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: P1202594

Luminaire Tested: GWC-SB2A-727-U-T4FT-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: | P1202594 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB2A-727-U-T4FT-HSS |
| Description: | GALLEON WALL LUMINAIRE |
| | (2) 70 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV FORWARD THRC OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 6299 lumens |
| Efficiency: | N/A |
| Efficacy: | 109.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1' x L: 0.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B1 - U0 - G2 |

| | |
|---|---|
| Input Watts (W): | 57.3 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.484 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.994 |
| Total Harmonic Distortion (THDi): | 9.038 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

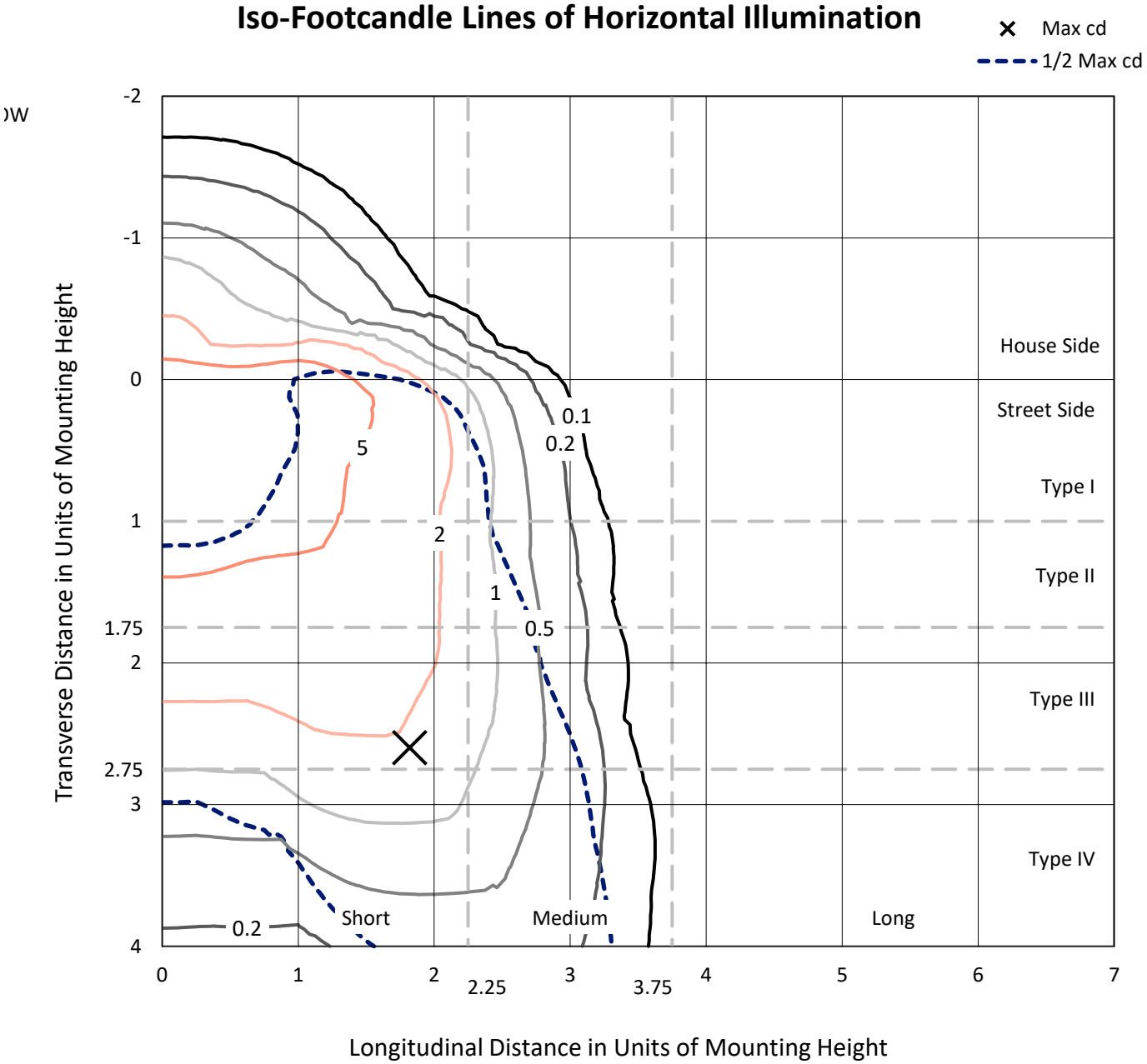


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REPORT NUMBER: P1202594
CATALOG NUMBER: GWC-SB2A-727-U-T4FT-HSS

