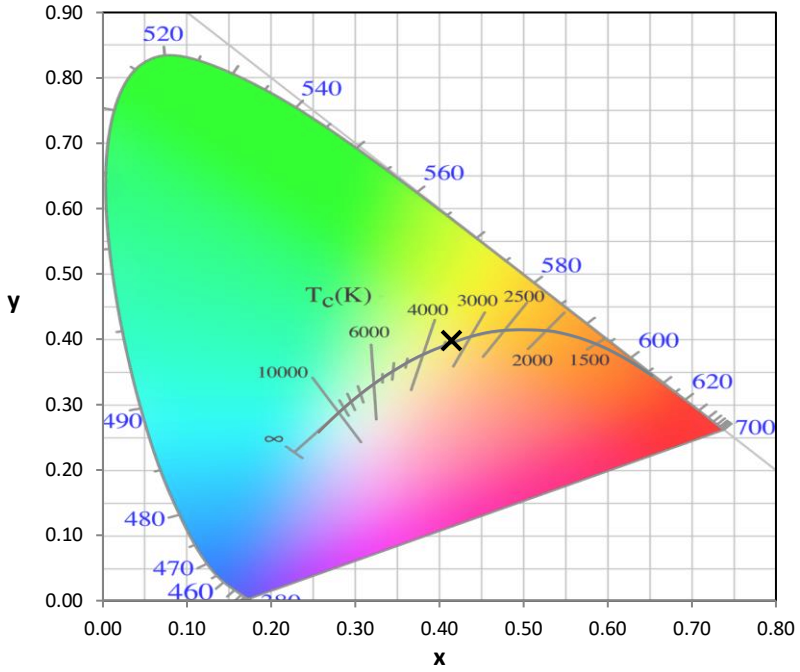
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-5

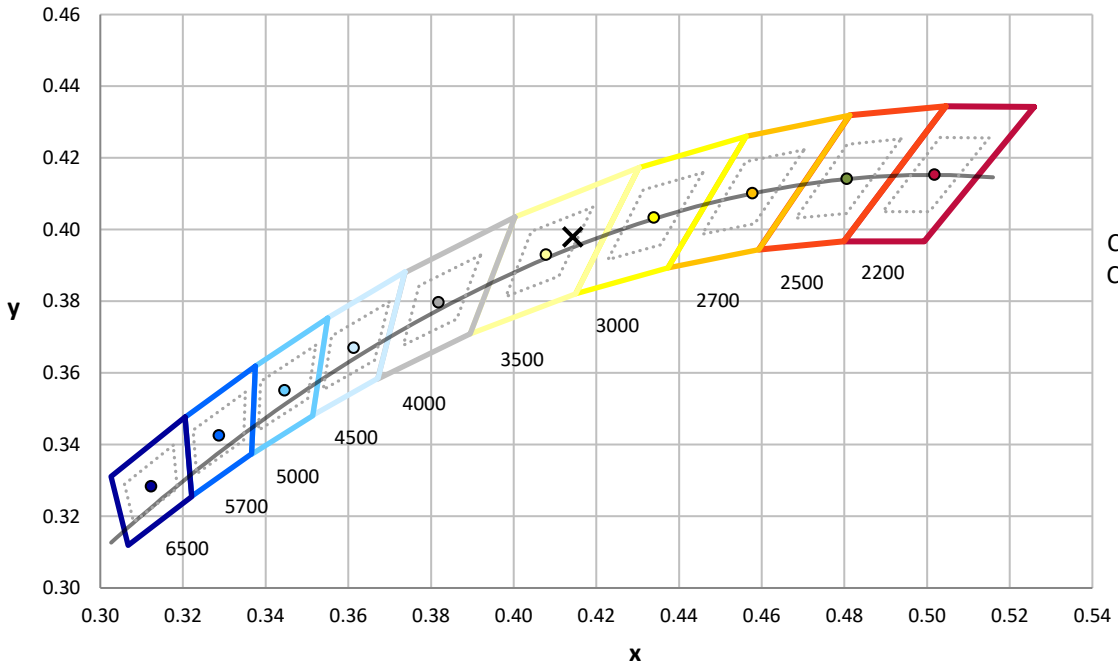
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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**CIE 1931 Chromaticity Diagram**




