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: P1201536

Luminaire Tested: GWC-SB1B-740-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: | P1201536 |
| | 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-740-U-T3-HSS |
| Description: | GALLEON WALL LUMINAIRE |
| | (1) 70 CRI, 4000K, 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: | 4697 lumens |
| Efficiency: | N/A |
| Efficacy: | 118.0 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 |

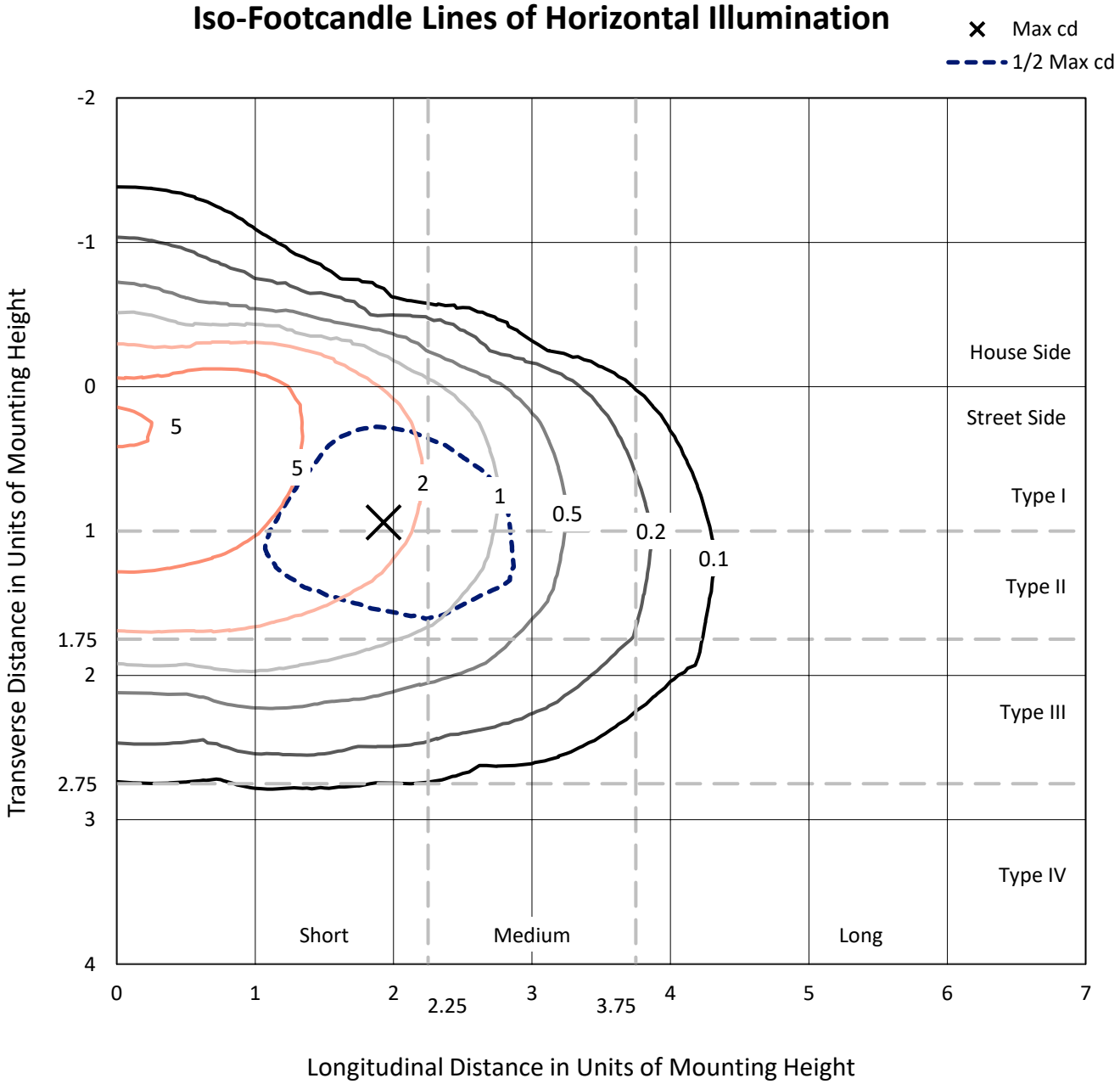


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REPORT NUMBER: P1201536
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## Iso-Footcandle Lines of Horizontal Illumination



