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: P1456060

Luminaire Tested: GLAN-SB5B-830-U-T2LG

Issue Date: 05/20/2026

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

Scaled Data Report

**Test Information**

| | |
|---|---|
| Test Method: | LM-79-2024 |
| Report Number: | P1456060 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 5/22/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | STREETWORKS |
| Catalog Number: | GLAN-SB5B-830-U-T2LG |
| Description: | GALLEON II AREA AND ROADWAY HIGH DENSITY LUMINAIRE 450mA 5xLight Square PACKAGE 80CRI 3000K FIXTURE w/ TYPE II LOW GLARE |
| Light Source: | (130) 3000K CCT, 80 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 24717.2 lumens |
| Efficiency: | N/A |
| Efficacy: | 135.3 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type II - Short |
| BUG Rating: | B3 - U0 - G3 |

| | |
|---|---|
| Input Watts (W): | 182.7 |
| 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: P1456060
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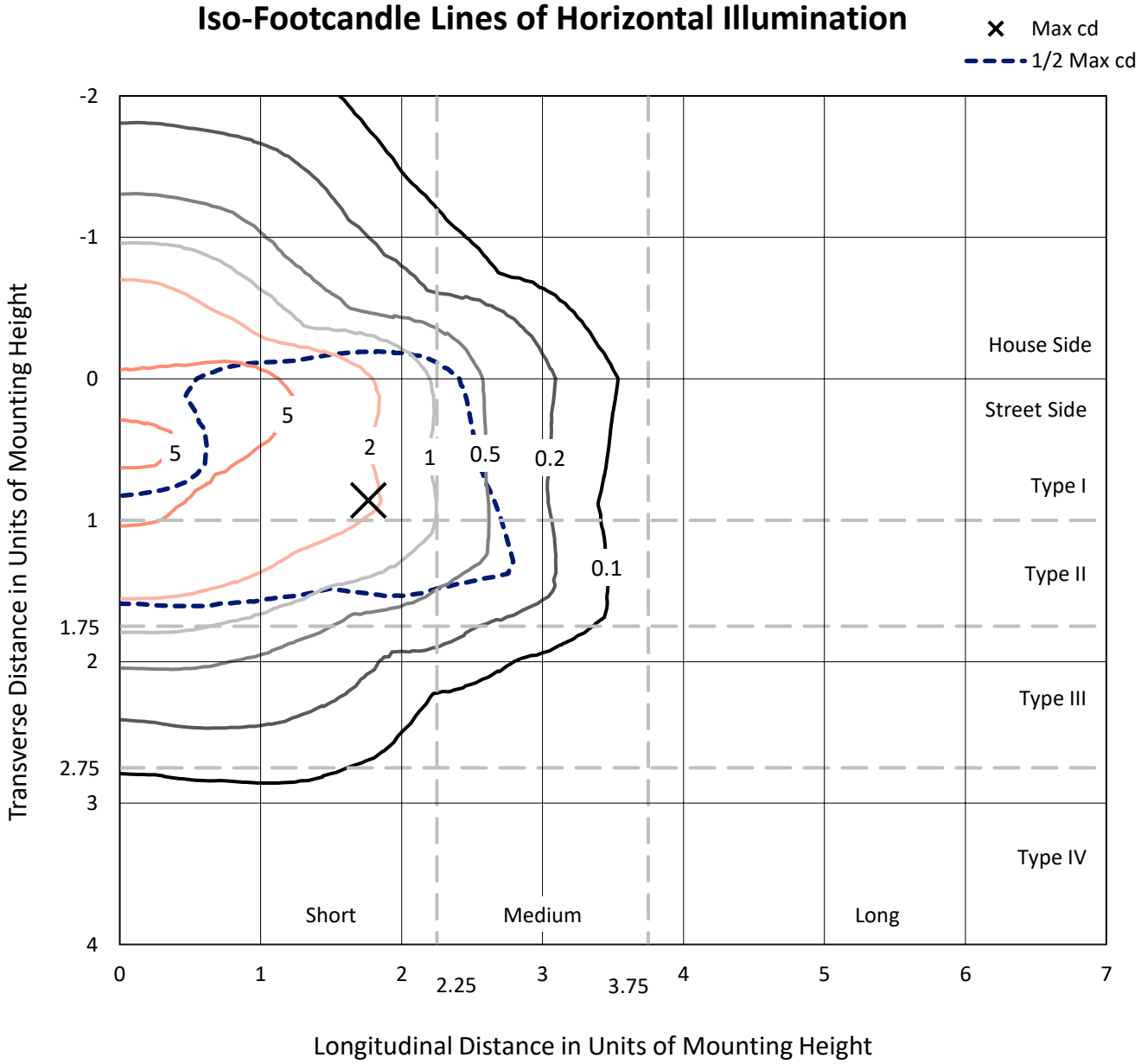
## Iso-Footcandle Lines of Horizontal Illumination




Based on 25 foot mounting height. Maximum calculated value = 9.3 fc
Type II - Short - N/A

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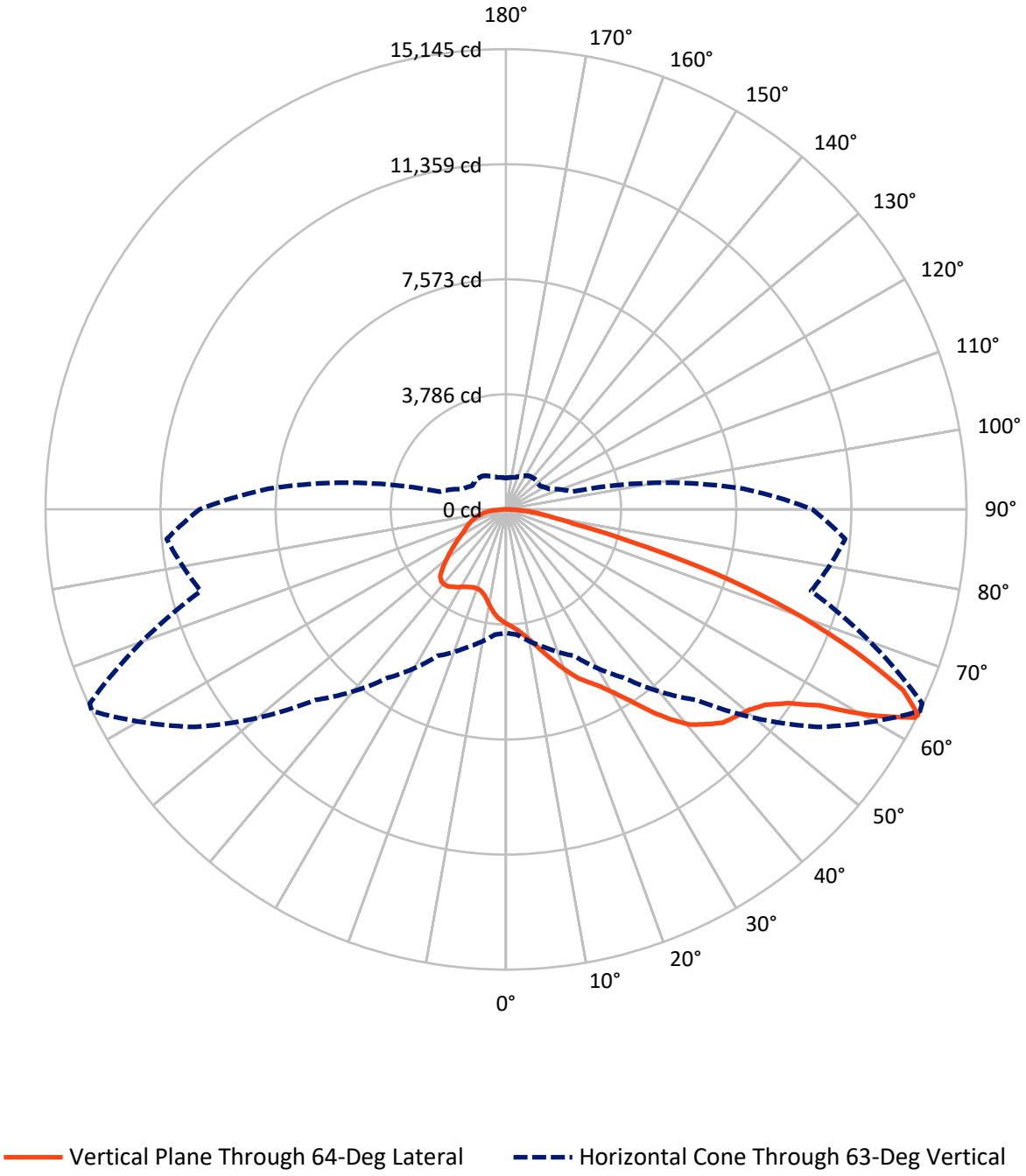
## Luminous Intensity Polar Plot



