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: P1201557

Luminaire Tested: GWC-SB1B-750-U-T2

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: | P1201557 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/14/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GWC-SB1B-750-U-T2 |
| Description: | GALLEON WALL LUMINAIRE |
| | (1) 70 CRI, 5000K, 450mA LIGHTSQUARE WITH 26 LEDS AND TYPE II OPTICS |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 5935 lumens |
| Efficiency: | N/A |
| Efficacy: | 149.1 lumens/watt |
| Luminous Opening: | Rectangular (W 0.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| 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 |

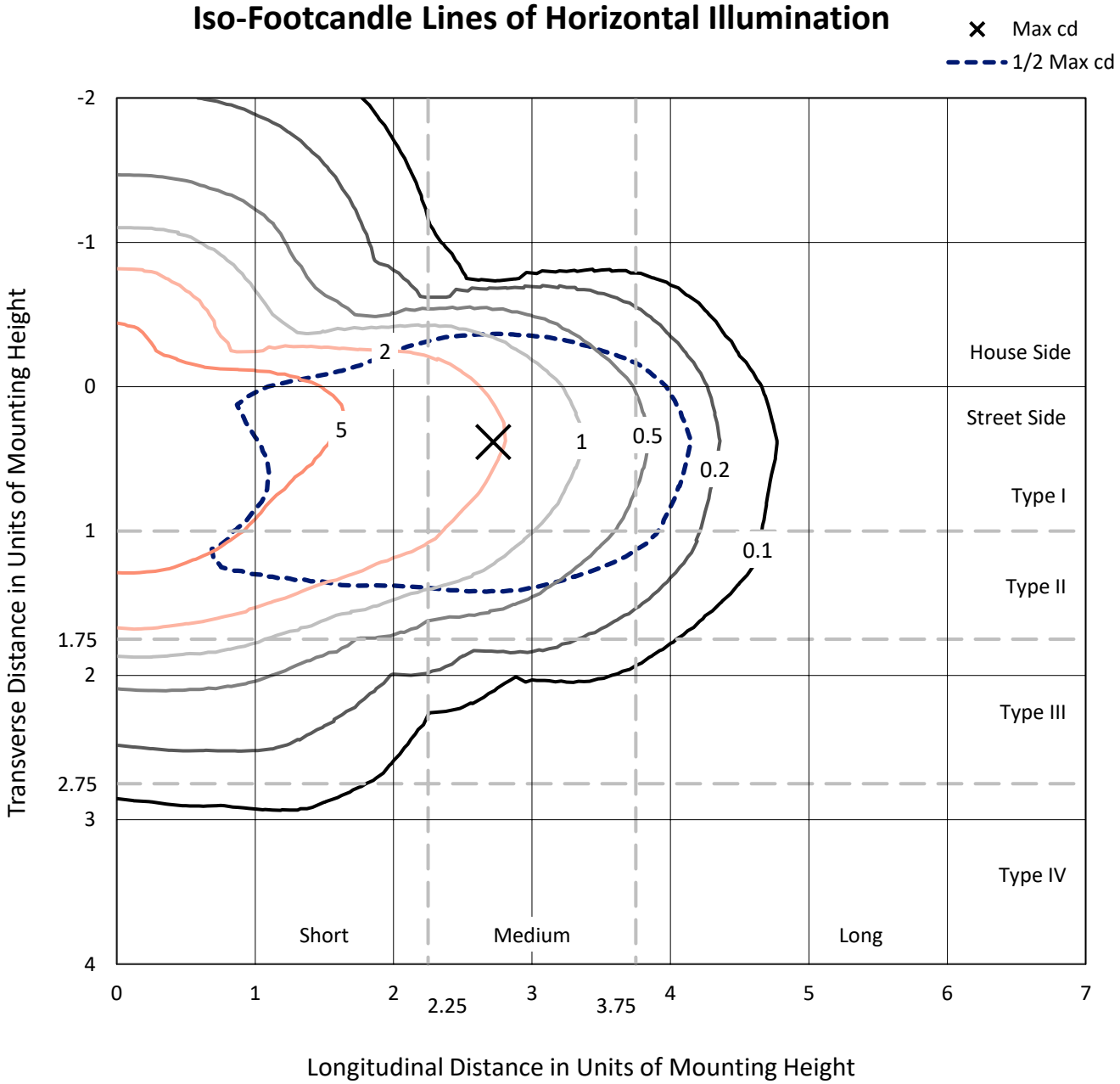


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Scaled Data Report

REPORT NUMBER: P1201557
CATALOG NUMBER: GWC-SB1B-750-U-T2

## Iso-Footcandle Lines of Horizontal Illumination



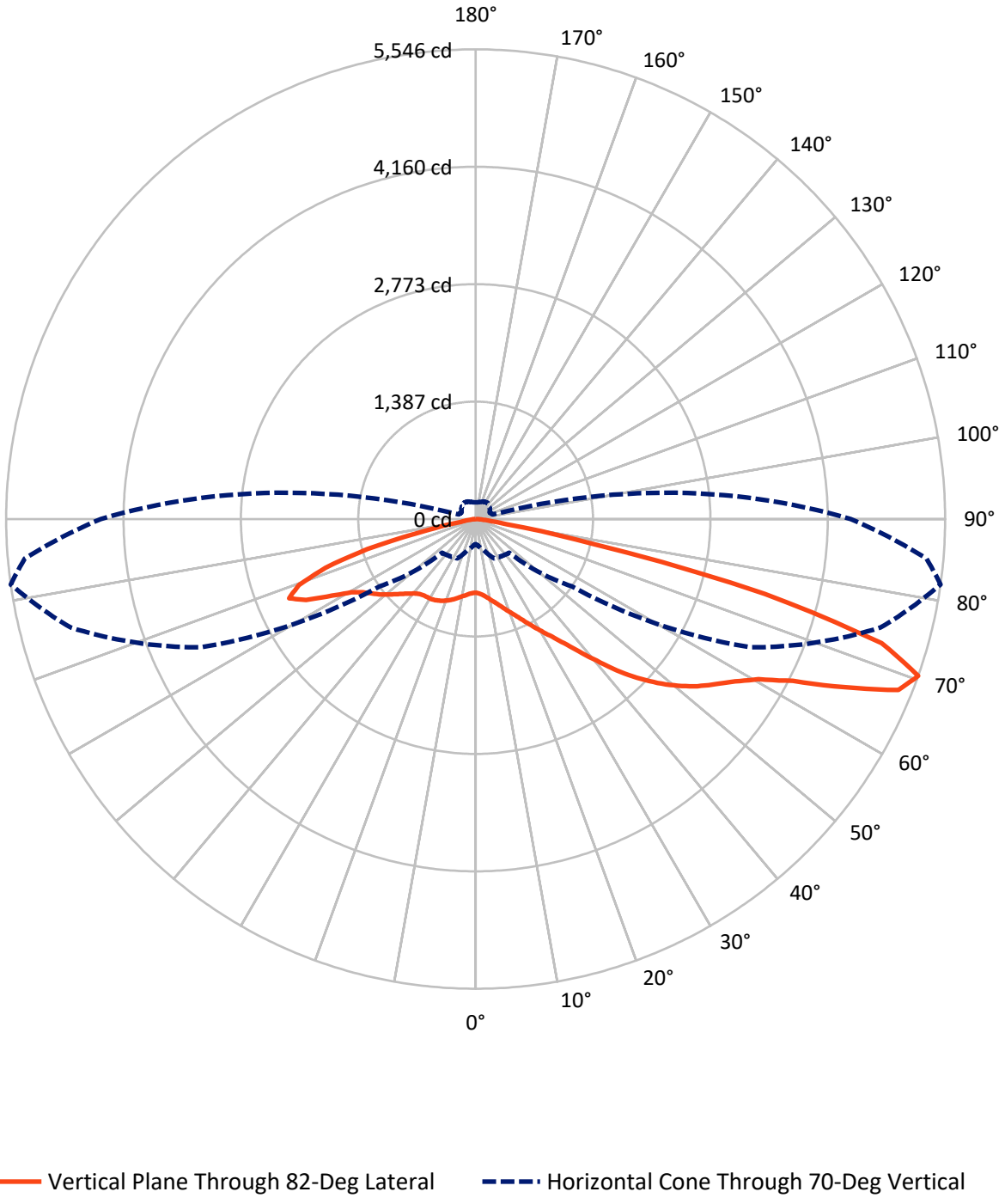

Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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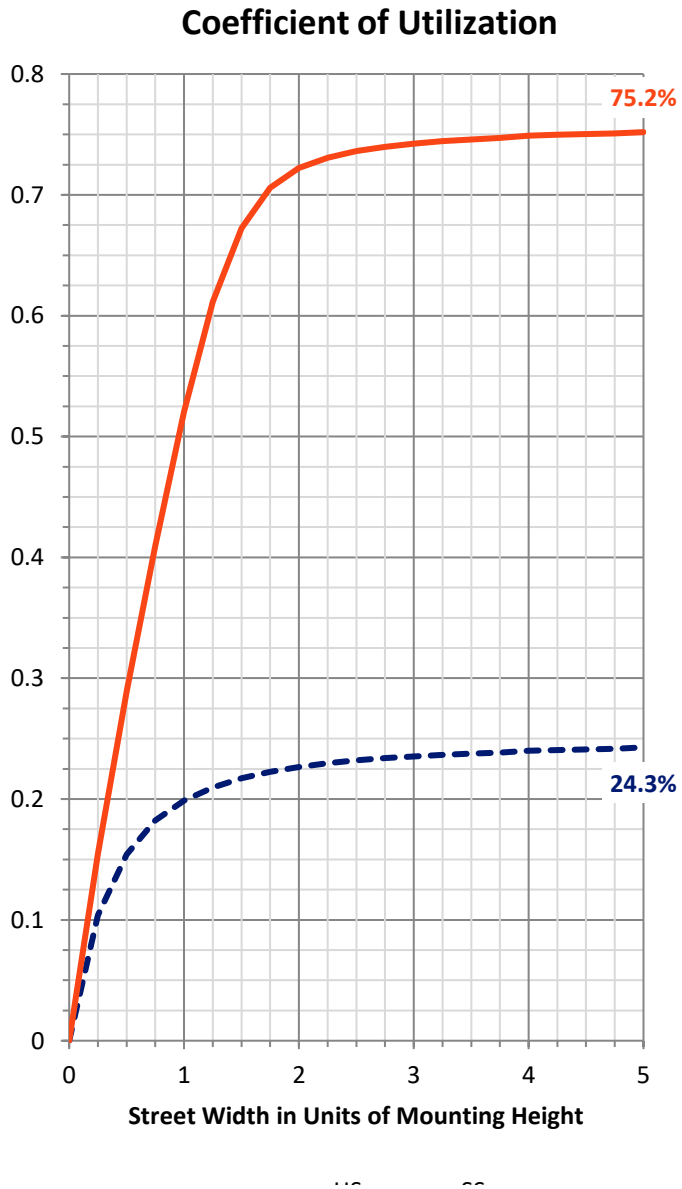
REPORT NUMBER: P1201557
CATALOG NUMBER: GWC-SB1B-750-U-T2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1463.1 | 0.0 | 1463.1 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| **Street Side** | Lumens | 4471.9 | 0.0 | 4471.9 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| **Total** | Lumens | 5935.0 | 0.0 | 5935.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 82.2 | 1.4 |
| 10°-20° | 236.0 | 4.0 |
| 20°-30° | 394.9 | 6.7 |
| 30°-40° | 616.9 | 10.4 |
| 40°-50° | 982.5 | 16.6 |
| 50°-60° | 1367.2 | 23.0 |
| 60°-70° | 1430.2 | 24.1 |
| 70°-80° | 747.5 | 12.6 |
| 80°-90° | 77.6 | 1.3 |
| 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° | 5935.0 | 100.0 |
| 0°-180° | 5935.0 | 100.0 |



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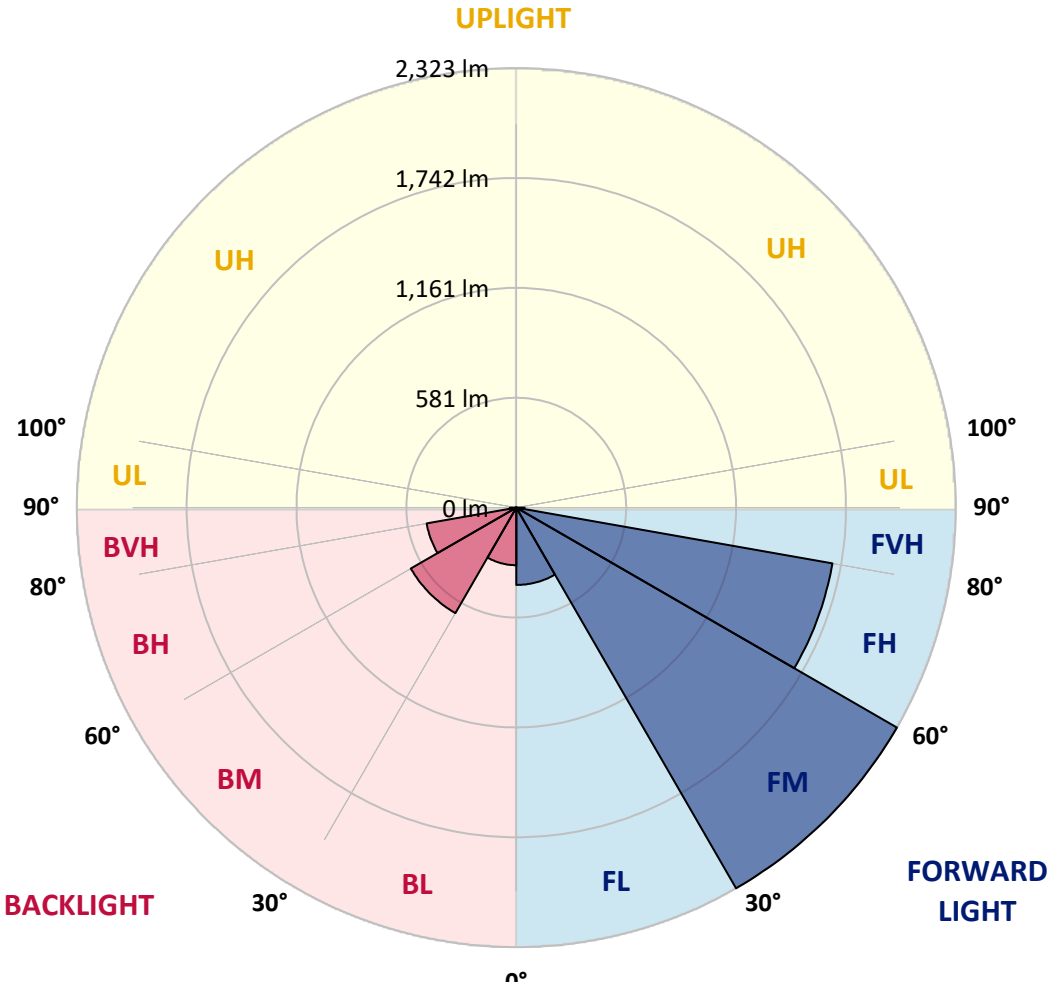
Scaled Data Report

