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

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Peachtree City, GA 30269

Scaled data based on original data using

LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: STREETWORKS

Report Number: P1456727

Luminaire Tested: GLAN-SB1A-850-U-T3LG

Issue Date: 05/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1456727 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB1A-850-U-T3LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 350mA 1xLight Square PACKAGE 80CRI 5000K FIXTURE w/ TYPE III LOW GLARE |
| Light Source: | (26) 5000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 4186 lumens |
| Efficiency: | N/A |
| Efficacy: | 135.5 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G1 |

| | |
|---|---|
| Input Watts (W): | 30.9 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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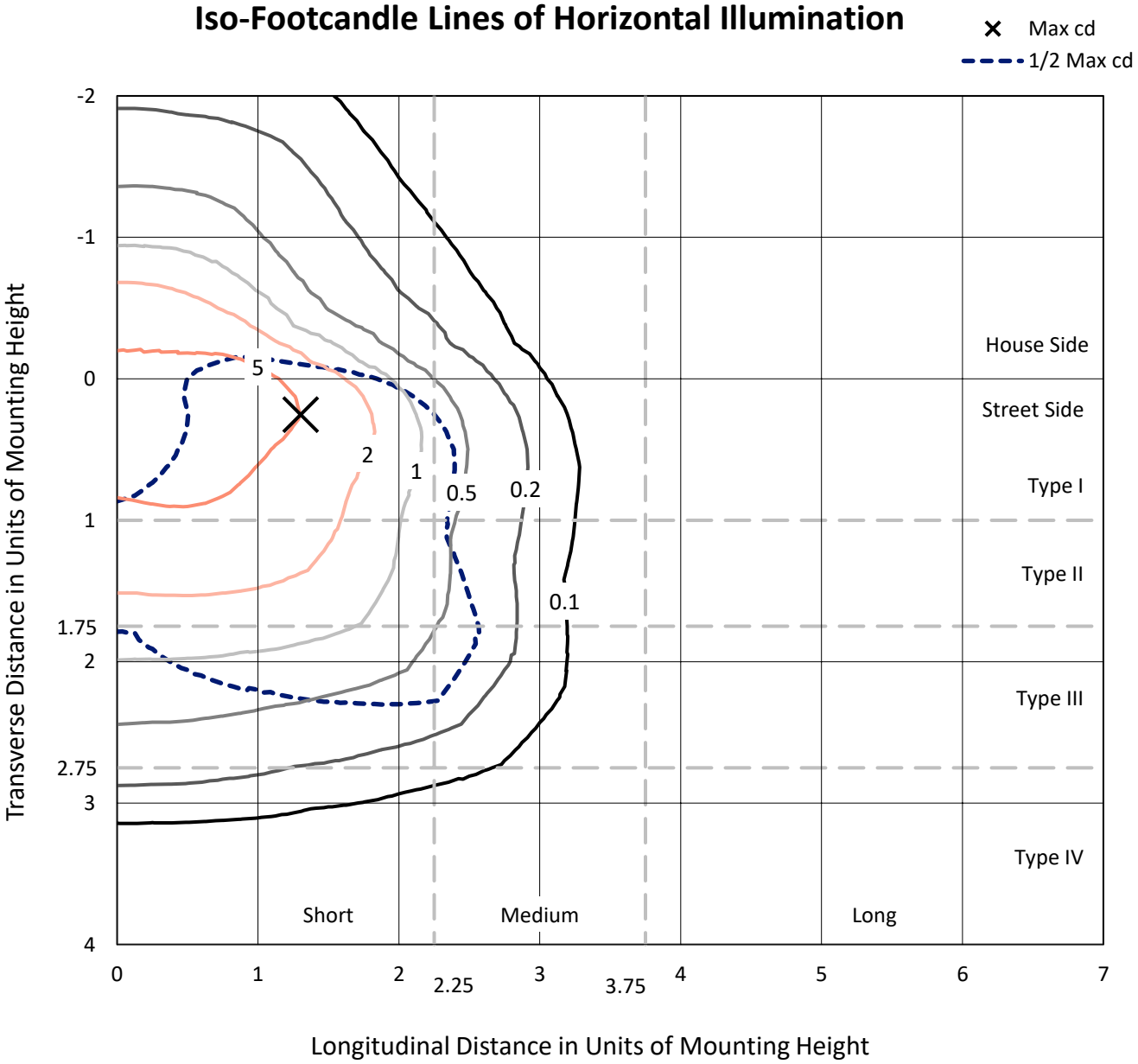
Scaled Data Report

REPORT NUMBER: P1456727
CATALOG NUMBER: GLAN-SB1A-850-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination




Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
Type III - Short - N/A

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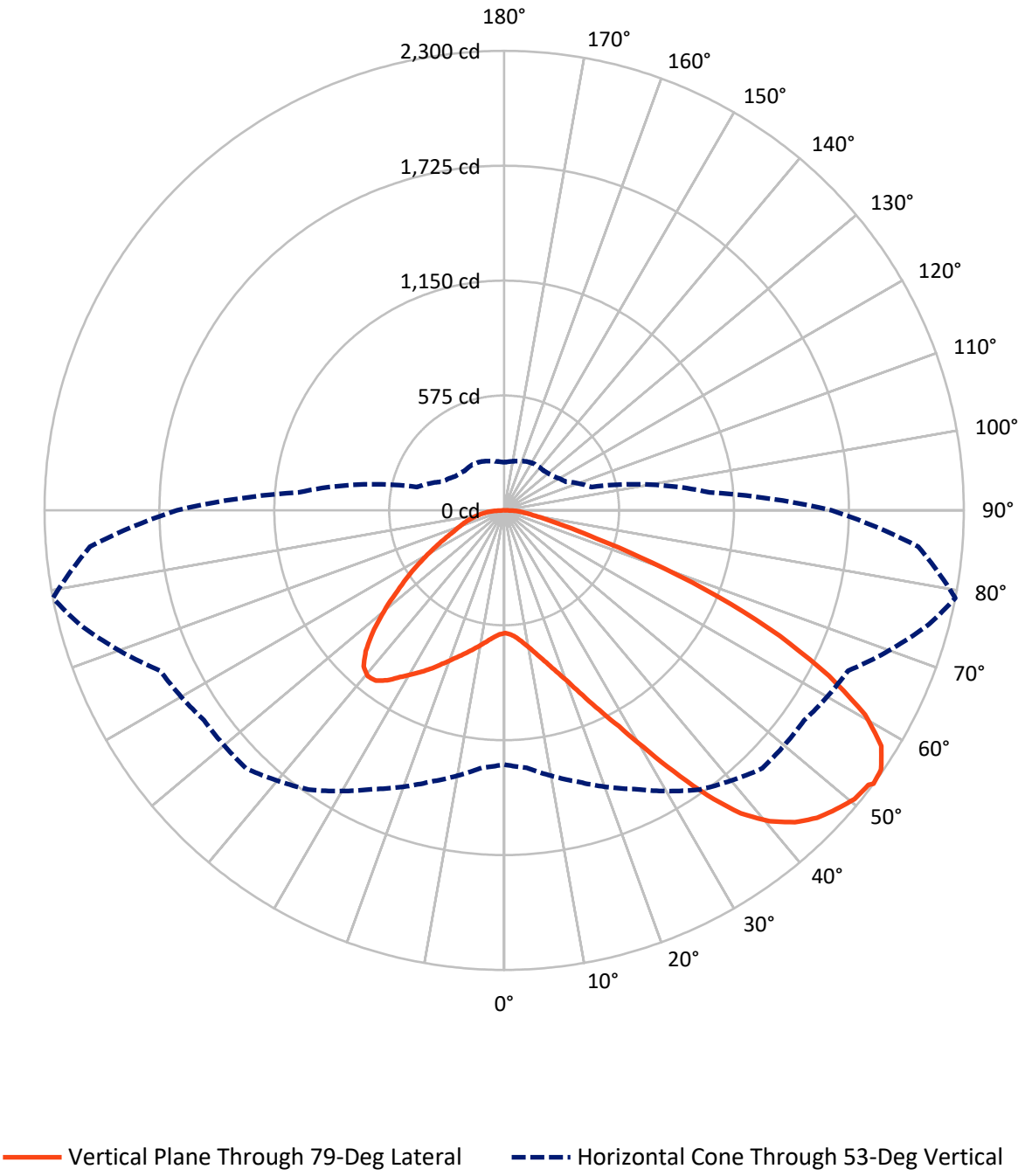
## Luminous Intensity Polar Plot



