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: P1455781

Luminaire Tested: GLAN-SB7C-740-U-T2LG

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: | P1455781 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB7C-740-U-T2LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 615mA 7xLight Square PACKAGE 70CRI 4000K FIXTURE w/ TYPE II LOW GLARE |
| Light Source: | (182) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 54511.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 155.5 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B4 - 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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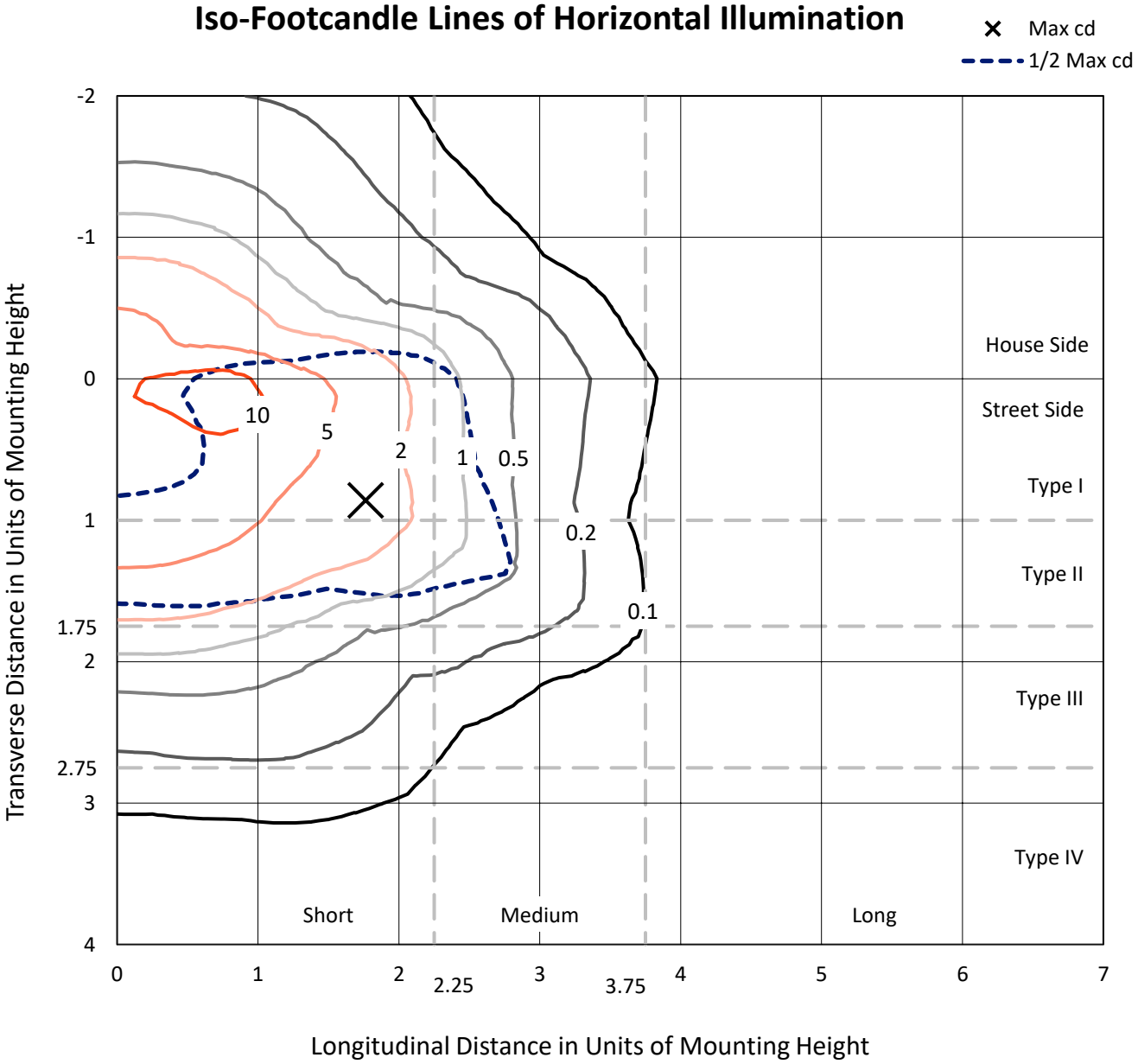
Scaled Data Report

REPORT NUMBER: P1455781
CATALOG NUMBER: GLAN-SB7C-740-U-T2LG

## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 14.2 fc
Type II - Short - N/A

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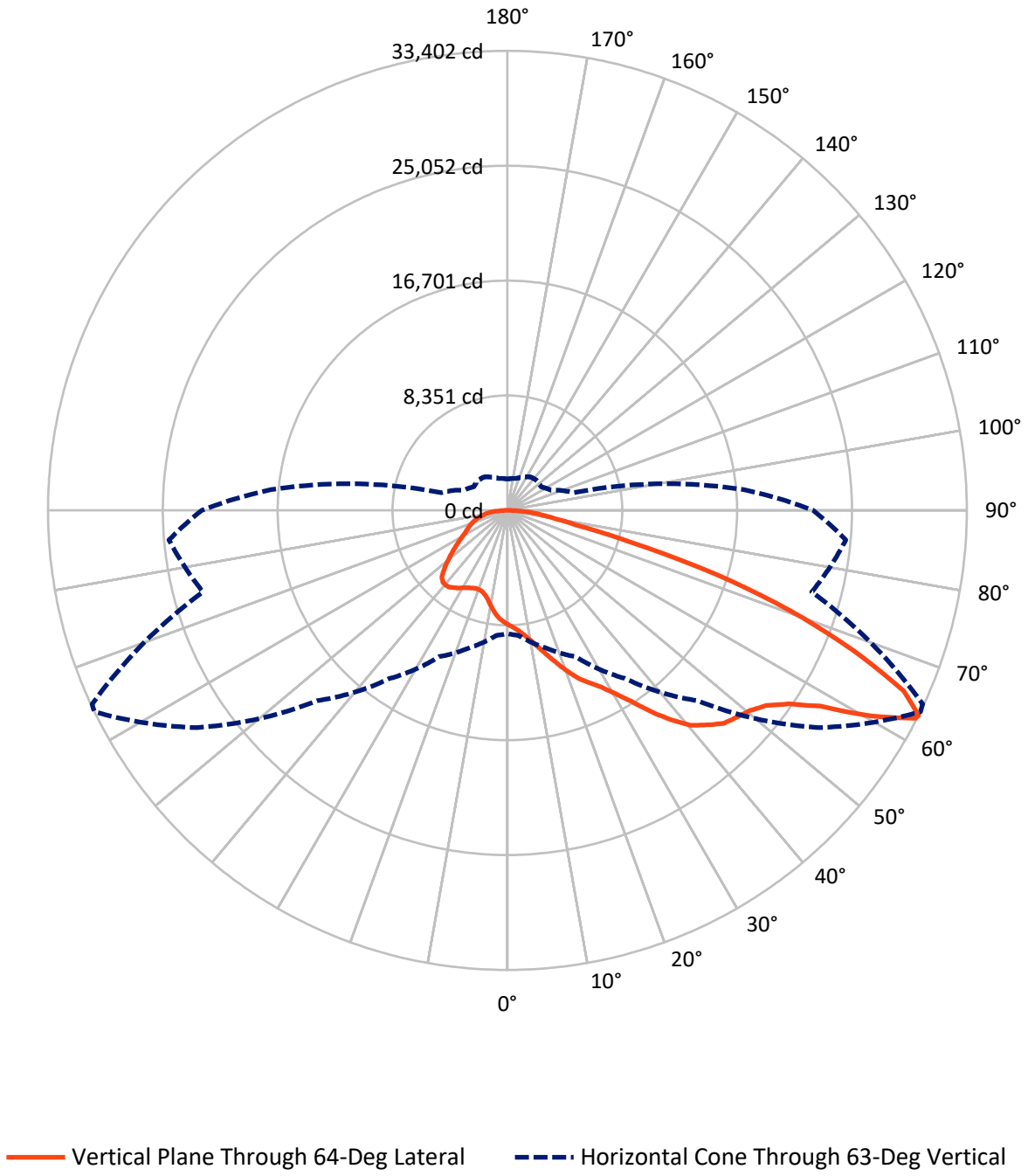
## Luminous Intensity Polar Plot