REPORT NUMBER: P1201557
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## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 408.7 | 6.9 | | | |
| FM | (30°-60°) | 2322.9 | 39.1 | | | |
| FH | (60°-80°) | 1696.8 | 28.6 | | | G1/1800 |
| FVH | (80°-90°) | 43.5 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 304.4 | 5.1 | B1/500 | | |
| BM | (30°-60°) | 643.7 | 10.8 | B1/1000 | | |
| BH | (60°-80°) | 480.9 | 8.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 34.2 | 0.6 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B1-U0-G1**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | *870.1* | 870.1 |
| 2.5° | 890.9 | 896.0 | 894.4 | 892.8 | 892.8 | 890.6 | 890.3 | 887.2 | 884.6 | *880.5* | 879.6 |
| 5° | 902.3 | 907.6 | 907.0 | 908.3 | 912.3 | 913.3 | 914.2 | 912.3 | 907.3 | *902.3* | 900.1 |
| 7.5° | 892.2 | 898.2 | 900.1 | 907.6 | 920.2 | 931.6 | 940.1 | 943.5 | 938.8 | *931.6* | 928.1 |
| 10° | 858.2 | 864.8 | 871.4 | 889.4 | 911.7 | 938.5 | 961.2 | 974.7 | 973.8 | *966.8* | 960.8 |
| 12.5° | 789.2 | 796.1 | 810.3 | 845.3 | 886.2 | 933.4 | 975.6 | 1004.0 | 1013.8 | *1008.7* | 998.3 |
| 15° | 734.1 | 740.1 | 750.8 | 786.7 | 839.9 | 911.7 | 981.0 | 1036.1 | 1061.0 | *1058.2* | 1045.6 |
| 17.5° | 732.5 | 735.0 | 741.7 | 758.7 | 799.6 | 877.7 | 975.3 | 1067.6 | 1115.2 | *1114.8* | 1099.1 |
| 20° | 760.2 | 761.2 | 765.0 | 768.4 | 791.7 | 851.9 | 960.8 | 1093.7 | 1175.9 | *1175.9* | 1158.9 |
| 22.5° | 798.7 | 798.0 | 801.8 | 798.7 | 810.0 | 849.7 | 951.7 | 1116.7 | 1243.6 | *1248.7* | 1227.3 |
| 25° | 856.3 | 853.1 | 852.2 | 845.0 | 847.2 | 870.1 | 961.8 | 1142.9 | 1324.0 | *1334.3* | 1307.6 |
| 27.5° | 933.1 | 928.1 | 924.6 | 907.9 | 902.3 | 912.3 | 992.7 | 1174.4 | 1413.4 | *1431.3* | 1397.3 |
| 30° | 1033.3 | 1024.1 | 1019.1 | 990.1 | 969.7 | 971.2 | 1039.3 | 1216.3 | 1506.9 | *1535.9* | 1492.8 |
| 32.5° | 1170.0 | 1155.8 | 1142.2 | 1094.7 | 1057.2 | 1044.9 | 1099.4 | 1274.2 | 1608.3 | *1654.6* | 1599.2 |
| 35° | 1323.0 | 1311.7 | 1297.2 | 1223.8 | 1166.2 | 1137.8 | 1180.7 | 1355.1 | 1727.1 | *1800.4* | 1728.3 |
| 37.5° | 1470.4 | 1460.6 | 1467.6 | 1368.7 | 1294.4 | 1253.1 | 1287.1 | 1463.8 | 1873.5 | *1981.8* | 1890.2 |
| 40° | 1622.8 | 1615.3 | 1616.2 | 1521.7 | 1435.1 | 1388.8 | 1416.2 | 1600.1 | 2041.4 | *2197.6* | 2084.8 |
| 42.5° | 1788.5 | 1782.8 | 1763.9 | 1680.1 | 1582.8 | 1539.7 | 1564.9 | 1757.6 | 2221.5 | *2443.2* | 2298.3 |
| 45° | 1974.0 | 1970.5 | 1952.9 | 1856.8 | 1745.3 | 1696.8 | 1730.8 | 1931.5 | 2402.6 | *2674.4* | 2512.8 |
| 47.5° | 2134.3 | 2137.1 | 2134.9 | 2054.0 | 1938.4 | 1867.2 | 1907.8 | 2112.8 | 2571.1 | *2891.7* | 2718.5 |
| 50° | 2211.4 | 2226.2 | 2248.0 | 2222.8 | 2151.0 | 2078.5 | 2086.4 | 2287.9 | 2731.7 | *3095.4* | 2915.6 |
| 52.5° | 2171.1 | 2199.1 | 2258.3 | 2298.7 | 2326.4 | 2311.3 | 2290.2 | 2461.8 | 2882.8 | *3279.3* | 3102.0 |
| 55° | 2020.9 | 2060.3 | 2158.5 | 2255.8 | 2397.2 | 2507.1 | 2534.9 | 2654.5 | 3030.2 | *3441.2* | 3278.4 |
| 57.5° | 1747.2 | 1811.1 | 1899.3 | 2096.2 | 2334.2 | 2601.9 | 2820.2 | 2921.9 | 3186.4 | *3614.1* | 3462.9 |
| 60° | 1278.0 | 1363.6 | 1473.2 | 1766.1 | 2113.8 | 2551.2 | 3063.0 | 3332.6 | 3408.5 | *3838.0* | 3703.2 |
| 62.5° | 817.9 | 870.8 | 971.6 | 1247.4 | 1647.1 | 2291.4 | 3137.3 | 3845.9 | 3784.8 | *4205.2* | 4063.5 |
| 65° | 559.9 | 594.0 | 686.2 | 841.2 | 1064.8 | 1705.6 | 2938.3 | 4230.7 | 4382.5 | *4787.2* | 4679.5 |
| 67.5° | 406.9 | 432.7 | 511.4 | 647.2 | 693.8 | 1009.3 | 2280.1 | 4213.1 | 4963.6 | *5386.8* | 5219.3 |
| 70° | *296.7* | *314.9* | *381.1* | *511.4* | *533.8* | *561.5* | *1381.3* | *3581.4* | *4951.0* | *5546.2* | *5345.6* |
| 72.5° | 219.8 | 232.4 | 276.8 | 396.8 | 432.1 | 379.2 | 683.7 | 2602.9 | 4254.4 | *5016.5* | 4855.6 |
| 75° | 159.0 | 168.5 | 201.2 | 303.6 | 345.8 | 288.8 | 341.1 | 1521.1 | 2967.6 | *3528.8* | 3557.1 |
| 77.5° | 121.6 | 128.8 | 150.2 | 222.3 | 276.8 | 216.7 | 211.6 | 699.8 | 1407.1 | *1414.0* | 1493.4 |
| 80° | 97.6 | 102.4 | 114.0 | 156.5 | 212.3 | 162.2 | 137.9 | 282.5 | 444.7 | *376.3* | 394.9 |
