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

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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: P1502441

Luminaire Tested: GSS-SB4A-935-U-T3LG-HSS

Issue Date: 07/20/2026

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: | P1502441 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB4A-935-U-T3LG-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 4SQUARE 114W 90CRI 3500K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE W/ HOUSE SIDE SHIELD |
| Light Source: | (104) 3500K CCT, 90 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 10147.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 89.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B1 - U0 - G2 |

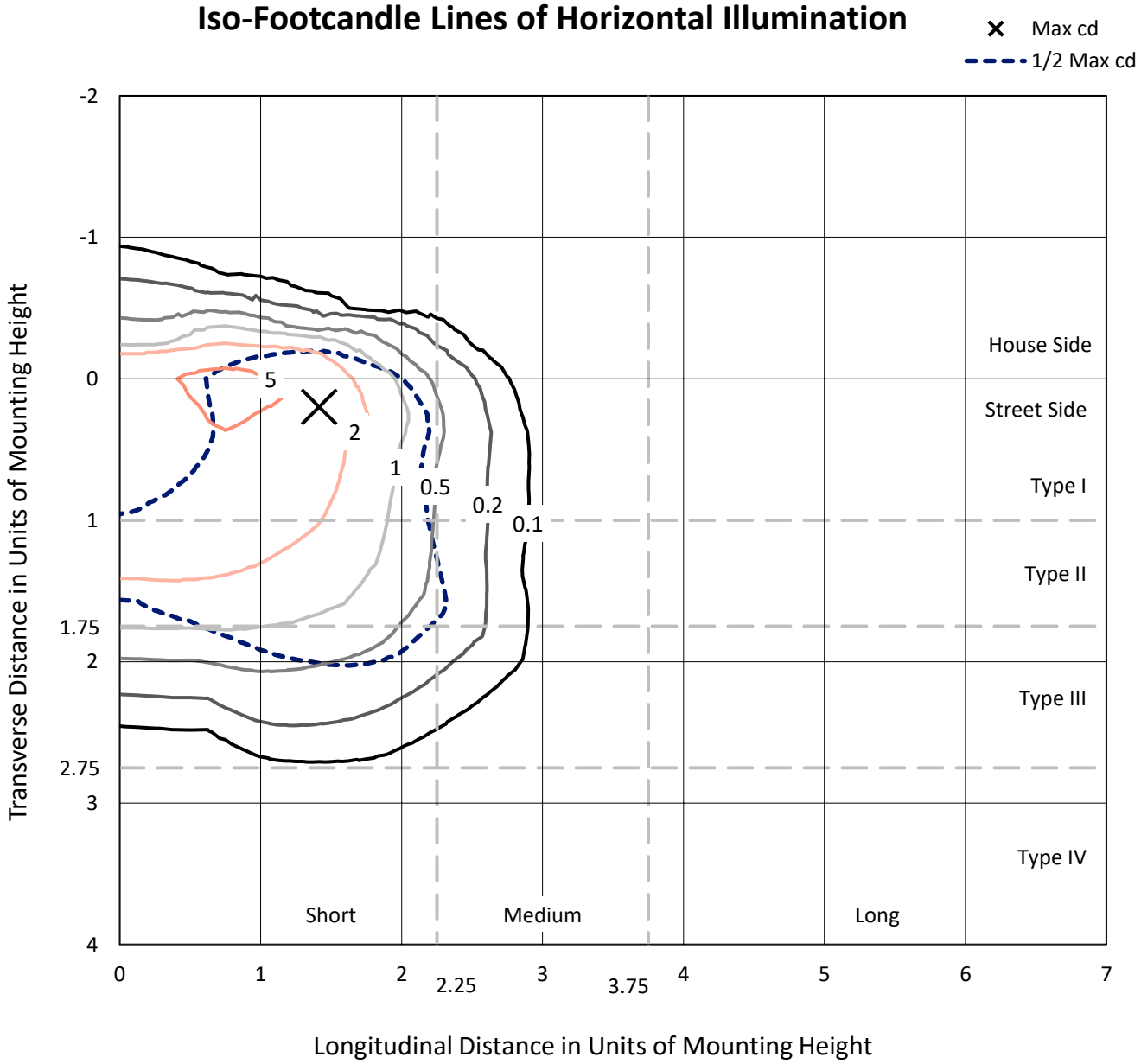
| | |
|---|---|
| Input Watts (W): | 114 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 8.2% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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REPORT NUMBER: P1502441
CATALOG NUMBER: GSS-SB4A-935-U-T3LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination