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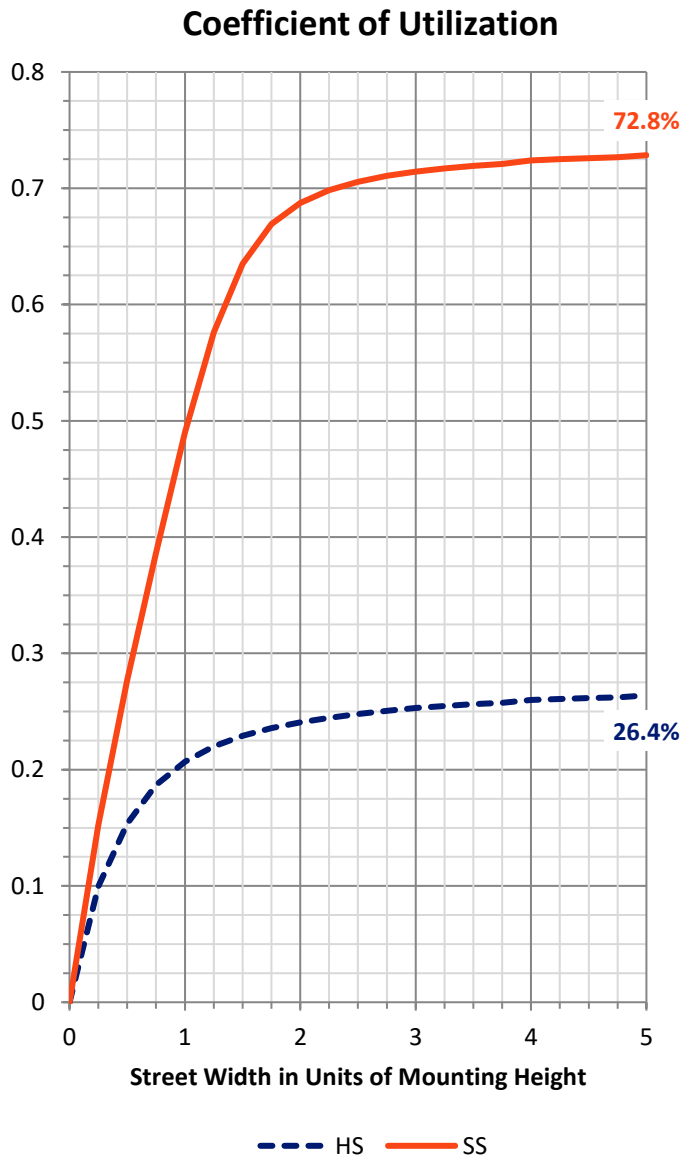
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 14645.8 | 0.0 | 14645.8 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| **Street Side** | Lumens | 39866.1 | 0.0 | 39866.1 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| **Total** | Lumens | 54511.9 | 0.0 | 54511.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 762.2 | 1.4 |
| 10°-20° | 2346.5 | 4.3 |
| 20°-30° | 4290.8 | 7.9 |
| 30°-40° | 7380.9 | 13.5 |
| 40°-50° | 10884.9 | 20.0 |
| 50°-60° | 13046.2 | 23.9 |
| 60°-70° | 10470.9 | 19.2 |
| 70°-80° | 4207.5 | 7.7 |
| 80°-90° | 1121.9 | 2.1 |
| 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° | 54511.9 | 100.0 |
| 0°-180° | 54511.9 | 100.0 |



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REPORT NUMBER: P1455781
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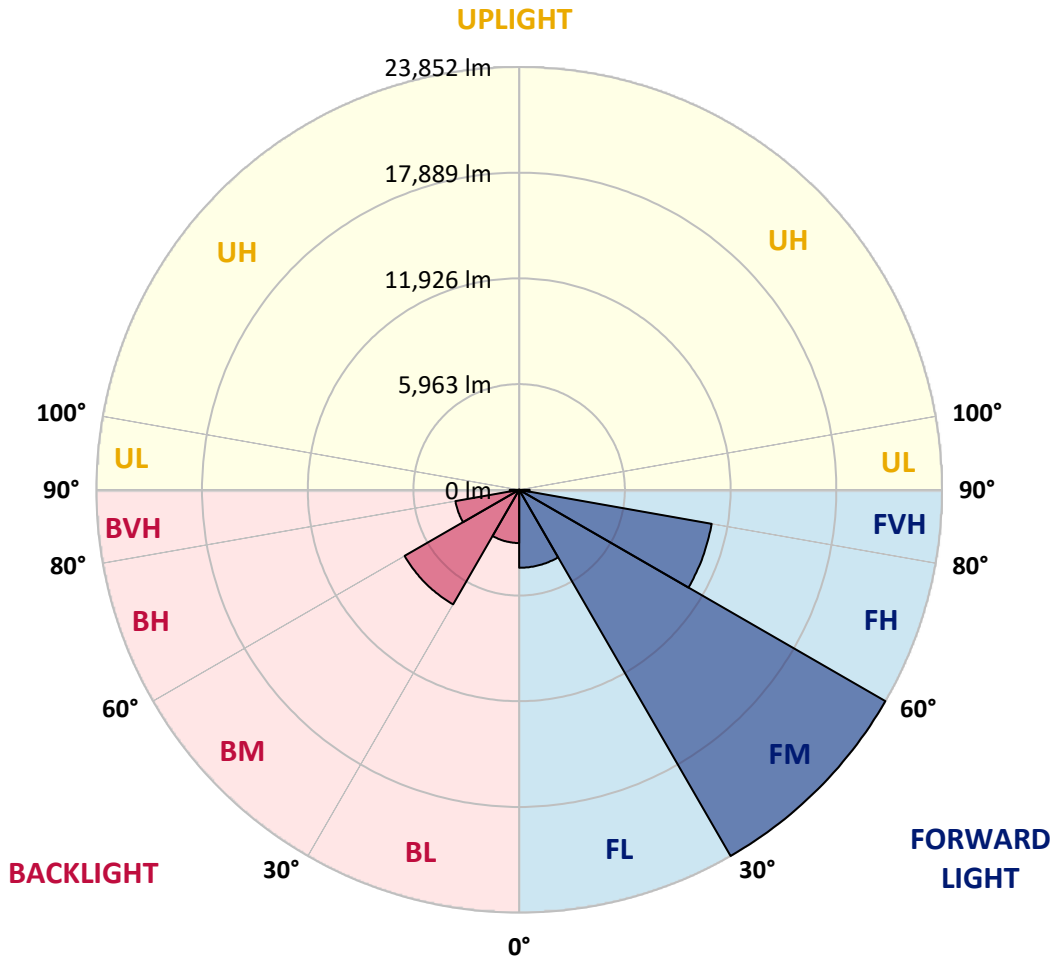
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 4398.1 | 8.1 | | | |
| FM | (30°-60°) | 23851.8 | 43.8 | | | |
| FH | (60°-80°) | 11026.7 | 20.2 | | | G4/12000 |
| FVH | (80°-90°) | 589.5 | 1.1 | | | G4/750 |
| BL | (0°-30°) | 3001.4 | 5.5 | B4/5000 | | |
| BM | (30°-60°) | 7460.3 | 13.7 | B4/8500 | | |
| BH | (60°-80°) | 3651.6 | 6.7 | B4/5000 | | G4/5000 |
| BVH | (80°-90°) | 532.5 | 1.0 | | | G4/750 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B4-U0-G4**
Type II Short



