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: McGRAW-EDISON

Report Number: P1201096

Luminaire Tested: GWC-SB1A-727-U-T3-HSS

Issue Date: 10/30/2025

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: | P1201096 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB1A-727-U-T3-HSS |
| Description: | GALLEON WALL LUMINAIRE |
| | (1) 70 CRI, 2700K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3280 lumens |
| Efficiency: | N/A |
| Efficacy: | 106.1 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): | 120.0 |
| Input Current (Ain): | 0.263 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.995 |
| Total Harmonic Distortion (THDi): | 6.356 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

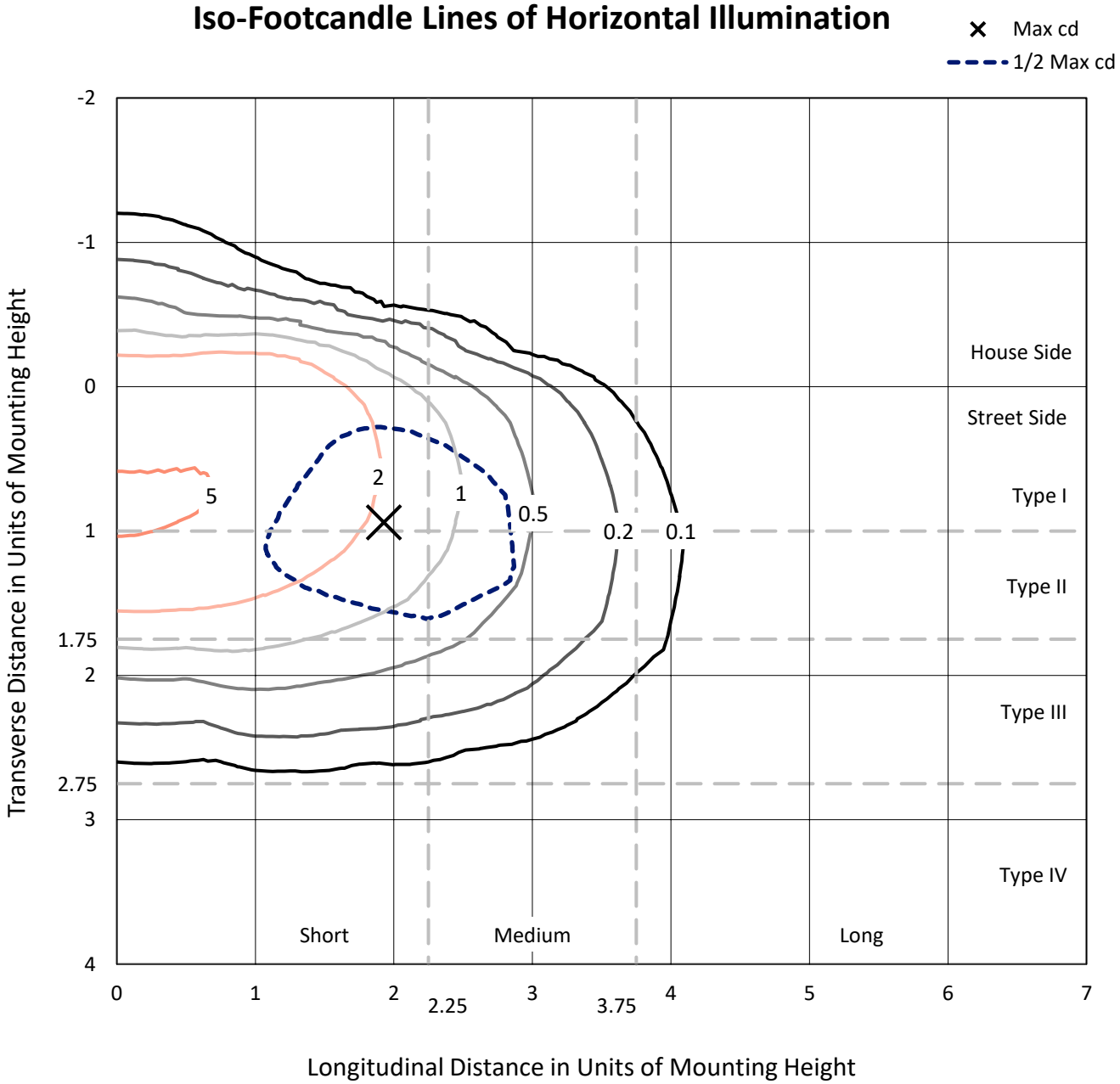


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Scaled Data Report

REPORT NUMBER: P1201096
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## Iso-Footcandle Lines of Horizontal Illumination



