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: P1047038

Luminaire Tested: **GALN-SA7B-740-U-T3BC**

Issue Date: 07/10/2025

Report Generated By 670347003

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: | P1047038 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 07/10/2025 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GALN-SA7B-740-U-T3BC |
| Description: | GALLEON II AREA AND ROADWAY LUMINAIRE 800mA 7xLight Square PACKAGE 70CRI 4000K FIXTURE w/ TYPE III ANGLED BACKLIGHT CONTROL |
| Light Source: | (98) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 32729.9 lumens |
| Efficiency: | N/A |
| Efficacy: | 131.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B0 - U0 - G5 |

| | |
|---|---|
| Input Watts (W): | 249.5 |
| 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: P1047038
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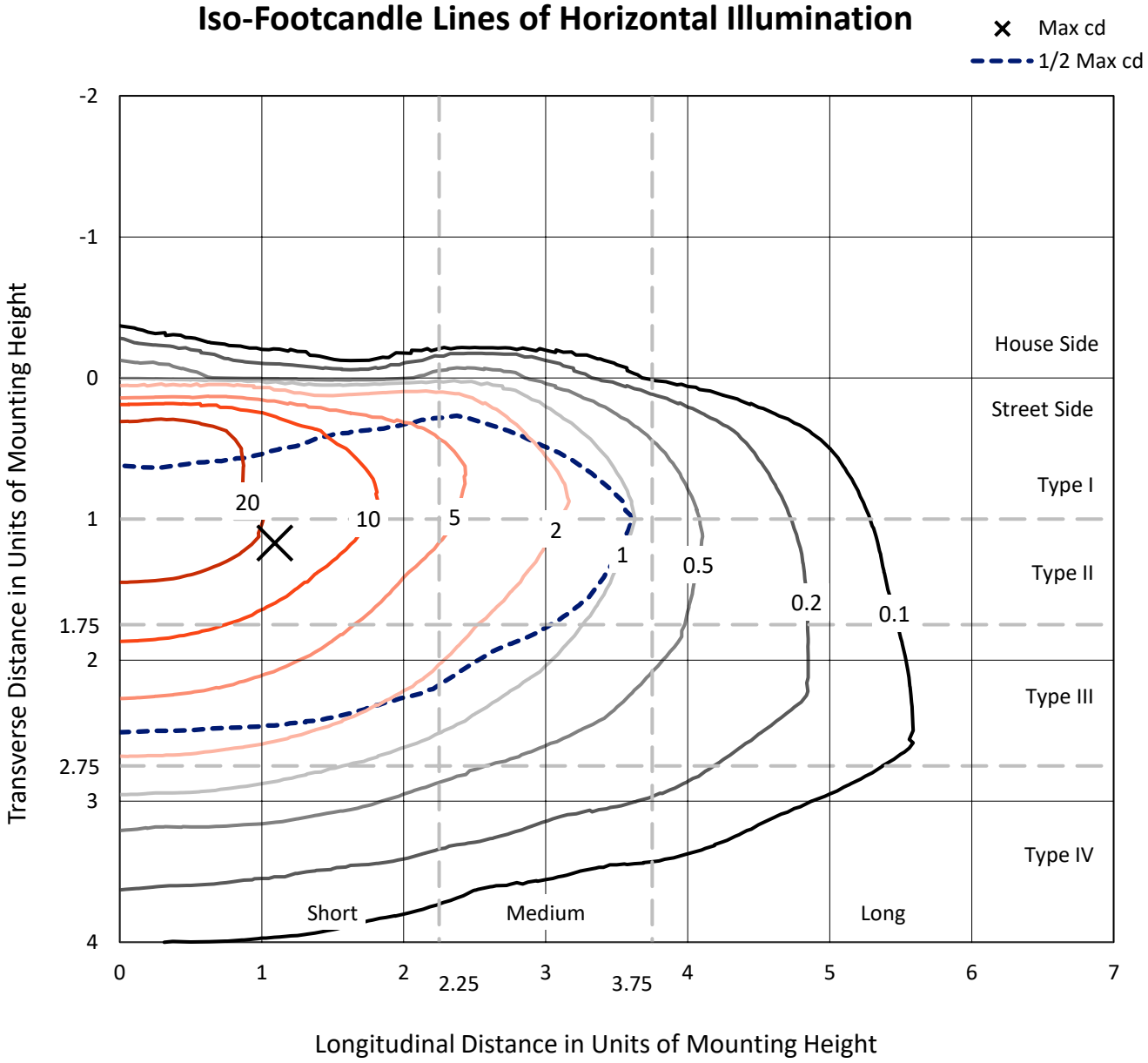
## Iso-Footcandle Lines of Horizontal Illumination




Based on 15 foot mounting height. Maximum calculated value = 36.7 fc
Type III - Short - N/A

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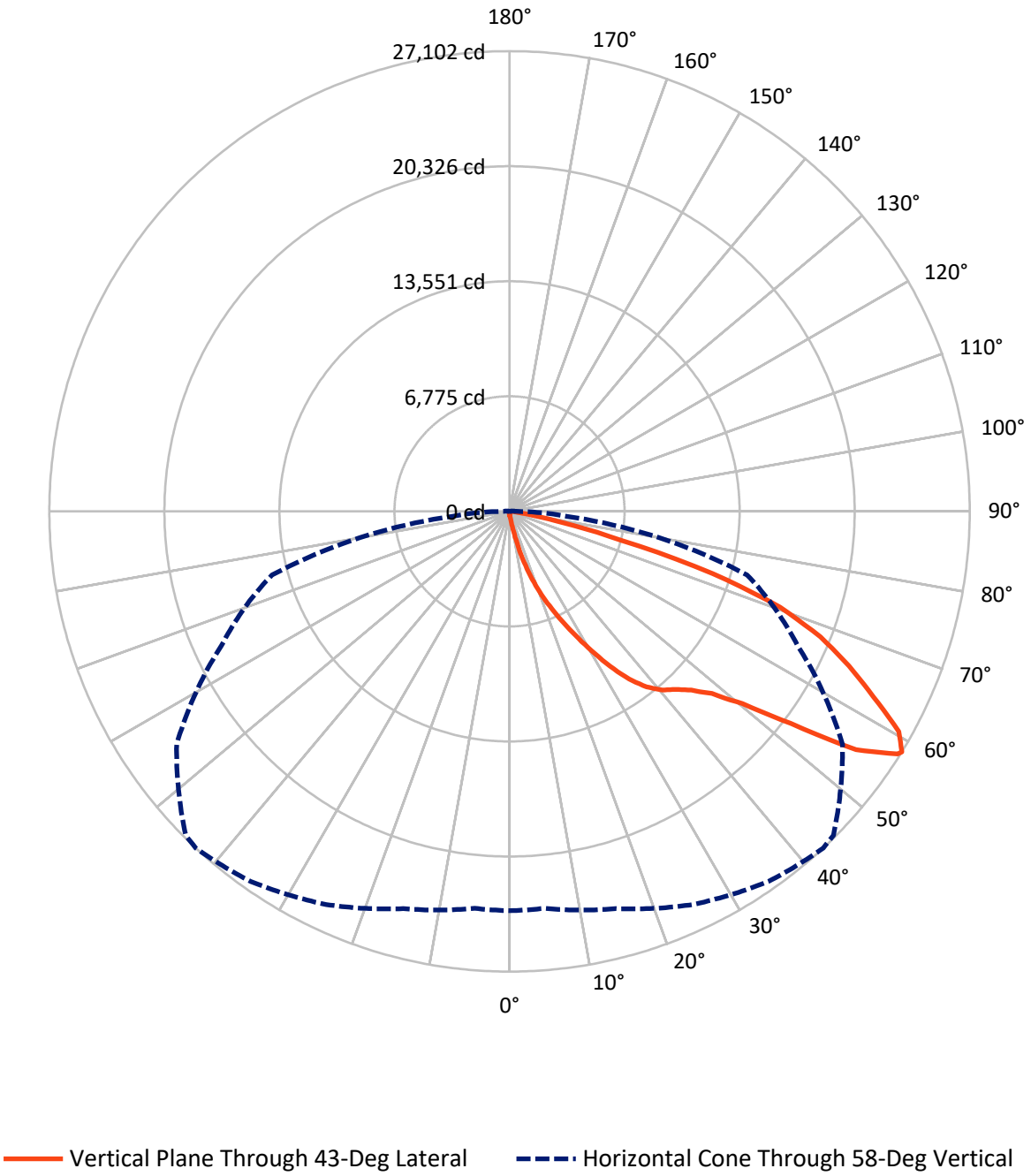
## Luminous Intensity Polar Plot



