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: P1197406

Luminaire Tested: GPC-SB1A-750-U-T2-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: | P1197406 |
| | TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4) |
| Test Lab: | INNOVATION CENTER |
| Issue Date: | 3/15/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GPC-SB1A-750-U-T2-HSS |
| Description: | GALLEON PEDESTRIAN LUMINAIRE |
| | (1) 70 CRI, 5000K, 350mA LIGHTSQUARE WITH 26 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD |
| Light Source: | - |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 3484 lumens |
| Efficiency: | N/A |
| Efficacy: | 112.8 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): | 30.9 |
| Input Voltage (V): | 120.0 |
| Input Current (Ain): | 0.263 |
| Voltage Rise (V): | NR |
| Power Factor: | 0.995 |
| Total Harmonic Distortion (THDi): | 6.356 |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

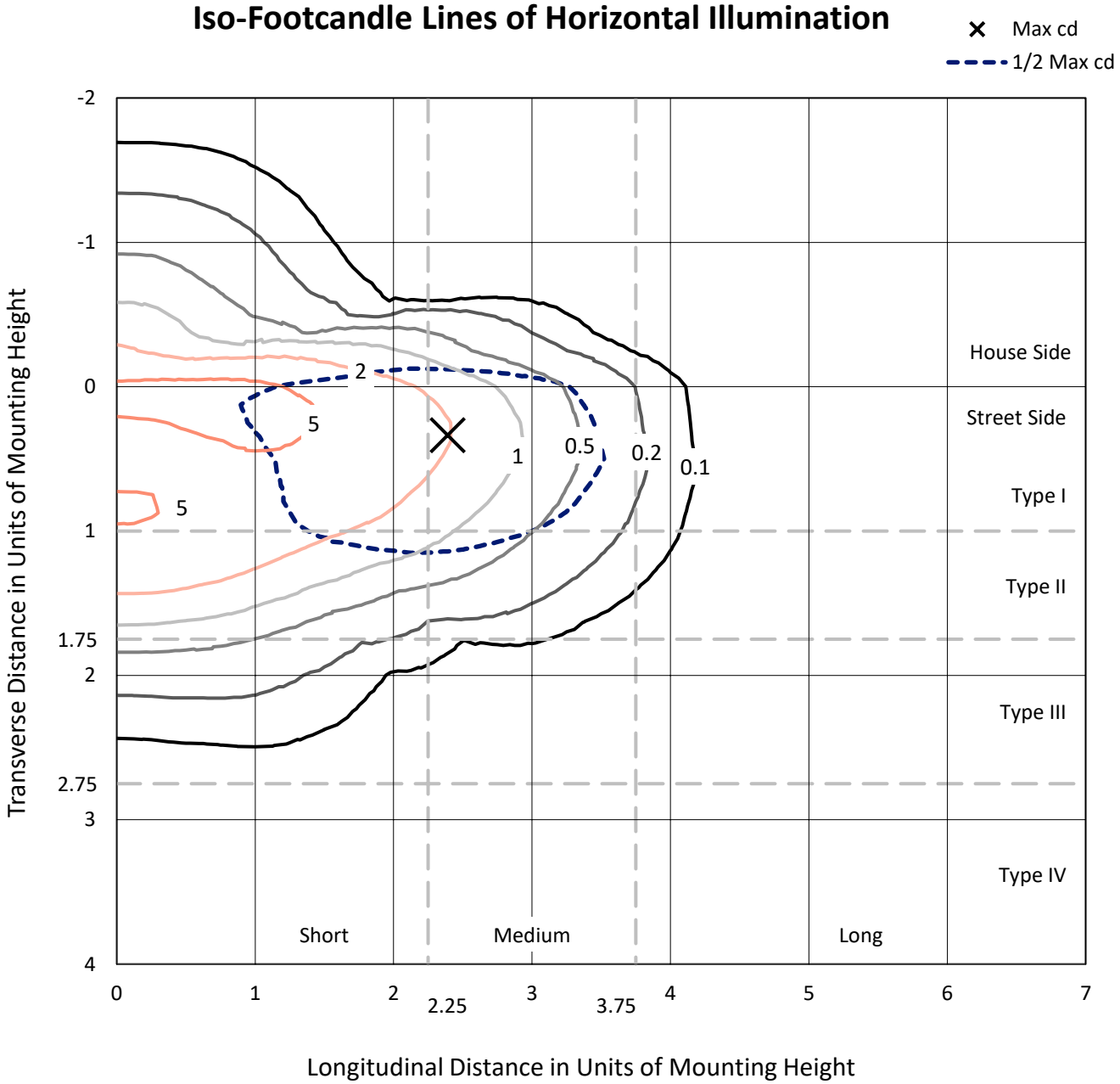


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Scaled Data Report

REPORT NUMBER: P1197406
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## Iso-Footcandle Lines of Horizontal Illumination



