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: P1457044

Luminaire Tested: GLAN-SB8B-730-U-T4LG

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: | P1457044 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/21/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB8B-730-U-T4LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 8xLight Square PACKAGE 70CRI 3000K FIXTURE w/ TYPE IV LOW GLARE |
| Light Source: | (208) 3000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 44552.8 lumens |
| Efficiency: | N/A |
| Efficacy: | 152.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1.5' x H: 0') |
| IES Classification: | Type IV - Short |
| BUG Rating: | B4 - U0 - G4 |

| | |
|---|---|
| Input Watts (W): | 292.8 |
| 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: P1457044
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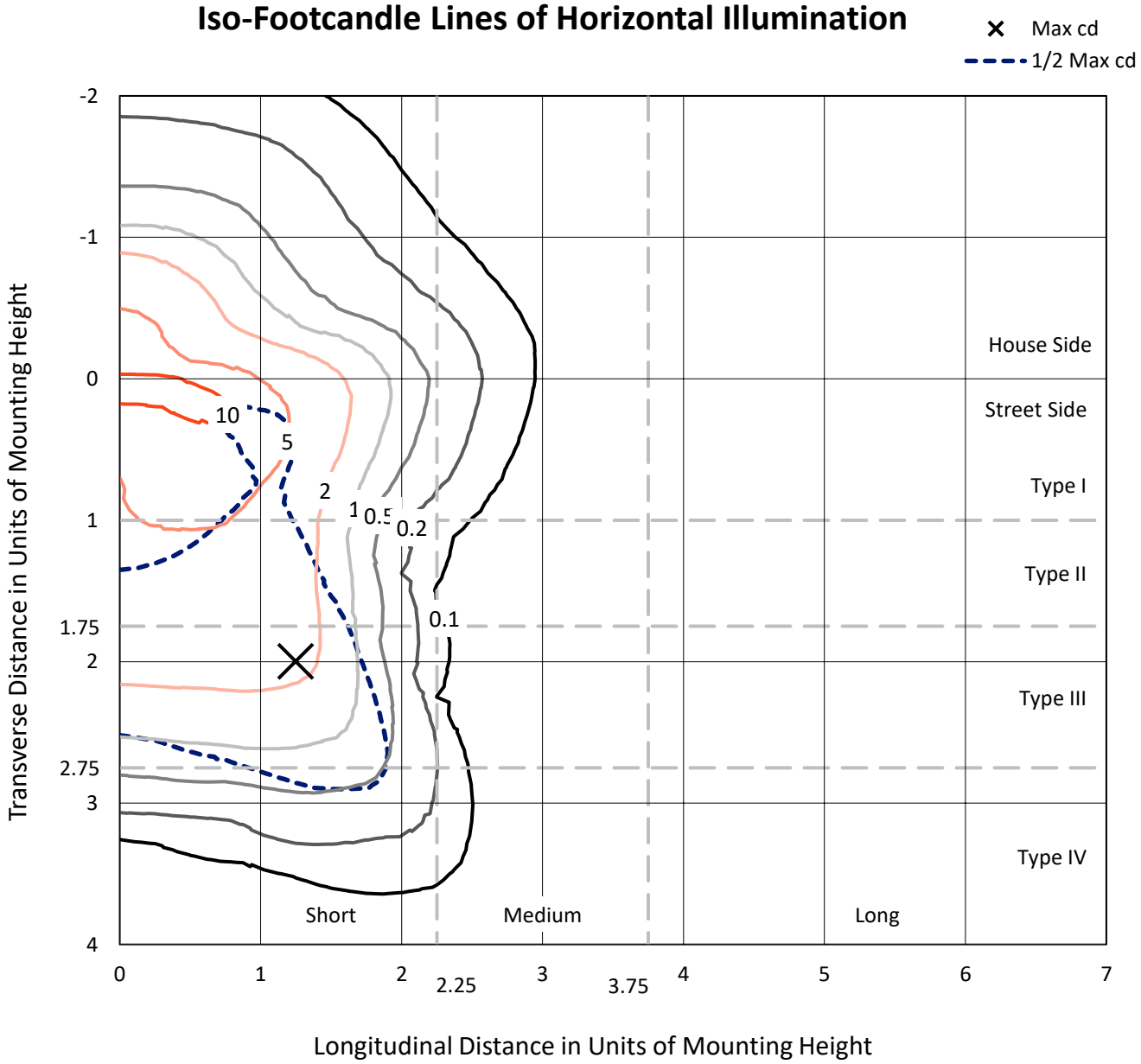
## Iso-Footcandle Lines of Horizontal Illumination




Based on 30 foot mounting height. Maximum calculated value = 12.2 fc
Type IV - Short - N/A

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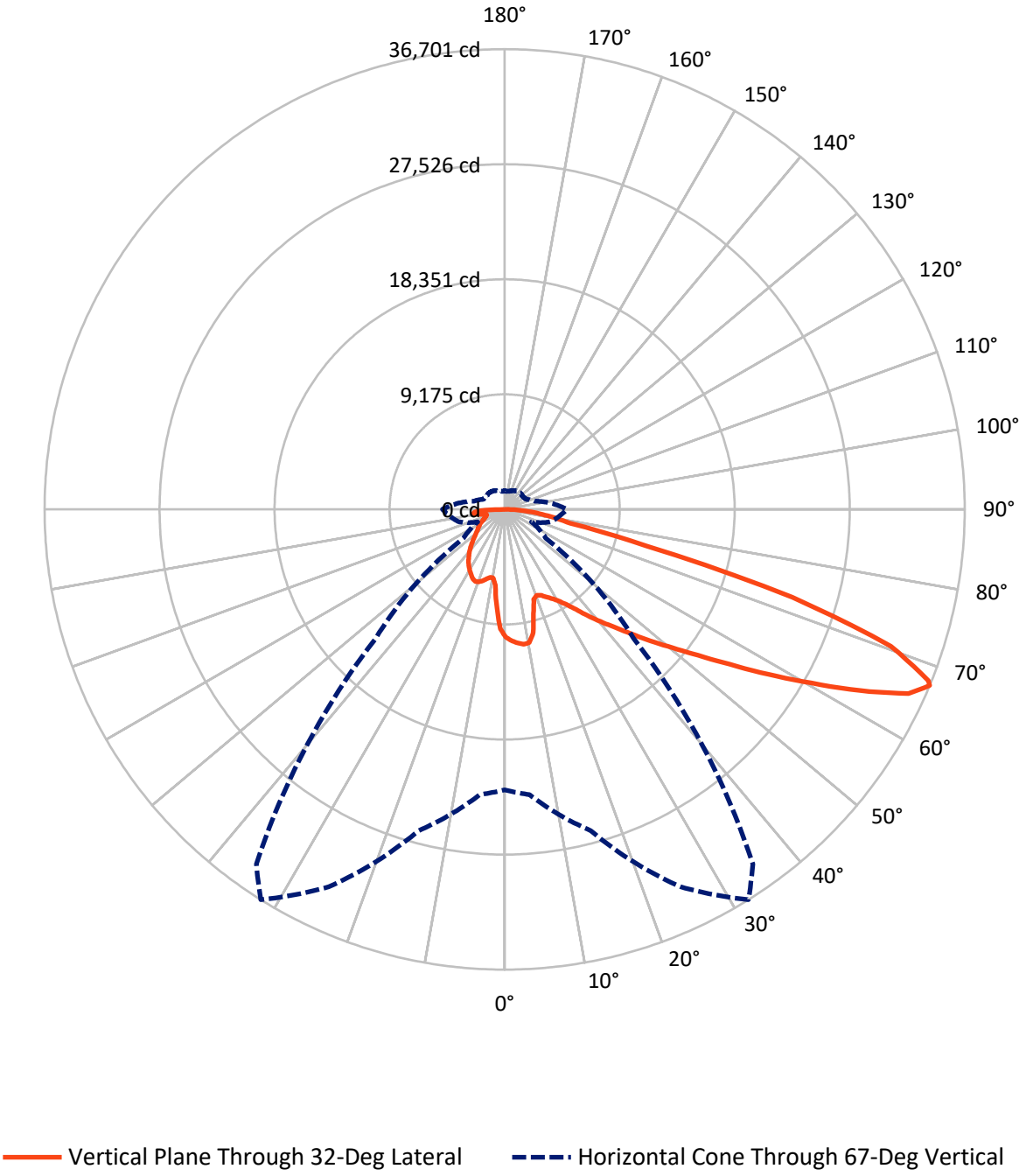
## Luminous Intensity Polar Plot