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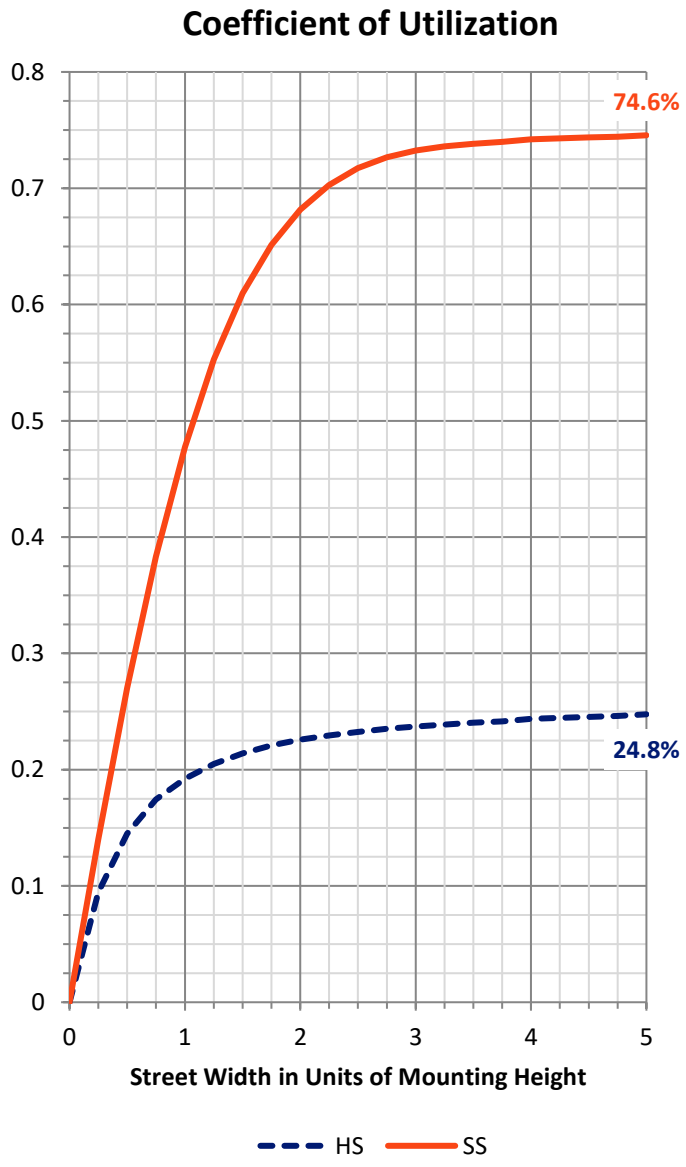
REPORT NUMBER: P1456727
CATALOG NUMBER: GLAN-SB1A-850-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1055.3 | 0.0 | 1055.3 |
| | % Fixture | 25.2 | 0.0 | 25.2 |
| **Street Side** | Lumens | 3130.8 | 0.0 | 3130.8 |
| | % Fixture | 74.8 | 0.0 | 74.8 |
| **Total** | Lumens | 4186.0 | 0.0 | 4186.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 58.6 | 1.4 |
| 10°-20° | 181.3 | 4.3 |
| 20°-30° | 346.7 | 8.3 |
| 30°-40° | 595.2 | 14.2 |
| 40°-50° | 833.7 | 19.9 |
| 50°-60° | 946.1 | 22.6 |
| 60°-70° | 829.7 | 19.8 |
| 70°-80° | 324.4 | 7.8 |
| 80°-90° | 70.3 | 1.7 |
| 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° | 4186.0 | 100.0 |
| 0°-180° | 4186.0 | 100.0 |



