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: STREETWORKS

Report Number: P1458272

Luminaire Tested: GLAN-SB9B-750-U-T3LG-HSS

Issue Date: 05/20/2026

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: | P1458272 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB9B-750-U-T3LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 9xLight Square PACKAGE 70CRI 5000K FIXTURE w/ TYPE III LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (234) 5000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 41473.7 lumens |
| Efficiency: | N/A |
| Efficacy: | 125.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 329.5 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.97 |
| Total Harmonic Distortion (THDi): | NR |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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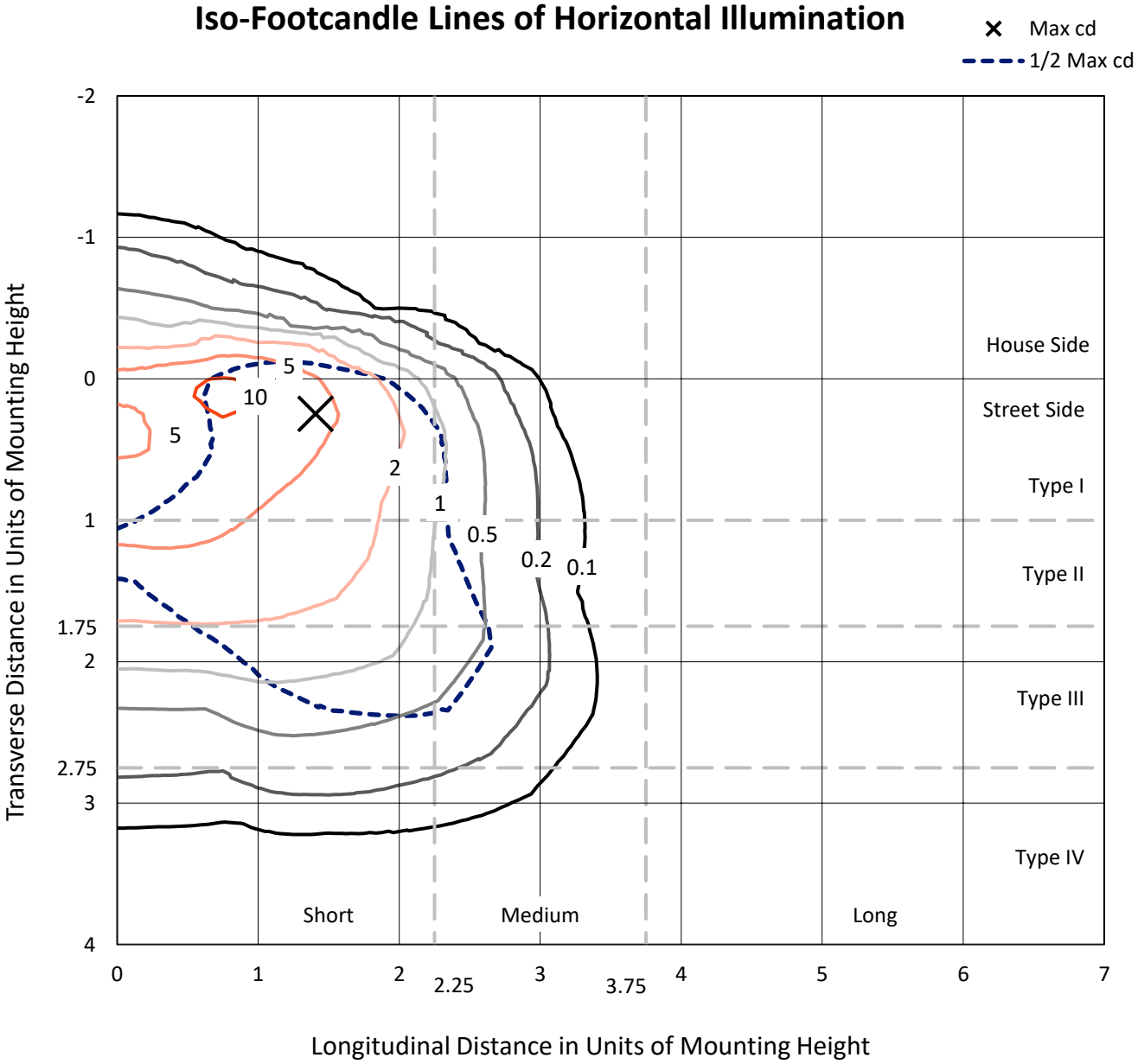
Scaled Data Report

REPORT NUMBER: P1458272
CATALOG NUMBER: GLAN-SB9B-750-U-T3LG-HSS

## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 11.4 fc
Type III - Short - N/A

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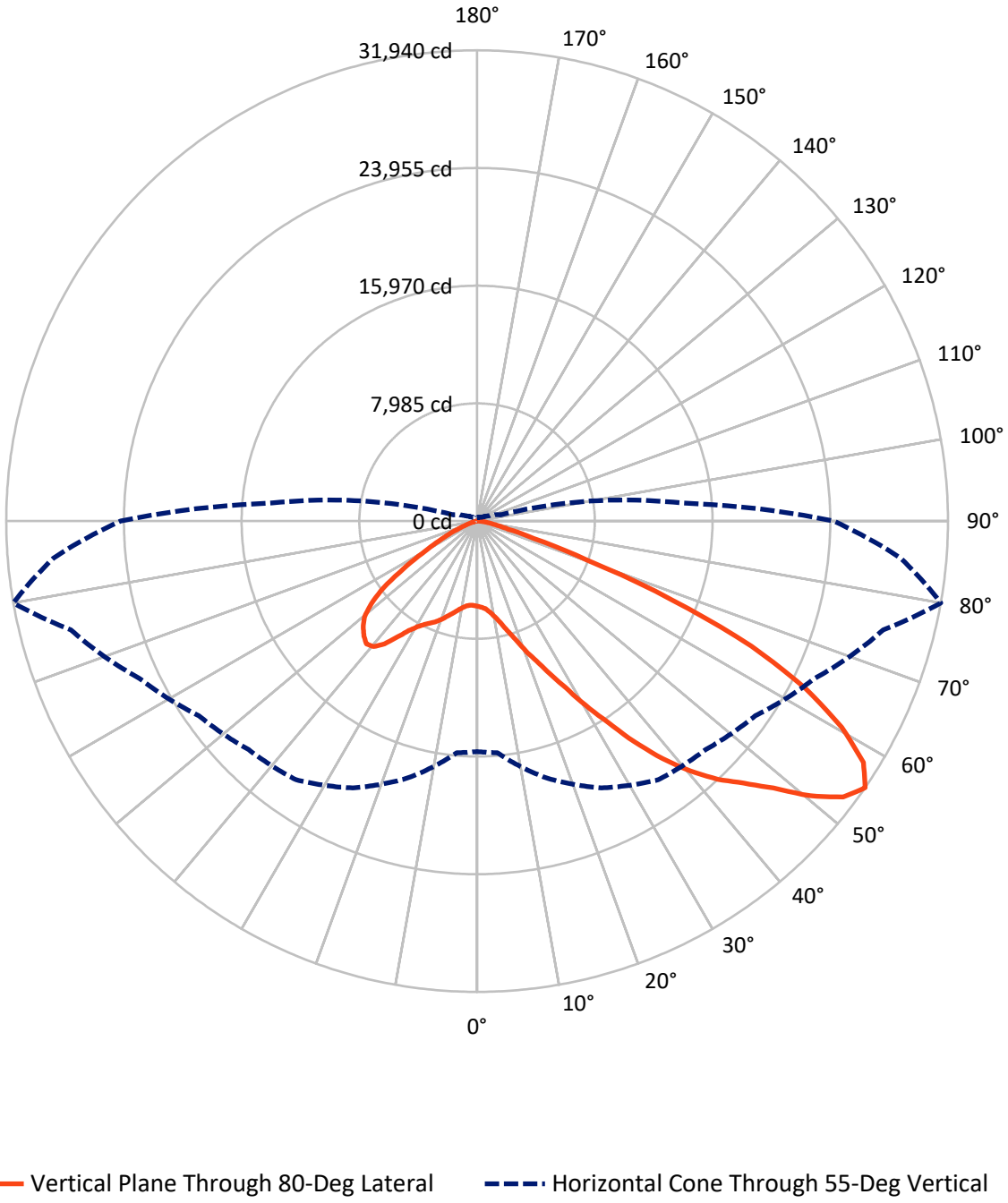
## Luminous Intensity Polar Plot