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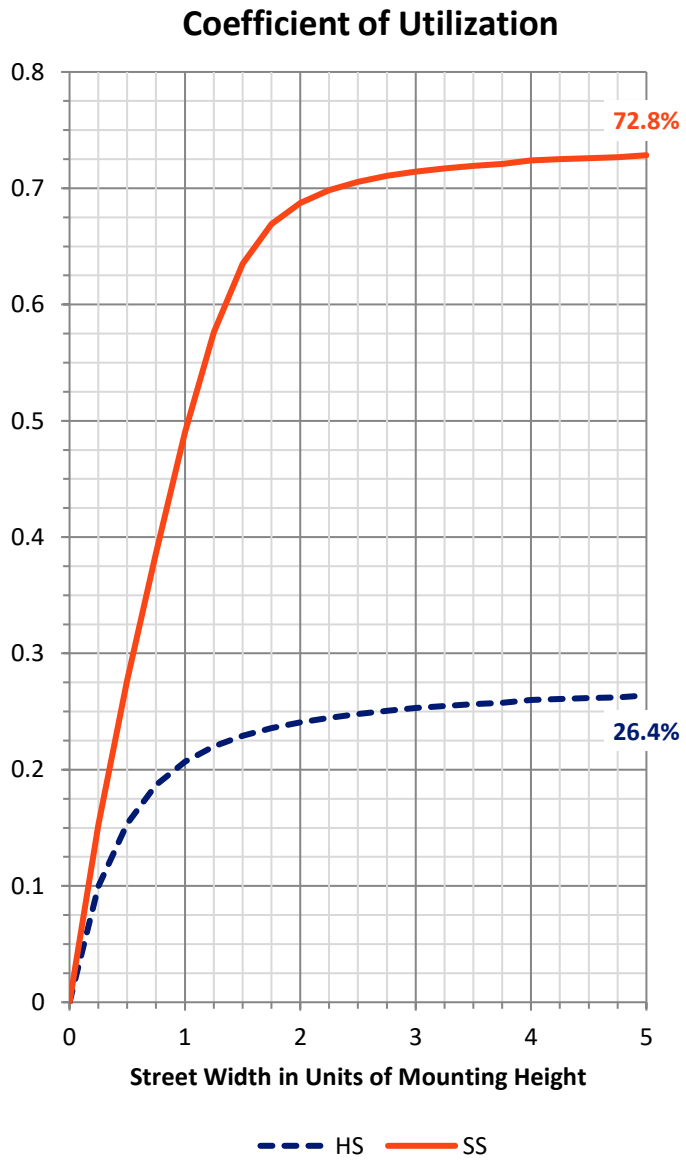
**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 6640.8 | 0.0 | 6640.8 |
| | % Fixture | 26.9 | 0.0 | 26.9 |
| **Street Side** | Lumens | 18076.4 | 0.0 | 18076.4 |
| | % Fixture | 73.1 | 0.0 | 73.1 |
| **Total** | Lumens | 24717.2 | 0.0 | 24717.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 345.6 | 1.4 |
| 10°-20° | 1064.0 | 4.3 |
| 20°-30° | 1945.6 | 7.9 |
| 30°-40° | 3346.7 | 13.5 |
| 40°-50° | 4935.5 | 20.0 |
| 50°-60° | 5915.5 | 23.9 |
| 60°-70° | 4747.8 | 19.2 |
| 70°-80° | 1907.8 | 7.7 |
| 80°-90° | 508.7 | 2.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 24717.2 | 100.0 |
| 0°-180° | 24717.2 | 100.0 |



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REPORT NUMBER: P1456060
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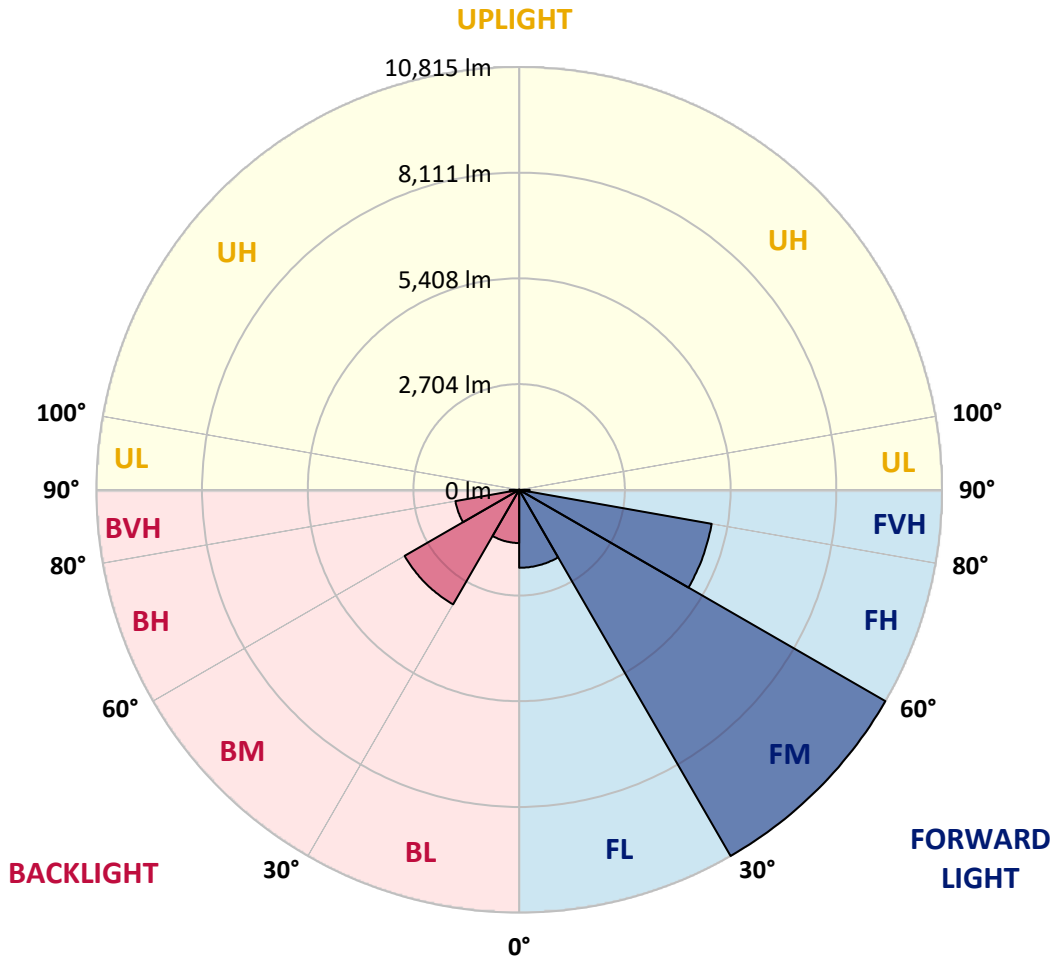
## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1994.2 | 8.1 | | | |
| FM | (30°-60°) | 10815.1 | 43.8 | | | |
| FH | (60°-80°) | 4999.8 | 20.2 | | | G2/5000 |
| FVH | (80°-90°) | 267.3 | 1.1 | | | G3/500 |
| BL | (0°-30°) | 1360.9 | 5.5 | B3/2500 | | |
| BM | (30°-60°) | 3382.7 | 13.7 | B3/5000 | | |
| BH | (60°-80°) | 1655.8 | 6.7 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 241.4 | 1.0 | | | G3/500 |
| 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 Short