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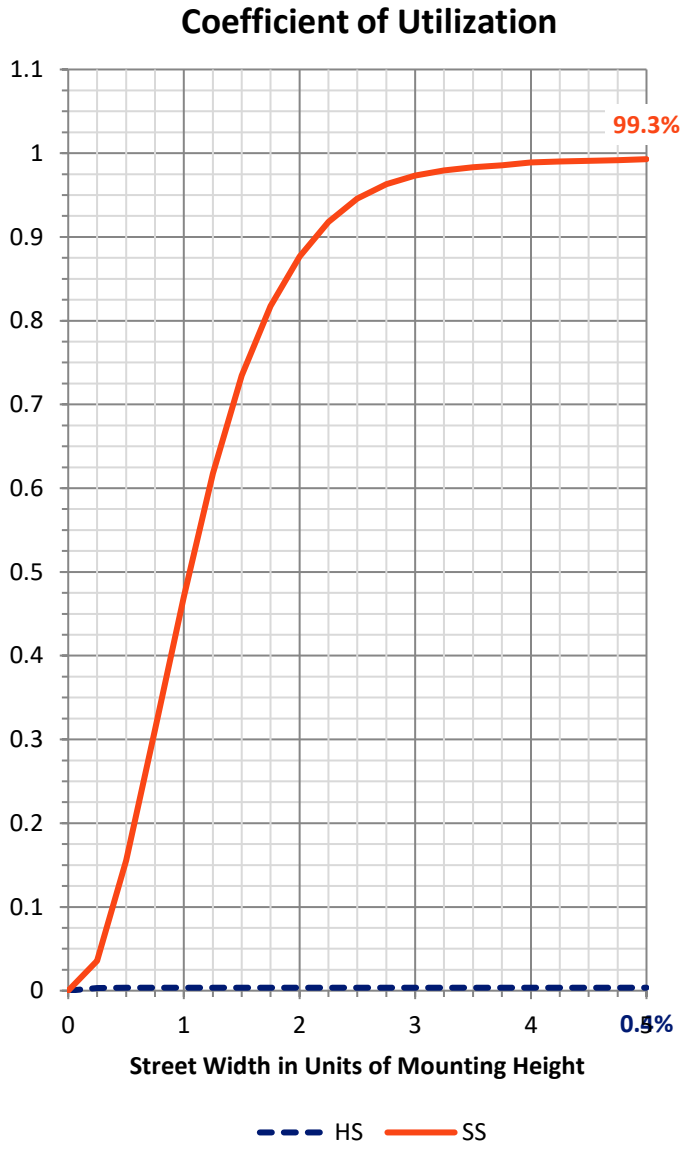
REPORT NUMBER: P1047038
CATALOG NUMBER: GALN-SA7B-740-U-T3BC

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 119.5 | 0.0 | 119.5 |
| | % Fixture | 0.4 | 0.0 | 0.4 |
| **Street Side** | Lumens | 32610.4 | 0.0 | 32610.4 |
| | % Fixture | 99.6 | 0.0 | 99.6 |
| **Total** | Lumens | 32729.9 | 0.0 | 32729.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 31.4 | 0.1 |
| 10°-20° | 376.2 | 1.1 |
| 20°-30° | 1356.0 | 4.1 |
| 30°-40° | 3102.6 | 9.5 |
| 40°-50° | 5232.9 | 16.0 |
| 50°-60° | 8635.5 | 26.4 |
| 60°-70° | 9651.3 | 29.5 |
| 70°-80° | 3984.9 | 12.2 |
| 80°-90° | 359.2 | 1.1 |
| 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° | 32729.9 | 100.0 |
| 0°-180° | 32729.9 | 100.0 |



