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: P1357609

Luminaire Tested: **GSS-SB5C-740-U-T4FT**

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: | P1357609 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5C-740-U-T4FT |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 252W 70CRI 4000K FIXTURE w/ TYPE IV FORWARD THROW DISTRIBUTION OPTIC |
| Light Source: | (130) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 36176.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 143.6 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B3 - U0 - G5 |

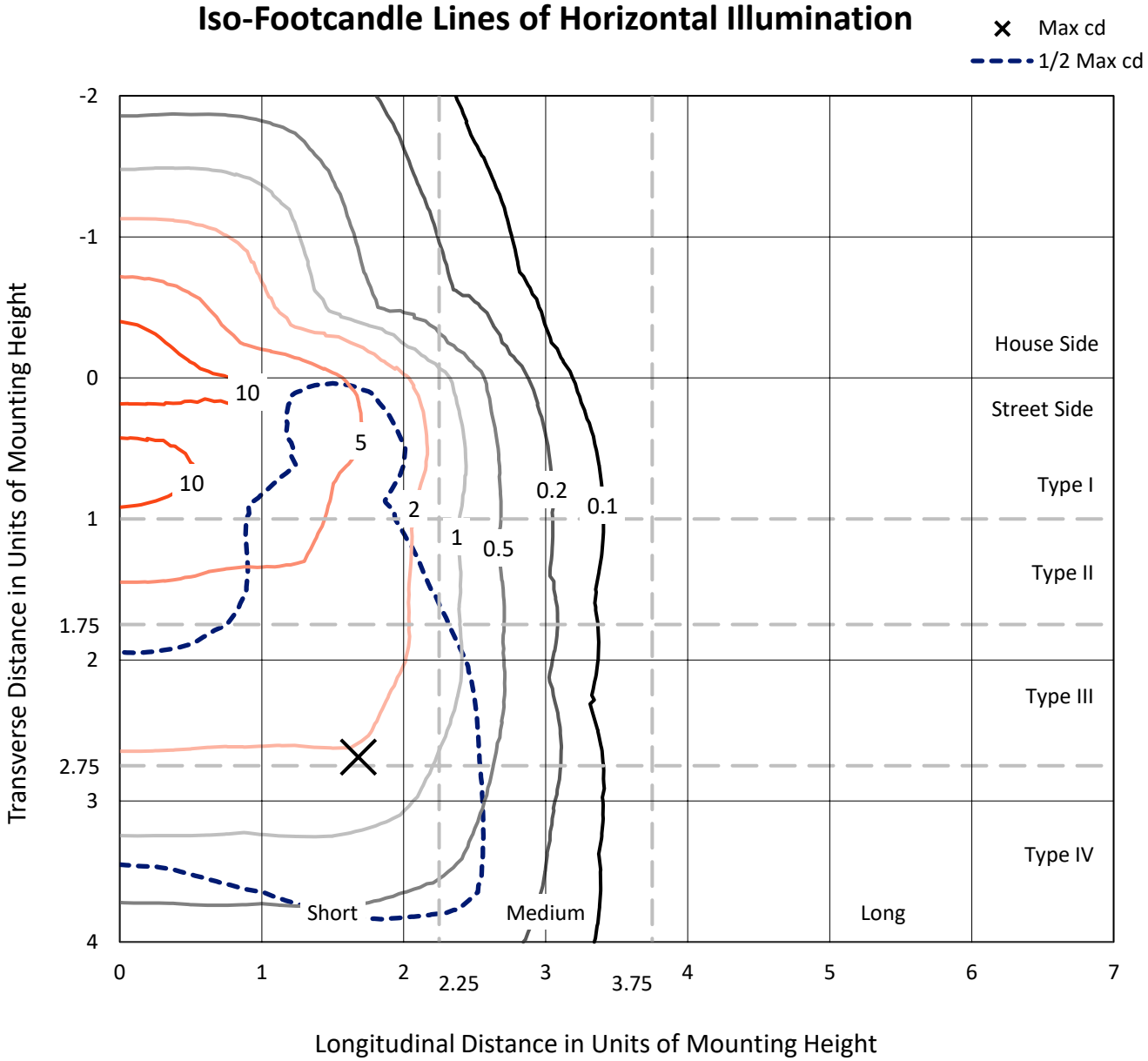
| | |
|---|---|
| Input Watts (W): | 252 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 7.9% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1357609
CATALOG NUMBER: GSS-SB5C-740-U-T4FT