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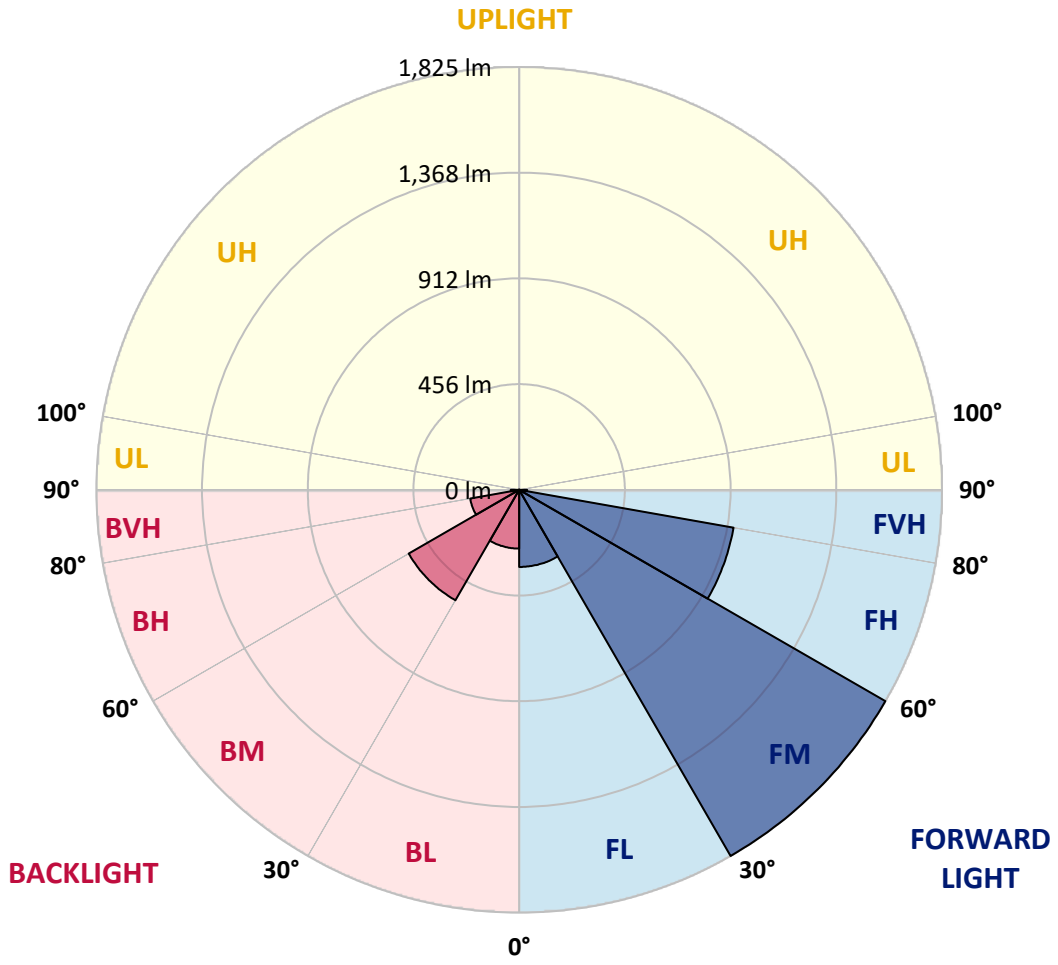
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 332.8 | 7.9 | | | |
| FM | (30°-60°) | 1824.6 | 43.6 | | | |
| FH | (60°-80°) | 939.4 | 22.4 | | | G1/1800 |
| FVH | (80°-90°) | 34.1 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 253.8 | 6.1 | B1/500 | | |
| BM | (30°-60°) | 550.5 | 13.2 | B1/1000 | | |
| BH | (60°-80°) | 214.8 | 5.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 36.2 | 0.9 | | | G1/100 |
| 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 Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | *614.5* | 614.5 |
| 2.5° | 615.5 | 615.5 | 611.7 | 615.5 | 613.6 | 616.4 | 618.3 | 618.3 | 622.0 | *621.1* | 621.1 |
| 5° | 605.2 | 603.3 | 602.4 | 608.9 | 612.7 | 620.1 | 628.5 | 632.2 | 638.8 | *638.8* | 639.7 |
| 7.5° | 578.2 | 577.2 | 581.9 | 594.9 | 607.1 | 625.7 | 643.4 | 653.7 | 663.9 | *665.8* | 665.8 |
| 10° | 561.4 | 560.4 | 566.0 | 581.9 | 601.5 | 628.5 | 656.5 | 677.9 | 694.7 | *699.4* | 699.4 |
| 12.5° | 561.4 | 561.4 | 566.0 | 581.9 | 602.4 | 635.0 | 673.3 | 709.6 | 735.7 | *741.3* | 739.5 |
| 15° | 577.2 | 576.3 | 581.9 | 598.7 | 618.3 | 649.0 | 695.7 | 744.1 | 779.6 | *789.8* | 790.8 |
| 17.5° | 594.0 | 593.1 | 601.5 | 622.9 | 646.2 | 677.0 | 724.6 | 784.2 | 834.6 | *847.7* | 850.4 |
| 20° | 620.1 | 619.2 | 629.4 | 650.0 | 678.9 | 714.3 | 763.7 | 831.8 | 901.7 | *915.7* | 919.5 |
| 22.5° | 650.0 | 650.9 | 662.1 | 687.3 | 716.2 | 762.8 | 823.4 | 898.9 | 982.9 | *1004.3* | 1008.0 |
| 25° | 712.4 | 709.6 | 719.0 | 736.7 | 767.5 | 823.4 | 898.0 | 980.1 | 1079.8 | *1106.0* | 1110.6 |
| 27.5° | 795.4 | 790.8 | 801.0 | 818.7 | 841.1 | 893.3 | 979.1 | 1070.5 | 1190.8 | *1223.5* | 1224.4 |
| 30° | 870.0 | 867.2 | 881.2 | 917.6 | 940.9 | 981.0 | 1072.4 | 1176.8 | 1327.9 | *1375.5* | 1377.3 |
| 32.5° | 934.4 | 933.4 | 959.6 | 1006.2 | 1059.3 | 1102.2 | 1190.8 | 1311.1 | 1501.3 | *1556.4* | 1544.2 |
| 35° | 995.9 | 998.7 | 1031.4 | 1079.8 | 1150.7 | 1236.5 | 1326.0 | 1463.1 | 1684.1 | *1750.3* | 1730.7 |
| 37.5° | 1058.4 | 1060.3 | 1103.2 | 1165.6 | 1240.2 | 1352.1 | 1472.4 | 1628.2 | 1842.6 | *1924.7* | 1881.8 |
| 40° | 1116.2 | 1121.8 | 1179.6 | 1246.8 | 1343.7 | 1457.5 | 1591.8 | 1742.9 | 1964.8 | *2045.9* | 1999.3 |
| 42.5° | 1174.0 | 1182.4 | 1244.9 | 1337.2 | 1440.7 | 1559.2 | 1674.8 | 1812.8 | 2043.1 | *2133.6* | 2061.8 |
| 45° | 1233.7 | 1239.3 | 1316.7 | 1412.8 | 1530.2 | 1639.4 | 1722.3 | 1857.6 | 2097.2 | *2195.1* | 2097.2 |
| 47.5° | 1273.8 | 1285.0 | 1369.9 | 1480.8 | 1598.3 | 1700.9 | 1760.6 | 1876.2 | 2131.7 | *2235.2* | 2110.3 |
| 50° | 1289.7 | 1305.5 | 1396.9 | 1520.0 | 1654.3 | 1758.7 | 1790.4 | 1886.5 | 2169.9 | *2270.7* | 2107.5 |
| 52.5° | 1286.9 | 1301.8 | 1401.6 | 1537.7 | 1699.0 | 1811.9 | 1819.3 | 1897.7 | 2197.0 | *2282.8* | 2083.2 |
| 53° | *1271.9* | *1292.5* | *1404.4* | *1538.6* | *1705.6* | *1825.9* | *1832.4* | *1898.6* | *2200.7* | *2299.6* | *2079.5* |
| 55° | 1220.7 | 1231.8 | 1375.5 | 1537.7 | 1736.3 | 1878.1 | 1868.7 | 1926.6 | 2211.0 | *2288.4* | 2038.5 |
| 57.5° | 1174.0 | 1185.2 | 1310.2 | 1520.0 | 1761.5 | 1951.7 | 1927.5 | 1921.9 | 2155.0 | *2225.0* | 1935.0 |
| 60° | 1144.2 | 1147.9 | 1253.3 | 1464.0 | 1751.3 | 2003.0 | 1965.7 | 1866.9 | 2017.0 | *2074.8* | 1753.1 |
| 62.5° | 1119.0 | 1118.1 | 1211.3 | 1383.8 | 1712.1 | 2010.5 | 1973.2 | 1730.7 | 1814.7 | *1824.0* | 1510.7 |
| 65° | 1062.1 | 1055.6 | 1146.1 | 1293.4 | 1631.0 | 1976.9 | 1881.8 | 1524.7 | 1546.1 | *1515.3* | 1213.2 |
| 67.5° | 949.3 | 935.3 | 1015.5 | 1155.4 | 1465.9 | 1881.8 | 1707.4 | 1285.0 | 1218.8 | *1157.2* | 913.9 |
| 70° | 679.8 | 679.8 | 744.1 | 884.0 | 1176.8 | 1626.3 | 1465.9 | 972.6 | 839.3 | *784.2* | 610.8 |
| 72.5° | 332.9 | 341.3 | 408.4 | 522.2 | 788.9 | 1180.6 | 1122.7 | 630.4 | 509.2 | *482.1* | 391.7 |
| 75° | 141.7 | 142.7 | 174.4 | 231.3 | 400.0 | 698.4 | 703.1 | 363.7 | 326.4 | *313.3* | 259.2 |
| 77.5° | 98.8 | 100.7 | 114.7 | 136.1 | 190.2 | 320.8 | 365.5 | 220.1 | 219.1 | *209.8* | 184.6 |
| 80° | 75.5 | 77.4 | 86.7 | 101.6 | 127.8 | 164.1 | 189.3 | 149.2 | 156.7 | *147.3* | 133.3 |
| 82.5° | 56.9 | 58.7 | 65.3 | 76.5 | 91.4 | 110.0 | 106.3 | 110.0 | 115.6 | *110.0* | 96.0 |
| 85° | 38.2 | 39.2 | 43.8 | 53.2 | 58.7 | 66.2 | 66.2 | 80.2 | 83.9 | *82.1* | 75.5 |
| 87.5° | 19.6 | 19.6 | 23.3 | 28.0 | 29.8 | 30.8 | 27.0 | 35.4 | 40.1 | *43.8* | 35.4 |
| 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: P1456727
CATALOG NUMBER: GLAN-SB1A-850-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 | 614.5 |
| 2.5° | 621.1 | 622.0 | 619.2 | 618.3 | 617.3 | 612.7 | 612.7 | 608.0 | 607.1 | 608.0 | 605.2 |
| 5° | 641.6 | 639.7 | 632.2 | 626.6 | 620.1 | 607.1 | 599.6 | 589.3 | 586.5 | 583.8 | 581.0 |
| 7.5° | 666.7 | 663.9 | 650.9 | 636.0 | 618.3 | 593.1 | 579.1 | 562.3 | 556.7 | 552.0 | 550.2 |
| 10° | 698.4 | 692.9 | 672.3 | 640.6 | 608.0 | 577.2 | 557.6 | 537.1 | 527.8 | 525.9 | 521.3 |
| 12.5° | 739.5 | 729.2 | 691.0 | 641.6 | 598.7 | 558.6 | 537.1 | 521.3 | 517.5 | 516.6 | 511.9 |
| 15° | 785.2 | 770.3 | 708.7 | 642.5 | 586.5 | 542.7 | 529.7 | 521.3 | 521.3 | 520.3 | 517.5 |
| 17.5° | 841.1 | 816.9 | 725.5 | 638.8 | 571.6 | 538.1 | 531.5 | 524.1 | 522.2 | 523.1 | 519.4 |
| 20° | 908.3 | 868.2 | 743.2 | 634.1 | 565.1 | 539.0 | 531.5 | 521.3 | 516.6 | 515.7 | 512.9 |
| 22.5° | 985.7 | 926.9 | 762.8 | 626.6 | 565.1 | 538.1 | 525.9 | 511.9 | 502.6 | 498.9 | 495.2 |
| 25° | 1074.3 | 995.0 | 783.3 | 623.8 | 567.0 | 534.3 | 514.7 | 492.4 | 477.4 | 471.8 | 469.1 |
| 27.5° | 1181.5 | 1066.8 | 798.2 | 626.6 | 566.0 | 525.9 | 495.2 | 466.3 | 449.5 | 440.1 | 438.3 |
| 30° | 1299.9 | 1144.2 | 808.5 | 631.3 | 560.4 | 510.1 | 471.8 | 439.2 | 415.9 | 404.7 | 401.9 |
| 32.5° | 1439.8 | 1230.9 | 818.7 | 631.3 | 546.5 | 487.7 | 444.8 | 409.4 | 385.1 | 372.1 | 370.2 |
| 35° | 1594.6 | 1337.2 | 828.1 | 630.4 | 529.7 | 463.5 | 417.8 | 381.4 | 356.2 | 343.2 | 342.2 |
| 37.5° | 1726.1 | 1417.4 | 832.7 | 621.1 | 506.4 | 435.5 | 392.6 | 356.2 | 330.1 | 316.1 | 315.2 |
| 40° | 1807.2 | 1451.0 | 823.4 | 602.4 | 478.4 | 406.6 | 364.6 | 331.0 | 304.9 | 288.1 | 284.4 |
| 42.5° | 1838.0 | 1435.1 | 793.6 | 571.6 | 444.8 | 377.7 | 341.3 | 305.9 | 271.4 | 257.4 | 254.6 |
| 45° | 1827.7 | 1373.6 | 730.2 | 527.8 | 407.5 | 351.6 | 320.8 | 280.7 | 258.3 | 246.2 | 245.2 |
| 47.5° | 1793.2 | 1278.5 | 650.9 | 472.8 | 368.3 | 328.2 | 293.7 | 274.2 | 253.6 | 240.6 | 239.7 |
| 50° | 1732.6 | 1176.8 | 555.8 | 410.3 | 332.9 | 304.0 | 287.2 | 271.4 | 254.6 | 244.3 | 242.5 |
| 52.5° | 1655.2 | 1062.1 | 468.1 | 349.7 | 302.1 | 282.6 | 280.7 | 269.5 | 256.4 | 245.2 | 240.6 |
| 53° | *1637.5* | *1032.3* | *451.3* | *339.4* | *297.5* | *279.8* | *278.8* | *269.5* | *254.6* | *244.3* | *240.6* |
| 55° | 1552.6 | 940.0 | 398.2 | 303.1 | 274.2 | 270.4 | 278.8 | 268.6 | 249.9 | 241.5 | 238.7 |
| 57.5° | 1416.5 | 818.7 | 346.9 | 269.5 | 249.9 | 259.2 | 276.0 | 264.8 | 244.3 | 229.4 | 224.7 |
| 60° | 1252.4 | 679.8 | 307.7 | 247.1 | 232.2 | 245.2 | 264.8 | 251.8 | 223.8 | 216.3 | 215.4 |
| 62.5° | 1056.5 | 550.2 | 277.9 | 228.5 | 217.3 | 230.3 | 248.0 | 225.7 | 205.2 | 199.6 | 197.7 |
| 65° | 825.3 | 437.3 | 254.6 | 214.5 | 202.4 | 212.6 | 224.7 | 210.7 | 197.7 | 193.0 | 192.1 |
| 67.5° | 613.6 | 343.2 | 235.9 | 202.4 | 187.4 | 194.0 | 207.9 | 204.2 | 193.0 | 190.2 | 189.3 |
| 70° | 423.4 | 278.8 | 219.1 | 191.2 | 168.8 | 176.2 | 197.7 | 200.5 | 189.3 | 187.4 | 186.5 |
| 72.5° | 296.5 | 235.9 | 201.4 | 179.0 | 153.9 | 161.3 | 193.0 | 193.0 | 180.9 | 183.7 | 181.8 |
| 75° | 222.9 | 198.6 | 180.9 | 164.1 | 135.2 | 146.4 | 186.5 | 184.6 | 172.5 | 184.6 | 180.0 |
| 77.5° | 167.9 | 160.4 | 156.7 | 145.5 | 118.4 | 129.6 | 173.4 | 169.7 | 153.9 | 154.8 | 146.4 |
| 80° | 122.2 | 124.0 | 134.3 | 124.0 | 98.8 | 107.2 | 146.4 | 144.5 | 125.0 | 128.7 | 118.4 |
| 82.5° | 87.7 | 92.3 | 114.7 | 99.8 | 71.8 | 76.5 | 100.7 | 109.1 | 97.9 | 92.3 | 94.2 |
| 85° | 66.2 | 69.0 | 92.3 | 73.7 | 44.8 | 50.4 | 69.0 | 78.3 | 76.5 | 70.9 | 71.8 |
| 87.5° | 28.0 | 31.7 | 42.9 | 34.5 | 26.1 | 26.1 | 42.9 | 55.0 | 49.4 | 42.0 | 43.8 |
| 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: SP1-2407-184-12