## Iso-Footcandle Lines of Horizontal Illumination



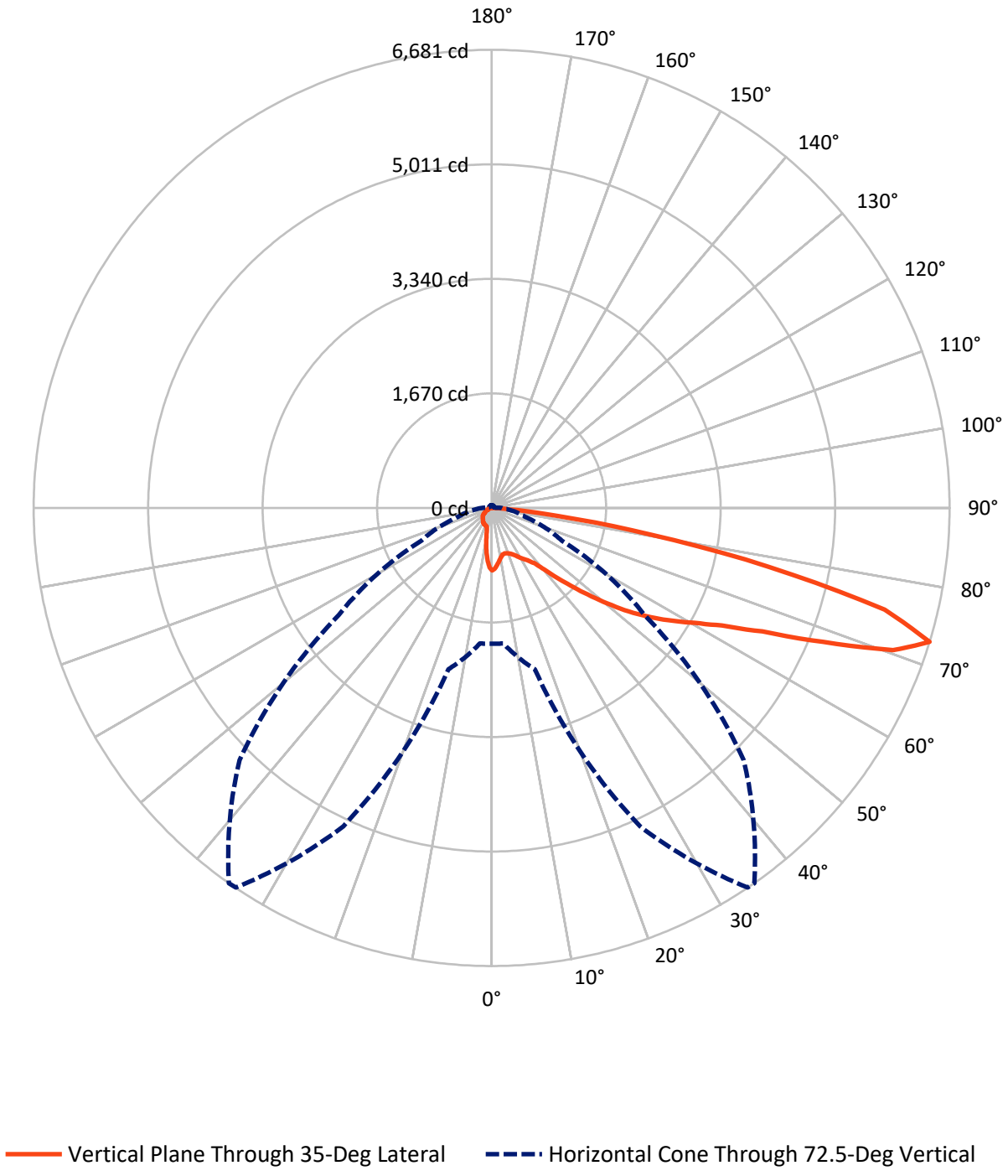

Based on 10 foot mounting height. Maximum calculated value = 13.1 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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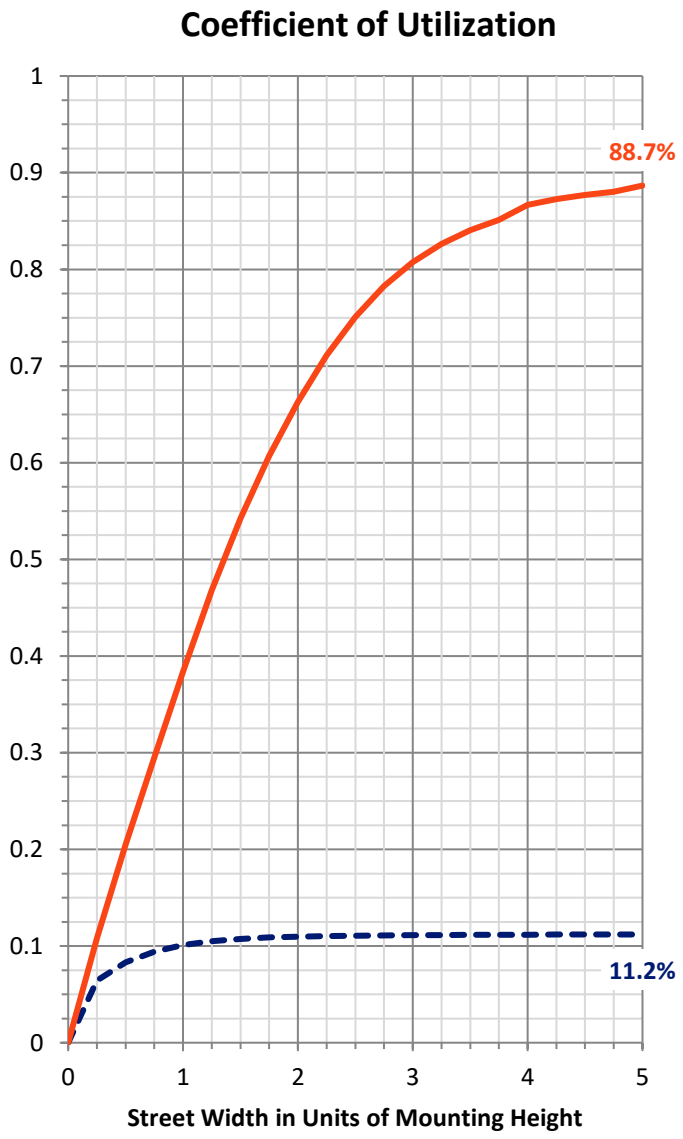
REPORT NUMBER: P1202594
CATALOG NUMBER: GWC-SB2A-727-U-T4FT-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 708.9 | 0.0 | 708.9 |
| | % Fixture | 11.3 | 0.0 | 11.3 |
| **Street Side** | Lumens | 5590.1 | 0.0 | 5590.1 |
| | % Fixture | 88.7 | 0.0 | 88.7 |
| **Total** | Lumens | 6299.0 | 0.0 | 6299.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 75.0 | 1.2 |
| 10°-20° | 175.5 | 2.8 |
| 20°-30° | 285.1 | 4.5 |
| 30°-40° | 475.7 | 7.6 |
| 40°-50° | 900.0 | 14.3 |
| 50°-60° | 1430.1 | 22.7 |
| 60°-70° | 1769.1 | 28.1 |
| 70°-80° | 1099.7 | 17.5 |
| 80°-90° | 88.9 | 1.4 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 6299.0 | 100.0 |
| 0°-180° | 6299.0 | 100.0 |



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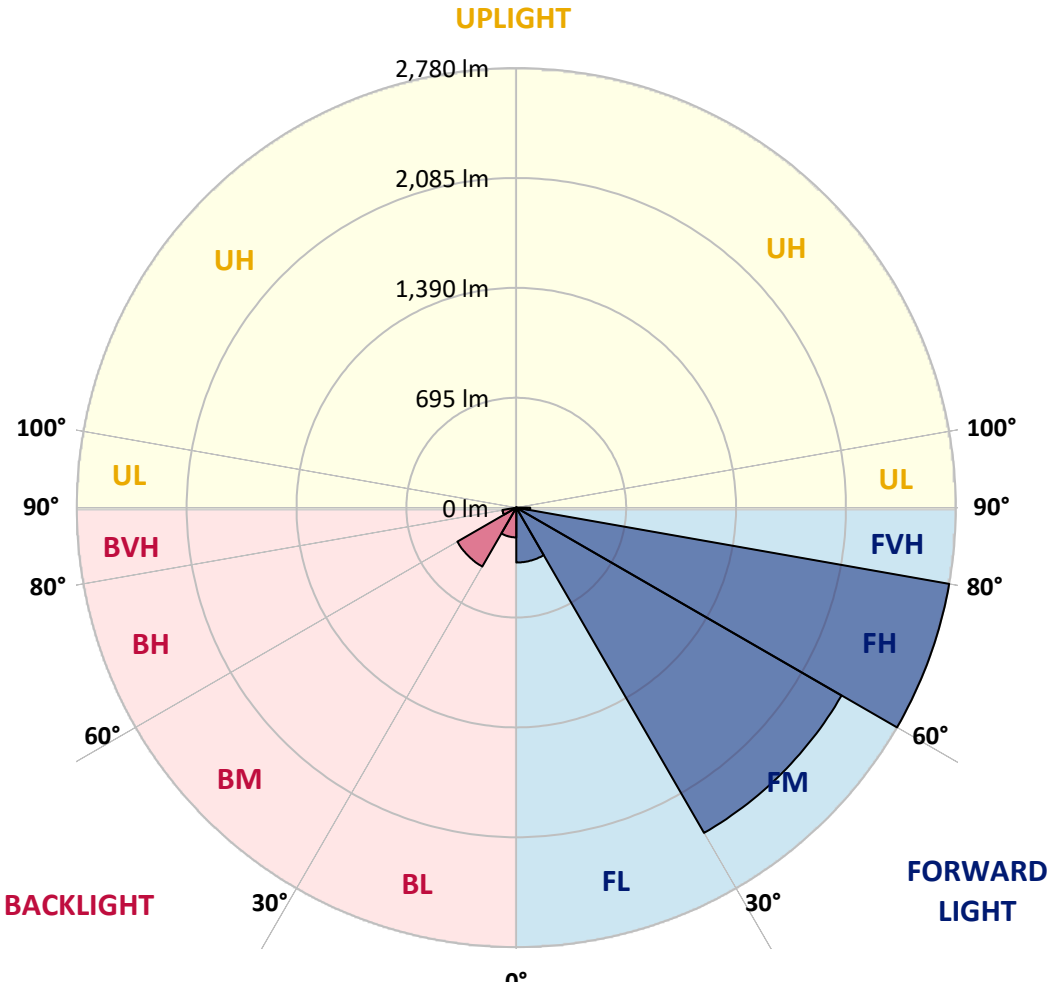
Scaled Data Report

