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: P1366434

Luminaire Tested: **GSS-SB3D-740-U-T3R**

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: | P1366434 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3D-740-U-T3R |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 219W 70CRI 4000K FIXTURE w/ TYPE III ROADWAY DISTRIBUTION OPTIC |
| Light Source: | (78) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 30115 lumens |
| Efficiency: | N/A |
| Efficacy: | 137.5 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type III - Medium |
| BUG Rating: | B3 - U0 - G4 |

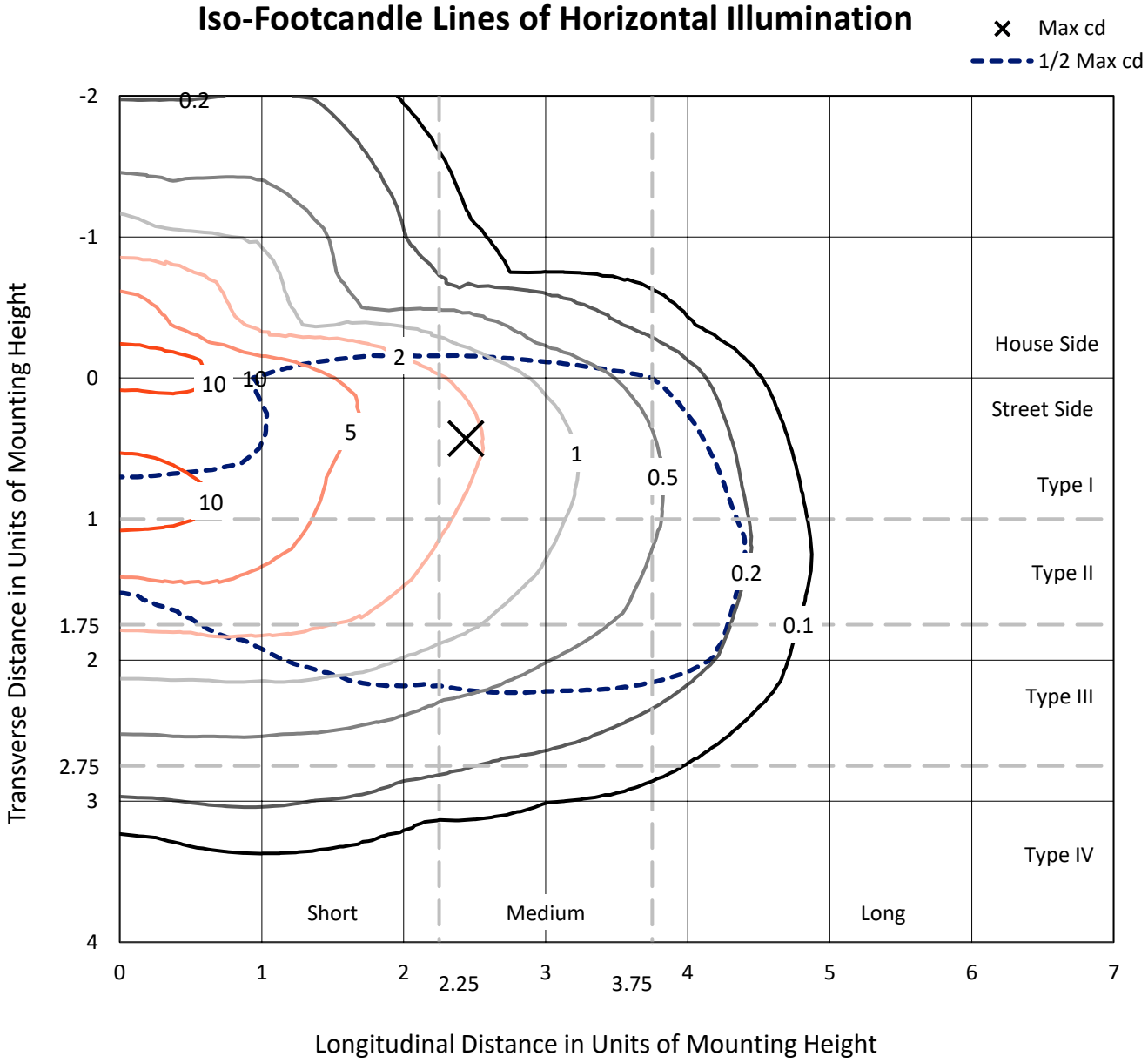
| | |
|---|---|
| Input Watts (W): | 219 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature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

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REPORT NUMBER: P1366434
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## Iso-Footcandle Lines of Horizontal Illumination