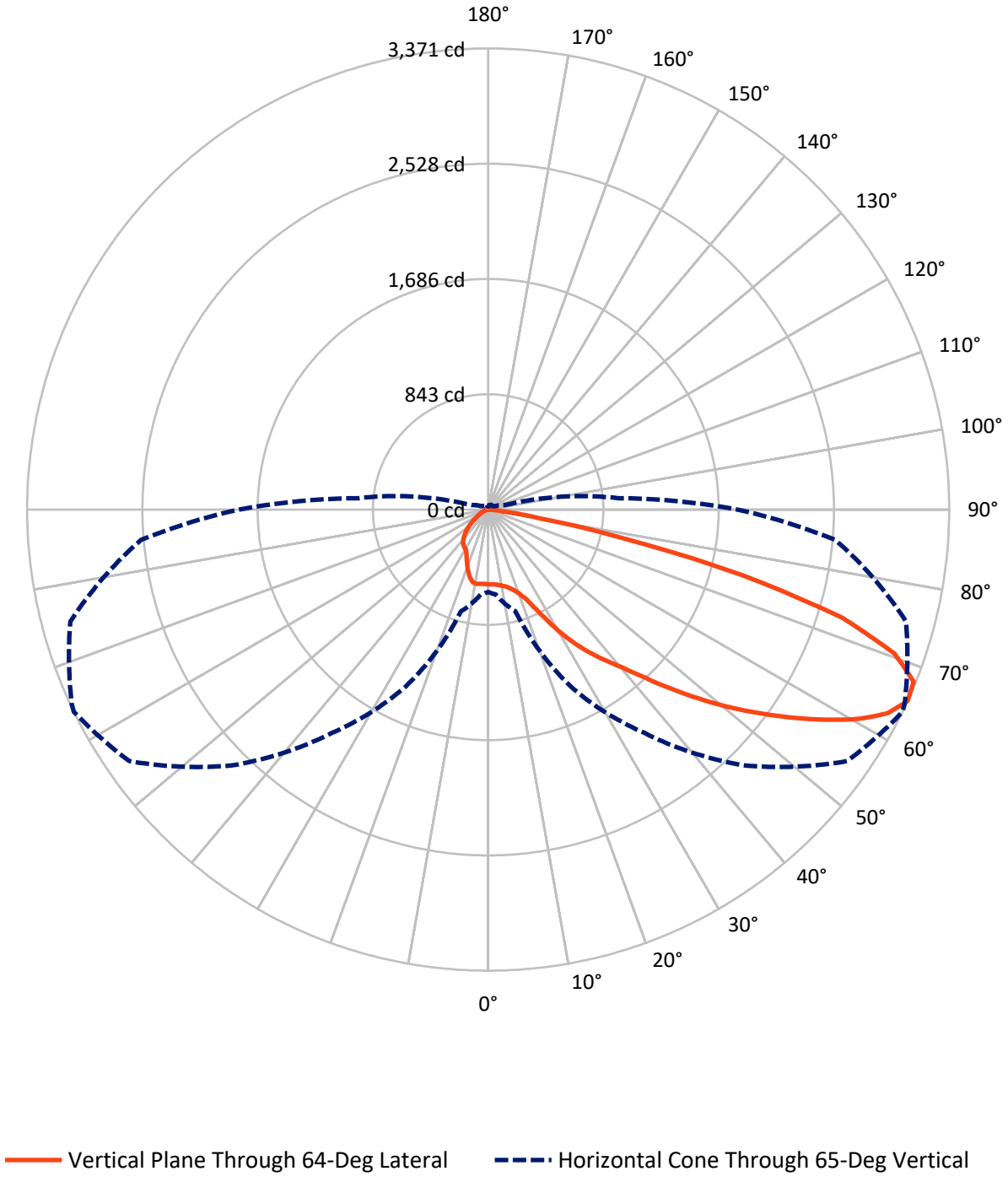

Based on 10 foot mounting height. Maximum calculated value = 9.9 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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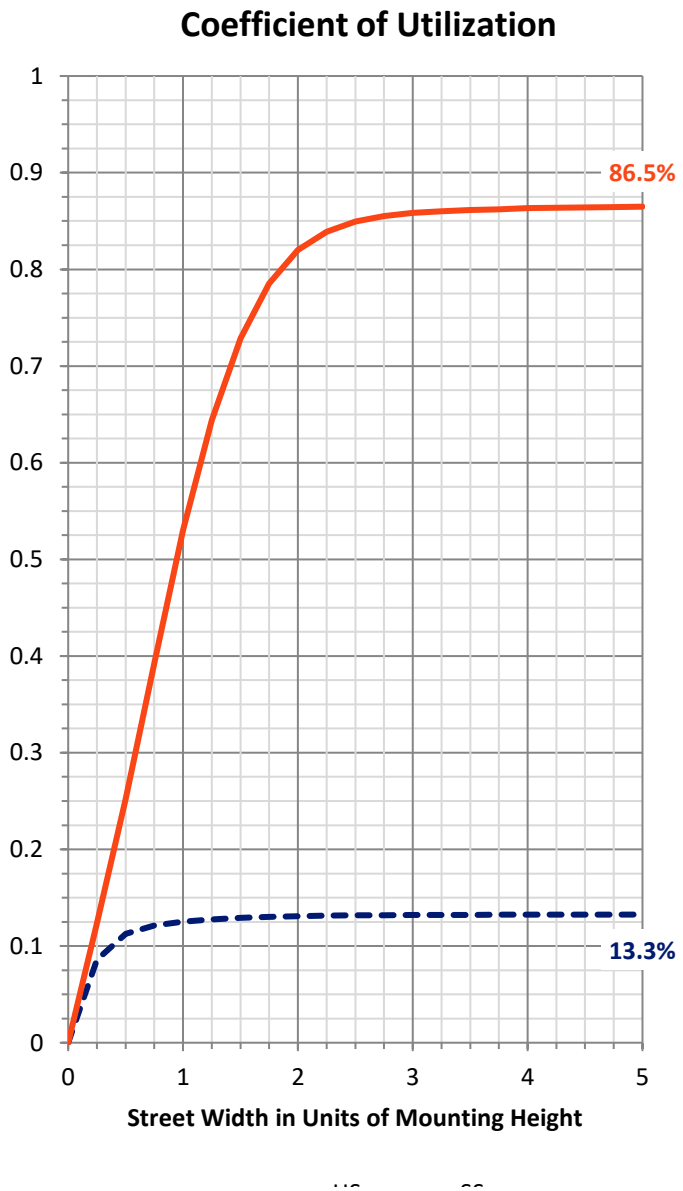
REPORT NUMBER: P1201536
CATALOG NUMBER: GWC-SB1B-740-U-T3-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 628.1 | 0.0 | 628.1 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| **Street Side** | Lumens | 4068.9 | 0.0 | 4068.9 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| **Total** | Lumens | 4697.0 | 0.0 | 4697.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 50.4 | 1.1 |
| 10°-20° | 136.7 | 2.9 |
| 20°-30° | 259.0 | 5.5 |
| 30°-40° | 524.2 | 11.2 |
| 40°-50° | 893.0 | 19.0 |
| 50°-60° | 1214.4 | 25.9 |
| 60°-70° | 1140.3 | 24.3 |
| 70°-80° | 456.9 | 9.7 |
| 80°-90° | 22.1 | 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° | 4697.0 | 100.0 |
| 0°-180° | 4697.0 | 100.0 |



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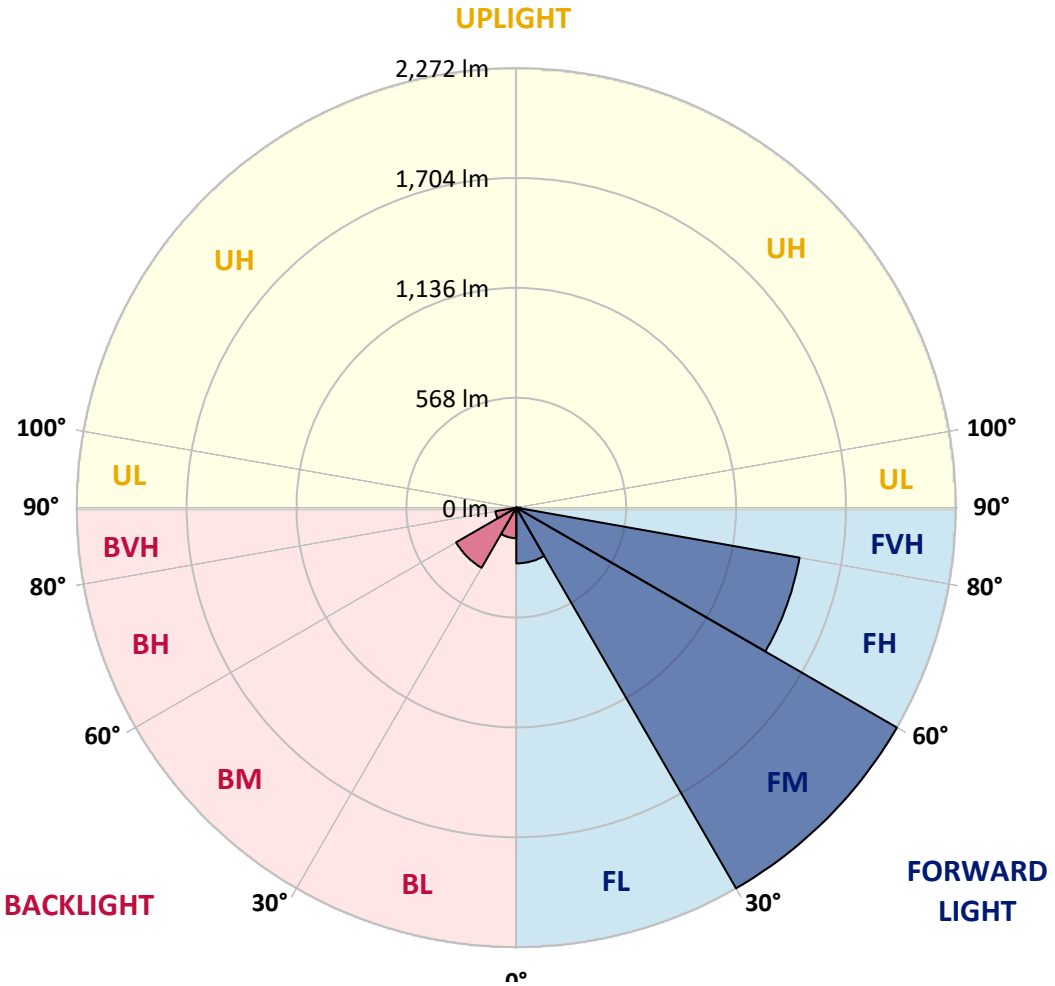
Scaled Data Report