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Scaled Data Report

REPORT NUMBER: P1456060
CATALOG NUMBER: GLAN-SB5B-830-U-T2LG

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | *3764.1* | 3764.1 | 3764.1 | 3764.1 |
| 2.5° | 3919.6 | 3925.1 | 3908.5 | 3902.9 | 3914.0 | 3891.8 | 3886.3 | *3864.1* | 3853.0 | 3830.8 | 3803.0 |
| 5° | 4030.6 | 4036.2 | 4025.1 | 4025.1 | 4036.2 | 4019.5 | 4014.0 | *3991.8* | 3980.7 | 3958.5 | 3902.9 |
| 7.5° | 4025.1 | 4030.6 | 4041.7 | 4086.2 | 4141.7 | 4163.9 | 4180.5 | *4163.9* | 4158.3 | 4125.0 | 4069.5 |
| 10° | 3936.3 | 3941.8 | 3969.6 | 4036.2 | 4175.0 | 4274.9 | 4380.4 | *4380.4* | 4391.5 | 4363.7 | 4263.8 |
| 12.5° | 3814.1 | 3819.7 | 3886.3 | 3991.8 | 4175.0 | 4347.1 | 4563.6 | *4652.4* | 4646.9 | 4630.2 | 4513.6 |
| 15° | 3519.9 | 3519.9 | 3619.8 | 3819.7 | 4113.9 | 4397.1 | 4719.1 | *4957.8* | 4963.3 | 4980.0 | 4841.2 |
| 17.5° | 3270.0 | 3275.6 | 3358.9 | 3536.5 | 3919.6 | 4369.3 | 4885.6 | *5296.5* | 5313.1 | 5407.5 | 5207.6 |
| 20° | 3292.2 | 3292.2 | 3320.0 | 3397.7 | 3708.6 | 4258.3 | 4980.0 | *5657.3* | 5712.8 | 5934.9 | 5685.1 |
| 22.5° | 3464.3 | 3464.3 | 3486.6 | 3481.0 | 3669.8 | 4186.1 | 5041.1 | *6018.2* | 6118.1 | 6578.9 | 6256.9 |
| 25° | 3780.8 | 3775.2 | 3753.0 | 3719.7 | 3830.8 | 4263.8 | 5179.9 | *6295.8* | 6490.1 | 7289.6 | 6917.6 |
| 27.5° | 4169.4 | 4158.3 | 4125.0 | 4069.5 | 4147.2 | 4497.0 | 5418.6 | *6590.0* | 6801.0 | 8066.8 | 7617.1 |
| 30° | 4652.4 | 4619.1 | 4585.8 | 4513.6 | 4596.9 | 4880.1 | 5773.9 | *7006.4* | 7206.3 | 8949.6 | 8461.0 |
| 32.5° | 5224.3 | 5263.1 | 5152.1 | 5052.2 | 5141.0 | 5401.9 | 6301.3 | *7500.5* | 7717.1 | 9871.2 | 9338.2 |
| 35° | 6079.3 | 6195.9 | 6162.5 | 5657.3 | 5740.6 | 6029.3 | 6917.6 | *8139.0* | 8333.3 | 10709.5 | 10237.6 |
| 37.5° | 6923.1 | 6895.4 | 6923.1 | 6501.2 | 6368.0 | 6717.7 | 7578.3 | *8749.7* | 8938.5 | 11392.4 | 11031.5 |
| 40° | 7600.5 | 7683.7 | 7683.7 | 7339.5 | 7167.4 | 7400.6 | 8177.9 | *9310.4* | 9493.6 | 11769.9 | 11603.3 |
| 42.5° | 8338.9 | 8350.0 | 8327.8 | 8028.0 | 7961.3 | 8022.4 | 8705.3 | *9665.7* | 9815.6 | 11964.2 | 11992.0 |
| 45° | 9171.6 | 9166.1 | 9071.7 | 8821.9 | 8721.9 | 8666.4 | 9032.8 | *10010.0* | 10159.9 | 12053.0 | 12202.9 |
| 47.5° | 9860.1 | 9887.8 | 9893.4 | 9626.9 | 9460.3 | 9221.6 | 9316.0 | *10182.1* | 10354.2 | 11953.1 | 12247.4 |
| 50° | 9898.9 | 9943.3 | 10154.3 | 10232.0 | 10198.7 | 9815.6 | 9576.9 | *10365.3* | 10537.4 | 11975.3 | 12408.4 |
| 52.5° | 9654.6 | 9699.1 | 9971.1 | 10293.1 | 10681.7 | 10498.5 | 9987.8 | *10681.7* | 10859.4 | 12191.8 | 12774.8 |
| 55° | 8999.5 | 9071.7 | 9477.0 | 9926.7 | 10620.7 | 10881.6 | 10715.0 | *11253.6* | 11420.1 | 12363.9 | 13202.3 |
| 57.5° | 7833.6 | 7922.5 | 8483.2 | 9199.4 | 10148.8 | 10792.8 | 11769.9 | *12169.6* | 12308.4 | 12486.1 | 13207.8 |
| 60° | 5857.2 | 5929.4 | 6806.6 | 7772.6 | 9199.4 | 10237.6 | 12397.3 | *13740.8* | 13818.5 | 11825.4 | 12458.3 |
| 62.5° | 4313.8 | 4386.0 | 4974.4 | 5668.4 | 7228.5 | 9216.1 | 12519.4 | *15101.0* | 15112.1 | 10631.8 | 11425.7 |
| 63° | *4063.9* | *4136.1* | *4669.1* | *5318.7* | *6762.1* | *8871.8* | *12480.5* | *15145.4* | *15106.5* | *10387.5* | *11198.1* |
| 65° | 3164.5 | 3292.2 | 3847.4 | 4341.5 | 5068.8 | 7061.9 | 11980.9 | *14357.1* | 14412.6 | 9665.7 | 10054.4 |
| 67.5° | 2154.1 | 2248.5 | 2953.6 | 3525.4 | 3830.8 | 4497.0 | 9826.8 | *12286.2* | 12375.0 | 8916.3 | 8022.4 |
| 70° | 1665.6 | 1710.0 | 2120.8 | 2792.6 | 3097.9 | 2859.2 | 6406.8 | *9893.4* | 9893.4 | 6962.0 | 5685.1 |
| 72.5° | 1304.7 | 1321.3 | 1598.9 | 2181.9 | 2492.8 | 2198.5 | 3569.8 | *7195.2* | 6928.7 | 4130.6 | 3791.9 |
| 75° | 932.7 | 954.9 | 1204.7 | 1626.7 | 1987.6 | 1732.2 | 2281.8 | *4191.6* | 4030.6 | 2376.2 | 2531.6 |
| 77.5° | 738.4 | 749.5 | 899.4 | 1199.2 | 1610.0 | 1321.3 | 1737.7 | *2287.4* | 2265.1 | 1671.1 | 1626.7 |
| 80° | 582.9 | 605.2 | 705.1 | 860.5 | 1243.6 | 1032.6 | 1293.6 | *1510.1* | 1465.7 | 1149.2 | 1043.7 |
| 82.5° | 416.4 | 455.3 | 544.1 | 655.1 | 921.6 | 738.4 | 849.4 | *1066.0* | 1066.0 | 866.1 | 688.4 |
| 85° | 255.4 | 288.7 | 322.0 | 405.3 | 655.1 | 477.5 | 449.7 | *688.4* | 705.1 | 649.6 | 444.1 |
| 87.5° | 122.1 | 133.2 | 155.5 | 172.1 | 238.7 | 216.5 | 177.7 | *260.9* | 266.5 | 288.7 | 183.2 |
| 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: P1456060