REPORT NUMBER: P1202594
CATALOG NUMBER: GWC-SB2A-727-U-T4FT-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 347.2 | 5.5 | | | |
| FM | (30°-60°) | 2375.4 | 37.7 | | | |
| FH | (60°-80°) | 2779.8 | 44.1 | | | G2/5000 |
| FVH | (80°-90°) | 87.7 | 1.4 | | | G1/100 |
| BL | (0°-30°) | 188.4 | 3.0 | B1/500 | | |
| BM | (30°-60°) | 430.4 | 6.8 | B1/1000 | | |
| BH | (60°-80°) | 89.0 | 1.4 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 1.2 | 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-G2**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 34° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | *912.9* | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 |
| 2.5° | 872.3 | 879.7 | 881.1 | 883.4 | 883.4 | *886.2* | 890.8 | 897.2 | 907.9 | 913.4 | 917.1 |
| 5° | 804.0 | 809.6 | 816.5 | 822.0 | 832.6 | *834.0* | 852.0 | 869.6 | 894.0 | 912.5 | 925.4 |
| 7.5° | 735.2 | 741.7 | 750.9 | 764.3 | 778.2 | *782.3* | 809.6 | 839.1 | 877.9 | 912.5 | 934.2 |
| 10° | 686.8 | 687.2 | 695.5 | 708.9 | 731.1 | *736.2* | 769.4 | 811.4 | 859.9 | 906.9 | 942.5 |
| 12.5° | 659.5 | 662.8 | 666.5 | 676.6 | 697.9 | *701.1* | 736.6 | 786.0 | 841.9 | 903.7 | 952.2 |
| 15° | 659.5 | 661.9 | 664.2 | 669.2 | 686.3 | *689.1* | 720.5 | 769.9 | 832.6 | 905.1 | 967.9 |
| 17.5° | 666.5 | 670.2 | 668.3 | 674.3 | 692.3 | *694.2* | 721.9 | 765.2 | 832.2 | 913.9 | 991.9 |
| 20° | 683.1 | 685.9 | 682.2 | 685.9 | 703.9 | *707.5* | 736.2 | 774.0 | 840.0 | 929.1 | 1021.9 |
| 22.5° | 709.4 | 710.8 | 702.0 | 704.8 | 723.2 | *727.9* | 761.1 | 798.9 | 858.9 | 953.6 | 1062.0 |
| 25° | 742.6 | 745.4 | 732.0 | 735.2 | 752.8 | *758.3* | 796.6 | 836.3 | 888.9 | 987.2 | 1113.2 |
| 27.5° | 780.9 | 782.3 | 770.8 | 770.3 | 792.9 | *800.8* | 839.6 | 882.5 | 929.1 | 1029.7 | 1177.9 |
| 30° | 824.8 | 828.9 | 817.9 | 816.0 | 844.6 | *851.1* | 889.4 | 939.2 | 988.2 | 1093.4 | 1269.7 |
| 32.5° | 859.4 | 862.6 | 856.2 | 860.8 | 889.9 | *894.9* | 949.9 | 1019.6 | 1080.9 | 1183.9 | 1394.8 |
| 35° | 909.2 | 911.1 | 896.3 | 904.6 | 937.9 | *950.8* | 1032.5 | 1132.2 | 1197.7 | 1297.4 | 1558.2 |
| 37.5° | 1089.7 | 1089.7 | 1026.9 | 985.9 | 1017.7 | *1029.2* | 1145.6 | 1273.9 | 1341.7 | 1449.7 | 1764.0 |
| 40° | 1339.4 | 1335.3 | 1243.4 | 1159.4 | 1155.2 | *1177.9* | 1306.6 | 1452.5 | 1527.7 | 1632.5 | 1995.7 |
| 42.5° | 1605.7 | 1599.3 | 1474.2 | 1391.1 | 1377.3 | *1385.1* | 1492.6 | 1672.6 | 1749.3 | 1855.4 | 2245.0 |
| 45° | 1842.0 | 1840.2 | 1725.7 | 1614.0 | 1589.1 | *1614.0* | 1724.8 | 1930.2 | 1985.1 | 2096.8 | 2493.7 |
| 47.5° | 2040.0 | 2040.0 | 1956.5 | 1883.6 | 1870.6 | *1885.4* | 2039.1 | 2215.9 | 2210.8 | 2353.9 | 2736.0 |
| 50° | 2268.0 | 2266.2 | 2186.8 | 2155.4 | 2168.8 | *2189.6* | 2401.0 | 2516.8 | 2444.3 | 2606.3 | 2952.5 |
| 52.5° | 2427.7 | 2438.8 | 2411.6 | 2406.5 | 2474.8 | *2510.8* | 2768.3 | 2811.3 | 2653.4 | 2845.9 | 3114.5 |
| 55° | 2554.2 | 2567.1 | 2598.5 | 2634.0 | 2765.6 | *2812.7* | 3124.2 | 3090.5 | 2828.3 | 3053.6 | 3207.7 |
| 57.5° | 2733.3 | 2714.8 | 2763.3 | 2833.4 | 3046.2 | *3103.0* | 3469.0 | 3354.0 | 2969.1 | 3222.0 | 3217.9 |
| 60° | 2950.7 | 2953.4 | 2961.7 | 3050.4 | 3326.4 | *3399.3* | 3808.7 | 3603.3 | 3059.6 | 3325.4 | 3105.3 |
| 62.5° | 3211.9 | 3216.0 | 3233.1 | 3369.3 | 3702.5 | *3771.3* | 4170.5 | 3807.3 | 3101.1 | 3296.4 | 2814.5 |
| 65° | 3193.9 | 3211.4 | 3402.0 | 3867.7 | 4274.4 | *4342.2* | 4592.8 | 3950.4 | 3038.4 | 3030.5 | 2291.6 |
| 67.5° | 2909.6 | 2938.2 | 3257.1 | 4463.1 | 5136.5 | *5212.2* | 5103.3 | 3978.5 | 2767.4 | 2356.6 | 1494.9 |
| 70° | 2536.7 | 2546.8 | 2930.4 | 4998.5 | 6134.9 | *6211.5* | 5560.2 | 3668.8 | 2100.0 | 1314.5 | 669.7 |
| 72.5° | *1981.0* | *1983.3* | *2433.3* | *5122.7* | *6676.7* | *6680.9* | *5201.6* | *2723.6* | *1129.4* | *504.9* | *232.6* |
| 75° | 1415.1 | 1401.3 | 1629.7 | 4154.4 | 5874.1 | *5921.2* | 3899.6 | 1277.6 | 431.5 | 238.6 | 115.8 |
| 77.5° | 758.8 | 774.0 | 922.2 | 2463.7 | 4057.9 | *4138.2* | 2127.7 | 368.3 | 219.7 | 162.5 | 76.6 |
| 80° | 234.5 | 247.4 | 378.0 | 1128.0 | 2298.5 | *2347.0* | 788.8 | 163.8 | 153.2 | 115.8 | 50.3 |
| 82.5° | 73.8 | 76.6 | 176.3 | 474.0 | 954.0 | *976.2* | 228.5 | 92.8 | 104.8 | 76.6 | 29.5 |
| 85° | 21.2 | 21.7 | 78.5 | 176.8 | 235.8 | *240.5* | 64.2 | 36.0 | 60.0 | 47.5 | 15.2 |
| 87.5° | 2.3 | 7.4 | 29.5 | 29.5 | 20.8 | *20.3* | 6.9 | 7.8 | 17.1 | 6.0 | 2.8 |
| 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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Scaled Data Report

