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: P1366832

Luminaire Tested: **GSS-SB1B-722-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: | P1366832 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB1B-722-U-T3R-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 1SQUARE 40W 70CRI 2200K FIXTURE w/ TYPE III ROADWAY DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (26) 2200K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3393.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 84.8 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 |

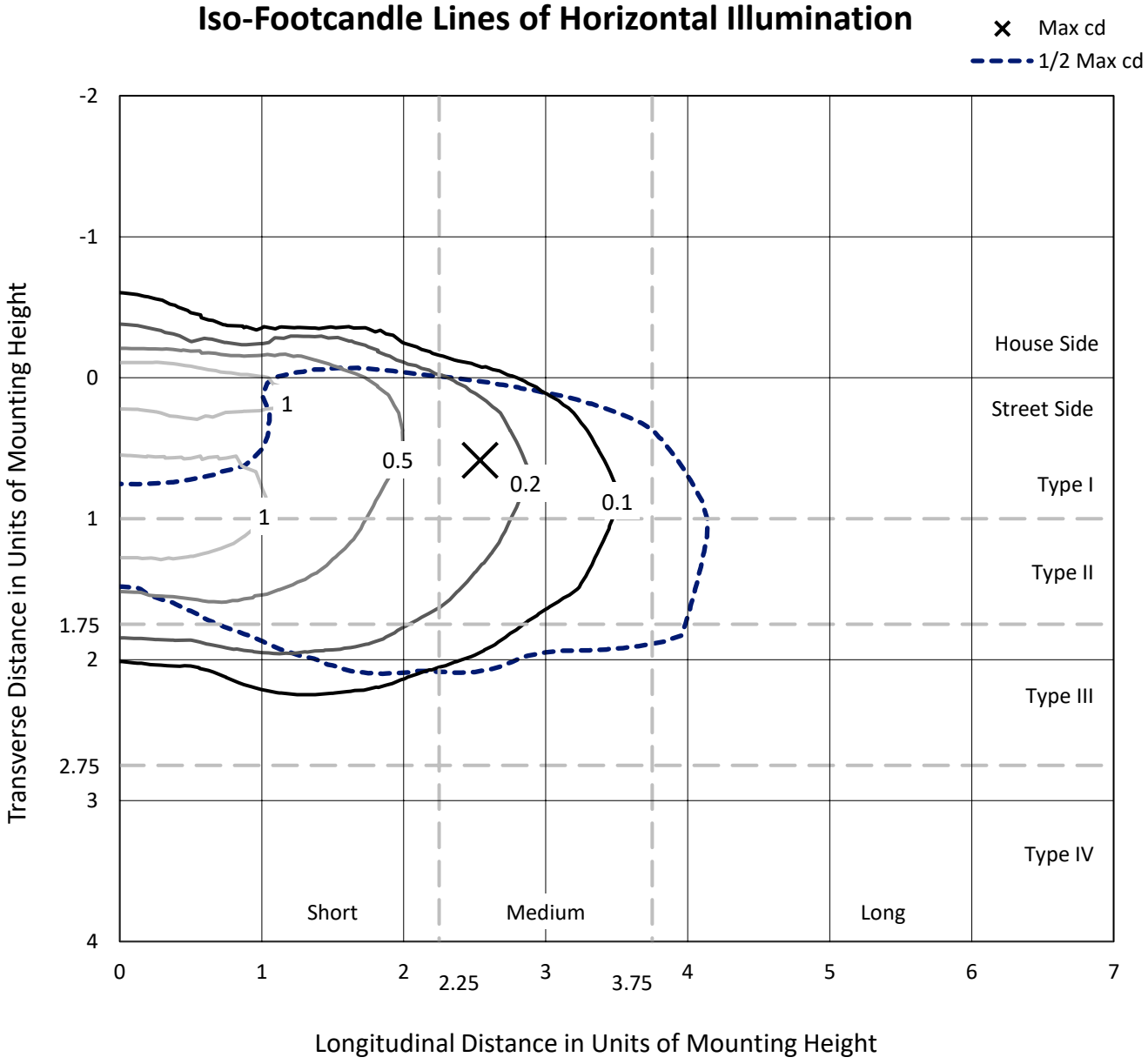
| | |
|---|---|
| Input Watts (W): | 40 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 5.3% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1366832
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## Iso-Footcandle Lines of Horizontal Illumination