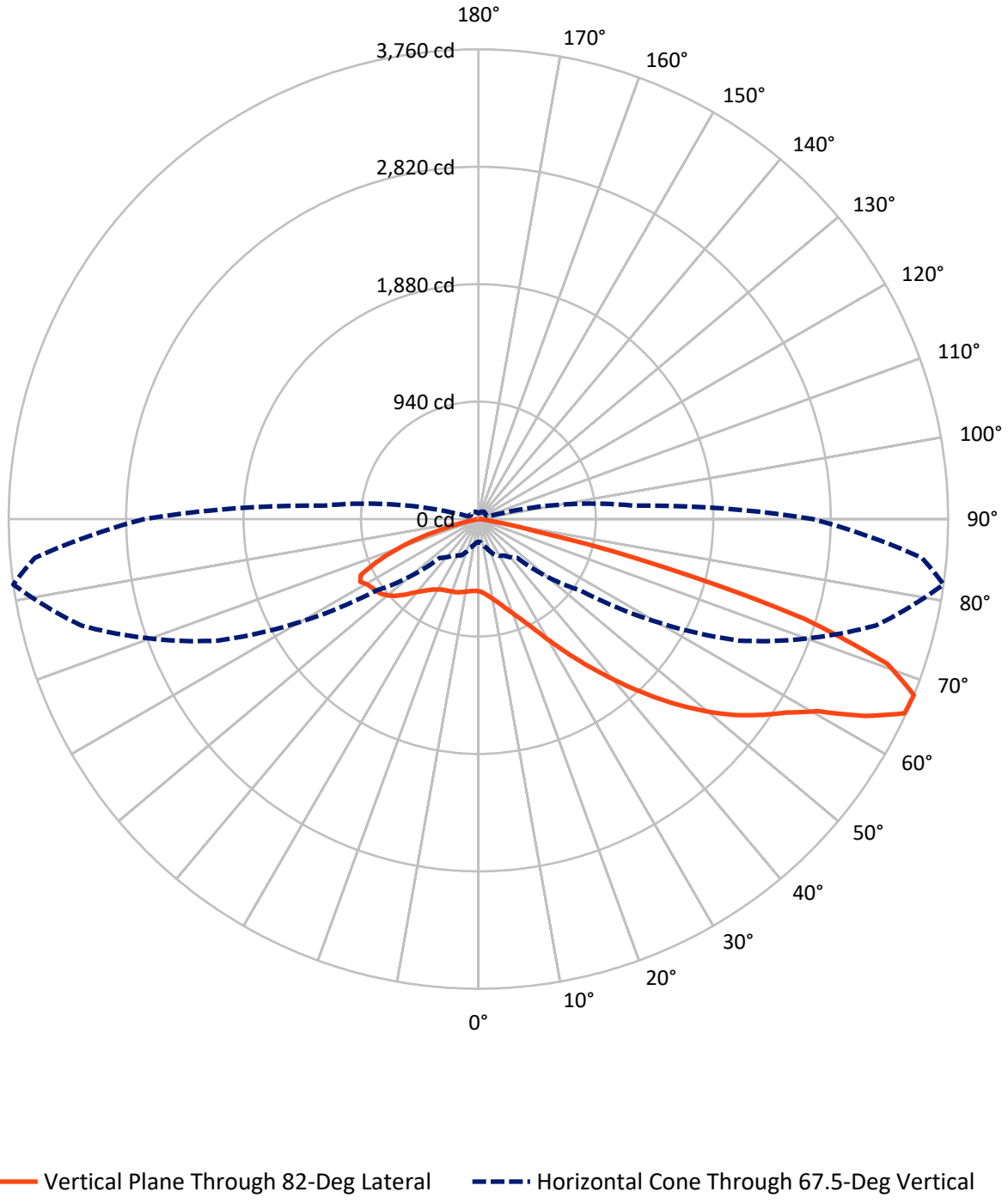

Based on 10 foot mounting height. Maximum calculated value = 7.6 fc
Type II - Medium - N/A

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## Luminous Intensity Polar Plot



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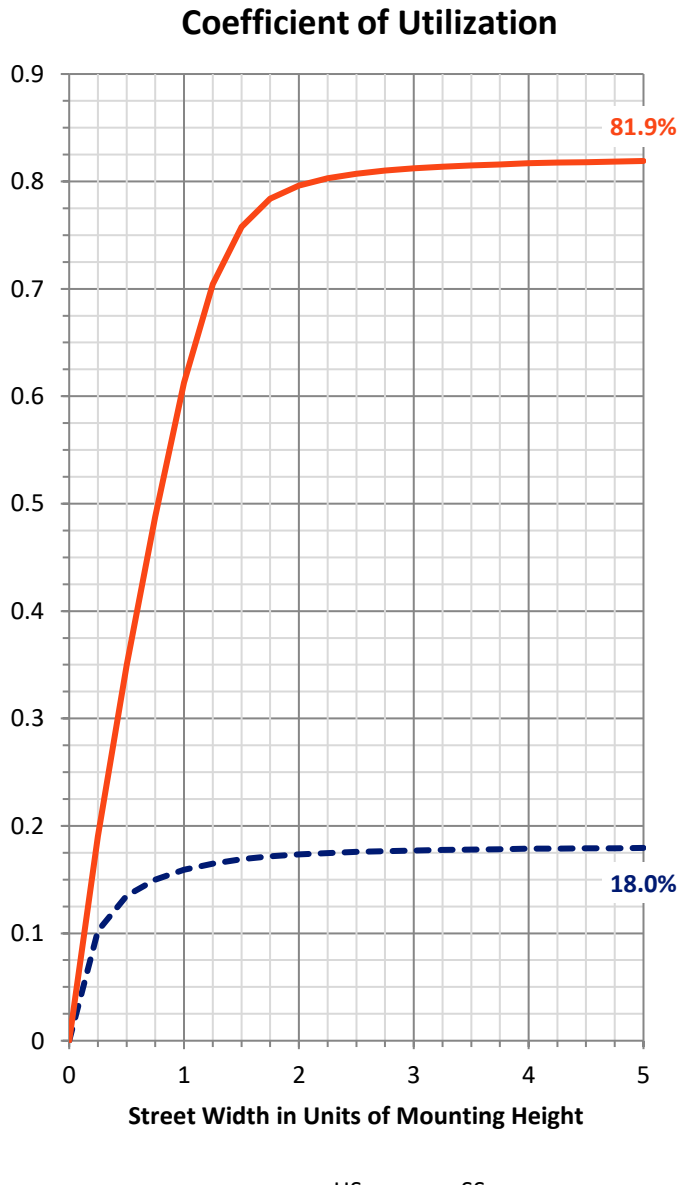
REPORT NUMBER: P1197406
CATALOG NUMBER: GPC-SB1A-750-U-T2-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 631.1 | 0.0 | 631.1 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| **Street Side** | Lumens | 2852.9 | 0.0 | 2852.9 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| **Total** | Lumens | 3484.0 | 0.0 | 3484.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 51.4 | 1.5 |
| 10°-20° | 133.6 | 3.8 |
| 20°-30° | 214.0 | 6.1 |
| 30°-40° | 378.5 | 10.9 |
| 40°-50° | 663.1 | 19.0 |
| 50°-60° | 884.4 | 25.4 |
| 60°-70° | 823.3 | 23.6 |
| 70°-80° | 316.0 | 9.1 |
| 80°-90° | 19.6 | 0.6 |
| 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° | 3484.0 | 100.0 |
| 0°-180° | 3484.0 | 100.0 |



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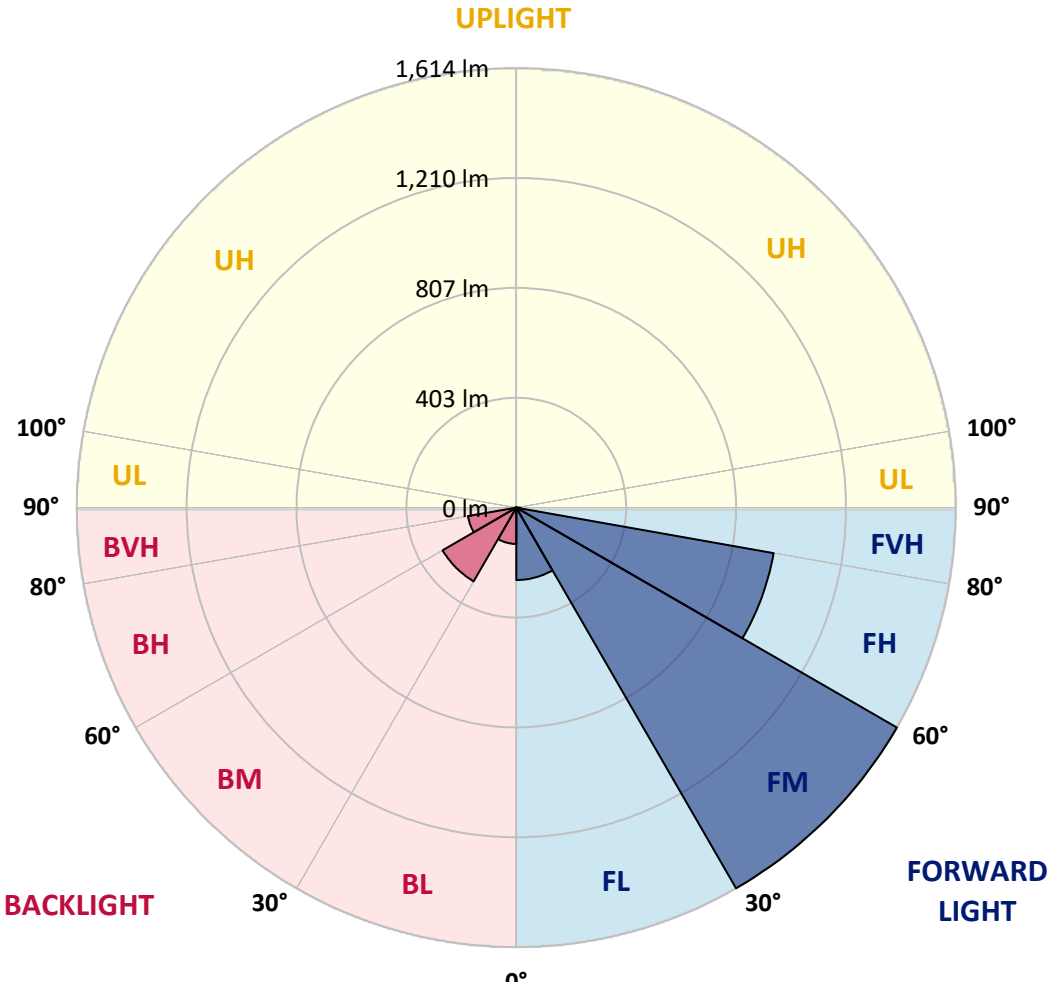
Scaled Data Report

