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

Cooper Lighting Solutions Photometric Lab
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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: P1201470

Luminaire Tested: GWC-SB1B-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: | P1201470 |
| | 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-SB1B-727-U-T3-HSS |
| Description: | GALLEON WALL LUMINAIRE |
| | (1) 70 CRI, 2700K, 450mA 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: | 4118 lumens |
| Efficiency: | N/A |
| Efficacy: | 103.5 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): | 39.8 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.33 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.996 |
| Total Harmonic Distortion (THDi): | 5.305 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

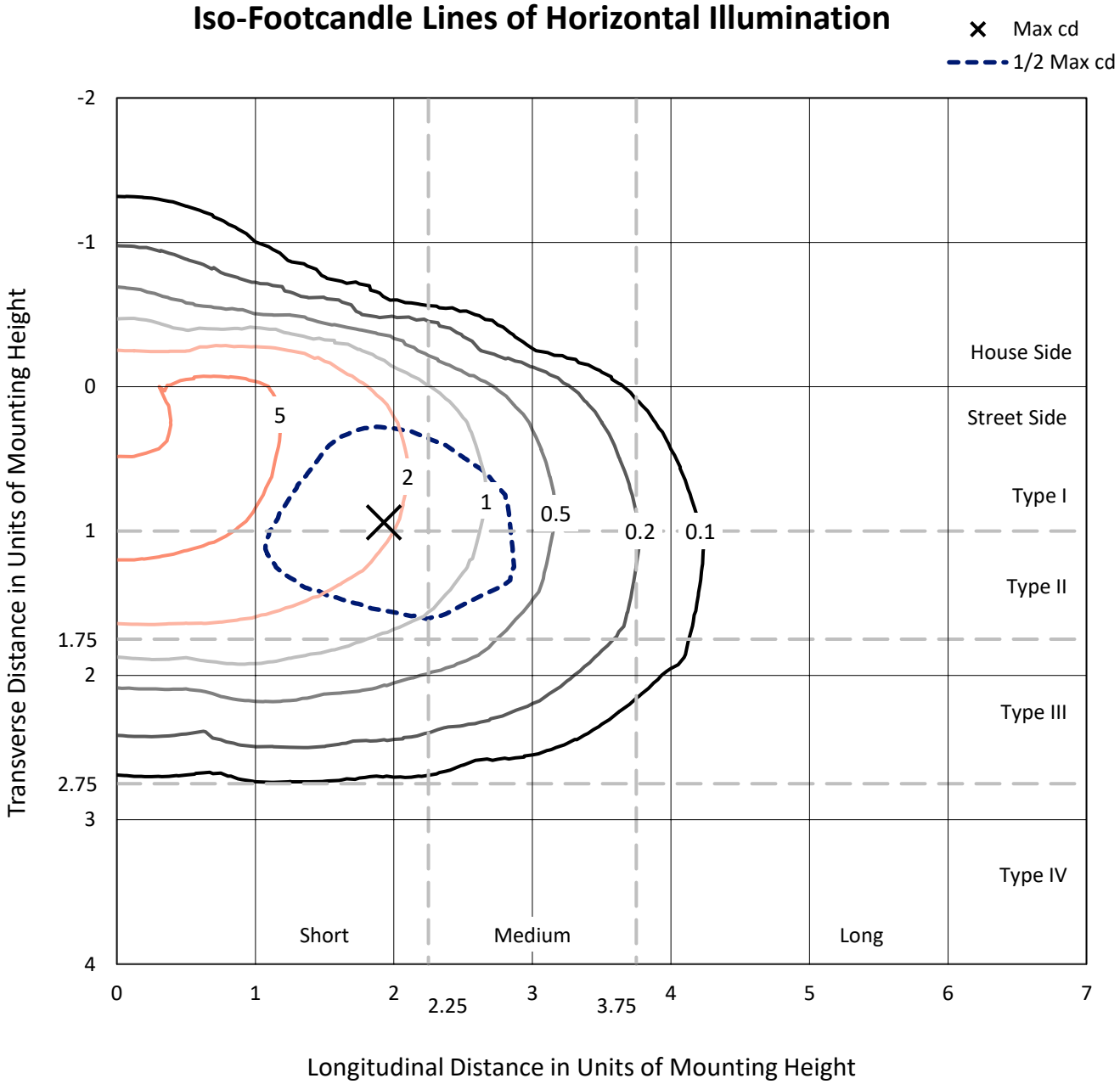


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Scaled Data Report

REPORT NUMBER: P1201470
CATALOG NUMBER: GWC-SB1B-727-U-T3-HSS

## Iso-Footcandle Lines of Horizontal Illumination



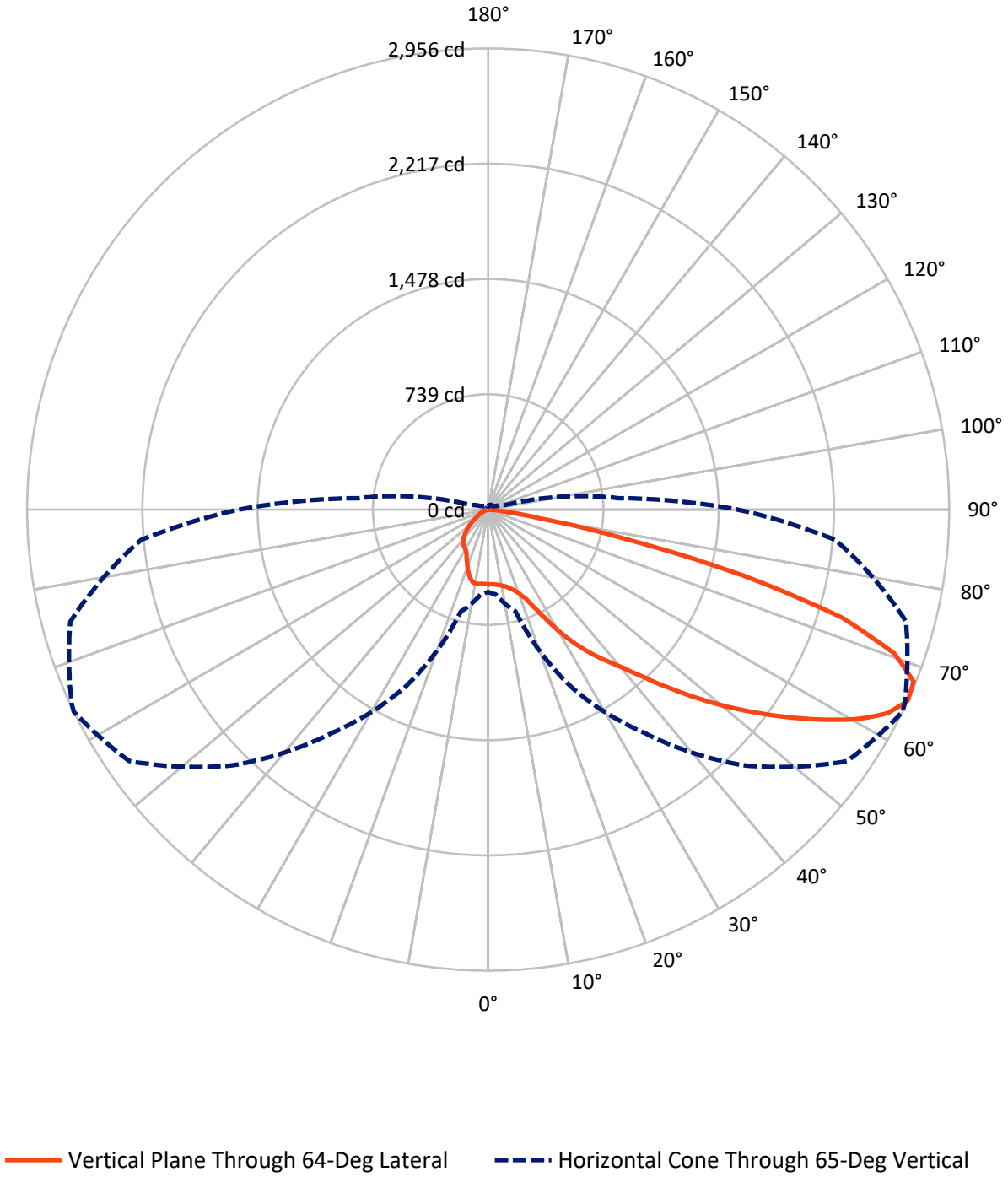