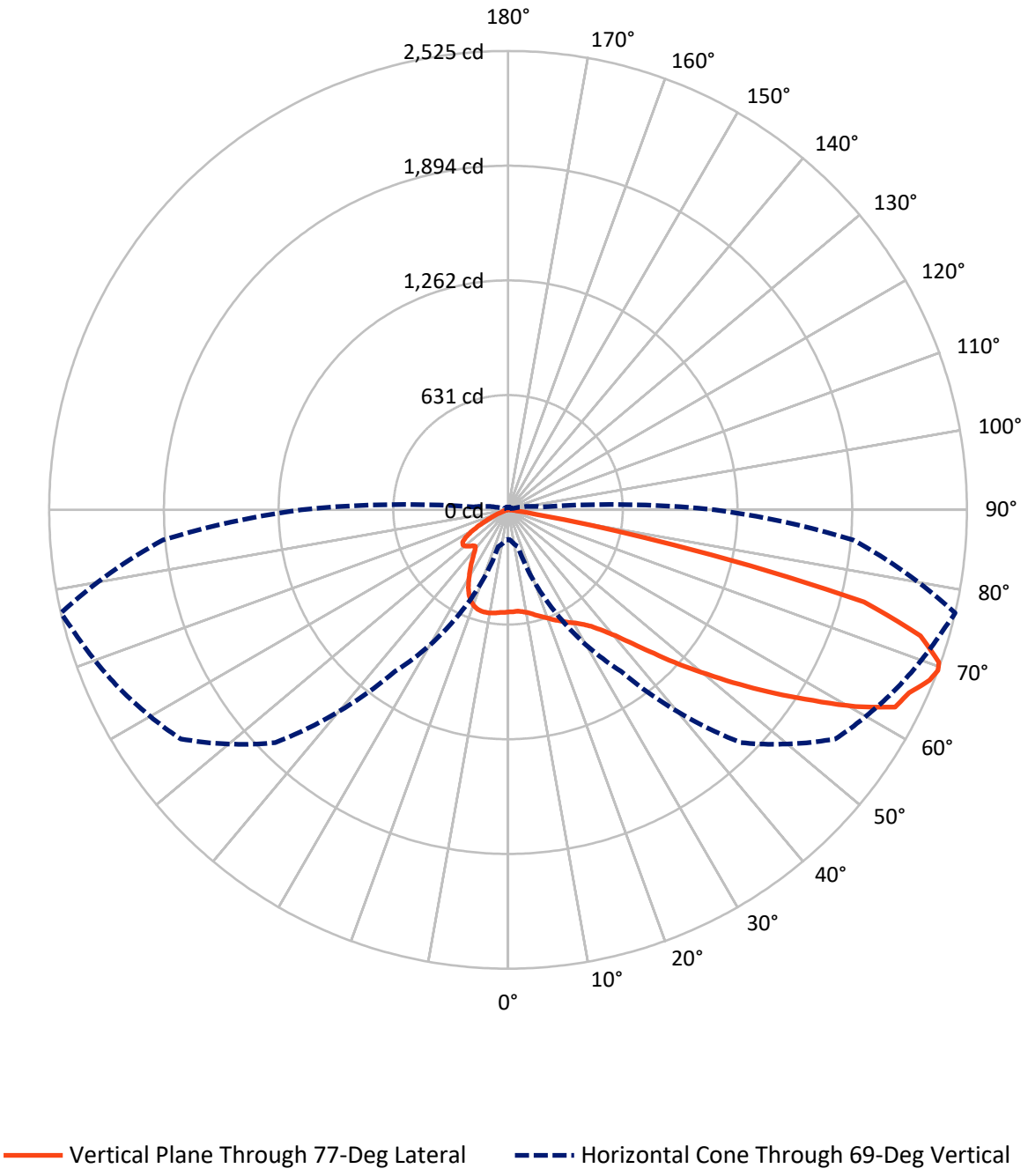

Based on 20 foot mounting height. Maximum calculated value = 1.6 fc
Type III - Medium - N/A

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Scaled Data Report

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CATALOG NUMBER: GSS-SB1B-722-U-T3R-HSS

## Luminous Intensity Polar Plot



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Scaled Data Report

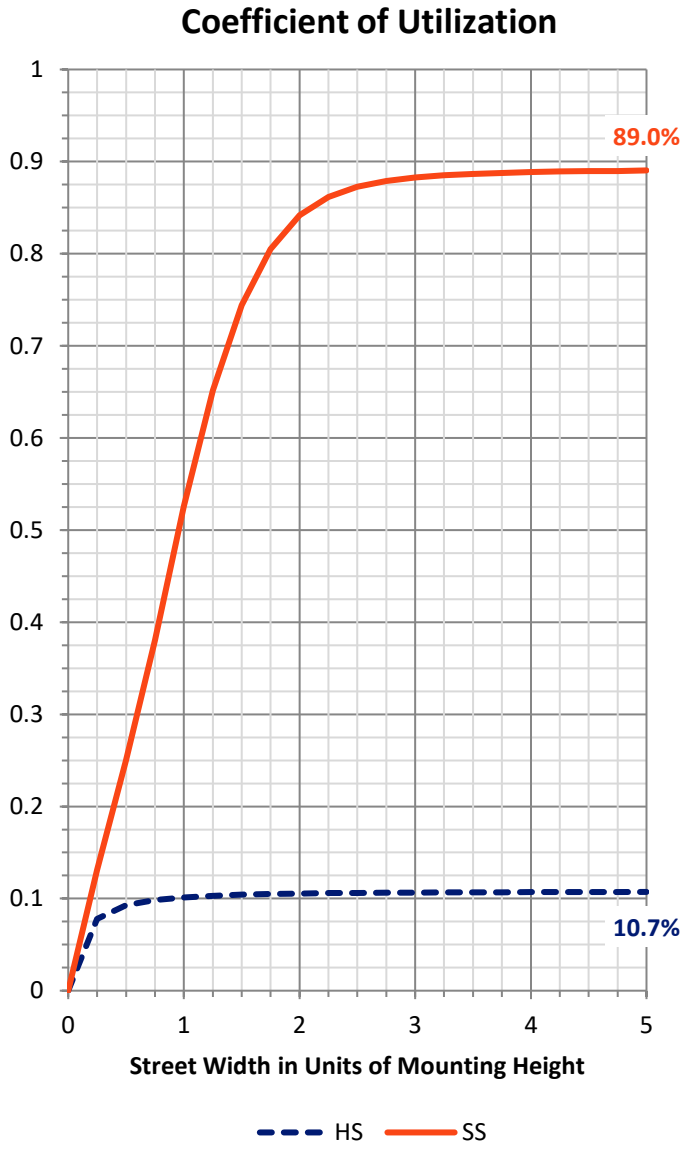
REPORT NUMBER: P1366832
CATALOG NUMBER: GSS-SB1B-722-U-T3R-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 366.8 | 0.0 | 366.8 |
| | % Fixture | 10.8 | 0.0 | 10.8 |
| **Street Side** | Lumens | 3027.1 | 0.0 | 3027.1 |
| | % Fixture | 89.2 | 0.0 | 89.2 |
| **Total** | Lumens | 3393.9 | 0.0 | 3393.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 48.0 | 1.4 |
| 10°-20° | 114.0 | 3.4 |
| 20°-30° | 175.8 | 5.2 |
| 30°-40° | 312.3 | 9.2 |
| 40°-50° | 603.3 | 17.8 |
| 50°-60° | 876.6 | 25.8 |
| 60°-70° | 841.2 | 24.8 |
| 70°-80° | 407.7 | 12.0 |
| 80°-90° | 15.0 | 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° | 3393.9 | 100.0 |
| 0°-180° | 3393.9 | 100.0 |



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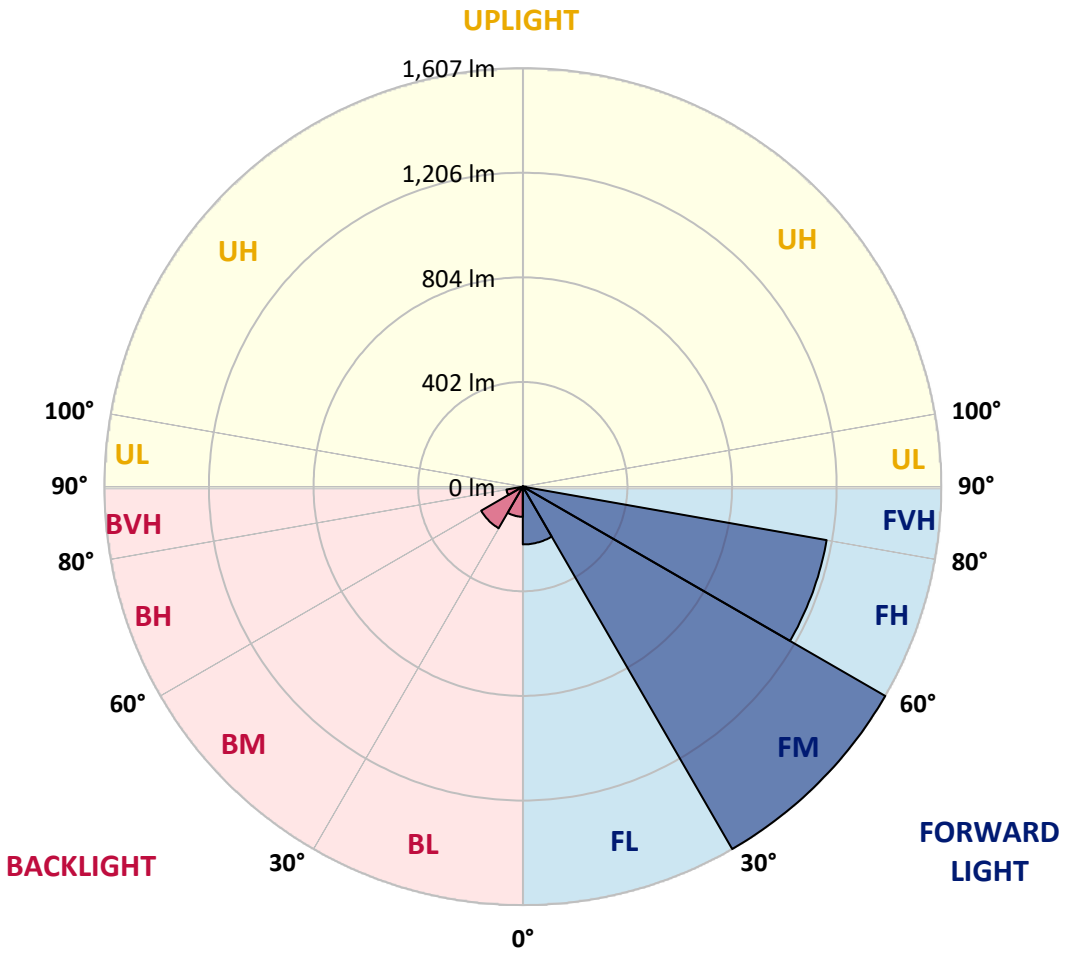
Scaled Data Report