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REPORT NUMBER: P1455781
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | *8301.5* | 8301.5 | 8301.5 | 8301.5 |
| 2.5° | 8644.4 | 8656.6 | 8619.9 | 8607.6 | 8632.1 | 8583.2 | 8570.9 | *8521.9* | 8497.4 | 8448.5 | 8387.2 |
| 5° | 8889.3 | 8901.5 | 8877.0 | 8877.0 | 8901.5 | 8864.8 | 8852.5 | *8803.5* | 8779.1 | 8730.1 | 8607.6 |
| 7.5° | 8877.0 | 8889.3 | 8913.7 | 9011.7 | 9134.1 | 9183.1 | 9219.8 | *9183.1* | 9170.9 | 9097.4 | 8975.0 |
| 10° | 8681.1 | 8693.3 | 8754.6 | 8901.5 | 9207.6 | 9428.0 | 9660.6 | *9660.6* | 9685.1 | 9623.9 | 9403.5 |
| 12.5° | 8411.7 | 8424.0 | 8570.9 | 8803.5 | 9207.6 | 9587.2 | 10064.7 | *10260.6* | 10248.4 | 10211.6 | 9954.5 |
| 15° | 7762.8 | 7762.8 | 7983.2 | 8424.0 | 9072.9 | 9697.4 | 10407.5 | *10934.0* | 10946.3 | 10983.0 | 10676.9 |
| 17.5° | 7211.8 | 7224.1 | 7407.7 | 7799.5 | 8644.4 | 9636.1 | 10774.9 | *11680.9* | 11717.7 | 11925.8 | 11485.0 |
| 20° | 7260.8 | 7260.8 | 7322.0 | 7493.4 | 8179.1 | 9391.3 | 10983.0 | *12476.8* | 12599.2 | 13089.0 | 12538.0 |
| 22.5° | 7640.4 | 7640.4 | 7689.3 | 7677.1 | 8093.4 | 9232.1 | 11117.7 | *13272.7* | 13493.1 | 14509.3 | 13799.2 |
| 25° | 8338.3 | 8326.0 | 8277.0 | 8203.6 | 8448.5 | 9403.5 | 11423.8 | *13884.9* | 14313.4 | 16076.6 | 15256.2 |
| 27.5° | 9195.4 | 9170.9 | 9097.4 | 8975.0 | 9146.4 | 9917.8 | 11950.3 | *14533.8* | 14999.1 | 17790.8 | 16799.0 |
| 30° | 10260.6 | 10187.1 | 10113.7 | 9954.5 | 10138.2 | 10762.6 | 12733.9 | *15452.1* | 15892.9 | 19737.6 | 18660.1 |
| 32.5° | 11521.7 | 11607.5 | 11362.6 | 11142.2 | 11338.1 | 11913.6 | 13897.1 | *16541.9* | 17019.4 | 21770.1 | 20594.7 |
| 35° | 13407.3 | 13664.5 | 13591.0 | 12476.8 | 12660.5 | 13297.2 | 15256.2 | *17949.9* | 18378.5 | 23619.0 | 22578.2 |
| 37.5° | 15268.5 | 15207.2 | 15268.5 | 14337.9 | 14044.0 | 14815.4 | 16713.3 | *19296.8* | 19713.1 | 25125.0 | 24329.1 |
| 40° | 16762.2 | 16945.9 | 16945.9 | 16186.8 | 15807.2 | 16321.5 | 18035.6 | *20533.4* | 20937.5 | 25957.6 | 25590.3 |
| 42.5° | 18390.7 | 18415.2 | 18366.2 | 17705.0 | 17558.1 | 17692.8 | 19198.8 | *21317.1* | 21647.7 | 26386.2 | 26447.4 |
| 45° | 20227.3 | 20215.1 | 20006.9 | 19456.0 | 19235.6 | 19113.1 | 19921.2 | *22076.2* | 22406.8 | 26582.1 | 26912.7 |
| 47.5° | 21745.6 | 21806.8 | 21819.1 | 21231.4 | 20864.0 | 20337.5 | 20545.7 | *22455.8* | 22835.3 | 26361.7 | 27010.6 |
| 50° | 21831.3 | 21929.3 | 22394.6 | 22566.0 | 22492.5 | 21647.7 | 21121.2 | *22859.8* | 23239.4 | 26410.6 | 27365.7 |
| 52.5° | 21292.6 | 21390.5 | 21990.5 | 22700.7 | 23557.8 | 23153.7 | 22027.2 | *23557.8* | 23949.6 | 26888.2 | 28173.8 |
| 55° | 19847.8 | 20006.9 | 20900.8 | 21892.5 | 23423.1 | 23998.5 | 23631.2 | *24818.9* | 25186.2 | 27267.7 | 29116.6 |
| 57.5° | 17276.5 | 17472.4 | 18709.1 | 20288.6 | 22382.3 | 23802.6 | 25957.6 | *26839.2* | 27145.3 | 27537.1 | 29128.8 |
| 60° | 12917.6 | 13076.8 | 15011.3 | 17141.8 | 20288.6 | 22578.2 | 27341.2 | *30304.3* | 30475.7 | 26080.0 | 27475.9 |
| 62.5° | 9513.7 | 9672.9 | 10970.8 | 12501.3 | 15941.9 | 20325.3 | 27610.6 | *33304.1* | 33328.6 | 23447.6 | 25198.5 |
| 63° | *8962.7* | *9121.9* | *10297.3* | *11729.9* | *14913.4* | *19566.2* | *27524.9* | *33402.1* | *33316.3* | *22908.8* | *24696.5* |
| 65° | 6979.2 | 7260.8 | 8485.2 | 9574.9 | 11178.9 | 15574.6 | 26422.9 | *31663.4* | 31785.8 | 21317.1 | 22174.2 |
| 67.5° | 4750.7 | 4958.9 | 6513.9 | 7775.0 | 8448.5 | 9917.8 | 21672.2 | *27096.3* | 27292.2 | 19664.1 | 17692.8 |
| 70° | 3673.2 | 3771.2 | 4677.3 | 6158.8 | 6832.2 | 6305.7 | 14129.8 | *21819.1* | 21819.1 | 15354.2 | 12538.0 |
| 72.5° | 2877.4 | 2914.1 | 3526.3 | 4812.0 | 5497.6 | 4848.7 | 7873.0 | *15868.4* | 15280.7 | 9109.7 | 8362.8 |
| 75° | 2057.0 | 2106.0 | 2657.0 | 3587.5 | 4383.4 | 3820.2 | 5032.3 | *9244.3* | 8889.3 | 5240.5 | 5583.3 |
| 77.5° | 1628.5 | 1653.0 | 1983.6 | 2644.7 | 3550.8 | 2914.1 | 3832.4 | *5044.6* | 4995.6 | 3685.5 | 3587.5 |
| 80° | 1285.6 | 1334.6 | 1555.0 | 1897.8 | 2742.7 | 2277.4 | 2852.9 | *3330.4* | 3232.5 | 2534.5 | 2301.9 |
| 82.5° | 918.3 | 1004.0 | 1199.9 | 1444.8 | 2032.5 | 1628.5 | 1873.4 | *2350.9* | 2350.9 | 1910.1 | 1518.3 |
| 85° | 563.2 | 636.7 | 710.2 | 893.8 | 1444.8 | 1053.0 | 991.8 | *1518.3* | 1555.0 | 1432.6 | 979.5 |