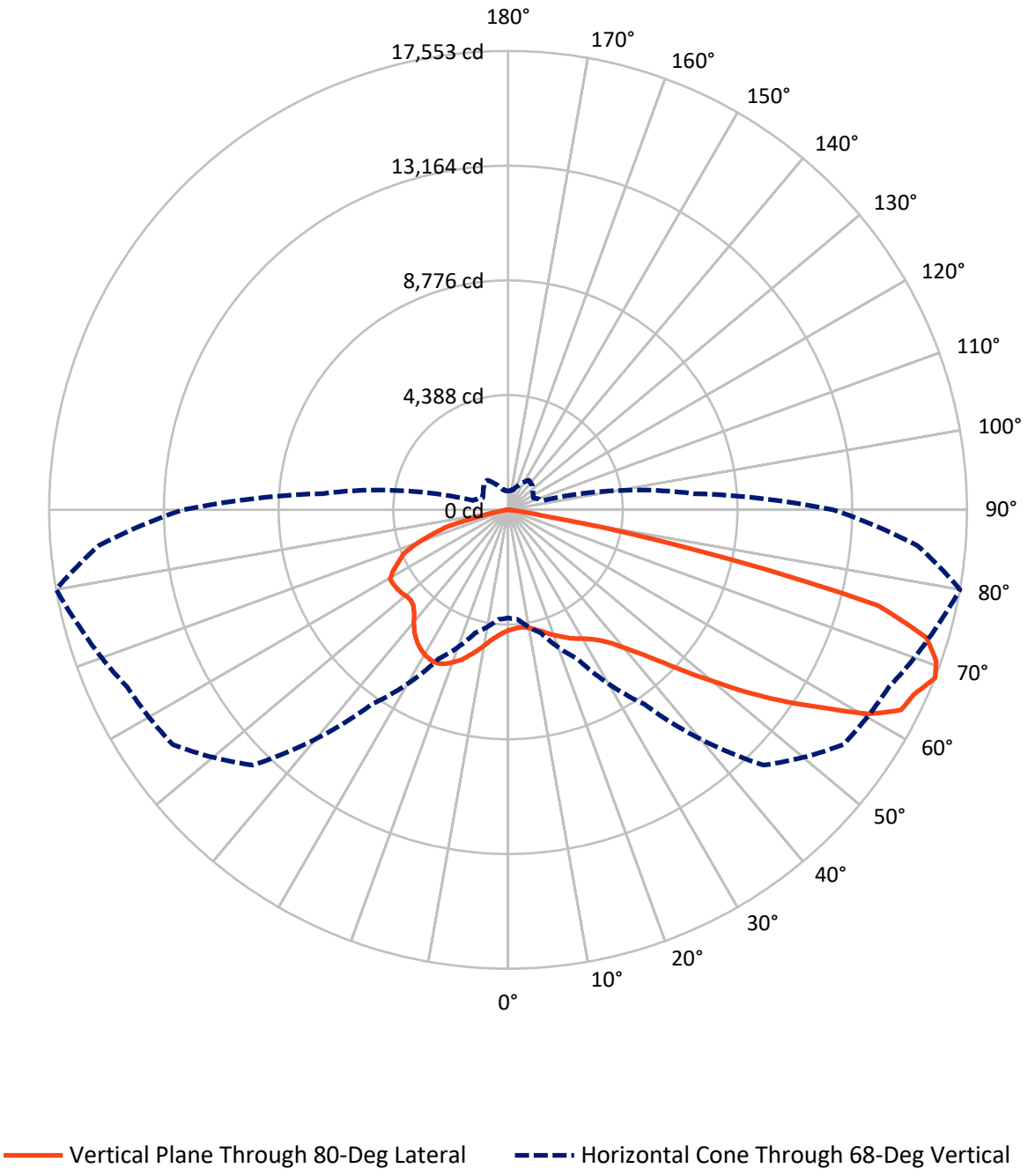

Based on 20 foot mounting height. Maximum calculated value = 13 fc
Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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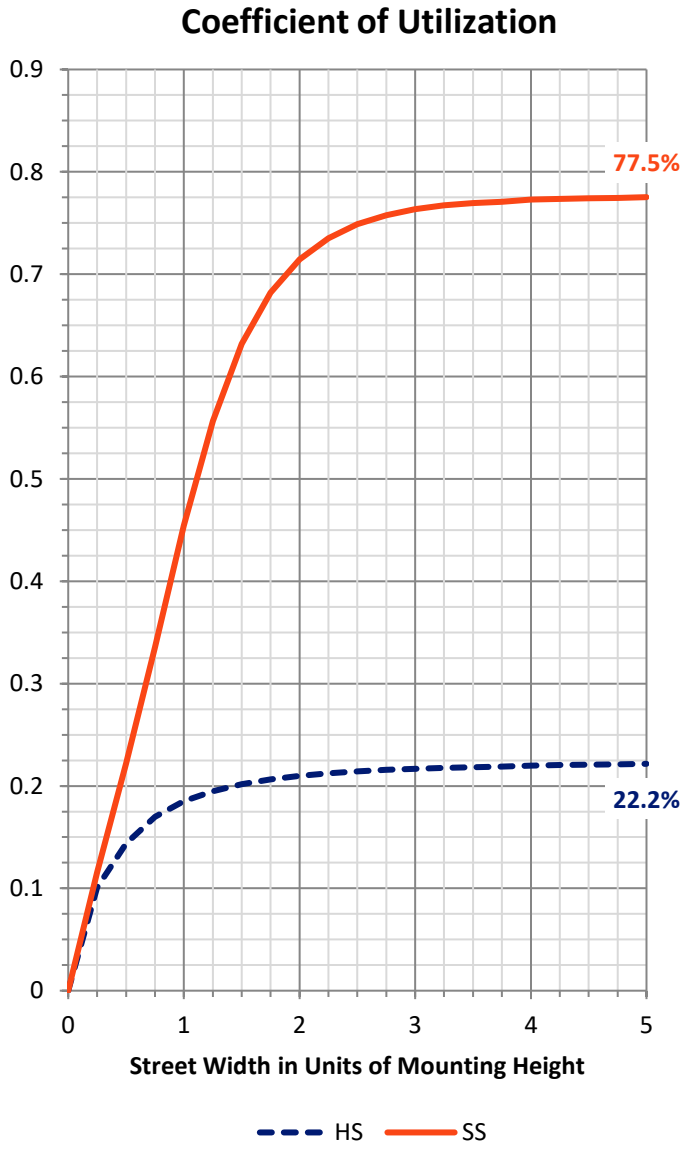
REPORT NUMBER: P1366434
CATALOG NUMBER: GSS-SB3D-740-U-T3R

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 6729.5 | 0.0 | 6729.5 |
| | % Fixture | 22.3 | 0.0 | 22.3 |
| **Street Side** | Lumens | 23385.4 | 0.0 | 23385.4 |
| | % Fixture | 77.7 | 0.0 | 77.7 |
| **Total** | Lumens | 30115.0 | 0.0 | 30115.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 445.3 | 1.5 |
| 10°-20° | 1271.4 | 4.2 |
| 20°-30° | 2096.4 | 7.0 |
| 30°-40° | 3218.5 | 10.7 |
| 40°-50° | 4969.4 | 16.5 |
| 50°-60° | 6864.0 | 22.8 |
| 60°-70° | 7034.9 | 23.4 |
| 70°-80° | 3984.3 | 13.2 |
| 80°-90° | 231.0 | 0.8 |
| 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° | 30115.0 | 100.0 |
| 0°-180° | 30115.0 | 100.0 |



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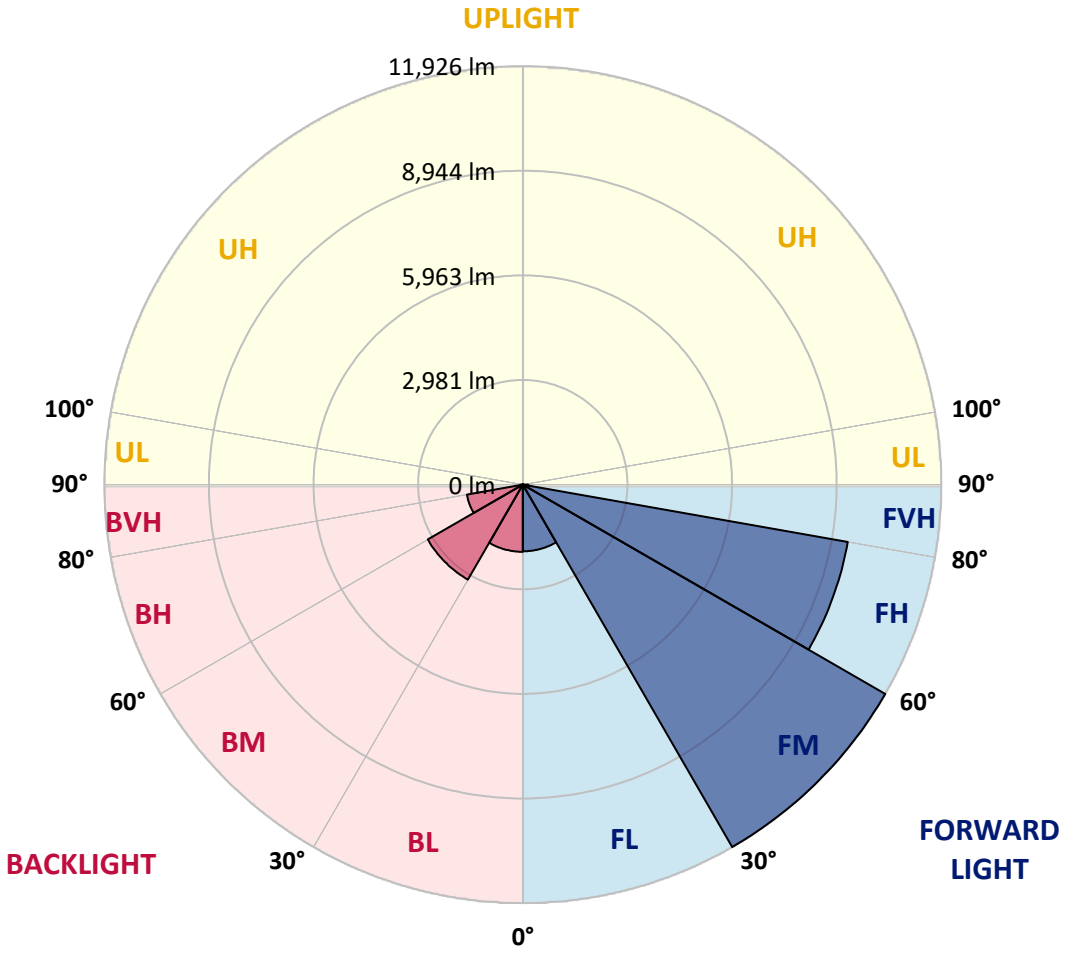
Scaled Data Report