REPORT NUMBER: P1366832
CATALOG NUMBER: GSS-SB1B-722-U-T3R-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 222.0 | 6.5 | | | |
| FM | (30°-60°) | 1607.5 | 47.4 | | | |
| FH | (60°-80°) | 1184.9 | 34.9 | | | G1/1800 |
| FVH | (80°-90°) | 12.6 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 115.8 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 184.8 | 5.4 | B0/220 | | |
| BH | (60°-80°) | 64.0 | 1.9 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 2.4 | 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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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | *561.8* | 561.8 |
| 2.5° | 540.2 | 542.1 | 539.2 | 541.2 | 544.1 | 546.1 | 551.0 | 553.0 | 559.9 | *561.8* | 563.8 |
| 5° | 513.6 | 515.6 | 515.6 | 519.5 | 524.4 | 530.3 | 538.2 | 546.1 | 558.9 | *559.9* | 568.7 |
| 7.5° | 482.1 | 481.1 | 484.1 | 492.0 | 501.8 | 516.6 | 530.3 | 544.1 | 562.8 | *565.8* | 581.5 |
| 10° | 441.8 | 441.8 | 447.7 | 458.5 | 474.3 | 498.9 | 522.5 | 543.1 | 567.7 | *574.6* | 595.3 |
| 12.5° | 419.2 | 420.1 | 423.1 | 431.9 | 454.6 | 483.1 | 514.6 | 548.0 | 580.5 | *587.4* | 615.9 |
| 15° | 410.3 | 411.3 | 415.2 | 424.1 | 441.8 | 475.2 | 512.6 | 554.0 | 594.3 | *603.1* | 637.6 |
| 17.5° | 411.3 | 410.3 | 413.2 | 420.1 | 437.8 | 470.3 | 514.6 | 563.8 | 609.1 | *619.9* | 660.2 |
| 20° | 417.2 | 417.2 | 417.2 | 422.1 | 438.8 | 470.3 | 520.5 | 577.6 | 627.7 | *637.6* | 687.8 |
| 22.5° | 428.0 | 426.0 | 427.0 | 429.0 | 444.7 | 476.2 | 529.4 | 592.3 | 646.4 | *658.2* | 713.3 |
| 25° | 435.9 | 434.9 | 434.9 | 438.8 | 453.6 | 482.1 | 538.2 | 615.0 | 667.1 | *677.9* | 739.9 |
| 27.5° | 485.1 | 480.2 | 464.4 | 451.6 | 463.4 | 494.9 | 551.0 | 634.6 | 688.7 | *700.6* | 764.5 |
| 30° | 639.6 | 631.7 | 583.5 | 514.6 | 485.1 | 509.7 | 567.7 | 655.3 | 712.4 | *722.2* | 796.0 |
| 32.5° | 871.8 | 861.9 | 787.1 | 655.3 | 556.9 | 539.2 | 590.4 | 679.9 | 738.9 | *749.8* | 833.4 |
| 35° | 1114.8 | 1102.0 | 1028.2 | 878.6 | 709.4 | 605.1 | 624.8 | 711.4 | 775.3 | *787.1* | 886.5 |
| 37.5° | 1293.9 | 1285.0 | 1232.9 | 1108.9 | 905.2 | 730.1 | 681.9 | 756.6 | 826.5 | *839.3* | 959.3 |
| 40° | 1442.4 | 1436.5 | 1420.8 | 1317.5 | 1125.6 | 911.1 | 778.3 | 826.5 | 896.4 | *910.1* | 1047.9 |
| 42.5° | 1572.3 | 1570.3 | 1577.2 | 1531.0 | 1372.6 | 1120.7 | 923.9 | 928.8 | 991.8 | *1006.6* | 1160.1 |
| 45° | 1679.6 | 1680.5 | 1708.1 | 1730.7 | 1626.4 | 1349.9 | 1092.2 | 1050.8 | 1106.9 | *1126.6* | 1282.1 |
| 47.5° | 1784.8 | 1777.0 | 1827.2 | 1876.4 | 1839.0 | 1582.2 | 1266.3 | 1188.6 | 1248.6 | *1271.2* | 1417.8 |
| 50° | 1799.6 | 1802.6 | 1889.1 | 1970.8 | 2003.3 | 1801.6 | 1455.2 | 1343.1 | 1399.1 | *1420.8* | 1562.5 |
| 52.5° | 1716.0 | 1733.7 | 1864.5 | 2014.1 | 2099.7 | 1995.4 | 1652.0 | 1508.4 | 1558.5 | *1595.9* | 1711.1 |
| 55° | 1307.6 | 1349.0 | 1778.0 | 1966.9 | 2115.4 | 2126.3 | 1834.0 | 1665.8 | 1736.6 | *1781.9* | 1850.8 |
| 57.5° | 1137.4 | 1149.2 | 1384.4 | 1868.5 | 2062.3 | 2196.1 | 1987.5 | 1823.2 | 1929.5 | *1979.7* | 1992.5 |
| 60° | 977.0 | 982.9 | 1164.0 | 1712.0 | 1970.8 | 2167.6 | 2116.4 | 2007.2 | 2139.1 | *2197.1* | 2113.5 |
| 62.5° | 574.6 | 620.9 | 823.5 | 1379.5 | 1856.7 | 2130.2 | 2214.8 | 2197.1 | 2337.8 | *2390.0* | 2128.2 |
| 65° | 291.2 | 316.8 | 439.8 | 1022.3 | 1658.9 | 2109.5 | 2304.4 | 2304.4 | 2375.2 | *2425.4* | 2020.0 |
| 67.5° | 188.9 | 198.8 | 247.9 | 759.6 | 1288.9 | 2031.8 | 2267.0 | 2306.3 | 2447.0 | *2502.1* | 1975.7 |
| 69° | *162.3* | *169.2* | *210.6* | *629.7* | *1085.3* | *1811.4* | *2198.1* | *2348.6* | *2491.3* | *2524.8* | *1905.9* |
| 70° | 145.6 | 151.5 | 191.9 | 549.0 | 942.6 | 1528.0 | 2158.7 | 2361.4 | 2484.4 | *2514.9* | 1835.0 |
| 72.5° | 101.3 | 102.3 | 142.7 | 324.7 | 597.2 | 971.1 | 1751.4 | 2258.1 | 2373.2 | *2373.2* | 1616.6 |
| 75° | 42.3 | 50.2 | 80.7 | 142.7 | 248.9 | 538.2 | 848.1 | 1925.5 | 2059.4 | *2023.9* | 1245.7 |
| 77.5° | 33.5 | 39.4 | 69.9 | 78.7 | 90.5 | 222.4 | 301.1 | 1126.6 | 982.0 | *926.9* | 407.3 |