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

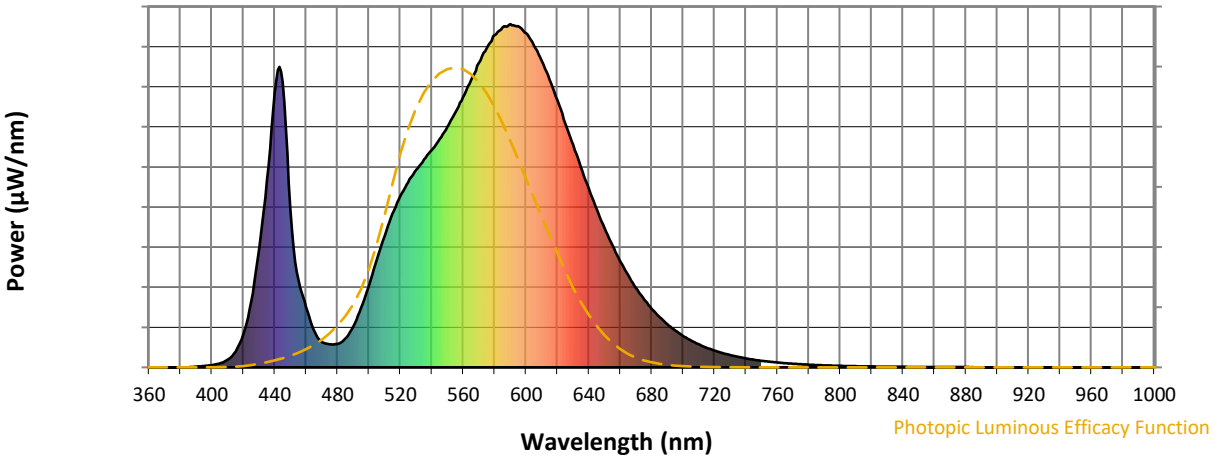



CCT = 3369K
CIE x = 0.4143
CIE y = 0.3980
Duv = 0.0013

Point lies inside the ANSI 3500K 4-step quadrangle

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## Photopic Flux vs. Wavelength

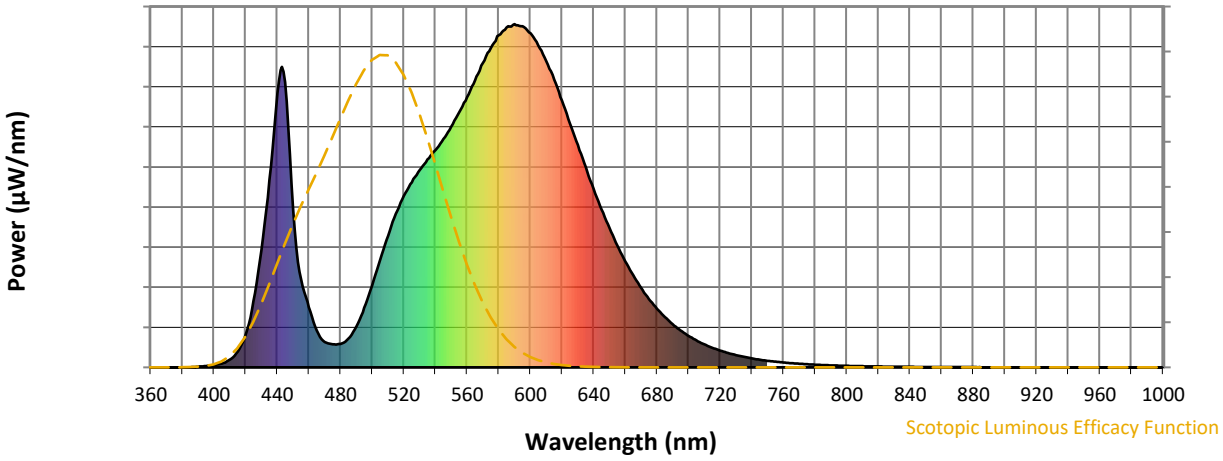



## Photopic Lumens: NR

| 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 | 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 | | | |

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## Scotopic Flux vs. Wavelength

