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: P1362642

Luminaire Tested: **GSS-SB3D-727-U-SL2**

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: | P1362642 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB3D-727-U-SL2 |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 3SQUARE 219W 70CRI 2700K FIXTURE w/ TYPE II SPILL CONTROL DISTRIBUTION OPTIC |
| Light Source: | (78) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 26034.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 118.9 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 0.5' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B3 - U0 - G3 |

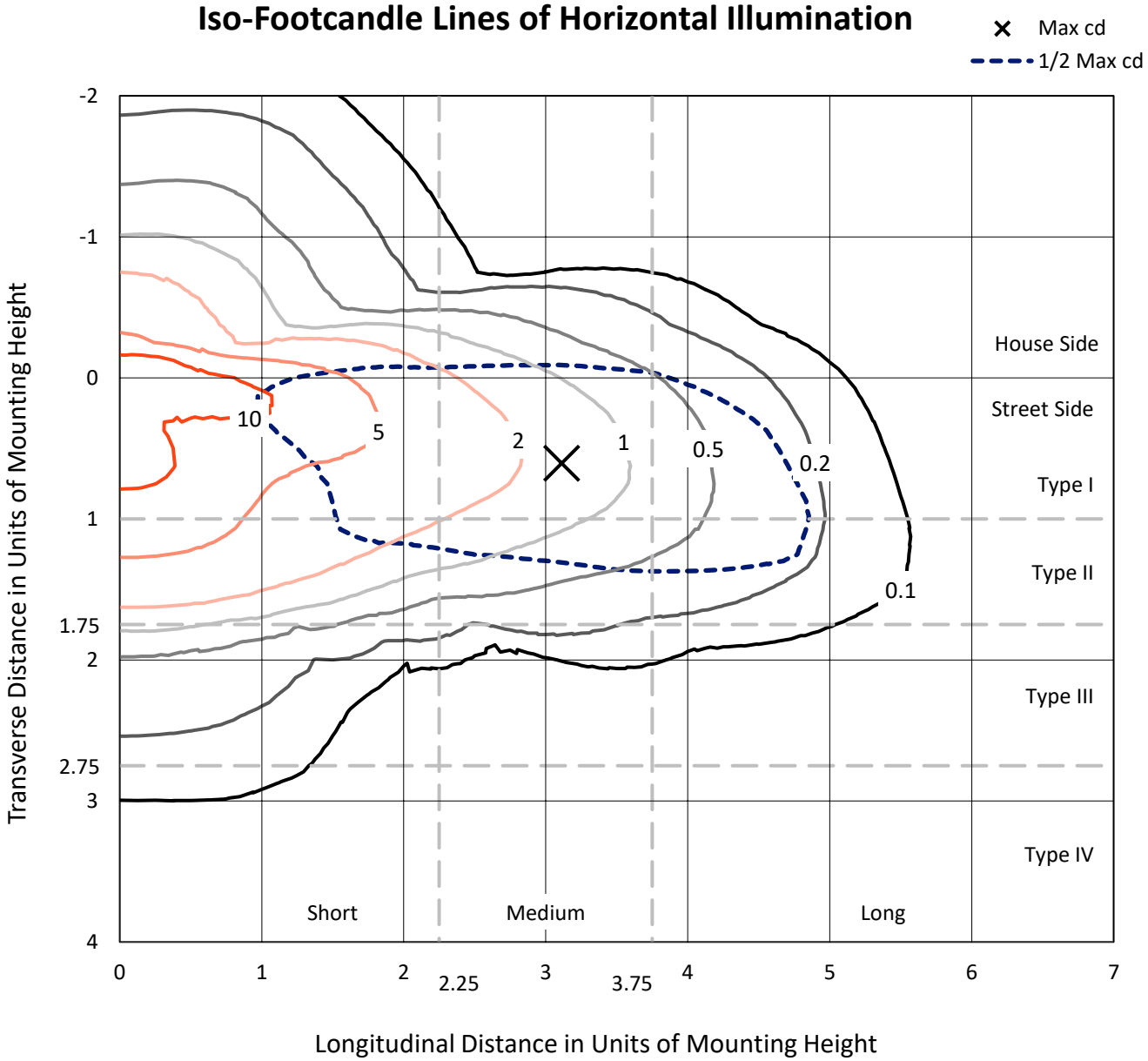
| | |
|---|---|
| Input Watts (W): | 219 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 2.5% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

## Iso-Footcandle Lines of Horizontal Illumination



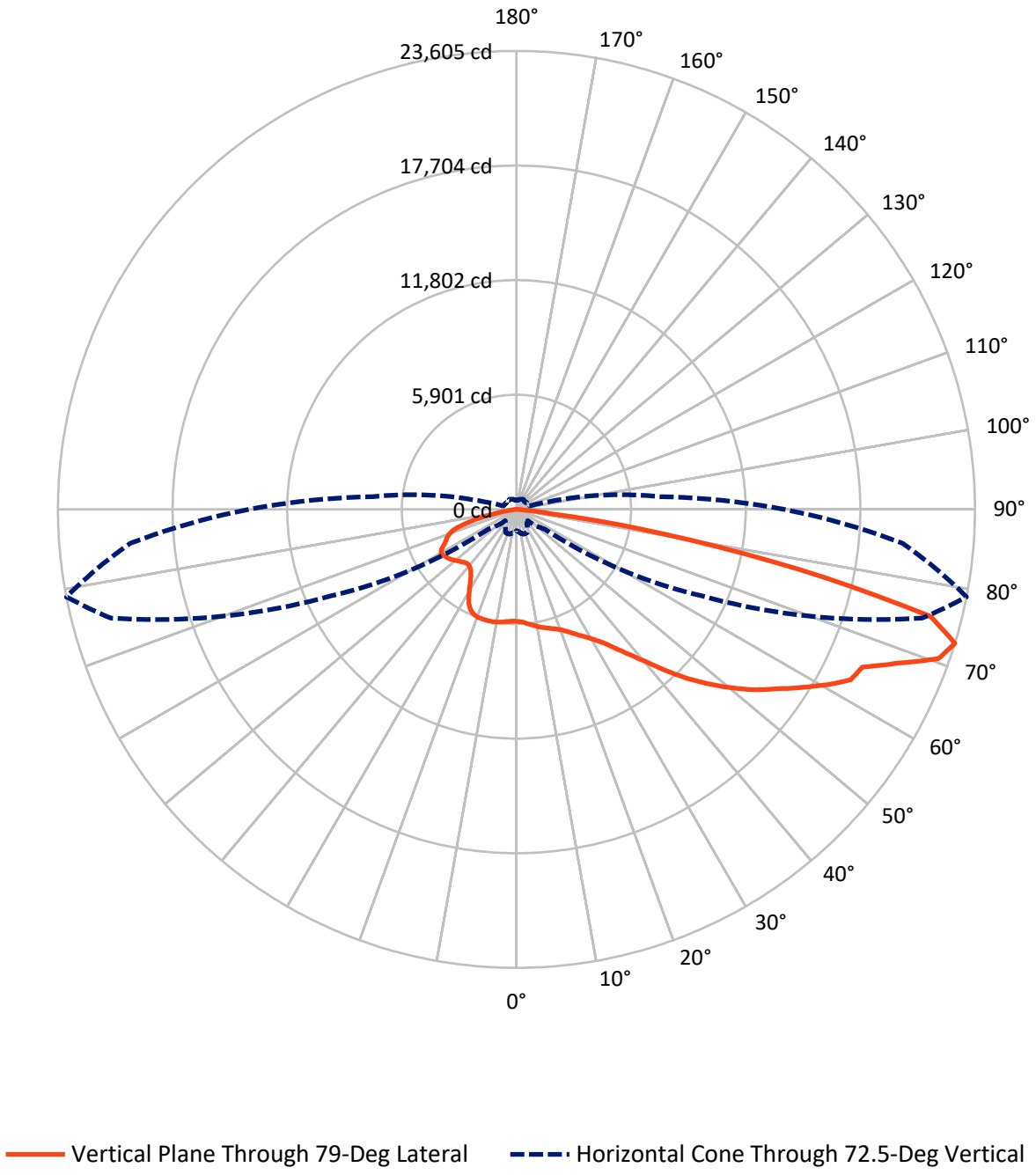

Based on 20 foot mounting height. Maximum calculated value = 14.5 fc
Type II - Medium - N/A

