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

Scaled data based on original data using

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

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P1359906

Luminaire Tested: **GSS-SB3D-740-U-T3**

Issue Date: 02/18/2026

Report Generated By 670245763

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-08 |
| Report Number: | P1359906 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3D-740-U-T3 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 219W 70CRI 4000K FIXTURE w/ TYPE III DISTRIBUTION OPTIC |
| Light Source: | (78) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 29557.6 lumens |
| Efficiency: | N/A |
| Efficacy: | 135.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G4 |

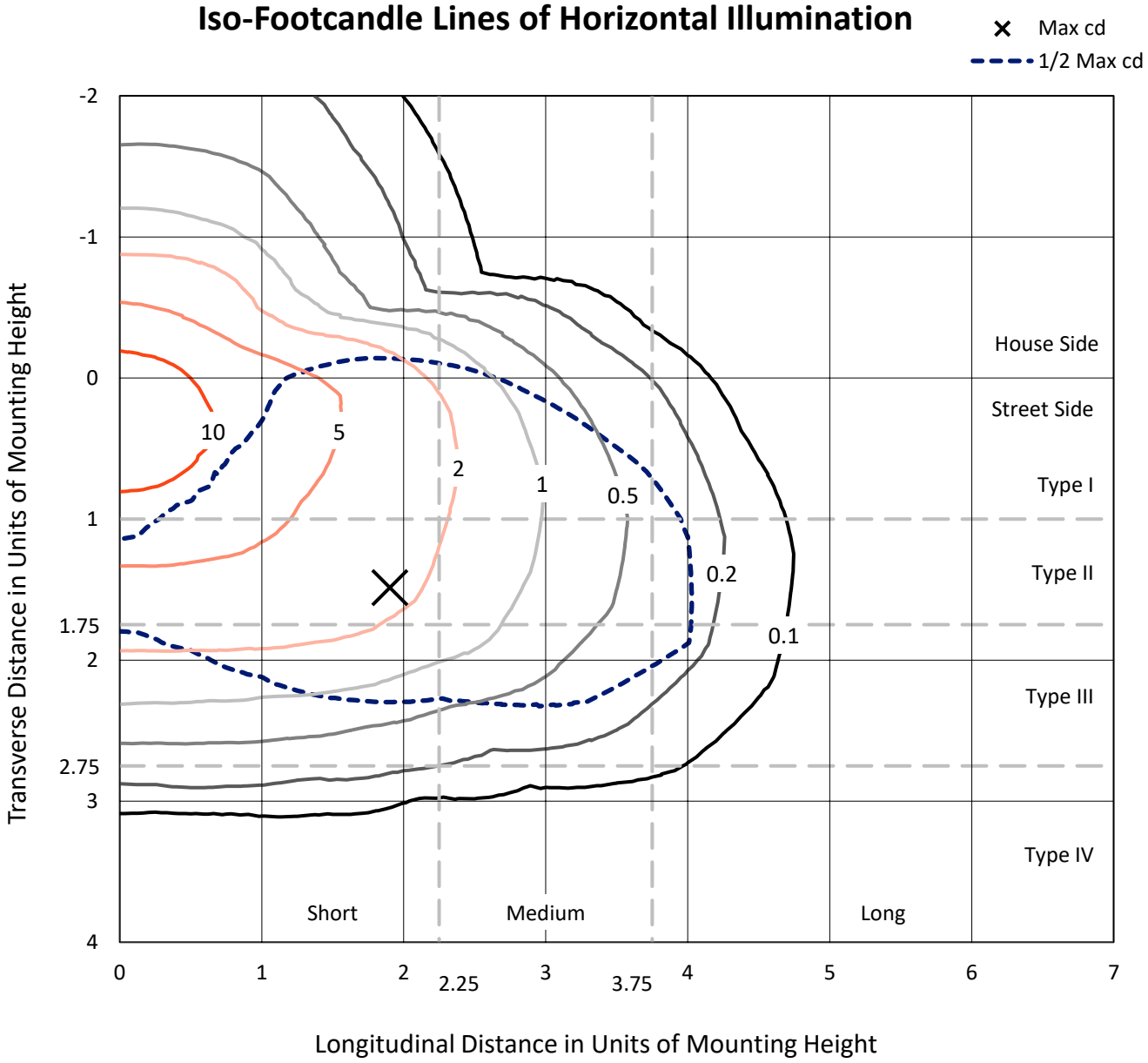
| | |
|---|---|
| Input Watts (W): | 219 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359906
CATALOG NUMBER: GSS-SB3D-740-U-T3