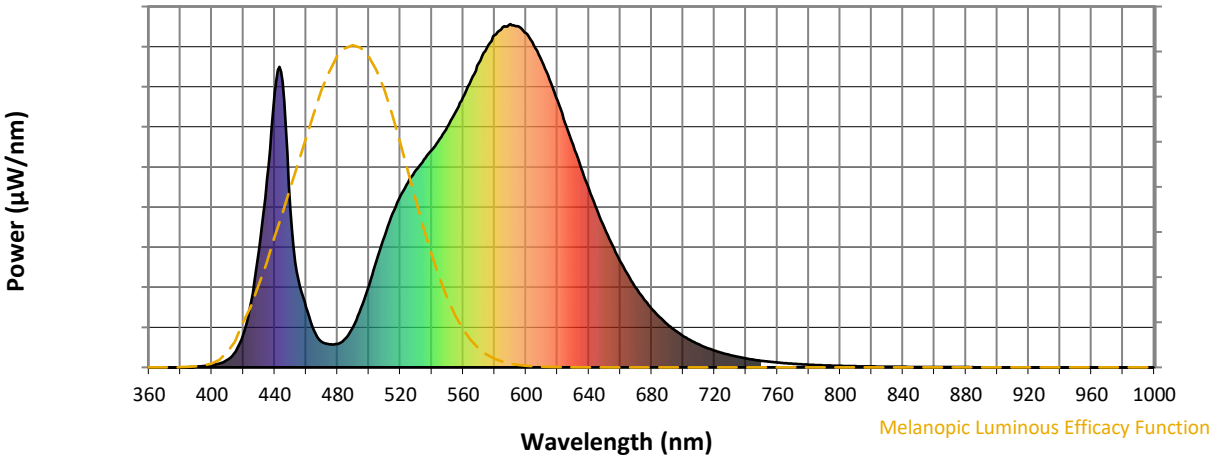



**Scotopic Lumens: NR** **S/P: 1.29**

| 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 | | | |

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## 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 | | | |

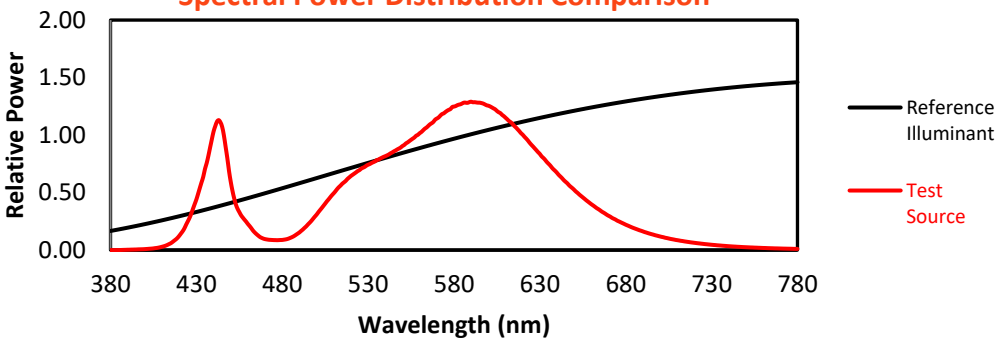
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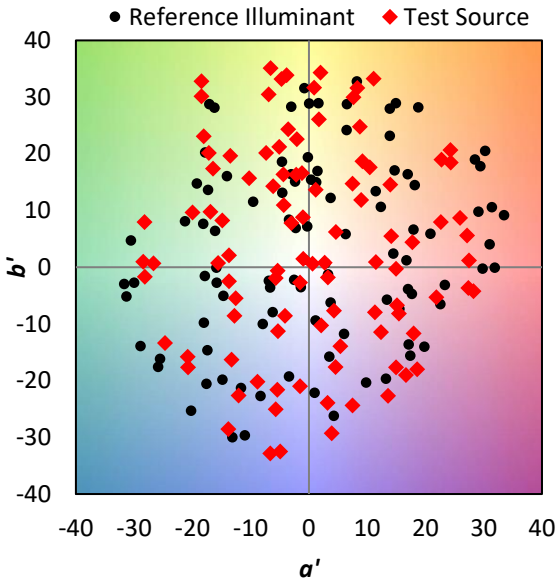
## Summary

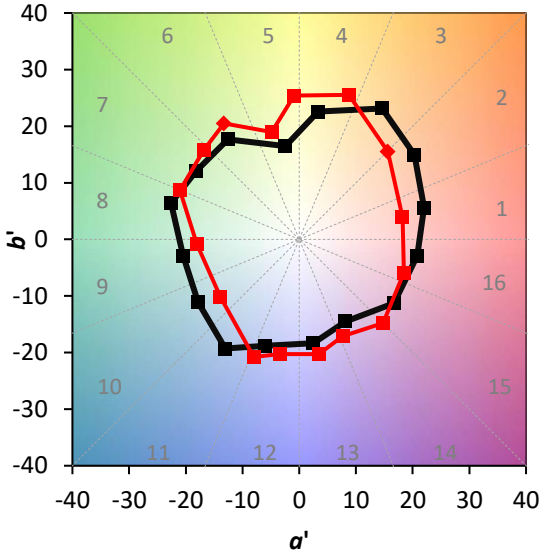
$R_f$ = 71.4
$R_g$ = 96
CIE $R_a$ = 70.1
$R_9$ = -40.2