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

## Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

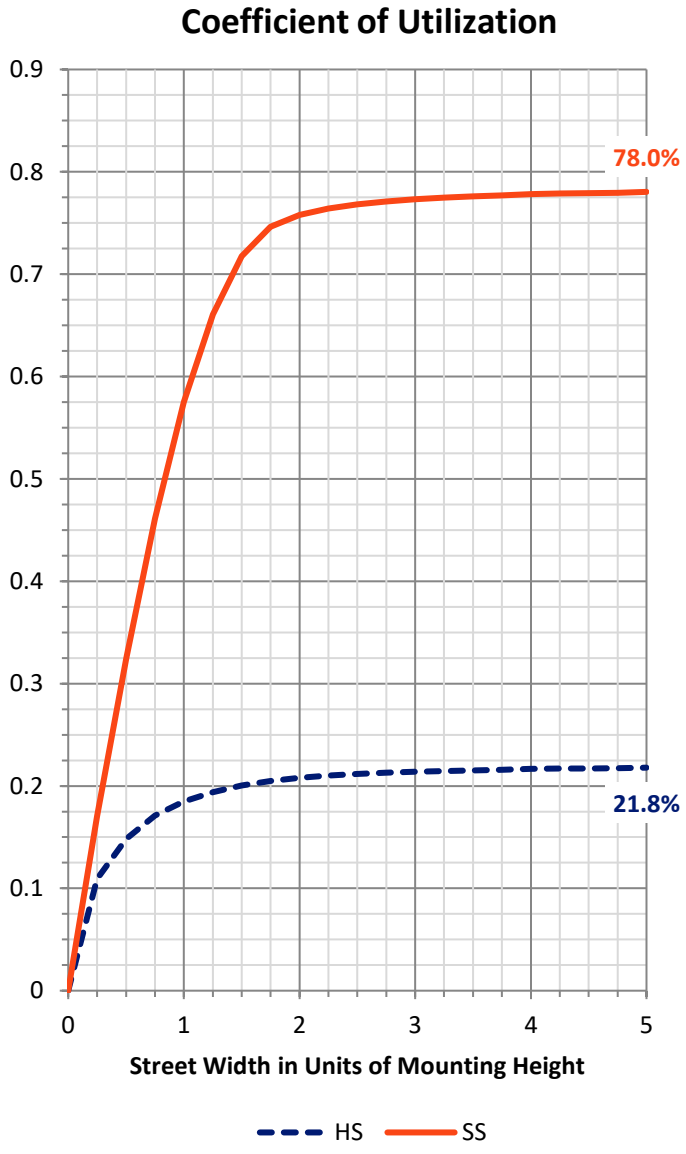
REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 5719.0 | 0.0 | 5719.0 |
| | % Fixture | 22.0 | 0.0 | 22.0 |
| **Street Side** | Lumens | 20315.8 | 0.0 | 20315.8 |
| | % Fixture | 78.0 | 0.0 | 78.0 |
| **Total** | Lumens | 26034.8 | 0.0 | 26034.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 535.2 | 2.1 |
| 10°-20° | 1329.3 | 5.1 |
| 20°-30° | 2092.9 | 8.0 |
| 30°-40° | 3123.2 | 12.0 |
| 40°-50° | 4440.7 | 17.1 |
| 50°-60° | 5609.5 | 21.5 |
| 60°-70° | 5250.6 | 20.2 |
| 70°-80° | 3335.2 | 12.8 |
| 80°-90° | 318.2 | 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° | 26034.8 | 100.0 |
| 0°-180° | 26034.8 | 100.0 |



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

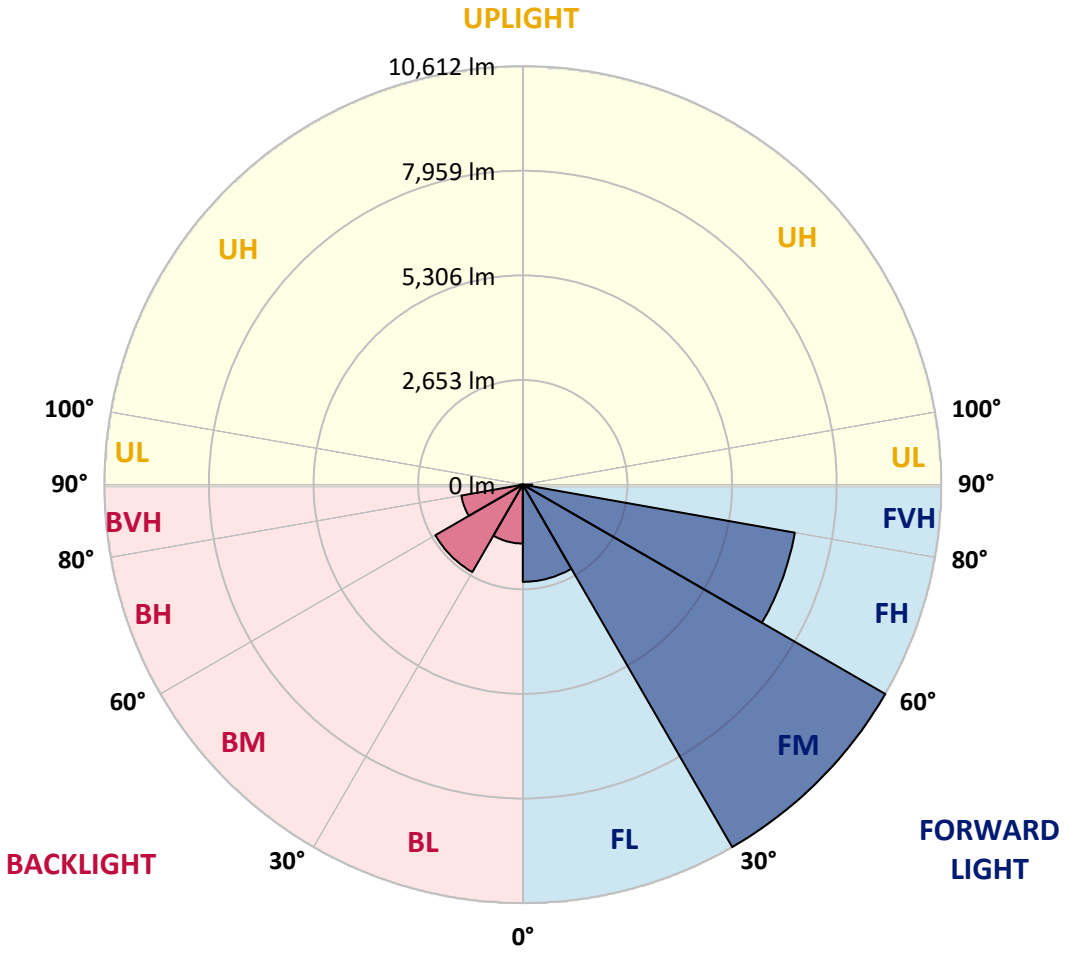
Scaled Data Report

REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 2464.3 | 9.5 | | | |
| FM | (30°-60°) | 10611.8 | 40.8 | | | |
| FH | (60°-80°) | 7002.7 | 26.9 | | | G3/7500 |
| FVH | (80°-90°) | 237.0 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 1493.1 | 5.7 | B3/2500 | | |
| BM | (30°-60°) | 2561.6 | 9.8 | B3/5000 | | |
| BH | (60°-80°) | 1583.1 | 6.1 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 81.2 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B3-U0-G3**
Type II Medium



Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | *5765.7* | 5765.7 |
| 2.5° | 5901.2 | 5907.4 | 5882.7 | 5882.7 | 5888.9 | 5864.3 | 5833.5 | 5827.3 | 5802.7 | *5802.7* | 5802.7 |
| 5° | 5932.0 | 5932.0 | 5925.9 | 5956.7 | 5969.0 | 5987.5 | 5962.8 | 5944.3 | 5907.4 | *5907.4* | 5858.1 |
| 7.5° | 5605.5 | 5593.2 | 5642.5 | 5784.2 | 5932.0 | 6012.1 | 6061.4 | 6061.4 | 6042.9 | *6012.1* | 5969.0 |
| 10° | 4989.5 | 5008.0 | 5081.9 | 5272.9 | 5543.9 | 5907.4 | 6104.5 | 6184.6 | 6153.8 | *6141.5* | 6067.5 |
| 12.5° | 4663.1 | 4656.9 | 4712.4 | 4854.0 | 5088.1 | 5531.6 | 6018.3 | 6270.8 | 6277.0 | *6246.2* | 6159.9 |
| 15° | 4626.1 | 4607.6 | 4632.3 | 4681.6 | 4835.6 | 5192.8 | 5759.5 | 6301.6 | 6363.2 | *6350.9* | 6252.3 |
| 17.5° | 4835.6 | 4829.4 | 4792.4 | 4780.1 | 4774.0 | 4971.1 | 5507.0 | 6277.0 | 6480.3 | *6467.9* | 6357.1 |
| 20° | 5199.0 | 5168.2 | 5100.4 | 5038.8 | 4909.5 | 4927.9 | 5309.9 | 6246.2 | 6640.4 | *6621.9* | 6511.1 |
| 22.5° | 5587.1 | 5599.4 | 5537.8 | 5389.9 | 5162.0 | 5057.3 | 5248.3 | 6203.1 | 6856.0 | *6843.7* | 6695.9 |
| 25° | 6061.4 | 6049.1 | 5975.1 | 5808.8 | 5507.0 | 5279.1 | 5316.0 | 6190.7 | 7102.4 | *7114.7* | 6936.1 |
| 27.5° | 6548.0 | 6535.7 | 6443.3 | 6233.9 | 5882.7 | 5550.1 | 5470.0 | 6240.0 | 7416.6 | *7410.4* | 7188.6 |
| 30° | 7090.1 | 7096.2 | 6979.2 | 6695.9 | 6270.8 | 5888.9 | 5716.4 | 6369.4 | 7730.7 | *7749.2* | 7478.2 |
| 32.5° | 7576.7 | 7607.5 | 7539.8 | 7274.9 | 6745.1 | 6240.0 | 6018.3 | 6578.8 | 8149.6 | *8180.4* | 7847.8 |
| 35° | 7884.7 | 7903.2 | 7897.0 | 7773.8 | 7250.2 | 6640.4 | 6320.1 | 6843.7 | 8654.7 | *8771.8* | 8340.6 |
| 37.5° | 8180.4 | 8223.5 | 8229.7 | 8137.3 | 7743.0 | 7114.7 | 6677.4 | 7213.3 | 9301.5 | *9492.5* | 8987.3 |
| 40° | 8500.7 | 8488.4 | 8574.6 | 8463.8 | 8186.6 | 7619.8 | 7047.0 | 7632.2 | 10016.1 | *10330.2* | 9745.0 |
| 42.5° | 8691.7 | 8722.5 | 8833.4 | 8808.7 | 8531.5 | 8088.0 | 7465.8 | 8100.3 | 10909.2 | *11371.2* | 10662.9 |
| 45° | 8814.9 | 8845.7 | 9005.8 | 9030.5 | 8882.6 | 8408.3 | 7860.1 | 8550.0 | 11728.5 | *12449.2* | 11648.4 |
| 47.5° | 8858.0 | 8876.5 | 9085.9 | 9184.5 | 9122.9 | 8611.6 | 8168.1 | 9061.3 | 12535.5 | *13465.6* | 12634.0 |
| 50° | 8685.5 | 8753.3 | 9024.3 | 9246.1 | 9289.2 | 8716.3 | 8433.0 | 9603.3 | 13404.0 | *14451.2* | 13625.8 |
| 52.5° | 8420.6 | 8457.6 | 8784.1 | 9258.4 | 9393.9 | 8888.8 | 8759.4 | 10176.2 | 14223.3 | *15436.8* | 14475.9 |
| 55° | 7903.2 | 7977.1 | 8383.7 | 9055.1 | 9455.5 | 9116.7 | 9184.5 | 10823.0 | 15073.4 | *16299.2* | 15399.8 |
| 57.5° | 6437.1 | 6566.5 | 7237.9 | 8186.6 | 9289.2 | 9566.4 | 9818.9 | 11623.8 | 16003.5 | *17297.1* | 16225.3 |
| 60° | 4034.8 | 4207.2 | 4909.5 | 6443.3 | 8346.7 | 9831.3 | 10829.2 | 12664.8 | 17112.3 | *18344.3* | 17143.1 |
| 62.5° | 2186.8 | 2180.6 | 2390.1 | 3295.6 | 6018.3 | 9141.3 | 11697.7 | 14469.7 | 18541.4 | *19317.6* | 17679.0 |
| 65° | 1897.3 | 1897.3 | 1921.9 | 1915.7 | 2599.5 | 6745.1 | 10835.3 | 15547.7 | 19527.0 | *19576.3* | 17223.2 |
| 67.5° | 1706.3 | 1706.3 | 1743.3 | 1650.9 | 1416.8 | 3018.4 | 7927.8 | 14907.0 | 21159.4 | *21128.6* | 17808.4 |
| 70° | 1503.0 | 1509.2 | 1570.8 | 1515.3 | 1139.6 | 1225.8 | 4336.6 | 13576.5 | 22379.1 | *23038.2* | 18972.6 |
| 72.5° | *1102.6* | *1139.6* | *1318.2* | *1318.2* | *936.3* | *825.4* | *1761.7* | *10527.3* | *21615.2* | *23604.9* | *19939.7* |
| 75° | 776.2 | 782.3 | 874.7 | 942.5 | 739.2 | 622.2 | 856.2 | 7047.0 | 19828.8 | *22021.8* | 19077.3 |
| 77.5° | 591.4 | 597.5 | 628.3 | 751.5 | 505.1 | 455.8 | 591.4 | 3850.0 | 14303.4 | *14870.1* | 12375.3 |
| 80° | 394.2 | 388.1 | 431.2 | 529.8 | 357.3 | 308.0 | 381.9 | 1287.4 | 8026.4 | *7656.8* | 5168.2 |
| 82.5° | 197.1 | 203.3 | 234.1 | 277.2 | 209.4 | 184.8 | 221.8 | 665.3 | 3147.7 | *1829.5* | 751.5 |
| 85° | 55.4 | 67.8 | 80.1 | 110.9 | 86.2 | 80.1 | 104.7 | 234.1 | 400.4 | *295.7* | 203.3 |
| 87.5° | 6.2 | 6.2 | 12.3 | 12.3 | 12.3 | 18.5 | 30.8 | 49.3 | 67.8 | *67.8* | 67.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | *0.0* | 0.0 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