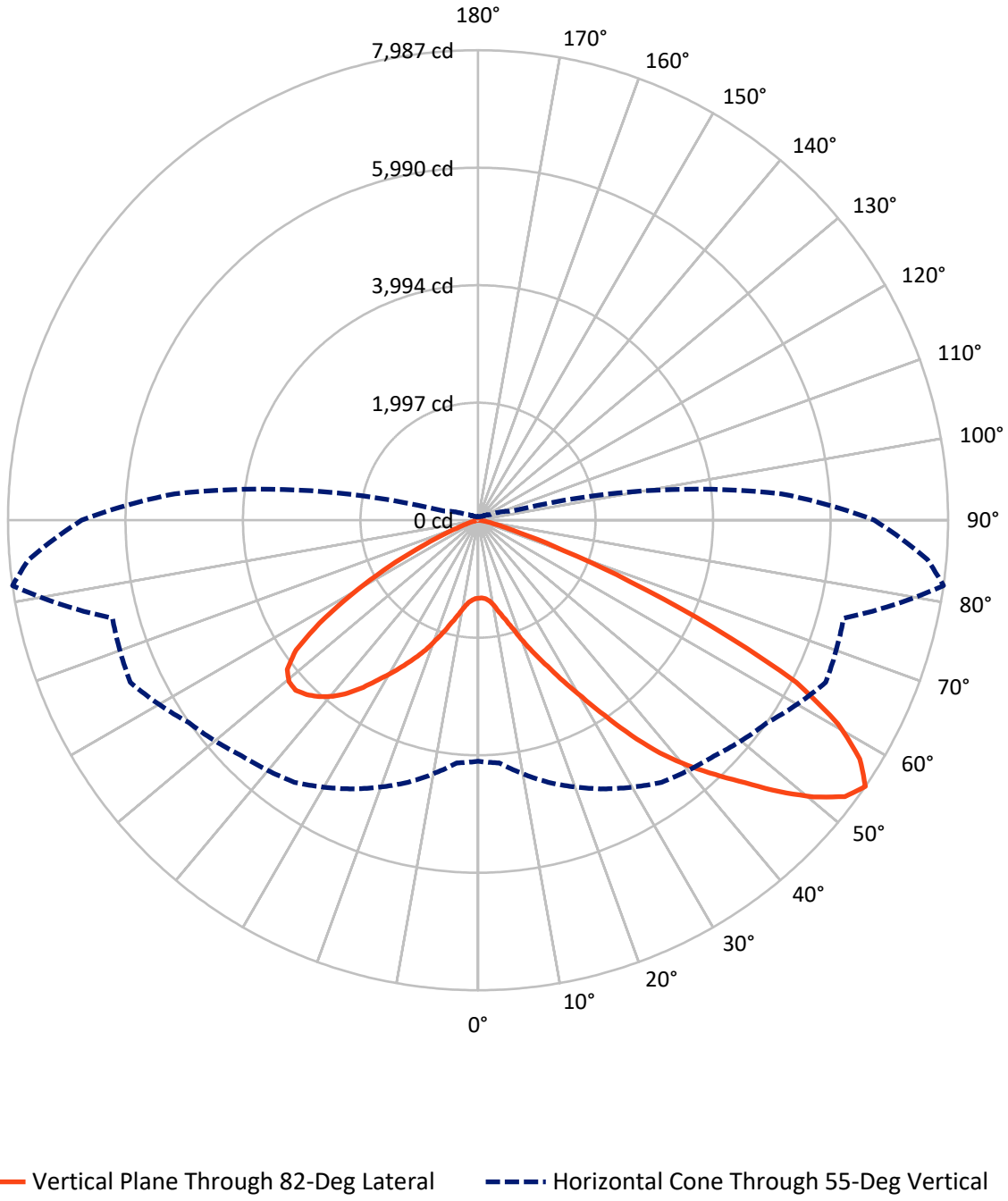

Based on 20 foot mounting height. Maximum calculated value = 6.2 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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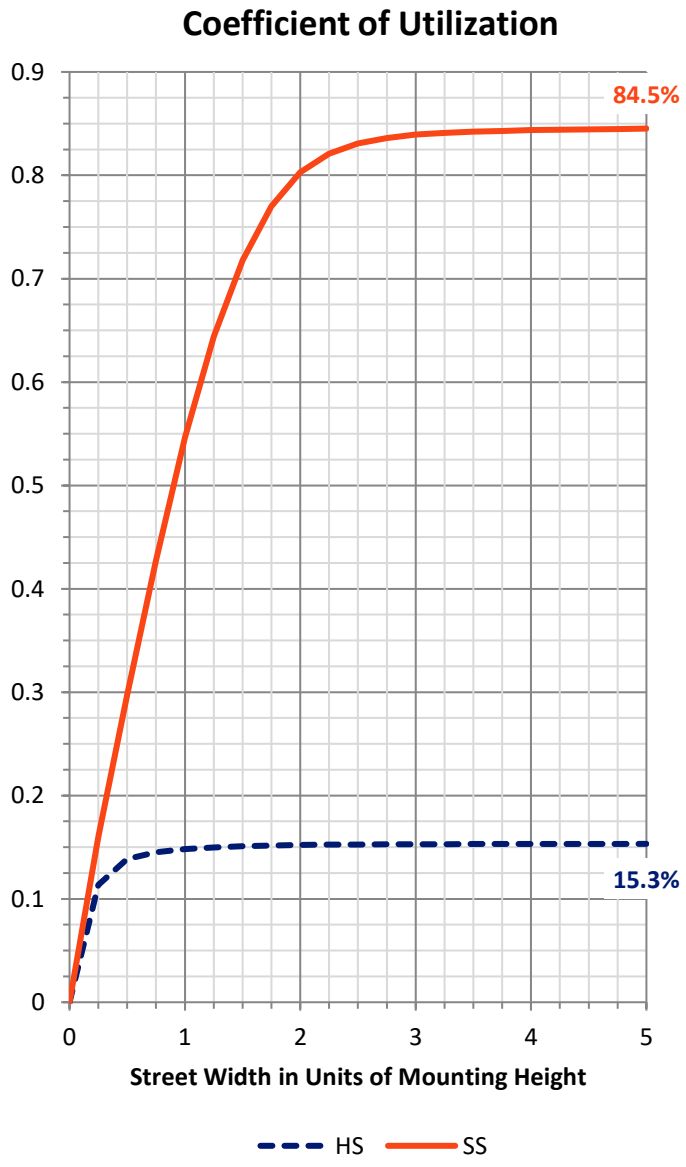
REPORT NUMBER: P1502441
CATALOG NUMBER: GSS-SB4A-935-U-T3LG-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 1568.5 | 0.0 | 1568.5 |
| | % Fixture | 15.5 | 0.0 | 15.5 |
| **Street Side** | Lumens | 8579.0 | 0.0 | 8579.0 |
| | % Fixture | 84.5 | 0.0 | 84.5 |
| **Total** | Lumens | 10147.5 | 0.0 | 10147.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 120.1 | 1.2 |
| 10°-20° | 325.1 | 3.2 |
| 20°-30° | 649.9 | 6.4 |
| 30°-40° | 1345.7 | 13.3 |
| 40°-50° | 2248.1 | 22.2 |
| 50°-60° | 2851.3 | 28.1 |
| 60°-70° | 2131.5 | 21.0 |
| 70°-80° | 451.5 | 4.4 |
| 80°-90° | 24.3 | 0.2 |
| 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° | 10147.5 | 100.0 |
| 0°-180° | 10147.5 | 100.0 |



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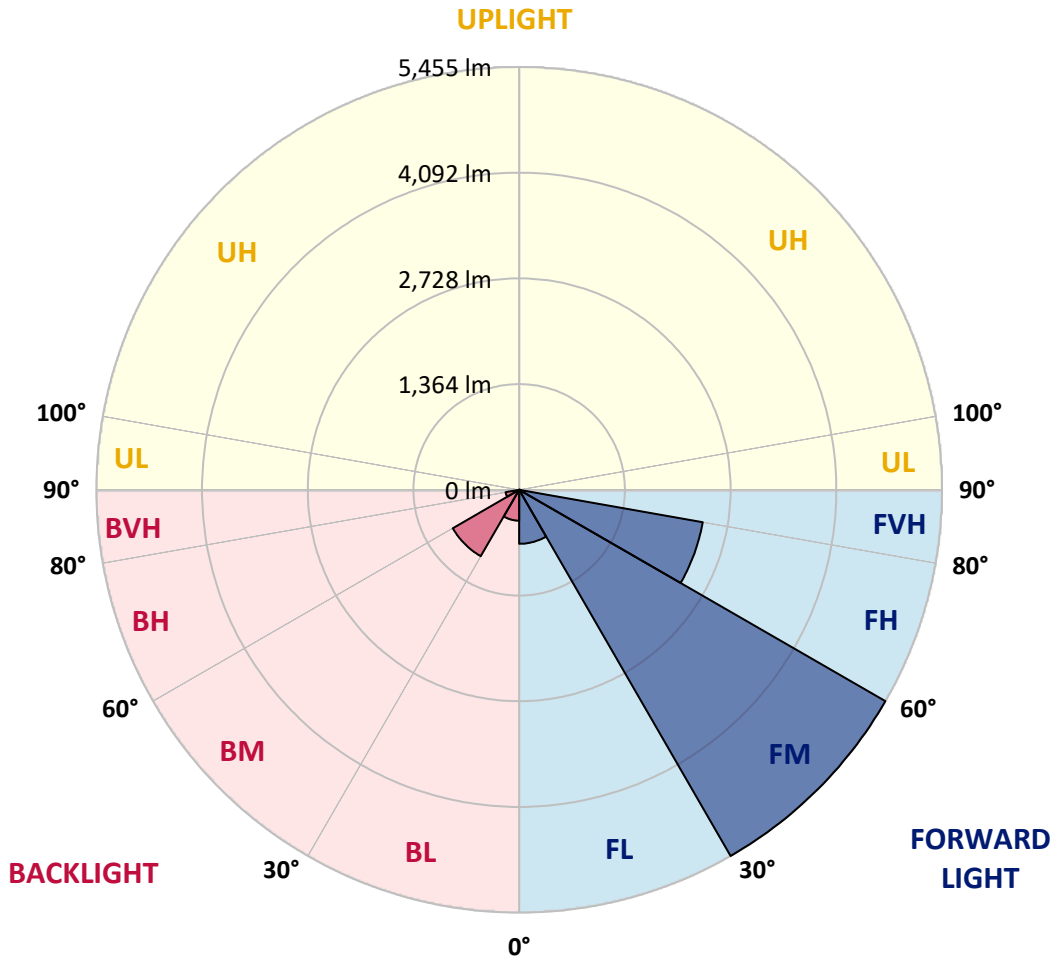
Scaled Data Report