REPORT NUMBER: P1197406
CATALOG NUMBER: GPC-SB1A-750-U-T2-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 265.8 | 7.6 | | | |
| FM | (30°-60°) | 1613.6 | 46.3 | | | |
| FH | (60°-80°) | 959.2 | 27.5 | | | G1/1800 |
| FVH | (80°-90°) | 14.3 | 0.4 | | | G1/100 |
| BL | (0°-30°) | 133.3 | 3.8 | B1/500 | | |
| BM | (30°-60°) | 312.3 | 9.0 | B1/1000 | | |
| BH | (60°-80°) | 180.1 | 5.2 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 5.4 | 0.2 | | | 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 II Medium



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REPORT NUMBER: P1197406
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | *577.2* | 577.2 |
| 2.5° | 610.0 | 613.6 | 611.5 | 610.5 | 608.8 | 606.3 | 604.3 | 598.0 | 591.5 | *587.2* | 585.7 |
| 5° | 622.3 | 625.8 | 625.6 | 626.6 | 627.9 | 628.6 | 628.1 | 621.1 | 611.8 | *604.5* | 600.3 |
| 7.5° | 611.8 | 615.8 | 619.1 | 624.1 | 632.9 | 642.1 | 646.7 | 645.2 | 635.6 | *625.6* | 620.3 |
| 10° | 581.9 | 586.2 | 594.0 | 605.8 | 624.3 | 644.4 | 661.2 | 669.0 | 663.0 | *651.9* | 644.7 |
| 12.5° | 527.3 | 531.5 | 546.8 | 572.4 | 603.5 | 638.4 | 670.5 | 691.3 | 692.8 | *681.8* | 673.3 |
| 15° | 465.8 | 470.1 | 486.4 | 518.5 | 565.9 | 621.8 | 675.5 | 714.9 | 728.2 | *718.7* | 708.4 |
| 17.5° | 427.7 | 431.4 | 443.7 | 469.6 | 519.0 | 588.7 | 673.8 | 740.0 | 770.3 | *762.8* | 750.5 |
| 20° | 416.1 | 419.4 | 425.2 | 443.2 | 484.4 | 554.4 | 662.2 | 763.6 | 815.7 | *811.5* | 797.7 |
| 22.5° | 428.4 | 431.4 | 433.2 | 441.2 | 467.1 | 531.8 | 647.7 | 787.6 | 868.4 | *868.9* | 852.1 |
| 25° | 456.8 | 459.8 | 457.8 | 462.8 | 474.1 | 524.8 | 642.1 | 816.0 | 934.6 | *940.1* | 921.1 |
| 27.5° | 503.4 | 503.7 | 498.9 | 498.7 | 500.4 | 535.3 | 647.9 | 846.3 | 1018.2 | *1028.4* | 1004.9 |
| 30° | 597.0 | 593.2 | 574.9 | 555.1 | 546.1 | 566.9 | 664.0 | 882.2 | 1116.7 | *1135.0* | 1105.4 |
| 32.5° | 741.2 | 735.7 | 702.1 | 654.7 | 607.0 | 617.8 | 692.8 | 923.1 | 1224.1 | *1257.2* | 1221.1 |
| 35° | 897.8 | 896.2 | 861.1 | 790.6 | 707.4 | 690.3 | 739.7 | 976.8 | 1341.2 | *1393.9* | 1351.0 |
| 37.5° | 1043.2 | 1042.5 | 1022.4 | 939.4 | 838.1 | 791.4 | 815.0 | 1047.0 | 1466.7 | *1542.9* | 1492.2 |
| 40° | 1176.2 | 1178.4 | 1158.4 | 1084.1 | 982.0 | 921.1 | 917.3 | 1133.8 | 1606.1 | *1705.2* | 1645.0 |
| 42.5° | 1291.1 | 1293.6 | 1273.3 | 1218.3 | 1124.3 | 1064.6 | 1043.0 | 1240.1 | 1742.3 | *1879.5* | 1808.3 |
| 45° | 1369.1 | 1384.6 | 1381.6 | 1337.7 | 1270.2 | 1208.3 | 1194.0 | 1373.6 | 1897.6 | *2064.4* | 1980.9 |
| 47.5° | 1391.2 | 1405.5 | 1428.0 | 1434.0 | 1392.9 | 1332.0 | 1349.0 | 1534.4 | 2054.6 | *2249.5* | 2154.5 |
| 50° | 1336.7 | 1350.0 | 1396.9 | 1459.4 | 1488.0 | 1469.2 | 1499.8 | 1706.7 | 2215.4 | *2434.1* | 2324.8 |
| 52.5° | 1229.4 | 1242.9 | 1302.1 | 1400.9 | 1517.6 | 1576.8 | 1651.0 | 1876.5 | 2371.2 | *2609.0* | 2486.1 |
| 55° | 1074.1 | 1088.4 | 1164.4 | 1276.3 | 1461.1 | 1621.2 | 1777.2 | 2046.1 | 2513.9 | *2766.3* | 2631.6 |
| 57.5° | 862.9 | 873.4 | 952.4 | 1109.0 | 1319.2 | 1577.0 | 1870.3 | 2231.2 | 2648.4 | *2920.8* | 2775.8 |
| 60° | 562.4 | 571.7 | 663.5 | 838.1 | 1083.9 | 1429.5 | 1888.8 | 2437.7 | 2827.0 | *3121.7* | 2970.2 |
| 62.5° | 374.0 | 380.3 | 434.7 | 562.9 | 763.3 | 1146.3 | 1780.2 | 2602.5 | 3088.8 | *3471.4* | 3303.6 |
| 65° | 256.6 | 262.9 | 317.3 | 406.6 | 493.1 | 758.3 | 1467.9 | 2580.6 | 3326.1 | *3749.0* | 3550.6 |
| 67.5° | *183.1* | *188.4* | *234.5* | *318.8* | *356.9* | *440.5* | *995.1* | *2301.7* | *3292.0* | *3759.6* | *3563.9* |
| 70° | 131.2 | 134.2 | 172.3 | 248.3 | 283.7 | 264.6 | 553.4 | 1760.4 | 2882.4 | *3471.6* | 3292.5 |
| 72.5° | 91.8 | 92.8 | 119.7 | 189.1 | 228.5 | 193.1 | 263.4 | 1173.7 | 2180.0 | *2724.9* | 2552.5 |
| 75° | 62.2 | 63.5 | 80.5 | 138.7 | 183.4 | 147.5 | 139.5 | 629.4 | 1279.8 | *1508.3* | 1352.0 |
| 77.5° | 38.1 | 38.6 | 51.9 | 94.8 | 137.2 | 112.4 | 89.8 | 266.6 | 495.2 | *486.1* | 414.4 |