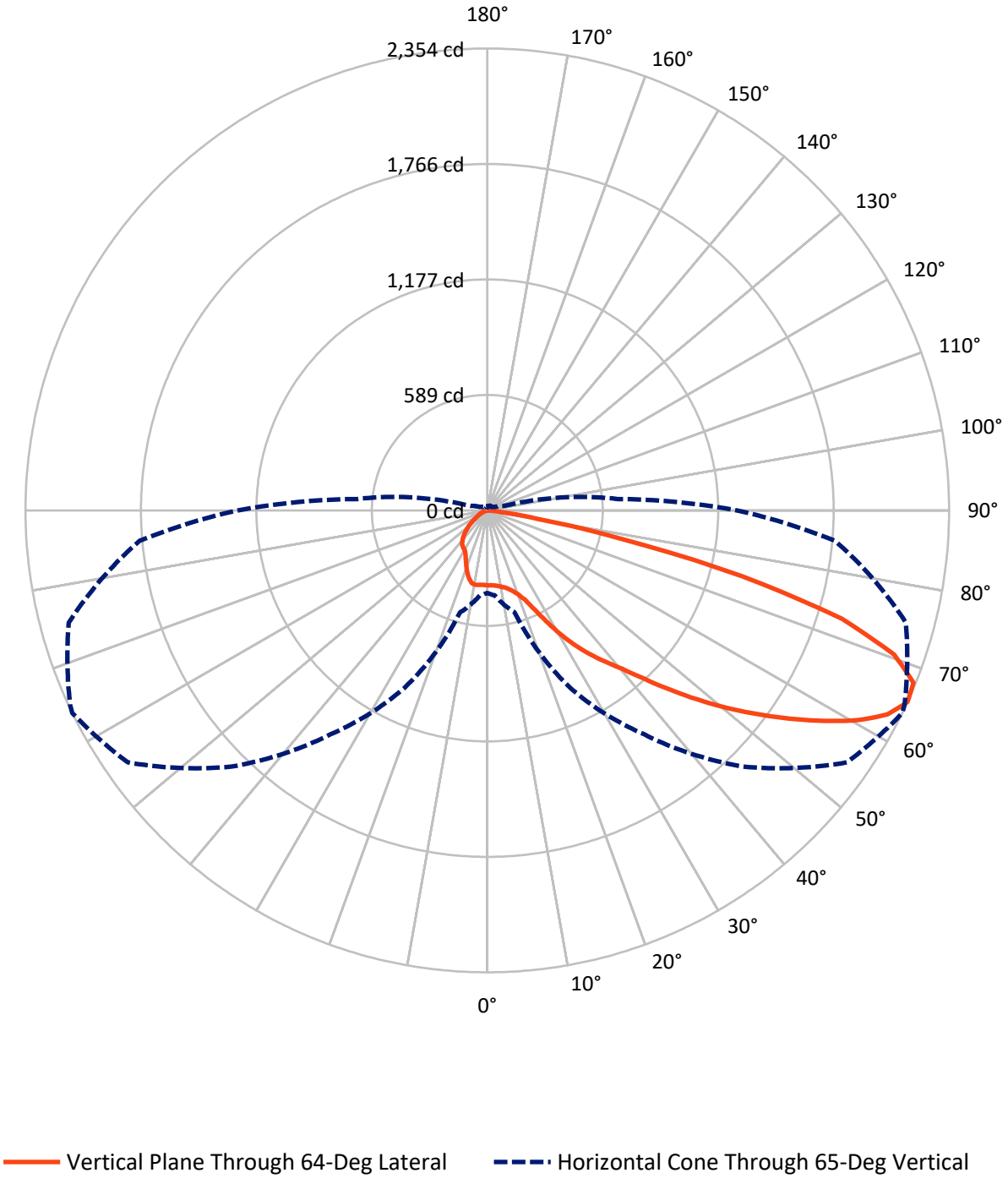

Based on 10 foot mounting height. Maximum calculated value = 6.9 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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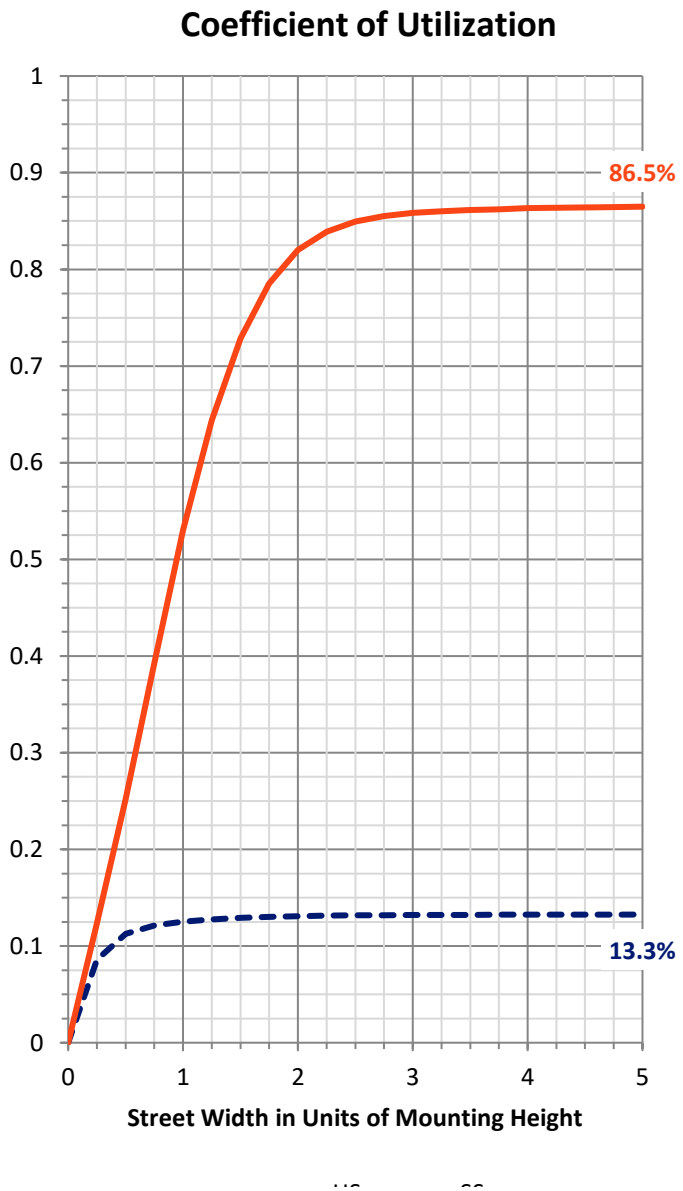
REPORT NUMBER: P1201096
CATALOG NUMBER: GWC-SB1A-727-U-T3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 438.6 | 0.0 | 438.6 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| **Street Side** | Lumens | 2841.4 | 0.0 | 2841.4 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| **Total** | Lumens | 3280.0 | 0.0 | 3280.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 35.2 | 1.1 |
| 10°-20° | 95.5 | 2.9 |
| 20°-30° | 180.9 | 5.5 |
| 30°-40° | 366.0 | 11.2 |
| 40°-50° | 623.6 | 19.0 |
| 50°-60° | 848.0 | 25.9 |
| 60°-70° | 796.3 | 24.3 |
| 70°-80° | 319.0 | 9.7 |
| 80°-90° | 15.5 | 0.5 |
| 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° | 3280.0 | 100.0 |
| 0°-180° | 3280.0 | 100.0 |



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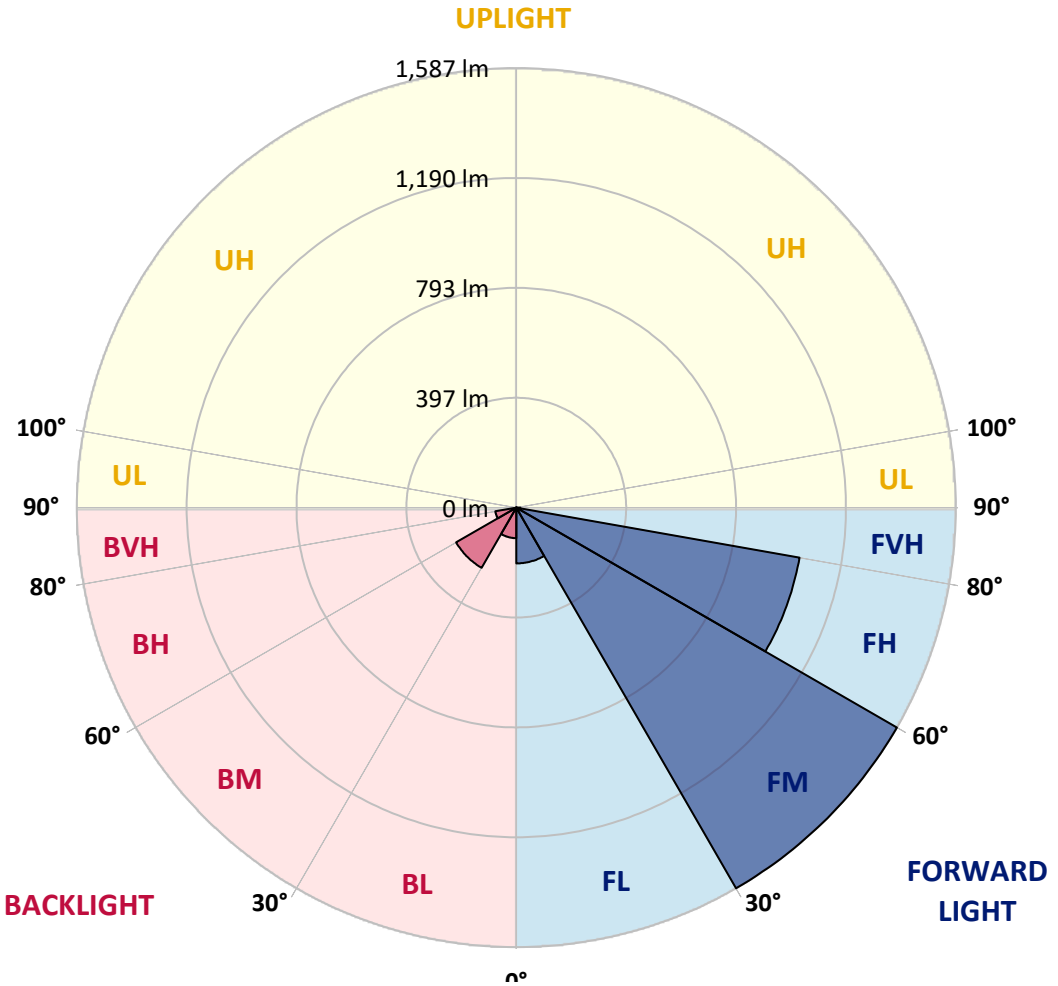
Scaled Data Report

REPORT NUMBER: P1201096
CATALOG NUMBER: GWC-SB1A-727-U-T3-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 201.4 | 6.1 | | | |
| FM | (30°-60°) | 1586.9 | 48.4 | | | |
| FH | (60°-80°) | 1038.4 | 31.7 | | | G1/1800 |
| FVH | (80°-90°) | 14.7 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 110.1 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 250.8 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 77.0 | 2.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 0.8 | 0.0 | | | 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 Short