REPORT NUMBER: P1502441
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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°) | 696.9 | 6.9 | | | |
| FM | (30°-60°) | 5455.4 | 53.8 | | | |
| FH | (60°-80°) | 2404.9 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 21.7 | 0.2 | | | G1/100 |
| BL | (0°-30°) | 398.1 | 3.9 | B1/500 | | |
| BM | (30°-60°) | 989.7 | 9.8 | B1/1000 | | |
| BH | (60°-80°) | 178.1 | 1.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 2.6 | 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 III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | *1324.7* | 1324.7 |
| 2.5° | 1288.9 | 1291.7 | 1286.2 | 1288.9 | 1294.4 | 1291.7 | 1302.7 | 1311.0 | 1319.2 | *1322.0* | 1324.7 |
| 5° | 1176.0 | 1178.8 | 1181.5 | 1203.6 | 1217.3 | 1250.4 | 1280.7 | 1300.0 | 1327.5 | *1341.3* | 1344.0 |
| 7.5° | 1041.1 | 1041.1 | 1052.1 | 1079.6 | 1115.4 | 1178.8 | 1247.6 | 1302.7 | 1355.0 | *1382.6* | 1388.1 |
| 10° | 1016.3 | 1019.0 | 1019.0 | 1038.3 | 1068.6 | 1132.0 | 1220.1 | 1330.3 | 1423.9 | *1465.2* | 1479.0 |
| 12.5° | 1021.8 | 1024.5 | 1027.3 | 1046.6 | 1076.9 | 1132.0 | 1244.9 | 1388.1 | 1534.1 | *1602.9* | 1611.2 |
| 15° | 1035.6 | 1041.1 | 1049.3 | 1074.1 | 1107.2 | 1178.8 | 1297.2 | 1470.7 | 1666.3 | *1754.4* | 1776.4 |
| 17.5° | 1076.9 | 1079.6 | 1093.4 | 1120.9 | 1173.3 | 1244.9 | 1374.3 | 1578.1 | 1850.8 | *1947.2* | 1988.5 |
| 20° | 1140.2 | 1145.7 | 1165.0 | 1203.6 | 1264.2 | 1355.0 | 1498.3 | 1718.6 | 2049.1 | *2197.8* | 2230.9 |
| 22.5° | 1220.1 | 1220.1 | 1247.6 | 1308.2 | 1393.6 | 1495.5 | 1669.0 | 1905.9 | 2291.5 | *2465.0* | 2520.0 |
| 25° | 1352.3 | 1349.5 | 1371.6 | 1440.4 | 1542.3 | 1691.0 | 1867.3 | 2129.0 | 2544.8 | *2751.4* | 2809.2 |
| 27.5° | 1655.2 | 1647.0 | 1638.7 | 1641.5 | 1729.6 | 1919.6 | 2123.4 | 2409.9 | 2858.8 | *3101.2* | 3145.2 |
| 30° | 2007.8 | 2018.8 | 2007.8 | 1980.2 | 1994.0 | 2170.3 | 2423.7 | 2754.1 | 3211.3 | *3484.0* | 3541.8 |
| 32.5° | 2316.2 | 2321.7 | 2368.6 | 2398.9 | 2409.9 | 2492.5 | 2770.7 | 3170.0 | 3660.3 | *3957.7* | 4032.1 |
| 35° | 2652.2 | 2660.5 | 2712.8 | 2776.2 | 2875.3 | 2949.7 | 3205.8 | 3652.0 | 4117.5 | *4492.0* | 4547.1 |
| 37.5° | 3043.3 | 3057.1 | 3126.0 | 3216.8 | 3354.6 | 3525.3 | 3663.0 | 4089.9 | 4582.9 | *5015.3* | 5073.1 |
| 40° | 3387.6 | 3431.7 | 3550.1 | 3665.8 | 3811.7 | 4004.5 | 4095.4 | 4472.7 | 4927.2 | *5478.0* | 5574.4 |
| 42.5° | 3712.6 | 3737.4 | 3927.4 | 4106.4 | 4279.9 | 4436.9 | 4525.1 | 4772.9 | 5232.9 | *5907.6* | 6015.1 |
| 45° | 3982.5 | 4001.8 | 4213.8 | 4450.7 | 4665.5 | 4822.5 | 4836.3 | 5064.9 | 5535.8 | *6362.1* | 6444.7 |
| 47.5° | 4147.7 | 4178.0 | 4450.7 | 4720.6 | 4957.5 | 5103.4 | 5081.4 | 5436.7 | 5866.3 | *6890.9* | 6901.9 |
| 50° | 4246.9 | 4266.2 | 4544.3 | 4894.1 | 5186.1 | 5288.0 | 5334.8 | 5792.0 | 6166.5 | *7392.1* | 7326.0 |
| 52.5° | 4318.5 | 4348.8 | 4621.5 | 4993.3 | 5321.0 | 5458.7 | 5626.7 | 6191.3 | 6403.4 | *7802.5* | 7626.2 |
| 55° | *4095.4* | *4139.5* | *4610.4* | *5037.3* | *5436.7* | *5668.0* | *5998.5* | *6519.1* | *6430.9* | *7987.0* | *7664.8* |
| 57.5° | 3844.8 | 3853.1 | 4318.5 | 5023.6 | 5566.1 | 5888.4 | 6340.0 | 6543.9 | 6174.8 | *7651.0* | 7273.7 |
| 60° | 3475.7 | 3525.3 | 4001.8 | 4844.5 | 5588.2 | 6064.6 | 6571.4 | 6243.7 | 5706.6 | *7028.6* | 6461.2 |
| 62.5° | 2440.2 | 2517.3 | 3139.7 | 4373.6 | 5431.2 | 6161.0 | 6532.8 | 5720.4 | 5120.0 | *6067.4* | 5431.2 |
| 65° | 1366.1 | 1432.2 | 1941.7 | 3528.1 | 4998.8 | 6139.0 | 6136.2 | 5020.8 | 4178.0 | *4384.6* | 3883.3 |
| 67.5° | 749.1 | 801.5 | 1008.0 | 2655.0 | 3966.0 | 5668.0 | 5301.7 | 3831.0 | 2801.0 | *2784.4* | 2423.7 |
| 70° | 523.3 | 526.0 | 636.2 | 1793.0 | 2850.5 | 3955.0 | 4145.0 | 2569.6 | 1737.9 | *1536.8* | 1297.2 |
| 72.5° | 256.1 | 258.9 | 316.7 | 845.5 | 1743.4 | 2192.3 | 2842.3 | 1335.8 | 975.0 | *762.9* | 650.0 |
| 75° | 129.4 | 126.7 | 173.5 | 316.7 | 721.6 | 1068.6 | 1253.1 | 669.3 | 567.4 | *418.6* | 371.8 |
| 77.5° | 82.6 | 85.4 | 101.9 | 173.5 | 325.0 | 415.9 | 385.6 | 363.5 | 333.3 | *245.1* | 212.1 |
| 80° | 55.1 | 55.1 | 68.9 | 110.2 | 159.7 | 198.3 | 118.4 | 168.0 | 195.5 | *143.2* | 123.9 |
| 82.5° | 16.5 | 16.5 | 41.3 | 60.6 | 77.1 | 79.9 | 52.3 | 77.1 | 110.2 | *79.9* | 60.6 |
| 85° | 11.0 | 11.0 | 22.0 | 30.3 | 33.0 | 27.5 | 16.5 | 33.0 | 52.3 | *35.8* | 30.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | *2.8* | 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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Scaled Data Report

REPORT NUMBER: P1502441
CATALOG NUMBER: GSS-SB4A-935-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 | 1324.7 |
| 2.5° | 1327.5 | 1330.3 | 1338.5 | 1341.3 | 1346.8 | 1349.5 | 1349.5 | 1349.5 | 1346.8 | 1349.5 | 1355.0 |
| 5° | 1349.5 | 1363.3 | 1374.3 | 1371.6 | 1371.6 | 1357.8 | 1346.8 | 1324.7 | 1313.7 | 1311.0 | 1313.7 |
| 7.5° | 1404.6 | 1415.6 | 1426.6 | 1410.1 | 1368.8 | 1305.5 | 1236.6 | 1181.5 | 1134.7 | 1112.7 | 1120.9 |
| 10° | 1503.8 | 1517.5 | 1517.5 | 1440.4 | 1324.7 | 1176.0 | 1052.1 | 950.2 | 873.1 | 831.8 | 851.0 |
| 12.5° | 1647.0 | 1658.0 | 1630.5 | 1468.0 | 1247.6 | 1002.5 | 795.9 | 625.2 | 526.0 | 476.5 | 465.5 |
| 15° | 1812.2 | 1828.8 | 1735.1 | 1462.5 | 1126.4 | 749.1 | 495.7 | 371.8 | 336.0 | 325.0 | 327.7 |
| 17.5° | 2024.3 | 2032.6 | 1850.8 | 1418.4 | 917.1 | 490.2 | 352.5 | 316.7 | 308.5 | 303.0 | 303.0 |
| 20° | 2285.9 | 2261.2 | 1944.4 | 1344.0 | 669.3 | 385.6 | 325.0 | 297.4 | 289.2 | 286.4 | 289.2 |
| 22.5° | 2566.9 | 2528.3 | 2021.5 | 1203.6 | 506.8 | 363.5 | 311.2 | 280.9 | 269.9 | 267.2 | 267.2 |
| 25° | 2861.6 | 2773.4 | 2082.1 | 997.0 | 473.7 | 358.0 | 294.7 | 256.1 | 245.1 | 239.6 | 239.6 |
| 27.5° | 3197.6 | 3046.1 | 2115.2 | 834.5 | 482.0 | 349.8 | 275.4 | 234.1 | 217.6 | 212.1 | 212.1 |
| 30° | 3569.4 | 3349.0 | 2117.9 | 801.5 | 498.5 | 338.8 | 256.1 | 209.3 | 192.8 | 184.5 | 187.3 |
| 32.5° | 4021.1 | 3657.5 | 2109.7 | 853.8 | 509.5 | 330.5 | 234.1 | 184.5 | 170.8 | 162.5 | 162.5 |
| 35° | 4489.3 | 4032.1 | 2076.6 | 952.9 | 515.0 | 305.7 | 206.6 | 162.5 | 146.0 | 143.2 | 146.0 |
| 37.5° | 4954.7 | 4387.4 | 2029.8 | 1008.0 | 487.5 | 250.6 | 168.0 | 140.5 | 129.4 | 129.4 | 129.4 |
| 40° | 5378.9 | 4695.8 | 1966.5 | 961.2 | 388.3 | 181.8 | 137.7 | 121.2 | 115.7 | 112.9 | 115.7 |
| 42.5° | 5695.6 | 4971.2 | 1850.8 | 809.7 | 275.4 | 146.0 | 121.2 | 107.4 | 101.9 | 101.9 | 104.7 |
| 45° | 6042.6 | 5235.6 | 1627.7 | 594.9 | 209.3 | 126.7 | 104.7 | 93.6 | 90.9 | 90.9 | 93.6 |
| 47.5° | 6392.4 | 5447.7 | 1412.9 | 396.6 | 181.8 | 112.9 | 93.6 | 85.4 | 82.6 | 79.9 | 82.6 |
| 50° | 6659.5 | 5549.6 | 1132.0 | 289.2 | 165.2 | 101.9 | 85.4 | 79.9 | 74.4 | 71.6 | 71.6 |
| 52.5° | 6849.6 | 5522.1 | 829.0 | 247.9 | 151.5 | 93.6 | 79.9 | 74.4 | 66.1 | 66.1 | 66.1 |
| 55° | *6733.9* | *5169.5* | *597.7* | *223.1* | *140.5* | *88.1* | *77.1* | *68.9* | *63.3* | *60.6* | *60.6* |
| 57.5° | 6172.0 | 4406.6 | 432.4 | 201.1 | 123.9 | 82.6 | 74.4 | 66.1 | 57.8 | 55.1 | 55.1 |
| 60° | 5365.1 | 3431.7 | 322.2 | 176.3 | 107.4 | 79.9 | 66.1 | 63.3 | 55.1 | 49.6 | 49.6 |
| 62.5° | 4384.6 | 2498.0 | 250.6 | 151.5 | 96.4 | 68.9 | 63.3 | 57.8 | 49.6 | 44.1 | 41.3 |
| 65° | 3043.3 | 1594.7 | 192.8 | 123.9 | 90.9 | 60.6 | 57.8 | 49.6 | 41.3 | 33.0 | 33.0 |
| 67.5° | 1878.3 | 947.4 | 148.7 | 96.4 | 71.6 | 52.3 | 49.6 | 44.1 | 35.8 | 27.5 | 27.5 |
| 70° | 1038.3 | 501.3 | 101.9 | 71.6 | 55.1 | 41.3 | 38.6 | 38.6 | 30.3 | 24.8 | 22.0 |
| 72.5° | 498.5 | 272.7 | 68.9 | 60.6 | 41.3 | 27.5 | 30.3 | 30.3 | 24.8 | 19.3 | 19.3 |
| 75° | 300.2 | 162.5 | 46.8 | 46.8 | 27.5 | 22.0 | 22.0 | 24.8 | 19.3 | 13.8 | 13.8 |
| 77.5° | 170.8 | 96.4 | 27.5 | 35.8 | 19.3 | 13.8 | 16.5 | 13.8 | 11.0 | 8.3 | 8.3 |
| 80° | 96.4 | 55.1 | 16.5 | 24.8 | 11.0 | 8.3 | 8.3 | 5.5 | 5.5 | 2.8 | 2.8 |
| 82.5° | 46.8 | 30.3 | 8.3 | 8.3 | 5.5 | 2.8 | 2.8 | 2.8 | 2.8 | 0.0 | 0.0 |
| 85° | 22.0 | 5.5 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 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 |