## Iso-Footcandle Lines of Horizontal Illumination



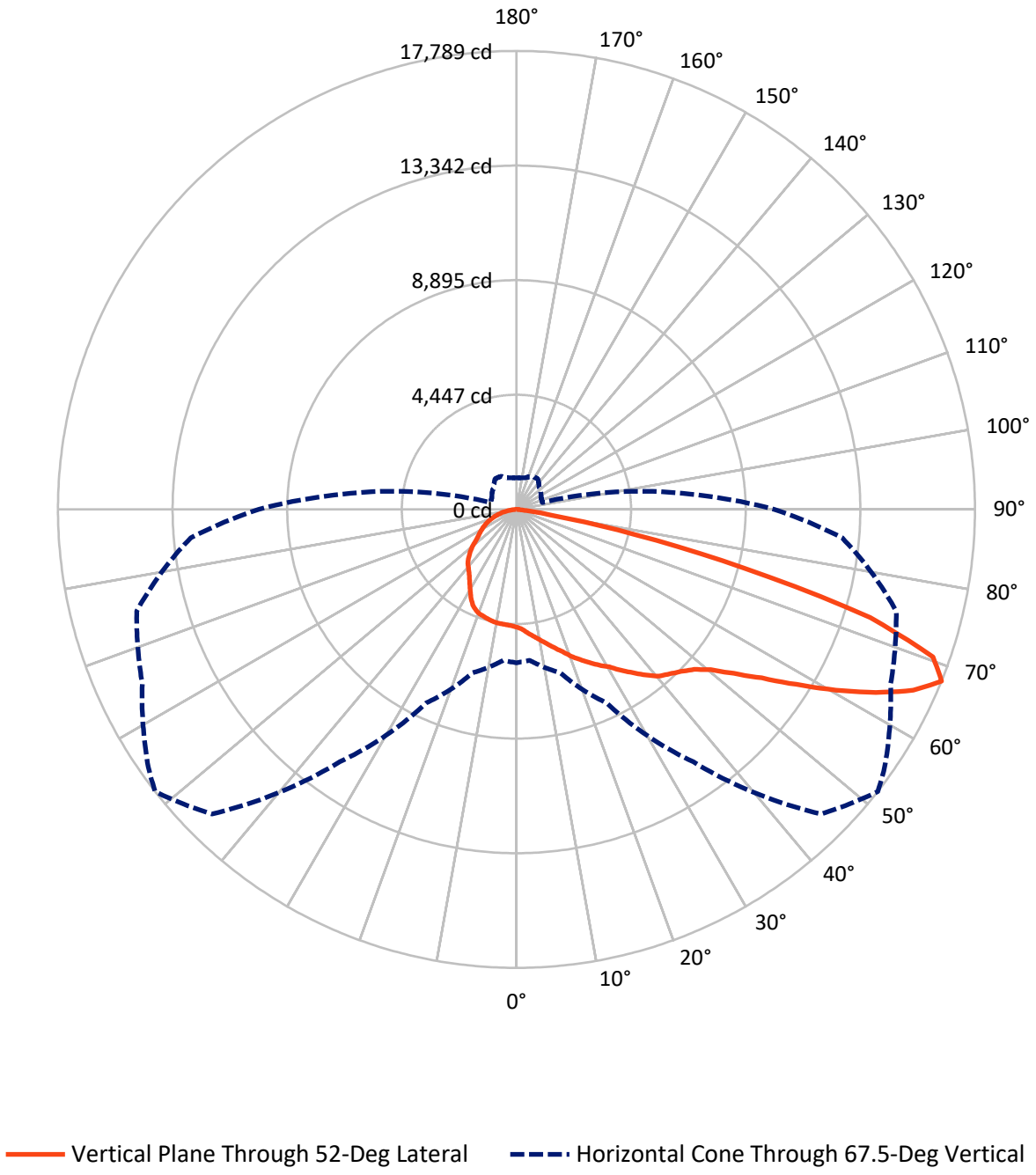

Based on 20 foot mounting height. Maximum calculated value = 13 fc
Type III - Short - N/A

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REPORT NUMBER: P1359906
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## Luminous Intensity Polar Plot



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Scaled Data Report

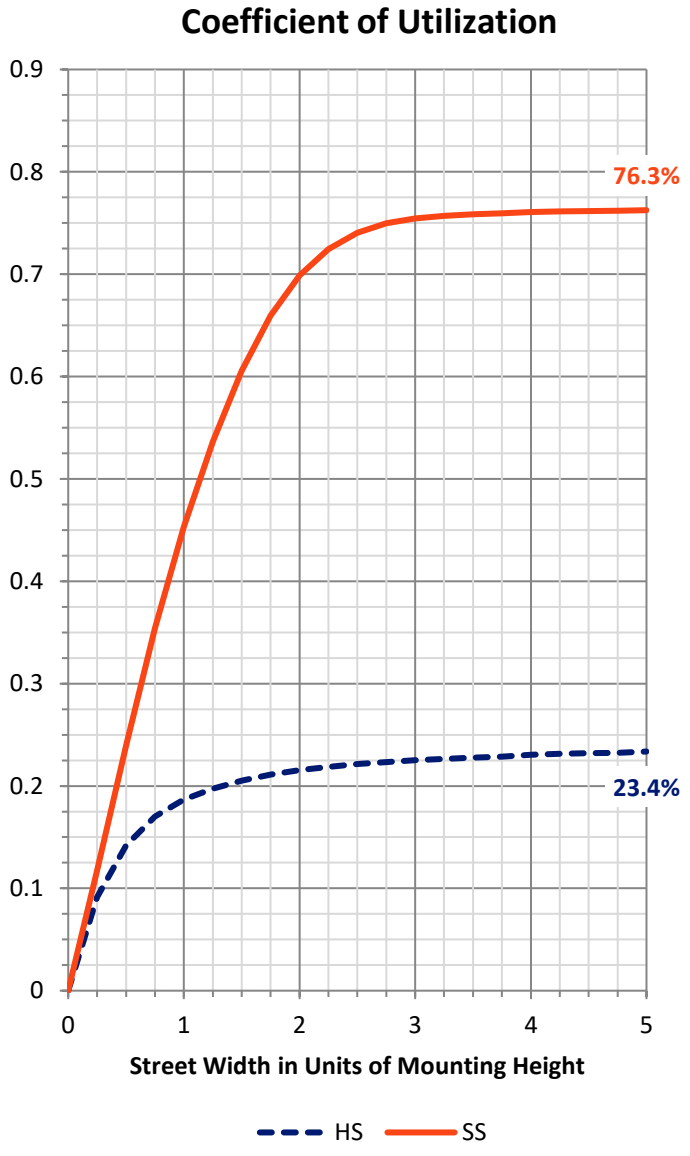
REPORT NUMBER: P1359906
CATALOG NUMBER: GSS-SB3D-740-U-T3

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 6992.8 | 0.0 | 6992.8 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| **Street Side** | Lumens | 22564.7 | 0.0 | 22564.7 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| **Total** | Lumens | 29557.6 | 0.0 | 29557.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 448.5 | 1.5 |
| 10°-20° | 1414.6 | 4.8 |
| 20°-30° | 2418.6 | 8.2 |
| 30°-40° | 3508.7 | 11.9 |
| 40°-50° | 4557.7 | 15.4 |
| 50°-60° | 6175.4 | 20.9 |
| 60°-70° | 7203.5 | 24.4 |
| 70°-80° | 3551.6 | 12.0 |
| 80°-90° | 278.8 | 0.9 |
| 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° | 29557.6 | 100.0 |
| 0°-180° | 29557.6 | 100.0 |



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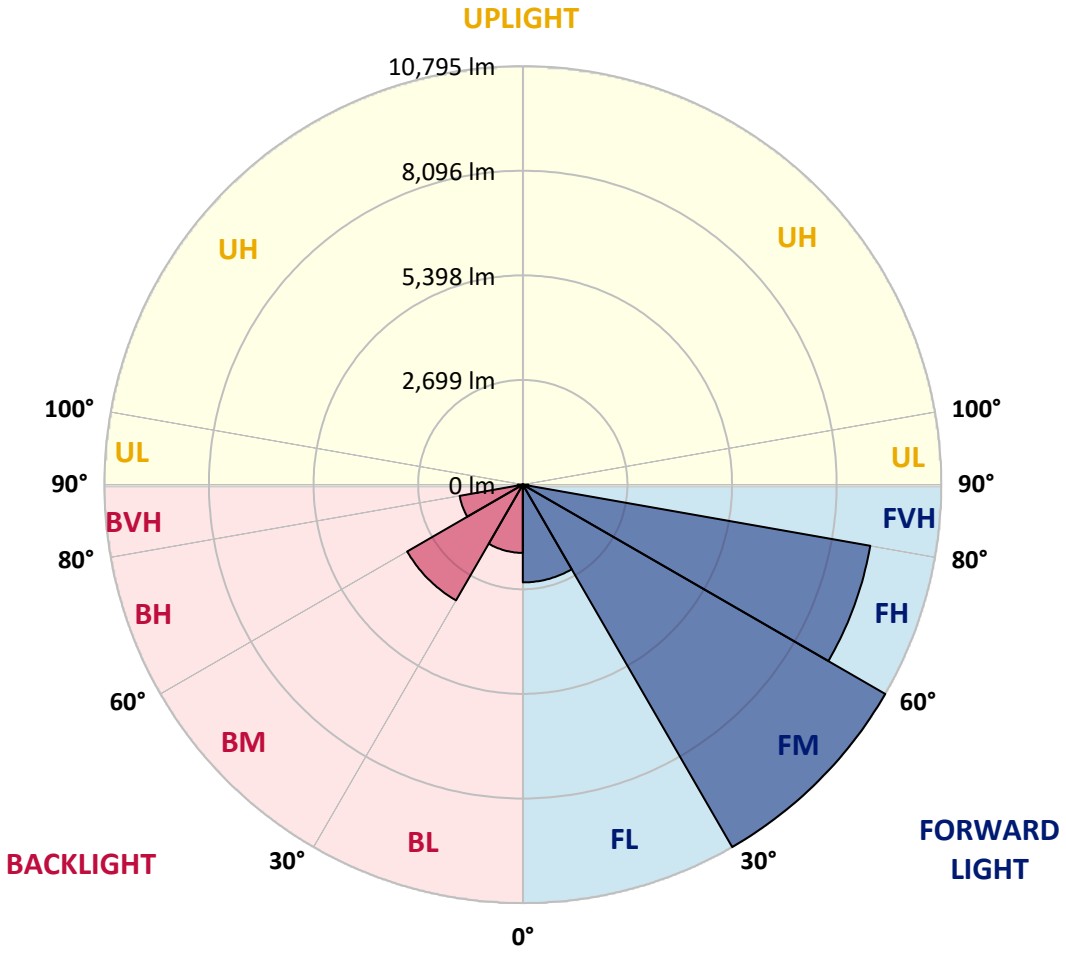
Scaled Data Report