CATALOG NUMBER: GLAN-SB5B-830-U-T2LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 | 3764.1 |
| 2.5° | 3797.5 | 3786.4 | 3730.8 | 3675.3 | 3614.2 | 3558.7 | 3503.2 | 3458.8 | 3408.8 | 3419.9 | 3425.5 |
| 5° | 3869.6 | 3841.9 | 3719.7 | 3575.4 | 3386.6 | 3209.0 | 3036.9 | 2914.7 | 2837.0 | 2814.8 | 2770.4 |
| 7.5° | 4025.1 | 3958.5 | 3736.4 | 3431.0 | 3081.3 | 2803.7 | 2642.7 | 2570.5 | 2548.3 | 2553.8 | 2542.7 |
| 10° | 4202.7 | 4102.8 | 3758.6 | 3258.9 | 2814.8 | 2626.0 | 2603.8 | 2648.2 | 2670.4 | 2692.6 | 2698.2 |
| 12.5° | 4435.9 | 4274.9 | 3747.5 | 3070.2 | 2687.1 | 2653.8 | 2737.1 | 2820.3 | 2870.3 | 2903.6 | 2898.1 |
| 15° | 4708.0 | 4491.4 | 3714.2 | 2914.7 | 2670.4 | 2759.3 | 2864.7 | 2959.1 | 3020.2 | 3053.5 | 3036.9 |
| 17.5° | 5035.5 | 4746.8 | 3675.3 | 2814.8 | 2720.4 | 2825.9 | 2936.9 | 3031.3 | 3097.9 | 3120.1 | 3103.5 |
| 20° | 5440.8 | 5035.5 | 3608.7 | 2770.4 | 2759.3 | 2853.6 | 2953.6 | 3042.4 | 3097.9 | 3120.1 | 3097.9 |
| 22.5° | 5918.3 | 5379.7 | 3553.2 | 2770.4 | 2775.9 | 2853.6 | 2925.8 | 2992.4 | 3042.4 | 3059.1 | 3031.3 |
| 25° | 6529.0 | 5779.5 | 3531.0 | 2814.8 | 2781.5 | 2825.9 | 2864.7 | 2903.6 | 2931.4 | 2942.5 | 2931.4 |
| 27.5° | 7150.8 | 6240.3 | 3542.1 | 2870.3 | 2775.9 | 2787.0 | 2787.0 | 2792.6 | 2798.1 | 2803.7 | 2798.1 |
| 30° | 7867.0 | 6706.6 | 3586.5 | 2942.5 | 2787.0 | 2731.5 | 2714.8 | 2681.5 | 2653.8 | 2631.6 | 2609.4 |
| 32.5° | 8560.9 | 7150.8 | 3664.2 | 3048.0 | 2775.9 | 2670.4 | 2637.1 | 2553.8 | 2476.1 | 2409.5 | 2409.5 |
| 35° | 9310.4 | 7611.6 | 3803.0 | 3125.7 | 2764.8 | 2614.9 | 2520.5 | 2426.2 | 2342.9 | 2248.5 | 2248.5 |
| 37.5° | 9954.4 | 8005.7 | 3914.0 | 3214.5 | 2753.7 | 2548.3 | 2398.4 | 2292.9 | 2204.1 | 2109.7 | 2098.6 |
| 40° | 10404.1 | 8233.4 | 3980.7 | 3247.8 | 2714.8 | 2459.5 | 2281.8 | 2148.6 | 2020.9 | 1893.2 | 1887.6 |
| 42.5° | 10620.7 | 8222.3 | 3941.8 | 3236.7 | 2642.7 | 2348.4 | 2181.9 | 2004.2 | 1832.1 | 1715.5 | 1704.4 |
| 45° | 10737.3 | 8150.1 | 3791.9 | 3142.3 | 2526.1 | 2231.8 | 2054.2 | 1865.4 | 1693.3 | 1587.8 | 1565.6 |
| 47.5° | 10715.0 | 7972.4 | 3586.5 | 2909.2 | 2370.6 | 2104.1 | 1926.5 | 1732.2 | 1593.4 | 1532.3 | 1532.3 |
| 50° | 10776.1 | 7833.6 | 3353.3 | 2642.7 | 2159.7 | 1954.2 | 1809.9 | 1632.2 | 1549.0 | 1471.2 | 1443.5 |
| 52.5° | 11048.2 | 7950.2 | 3153.4 | 2392.8 | 1959.8 | 1809.9 | 1710.0 | 1560.1 | 1454.6 | 1404.6 | 1388.0 |
| 55° | 11409.0 | 8200.1 | 2964.7 | 2170.8 | 1765.5 | 1682.2 | 1632.2 | 1493.4 | 1371.3 | 1321.3 | 1293.6 |
| 57.5° | 11475.6 | 8372.2 | 2781.5 | 1954.2 | 1604.5 | 1582.3 | 1565.6 | 1376.9 | 1276.9 | 1238.1 | 1215.9 |
| 60° | 11014.8 | 8244.5 | 2542.7 | 1759.9 | 1476.8 | 1487.9 | 1443.5 | 1304.7 | 1188.1 | 1149.2 | 1127.0 |
| 62.5° | 10232.0 | 7911.4 | 2304.0 | 1593.4 | 1376.9 | 1399.1 | 1354.6 | 1215.9 | 1099.3 | 1060.4 | 1049.3 |
| 63° | *10076.6* | *7822.5* | *2248.5* | *1576.7* | *1354.6* | *1382.4* | *1343.5* | *1204.7* | *1088.2* | *1049.3* | *1032.6* |
| 65° | 9149.4 | 7289.6 | 2054.2 | 1487.9 | 1282.5 | 1282.5 | 1288.0 | 1149.2 | 1049.3 | 1032.6 | 1021.5 |
| 67.5° | 7461.7 | 6084.8 | 1843.2 | 1382.4 | 1204.7 | 1221.4 | 1249.2 | 1171.4 | 1132.6 | 1121.5 | 1110.4 |
| 70° | 5640.7 | 4580.3 | 1660.0 | 1282.5 | 1121.5 | 1177.0 | 1365.8 | 1332.4 | 1188.1 | 1088.2 | 1066.0 |
| 72.5° | 3997.3 | 3120.1 | 1499.0 | 1182.5 | 1021.5 | 1160.3 | 1415.7 | 1271.4 | 1071.5 | 954.9 | 932.7 |
| 75° | 2676.0 | 2009.8 | 1338.0 | 1077.1 | 910.5 | 1071.5 | 1338.0 | 1160.3 | 932.7 | 904.9 | 871.6 |
| 77.5° | 1682.2 | 1432.4 | 1177.0 | 954.9 | 788.4 | 954.9 | 1215.9 | 1032.6 | 805.0 | 816.1 | 766.2 |
| 80° | 1027.1 | 1021.5 | 988.2 | 810.6 | 632.9 | 760.6 | 1021.5 | 871.6 | 644.0 | 644.0 | 571.8 |
| 82.5° | 610.7 | 738.4 | 838.3 | 671.8 | 460.8 | 544.1 | 738.4 | 655.1 | 538.5 | 521.9 | 488.6 |
| 85° | 410.8 | 499.7 | 666.2 | 516.3 | 294.2 | 333.1 | 510.8 | 549.6 | 494.1 | 433.0 | 405.3 |
| 87.5° | 149.9 | 199.9 | 305.4 | 211.0 | 127.7 | 199.9 | 383.1 | 399.7 | 299.8 | 233.2 | 211.0 |
| 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: SP1-2407-184-9

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-830-U-5WQ

Data in this report applies to families of products including GSS-SB1A-830-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