REPORT NUMBER: P1202594
CATALOG NUMBER: GWC-SB2A-727-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 | 912.9 |
| 2.5° | 914.8 | 915.2 | 909.2 | 899.1 | 888.0 | 878.8 | 867.2 | 858.0 | 851.6 | 849.7 | 852.9 |
| 5° | 921.2 | 918.0 | 900.9 | 870.0 | 833.1 | 801.2 | 765.7 | 737.5 | 719.1 | 711.2 | 714.0 |
| 7.5° | 930.9 | 921.7 | 884.3 | 823.4 | 752.8 | 690.0 | 626.3 | 576.9 | 545.5 | 529.9 | 532.2 |
| 10° | 939.2 | 920.8 | 856.6 | 756.0 | 648.0 | 552.9 | 467.1 | 407.5 | 374.3 | 358.6 | 359.1 |
| 12.5° | 947.1 | 920.3 | 820.6 | 676.2 | 529.9 | 413.5 | 333.7 | 304.2 | 294.9 | 291.7 | 290.8 |
| 15° | 961.9 | 921.7 | 775.4 | 584.8 | 412.2 | 312.5 | 283.4 | 282.9 | 284.8 | 283.9 | 283.4 |
| 17.5° | 982.2 | 923.1 | 724.2 | 487.9 | 318.0 | 275.5 | 274.2 | 278.3 | 281.1 | 279.7 | 279.2 |
| 20° | 1008.5 | 928.6 | 669.7 | 391.9 | 273.2 | 266.3 | 269.5 | 273.2 | 275.5 | 273.2 | 272.8 |
| 22.5° | 1045.4 | 938.3 | 610.2 | 314.8 | 258.9 | 260.8 | 263.5 | 267.7 | 270.0 | 266.8 | 266.3 |
| 25° | 1090.6 | 953.6 | 551.5 | 273.7 | 252.0 | 254.3 | 258.5 | 263.1 | 265.9 | 262.6 | 262.2 |
| 27.5° | 1149.2 | 978.0 | 497.5 | 264.5 | 245.1 | 246.5 | 252.5 | 259.4 | 263.1 | 258.9 | 258.9 |
| 30° | 1234.2 | 1018.2 | 450.9 | 268.6 | 240.9 | 237.7 | 246.0 | 255.7 | 259.8 | 256.2 | 255.7 |
| 32.5° | 1346.8 | 1074.9 | 422.3 | 275.1 | 239.1 | 227.5 | 235.4 | 247.8 | 254.8 | 252.5 | 252.5 |
| 35° | 1494.5 | 1161.2 | 411.2 | 282.5 | 237.7 | 216.9 | 222.5 | 235.8 | 247.8 | 250.2 | 250.2 |
| 37.5° | 1673.6 | 1281.2 | 414.5 | 285.7 | 233.5 | 208.2 | 210.9 | 222.5 | 238.2 | 245.5 | 247.4 |
| 40° | 1877.1 | 1421.1 | 432.9 | 282.5 | 228.9 | 200.8 | 201.2 | 210.0 | 223.8 | 234.9 | 238.6 |
| 42.5° | 2087.1 | 1584.5 | 467.1 | 270.5 | 224.8 | 194.3 | 192.9 | 198.9 | 208.2 | 216.0 | 219.2 |
| 45° | 2287.0 | 1752.5 | 500.8 | 253.8 | 219.7 | 187.8 | 184.6 | 186.9 | 188.8 | 192.0 | 193.8 |
| 47.5° | 2461.4 | 1870.6 | 491.1 | 238.6 | 212.8 | 180.5 | 174.9 | 174.0 | 168.5 | 168.0 | 167.5 |
| 50° | 2581.9 | 1896.5 | 436.2 | 223.4 | 202.6 | 172.2 | 163.4 | 157.8 | 148.2 | 143.5 | 144.0 |
| 52.5° | 2620.2 | 1794.5 | 356.3 | 208.2 | 186.0 | 161.1 | 148.6 | 139.8 | 127.8 | 123.7 | 123.2 |
| 55° | 2569.4 | 1594.6 | 284.8 | 189.7 | 162.9 | 146.3 | 132.5 | 120.9 | 111.2 | 106.2 | 106.2 |
| 57.5° | 2445.3 | 1340.3 | 225.2 | 168.0 | 138.5 | 129.7 | 115.8 | 104.3 | 96.0 | 90.9 | 90.0 |
| 60° | 2239.4 | 1064.3 | 178.2 | 142.2 | 118.2 | 111.7 | 97.4 | 90.0 | 82.6 | 76.6 | 75.2 |
| 62.5° | 1927.0 | 759.7 | 139.8 | 112.6 | 98.8 | 91.4 | 83.1 | 77.5 | 68.8 | 60.5 | 59.1 |
| 65° | 1503.7 | 464.8 | 108.0 | 82.6 | 79.4 | 75.7 | 70.6 | 65.5 | 54.9 | 46.6 | 45.2 |
| 67.5° | 948.5 | 220.2 | 77.1 | 62.3 | 62.8 | 60.9 | 58.6 | 54.5 | 46.6 | 39.2 | 38.3 |
| 70° | 417.7 | 106.6 | 50.8 | 47.5 | 46.6 | 46.6 | 48.5 | 47.1 | 39.7 | 32.8 | 31.4 |
| 72.5° | *142.2* | *57.2* | *37.8* | *36.0* | *33.7* | *33.2* | *40.6* | *39.2* | *31.8* | *25.4* | *24.0* |
| 75° | 74.3 | 38.3 | 27.7 | 25.8 | 20.3 | 24.5 | 32.3 | 30.5 | 22.6 | 16.6 | 15.2 |
| 77.5° | 48.5 | 27.2 | 18.9 | 16.6 | 11.5 | 16.2 | 24.0 | 21.2 | 13.4 | 8.3 | 7.4 |
| 80° | 30.5 | 18.0 | 11.1 | 7.8 | 5.5 | 8.8 | 12.9 | 9.2 | 5.1 | 1.8 | 1.4 |
| 82.5° | 16.2 | 9.2 | 4.2 | 2.8 | 2.3 | 2.8 | 3.2 | 2.3 | 0.9 | 0.0 | 0.0 |
| 85° | 6.5 | 3.2 | 1.4 | 0.9 | 0.5 | 0.0 | 0.9 | 0.5 | 0.0 | 0.0 | 0.0 |
| 87.5° | 2.3 | 0.5 | 0.0 | 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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# 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

