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: McGRAW-EDISON

Report Number: P1500961

Luminaire Tested: GSS-SB6A-740-U-T3LG

Issue Date: 07/20/2026

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: | P1500961 |
| Test Lab: | INNOVATION CENTER(G1) |
| Issue Date: | 7/20/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB6A-740-U-T3LG |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 6SQUARE 170W 70CRI 4000K FIXTURE w/ TYPE III LOW GLARE DISTRIBUTION FIXTURE |
| Light Source: | (156) 4000K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 28223.5 lumens |
| Efficiency: | N/A |
| Efficacy: | 166.0 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type III - Short |
| BUG Rating: | B3 - U0 - G3 |

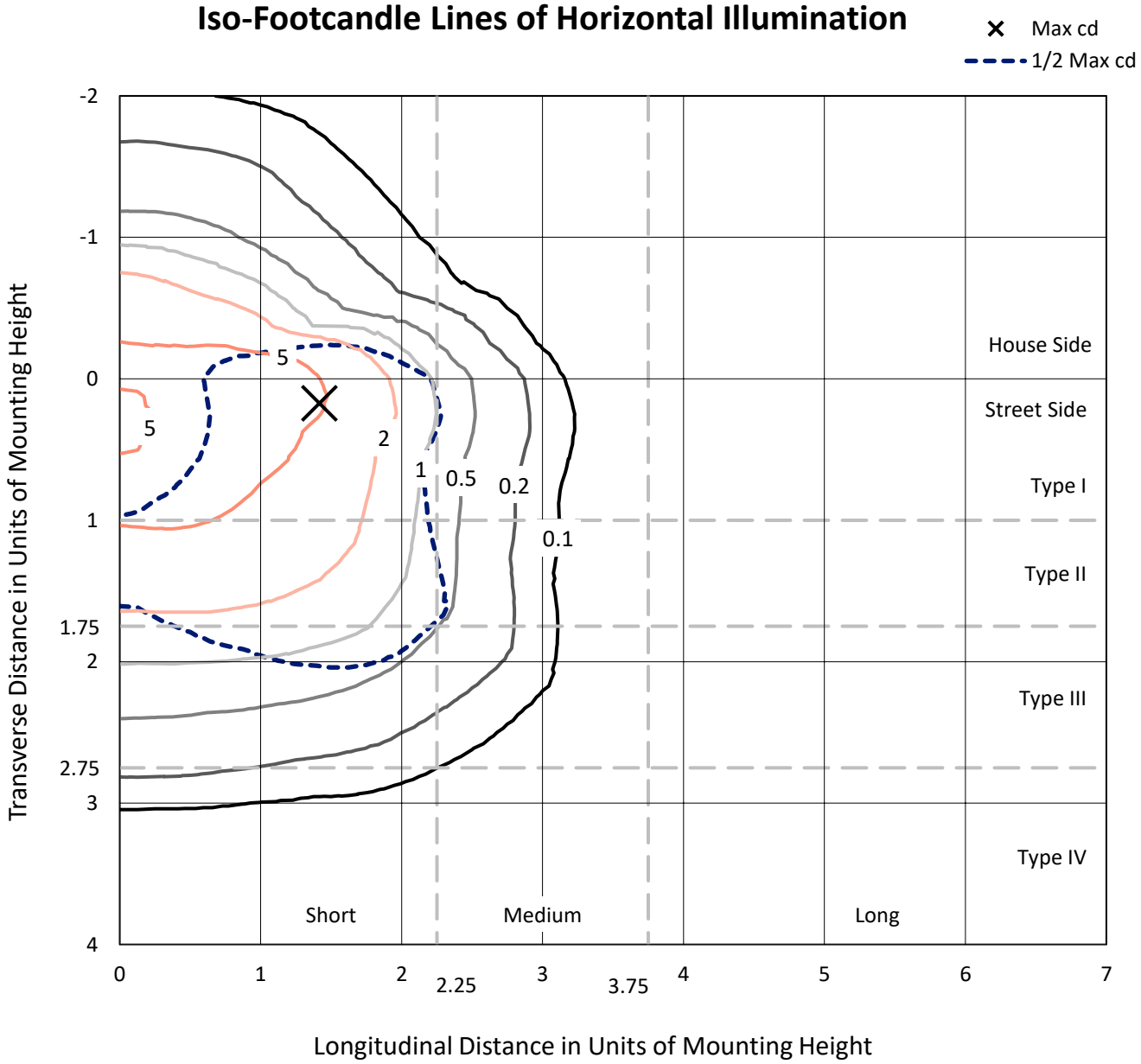
| | |
|---|---|
| Input Watts (W): | 170 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 12.0% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1500961
CATALOG NUMBER: GSS-SB6A-740-U-T3LG

## Iso-Footcandle Lines of Horizontal Illumination



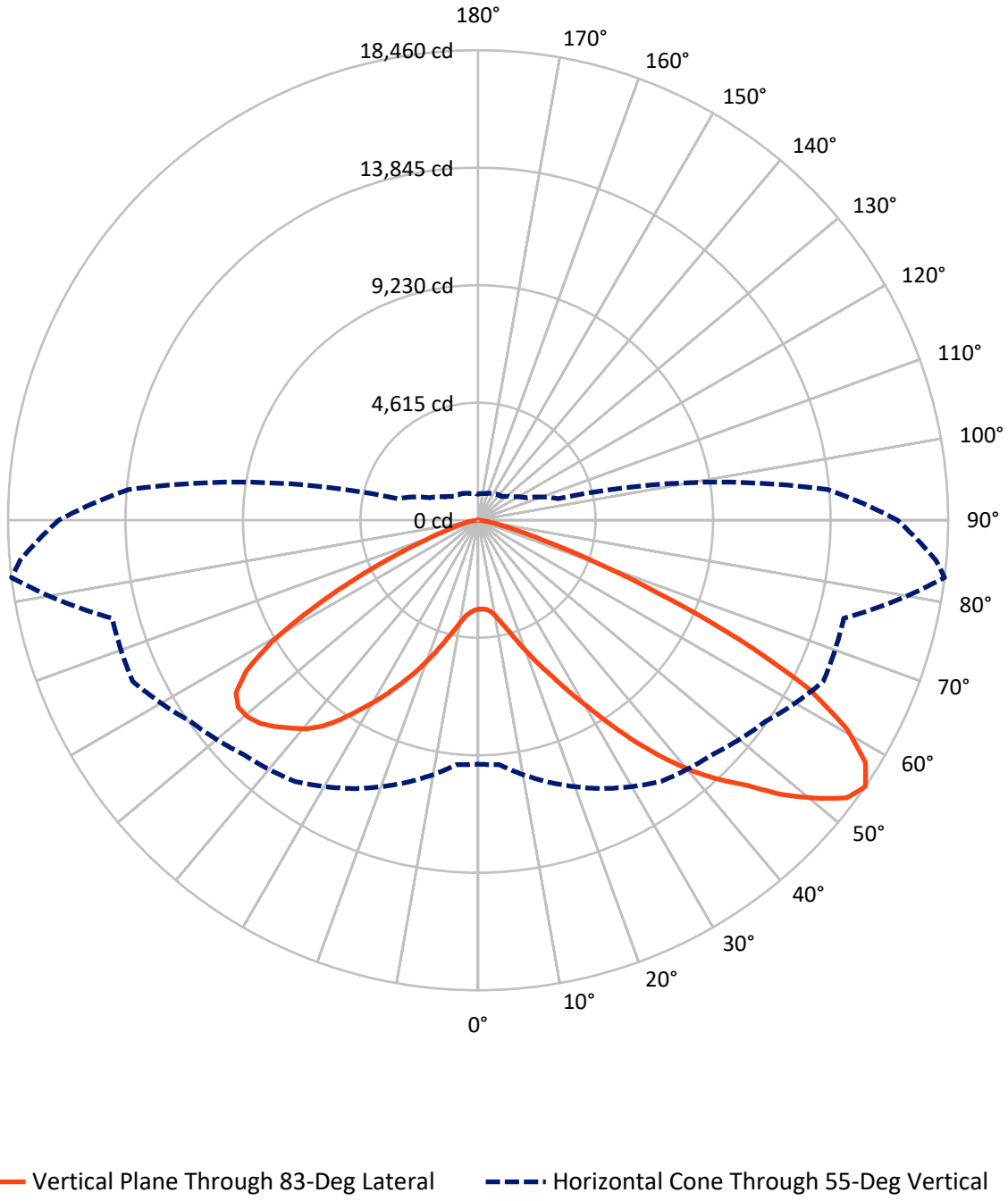

Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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Scaled Data Report