REPORT NUMBER: P1359906
CATALOG NUMBER: GSS-SB3D-740-U-T3

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2521.5 | 8.5 | | | |
| FM | (30°-60°) | 10795.3 | 36.5 | | | |
| FH | (60°-80°) | 9101.5 | 30.8 | | | G4/12000 |
| FVH | (80°-90°) | 146.3 | 0.5 | | | G2/225 |
| BL | (0°-30°) | 1760.2 | 6.0 | B3/2500 | | |
| BM | (30°-60°) | 3446.5 | 11.7 | B3/5000 | | |
| BH | (60°-80°) | 1653.6 | 5.6 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 132.5 | 0.4 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G4**
Type III Short



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REPORT NUMBER: P1359906
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 52° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 |
| 2.5° | 4712.2 | 4705.7 | 4699.1 | 4672.8 | 4672.8 | 4679.3 | 4666.2 | 4672.8 | 4666.2 | 4633.3 | 4606.9 |
| 5° | 4975.5 | 4916.3 | 4903.1 | 4889.9 | 4903.1 | 4863.6 | 4830.7 | 4811.0 | 4738.6 | 4718.8 | 4639.9 |
| 7.5° | 5087.4 | 5094.0 | 5087.4 | 5061.1 | 5041.3 | 5041.3 | 4988.7 | 4962.3 | 4916.3 | 4837.3 | 4705.7 |
| 10° | 5245.3 | 5238.8 | 5219.0 | 5232.2 | 5271.7 | 5205.8 | 5166.4 | 5146.6 | 5067.6 | 4955.8 | 4830.7 |
| 12.5° | 5528.3 | 5482.3 | 5469.1 | 5449.4 | 5442.8 | 5403.3 | 5357.2 | 5363.8 | 5271.7 | 5100.5 | 4968.9 |
| 15° | 5771.8 | 5719.2 | 5778.4 | 5738.9 | 5686.3 | 5627.1 | 5581.0 | 5541.5 | 5436.2 | 5278.2 | 5113.7 |
| 17.5° | 6002.2 | 5975.9 | 6002.2 | 6002.2 | 5995.6 | 5896.9 | 5804.8 | 5771.8 | 5646.8 | 5469.1 | 5251.9 |
| 20° | 6179.9 | 6179.9 | 6226.0 | 6226.0 | 6206.2 | 6147.0 | 6087.8 | 6048.3 | 5870.6 | 5640.2 | 5390.1 |
| 22.5° | 6410.2 | 6304.9 | 6403.7 | 6410.2 | 6416.8 | 6370.7 | 6331.3 | 6278.6 | 6094.3 | 5817.9 | 5502.0 |
| 25° | 6627.4 | 6541.9 | 6601.1 | 6561.6 | 6587.9 | 6607.7 | 6587.9 | 6568.2 | 6364.2 | 6048.3 | 5666.5 |
| 27.5° | 6969.7 | 6884.1 | 6923.6 | 6831.4 | 6831.4 | 6811.7 | 6844.6 | 6870.9 | 6647.2 | 6272.0 | 5811.3 |
| 30° | 7483.0 | 7384.3 | 7351.4 | 7239.5 | 7127.6 | 7081.5 | 7094.7 | 7140.8 | 6989.4 | 6489.2 | 5956.1 |
| 32.5° | 7923.9 | 7871.3 | 7845.0 | 7752.8 | 7614.6 | 7404.0 | 7436.9 | 7436.9 | 7279.0 | 6647.2 | 6028.5 |
| 35° | 8285.9 | 8272.8 | 8279.3 | 8154.3 | 8128.0 | 7785.7 | 7785.7 | 7772.6 | 7483.0 | 6857.8 | 6219.4 |
| 37.5° | 8522.9 | 8450.5 | 8483.4 | 8529.4 | 8443.9 | 8213.5 | 8154.3 | 8121.4 | 7766.0 | 7081.5 | 6469.5 |
| 40° | 8470.2 | 8417.5 | 8542.6 | 8628.2 | 8562.3 | 8516.3 | 8509.7 | 8443.9 | 8049.0 | 7364.5 | 6838.0 |
| 42.5° | 8463.6 | 8417.5 | 8568.9 | 8661.1 | 8628.2 | 8700.5 | 8720.3 | 8766.4 | 8411.0 | 7812.1 | 7364.5 |
| 45° | 8489.9 | 8470.2 | 8720.3 | 8838.8 | 8759.8 | 8858.5 | 8970.4 | 9009.9 | 8871.7 | 8358.3 | 8022.7 |
| 47.5° | 8707.1 | 8680.8 | 8970.4 | 9108.6 | 9174.4 | 9345.5 | 9273.1 | 9338.9 | 9417.9 | 9134.9 | 8779.5 |
| 50° | 8917.7 | 8944.1 | 9332.4 | 9464.0 | 9786.5 | 10023.4 | 9773.3 | 9878.6 | 10141.9 | 10036.6 | 9793.1 |
| 52.5° | 9253.4 | 9260.0 | 9641.7 | 9970.7 | 10589.4 | 10813.2 | 10569.7 | 10582.8 | 10938.2 | 11135.6 | 10813.2 |
| 55° | 9338.9 | 9411.3 | 9924.7 | 10609.1 | 11497.6 | 11655.6 | 11543.7 | 11497.6 | 11918.8 | 12188.7 | 11839.9 |
| 57.5° | 9332.4 | 9292.9 | 9931.3 | 10879.0 | 12188.7 | 12748.1 | 12813.9 | 12688.8 | 13044.2 | 13156.1 | 12965.3 |
| 60° | 9088.8 | 9167.8 | 9865.4 | 11069.8 | 12833.6 | 14077.5 | 14235.5 | 14070.9 | 14242.0 | 14275.0 | 13741.9 |
| 62.5° | 8345.2 | 8371.5 | 9325.8 | 11076.4 | 13340.4 | 15183.2 | 15650.5 | 15466.2 | 15308.2 | 14900.2 | 13913.0 |
| 65° | 7134.2 | 7088.1 | 8002.9 | 10161.6 | 13432.5 | 16249.4 | 16920.7 | 16920.7 | 15894.0 | 15110.8 | 13551.0 |
| 67.5° | 5949.5 | 5877.1 | 6561.6 | 8285.9 | 11958.3 | 16716.6 | 17789.4 | 17440.6 | 16019.0 | 15255.6 | 12688.8 |
| 70° | 2869.5 | 3073.5 | 4119.9 | 5864.0 | 9141.5 | 14117.0 | 17144.4 | 17276.0 | 15920.3 | 14801.5 | 11017.2 |
| 72.5° | 1026.7 | 980.6 | 1480.8 | 2514.1 | 5061.1 | 9213.9 | 14353.9 | 15512.2 | 15229.2 | 13498.4 | 9023.0 |
| 75° | 473.9 | 480.4 | 618.6 | 875.3 | 1638.8 | 4495.1 | 9128.3 | 10681.5 | 13044.2 | 11221.2 | 6752.5 |
| 77.5° | 368.6 | 368.6 | 421.2 | 500.2 | 677.9 | 1454.5 | 4666.2 | 5995.6 | 8430.7 | 6949.9 | 3218.3 |
| 80° | 269.8 | 276.4 | 283.0 | 329.1 | 414.6 | 546.3 | 1388.7 | 2079.7 | 3073.5 | 2231.1 | 1046.4 |
| 82.5° | 190.9 | 190.9 | 184.3 | 184.3 | 223.8 | 243.5 | 375.1 | 526.5 | 901.6 | 612.1 | 276.4 |
| 85° | 79.0 | 92.1 | 79.0 | 79.0 | 79.0 | 98.7 | 118.5 | 138.2 | 197.4 | 171.1 | 118.5 |
| 87.5° | 13.2 | 13.2 | 13.2 | 19.7 | 26.3 | 32.9 | 39.5 | 46.1 | 52.7 | 52.7 | 52.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1359906
CATALOG NUMBER: GSS-SB3D-740-U-T3