REPORT NUMBER: P1201536
CATALOG NUMBER: GWC-SB1B-740-U-T3-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 288.4 | 6.1 | | | |
| FM | (30°-60°) | 2272.4 | 48.4 | | | |
| FH | (60°-80°) | 1487.0 | 31.7 | | | G1/1800 |
| FVH | (80°-90°) | 21.0 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 157.7 | 3.4 | B1/500 | | |
| BM | (30°-60°) | 359.1 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 110.2 | 2.3 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 1.1 | 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: P1201536
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | *546.3* | 546.3 | 546.3 | 546.3 |
| 2.5° | 544.4 | 548.2 | 547.3 | 546.3 | 546.0 | 546.6 | 546.9 | *546.6* | 546.6 | 546.6 | 546.9 |
| 5° | 534.0 | 537.2 | 537.2 | 539.4 | 542.5 | 546.3 | 549.1 | *549.8* | 550.4 | 551.3 | 551.0 |
| 7.5° | 514.2 | 516.7 | 518.6 | 525.8 | 533.7 | 543.8 | 552.3 | *556.7* | 557.3 | 560.8 | 562.1 |
| 10° | 500.7 | 503.8 | 507.0 | 514.5 | 525.8 | 541.0 | 555.4 | *566.1* | 567.7 | 575.9 | 579.7 |
| 12.5° | 500.0 | 503.2 | 507.3 | 515.5 | 528.7 | 544.7 | 562.4 | *577.8* | 580.6 | 592.6 | 600.5 |
| 15° | 506.6 | 510.4 | 514.2 | 524.3 | 538.4 | 558.0 | 576.9 | *596.1* | 598.9 | 615.9 | 624.4 |
| 17.5° | 520.2 | 525.2 | 528.0 | 538.1 | 553.2 | 575.0 | 599.8 | *621.9* | 624.4 | 644.2 | 654.9 |
| 20° | 546.9 | 552.9 | 553.9 | 562.1 | 576.9 | 600.2 | 629.8 | *657.1* | 660.3 | 683.0 | 694.9 |
| 22.5° | 602.4 | 610.9 | 603.3 | 607.4 | 620.6 | 643.9 | 676.0 | *710.7* | 715.1 | 740.9 | 751.6 |
| 25° | 700.0 | 711.9 | 692.4 | 685.5 | 691.2 | 715.4 | 755.7 | *799.5* | 804.5 | 825.3 | 830.6 |
| 27.5° | 891.7 | 876.3 | 846.7 | 817.7 | 800.7 | 814.6 | 859.9 | *914.1* | 920.4 | 940.5 | 934.2 |
| 30° | 1102.4 | 1088.8 | 1048.9 | 984.6 | 944.3 | 942.1 | 984.0 | *1044.4* | 1051.7 | 1070.9 | 1051.7 |
| 32.5° | 1313.3 | 1300.4 | 1257.0 | 1178.0 | 1108.0 | 1073.4 | 1102.4 | *1169.4* | 1173.2 | 1185.5 | 1157.2 |
| 35° | 1520.9 | 1507.6 | 1464.2 | 1383.3 | 1297.3 | 1218.6 | 1212.9 | *1288.5* | 1289.7 | 1302.6 | 1260.4 |
| 37.5° | 1729.6 | 1718.6 | 1672.3 | 1593.0 | 1508.3 | 1399.6 | 1347.0 | *1401.2* | 1402.8 | 1415.4 | 1371.6 |
| 40° | 1878.6 | 1883.3 | 1851.5 | 1790.1 | 1717.3 | 1598.6 | 1497.6 | *1521.2* | 1511.7 | 1532.8 | 1506.7 |
| 42.5° | 2006.4 | 2015.8 | 1988.1 | 1957.3 | 1915.1 | 1810.5 | 1684.0 | *1679.9* | 1664.7 | 1676.1 | 1649.0 |
| 45° | 2116.9 | 2124.8 | 2099.9 | 2092.7 | 2091.7 | 2018.4 | 1887.7 | *1863.1* | 1842.0 | 1839.8 | 1807.4 |
| 47.5° | 2157.5 | 2172.6 | 2183.4 | 2207.6 | 2254.8 | 2224.0 | 2098.3 | *2060.2* | 2036.6 | 2019.3 | 1968.0 |
| 50° | 2173.0 | 2189.0 | 2225.5 | 2296.1 | 2407.9 | 2421.1 | 2308.0 | *2265.2* | 2236.2 | 2204.8 | 2129.2 |
| 52.5° | 2152.2 | 2180.8 | 2230.0 | 2348.7 | 2510.8 | 2579.1 | 2509.2 | *2471.8* | 2438.7 | 2387.4 | 2275.3 |
| 55° | 2029.7 | 2058.3 | 2158.8 | 2348.0 | 2562.1 | 2690.0 | 2699.4 | *2682.7* | 2645.6 | 2564.7 | 2393.4 |
| 57.5° | 1771.5 | 1814.0 | 1973.0 | 2268.1 | 2561.2 | 2785.4 | 2885.8 | *2897.8* | 2856.2 | 2740.4 | 2486.3 |
| 60° | 1413.8 | 1471.4 | 1665.4 | 2090.8 | 2482.2 | 2837.0 | 3049.3 | *3109.1* | 3065.0 | 2913.5 | 2561.5 |
| 62.5° | 986.5 | 1053.3 | 1236.8 | 1813.1 | 2301.4 | 2799.9 | 3168.6 | *3279.1* | 3245.7 | 3068.5 | 2590.5 |
| 65° | *601.7* | *623.1* | *771.1* | *1426.7* | *1994.1* | *2644.3* | *3205.4* | *3371.1* | *3360.0* | *3163.2* | *2547.7* |
| 67.5° | 400.8 | 418.8 | 461.3 | 978.3 | 1547.9 | 2333.5 | 3117.3 | *3355.0* | 3358.2 | 3147.8 | 2390.9 |
| 70° | 241.5 | 256.9 | 284.6 | 569.0 | 1003.2 | 1847.1 | 2844.3 | *3150.3* | 3168.6 | 2941.6 | 2093.6 |
| 72.5° | 99.5 | 109.9 | 135.1 | 257.9 | 519.5 | 1172.3 | 2264.9 | *2704.8* | 2747.3 | 2473.4 | 1606.8 |
| 75° | 56.4 | 61.7 | 79.3 | 129.4 | 225.5 | 546.3 | 1371.9 | *1920.1* | 1982.8 | 1704.7 | 966.7 |
| 77.5° | 37.5 | 40.0 | 51.3 | 83.8 | 126.9 | 186.4 | 586.3 | *1000.4* | 1120.0 | 931.1 | 418.5 |
| 80° | 25.2 | 27.4 | 35.3 | 56.0 | 82.5 | 80.0 | 186.7 | *370.6* | 455.9 | 319.9 | 102.0 |
| 82.5° | 17.0 | 17.3 | 25.2 | 36.8 | 52.3 | 38.7 | 55.1 | *115.2* | 144.8 | 92.6 | 38.7 |
| 85° | 9.8 | 9.4 | 18.6 | 21.4 | 23.3 | 16.1 | 16.7 | *34.6* | 45.3 | 39.0 | 22.0 |
| 87.5° | 1.3 | 1.9 | 7.2 | 5.7 | 3.1 | 3.5 | 3.5 | *6.0* | 8.8 | 9.4 | 4.7 |
| 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: P1201536
CATALOG NUMBER: GWC-SB1B-740-U-T3-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 | 546.3 |
| 2.5° | 546.9 | 546.6 | 545.7 | 544.7 | 542.5 | 541.3 | 541.9 | 541.3 | 541.0 | 541.3 | 542.5 |
| 5° | 551.0 | 550.1 | 547.6 | 544.4 | 540.0 | 534.7 | 531.2 | 526.2 | 521.4 | 518.6 | 519.2 |
| 7.5° | 562.1 | 561.1 | 557.6 | 548.8 | 534.7 | 512.3 | 491.8 | 473.9 | 460.3 | 452.5 | 452.8 |
| 10° | 579.7 | 578.1 | 572.8 | 553.2 | 516.1 | 467.3 | 426.7 | 393.0 | 370.9 | 360.5 | 359.6 |
| 12.5° | 600.5 | 598.6 | 589.1 | 549.1 | 480.8 | 404.6 | 348.6 | 311.1 | 290.6 | 281.5 | 280.6 |
| 15° | 625.0 | 622.5 | 603.9 | 529.6 | 429.5 | 335.3 | 284.0 | 256.0 | 242.8 | 234.6 | 234.9 |
| 17.5° | 655.6 | 651.2 | 615.0 | 500.3 | 373.8 | 282.4 | 244.3 | 223.2 | 211.6 | 203.7 | 203.1 |
| 20° | 695.2 | 688.0 | 623.8 | 465.4 | 322.4 | 249.1 | 217.6 | 199.9 | 191.1 | 184.2 | 182.9 |
| 22.5° | 750.7 | 740.3 | 634.5 | 427.6 | 286.2 | 226.1 | 197.7 | 184.8 | 177.6 | 169.7 | 168.5 |
| 25° | 819.3 | 807.0 | 647.7 | 392.7 | 261.3 | 206.2 | 183.3 | 172.6 | 164.1 | 154.9 | 154.0 |
| 27.5° | 915.3 | 893.3 | 663.4 | 364.0 | 239.9 | 189.2 | 170.0 | 158.1 | 148.3 | 140.7 | 139.2 |
| 30° | 1022.4 | 986.2 | 677.3 | 346.7 | 220.4 | 173.5 | 152.7 | 140.7 | 131.6 | 126.3 | 125.3 |
| 32.5° | 1123.8 | 1074.7 | 686.4 | 339.1 | 202.8 | 155.5 | 133.8 | 120.9 | 114.0 | 112.4 | 113.4 |
| 35° | 1219.5 | 1154.7 | 685.5 | 331.9 | 187.0 | 137.6 | 115.2 | 102.0 | 96.7 | 97.6 | 97.6 |
| 37.5° | 1329.7 | 1240.0 | 678.9 | 320.5 | 174.1 | 121.2 | 99.2 | 87.5 | 82.8 | 83.1 | 84.4 |
| 40° | 1457.9 | 1338.5 | 674.8 | 299.1 | 160.0 | 106.1 | 86.0 | 76.5 | 73.1 | 71.8 | 71.5 |
| 42.5° | 1594.5 | 1433.9 | 675.4 | 274.9 | 142.3 | 92.6 | 76.8 | 69.0 | 65.8 | 64.9 | 64.5 |
| 45° | 1731.8 | 1524.9 | 676.4 | 249.7 | 123.7 | 82.2 | 70.2 | 63.6 | 61.7 | 60.5 | 60.5 |
| 47.5° | 1860.9 | 1602.4 | 658.7 | 222.6 | 105.5 | 74.3 | 64.9 | 60.5 | 58.9 | 57.3 | 57.3 |
| 50° | 1981.2 | 1654.0 | 616.2 | 191.1 | 91.0 | 68.0 | 60.8 | 57.6 | 56.0 | 54.5 | 54.5 |
| 52.5° | 2074.7 | 1662.2 | 546.0 | 158.7 | 80.9 | 63.3 | 58.3 | 55.4 | 53.5 | 52.0 | 51.6 |
| 55° | 2116.3 | 1610.9 | 446.2 | 128.5 | 73.1 | 59.2 | 55.7 | 52.9 | 50.7 | 49.1 | 48.8 |
| 57.5° | 2105.6 | 1502.9 | 347.9 | 103.3 | 65.5 | 55.1 | 52.6 | 50.7 | 48.2 | 45.7 | 45.3 |
| 60° | 2053.0 | 1358.4 | 262.3 | 86.0 | 58.6 | 50.7 | 49.1 | 47.5 | 44.1 | 40.3 | 39.7 |
| 62.5° | 1962.0 | 1176.7 | 187.0 | 71.2 | 51.0 | 45.7 | 45.0 | 43.8 | 38.7 | 31.8 | 31.2 |
| 65° | *1822.8* | *956.0* | *126.0* | *59.2* | *43.8* | *40.0* | *40.3* | *38.1* | *31.5* | *23.6* | *23.0* |
| 67.5° | 1619.4 | 699.0 | 80.6 | 48.5 | 36.5 | 33.4 | 33.7 | 32.4 | 26.8 | 20.2 | 19.2 |
| 70° | 1360.3 | 462.9 | 52.6 | 36.8 | 29.3 | 25.8 | 27.7 | 28.0 | 22.7 | 16.4 | 15.7 |
| 72.5° | 997.2 | 273.3 | 36.8 | 27.4 | 21.4 | 17.9 | 22.7 | 23.3 | 18.3 | 12.3 | 11.7 |
| 75° | 568.4 | 129.7 | 27.7 | 19.8 | 13.2 | 12.6 | 17.6 | 17.6 | 12.6 | 8.2 | 7.6 |
| 77.5° | 238.7 | 54.2 | 19.5 | 12.9 | 7.6 | 7.2 | 12.0 | 11.0 | 6.3 | 3.8 | 3.8 |
| 80° | 69.0 | 24.2 | 10.4 | 6.3 | 3.1 | 2.8 | 4.7 | 3.5 | 1.6 | 0.6 | 0.6 |
| 82.5° | 27.1 | 10.7 | 4.1 | 2.5 | 1.3 | 1.3 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 16.1 | 4.4 | 1.9 | 0.9 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 4.1 | 0.9 | 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 |