## Iso-Footcandle Lines of Horizontal Illumination



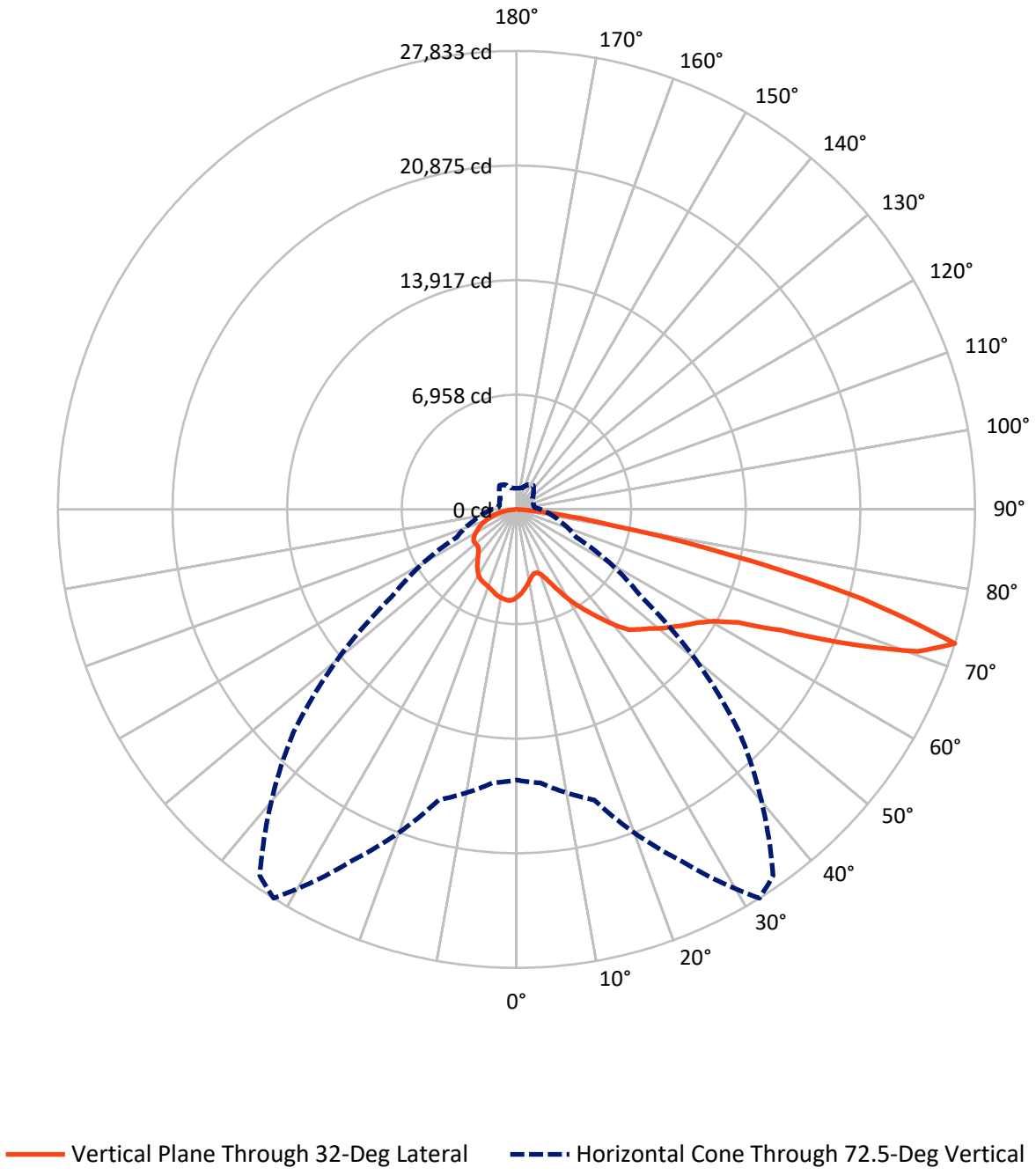

Based on 20 foot mounting height. Maximum calculated value = 13.3 fc
Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

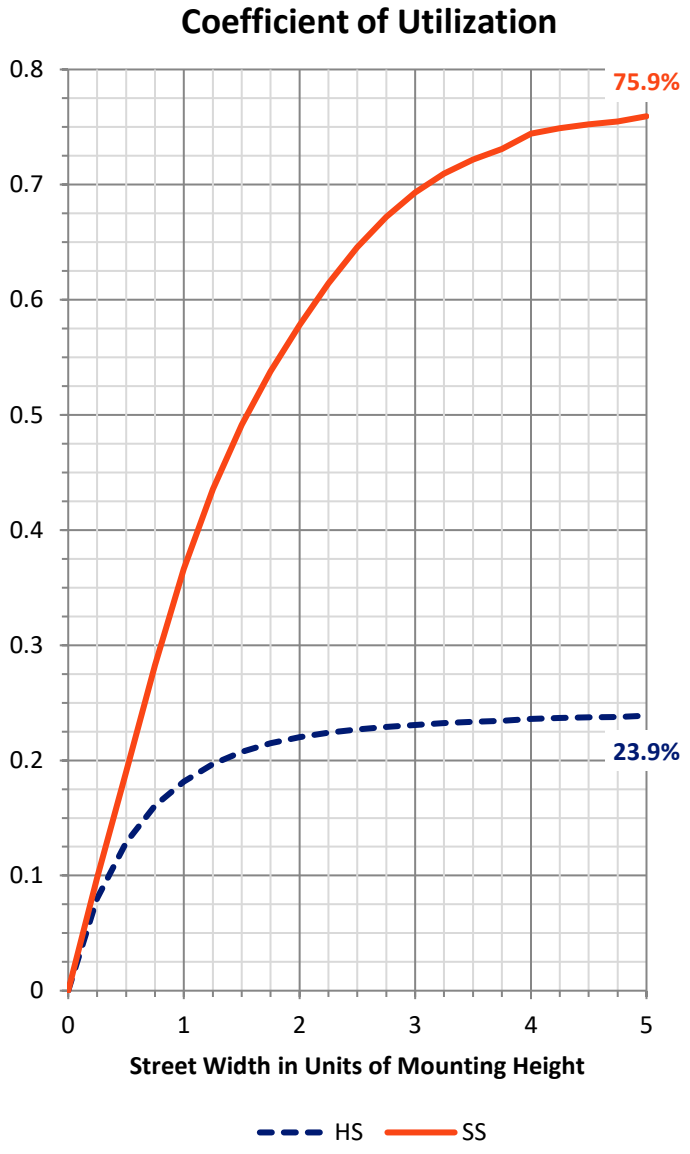
REPORT NUMBER: P1357609
CATALOG NUMBER: GSS-SB5C-740-U-T4FT

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 8724.6 | 0.0 | 8724.6 |
| | % Fixture | 24.1 | 0.0 | 24.1 |
| **Street Side** | Lumens | 27451.9 | 0.0 | 27451.9 |
| | % Fixture | 75.9 | 0.0 | 75.9 |
| **Total** | Lumens | 36176.5 | 0.0 | 36176.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 497.0 | 1.4 |
| 10°-20° | 1410.2 | 3.9 |
| 20°-30° | 2443.4 | 6.8 |
| 30°-40° | 3859.5 | 10.7 |
| 40°-50° | 5625.2 | 15.5 |
| 50°-60° | 7625.5 | 21.1 |
| 60°-70° | 8776.1 | 24.3 |
| 70°-80° | 5491.7 | 15.2 |
| 80°-90° | 448.0 | 1.2 |
| 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° | 36176.5 | 100.0 |
| 0°-180° | 36176.5 | 100.0 |



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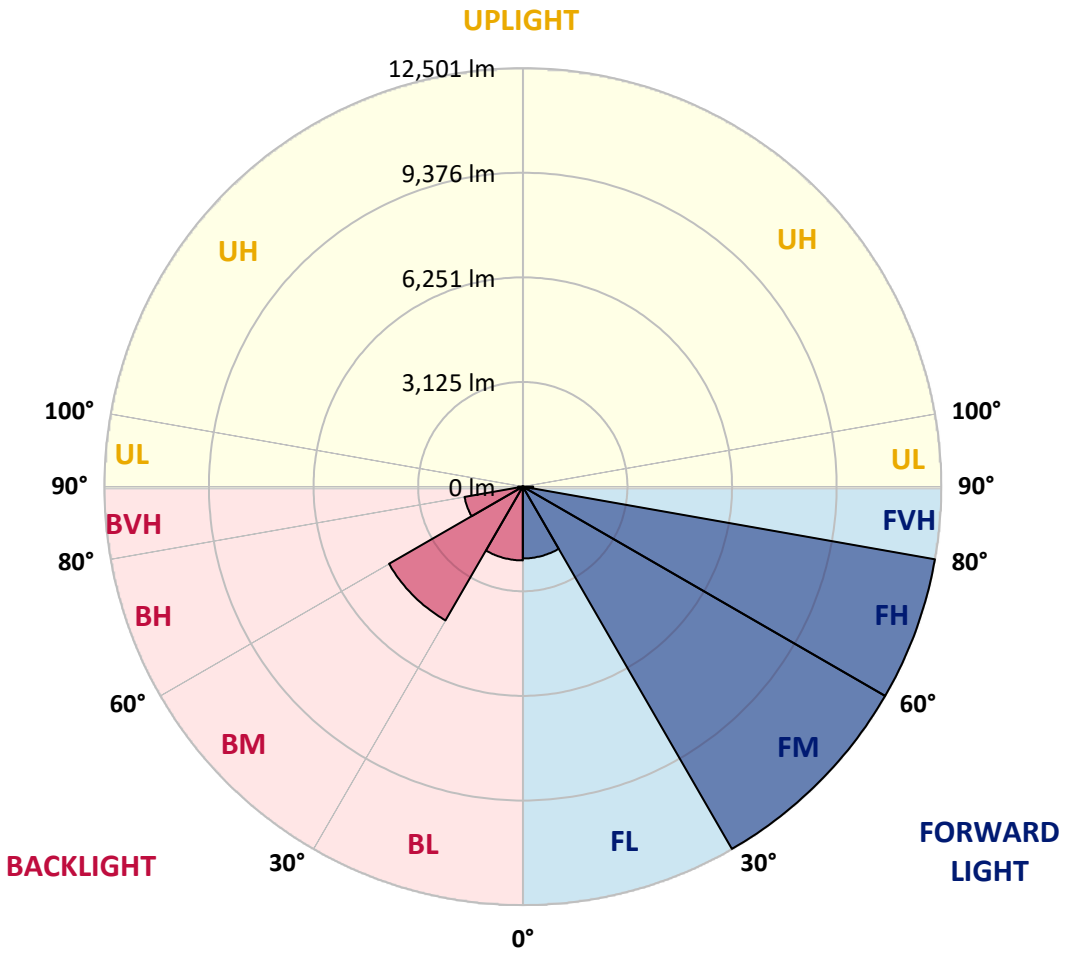
Scaled Data Report