REPORT NUMBER: P1362642
CATALOG NUMBER: GSS-SB3D-727-U-SL2

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 | 5765.7 |
| 2.5° | 5790.3 | 5771.9 | 5747.2 | 5710.3 | 5710.3 | 5667.1 | 5642.5 | 5593.2 | 5611.7 | 5587.1 | 5574.7 |
| 5° | 5845.8 | 5821.1 | 5765.7 | 5704.1 | 5642.5 | 5550.1 | 5476.2 | 5371.5 | 5359.1 | 5334.5 | 5297.5 |
| 7.5° | 5944.3 | 5882.7 | 5815.0 | 5673.3 | 5556.3 | 5346.8 | 5180.5 | 4971.1 | 4854.0 | 4780.1 | 4786.3 |
| 10° | 6042.9 | 5962.8 | 5821.1 | 5636.3 | 5383.8 | 5038.8 | 4607.6 | 4194.9 | 3880.8 | 3702.1 | 3739.1 |
| 12.5° | 6110.7 | 6024.4 | 5833.5 | 5537.8 | 5069.6 | 4379.7 | 3578.9 | 2993.7 | 2765.8 | 2648.8 | 2648.8 |
| 15° | 6178.4 | 6067.5 | 5815.0 | 5328.3 | 4478.3 | 3301.7 | 2667.3 | 2445.5 | 2383.9 | 2346.9 | 2334.6 |
| 17.5° | 6264.7 | 6135.3 | 5759.5 | 4940.3 | 3529.6 | 2581.0 | 2359.3 | 2291.5 | 2291.5 | 2285.3 | 2273.0 |
| 20° | 6369.4 | 6215.4 | 5691.8 | 4324.3 | 2710.4 | 2316.1 | 2254.5 | 2242.2 | 2254.5 | 2248.4 | 2242.2 |
| 22.5° | 6529.5 | 6313.9 | 5519.3 | 3474.2 | 2328.5 | 2192.9 | 2186.8 | 2125.2 | 2137.5 | 2149.8 | 2143.7 |
| 25° | 6732.8 | 6437.1 | 5192.8 | 2654.9 | 2137.5 | 2112.9 | 2051.3 | 1995.8 | 1989.7 | 1995.8 | 1995.8 |
| 27.5° | 6923.8 | 6529.5 | 4663.1 | 2186.8 | 2002.0 | 1995.8 | 1940.4 | 1891.1 | 1891.1 | 1897.3 | 1897.3 |
| 30° | 7133.2 | 6585.0 | 3850.0 | 1946.5 | 1921.9 | 1891.1 | 1872.6 | 1854.1 | 1860.3 | 1878.8 | 1878.8 |
| 32.5° | 7410.4 | 6640.4 | 3055.3 | 1811.0 | 1841.8 | 1798.7 | 1811.0 | 1804.9 | 1817.2 | 1848.0 | 1854.1 |
| 35° | 7749.2 | 6665.1 | 2445.5 | 1730.9 | 1730.9 | 1694.0 | 1700.1 | 1675.5 | 1675.5 | 1694.0 | 1706.3 |
| 37.5° | 8198.9 | 6677.4 | 2057.4 | 1687.8 | 1644.7 | 1626.2 | 1613.9 | 1583.1 | 1540.0 | 1509.2 | 1515.3 |
| 40° | 8685.5 | 6708.2 | 1848.0 | 1657.0 | 1607.7 | 1601.6 | 1576.9 | 1533.8 | 1410.6 | 1312.1 | 1305.9 |
| 42.5° | 9332.3 | 6794.4 | 1743.3 | 1607.7 | 1607.7 | 1607.7 | 1570.8 | 1379.8 | 1281.3 | 1213.5 | 1207.3 |
| 45° | 9985.3 | 7022.3 | 1687.8 | 1564.6 | 1601.6 | 1607.7 | 1441.4 | 1324.4 | 1244.3 | 1170.4 | 1151.9 |
| 47.5° | 10712.1 | 7348.8 | 1663.2 | 1540.0 | 1558.5 | 1570.8 | 1355.2 | 1299.7 | 1207.3 | 1121.1 | 1102.6 |
| 50° | 11432.8 | 7693.8 | 1638.5 | 1496.9 | 1496.9 | 1416.8 | 1336.7 | 1275.1 | 1182.7 | 1090.3 | 1078.0 |
| 52.5° | 12196.7 | 8094.2 | 1613.9 | 1422.9 | 1416.8 | 1330.5 | 1318.2 | 1268.9 | 1170.4 | 1053.3 | 1028.7 |
| 55° | 12861.9 | 8457.6 | 1570.8 | 1336.7 | 1330.5 | 1244.3 | 1305.9 | 1244.3 | 1096.5 | 961.0 | 936.3 |
| 57.5° | 13496.4 | 8753.3 | 1515.3 | 1244.3 | 1256.6 | 1176.5 | 1256.6 | 1195.0 | 1028.7 | 893.2 | 880.9 |
| 60° | 14100.1 | 9061.3 | 1441.4 | 1164.2 | 1164.2 | 1114.9 | 1195.0 | 1114.9 | 961.0 | 825.4 | 807.0 |
| 62.5° | 14278.7 | 8962.7 | 1318.2 | 1078.0 | 1071.8 | 1034.9 | 1114.9 | 1022.5 | 874.7 | 751.5 | 733.0 |
| 65° | 13662.7 | 8457.6 | 1170.4 | 991.7 | 973.3 | 942.5 | 997.9 | 911.7 | 776.2 | 677.6 | 671.4 |
| 67.5° | 13749.0 | 8260.5 | 1004.1 | 880.9 | 862.4 | 837.8 | 856.2 | 788.5 | 683.8 | 609.8 | 603.7 |
| 70° | 13859.9 | 8044.9 | 850.1 | 776.2 | 733.0 | 689.9 | 733.0 | 677.6 | 603.7 | 542.1 | 535.9 |
| 72.5° | *13773.6* | *7447.4* | *702.2* | *653.0* | *622.2* | *572.9* | *628.3* | *585.2* | *523.6* | *474.3* | *462.0* |
| 75° | 12529.3 | 5987.5 | 572.9 | 535.9 | 499.0 | 468.2 | 505.1 | 492.8 | 443.5 | 437.4 | 394.2 |
| 77.5° | 8426.8 | 3837.6 | 443.5 | 412.7 | 400.4 | 369.6 | 394.2 | 375.8 | 351.1 | 326.5 | 308.0 |
| 80° | 3652.8 | 1718.6 | 320.3 | 289.5 | 277.2 | 258.7 | 283.4 | 277.2 | 264.9 | 246.4 | 240.2 |
| 82.5° | 523.6 | 406.6 | 215.6 | 197.1 | 166.3 | 154.0 | 166.3 | 178.6 | 258.7 | 314.2 | 308.0 |
| 85° | 147.8 | 123.2 | 104.7 | 92.4 | 73.9 | 61.6 | 67.8 | 110.9 | 147.8 | 92.4 | 80.1 |
| 87.5° | 67.8 | 61.6 | 49.3 | 30.8 | 18.5 | 18.5 | 12.3 | 6.2 | 6.2 | 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 |

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

# LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-3

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-727-U-5WQ

Data in this report applies to families of products including GSS-SB1A-727-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

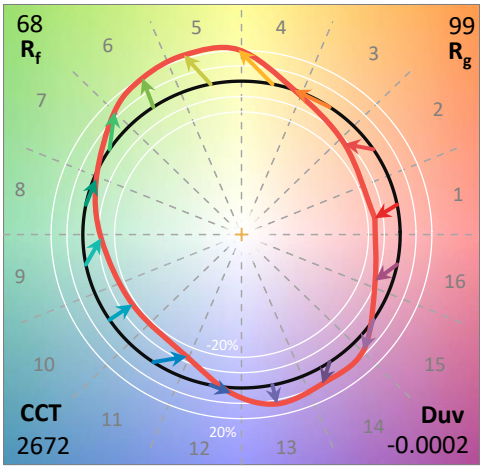
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-3 |
| 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-727-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 2700K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 2672 |
| CIE u': | 0.2638 |
| CIE v': | 0.5276 |
| Duv: | -0.0002 |
| CIE x: | 0.4619 |
| CIE y: | 0.4106 |
| CIE z: | 0.1275 |
| Peak Wavelength (nm): | 601 |
| Dominant Wavelength (nm): | 584 |
| Purity: | 61.88407 |
| Rf: | 67.9 |
| Rg: | 98.6 |

| | |
|---|---|
| CRI (Ra): | 71.1 |
| R1: | 68.3 |
| R2: | 79.8 |
| R3: | 91.2 |
| R4: | 69.4 |
| R5: | 66.5 |
| R6: | 72.6 |
| R7: | 77.0 |
| R8: | 44.1 |
| R9: | -27.8 |
| R10: | 54.4 |
| R11: | 65.8 |
| R12: | 45.6 |
| R13: | 69.8 |
| R14: | 94.5 |
| R15: | 60.1 |