| 87.5° | 269.4 | 293.9 | 342.8 | 379.6 | 526.5 | 477.5 | 391.8 | *575.5* | 587.7 | 636.7 | 404.1 |
| 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: P1455781
CATALOG NUMBER: GLAN-SB7C-740-U-T2LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 | 8301.5 |
| 2.5° | 8375.0 | 8350.5 | 8228.1 | 8105.6 | 7970.9 | 7848.5 | 7726.1 | 7628.1 | 7517.9 | 7542.4 | 7554.6 |
| 5° | 8534.2 | 8473.0 | 8203.6 | 7885.2 | 7468.9 | 7077.1 | 6697.6 | 6428.2 | 6256.8 | 6207.8 | 6109.8 |
| 7.5° | 8877.0 | 8730.1 | 8240.3 | 7566.9 | 6795.5 | 6183.3 | 5828.2 | 5669.0 | 5620.1 | 5632.3 | 5607.8 |
| 10° | 9268.8 | 9048.4 | 8289.3 | 7187.3 | 6207.8 | 5791.5 | 5742.5 | 5840.5 | 5889.4 | 5938.4 | 5950.7 |
| 12.5° | 9783.1 | 9428.0 | 8264.8 | 6771.0 | 5926.2 | 5852.7 | 6036.4 | 6220.0 | 6330.2 | 6403.7 | 6391.4 |
| 15° | 10383.0 | 9905.5 | 8191.3 | 6428.2 | 5889.4 | 6085.3 | 6318.0 | 6526.1 | 6660.8 | 6734.3 | 6697.6 |
| 17.5° | 11105.4 | 10468.8 | 8105.6 | 6207.8 | 5999.6 | 6232.3 | 6477.2 | 6685.3 | 6832.2 | 6881.2 | 6844.5 |
| 20° | 11999.3 | 11105.4 | 7958.7 | 6109.8 | 6085.3 | 6293.5 | 6513.9 | 6709.8 | 6832.2 | 6881.2 | 6832.2 |
| 22.5° | 13052.3 | 11864.6 | 7836.3 | 6109.8 | 6122.1 | 6293.5 | 6452.7 | 6599.6 | 6709.8 | 6746.5 | 6685.3 |
| 25° | 14399.1 | 12746.2 | 7787.3 | 6207.8 | 6134.3 | 6232.3 | 6318.0 | 6403.7 | 6464.9 | 6489.4 | 6464.9 |
| 27.5° | 15770.5 | 13762.4 | 7811.8 | 6330.2 | 6122.1 | 6146.6 | 6146.6 | 6158.8 | 6171.1 | 6183.3 | 6171.1 |
| 30° | 17350.0 | 14790.9 | 7909.7 | 6489.4 | 6146.6 | 6024.1 | 5987.4 | 5913.9 | 5852.7 | 5803.7 | 5754.8 |
| 32.5° | 18880.5 | 15770.5 | 8081.1 | 6722.0 | 6122.1 | 5889.4 | 5816.0 | 5632.3 | 5460.9 | 5314.0 | 5314.0 |
| 35° | 20533.4 | 16786.7 | 8387.2 | 6893.5 | 6097.6 | 5767.0 | 5558.8 | 5350.7 | 5167.0 | 4958.9 | 4958.9 |
| 37.5° | 21953.8 | 17656.1 | 8632.1 | 7089.4 | 6073.1 | 5620.1 | 5289.5 | 5056.8 | 4860.9 | 4652.8 | 4628.3 |
| 40° | 22945.5 | 18158.1 | 8779.1 | 7162.8 | 5987.4 | 5424.2 | 5032.3 | 4738.5 | 4456.9 | 4175.3 | 4163.0 |
| 42.5° | 23423.1 | 18133.6 | 8693.3 | 7138.3 | 5828.2 | 5179.3 | 4812.0 | 4420.1 | 4040.6 | 3783.4 | 3759.0 |
| 45° | 23680.2 | 17974.4 | 8362.8 | 6930.2 | 5571.1 | 4922.1 | 4530.3 | 4114.0 | 3734.5 | 3501.8 | 3452.9 |
| 47.5° | 23631.2 | 17582.6 | 7909.7 | 6415.9 | 5228.3 | 4640.5 | 4248.7 | 3820.2 | 3514.1 | 3379.4 | 3379.4 |
| 50° | 23765.9 | 17276.5 | 7395.5 | 5828.2 | 4763.0 | 4309.9 | 3991.6 | 3599.8 | 3416.1 | 3244.7 | 3183.5 |
| 52.5° | 24365.9 | 17533.6 | 6954.7 | 5277.2 | 4322.2 | 3991.6 | 3771.2 | 3440.6 | 3208.0 | 3097.8 | 3061.0 |
| 55° | 25161.7 | 18084.6 | 6538.4 | 4787.5 | 3893.6 | 3710.0 | 3599.8 | 3293.7 | 3024.3 | 2914.1 | 2852.9 |
| 57.5° | 25308.7 | 18464.2 | 6134.3 | 4309.9 | 3538.6 | 3489.6 | 3452.9 | 3036.6 | 2816.2 | 2730.4 | 2681.5 |
| 60° | 24292.4 | 18182.6 | 5607.8 | 3881.4 | 3256.9 | 3281.4 | 3183.5 | 2877.4 | 2620.2 | 2534.5 | 2485.6 |
| 62.5° | 22566.0 | 17447.9 | 5081.3 | 3514.1 | 3036.6 | 3085.5 | 2987.6 | 2681.5 | 2424.3 | 2338.6 | 2314.1 |
| 63° | *22223.1* | *17252.0* | *4958.9* | *3477.3* | *2987.6* | *3048.8* | *2963.1* | *2657.0* | *2399.9* | *2314.1* | *2277.4* |
| 65° | 20178.4 | 16076.6 | 4530.3 | 3281.4 | 2828.4 | 2828.4 | 2840.6 | 2534.5 | 2314.1 | 2277.4 | 2252.9 |
| 67.5° | 16456.1 | 13419.6 | 4065.1 | 3048.8 | 2657.0 | 2693.7 | 2754.9 | 2583.5 | 2497.8 | 2473.3 | 2448.8 |
| 70° | 12440.1 | 10101.4 | 3661.0 | 2828.4 | 2473.3 | 2595.8 | 3012.1 | 2938.6 | 2620.2 | 2399.9 | 2350.9 |
| 72.5° | 8815.8 | 6881.2 | 3305.9 | 2608.0 | 2252.9 | 2559.0 | 3122.3 | 2803.9 | 2363.1 | 2106.0 | 2057.0 |
| 75° | 5901.7 | 4432.4 | 2950.8 | 2375.4 | 2008.0 | 2363.1 | 2950.8 | 2559.0 | 2057.0 | 1995.8 | 1922.3 |
| 77.5° | 3710.0 | 3159.0 | 2595.8 | 2106.0 | 1738.7 | 2106.0 | 2681.5 | 2277.4 | 1775.4 | 1799.9 | 1689.7 |
| 80° | 2265.2 | 2252.9 | 2179.5 | 1787.6 | 1395.8 | 1677.4 | 2252.9 | 1922.3 | 1420.3 | 1420.3 | 1261.1 |
| 82.5° | 1346.9 | 1628.5 | 1848.9 | 1481.5 | 1016.3 | 1199.9 | 1628.5 | 1444.8 | 1187.7 | 1151.0 | 1077.5 |
| 85° | 906.1 | 1102.0 | 1469.3 | 1138.7 | 648.9 | 734.6 | 1126.5 | 1212.2 | 1089.7 | 955.0 | 893.8 |
| 87.5° | 330.6 | 440.8 | 673.4 | 465.3 | 281.6 | 440.8 | 844.8 | 881.6 | 661.2 | 514.3 | 465.3 |
| 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