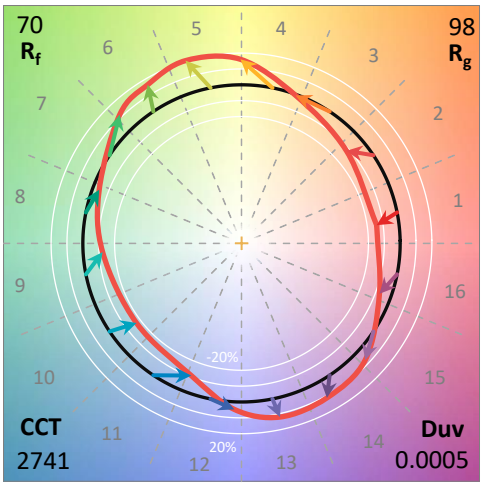
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-1-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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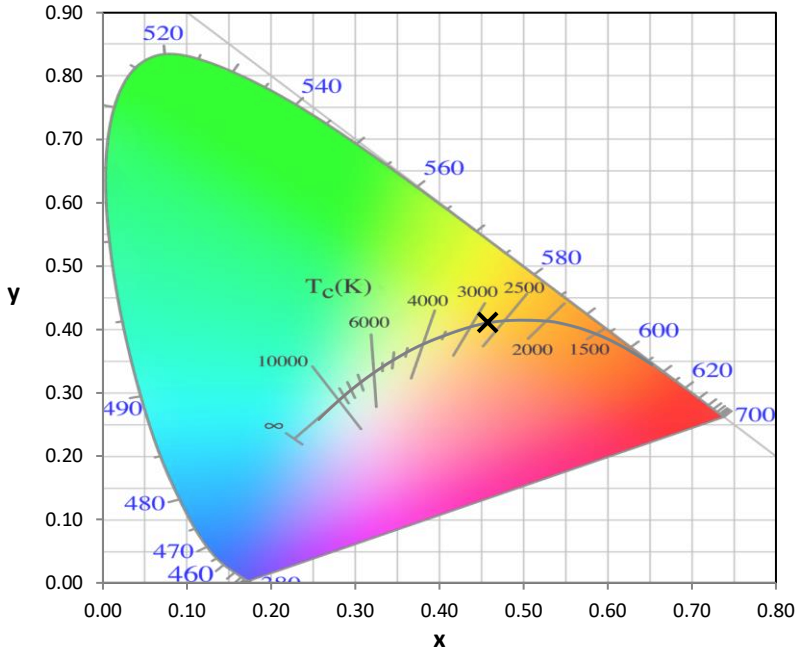
REPORT NUMBER: SP1-1908-441-1-R4

| 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 |

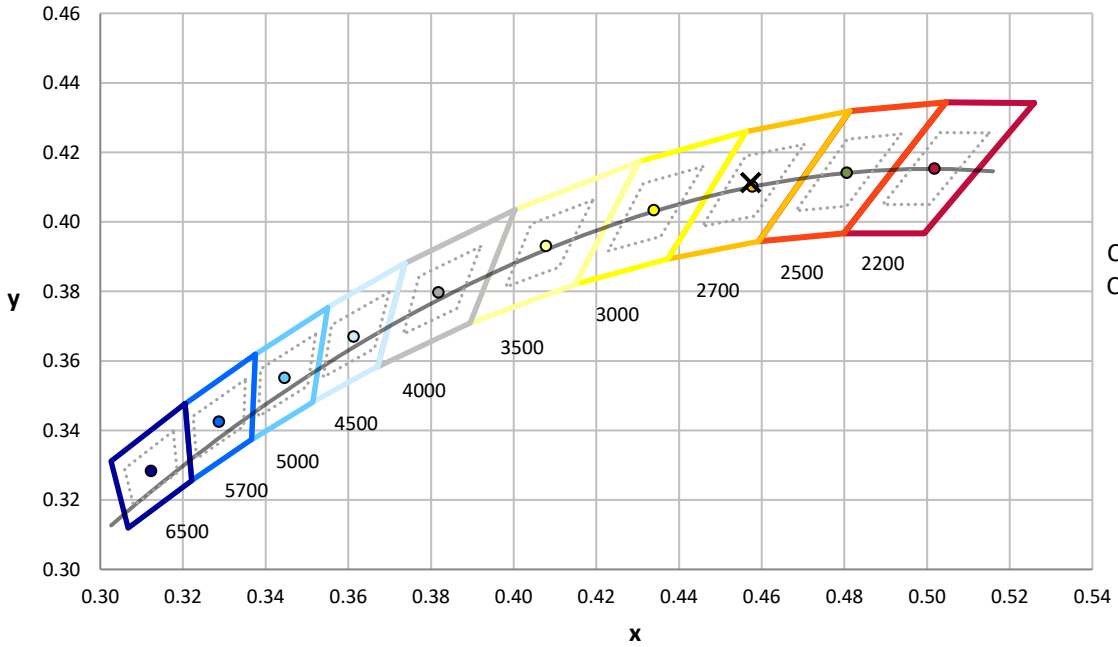
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Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



