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: P1359576

Luminaire Tested: **GSS-SB5B-727-U-T2-HSS**

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: | P1359576 |
| Test Lab: | INNOVATION CENTER(G3) |
| Issue Date: | 02/18/2026 |
| Manufacturer: | COOPER LIGHTING SOLUTIONS (FORMERLY EATON) |
| Product Line: | McGRAW-EDISON |
| Catalog Number: | GSS-SB5B-727-U-T2-HSS |
| Description: | GALLEON II SLIM SITE HIGH DENSITY LED ARRAYS 5SQUARE 184W 70CRI 2700K FIXTURE w/ TYPE II DISTRIBUTION OPTIC AND HOUSE SIDE SHIELD |
| Light Source: | (130) 2700K CCT, 70 CRI LEDS |
| Ballast/Driver: | ELECTRONIC DRIVER |

**Summary**

| | |
|---|---|
| Lumens per Lamp: | N/A |
| Luminaire Lumens: | 19732 lumens |
| Efficiency: | N/A |
| Efficacy: | 107.2 lumens/watt |
| Luminous Opening: | Rectangular (W 1.5' x L: 1' x H: 0') |
| IES Classification: | Type II - Medium |
| BUG Rating: | B2 - U0 - G3 |

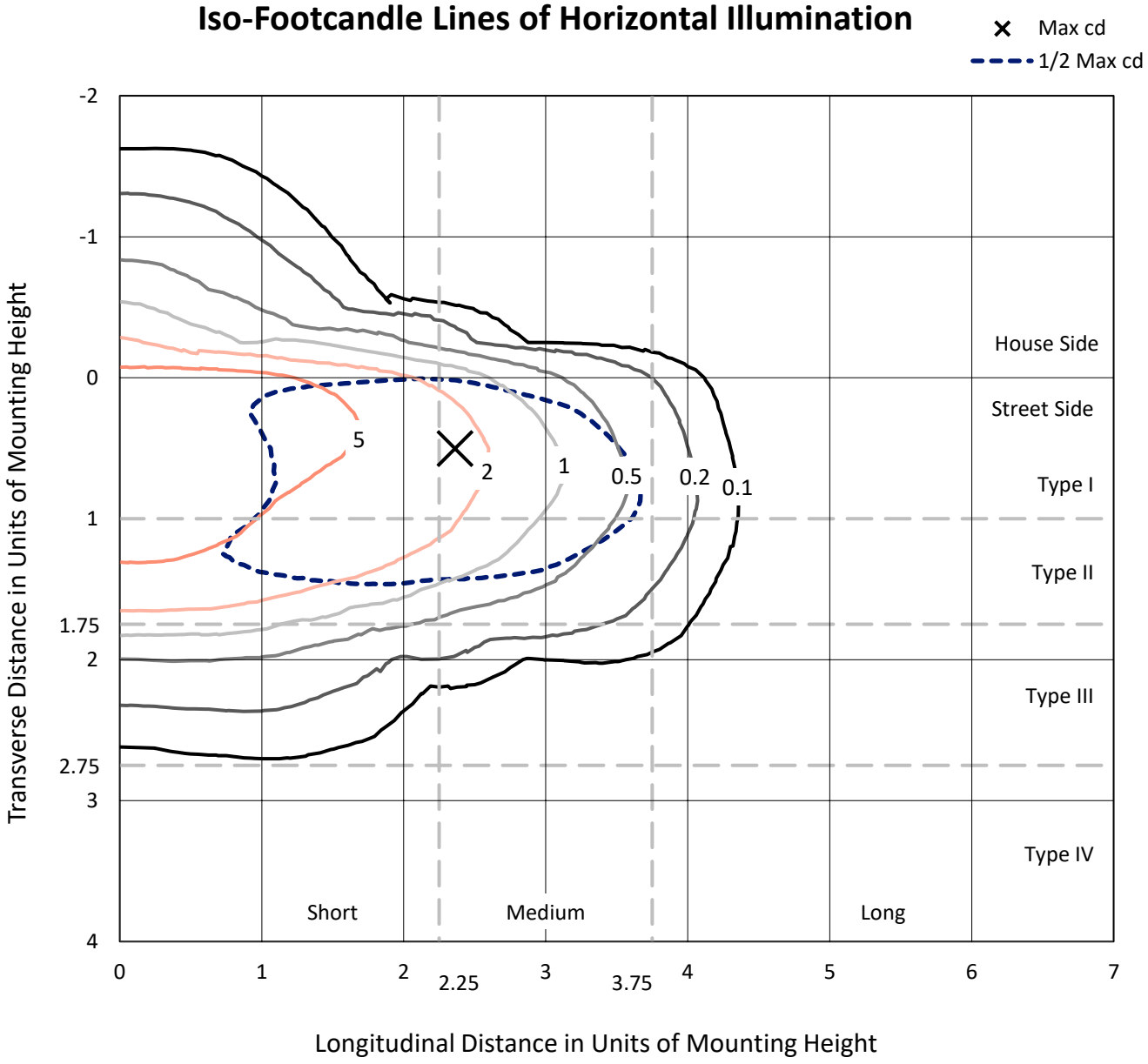
| | |
|---|---|
| Input Watts (W): | 184 |
| Input Voltage (V): | 120 |
| Input Current (Ain): | NR |
| Voltage Rise (V): | NR |
| Power Factor: | 0.98 |
| Total Harmonic Distortion (THDi): | 11.1% |
| Frequency (hertz): | 60 |
| Stabilization Time: | NR |
| Operation Time: | NR |
| Ambient Temperature (°C): | NR |
| Test Distance: | 28.75 FT |