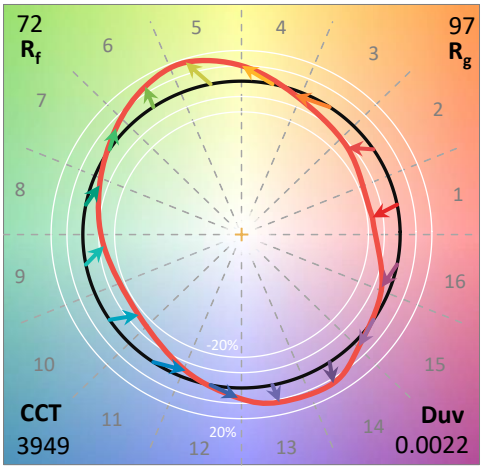
## Test Information

| | |
|---|---|
| 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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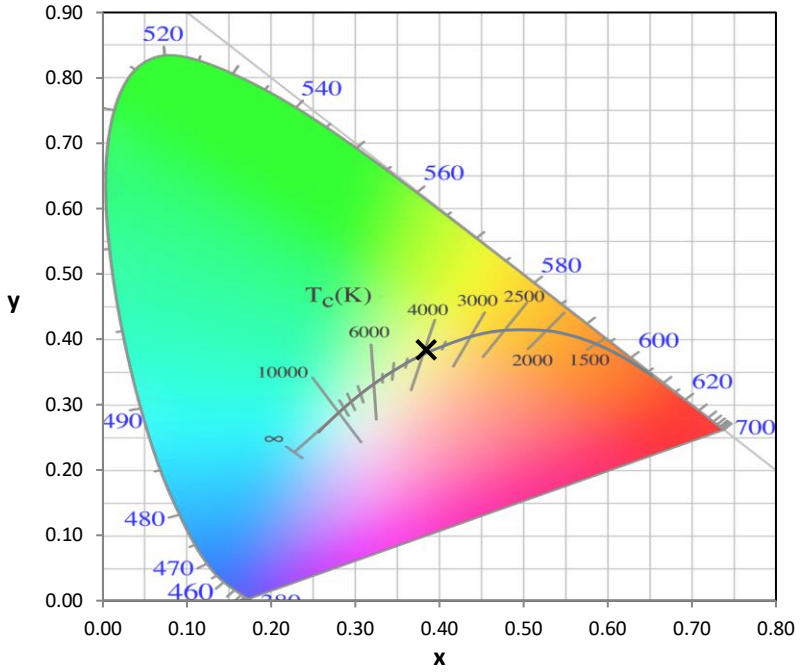
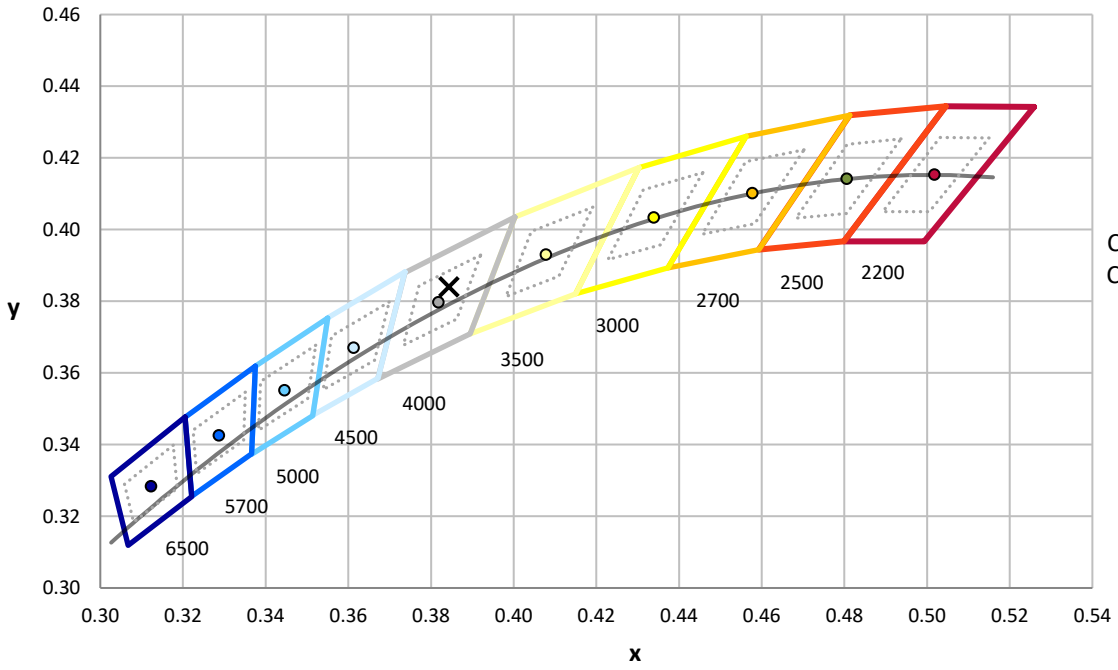
## CIE 1931 Chromaticity Diagram