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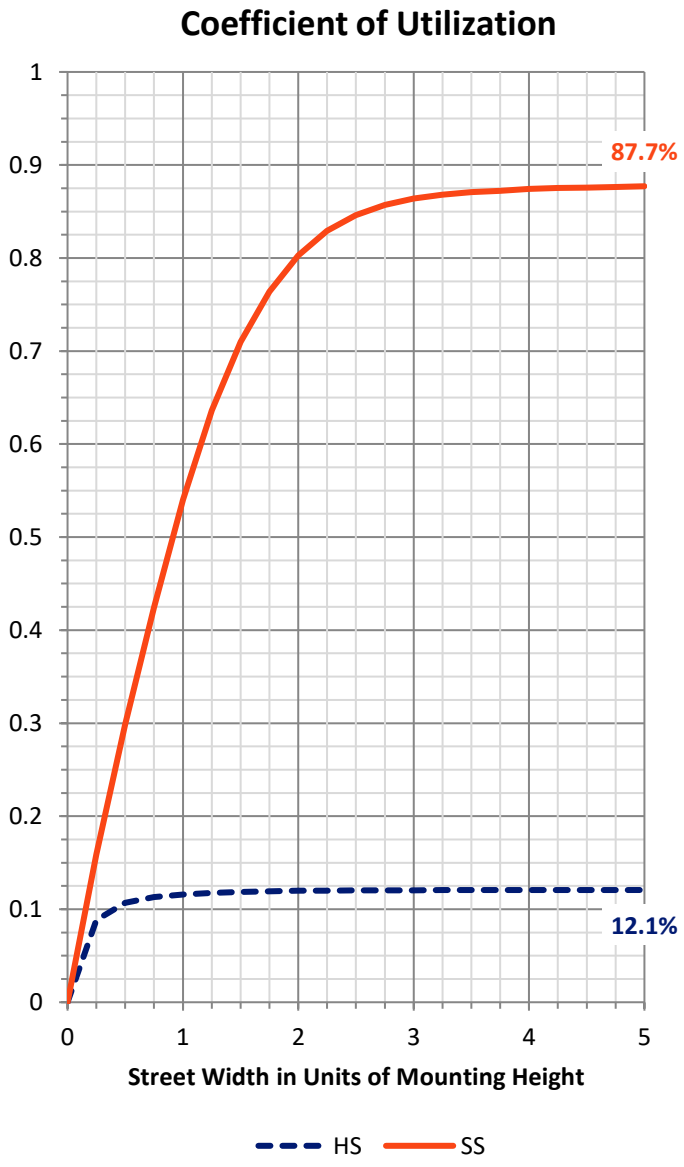
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5041.6 | 0.0 | 5041.6 |
| | % Fixture | 12.2 | 0.0 | 12.2 |
| **Street Side** | Lumens | 36432.1 | 0.0 | 36432.1 |
| | % Fixture | 87.8 | 0.0 | 87.8 |
| **Total** | Lumens | 41473.7 | 0.0 | 41473.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 484.8 | 1.2 |
| 10°-20° | 1278.2 | 3.1 |
| 20°-30° | 2502.3 | 6.0 |
| 30°-40° | 5090.8 | 12.3 |
| 40°-50° | 8582.3 | 20.7 |
| 50°-60° | 10965.6 | 26.4 |
| 60°-70° | 9362.0 | 22.6 |
| 70°-80° | 2991.7 | 7.2 |
| 80°-90° | 216.0 | 0.5 |
| 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° | 41473.7 | 100.0 |
| 0°-180° | 41473.7 | 100.0 |



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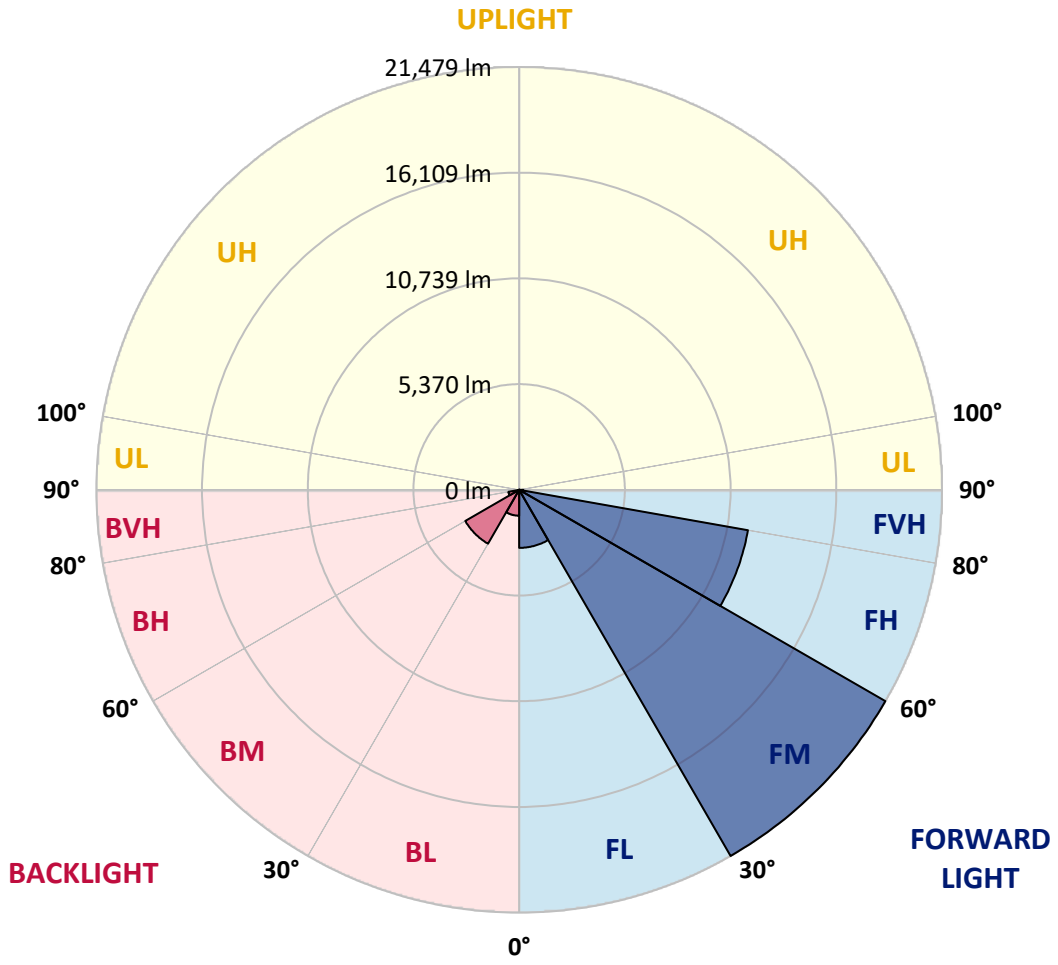
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2948.9 | 7.1 | | | |
| FM | (30°-60°) | 21478.9 | 51.8 | | | |
| FH | (60°-80°) | 11799.6 | 28.5 | | | G4/12000 |
| FVH | (80°-90°) | 204.8 | 0.5 | | | G2/225 |
| BL | (0°-30°) | 1316.5 | 3.2 | B3/2500 | | |
| BM | (30°-60°) | 3159.7 | 7.6 | B3/5000 | | |
| BH | (60°-80°) | 554.1 | 1.3 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 11.3 | 0.0 | | | 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 Short



