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: P1457617

Luminaire Tested: GLAN-SB7C-730-U-T2LG-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: | P1457617 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB7C-730-U-T2LG-HSS |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 7xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE II LOW GLARE WITH HOUSE SIDE SHIELD |
| Light Source: | (182) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 38570.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 110.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B3 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 350.5 |
| 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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REPORT NUMBER: P1457617
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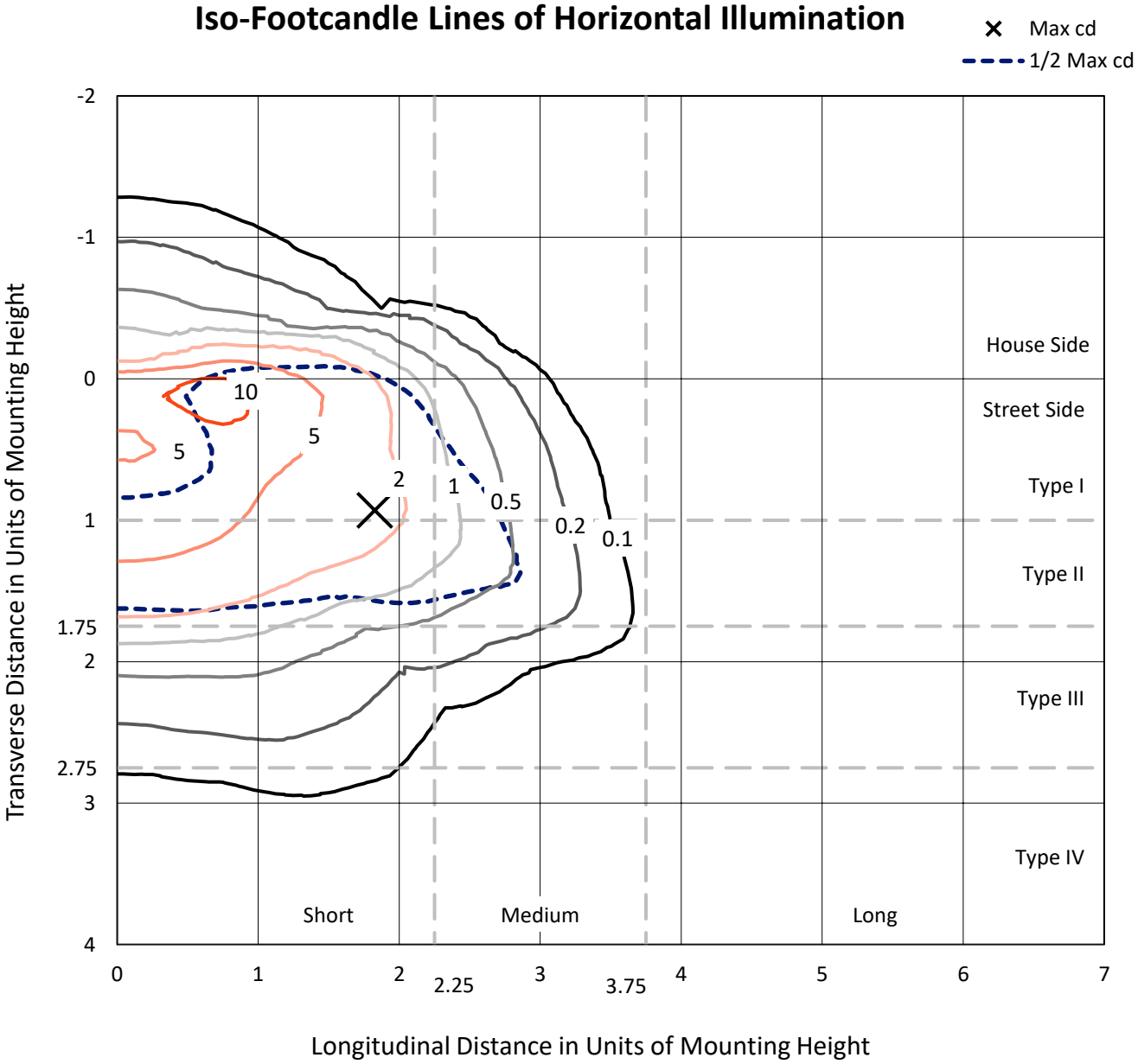
## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 12.3 fc
Type II - Short - N/A

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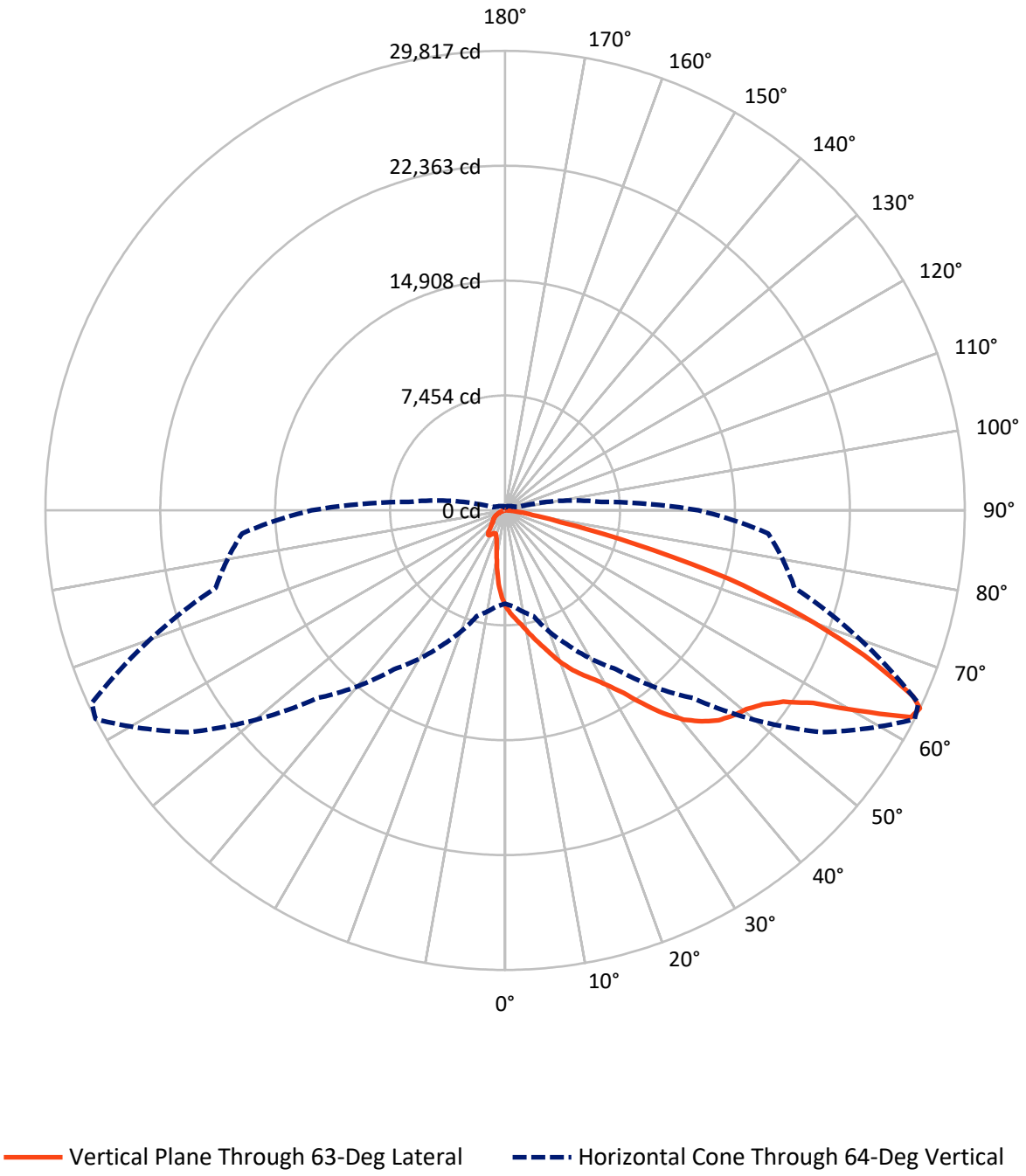
## Luminous Intensity Polar Plot