| 80° | 24.6 | 28.5 | 59.0 | 53.1 | 33.5 | 64.9 | 74.8 | 256.8 | 184.0 | *161.4* | 62.0 |
| 82.5° | 10.8 | 13.8 | 45.3 | 33.5 | 18.7 | 20.7 | 27.5 | 54.1 | 53.1 | *47.2* | 25.6 |
| 85° | 5.9 | 8.9 | 19.7 | 11.8 | 7.9 | 7.9 | 10.8 | 16.7 | 14.8 | *14.8* | 10.8 |
| 87.5° | 0.0 | 0.0 | 1.0 | 1.0 | 2.0 | 3.0 | 3.9 | 5.9 | 6.9 | *6.9* | 6.9 |
| 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: P1366832
CATALOG NUMBER: GSS-SB1B-722-U-T3R-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 | 561.8 |
| 2.5° | 563.8 | 564.8 | 564.8 | 561.8 | 558.9 | 554.9 | 548.0 | 544.1 | 542.1 | 540.2 | 539.2 |
| 5° | 568.7 | 570.7 | 565.8 | 553.0 | 537.2 | 515.6 | 495.9 | 480.2 | 466.4 | 463.4 | 460.5 |
| 7.5° | 581.5 | 583.5 | 568.7 | 536.2 | 495.9 | 459.5 | 420.1 | 392.6 | 370.0 | 365.0 | 366.0 |
| 10° | 598.2 | 600.2 | 569.7 | 513.6 | 452.6 | 390.6 | 336.5 | 289.3 | 258.8 | 251.9 | 243.0 |
| 12.5° | 621.8 | 619.9 | 566.7 | 485.1 | 397.5 | 309.9 | 237.1 | 186.0 | 160.4 | 144.6 | 147.6 |
| 15° | 644.5 | 639.6 | 560.8 | 449.7 | 327.6 | 221.4 | 149.6 | 121.0 | 112.2 | 111.2 | 111.2 |
| 17.5° | 672.0 | 660.2 | 550.0 | 403.4 | 247.9 | 148.6 | 113.2 | 107.2 | 105.3 | 106.3 | 105.3 |
| 20° | 697.6 | 676.0 | 532.3 | 345.4 | 178.1 | 114.1 | 105.3 | 102.3 | 101.3 | 100.4 | 100.4 |
| 22.5° | 725.2 | 688.7 | 505.7 | 278.5 | 127.9 | 104.3 | 100.4 | 97.4 | 94.5 | 93.5 | 93.5 |
| 25° | 751.7 | 697.6 | 470.3 | 211.5 | 105.3 | 98.4 | 93.5 | 89.5 | 86.6 | 84.6 | 84.6 |
| 27.5° | 774.4 | 700.6 | 426.0 | 154.5 | 96.4 | 92.5 | 85.6 | 80.7 | 76.7 | 75.8 | 75.8 |
| 30° | 800.9 | 699.6 | 371.9 | 116.1 | 90.5 | 84.6 | 76.7 | 69.9 | 66.9 | 67.9 | 67.9 |
| 32.5° | 828.5 | 703.5 | 317.8 | 97.4 | 84.6 | 75.8 | 64.9 | 59.0 | 57.1 | 57.1 | 58.1 |
| 35° | 863.9 | 709.4 | 266.6 | 91.5 | 78.7 | 64.9 | 55.1 | 48.2 | 47.2 | 49.2 | 49.2 |
| 37.5° | 910.1 | 716.3 | 217.4 | 90.5 | 73.8 | 56.1 | 45.3 | 41.3 | 40.3 | 41.3 | 41.3 |
| 40° | 975.1 | 737.9 | 171.2 | 90.5 | 69.9 | 50.2 | 38.4 | 36.4 | 36.4 | 36.4 | 36.4 |
| 42.5° | 1067.6 | 787.1 | 139.7 | 89.5 | 67.9 | 46.2 | 34.4 | 32.5 | 32.5 | 33.5 | 33.5 |
| 45° | 1166.9 | 861.9 | 129.9 | 86.6 | 65.9 | 46.2 | 32.5 | 30.5 | 31.5 | 31.5 | 31.5 |
| 47.5° | 1262.4 | 937.7 | 132.8 | 81.7 | 64.0 | 47.2 | 31.5 | 29.5 | 29.5 | 29.5 | 29.5 |
| 50° | 1347.0 | 990.8 | 137.7 | 74.8 | 60.0 | 46.2 | 31.5 | 27.5 | 28.5 | 28.5 | 28.5 |
| 52.5° | 1435.6 | 1013.4 | 139.7 | 64.9 | 54.1 | 44.3 | 31.5 | 26.6 | 26.6 | 27.5 | 27.5 |
| 55° | 1510.3 | 1006.6 | 131.8 | 55.1 | 47.2 | 41.3 | 29.5 | 25.6 | 25.6 | 25.6 | 25.6 |
| 57.5° | 1573.3 | 956.4 | 107.2 | 46.2 | 40.3 | 34.4 | 27.5 | 24.6 | 24.6 | 24.6 | 24.6 |
| 60° | 1595.9 | 830.4 | 78.7 | 39.4 | 32.5 | 28.5 | 25.6 | 23.6 | 22.6 | 22.6 | 21.6 |
| 62.5° | 1509.3 | 640.5 | 54.1 | 33.5 | 27.5 | 24.6 | 22.6 | 21.6 | 20.7 | 18.7 | 17.7 |
| 65° | 1346.0 | 440.8 | 39.4 | 27.5 | 23.6 | 20.7 | 20.7 | 19.7 | 16.7 | 14.8 | 13.8 |
| 67.5° | 1222.0 | 270.6 | 31.5 | 22.6 | 19.7 | 17.7 | 17.7 | 17.7 | 15.7 | 12.8 | 12.8 |
| 69° | *1136.4* | *187.9* | *28.5* | *20.7* | *17.7* | *15.7* | *15.7* | *16.7* | *14.8* | *11.8* | *11.8* |
| 70° | 1062.6 | 147.6 | 26.6 | 18.7 | 15.7 | 14.8 | 14.8 | 15.7 | 13.8 | 10.8 | 10.8 |
| 72.5° | 886.5 | 72.8 | 22.6 | 15.7 | 12.8 | 11.8 | 12.8 | 12.8 | 11.8 | 8.9 | 8.9 |
| 75° | 646.4 | 43.3 | 18.7 | 12.8 | 9.8 | 8.9 | 10.8 | 10.8 | 8.9 | 6.9 | 6.9 |
| 77.5° | 209.6 | 25.6 | 14.8 | 10.8 | 8.9 | 7.9 | 8.9 | 7.9 | 6.9 | 4.9 | 4.9 |
| 80° | 44.3 | 15.7 | 10.8 | 7.9 | 6.9 | 5.9 | 5.9 | 4.9 | 4.9 | 3.9 | 3.9 |
| 82.5° | 19.7 | 11.8 | 7.9 | 6.9 | 4.9 | 4.9 | 3.9 | 3.9 | 3.0 | 3.0 | 3.0 |
| 85° | 9.8 | 7.9 | 5.9 | 4.9 | 3.9 | 3.9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 87.5° | 6.9 | 5.9 | 4.9 | 3.0 | 3.0 | 3.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 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
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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: SP1-2407-184-2