## Test Conditions

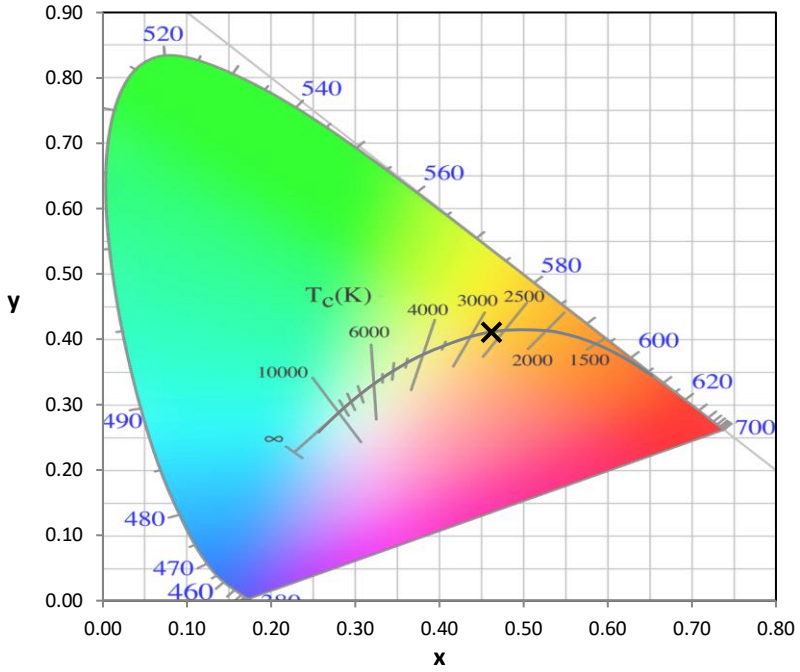
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

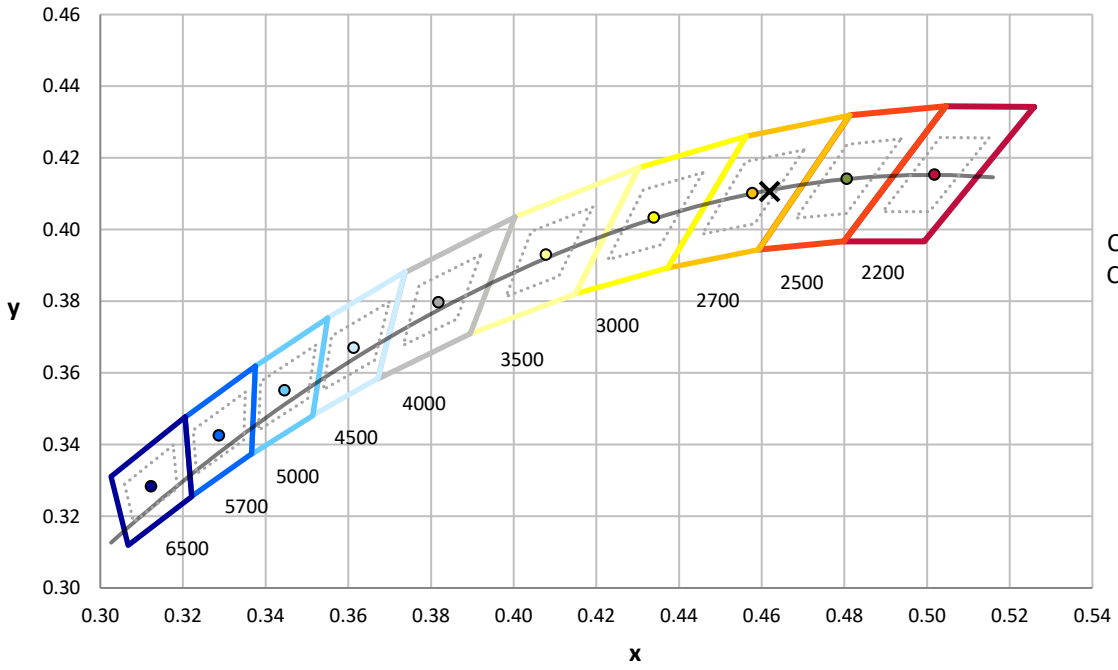
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC 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: SP1-2407-184-3

## CIE 1931 Chromaticity Diagram




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

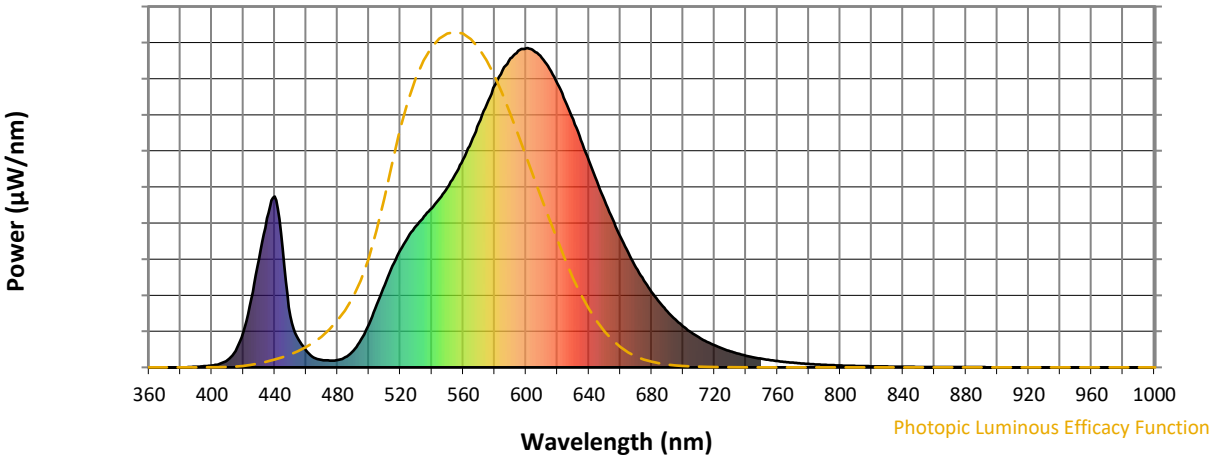



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-3

## Photopic Flux vs. Wavelength

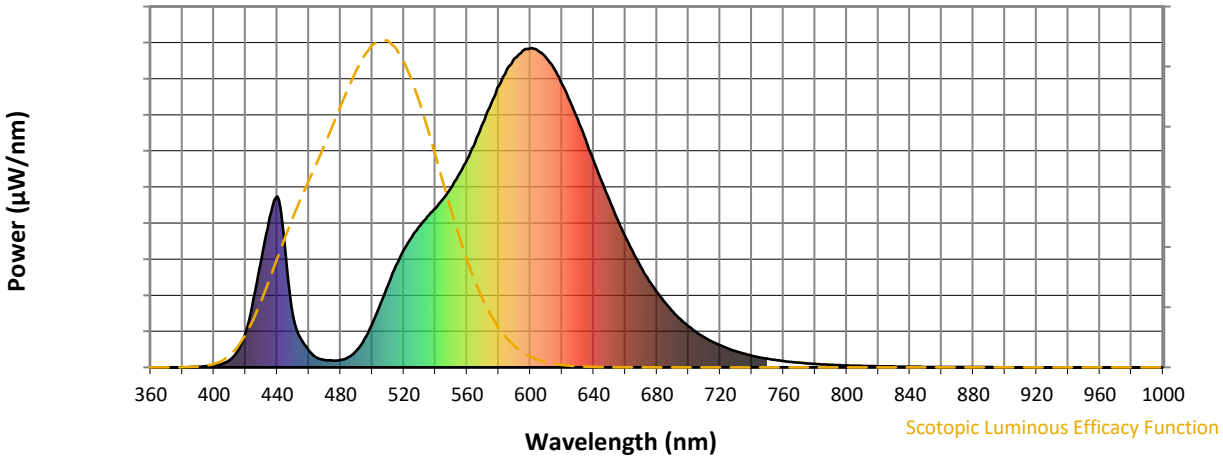



## Photopic Lumens: NR

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Scotopic Flux vs. Wavelength