Test Date: 10/11/2024

Luminaire Tested: GSS-SB1A-850-U-5WQ

Data in this report applies to families of products including GSS-SB1A-850-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

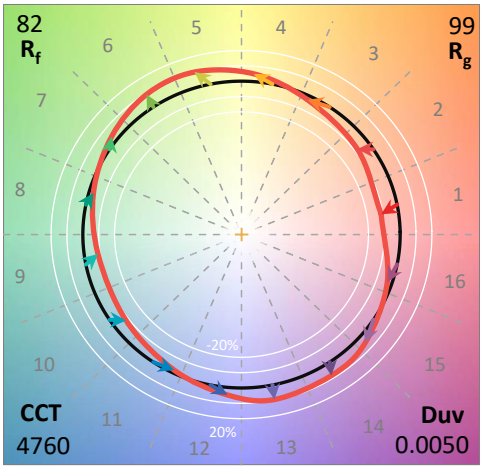
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-12 |
| 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-850-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4760 |
| CIE u': | 0.2107 |
| CIE v': | 0.4939 |
| Duv: | 0.0050 |
| CIE x: | 0.3537 |
| CIE y: | 0.3685 |
| CIE z: | 0.2779 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 571 |
| Purity: | 16.69598 |
| Rf: | 82 |
| Rg: | 99.4 |

| | | | | | |
|---|---|---|---|---|---|
| CRI (Ra): | 81.1 | | | | |
| R1: | 79.8 | R9: | 8.7 | | |
| R2: | 83.5 | R10: | 62.4 | | |
| R3: | 87.9 | R11: | 83.8 | | |
| R4: | 83.1 | R12: | 63.0 | | |
| R5: | 80.5 | R13: | 79.9 | | |
| R6: | 79.1 | R14: | 93.3 | | |
| R7: | 86.1 | R15: | 72.7 | | |
| R8: | 69.0 | | | | |