Test Date: 10/09/2024

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

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

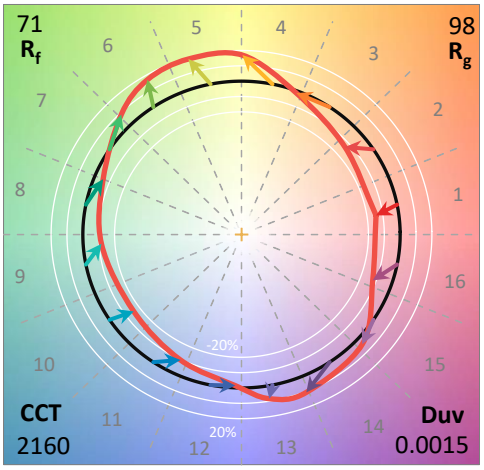
## Test Information

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

## Spectral Parameters

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

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




## Test Conditions

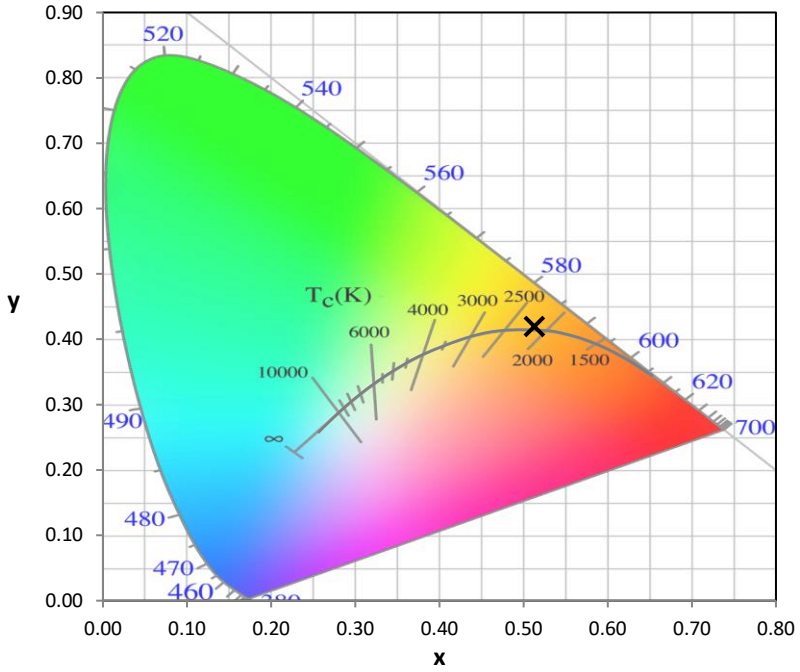
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-2

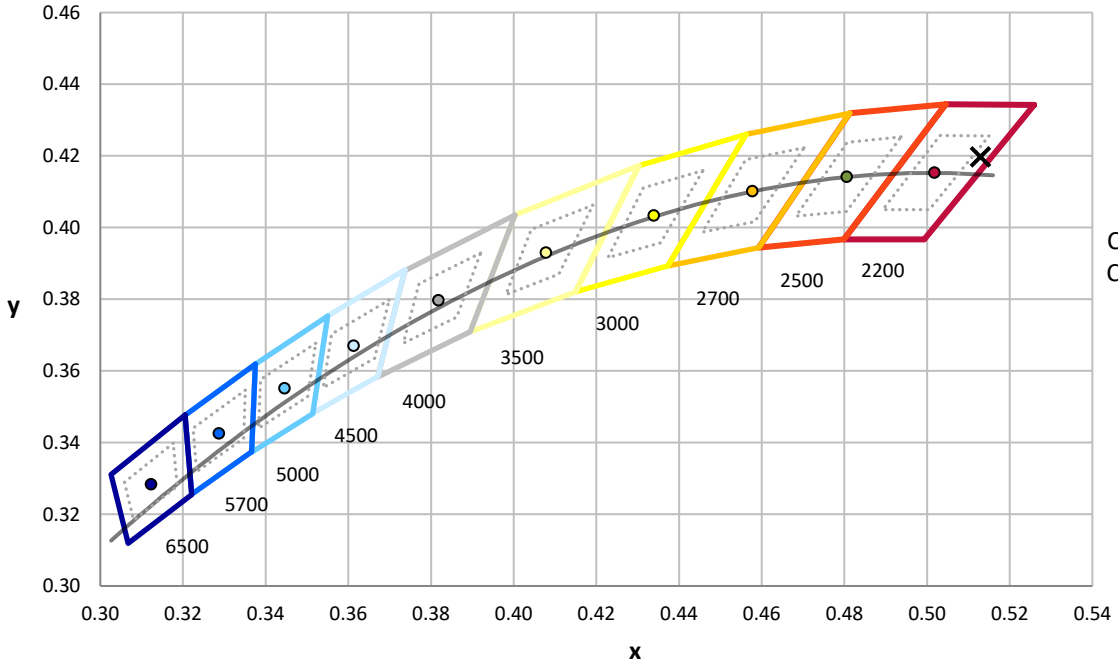
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

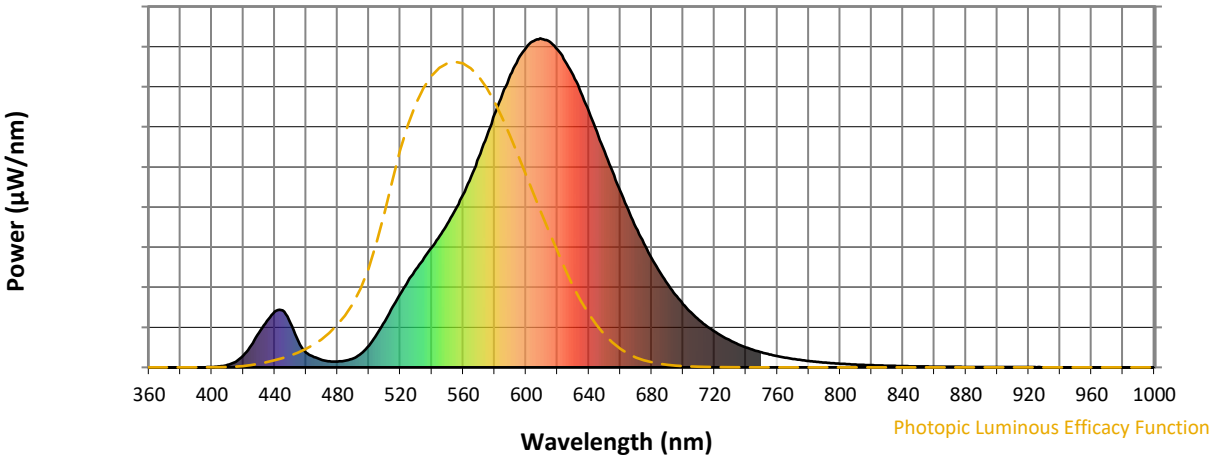



CCT = 2160K
CIE x = 0.5130
CIE y = 0.4197
Duv = 0.0015

Point lies inside the ANSI 2200K 7-step quadrangle

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## Photopic Flux vs. Wavelength