REPORT NUMBER: P1366434
CATALOG NUMBER: GSS-SB3D-740-U-T3R

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1898.6 | 6.3 | | | |
| FM | (30°-60°) | 11925.7 | 39.6 | | | |
| FH | (60°-80°) | 9401.8 | 31.2 | | | G4/12000 |
| FVH | (80°-90°) | 159.3 | 0.5 | | | G2/225 |
| BL | (0°-30°) | 1914.4 | 6.4 | B3/2500 | | |
| BM | (30°-60°) | 3126.1 | 10.4 | B3/5000 | | |
| BH | (60°-80°) | 1617.3 | 5.4 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 71.7 | 0.2 | | | G1/100 |
| 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 Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | *4600.6* | 4600.6 |
| 2.5° | 4277.5 | 4263.4 | 4256.4 | 4270.5 | 4291.5 | 4333.7 | 4382.8 | 4418.0 | 4502.3 | *4551.4* | 4593.6 |
| 5° | 4052.7 | 4045.7 | 4045.7 | 4080.8 | 4115.9 | 4165.1 | 4235.3 | 4298.6 | 4425.0 | *4523.3* | 4593.6 |
| 7.5° | 3785.8 | 3778.8 | 3778.8 | 3856.1 | 3926.3 | 4038.7 | 4151.1 | 4256.4 | 4410.9 | *4537.4* | 4649.8 |
| 10° | 3504.9 | 3504.9 | 3518.9 | 3617.3 | 3736.7 | 3898.2 | 4087.8 | 4249.4 | 4446.1 | *4593.6* | 4748.1 |
| 12.5° | 3385.5 | 3378.4 | 3385.5 | 3476.8 | 3596.2 | 3813.9 | 4031.7 | 4277.5 | 4516.3 | *4705.9* | 4888.6 |
| 15° | 3413.6 | 3399.5 | 3385.5 | 3462.7 | 3554.0 | 3771.8 | 4031.7 | 4333.7 | 4635.7 | *4818.3* | 5071.2 |
| 17.5° | 3561.1 | 3554.0 | 3511.9 | 3533.0 | 3596.2 | 3792.8 | 4066.8 | 4418.0 | 4755.1 | *4972.8* | 5246.8 |
| 20° | 3849.0 | 3828.0 | 3764.8 | 3729.6 | 3736.7 | 3863.1 | 4130.0 | 4530.3 | 4867.5 | *5127.4* | 5436.4 |
| 22.5° | 4326.7 | 4312.6 | 4207.3 | 4066.8 | 3975.5 | 4010.6 | 4242.4 | 4656.8 | 5022.0 | *5267.8* | 5654.2 |
| 25° | 4958.8 | 4923.7 | 4762.1 | 4537.4 | 4326.7 | 4249.4 | 4382.8 | 4825.3 | 5169.5 | *5436.4* | 5857.8 |
| 27.5° | 5633.1 | 5640.1 | 5492.6 | 5155.5 | 4790.2 | 4530.3 | 4565.5 | 4993.9 | 5338.1 | *5576.9* | 6033.4 |
| 30° | 6419.7 | 6384.6 | 6223.1 | 5871.9 | 5338.1 | 4902.6 | 4755.1 | 5155.5 | 5492.6 | *5717.4* | 6244.2 |
| 32.5° | 7459.3 | 7466.3 | 7178.3 | 6637.5 | 5970.2 | 5359.2 | 5000.9 | 5324.0 | 5668.2 | *5900.0* | 6504.0 |
| 35° | 8716.5 | 8688.4 | 8344.3 | 7691.1 | 6785.0 | 5885.9 | 5317.0 | 5541.8 | 5878.9 | *6138.8* | 6806.1 |
| 37.5° | 9840.3 | 9763.1 | 9559.4 | 8934.3 | 7810.5 | 6602.4 | 5745.5 | 5829.8 | 6209.0 | *6483.0* | 7255.6 |
| 40° | 10844.7 | 10809.6 | 10774.5 | 10296.9 | 8983.4 | 7494.4 | 6307.4 | 6272.2 | 6616.4 | *6974.6* | 7810.5 |
| 42.5° | 11673.5 | 11666.5 | 11680.6 | 11575.2 | 10416.3 | 8611.2 | 7094.0 | 6848.2 | 7192.4 | *7557.6* | 8463.7 |
| 45° | 12277.6 | 12263.5 | 12411.0 | 12628.8 | 11814.0 | 9945.7 | 8021.2 | 7564.6 | 7922.8 | *8337.2* | 9292.5 |
| 47.5° | 12923.8 | 12930.8 | 13134.5 | 13499.7 | 13176.6 | 11273.2 | 9074.7 | 8456.7 | 8779.7 | *9306.5* | 10282.8 |
| 50° | 13176.6 | 13176.6 | 13661.3 | 14181.0 | 14272.4 | 12685.0 | 10332.0 | 9517.2 | 9847.4 | *10409.3* | 11280.2 |
| 52.5° | 12628.8 | 12734.1 | 13584.0 | 14560.3 | 14988.8 | 13991.4 | 11659.5 | 10669.1 | 10950.1 | *11673.5* | 12270.6 |
| 55° | 9566.4 | 9938.7 | 12994.0 | 14377.7 | 15255.7 | 15016.9 | 12980.0 | 11947.5 | 12256.5 | *12973.0* | 13289.0 |
| 57.5° | 8260.0 | 8358.3 | 10191.5 | 13738.5 | 14918.5 | 15571.8 | 14202.1 | 13310.1 | 13591.0 | *14293.4* | 14349.6 |
| 60° | 7262.6 | 7396.1 | 8519.9 | 12656.9 | 14251.3 | 15515.6 | 15220.6 | 14567.4 | 14960.7 | *15852.7* | 15424.3 |
| 62.5° | 5885.9 | 6026.4 | 6974.6 | 10114.3 | 13373.3 | 15122.2 | 16014.3 | 15754.4 | 16126.6 | *16871.2* | 15866.8 |
| 65° | 5183.6 | 5232.7 | 5914.0 | 7754.3 | 11757.8 | 14785.1 | 16421.6 | 16260.1 | 16421.6 | *17046.8* | 15642.0 |
| 67.5° | 4319.6 | 4418.0 | 5078.2 | 6581.3 | 9496.2 | 14068.7 | 15817.6 | 16049.4 | 16850.1 | *17468.2* | 15810.6 |
| 68° | *4137.0* | *4207.3* | *4881.5* | *6293.3* | *9074.7* | *13808.8* | *15656.0* | *16063.4* | *17018.7* | *17552.5* | *15719.3* |
| 70° | 3378.4 | 3476.8 | 4073.8 | 5274.9 | 7606.8 | 11055.5 | 15023.9 | 16337.3 | 17138.1 | *17376.9* | 15220.6 |
| 72.5° | 1671.7 | 1847.3 | 2809.5 | 3722.6 | 5492.6 | 7993.1 | 13169.6 | 15986.2 | 16892.2 | *16744.7* | 14167.0 |
| 75° | 590.0 | 632.1 | 1313.4 | 2015.8 | 2662.0 | 5176.5 | 9313.6 | 14574.4 | 15487.5 | *14623.5* | 11877.2 |
| 77.5° | 421.4 | 456.5 | 744.5 | 1018.5 | 1095.7 | 2598.8 | 5970.2 | 9636.6 | 9159.0 | *7094.0* | 5408.3 |
| 80° | 330.1 | 358.2 | 554.9 | 568.9 | 547.9 | 913.1 | 2036.9 | 2921.9 | 2058.0 | *1292.4* | 934.2 |
| 82.5° | 203.7 | 245.8 | 414.4 | 344.2 | 252.9 | 288.0 | 477.6 | 786.7 | 561.9 | *358.2* | 288.0 |
| 85° | 77.3 | 98.3 | 189.6 | 133.5 | 84.3 | 112.4 | 161.5 | 210.7 | 161.5 | *119.4* | 105.4 |
| 87.5° | 7.0 | 7.0 | 14.0 | 14.0 | 21.1 | 28.1 | 42.1 | 56.2 | 63.2 | *63.2* | 63.2 |
| 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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Scaled Data Report