Based on 10 foot mounting height. Maximum calculated value = 8.7 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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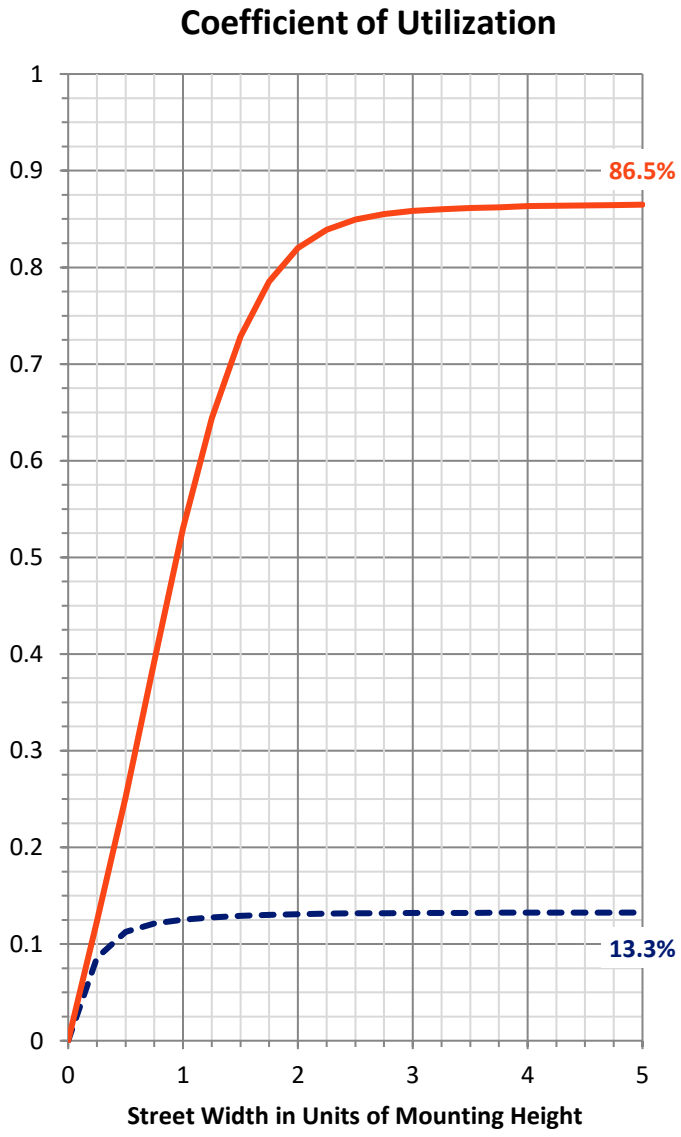
REPORT NUMBER: P1201470
CATALOG NUMBER: GWC-SB1B-727-U-T3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 550.7 | 0.0 | 550.7 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| **Street Side** | Lumens | 3567.3 | 0.0 | 3567.3 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| **Total** | Lumens | 4118.0 | 0.0 | 4118.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 44.2 | 1.1 |
| 10°-20° | 119.9 | 2.9 |
| 20°-30° | 227.1 | 5.5 |
| 30°-40° | 459.6 | 11.2 |
| 40°-50° | 782.9 | 19.0 |
| 50°-60° | 1064.7 | 25.9 |
| 60°-70° | 999.8 | 24.3 |
| 70°-80° | 400.6 | 9.7 |
| 80°-90° | 19.4 | 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° | 4118.0 | 100.0 |
| 0°-180° | 4118.0 | 100.0 |



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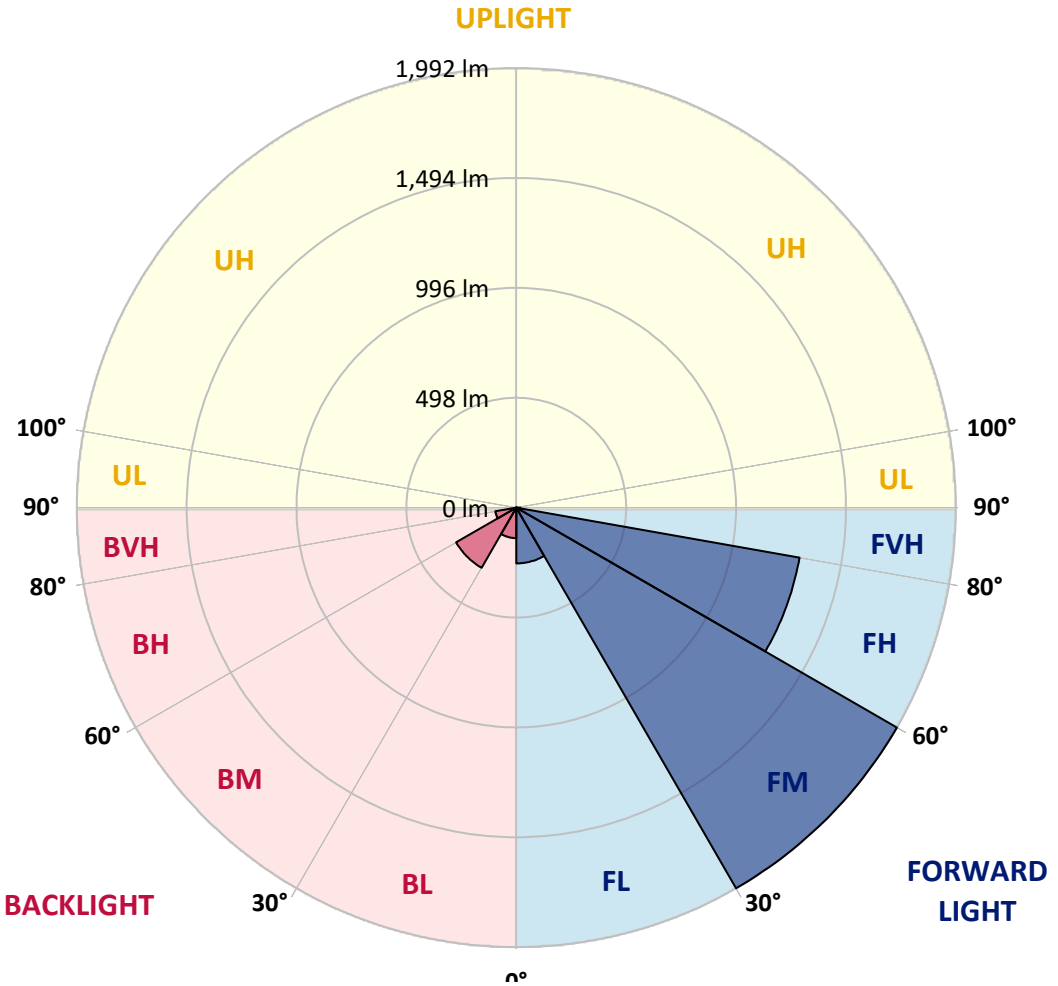
Scaled Data Report