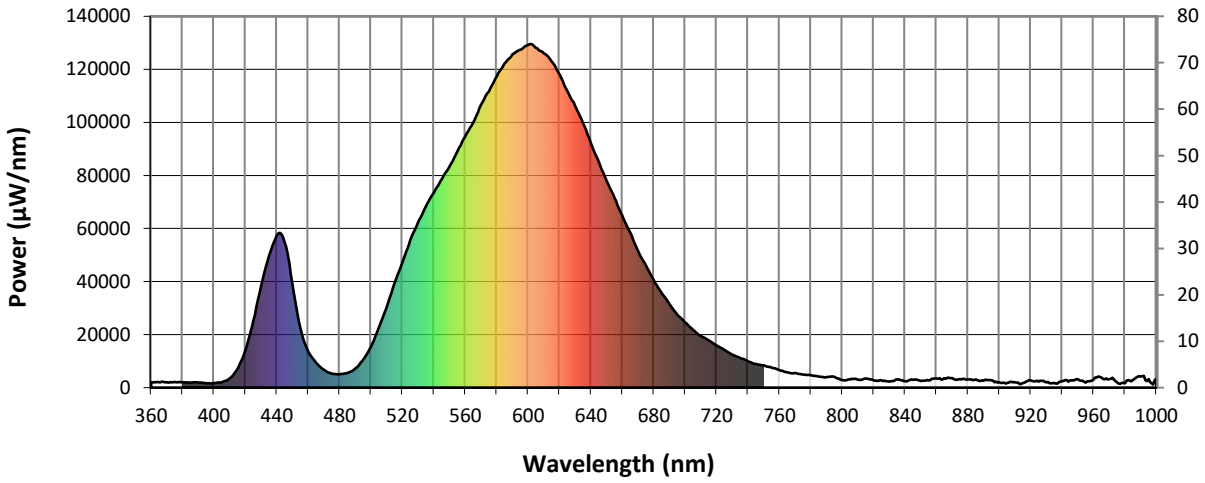

CCT = 2741K
CIE x = 0.4573
CIE y = 0.4113
Duv = 0.0005

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength



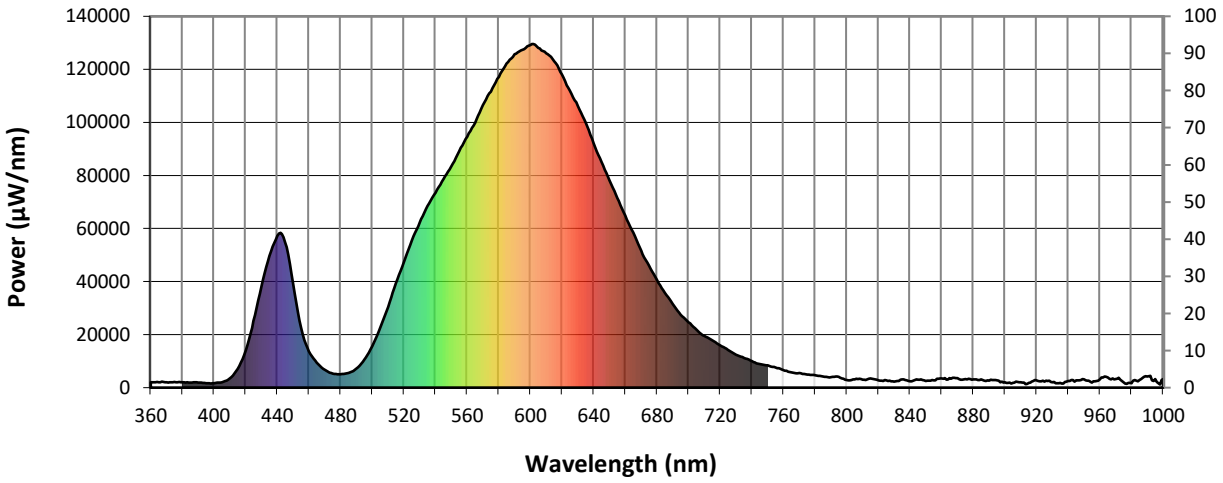

######

| 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



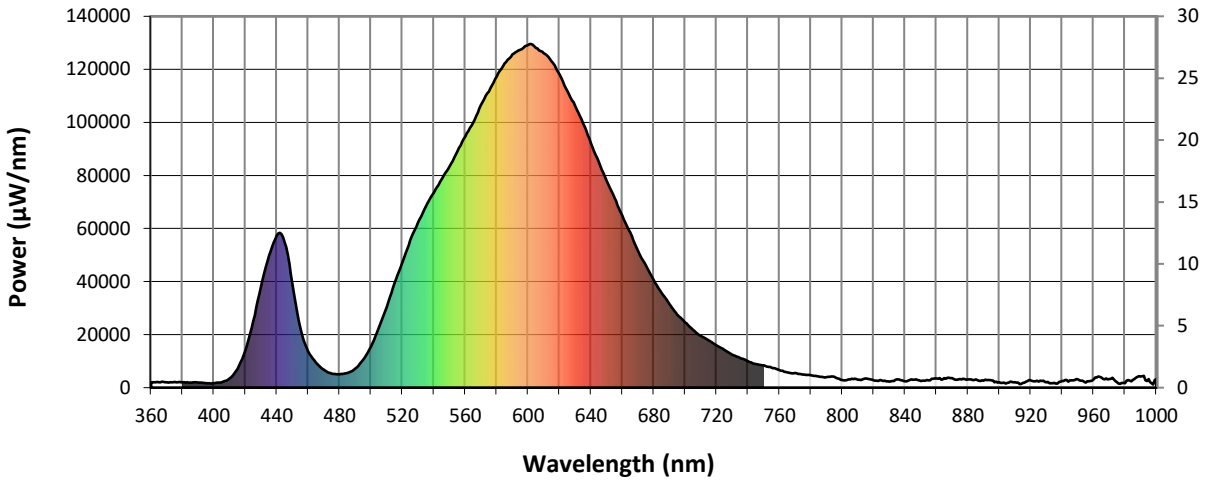

**Scotopic Lumens: 6474.3** **S/P: 1.04**

| 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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Peachtree City, GA 30269

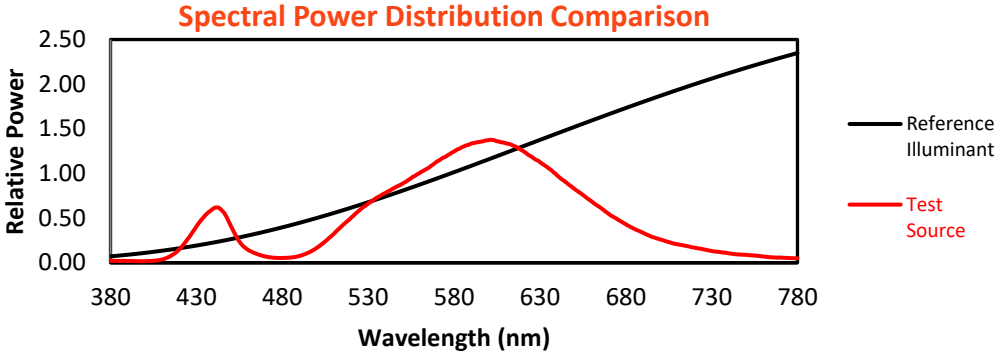
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# TM-30-18