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 | 4574.0 |
| 2.5° | 4593.8 | 4593.8 | 4574.0 | 4541.1 | 4528.0 | 4508.2 | 4501.6 | 4495.1 | 4481.9 | 4508.2 | 4495.1 |
| 5° | 4620.1 | 4593.8 | 4567.5 | 4514.8 | 4508.2 | 4475.3 | 4442.4 | 4435.8 | 4416.1 | 4435.8 | 4435.8 |
| 7.5° | 4679.3 | 4639.9 | 4580.6 | 4528.0 | 4481.9 | 4475.3 | 4416.1 | 4363.4 | 4363.4 | 4370.0 | 4363.4 |
| 10° | 4784.6 | 4738.6 | 4679.3 | 4580.6 | 4495.1 | 4416.1 | 4317.4 | 4251.6 | 4258.1 | 4258.1 | 4245.0 |
| 12.5° | 4922.9 | 4857.0 | 4751.7 | 4606.9 | 4475.3 | 4350.3 | 4231.8 | 4212.1 | 4205.5 | 4218.6 | 4179.2 |
| 15° | 5028.2 | 4968.9 | 4797.8 | 4633.3 | 4429.2 | 4304.2 | 4179.2 | 4133.1 | 4139.7 | 4126.5 | 4093.6 |
| 17.5° | 5159.8 | 5067.6 | 4857.0 | 4613.5 | 4376.6 | 4258.1 | 4113.3 | 4014.6 | 3962.0 | 3968.6 | 3962.0 |
| 20° | 5284.8 | 5153.2 | 4903.1 | 4613.5 | 4363.4 | 4152.8 | 3968.6 | 3836.9 | 3725.0 | 3705.3 | 3698.7 |
| 22.5° | 5377.0 | 5245.3 | 4955.8 | 4620.1 | 4284.5 | 4034.4 | 3764.5 | 3593.4 | 3428.9 | 3402.6 | 3396.0 |
| 25° | 5508.6 | 5337.5 | 5015.0 | 4574.0 | 4179.2 | 3836.9 | 3501.3 | 3310.4 | 3165.6 | 3139.3 | 3139.3 |
| 27.5° | 5620.5 | 5436.2 | 5094.0 | 4528.0 | 4008.0 | 3567.1 | 3251.2 | 3060.3 | 2968.2 | 2922.1 | 2922.1 |
| 30° | 5738.9 | 5534.9 | 5159.8 | 4389.8 | 3777.7 | 3297.3 | 3053.7 | 2928.7 | 2823.4 | 2777.3 | 2757.6 |
| 32.5° | 5870.6 | 5699.5 | 5172.9 | 4251.6 | 3547.3 | 3119.6 | 2915.5 | 2810.2 | 2698.4 | 2632.5 | 2626.0 |
| 35° | 6035.1 | 5910.1 | 5126.9 | 4047.5 | 3317.0 | 2981.4 | 2783.9 | 2665.4 | 2553.6 | 2487.8 | 2500.9 |
| 37.5° | 6298.4 | 6153.6 | 4988.7 | 3758.0 | 3126.1 | 2895.8 | 2678.6 | 2507.5 | 2375.9 | 2270.6 | 2277.1 |
| 40° | 6686.7 | 6449.7 | 4784.6 | 3409.1 | 2987.9 | 2797.1 | 2553.6 | 2356.1 | 2165.3 | 2007.3 | 2007.3 |
| 42.5° | 7127.6 | 6713.0 | 4534.6 | 3086.7 | 2882.6 | 2672.0 | 2421.9 | 2171.8 | 1902.0 | 1737.5 | 1730.9 |
| 45° | 7621.2 | 6943.3 | 4245.0 | 2823.4 | 2711.5 | 2520.7 | 2250.8 | 1895.4 | 1717.7 | 1632.2 | 1625.6 |
| 47.5° | 8279.3 | 7193.4 | 3902.7 | 2593.1 | 2514.1 | 2369.3 | 1994.1 | 1737.5 | 1632.2 | 1566.4 | 1559.8 |
| 50° | 8898.0 | 7463.3 | 3619.7 | 2369.3 | 2303.5 | 2191.6 | 1816.5 | 1671.7 | 1586.1 | 1533.5 | 1520.3 |
| 52.5° | 9615.4 | 7739.7 | 3303.8 | 2152.1 | 2066.5 | 1915.2 | 1777.0 | 1638.8 | 1559.8 | 1520.3 | 1507.1 |
| 55° | 10326.1 | 8128.0 | 2955.0 | 1954.7 | 1855.9 | 1790.1 | 1737.5 | 1619.0 | 1540.0 | 1513.7 | 1494.0 |
| 57.5° | 11135.6 | 8503.1 | 2527.2 | 1744.1 | 1704.6 | 1698.0 | 1730.9 | 1612.4 | 1546.6 | 1500.5 | 1474.2 |
| 60° | 11556.9 | 8667.6 | 2079.7 | 1553.2 | 1559.8 | 1599.3 | 1704.6 | 1612.4 | 1507.1 | 1428.2 | 1395.2 |
| 62.5° | 11412.1 | 8332.0 | 1645.3 | 1362.3 | 1421.6 | 1494.0 | 1658.5 | 1553.2 | 1421.6 | 1362.3 | 1322.9 |
| 65° | 10832.9 | 7759.4 | 1283.4 | 1197.8 | 1296.5 | 1362.3 | 1546.6 | 1467.6 | 1336.0 | 1276.8 | 1270.2 |
| 67.5° | *9997.1* | *6765.6* | *1039.9* | *1053.0* | *1151.7* | *1237.3* | *1447.9* | *1415.0* | *1263.6* | *1224.1* | *1224.1* |
| 70° | 8404.4 | 5436.2 | 855.6 | 921.4 | 1006.9 | 1099.1 | 1375.5 | 1329.4 | 1171.5 | 1151.7 | 1151.7 |
| 72.5° | 6568.2 | 3836.9 | 730.5 | 809.5 | 835.8 | 967.5 | 1276.8 | 1230.7 | 1138.6 | 1184.6 | 1191.2 |
| 75° | 4633.3 | 2336.4 | 625.2 | 684.5 | 710.8 | 796.3 | 1184.6 | 1204.4 | 1118.8 | 1270.2 | 1296.5 |
| 77.5° | 2106.0 | 1026.7 | 487.0 | 539.7 | 572.6 | 677.9 | 1020.1 | 1118.8 | 967.5 | 967.5 | 914.8 |
| 80° | 737.1 | 434.4 | 388.3 | 388.3 | 414.6 | 526.5 | 849.0 | 921.4 | 776.6 | 684.5 | 658.1 |
| 82.5° | 269.8 | 236.9 | 289.6 | 289.6 | 263.3 | 322.5 | 566.0 | 612.1 | 559.4 | 487.0 | 480.4 |
| 85° | 105.3 | 111.9 | 177.7 | 177.7 | 131.6 | 158.0 | 315.9 | 329.1 | 315.9 | 276.4 | 276.4 |
| 87.5° | 46.1 | 46.1 | 52.7 | 52.7 | 46.1 | 39.5 | 59.2 | 59.2 | 39.5 | 26.3 | 13.2 |
| 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-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