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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: SP1-1908-441-3-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-740-U-5WQ

Data in this report applies to families of products SA1C-740-U-5WQ

Data valid for all products using SA and SB light squares

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.13

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## Test Information

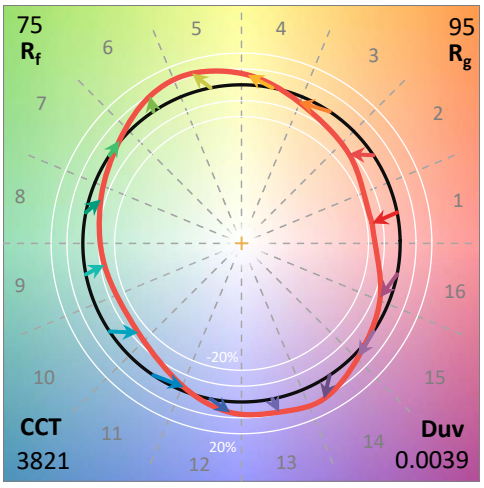
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-3-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 11/05/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-740-U-5WQ** |
| Description: | McGRAW EDISON ROADWAY AND AREA LUMINAIRE |

***THIS IS A REVISION OF SP1-1908-441-3-R3. TO UPDATE THE CATALOG INFORMATION.***TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 4000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3821 | CRI (Ra): | 72.3 | | |
| CIE u': | 0.2264 | R1: | 68.5 | R9: | -33.5 |
| CIE v': | 0.5098 | R2: | 78.5 | R10: | 50.8 |
| Duv: | 0.0039 | R3: | 88.2 | R11: | 69.2 |
| CIE x: | 0.3918 | R4: | 72.2 | R12: | 48.9 |
| CIE y: | 0.3921 | R5: | 69.0 | R13: | 69.8 |
| CIE z: | 0.2161 | R6: | 71.0 | R14: | 93.4 |
| Peak Wavelength (nm): | 585 | R7: | 80.4 | | |
| Dominant Wavelength (nm): | 577 | R8: | 50.4 | | |
| Purity: | 35.4 | | | | |

| | |
|---|---|
| Rf: | 75.5 |
| Rg: | 94.8 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 67M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 25.0./44% |
| Sphere Temperature (°C): | 25.7 |

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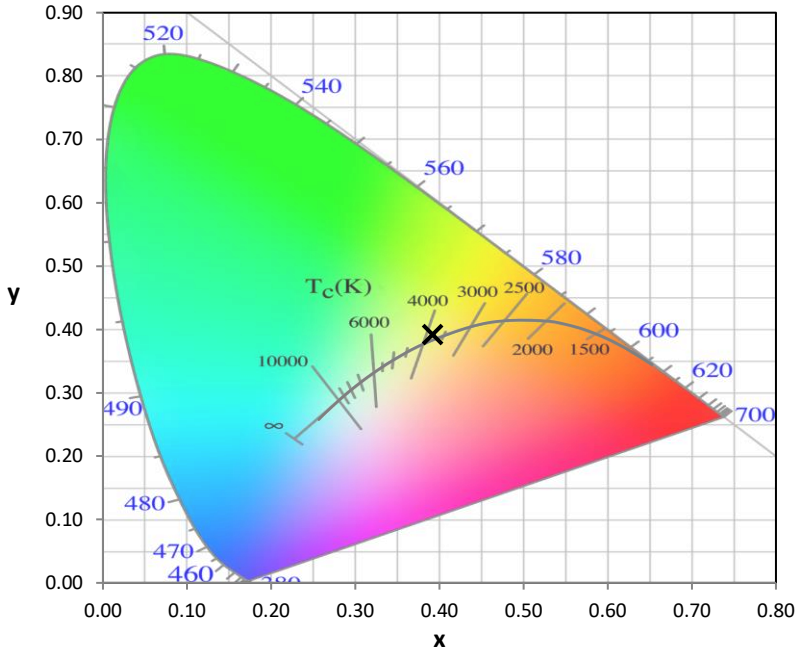
REPORT NUMBER: SP1-1908-441-3-R4

| 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 |

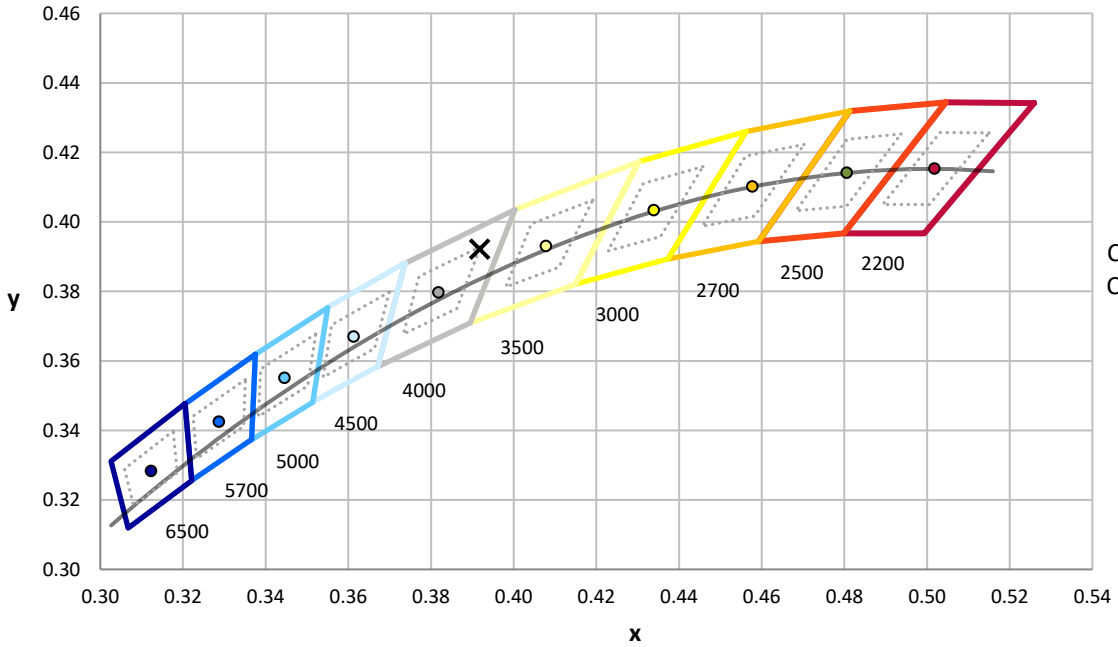
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1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-1908-441-3-R4