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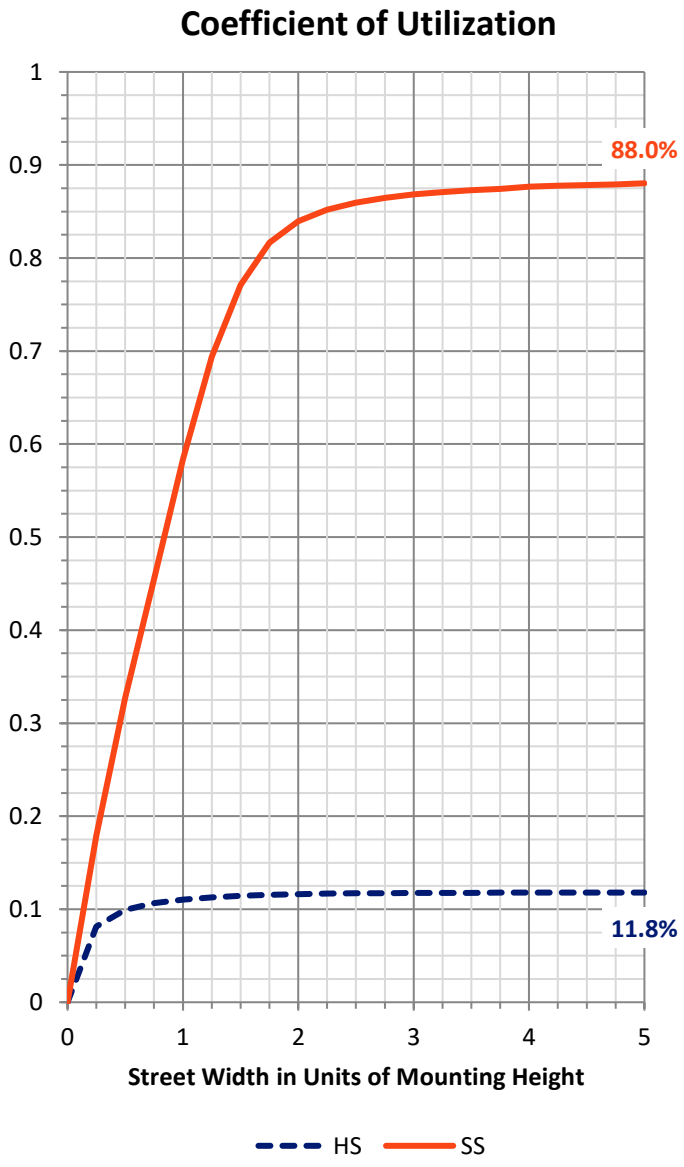
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 4577.1 | 0.0 | 4577.1 |
| | % Fixture | 11.9 | 0.0 | 11.9 |
| **Street Side** | Lumens | 33993.5 | 0.0 | 33993.5 |
| | % Fixture | 88.1 | 0.0 | 88.1 |
| **Total** | Lumens | 38570.5 | 0.0 | 38570.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 525.2 | 1.4 |
| 10°-20° | 1475.8 | 3.8 |
| 20°-30° | 2628.4 | 6.8 |
| 30°-40° | 5020.2 | 13.0 |
| 40°-50° | 8321.4 | 21.6 |
| 50°-60° | 10372.6 | 26.9 |
| 60°-70° | 7734.5 | 20.1 |
| 70°-80° | 2218.2 | 5.8 |
| 80°-90° | 274.3 | 0.7 |
| 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° | 38570.5 | 100.0 |
| 0°-180° | 38570.5 | 100.0 |