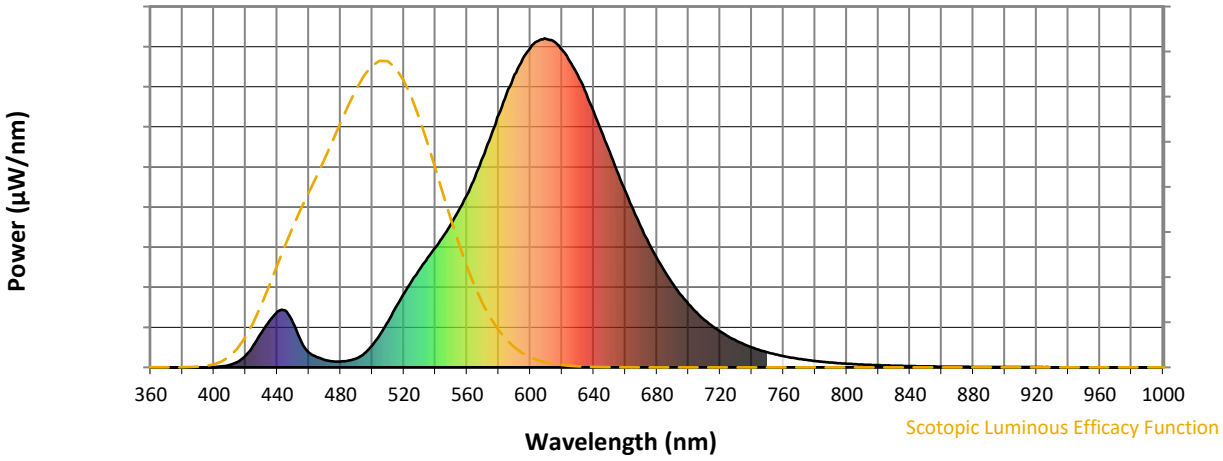



## Photopic Lumens: NR

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

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## Scotopic Flux vs. Wavelength

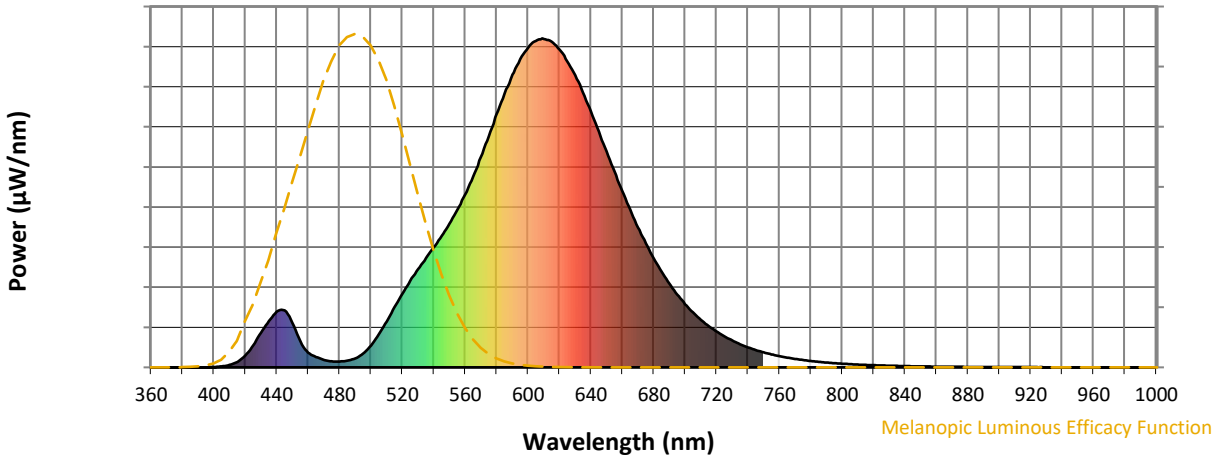



**Scotopic Lumens: NR** **S/P: 0.8**

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

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## Melanopic Flux vs. Wavelength




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

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

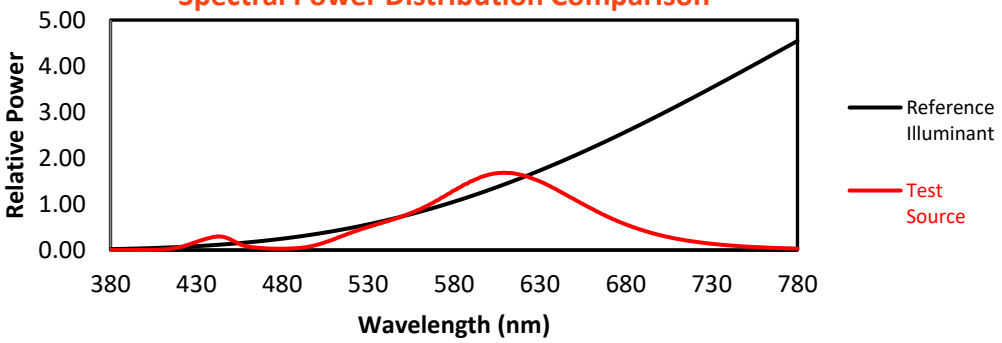
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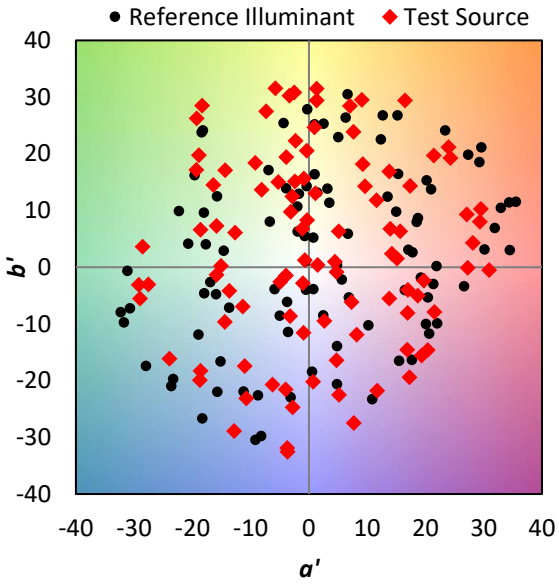
## Summary