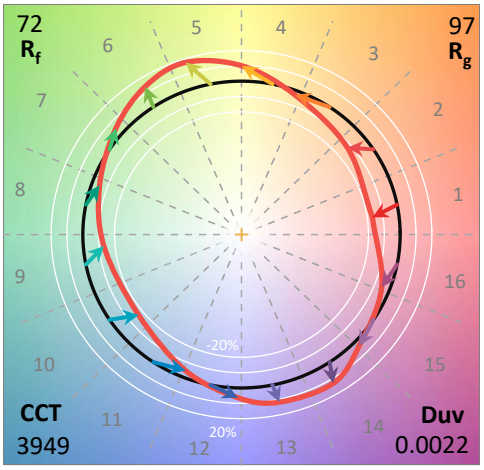
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

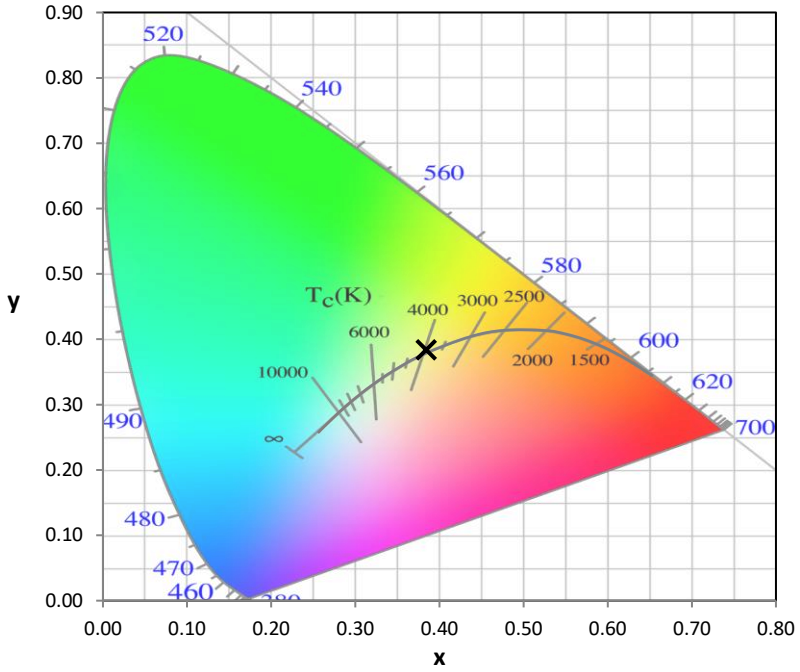
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

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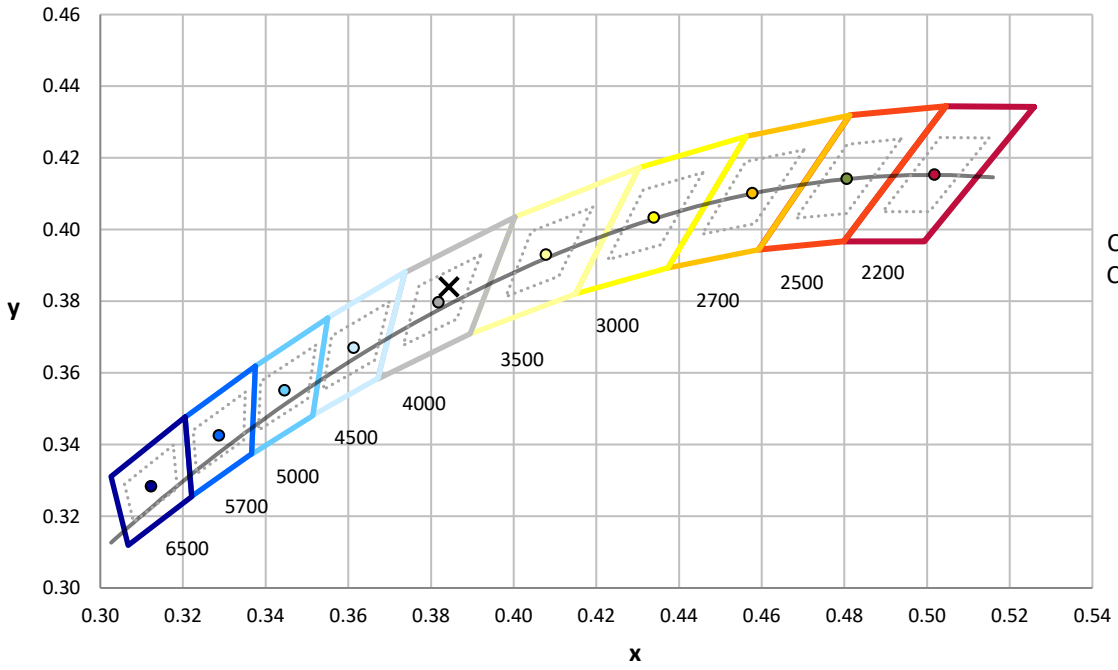
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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## CIE 1931 Chromaticity Diagram