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# LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

McGRAW-EDISON

Report Number: SP1-2106-271-3

Luminaire Tested: GFLD-SA1-A-935-U-WR-X-BK

Test Date: 06/15/2021

Report Generated By FNC07603 / LDUCLS01DT446
Version: v6.09

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## Test Information

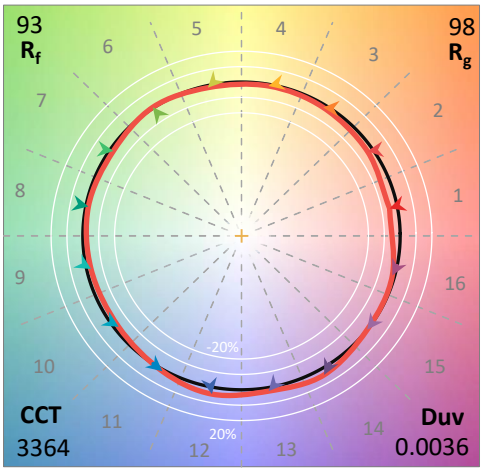
| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | SP1-2106-271-3 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 |
| Measurement Geometry: | 4π |
| Issue Date: | 06/15/2021 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | **GFLD-SA1-A-935-U-WR-X-BK** |
| Description: | MCGRAW EDISON |

N6, BLACK

## Spectral Parameters

| | | | | | |
|---|---|---|---|---|---|
| CCT (K): | 3364 | CRI (Ra): | 92.0 | | |
| CIE u': | 0.2376 | R1: | 91.7 | R9: | 59.7 |
| CIE v': | 0.5188 | R2: | 94.0 | R10: | 85.2 |
| Duv: | 0.0036 | R3: | 95.5 | R11: | 92.8 |
| CIE x: | 0.4173 | R4: | 93.0 | R12: | 78.2 |
| CIE y: | 0.4050 | R5: | 90.9 | R13: | 92.0 |
| CIE z: | 0.1777 | R6: | 92.2 | R14: | 96.9 |
| Peak Wavelength (nm): | 622 | R7: | 94.8 | | |
| Dominant Wavelength (nm): | 580 | R8: | 84.1 | | |
| Purity: | 46.9 | | | | |

| | |
|---|---|
| Rf: | 92.6 |
| Rg: | 98.3 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 76M |
| Operation Time: | 12H |
| Room Temperature (°C) / RH%: | 24.8/44% |
| Sphere Temperature (°C): | 24.9 |

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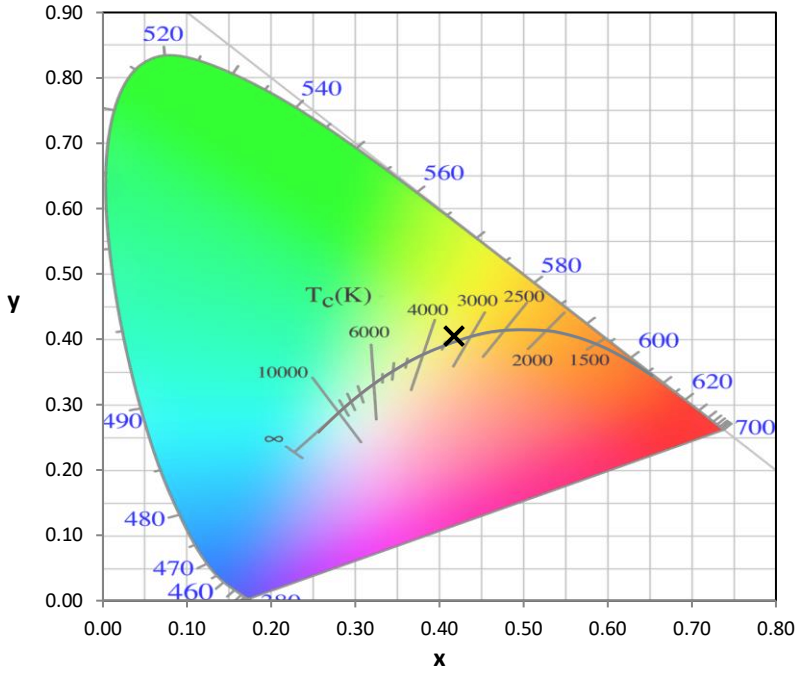
REPORT NUMBER: SP1-2106-271-3

| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | 76INCH SPHERE IN0058 | 1/31/2021 | 7/31/2021 |
| Power Meter | XITRON 2801 IN0071 | 12/1/2020 | 12/1/2021 |
| AC Power Source | CHROMA 61603 IN0063 | 12/1/2020 | 12/1/2021 |
| DC Power Source | AGILENT E3634A IN0208 | 12/1/2020 | 12/1/2021 |
| Sphere Thermometer | ONSET IN0085 | 12/1/2020 | 12/1/2021 |
| Room Thermometer | ONSET IN0046 | 12/1/2020 | 12/1/2021 |

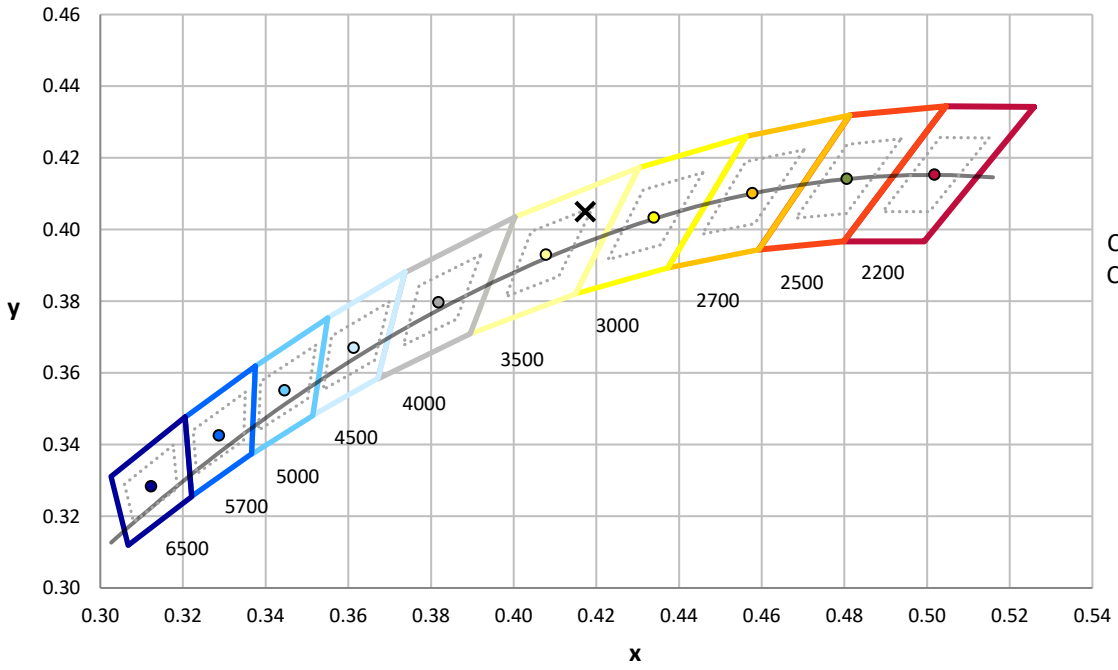
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1121 Highway 74 South
Peachtree City, GA 30269