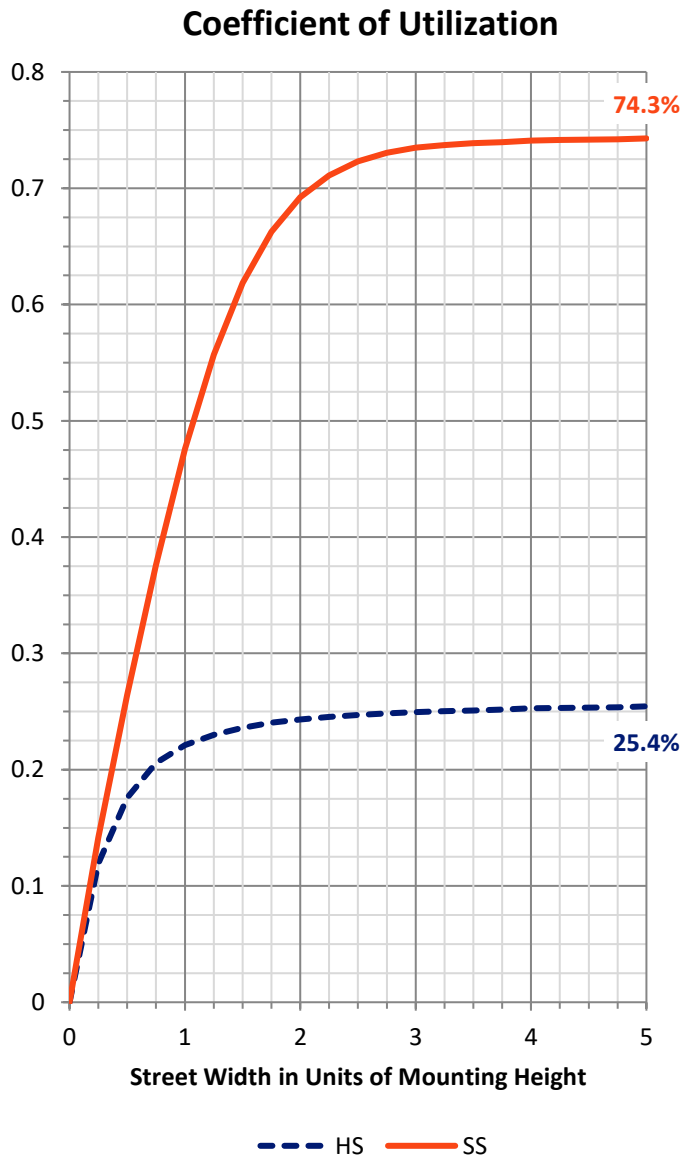
REPORT NUMBER: P1500961
CATALOG NUMBER: GSS-SB6A-740-U-T3LG

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 7242.7 | 0.0 | 7242.7 |
| | % Fixture | 25.7 | 0.0 | 25.7 |
| **Street Side** | Lumens | 20980.7 | 0.0 | 20980.7 |
| | % Fixture | 74.3 | 0.0 | 74.3 |
| **Total** | Lumens | 28223.5 | 0.0 | 28223.5 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 337.6 | 1.2 |
| 10°-20° | 1099.7 | 3.9 |
| 20°-30° | 2201.6 | 7.8 |
| 30°-40° | 3917.0 | 13.9 |
| 40°-50° | 5902.8 | 20.9 |
| 50°-60° | 7192.9 | 25.5 |
| 60°-70° | 5816.5 | 20.6 |
| 70°-80° | 1593.1 | 5.6 |
| 80°-90° | 162.2 | 0.6 |
| 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° | 28223.5 | 100.0 |
| 0°-180° | 28223.5 | 100.0 |



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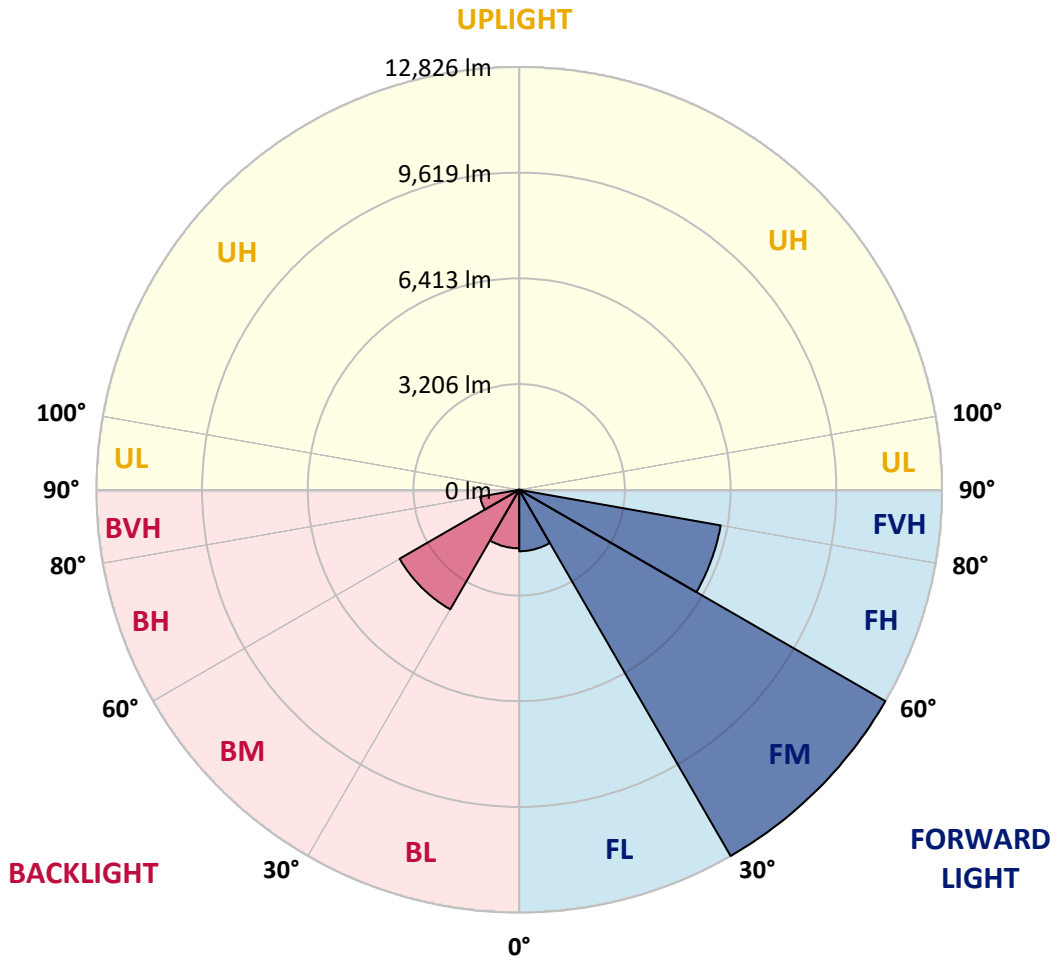
Scaled Data Report