| 82.5° | 71.8 | 79.7 | 96.4 | 109.9 | 151.8 | 111.8 | 84.1 | 142.7 | 169.1 | *145.5* | 146.8 |
| 85° | 40.9 | 46.3 | 58.3 | 78.7 | 97.0 | 68.3 | 48.2 | 63.3 | 78.7 | *64.6* | 57.6 |
| 87.5° | 14.5 | 18.9 | 20.5 | 30.9 | 42.2 | 28.3 | 18.6 | 18.3 | 25.8 | *19.2* | 16.1 |
| 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: P1201557
CATALOG NUMBER: GWC-SB1B-750-U-T2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 | 870.1 |
| 2.5° | 876.4 | 874.9 | 868.6 | 860.1 | 851.2 | 842.7 | 839.9 | 833.9 | 829.8 | 827.6 | 830.1 |
| 5° | 894.1 | 889.0 | 874.2 | 855.3 | 835.5 | 814.1 | 799.0 | 785.1 | 775.0 | 765.6 | 769.4 |
| 7.5° | 919.3 | 910.5 | 884.9 | 851.9 | 816.6 | 781.0 | 754.6 | 734.4 | 720.9 | 712.1 | 713.9 |
| 10° | 948.6 | 935.0 | 896.0 | 846.5 | 792.0 | 741.0 | 709.8 | 692.5 | 684.0 | 679.3 | 680.6 |
| 12.5° | 982.3 | 963.0 | 907.3 | 834.2 | 754.6 | 696.3 | 674.9 | 669.9 | 670.2 | 670.5 | 671.1 |
| 15° | 1023.8 | 997.1 | 916.4 | 807.5 | 705.8 | 662.0 | 658.2 | 666.4 | 674.9 | 679.0 | 678.7 |
| 17.5° | 1070.8 | 1033.0 | 918.0 | 763.4 | 657.9 | 639.9 | 651.9 | 669.5 | 682.4 | 688.1 | 689.4 |
| 20° | 1121.1 | 1069.5 | 906.7 | 701.0 | 618.5 | 622.0 | 643.4 | 666.1 | 680.2 | 687.5 | 689.4 |
| 22.5° | 1178.8 | 1108.5 | 879.6 | 635.5 | 586.4 | 602.5 | 627.7 | 649.7 | 664.5 | 671.7 | 673.6 |
| 25° | 1244.6 | 1152.3 | 837.1 | 580.4 | 558.7 | 580.4 | 605.6 | 623.9 | 635.8 | 642.5 | 644.3 |
| 27.5° | 1317.7 | 1198.0 | 780.4 | 536.6 | 534.4 | 557.7 | 578.5 | 592.7 | 599.0 | 604.0 | 605.9 |
| 30° | 1391.0 | 1239.6 | 711.7 | 503.6 | 513.3 | 535.4 | 550.2 | 556.5 | 558.4 | 559.3 | 561.5 |
| 32.5° | 1470.4 | 1275.5 | 639.6 | 476.2 | 493.2 | 513.6 | 522.5 | 525.3 | 516.5 | 510.5 | 512.4 |
| 35° | 1566.5 | 1313.9 | 569.1 | 454.4 | 473.3 | 491.0 | 493.8 | 491.3 | 480.9 | 468.6 | 469.2 |
| 37.5° | 1685.2 | 1361.7 | 512.7 | 439.0 | 454.8 | 466.4 | 462.9 | 462.3 | 463.3 | 448.8 | 449.7 |
| 40° | 1830.7 | 1424.1 | 471.4 | 427.0 | 439.6 | 442.2 | 432.4 | 437.7 | 442.5 | 420.4 | 421.1 |
| 42.5° | 1992.2 | 1499.4 | 445.3 | 418.9 | 427.0 | 421.1 | 405.9 | 411.9 | 411.3 | 382.3 | 382.0 |
| 45° | 2156.9 | 1581.3 | 436.2 | 412.9 | 415.4 | 403.4 | 386.7 | 388.3 | 375.1 | 348.9 | 349.9 |
| 47.5° | 2320.7 | 1669.1 | 441.8 | 407.8 | 400.9 | 387.4 | 374.4 | 367.5 | 348.0 | 328.5 | 328.5 |
| 50° | 2481.3 | 1761.4 | 462.6 | 397.8 | 381.1 | 373.2 | 363.7 | 351.5 | 330.7 | 314.0 | 312.7 |
| 52.5° | 2630.3 | 1854.3 | 485.9 | 381.1 | 356.2 | 360.9 | 354.9 | 340.8 | 320.3 | 303.3 | 303.6 |
| 55° | 2771.4 | 1947.2 | 495.1 | 358.1 | 332.9 | 350.2 | 346.7 | 320.6 | 296.0 | 282.2 | 280.9 |
| 57.5° | 2925.0 | 2059.0 | 485.0 | 328.8 | 314.0 | 337.9 | 324.7 | 295.7 | 281.5 | 271.2 | 270.2 |
| 60° | 3137.9 | 2234.4 | 463.3 | 292.6 | 296.0 | 319.7 | 297.0 | 285.0 | 269.6 | 257.9 | 257.3 |
| 62.5° | 3491.6 | 2561.6 | 428.3 | 256.7 | 274.9 | 292.6 | 283.7 | 271.8 | 256.0 | 244.7 | 244.7 |
| 65° | 4014.4 | 3016.4 | 362.5 | 228.6 | 251.3 | 266.1 | 269.6 | 257.6 | 241.2 | 229.3 | 229.9 |
| 67.5° | 4455.3 | 3301.7 | 274.3 | 205.3 | 227.1 | 244.7 | 254.5 | 242.8 | 225.5 | 213.8 | 214.2 |
| 70° | *4431.0* | *3094.5* | *209.4* | *182.3* | *205.6* | *223.6* | *236.2* | *227.1* | *208.5* | *197.5* | *198.4* |
| 72.5° | 3935.7 | 2588.7 | 169.4 | 159.0 | 183.9 | 201.6 | 216.7 | 209.7 | 190.8 | 180.1 | 180.1 |
| 75° | 2891.4 | 1837.6 | 135.4 | 135.4 | 156.8 | 178.6 | 195.3 | 190.8 | 173.5 | 166.0 | 163.8 |
| 77.5° | 1218.8 | 770.9 | 106.1 | 112.4 | 130.4 | 153.4 | 174.2 | 175.7 | 160.6 | 170.1 | 154.3 |
| 80° | 324.1 | 212.6 | 80.9 | 88.5 | 102.4 | 126.6 | 151.5 | 150.9 | 134.5 | 125.7 | 116.8 |
| 82.5° | 123.5 | 83.8 | 57.6 | 62.4 | 74.0 | 97.0 | 120.0 | 123.8 | 107.4 | 92.9 | 92.9 |
| 85° | 47.6 | 35.9 | 35.6 | 37.5 | 43.1 | 64.2 | 90.7 | 93.8 | 80.9 | 68.7 | 70.9 |
| 87.5° | 12.3 | 10.7 | 13.2 | 12.6 | 19.8 | 34.3 | 52.0 | 53.9 | 49.4 | 28.7 | 40.9 |
| 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: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-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