REPORT NUMBER: SP1-2106-271-3

## CIE 1931 Chromaticity Diagram




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



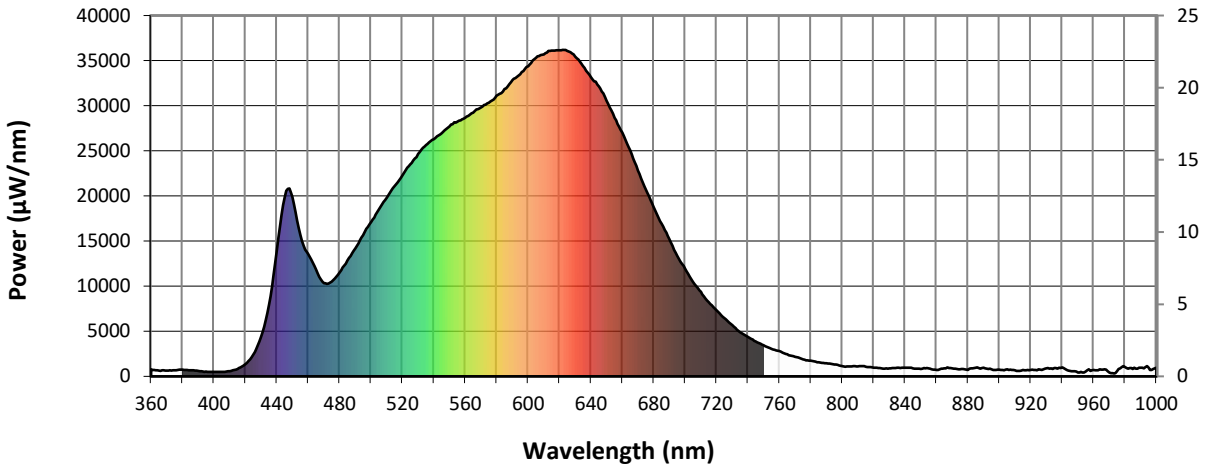

CCT = 3364K
CIE x = 0.4173
CIE y = 0.4050
Duv = 0.0036

Point lies inside the ANSI 3500K 4-step quadrangle

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## Photopic Flux vs. Wavelength



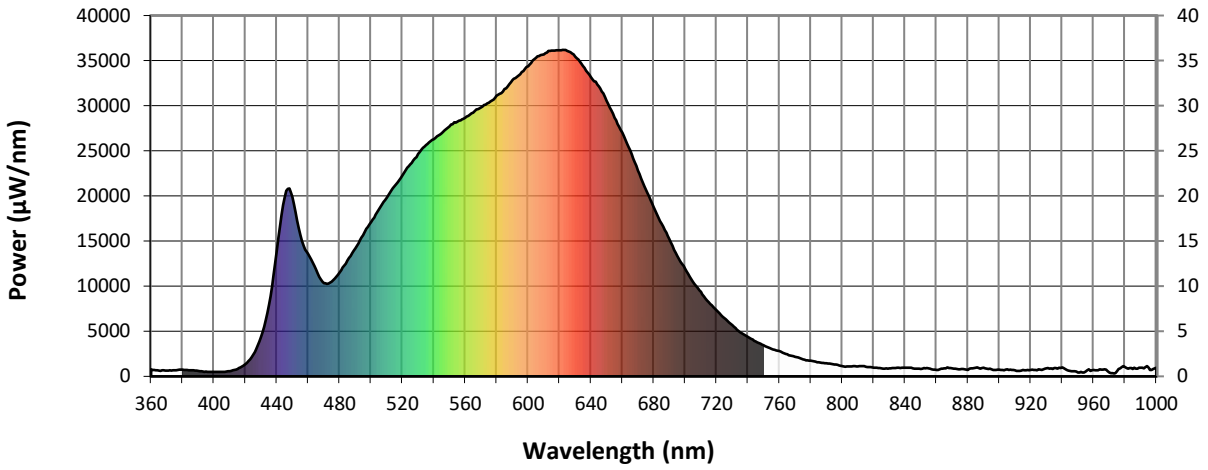

######

| 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 | 792 | NR | 490 | 14205 | NR | 620 | 36151 | NR | 750 | 3427 | NR | 880 | 712 | NR |
| 365 | 640 | NR | 495 | 15647 | NR | 625 | 36077 | NR | 755 | 3047 | NR | 885 | 942 | NR |
| 370 | 630 | NR | 500 | 17088 | NR | 630 | 35451 | NR | 760 | 2790 | NR | 890 | 952 | NR |
| 375 | 684 | NR | 505 | 18475 | NR | 635 | 34417 | NR | 765 | 2433 | NR | 895 | 764 | NR |
| 380 | 731 | NR | 510 | 19780 | NR | 640 | 33166 | NR | 770 | 2178 | NR | 900 | 743 | NR |
| 385 | 664 | NR | 515 | 21055 | NR | 645 | 32124 | NR | 775 | 1893 | NR | 905 | 776 | NR |
| 390 | 595 | NR | 520 | 22268 | NR | 650 | 30559 | NR | 780 | 1724 | NR | 910 | 659 | NR |
| 395 | 520 | NR | 525 | 23497 | NR | 655 | 28656 | NR | 785 | 1549 | NR | 915 | 701 | NR |
| 400 | 491 | NR | 530 | 24653 | NR | 660 | 27033 | NR | 790 | 1451 | NR | 920 | 728 | NR |
| 405 | 489 | NR | 535 | 25661 | NR | 665 | 25030 | NR | 795 | 1317 | NR | 925 | 793 | NR |
| 410 | 585 | NR | 540 | 26289 | NR | 670 | 22820 | NR | 800 | 1124 | NR | 930 | 877 | NR |
| 415 | 826 | NR | 545 | 26945 | NR | 675 | 20678 | NR | 805 | 1116 | NR | 935 | 923 | NR |
| 420 | 1336 | NR | 550 | 27713 | NR | 680 | 18748 | NR | 810 | 1105 | NR | 940 | 1001 | NR |
| 425 | 2406 | NR | 555 | 28230 | NR | 685 | 16904 | NR | 815 | 1073 | NR | 945 | 604 | NR |
| 430 | 4355 | NR | 560 | 28678 | NR | 690 | 15203 | NR | 820 | 977 | NR | 950 | 424 | NR |
| 435 | 7911 | NR | 565 | 29242 | NR | 695 | 13356 | NR | 825 | 882 | NR | 955 | 550 | NR |
| 440 | 13821 | NR | 570 | 29806 | NR | 700 | 11948 | NR | 830 | 875 | NR | 960 | 709 | NR |
| 445 | 19836 | NR | 575 | 30322 | NR | 705 | 10482 | NR | 835 | 944 | NR | 965 | 755 | NR |
| 450 | 19902 | NR | 580 | 31125 | NR | 710 | 9351 | NR | 840 | 956 | NR | 970 | 426 | NR |
| 455 | 15697 | NR | 585 | 31838 | NR | 715 | 8217 | NR | 845 | 875 | NR | 975 | 556 | NR |
| 460 | 13589 | NR | 590 | 32845 | NR | 720 | 7313 | NR | 850 | 801 | NR | 980 | 1040 | NR |
| 465 | 11857 | NR | 595 | 33487 | NR | 725 | 6460 | NR | 855 | 890 | NR | 985 | 833 | NR |
| 470 | 10336 | NR | 600 | 34359 | NR | 730 | 5680 | NR | 860 | 706 | NR | 990 | 964 | NR |
| 475 | 10504 | NR | 605 | 35281 | NR | 735 | 4904 | NR | 865 | 902 | NR | 995 | 953 | NR |
| 480 | 11526 | NR | 610 | 35679 | NR | 740 | 4372 | NR | 870 | 879 | NR | 1000 | 950 | NR |
| 485 | 12831 | NR | 615 | 36113 | NR | 745 | 3858 | NR | 875 | 769 | NR | | | |

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## Scotopic Flux vs. Wavelength