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

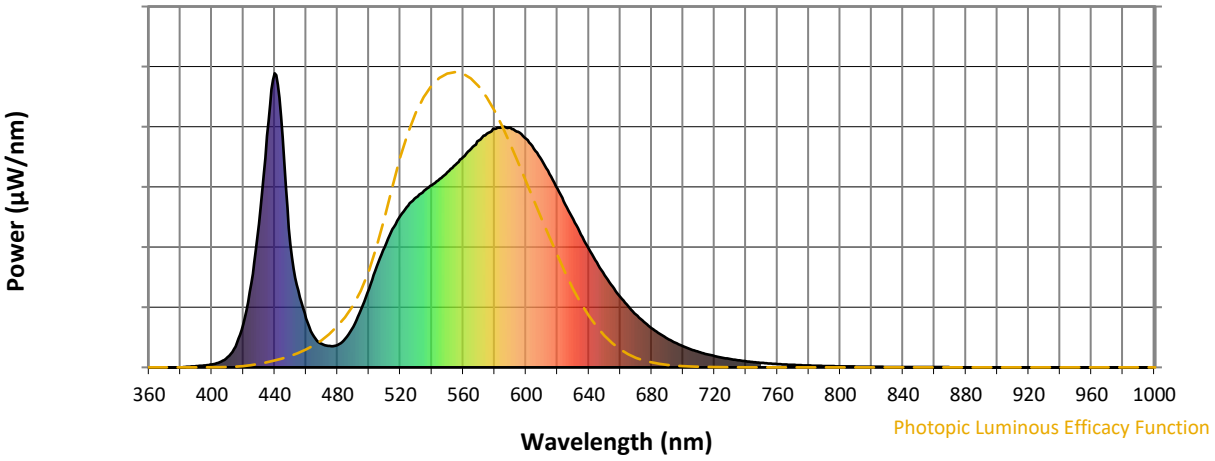



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

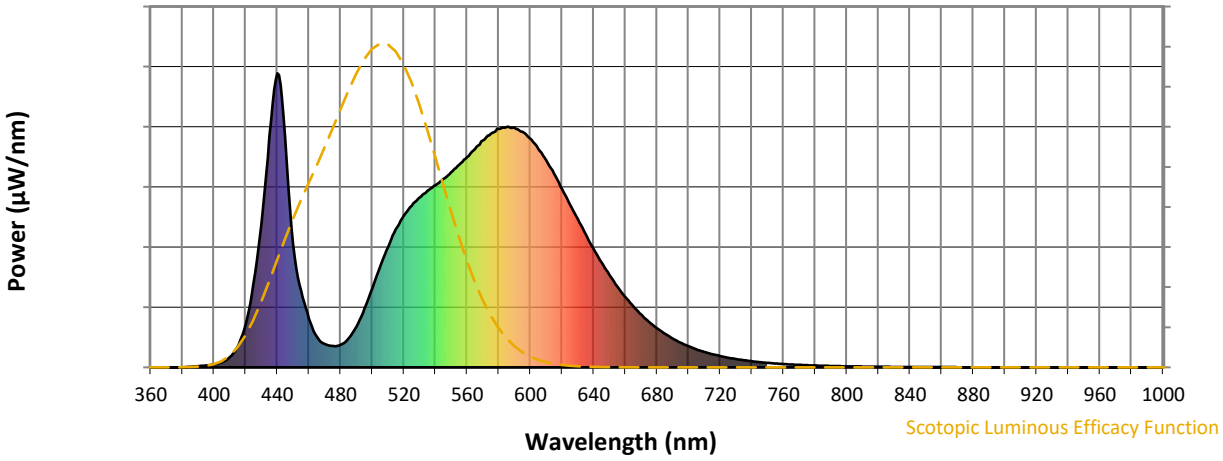



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-1

## Scotopic Flux vs. Wavelength

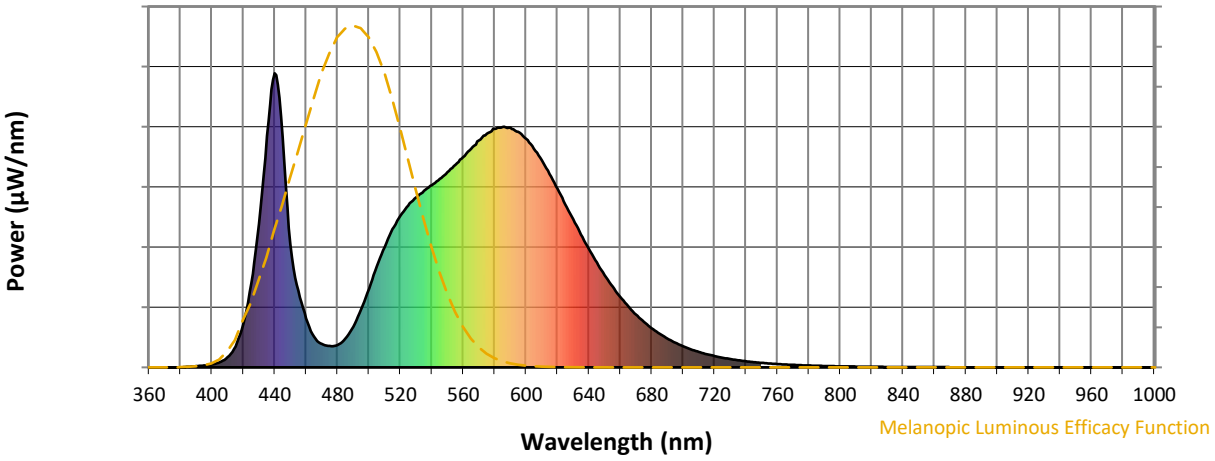



**Scotopic Lumens: NR** **S/P: 1.47**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

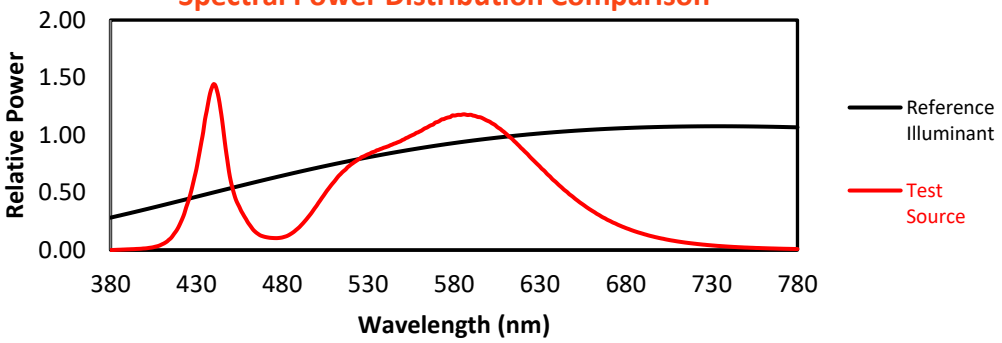
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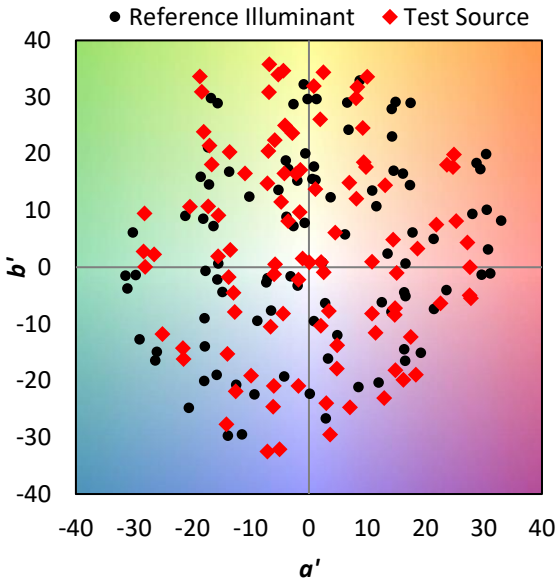
## Summary

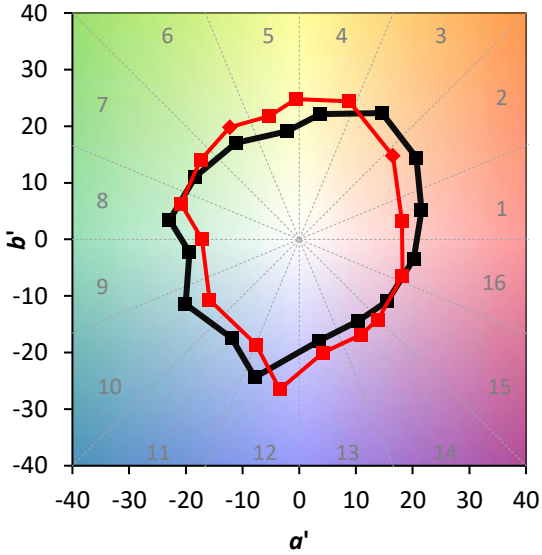
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