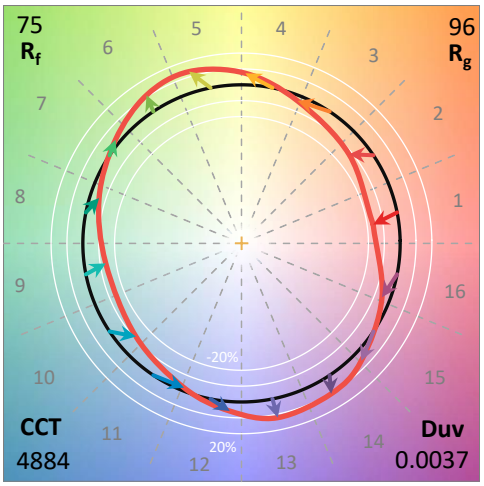
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-4-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **SA1C-750-U-5WQ** |
| Description: | McGRAW EDISON ROADWAY AND AREA LUMINAIRE |

***THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.***TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 4884 | CRI (Ra): | 73.5 | | |
| CIE u': | 0.2101 | R1: | 70.5 | R9: | -28.4 |
| CIE v': | 0.4904 | R2: | 77.7 | R10: | 48.6 |
| Duv: | 0.0037 | R3: | 84.6 | R11: | 73.2 |
| CIE x: | 0.3493 | R4: | 74.7 | R12: | 50.7 |
| CIE y: | 0.3624 | R5: | 71.9 | R13: | 71.2 |
| CIE z: | 0.2884 | R6: | 70.7 | R14: | 91.4 |
| Peak Wavelength (nm): | 444 | R7: | 81.2 | | |
| Dominant Wavelength (nm): | 571 | R8: | 56.9 | | |
| Purity: | 13.7 | | | | |

| | |
|---|---|
| Rf: | 74.9 |
| Rg: | 96.3 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 240M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 25.0./44% |
| Sphere Temperature (°C): | 25.7 |

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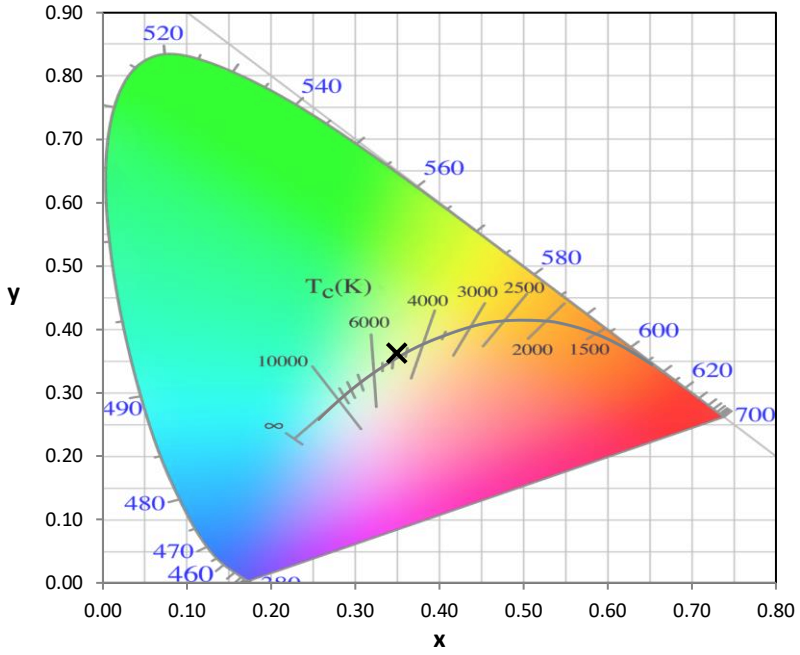
REPORT NUMBER: SP1-1908-441-4-R4

| 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 |

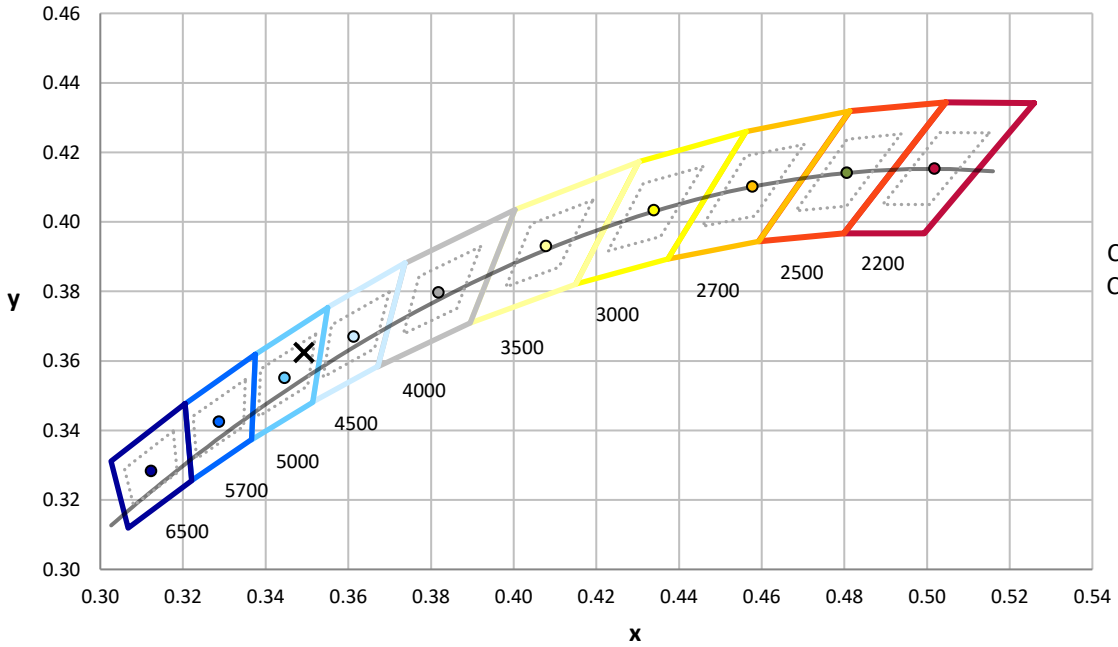
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1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-1908-441-4-R4