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Scaled Data Report

REPORT NUMBER: P1359576
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## Iso-Footcandle Lines of Horizontal Illumination



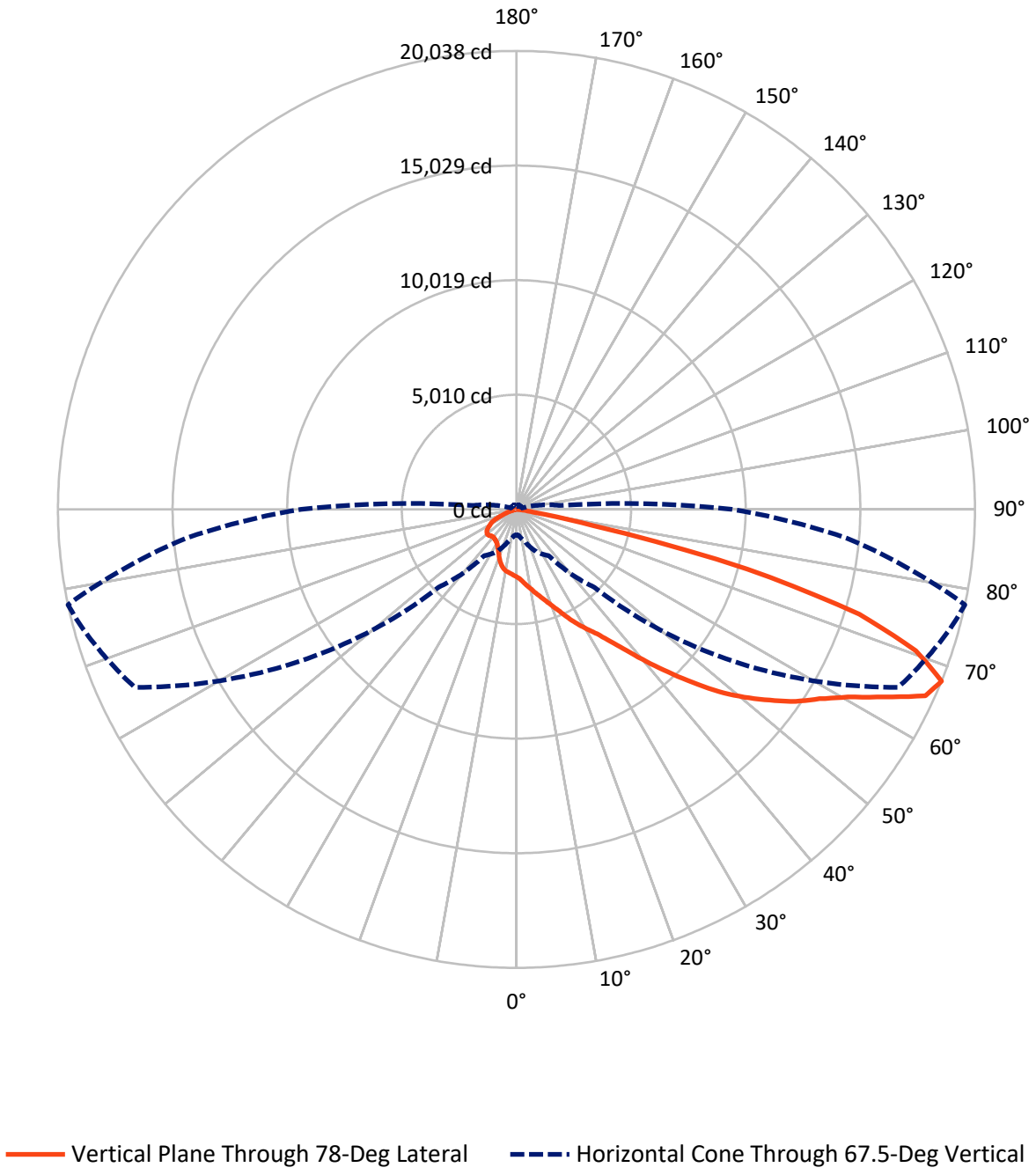

Based on 20 foot mounting height. Maximum calculated value = 9.9 fc
Type II - Medium - N/A