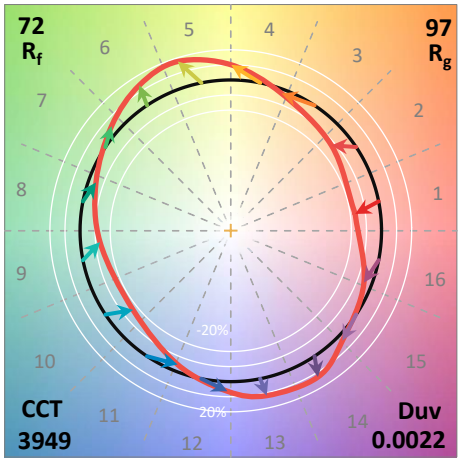
## Spectral Power Distribution Comparison

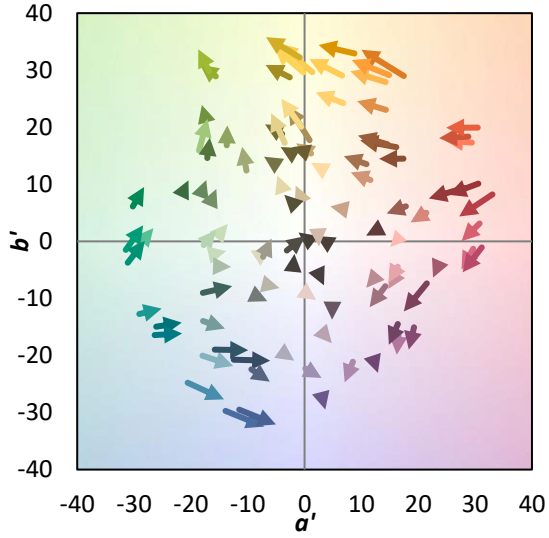



## Color Vector Graphics



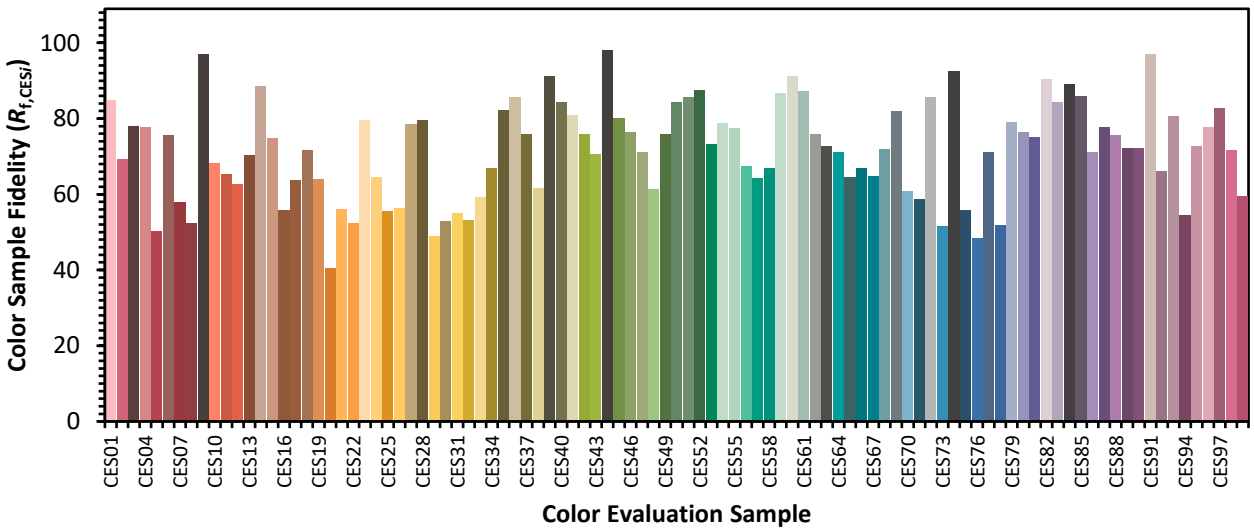



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**Individual Sample Fidelity Index ($R_{f,i}$)**

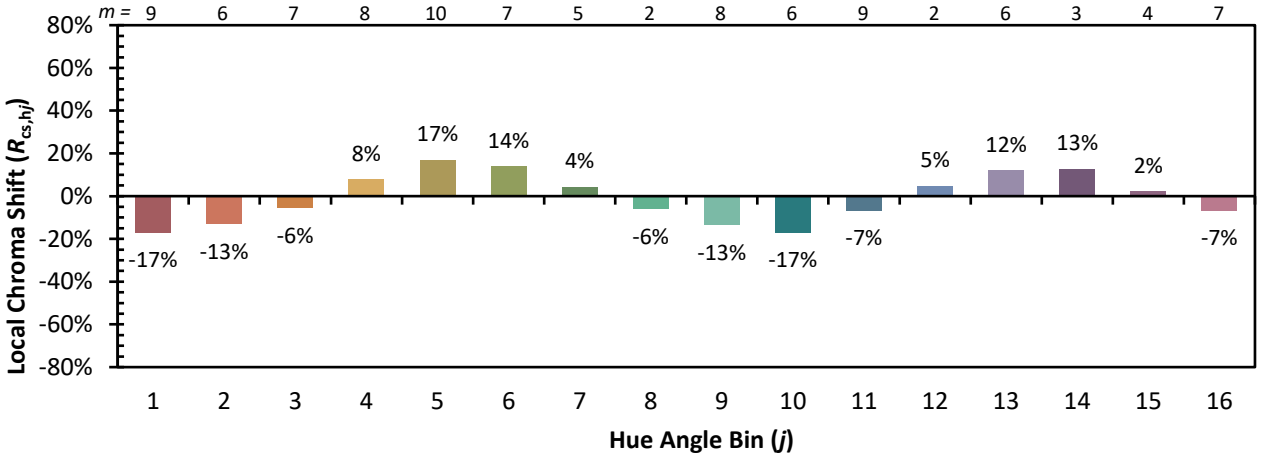
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 50 | CES31 = 55 | CES56 = 67 | CES81 = 75 |
| CES07 = 40 | CES32 = 53 | CES57 = 64 | CES82 = 90 |
| CES08 = 39 | CES33 = 59 | CES58 = 67 | CES83 = 84 |
| CES09 = 29 | CES34 = 67 | CES59 = 87 | CES84 = 89 |
| CES10 = 74 | CES35 = 82 | CES60 = 91 | CES85 = 86 |
| CES11 = 57 | CES36 = 86 | CES61 = 87 | CES86 = 71 |
| CES12 = 63 | CES37 = 76 | CES62 = 76 | CES87 = 78 |
| CES13 = 42 | CES38 = 62 | CES63 = 73 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 71 | CES89 = 72 |
| CES15 = 71 | CES40 = 84 | CES65 = 64 | CES90 = 72 |
| CES16 = 46 | CES41 = 81 | CES66 = 67 | CES91 = 97 |
| CES17 = 49 | CES42 = 76 | CES67 = 65 | CES92 = 66 |
| CES18 = 56 | CES43 = 71 | CES68 = 72 | CES93 = 81 |
| CES19 = 72 | CES44 = 98 | CES69 = 82 | CES94 = 55 |
| CES20 = 65 | CES45 = 80 | CES70 = 61 | CES95 = 73 |
| CES21 = 86 | CES46 = 76 | CES71 = 59 | CES96 = 78 |
| CES22 = 78 | CES47 = 71 | CES72 = 86 | CES97 = 83 |
| CES23 = 92 | CES48 = 61 | CES73 = 52 | CES98 = 72 |
| CES24 = 91 | CES49 = 76 | CES74 = 93 | CES99 = 60 |
| CES25 = 72 | CES50 = 84 | CES75 = 56 | |