REPORT NUMBER: P1500961
CATALOG NUMBER: GSS-SB6A-740-U-T3LG

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1863.5 | 6.6 | | | |
| FM | (30°-60°) | 12825.6 | 45.4 | | | |
| FH | (60°-80°) | 6207.1 | 22.0 | | | G3/7500 |
| FVH | (80°-90°) | 84.5 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 1775.4 | 6.3 | B3/2500 | | |
| BM | (30°-60°) | 4187.1 | 14.8 | B3/5000 | | |
| BH | (60°-80°) | 1202.5 | 4.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 77.7 | 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 III Short



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REPORT NUMBER: P1500961
CATALOG NUMBER: GSS-SB6A-740-U-T3LG

**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 83° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | *3493.8* | 3493.8 |
| 2.5° | 3393.4 | 3387.1 | 3380.9 | 3374.6 | 3387.1 | 3406.0 | 3424.8 | 3437.3 | 3468.7 | *3493.8* | 3481.2 |
| 5° | 3123.7 | 3111.1 | 3123.7 | 3173.9 | 3217.8 | 3293.0 | 3368.3 | 3418.5 | 3487.5 | *3518.9* | 3531.4 |
| 7.5° | 2885.3 | 2872.8 | 2885.3 | 2948.1 | 3023.3 | 3142.5 | 3299.3 | 3424.8 | 3550.2 | *3625.5* | 3638.0 |
| 10° | 2885.3 | 2891.6 | 2891.6 | 2916.7 | 2954.3 | 3073.5 | 3261.7 | 3500.0 | 3719.6 | *3826.2* | 3851.3 |
| 12.5° | 2979.4 | 2979.4 | 2979.4 | 3010.8 | 3035.9 | 3130.0 | 3343.2 | 3638.0 | 3989.3 | *4146.1* | 4164.9 |
| 15° | 3104.9 | 3098.6 | 3117.4 | 3136.2 | 3180.1 | 3274.2 | 3487.5 | 3838.8 | 4284.1 | *4522.5* | 4547.5 |
| 17.5° | 3280.5 | 3268.0 | 3286.8 | 3330.7 | 3393.4 | 3500.0 | 3713.3 | 4114.7 | 4691.8 | *4992.9* | 5030.5 |
| 20° | 3474.9 | 3468.7 | 3506.3 | 3575.3 | 3663.1 | 3794.8 | 4039.5 | 4447.2 | 5156.0 | *5538.6* | 5607.6 |
| 22.5° | 3707.0 | 3694.5 | 3763.5 | 3888.9 | 4008.1 | 4158.6 | 4453.5 | 4880.0 | 5689.1 | *6147.0* | 6216.0 |
| 25° | 3970.5 | 3970.5 | 4064.6 | 4215.1 | 4397.0 | 4666.7 | 4961.5 | 5432.0 | 6316.4 | *6805.6* | 6912.3 |
| 27.5° | 4403.3 | 4434.6 | 4472.3 | 4629.1 | 4886.3 | 5250.1 | 5563.7 | 6096.8 | 7000.1 | *7614.8* | 7652.4 |
| 30° | 5105.8 | 5093.2 | 5156.0 | 5262.6 | 5475.9 | 5858.5 | 6328.9 | 6899.7 | 7865.7 | *8511.7* | 8605.8 |
| 32.5° | 5739.3 | 5758.1 | 5845.9 | 6046.7 | 6303.8 | 6630.0 | 7194.5 | 7897.0 | 8806.5 | *9553.0* | 9596.9 |
| 35° | 6379.1 | 6391.6 | 6561.0 | 6862.1 | 7244.7 | 7608.5 | 8223.2 | 8913.2 | 9829.0 | *10713.4* | 10832.6 |
| 37.5° | 7276.1 | 7263.5 | 7432.9 | 7690.0 | 8204.4 | 8768.9 | 9264.4 | 9923.0 | 10807.5 | *11842.4* | 11980.4 |
| 40° | 7947.2 | 8016.2 | 8336.1 | 8662.3 | 9145.3 | 9728.6 | 10148.9 | 10769.8 | 11610.3 | *12946.4* | 13071.8 |
| 42.5° | 8637.2 | 8693.6 | 9120.2 | 9609.4 | 10117.5 | 10512.7 | 10838.8 | 11415.9 | 12250.1 | *13924.9* | 13993.9 |
| 45° | 9208.0 | 9283.3 | 9772.5 | 10393.5 | 10920.4 | 11321.8 | 11434.7 | 11974.1 | 12902.5 | *14865.8* | 14972.4 |
| 47.5° | 9571.8 | 9653.3 | 10230.4 | 10958.0 | 11497.4 | 11924.0 | 11886.3 | 12645.3 | 13598.7 | *16114.0* | 16076.3 |
| 50° | 9822.7 | 9872.9 | 10500.1 | 11277.9 | 11980.4 | 12262.7 | 12425.8 | 13404.3 | 14313.8 | *17161.5* | 17023.5 |
| 52.5° | 10004.6 | 10086.1 | 10656.9 | 11510.0 | 12250.1 | 12620.2 | 13059.3 | 14282.4 | 14809.3 | *18121.2* | 17813.8 |
| 55° | *9578.1* | *9640.8* | *10644.4* | *11629.2* | *12526.1* | *13015.4* | *13780.6* | *14966.1* | *14872.0* | *18459.9* | *18045.9* |
| 57.5° | 9139.0 | 9189.2 | 10117.5 | 11597.8 | 12827.2 | 13504.6 | 14602.3 | 15053.9 | 14313.8 | *17939.3* | 17418.7 |
| 60° | 8587.0 | 8624.6 | 9553.0 | 11265.4 | 12833.5 | 13887.3 | 15022.6 | 14414.1 | 13278.8 | *16628.3* | 16132.8 |
| 62.5° | 7570.9 | 7570.9 | 8593.3 | 10368.4 | 12519.9 | 14081.7 | 14909.7 | 13203.6 | 11892.6 | *14564.7* | 13881.0 |
| 65° | 6567.3 | 6523.4 | 7213.3 | 8768.9 | 11685.6 | 14031.5 | 14062.9 | 11673.1 | 9741.1 | *11234.0* | 10700.8 |
| 67.5° | 5475.9 | 5482.1 | 5889.9 | 7119.3 | 9465.2 | 12984.0 | 12275.2 | 9019.8 | 6786.8 | *7564.6* | 7288.6 |
| 70° | 3707.0 | 3801.1 | 4215.1 | 5168.5 | 7138.1 | 9201.7 | 9772.5 | 6109.4 | 4233.9 | *4698.1* | 4472.3 |
| 72.5° | 1411.3 | 1430.1 | 1913.1 | 2709.7 | 4509.9 | 5532.3 | 6818.2 | 3418.5 | 2477.6 | *2590.5* | 2603.1 |
| 75° | 595.9 | 621.0 | 815.4 | 1141.6 | 2000.9 | 3017.1 | 3587.9 | 1731.2 | 1505.4 | *1549.3* | 1536.8 |
| 77.5° | 401.4 | 414.0 | 495.5 | 614.7 | 903.2 | 1210.6 | 1499.1 | 978.5 | 922.1 | *865.6* | 840.5 |
| 80° | 301.1 | 301.1 | 357.5 | 414.0 | 508.1 | 621.0 | 652.3 | 495.5 | 552.0 | *457.9* | 445.3 |
| 82.5° | 194.4 | 207.0 | 225.8 | 244.6 | 288.5 | 307.4 | 263.4 | 269.7 | 319.9 | *238.4* | 225.8 |
| 85° | 94.1 | 100.4 | 106.6 | 112.9 | 112.9 | 106.6 | 94.1 | 119.2 | 163.1 | *100.4* | 94.1 |
| 87.5° | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 6.3 | 6.3 | 6.3 | *6.3* | 6.3 |
| 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: P1500961
CATALOG NUMBER: GSS-SB6A-740-U-T3LG