## CIE 1931 Chromaticity Diagram




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



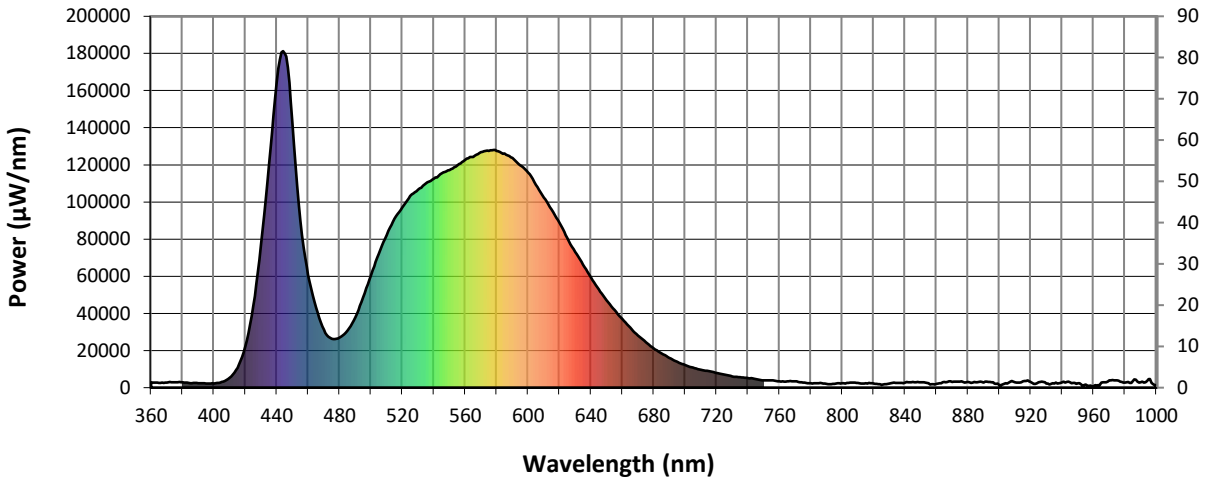

CCT = 4884K
CIE x = 0.3493
CIE y = 0.3624
Duv = 0.0037

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength



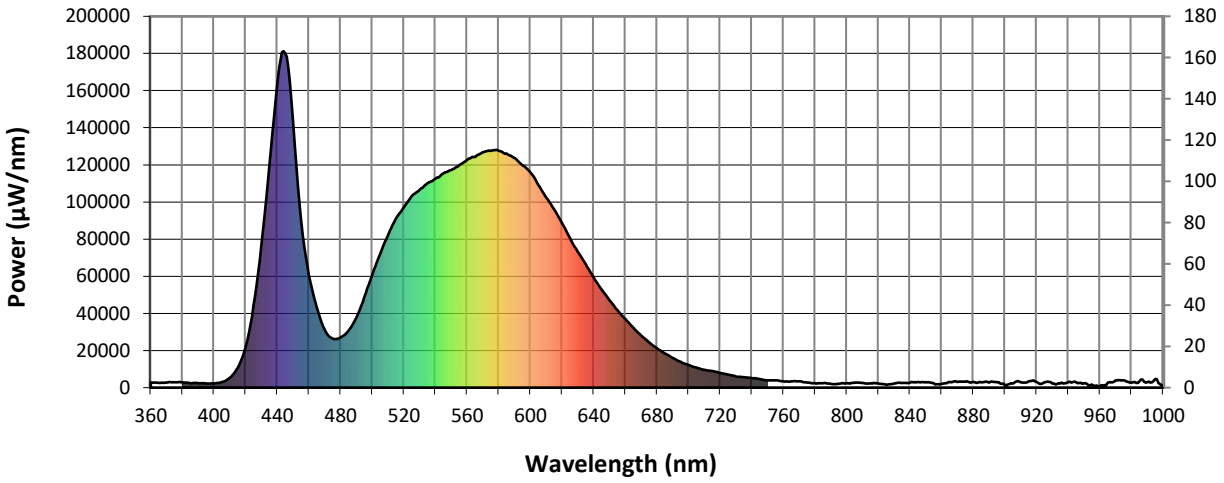

######

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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## Scotopic Flux vs. Wavelength



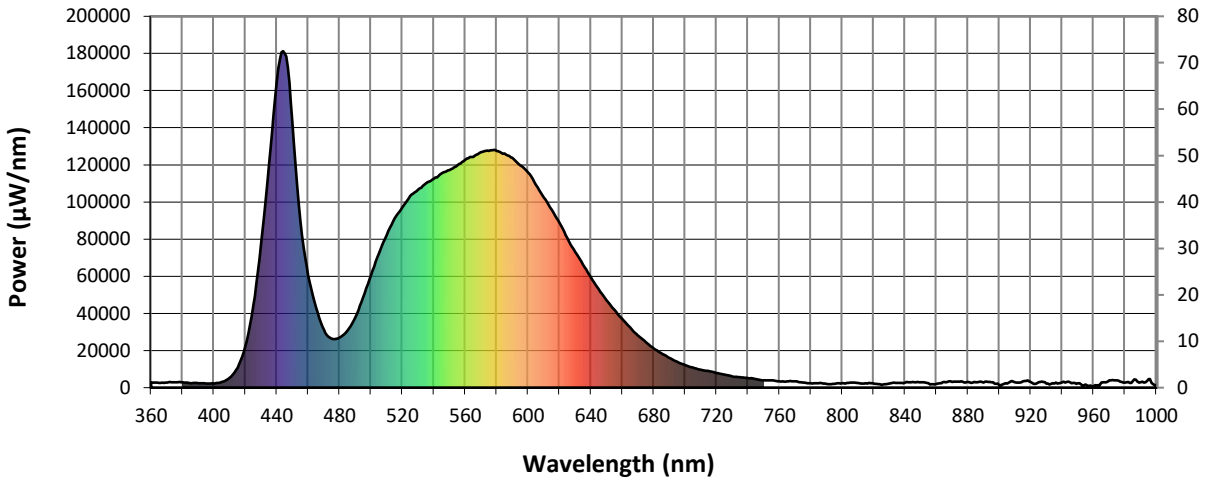

**Scotopic Lumens: 13493.5** **S/P: 1.77**

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 5378.9** **M/P: 0.71**

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

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Peachtree City, GA 30269

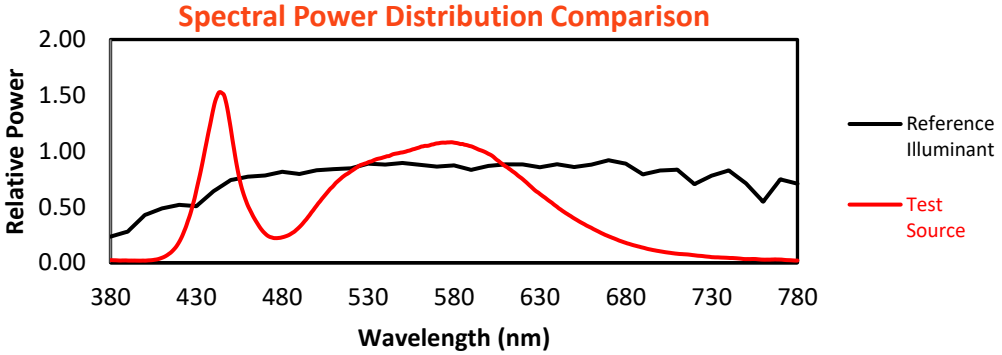
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# TM-30-18