## 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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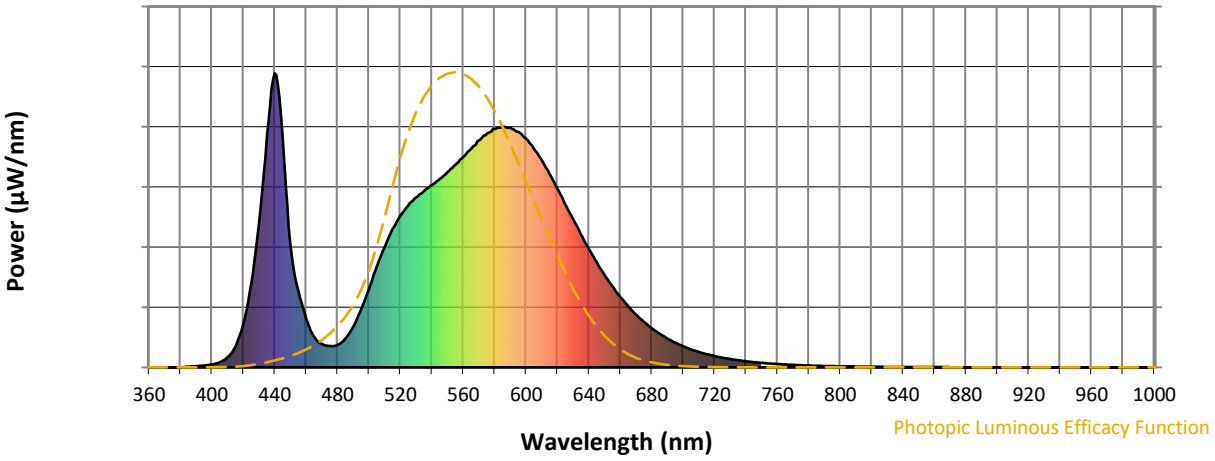
## Photopic Flux vs. Wavelength




## 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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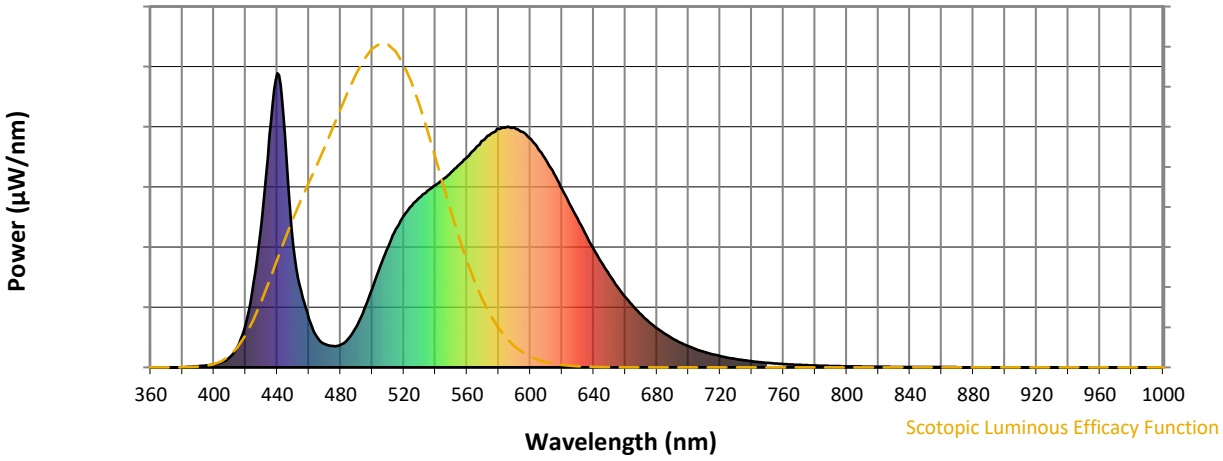
## Scotopic Flux vs. Wavelength




**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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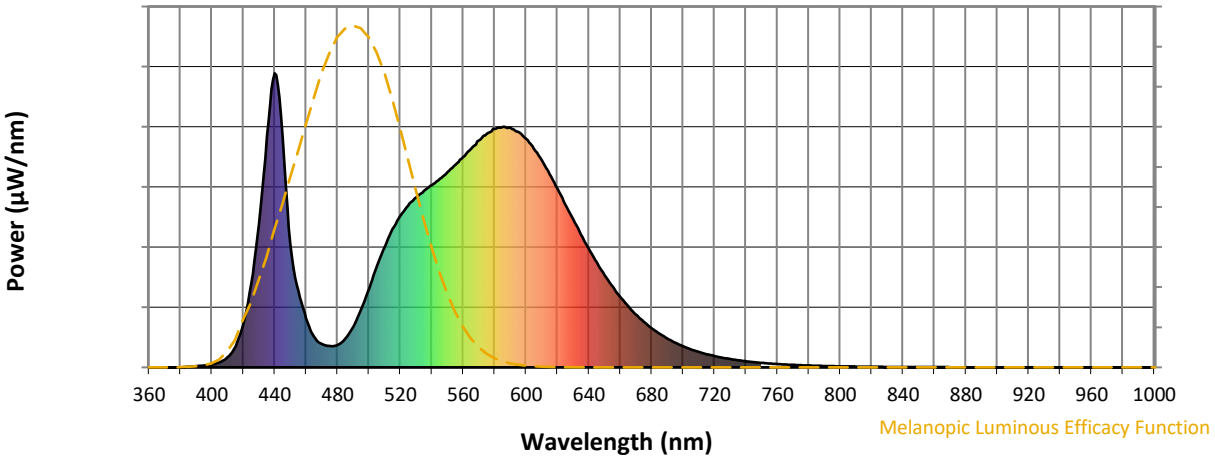
## Melanopic Flux vs. Wavelength




**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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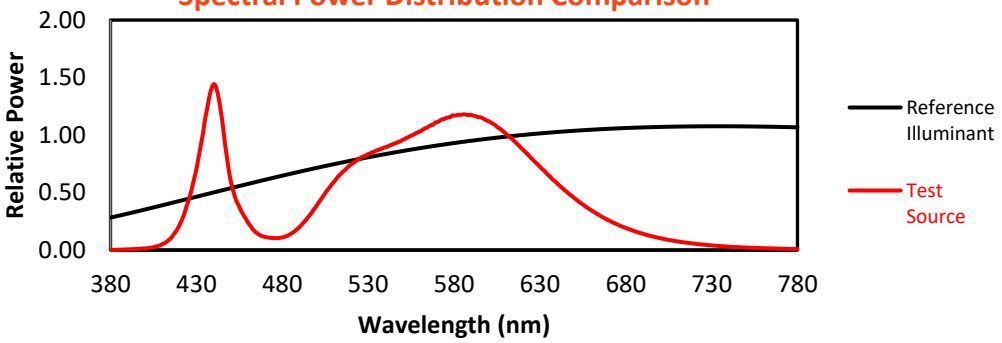
# TM-30-18