REPORT NUMBER: P1366434
CATALOG NUMBER: GSS-SB3D-740-U-T3R

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 | 4600.6 |
| 2.5° | 4621.7 | 4642.7 | 4734.0 | 4783.2 | 4874.5 | 4944.8 | 4986.9 | 5008.0 | 5029.0 | 5043.1 | 5036.1 |
| 5° | 4670.8 | 4734.0 | 4909.6 | 5043.1 | 5148.4 | 5218.7 | 5253.8 | 5281.9 | 5288.9 | 5303.0 | 5295.9 |
| 7.5° | 4762.1 | 4860.5 | 5127.4 | 5281.9 | 5373.2 | 5401.3 | 5373.2 | 5359.2 | 5338.1 | 5317.0 | 5317.0 |
| 10° | 4909.6 | 5064.2 | 5380.2 | 5492.6 | 5499.6 | 5457.5 | 5366.2 | 5260.8 | 5183.6 | 5155.5 | 5141.4 |
| 12.5° | 5099.3 | 5317.0 | 5640.1 | 5668.2 | 5576.9 | 5380.2 | 5120.3 | 4902.6 | 4762.1 | 4656.8 | 4649.8 |
| 15° | 5331.1 | 5583.9 | 5864.9 | 5780.6 | 5520.7 | 5106.3 | 4677.8 | 4368.8 | 4207.3 | 4115.9 | 4073.8 |
| 17.5° | 5569.9 | 5893.0 | 6068.6 | 5836.8 | 5288.9 | 4614.6 | 4101.9 | 3856.1 | 3708.6 | 3659.4 | 3624.3 |
| 20° | 5836.8 | 6145.8 | 6209.0 | 5752.5 | 4867.5 | 4066.8 | 3603.2 | 3448.7 | 3448.7 | 3434.6 | 3420.6 |
| 22.5° | 6110.7 | 6405.7 | 6286.3 | 5520.7 | 4312.6 | 3525.9 | 3245.0 | 3301.2 | 3399.5 | 3427.6 | 3427.6 |
| 25° | 6363.6 | 6630.5 | 6286.3 | 5106.3 | 3652.4 | 3083.4 | 3104.5 | 3238.0 | 3364.4 | 3434.6 | 3434.6 |
| 27.5° | 6609.4 | 6770.9 | 6159.9 | 4523.3 | 3055.4 | 2858.7 | 2985.1 | 3146.7 | 3350.4 | 3455.7 | 3462.7 |
| 30° | 6855.2 | 6876.3 | 5935.1 | 3778.8 | 2626.9 | 2697.1 | 2844.6 | 3055.4 | 3280.1 | 3413.6 | 3427.6 |
| 32.5° | 7115.1 | 6974.6 | 5619.0 | 3041.3 | 2430.2 | 2542.6 | 2718.2 | 2886.8 | 3062.4 | 3160.7 | 3167.7 |
| 35° | 7410.1 | 7065.9 | 5211.7 | 2472.4 | 2303.8 | 2437.3 | 2570.7 | 2626.9 | 2676.1 | 2732.3 | 2767.4 |
| 37.5° | 7733.2 | 7185.3 | 4677.8 | 2184.4 | 2184.4 | 2338.9 | 2416.2 | 2303.8 | 2289.8 | 2282.7 | 2261.7 |
| 40° | 8091.4 | 7311.8 | 4010.6 | 2036.9 | 2093.1 | 2233.6 | 2170.4 | 2036.9 | 1938.6 | 1833.2 | 1840.2 |
| 42.5° | 8540.9 | 7473.3 | 3252.0 | 1966.7 | 2029.9 | 2149.3 | 1973.7 | 1812.1 | 1545.2 | 1475.0 | 1489.0 |
| 45° | 9053.7 | 7677.0 | 2648.0 | 1903.4 | 1980.7 | 2072.0 | 1840.2 | 1531.2 | 1362.6 | 1432.9 | 1482.0 |
| 47.5° | 9594.5 | 7943.9 | 2212.5 | 1854.3 | 1959.6 | 1980.7 | 1755.9 | 1404.8 | 1292.4 | 1446.9 | 1510.1 |
| 50° | 10233.7 | 8189.7 | 2008.8 | 1805.1 | 1952.6 | 1952.6 | 1608.4 | 1383.7 | 1236.2 | 1369.6 | 1432.9 |
| 52.5° | 10879.9 | 8428.6 | 1903.4 | 1748.9 | 1931.5 | 1945.6 | 1573.3 | 1355.6 | 1158.9 | 1201.1 | 1229.2 |
| 55° | 11512.0 | 8562.0 | 1847.3 | 1671.7 | 1910.5 | 1910.5 | 1587.4 | 1306.4 | 1081.7 | 1081.7 | 1095.7 |
| 57.5° | 12151.2 | 8653.3 | 1798.1 | 1580.4 | 1840.2 | 1805.1 | 1587.4 | 1271.3 | 1053.6 | 1025.5 | 1039.5 |
| 60° | 12860.6 | 8709.5 | 1748.9 | 1475.0 | 1741.9 | 1678.7 | 1580.4 | 1243.2 | 1018.5 | 976.3 | 983.3 |
| 62.5° | 12973.0 | 8316.2 | 1657.6 | 1362.6 | 1608.4 | 1573.3 | 1552.3 | 1208.1 | 962.3 | 878.0 | 878.0 |
| 65° | 12572.6 | 7726.2 | 1545.2 | 1222.1 | 1432.9 | 1468.0 | 1496.1 | 1166.0 | 906.1 | 807.7 | 814.8 |
| 67.5° | 12530.5 | 7283.7 | 1425.8 | 1095.7 | 1201.1 | 1334.5 | 1425.8 | 1095.7 | 821.8 | 737.5 | 730.5 |
| 68° | *12432.1* | *7122.1* | *1390.7* | *1067.6* | *1158.9* | *1306.4* | *1383.7* | *1067.6* | *807.7* | *723.5* | *723.5* |
| 70° | 11800.0 | 6419.7 | 1180.0 | 941.2 | 1025.5 | 1067.6 | 1215.1 | 948.2 | 723.5 | 653.2 | 660.2 |
| 72.5° | 10570.8 | 5232.7 | 906.1 | 765.6 | 821.8 | 821.8 | 1053.6 | 878.0 | 660.2 | 597.0 | 597.0 |
| 75° | 8814.9 | 4137.0 | 688.3 | 604.0 | 576.0 | 667.3 | 856.9 | 793.7 | 583.0 | 533.8 | 512.7 |
| 77.5° | 4003.6 | 1784.0 | 449.5 | 421.4 | 428.5 | 519.8 | 681.3 | 681.3 | 554.9 | 435.5 | 386.3 |
| 80° | 885.0 | 554.9 | 273.9 | 252.9 | 252.9 | 330.1 | 477.6 | 491.7 | 400.4 | 302.0 | 259.9 |
| 82.5° | 295.0 | 224.8 | 168.6 | 154.5 | 147.5 | 175.6 | 295.0 | 323.1 | 238.8 | 175.6 | 175.6 |
| 85° | 112.4 | 105.4 | 91.3 | 84.3 | 70.2 | 70.2 | 91.3 | 147.5 | 126.4 | 84.3 | 84.3 |
| 87.5° | 56.2 | 56.2 | 49.2 | 35.1 | 28.1 | 21.1 | 14.0 | 14.0 | 14.0 | 21.1 | 14.0 |
| 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-79-2019: 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