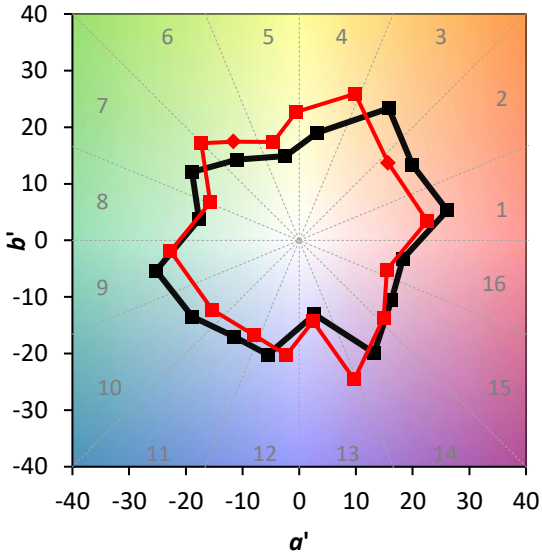
$R_f$ = 70.6
$R_g$ = 97.6
CIE $R_a$ = 71.9
$R_9$ = -17.8

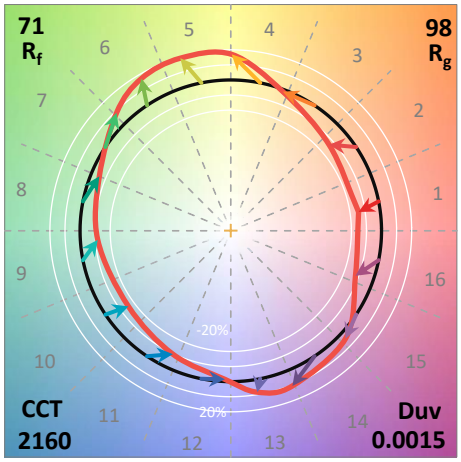
## Spectral Power Distribution Comparison

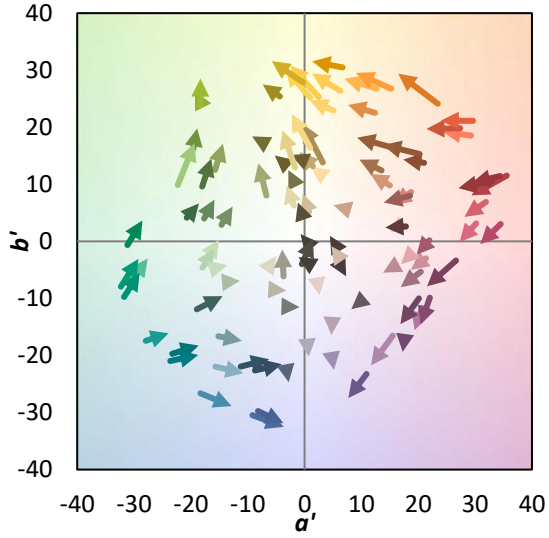



## Color Vector Graphics



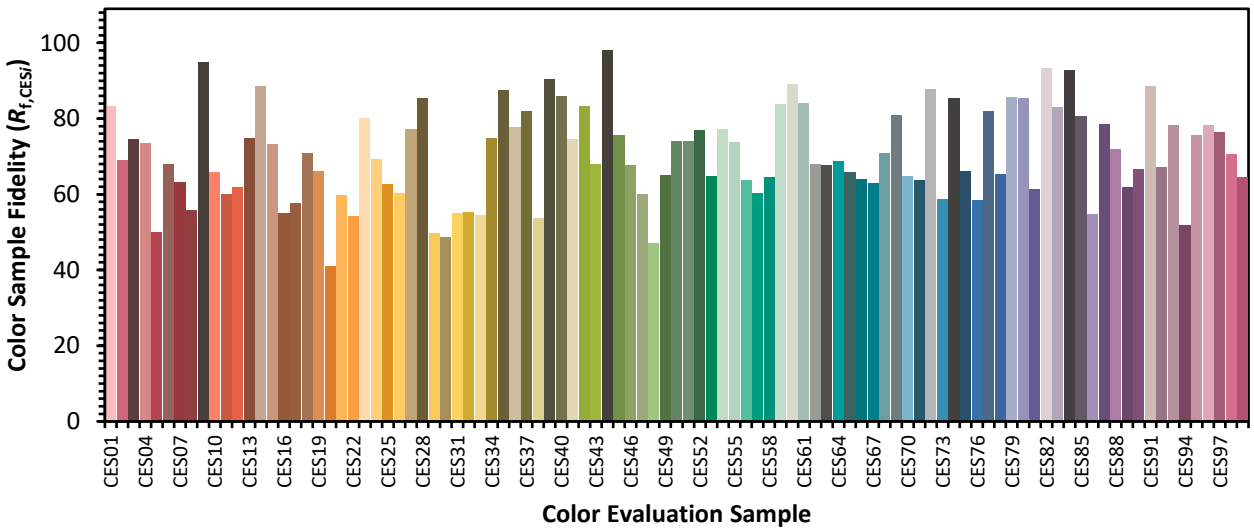



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**Individual Sample Fidelity Index ($R_{f,i}$)**

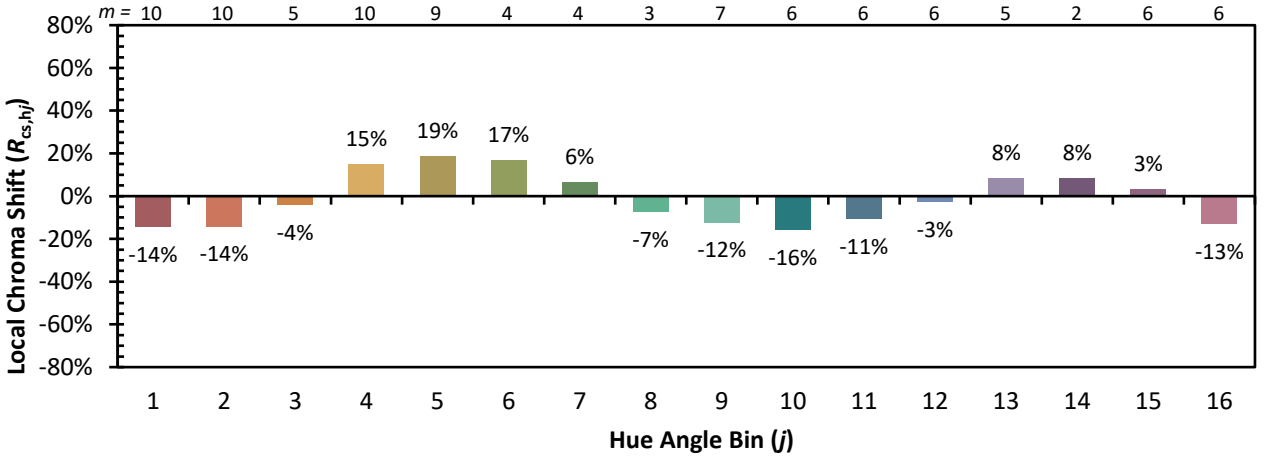
| | | | |
|---|---|---|---|
| CES01 = 87 | CES26 = 60 | CES51 = 74 | CES76 = 58 |
| CES02 = 65 | CES27 = 77 | CES52 = 77 | CES77 = 82 |
| CES03 = 32 | CES28 = 85 | CES53 = 65 | CES78 = 65 |
| CES04 = 72 | CES29 = 50 | CES54 = 77 | CES79 = 86 |
| CES05 = 52 | CES30 = 49 | CES55 = 74 | CES80 = 85 |
| CES06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