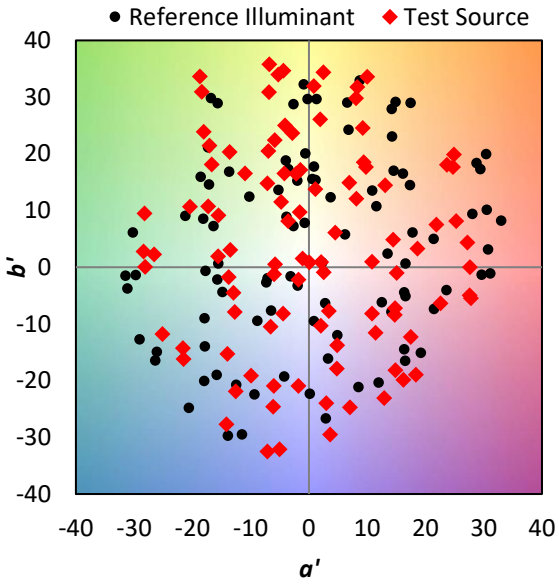
## Summary

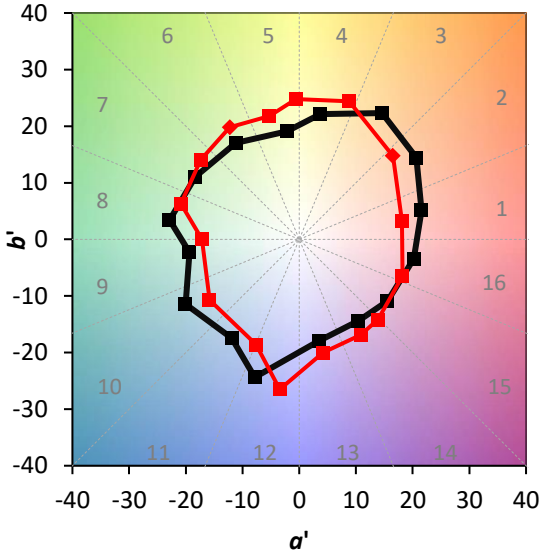
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

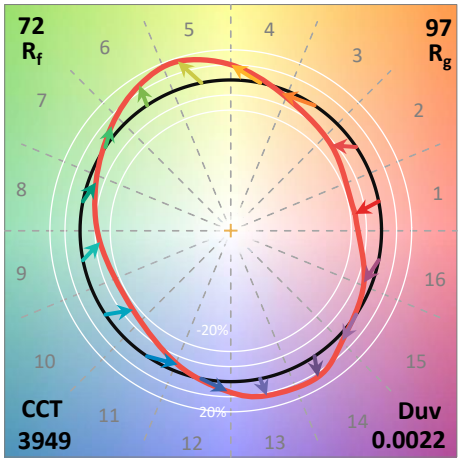
## Spectral Power Distribution Comparison

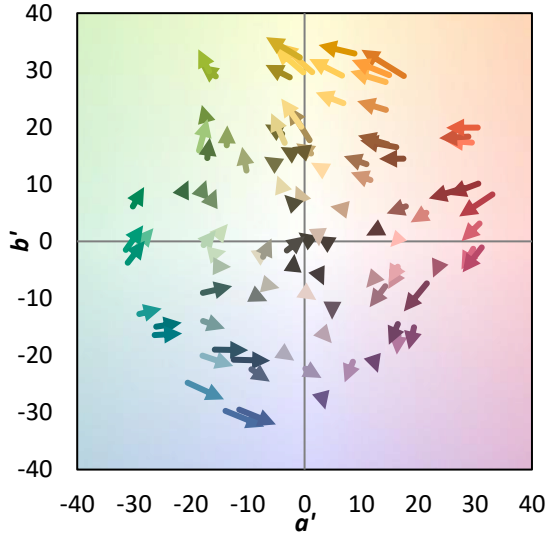



## Color Vector Graphics



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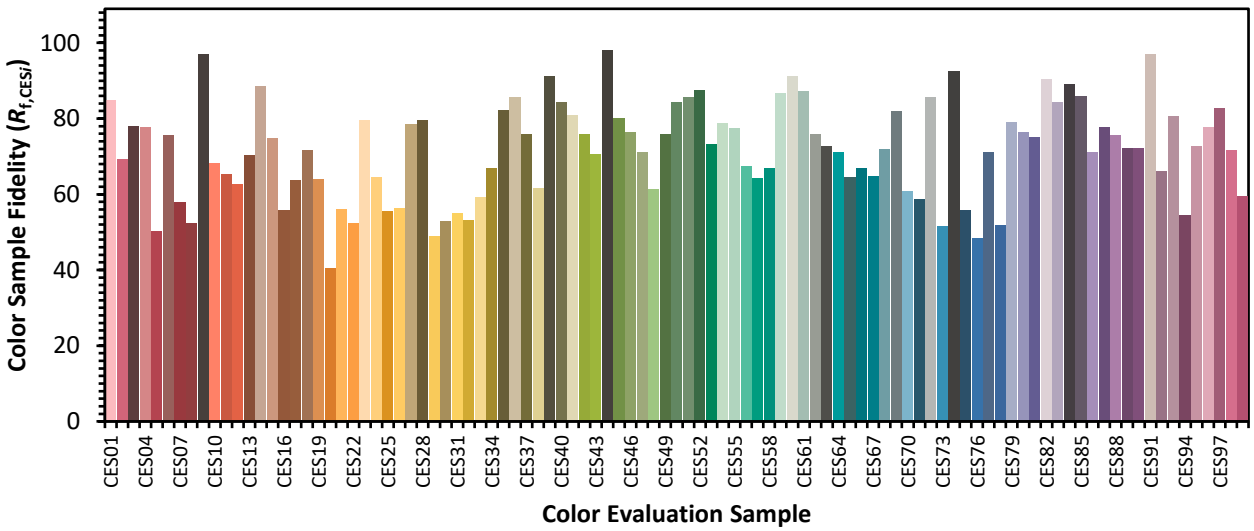
# TM-30-18