REPORT NUMBER: P1357609
CATALOG NUMBER: GSS-SB5C-740-U-T4FT

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2146.0 | 5.9 | | | |
| FM | (30°-60°) | 12496.7 | 34.5 | | | |
| FH | (60°-80°) | 12501.4 | 34.6 | | | G5 |
| FVH | (80°-90°) | 307.8 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 2204.5 | 6.1 | B3/2500 | | |
| BM | (30°-60°) | 4613.5 | 12.8 | B3/5000 | | |
| BH | (60°-80°) | 1766.3 | 4.9 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 140.2 | 0.4 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G5**
Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 |
| 2.5° | 5089.3 | 5081.0 | 5122.5 | 5105.9 | 5139.2 | 5122.5 | 5122.5 | 5172.4 | 5214.0 | 5272.2 | 5313.8 |
| 5° | 4806.5 | 4814.9 | 4806.5 | 4889.7 | 4889.7 | 4898.0 | 4964.5 | 5097.6 | 5197.4 | 5263.9 | 5305.5 |
| 7.5° | 4440.6 | 4457.3 | 4490.5 | 4582.0 | 4640.2 | 4681.8 | 4806.5 | 4947.9 | 5114.2 | 5239.0 | 5388.6 |
| 10° | 4141.3 | 4116.3 | 4191.2 | 4291.0 | 4374.1 | 4415.7 | 4623.6 | 4848.1 | 5072.6 | 5280.5 | 5405.3 |
| 12.5° | 3925.1 | 3925.1 | 3966.6 | 4058.1 | 4149.6 | 4216.1 | 4449.0 | 4723.4 | 5022.8 | 5280.5 | 5513.4 |
| 15° | 3883.5 | 3900.1 | 3916.7 | 3950.0 | 4033.2 | 4066.4 | 4291.0 | 4631.9 | 4964.5 | 5355.4 | 5588.2 |
| 17.5° | 4024.9 | 4008.2 | 3991.6 | 4008.2 | 4041.5 | 4058.1 | 4224.4 | 4557.1 | 4931.3 | 5363.7 | 5629.8 |
| 20° | 4407.4 | 4374.1 | 4349.2 | 4224.4 | 4199.5 | 4216.1 | 4282.6 | 4532.1 | 4939.6 | 5480.1 | 5804.4 |
| 22.5° | 4939.6 | 4956.2 | 4856.4 | 4648.5 | 4548.8 | 4540.4 | 4457.3 | 4623.6 | 4989.5 | 5571.6 | 5954.1 |
| 25° | 5704.6 | 5629.8 | 5530.0 | 5280.5 | 5072.6 | 4997.8 | 4823.2 | 4814.9 | 5097.6 | 5737.9 | 6170.3 |
| 27.5° | 6478.0 | 6436.4 | 6278.4 | 5929.2 | 5696.3 | 5588.2 | 5272.2 | 5114.2 | 5255.6 | 5937.5 | 6419.8 |
| 30° | 7342.9 | 7342.9 | 7085.1 | 6694.2 | 6386.5 | 6187.0 | 5812.8 | 5513.4 | 5521.7 | 6203.6 | 6777.4 |
| 32.5° | 8232.7 | 8182.8 | 7933.3 | 7359.5 | 7051.8 | 6852.2 | 6353.3 | 6045.6 | 5945.8 | 6577.8 | 7268.0 |
| 35° | 8873.0 | 8889.6 | 8656.8 | 8149.5 | 7708.8 | 7517.5 | 7068.4 | 6719.2 | 6494.7 | 7101.7 | 7891.7 |
| 37.5° | 9455.1 | 9471.7 | 9330.3 | 8831.4 | 8440.6 | 8249.3 | 7742.0 | 7500.9 | 7159.9 | 7850.1 | 8640.1 |
| 40° | 9746.1 | 9704.6 | 9663.0 | 9480.0 | 9255.5 | 9105.8 | 8581.9 | 8265.9 | 7966.6 | 8656.8 | 9455.1 |
| 42.5° | 9962.3 | 9962.3 | 9895.8 | 9979.0 | 9979.0 | 9879.2 | 9471.7 | 9189.0 | 8889.6 | 9779.4 | 10319.9 |
| 45° | 10211.8 | 10103.7 | 10103.7 | 10178.6 | 10386.5 | 10453.0 | 10486.2 | 10220.1 | 9945.7 | 10893.7 | 11259.6 |
| 47.5° | 10469.6 | 10494.6 | 10428.0 | 10519.5 | 10810.6 | 11101.6 | 11534.0 | 11292.9 | 10993.5 | 12215.9 | 12324.0 |
| 50° | 10793.9 | 10827.2 | 10827.2 | 11026.8 | 11351.1 | 11692.0 | 12756.5 | 12507.0 | 12008.0 | 13712.8 | 13496.6 |
| 52.5° | 10877.1 | 10893.7 | 11143.2 | 11367.7 | 11841.7 | 12307.4 | 13978.9 | 13621.3 | 13089.1 | 15076.6 | 14519.4 |
| 55° | 10727.4 | 10852.1 | 11301.2 | 11733.6 | 12415.5 | 12972.7 | 15143.1 | 14694.0 | 13879.1 | 16116.0 | 15326.0 |
| 57.5° | 11068.3 | 11118.2 | 11534.0 | 12024.7 | 12972.7 | 13687.8 | 16290.7 | 15650.4 | 14427.9 | 16972.6 | 15650.4 |
| 60° | 11791.8 | 11758.6 | 12124.5 | 12673.3 | 13771.0 | 14694.0 | 17529.7 | 16465.3 | 14885.3 | 17113.9 | 15010.0 |
| 62.5° | 13413.4 | 13247.1 | 13380.1 | 13879.1 | 15109.8 | 16365.5 | 18802.1 | 17130.6 | 14602.6 | 15716.9 | 12847.9 |
| 65° | 15608.8 | 15558.9 | 15475.7 | 15999.6 | 17687.7 | 18760.5 | 20390.4 | 16989.2 | 13188.9 | 13263.7 | 10328.2 |
| 67.5° | 17571.3 | 17637.8 | 17587.9 | 18985.0 | 21820.7 | 22802.0 | 22078.5 | 15966.4 | 10927.0 | 9463.4 | 6644.3 |
| 70° | 18328.1 | 18461.1 | 19342.6 | 22003.6 | 25828.9 | 26968.2 | 22843.5 | 13363.5 | 7567.4 | 5114.2 | 3268.1 |
| 72.5° | 16432.1 | 16673.2 | 18261.5 | 23508.8 | 27833.0 | 27159.5 | 19151.3 | 9222.2 | 3991.6 | 2694.3 | 1821.2 |
| 75° | 11359.4 | 11608.9 | 14020.5 | 19716.8 | 21654.4 | 20548.4 | 11758.6 | 3975.0 | 2062.3 | 1571.7 | 1122.6 |
| 77.5° | 4457.3 | 5105.9 | 6685.9 | 11001.8 | 13272.0 | 13022.6 | 5571.6 | 1372.1 | 1147.6 | 956.3 | 731.8 |
| 80° | 1496.8 | 1696.4 | 2486.4 | 4340.9 | 5887.6 | 6220.2 | 2029.1 | 698.5 | 665.3 | 582.1 | 457.4 |
| 82.5° | 540.5 | 607.1 | 1064.4 | 1638.2 | 2686.0 | 2702.6 | 656.9 | 374.2 | 407.5 | 349.3 | 241.2 |
| 85° | 182.9 | 199.6 | 249.5 | 507.3 | 656.9 | 706.8 | 182.9 | 141.4 | 166.3 | 149.7 | 108.1 |
| 87.5° | 16.6 | 16.6 | 16.6 | 24.9 | 24.9 | 24.9 | 24.9 | 33.3 | 33.3 | 24.9 | 24.9 |
| 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: P1357609
CATALOG NUMBER: GSS-SB5C-740-U-T4FT