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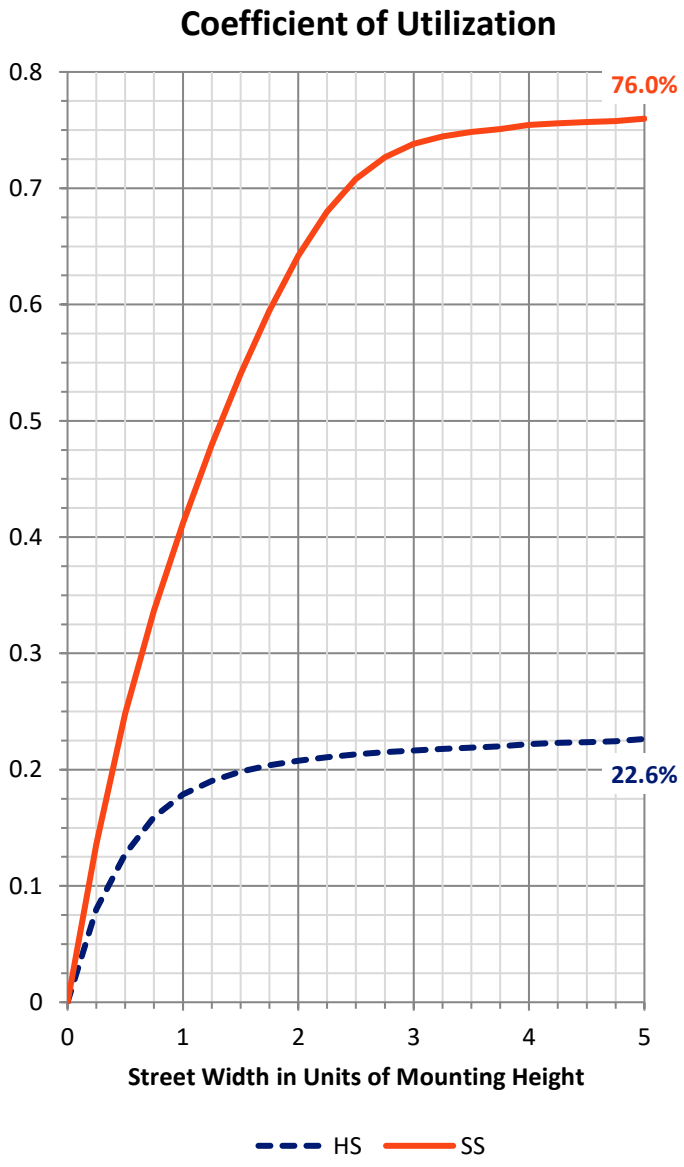
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 10547.7 | 0.0 | 10547.7 |
| | % Fixture | 23.7 | 0.0 | 23.7 |
| **Street Side** | Lumens | 34005.1 | 0.0 | 34005.1 |
| | % Fixture | 76.3 | 0.0 | 76.3 |
| **Total** | Lumens | 44552.8 | 0.0 | 44552.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 889.4 | 2.0 |
| 10°-20° | 2361.5 | 5.3 |
| 20°-30° | 3856.5 | 8.7 |
| 30°-40° | 5684.1 | 12.8 |
| 40°-50° | 7838.6 | 17.6 |
| 50°-60° | 9902.6 | 22.2 |
| 60°-70° | 9583.9 | 21.5 |
| 70°-80° | 3420.4 | 7.7 |
| 80°-90° | 1015.7 | 2.3 |
| 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° | 44552.8 | 100.0 |
| 0°-180° | 44552.8 | 100.0 |



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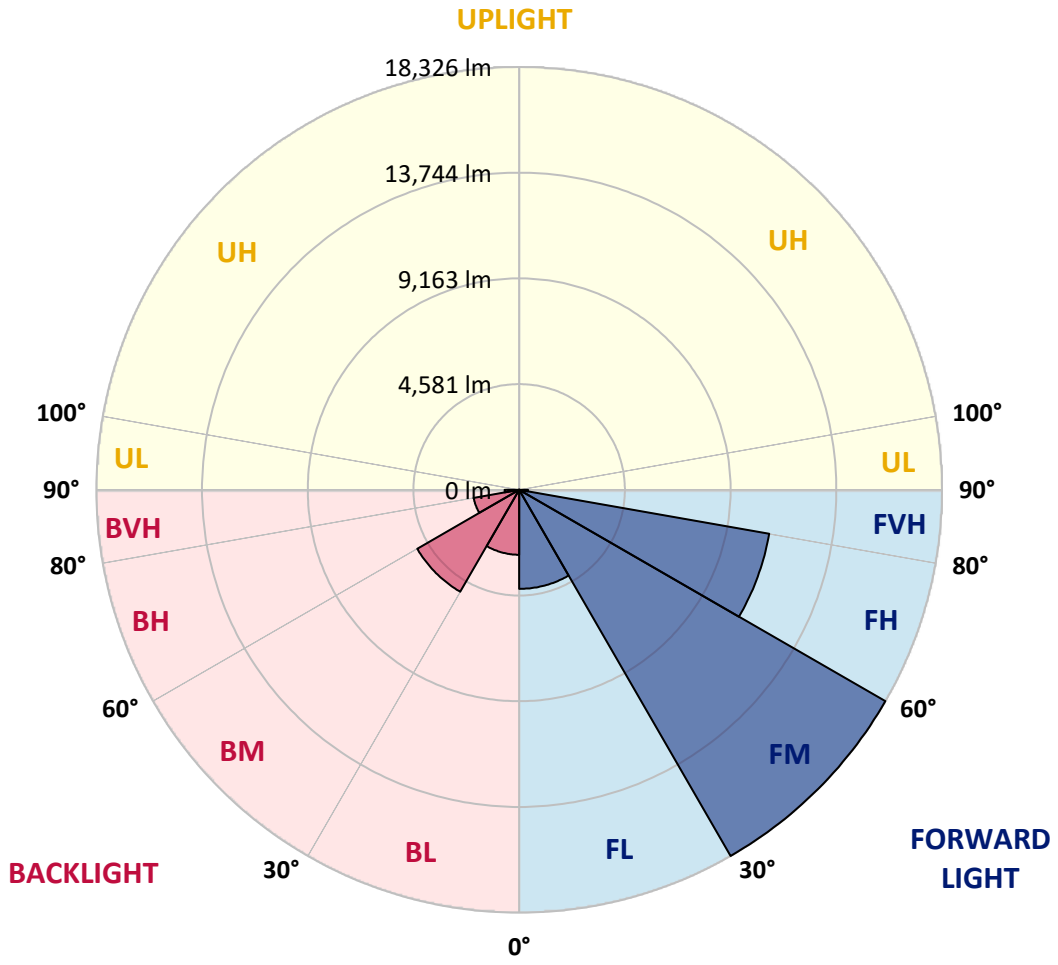
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 4292.8 | 9.6 | | | |
| FM | (30°-60°) | 18326.0 | 41.1 | | | |
| FH | (60°-80°) | 11003.6 | 24.7 | | | G4/12000 |
| FVH | (80°-90°) | 382.7 | 0.9 | | | G3/500 |
| BL | (0°-30°) | 2814.7 | 6.3 | B4/5000 | | |
| BM | (30°-60°) | 5099.3 | 11.4 | B4/8500 | | |
| BH | (60°-80°) | 2000.7 | 4.5 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 633.0 | 1.4 | | | 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 IV Short