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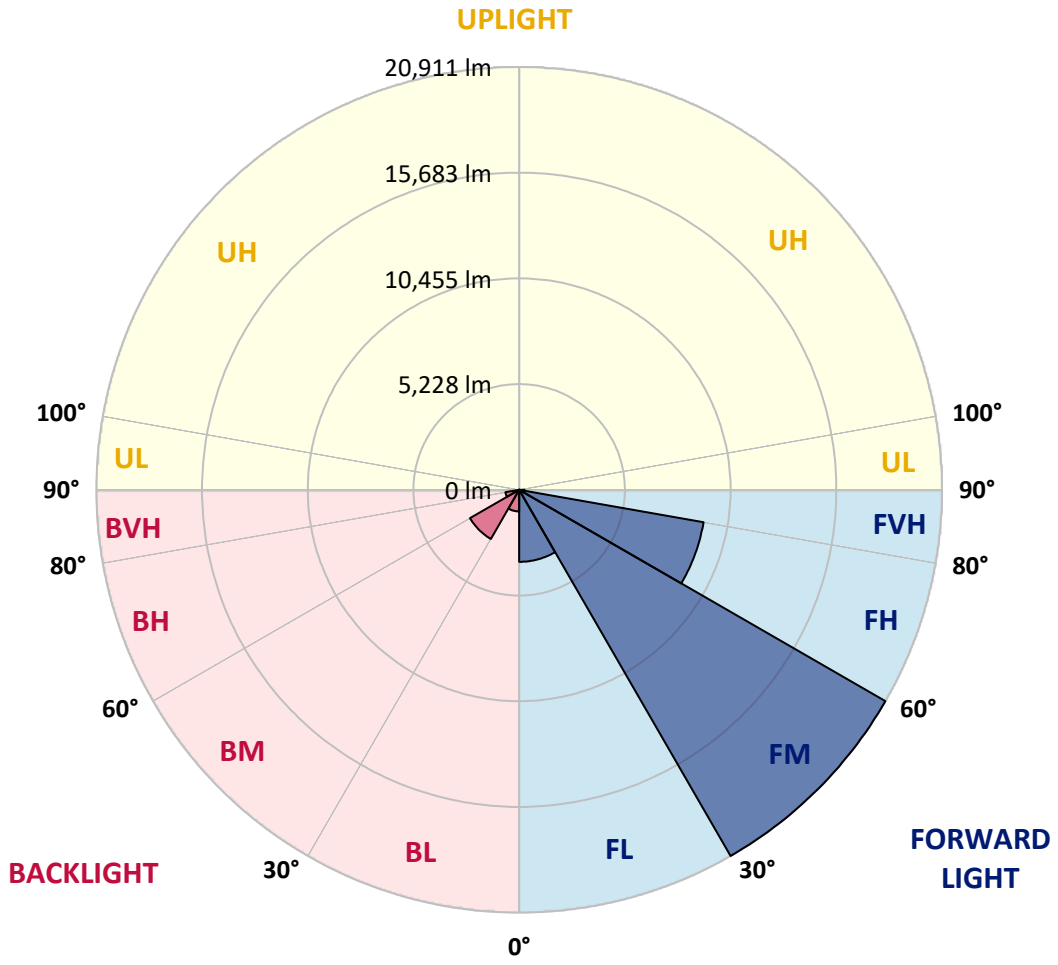
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 3561.5 | 9.2 | | | |
| FM | (30°-60°) | 20910.7 | 54.2 | | | |
| FH | (60°-80°) | 9260.5 | 24.0 | | | G4/12000 |
| FVH | (80°-90°) | 260.8 | 0.7 | | | G3/500 |
| BL | (0°-30°) | 1067.8 | 2.8 | B3/2500 | | |
| BM | (30°-60°) | 2803.5 | 7.3 | B3/5000 | | |
| BH | (60°-80°) | 692.2 | 1.8 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 13.5 | 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 II Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 63° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | *6236.4* | 6236.4 | 6236.4 | 6236.4 |
| 2.5° | 6988.5 | 6965.3 | 6942.2 | 6907.5 | 6861.2 | 6814.9 | 6757.1 | *6676.1* | 6641.4 | 6525.7 | 6386.8 |
| 5° | 7347.1 | 7347.1 | 7335.6 | 7312.4 | 7289.3 | 7243.0 | 7173.6 | *7069.5* | 7023.2 | 6861.2 | 6618.2 |
| 7.5° | 7439.7 | 7451.3 | 7486.0 | 7532.3 | 7601.7 | 7590.1 | 7590.1 | *7474.4* | 7451.3 | 7277.7 | 6953.8 |
| 10° | 7277.7 | 7289.3 | 7381.9 | 7509.1 | 7717.4 | 7914.1 | 8052.9 | *7983.5* | 7948.8 | 7775.2 | 7370.3 |
| 12.5° | 7046.3 | 7046.3 | 7196.7 | 7393.4 | 7717.4 | 8087.6 | 8492.6 | *8562.0* | 8573.6 | 8376.9 | 7890.9 |
| 15° | 6444.7 | 6467.8 | 6710.8 | 7104.2 | 7636.4 | 8214.9 | 8897.6 | *9163.7* | 9233.1 | 9105.8 | 8527.3 |
| 17.5° | 5646.3 | 5669.5 | 5912.4 | 6444.7 | 7243.0 | 8214.9 | 9244.7 | *9857.9* | 9950.5 | 9973.6 | 9337.2 |
| 20° | 5310.8 | 5310.8 | 5449.6 | 5854.6 | 6687.6 | 7995.1 | 9452.9 | *10598.4* | 10806.7 | 11061.2 | 10228.2 |
| 22.5° | 5357.1 | 5357.1 | 5438.0 | 5669.5 | 6340.5 | 7694.3 | 9580.2 | *11257.9* | 11686.0 | 12333.9 | 11373.6 |
| 25° | 5611.6 | 5611.6 | 5681.0 | 5831.4 | 6375.2 | 7648.0 | 9823.2 | *11848.0* | 12530.6 | 13757.1 | 12681.1 |
| 27.5° | 6016.6 | 6005.0 | 6062.8 | 6213.3 | 6710.8 | 7867.8 | 10228.2 | *12438.1* | 13201.7 | 15353.8 | 14185.2 |
| 30° | 6606.6 | 6571.9 | 6595.1 | 6768.6 | 7254.6 | 8376.9 | 10818.2 | *13190.2* | 13965.4 | 17100.9 | 15851.3 |
| 32.5° | 7971.9 | 7960.4 | 7624.8 | 7532.3 | 8052.9 | 9198.4 | 11628.2 | *14127.3* | 14995.1 | 18952.2 | 17563.7 |
| 35° | 10436.4 | 10598.4 | 10124.0 | 8909.1 | 9013.3 | 10297.6 | 12785.2 | *15400.1* | 16198.4 | 20919.1 | 19426.5 |
| 37.5° | 12935.6 | 12935.6 | 12738.9 | 11304.2 | 10575.3 | 11512.5 | 14034.8 | *16707.5* | 17540.6 | 22504.2 | 21219.9 |
| 40° | 14914.1 | 15018.3 | 14786.9 | 13710.8 | 12762.0 | 12900.9 | 15284.4 | *17853.0* | 18616.6 | 23476.2 | 22492.7 |
| 42.5° | 16383.6 | 16360.4 | 16267.9 | 15562.1 | 15029.8 | 14717.4 | 16418.3 | *18709.2* | 19438.1 | 23973.7 | 23291.0 |
| 45° | 17968.7 | 17968.7 | 17841.4 | 17262.9 | 16823.2 | 16557.1 | 17262.9 | *19426.5* | 20190.2 | 24274.5 | 23788.6 |
| 47.5° | 19623.2 | 19600.1 | 19472.8 | 18836.5 | 18362.1 | 17968.7 | 18119.1 | *19889.4* | 20653.0 | 24077.8 | 23869.5 |
| 50° | 20028.2 | 20005.1 | 20294.3 | 20317.5 | 19889.4 | 19137.3 | 18801.7 | *20282.7* | 20953.8 | 24089.4 | 24124.1 |
| 52.5° | 19553.8 | 19692.7 | 20120.8 | 20641.4 | 21127.4 | 20340.6 | 19530.7 | *20907.5* | 21601.8 | 24413.3 | 24760.5 |
| 55° | 18373.6 | 18431.5 | 19253.0 | 20086.1 | 21219.9 | 21497.6 | 20699.3 | *21902.6* | 22515.8 | 24725.7 | 25327.4 |
| 57.5° | 16175.3 | 16395.1 | 17274.5 | 18720.8 | 20444.7 | 21601.8 | 22735.7 | *23568.7* | 24031.5 | 24853.0 | 25015.0 |
| 60° | 12206.7 | 12322.4 | 14231.5 | 16105.9 | 18836.5 | 20768.7 | 24633.2 | *26391.9* | 26334.0 | 23418.3 | 22828.2 |
| 62.5° | 7428.1 | 7532.3 | 8897.6 | 11871.1 | 15307.5 | 19033.2 | 25269.6 | *29550.6* | 29238.2 | 21000.1 | 19218.3 |
| 64° | *6051.3* | *6248.0* | *7092.6* | *9638.1* | *12588.5* | *17216.6* | *25084.4* | *29816.7* | *29573.7* | *19438.1* | *17124.1* |
| 65° | 5171.9 | 5438.0 | 6305.8 | 8365.3 | 10702.5 | 15261.2 | 24575.3 | *29076.2* | 28914.2 | 18489.4 | 15388.5 |
| 67.5° | 3251.3 | 3378.5 | 4662.8 | 6502.5 | 7370.3 | 9765.3 | 21127.4 | *25142.3* | 25431.5 | 16476.1 | 11350.5 |
| 70° | 2418.2 | 2476.0 | 3205.0 | 5033.1 | 5750.4 | 5681.0 | 14509.2 | *20363.7* | 20433.2 | 13178.6 | 6849.6 |
| 72.5° | 1758.7 | 1770.3 | 2244.6 | 3725.6 | 4500.8 | 3876.1 | 7648.0 | *15134.0* | 14636.4 | 7717.4 | 3737.2 |
| 75° | 1168.6 | 1214.9 | 1573.6 | 2626.5 | 3505.8 | 2846.3 | 3482.7 | *8619.9* | 8469.5 | 3771.9 | 2140.5 |