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REPORT NUMBER: P1201096
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | *381.5* | 381.5 | 381.5 | 381.5 |
| 2.5° | 380.2 | 382.8 | 382.2 | 381.5 | 381.3 | 381.7 | 381.9 | *381.7* | 381.7 | 381.7 | 381.9 |
| 5° | 372.9 | 375.1 | 375.1 | 376.7 | 378.9 | 381.5 | 383.5 | *383.9* | 384.4 | 385.0 | 384.8 |
| 7.5° | 359.1 | 360.8 | 362.1 | 367.2 | 372.7 | 379.7 | 385.7 | *388.8* | 389.2 | 391.6 | 392.5 |
| 10° | 349.6 | 351.8 | 354.0 | 359.3 | 367.2 | 377.8 | 387.9 | *395.4* | 396.5 | 402.2 | 404.8 |
| 12.5° | 349.2 | 351.4 | 354.2 | 359.9 | 369.2 | 380.4 | 392.7 | *403.5* | 405.5 | 413.8 | 419.3 |
| 15° | 353.8 | 356.4 | 359.1 | 366.1 | 376.0 | 389.6 | 402.8 | *416.2* | 418.2 | 430.1 | 436.0 |
| 17.5° | 363.2 | 366.8 | 368.7 | 375.8 | 386.3 | 401.5 | 418.9 | *434.3* | 436.0 | 449.9 | 457.4 |
| 20° | 381.9 | 386.1 | 386.8 | 392.5 | 402.8 | 419.1 | 439.8 | *458.9* | 461.1 | 476.9 | 485.3 |
| 22.5° | 420.6 | 426.6 | 421.3 | 424.2 | 433.4 | 449.7 | 472.1 | *496.3* | 499.4 | 517.4 | 524.9 |
| 25° | 488.8 | 497.2 | 483.5 | 478.7 | 482.6 | 499.6 | 527.7 | *558.3* | 561.8 | 576.3 | 580.1 |
| 27.5° | 622.7 | 611.9 | 591.3 | 571.0 | 559.2 | 568.8 | 600.5 | *638.3* | 642.7 | 656.8 | 652.4 |
| 30° | 769.8 | 760.4 | 732.4 | 687.6 | 659.4 | 657.9 | 687.1 | *729.4* | 734.4 | 747.8 | 734.4 |
| 32.5° | 917.1 | 908.1 | 877.8 | 822.6 | 773.8 | 749.6 | 769.8 | *816.6* | 819.3 | 827.9 | 808.1 |
| 35° | 1062.0 | 1052.8 | 1022.5 | 965.9 | 905.9 | 850.9 | 847.0 | *899.8* | 900.6 | 909.7 | 880.2 |
| 37.5° | 1207.8 | 1200.1 | 1167.8 | 1112.4 | 1053.2 | 977.4 | 940.7 | *978.5* | 979.6 | 988.4 | 957.8 |
| 40° | 1311.8 | 1315.1 | 1292.9 | 1250.0 | 1199.2 | 1116.3 | 1045.8 | *1062.3* | 1055.7 | 1070.4 | 1052.1 |
| 42.5° | 1401.1 | 1407.7 | 1388.3 | 1366.8 | 1337.3 | 1264.3 | 1175.9 | *1173.1* | 1162.5 | 1170.4 | 1151.5 |
| 45° | 1478.3 | 1483.8 | 1466.4 | 1461.3 | 1460.7 | 1409.5 | 1318.2 | *1301.1* | 1286.3 | 1284.8 | 1262.1 |
| 47.5° | 1506.6 | 1517.2 | 1524.7 | 1541.6 | 1574.6 | 1553.0 | 1465.3 | *1438.7* | 1422.2 | 1410.1 | 1374.3 |
| 50° | 1517.4 | 1528.6 | 1554.1 | 1603.4 | 1681.4 | 1690.7 | 1611.7 | *1581.8* | 1561.6 | 1539.6 | 1486.9 |
| 52.5° | 1502.9 | 1522.9 | 1557.2 | 1640.1 | 1753.4 | 1801.1 | 1752.3 | *1726.1* | 1703.0 | 1667.2 | 1588.9 |
| 55° | 1417.4 | 1437.4 | 1507.5 | 1639.7 | 1789.2 | 1878.5 | 1885.1 | *1873.4* | 1847.5 | 1791.0 | 1671.3 |
| 57.5° | 1237.1 | 1266.7 | 1377.8 | 1583.8 | 1788.5 | 1945.1 | 2015.2 | *2023.6* | 1994.6 | 1913.6 | 1736.2 |
| 60° | 987.3 | 1027.5 | 1163.0 | 1460.0 | 1733.3 | 1981.2 | 2129.4 | *2171.1* | 2140.3 | 2034.6 | 1788.8 |
| 62.5° | 688.9 | 735.5 | 863.7 | 1266.1 | 1607.1 | 1955.2 | 2212.7 | *2289.9* | 2266.6 | 2142.8 | 1809.0 |
| 65° | *420.2* | *435.1* | *538.5* | *996.3* | *1392.5* | *1846.6* | *2238.4* | *2354.1* | *2346.4* | *2209.0* | *1779.1* |
| 67.5° | 279.9 | 292.4 | 322.1 | 683.2 | 1080.9 | 1629.6 | 2176.8 | *2342.9* | 2345.1 | 2198.2 | 1669.6 |
| 70° | 168.7 | 179.4 | 198.8 | 397.3 | 700.5 | 1289.8 | 1986.2 | *2199.9* | 2212.7 | 2054.2 | 1462.0 |
| 72.5° | 69.5 | 76.7 | 94.3 | 180.1 | 362.8 | 818.6 | 1581.6 | *1888.8* | 1918.5 | 1727.2 | 1122.1 |
| 75° | 39.4 | 43.1 | 55.4 | 90.4 | 157.4 | 381.5 | 958.0 | *1340.9* | 1384.6 | 1190.4 | 675.0 |
| 77.5° | 26.2 | 27.9 | 35.8 | 58.5 | 88.6 | 130.2 | 409.4 | *698.6* | 782.1 | 650.2 | 292.2 |
| 80° | 17.6 | 19.1 | 24.6 | 39.1 | 57.6 | 55.9 | 130.4 | *258.8* | 318.4 | 223.4 | 71.2 |
| 82.5° | 11.9 | 12.1 | 17.6 | 25.7 | 36.5 | 27.0 | 38.5 | *80.5* | 101.1 | 64.6 | 27.0 |
| 85° | 6.8 | 6.6 | 13.0 | 15.0 | 16.3 | 11.2 | 11.7 | *24.2* | 31.7 | 27.3 | 15.4 |
| 87.5° | 0.9 | 1.3 | 5.1 | 4.0 | 2.2 | 2.4 | 2.4 | *4.2* | 6.2 | 6.6 | 3.3 |
| 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: P1201096
CATALOG NUMBER: GWC-SB1A-727-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 | 381.5 |
| 2.5° | 381.9 | 381.7 | 381.1 | 380.4 | 378.9 | 378.0 | 378.4 | 378.0 | 377.8 | 378.0 | 378.9 |
| 5° | 384.8 | 384.1 | 382.4 | 380.2 | 377.1 | 373.4 | 370.9 | 367.4 | 364.1 | 362.1 | 362.6 |
| 7.5° | 392.5 | 391.8 | 389.4 | 383.3 | 373.4 | 357.8 | 343.5 | 330.9 | 321.5 | 316.0 | 316.2 |
| 10° | 404.8 | 403.7 | 400.0 | 386.3 | 360.4 | 326.3 | 297.9 | 274.4 | 259.0 | 251.8 | 251.1 |
| 12.5° | 419.3 | 418.0 | 411.4 | 383.5 | 335.8 | 282.6 | 243.4 | 217.2 | 203.0 | 196.6 | 195.9 |
| 15° | 436.5 | 434.7 | 421.7 | 369.8 | 299.9 | 234.2 | 198.3 | 178.8 | 169.5 | 163.8 | 164.0 |
| 17.5° | 457.8 | 454.7 | 429.4 | 349.4 | 261.0 | 197.2 | 170.6 | 155.9 | 147.8 | 142.3 | 141.8 |
| 20° | 485.5 | 480.4 | 435.6 | 325.0 | 225.2 | 173.9 | 151.9 | 139.6 | 133.5 | 128.6 | 127.8 |
| 22.5° | 524.2 | 516.9 | 443.1 | 298.6 | 199.9 | 157.9 | 138.1 | 129.1 | 124.0 | 118.5 | 117.6 |
| 25° | 572.1 | 563.6 | 452.3 | 274.2 | 182.5 | 144.0 | 128.0 | 120.5 | 114.6 | 108.2 | 107.5 |
| 27.5° | 639.2 | 623.8 | 463.3 | 254.2 | 167.6 | 132.2 | 118.7 | 110.4 | 103.6 | 98.3 | 97.2 |
| 30° | 714.0 | 688.7 | 473.0 | 242.1 | 153.9 | 121.2 | 106.6 | 98.3 | 91.9 | 88.2 | 87.5 |
| 32.5° | 784.8 | 750.5 | 479.3 | 236.8 | 141.6 | 108.6 | 93.5 | 84.4 | 79.6 | 78.5 | 79.2 |
| 35° | 851.6 | 806.3 | 478.7 | 231.8 | 130.6 | 96.1 | 80.5 | 71.2 | 67.5 | 68.2 | 68.2 |
| 37.5° | 928.6 | 865.9 | 474.1 | 223.8 | 121.6 | 84.7 | 69.3 | 61.1 | 57.8 | 58.0 | 58.9 |
| 40° | 1018.1 | 934.7 | 471.2 | 208.9 | 111.7 | 74.1 | 60.0 | 53.4 | 51.0 | 50.1 | 49.9 |
| 42.5° | 1113.5 | 1001.3 | 471.7 | 192.0 | 99.4 | 64.6 | 53.7 | 48.2 | 46.0 | 45.3 | 45.1 |
| 45° | 1209.4 | 1064.9 | 472.3 | 174.4 | 86.4 | 57.4 | 49.0 | 44.4 | 43.1 | 42.2 | 42.2 |
| 47.5° | 1299.5 | 1119.0 | 460.0 | 155.5 | 73.7 | 51.9 | 45.3 | 42.2 | 41.1 | 40.0 | 40.0 |
| 50° | 1383.5 | 1155.0 | 430.3 | 133.5 | 63.5 | 47.5 | 42.4 | 40.2 | 39.1 | 38.0 | 38.0 |
| 52.5° | 1448.8 | 1160.8 | 381.3 | 110.8 | 56.5 | 44.2 | 40.7 | 38.7 | 37.4 | 36.3 | 36.1 |
| 55° | 1477.8 | 1124.9 | 311.6 | 89.7 | 51.0 | 41.3 | 38.9 | 36.9 | 35.4 | 34.3 | 34.1 |
| 57.5° | 1470.4 | 1049.5 | 243.0 | 72.1 | 45.7 | 38.5 | 36.7 | 35.4 | 33.6 | 31.9 | 31.7 |
| 60° | 1433.6 | 948.6 | 183.2 | 60.0 | 40.9 | 35.4 | 34.3 | 33.2 | 30.8 | 28.1 | 27.7 |
| 62.5° | 1370.1 | 821.7 | 130.6 | 49.7 | 35.6 | 31.9 | 31.4 | 30.6 | 27.0 | 22.2 | 21.8 |
| 65° | *1272.9* | *667.6* | *88.0* | *41.3* | *30.6* | *27.9* | *28.1* | *26.6* | *22.0* | *16.5* | *16.1* |
| 67.5° | 1130.9 | 488.1 | 56.3 | 33.9 | 25.5 | 23.3 | 23.5 | 22.6 | 18.7 | 14.1 | 13.4 |
| 70° | 949.9 | 323.2 | 36.7 | 25.7 | 20.4 | 18.0 | 19.3 | 19.6 | 15.8 | 11.4 | 11.0 |
| 72.5° | 696.4 | 190.9 | 25.7 | 19.1 | 15.0 | 12.5 | 15.8 | 16.3 | 12.8 | 8.6 | 8.1 |
| 75° | 396.9 | 90.6 | 19.3 | 13.9 | 9.2 | 8.8 | 12.3 | 12.3 | 8.8 | 5.7 | 5.3 |
| 77.5° | 166.7 | 37.8 | 13.6 | 9.0 | 5.3 | 5.1 | 8.4 | 7.7 | 4.4 | 2.6 | 2.6 |
| 80° | 48.2 | 16.9 | 7.3 | 4.4 | 2.2 | 2.0 | 3.3 | 2.4 | 1.1 | 0.4 | 0.4 |
| 82.5° | 18.9 | 7.5 | 2.9 | 1.8 | 0.9 | 0.9 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 11.2 | 3.1 | 1.3 | 0.7 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.9 | 0.7 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |