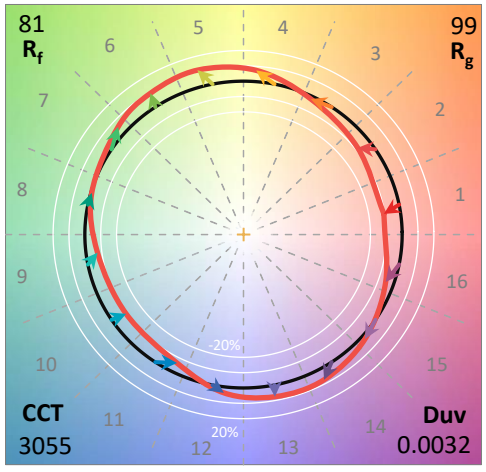
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-9 |
| 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-830-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 80 CRI 3000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3055 |
| CIE u': | 0.2475 |
| CIE v': | 0.5247 |
| Duv: | 0.0032 |
| CIE x: | 0.4377 |
| CIE y: | 0.4124 |
| CIE z: | 0.1499 |
| Peak Wavelength (nm): | 604 |
| Dominant Wavelength (nm): | 581 |
| Purity: | 55.16339 |
| Rf: | 81.5 |
| Rg: | 99.2 |

| | |
|---|---|
| CRI (Ra): | 80.9 |
| R1: | 79.5 |
| R2: | 85.6 |
| R3: | 92.1 |
| R4: | 82.4 |
| R5: | 78.9 |
| R6: | 81.7 |
| R7: | 85.1 |
| R8: | 61.9 |
| R9: | 6.8 |
| R10: | 67.1 |
| R11: | 82.5 |
| R12: | 63.4 |
| R13: | 80.2 |
| R14: | 95.1 |
| R15: | 71.7 |




## Test Conditions

| | |
|---|---|
| Stabilization Time: | 20M |
| Operation Time: | 1H 20M |
| 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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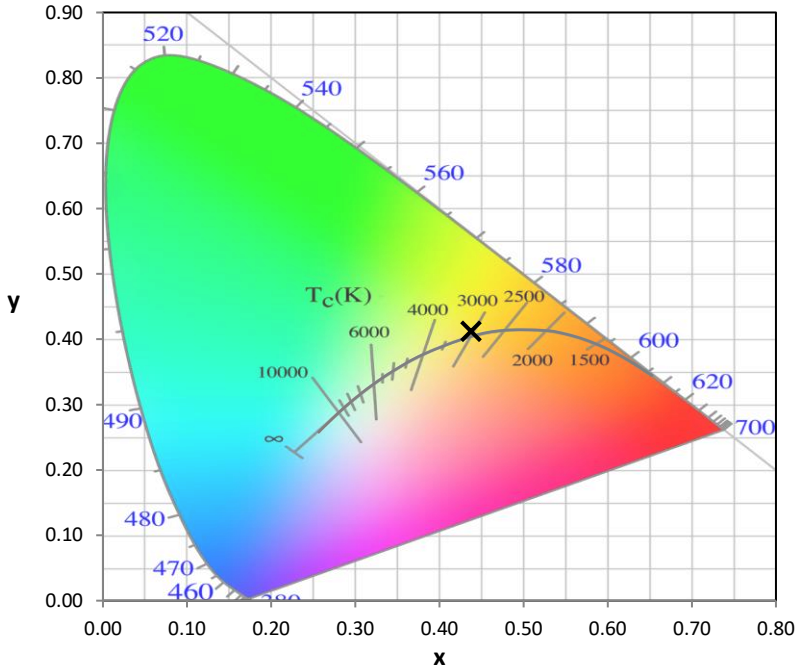
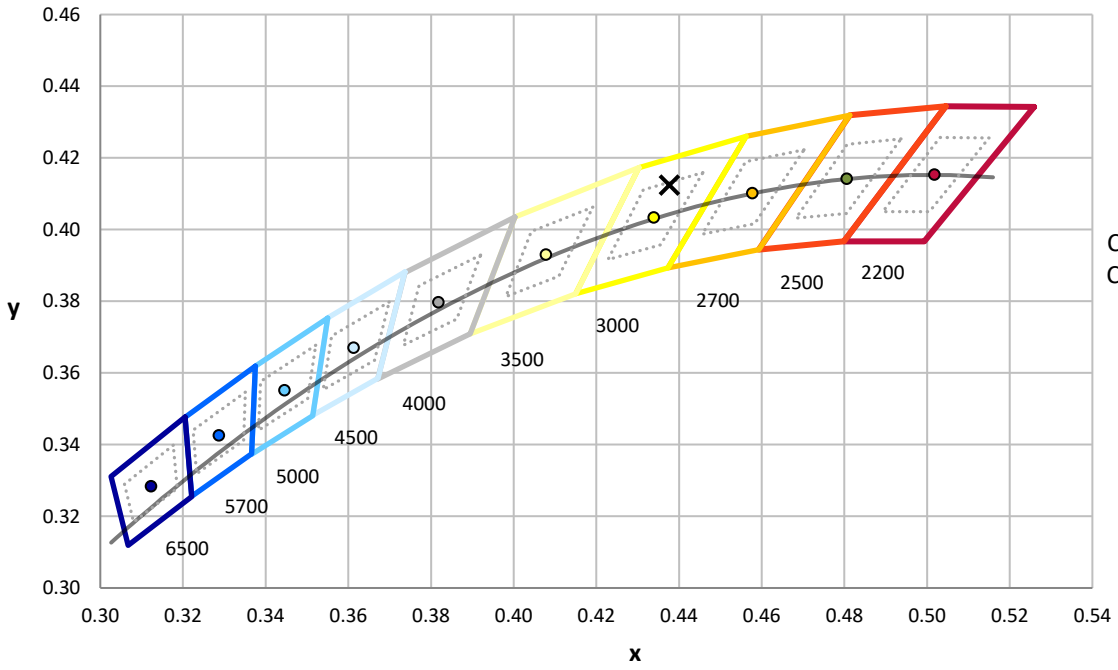
## CIE 1931 Chromaticity Diagram




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




CCT = 3055K
CIE x = 0.4377
CIE y = 0.4124
Duv = 0.0032

Point lies inside the ANSI 3000K 4-step quadrangle

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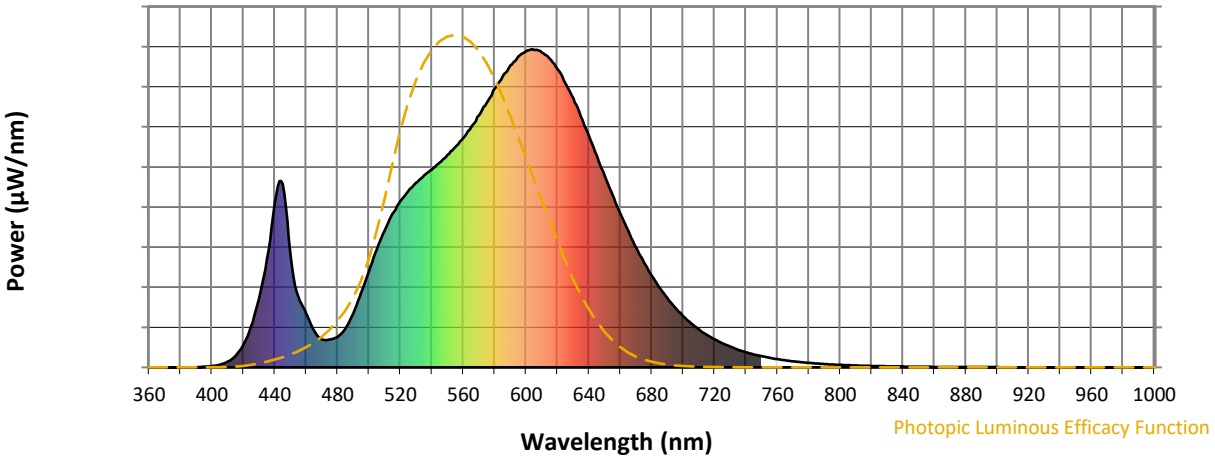
## Photopic Flux vs. Wavelength