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Scaled Data Report

REPORT NUMBER: P1359576
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## Luminous Intensity Polar Plot



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Scaled Data Report

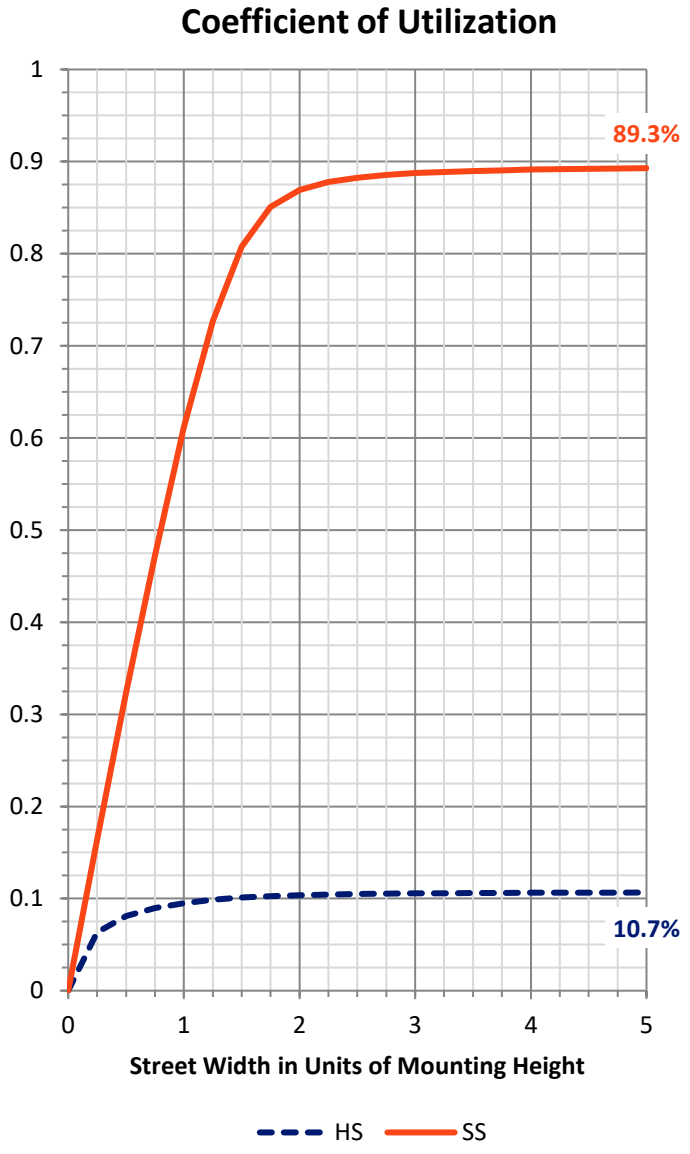
REPORT NUMBER: P1359576
CATALOG NUMBER: GSS-SB5B-727-U-T2-HSS

**FLUX DISTRIBUTION:**

| | | Downward | Upward | Total |
|---|---|---|---|---|
| **House Side** | Lumens | 2117.5 | 0.0 | 2117.5 |
| | % Fixture | 10.7 | 0.0 | 10.7 |
| **Street Side** | Lumens | 17614.6 | 0.0 | 17614.6 |
| | % Fixture | 89.3 | 0.0 | 89.3 |
| **Total** | Lumens | 19732.0 | 0.0 | 19732.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

**ZONAL LUMENS:**

| Zone | Lumens | % Fixture |
|---|---|---|
| 0°-10° | 266.2 | 1.3 |
| 10°-20° | 724.5 | 3.7 |
| 20°-30° | 1192.1 | 6.0 |
| 30°-40° | 2082.1 | 10.6 |
| 40°-50° | 3542.7 | 18.0 |
| 50°-60° | 5109.6 | 25.9 |
| 60°-70° | 4931.8 | 25.0 |
| 70°-80° | 1811.6 | 9.2 |
| 80°-90° | 71.4 | 0.4 |
| 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° | 19732.0 | 100.0 |
| 0°-180° | 19732.0 | 100.0 |