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 | 5313.8 |
| 2.5° | 5322.1 | 5347.1 | 5363.7 | 5397.0 | 5438.5 | 5446.9 | 5480.1 | 5488.4 | 5471.8 | 5488.4 | 5471.8 |
| 5° | 5372.0 | 5413.6 | 5446.9 | 5496.8 | 5530.0 | 5571.6 | 5563.3 | 5538.3 | 5538.3 | 5496.8 | 5563.3 |
| 7.5° | 5438.5 | 5496.8 | 5521.7 | 5571.6 | 5579.9 | 5555.0 | 5521.7 | 5513.4 | 5430.2 | 5430.2 | 5446.9 |
| 10° | 5530.0 | 5579.9 | 5604.9 | 5621.5 | 5571.6 | 5530.0 | 5463.5 | 5421.9 | 5388.6 | 5355.4 | 5363.7 |
| 12.5° | 5596.5 | 5646.4 | 5646.4 | 5588.2 | 5530.0 | 5463.5 | 5405.3 | 5322.1 | 5297.2 | 5255.6 | 5255.6 |
| 15° | 5638.1 | 5721.3 | 5663.1 | 5571.6 | 5455.2 | 5363.7 | 5272.2 | 5197.4 | 5164.1 | 5155.8 | 5189.1 |
| 17.5° | 5746.2 | 5787.8 | 5646.4 | 5488.4 | 5363.7 | 5239.0 | 5139.2 | 5081.0 | 5039.4 | 5031.1 | 5097.6 |
| 20° | 5871.0 | 5837.7 | 5596.5 | 5397.0 | 5255.6 | 5089.3 | 5006.1 | 4989.5 | 4972.9 | 5022.8 | 5022.8 |
| 22.5° | 5995.7 | 5937.5 | 5546.6 | 5322.1 | 5097.6 | 4981.2 | 4906.3 | 4956.2 | 4964.5 | 4997.8 | 5031.1 |
| 25° | 6178.7 | 6037.3 | 5530.0 | 5205.7 | 4914.6 | 4831.5 | 4839.8 | 4906.3 | 4923.0 | 4923.0 | 4939.6 |
| 27.5° | 6378.2 | 6203.6 | 5538.3 | 5031.1 | 4731.7 | 4706.8 | 4765.0 | 4789.9 | 4814.9 | 4789.9 | 4798.2 |
| 30° | 6661.0 | 6378.2 | 5496.8 | 4831.5 | 4573.7 | 4615.3 | 4648.5 | 4640.2 | 4532.1 | 4507.2 | 4523.8 |
| 32.5° | 7076.8 | 6619.4 | 5463.5 | 4673.5 | 4490.5 | 4490.5 | 4457.3 | 4357.5 | 4249.4 | 4149.6 | 4182.9 |
| 35° | 7550.8 | 6918.8 | 5338.8 | 4548.8 | 4407.4 | 4374.1 | 4241.1 | 4074.7 | 3875.2 | 3758.7 | 3767.1 |
| 37.5° | 8049.7 | 7193.2 | 5205.7 | 4407.4 | 4274.3 | 4191.2 | 3999.9 | 3742.1 | 3542.5 | 3426.1 | 3409.5 |
| 40° | 8698.3 | 7500.9 | 5006.1 | 4216.1 | 4091.4 | 3958.3 | 3742.1 | 3459.4 | 3259.8 | 3168.3 | 3218.2 |
| 42.5° | 9355.3 | 7858.4 | 4773.3 | 3950.0 | 3850.2 | 3767.1 | 3525.9 | 3251.5 | 3060.2 | 3002.0 | 3035.3 |
| 45° | 10087.1 | 8224.3 | 4532.1 | 3634.0 | 3584.1 | 3567.5 | 3359.6 | 3143.4 | 2977.1 | 2893.9 | 2885.6 |
| 47.5° | 10835.5 | 8606.9 | 4199.5 | 3351.3 | 3326.3 | 3434.4 | 3276.4 | 3093.5 | 2952.1 | 2819.1 | 2810.7 |
| 50° | 11675.4 | 8981.1 | 3750.4 | 2993.7 | 3110.1 | 3359.6 | 3301.4 | 3101.8 | 2860.6 | 2652.7 | 2619.5 |
| 52.5° | 12423.8 | 9114.1 | 3276.4 | 2711.0 | 2943.8 | 3367.9 | 3326.3 | 3051.9 | 2735.9 | 2486.4 | 2453.2 |
| 55° | 12931.1 | 8889.6 | 2869.0 | 2461.5 | 2819.1 | 3309.7 | 3293.1 | 2977.1 | 2611.2 | 2345.1 | 2311.8 |
| 57.5° | 12964.4 | 8232.7 | 2478.1 | 2253.6 | 2619.5 | 3143.4 | 3193.3 | 2827.4 | 2419.9 | 2195.4 | 2170.4 |
| 60° | 12166.0 | 7151.6 | 2162.1 | 2070.6 | 2403.3 | 2927.2 | 3010.3 | 2619.5 | 2245.3 | 2004.1 | 1987.5 |
| 62.5° | 10378.1 | 5721.3 | 1862.7 | 1871.1 | 2195.4 | 2636.1 | 2794.1 | 2444.8 | 2070.6 | 1837.8 | 1812.8 |
| 65° | 8257.6 | 4374.1 | 1654.8 | 1696.4 | 1929.3 | 2353.4 | 2594.5 | 2270.2 | 1896.0 | 1671.5 | 1638.2 |
| 67.5° | 5546.6 | 3018.6 | 1430.3 | 1513.5 | 1671.5 | 2062.3 | 2395.0 | 2087.3 | 1679.8 | 1496.8 | 1471.9 |
| 70° | 2644.4 | 1754.6 | 1230.7 | 1330.5 | 1430.3 | 1746.3 | 2103.9 | 1829.5 | 1505.2 | 1355.5 | 1347.2 |
| 72.5° | *1471.9* | *1122.6* | *1064.4* | *1139.3* | *1197.5* | *1463.6* | *1779.6* | *1654.8* | *1347.2* | *1289.0* | *1280.6* |
| 75° | 939.7 | 798.3 | 848.2 | 939.7 | 973.0 | 1155.9 | 1538.4 | 1480.2 | 1214.1 | 1247.4 | 1247.4 |
| 77.5° | 582.1 | 548.8 | 648.6 | 731.8 | 756.7 | 948.0 | 1264.0 | 1255.7 | 1014.5 | 997.9 | 881.5 |
| 80° | 374.2 | 365.9 | 465.7 | 474.0 | 515.6 | 723.5 | 1006.2 | 964.6 | 765.1 | 698.5 | 656.9 |
| 82.5° | 199.6 | 207.9 | 282.7 | 299.4 | 291.1 | 440.7 | 690.2 | 681.9 | 565.5 | 490.6 | 465.7 |
| 85° | 74.8 | 74.8 | 108.1 | 133.1 | 141.4 | 224.5 | 365.9 | 374.2 | 307.7 | 232.8 | 241.2 |
| 87.5° | 16.6 | 16.6 | 16.6 | 24.9 | 24.9 | 49.9 | 66.5 | 74.8 | 83.2 | 41.6 | 24.9 |
| 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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# 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