## 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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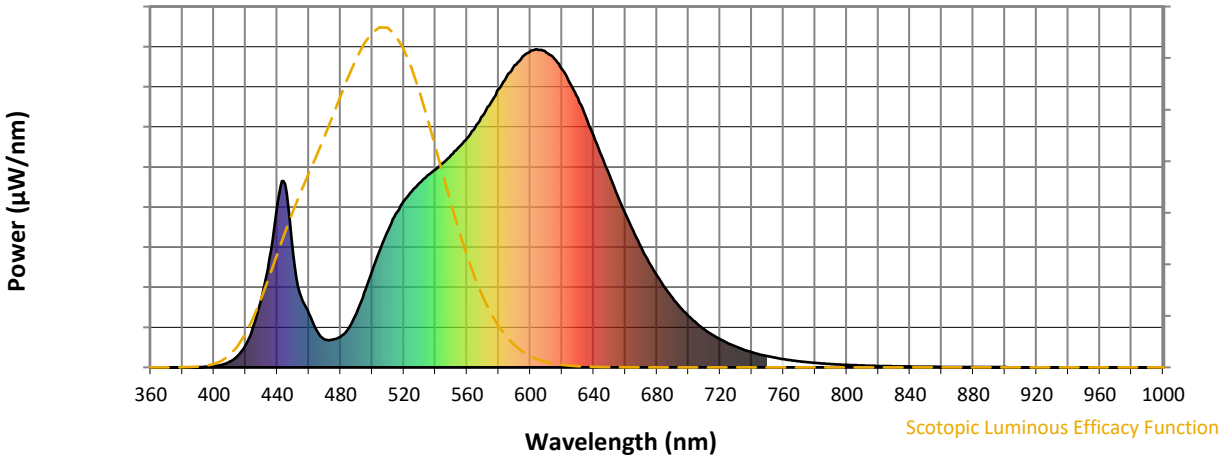
## Scotopic Flux vs. Wavelength




**Scotopic Lumens: NR** **S/P: 1.28**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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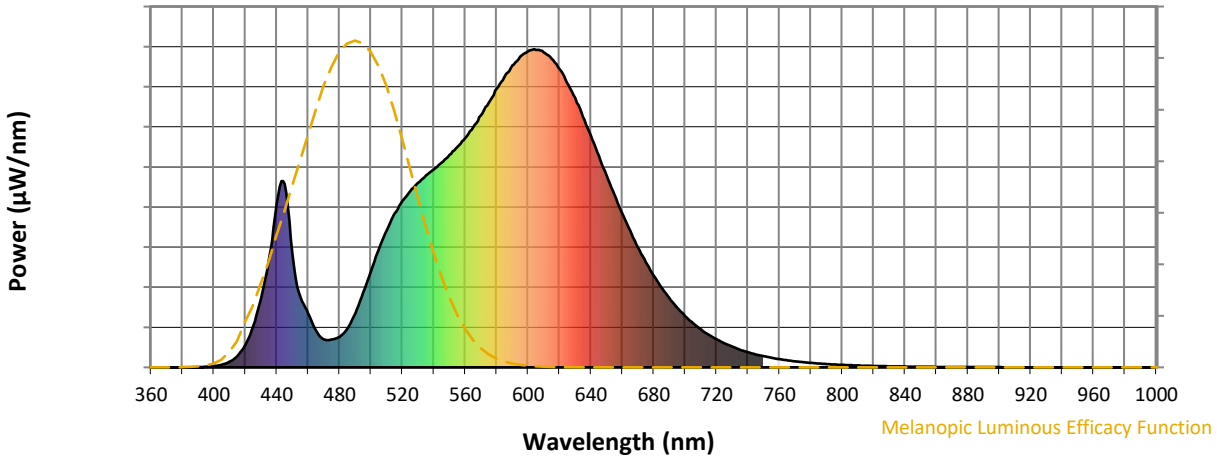
## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.33**

| 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 | 170 | NR | 620 | 938 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 234 | NR | 625 | 894 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 302 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 371 | NR | 635 | 788 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 431 | NR | 640 | 728 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 482 | NR | 645 | 665 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 523 | NR | 650 | 603 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 553 | NR | 655 | 542 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 580 | NR | 660 | 484 | NR | 790 | 11 | NR | 920 | 0 | NR |
| 405 | 8 | NR | 535 | 603 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 18 | NR | 540 | 622 | NR | 670 | 377 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 36 | NR | 545 | 644 | NR | 675 | 330 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 71 | NR | 550 | 668 | NR | 680 | 289 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 131 | NR | 555 | 693 | NR | 685 | 250 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 215 | NR | 560 | 720 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 341 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 514 | NR | 570 | 792 | NR | 700 | 161 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 576 | NR | 575 | 832 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 358 | NR | 580 | 875 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 222 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 170 | NR | 590 | 950 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 115 | NR | 595 | 977 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 88 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 87 | NR | 605 | 997 | NR | 735 | 56 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 96 | NR | 610 | 990 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 122 | NR | 615 | 971 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

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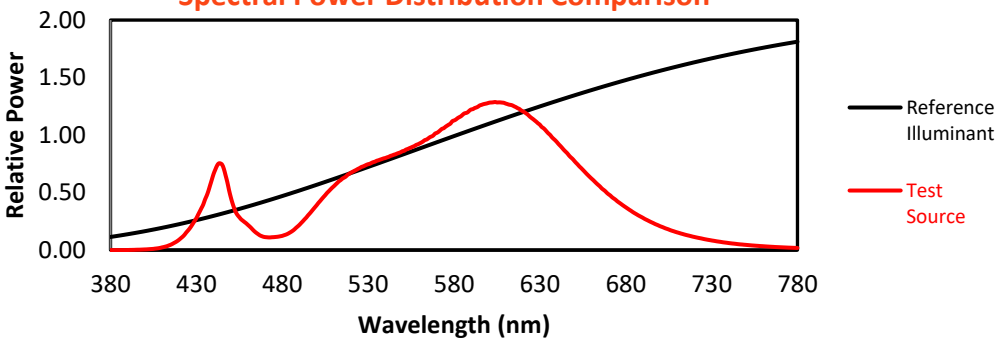
# TM-30-18

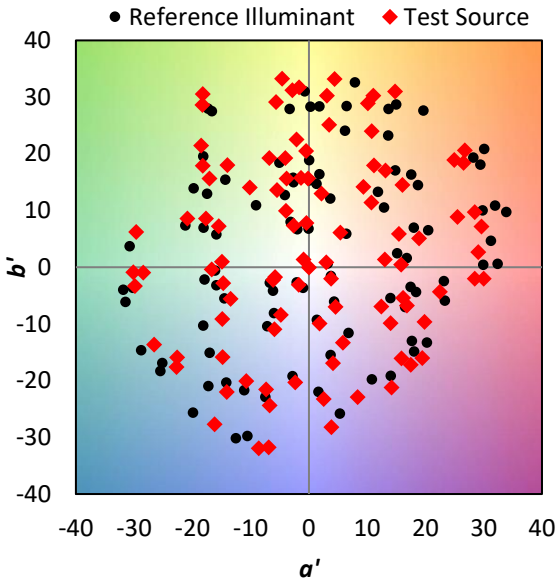
## Summary

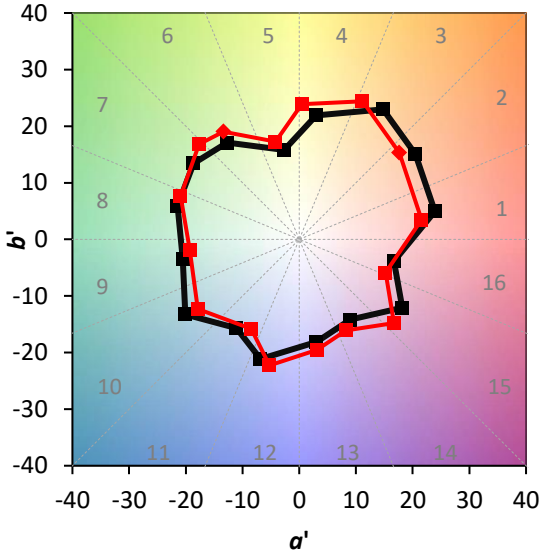
$R_f$ = 81.5
$R_g$ = 99.2
CIE $R_a$ = 80.9
$R_9$ = 6.8