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 | 3493.8 |
| 2.5° | 3500.0 | 3525.1 | 3543.9 | 3556.5 | 3587.9 | 3581.6 | 3600.4 | 3612.9 | 3625.5 | 3644.3 | 3619.2 |
| 5° | 3562.8 | 3606.7 | 3656.9 | 3694.5 | 3732.1 | 3750.9 | 3757.2 | 3769.8 | 3776.0 | 3788.6 | 3782.3 |
| 7.5° | 3700.8 | 3750.9 | 3826.2 | 3863.8 | 3895.2 | 3895.2 | 3876.4 | 3870.1 | 3851.3 | 3863.8 | 3863.8 |
| 10° | 3932.8 | 4008.1 | 4089.7 | 4095.9 | 4058.3 | 4014.4 | 3945.4 | 3907.7 | 3857.6 | 3845.0 | 3832.5 |
| 12.5° | 4271.6 | 4371.9 | 4434.6 | 4390.7 | 4259.0 | 4095.9 | 3914.0 | 3744.7 | 3612.9 | 3556.5 | 3543.9 |
| 15° | 4654.2 | 4779.6 | 4792.2 | 4666.7 | 4428.4 | 4033.2 | 3650.6 | 3462.4 | 3393.4 | 3393.4 | 3387.1 |
| 17.5° | 5181.1 | 5268.9 | 5218.7 | 4917.6 | 4384.5 | 3738.4 | 3462.4 | 3431.0 | 3449.9 | 3474.9 | 3474.9 |
| 20° | 5733.0 | 5833.4 | 5626.4 | 5093.2 | 4114.7 | 3562.8 | 3481.2 | 3506.3 | 3550.2 | 3575.3 | 3569.0 |
| 22.5° | 6391.6 | 6441.8 | 6040.4 | 5099.5 | 3826.2 | 3518.9 | 3518.9 | 3550.2 | 3581.6 | 3619.2 | 3619.2 |
| 25° | 7069.1 | 7050.3 | 6423.0 | 4867.4 | 3663.1 | 3506.3 | 3493.8 | 3518.9 | 3531.4 | 3550.2 | 3543.9 |
| 27.5° | 7828.0 | 7727.7 | 6717.8 | 4497.4 | 3612.9 | 3468.7 | 3406.0 | 3380.9 | 3393.4 | 3412.2 | 3418.5 |
| 30° | 8699.9 | 8461.6 | 6956.2 | 4265.3 | 3594.1 | 3380.9 | 3230.3 | 3161.3 | 3148.8 | 3173.9 | 3173.9 |
| 32.5° | 9709.8 | 9195.4 | 7100.4 | 4233.9 | 3575.3 | 3224.1 | 3023.3 | 2891.6 | 2866.5 | 2879.1 | 2910.4 |
| 35° | 10744.7 | 10079.9 | 7062.8 | 4315.5 | 3581.6 | 3098.6 | 2803.8 | 2628.2 | 2603.1 | 2615.6 | 2647.0 |
| 37.5° | 11829.9 | 10920.4 | 6918.5 | 4440.9 | 3531.4 | 2929.2 | 2603.1 | 2389.8 | 2352.2 | 2377.3 | 2389.8 |
| 40° | 12670.4 | 11629.2 | 6561.0 | 4491.1 | 3443.6 | 2716.0 | 2371.0 | 2189.1 | 2088.7 | 2082.5 | 2113.8 |
| 42.5° | 13448.2 | 12187.4 | 6172.1 | 4409.5 | 3261.7 | 2490.2 | 2132.6 | 1950.7 | 1793.9 | 1674.7 | 1674.7 |
| 45° | 14226.0 | 12751.9 | 5776.9 | 4177.5 | 2960.6 | 2251.8 | 1881.7 | 1637.1 | 1455.2 | 1367.4 | 1373.7 |
| 47.5° | 15003.8 | 13297.6 | 5306.5 | 3826.2 | 2659.5 | 2000.9 | 1612.0 | 1417.6 | 1292.1 | 1223.1 | 1223.1 |
| 50° | 15725.1 | 13692.8 | 4704.4 | 3268.0 | 2314.5 | 1750.0 | 1423.9 | 1310.9 | 1216.9 | 1154.1 | 1141.6 |
| 52.5° | 16358.6 | 13956.2 | 3888.9 | 2590.5 | 1938.2 | 1467.8 | 1323.5 | 1235.7 | 1166.7 | 1097.7 | 1078.9 |
| 55° | *16471.5* | *13780.6* | *3255.4* | *2082.5* | *1599.5* | *1317.2* | *1248.2* | *1173.0* | *1078.9* | *1047.5* | *1028.7* |
| 57.5° | 15775.3 | 12852.3 | 2747.3 | 1756.3 | 1367.4 | 1210.6 | 1185.5 | 1097.7 | 1022.4 | 991.1 | 972.2 |
| 60° | 14589.8 | 11165.0 | 2270.6 | 1505.4 | 1216.9 | 1110.2 | 1141.6 | 1053.8 | 934.6 | 915.8 | 897.0 |
| 62.5° | 12457.1 | 8712.5 | 1812.7 | 1267.0 | 1104.0 | 1035.0 | 1066.3 | 940.9 | 840.5 | 815.4 | 809.1 |
| 65° | 9684.7 | 6234.8 | 1524.2 | 1116.5 | 1016.1 | 959.7 | 947.1 | 834.2 | 759.0 | 740.2 | 740.2 |
| 67.5° | 6761.7 | 3964.2 | 1273.3 | 1022.4 | 903.2 | 865.6 | 859.3 | 784.1 | 733.9 | 715.1 | 715.1 |
| 70° | 4139.8 | 2402.4 | 1072.6 | 934.6 | 796.6 | 727.6 | 771.5 | 759.0 | 683.7 | 664.9 | 658.6 |
| 72.5° | 2151.5 | 1436.4 | 940.9 | 859.3 | 671.2 | 621.0 | 690.0 | 696.2 | 633.5 | 658.6 | 652.3 |
| 75° | 1248.2 | 997.3 | 821.7 | 759.0 | 533.2 | 520.6 | 602.2 | 664.9 | 614.7 | 633.5 | 621.0 |
| 77.5° | 715.1 | 639.8 | 633.5 | 621.0 | 420.3 | 426.5 | 539.4 | 595.9 | 526.9 | 545.7 | 501.8 |
| 80° | 395.2 | 414.0 | 439.1 | 388.9 | 294.8 | 332.4 | 432.8 | 476.7 | 401.4 | 395.2 | 363.8 |
| 82.5° | 207.0 | 257.2 | 294.8 | 250.9 | 169.4 | 200.7 | 294.8 | 294.8 | 257.2 | 244.6 | 238.4 |
| 85° | 94.1 | 106.6 | 138.0 | 125.4 | 62.7 | 75.3 | 138.0 | 150.5 | 131.7 | 119.2 | 112.9 |
| 87.5° | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 12.5 | 18.8 | 6.3 | 6.3 | 6.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-1

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-740-U-5WQ

Data in this report applies to families of products including GSS-SB1A-740-U-5WQ

Report Generated By FNC07603 / LDUCLS01DT446
Version: v7.04

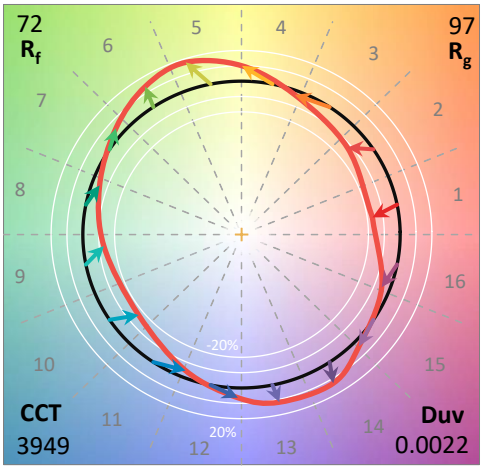
## Test Information

| | |
|---|---|
| Test Method: | LM-79-2019 |
| Report Number: | SP1-2407-184-1 |
| Test Lab: | COOPER LIGHTING SOLUTIONS |
| Photometer: | SP1 - 76IN SPHERE |
| Measurement Geometry: | 4π |
| Issue Date: | 10/15/2024 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS |
| Product Line: | McGraw-Edison |
| Catalog Number: | **GSS-SB1A-740-U-5WQ** |
| Description: | GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 4000K CCT 26 LEDS |