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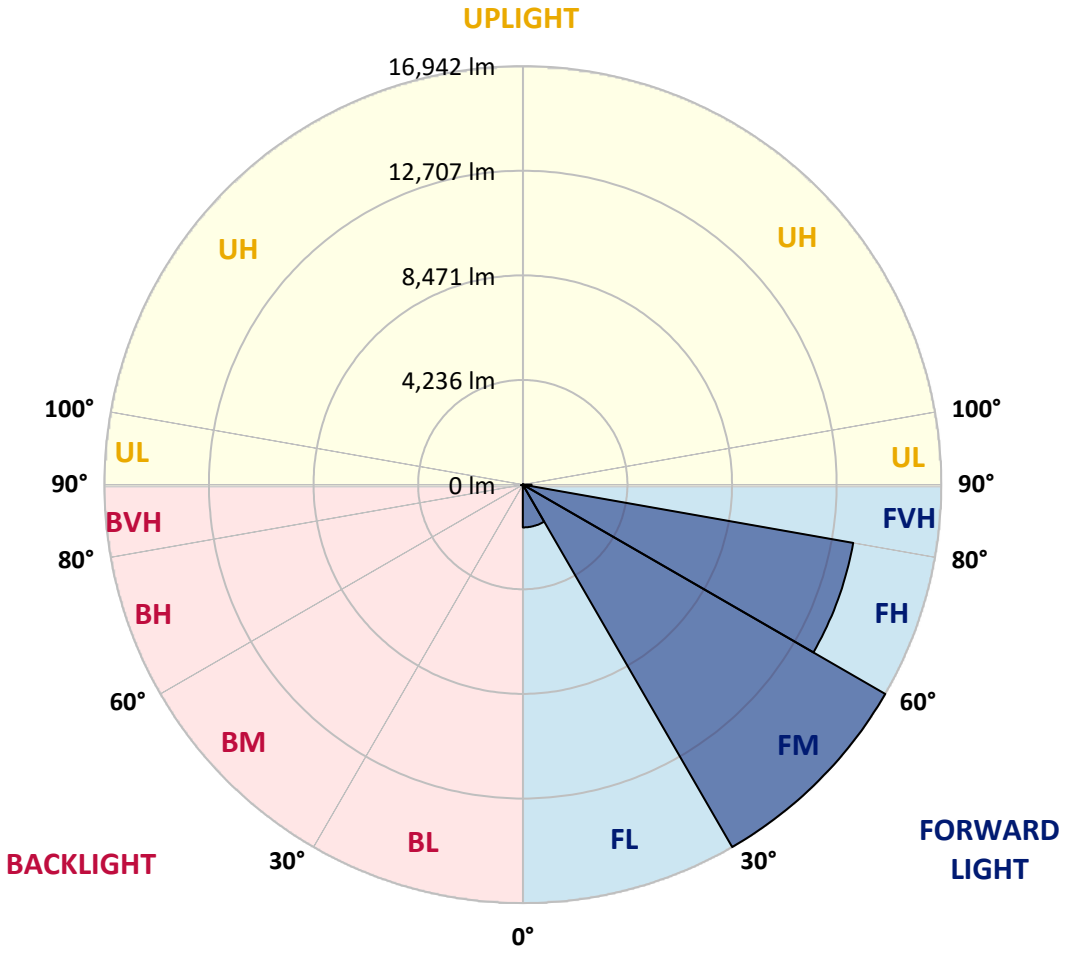
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1732.5 | 5.3 | | | |
| FM | (30°-60°) | 16942.3 | 51.8 | | | |
| FH | (60°-80°) | 13581.4 | 41.5 | | | G5 |
| FVH | (80°-90°) | 354.3 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 31.2 | 0.1 | B0/110 | | |
| BM | (30°-60°) | 28.6 | 0.1 | B0/220 | | |
| BH | (60°-80°) | 54.8 | 0.2 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 4.9 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B0-U0-G5**
Type III Short



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 43° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | *214.0* | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 |
| 2.5° | 256.8 | 265.4 | 256.8 | 256.8 | 256.8 | *248.2* | 248.2 | 239.7 | 239.7 | 231.1 | 222.6 |
| 5° | 376.6 | 376.6 | 351.0 | 333.8 | 316.7 | *308.2* | 299.6 | 282.5 | 265.4 | 248.2 | 231.1 |
| 7.5° | 838.9 | 838.9 | 761.9 | 659.1 | 522.2 | *445.1* | 428.0 | 351.0 | 299.6 | 265.4 | 231.1 |
| 10° | 2003.1 | 2003.1 | 1831.9 | 1549.4 | 1198.4 | *890.3* | 796.1 | 505.1 | 359.5 | 282.5 | 239.7 |
| 12.5° | 3329.9 | 3372.7 | 3158.7 | 2799.2 | 2277.0 | *1737.7* | 1549.4 | 924.5 | 479.4 | 308.2 | 239.7 |
| 15° | 4519.8 | 4417.1 | 4357.2 | 4014.7 | 3518.3 | *2876.2* | 2636.5 | 1558.0 | 693.4 | 351.0 | 239.7 |
| 17.5° | 5324.5 | 5324.5 | 5238.9 | 5007.7 | 4554.0 | *3989.1* | 3792.2 | 2516.7 | 1121.4 | 402.3 | 248.2 |
| 20° | 6266.1 | 6266.1 | 6112.0 | 5949.4 | 5547.0 | *5067.7* | 4879.3 | 3578.2 | 1737.7 | 513.6 | 248.2 |
| 22.5° | 7404.6 | 7421.7 | 7250.5 | 6959.5 | 6574.2 | *6043.5* | 5880.9 | 4562.6 | 2516.7 | 684.8 | 256.8 |
| 25° | 8791.3 | 8808.5 | 8560.2 | 8286.3 | 7695.6 | *7122.1* | 6873.9 | 5692.5 | 3466.9 | 958.7 | 256.8 |
| 27.5° | 10323.6 | 10443.5 | 10075.4 | 9604.6 | 8979.7 | *8260.6* | 8072.3 | 6711.2 | 4408.5 | 1352.5 | 273.9 |
| 30° | 12232.6 | 12232.6 | 11744.6 | 11085.5 | 10409.2 | *9519.0* | 9279.3 | 7781.2 | 5410.1 | 1874.7 | 291.0 |
| 32.5° | 13876.1 | 13747.7 | 13122.8 | 12429.4 | 11710.4 | *10880.0* | 10623.2 | 8902.6 | 6437.3 | 2525.3 | 325.3 |
| 35° | 15134.5 | 15023.2 | 14252.8 | 13508.0 | 12883.1 | *12121.3* | 11813.1 | 10118.2 | 7524.4 | 3261.4 | 376.6 |
| 37.5° | 16213.1 | 16170.3 | 15125.9 | 14192.8 | 13782.0 | *13114.3* | 12840.3 | 11265.2 | 8594.5 | 4057.5 | 436.6 |
| 40° | 17394.4 | 17257.4 | 16144.6 | 14988.9 | 14372.6 | *13833.3* | 13585.1 | 12189.8 | 9621.7 | 4990.6 | 522.2 |
| 42.5° | 18404.5 | 18241.8 | 17240.3 | 16110.3 | 15057.4 | *14329.8* | 14090.1 | 12968.7 | 10623.2 | 5923.7 | 633.5 |
| 45° | 19525.9 | 19440.3 | 18430.2 | 17574.1 | 16170.3 | *15006.1* | 14689.3 | 13593.6 | 11539.2 | 7036.5 | 779.0 |
| 47.5° | 21212.2 | 21058.1 | 20116.5 | 19414.6 | 17788.1 | *16033.3* | 15579.6 | 14235.6 | 12420.9 | 8132.2 | 1001.5 |
| 50° | 23172.5 | 23069.8 | 22513.4 | 21957.0 | 20339.1 | *17788.1* | 17248.8 | 15160.1 | 13405.3 | 9433.4 | 1292.6 |
| 52.5° | 24773.3 | 24756.2 | 24824.6 | 24833.2 | 23609.1 | *20741.4* | 19936.8 | 16649.6 | 14535.3 | 10717.4 | 1703.5 |
| 55° | 24739.0 | 24816.1 | 25569.4 | 26434.0 | 26528.1 | *24773.3* | 23994.3 | 19157.8 | 16007.6 | 12301.0 | 2277.0 |
| 57.5° | 23814.5 | 23754.6 | 24550.7 | 25851.9 | 26767.8 | *26956.1* | 26827.7 | 23052.7 | 18224.7 | 14210.0 | 3158.7 |
| 58° | *23514.9* | *23463.6* | *24216.9* | *25543.7* | *26596.6* | *27101.7* | *26973.3* | *23934.4* | *18721.2* | *14483.9* | *3398.4* |
| 60° | 22427.8 | 22436.3 | 22881.5 | 24088.5 | 25141.4 | *26339.8* | 26459.6 | 26451.1 | 21195.1 | 16315.8 | 4605.4 |
| 62.5° | 20989.7 | 20921.2 | 21332.1 | 22316.5 | 23241.0 | *24045.7* | 24251.1 | 26622.3 | 24816.1 | 18644.2 | 6908.1 |
| 65° | 19003.7 | 18901.0 | 19337.5 | 20450.4 | 21443.4 | *21965.5* | 21974.1 | 24328.1 | 26519.6 | 21143.7 | 10195.2 |
| 67.5° | 15314.2 | 15228.6 | 16101.8 | 17531.3 | 19063.6 | *19748.4* | 20056.6 | 21109.5 | 25081.4 | 22838.7 | 12078.5 |
| 70° | 9382.0 | 9561.8 | 10777.3 | 13020.1 | 15639.5 | *16897.9* | 17360.1 | 17685.4 | 21357.7 | 22581.9 | 10101.1 |
| 72.5° | 4331.5 | 4117.5 | 5153.3 | 6719.8 | 9707.3 | *12506.5* | 12985.9 | 14261.3 | 16932.1 | 19602.9 | 7533.0 |
| 75° | 2020.2 | 1943.2 | 2182.9 | 2936.2 | 4400.0 | *6754.0* | 7627.2 | 11385.1 | 12985.9 | 13636.4 | 5435.7 |
| 77.5° | 1035.8 | 1044.3 | 1241.2 | 1335.4 | 1814.8 | *3124.5* | 3586.7 | 7490.2 | 9519.0 | 7610.0 | 3646.7 |
| 80° | 453.7 | 470.8 | 479.4 | 522.2 | 736.2 | *1207.0* | 1361.1 | 3475.4 | 6505.8 | 3877.8 | 1994.5 |
| 82.5° | 291.0 | 299.6 | 299.6 | 299.6 | 351.0 | *479.4* | 547.9 | 1395.3 | 3244.3 | 1926.0 | 616.3 |
| 85° | 154.1 | 154.1 | 171.2 | 214.0 | 248.2 | *291.0* | 308.2 | 445.1 | 1070.0 | 573.5 | 145.5 |
| 87.5° | 85.6 | 94.2 | 102.7 | 128.4 | 162.6 | *196.9* | 214.0 | 308.2 | 410.9 | 393.8 | 34.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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Scaled Data Report