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REPORT NUMBER: P1458272
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 80° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | *5777.2* | 5777.2 |
| 2.5° | 5812.6 | 5824.4 | 5812.6 | 5824.4 | 5848.0 | 5836.2 | 5883.3 | 5871.5 | 5871.5 | *5859.8* | 5812.6 |
| 5° | 5482.5 | 5494.3 | 5517.8 | 5576.8 | 5659.3 | 5741.9 | 5848.0 | 5918.7 | 5989.4 | *5977.7* | 5930.5 |
| 7.5° | 4834.0 | 4857.6 | 4951.9 | 5069.8 | 5341.0 | 5588.6 | 5859.8 | 6036.6 | 6189.9 | *6237.0* | 6201.7 |
| 10° | 4468.5 | 4492.1 | 4551.0 | 4668.9 | 4916.5 | 5329.2 | 5859.8 | 6225.3 | 6496.4 | *6590.8* | 6602.5 |
| 12.5° | 4433.1 | 4444.9 | 4492.1 | 4621.8 | 4834.0 | 5187.7 | 5848.0 | 6472.8 | 6932.7 | *7074.2* | 7121.3 |
| 15° | 4456.7 | 4480.3 | 4527.5 | 4633.6 | 4881.2 | 5282.0 | 5942.3 | 6861.9 | 7510.4 | *7710.8* | 7722.6 |
| 17.5° | 4551.0 | 4574.6 | 4633.6 | 4751.5 | 5022.6 | 5529.6 | 6237.0 | 7262.8 | 8206.0 | *8430.0* | 8559.7 |
| 20° | 4739.7 | 4751.5 | 4822.2 | 4975.5 | 5282.0 | 5836.2 | 6673.3 | 7805.1 | 9043.1 | *9373.3* | 9467.6 |
| 22.5° | 4987.3 | 5022.6 | 5117.0 | 5305.6 | 5694.7 | 6260.6 | 7274.6 | 8465.4 | 9962.8 | *10304.7* | 10469.7 |
| 25° | 5258.5 | 5305.6 | 5447.1 | 5753.6 | 6248.8 | 6909.1 | 8017.4 | 9337.9 | 11047.5 | *11460.1* | 11684.1 |
| 27.5° | 5812.6 | 5824.4 | 5918.7 | 6307.8 | 6944.5 | 7758.0 | 8960.6 | 10458.0 | 12320.8 | *12804.2* | 13051.8 |
| 30° | 7027.0 | 7038.8 | 6956.2 | 7062.4 | 7710.8 | 8760.2 | 10068.9 | 11766.7 | 13806.4 | *14478.4* | 14678.9 |
| 32.5° | 8512.6 | 8571.5 | 8559.7 | 8489.0 | 8783.7 | 9762.3 | 11389.4 | 13334.8 | 15551.3 | *16258.8* | 16447.4 |
| 35° | 10198.6 | 10340.1 | 10304.7 | 10281.1 | 10316.5 | 11047.5 | 12898.5 | 15067.9 | 17532.1 | *18392.8* | 18546.1 |
| 37.5° | 11849.2 | 11884.6 | 12049.6 | 12250.1 | 12273.7 | 12780.6 | 14643.5 | 16907.2 | 19371.4 | *20467.9* | 20703.7 |
| 40° | 13122.6 | 13240.5 | 13653.1 | 14054.0 | 14466.6 | 14867.5 | 16081.9 | 18392.8 | 20833.4 | *22307.2* | 22413.3 |
| 42.5° | 14112.9 | 14395.9 | 14997.2 | 15622.1 | 16459.2 | 16907.2 | 17449.6 | 19442.1 | 22024.2 | *23946.0* | 23898.8 |
| 45° | 15315.5 | 15433.4 | 16282.3 | 17107.7 | 17956.6 | 18640.4 | 18628.6 | 20326.4 | 22955.6 | *25349.0* | 25054.3 |
| 47.5° | 16129.1 | 16270.5 | 17426.0 | 18392.8 | 19265.3 | 19607.2 | 19677.9 | 21281.4 | 24240.8 | *27046.8* | 26351.2 |
| 50° | 16565.3 | 16812.9 | 18074.5 | 19300.6 | 20243.9 | 20350.0 | 20668.3 | 22531.2 | 25926.8 | *29298.8* | 27990.1 |
| 52.5° | 16612.5 | 16848.3 | 18298.5 | 19878.4 | 20904.1 | 21116.3 | 21658.7 | 23946.0 | 27565.6 | *31102.7* | 28933.3 |
| 55° | *15633.9* | *15775.4* | *18027.3* | *19972.7* | *21422.9* | *21918.1* | *23026.4* | *25254.7* | *28520.6* | *31939.8* | *28850.7* |
| 57.5° | 14714.2 | 14855.7 | 16812.9 | 19807.6 | 21953.4 | 22967.4 | 24488.4 | 26150.8 | 27777.8 | *30902.3* | 27011.5 |
| 60° | 13924.3 | 13995.0 | 15775.4 | 19041.3 | 22153.9 | 23993.2 | 25749.9 | 25266.5 | 25856.0 | *28414.5* | 23863.5 |
| 62.5° | 12438.7 | 12485.9 | 14596.3 | 17661.8 | 21753.0 | 24783.1 | 26186.1 | 23391.9 | 23745.6 | *24983.5* | 20161.3 |
| 65° | 9396.8 | 9573.7 | 11507.3 | 16624.3 | 21092.8 | 25148.6 | 25172.2 | 21104.6 | 20739.1 | *20444.3* | 15857.9 |
| 67.5° | 6378.5 | 6579.0 | 7746.2 | 14950.0 | 20019.8 | 25301.9 | 23203.2 | 18145.2 | 15798.9 | *14278.0* | 10387.2 |
| 70° | 5093.4 | 5093.4 | 5494.3 | 12014.3 | 17473.2 | 23344.7 | 20762.6 | 13700.3 | 10033.5 | *7887.7* | 5565.0 |
| 72.5° | 3348.4 | 3360.2 | 3737.5 | 7628.3 | 12391.6 | 17803.3 | 16930.8 | 7923.0 | 5211.3 | *4020.5* | 2747.1 |
| 75° | 1214.4 | 1214.4 | 1638.8 | 3053.7 | 6555.4 | 10599.4 | 10316.5 | 3784.7 | 2829.7 | *2193.0* | 1662.4 |
| 77.5° | 648.5 | 672.0 | 789.9 | 1261.6 | 2511.3 | 4315.2 | 4032.3 | 1933.6 | 1603.5 | *1367.7* | 1037.5 |
| 80° | 436.2 | 448.0 | 530.6 | 778.2 | 1214.4 | 1662.4 | 1296.9 | 1084.7 | 1084.7 | *919.6* | 695.6 |
| 82.5° | 235.8 | 247.6 | 353.7 | 507.0 | 648.5 | 778.2 | 624.9 | 636.7 | 766.4 | *624.9* | 400.9 |
| 85° | 165.1 | 165.1 | 271.2 | 365.5 | 365.5 | 377.3 | 271.2 | 400.9 | 448.0 | *389.1* | 271.2 |
| 87.5° | 94.3 | 94.3 | 153.3 | 176.9 | 176.9 | 165.1 | 82.5 | 141.5 | 176.9 | *200.4* | 117.9 |
| 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: P1458272
CATALOG NUMBER: GLAN-SB9B-750-U-T3LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 | 5777.2 |
| 2.5° | 5800.8 | 5765.4 | 5694.7 | 5553.2 | 5482.5 | 5388.1 | 5305.6 | 5199.5 | 5175.9 | 5164.1 | 5117.0 |
| 5° | 5895.1 | 5824.4 | 5612.2 | 5305.6 | 5046.2 | 4798.6 | 4551.0 | 4409.6 | 4291.7 | 4232.7 | 4220.9 |
| 7.5° | 6130.9 | 5989.4 | 5600.4 | 5058.0 | 4574.6 | 4150.2 | 3784.7 | 3466.3 | 3301.3 | 3159.8 | 3171.6 |
| 10° | 6484.6 | 6260.6 | 5624.0 | 4822.2 | 4103.0 | 3419.2 | 2888.6 | 2428.8 | 2098.7 | 1945.4 | 1933.6 |
| 12.5° | 6956.2 | 6637.9 | 5706.5 | 4586.4 | 3525.3 | 2570.3 | 1898.2 | 1627.1 | 1556.3 | 1544.5 | 1532.7 |
| 15° | 7534.0 | 7085.9 | 5789.0 | 4279.9 | 2747.1 | 1780.3 | 1544.5 | 1485.6 | 1473.8 | 1462.0 | 1462.0 |
| 17.5° | 8229.6 | 7604.7 | 5836.2 | 3761.1 | 2004.3 | 1532.7 | 1450.2 | 1414.8 | 1403.0 | 1391.2 | 1391.2 |
| 20° | 9102.1 | 8182.4 | 5895.1 | 3100.8 | 1697.8 | 1473.8 | 1379.5 | 1332.3 | 1320.5 | 1320.5 | 1308.7 |
| 22.5° | 9962.8 | 8830.9 | 5848.0 | 2523.1 | 1638.8 | 1403.0 | 1296.9 | 1249.8 | 1226.2 | 1226.2 | 1214.4 |
| 25° | 10953.1 | 9491.2 | 5706.5 | 2275.5 | 1627.1 | 1344.1 | 1214.4 | 1143.7 | 1108.3 | 1096.5 | 1096.5 |
| 27.5° | 12085.0 | 10245.7 | 5482.5 | 2287.3 | 1627.1 | 1296.9 | 1108.3 | 1014.0 | 990.4 | 966.8 | 966.8 |
| 30° | 13381.9 | 11165.4 | 5317.4 | 2440.6 | 1650.6 | 1249.8 | 1014.0 | 896.1 | 860.7 | 837.1 | 848.9 |
| 32.5° | 14867.5 | 12191.1 | 5305.6 | 2688.2 | 1686.0 | 1179.0 | 907.8 | 778.2 | 742.8 | 731.0 | 742.8 |
| 35° | 16553.5 | 13464.5 | 5576.8 | 2876.8 | 1591.7 | 1025.8 | 778.2 | 672.0 | 636.7 | 636.7 | 648.5 |
| 37.5° | 18428.2 | 14926.5 | 5942.3 | 2829.7 | 1285.1 | 813.5 | 672.0 | 589.5 | 554.1 | 565.9 | 577.7 |
| 40° | 20137.8 | 16070.1 | 6001.2 | 2417.0 | 966.8 | 695.6 | 577.7 | 518.8 | 495.2 | 507.0 | 518.8 |
| 42.5° | 21434.7 | 16989.8 | 5435.3 | 1874.7 | 813.5 | 589.5 | 495.2 | 448.0 | 436.2 | 459.8 | 459.8 |
| 45° | 22484.0 | 17355.3 | 4539.2 | 1391.2 | 719.2 | 507.0 | 436.2 | 412.7 | 389.1 | 400.9 | 400.9 |
| 47.5° | 23580.5 | 17414.2 | 3702.1 | 1120.1 | 636.7 | 459.8 | 400.9 | 377.3 | 353.7 | 353.7 | 353.7 |
| 50° | 24641.6 | 17272.7 | 2829.7 | 990.4 | 589.5 | 412.7 | 365.5 | 341.9 | 318.3 | 306.5 | 306.5 |
| 52.5° | 24901.0 | 16140.9 | 2075.1 | 919.6 | 542.4 | 389.1 | 341.9 | 318.3 | 294.8 | 283.0 | 283.0 |
| 55° | *24181.8* | *13995.0* | *1627.1* | *825.3* | *495.2* | *353.7* | *318.3* | *294.8* | *259.4* | *247.6* | *247.6* |
| 57.5° | 21812.0 | 10670.2 | 1296.9 | 707.4 | 448.0 | 341.9 | 294.8 | 271.2 | 235.8 | 224.0 | 224.0 |
| 60° | 18734.7 | 7569.3 | 1049.3 | 577.7 | 412.7 | 306.5 | 271.2 | 235.8 | 212.2 | 188.6 | 188.6 |
| 62.5° | 15327.3 | 5435.3 | 848.9 | 483.4 | 389.1 | 271.2 | 247.6 | 212.2 | 165.1 | 129.7 | 129.7 |
| 65° | 11754.9 | 3902.6 | 660.3 | 389.1 | 353.7 | 235.8 | 212.2 | 176.9 | 129.7 | 94.3 | 94.3 |
| 67.5° | 7604.7 | 2523.1 | 495.2 | 341.9 | 271.2 | 200.4 | 165.1 | 141.5 | 117.9 | 82.5 | 70.7 |
| 70° | 4008.7 | 1473.8 | 365.5 | 294.8 | 200.4 | 153.3 | 141.5 | 117.9 | 94.3 | 59.0 | 59.0 |
| 72.5° | 2075.1 | 966.8 | 271.2 | 259.4 | 153.3 | 106.1 | 117.9 | 94.3 | 70.7 | 35.4 | 35.4 |
| 75° | 1332.3 | 648.5 | 200.4 | 212.2 | 94.3 | 82.5 | 82.5 | 59.0 | 35.4 | 23.6 | 11.8 |
| 77.5° | 860.7 | 436.2 | 141.5 | 176.9 | 59.0 | 47.2 | 47.2 | 23.6 | 11.8 | 0.0 | 0.0 |
| 80° | 507.0 | 271.2 | 94.3 | 117.9 | 23.6 | 23.6 | 11.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 259.4 | 141.5 | 47.2 | 47.2 | 11.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 165.1 | 70.7 | 11.8 | 11.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 82.5 | 23.6 | 11.8 | 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-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-6