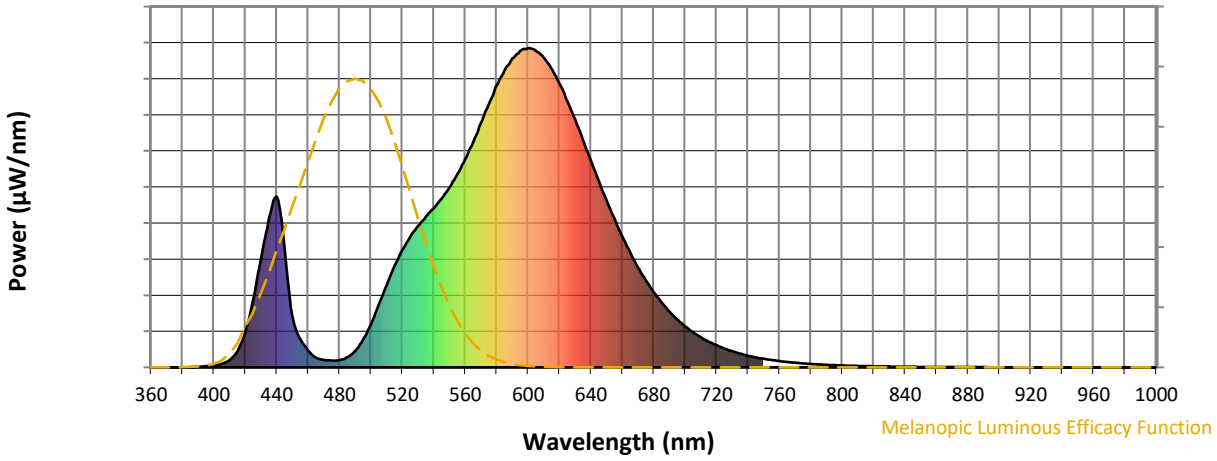



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2407-184-3

## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 1.71**

| 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 | 52 | NR | 620 | 888 | NR | 750 | 27 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 87 | NR | 625 | 834 | NR | 755 | 23 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 135 | NR | 630 | 776 | NR | 760 | 20 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 196 | NR | 635 | 712 | NR | 765 | 17 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 258 | NR | 640 | 648 | NR | 770 | 15 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 317 | NR | 645 | 583 | NR | 775 | 12 | NR | 905 | 0 | NR |
| 390 | 2 | NR | 520 | 368 | NR | 650 | 523 | NR | 780 | 11 | NR | 910 | 0 | NR |
| 395 | 4 | NR | 525 | 408 | NR | 655 | 465 | NR | 785 | 9 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 443 | NR | 660 | 410 | NR | 790 | 8 | NR | 920 | 0 | NR |
| 405 | 11 | NR | 535 | 473 | NR | 665 | 360 | NR | 795 | 7 | NR | 925 | 0 | NR |
| 410 | 23 | NR | 540 | 498 | NR | 670 | 313 | NR | 800 | 6 | NR | 930 | 0 | NR |
| 415 | 51 | NR | 545 | 530 | NR | 675 | 272 | NR | 805 | 5 | NR | 935 | 0 | NR |
| 420 | 111 | NR | 550 | 563 | NR | 680 | 236 | NR | 810 | 4 | NR | 940 | 0 | NR |
| 425 | 214 | NR | 555 | 605 | NR | 685 | 203 | NR | 815 | 4 | NR | 945 | 0 | NR |
| 430 | 339 | NR | 560 | 651 | NR | 690 | 175 | NR | 820 | 3 | NR | 950 | 0 | NR |
| 435 | 467 | NR | 565 | 705 | NR | 695 | 150 | NR | 825 | 3 | NR | 955 | 0 | NR |
| 440 | 535 | NR | 570 | 765 | NR | 700 | 128 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 372 | NR | 575 | 824 | NR | 705 | 110 | NR | 835 | 2 | NR | 965 | 0 | NR |
| 450 | 160 | NR | 580 | 882 | NR | 710 | 94 | NR | 840 | 2 | NR | 970 | 0 | NR |
| 455 | 89 | NR | 585 | 930 | NR | 715 | 80 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 53 | NR | 590 | 968 | NR | 720 | 69 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 31 | NR | 595 | 991 | NR | 725 | 59 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 23 | NR | 600 | 999 | NR | 730 | 50 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 21 | NR | 605 | 992 | NR | 735 | 43 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 23 | NR | 610 | 969 | NR | 740 | 36 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 32 | NR | 615 | 935 | NR | 745 | 31 | NR | 875 | 1 | NR | | | |

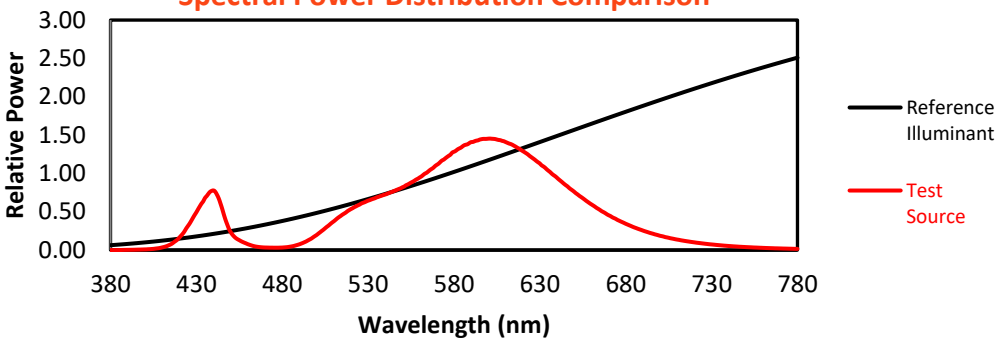
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

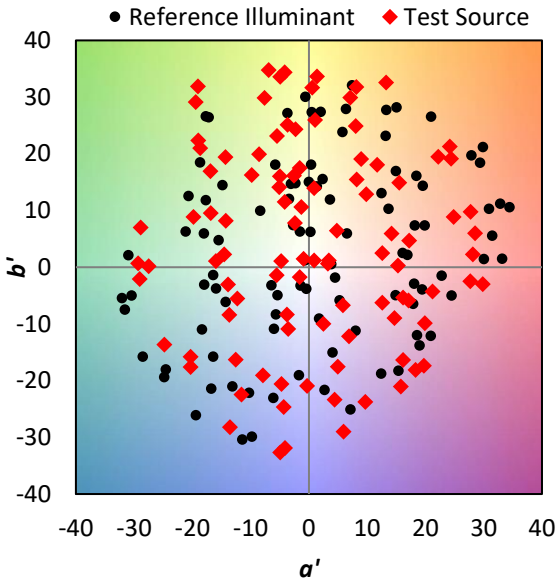
## Summary

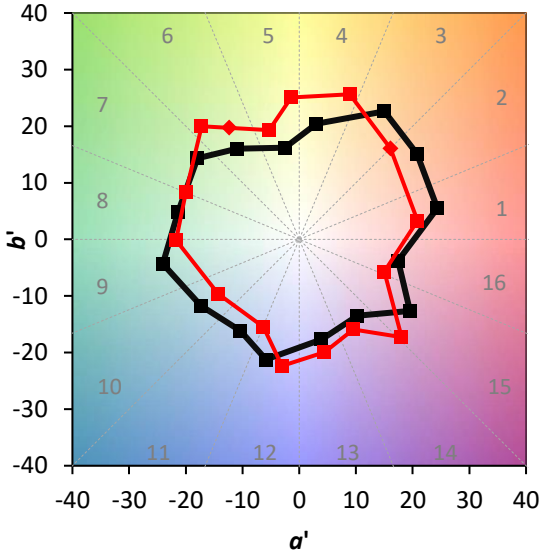
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