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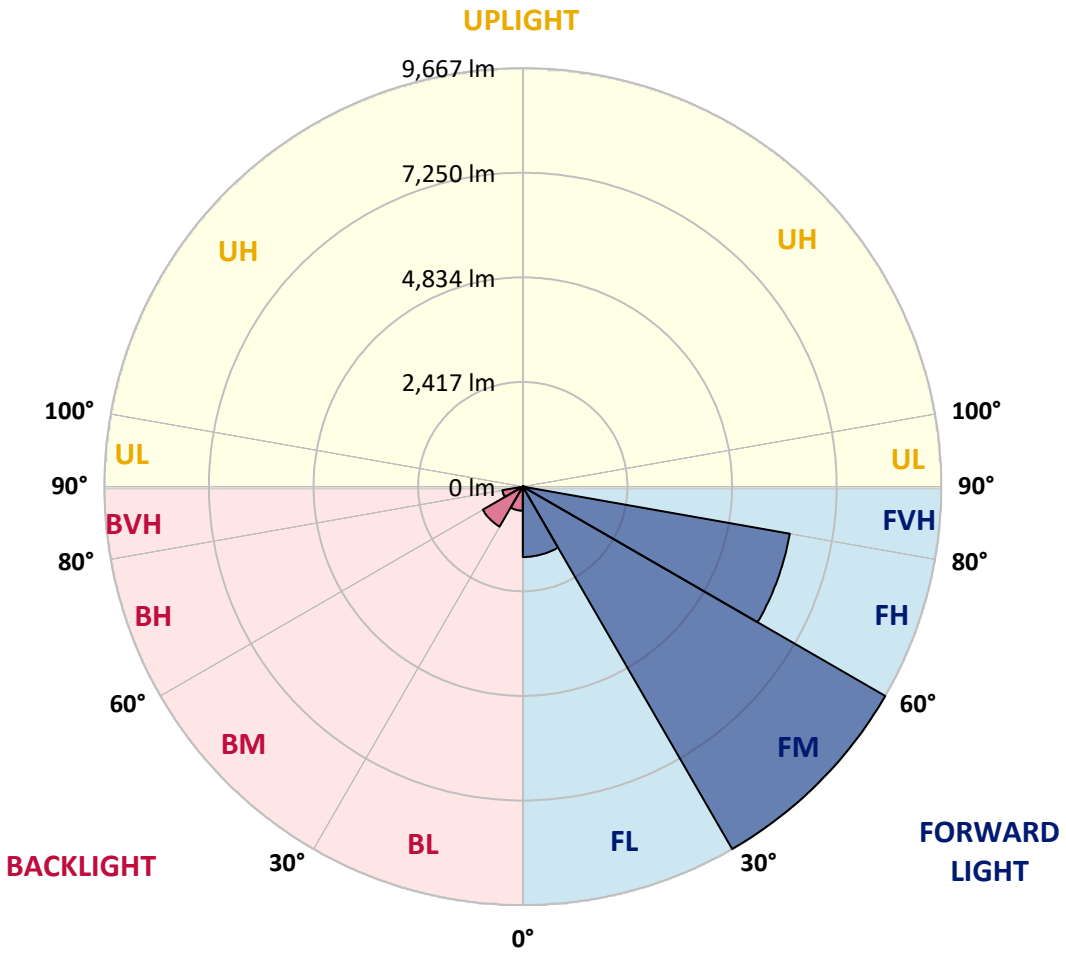
Scaled Data Report

REPORT NUMBER: P1359576
CATALOG NUMBER: GSS-SB5B-727-U-T2-HSS

## LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit B | U | G |
|---|---|---|---|---|---|---|
| FL | (0°-30°) | 1625.9 | 8.2 | | | |
| FM | (30°-60°) | 9667.3 | 49.0 | | | |
| FH | (60°-80°) | 6263.4 | 31.7 | | | G3/7500 |
| FVH | (80°-90°) | 58.0 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 556.9 | 2.8 | B2/1000 | | |
| BM | (30°-60°) | 1067.1 | 5.4 | B2/2500 | | |
| BH | (60°-80°) | 480.0 | 2.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 13.4 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

**BUG Rating: B2-U0-G3**
Type II Medium



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**CANDELA DISTRIBUTION (FULL):**