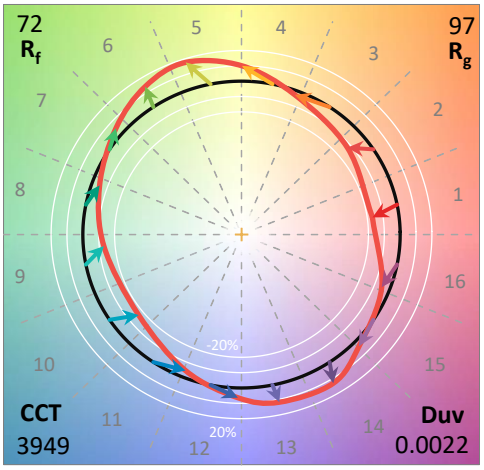
## Test Information

| | |
|---|---|
| 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

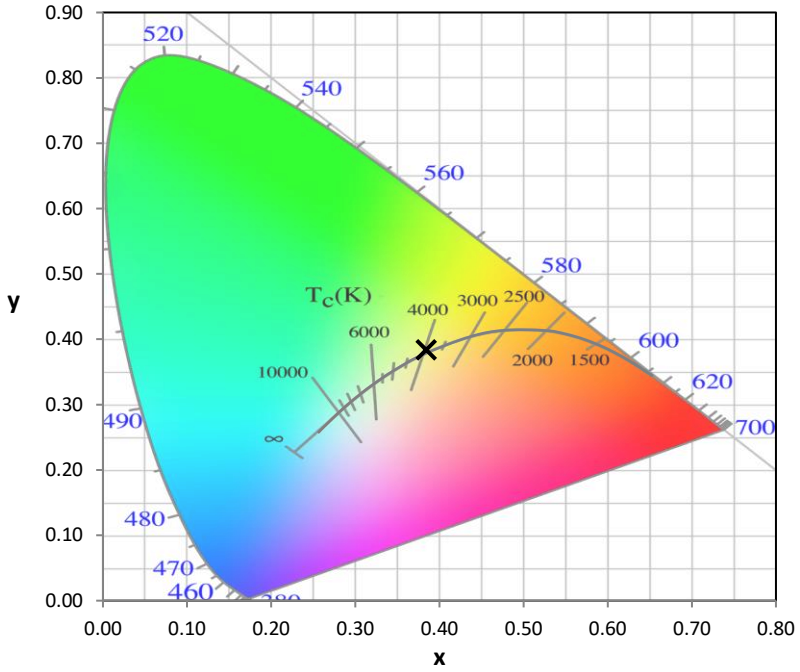
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

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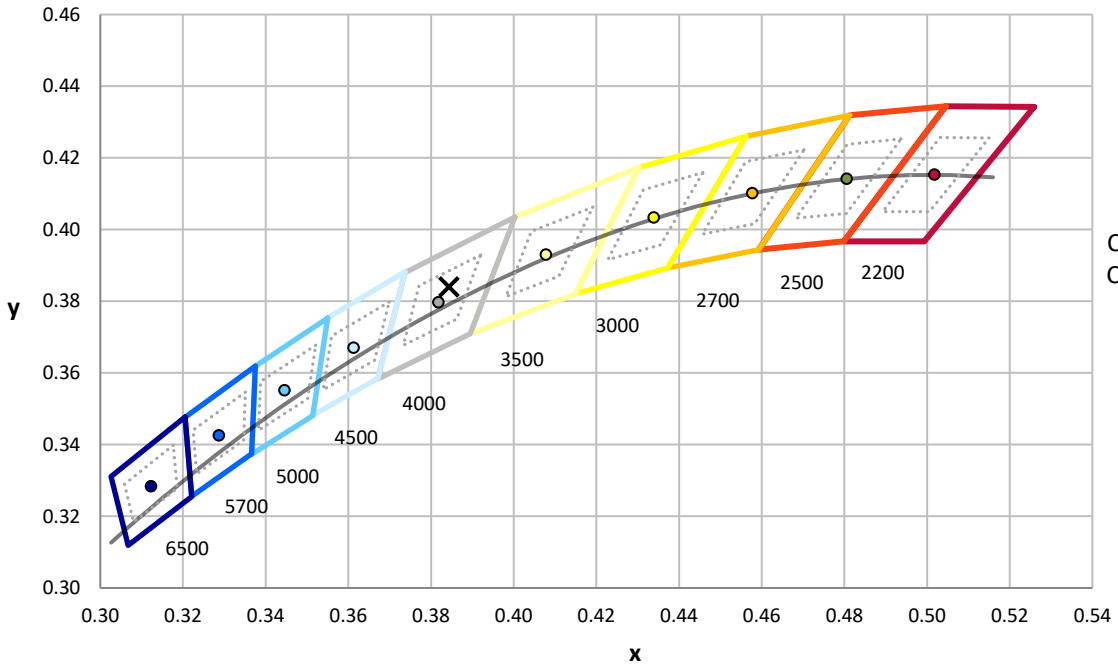
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