REPORT NUMBER: P1201470
CATALOG NUMBER: GWC-SB1B-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°) | 252.9 | 6.1 | | | |
| FM | (30°-60°) | 1992.3 | 48.4 | | | |
| FH | (60°-80°) | 1303.7 | 31.7 | | | G1/1800 |
| FVH | (80°-90°) | 18.5 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 138.3 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 314.8 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 96.7 | 2.3 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.0 | 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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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | *479.0* | 479.0 | 479.0 | 479.0 |
| 2.5° | 477.3 | 480.6 | 479.8 | 479.0 | 478.7 | 479.2 | 479.5 | *479.2* | 479.2 | 479.2 | 479.5 |
| 5° | 468.2 | 471.0 | 471.0 | 472.9 | 475.7 | 479.0 | 481.5 | *482.0* | 482.6 | 483.4 | 483.1 |
| 7.5° | 450.8 | 453.0 | 454.7 | 461.0 | 467.9 | 476.8 | 484.2 | *488.1* | 488.6 | 491.7 | 492.8 |
| 10° | 438.9 | 441.7 | 444.5 | 451.1 | 461.0 | 474.3 | 487.0 | *496.4* | 497.7 | 504.9 | 508.2 |
| 12.5° | 438.4 | 441.1 | 444.7 | 451.9 | 463.5 | 477.6 | 493.0 | *506.6* | 509.1 | 519.5 | 526.4 |
| 15° | 444.2 | 447.5 | 450.8 | 459.6 | 472.1 | 489.2 | 505.7 | *522.6* | 525.1 | 540.0 | 547.4 |
| 17.5° | 456.1 | 460.5 | 463.0 | 471.8 | 485.0 | 504.1 | 525.9 | *545.2* | 547.4 | 564.8 | 574.2 |
| 20° | 479.5 | 484.8 | 485.6 | 492.8 | 505.7 | 526.2 | 552.1 | *576.1* | 578.9 | 598.8 | 609.3 |
| 22.5° | 528.1 | 535.6 | 528.9 | 532.5 | 544.1 | 564.5 | 592.7 | *623.1* | 626.9 | 649.6 | 659.0 |
| 25° | 613.7 | 624.2 | 607.1 | 601.0 | 606.0 | 627.2 | 662.5 | *700.9* | 705.3 | 723.6 | 728.2 |
| 27.5° | 781.8 | 768.3 | 742.3 | 716.9 | 702.0 | 714.2 | 753.9 | *801.4* | 806.9 | 824.6 | 819.1 |
| 30° | 966.5 | 954.6 | 919.6 | 863.2 | 827.9 | 826.0 | 862.7 | *915.7* | 922.0 | 938.9 | 922.0 |
| 32.5° | 1151.5 | 1140.1 | 1102.0 | 1032.7 | 971.5 | 941.1 | 966.5 | *1025.3* | 1028.6 | 1039.4 | 1014.5 |
| 35° | 1333.4 | 1321.8 | 1283.7 | 1212.7 | 1137.4 | 1068.4 | 1063.4 | *1129.6* | 1130.7 | 1142.1 | 1105.1 |
| 37.5° | 1516.4 | 1506.7 | 1466.2 | 1396.6 | 1322.3 | 1227.1 | 1181.0 | *1228.5* | 1229.9 | 1240.9 | 1202.5 |
| 40° | 1647.0 | 1651.1 | 1623.2 | 1569.4 | 1505.6 | 1401.6 | 1312.9 | *1333.7* | 1325.4 | 1343.9 | 1321.0 |
| 42.5° | 1759.1 | 1767.3 | 1743.1 | 1716.0 | 1679.0 | 1587.4 | 1476.4 | *1472.8* | 1459.5 | 1469.5 | 1445.7 |
| 45° | 1856.0 | 1862.9 | 1841.1 | 1834.7 | 1833.9 | 1769.6 | 1655.0 | *1633.5* | 1615.0 | 1613.0 | 1584.6 |
| 47.5° | 1891.6 | 1904.8 | 1914.2 | 1935.5 | 1976.9 | 1949.8 | 1839.7 | *1806.3* | 1785.6 | 1770.4 | 1725.4 |
| 50° | 1905.1 | 1919.2 | 1951.2 | 2013.0 | 2111.0 | 2122.6 | 2023.5 | *1986.0* | 1960.6 | 1933.0 | 1866.7 |
| 52.5° | 1886.9 | 1912.0 | 1955.1 | 2059.1 | 2201.3 | 2261.2 | 2199.9 | *2167.1* | 2138.1 | 2093.1 | 1994.8 |
| 55° | 1779.5 | 1804.6 | 1892.7 | 2058.6 | 2246.3 | 2358.4 | 2366.7 | *2352.0* | 2319.5 | 2248.5 | 2098.3 |
| 57.5° | 1553.1 | 1590.4 | 1729.8 | 1988.5 | 2245.5 | 2442.0 | 2530.1 | *2540.6* | 2504.2 | 2402.6 | 2179.8 |
| 60° | 1239.5 | 1290.0 | 1460.1 | 1833.0 | 2176.2 | 2487.3 | 2673.4 | *2725.8* | 2687.2 | 2554.4 | 2245.8 |
| 62.5° | 864.9 | 923.4 | 1084.4 | 1589.6 | 2017.7 | 2454.7 | 2778.0 | *2874.9* | 2845.6 | 2690.2 | 2271.2 |
| 65° | *527.6* | *546.3* | *676.1* | *1250.8* | *1748.3* | *2318.4* | *2810.3* | *2955.5* | *2945.8* | *2773.3* | *2233.6* |
| 67.5° | 351.4 | 367.2 | 404.4 | 857.7 | 1357.1 | 2045.9 | 2733.0 | *2941.4* | 2944.2 | 2759.8 | 2096.1 |
| 70° | 211.7 | 225.3 | 249.6 | 498.8 | 879.5 | 1619.4 | 2493.7 | *2762.0* | 2778.0 | 2579.0 | 1835.5 |
| 72.5° | 87.2 | 96.3 | 118.4 | 226.1 | 455.5 | 1027.8 | 1985.7 | *2371.4* | 2408.6 | 2168.5 | 1408.7 |
| 75° | 49.4 | 54.1 | 69.6 | 113.5 | 197.7 | 479.0 | 1202.8 | *1683.4* | 1738.4 | 1494.6 | 847.5 |