## Spectral Parameters

| | |
|---|---|
| CCT (K): | 3949 |
| CIE u': | 0.2248 |
| CIE v': | 0.5053 |
| Duv: | 0.0022 |
| CIE x: | 0.3844 |
| CIE y: | 0.3840 |
| CIE z: | 0.2316 |
| Peak Wavelength (nm): | 440 |
| Dominant Wavelength (nm): | 578 |
| Purity: | 30.60026 |
| Rf: | 71.8 |
| Rg: | 96.5 |

| | |
|---|---|
| CRI (Ra): | 70.7 |
| R1: | 68.0 |
| R2: | 76.0 |
| R3: | 84.3 |
| R4: | 72.0 |
| R5: | 68.6 |
| R6: | 68.3 |
| R7: | 77.9 |
| R8: | 50.3 |
| R9: | -36.7 |
| R10: | 45.1 |
| R11: | 70.7 |
| R12: | 47.1 |
| R13: | 68.5 |
| R14: | 91.1 |
| R15: | 58.7 |




## Test Conditions

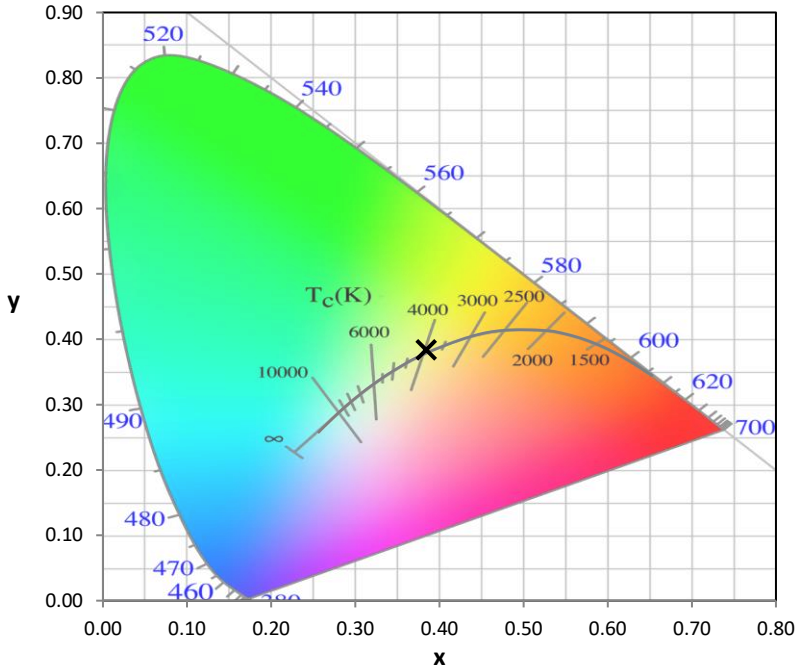
| | |
|---|---|
| Stabilization Time: | 34M |
| Operation Time: | 1H 34M |
| Sphere Temperature (°C): | 25.2 |

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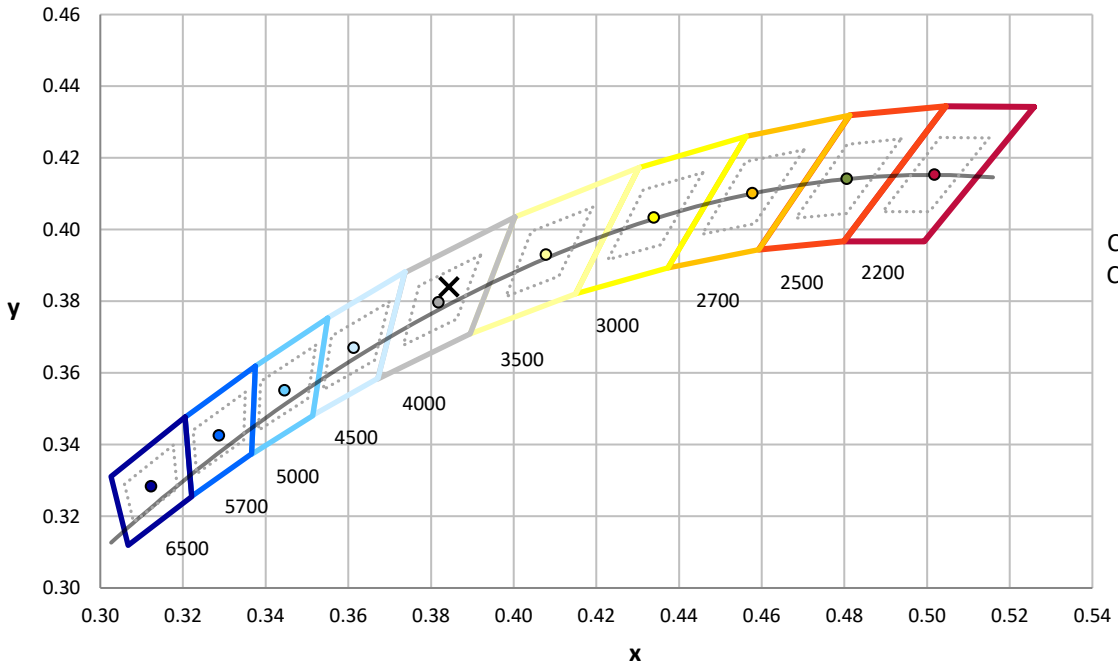
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

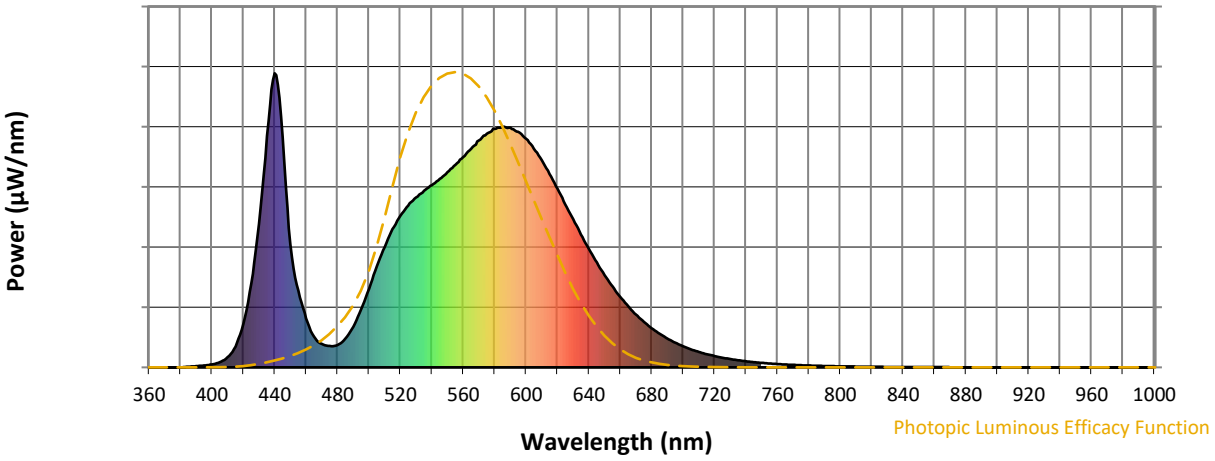



CCT = 3949K
CIE x = 0.3844
CIE y = 0.3840
Duv = 0.0022

Point lies inside the ANSI 4000K 4-step quadrangle

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## Photopic Flux vs. Wavelength