## Test Conditions

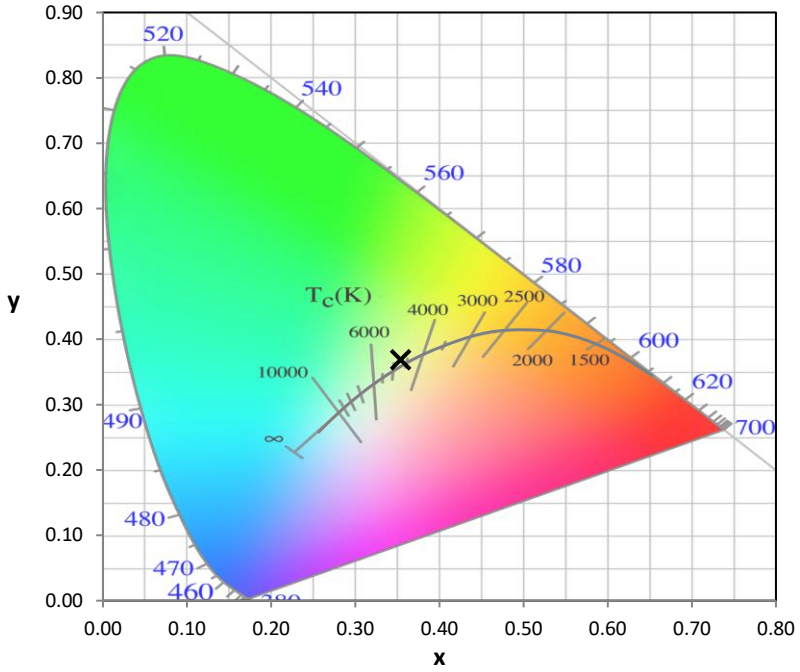
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-12

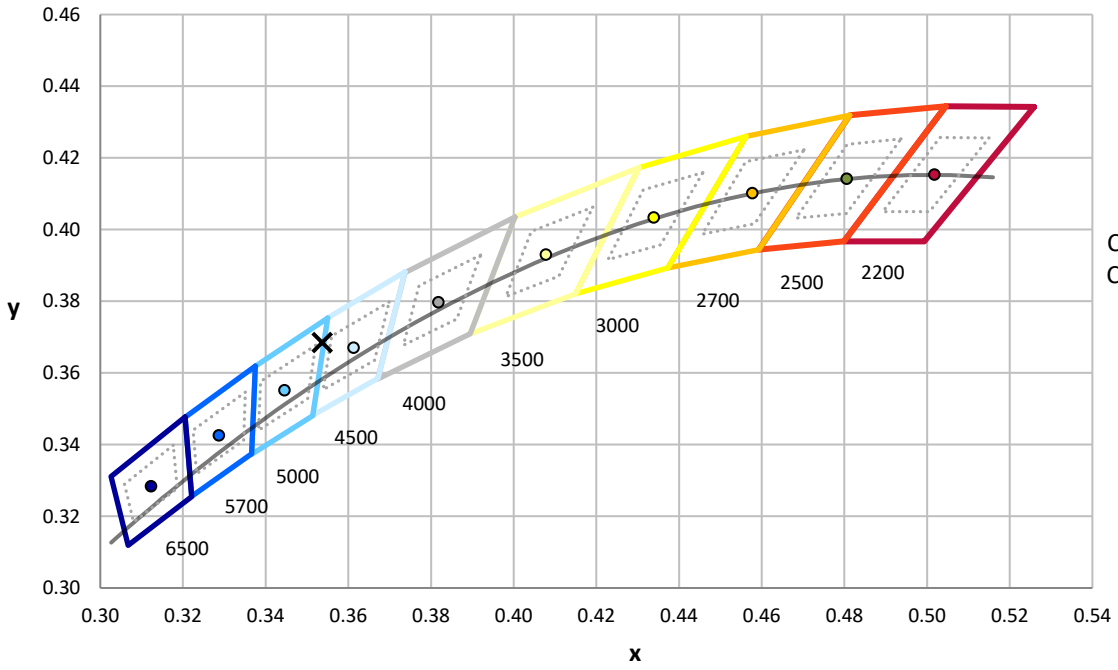
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

## CIE 1931 Chromaticity Diagram




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




CCT = 4760K
CIE x = 0.3537
CIE y = 0.3685
Duv = 0.0050

Point lies inside the ANSI 5000K 7-step quadrangle

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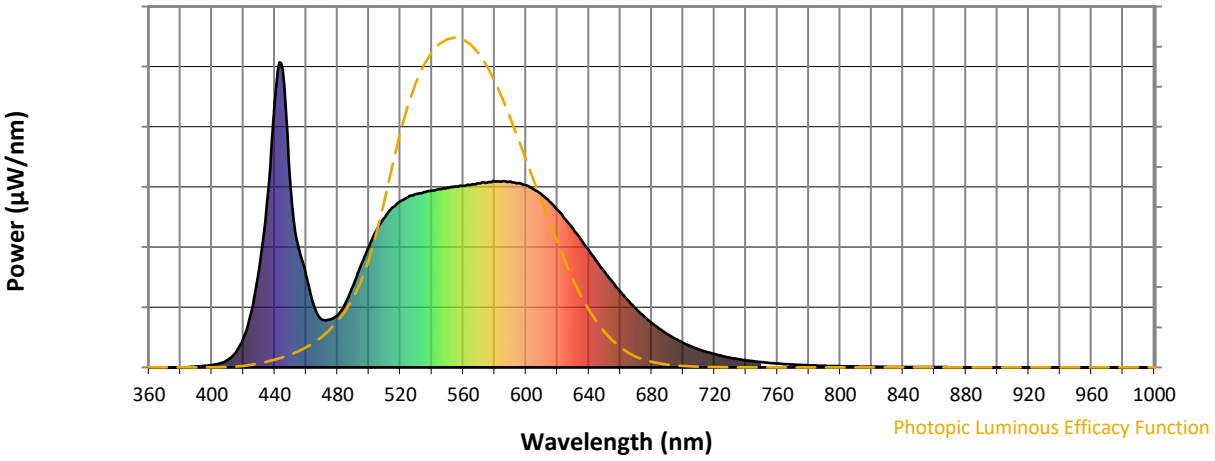
## Photopic Flux vs. Wavelength