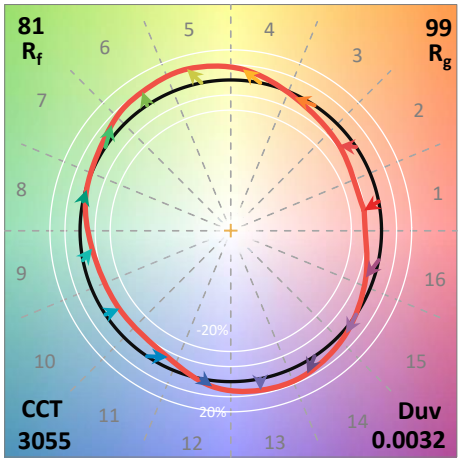
## Spectral Power Distribution Comparison

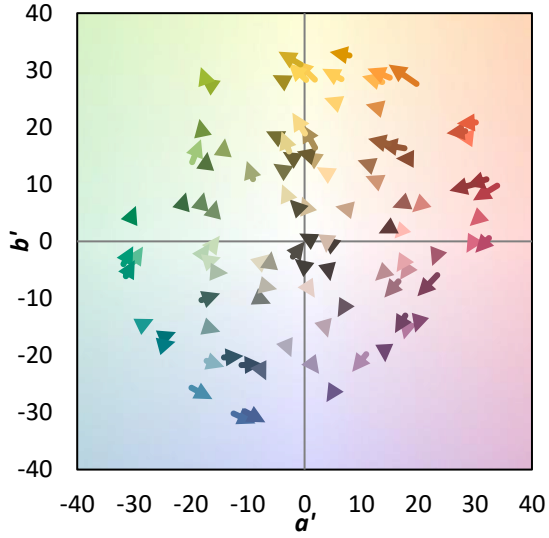



## Color Vector Graphics



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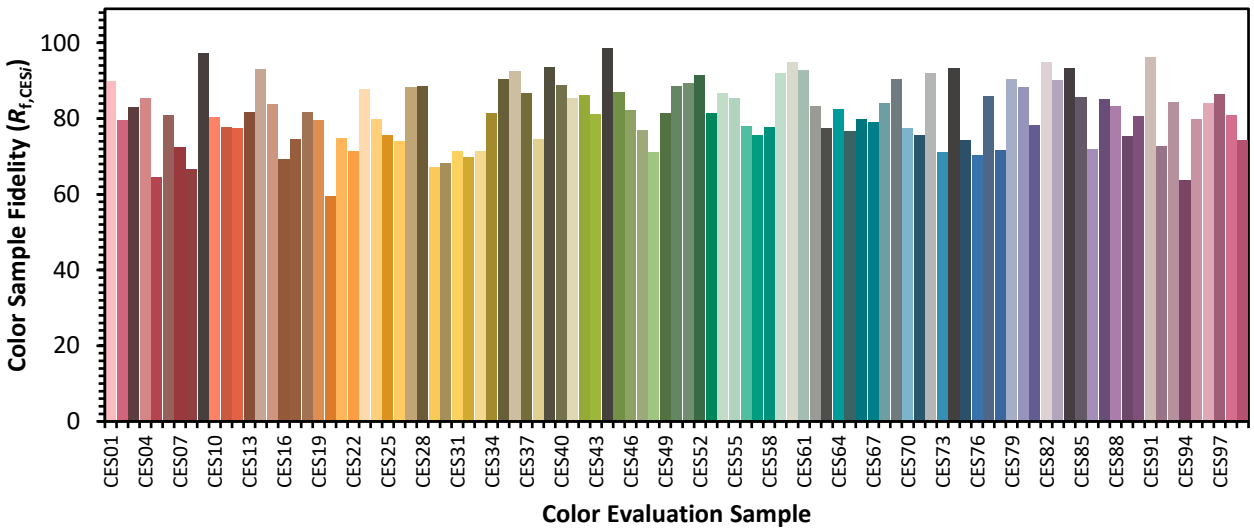
## Individual Sample Fidelity Index ($R_{f,i}$)

| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 74 | CES51 = 89 | CES76 = 70 |
| CES02 = 63 | CES27 = 88 | CES52 = 91 | CES77 = 86 |
| CES03 = 31 | CES28 = 89 | CES53 = 81 | CES78 = 72 |
| CES04 = 70 | CES29 = 67 | CES54 = 87 | CES79 = 90 |
| CES05 = 50 | CES30 = 68 | CES55 = 85 | CES80 = 88 |
| CES06 = 51 | CES31 = 71 | CES56 = 78 | CES81 = 78 |
| CES07 = 42 | CES32 = 70 | CES57 = 76 | CES82 = 95 |
| CES08 = 41 | CES33 = 71 | CES58 = 78 | CES83 = 90 |
| CES09 = 29 | CES34 = 82 | CES59 = 92 | CES84 = 93 |
| CES10 = 76 | CES35 = 90 | CES60 = 95 | CES85 = 86 |
| CES11 = 59 | CES36 = 93 | CES61 = 93 | CES86 = 72 |
| CES12 = 65 | CES37 = 87 | CES62 = 83 | CES87 = 85 |
| CES13 = 43 | CES38 = 75 | CES63 = 77 | CES88 = 83 |
| CES14 = 74 | CES39 = 94 | CES64 = 83 | CES89 = 75 |
| CES15 = 71 | CES40 = 89 | CES65 = 77 | CES90 = 81 |
| CES16 = 47 | CES41 = 85 | CES66 = 80 | CES91 = 96 |
| CES17 = 50 | CES42 = 86 | CES67 = 79 | CES92 = 73 |
| CES18 = 56 | CES43 = 81 | CES68 = 84 | CES93 = 84 |
| CES19 = 72 | CES44 = 99 | CES69 = 90 | CES94 = 64 |
| CES20 = 66 | CES45 = 87 | CES70 = 77 | CES95 = 80 |
| CES21 = 87 | CES46 = 82 | CES71 = 76 | CES96 = 84 |
| CES22 = 79 | CES47 = 77 | CES72 = 92 | CES97 = 87 |
| CES23 = 92 | CES48 = 71 | CES73 = 71 | CES98 = 81 |
| CES24 = 91 | CES49 = 81 | CES74 = 93 | CES99 = 74 |
| CES25 = 72 | CES50 = 89 | CES75 = 74 | |