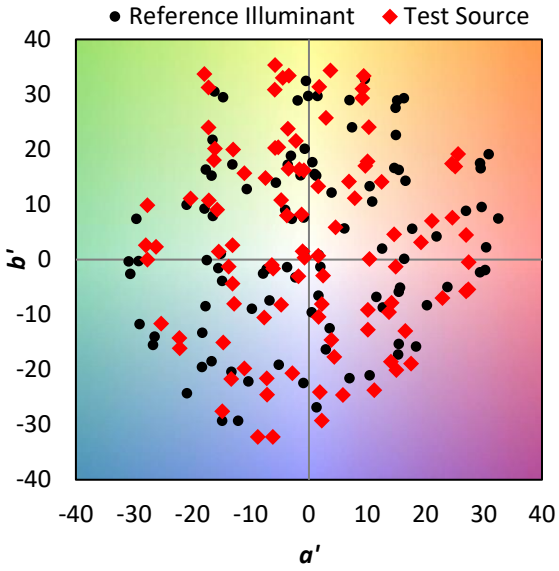
## Summary

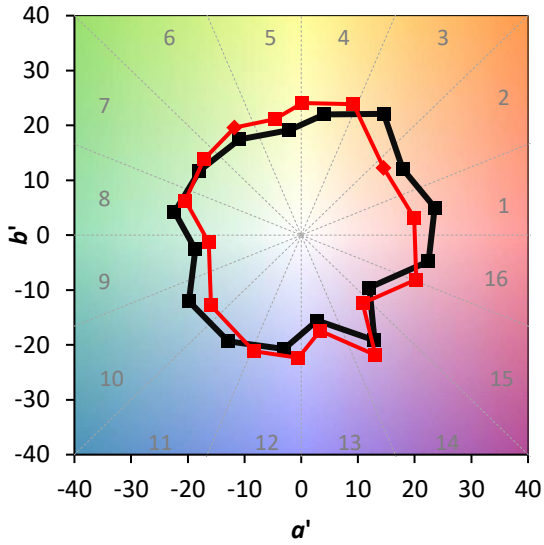
$R_f$ = 74.9
$R_g$ = 96.3
CIE $R_a$ = 73.5
$R_9$ = -28.4

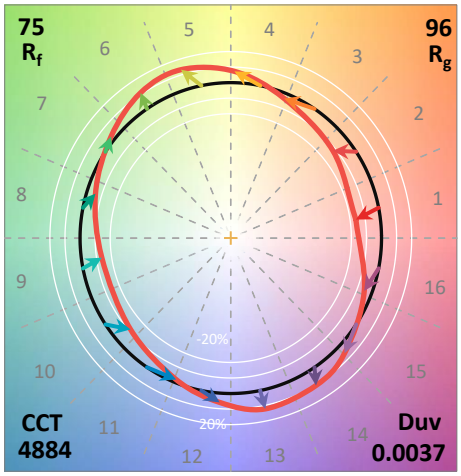
## Spectral Power Distribution Comparison

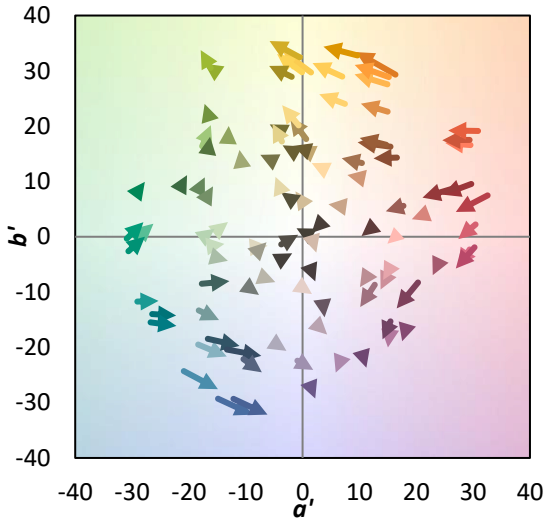



## Color Vector Graphics



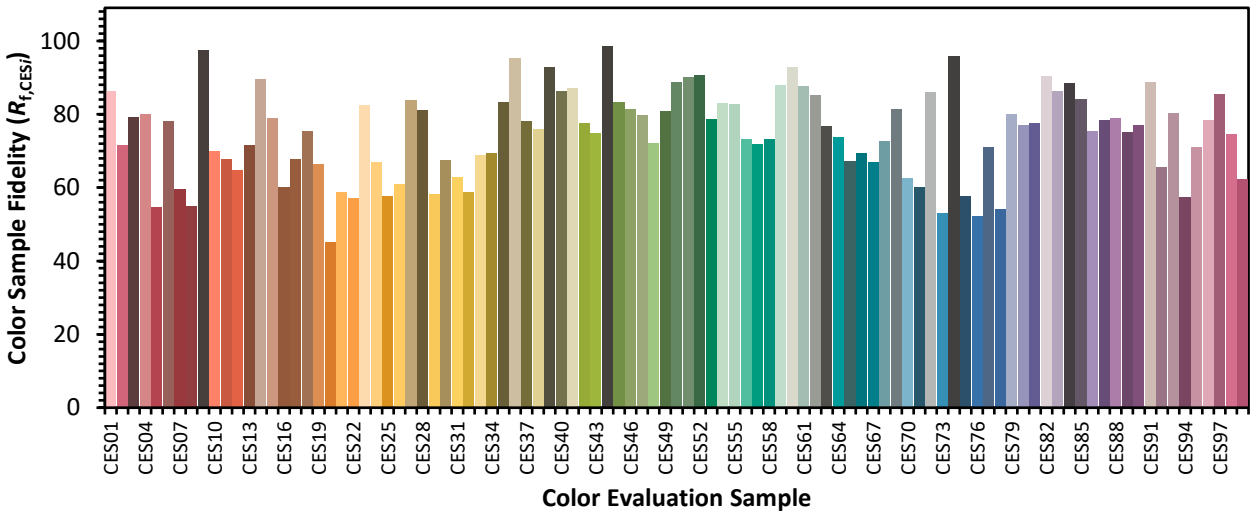
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Peachtree City, GA 30269

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

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 61 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
| CES21 = 85 | CES46 = 81 | CES71 = 60 | CES96 = 78 |
| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 58 | |