## 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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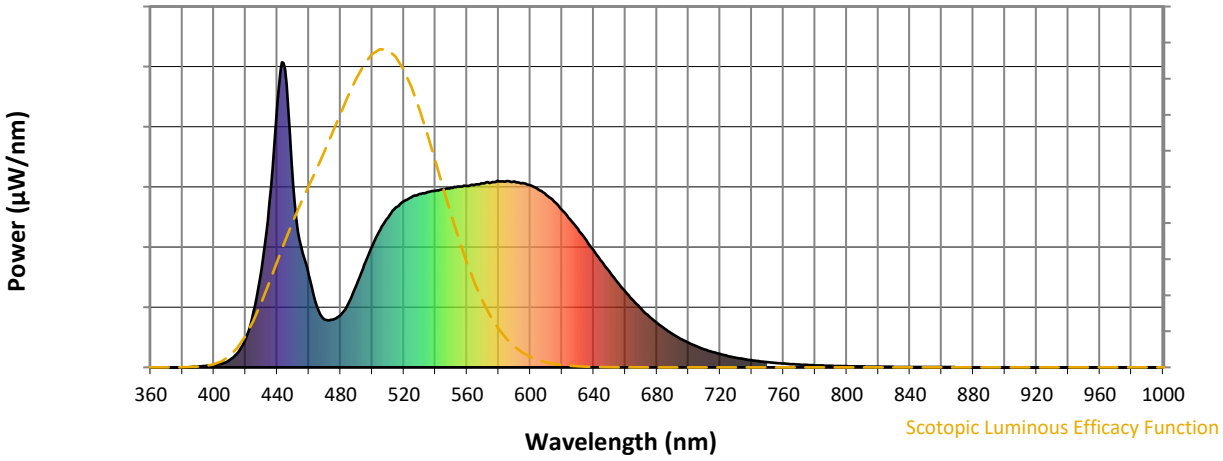
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.83**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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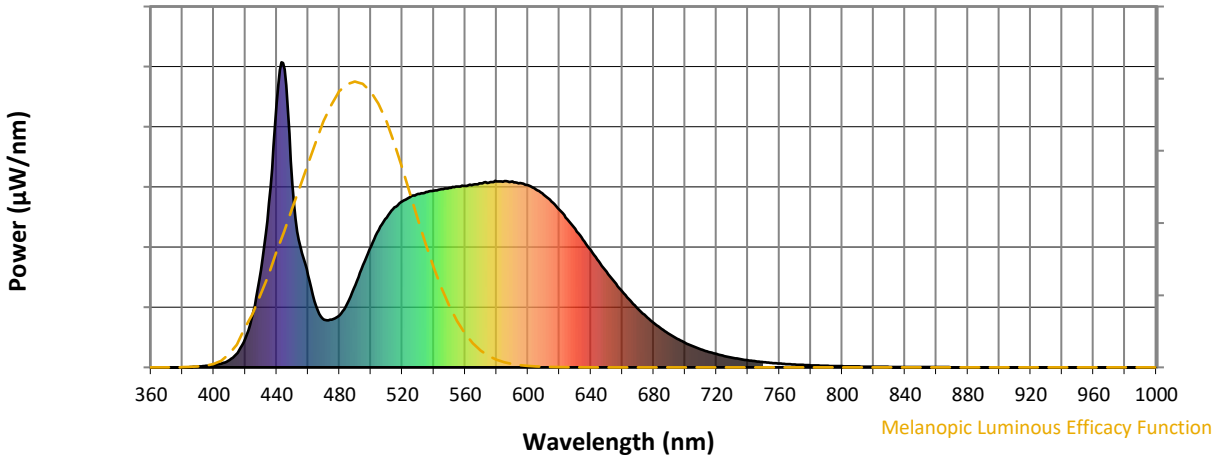
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.74**

| 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 | 270 | NR | 620 | 517 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 335 | NR | 625 | 486 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 397 | NR | 630 | 454 | NR | 760 | 12 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 451 | NR | 635 | 419 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 492 | NR | 640 | 384 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 524 | NR | 645 | 347 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 545 | NR | 650 | 313 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 558 | NR | 655 | 280 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 7 | NR | 530 | 568 | NR | 660 | 248 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 13 | NR | 535 | 575 | NR | 665 | 219 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 24 | NR | 540 | 579 | NR | 670 | 192 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 47 | NR | 545 | 585 | NR | 675 | 167 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 95 | NR | 550 | 588 | NR | 680 | 146 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 181 | NR | 555 | 593 | NR | 685 | 126 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 319 | NR | 560 | 595 | NR | 690 | 109 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 539 | NR | 565 | 600 | NR | 695 | 94 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 868 | NR | 570 | 603 | NR | 700 | 80 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 977 | NR | 575 | 606 | NR | 705 | 69 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 601 | NR | 580 | 609 | NR | 710 | 59 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 397 | NR | 585 | 611 | NR | 715 | 51 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 302 | NR | 590 | 610 | NR | 720 | 44 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 201 | NR | 595 | 604 | NR | 725 | 37 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 157 | NR | 600 | 596 | NR | 730 | 32 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 157 | NR | 605 | 583 | NR | 735 | 27 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 171 | NR | 610 | 566 | NR | 740 | 23 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 210 | NR | 615 | 543 | NR | 745 | 20 | NR | 875 | 0 | NR | | | |

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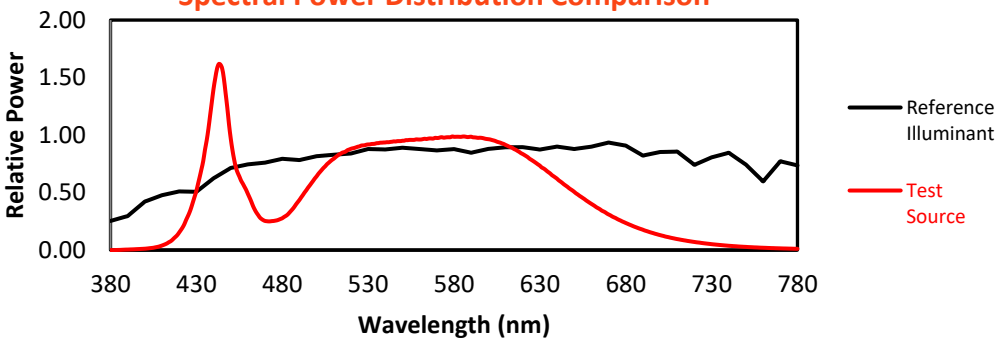
# TM-30-18

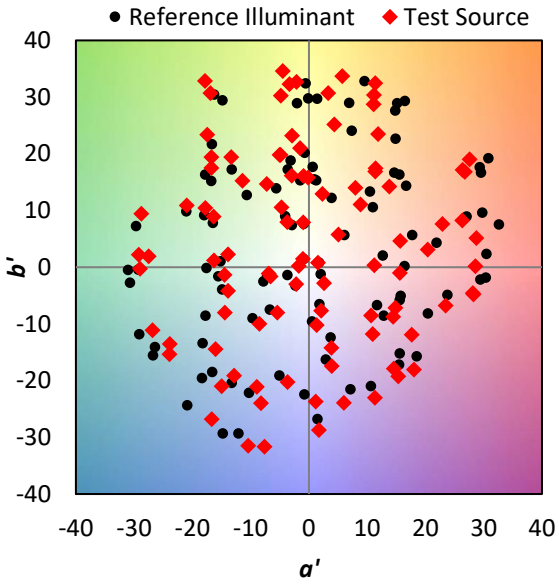
## Summary

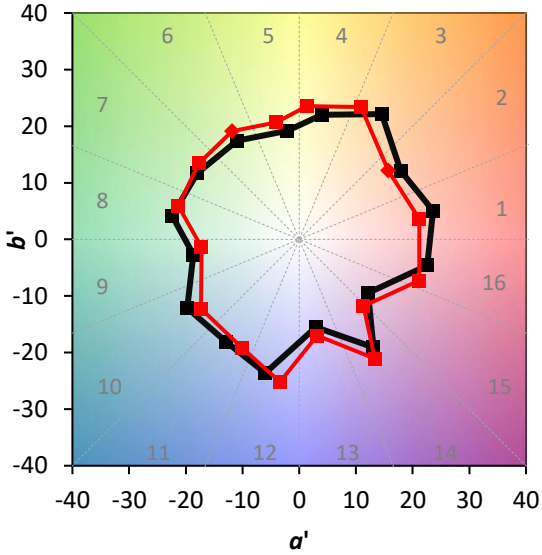
$R_f$ = 82
$R_g$ = 99.4
CIE $R_a$ = 81.1
$R_9$ = 8.7