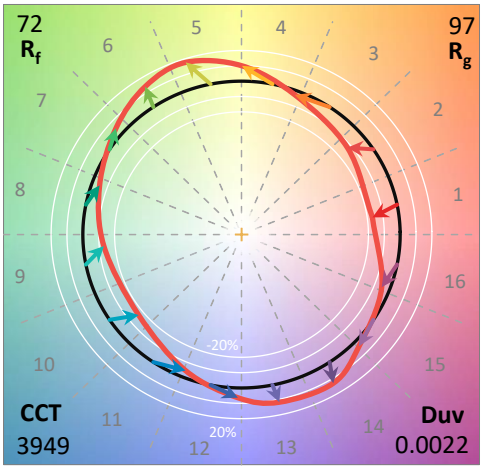
## Test Information

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

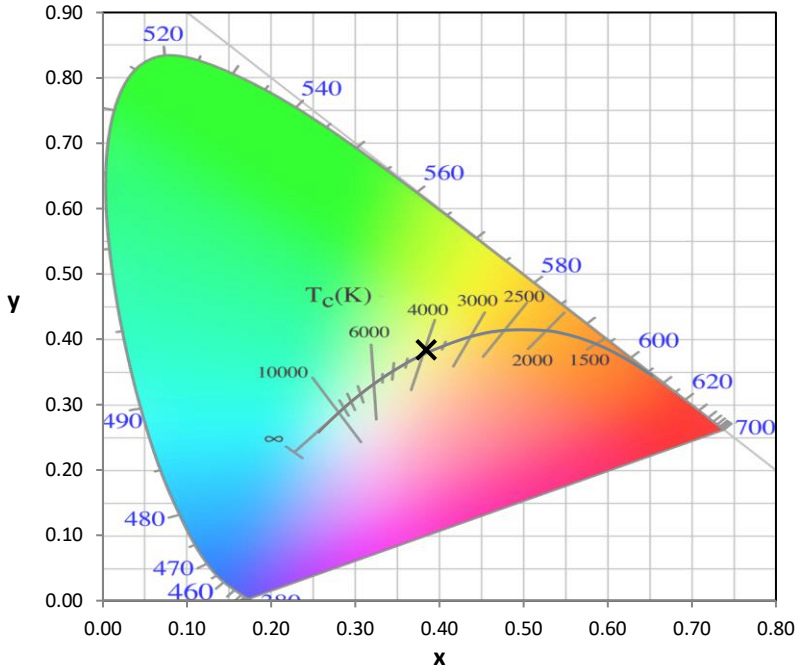
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

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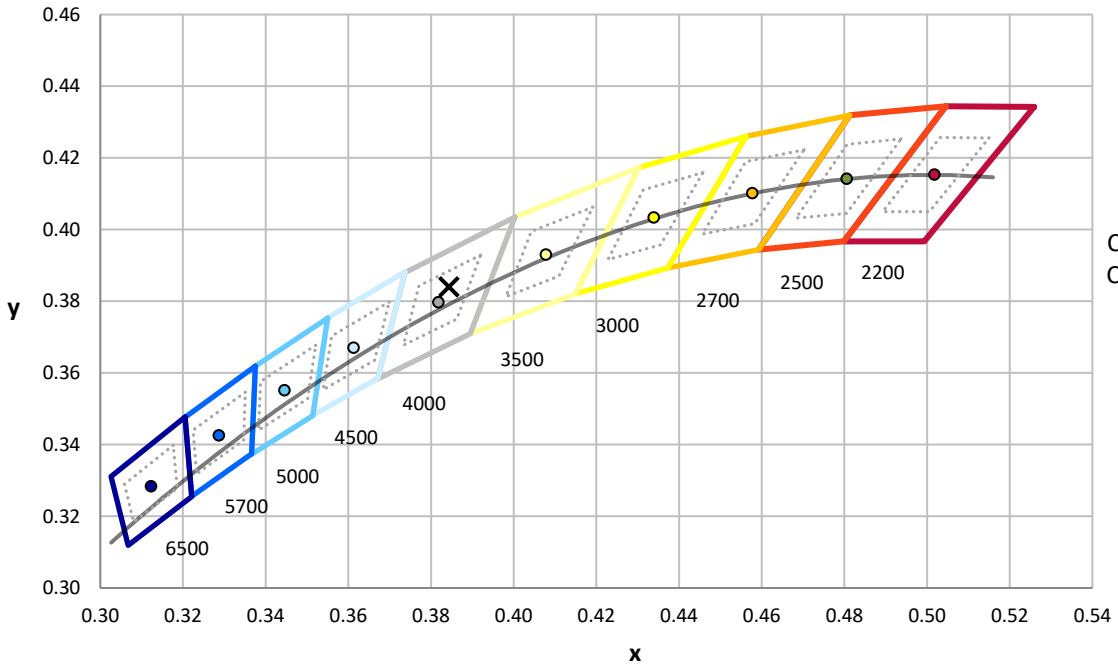
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