| 77.5° | 856.2 | 867.8 | 1064.5 | 1758.7 | 2753.7 | 2094.2 | 2105.8 | *3714.1* | 3829.8 | 2244.6 | 1353.7 |
| 80° | 486.0 | 509.1 | 694.2 | 1076.0 | 1793.4 | 1434.7 | 1180.2 | *1793.4* | 2059.5 | 1527.3 | 902.5 |
| 82.5° | 289.3 | 312.4 | 497.5 | 705.8 | 1226.5 | 590.1 | 601.7 | *983.5* | 1226.5 | 1099.2 | 486.0 |
| 85° | 173.6 | 185.1 | 312.4 | 381.8 | 728.9 | 393.4 | 219.8 | *486.0* | 636.4 | 647.9 | 266.1 |
| 87.5° | 115.7 | 115.7 | 173.6 | 162.0 | 208.3 | 185.1 | 92.6 | *127.3* | 162.0 | 219.8 | 104.1 |
| 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: P1457617
CATALOG NUMBER: GLAN-SB7C-730-U-T2LG-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 | 6236.4 |
| 2.5° | 6271.1 | 6201.7 | 5993.4 | 5715.7 | 5461.2 | 5264.5 | 5021.5 | 4859.5 | 4709.1 | 4709.1 | 4581.8 |
| 5° | 6421.5 | 6236.4 | 5727.3 | 5090.9 | 4408.3 | 3760.3 | 3343.8 | 2881.0 | 2730.6 | 2603.3 | 2626.5 |
| 7.5° | 6676.1 | 6340.5 | 5438.0 | 4292.6 | 3205.0 | 2510.8 | 2047.9 | 1839.7 | 1747.1 | 1689.3 | 1700.8 |
| 10° | 6988.5 | 6525.7 | 5090.9 | 3482.7 | 2360.3 | 1839.7 | 1619.8 | 1538.9 | 1504.1 | 1492.6 | 1492.6 |
| 12.5° | 7416.6 | 6745.5 | 4743.8 | 2800.0 | 1862.8 | 1585.1 | 1469.4 | 1423.1 | 1388.4 | 1365.3 | 1365.3 |
| 15° | 7925.7 | 7023.2 | 4338.9 | 2302.5 | 1631.4 | 1457.9 | 1365.3 | 1319.0 | 1272.7 | 1261.2 | 1261.2 |
| 17.5° | 8573.6 | 7312.4 | 3980.2 | 1978.5 | 1515.7 | 1365.3 | 1272.7 | 1214.9 | 1180.2 | 1168.6 | 1168.6 |
| 20° | 9291.0 | 7671.1 | 3621.5 | 1793.4 | 1434.7 | 1272.7 | 1180.2 | 1133.9 | 1099.2 | 1076.0 | 1087.6 |
| 22.5° | 10205.0 | 8122.4 | 3390.1 | 1700.8 | 1365.3 | 1191.7 | 1099.2 | 1052.9 | 1018.2 | 995.0 | 1006.6 |
| 25° | 11211.6 | 8689.3 | 3262.8 | 1700.8 | 1319.0 | 1133.9 | 1029.8 | 983.5 | 948.8 | 925.6 | 925.6 |
| 27.5° | 12438.1 | 9325.7 | 3274.4 | 1770.3 | 1307.4 | 1087.6 | 971.9 | 925.6 | 890.9 | 856.2 | 856.2 |
| 30° | 13791.8 | 10077.7 | 3401.7 | 1897.5 | 1330.6 | 1041.3 | 925.6 | 856.2 | 833.1 | 798.4 | 798.4 |
| 32.5° | 15226.5 | 10945.5 | 3725.6 | 2059.5 | 1307.4 | 983.5 | 856.2 | 798.4 | 763.6 | 740.5 | 740.5 |
| 35° | 16742.2 | 11929.0 | 4130.6 | 2128.9 | 1191.7 | 902.5 | 798.4 | 740.5 | 717.4 | 705.8 | 694.2 |
| 37.5° | 18188.5 | 12785.2 | 4350.4 | 1990.1 | 1041.3 | 833.1 | 728.9 | 671.1 | 659.5 | 636.4 | 636.4 |
| 40° | 19310.8 | 13491.0 | 4223.2 | 1700.8 | 960.3 | 763.6 | 671.1 | 613.2 | 590.1 | 566.9 | 566.9 |
| 42.5° | 19970.4 | 13745.5 | 3760.3 | 1446.3 | 902.5 | 694.2 | 613.2 | 555.4 | 532.2 | 520.7 | 520.7 |
| 45° | 20352.2 | 13710.8 | 3216.5 | 1295.9 | 844.6 | 636.4 | 555.4 | 520.7 | 486.0 | 474.4 | 462.8 |
| 47.5° | 20340.6 | 13352.1 | 2823.2 | 1168.6 | 786.8 | 590.1 | 520.7 | 486.0 | 451.2 | 439.7 | 439.7 |
| 50° | 20259.6 | 12819.9 | 2383.5 | 1076.0 | 740.5 | 555.4 | 486.0 | 462.8 | 428.1 | 416.5 | 405.0 |
| 52.5° | 20456.3 | 12519.1 | 1990.1 | 1018.2 | 682.6 | 532.2 | 474.4 | 439.7 | 393.4 | 381.8 | 381.8 |
| 55° | 20699.3 | 12345.5 | 1596.7 | 960.3 | 636.4 | 520.7 | 451.2 | 416.5 | 370.2 | 358.7 | 358.7 |
| 57.5° | 19993.5 | 11686.0 | 1319.0 | 867.8 | 578.5 | 497.5 | 428.1 | 405.0 | 358.7 | 324.0 | 324.0 |
| 60° | 17772.0 | 9661.2 | 1087.6 | 763.6 | 532.2 | 462.8 | 405.0 | 370.2 | 324.0 | 277.7 | 277.7 |
| 62.5° | 14451.3 | 7370.3 | 902.5 | 647.9 | 497.5 | 428.1 | 370.2 | 335.5 | 277.7 | 219.8 | 219.8 |
| 64° | *12553.8* | *6259.5* | *809.9* | *566.9* | *474.4* | *393.4* | *335.5* | *300.8* | *243.0* | *185.1* | *173.6* |
| 65° | 11257.9 | 5530.6 | 752.1 | 532.2 | 462.8 | 370.2 | 324.0 | 289.3 | 219.8 | 173.6 | 162.0 |
| 67.5° | 7925.7 | 3714.1 | 601.7 | 439.7 | 405.0 | 312.4 | 277.7 | 243.0 | 196.7 | 150.4 | 138.8 |
| 70° | 4616.6 | 2105.8 | 474.4 | 370.2 | 312.4 | 243.0 | 231.4 | 219.8 | 173.6 | 115.7 | 115.7 |
| 72.5° | 2510.8 | 1052.9 | 358.7 | 300.8 | 243.0 | 173.6 | 196.7 | 173.6 | 138.8 | 92.6 | 81.0 |
| 75° | 1538.9 | 647.9 | 266.1 | 219.8 | 162.0 | 127.3 | 150.4 | 127.3 | 81.0 | 57.9 | 46.3 |
| 77.5° | 1029.8 | 416.5 | 196.7 | 150.4 | 104.1 | 81.0 | 104.1 | 69.4 | 34.7 | 11.6 | 11.6 |
| 80° | 636.4 | 289.3 | 127.3 | 92.6 | 57.9 | 34.7 | 23.1 | 11.6 | 11.6 | 0.0 | 0.0 |
| 82.5° | 277.7 | 185.1 | 69.4 | 46.3 | 23.1 | 11.6 | 11.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 150.4 | 57.9 | 23.1 | 11.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 46.3 | 23.1 | 11.6 | 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: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