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-750-U-5WQ

Data in this report applies to families of products including GSS-SB1A-750-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

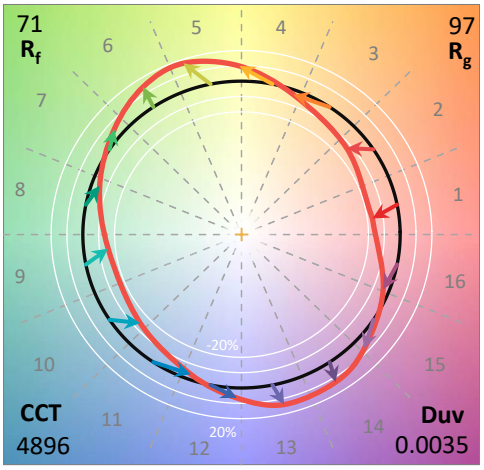
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-6 |
| 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-750-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 5000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 4896 |
| CIE u': | 0.2101 |
| CIE v': | 0.4901 |
| Duv: | 0.0035 |
| CIE x: | 0.3489 |
| CIE y: | 0.3618 |
| CIE z: | 0.2893 |
| Peak Wavelength (nm): | 443 |
| Dominant Wavelength (nm): | 570 |
| Purity: | 13.25435 |
| Rf: | 70.7 |
| Rg: | 96.8 |