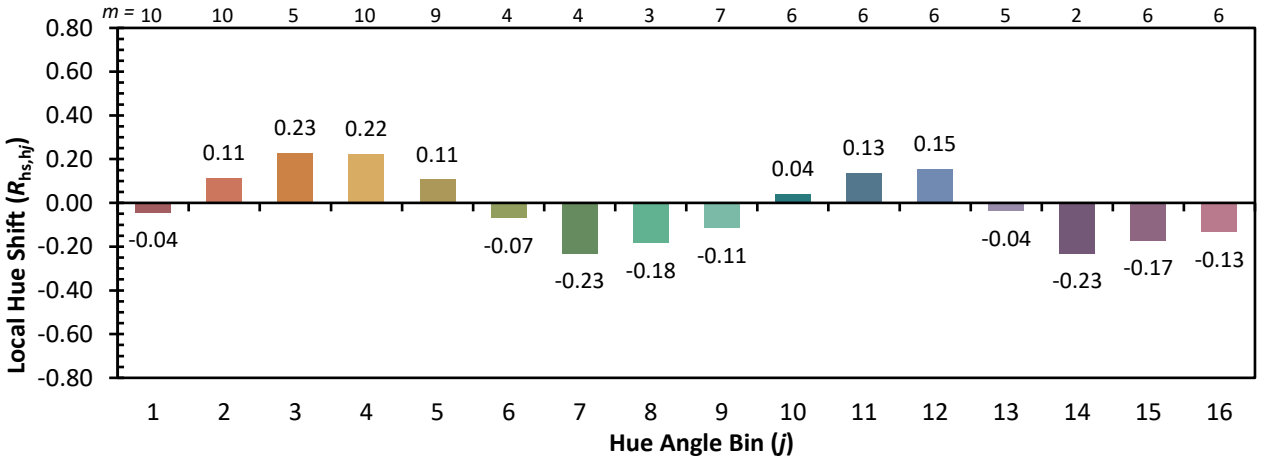


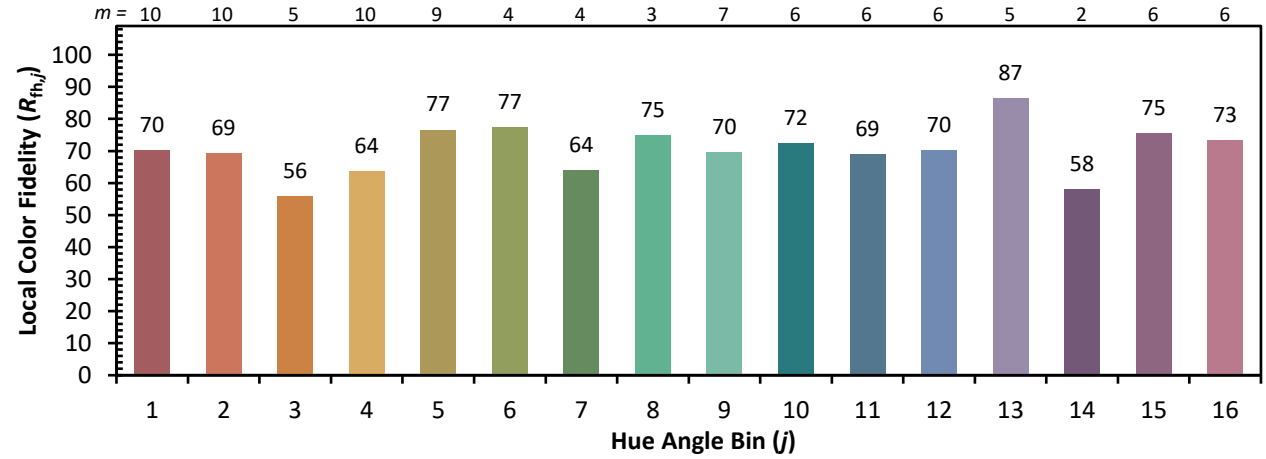
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## Color Rendition by Hue-Angle Bin



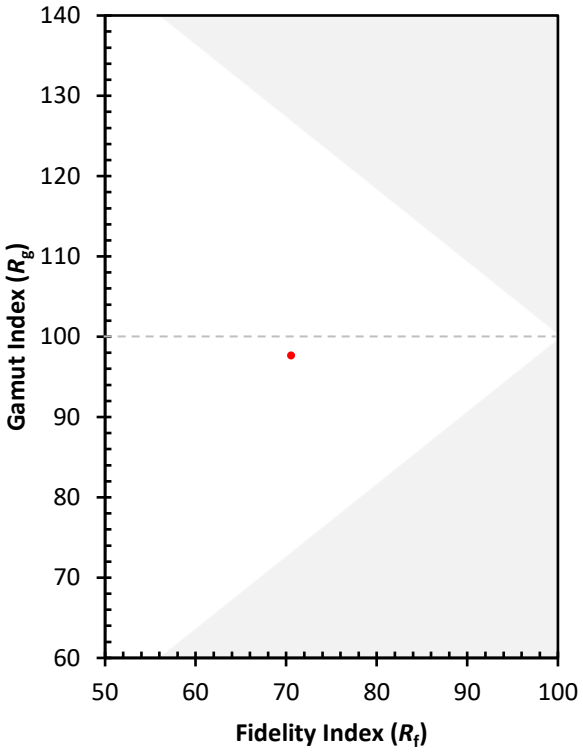



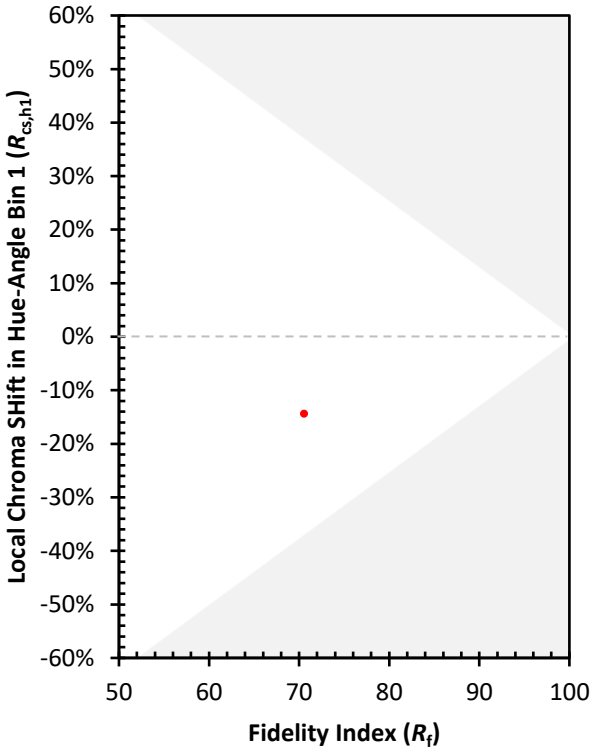



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## Measure Comparisons




(END OF REPORT)