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REPORT NUMBER: P1457044
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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 32° | 35° | 45° | 55° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 10179.4 | 10179.4 | 10179.4 | 10179.4 | *10179.4* | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 |
| 2.5° | 10565.2 | 10535.6 | 10505.9 | 10525.7 | *10486.1* | 10476.2 | 10426.7 | 10407.0 | 10347.6 | 10337.7 | 10228.9 |
| 5° | 10782.9 | 10723.5 | 10713.6 | 10733.4 | *10693.8* | 10693.8 | 10654.3 | 10624.6 | 10535.6 | 10486.1 | 10327.8 |
| 7.5° | 10782.9 | 10773.0 | 10792.8 | 10862.0 | *10871.9* | 10871.9 | 10871.9 | 10881.8 | 10792.8 | 10723.5 | 10476.2 |
| 10° | 10169.5 | 10070.6 | 10288.2 | 10634.5 | *10802.7* | 10901.6 | 11079.6 | 11188.5 | 11119.2 | 11069.8 | 10733.4 |
| 12.5° | 8339.4 | 8349.3 | 8695.5 | 9437.5 | *10110.2* | 10397.1 | 11139.0 | 11534.7 | 11564.4 | 11485.2 | 11059.9 |
| 15° | 7073.2 | 7122.6 | 7300.7 | 7834.9 | *8606.5* | 9031.9 | 10792.8 | 11841.4 | 12078.8 | 11999.7 | 11455.6 |
| 17.5° | 6687.4 | 6717.0 | 6796.2 | 7102.8 | *7538.1* | 7884.4 | 9853.0 | 12039.2 | 12702.0 | 12603.1 | 11900.7 |
| 20° | 6628.0 | 6647.8 | 6746.7 | 7003.9 | *7300.7* | 7498.5 | 8893.4 | 11880.9 | 13285.7 | 13246.1 | 12306.3 |
| 22.5° | 6637.9 | 6657.7 | 6786.3 | 7142.4 | *7449.1* | 7617.3 | 8586.7 | 11514.9 | 13899.0 | 13938.6 | 12721.8 |
| 25° | 6657.7 | 6667.6 | 6865.4 | 7340.3 | *7726.1* | 7933.8 | 8784.6 | 11188.5 | 14413.4 | 14749.8 | 13176.9 |
| 27.5° | 6766.5 | 6796.2 | 7063.3 | 7597.5 | *8052.5* | 8289.9 | 9249.5 | 11297.3 | 14977.3 | 15669.8 | 13721.0 |
| 30° | 7063.3 | 7083.1 | 7409.5 | 7963.5 | *8458.1* | 8705.4 | 9803.5 | 11732.6 | 15669.8 | 16619.5 | 14255.2 |
| 32.5° | 7528.2 | 7548.0 | 7923.9 | 8497.7 | *9031.9* | 9328.7 | 10525.7 | 12563.5 | 16441.4 | 17618.6 | 14789.3 |
| 35° | 8171.2 | 8181.1 | 8606.5 | 9219.8 | *9783.7* | 10120.1 | 11366.5 | 13503.3 | 17242.7 | 18469.4 | 15185.1 |
| 37.5° | 8933.0 | 9002.2 | 9437.5 | 10080.5 | *10743.3* | 11050.0 | 12355.8 | 14601.4 | 17955.0 | 19191.5 | 15412.6 |
| 40° | 9981.6 | 10001.4 | 10426.7 | 11050.0 | *11752.3* | 12049.1 | 13345.0 | 15640.1 | 18736.5 | 19616.9 | 15620.3 |
| 42.5° | 11059.9 | 11228.0 | 11584.2 | 12276.6 | *12800.9* | 13038.4 | 14472.8 | 16589.8 | 19359.7 | 19636.7 | 15531.3 |
| 45° | 12504.2 | 12632.8 | 12988.9 | 13602.2 | *14126.5* | 14403.5 | 15689.6 | 17460.3 | 19676.3 | 19468.5 | 15333.4 |
| 47.5° | 14156.2 | 14235.4 | 14522.3 | 15076.2 | *15659.9* | 15857.7 | 16955.8 | 17955.0 | 19795.0 | 19349.8 | 15244.4 |
| 50° | 16105.1 | 16105.1 | 16312.8 | 16787.6 | *17321.8* | 17598.8 | 18123.1 | 18251.7 | 20141.2 | 19142.1 | 15471.9 |
| 52.5° | 17747.2 | 17826.4 | 18103.4 | 18776.0 | *19310.2* | 19626.8 | 19033.2 | 18706.8 | 19438.8 | 17984.6 | 15541.2 |
| 55° | 19320.1 | 19409.2 | 20032.4 | 20873.3 | *21783.4* | 22129.6 | 20170.9 | 18479.3 | 17074.5 | 16293.0 | 15066.3 |
| 57.5° | 20823.8 | 21011.8 | 21793.3 | 23435.4 | *24810.5* | 24780.8 | 21615.2 | 16441.4 | 13938.6 | 14423.3 | 14027.6 |
| 60° | 22921.0 | 23118.9 | 24365.3 | 26432.9 | *28114.6* | 27412.2 | 21635.0 | 13681.4 | 10862.0 | 11514.9 | 12078.8 |
| 62.5° | 24672.0 | 25008.3 | 26838.5 | 30281.1 | *31824.3* | 30726.2 | 19844.4 | 10476.2 | 7211.7 | 8032.7 | 9338.6 |
| 65° | 24513.7 | 24958.9 | 27798.0 | 33110.3 | *35415.3* | 34396.4 | 17222.9 | 6628.0 | 3719.6 | 5490.4 | 6539.0 |
| 67° | *22357.1* | *22841.9* | *26521.9* | *33209.3* | *36701.3* | *34525.0* | *14542.0* | *4006.5* | *2364.3* | *3808.6* | *4540.7* |
| 67.5° | 21120.6 | 21832.8 | 25888.8 | 33021.3 | *36463.9* | 33980.9 | 13335.1 | 3353.6 | 2225.8 | 3541.5 | 4135.1 |
| 70° | 12988.9 | 14136.4 | 19429.0 | 29192.9 | *32685.0* | 28441.1 | 7409.5 | 1899.4 | 1810.3 | 2374.2 | 2858.9 |
| 72.5° | 3907.6 | 4253.8 | 7498.5 | 18726.6 | *23989.4* | 21081.0 | 3333.8 | 1464.1 | 1622.4 | 1909.3 | 2206.0 |
| 75° | 1899.4 | 2028.0 | 3096.4 | 7656.8 | *11683.1* | 11623.7 | 1859.8 | 1256.4 | 1503.7 | 1602.6 | 1741.1 |
| 77.5° | 1216.8 | 1295.9 | 1929.0 | 4283.5 | *5351.9* | 4768.2 | 1345.4 | 1098.1 | 1335.5 | 1315.7 | 1295.9 |
| 80° | 761.7 | 801.3 | 1236.6 | 2483.0 | *3947.1* | 3294.2 | 989.3 | 900.2 | 1147.5 | 1018.9 | 920.0 |
| 82.5° | 494.6 | 544.1 | 791.4 | 1513.6 | *2819.4* | 2453.4 | 652.9 | 643.0 | 949.7 | 811.2 | 712.3 |