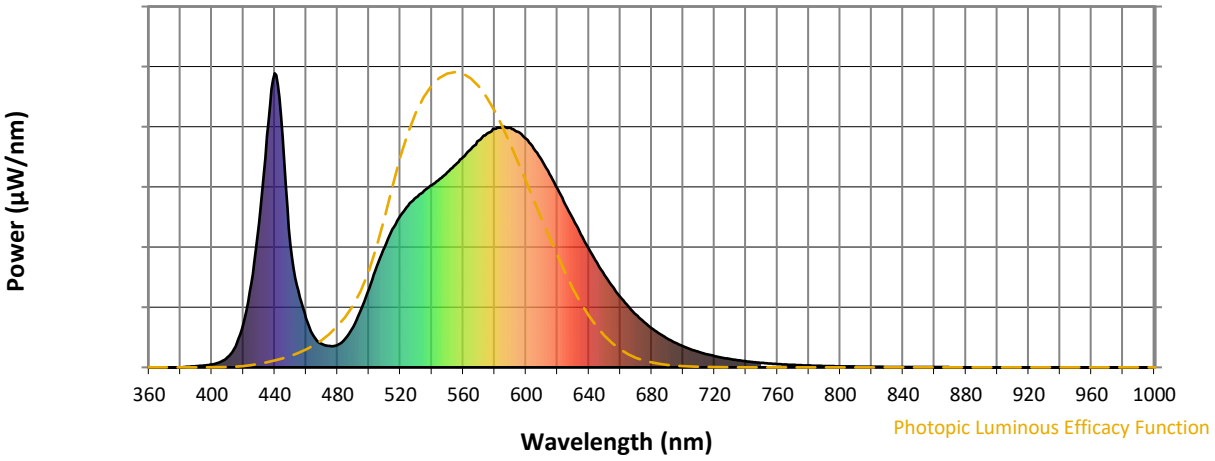



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

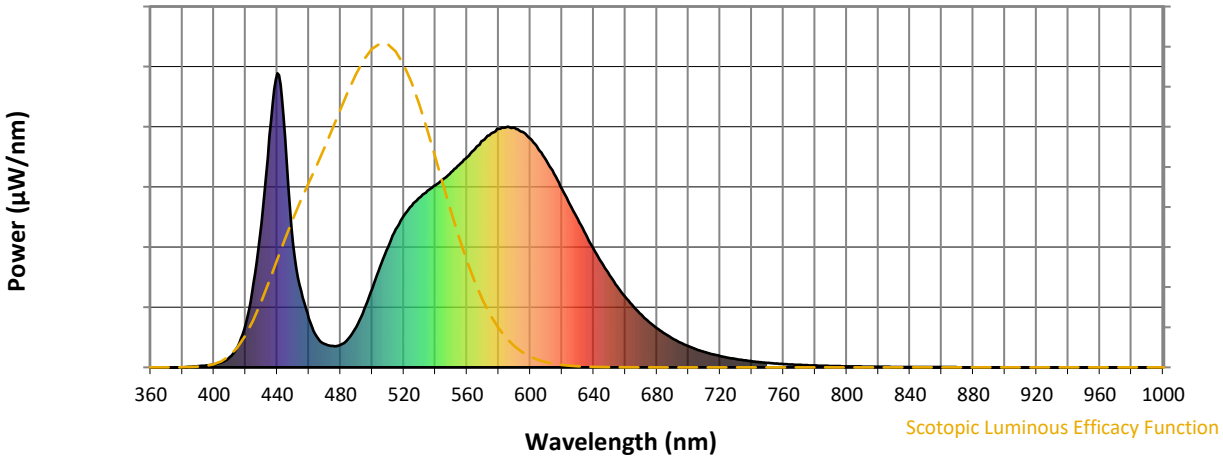



## Photopic Lumens: NR

| 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 | | | |

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## Scotopic Flux vs. Wavelength

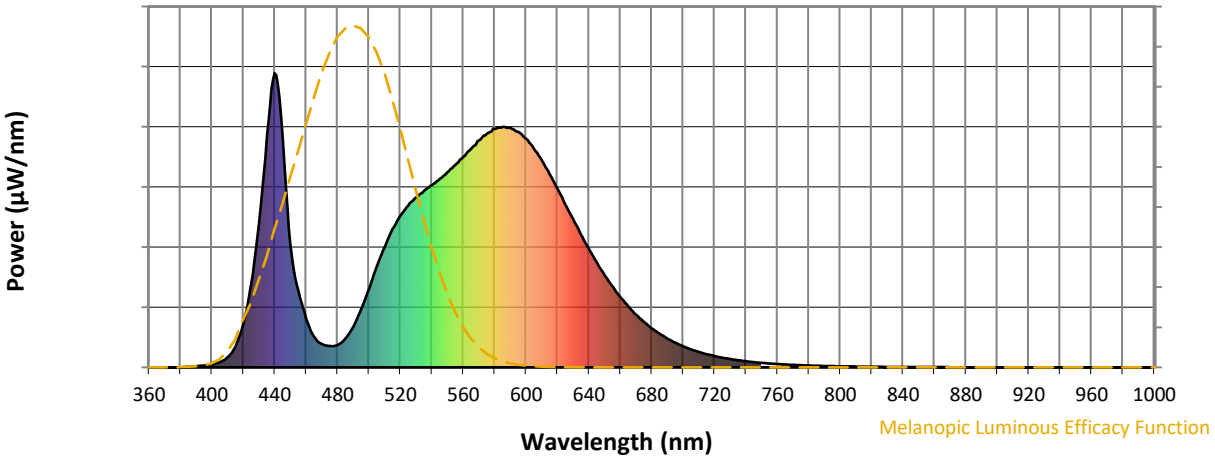



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

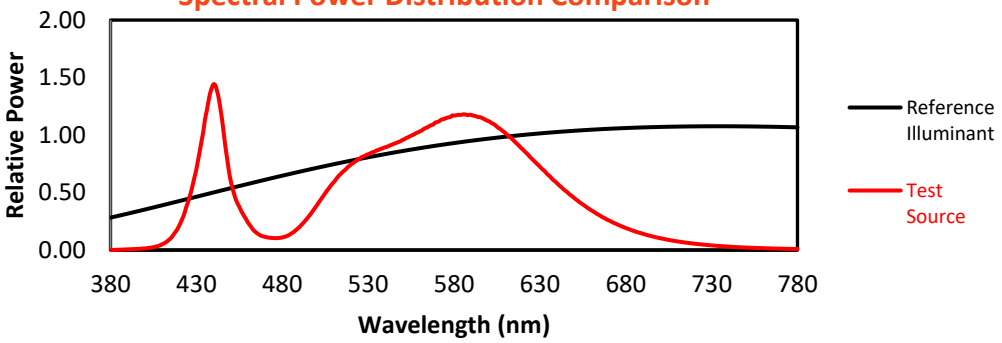
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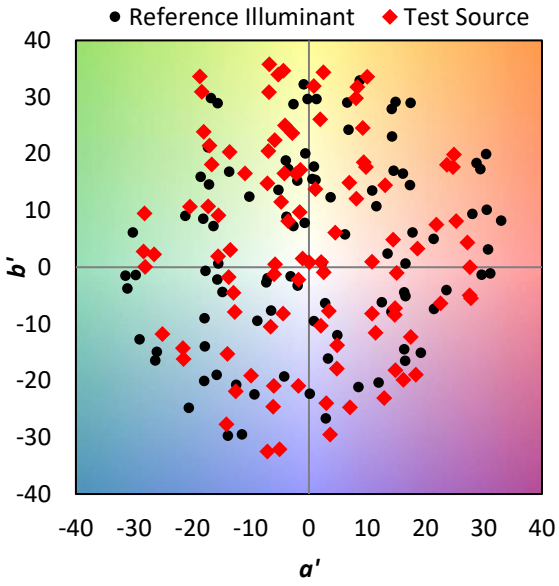
## Summary