## CIE 1931 Chromaticity Diagram




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



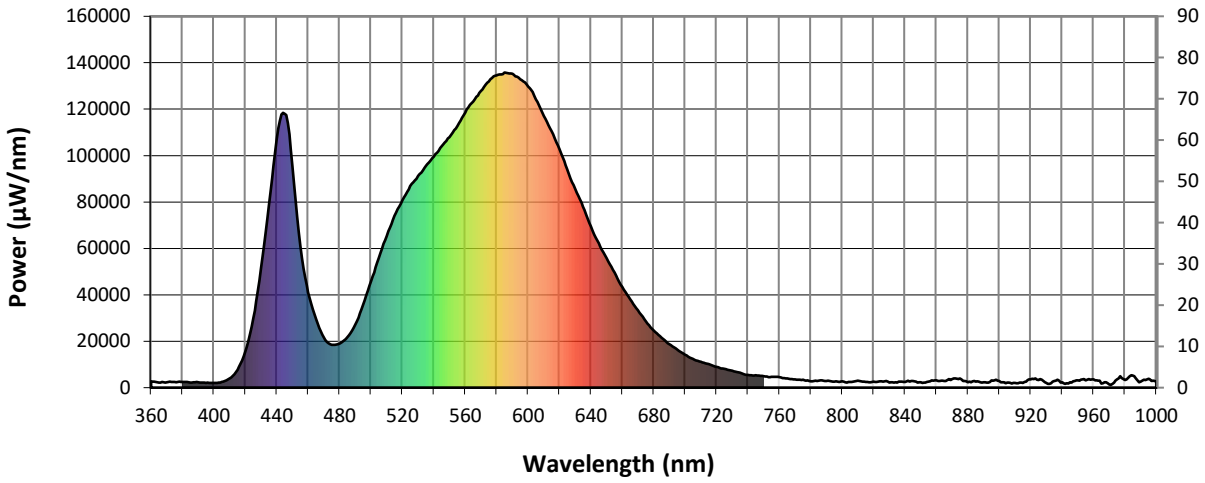

CCT = 3821K
CIE x = 0.3918
CIE y = 0.3921
Duv = 0.0039

Point lies inside the ANSI 4000K 7-step quadrangle

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## Photopic Flux vs. Wavelength



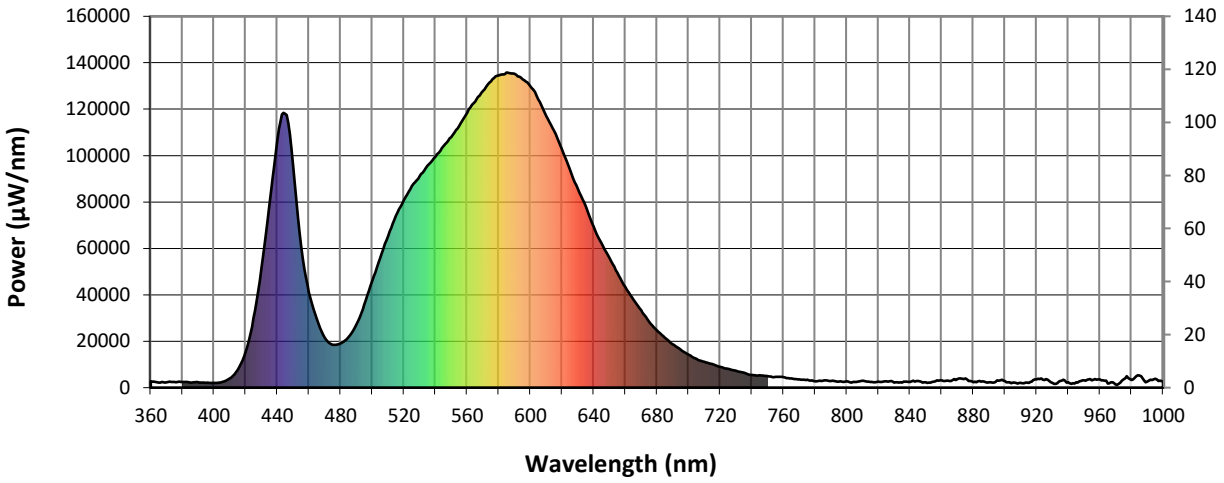

######

| 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 | 2662 | NR | 490 | 27227 | NR | 620 | 102725 | NR | 750 | 4998 | NR | 880 | 2294 | NR |
| 365 | 2227 | NR | 495 | 35672 | NR | 625 | 94018 | NR | 755 | 4638 | NR | 885 | 2526 | NR |
| 370 | 2351 | NR | 500 | 45857 | NR | 630 | 85530 | NR | 760 | 4579 | NR | 890 | 2275 | NR |
| 375 | 2487 | NR | 505 | 55772 | NR | 635 | 77990 | NR | 765 | 3952 | NR | 895 | 3151 | NR |
| 380 | 2507 | NR | 510 | 65358 | NR | 640 | 69405 | NR | 770 | 3495 | NR | 900 | 2915 | NR |
| 385 | 2244 | NR | 515 | 73945 | NR | 645 | 62112 | NR | 775 | 3353 | NR | 905 | 2197 | NR |
| 390 | 2299 | NR | 520 | 80747 | NR | 650 | 55830 | NR | 780 | 2778 | NR | 910 | 2048 | NR |
| 395 | 2056 | NR | 525 | 86794 | NR | 655 | 49542 | NR | 785 | 2954 | NR | 915 | 2045 | NR |
| 400 | 2025 | NR | 530 | 91185 | NR | 660 | 43371 | NR | 790 | 2859 | NR | 920 | 3527 | NR |
| 405 | 2414 | NR | 535 | 95640 | NR | 665 | 38089 | NR | 795 | 2638 | NR | 925 | 3296 | NR |
| 410 | 3944 | NR | 540 | 99533 | NR | 670 | 33284 | NR | 800 | 2710 | NR | 930 | 2096 | NR |
| 415 | 7705 | NR | 545 | 104097 | NR | 675 | 28574 | NR | 805 | 2390 | NR | 935 | 2810 | NR |
| 420 | 15513 | NR | 550 | 107982 | NR | 680 | 24590 | NR | 810 | 2947 | NR | 940 | 2304 | NR |
| 425 | 29927 | NR | 555 | 112790 | NR | 685 | 21480 | NR | 815 | 2387 | NR | 945 | 2250 | NR |
| 430 | 51389 | NR | 560 | 118428 | NR | 690 | 18698 | NR | 820 | 2557 | NR | 950 | 3082 | NR |
| 435 | 78905 | NR | 565 | 123208 | NR | 695 | 16372 | NR | 825 | 2693 | NR | 955 | 3173 | NR |
| 440 | 106921 | NR | 570 | 127740 | NR | 700 | 14200 | NR | 830 | 2208 | NR | 960 | 3569 | NR |
| 445 | 118008 | NR | 575 | 131879 | NR | 705 | 12325 | NR | 835 | 2160 | NR | 965 | 1744 | NR |
| 450 | 95722 | NR | 580 | 134489 | NR | 710 | 11122 | NR | 840 | 2493 | NR | 970 | 1283 | NR |
| 455 | 61053 | NR | 585 | 135793 | NR | 715 | 10157 | NR | 845 | 2809 | NR | 975 | 3622 | NR |
| 460 | 41109 | NR | 590 | 135243 | NR | 720 | 8957 | NR | 850 | 2287 | NR | 980 | 3346 | NR |
| 465 | 29591 | NR | 595 | 132928 | NR | 725 | 8084 | NR | 855 | 2564 | NR | 985 | 5229 | NR |
| 470 | 21545 | NR | 600 | 129738 | NR | 730 | 7241 | NR | 860 | 3166 | NR | 990 | 2613 | NR |
| 475 | 18425 | NR | 605 | 124239 | NR | 735 | 6387 | NR | 865 | 2867 | NR | 995 | 3838 | NR |
| 480 | 19056 | NR | 610 | 116984 | NR | 740 | 5430 | NR | 870 | 3742 | NR | 1000 | 2626 | NR |
| 485 | 21740 | NR | 615 | 110543 | NR | 745 | 5284 | NR | 875 | 3912 | NR | | | |

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## Scotopic Flux vs. Wavelength