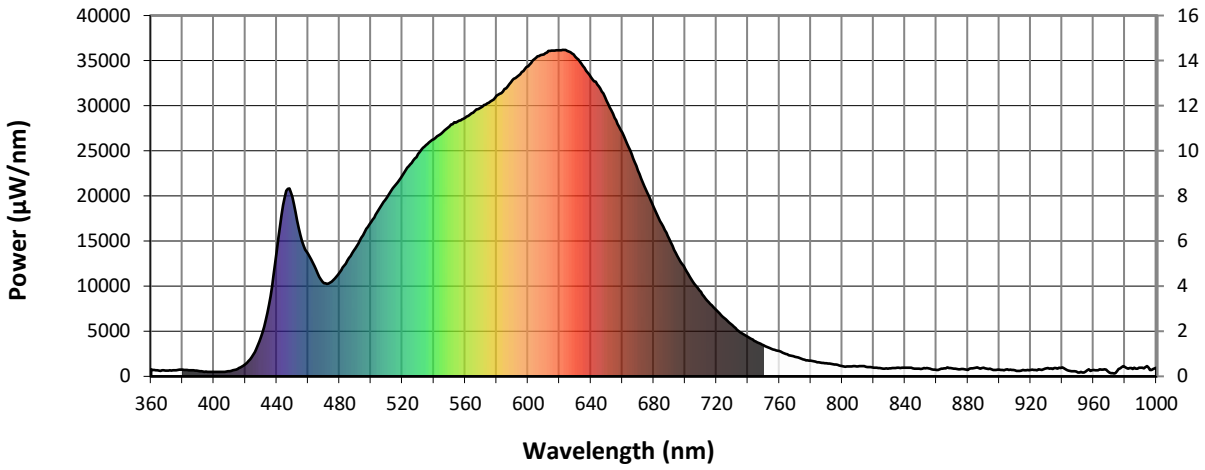

**Scotopic Lumens: 3109.5** **S/P: 1.54**

| 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 | 792 | NR | 490 | 14205 | NR | 620 | 36151 | NR | 750 | 3427 | NR | 880 | 712 | NR |
| 365 | 640 | NR | 495 | 15647 | NR | 625 | 36077 | NR | 755 | 3047 | NR | 885 | 942 | NR |
| 370 | 630 | NR | 500 | 17088 | NR | 630 | 35451 | NR | 760 | 2790 | NR | 890 | 952 | NR |
| 375 | 684 | NR | 505 | 18475 | NR | 635 | 34417 | NR | 765 | 2433 | NR | 895 | 764 | NR |
| 380 | 731 | NR | 510 | 19780 | NR | 640 | 33166 | NR | 770 | 2178 | NR | 900 | 743 | NR |
| 385 | 664 | NR | 515 | 21055 | NR | 645 | 32124 | NR | 775 | 1893 | NR | 905 | 776 | NR |
| 390 | 595 | NR | 520 | 22268 | NR | 650 | 30559 | NR | 780 | 1724 | NR | 910 | 659 | NR |
| 395 | 520 | NR | 525 | 23497 | NR | 655 | 28656 | NR | 785 | 1549 | NR | 915 | 701 | NR |
| 400 | 491 | NR | 530 | 24653 | NR | 660 | 27033 | NR | 790 | 1451 | NR | 920 | 728 | NR |
| 405 | 489 | NR | 535 | 25661 | NR | 665 | 25030 | NR | 795 | 1317 | NR | 925 | 793 | NR |
| 410 | 585 | NR | 540 | 26289 | NR | 670 | 22820 | NR | 800 | 1124 | NR | 930 | 877 | NR |
| 415 | 826 | NR | 545 | 26945 | NR | 675 | 20678 | NR | 805 | 1116 | NR | 935 | 923 | NR |
| 420 | 1336 | NR | 550 | 27713 | NR | 680 | 18748 | NR | 810 | 1105 | NR | 940 | 1001 | NR |
| 425 | 2406 | NR | 555 | 28230 | NR | 685 | 16904 | NR | 815 | 1073 | NR | 945 | 604 | NR |
| 430 | 4355 | NR | 560 | 28678 | NR | 690 | 15203 | NR | 820 | 977 | NR | 950 | 424 | NR |
| 435 | 7911 | NR | 565 | 29242 | NR | 695 | 13356 | NR | 825 | 882 | NR | 955 | 550 | NR |
| 440 | 13821 | NR | 570 | 29806 | NR | 700 | 11948 | NR | 830 | 875 | NR | 960 | 709 | NR |
| 445 | 19836 | NR | 575 | 30322 | NR | 705 | 10482 | NR | 835 | 944 | NR | 965 | 755 | NR |
| 450 | 19902 | NR | 580 | 31125 | NR | 710 | 9351 | NR | 840 | 956 | NR | 970 | 426 | NR |
| 455 | 15697 | NR | 585 | 31838 | NR | 715 | 8217 | NR | 845 | 875 | NR | 975 | 556 | NR |
| 460 | 13589 | NR | 590 | 32845 | NR | 720 | 7313 | NR | 850 | 801 | NR | 980 | 1040 | NR |
| 465 | 11857 | NR | 595 | 33487 | NR | 725 | 6460 | NR | 855 | 890 | NR | 985 | 833 | NR |
| 470 | 10336 | NR | 600 | 34359 | NR | 730 | 5680 | NR | 860 | 706 | NR | 990 | 964 | NR |
| 475 | 10504 | NR | 605 | 35281 | NR | 735 | 4904 | NR | 865 | 902 | NR | 995 | 953 | NR |
| 480 | 11526 | NR | 610 | 35679 | NR | 740 | 4372 | NR | 870 | 879 | NR | 1000 | 950 | NR |
| 485 | 12831 | NR | 615 | 36113 | NR | 745 | 3858 | NR | 875 | 769 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: 1210.8** **S/P: 0.6**

| 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 | 792 | NR | 490 | 14205 | NR | 620 | 36151 | NR | 750 | 3427 | NR | 880 | 712 | NR |
| 365 | 640 | NR | 495 | 15647 | NR | 625 | 36077 | NR | 755 | 3047 | NR | 885 | 942 | NR |
| 370 | 630 | NR | 500 | 17088 | NR | 630 | 35451 | NR | 760 | 2790 | NR | 890 | 952 | NR |
| 375 | 684 | NR | 505 | 18475 | NR | 635 | 34417 | NR | 765 | 2433 | NR | 895 | 764 | NR |
| 380 | 731 | NR | 510 | 19780 | NR | 640 | 33166 | NR | 770 | 2178 | NR | 900 | 743 | NR |
| 385 | 664 | NR | 515 | 21055 | NR | 645 | 32124 | NR | 775 | 1893 | NR | 905 | 776 | NR |
| 390 | 595 | NR | 520 | 22268 | NR | 650 | 30559 | NR | 780 | 1724 | NR | 910 | 659 | NR |
| 395 | 520 | NR | 525 | 23497 | NR | 655 | 28656 | NR | 785 | 1549 | NR | 915 | 701 | NR |
| 400 | 491 | NR | 530 | 24653 | NR | 660 | 27033 | NR | 790 | 1451 | NR | 920 | 728 | NR |
| 405 | 489 | NR | 535 | 25661 | NR | 665 | 25030 | NR | 795 | 1317 | NR | 925 | 793 | NR |
| 410 | 585 | NR | 540 | 26289 | NR | 670 | 22820 | NR | 800 | 1124 | NR | 930 | 877 | NR |
| 415 | 826 | NR | 545 | 26945 | NR | 675 | 20678 | NR | 805 | 1116 | NR | 935 | 923 | NR |
| 420 | 1336 | NR | 550 | 27713 | NR | 680 | 18748 | NR | 810 | 1105 | NR | 940 | 1001 | NR |
| 425 | 2406 | NR | 555 | 28230 | NR | 685 | 16904 | NR | 815 | 1073 | NR | 945 | 604 | NR |
| 430 | 4355 | NR | 560 | 28678 | NR | 690 | 15203 | NR | 820 | 977 | NR | 950 | 424 | NR |
| 435 | 7911 | NR | 565 | 29242 | NR | 695 | 13356 | NR | 825 | 882 | NR | 955 | 550 | NR |
| 440 | 13821 | NR | 570 | 29806 | NR | 700 | 11948 | NR | 830 | 875 | NR | 960 | 709 | NR |
| 445 | 19836 | NR | 575 | 30322 | NR | 705 | 10482 | NR | 835 | 944 | NR | 965 | 755 | NR |
| 450 | 19902 | NR | 580 | 31125 | NR | 710 | 9351 | NR | 840 | 956 | NR | 970 | 426 | NR |
| 455 | 15697 | NR | 585 | 31838 | NR | 715 | 8217 | NR | 845 | 875 | NR | 975 | 556 | NR |
| 460 | 13589 | NR | 590 | 32845 | NR | 720 | 7313 | NR | 850 | 801 | NR | 980 | 1040 | NR |
| 465 | 11857 | NR | 595 | 33487 | NR | 725 | 6460 | NR | 855 | 890 | NR | 985 | 833 | NR |
| 470 | 10336 | NR | 600 | 34359 | NR | 730 | 5680 | NR | 860 | 706 | NR | 990 | 964 | NR |
| 475 | 10504 | NR | 605 | 35281 | NR | 735 | 4904 | NR | 865 | 902 | NR | 995 | 953 | NR |
| 480 | 11526 | NR | 610 | 35679 | NR | 740 | 4372 | NR | 870 | 879 | NR | 1000 | 950 | NR |
| 485 | 12831 | NR | 615 | 36113 | NR | 745 | 3858 | NR | 875 | 769 | NR | | | |