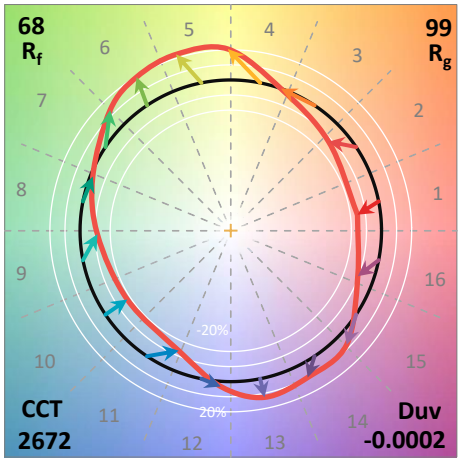
## Spectral Power Distribution Comparison

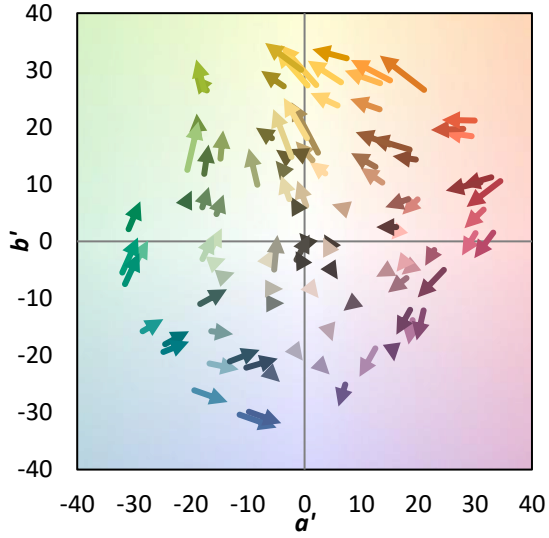



## Color Vector Graphics



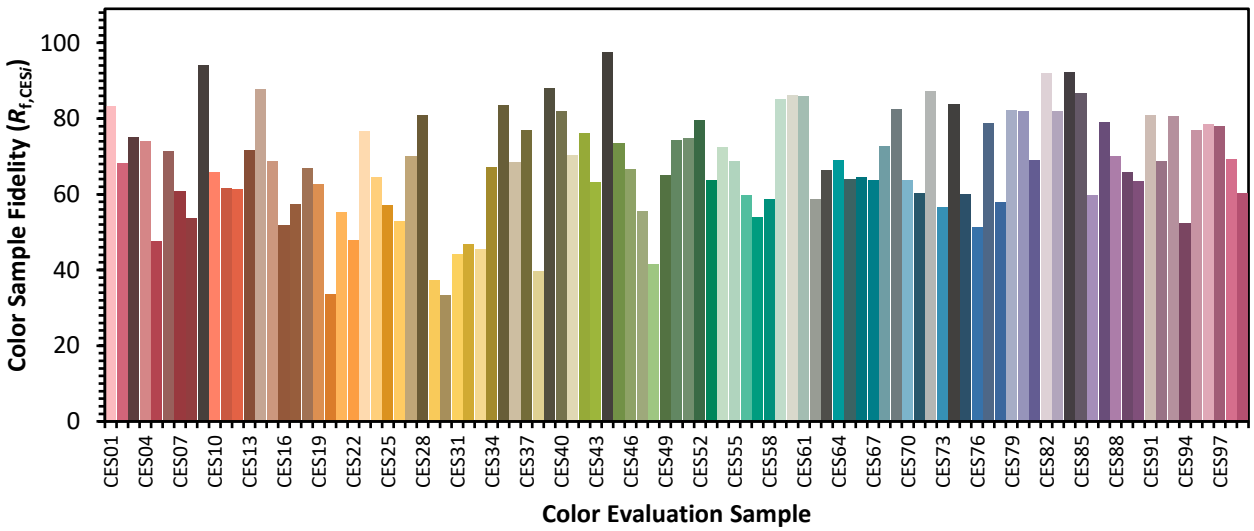



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

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

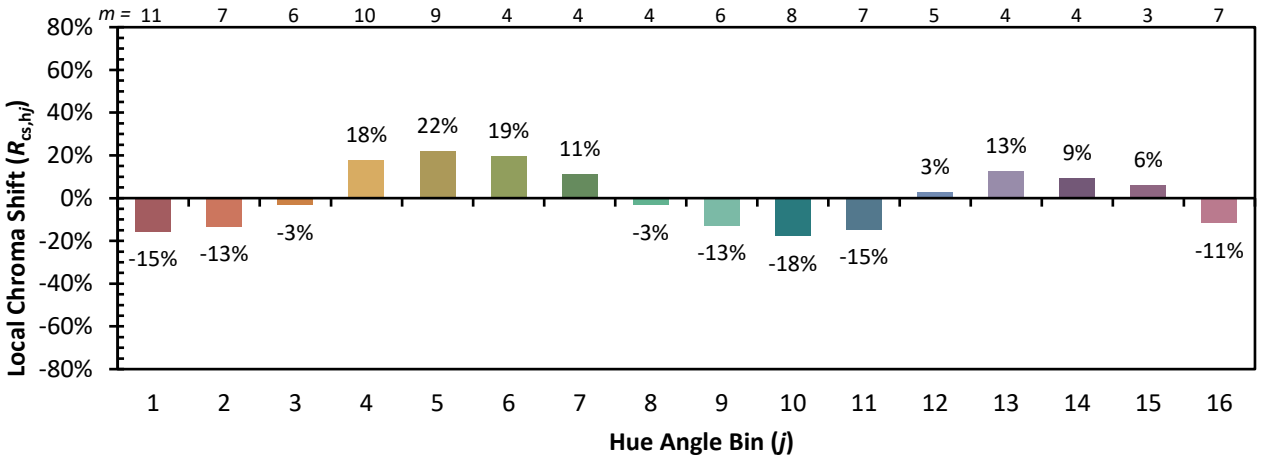
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 52 | CES31 = 44 | CES56 = 60 | CES81 = 69 |
| CES07 = 42 | CES32 = 47 | CES57 = 54 | CES82 = 92 |
| CES08 = 41 | CES33 = 45 | CES58 = 59 | CES83 = 82 |
| CES09 = 29 | CES34 = 67 | CES59 = 85 | CES84 = 92 |
| CES10 = 77 | CES35 = 84 | CES60 = 86 | CES85 = 87 |
| CES11 = 60 | CES36 = 68 | CES61 = 86 | CES86 = 60 |
| CES12 = 66 | CES37 = 77 | CES62 = 59 | CES87 = 79 |
| CES13 = 44 | CES38 = 40 | CES63 = 66 | CES88 = 70 |
| CES14 = 74 | CES39 = 88 | CES64 = 69 | CES89 = 66 |
| CES15 = 72 | CES40 = 82 | CES65 = 64 | CES90 = 64 |
| CES16 = 48 | CES41 = 70 | CES66 = 65 | CES91 = 81 |
| CES17 = 51 | CES42 = 76 | CES67 = 64 | CES92 = 69 |
| CES18 = 57 | CES43 = 63 | CES68 = 73 | CES93 = 81 |
| CES19 = 73 | CES44 = 97 | CES69 = 83 | CES94 = 53 |
| CES20 = 67 | CES45 = 74 | CES70 = 64 | CES95 = 77 |
| CES21 = 88 | CES46 = 67 | CES71 = 60 | CES96 = 79 |
| CES22 = 80 | CES47 = 55 | CES72 = 87 | CES97 = 78 |
| CES23 = 92 | CES48 = 42 | CES73 = 57 | CES98 = 69 |
| CES24 = 92 | CES49 = 65 | CES74 = 84 | CES99 = 60 |
| CES25 = 73 | CES50 = 74 | CES75 = 60 | |