**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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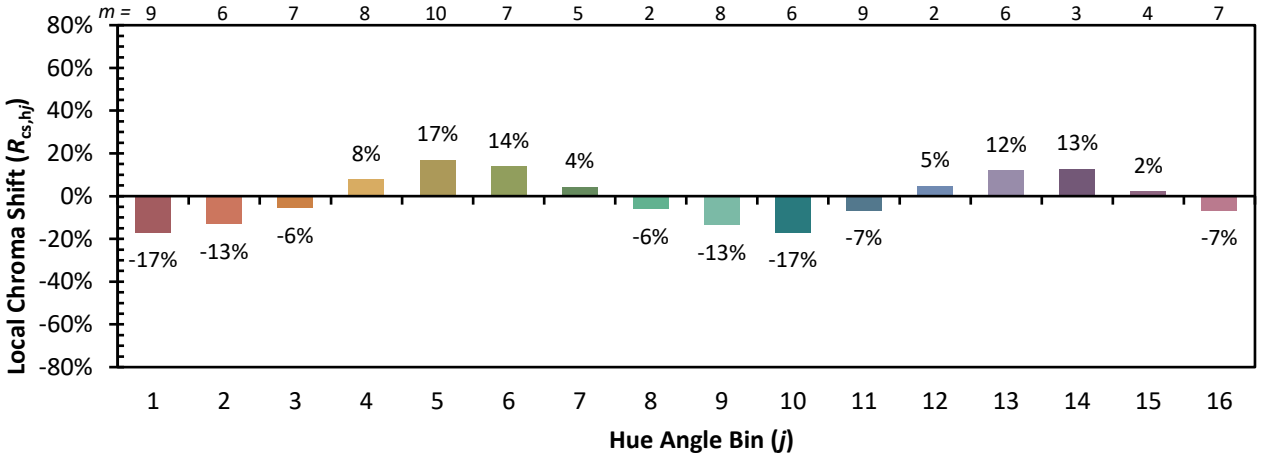
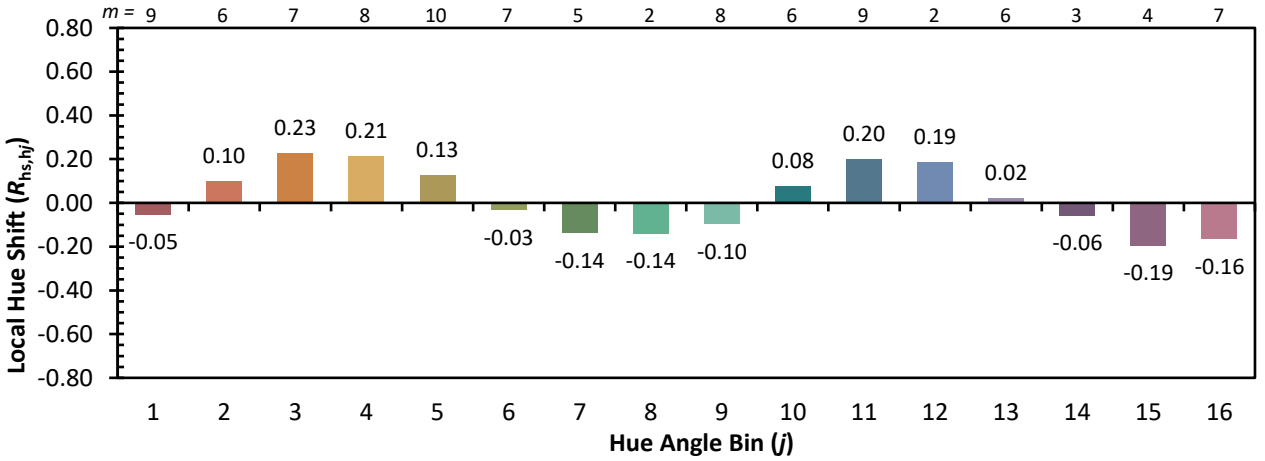
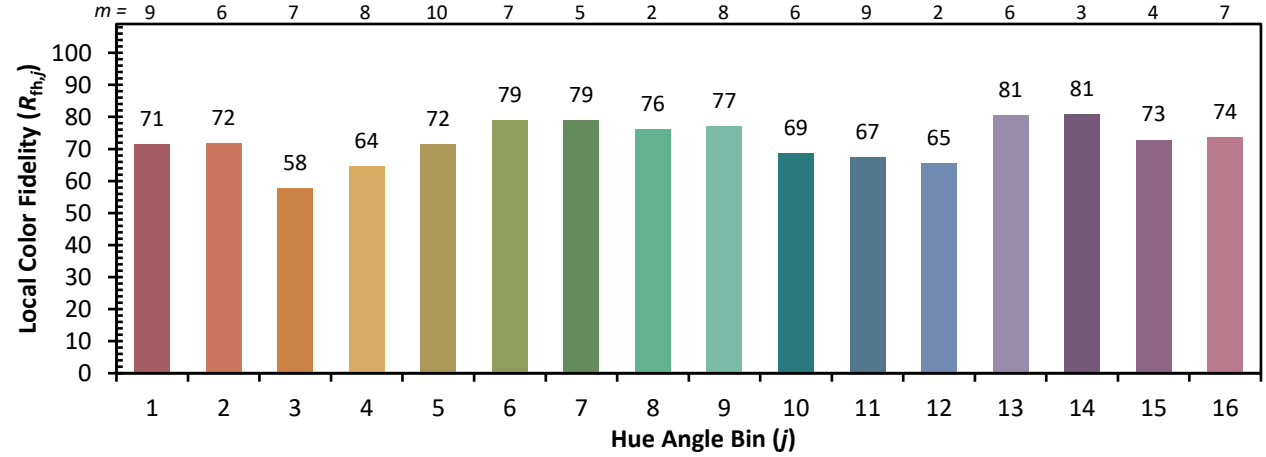
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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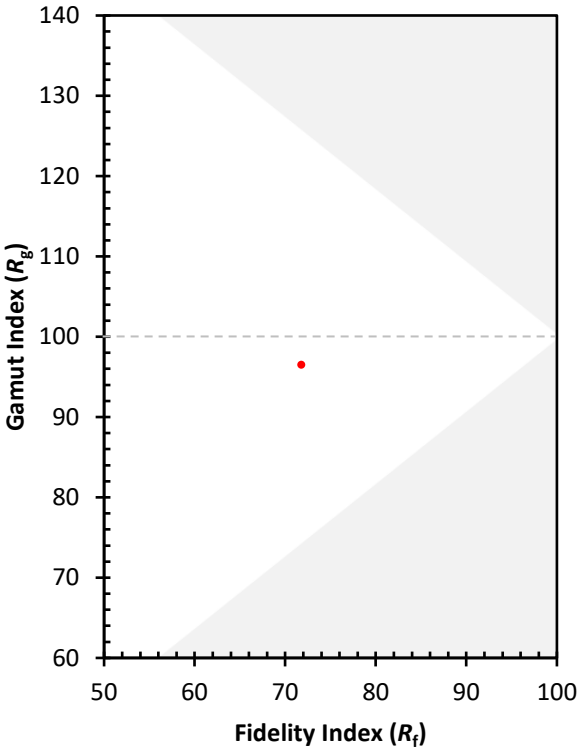
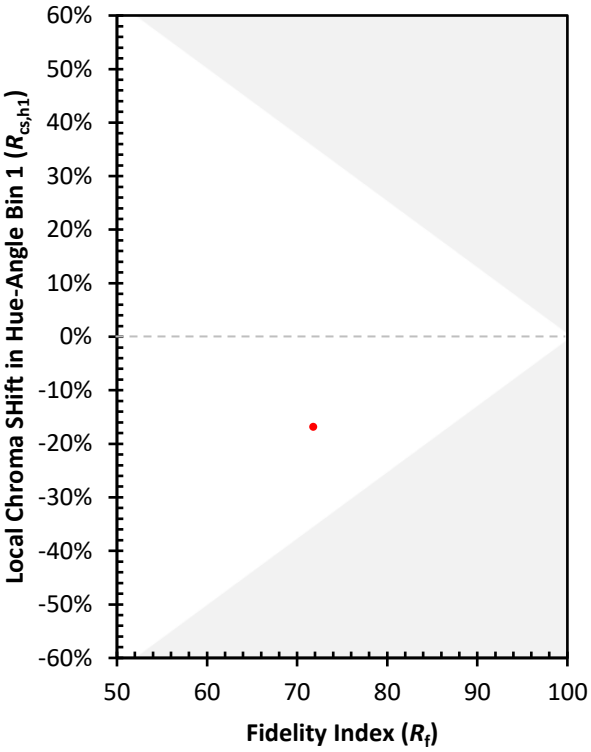
## Measure Comparisons




(END OF REPORT)