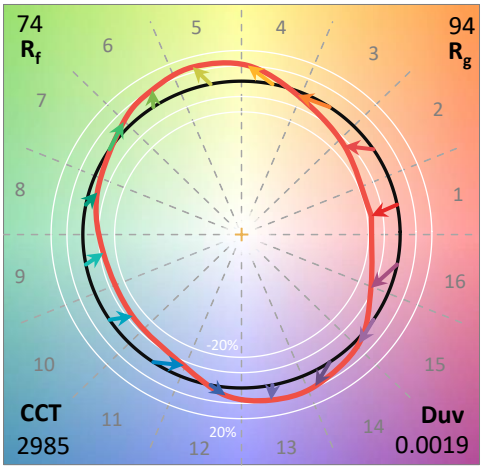
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-4 |
| 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-730-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2985 |
| CIE u': | 0.2504 |
| CIE v': | 0.5243 |
| Duv: | 0.0019 |
| CIE x: | 0.4408 |
| CIE y: | 0.4101 |
| CIE z: | 0.1491 |
| Peak Wavelength (nm): | 595 |
| Dominant Wavelength (nm): | 582 |
| Purity: | 55.41818 |
| Rf: | 73.8 |
| Rg: | 94.4 |

| | |
|---|---|
| CRI (Ra): | 70.8 |
| R1: | 66.3 |
| R2: | 80.6 |
| R3: | 94.5 |
| R4: | 68.2 |
| R5: | 66.5 |
| R6: | 74.7 |
| R7: | 76.2 |
| R8: | 39.6 |
| R9: | -43.2 |
| R10: | 57.6 |
| R11: | 64.8 |
| R12: | 53.5 |
| R13: | 68.7 |
| R14: | 97.0 |
| R15: | 56.4 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| 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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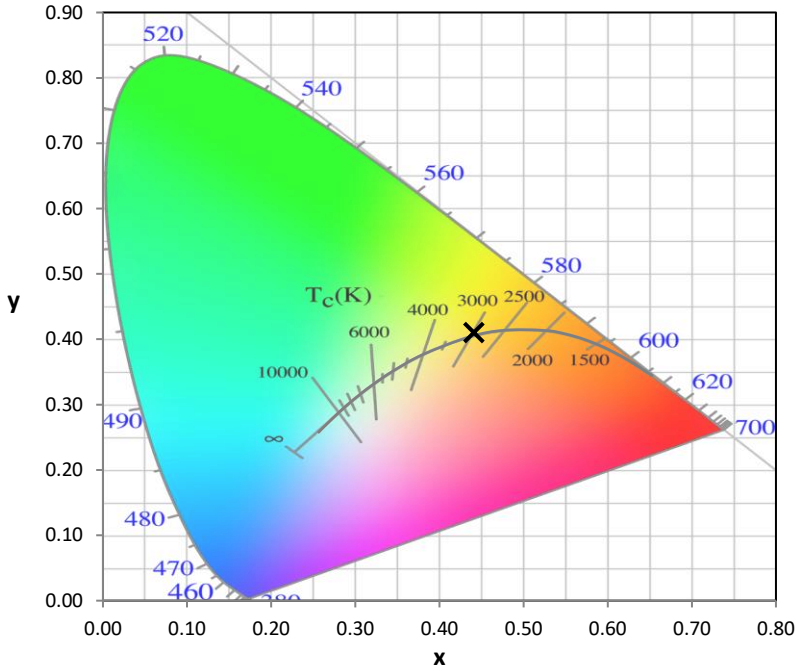
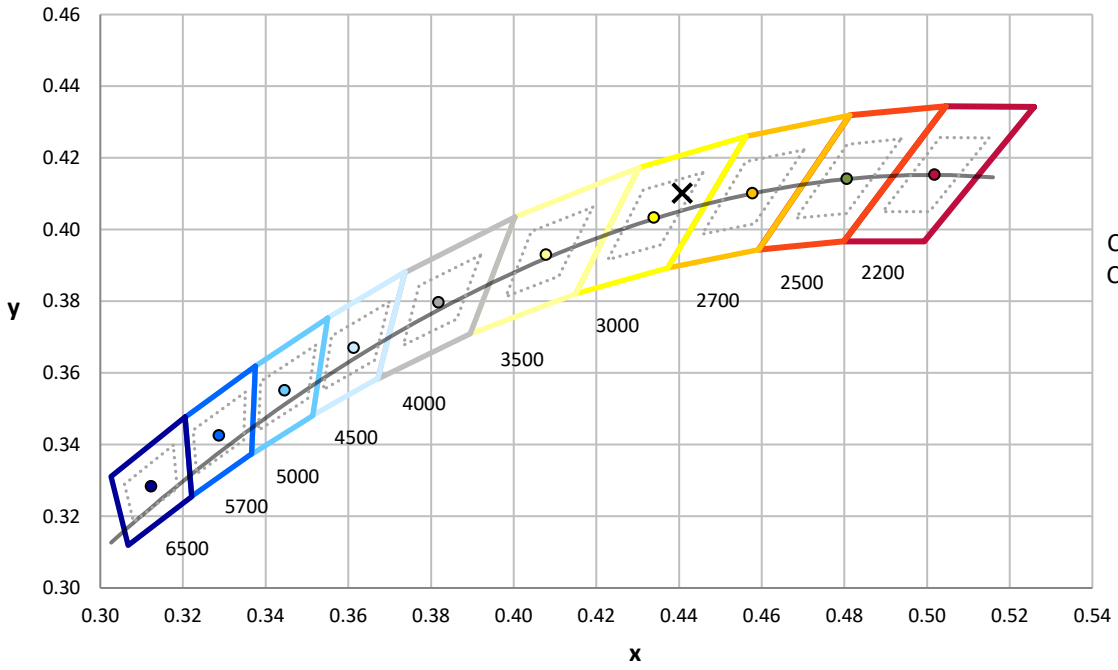
## CIE 1931 Chromaticity Diagram