| 77.5° | 32.9 | 35.1 | 45.0 | 73.4 | 111.3 | 163.4 | 514.0 | *877.0* | 981.9 | 816.3 | 366.9 |
| 80° | 22.1 | 24.0 | 30.9 | 49.1 | 72.3 | 70.1 | 163.7 | *324.9* | 399.7 | 280.5 | 89.4 |
| 82.5° | 14.9 | 15.2 | 22.1 | 32.3 | 45.8 | 34.0 | 48.3 | *101.0* | 127.0 | 81.2 | 34.0 |
| 85° | 8.6 | 8.3 | 16.3 | 18.8 | 20.4 | 14.1 | 14.6 | *30.4* | 39.8 | 34.2 | 19.3 |
| 87.5° | 1.1 | 1.7 | 6.3 | 5.0 | 2.8 | 3.0 | 3.0 | *5.2* | 7.7 | 8.3 | 4.1 |
| 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: P1201470
CATALOG NUMBER: GWC-SB1B-727-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 | 479.0 |
| 2.5° | 479.5 | 479.2 | 478.4 | 477.6 | 475.7 | 474.5 | 475.1 | 474.5 | 474.3 | 474.5 | 475.7 |
| 5° | 483.1 | 482.3 | 480.1 | 477.3 | 473.4 | 468.8 | 465.7 | 461.3 | 457.2 | 454.7 | 455.2 |
| 7.5° | 492.8 | 491.9 | 488.9 | 481.2 | 468.8 | 449.2 | 431.2 | 415.5 | 403.6 | 396.7 | 397.0 |
| 10° | 508.2 | 506.8 | 502.2 | 485.0 | 452.5 | 409.7 | 374.1 | 344.5 | 325.2 | 316.1 | 315.3 |
| 12.5° | 526.4 | 524.8 | 516.5 | 481.5 | 421.5 | 354.7 | 305.6 | 272.7 | 254.8 | 246.8 | 246.0 |
| 15° | 548.0 | 545.8 | 529.5 | 464.3 | 376.5 | 294.0 | 249.0 | 224.4 | 212.8 | 205.7 | 205.9 |
| 17.5° | 574.8 | 570.9 | 539.1 | 438.7 | 327.7 | 247.6 | 214.2 | 195.7 | 185.5 | 178.6 | 178.1 |
| 20° | 609.5 | 603.2 | 546.9 | 408.0 | 282.7 | 218.4 | 190.8 | 175.3 | 167.6 | 161.5 | 160.4 |
| 22.5° | 658.1 | 649.0 | 556.3 | 374.9 | 250.9 | 198.2 | 173.4 | 162.0 | 155.7 | 148.8 | 147.7 |
| 25° | 718.3 | 707.5 | 567.9 | 344.2 | 229.1 | 180.8 | 160.7 | 151.3 | 143.8 | 135.8 | 135.0 |
| 27.5° | 802.5 | 783.2 | 581.7 | 319.1 | 210.4 | 165.9 | 149.1 | 138.6 | 130.0 | 123.4 | 122.0 |
| 30° | 896.4 | 864.6 | 593.8 | 303.9 | 193.2 | 152.1 | 133.9 | 123.4 | 115.4 | 110.7 | 109.9 |
| 32.5° | 985.3 | 942.2 | 601.8 | 297.3 | 177.8 | 136.4 | 117.3 | 106.0 | 99.9 | 98.6 | 99.4 |
| 35° | 1069.2 | 1012.3 | 601.0 | 291.0 | 164.0 | 120.6 | 101.0 | 89.4 | 84.8 | 85.6 | 85.6 |
| 37.5° | 1165.8 | 1087.1 | 595.2 | 281.0 | 152.7 | 106.3 | 87.0 | 76.7 | 72.6 | 72.9 | 74.0 |
| 40° | 1278.2 | 1173.5 | 591.6 | 262.3 | 140.2 | 93.0 | 75.4 | 67.1 | 64.0 | 62.9 | 62.7 |
| 42.5° | 1398.0 | 1257.2 | 592.2 | 241.0 | 124.8 | 81.2 | 67.4 | 60.5 | 57.7 | 56.9 | 56.6 |
| 45° | 1518.3 | 1337.0 | 593.0 | 218.9 | 108.5 | 72.1 | 61.6 | 55.8 | 54.1 | 53.0 | 53.0 |
| 47.5° | 1631.5 | 1404.9 | 577.5 | 195.2 | 92.5 | 65.2 | 56.9 | 53.0 | 51.6 | 50.2 | 50.2 |
| 50° | 1737.0 | 1450.1 | 540.3 | 167.6 | 79.8 | 59.6 | 53.3 | 50.5 | 49.1 | 47.8 | 47.8 |
| 52.5° | 1819.0 | 1457.3 | 478.7 | 139.1 | 70.9 | 55.5 | 51.1 | 48.6 | 46.9 | 45.6 | 45.3 |
| 55° | 1855.4 | 1412.3 | 391.2 | 112.6 | 64.0 | 51.9 | 48.9 | 46.4 | 44.4 | 43.1 | 42.8 |
| 57.5° | 1846.0 | 1317.6 | 305.0 | 90.5 | 57.4 | 48.3 | 46.1 | 44.4 | 42.2 | 40.0 | 39.8 |
| 60° | 1799.9 | 1190.9 | 230.0 | 75.4 | 51.3 | 44.4 | 43.1 | 41.7 | 38.6 | 35.3 | 34.8 |
| 62.5° | 1720.1 | 1031.6 | 164.0 | 62.4 | 44.7 | 40.0 | 39.5 | 38.4 | 34.0 | 27.9 | 27.3 |
| 65° | *1598.1* | *838.1* | *110.4* | *51.9* | *38.4* | *35.1* | *35.3* | *33.4* | *27.6* | *20.7* | *20.2* |
| 67.5° | 1419.8 | 612.9 | 70.7 | 42.5 | 32.0 | 29.3 | 29.5 | 28.4 | 23.5 | 17.7 | 16.8 |
| 70° | 1192.6 | 405.8 | 46.1 | 32.3 | 25.7 | 22.6 | 24.3 | 24.6 | 19.9 | 14.4 | 13.8 |
| 72.5° | 874.3 | 239.6 | 32.3 | 24.0 | 18.8 | 15.7 | 19.9 | 20.4 | 16.0 | 10.8 | 10.2 |
| 75° | 498.3 | 113.7 | 24.3 | 17.4 | 11.6 | 11.0 | 15.5 | 15.5 | 11.0 | 7.2 | 6.6 |
| 77.5° | 209.3 | 47.5 | 17.1 | 11.3 | 6.6 | 6.3 | 10.5 | 9.7 | 5.5 | 3.3 | 3.3 |
| 80° | 60.5 | 21.3 | 9.1 | 5.5 | 2.8 | 2.5 | 4.1 | 3.0 | 1.4 | 0.6 | 0.6 |
| 82.5° | 23.7 | 9.4 | 3.6 | 2.2 | 1.1 | 1.1 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 14.1 | 3.9 | 1.7 | 0.8 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 3.6 | 0.8 | 0.6 | 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