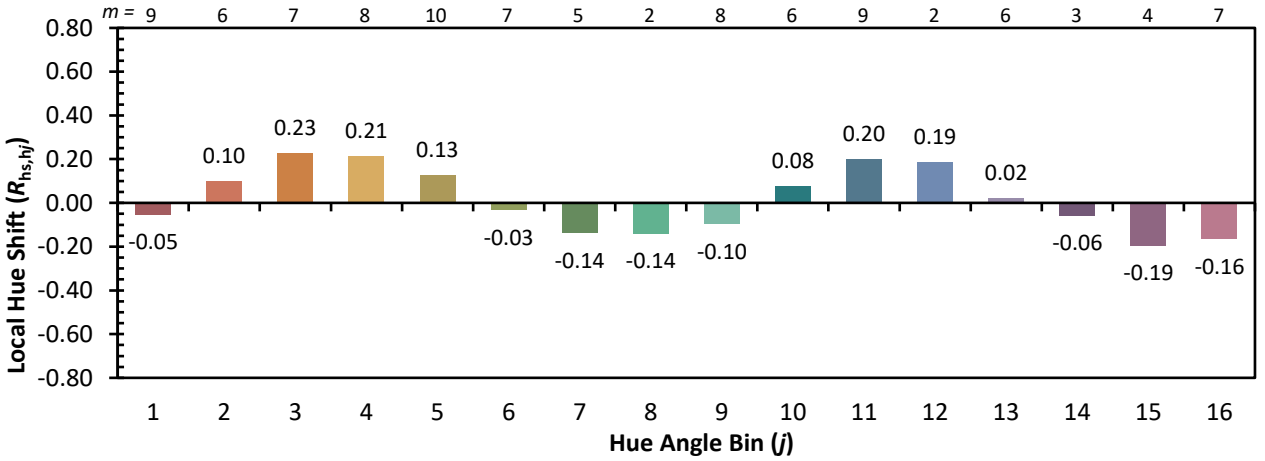


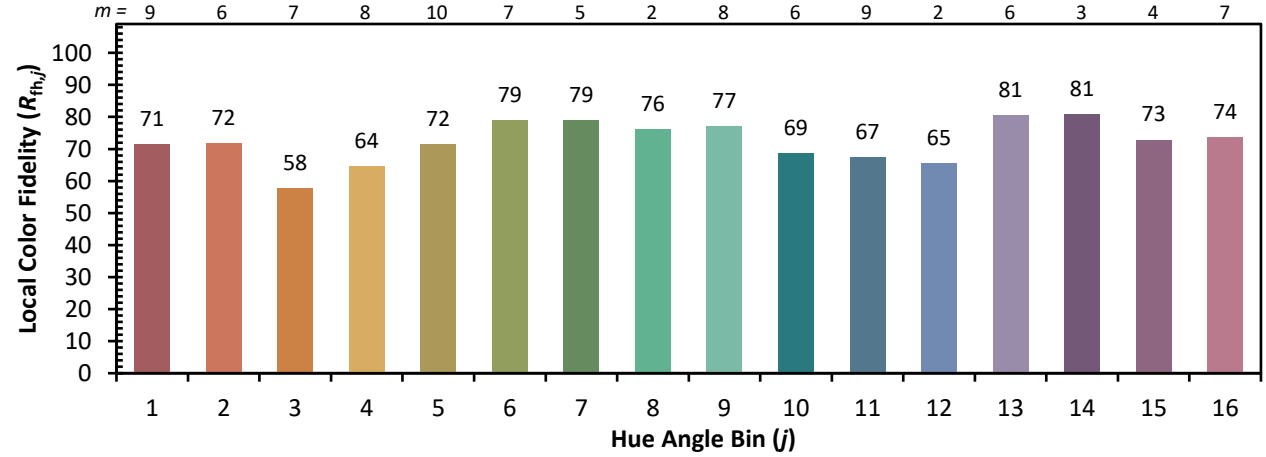
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## Color Rendition by Hue-Angle Bin



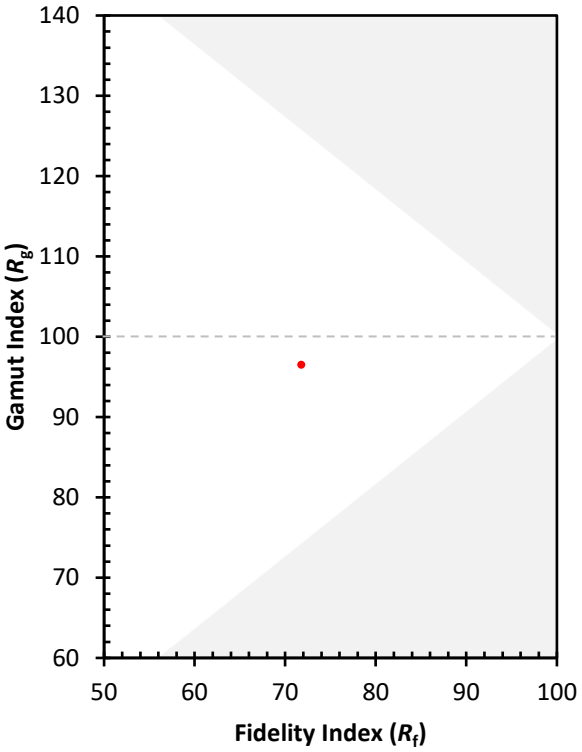



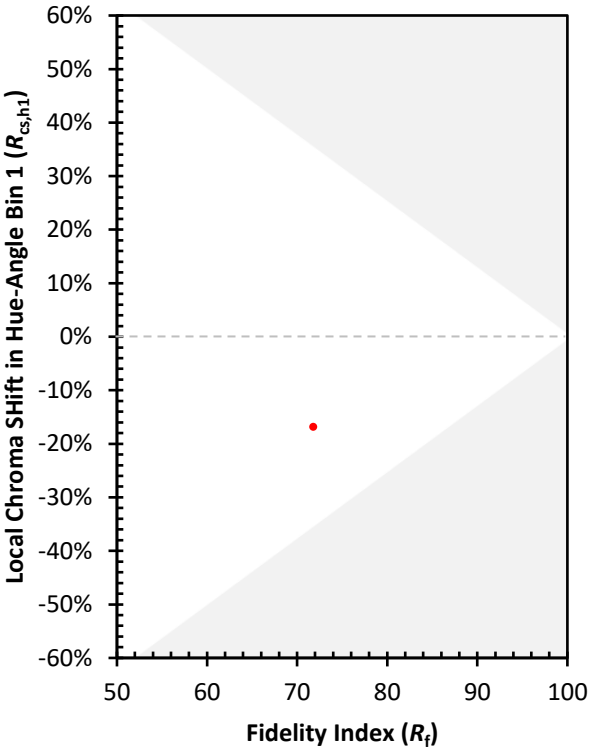



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## Measure Comparisons




(END OF REPORT)