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




CCT = 2985K
CIE x = 0.4408
CIE y = 0.4101
Duv = 0.0019

Point lies inside the ANSI 3000K 4-step quadrangle

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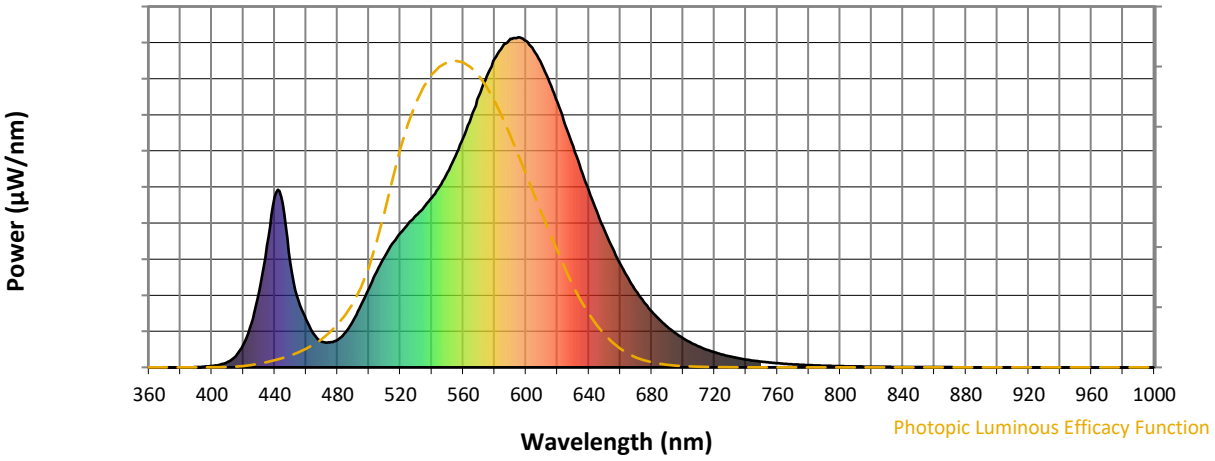
## Photopic Flux vs. Wavelength




## 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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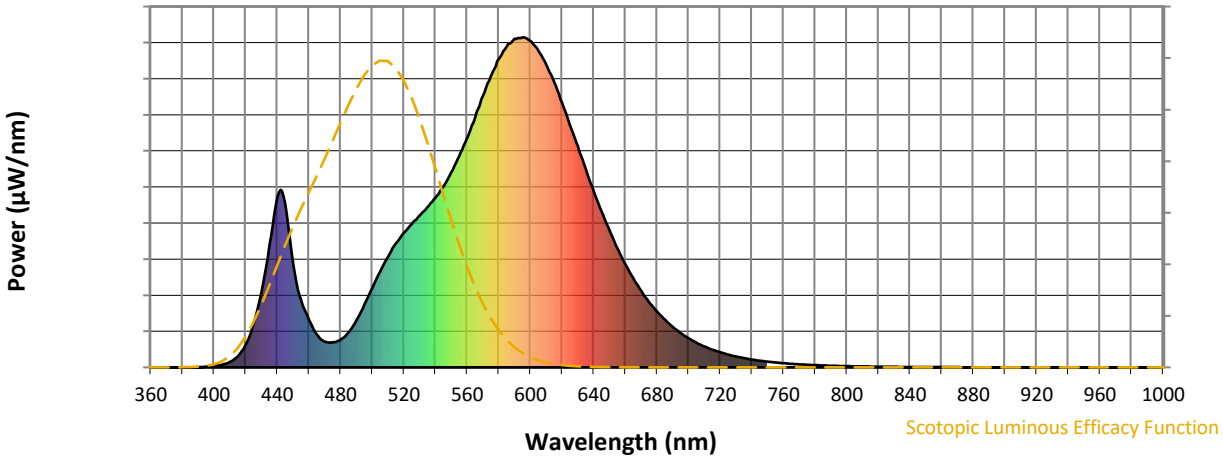
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.19**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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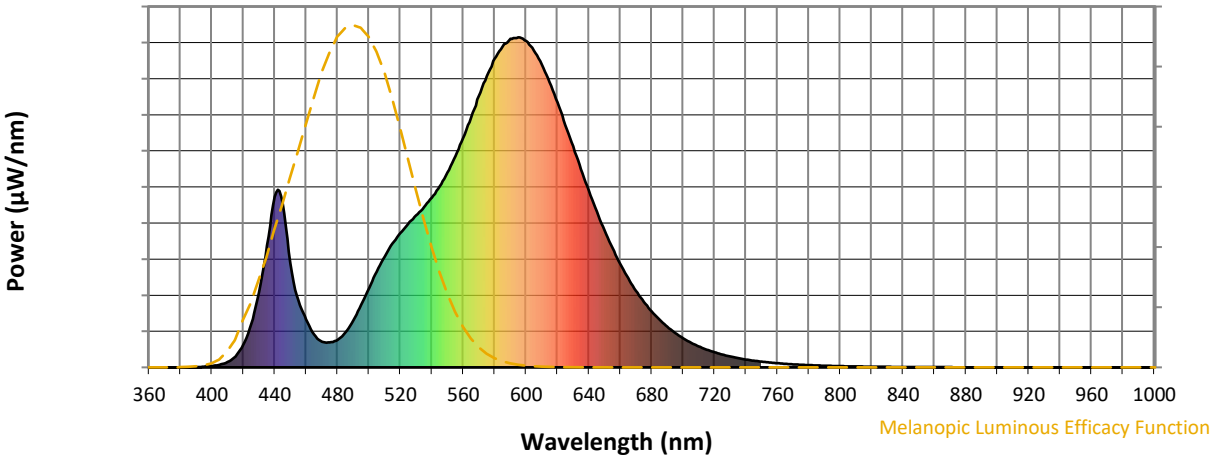
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.13**

| 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 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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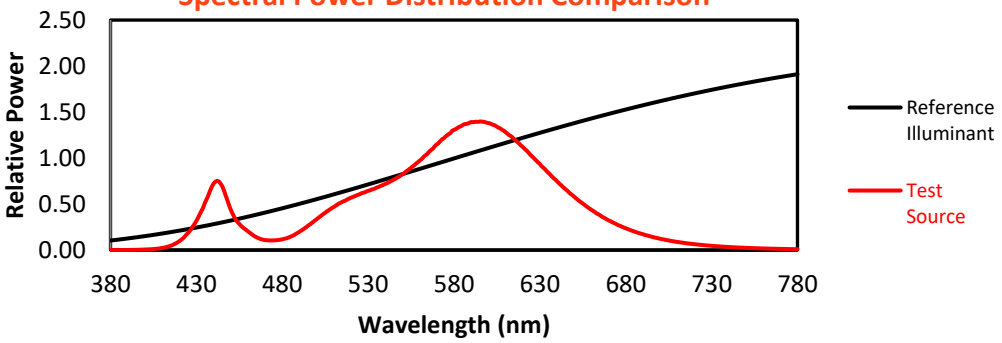
# TM-30-18