| 80° | 21.6 | 21.6 | 33.1 | 58.9 | 93.6 | 72.5 | 63.0 | 113.4 | 156.8 | *137.7* | 121.4 |
| 82.5° | 12.0 | 12.3 | 24.1 | 36.6 | 62.0 | 42.9 | 34.6 | 52.4 | 67.7 | *60.0* | 52.2 |
| 85° | 5.0 | 5.5 | 14.8 | 17.3 | 29.6 | 21.3 | 14.0 | 22.1 | 25.1 | *22.3* | 16.3 |
| 87.5° | 0.5 | 0.8 | 4.5 | 3.3 | 3.5 | 4.3 | 2.0 | 4.3 | 3.5 | *3.5* | 2.5 |
| 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: P1197406
CATALOG NUMBER: GPC-SB1A-750-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 | 577.2 |
| 2.5° | 580.9 | 577.2 | 567.6 | 556.6 | 542.1 | 535.0 | 525.5 | 519.0 | 513.5 | 514.0 | 509.0 |
| 5° | 592.2 | 582.7 | 561.4 | 534.8 | 501.7 | 478.1 | 453.0 | 435.7 | 421.7 | 418.7 | 411.9 |
| 7.5° | 607.8 | 592.7 | 555.4 | 507.4 | 451.5 | 409.1 | 371.2 | 346.9 | 329.6 | 324.1 | 318.6 |
| 10° | 627.9 | 606.0 | 547.6 | 473.1 | 392.6 | 338.6 | 298.0 | 278.9 | 267.1 | 263.1 | 260.1 |
| 12.5° | 651.2 | 621.3 | 537.3 | 431.2 | 331.9 | 279.9 | 254.1 | 244.6 | 240.8 | 239.6 | 238.8 |
| 15° | 680.5 | 640.4 | 521.7 | 381.5 | 280.4 | 244.1 | 233.0 | 231.8 | 232.3 | 231.8 | 231.5 |
| 17.5° | 715.4 | 661.2 | 496.4 | 330.4 | 245.8 | 225.8 | 221.7 | 222.7 | 224.0 | 223.7 | 223.2 |
| 20° | 753.5 | 681.8 | 464.1 | 285.0 | 222.2 | 212.7 | 210.5 | 211.5 | 212.5 | 212.0 | 211.7 |
| 22.5° | 796.9 | 703.9 | 428.2 | 249.6 | 206.4 | 200.7 | 198.2 | 198.4 | 198.4 | 197.4 | 196.9 |
| 25° | 848.8 | 728.2 | 390.6 | 224.5 | 194.4 | 189.9 | 186.9 | 185.9 | 184.4 | 181.4 | 180.9 |
| 27.5° | 910.8 | 754.0 | 354.4 | 206.9 | 184.9 | 180.6 | 177.1 | 174.6 | 170.8 | 165.8 | 165.3 |
| 30° | 980.5 | 785.4 | 323.8 | 195.9 | 177.3 | 173.1 | 169.1 | 165.3 | 159.8 | 153.5 | 153.0 |
| 32.5° | 1062.6 | 819.0 | 301.5 | 188.6 | 170.6 | 166.1 | 161.3 | 156.8 | 150.8 | 144.5 | 144.7 |
| 35° | 1160.4 | 859.6 | 288.5 | 183.6 | 165.3 | 159.3 | 154.0 | 149.0 | 144.5 | 139.0 | 138.5 |
| 37.5° | 1266.5 | 902.8 | 284.5 | 181.1 | 161.8 | 152.5 | 146.5 | 143.0 | 142.5 | 139.2 | 139.0 |
| 40° | 1382.6 | 953.9 | 287.5 | 179.6 | 158.0 | 146.0 | 139.5 | 138.7 | 140.0 | 134.2 | 134.4 |
| 42.5° | 1505.5 | 1014.6 | 292.5 | 177.8 | 152.8 | 139.5 | 133.2 | 133.2 | 132.2 | 124.2 | 124.2 |
| 45° | 1638.5 | 1084.6 | 297.5 | 173.6 | 146.5 | 132.9 | 128.2 | 126.4 | 122.2 | 114.4 | 114.1 |
| 47.5° | 1772.4 | 1155.9 | 301.3 | 165.8 | 139.0 | 127.4 | 123.2 | 119.1 | 112.9 | 105.9 | 105.6 |
| 50° | 1899.6 | 1219.8 | 297.2 | 154.3 | 130.4 | 122.2 | 117.6 | 112.1 | 105.4 | 100.6 | 99.8 |
| 52.5° | 2013.2 | 1275.3 | 280.2 | 140.7 | 121.4 | 116.6 | 112.6 | 106.9 | 101.3 | 96.3 | 95.8 |
| 55° | 2112.1 | 1320.2 | 250.1 | 127.9 | 113.4 | 111.9 | 107.9 | 100.6 | 93.1 | 88.8 | 88.3 |
| 57.5° | 2206.9 | 1354.3 | 212.5 | 117.4 | 106.1 | 106.6 | 100.6 | 94.1 | 87.0 | 82.5 | 82.0 |
| 60° | 2333.1 | 1399.9 | 174.3 | 107.6 | 98.3 | 99.8 | 93.3 | 88.5 | 79.8 | 74.0 | 73.2 |
| 62.5° | 2534.7 | 1470.9 | 138.5 | 95.6 | 89.3 | 89.8 | 87.0 | 81.3 | 70.7 | 64.0 | 63.5 |
| 65° | 2694.8 | 1444.8 | 109.1 | 82.5 | 79.0 | 79.8 | 79.8 | 73.5 | 62.2 | 54.4 | 53.7 |
| 67.5° | *2676.7* | *1237.1* | *87.0* | *69.7* | *69.2* | *69.7* | *71.5* | *66.2* | *55.2* | *48.9* | *47.9* |
| 70° | 2465.7 | 984.0 | 69.7 | 57.9 | 60.2 | 58.9 | 64.0 | 60.5 | 49.7 | 43.4 | 42.6 |
| 72.5° | 2012.0 | 708.9 | 53.2 | 47.9 | 46.2 | 48.2 | 57.7 | 54.4 | 41.4 | 34.4 | 33.6 |
| 75° | 1175.7 | 378.3 | 39.6 | 37.9 | 33.4 | 40.1 | 51.2 | 46.4 | 31.6 | 25.3 | 24.6 |
| 77.5° | 382.8 | 131.9 | 29.1 | 27.8 | 24.8 | 32.4 | 43.6 | 39.1 | 25.8 | 20.1 | 19.3 |
| 80° | 102.6 | 39.9 | 19.8 | 18.3 | 16.1 | 24.1 | 34.6 | 31.1 | 18.6 | 13.0 | 12.8 |
| 82.5° | 41.1 | 16.8 | 11.5 | 10.3 | 8.8 | 16.6 | 27.3 | 25.1 | 13.8 | 8.3 | 8.3 |
| 85° | 13.3 | 5.5 | 4.3 | 3.3 | 4.0 | 10.3 | 16.3 | 17.1 | 9.8 | 4.3 | 3.3 |
| 87.5° | 1.8 | 0.8 | 0.8 | 1.0 | 0.8 | 1.8 | 5.0 | 4.8 | 2.8 | 0.5 | 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: SP1-1908-441-4-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