HS
SS

0

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1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-1-R4

Test Date: 08/20/2019

Luminaire Tested: SA1C-727-U-5WQ

Data in this report applies to products using SA and SB light squares

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

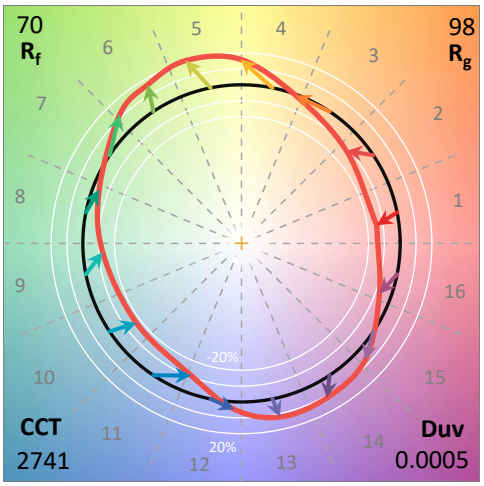
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-1-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-727-U-5WQ** |
| Description: | McGRAW EDISON ROADWAY AND AREA LUMINAIRE |

***THIS IS A REVISION OF SP1-1908-441-1-R3. TO UPDATE THE CATALOG NUMBER.***TESTED IN SITU. (1) 70 CRI, 2700K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 2741 | CRI (Ra): | 71.5 | | |
| CIE u': | 0.2605 | R1: | 69.2 | R9: | -16.1 |
| CIE v': | 0.5272 | R2: | 79.4 | R10: | 51.4 |
| Duv: | 0.0005 | R3: | 87.8 | R11: | 63.1 |
| CIE x: | 0.4573 | R4: | 69.4 | R12: | 42.0 |
| CIE y: | 0.4113 | R5: | 66.4 | R13: | 70.2 |
| CIE z: | 0.1313 | R6: | 69.8 | R14: | 92.4 |
| Peak Wavelength (nm): | 602 | R7: | 79.8 | | |
| Dominant Wavelength (nm): | 583 | R8: | 50.1 | | |
| Purity: | 61.2 | | | | |

| | |
|---|---|
| Rf: | 69.9 |
| Rg: | 98.3 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 56M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 25.3./42% |
| Sphere Temperature (°C): | 25.7 |

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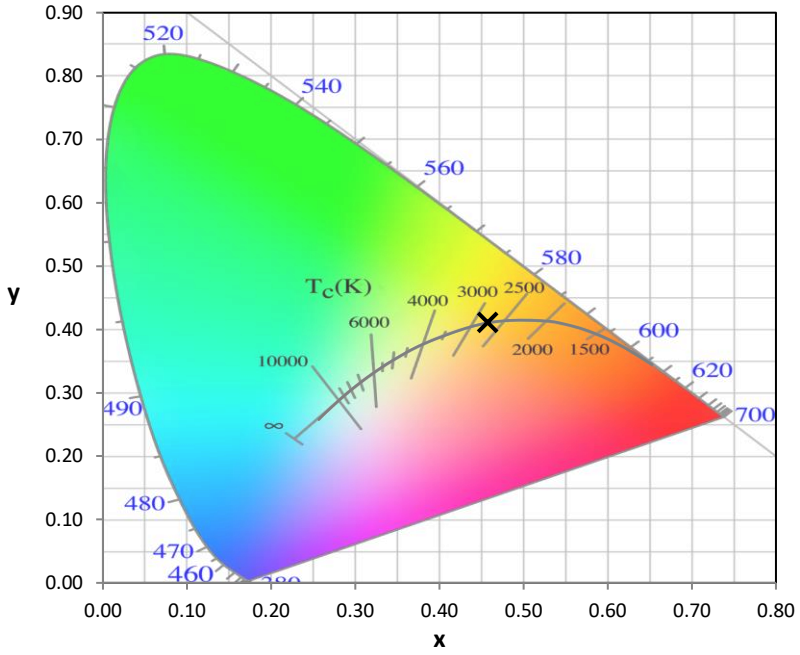
REPORT NUMBER: SP1-1908-441-1-R4

| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

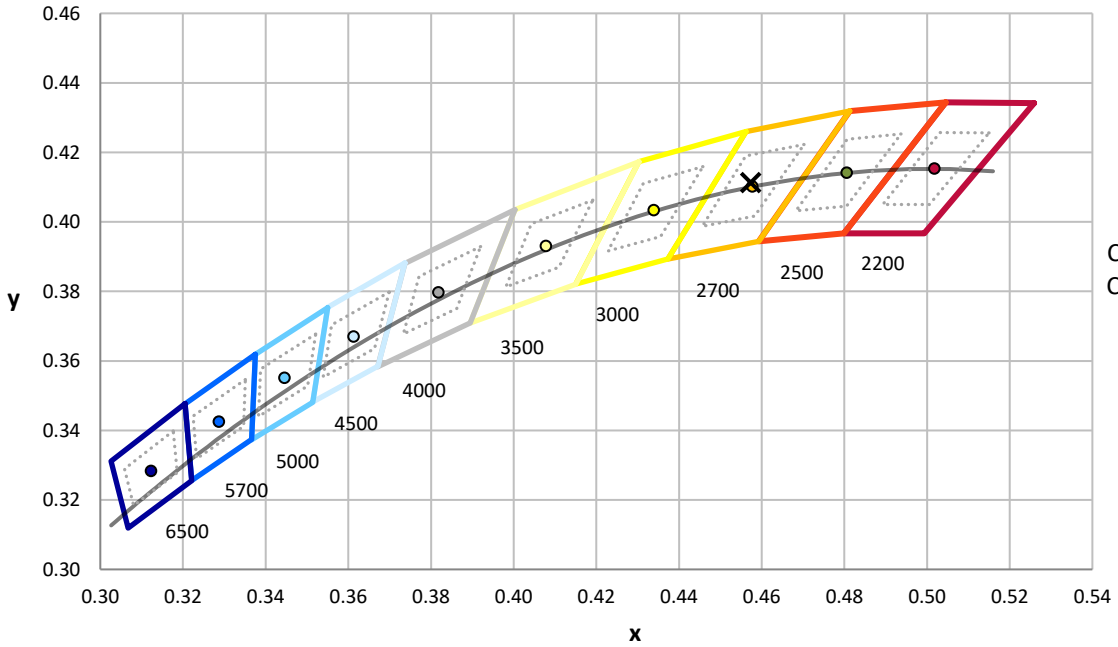
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Peachtree City, GA 30269