| | |
|---|---|
| CRI (Ra): | 70.2 |
| R1: | 68.1 |
| R2: | 73.9 |
| R3: | 79.4 |
| R4: | 72.1 |
| R5: | 69.2 |
| R6: | 65.7 |
| R7: | 78.1 |
| R8: | 55.3 |
| R9: | -35.1 |
| R10: | 39.3 |
| R11: | 71.1 |
| R12: | 43.8 |
| R13: | 68.1 |
| R14: | 88.4 |
| R15: | 59.7 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-6

| 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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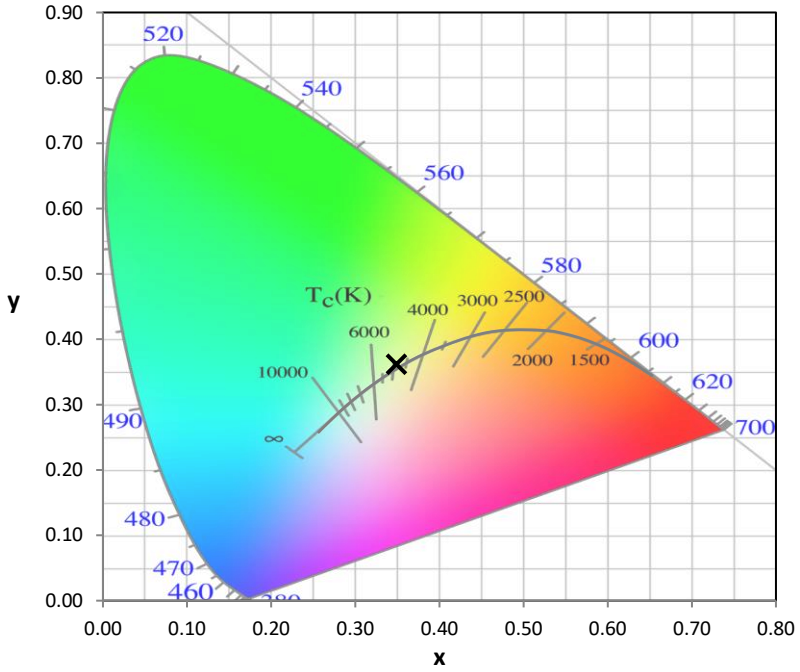
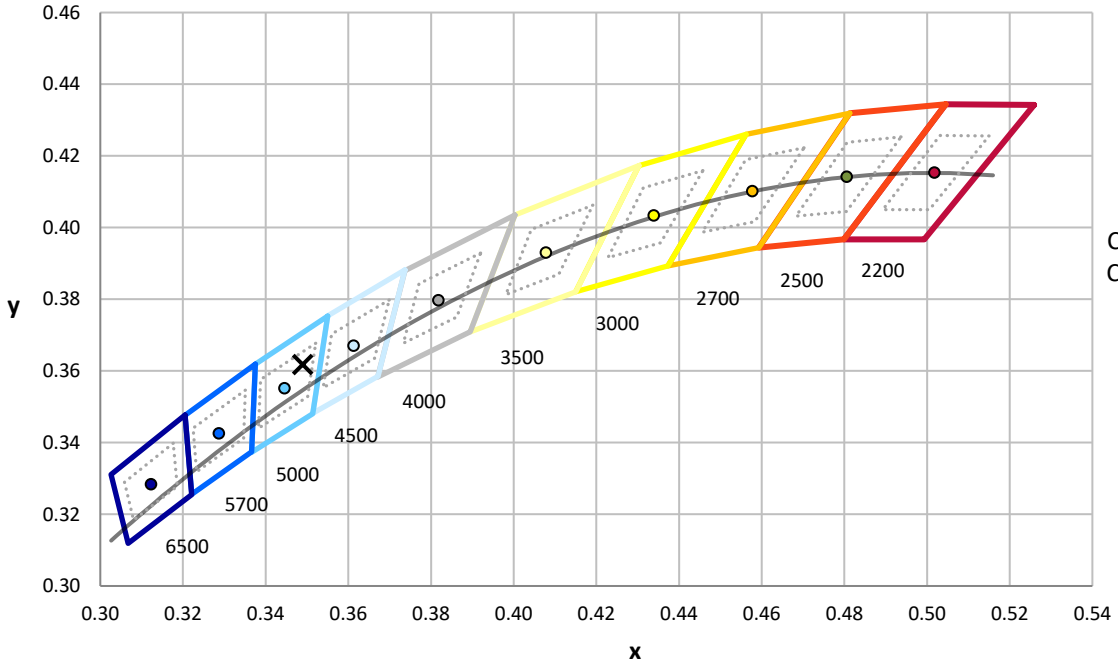
## CIE 1931 Chromaticity Diagram




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




CCT = 4896K
CIE x = 0.3489
CIE y = 0.3618
Duv = 0.0035

Point lies inside the ANSI 5000K 4-step quadrangle

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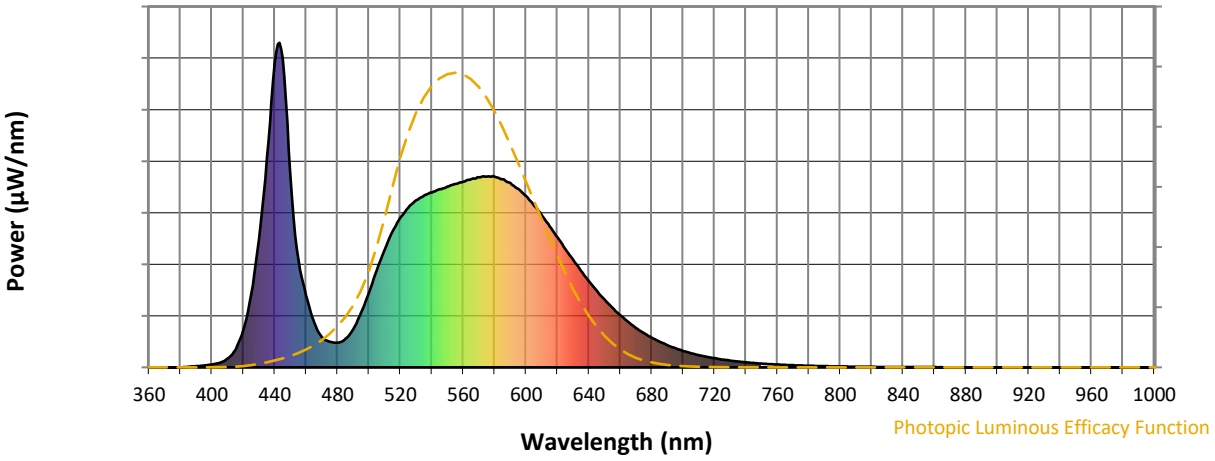
## Photopic Flux vs. Wavelength