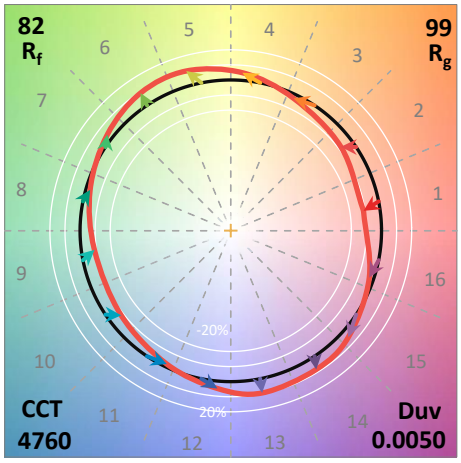
## Spectral Power Distribution Comparison

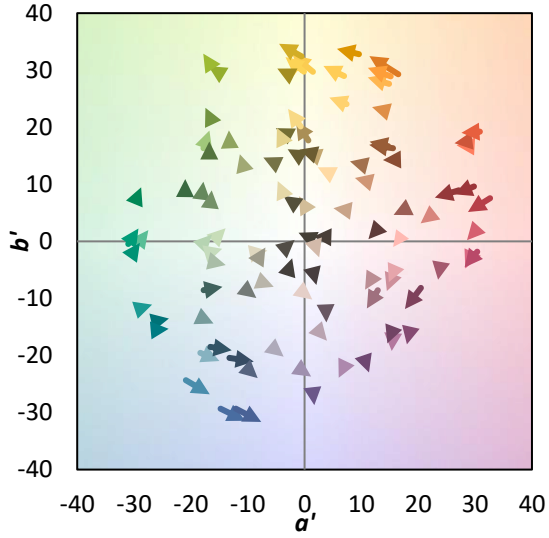



## Color Vector Graphics



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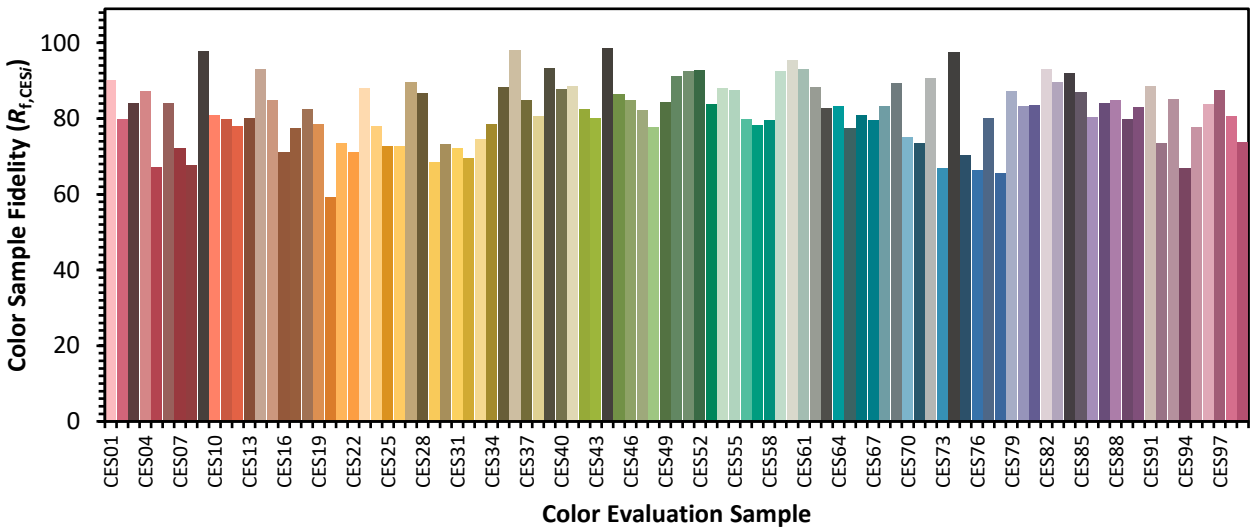
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 73 | CES51 = 92 | CES76 = 66 |
| CES02 = 60 | CES27 = 90 | CES52 = 93 | CES77 = 80 |
| CES03 = 30 | CES28 = 87 | CES53 = 84 | CES78 = 65 |
| CES04 = 69 | CES29 = 69 | CES54 = 88 | CES79 = 87 |
| CES05 = 47 | CES30 = 73 | CES55 = 88 | CES80 = 83 |
| CES06 = 50 | CES31 = 72 | CES56 = 80 | CES81 = 84 |
| CES07 = 40 | CES32 = 69 | CES57 = 78 | CES82 = 93 |
| CES08 = 39 | CES33 = 75 | CES58 = 80 | CES83 = 90 |
| CES09 = 29 | CES34 = 78 | CES59 = 93 | CES84 = 92 |
| CES10 = 73 | CES35 = 88 | CES60 = 95 | CES85 = 87 |
| CES11 = 56 | CES36 = 98 | CES61 = 93 | CES86 = 80 |
| CES12 = 62 | CES37 = 85 | CES62 = 88 | CES87 = 84 |
| CES13 = 42 | CES38 = 81 | CES63 = 83 | CES88 = 85 |
| CES14 = 74 | CES39 = 93 | CES64 = 83 | CES89 = 80 |
| CES15 = 71 | CES40 = 88 | CES65 = 77 | CES90 = 83 |
| CES16 = 46 | CES41 = 89 | CES66 = 81 | CES91 = 89 |
| CES17 = 48 | CES42 = 82 | CES67 = 80 | CES92 = 73 |
| CES18 = 55 | CES43 = 80 | CES68 = 83 | CES93 = 85 |
| CES19 = 70 | CES44 = 99 | CES69 = 89 | CES94 = 67 |
| CES20 = 64 | CES45 = 87 | CES70 = 75 | CES95 = 78 |
| CES21 = 85 | CES46 = 85 | CES71 = 73 | CES96 = 84 |
| CES22 = 77 | CES47 = 82 | CES72 = 91 | CES97 = 87 |
| CES23 = 91 | CES48 = 78 | CES73 = 67 | CES98 = 81 |
| CES24 = 90 | CES49 = 84 | CES74 = 98 | CES99 = 74 |
| CES25 = 71 | CES50 = 91 | CES75 = 70 | |