REPORT NUMBER: SP1-1908-441-1-R4

## CIE 1931 Chromaticity Diagram




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



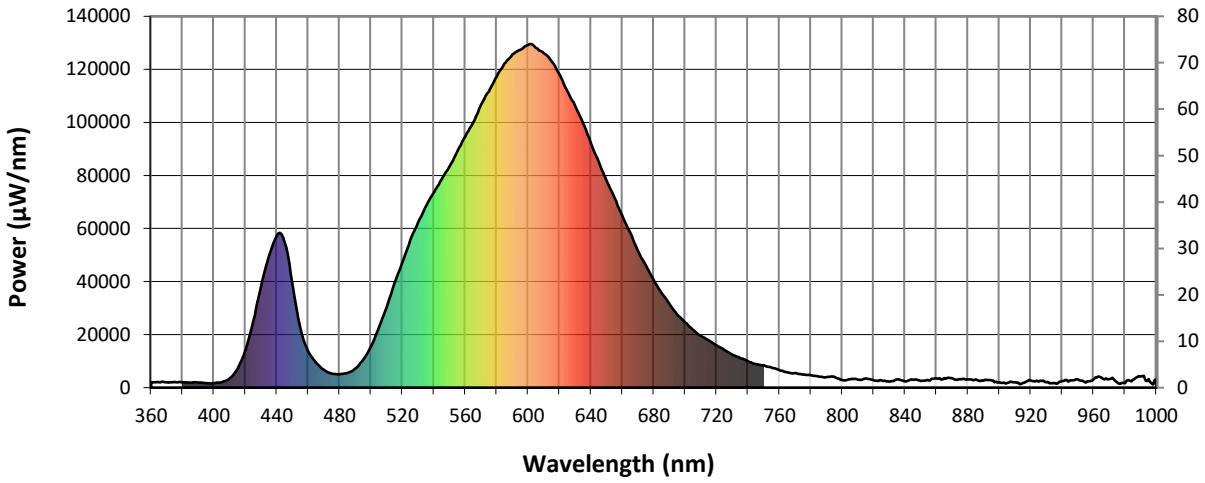

CCT = 2741K
CIE x = 0.4573
CIE y = 0.4113
Duv = 0.0005

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength



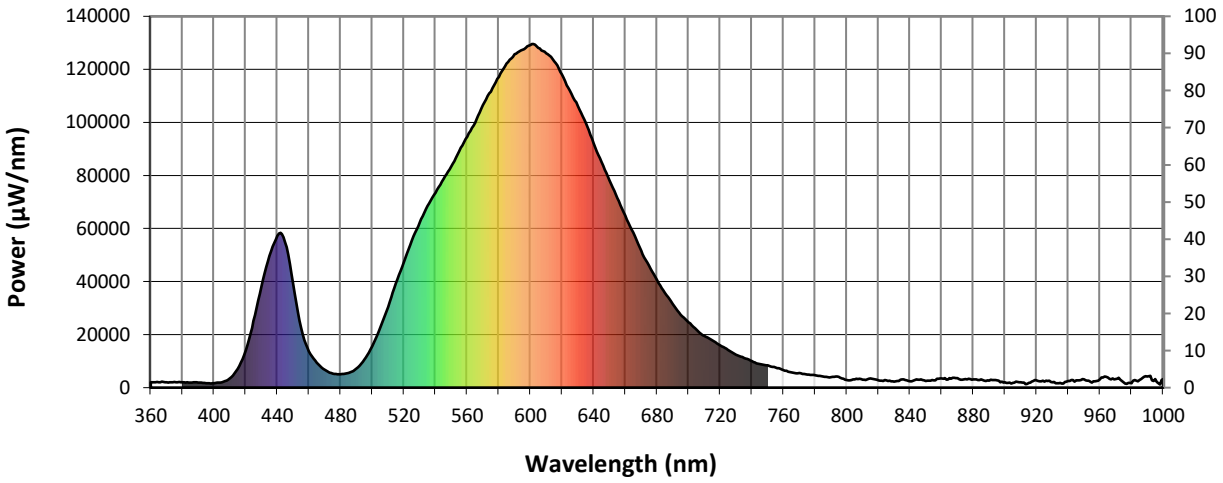

######

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2044 | NR | 490 | 7179 | NR | 620 | 118034 | NR | 750 | 8362 | NR | 880 | 3128 | NR |
| 365 | 2016 | NR | 495 | 10476 | NR | 625 | 111884 | NR | 755 | 7635 | NR | 885 | 3110 | NR |
| 370 | 2020 | NR | 500 | 15549 | NR | 630 | 106119 | NR | 760 | 6582 | NR | 890 | 2632 | NR |
| 375 | 2137 | NR | 505 | 22477 | NR | 635 | 99706 | NR | 765 | 5777 | NR | 895 | 2709 | NR |
| 380 | 2046 | NR | 510 | 30417 | NR | 640 | 92142 | NR | 770 | 5474 | NR | 900 | 2016 | NR |
| 385 | 1925 | NR | 515 | 39274 | NR | 645 | 84987 | NR | 775 | 4977 | NR | 905 | 1748 | NR |
| 390 | 1893 | NR | 520 | 47282 | NR | 650 | 78016 | NR | 780 | 4723 | NR | 910 | 2046 | NR |
| 395 | 1695 | NR | 525 | 55413 | NR | 655 | 71541 | NR | 785 | 4219 | NR | 915 | 1844 | NR |
| 400 | 1633 | NR | 530 | 62377 | NR | 660 | 64863 | NR | 790 | 3969 | NR | 920 | 2734 | NR |
| 405 | 2065 | NR | 535 | 68520 | NR | 665 | 58485 | NR | 795 | 4122 | NR | 925 | 2307 | NR |
| 410 | 3449 | NR | 540 | 73435 | NR | 670 | 51641 | NR | 800 | 2864 | NR | 930 | 2039 | NR |
| 415 | 7117 | NR | 545 | 78677 | NR | 675 | 46030 | NR | 805 | 3151 | NR | 935 | 1784 | NR |
| 420 | 13992 | NR | 550 | 83331 | NR | 680 | 40590 | NR | 810 | 3022 | NR | 940 | 2464 | NR |
| 425 | 25176 | NR | 555 | 89120 | NR | 685 | 35691 | NR | 815 | 3471 | NR | 945 | 2794 | NR |
| 430 | 38151 | NR | 560 | 94613 | NR | 690 | 31631 | NR | 820 | 2749 | NR | 950 | 3090 | NR |
| 435 | 49673 | NR | 565 | 99818 | NR | 695 | 27437 | NR | 825 | 2729 | NR | 955 | 1866 | NR |
| 440 | 57273 | NR | 570 | 106526 | NR | 700 | 24589 | NR | 830 | 2282 | NR | 960 | 3110 | NR |
| 445 | 54802 | NR | 575 | 111610 | NR | 705 | 21832 | NR | 835 | 3140 | NR | 965 | 3880 | NR |
| 450 | 39184 | NR | 580 | 117163 | NR | 710 | 19500 | NR | 840 | 2365 | NR | 970 | 3243 | NR |
| 455 | 22506 | NR | 585 | 122201 | NR | 715 | 17870 | NR | 845 | 3024 | NR | 975 | 2014 | NR |
| 460 | 13692 | NR | 590 | 125662 | NR | 720 | 15924 | NR | 850 | 2510 | NR | 980 | 1688 | NR |
| 465 | 9446 | NR | 595 | 127415 | NR | 725 | 14268 | NR | 855 | 2739 | NR | 985 | 2827 | NR |
| 470 | 6698 | NR | 600 | 129155 | NR | 730 | 12438 | NR | 860 | 3515 | NR | 990 | 4172 | NR |
| 475 | 5328 | NR | 605 | 128057 | NR | 735 | 11255 | NR | 865 | 3600 | NR | 995 | 3177 | NR |
| 480 | 5081 | NR | 610 | 126031 | NR | 740 | 9951 | NR | 870 | 3609 | NR | 1000 | 3241 | NR |
| 485 | 5579 | NR | 615 | 123059 | NR | 745 | 8870 | NR | 875 | 3208 | NR | | | |

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## Scotopic Flux vs. Wavelength