## 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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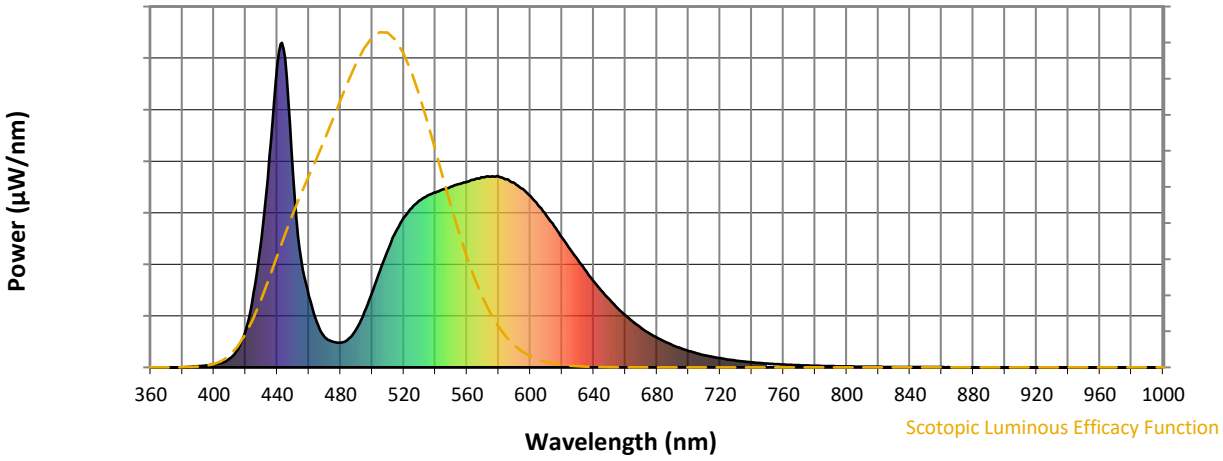
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.7**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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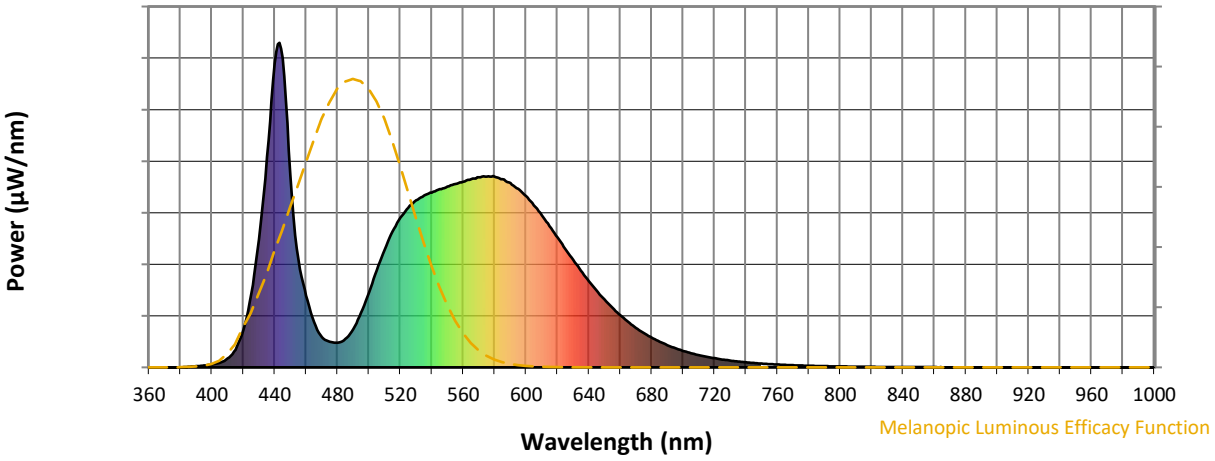
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 3.37**

| 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 | 118 | NR | 620 | 401 | NR | 750 | 12 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 168 | NR | 625 | 365 | NR | 755 | 10 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 230 | NR | 630 | 331 | NR | 760 | 9 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 299 | NR | 635 | 298 | NR | 765 | 8 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 362 | NR | 640 | 266 | NR | 770 | 6 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 418 | NR | 645 | 236 | NR | 775 | 6 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 461 | NR | 650 | 209 | NR | 780 | 5 | NR | 910 | 0 | NR |
| 395 | 6 | NR | 525 | 491 | NR | 655 | 184 | NR | 785 | 4 | NR | 915 | 0 | NR |
| 400 | 9 | NR | 530 | 514 | NR | 660 | 160 | NR | 790 | 4 | NR | 920 | 0 | NR |
| 405 | 14 | NR | 535 | 530 | NR | 665 | 140 | NR | 795 | 3 | NR | 925 | 0 | NR |
| 410 | 27 | NR | 540 | 539 | NR | 670 | 122 | NR | 800 | 3 | NR | 930 | 0 | NR |
| 415 | 55 | NR | 545 | 549 | NR | 675 | 106 | NR | 805 | 2 | NR | 935 | 0 | NR |
| 420 | 115 | NR | 550 | 557 | NR | 680 | 92 | NR | 810 | 2 | NR | 940 | 0 | NR |
| 425 | 226 | NR | 555 | 565 | NR | 685 | 79 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 395 | NR | 560 | 572 | NR | 690 | 68 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 648 | NR | 565 | 580 | NR | 695 | 59 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 937 | NR | 570 | 586 | NR | 700 | 51 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 953 | NR | 575 | 588 | NR | 705 | 44 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 591 | NR | 580 | 588 | NR | 710 | 38 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 334 | NR | 585 | 580 | NR | 715 | 32 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 221 | NR | 590 | 568 | NR | 720 | 28 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 140 | NR | 595 | 550 | NR | 725 | 24 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 93 | NR | 600 | 527 | NR | 730 | 21 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 79 | NR | 605 | 499 | NR | 735 | 18 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 469 | NR | 740 | 15 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 87 | NR | 615 | 435 | NR | 745 | 13 | NR | 875 | 0 | NR | | | |

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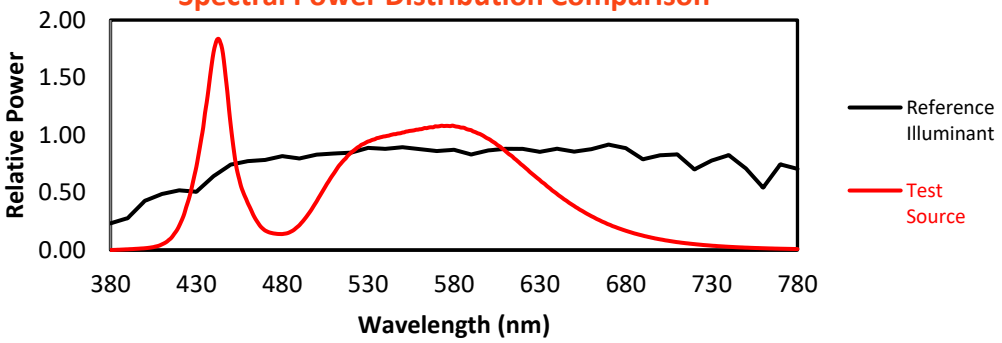
# TM-30-18

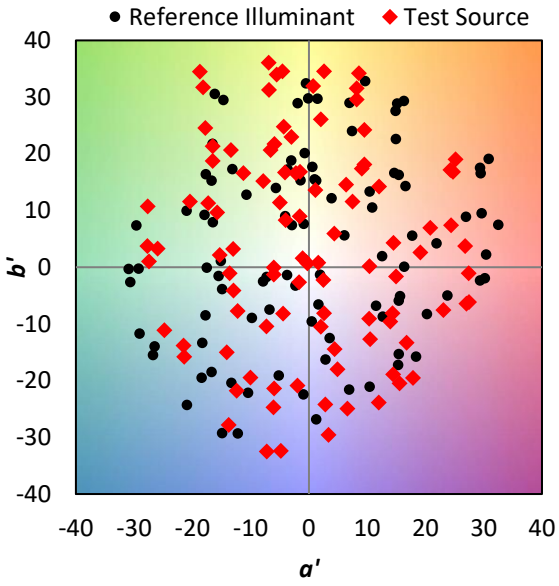
## Summary

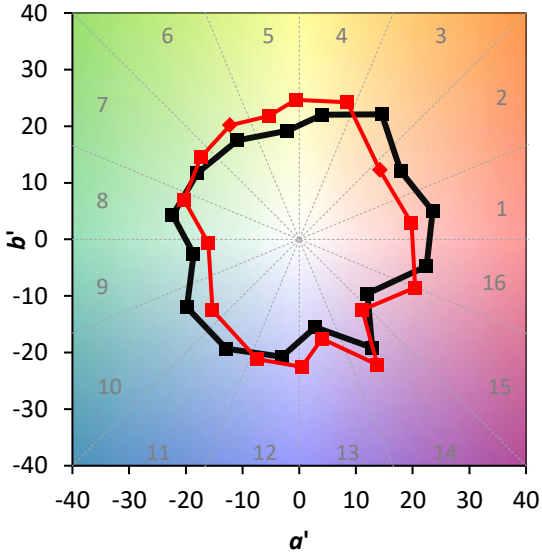
$R_f$ = 70.7
$R_g$ = 96.8
CIE $R_a$ = 70.2
$R_9$ = -35.1