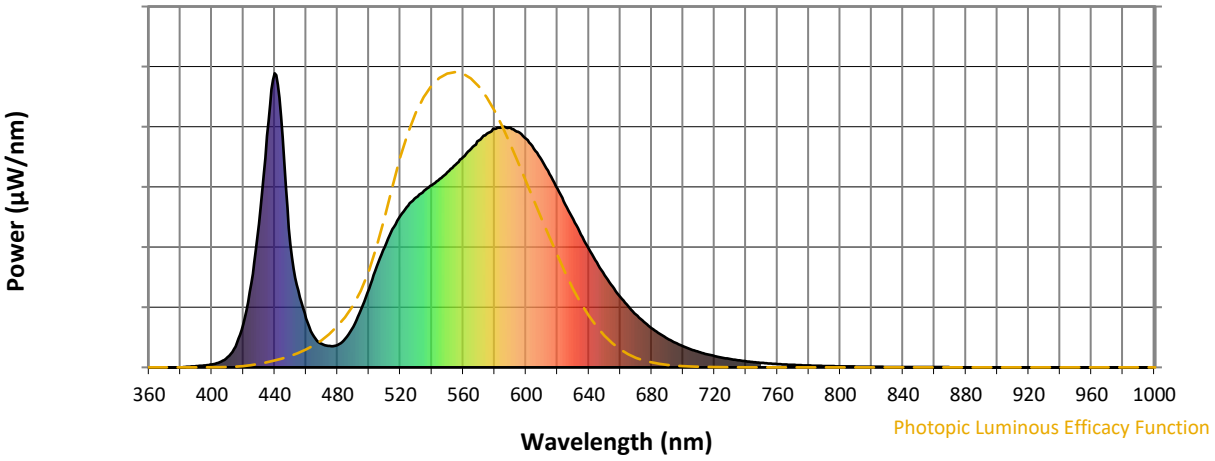



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

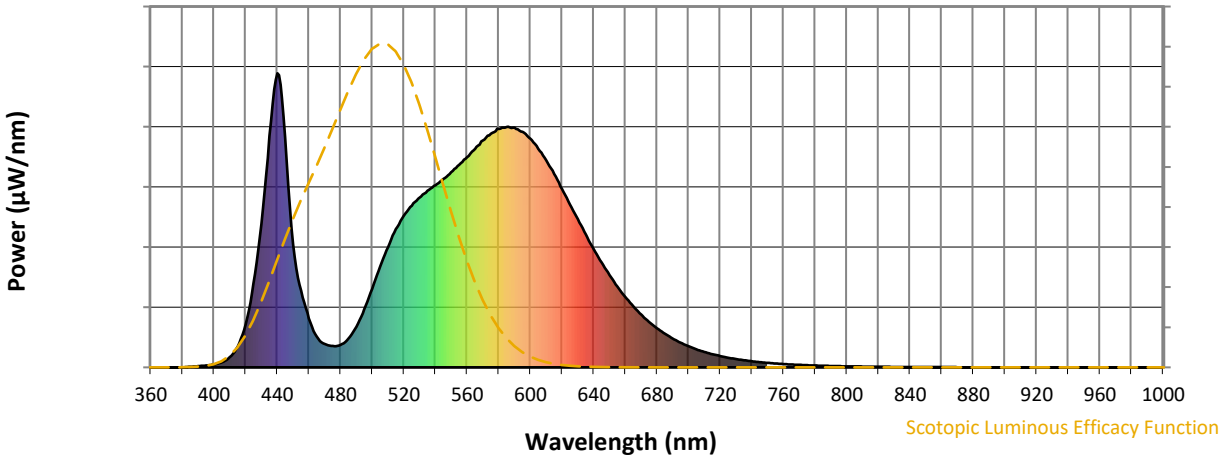



## Photopic Lumens: NR

| 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

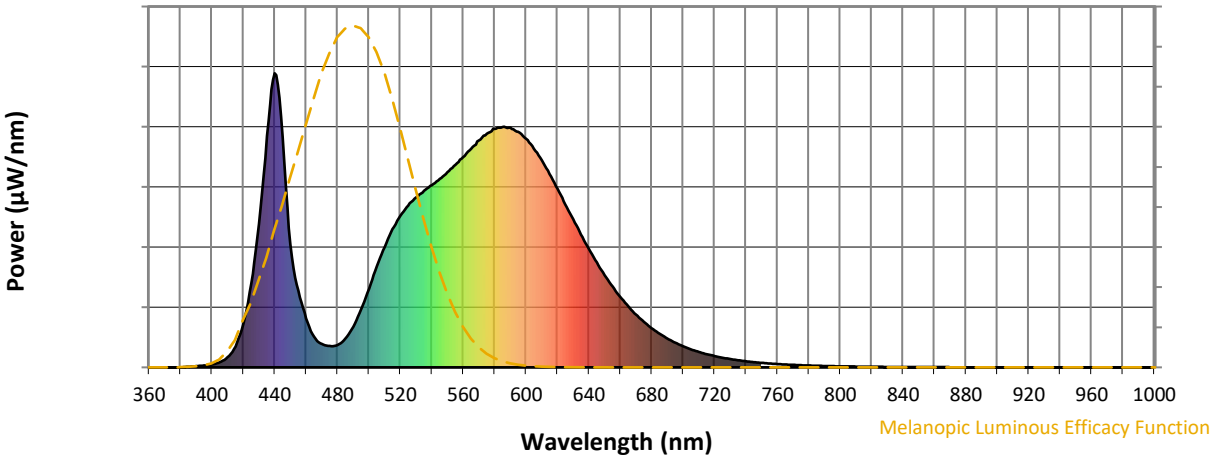



**Scotopic Lumens: NR** **S/P: 1.47**

| 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 | | | |

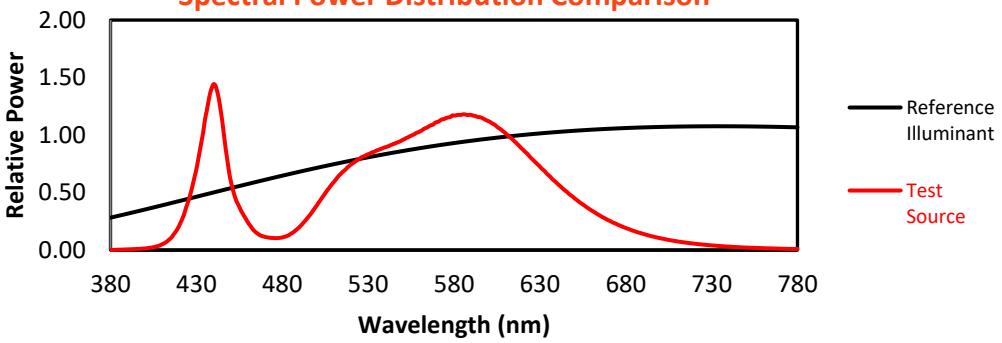
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# TM-30-18