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Peachtree City, GA 30269

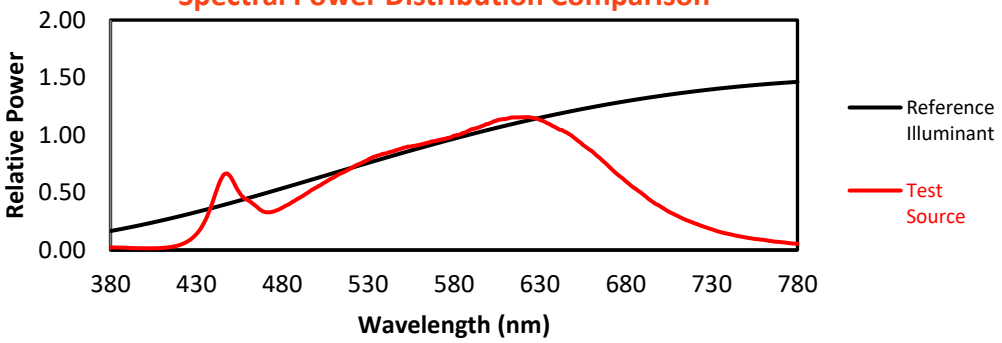
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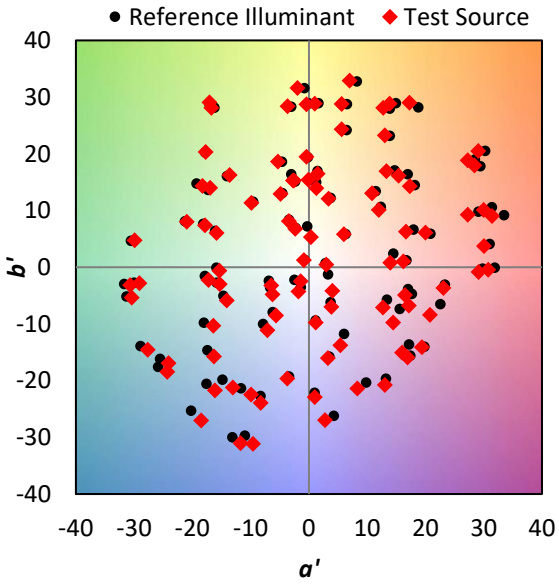
## Summary

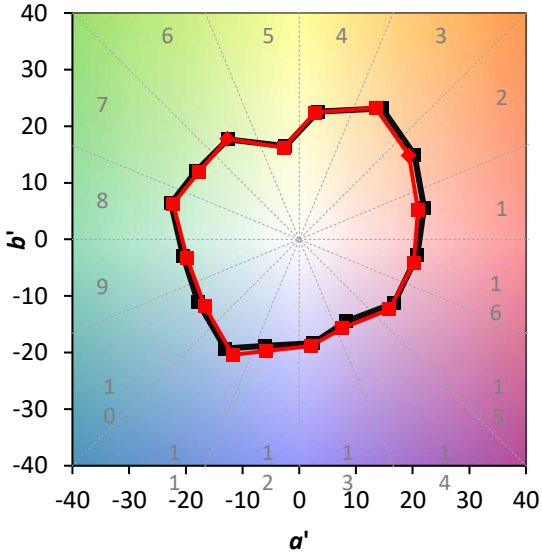
$R_f$ = 92.6
$R_g$ = 98.3
CIE $R_a$ = 92.0
$R_9$ = 59.7

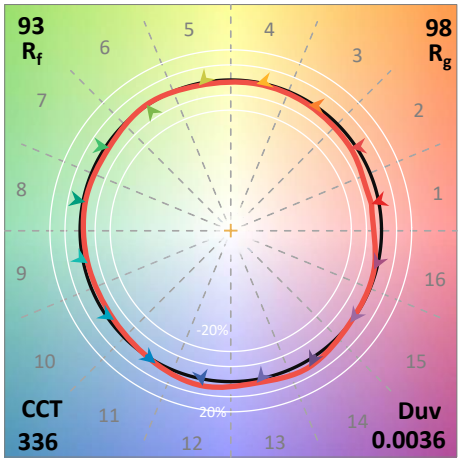
## Spectral Power Distribution Comparison

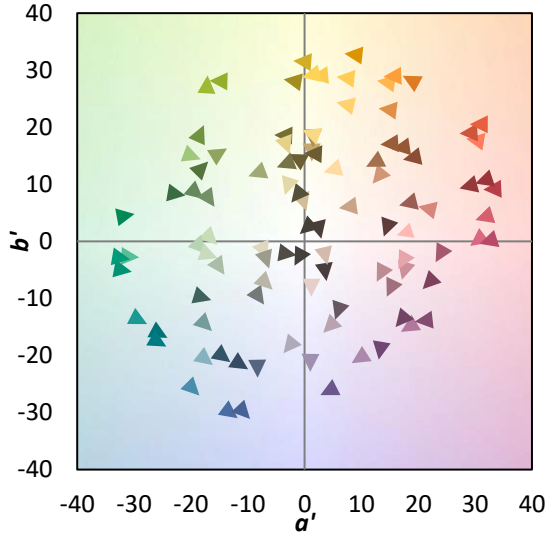



## Color Vector Graphics



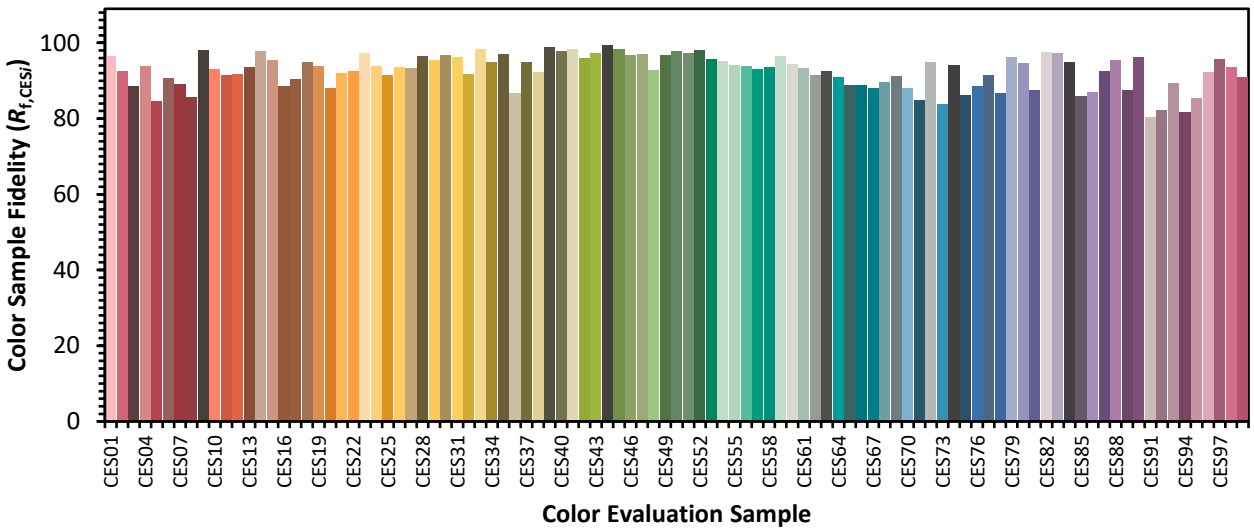
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1121 Highway 74 South
Peachtree City, GA 30269

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## TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 94 | CES51 = 97 | CES76 = 88 |
| CES02 = 62 | CES27 = 93 | CES52 = 98 | CES77 = 91 |
| CES03 = 31 | CES28 = 96 | CES53 = 96 | CES78 = 87 |
| CES04 = 70 | CES29 = 96 | CES54 = 95 | CES79 = 96 |
| CES05 = 50 | CES30 = 97 | CES55 = 94 | CES80 = 95 |
| CES06 = 51 | CES31 = 96 | CES56 = 94 | CES81 = 88 |
| CES07 = 42 | CES32 = 92 | CES57 = 93 | CES82 = 98 |
| CES08 = 41 | CES33 = 98 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 95 | CES59 = 96 | CES84 = 95 |
| CES10 = 75 | CES35 = 97 | CES60 = 94 | CES85 = 86 |
| CES11 = 58 | CES36 = 87 | CES61 = 93 | CES86 = 87 |
| CES12 = 64 | CES37 = 95 | CES62 = 91 | CES87 = 92 |
| CES13 = 43 | CES38 = 92 | CES63 = 93 | CES88 = 96 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 98 | CES66 = 89 | CES91 = 80 |
| CES17 = 49 | CES42 = 96 | CES67 = 88 | CES92 = 82 |
| CES18 = 56 | CES43 = 97 | CES68 = 90 | CES93 = 89 |
| CES19 = 71 | CES44 = 99 | CES69 = 91 | CES94 = 82 |
| CES20 = 66 | CES45 = 98 | CES70 = 88 | CES95 = 85 |
| CES21 = 86 | CES46 = 97 | CES71 = 85 | CES96 = 92 |
| CES22 = 78 | CES47 = 97 | CES72 = 95 | CES97 = 96 |
| CES23 = 91 | CES48 = 93 | CES73 = 84 | CES98 = 94 |
| CES24 = 90 | CES49 = 97 | CES74 = 94 | CES99 = 91 |
| CES25 = 71 | CES50 = 98 | CES75 = 86 | |