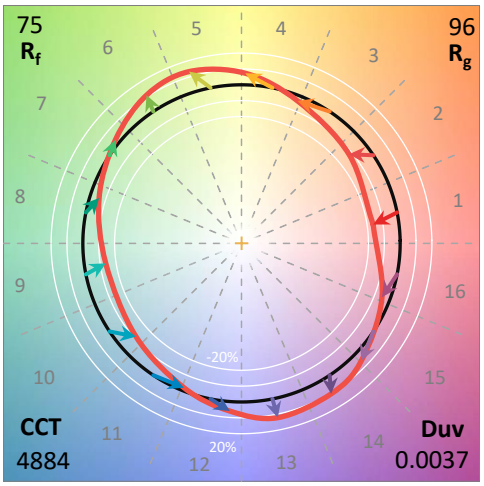
| | |
|---|---|
| Test Method: | LM-79-2008 |
| Report Number: | SP1-1908-441-4-R4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/28/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON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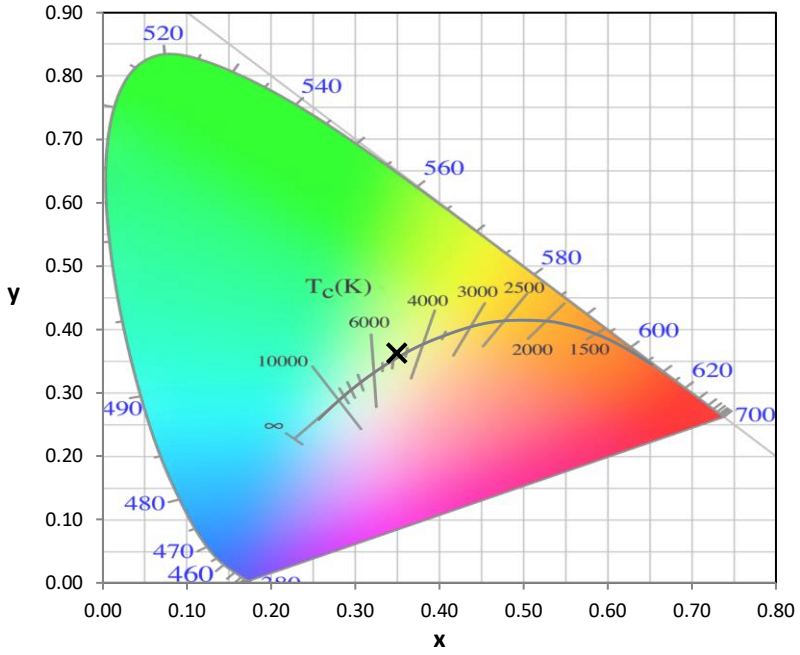
REPORT NUMBER: SP1-1908-441-4-R4

| 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 |

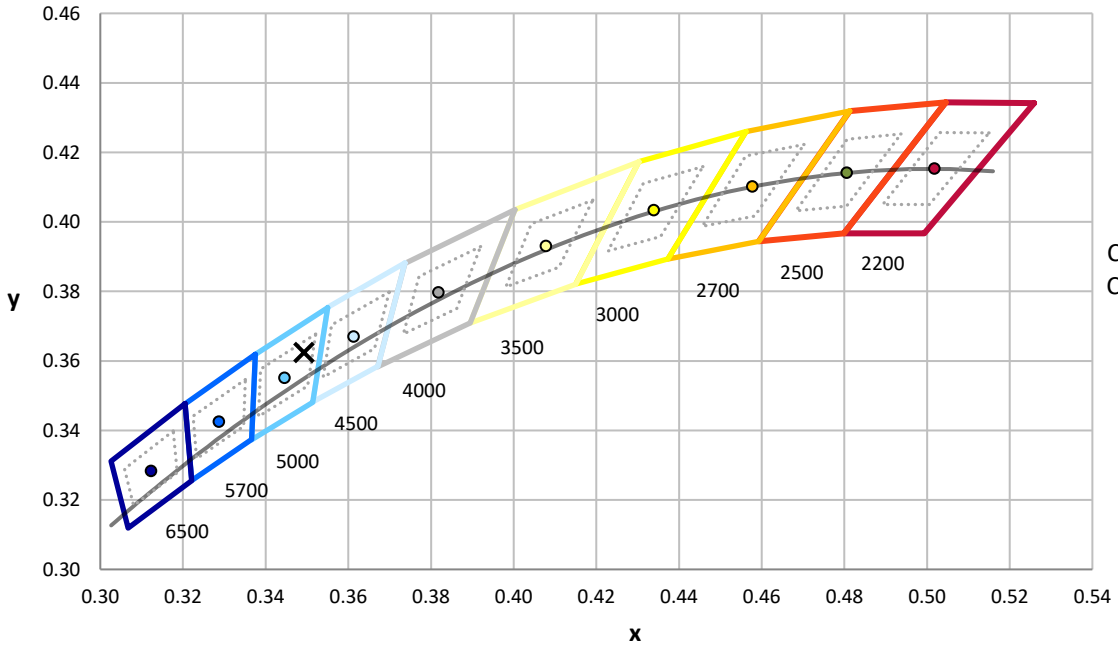
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1121 Highway 74 South
Peachtree City, GA 30269