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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

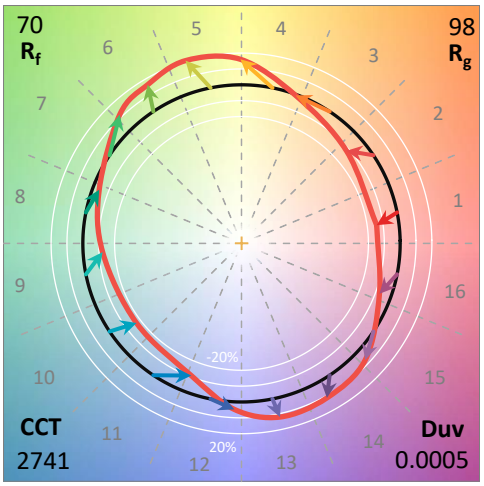
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-1-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| 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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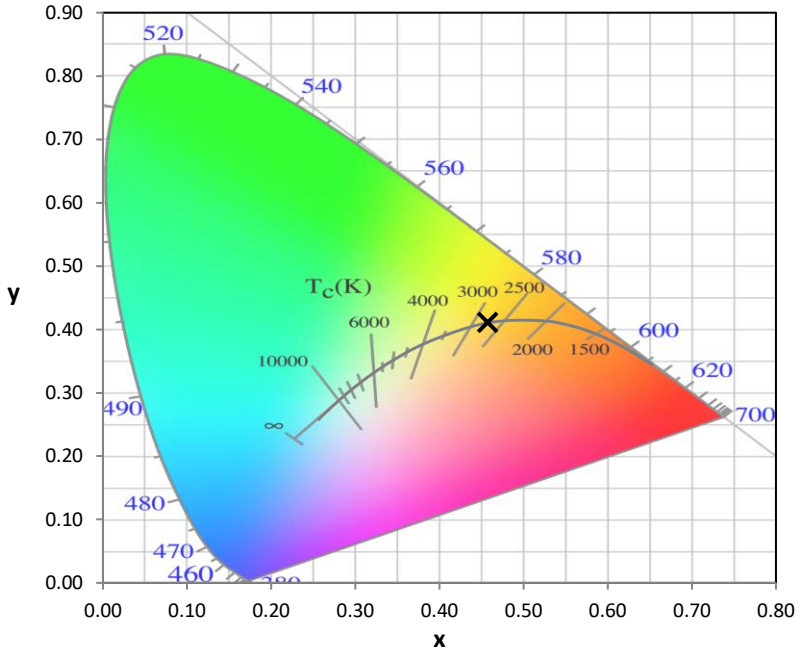
REPORT NUMBER: SP1-1908-441-1-R4

| 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 |

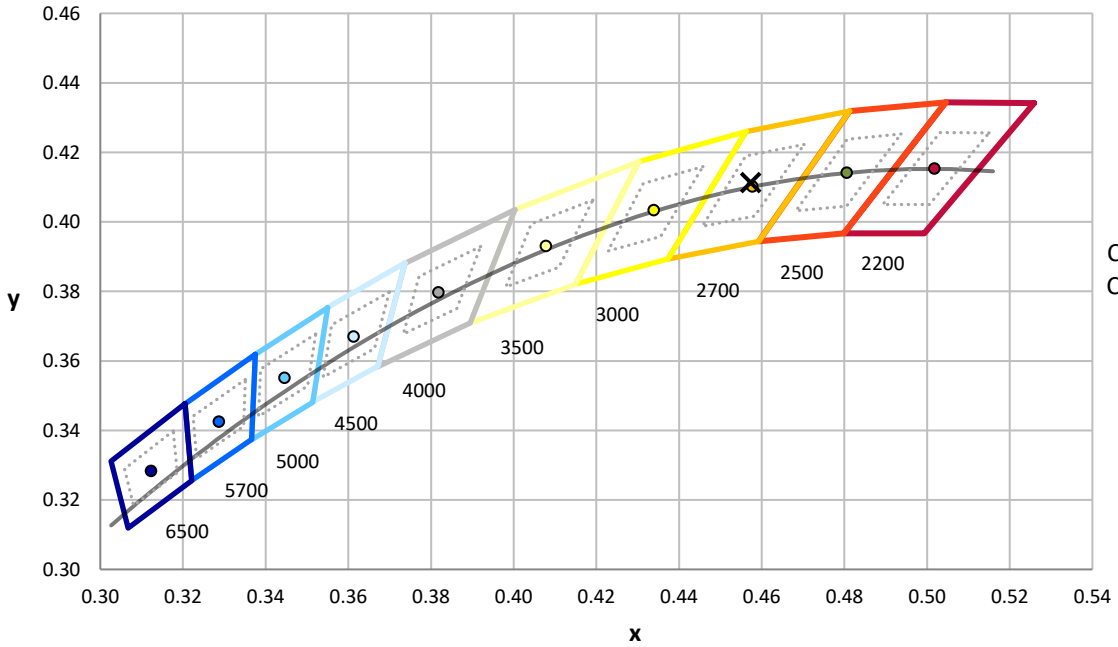
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Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