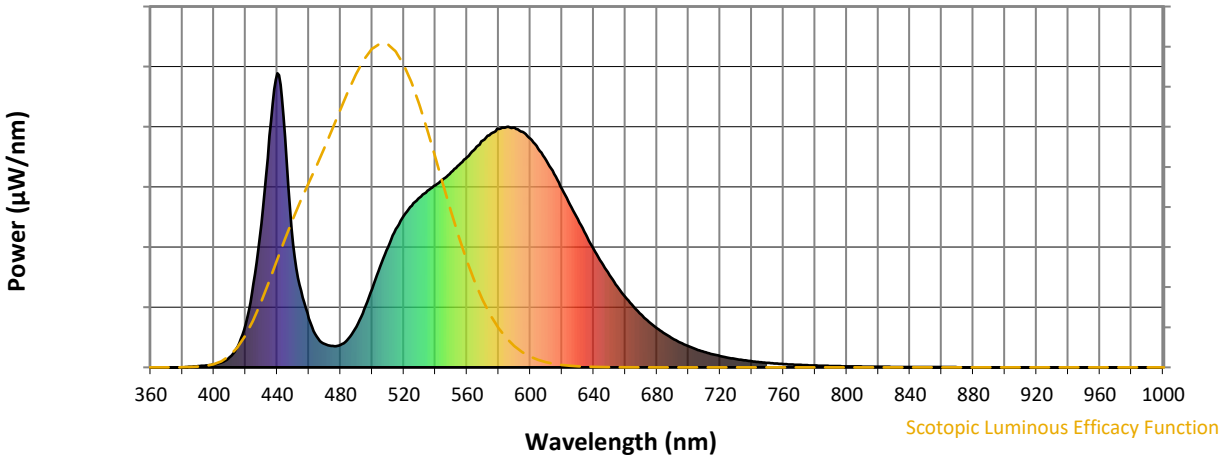



## Photopic Lumens: NR

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Scotopic Flux vs. Wavelength

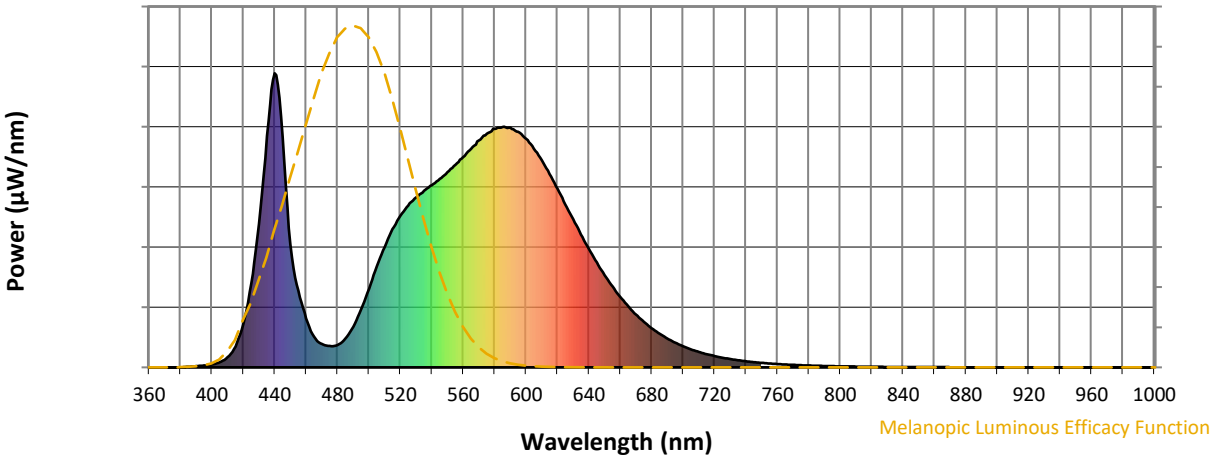



**Scotopic Lumens: NR** **S/P: 1.47**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

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## Melanopic Flux vs. Wavelength




**Melanopic Lumens: NR** **M/P: 2.78**

| λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) | λ (nm) | Power W^/nm | Lumens (ϕ/nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 360 | 0 | NR | 490 | 139 | NR | 620 | 607 | NR | 750 | 15 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 198 | NR | 625 | 554 | NR | 755 | 13 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 267 | NR | 630 | 504 | NR | 760 | 11 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 343 | NR | 635 | 452 | NR | 765 | 10 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 410 | NR | 640 | 403 | NR | 770 | 8 | NR | 900 | 0 | NR |
| 385 | 2 | NR | 515 | 470 | NR | 645 | 357 | NR | 775 | 7 | NR | 905 | 0 | NR |
| 390 | 4 | NR | 520 | 516 | NR | 650 | 314 | NR | 780 | 6 | NR | 910 | 0 | NR |
| 395 | 7 | NR | 525 | 550 | NR | 655 | 275 | NR | 785 | 5 | NR | 915 | 0 | NR |
| 400 | 10 | NR | 530 | 578 | NR | 660 | 240 | NR | 790 | 5 | NR | 920 | 0 | NR |
| 405 | 17 | NR | 535 | 601 | NR | 665 | 208 | NR | 795 | 4 | NR | 925 | 0 | NR |
| 410 | 35 | NR | 540 | 620 | NR | 670 | 179 | NR | 800 | 4 | NR | 930 | 0 | NR |
| 415 | 70 | NR | 545 | 641 | NR | 675 | 155 | NR | 805 | 3 | NR | 935 | 0 | NR |
| 420 | 147 | NR | 550 | 664 | NR | 680 | 133 | NR | 810 | 3 | NR | 940 | 0 | NR |
| 425 | 285 | NR | 555 | 689 | NR | 685 | 114 | NR | 815 | 2 | NR | 945 | 0 | NR |
| 430 | 487 | NR | 560 | 715 | NR | 690 | 98 | NR | 820 | 2 | NR | 950 | 0 | NR |
| 435 | 787 | NR | 565 | 743 | NR | 695 | 84 | NR | 825 | 2 | NR | 955 | 0 | NR |
| 440 | 1000 | NR | 570 | 771 | NR | 700 | 72 | NR | 830 | 2 | NR | 960 | 0 | NR |
| 445 | 783 | NR | 575 | 794 | NR | 705 | 61 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 417 | NR | 580 | 811 | NR | 710 | 52 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 261 | NR | 585 | 817 | NR | 715 | 45 | NR | 845 | 1 | NR | 975 | 0 | NR |
| 460 | 167 | NR | 590 | 815 | NR | 720 | 39 | NR | 850 | 1 | NR | 980 | 0 | NR |
| 465 | 104 | NR | 595 | 801 | NR | 725 | 33 | NR | 855 | 1 | NR | 985 | 0 | NR |
| 470 | 79 | NR | 600 | 777 | NR | 730 | 28 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 73 | NR | 605 | 744 | NR | 735 | 24 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 76 | NR | 610 | 704 | NR | 740 | 21 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 98 | NR | 615 | 657 | NR | 745 | 18 | NR | 875 | 1 | NR | | | |