| 85° | 326.5 | 366.0 | 504.5 | 890.3 | *1671.8* | 1751.0 | 425.4 | 445.2 | 732.0 | 613.3 | 544.1 |
| 87.5° | 118.7 | 148.4 | 257.2 | 395.7 | *781.5* | 969.5 | 178.1 | 168.2 | 356.1 | 286.9 | 227.5 |
| 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: P1457044
CATALOG NUMBER: GLAN-SB8B-730-U-T4LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 | 10179.4 |
| 2.5° | 10209.1 | 10179.4 | 10040.9 | 9922.2 | 9833.2 | 9714.5 | 9585.9 | 9437.5 | 9338.6 | 9358.3 | 9328.7 |
| 5° | 10258.6 | 10179.4 | 9912.3 | 9506.7 | 9111.0 | 8616.4 | 7983.3 | 7607.4 | 7320.5 | 7172.1 | 7211.7 |
| 7.5° | 10367.4 | 10228.9 | 9665.0 | 8843.9 | 7815.1 | 6806.1 | 6182.8 | 5826.7 | 5658.5 | 5589.3 | 5579.4 |
| 10° | 10555.3 | 10317.9 | 9348.5 | 7815.1 | 6469.7 | 5787.1 | 5559.6 | 5460.7 | 5440.9 | 5440.9 | 5431.0 |
| 12.5° | 10782.9 | 10407.0 | 8814.3 | 6816.0 | 5826.7 | 5579.4 | 5539.8 | 5549.7 | 5579.4 | 5609.1 | 5559.6 |
| 15° | 11059.9 | 10446.5 | 8151.5 | 6212.5 | 5698.1 | 5638.7 | 5698.1 | 5767.4 | 5816.8 | 5856.4 | 5806.9 |
| 17.5° | 11336.9 | 10407.0 | 7528.2 | 5925.6 | 5717.9 | 5797.0 | 5915.7 | 6024.6 | 6054.2 | 6113.6 | 6074.0 |
| 20° | 11534.7 | 10268.5 | 6994.0 | 5816.8 | 5767.4 | 5945.4 | 6093.8 | 6212.5 | 6271.9 | 6311.4 | 6271.9 |
| 22.5° | 11683.1 | 10090.4 | 6608.2 | 5708.0 | 5767.4 | 5985.0 | 6163.1 | 6301.5 | 6370.8 | 6410.4 | 6360.9 |
| 25° | 11811.7 | 9843.1 | 6311.4 | 5549.7 | 5648.6 | 5856.4 | 6054.2 | 6192.7 | 6291.7 | 6351.0 | 6321.3 |
| 27.5° | 11970.0 | 9645.2 | 6034.5 | 5312.3 | 5401.3 | 5599.2 | 5806.9 | 5975.1 | 6163.1 | 6262.0 | 6242.2 |
| 30° | 12148.0 | 9546.3 | 5767.4 | 5055.1 | 5114.4 | 5312.3 | 5559.6 | 5787.1 | 6044.3 | 6172.9 | 6172.9 |
| 32.5° | 12355.8 | 9477.1 | 5520.0 | 4807.8 | 4857.2 | 5074.9 | 5312.3 | 5520.0 | 5797.0 | 6004.8 | 5994.9 |
| 35° | 12444.8 | 9397.9 | 5322.2 | 4580.2 | 4679.2 | 4857.2 | 5045.2 | 5183.7 | 5470.6 | 5717.9 | 5737.7 |
| 37.5° | 12533.8 | 9368.2 | 5223.3 | 4402.2 | 4481.3 | 4619.8 | 4718.7 | 4788.0 | 5055.1 | 5312.3 | 5322.2 |
| 40° | 12642.7 | 9506.7 | 5292.5 | 4283.5 | 4214.2 | 4352.7 | 4402.2 | 4441.8 | 4580.2 | 4748.4 | 4748.4 |
| 42.5° | 12573.4 | 9605.7 | 5450.8 | 4174.7 | 3887.8 | 4046.0 | 4065.8 | 4055.9 | 4065.8 | 4075.7 | 4065.8 |
| 45° | 12395.4 | 9506.7 | 5450.8 | 4006.5 | 3541.5 | 3709.7 | 3699.8 | 3650.3 | 3571.2 | 3363.5 | 3333.8 |
| 47.5° | 12355.8 | 9447.4 | 5243.0 | 3729.5 | 3195.3 | 3333.8 | 3353.6 | 3254.6 | 3027.1 | 2809.5 | 2740.2 |
| 50° | 12524.0 | 9556.2 | 4916.6 | 3393.1 | 2898.5 | 3017.2 | 3066.7 | 2898.5 | 2641.3 | 2413.8 | 2374.2 |
| 52.5° | 12771.3 | 9694.7 | 4441.8 | 3027.1 | 2651.2 | 2769.9 | 2829.3 | 2641.3 | 2374.2 | 2196.1 | 2176.4 |
| 55° | 12741.6 | 9694.7 | 3907.6 | 2690.8 | 2463.2 | 2552.3 | 2651.2 | 2453.4 | 2245.6 | 2146.7 | 2136.8 |
| 57.5° | 12098.6 | 9328.7 | 3511.9 | 2453.4 | 2285.2 | 2364.3 | 2492.9 | 2305.0 | 2107.1 | 2126.9 | 2156.6 |
| 60° | 10842.2 | 8379.0 | 3215.1 | 2295.1 | 2126.9 | 2206.0 | 2344.5 | 2126.9 | 1869.7 | 1800.4 | 1800.4 |
| 62.5° | 8933.0 | 6905.0 | 2977.7 | 2136.8 | 1978.5 | 2077.4 | 2146.7 | 1859.8 | 1691.6 | 1612.5 | 1612.5 |
| 65° | 6697.3 | 5342.0 | 2730.3 | 2008.2 | 1849.9 | 1958.7 | 1879.6 | 1741.1 | 1572.9 | 1513.6 | 1523.5 |
| 67° | *4966.1* | *4145.0* | *2522.6* | *1899.4* | *1770.8* | *1820.2* | *1760.9* | *1661.9* | *1493.8* | *1444.3* | *1493.8* |
| 67.5° | 4461.5 | 3937.2 | 2473.1 | 1869.7 | 1751.0 | 1790.5 | 1731.2 | 1652.1 | 1474.0 | 1424.5 | 1474.0 |
| 70° | 3066.7 | 3027.1 | 2206.0 | 1731.2 | 1642.2 | 1602.6 | 1632.3 | 1533.3 | 1385.0 | 1365.2 | 1414.6 |
| 72.5° | 2334.6 | 2413.8 | 1978.5 | 1612.5 | 1523.5 | 1474.0 | 1543.2 | 1444.3 | 1295.9 | 1325.6 | 1375.1 |
| 75° | 1830.1 | 1948.8 | 1770.8 | 1444.3 | 1385.0 | 1394.8 | 1533.3 | 1493.8 | 1375.1 | 1404.7 | 1414.6 |
| 77.5° | 1355.3 | 1572.9 | 1513.6 | 1256.4 | 1206.9 | 1345.4 | 1731.2 | 1849.9 | 1642.2 | 1592.7 | 1523.5 |
| 80° | 989.3 | 1127.7 | 1276.1 | 1038.7 | 1009.0 | 1295.9 | 2136.8 | 2364.3 | 2028.0 | 1830.1 | 1780.7 |
| 82.5° | 732.0 | 791.4 | 1048.6 | 831.0 | 732.0 | 1157.4 | 2374.2 | 2779.8 | 2413.8 | 2037.9 | 1978.5 |
| 85° | 524.3 | 613.3 | 831.0 | 613.3 | 484.7 | 949.7 | 2324.7 | 2720.4 | 2394.0 | 1929.0 | 1879.6 |
| 87.5° | 188.0 | 267.1 | 356.1 | 277.0 | 247.3 | 652.9 | 1919.2 | 1958.7 | 1493.8 | 682.6 | 692.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-4