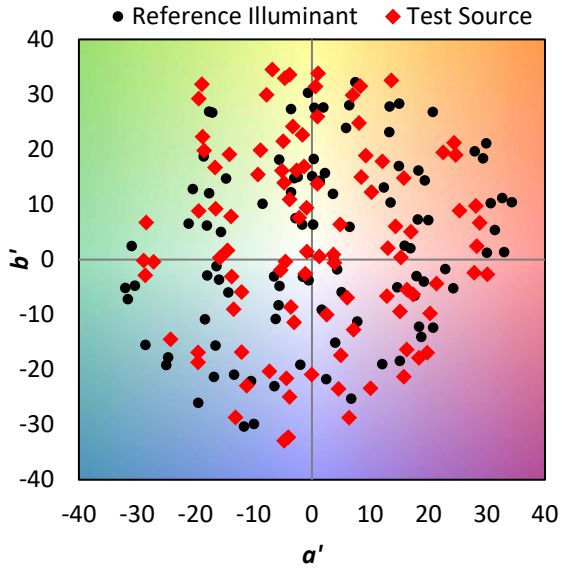
## Summary

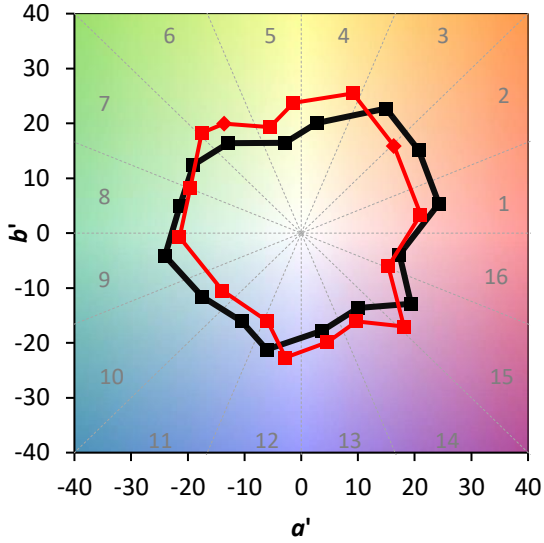
$R_f$ = 69.9
$R_g$ = 98.3
CIE $R_a$ = 71.5
$R_9$ = -16.1

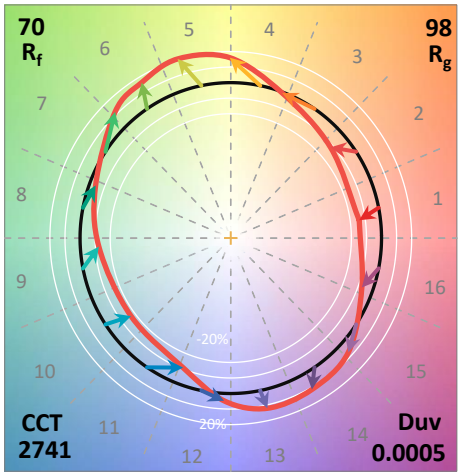
## Spectral Power Distribution Comparison

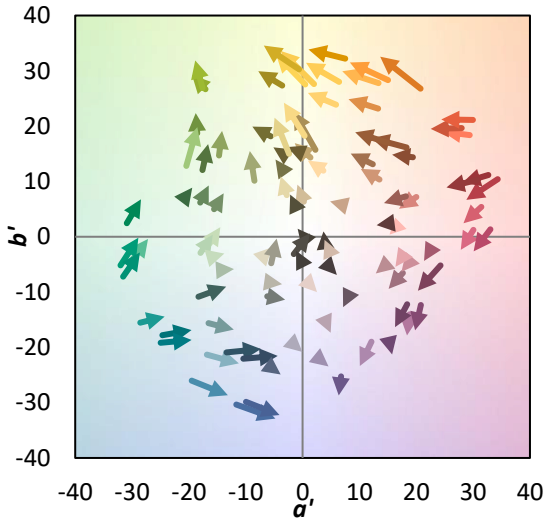



## Color Vector Graphics



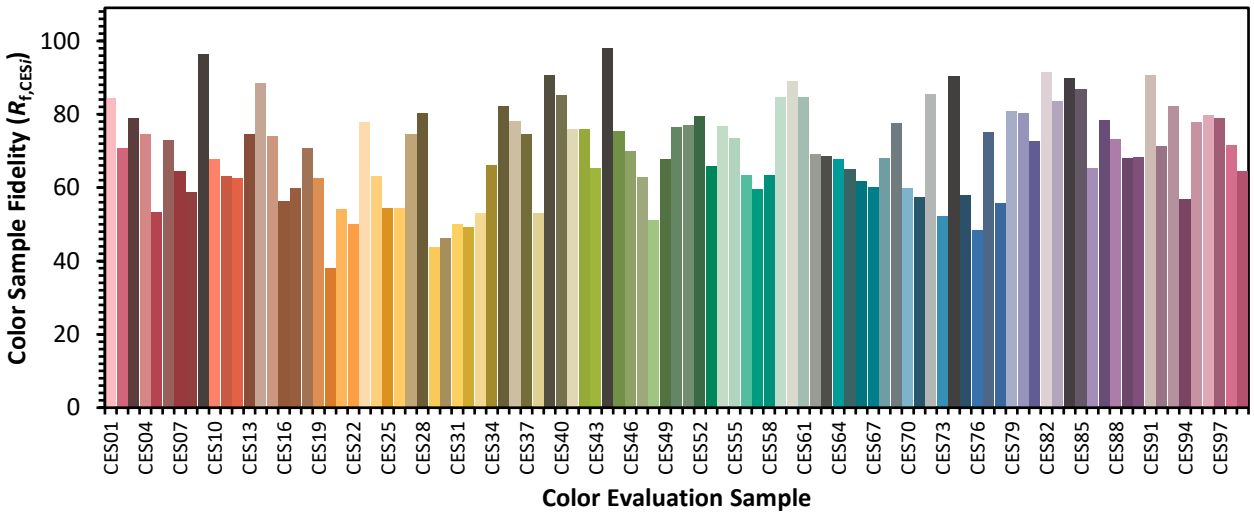
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Peachtree City, GA 30269

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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 | |