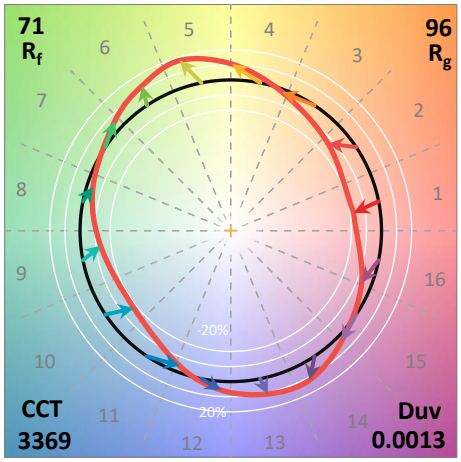
## Spectral Power Distribution Comparison

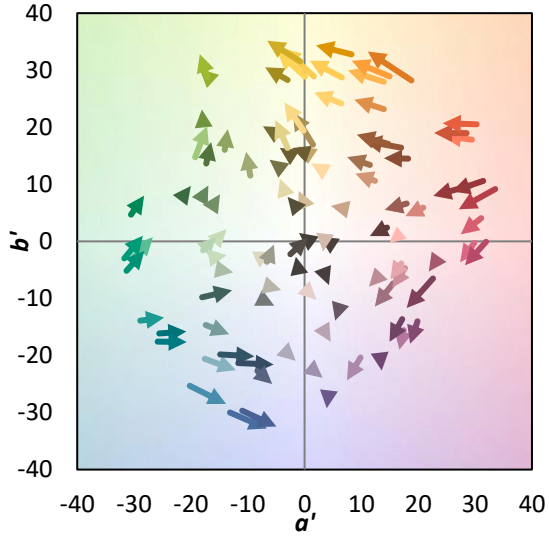



## Color Vector Graphics



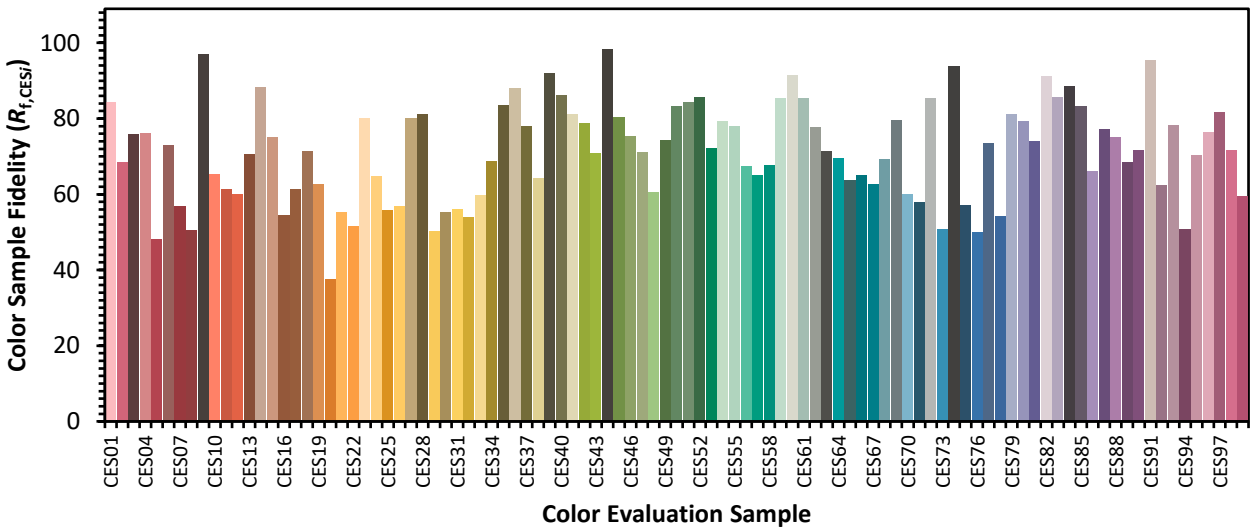



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## Individual Sample Fidelity Index ($R_{f,i}$)