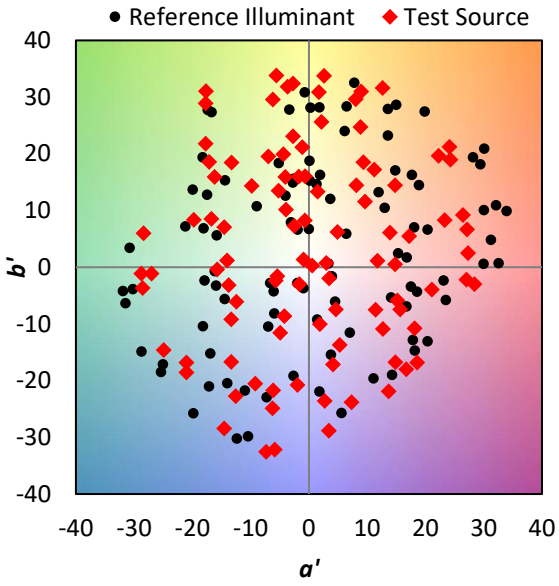
## Summary

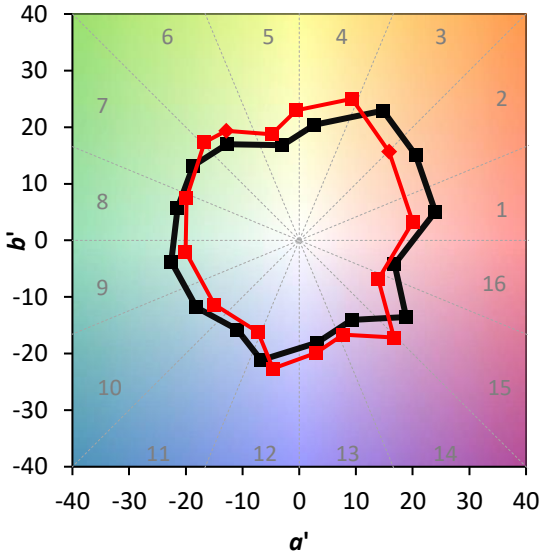
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

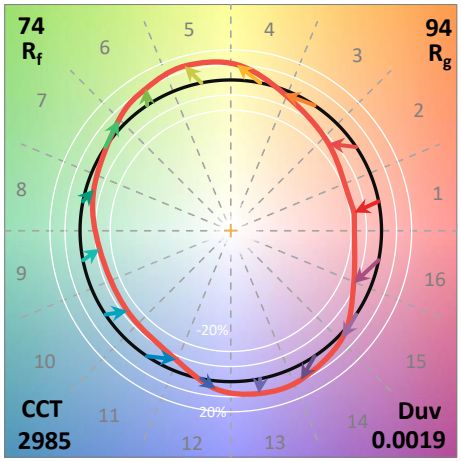
## Spectral Power Distribution Comparison

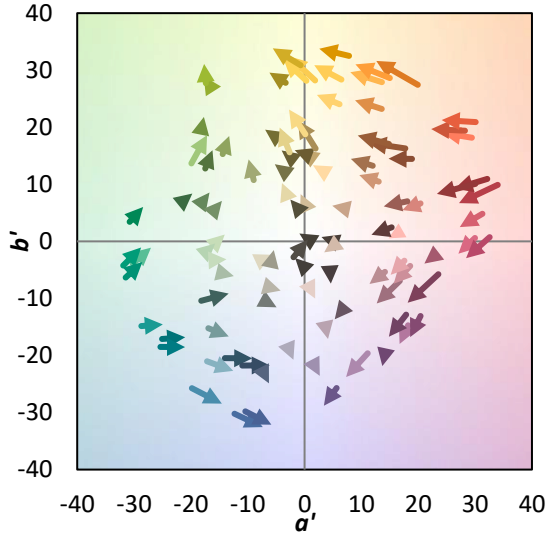



## Color Vector Graphics



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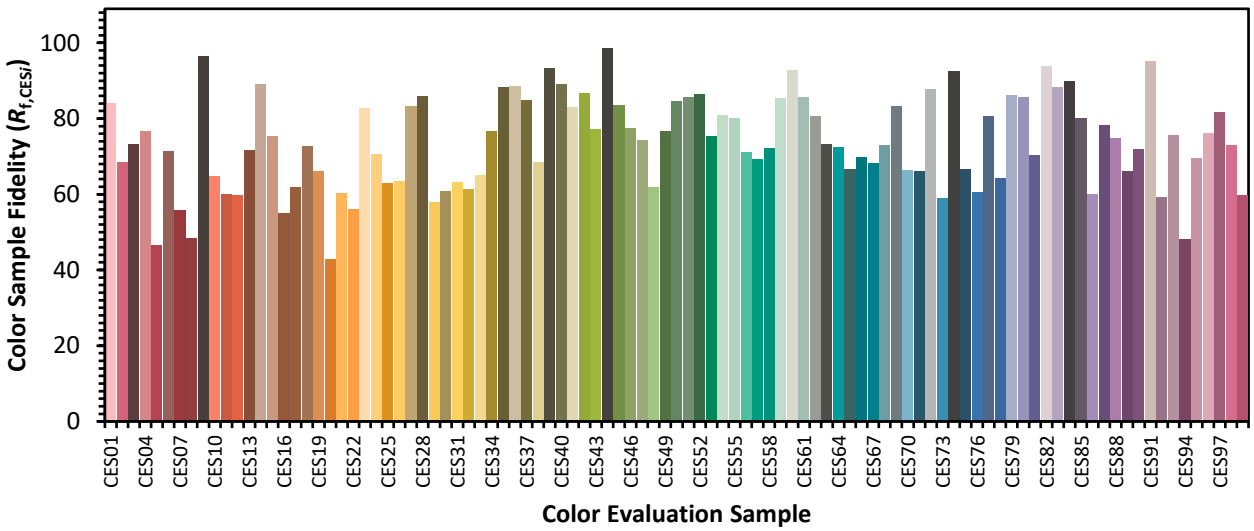
# TM-30-18