Test Date: 10/10/2024

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

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

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

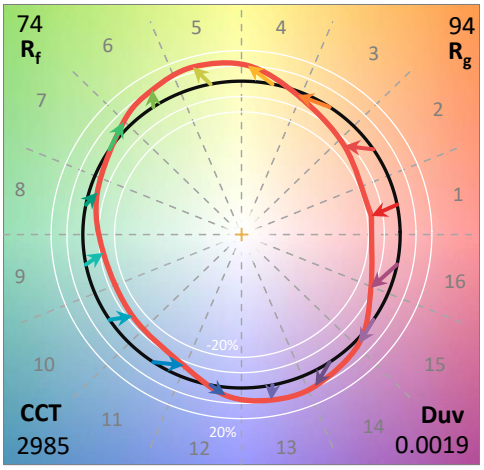
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-4 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-730-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

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

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




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 36M |
| Operation Time: | 1H 36M |
| Sphere Temperature (°C): | 25.2 |

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| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC Power Source | IN0208 | 10/24/2023 | 10/24/2024 |
| Sphere Thermometer | IN0085 | 10/24/2023 | 10/24/2024 |
| Room Thermometer | IN0046 | 10/24/2023 | 10/24/2024 |

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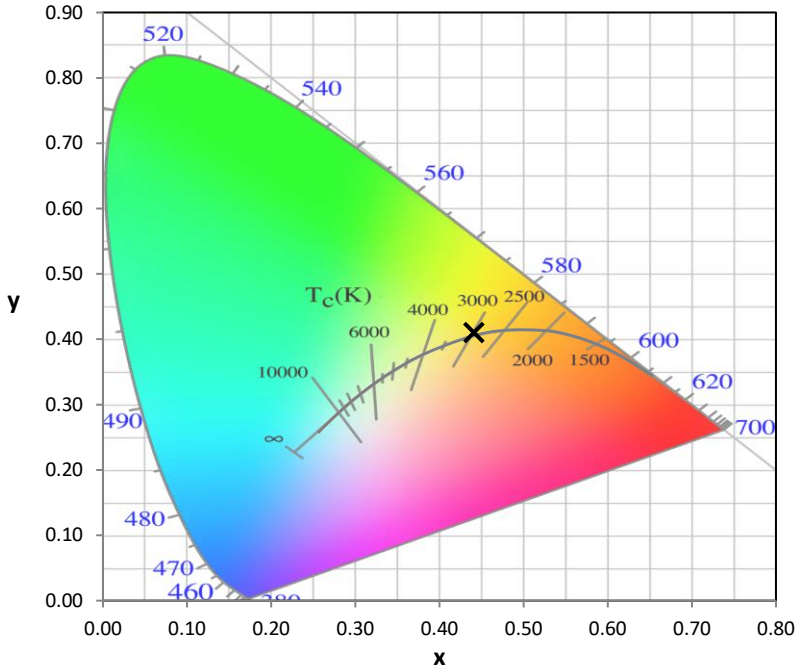
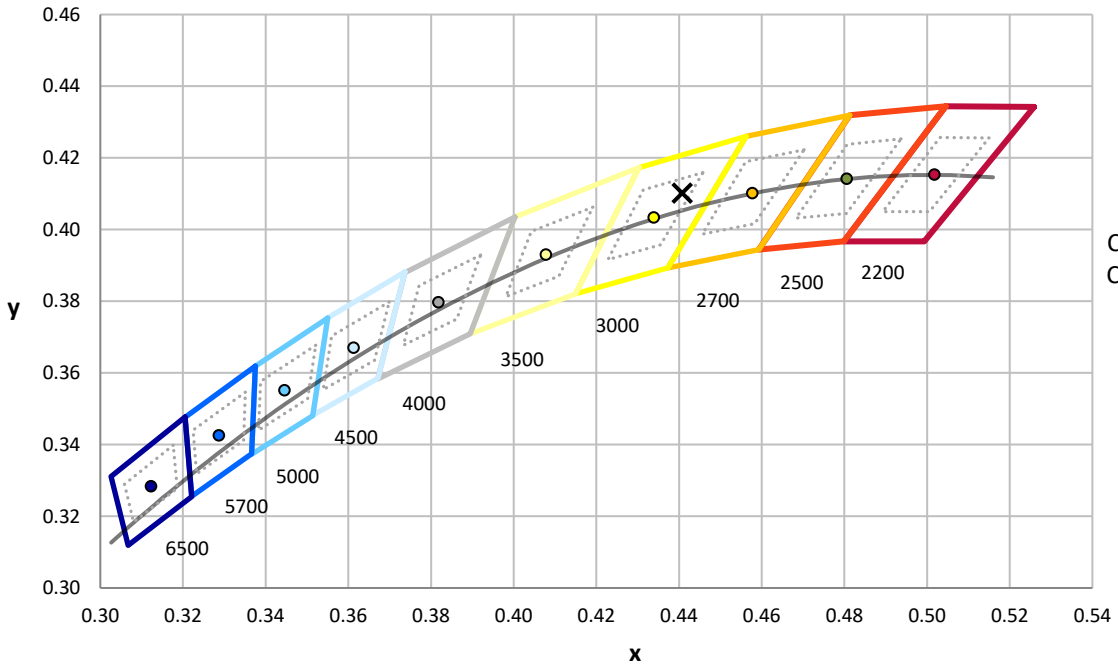
## CIE 1931 Chromaticity Diagram




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




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

Point lies inside the ANSI 3000K 4-step quadrangle

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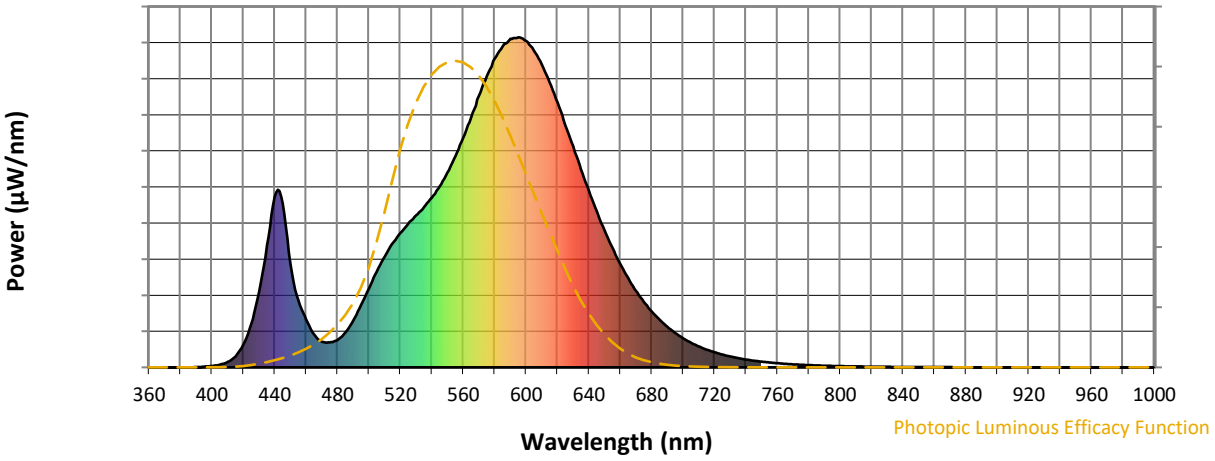
## Photopic Flux vs. Wavelength




## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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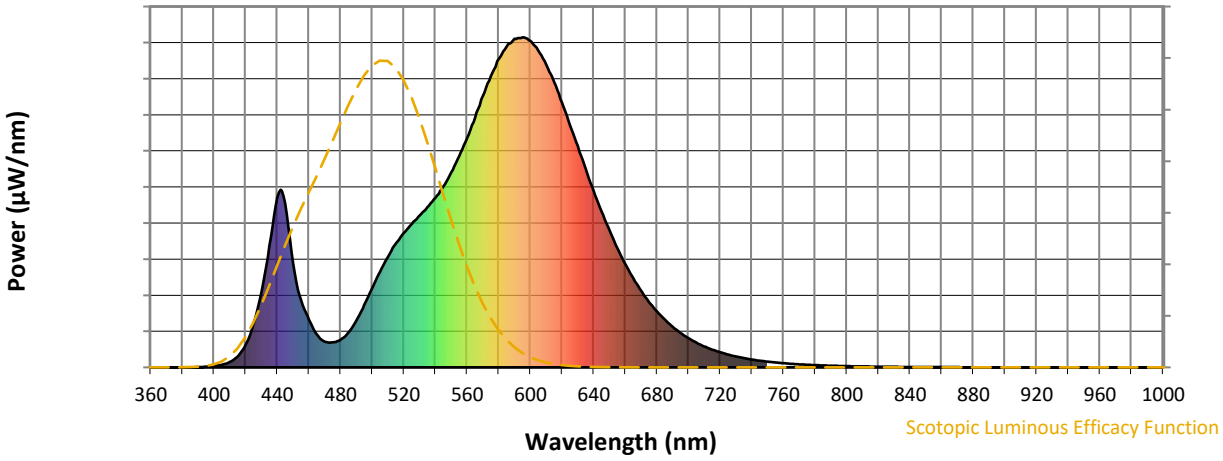
## Scotopic Flux vs. Wavelength




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

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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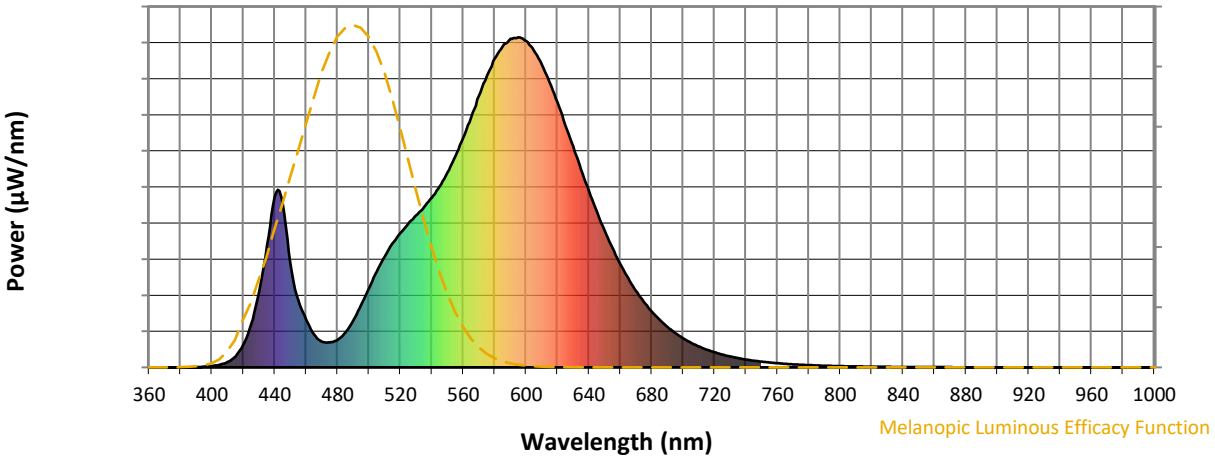
## Melanopic Flux vs. Wavelength




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

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 142 | NR | 620 | 803 | NR | 750 | 17 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 189 | NR | 625 | 734 | NR | 755 | 15 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 240 | NR | 630 | 670 | NR | 760 | 13 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 290 | NR | 635 | 600 | NR | 765 | 11 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 335 | NR | 640 | 535 | NR | 770 | 9 | NR | 900 | 0 | NR |
| 385 | 0 | NR | 515 | 375 | NR | 645 | 473 | NR | 775 | 8 | NR | 905 | 0 | NR |
| 390 | 1 | NR | 520 | 408 | NR | 650 | 415 | NR | 780 | 7 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 434 | NR | 655 | 362 | NR | 785 | 6 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 461 | NR | 660 | 313 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 486 | NR | 665 | 271 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 16 | NR | 540 | 514 | NR | 670 | 231 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 33 | NR | 545 | 549 | NR | 675 | 198 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 69 | NR | 550 | 591 | NR | 680 | 169 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 640 | NR | 685 | 144 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 227 | NR | 560 | 695 | NR | 690 | 123 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 369 | NR | 565 | 757 | NR | 695 | 104 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 517 | NR | 570 | 822 | NR | 700 | 88 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 498 | NR | 575 | 882 | NR | 705 | 75 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 315 | NR | 580 | 935 | NR | 710 | 63 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 204 | NR | 585 | 972 | NR | 715 | 54 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 145 | NR | 590 | 996 | NR | 720 | 46 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 100 | NR | 595 | 1000 | NR | 725 | 39 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 78 | NR | 600 | 989 | NR | 730 | 33 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 76 | NR | 605 | 960 | NR | 735 | 28 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 83 | NR | 610 | 918 | NR | 740 | 24 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 105 | NR | 615 | 864 | NR | 745 | 20 | NR | 875 | 1 | NR | | | |

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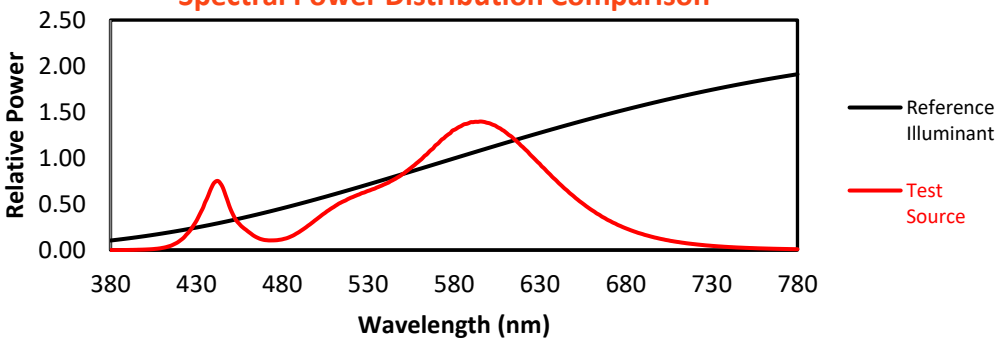
# TM-30-18