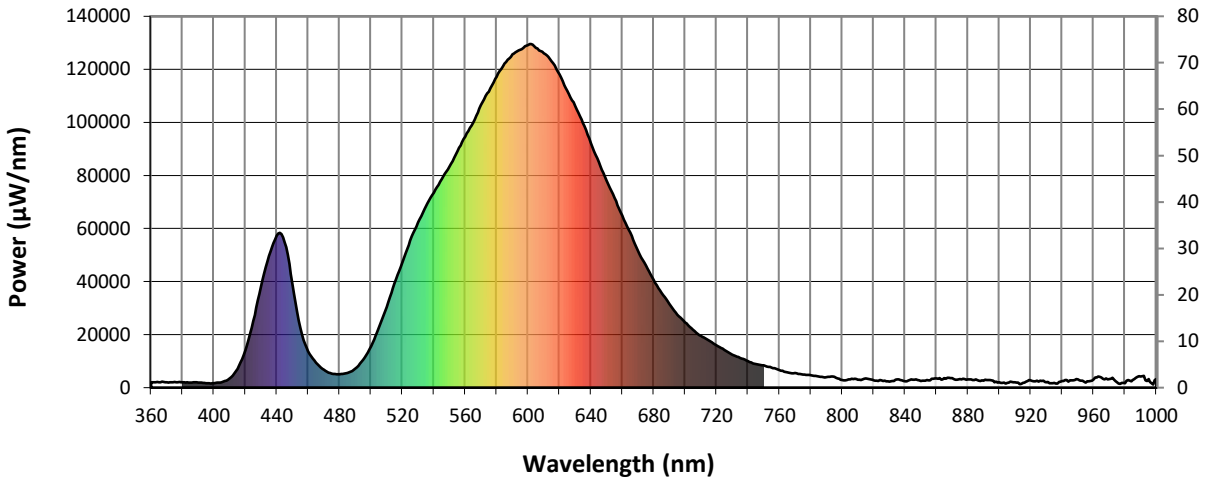

CCT = 2741K
CIE x = 0.4573
CIE y = 0.4113
Duv = 0.0005

Point lies inside the ANSI 2700K 4-step quadrangle

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Peachtree City, GA 30269

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

## Photopic Flux vs. Wavelength



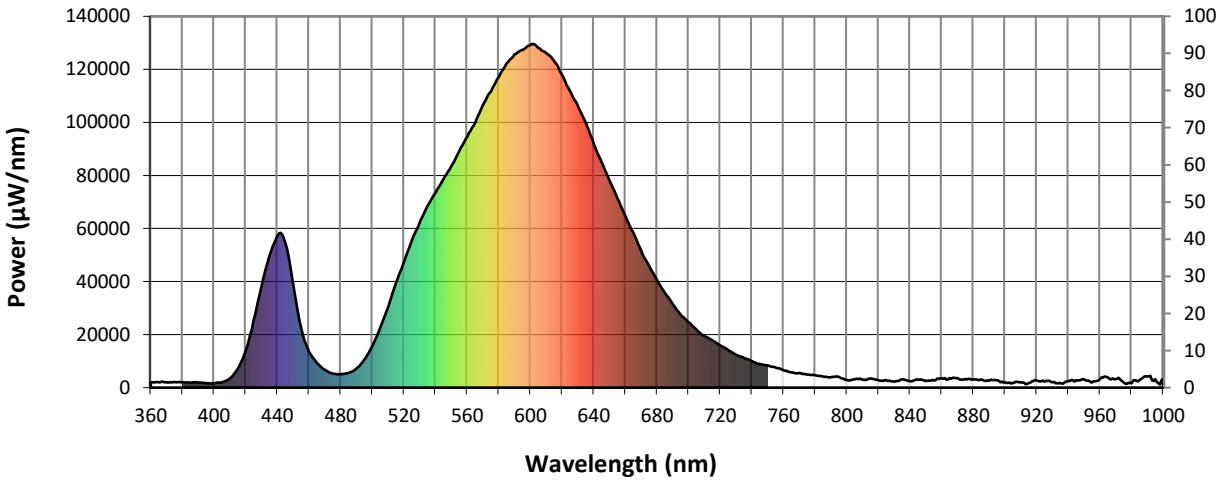

######

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

## Scotopic Flux vs. Wavelength



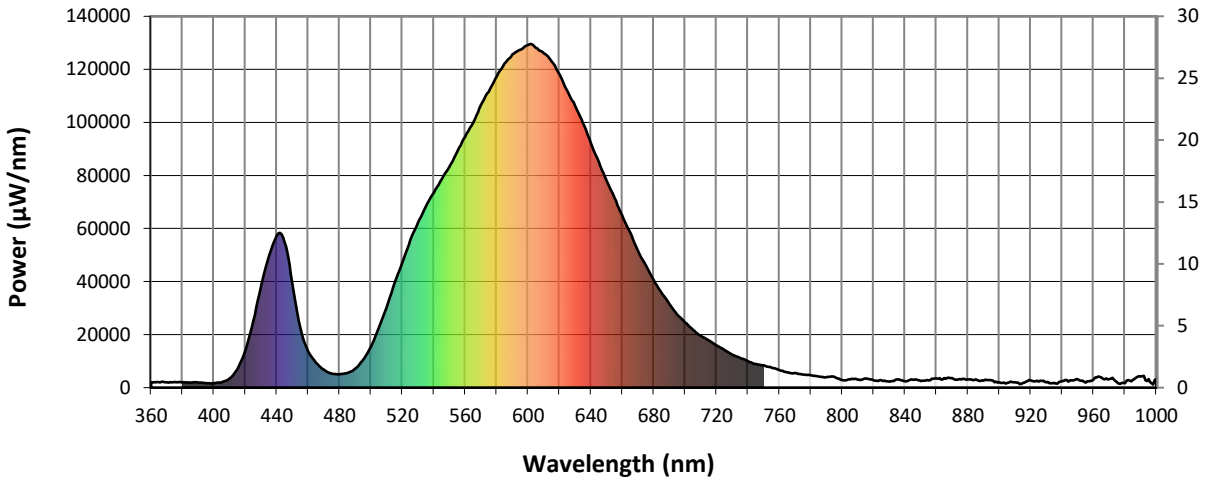

**Scotopic Lumens: 6474.3** **S/P: 1.04**

| 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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Peachtree City, GA 30269

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

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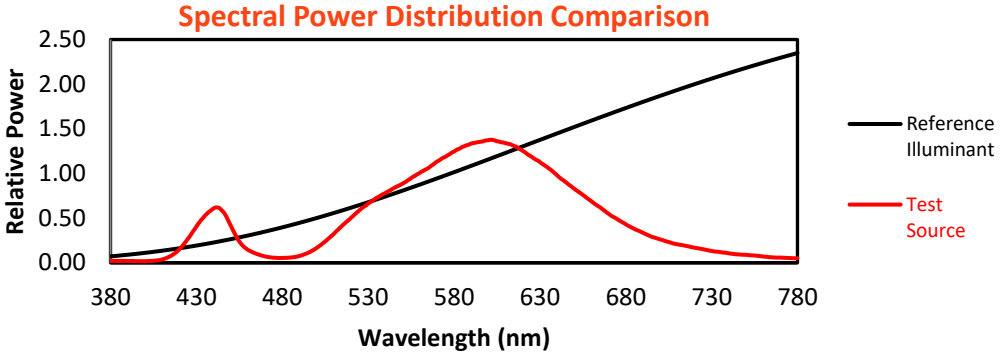
REPORT NUMBER: SP1-1908-441-1-R4