REPORT NUMBER: P1047038
CATALOG NUMBER: GALN-SA7B-740-U-T3BC

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 | 214.0 |
| 2.5° | 222.6 | 214.0 | 205.4 | 196.9 | 188.3 | 179.8 | 179.8 | 179.8 | 179.8 | 179.8 | 179.8 |
| 5° | 214.0 | 205.4 | 196.9 | 179.8 | 162.6 | 154.1 | 145.5 | 137.0 | 137.0 | 137.0 | 137.0 |
| 7.5° | 214.0 | 205.4 | 179.8 | 162.6 | 145.5 | 128.4 | 111.3 | 111.3 | 111.3 | 111.3 | 111.3 |
| 10° | 214.0 | 196.9 | 171.2 | 145.5 | 119.8 | 102.7 | 94.2 | 85.6 | 85.6 | 85.6 | 85.6 |
| 12.5° | 214.0 | 188.3 | 162.6 | 128.4 | 102.7 | 85.6 | 77.0 | 68.5 | 68.5 | 68.5 | 68.5 |
| 15° | 214.0 | 188.3 | 154.1 | 119.8 | 94.2 | 68.5 | 59.9 | 51.4 | 51.4 | 51.4 | 51.4 |
| 17.5° | 205.4 | 179.8 | 145.5 | 102.7 | 77.0 | 51.4 | 42.8 | 34.2 | 34.2 | 42.8 | 42.8 |
| 20° | 196.9 | 171.2 | 128.4 | 85.6 | 59.9 | 42.8 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 |
| 22.5° | 196.9 | 171.2 | 119.8 | 77.0 | 51.4 | 25.7 | 17.1 | 17.1 | 17.1 | 17.1 | 25.7 |
| 25° | 196.9 | 162.6 | 102.7 | 59.9 | 34.2 | 17.1 | 8.6 | 8.6 | 8.6 | 8.6 | 8.6 |
| 27.5° | 196.9 | 162.6 | 94.2 | 51.4 | 25.7 | 17.1 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30° | 188.3 | 154.1 | 85.6 | 42.8 | 17.1 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 32.5° | 188.3 | 145.5 | 68.5 | 34.2 | 17.1 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 35° | 196.9 | 137.0 | 59.9 | 25.7 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.6 |
| 37.5° | 205.4 | 128.4 | 51.4 | 17.1 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40° | 214.0 | 119.8 | 51.4 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 42.5° | 231.1 | 119.8 | 42.8 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 45° | 248.2 | 119.8 | 34.2 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 47.5° | 282.5 | 128.4 | 34.2 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 50° | 308.2 | 137.0 | 25.7 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 52.5° | 342.4 | 128.4 | 25.7 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 55° | 385.2 | 128.4 | 25.7 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 57.5° | 419.5 | 119.8 | 25.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 58° | *436.6* | *111.3* | *17.1* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* |
| 60° | 522.2 | 102.7 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 813.2 | 85.6 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 1652.1 | 77.0 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 3081.7 | 68.5 | 17.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 3449.8 | 77.0 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 2174.3 | 59.9 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 1147.1 | 59.9 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 573.5 | 59.9 | 8.6 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 265.4 | 42.8 | 8.6 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 111.3 | 25.7 | 17.1 | 8.6 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 51.4 | 25.7 | 17.1 | 17.1 | 8.6 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 25.7 | 25.7 | 25.7 | 17.1 | 17.1 | 8.6 | 8.6 | 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: SP1-2407-184-1