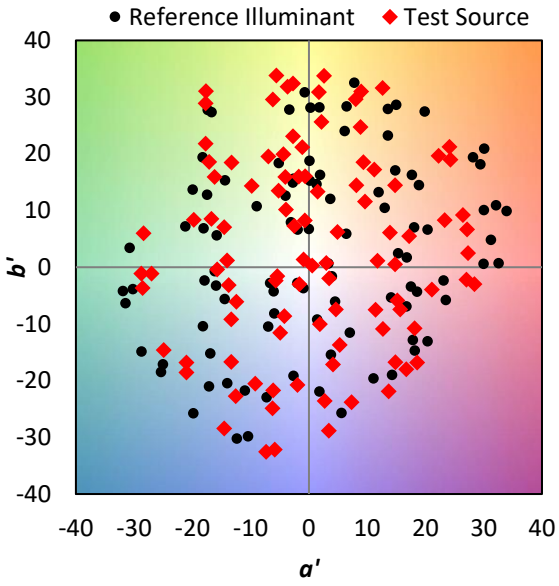
## Summary

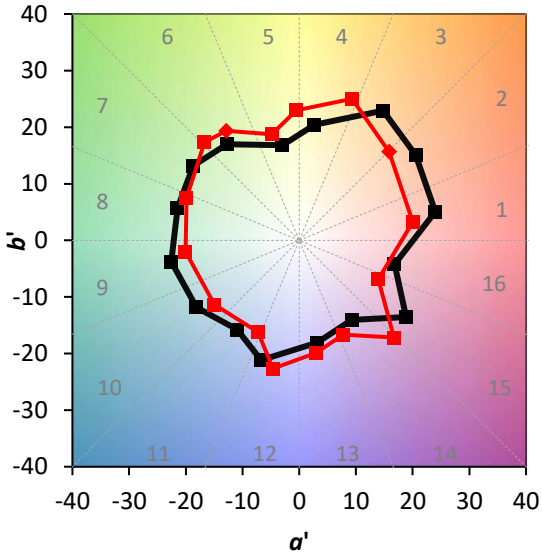
$R_f$ = 73.8
$R_g$ = 94.4
CIE $R_a$ = 70.8
$R_9$ = -43.2

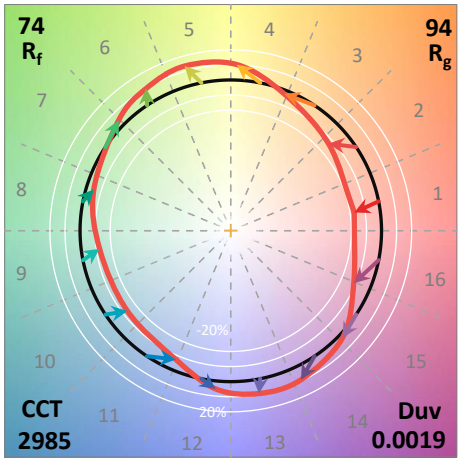
## Spectral Power Distribution Comparison

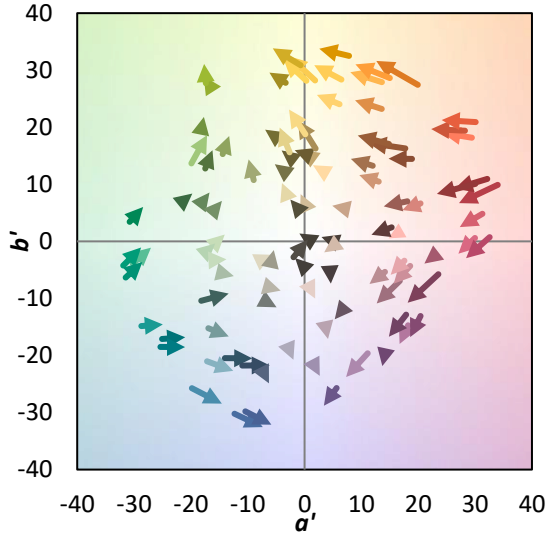



## Color Vector Graphics



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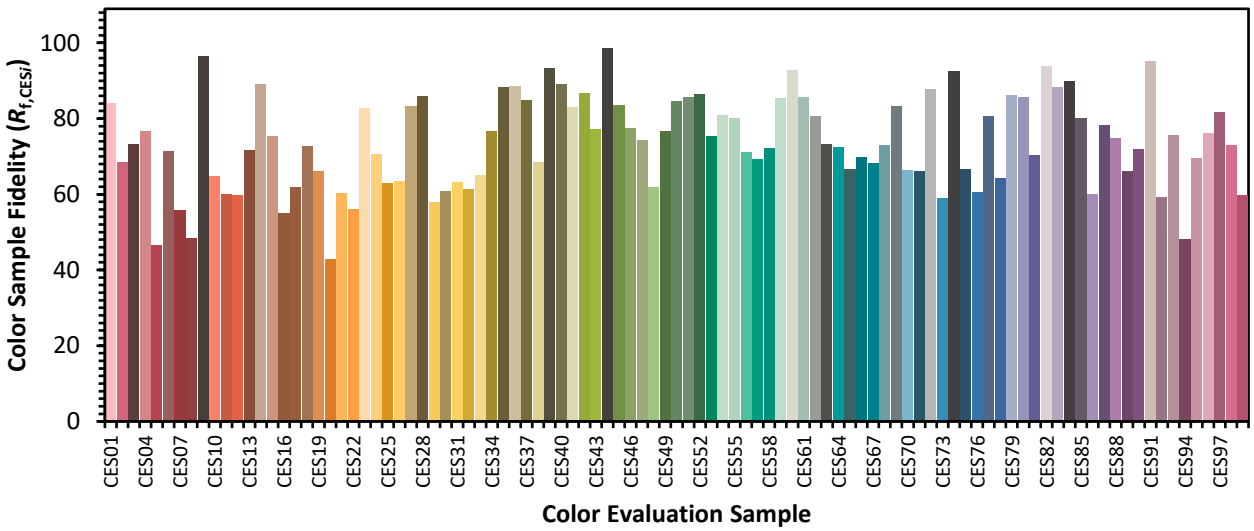
# TM-30-18