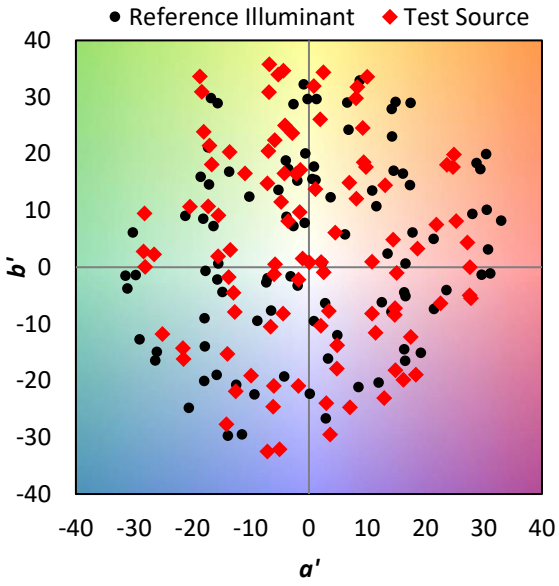
## Summary

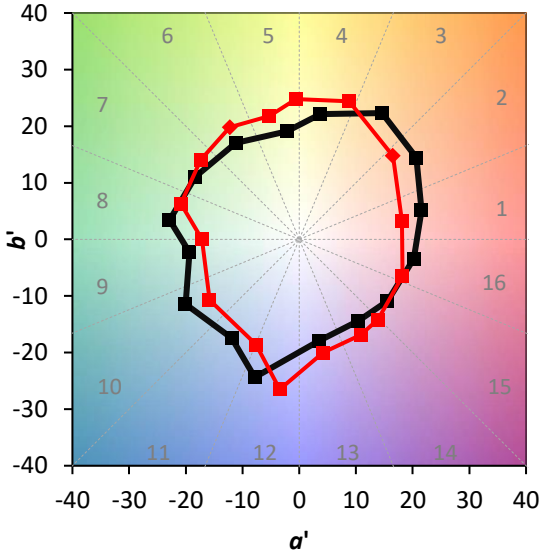
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

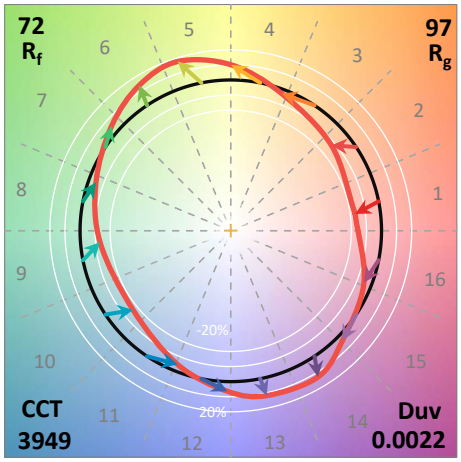
## Spectral Power Distribution Comparison

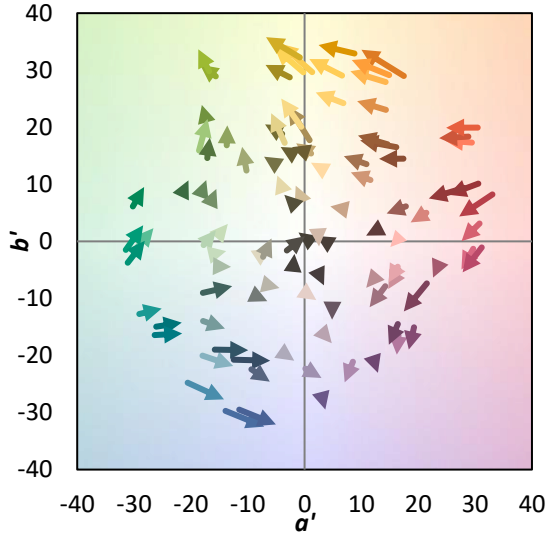



## Color Vector Graphics



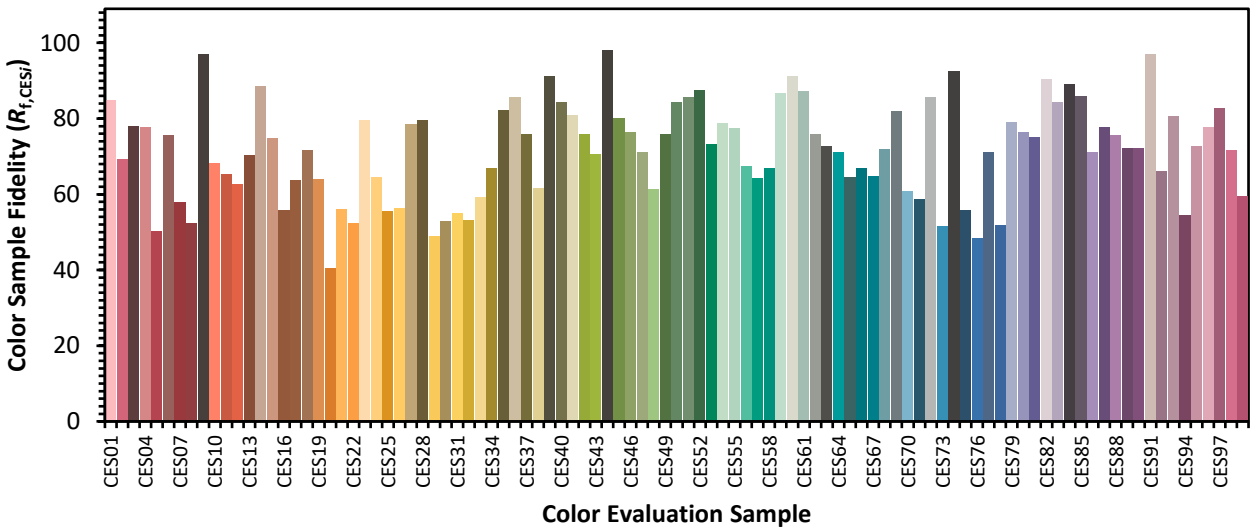



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**Individual Sample Fidelity Index ($R_{f,i}$)**

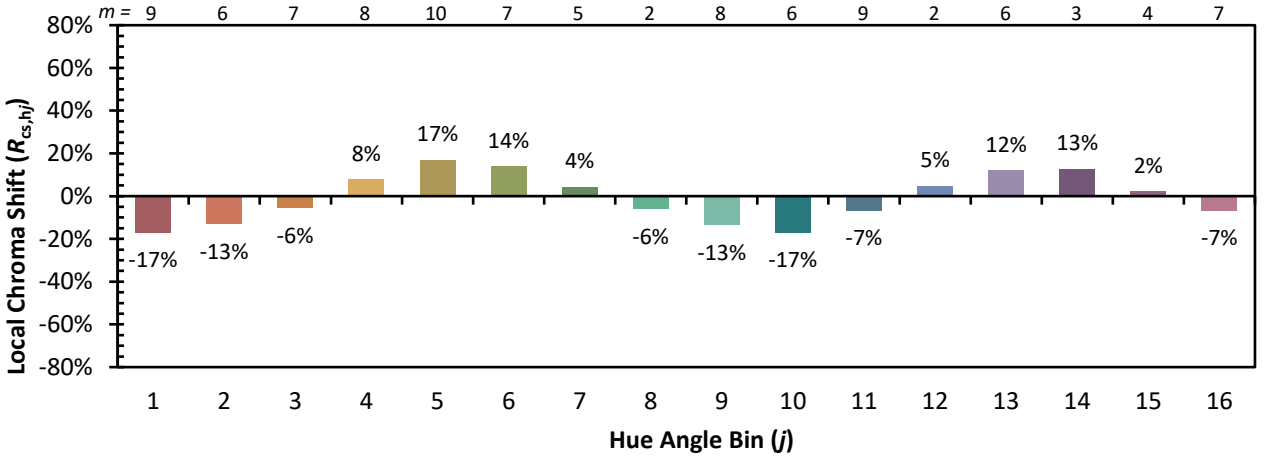
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06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