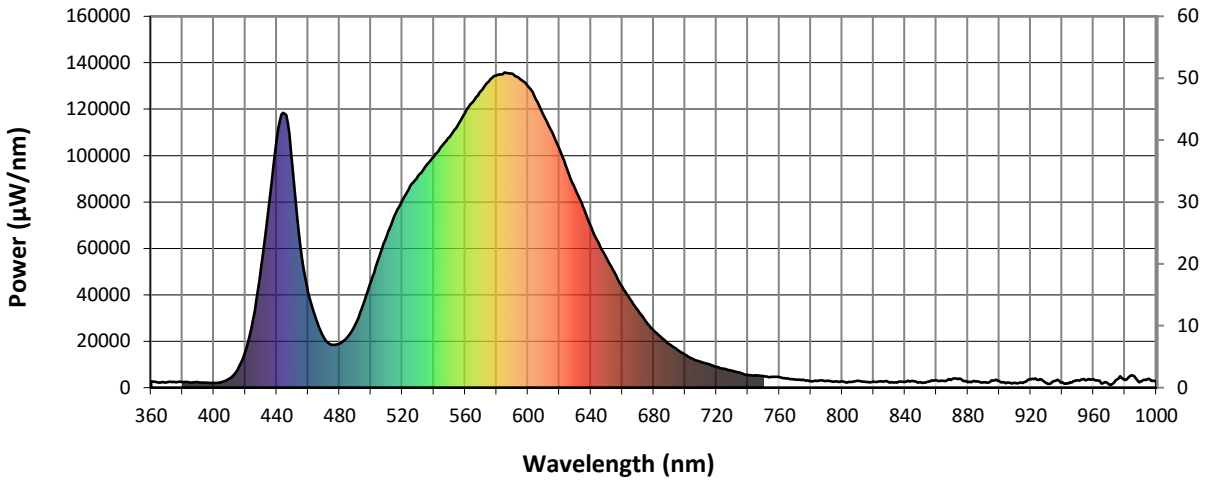

**Scotopic Lumens: 10930.8** **S/P: 1.47**

| 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 | 2662 | NR | 490 | 27227 | NR | 620 | 102725 | NR | 750 | 4998 | NR | 880 | 2294 | NR |
| 365 | 2227 | NR | 495 | 35672 | NR | 625 | 94018 | NR | 755 | 4638 | NR | 885 | 2526 | NR |
| 370 | 2351 | NR | 500 | 45857 | NR | 630 | 85530 | NR | 760 | 4579 | NR | 890 | 2275 | NR |
| 375 | 2487 | NR | 505 | 55772 | NR | 635 | 77990 | NR | 765 | 3952 | NR | 895 | 3151 | NR |
| 380 | 2507 | NR | 510 | 65358 | NR | 640 | 69405 | NR | 770 | 3495 | NR | 900 | 2915 | NR |
| 385 | 2244 | NR | 515 | 73945 | NR | 645 | 62112 | NR | 775 | 3353 | NR | 905 | 2197 | NR |
| 390 | 2299 | NR | 520 | 80747 | NR | 650 | 55830 | NR | 780 | 2778 | NR | 910 | 2048 | NR |
| 395 | 2056 | NR | 525 | 86794 | NR | 655 | 49542 | NR | 785 | 2954 | NR | 915 | 2045 | NR |
| 400 | 2025 | NR | 530 | 91185 | NR | 660 | 43371 | NR | 790 | 2859 | NR | 920 | 3527 | NR |
| 405 | 2414 | NR | 535 | 95640 | NR | 665 | 38089 | NR | 795 | 2638 | NR | 925 | 3296 | NR |
| 410 | 3944 | NR | 540 | 99533 | NR | 670 | 33284 | NR | 800 | 2710 | NR | 930 | 2096 | NR |
| 415 | 7705 | NR | 545 | 104097 | NR | 675 | 28574 | NR | 805 | 2390 | NR | 935 | 2810 | NR |
| 420 | 15513 | NR | 550 | 107982 | NR | 680 | 24590 | NR | 810 | 2947 | NR | 940 | 2304 | NR |
| 425 | 29927 | NR | 555 | 112790 | NR | 685 | 21480 | NR | 815 | 2387 | NR | 945 | 2250 | NR |
| 430 | 51389 | NR | 560 | 118428 | NR | 690 | 18698 | NR | 820 | 2557 | NR | 950 | 3082 | NR |
| 435 | 78905 | NR | 565 | 123208 | NR | 695 | 16372 | NR | 825 | 2693 | NR | 955 | 3173 | NR |
| 440 | 106921 | NR | 570 | 127740 | NR | 700 | 14200 | NR | 830 | 2208 | NR | 960 | 3569 | NR |
| 445 | 118008 | NR | 575 | 131879 | NR | 705 | 12325 | NR | 835 | 2160 | NR | 965 | 1744 | NR |
| 450 | 95722 | NR | 580 | 134489 | NR | 710 | 11122 | NR | 840 | 2493 | NR | 970 | 1283 | NR |
| 455 | 61053 | NR | 585 | 135793 | NR | 715 | 10157 | NR | 845 | 2809 | NR | 975 | 3622 | NR |
| 460 | 41109 | NR | 590 | 135243 | NR | 720 | 8957 | NR | 850 | 2287 | NR | 980 | 3346 | NR |
| 465 | 29591 | NR | 595 | 132928 | NR | 725 | 8084 | NR | 855 | 2564 | NR | 985 | 5229 | NR |
| 470 | 21545 | NR | 600 | 129738 | NR | 730 | 7241 | NR | 860 | 3166 | NR | 990 | 2613 | NR |
| 475 | 18425 | NR | 605 | 124239 | NR | 735 | 6387 | NR | 865 | 2867 | NR | 995 | 3838 | NR |
| 480 | 19056 | NR | 610 | 116984 | NR | 740 | 5430 | NR | 870 | 3742 | NR | 1000 | 2626 | NR |
| 485 | 21740 | NR | 615 | 110543 | NR | 745 | 5284 | NR | 875 | 3912 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 4115.9** **M/P: 0.55**

| 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 | 2662 | NR | 490 | 27227 | NR | 620 | 102725 | NR | 750 | 4998 | NR | 880 | 2294 | NR |
| 365 | 2227 | NR | 495 | 35672 | NR | 625 | 94018 | NR | 755 | 4638 | NR | 885 | 2526 | NR |
| 370 | 2351 | NR | 500 | 45857 | NR | 630 | 85530 | NR | 760 | 4579 | NR | 890 | 2275 | NR |
| 375 | 2487 | NR | 505 | 55772 | NR | 635 | 77990 | NR | 765 | 3952 | NR | 895 | 3151 | NR |
| 380 | 2507 | NR | 510 | 65358 | NR | 640 | 69405 | NR | 770 | 3495 | NR | 900 | 2915 | NR |
| 385 | 2244 | NR | 515 | 73945 | NR | 645 | 62112 | NR | 775 | 3353 | NR | 905 | 2197 | NR |
| 390 | 2299 | NR | 520 | 80747 | NR | 650 | 55830 | NR | 780 | 2778 | NR | 910 | 2048 | NR |
| 395 | 2056 | NR | 525 | 86794 | NR | 655 | 49542 | NR | 785 | 2954 | NR | 915 | 2045 | NR |
| 400 | 2025 | NR | 530 | 91185 | NR | 660 | 43371 | NR | 790 | 2859 | NR | 920 | 3527 | NR |
| 405 | 2414 | NR | 535 | 95640 | NR | 665 | 38089 | NR | 795 | 2638 | NR | 925 | 3296 | NR |
| 410 | 3944 | NR | 540 | 99533 | NR | 670 | 33284 | NR | 800 | 2710 | NR | 930 | 2096 | NR |
| 415 | 7705 | NR | 545 | 104097 | NR | 675 | 28574 | NR | 805 | 2390 | NR | 935 | 2810 | NR |
| 420 | 15513 | NR | 550 | 107982 | NR | 680 | 24590 | NR | 810 | 2947 | NR | 940 | 2304 | NR |
| 425 | 29927 | NR | 555 | 112790 | NR | 685 | 21480 | NR | 815 | 2387 | NR | 945 | 2250 | NR |
| 430 | 51389 | NR | 560 | 118428 | NR | 690 | 18698 | NR | 820 | 2557 | NR | 950 | 3082 | NR |
| 435 | 78905 | NR | 565 | 123208 | NR | 695 | 16372 | NR | 825 | 2693 | NR | 955 | 3173 | NR |
| 440 | 106921 | NR | 570 | 127740 | NR | 700 | 14200 | NR | 830 | 2208 | NR | 960 | 3569 | NR |
| 445 | 118008 | NR | 575 | 131879 | NR | 705 | 12325 | NR | 835 | 2160 | NR | 965 | 1744 | NR |
| 450 | 95722 | NR | 580 | 134489 | NR | 710 | 11122 | NR | 840 | 2493 | NR | 970 | 1283 | NR |
| 455 | 61053 | NR | 585 | 135793 | NR | 715 | 10157 | NR | 845 | 2809 | NR | 975 | 3622 | NR |
| 460 | 41109 | NR | 590 | 135243 | NR | 720 | 8957 | NR | 850 | 2287 | NR | 980 | 3346 | NR |
| 465 | 29591 | NR | 595 | 132928 | NR | 725 | 8084 | NR | 855 | 2564 | NR | 985 | 5229 | NR |
| 470 | 21545 | NR | 600 | 129738 | NR | 730 | 7241 | NR | 860 | 3166 | NR | 990 | 2613 | NR |
| 475 | 18425 | NR | 605 | 124239 | NR | 735 | 6387 | NR | 865 | 2867 | NR | 995 | 3838 | NR |
| 480 | 19056 | NR | 610 | 116984 | NR | 740 | 5430 | NR | 870 | 3742 | NR | 1000 | 2626 | NR |
| 485 | 21740 | NR | 615 | 110543 | NR | 745 | 5284 | NR | 875 | 3912 | NR | | | |