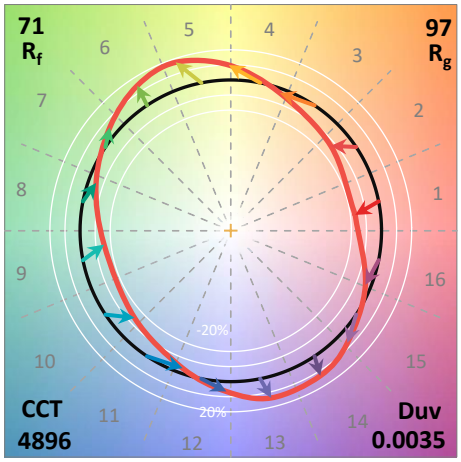
## Spectral Power Distribution Comparison

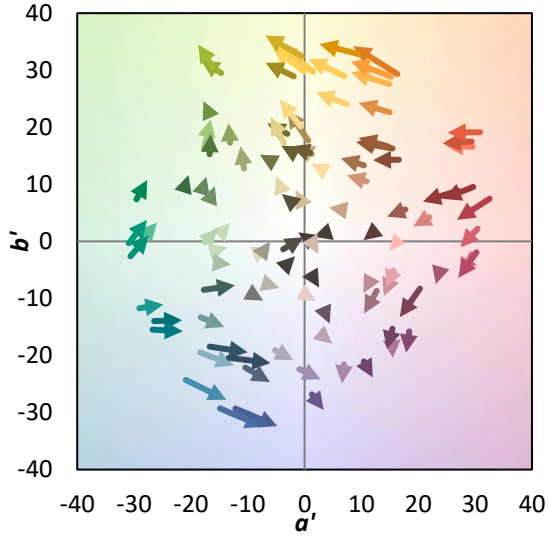



## Color Vector Graphics



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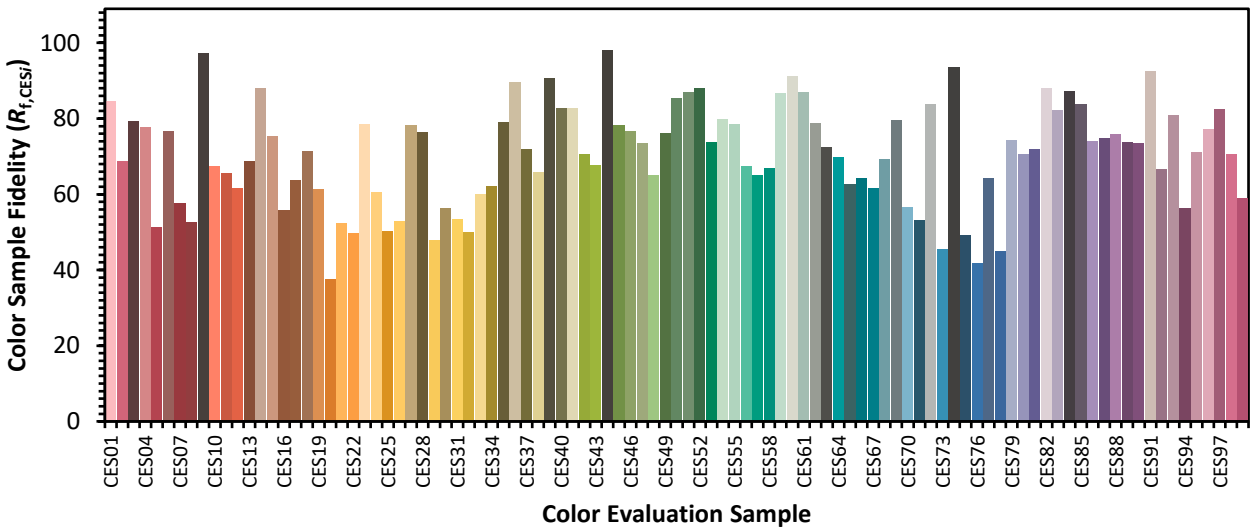
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 53 | CES51 = 87 | CES76 = 42 |
| CES02 = 59 | CES27 = 78 | CES52 = 88 | CES77 = 64 |
| CES03 = 30 | CES28 = 76 | CES53 = 74 | CES78 = 45 |
| CES04 = 69 | CES29 = 48 | CES54 = 80 | CES79 = 74 |
| CES05 = 46 | CES30 = 56 | CES55 = 79 | CES80 = 71 |
| CES06 = 50 | CES31 = 54 | CES56 = 68 | CES81 = 72 |
| CES07 = 39 | CES32 = 50 | CES57 = 65 | CES82 = 88 |
| CES08 = 38 | CES33 = 60 | CES58 = 67 | CES83 = 82 |
| CES09 = 29 | CES34 = 62 | CES59 = 87 | CES84 = 87 |
| CES10 = 72 | CES35 = 79 | CES60 = 91 | CES85 = 84 |
| CES11 = 56 | CES36 = 90 | CES61 = 87 | CES86 = 74 |
| CES12 = 61 | CES37 = 72 | CES62 = 79 | CES87 = 75 |
| CES13 = 41 | CES38 = 66 | CES63 = 72 | CES88 = 76 |
| CES14 = 74 | CES39 = 91 | CES64 = 70 | CES89 = 74 |
| CES15 = 70 | CES40 = 83 | CES65 = 63 | CES90 = 73 |
| CES16 = 46 | CES41 = 83 | CES66 = 64 | CES91 = 92 |
| CES17 = 49 | CES42 = 70 | CES67 = 62 | CES92 = 67 |
| CES18 = 55 | CES43 = 68 | CES68 = 69 | CES93 = 81 |
| CES19 = 71 | CES44 = 98 | CES69 = 80 | CES94 = 56 |
| CES20 = 64 | CES45 = 78 | CES70 = 56 | CES95 = 71 |
| CES21 = 85 | CES46 = 77 | CES71 = 53 | CES96 = 77 |
| CES22 = 77 | CES47 = 73 | CES72 = 84 | CES97 = 82 |
| CES23 = 91 | CES48 = 65 | CES73 = 46 | CES98 = 71 |
| CES24 = 90 | CES49 = 76 | CES74 = 94 | CES99 = 59 |
| CES25 = 71 | CES50 = 85 | CES75 = 49 | |