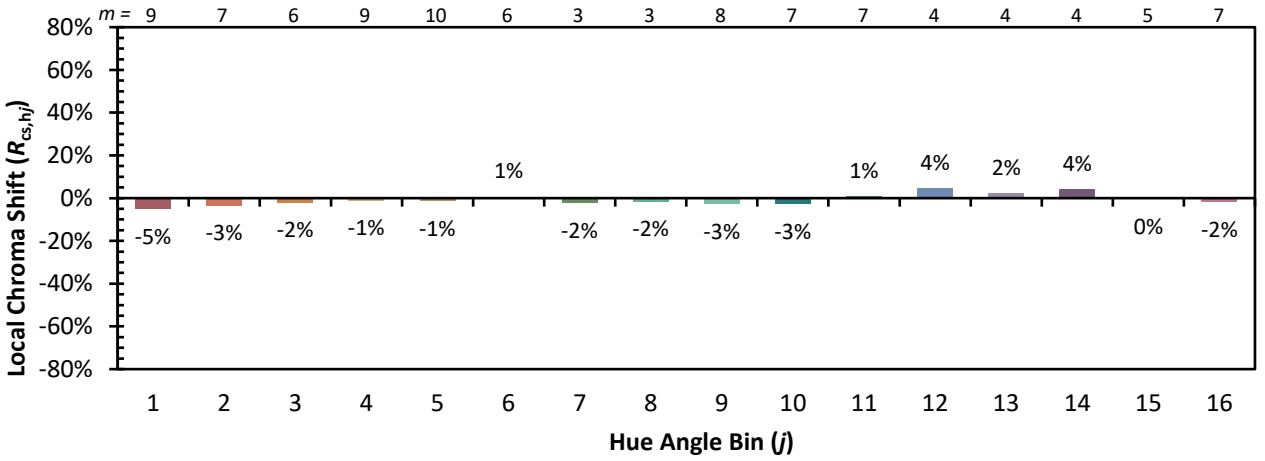


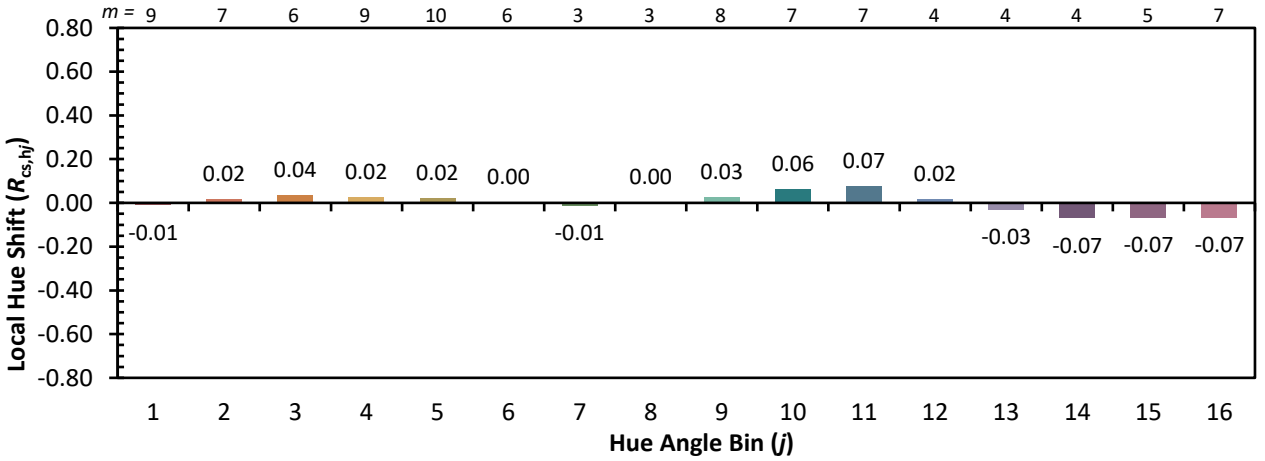
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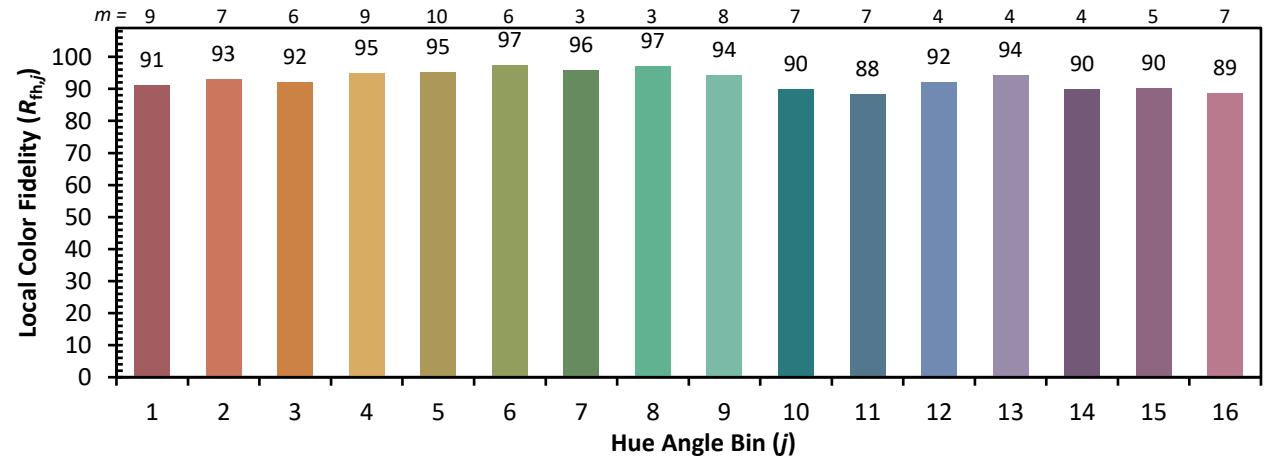
REPORT NUMBER: SP1-2106-271-3

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### Color Rendition by Hue-Angle Bin



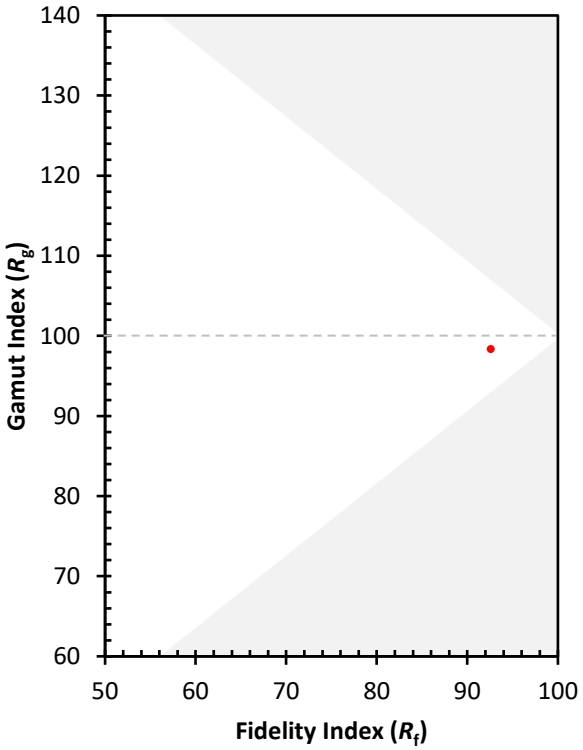



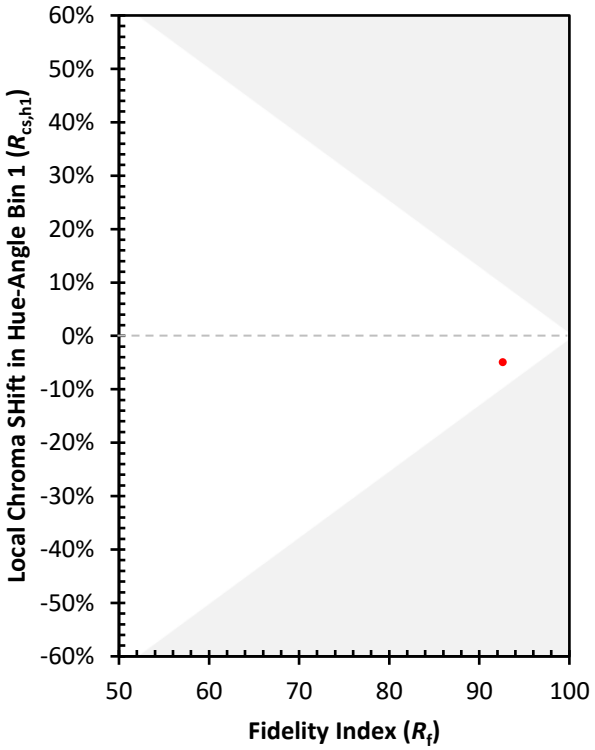
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### Measure Comparisons




(END OF REPORT)