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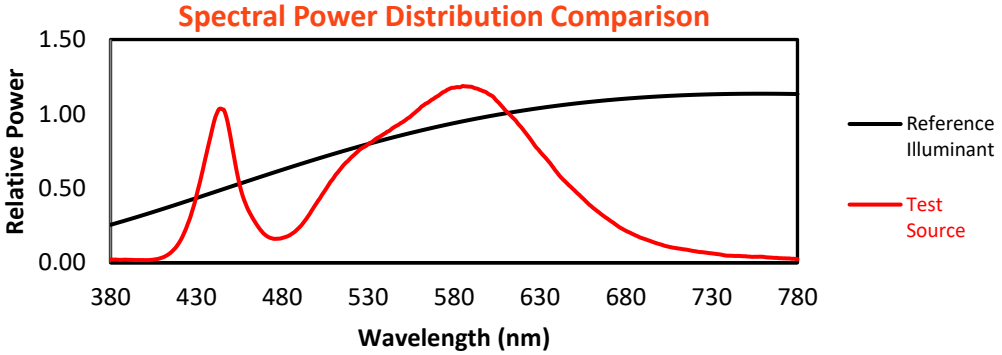
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# TM-30-18

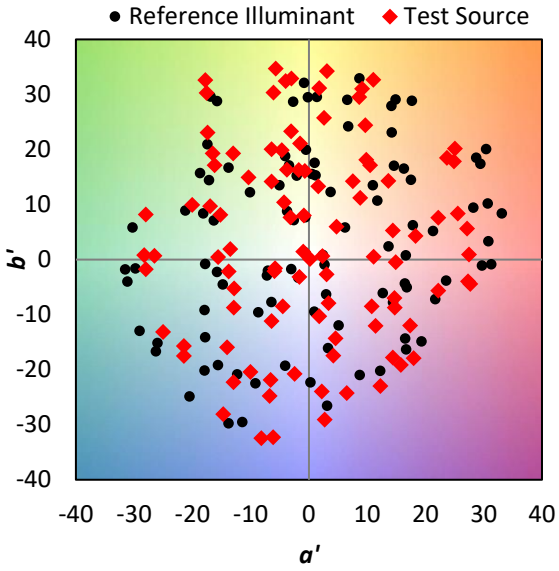
## Summary

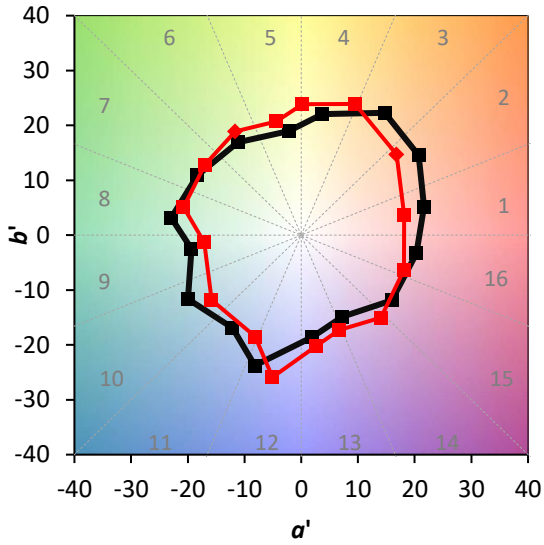
$R_f$ = 75.5
$R_g$ = 94.8
CIE $R_a$ = 72.3
$R_9$ = -33.5

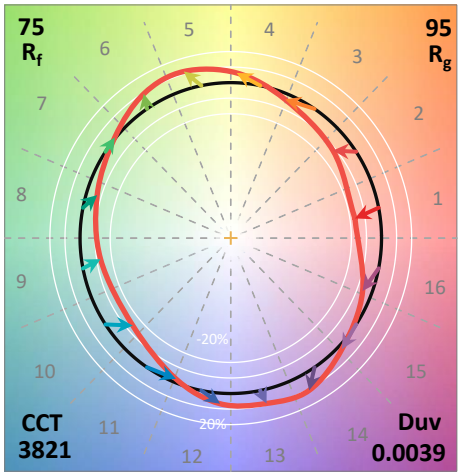
## Spectral Power Distribution Comparison

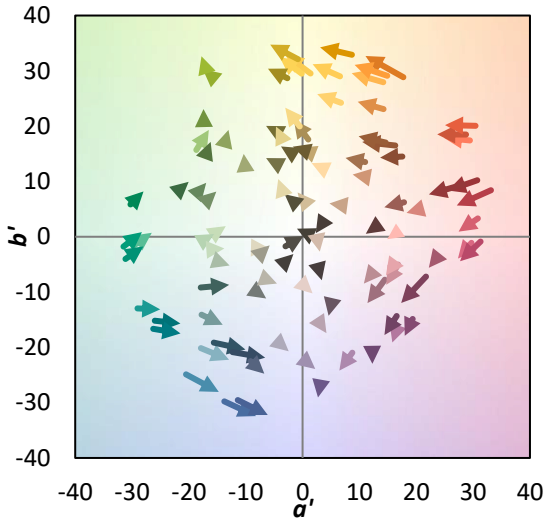



## Color Vector Graphics



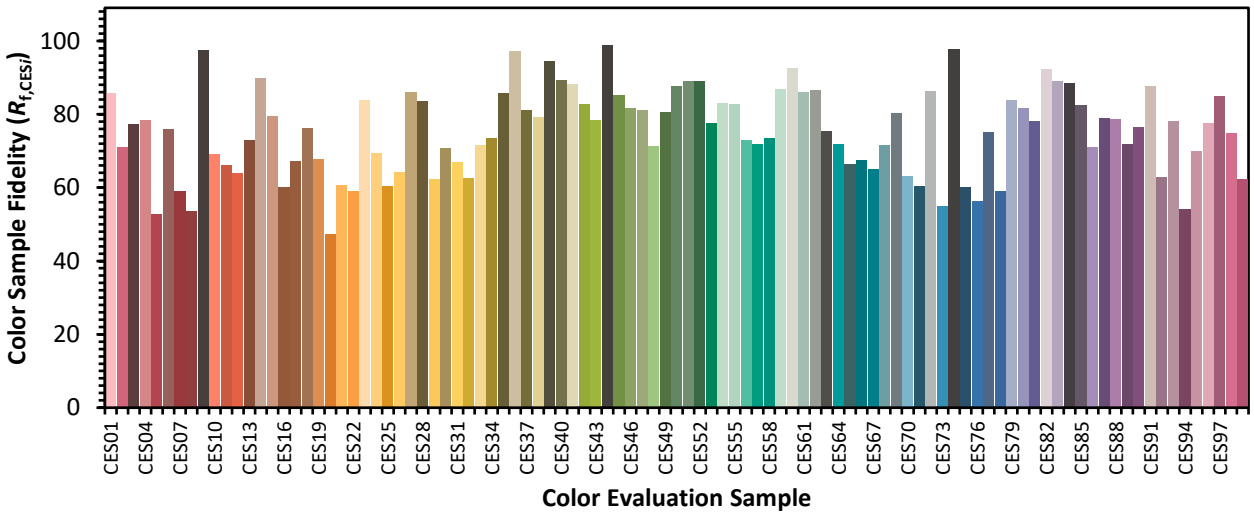
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Peachtree City, GA 30269

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## TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 64 | CES51 = 89 | CES76 = 56 |
| CES02 = 61 | CES27 = 86 | CES52 = 89 | CES77 = 75 |
| CES03 = 30 | CES28 = 83 | CES53 = 78 | CES78 = 59 |
| CES04 = 70 | CES29 = 62 | CES54 = 83 | CES79 = 84 |
| CES05 = 47 | CES30 = 71 | CES55 = 83 | CES80 = 82 |
| CES06 = 50 | CES31 = 67 | CES56 = 73 | CES81 = 78 |
| CES07 = 40 | CES32 = 63 | CES57 = 72 | CES82 = 92 |
| CES08 = 39 | CES33 = 72 | CES58 = 73 | CES83 = 89 |
| CES09 = 29 | CES34 = 73 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 86 | CES60 = 92 | CES85 = 83 |
| CES11 = 57 | CES36 = 97 | CES61 = 86 | CES86 = 71 |
| CES12 = 63 | CES37 = 81 | CES62 = 87 | CES87 = 79 |
| CES13 = 42 | CES38 = 79 | CES63 = 75 | CES88 = 79 |
| CES14 = 74 | CES39 = 94 | CES64 = 72 | CES89 = 72 |
| CES15 = 71 | CES40 = 89 | CES65 = 66 | CES90 = 77 |
| CES16 = 46 | CES41 = 88 | CES66 = 67 | CES91 = 88 |
| CES17 = 49 | CES42 = 83 | CES67 = 65 | CES92 = 63 |
| CES18 = 56 | CES43 = 78 | CES68 = 71 | CES93 = 78 |
| CES19 = 72 | CES44 = 99 | CES69 = 80 | CES94 = 54 |
| CES20 = 65 | CES45 = 85 | CES70 = 63 | CES95 = 70 |
| CES21 = 86 | CES46 = 82 | CES71 = 60 | CES96 = 78 |
| CES22 = 78 | CES47 = 81 | CES72 = 86 | CES97 = 85 |
| CES23 = 92 | CES48 = 71 | CES73 = 55 | CES98 = 75 |
| CES24 = 91 | CES49 = 81 | CES74 = 98 | CES99 = 62 |
| CES25 = 72 | CES50 = 88 | CES75 = 60 | |