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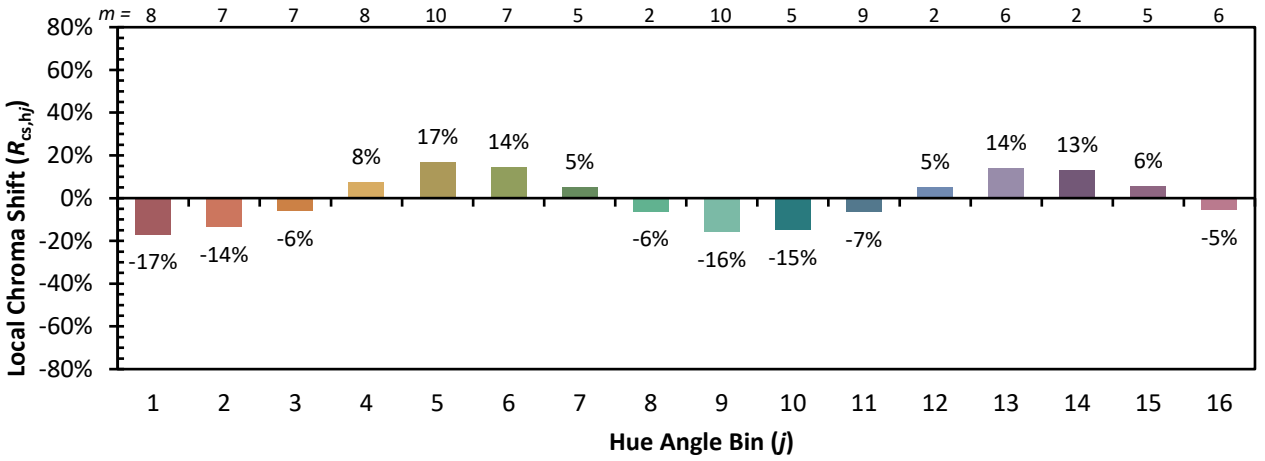
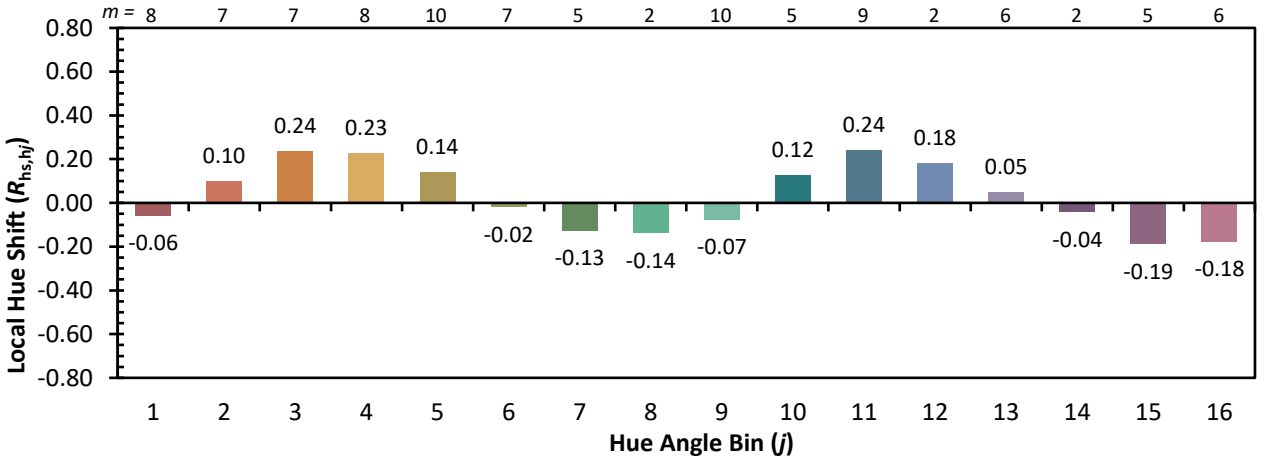
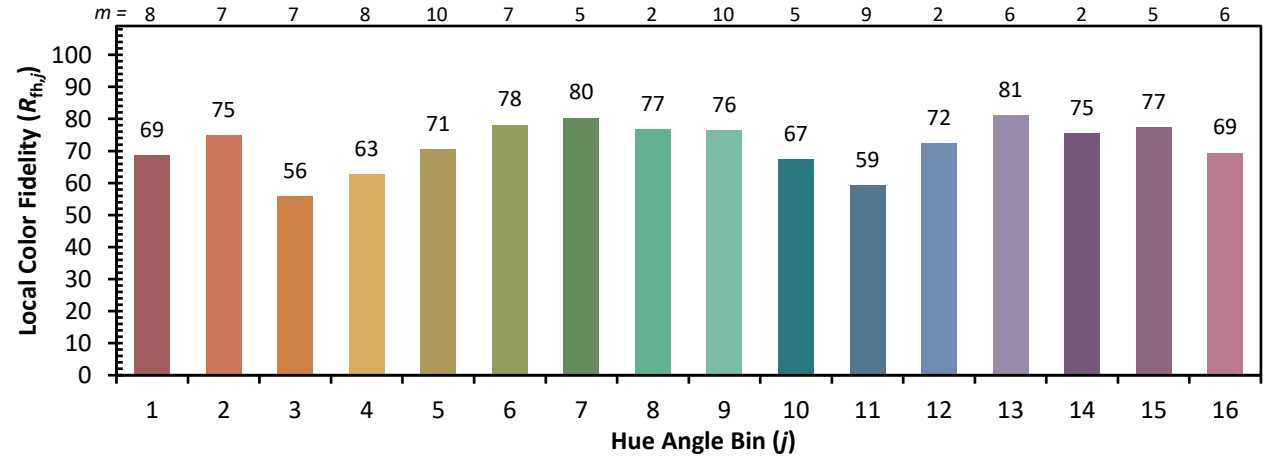
## Color Rendition by Hue-Angle Bin



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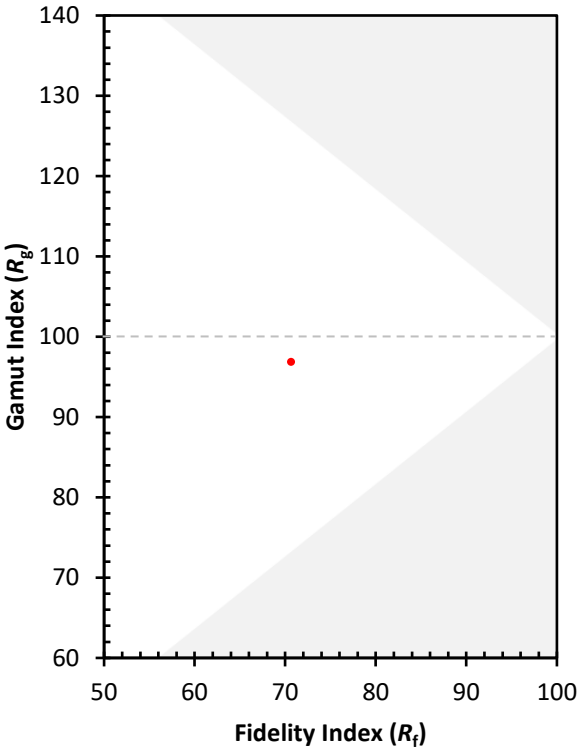
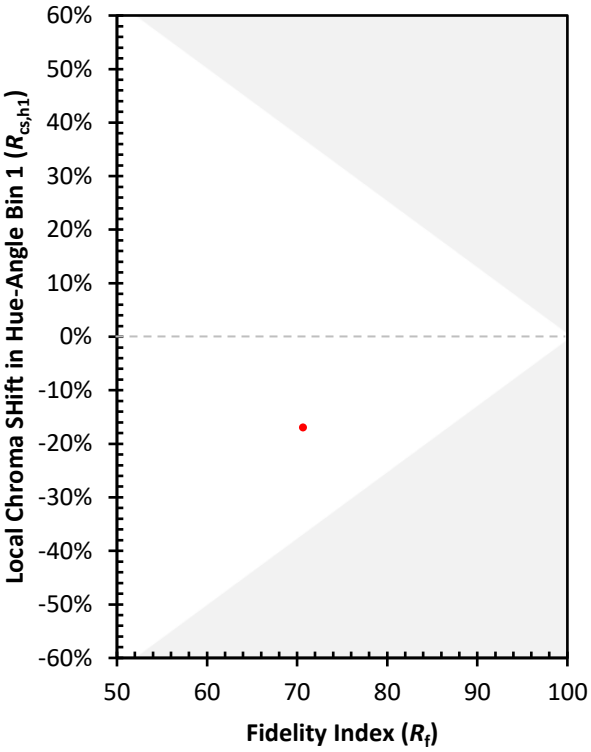
## Measure Comparisons




(END OF REPORT)