# TM-30-18

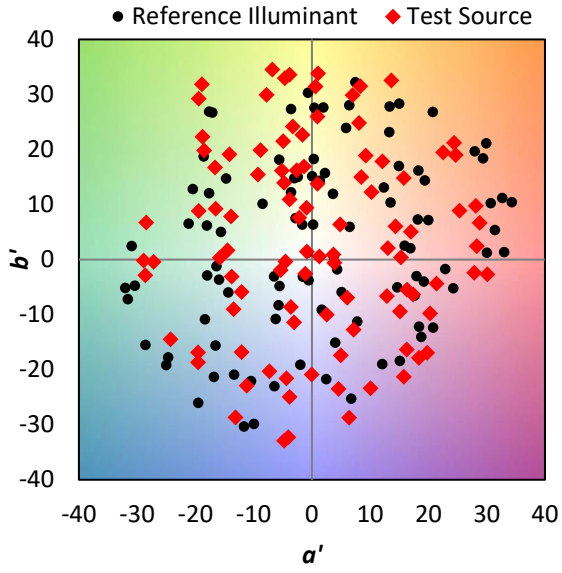
## Summary

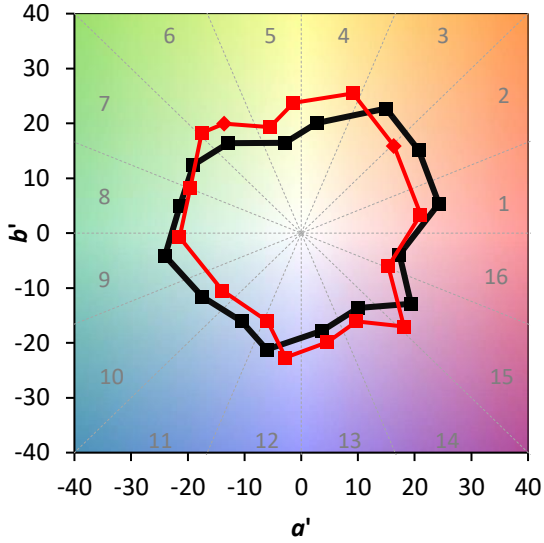
$R_f$ = 69.9
$R_g$ = 98.3
CIE $R_a$ = 71.5
$R_9$ = -16.1

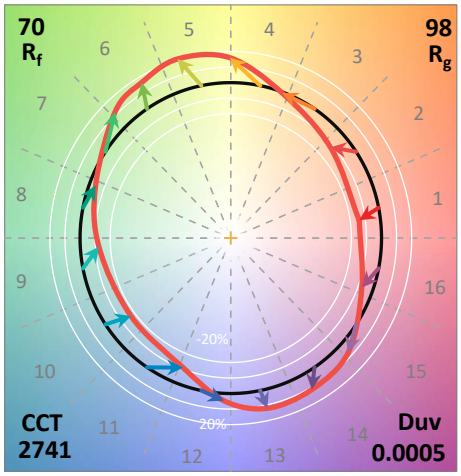
## Spectral Power Distribution Comparison

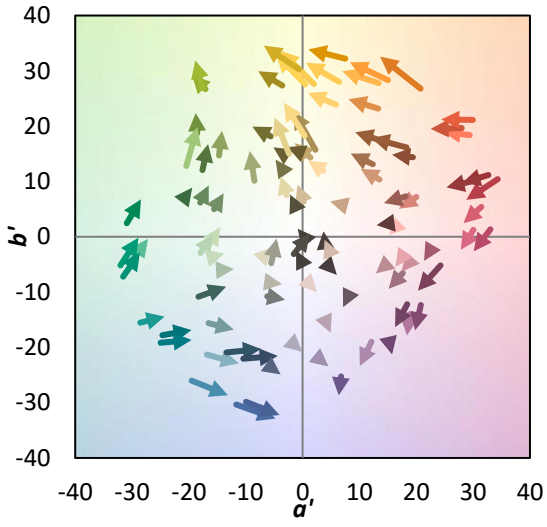



## Color Vector Graphics



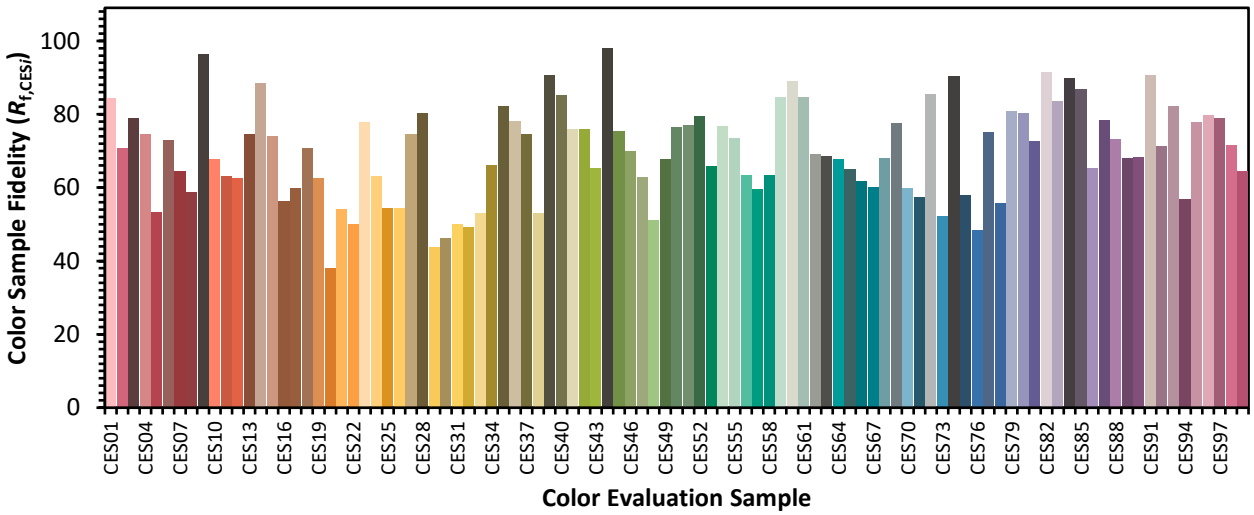
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1121 Highway 74 South
Peachtree City, GA 30269