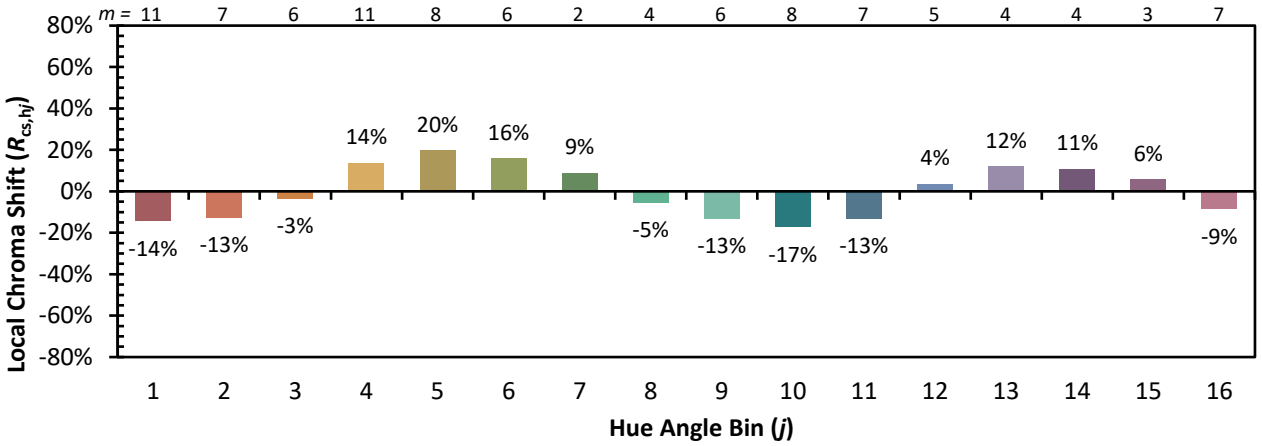


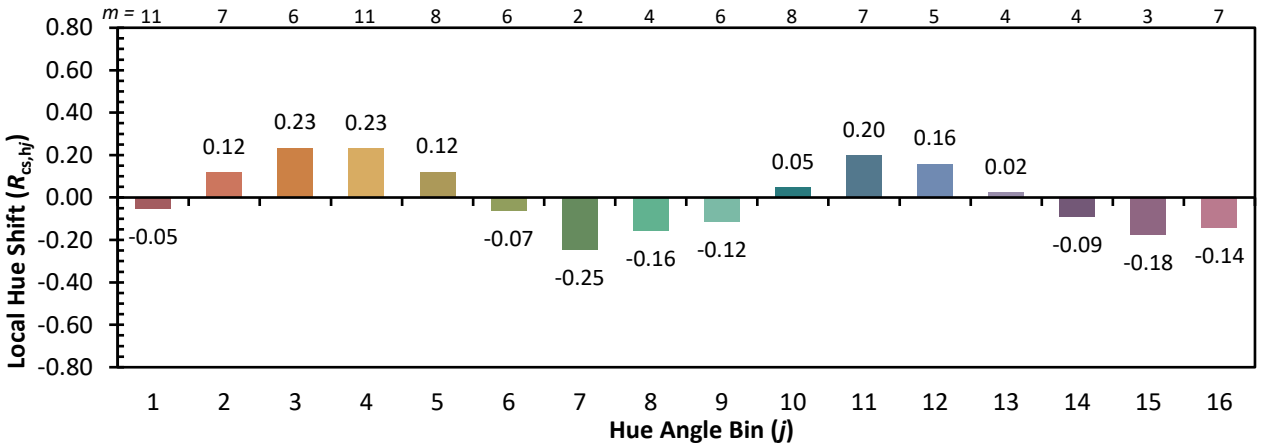
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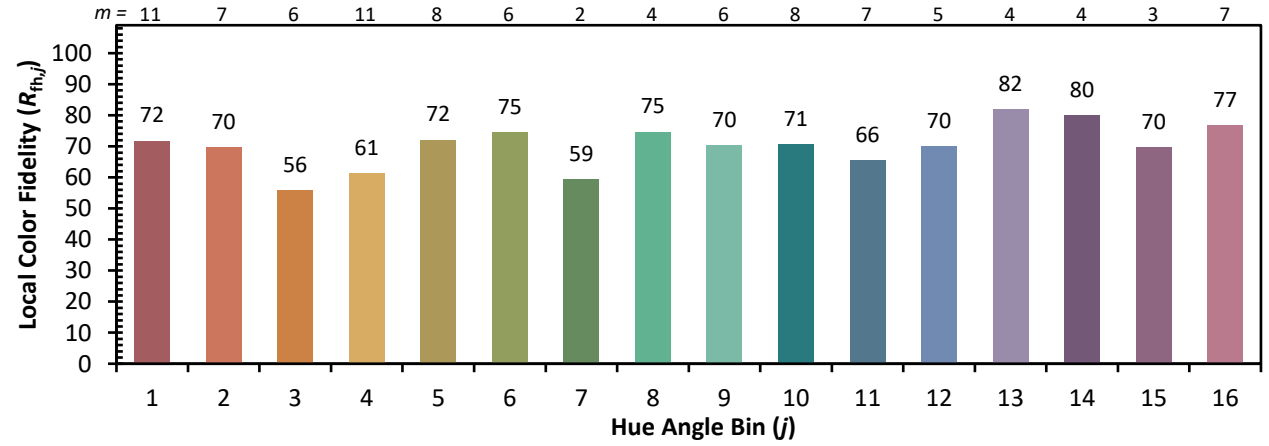
REPORT NUMBER: SP1-1908-441-1-R4

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### Color Rendition by Hue-Angle Bin



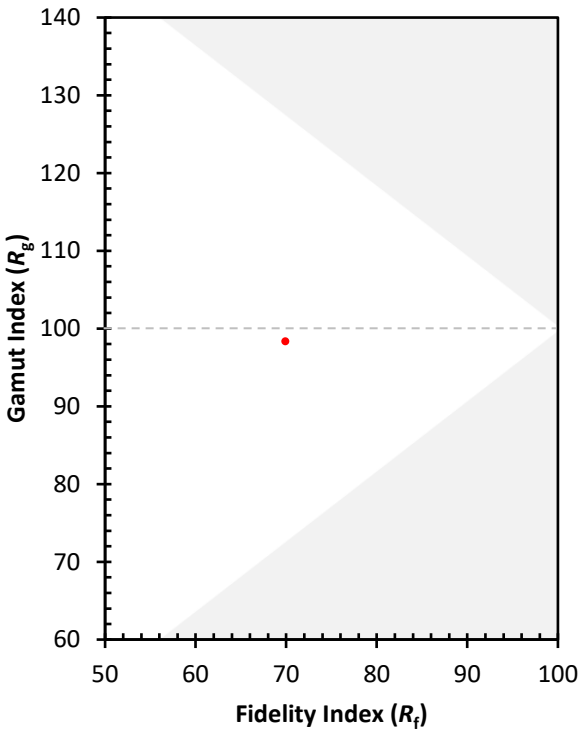



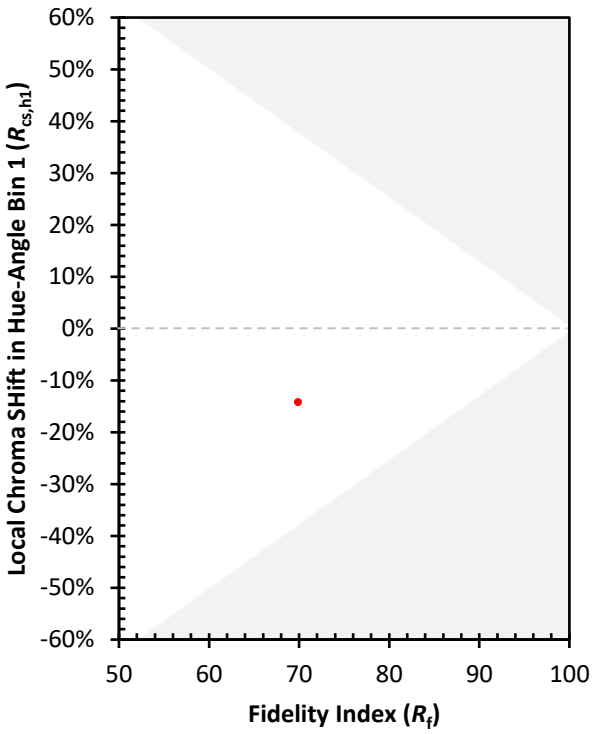
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### Measure Comparisons




(END OF REPORT)