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

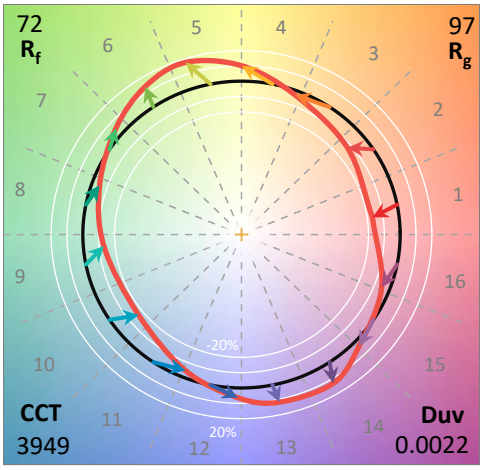
## Test Information

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

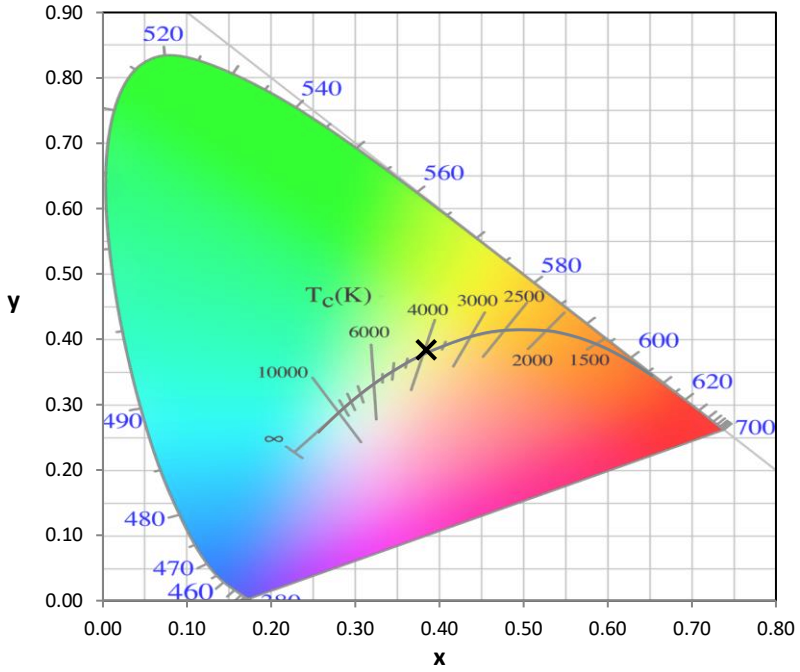
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-1

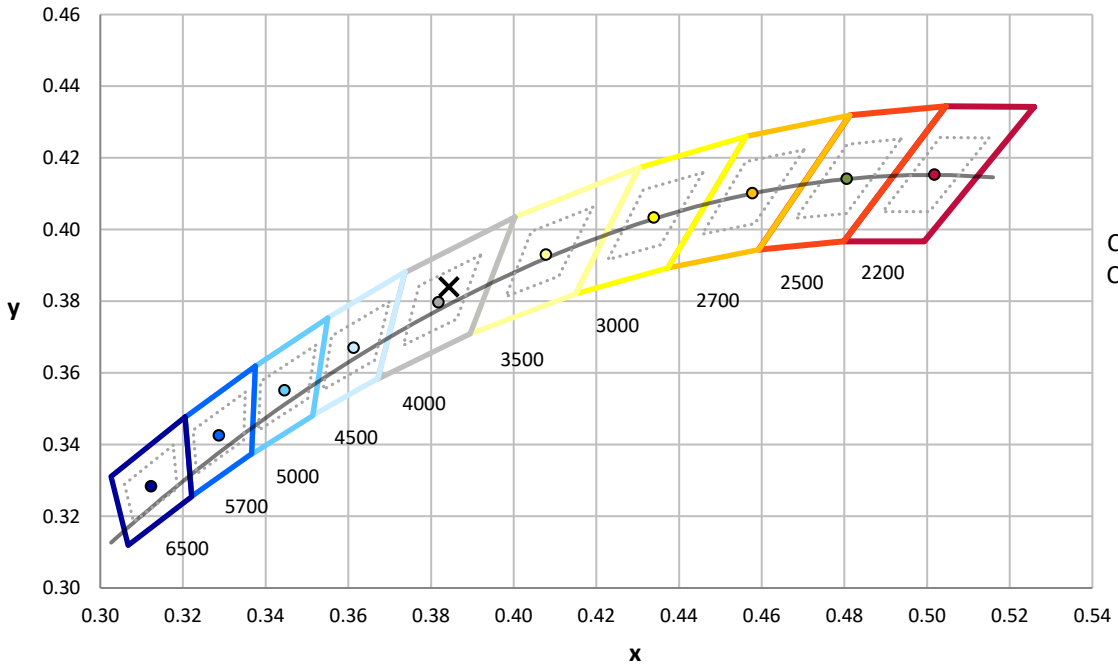
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

REPORT NUMBER: SP1-2407-184-1

## 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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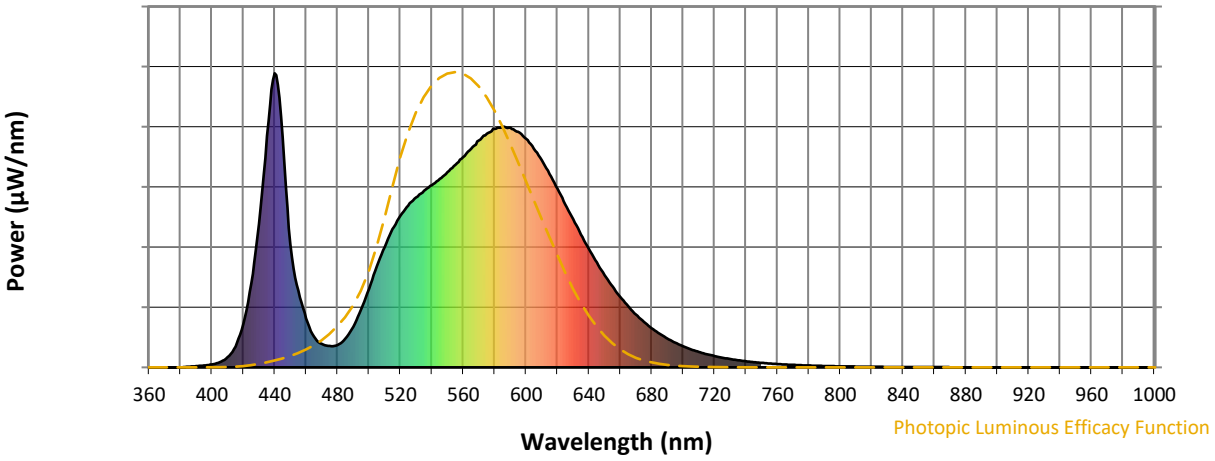
## Photopic Flux vs. Wavelength