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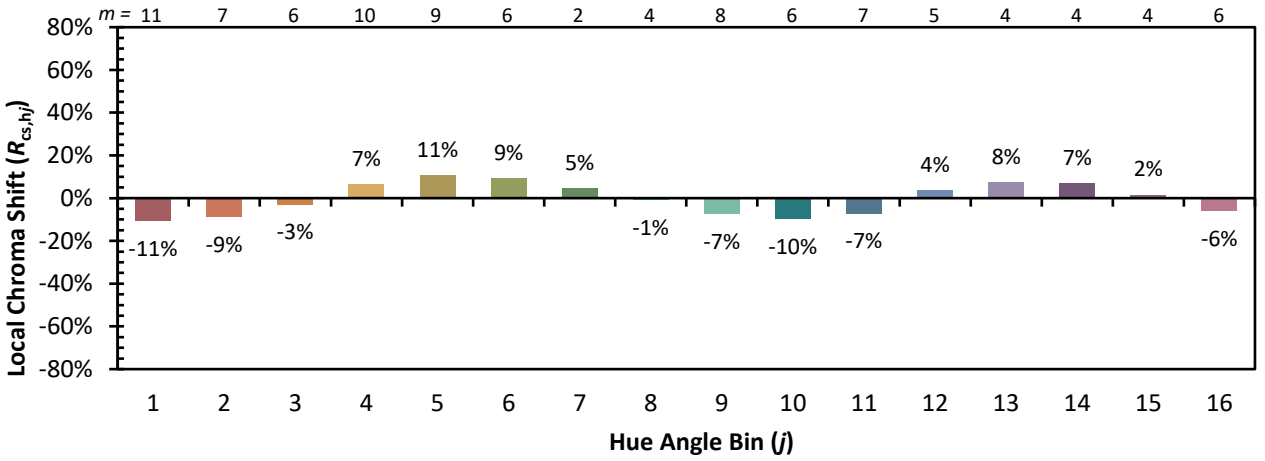
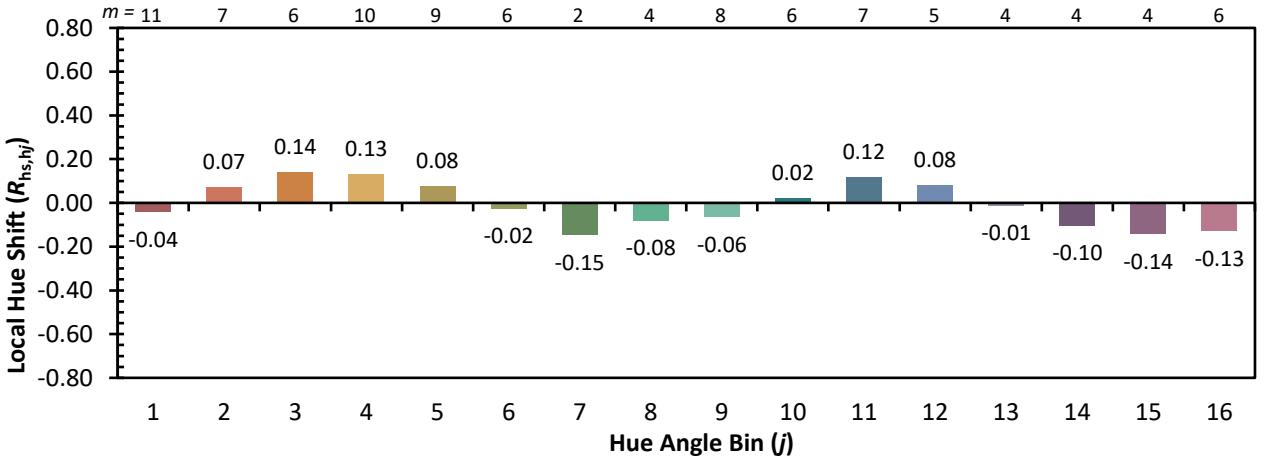
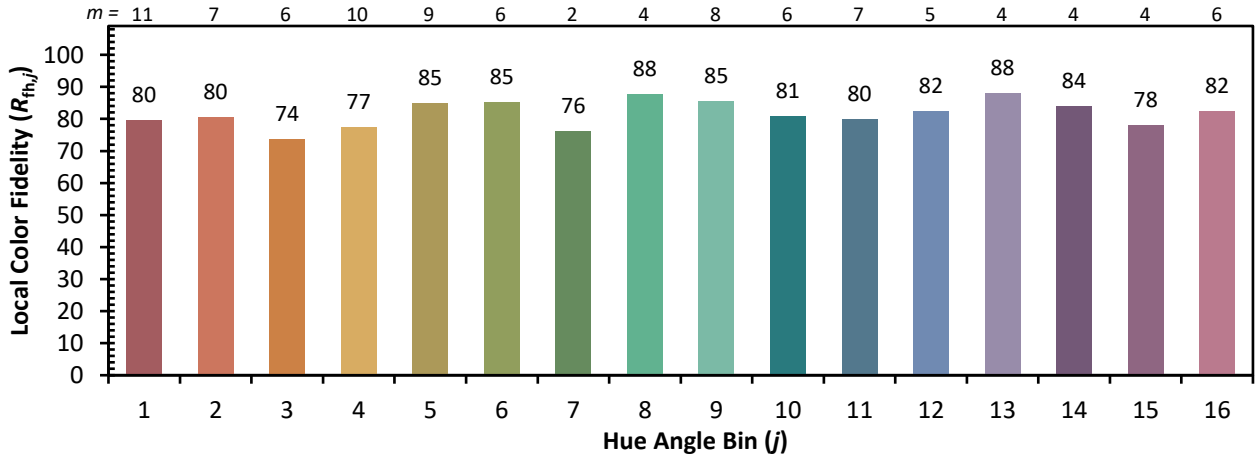
## Color Rendition by Hue-Angle Bin



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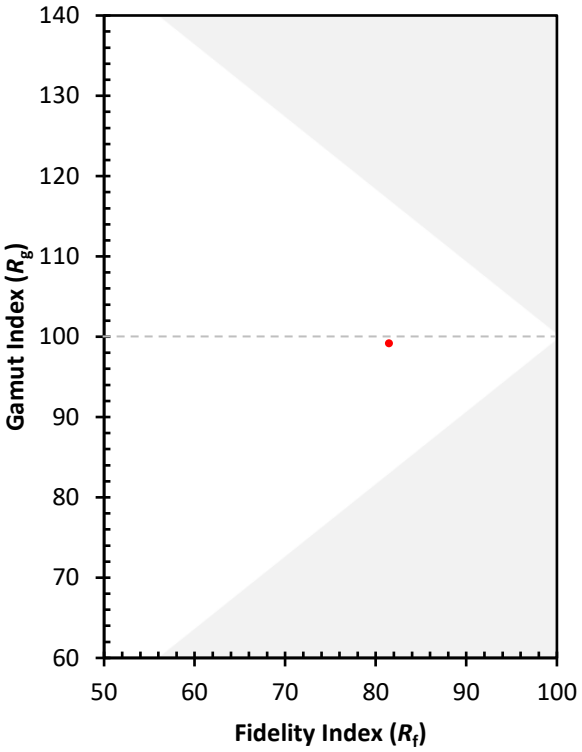
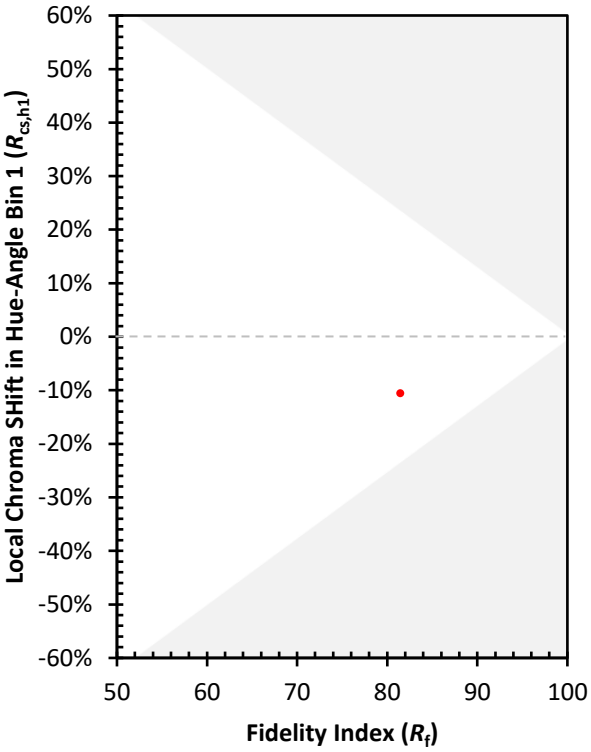
## Measure Comparisons




(END OF REPORT)