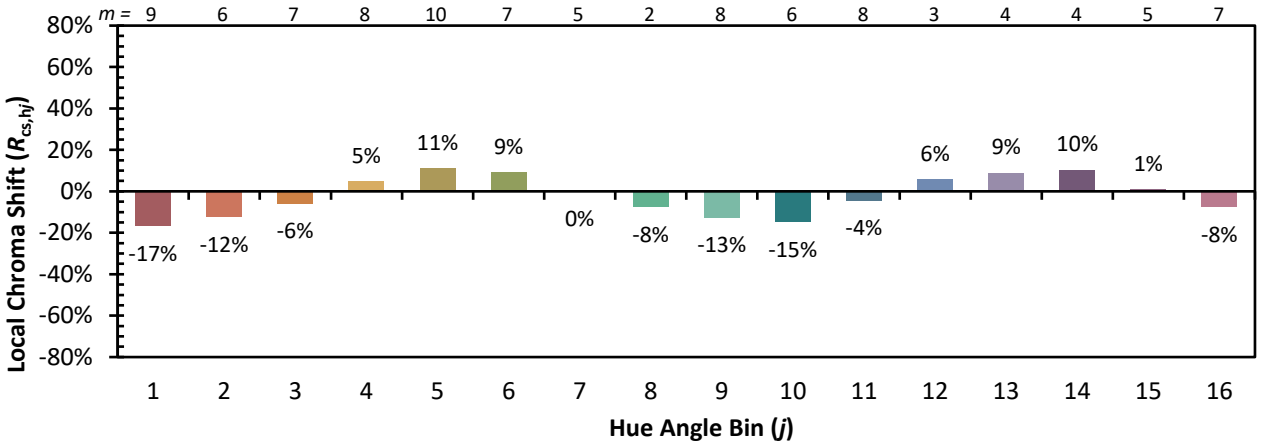


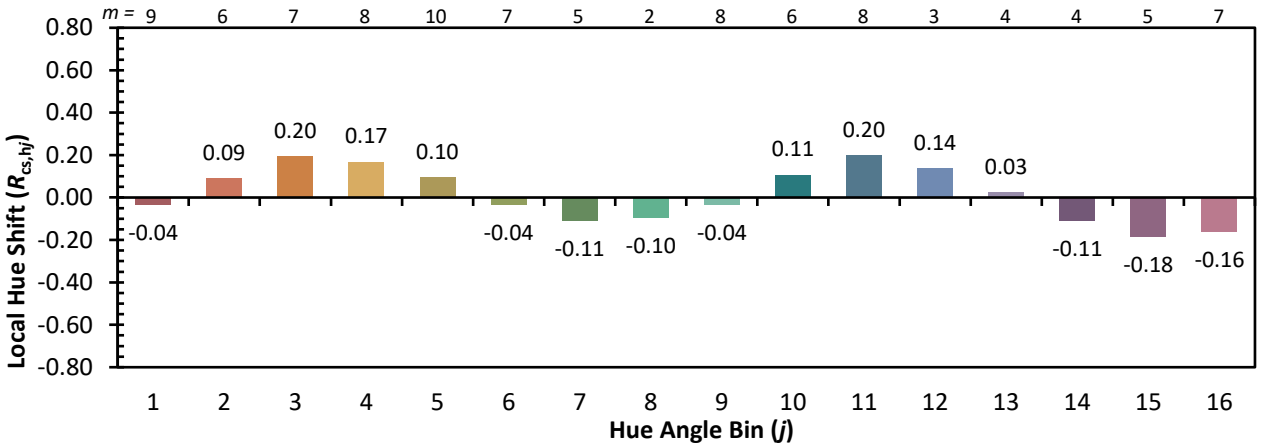
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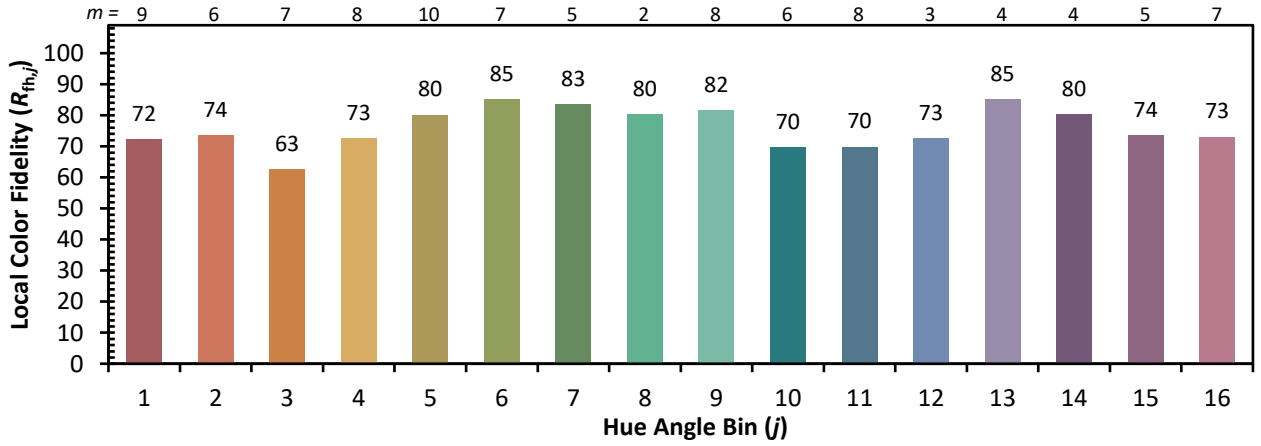
REPORT NUMBER: SP1-1908-441-3-R4

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### Color Rendition by Hue-Angle Bin



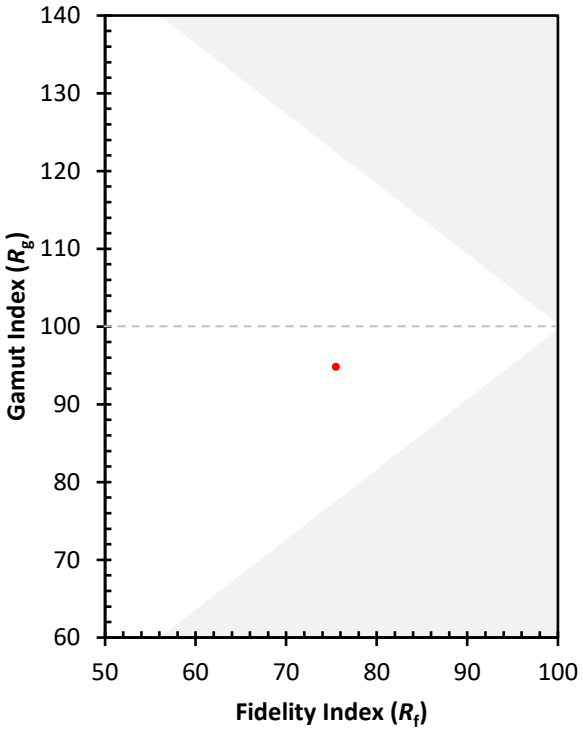



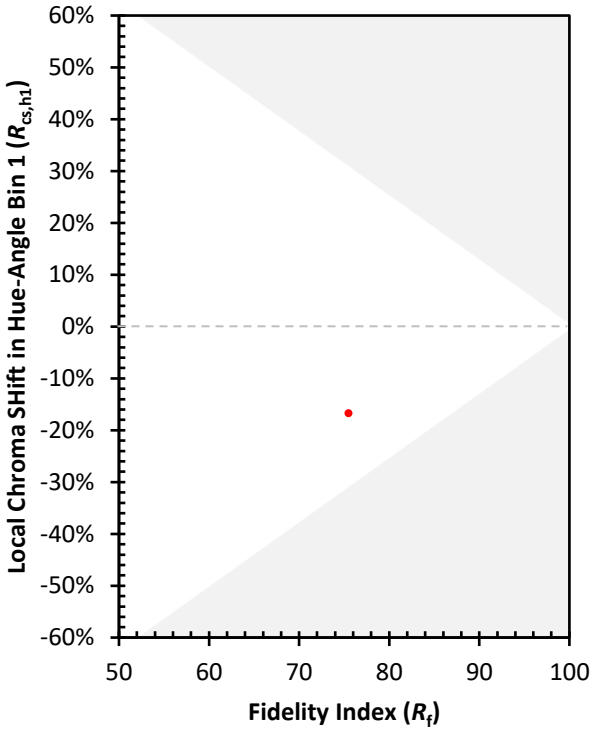
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### Measure Comparisons




(END OF REPORT)