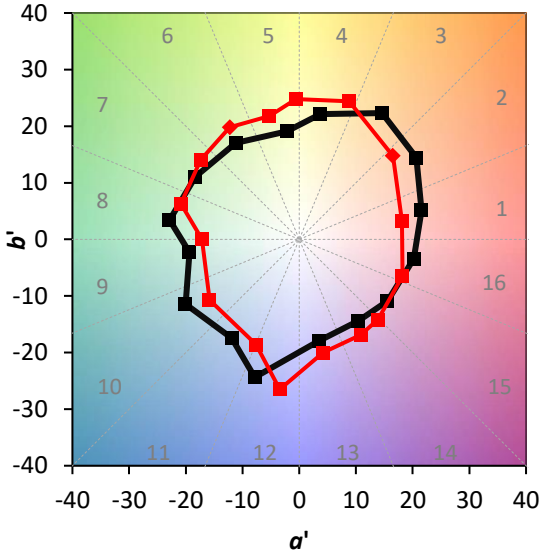
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

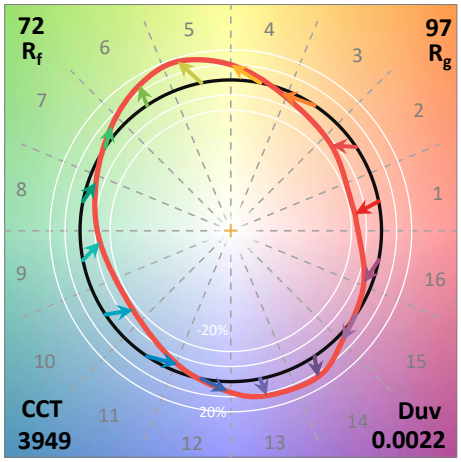
## Spectral Power Distribution Comparison

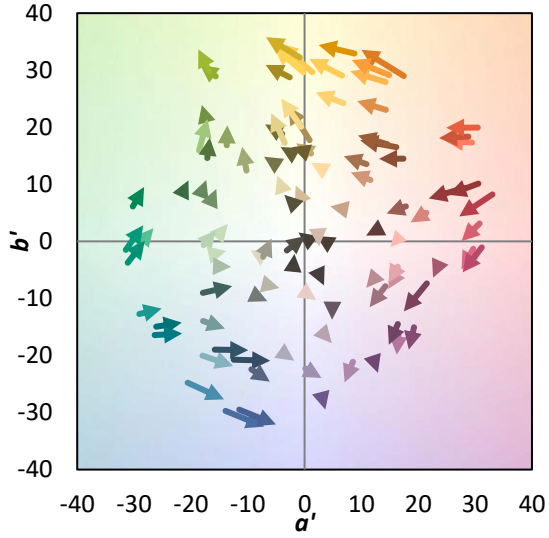



## Color Vector Graphics



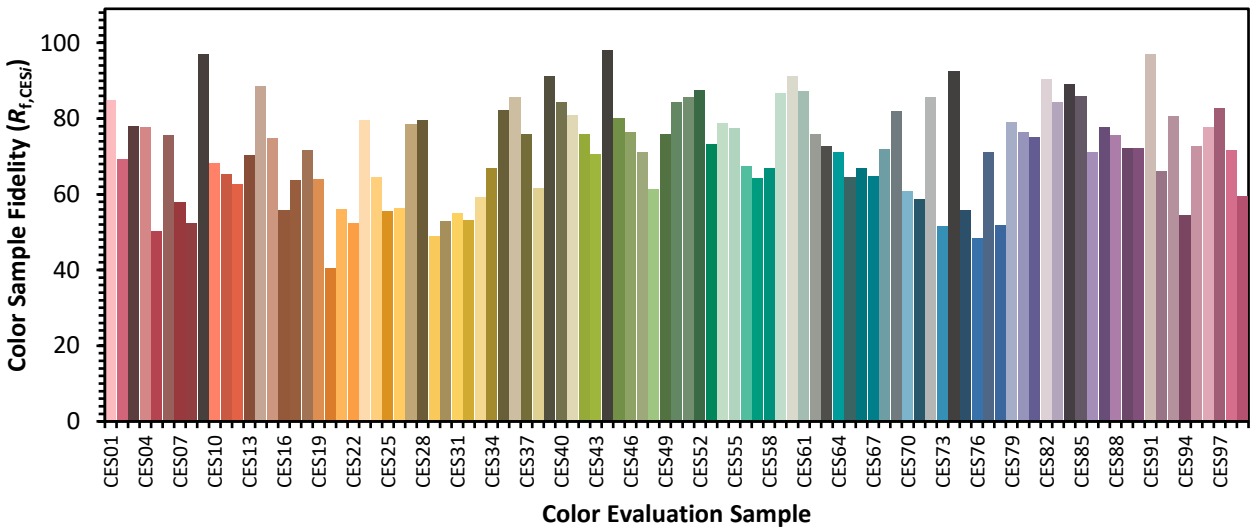



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**Individual Sample Fidelity Index ($R_{f,i}$)**

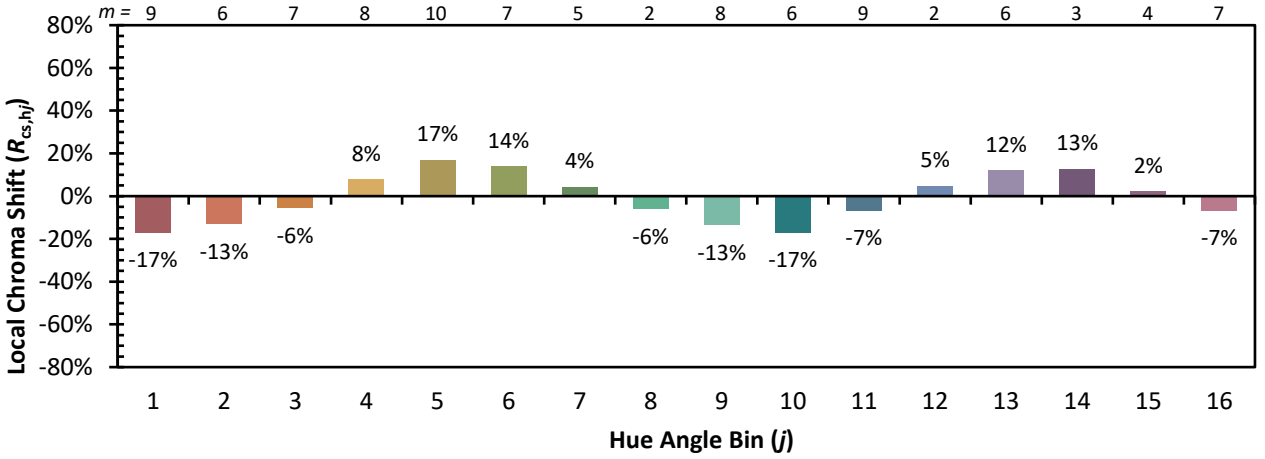
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06 = 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 | |