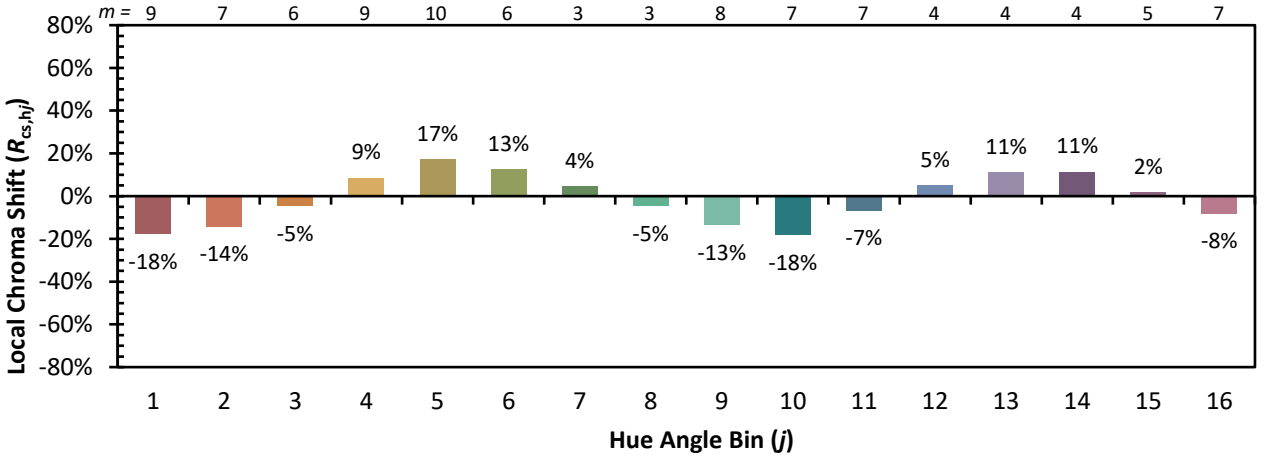
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 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 | |