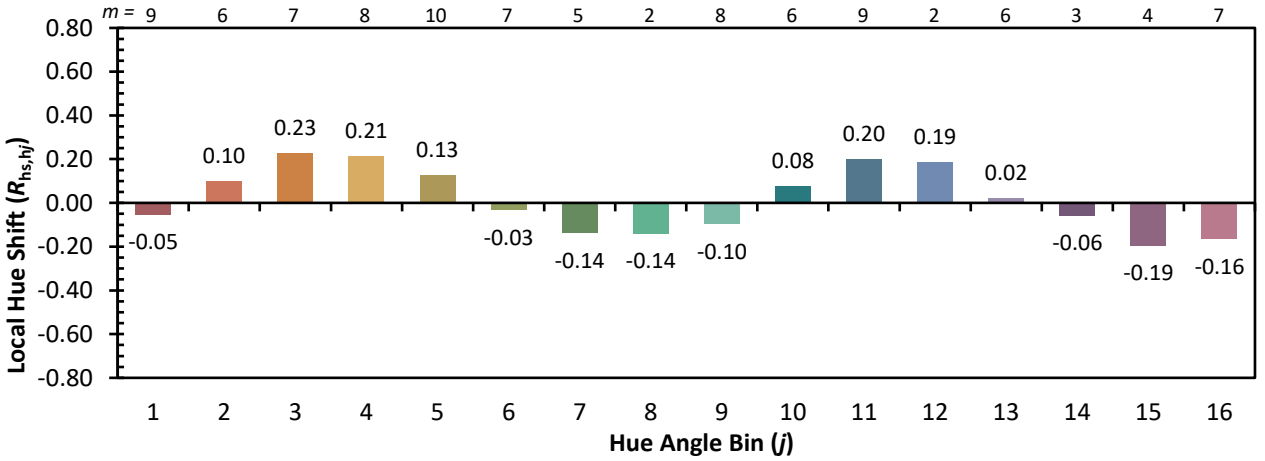


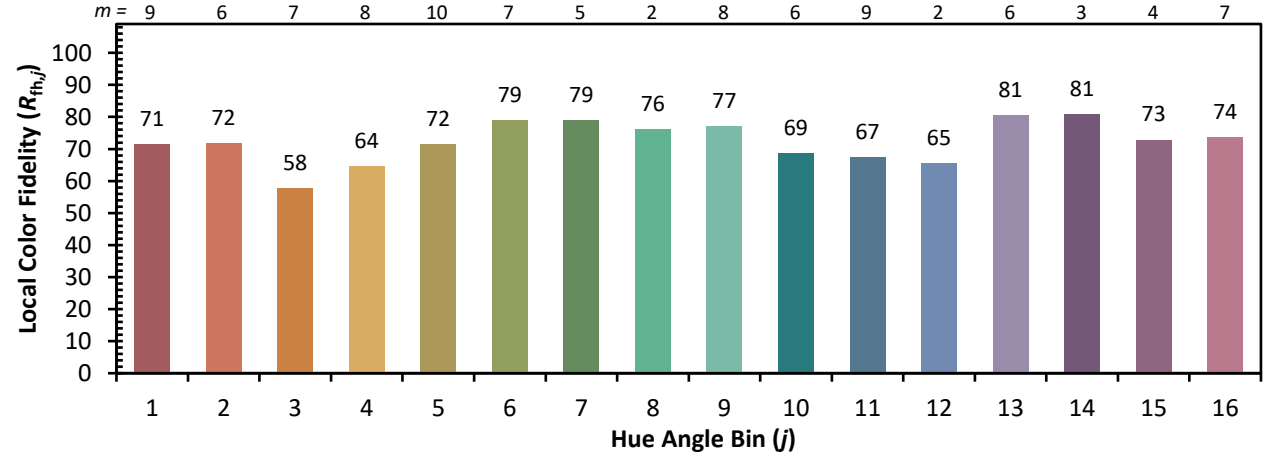
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## Color Rendition by Hue-Angle Bin



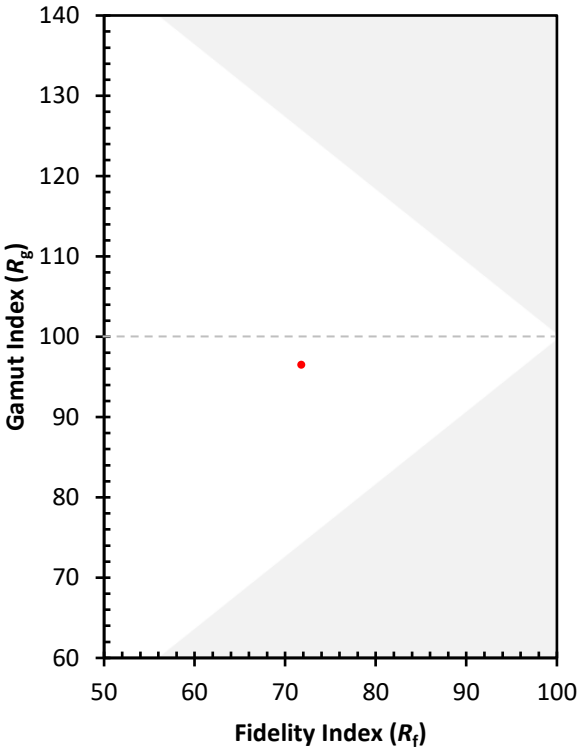



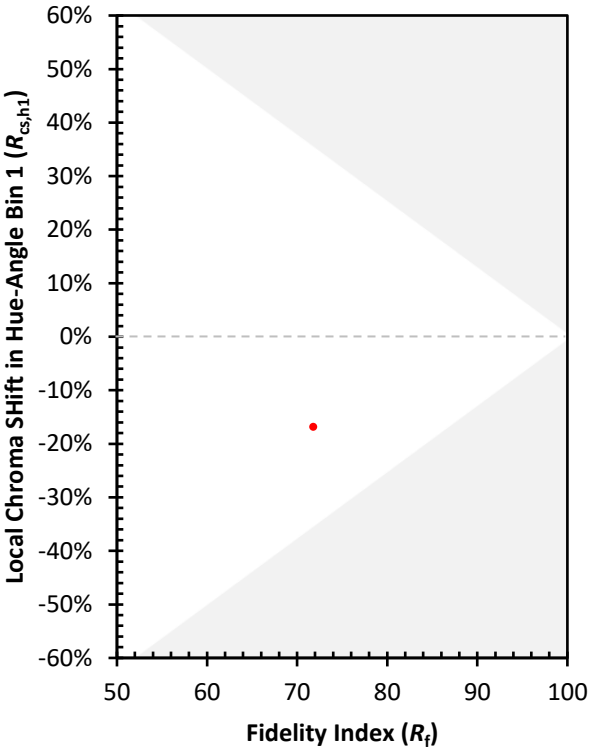



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## Measure Comparisons




(END OF REPORT)