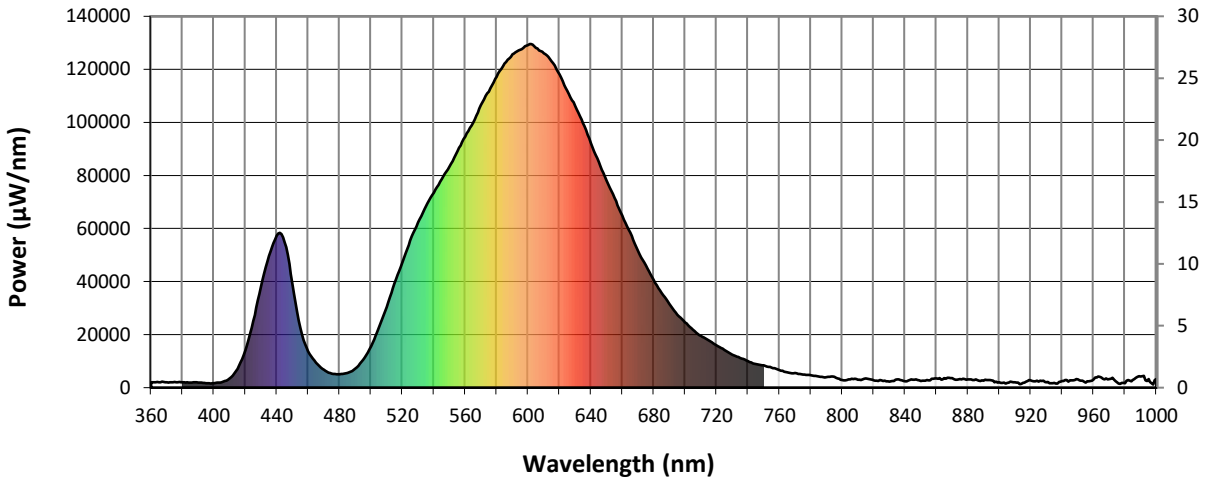

**Scotopic Lumens: 6474.3** **S/P: 1.04**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2044 | NR | 490 | 7179 | NR | 620 | 118034 | NR | 750 | 8362 | NR | 880 | 3128 | NR |
| 365 | 2016 | NR | 495 | 10476 | NR | 625 | 111884 | NR | 755 | 7635 | NR | 885 | 3110 | NR |
| 370 | 2020 | NR | 500 | 15549 | NR | 630 | 106119 | NR | 760 | 6582 | NR | 890 | 2632 | NR |
| 375 | 2137 | NR | 505 | 22477 | NR | 635 | 99706 | NR | 765 | 5777 | NR | 895 | 2709 | NR |
| 380 | 2046 | NR | 510 | 30417 | NR | 640 | 92142 | NR | 770 | 5474 | NR | 900 | 2016 | NR |
| 385 | 1925 | NR | 515 | 39274 | NR | 645 | 84987 | NR | 775 | 4977 | NR | 905 | 1748 | NR |
| 390 | 1893 | NR | 520 | 47282 | NR | 650 | 78016 | NR | 780 | 4723 | NR | 910 | 2046 | NR |
| 395 | 1695 | NR | 525 | 55413 | NR | 655 | 71541 | NR | 785 | 4219 | NR | 915 | 1844 | NR |
| 400 | 1633 | NR | 530 | 62377 | NR | 660 | 64863 | NR | 790 | 3969 | NR | 920 | 2734 | NR |
| 405 | 2065 | NR | 535 | 68520 | NR | 665 | 58485 | NR | 795 | 4122 | NR | 925 | 2307 | NR |
| 410 | 3449 | NR | 540 | 73435 | NR | 670 | 51641 | NR | 800 | 2864 | NR | 930 | 2039 | NR |
| 415 | 7117 | NR | 545 | 78677 | NR | 675 | 46030 | NR | 805 | 3151 | NR | 935 | 1784 | NR |
| 420 | 13992 | NR | 550 | 83331 | NR | 680 | 40590 | NR | 810 | 3022 | NR | 940 | 2464 | NR |
| 425 | 25176 | NR | 555 | 89120 | NR | 685 | 35691 | NR | 815 | 3471 | NR | 945 | 2794 | NR |
| 430 | 38151 | NR | 560 | 94613 | NR | 690 | 31631 | NR | 820 | 2749 | NR | 950 | 3090 | NR |
| 435 | 49673 | NR | 565 | 99818 | NR | 695 | 27437 | NR | 825 | 2729 | NR | 955 | 1866 | NR |
| 440 | 57273 | NR | 570 | 106526 | NR | 700 | 24589 | NR | 830 | 2282 | NR | 960 | 3110 | NR |
| 445 | 54802 | NR | 575 | 111610 | NR | 705 | 21832 | NR | 835 | 3140 | NR | 965 | 3880 | NR |
| 450 | 39184 | NR | 580 | 117163 | NR | 710 | 19500 | NR | 840 | 2365 | NR | 970 | 3243 | NR |
| 455 | 22506 | NR | 585 | 122201 | NR | 715 | 17870 | NR | 845 | 3024 | NR | 975 | 2014 | NR |
| 460 | 13692 | NR | 590 | 125662 | NR | 720 | 15924 | NR | 850 | 2510 | NR | 980 | 1688 | NR |
| 465 | 9446 | NR | 595 | 127415 | NR | 725 | 14268 | NR | 855 | 2739 | NR | 985 | 2827 | NR |
| 470 | 6698 | NR | 600 | 129155 | NR | 730 | 12438 | NR | 860 | 3515 | NR | 990 | 4172 | NR |
| 475 | 5328 | NR | 605 | 128057 | NR | 735 | 11255 | NR | 865 | 3600 | NR | 995 | 3177 | NR |
| 480 | 5081 | NR | 610 | 126031 | NR | 740 | 9951 | NR | 870 | 3609 | NR | 1000 | 3241 | NR |
| 485 | 5579 | NR | 615 | 123059 | NR | 745 | 8870 | NR | 875 | 3208 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 2145.7** **M/P: 0.35**

| λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) | λ (nm) | Power (µW/nm) | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 2044 | NR | 490 | 7179 | NR | 620 | 118034 | NR | 750 | 8362 | NR | 880 | 3128 | NR |
| 365 | 2016 | NR | 495 | 10476 | NR | 625 | 111884 | NR | 755 | 7635 | NR | 885 | 3110 | NR |
| 370 | 2020 | NR | 500 | 15549 | NR | 630 | 106119 | NR | 760 | 6582 | NR | 890 | 2632 | NR |
| 375 | 2137 | NR | 505 | 22477 | NR | 635 | 99706 | NR | 765 | 5777 | NR | 895 | 2709 | NR |
| 380 | 2046 | NR | 510 | 30417 | NR | 640 | 92142 | NR | 770 | 5474 | NR | 900 | 2016 | NR |
| 385 | 1925 | NR | 515 | 39274 | NR | 645 | 84987 | NR | 775 | 4977 | NR | 905 | 1748 | NR |
| 390 | 1893 | NR | 520 | 47282 | NR | 650 | 78016 | NR | 780 | 4723 | NR | 910 | 2046 | NR |
| 395 | 1695 | NR | 525 | 55413 | NR | 655 | 71541 | NR | 785 | 4219 | NR | 915 | 1844 | NR |
| 400 | 1633 | NR | 530 | 62377 | NR | 660 | 64863 | NR | 790 | 3969 | NR | 920 | 2734 | NR |
| 405 | 2065 | NR | 535 | 68520 | NR | 665 | 58485 | NR | 795 | 4122 | NR | 925 | 2307 | NR |
| 410 | 3449 | NR | 540 | 73435 | NR | 670 | 51641 | NR | 800 | 2864 | NR | 930 | 2039 | NR |
| 415 | 7117 | NR | 545 | 78677 | NR | 675 | 46030 | NR | 805 | 3151 | NR | 935 | 1784 | NR |
| 420 | 13992 | NR | 550 | 83331 | NR | 680 | 40590 | NR | 810 | 3022 | NR | 940 | 2464 | NR |
| 425 | 25176 | NR | 555 | 89120 | NR | 685 | 35691 | NR | 815 | 3471 | NR | 945 | 2794 | NR |
| 430 | 38151 | NR | 560 | 94613 | NR | 690 | 31631 | NR | 820 | 2749 | NR | 950 | 3090 | NR |
| 435 | 49673 | NR | 565 | 99818 | NR | 695 | 27437 | NR | 825 | 2729 | NR | 955 | 1866 | NR |
| 440 | 57273 | NR | 570 | 106526 | NR | 700 | 24589 | NR | 830 | 2282 | NR | 960 | 3110 | NR |
| 445 | 54802 | NR | 575 | 111610 | NR | 705 | 21832 | NR | 835 | 3140 | NR | 965 | 3880 | NR |
| 450 | 39184 | NR | 580 | 117163 | NR | 710 | 19500 | NR | 840 | 2365 | NR | 970 | 3243 | NR |
| 455 | 22506 | NR | 585 | 122201 | NR | 715 | 17870 | NR | 845 | 3024 | NR | 975 | 2014 | NR |
| 460 | 13692 | NR | 590 | 125662 | NR | 720 | 15924 | NR | 850 | 2510 | NR | 980 | 1688 | NR |
| 465 | 9446 | NR | 595 | 127415 | NR | 725 | 14268 | NR | 855 | 2739 | NR | 985 | 2827 | NR |
| 470 | 6698 | NR | 600 | 129155 | NR | 730 | 12438 | NR | 860 | 3515 | NR | 990 | 4172 | NR |
| 475 | 5328 | NR | 605 | 128057 | NR | 735 | 11255 | NR | 865 | 3600 | NR | 995 | 3177 | NR |
| 480 | 5081 | NR | 610 | 126031 | NR | 740 | 9951 | NR | 870 | 3609 | NR | 1000 | 3241 | NR |
| 485 | 5579 | NR | 615 | 123059 | NR | 745 | 8870 | NR | 875 | 3208 | NR | | | |