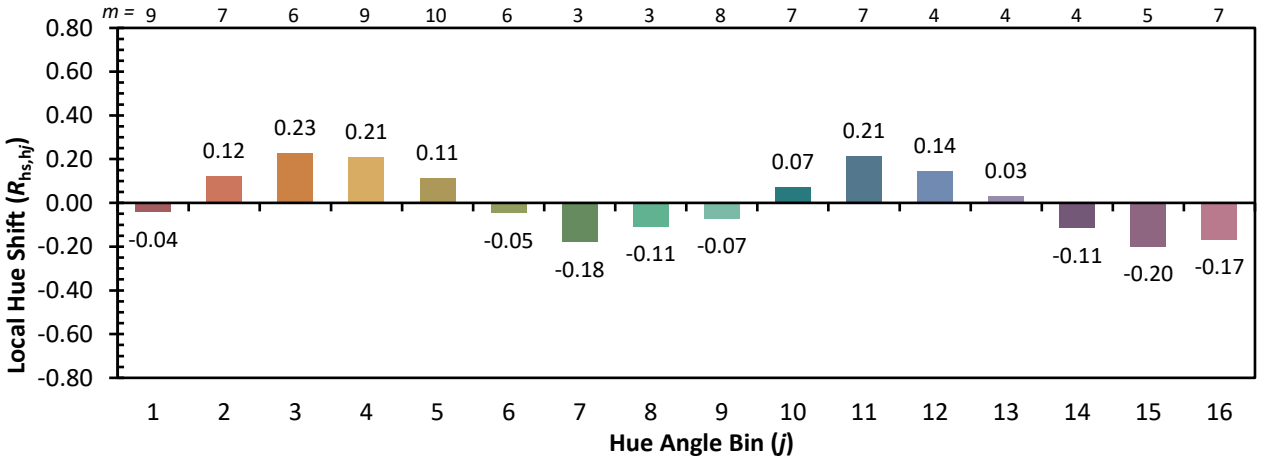


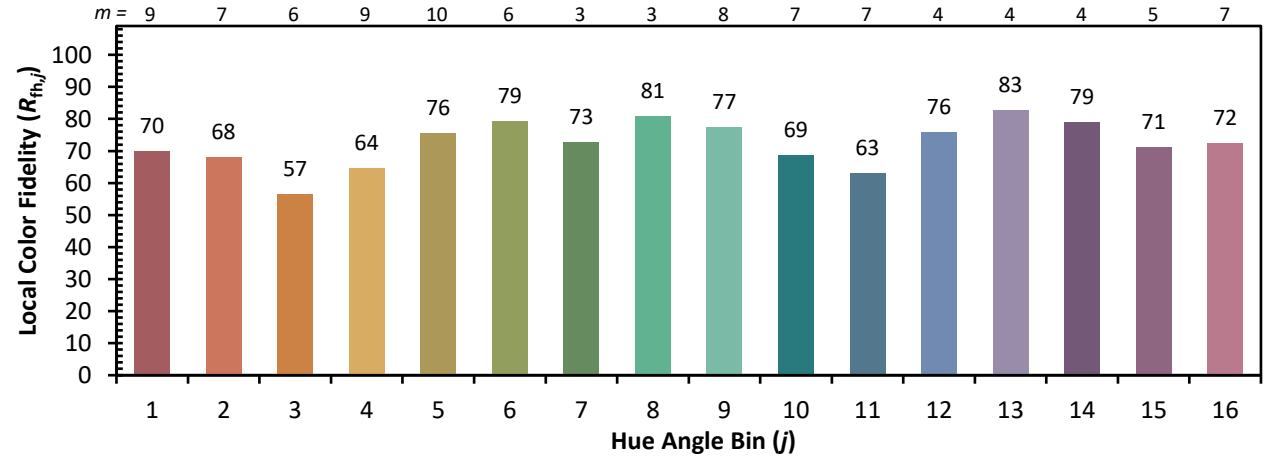
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## Color Rendition by Hue-Angle Bin



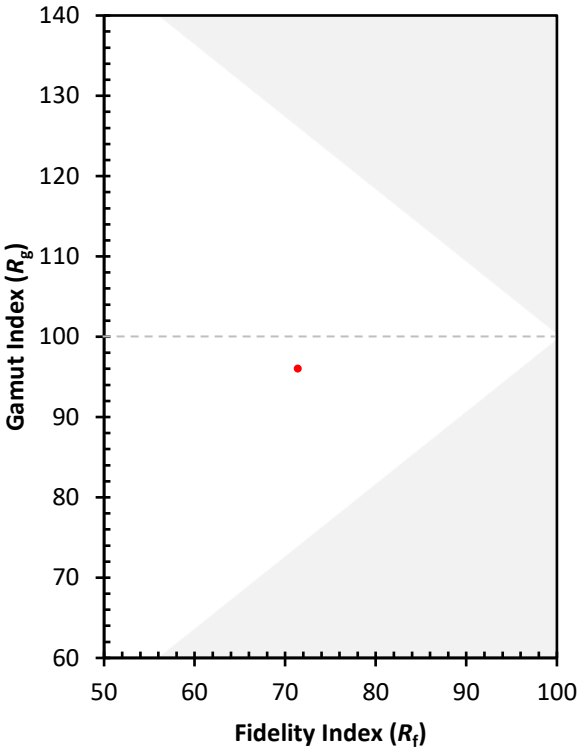



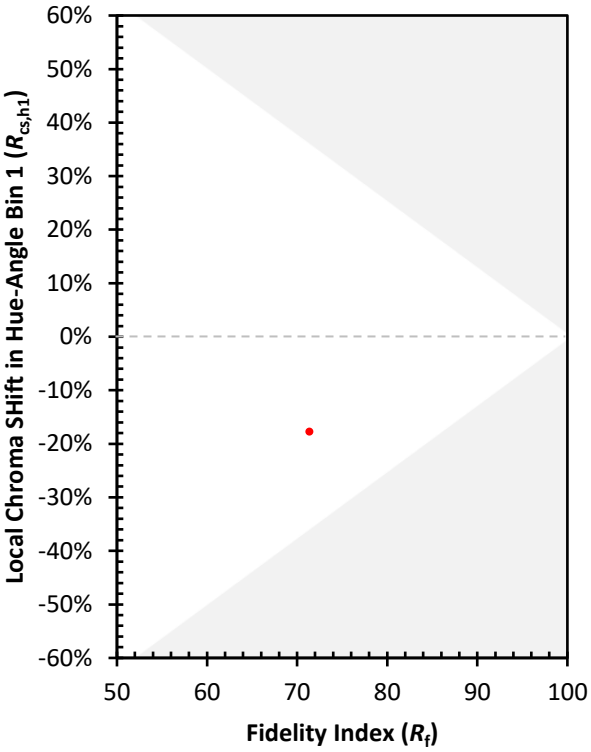



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## Measure Comparisons




(END OF REPORT)