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

## CIE 1931 Chromaticity Diagram




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



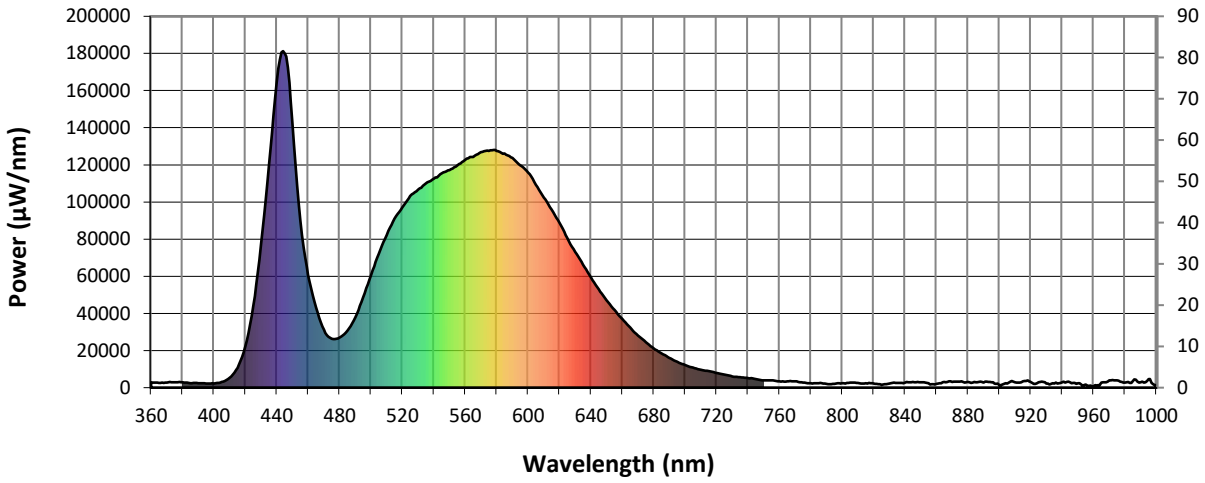

CCT = 4884K
CIE x = 0.3493
CIE y = 0.3624
Duv = 0.0037

Point lies inside the ANSI 5000K 4-step quadrangle

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## Photopic Flux vs. Wavelength



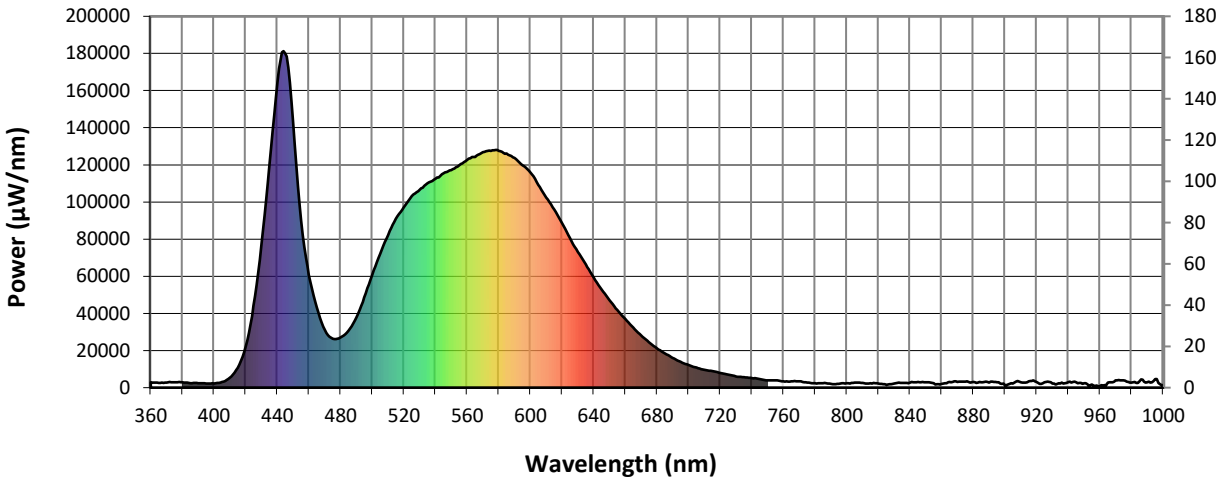

######

| 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



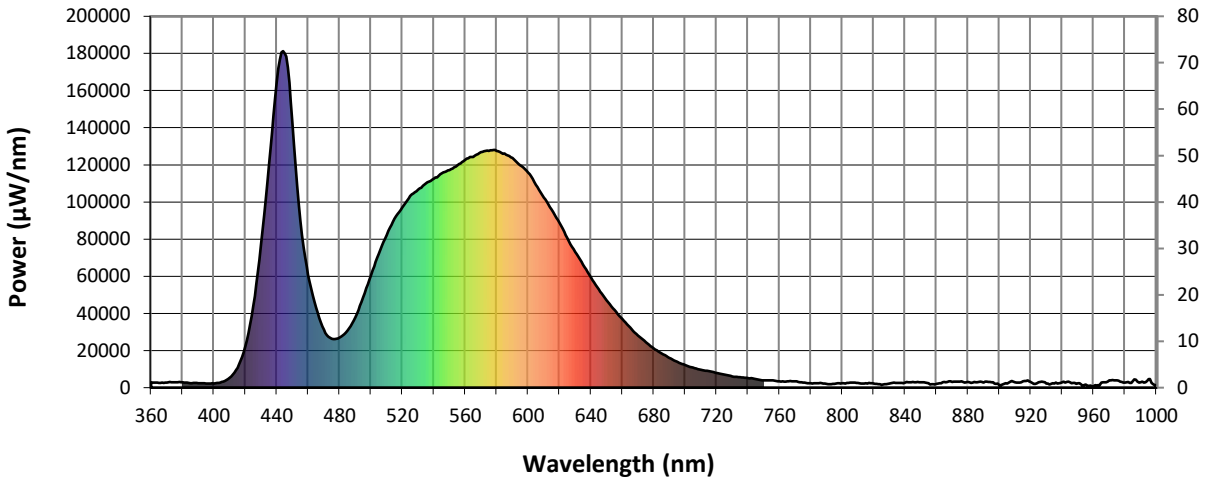

**Scotopic Lumens: 13493.5** **S/P: 1.77**

| 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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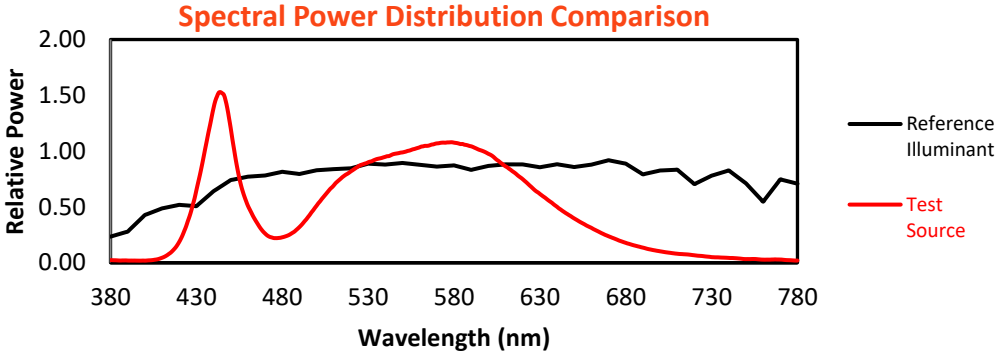
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# TM-30-18