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

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 | |



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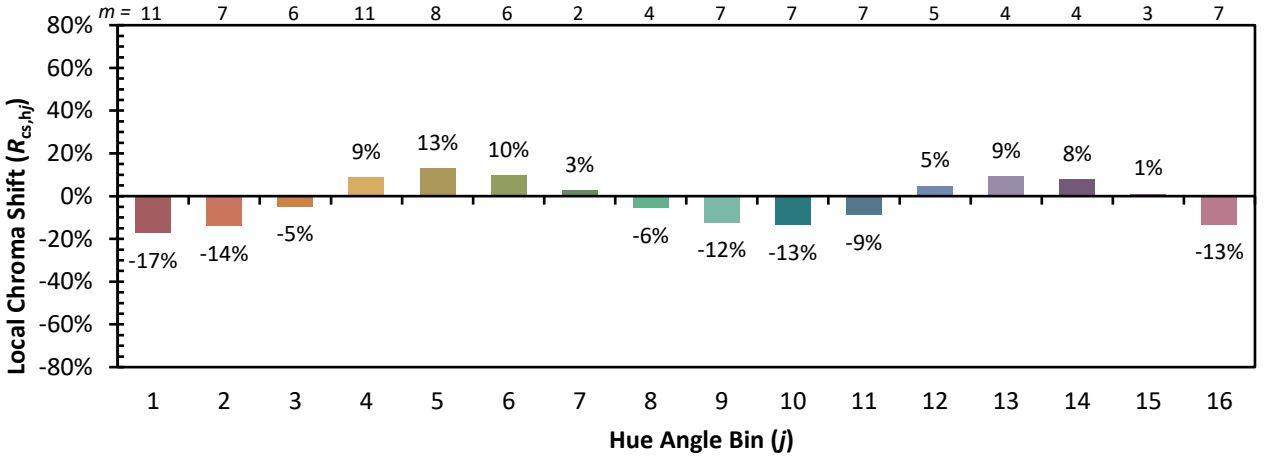
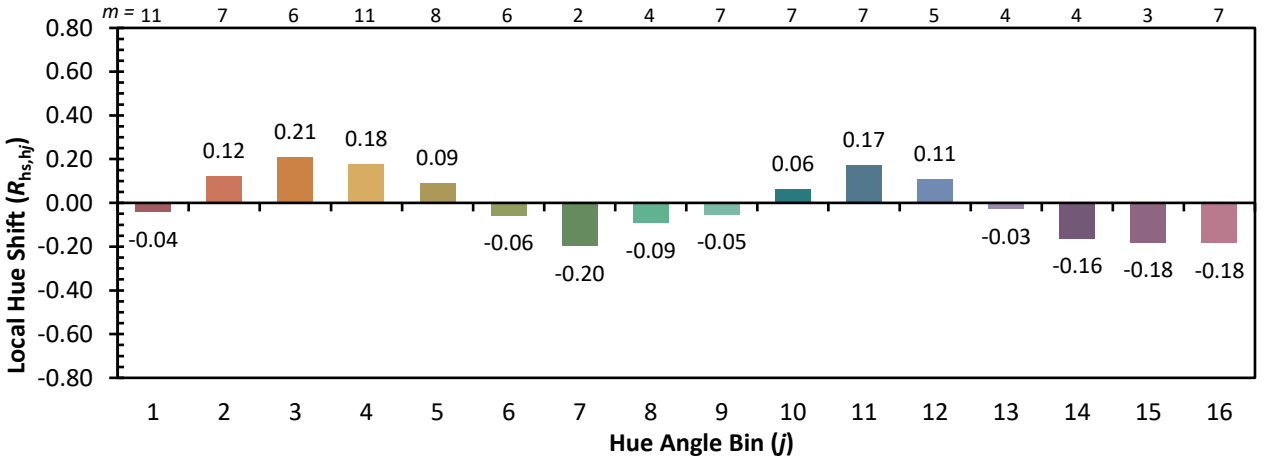
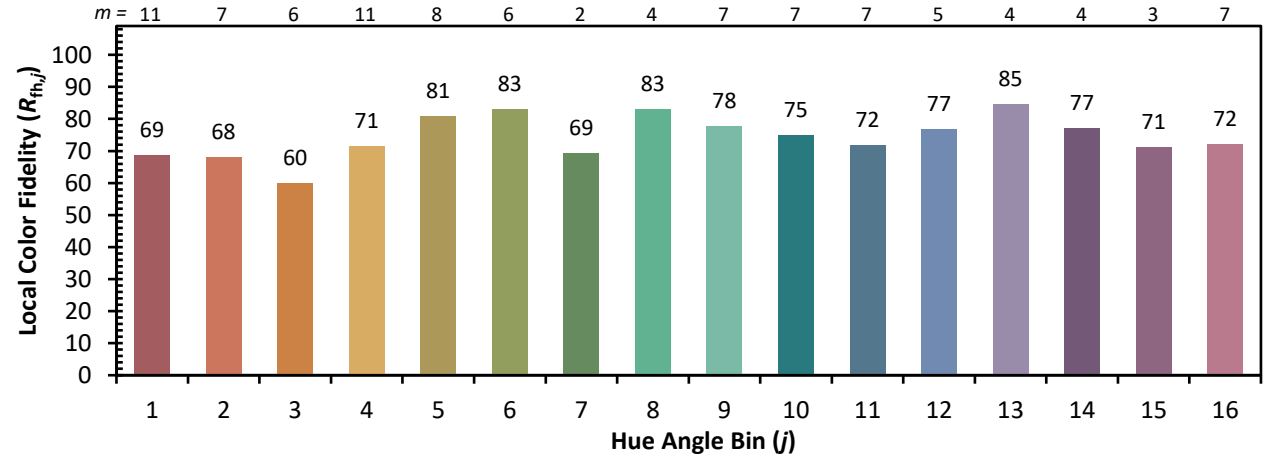
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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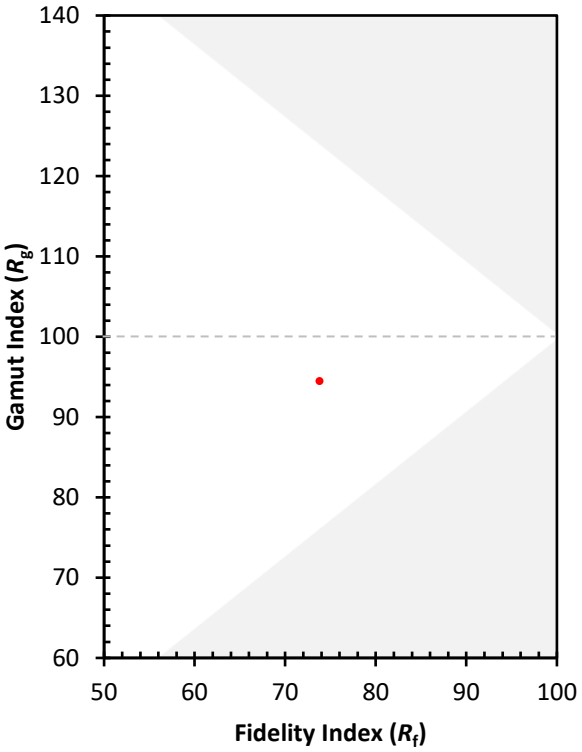
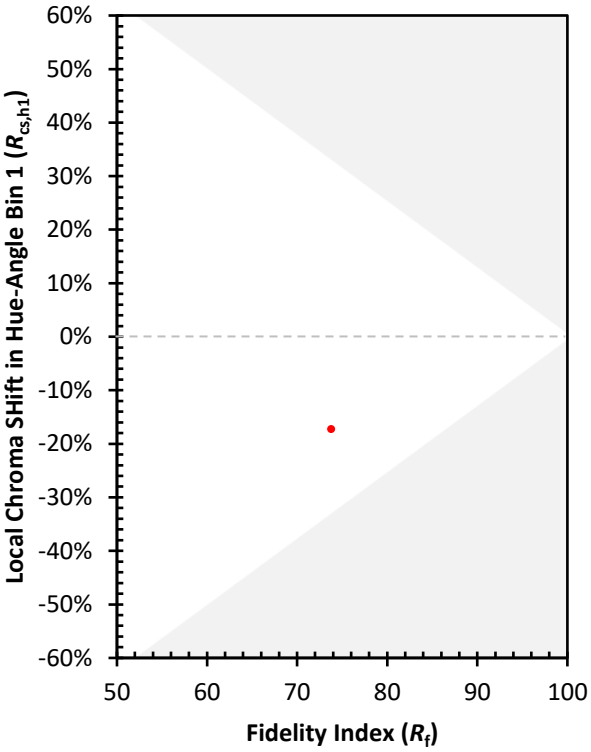
## Measure Comparisons




(END OF REPORT)