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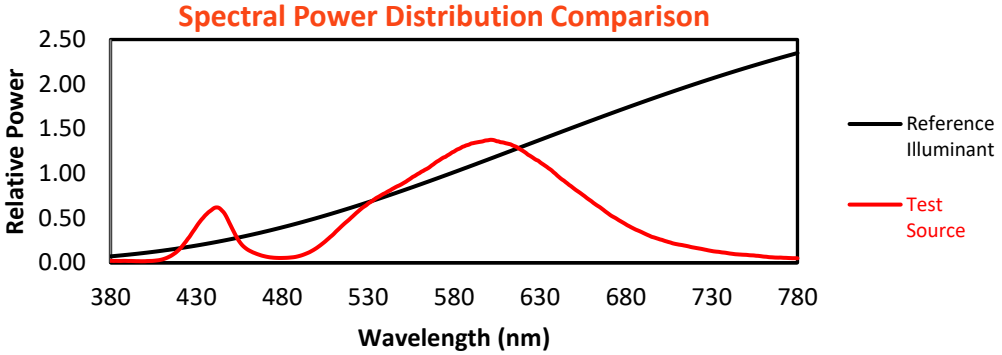
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# TM-30-18

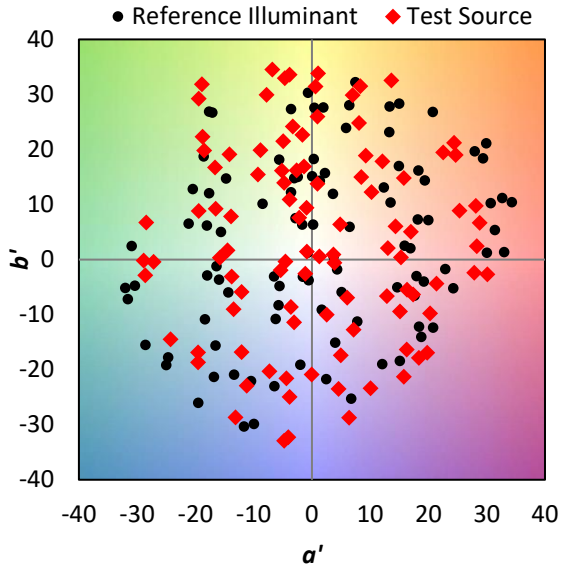
## Summary

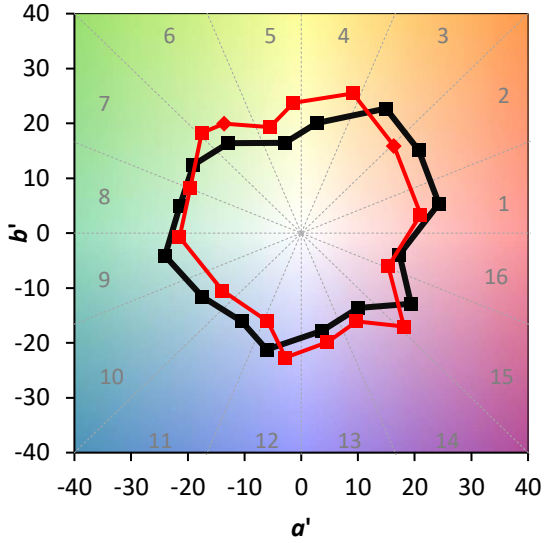
$R_f$ = 69.9
$R_g$ = 98.3
CIE $R_a$ = 71.5
$R_9$ = -16.1

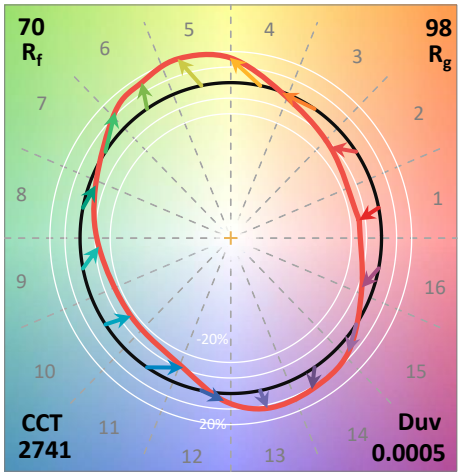
## Spectral Power Distribution Comparison

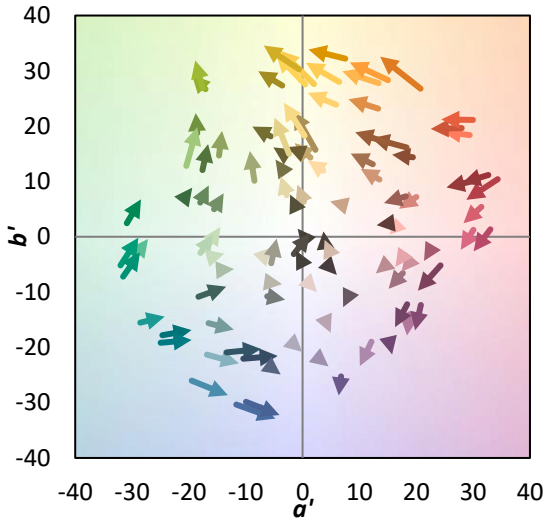



## Color Vector Graphics



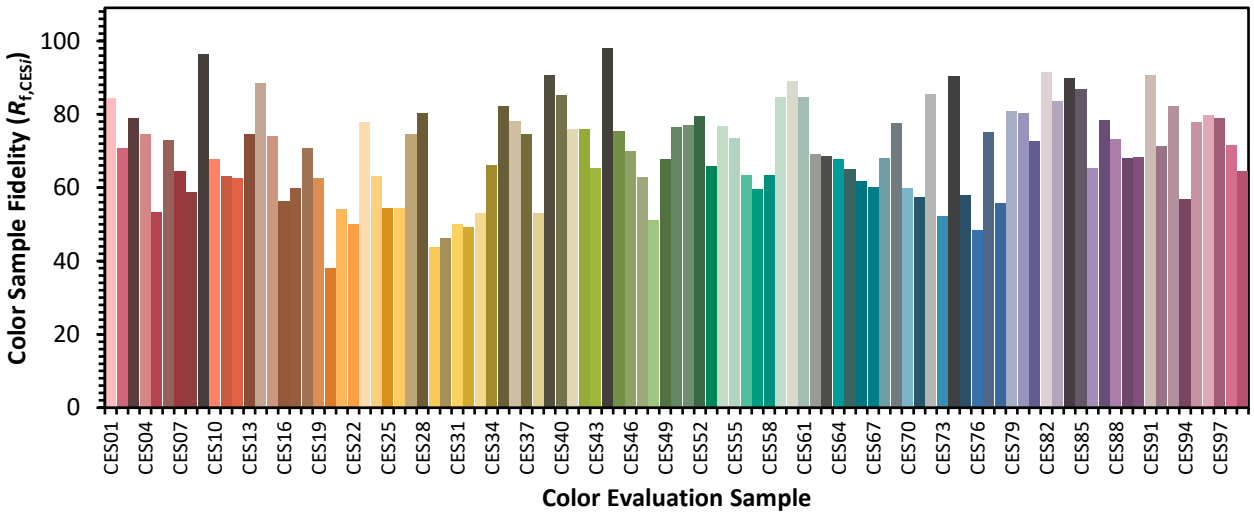
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Peachtree City, GA 30269

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 54 | CES51 = 77 | CES76 = 48 |
| CES02 = 63 | CES27 = 74 | CES52 = 80 | CES77 = 75 |
| CES03 = 31 | CES28 = 80 | CES53 = 66 | CES78 = 56 |
| CES04 = 71 | CES29 = 44 | CES54 = 77 | CES79 = 81 |
| CES05 = 50 | CES30 = 46 | CES55 = 74 | CES80 = 80 |
| CES06 = 52 | CES31 = 50 | CES56 = 63 | CES81 = 73 |
| CES07 = 42 | CES32 = 49 | CES57 = 60 | CES82 = 91 |
| CES08 = 41 | CES33 = 53 | CES58 = 63 | CES83 = 84 |
| CES09 = 29 | CES34 = 66 | CES59 = 85 | CES84 = 90 |
| CES10 = 77 | CES35 = 82 | CES60 = 89 | CES85 = 87 |
| CES11 = 60 | CES36 = 78 | CES61 = 85 | CES86 = 65 |
| CES12 = 66 | CES37 = 75 | CES62 = 69 | CES87 = 78 |
| CES13 = 43 | CES38 = 53 | CES63 = 68 | CES88 = 73 |
| CES14 = 74 | CES39 = 91 | CES64 = 68 | CES89 = 68 |
| CES15 = 71 | CES40 = 85 | CES65 = 65 | CES90 = 68 |
| CES16 = 48 | CES41 = 76 | CES66 = 62 | CES91 = 91 |
| CES17 = 50 | CES42 = 76 | CES67 = 60 | CES92 = 71 |
| CES18 = 57 | CES43 = 65 | CES68 = 68 | CES93 = 82 |
| CES19 = 73 | CES44 = 98 | CES69 = 77 | CES94 = 57 |
| CES20 = 67 | CES45 = 75 | CES70 = 60 | CES95 = 78 |
| CES21 = 88 | CES46 = 70 | CES71 = 57 | CES96 = 80 |
| CES22 = 80 | CES47 = 63 | CES72 = 86 | CES97 = 79 |
| CES23 = 92 | CES48 = 51 | CES73 = 52 | CES98 = 71 |
| CES24 = 91 | CES49 = 68 | CES74 = 90 | CES99 = 64 |
| CES25 = 73 | CES50 = 77 | CES75 = 58 | |