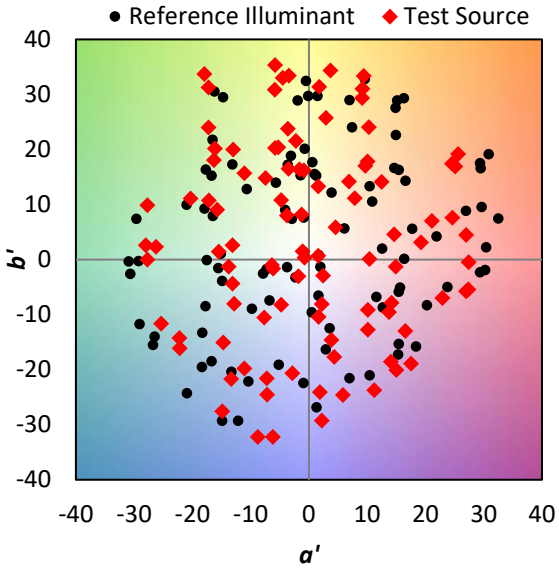
## Summary

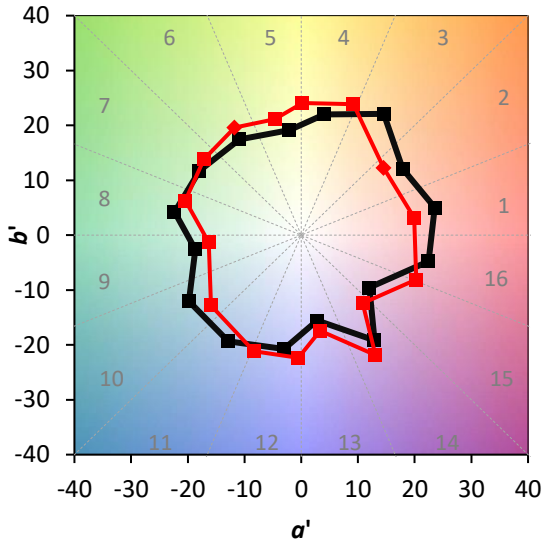
$R_f$ = 74.9
$R_g$ = 96.3
CIE $R_a$ = 73.5
$R_9$ = -28.4

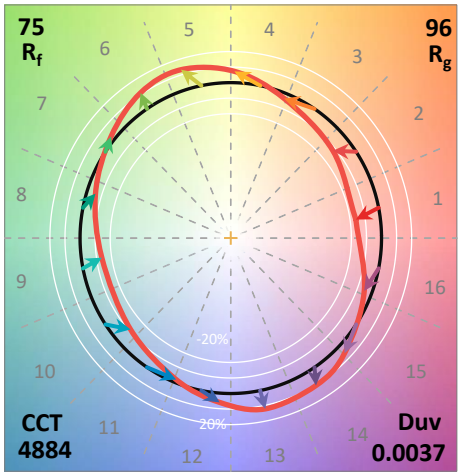
## Spectral Power Distribution Comparison

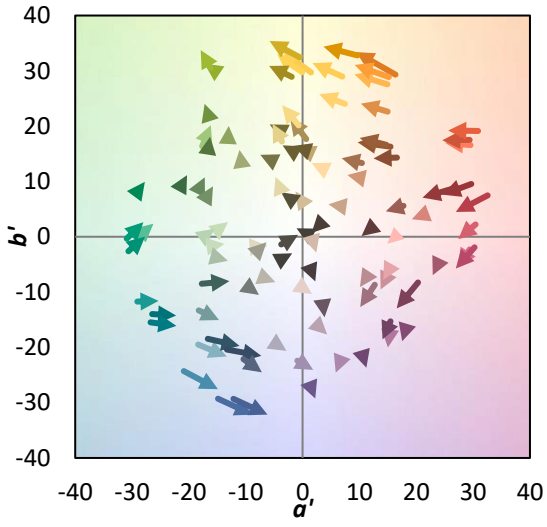



## Color Vector Graphics



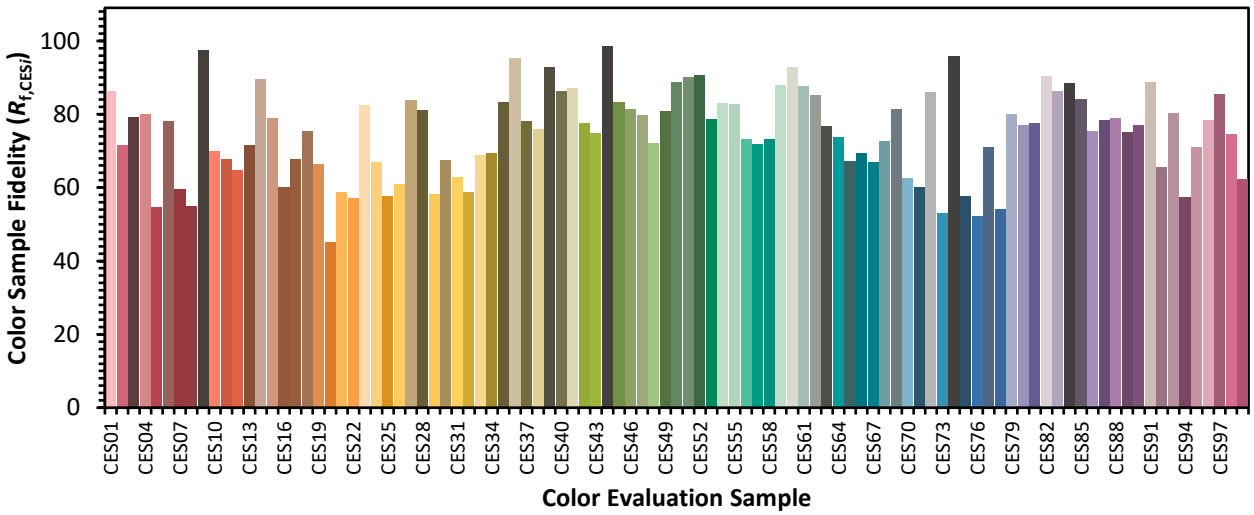
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Peachtree City, GA 30269

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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 | |