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

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



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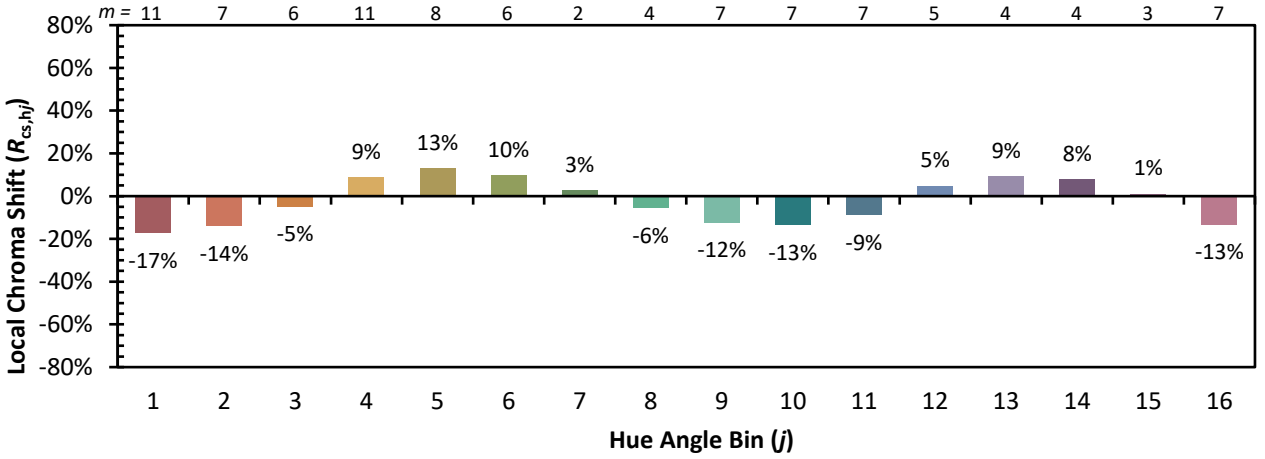
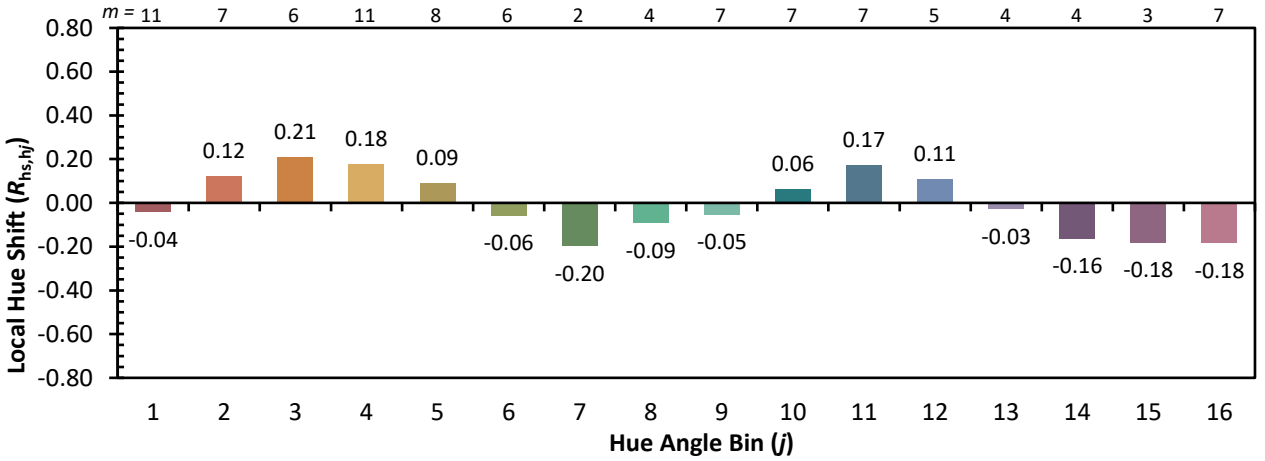
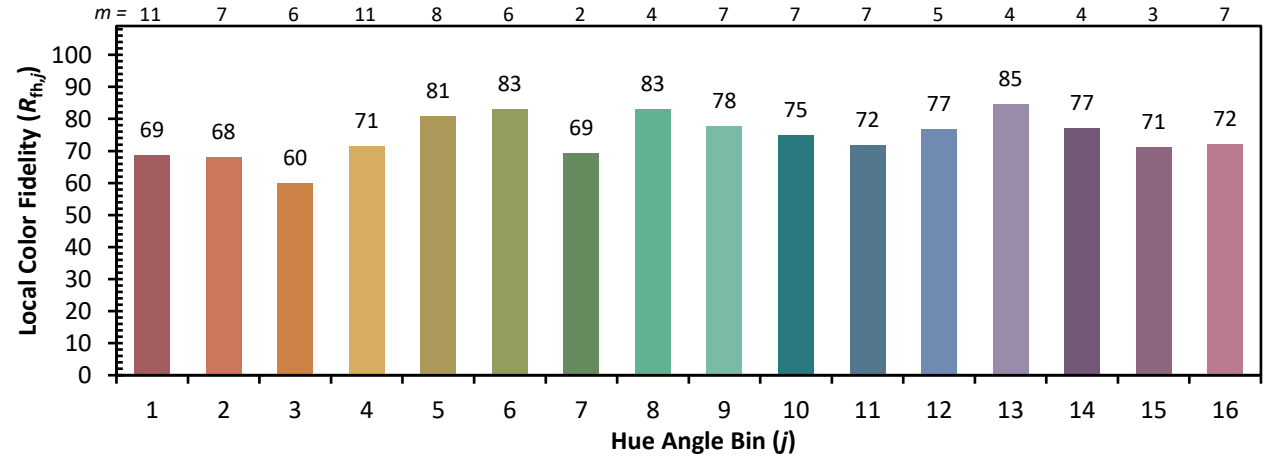
**TM-30-18**

## Color Rendition by Hue-Angle Bin



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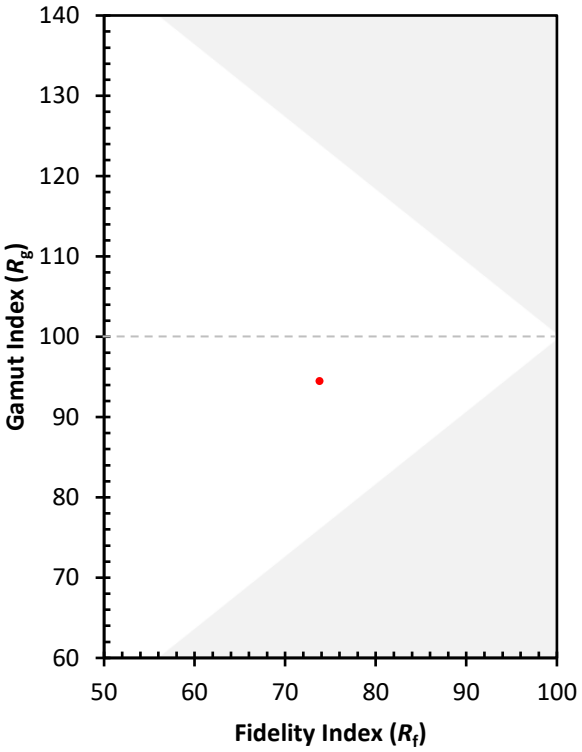
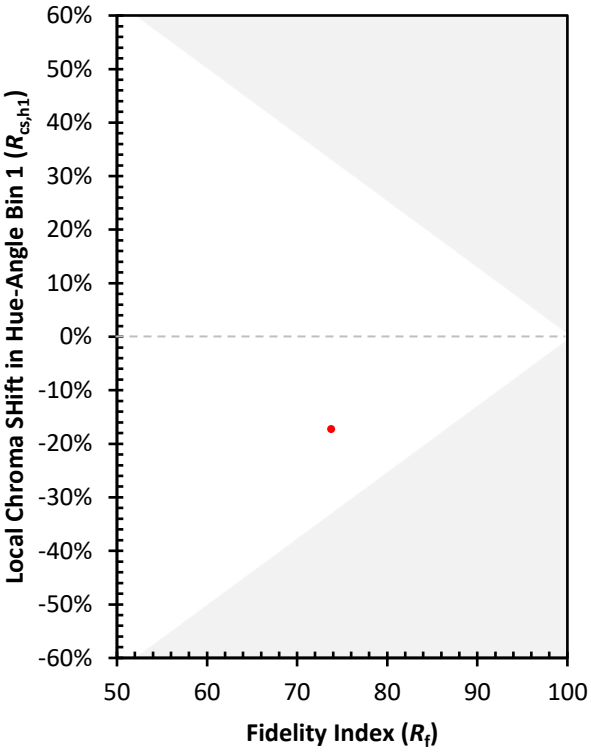
## Measure Comparisons




(END OF REPORT)