## 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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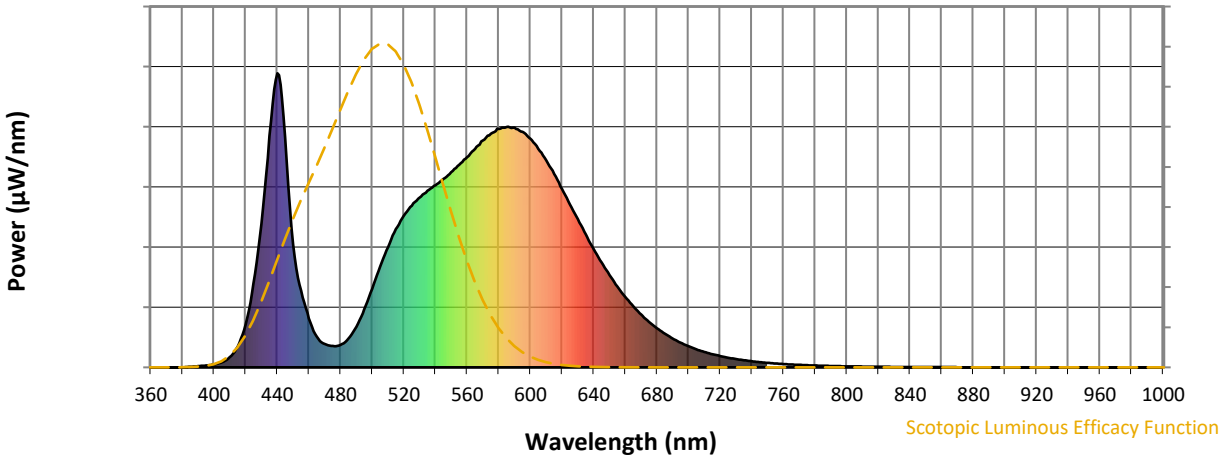
## Scotopic Flux vs. Wavelength




**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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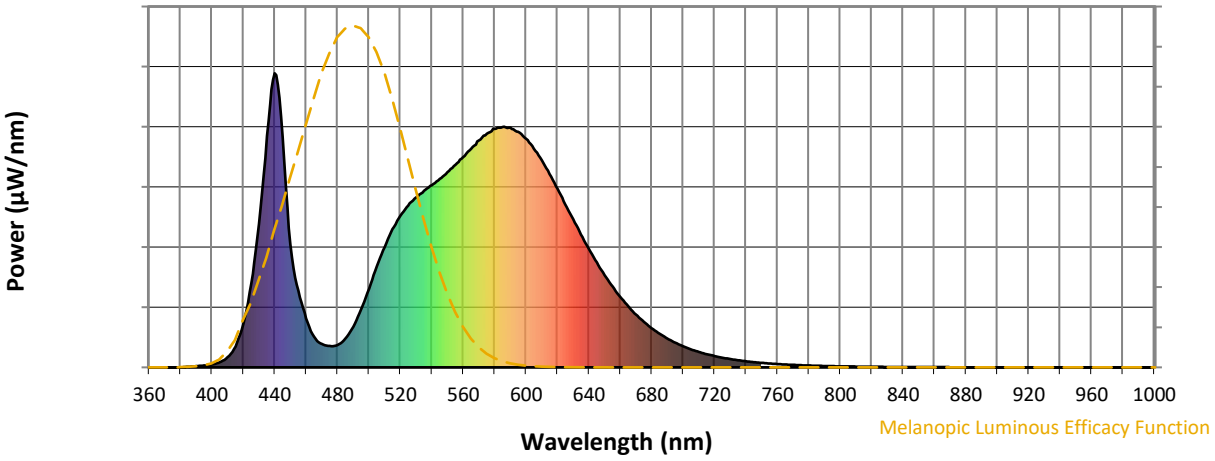
## Melanopic Flux vs. Wavelength




**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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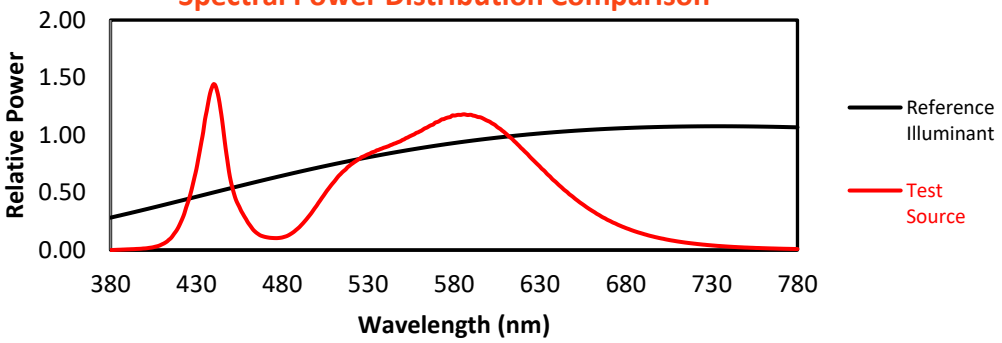
# TM-30-18

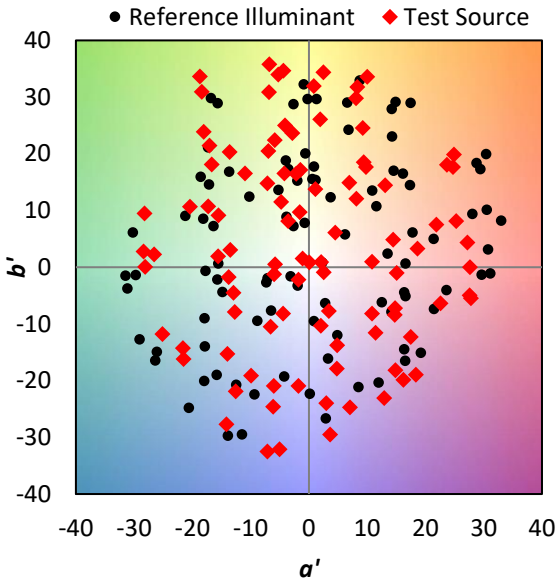
## Summary

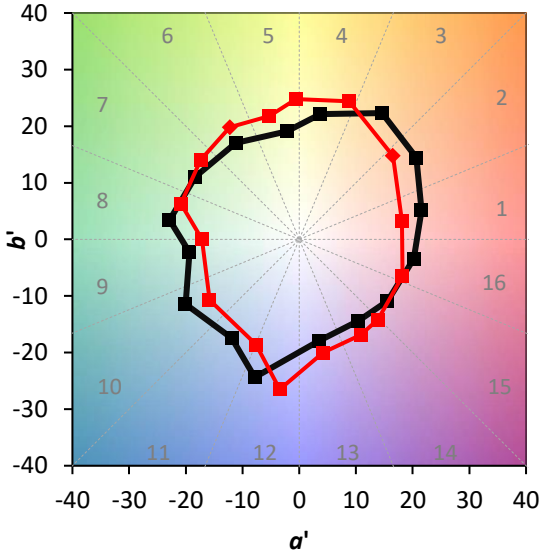
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