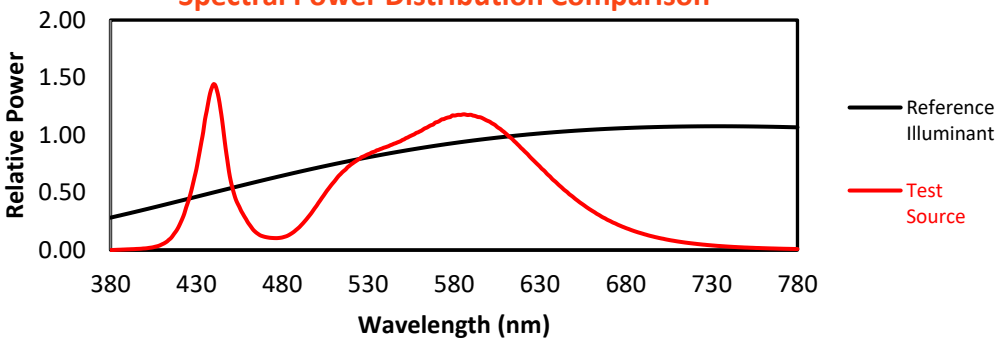
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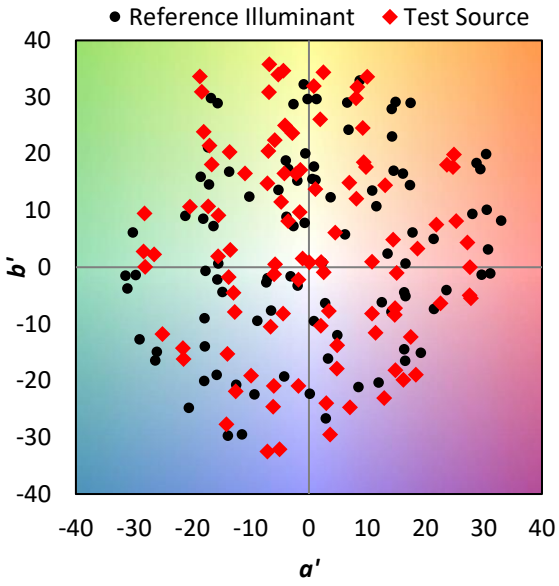
## Summary

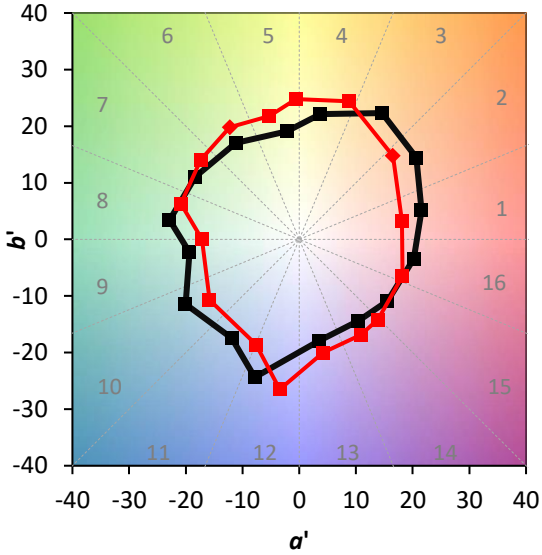
$R_f$ = 71.8
$R_g$ = 96.5
CIE $R_a$ = 70.7
$R_9$ = -36.7

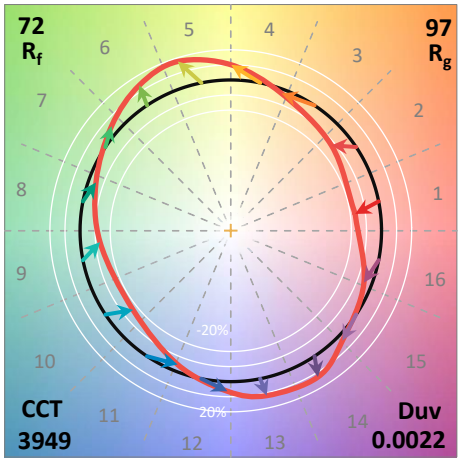
## Spectral Power Distribution Comparison

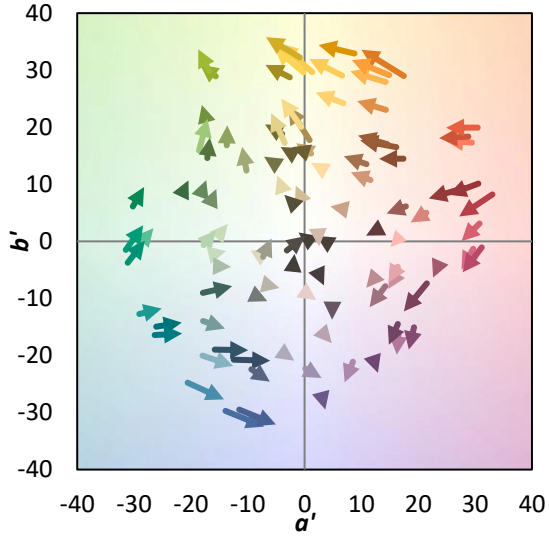



## Color Vector Graphics



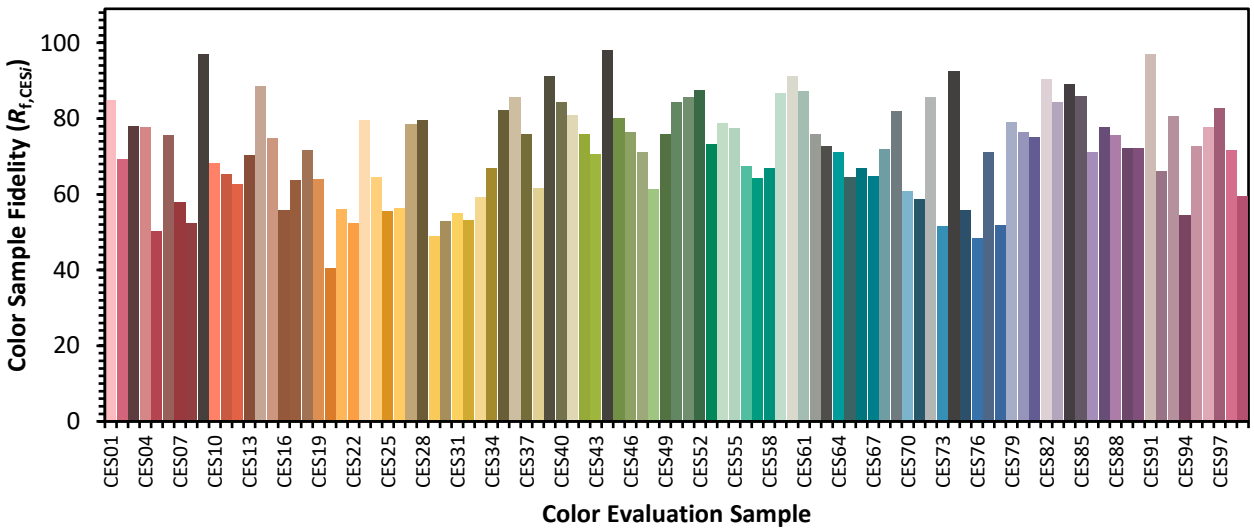



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**Individual Sample Fidelity Index ($R_{f,i}$)**

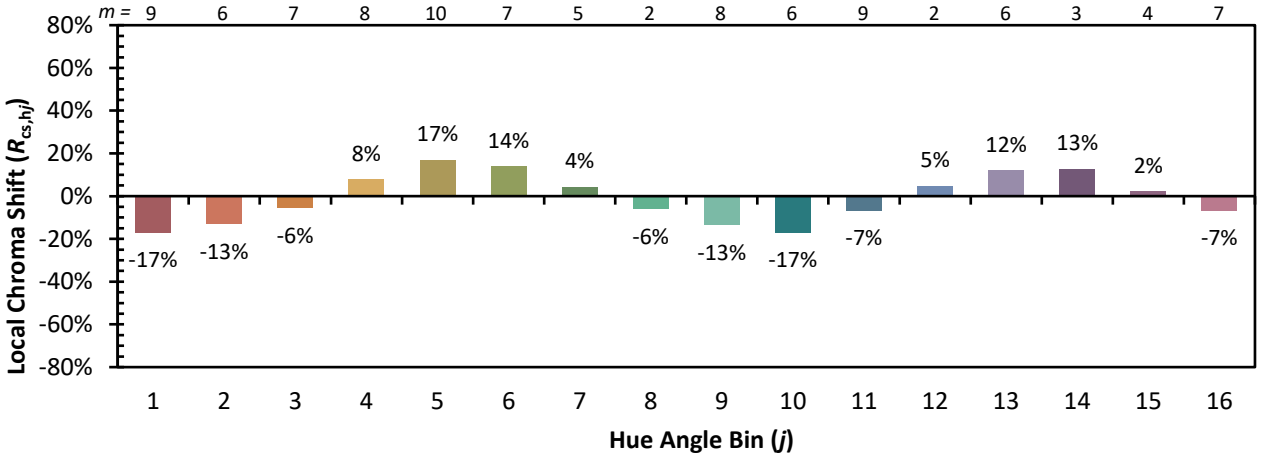
| | | | |
|---|---|---|---|
| CES01 = 85 | CES26 = 56 | CES51 = 86 | CES76 = 48 |
| CES02 = 61 | CES27 = 79 | CES52 = 88 | CES77 = 71 |
| CES03 = 30 | CES28 = 80 | CES53 = 73 | CES78 = 52 |
| CES04 = 70 | CES29 = 49 | CES54 = 79 | CES79 = 79 |
| CES05 = 47 | CES30 = 53 | CES55 = 77 | CES80 = 77 |
| CES06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