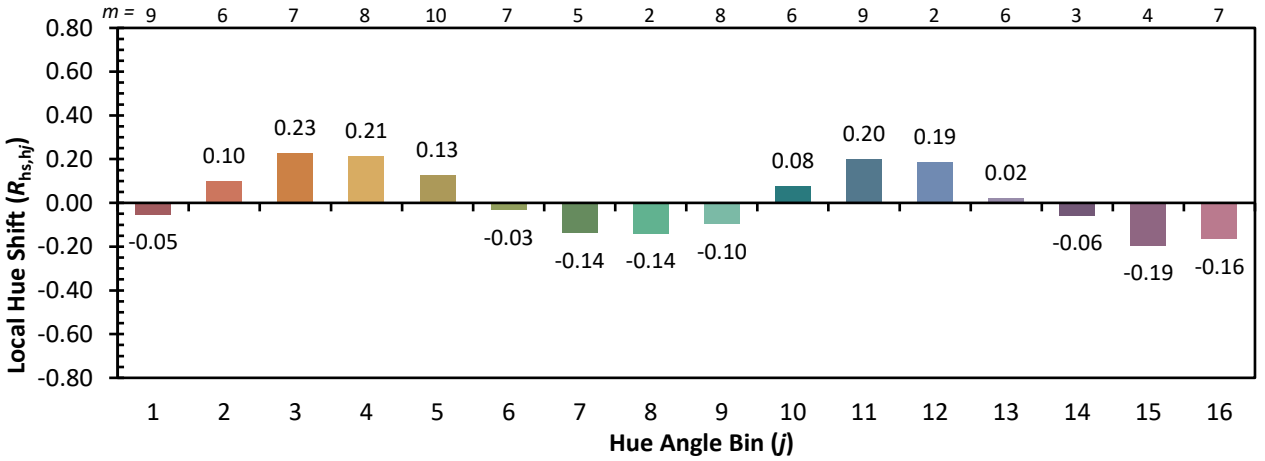


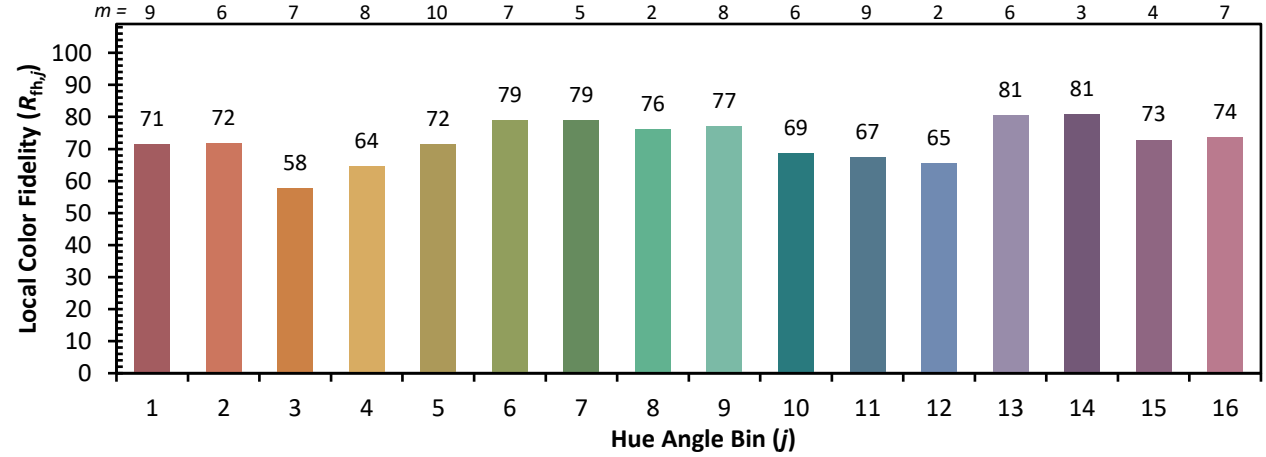
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## Color Rendition by Hue-Angle Bin



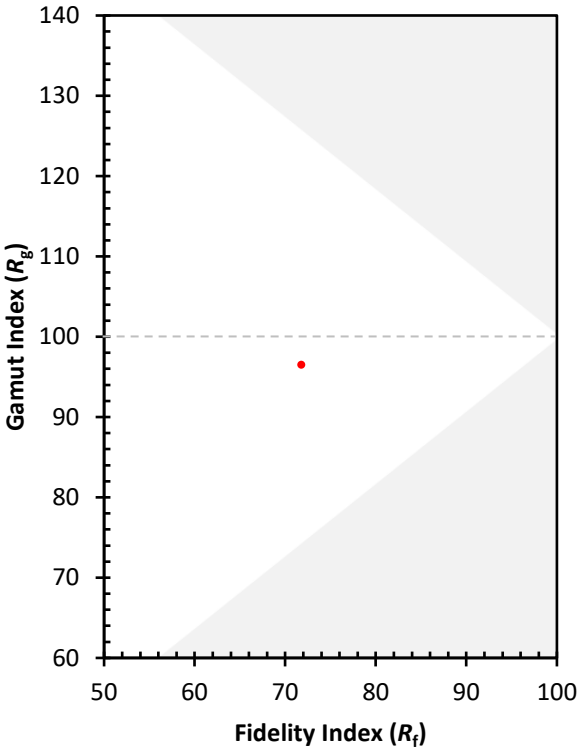



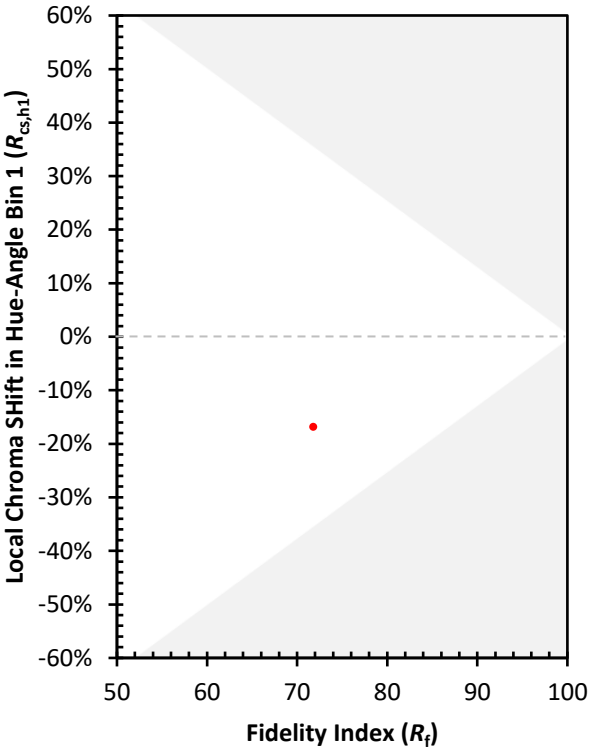



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## Measure Comparisons




(END OF REPORT)