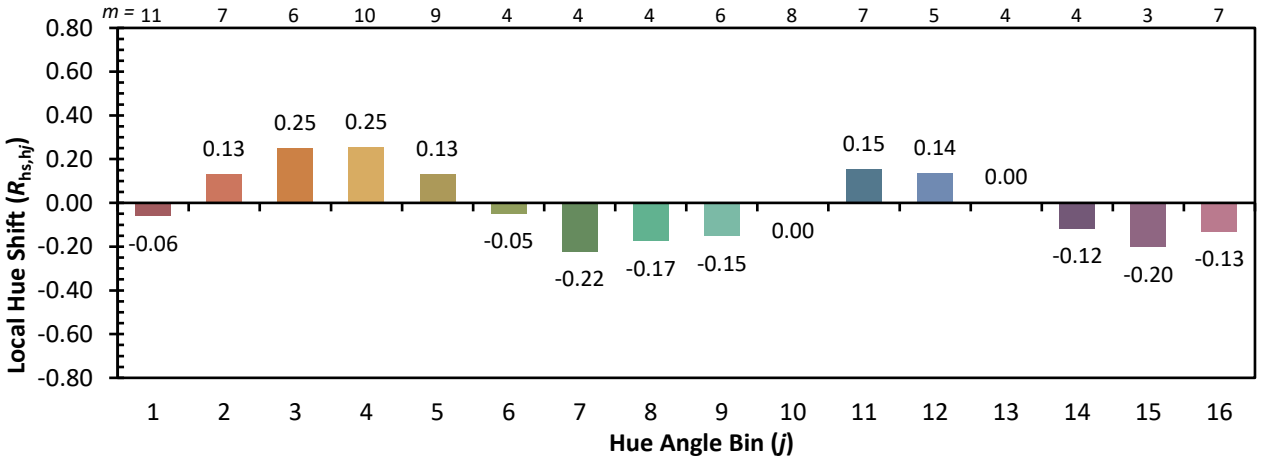


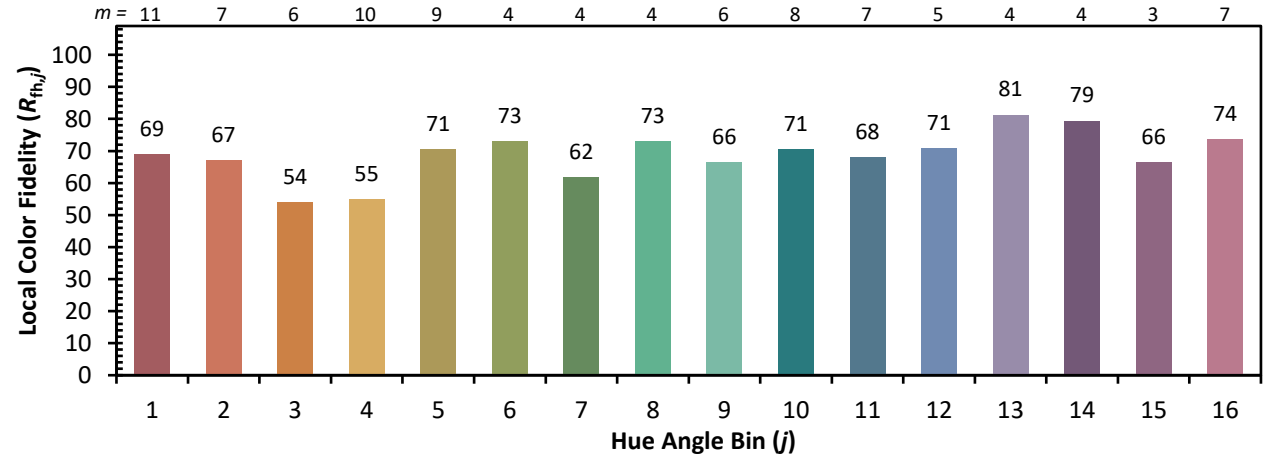
REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Color Rendition by Hue-Angle Bin



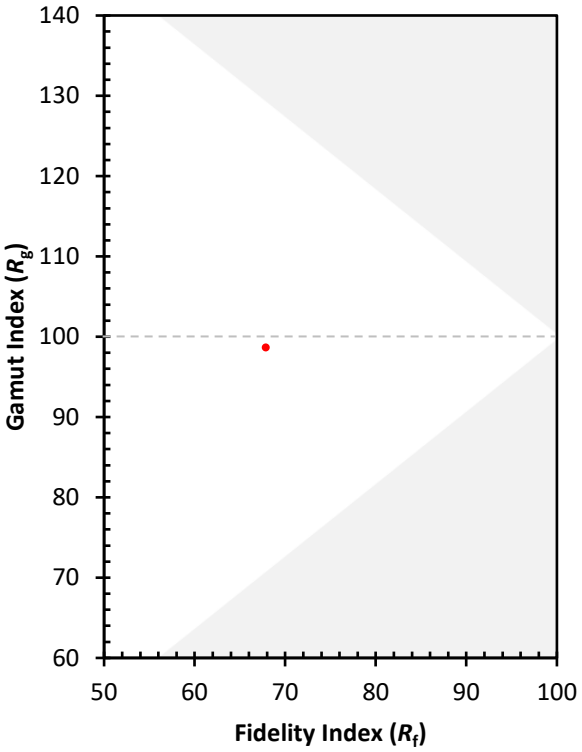



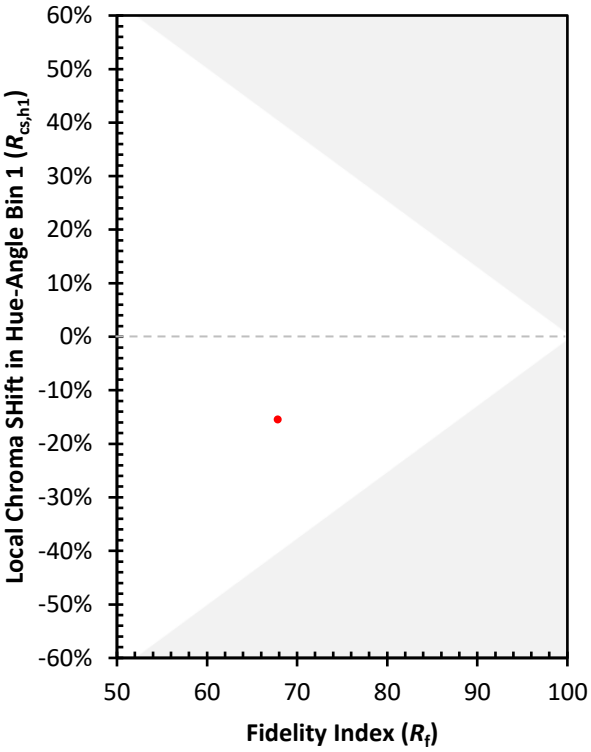



REPORT NUMBER: SP1-2407-184-3

# TM-30-18

## Measure Comparisons




(END OF REPORT)