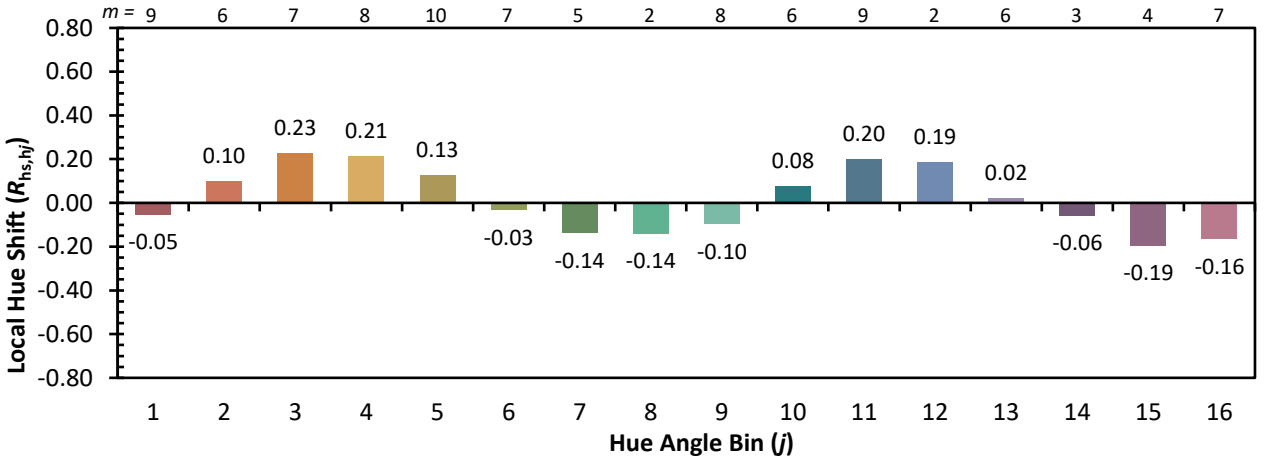


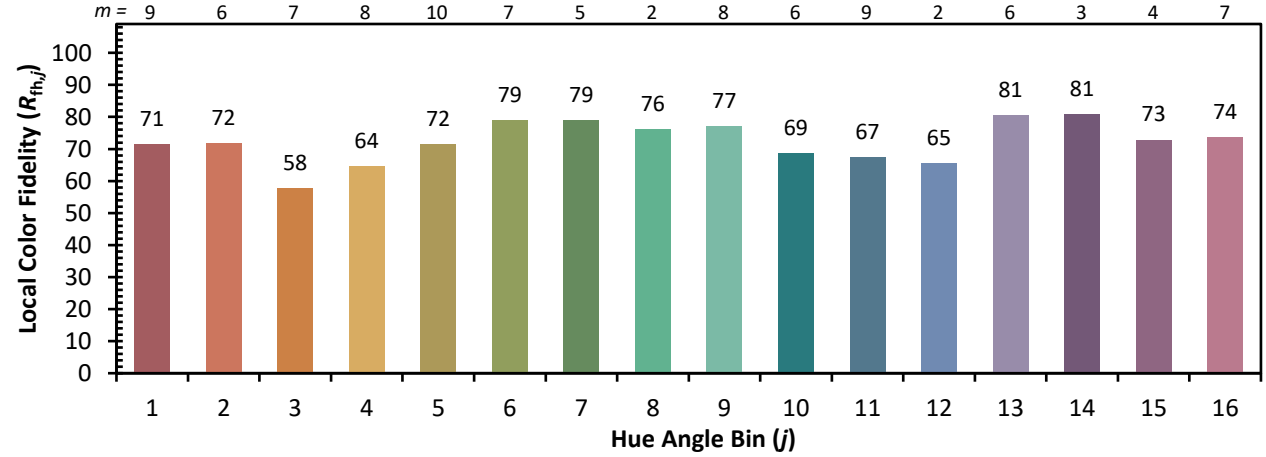
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## Color Rendition by Hue-Angle Bin



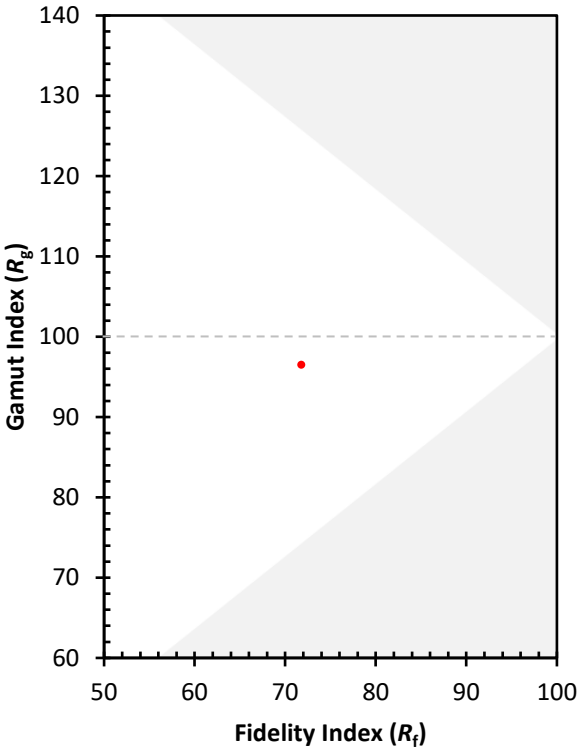



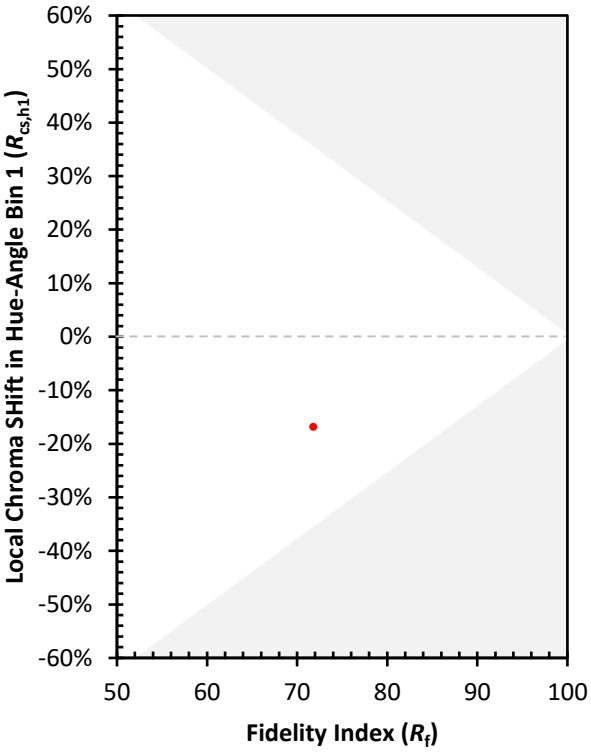



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## Measure Comparisons




(END OF REPORT)