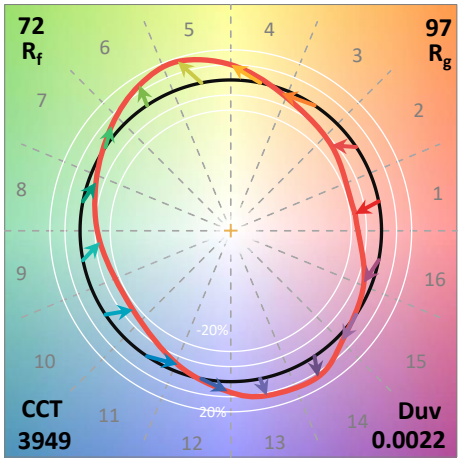
## Spectral Power Distribution Comparison

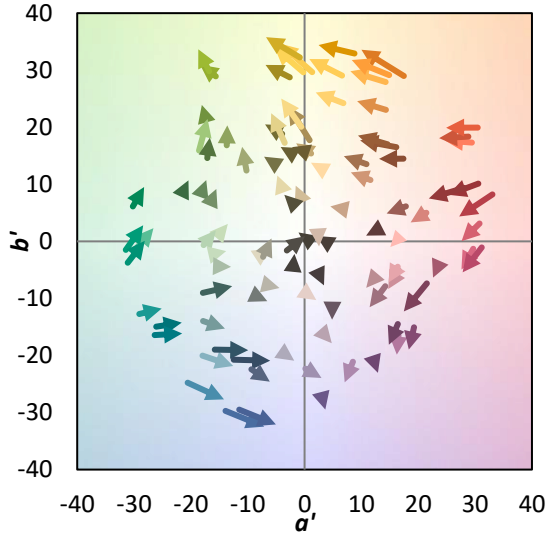



## Color Vector Graphics



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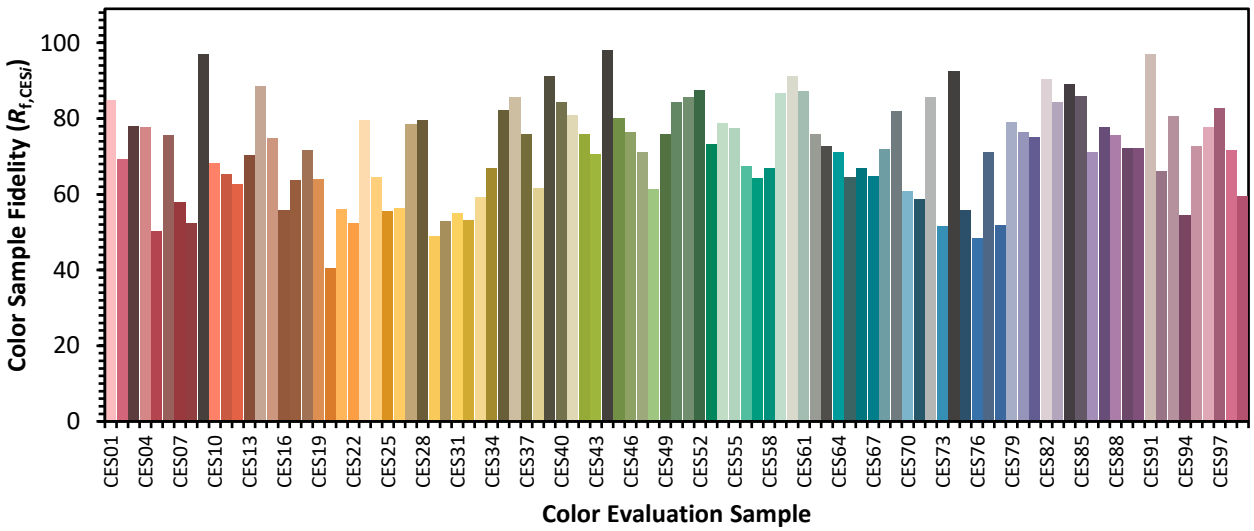
**Individual Sample Fidelity Index ($R_{f,i}$)**