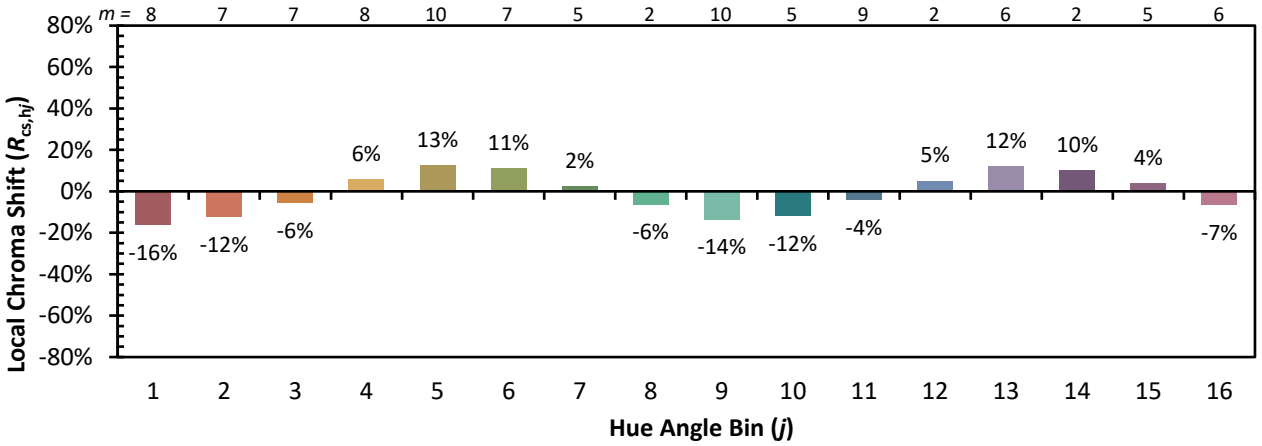


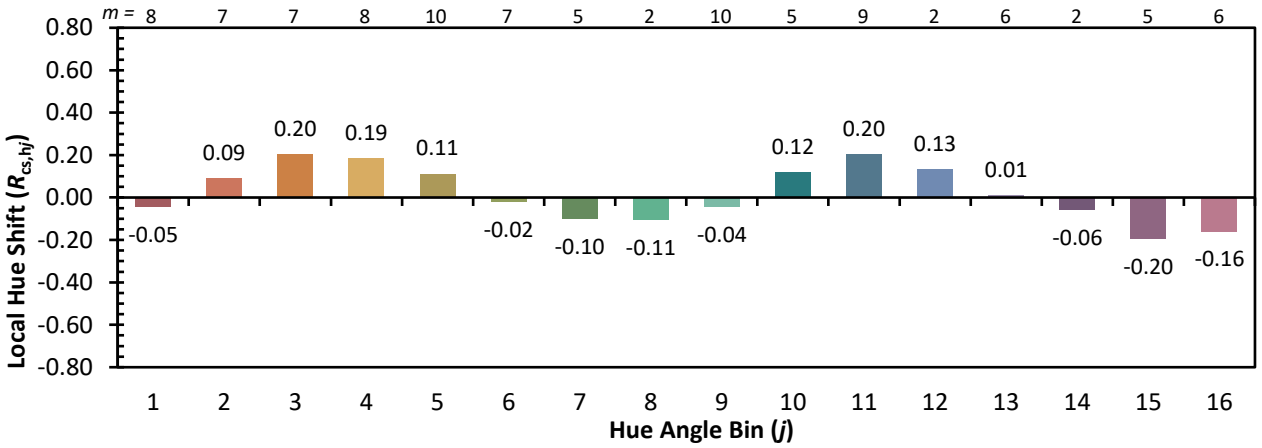
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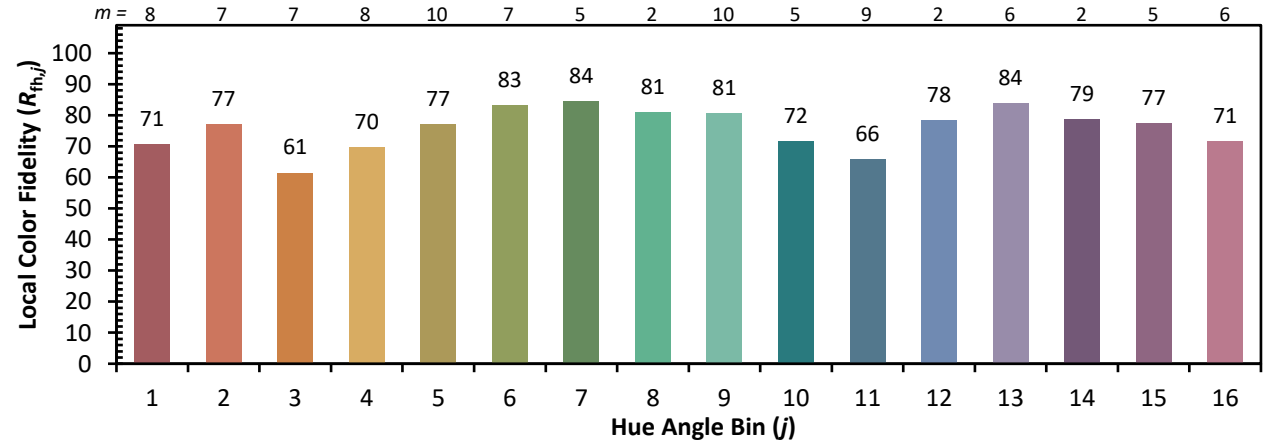
REPORT NUMBER: SP1-1908-441-4-R4

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### Color Rendition by Hue-Angle Bin



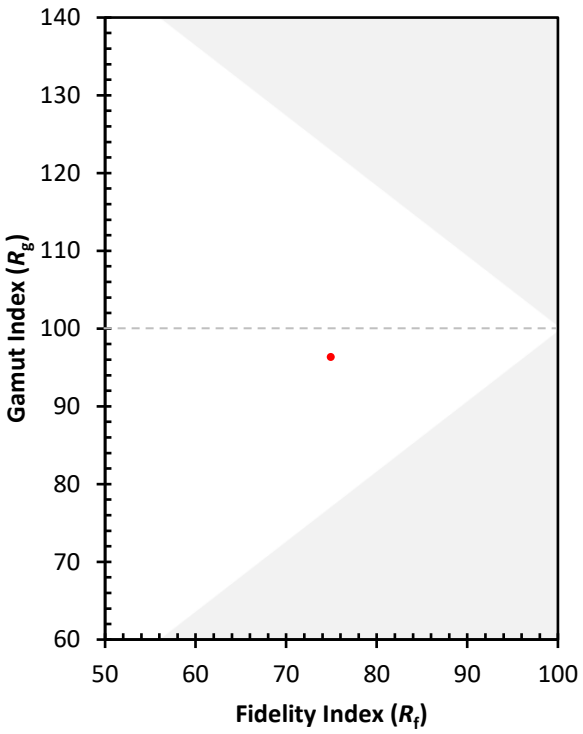



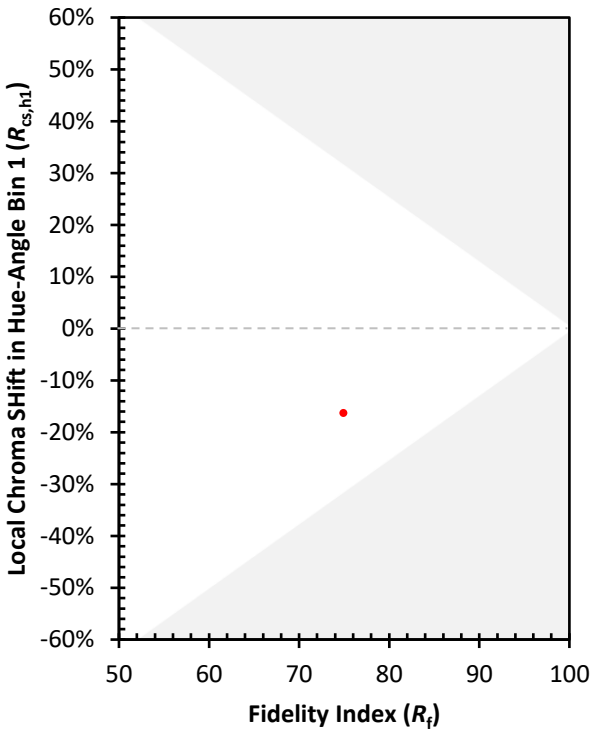
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### Measure Comparisons




(END OF REPORT)