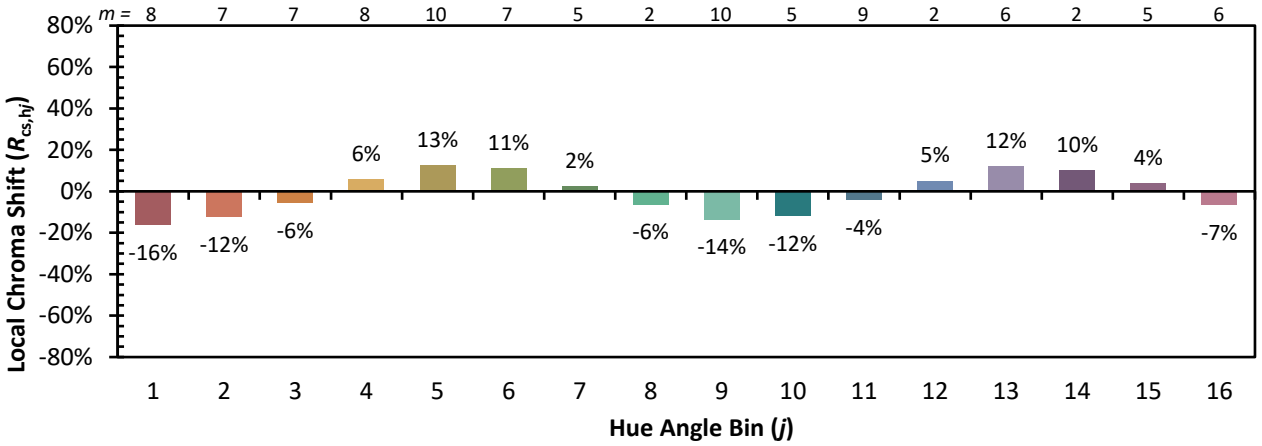


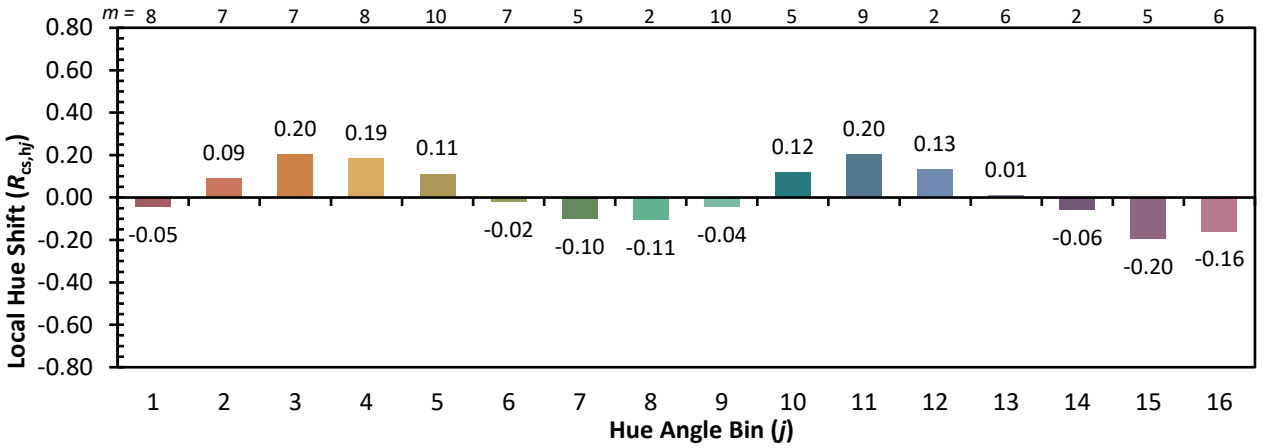
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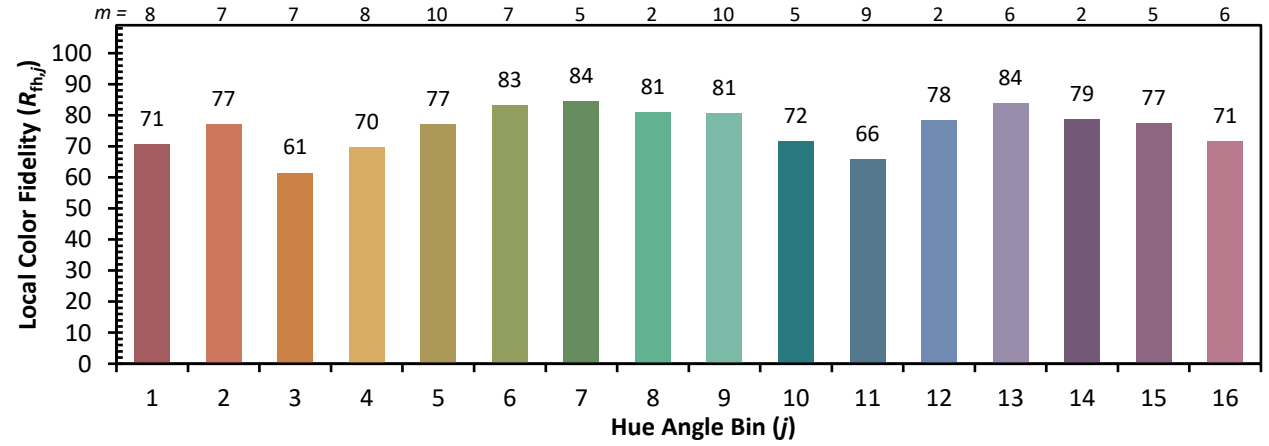
REPORT NUMBER: SP1-1908-441-4-R4

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### Color Rendition by Hue-Angle Bin



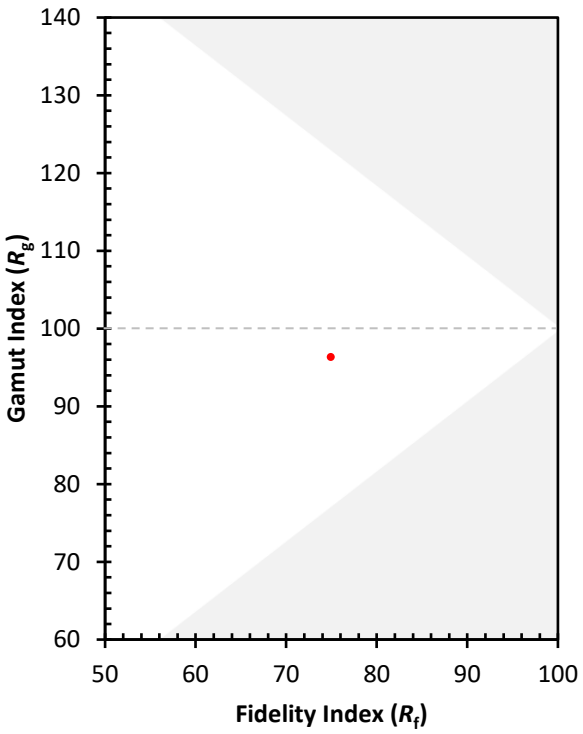



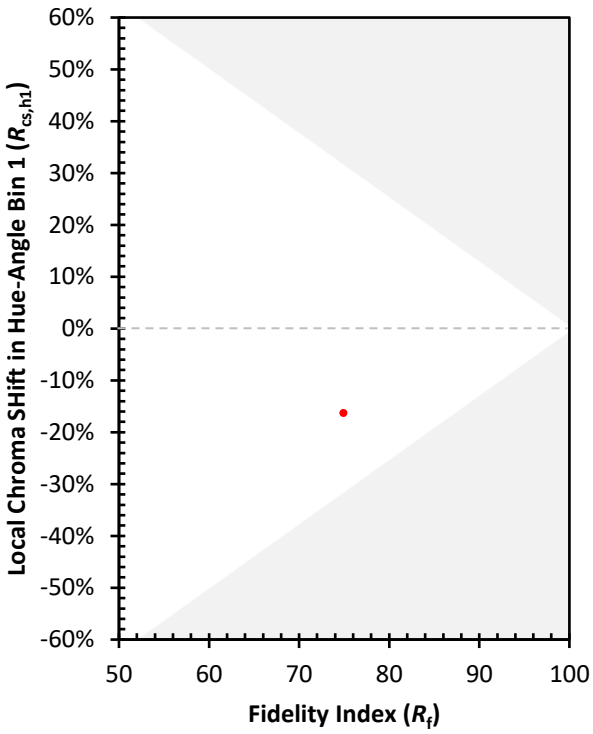
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### Measure Comparisons




(END OF REPORT)