| | | | |
|---|---|---|---|
| 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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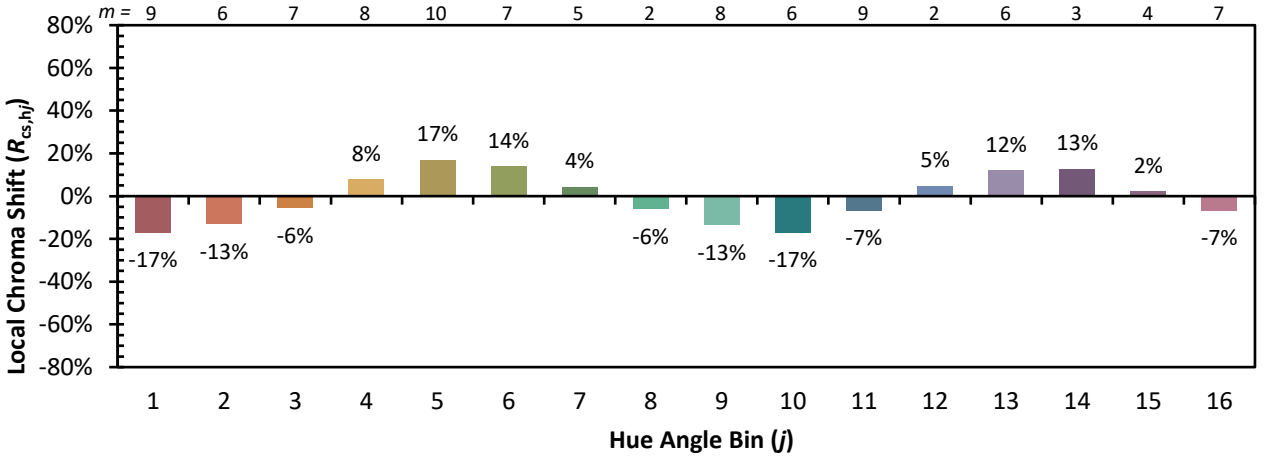
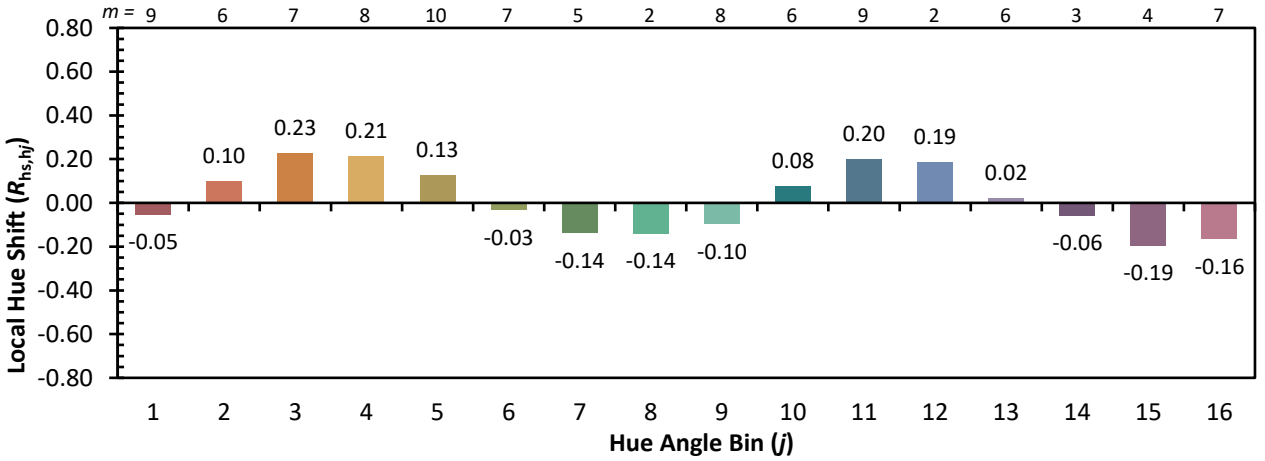
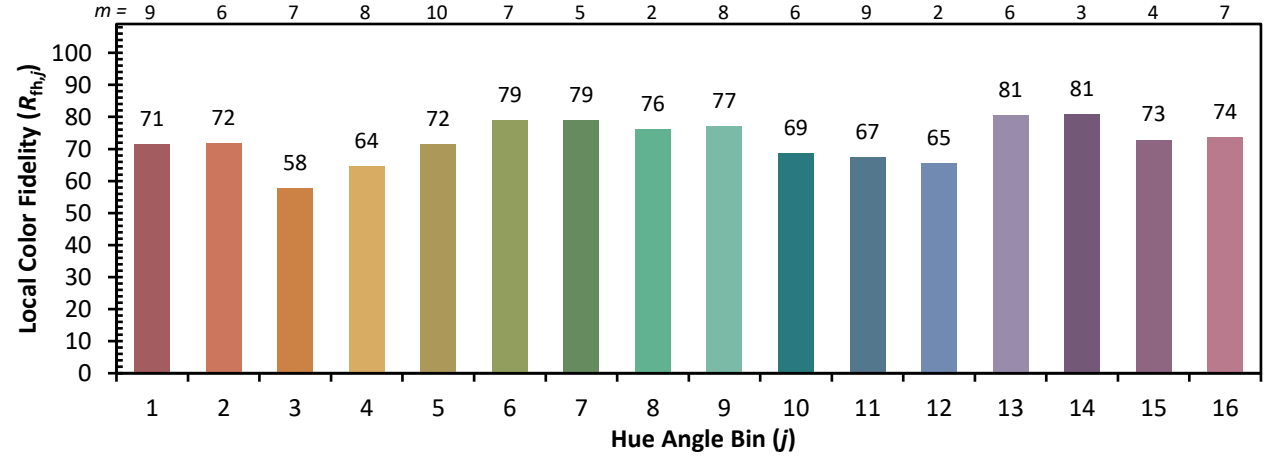
## Color Rendition by Hue-Angle Bin



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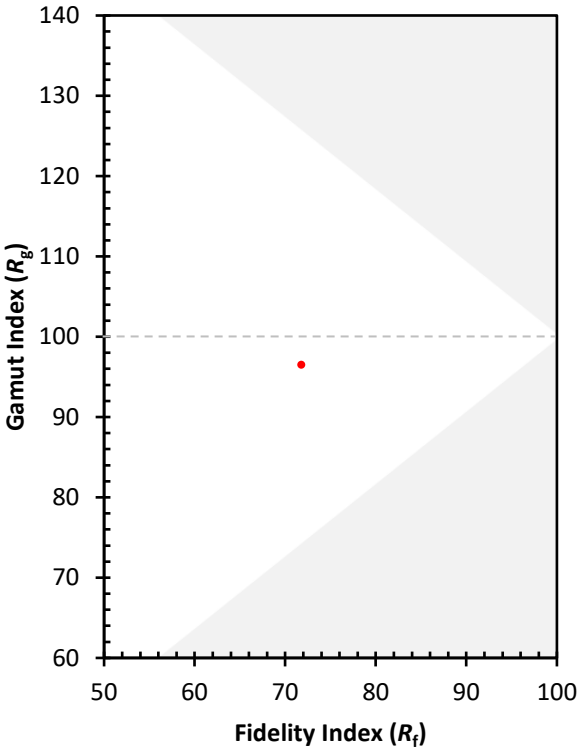
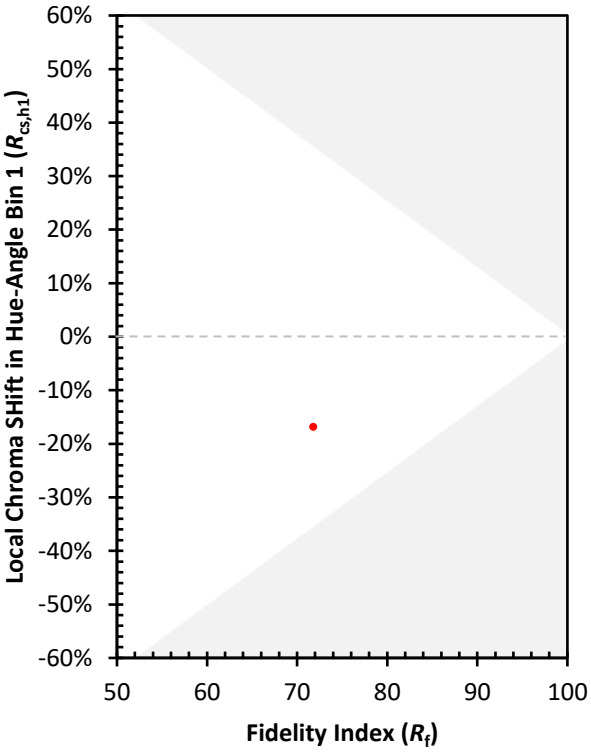
## Measure Comparisons




(END OF REPORT)