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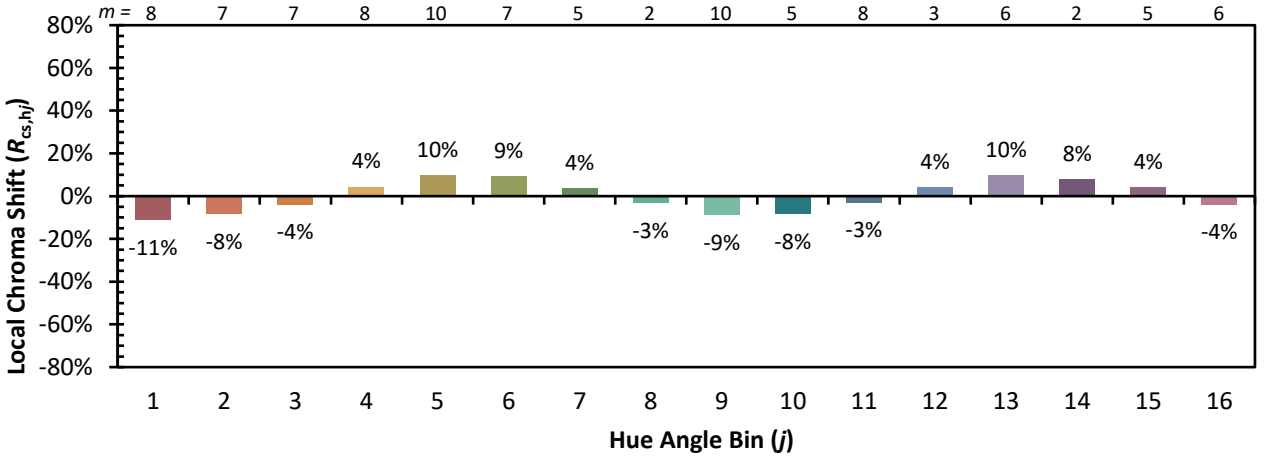
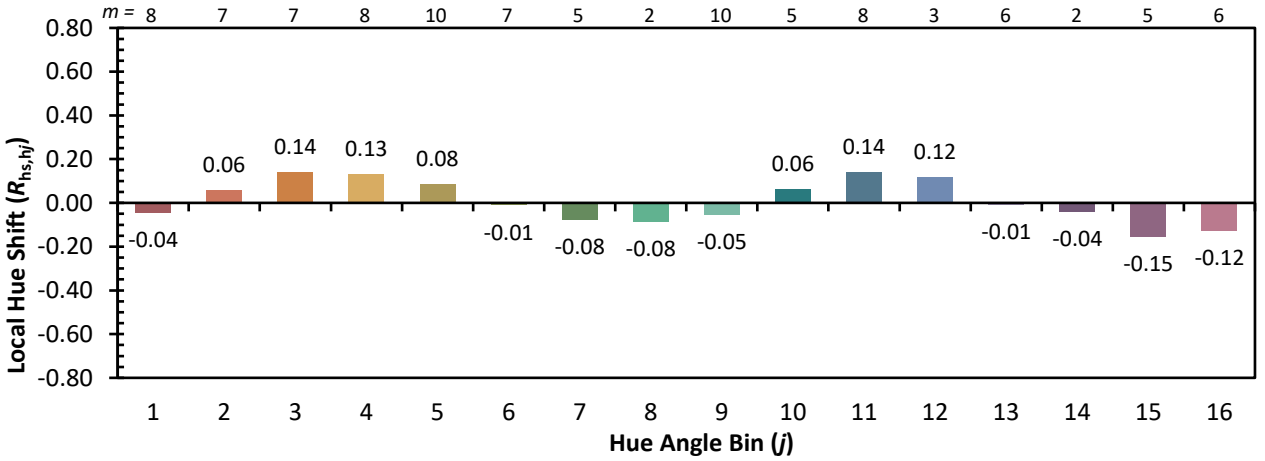
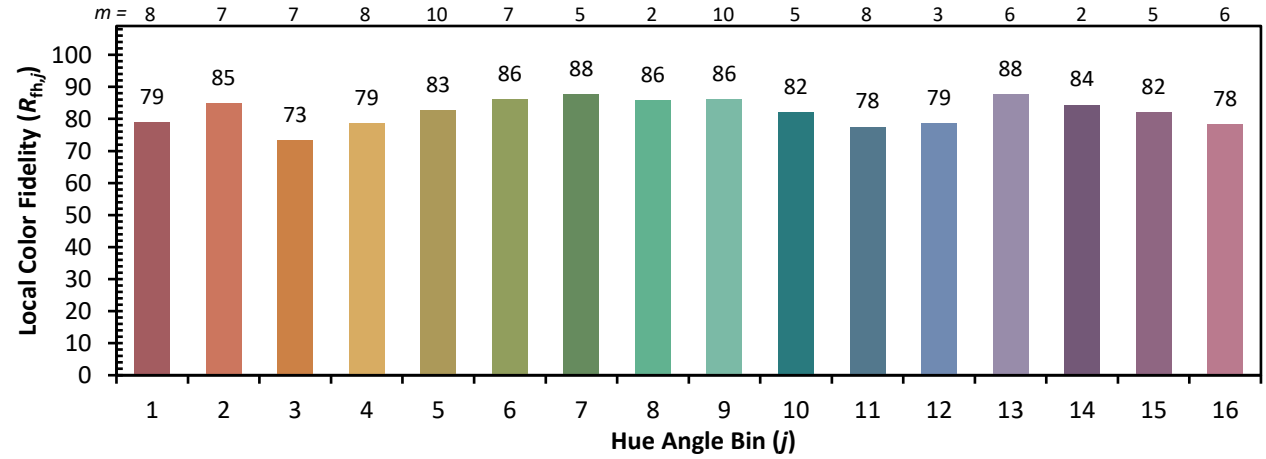
## Color Rendition by Hue-Angle Bin



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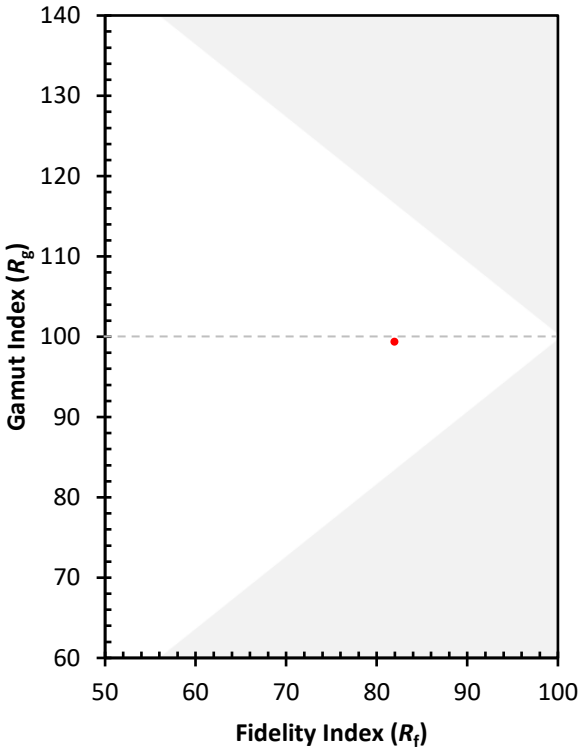
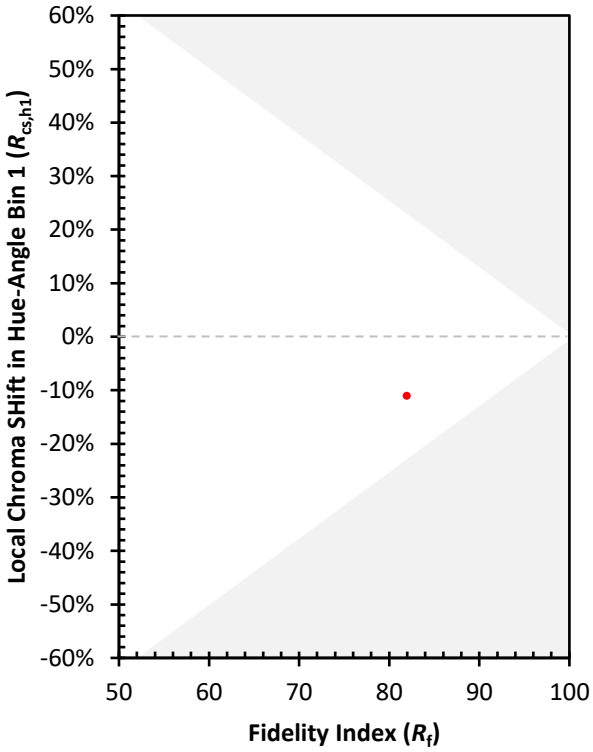
## Measure Comparisons

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