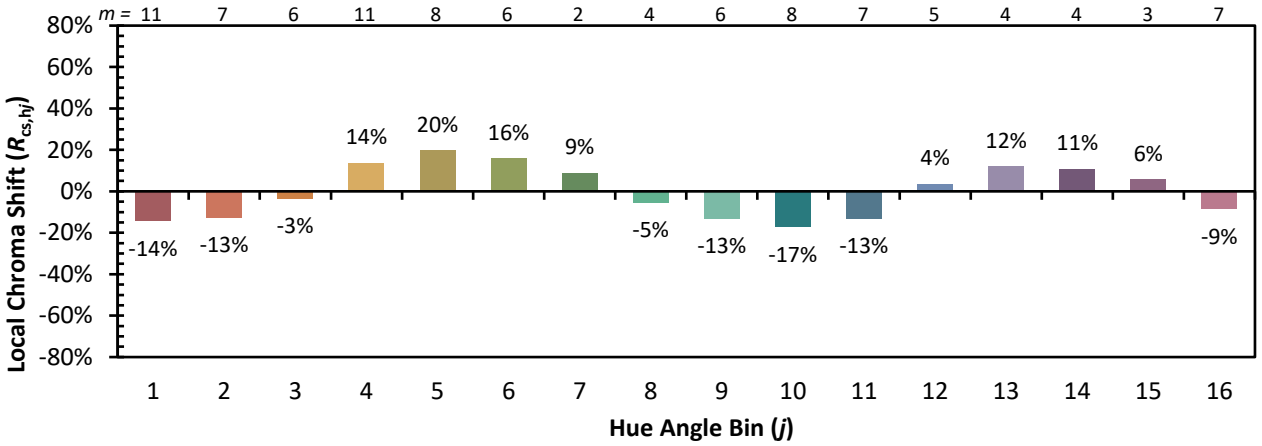


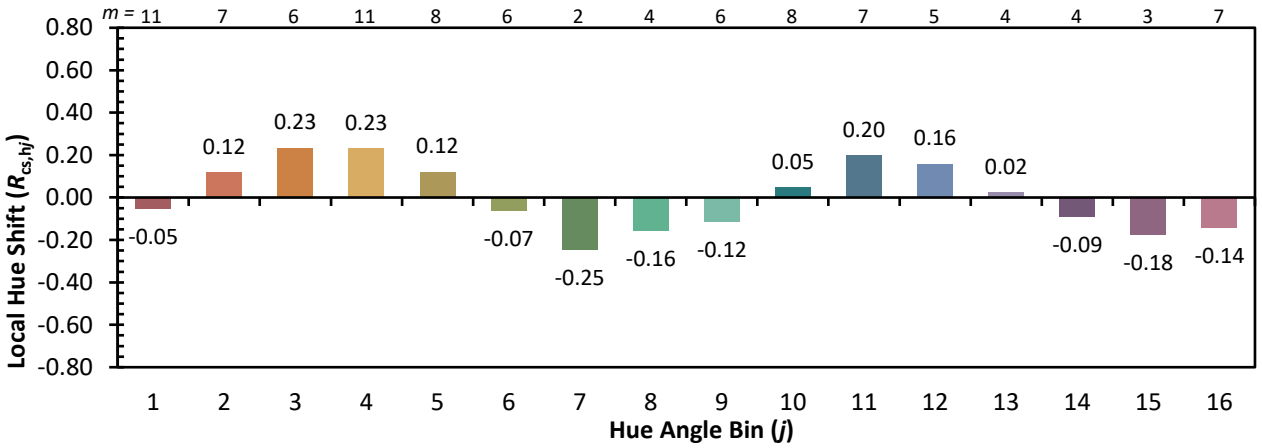
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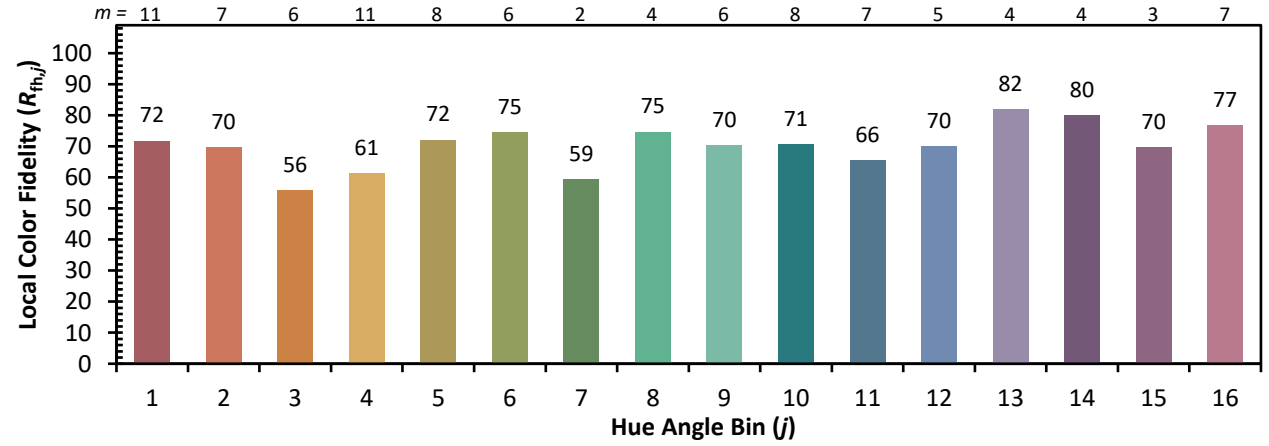
REPORT NUMBER: SP1-1908-441-1-R4

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### Color Rendition by Hue-Angle Bin



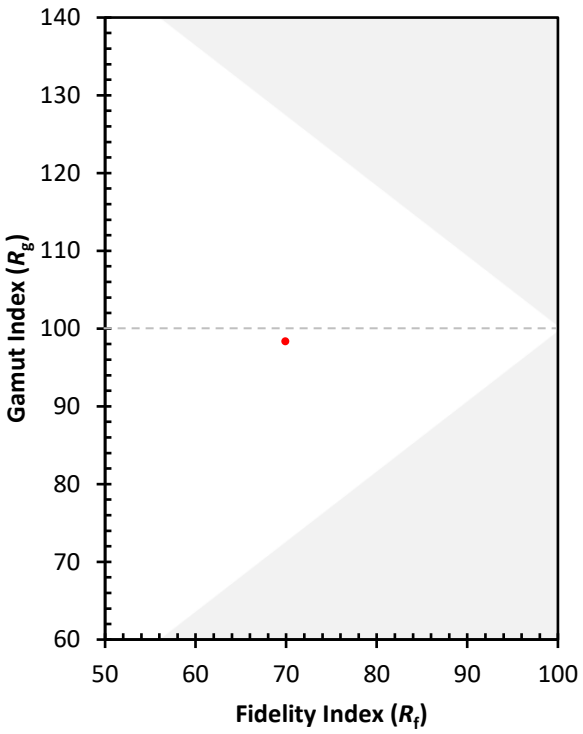



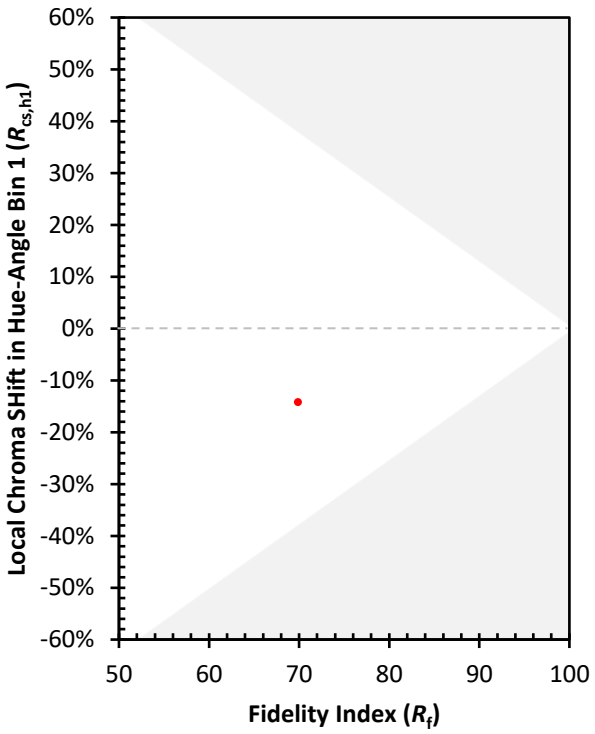
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### Measure Comparisons




(END OF REPORT)