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

## TM-30-18

**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 | |

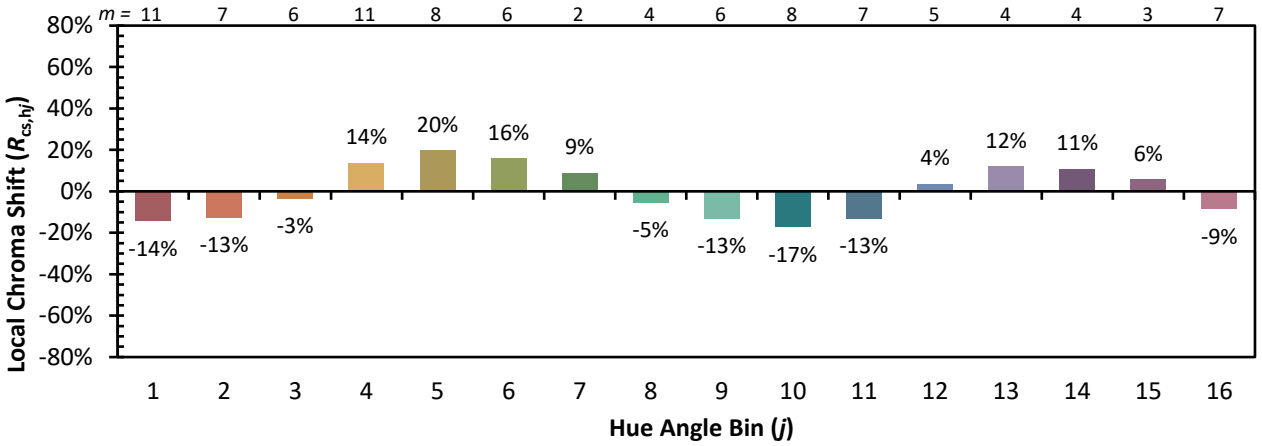


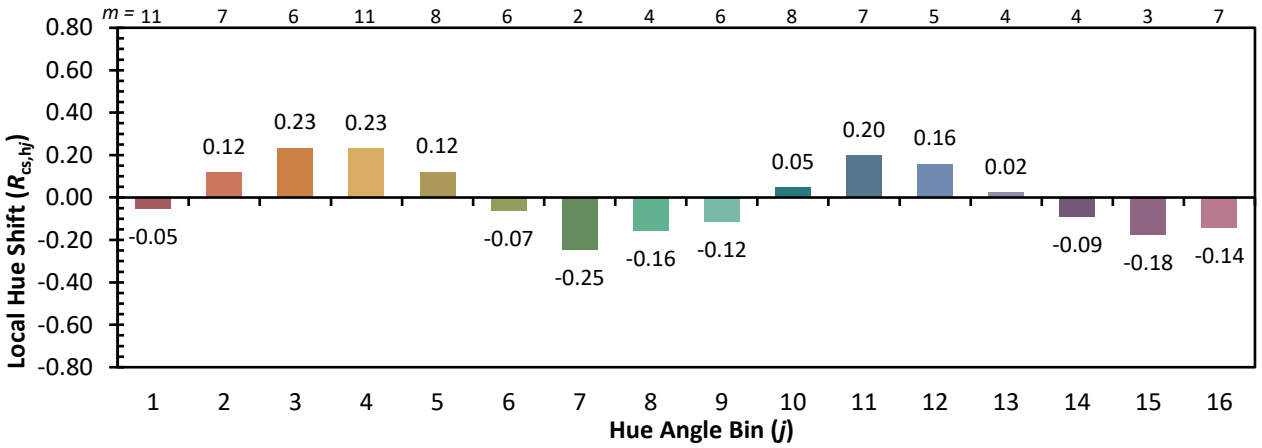
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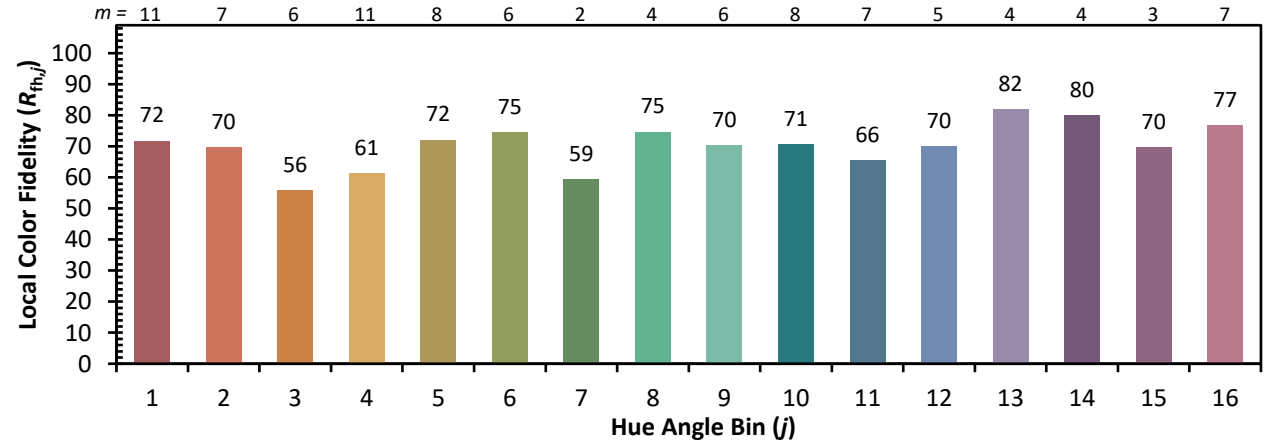
REPORT NUMBER: SP1-1908-441-1-R4

## TM-30-18

### Color Rendition by Hue-Angle Bin



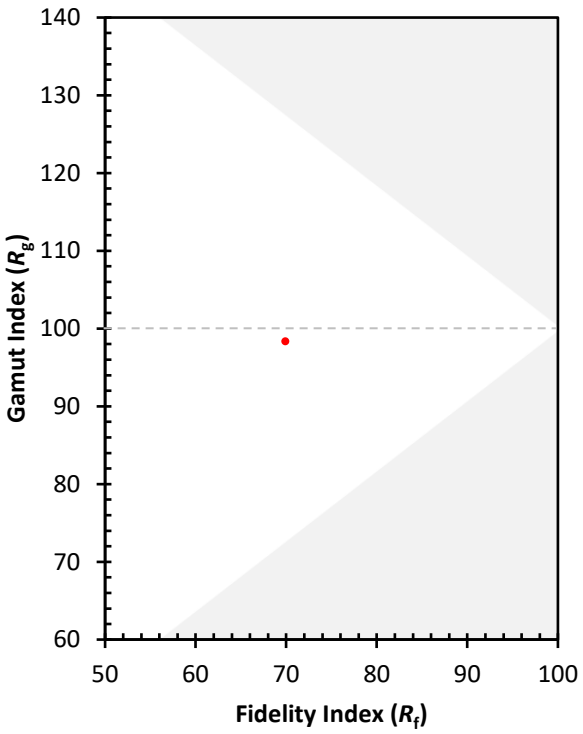



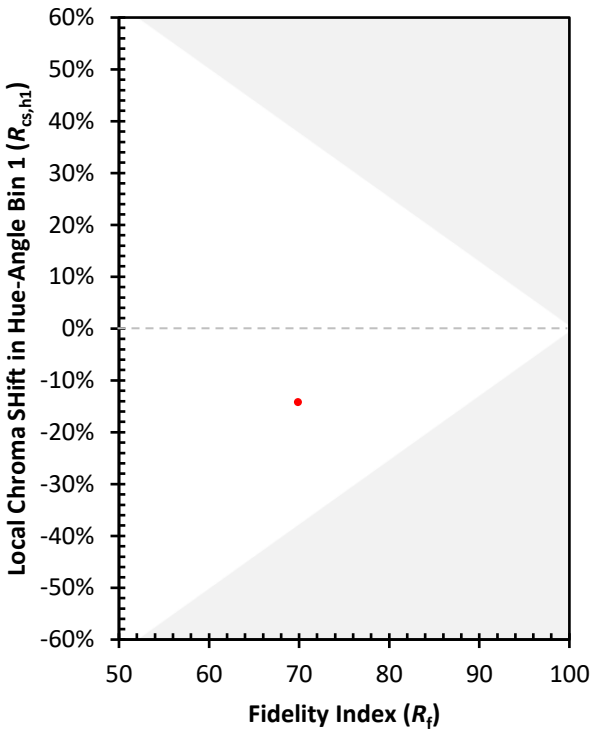
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REPORT NUMBER: SP1-1908-441-1-R4

## TM-30-18

### Measure Comparisons




(END OF REPORT)