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 78° | 85° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | *2953.4* | 2953.4 |
| 2.5° | 3268.7 | 3263.2 | 3274.2 | 3252.1 | 3257.6 | 3230.0 | 3169.1 | 3130.4 | 3080.7 | *3047.5* | 3008.8 |
| 5° | 3506.5 | 3512.1 | 3501.0 | 3506.5 | 3489.9 | 3451.2 | 3418.0 | 3318.5 | 3235.5 | *3202.3* | 3119.4 |
| 7.5° | 3584.0 | 3595.0 | 3595.0 | 3622.7 | 3639.3 | 3655.9 | 3628.2 | 3523.1 | 3412.5 | *3368.3* | 3230.0 |
| 10° | 3584.0 | 3584.0 | 3622.7 | 3661.4 | 3738.8 | 3794.1 | 3788.6 | 3749.9 | 3611.6 | *3545.2* | 3390.4 |
| 12.5° | 3484.4 | 3478.9 | 3528.6 | 3639.3 | 3744.3 | 3871.6 | 3965.6 | 3932.4 | 3805.2 | *3755.4* | 3528.6 |
| 15° | 3207.9 | 3213.4 | 3307.4 | 3473.3 | 3683.5 | 3899.2 | 4059.6 | 4131.5 | 4043.0 | *3965.6* | 3738.8 |
| 17.5° | 2842.8 | 2865.0 | 2975.6 | 3207.9 | 3523.1 | 3871.6 | 4175.8 | 4347.2 | 4291.9 | *4220.0* | 3943.5 |
| 20° | 2710.1 | 2715.6 | 2776.5 | 2942.4 | 3301.9 | 3766.5 | 4208.9 | 4579.5 | 4623.7 | *4507.6* | 4164.7 |
| 22.5° | 2914.7 | 2936.9 | 2914.7 | 2925.8 | 3152.6 | 3639.3 | 4242.1 | 4784.1 | 4944.5 | *4833.9* | 4430.2 |
| 25° | 3290.8 | 3268.7 | 3207.9 | 3158.1 | 3196.8 | 3545.2 | 4258.7 | 5044.1 | 5348.3 | *5254.3* | 4778.6 |
| 27.5° | 3716.7 | 3666.9 | 3617.1 | 3501.0 | 3423.6 | 3600.5 | 4314.0 | 5198.9 | 5724.4 | *5652.5* | 5093.9 |
| 30° | 4374.9 | 4363.8 | 4214.5 | 3949.0 | 3755.4 | 3816.2 | 4402.5 | 5359.3 | 6155.8 | *6067.3* | 5414.6 |
| 32.5° | 5149.2 | 5121.5 | 4927.9 | 4568.4 | 4225.5 | 4120.4 | 4579.5 | 5514.2 | 6637.0 | *6482.1* | 5829.5 |
| 35° | 5923.5 | 5918.0 | 5801.8 | 5276.4 | 4811.8 | 4535.3 | 4894.8 | 5752.0 | 7195.6 | *7084.9* | 6277.5 |
| 37.5° | 6542.9 | 6581.6 | 6653.5 | 5951.1 | 5503.1 | 5082.8 | 5315.1 | 6133.7 | 7898.0 | *7820.5* | 6841.6 |
| 40° | 7057.3 | 7123.7 | 7217.7 | 6625.9 | 6144.7 | 5741.0 | 5884.8 | 6758.6 | 8744.2 | *8733.1* | 7516.4 |
| 42.5° | 7499.8 | 7604.8 | 7527.4 | 7190.0 | 6747.6 | 6410.2 | 6509.7 | 7477.6 | 9662.3 | *9712.1* | 8290.7 |
| 45° | 8019.7 | 8086.0 | 8091.6 | 7737.6 | 7328.3 | 7096.0 | 7261.9 | 8296.2 | 10724.2 | *10785.1* | 9114.8 |
| 47.5° | 8589.3 | 8567.2 | 8605.9 | 8346.0 | 7975.4 | 7765.2 | 8063.9 | 9164.5 | 11692.1 | *11907.8* | 9955.4 |
| 50° | 9042.8 | 9120.3 | 9181.1 | 9037.3 | 8694.4 | 8511.9 | 8854.8 | 10060.5 | 12648.9 | *12897.8* | 10751.9 |
| 52.5° | 9092.6 | 9136.9 | 9446.6 | 9584.9 | 9568.3 | 9275.1 | 9673.4 | 10895.7 | 13467.5 | *13854.6* | 11399.0 |
| 55° | 8373.6 | 8683.3 | 9192.2 | 9667.8 | 10292.8 | 10342.6 | 10453.2 | 11692.1 | 14186.5 | *14817.0* | 11952.0 |
| 57.5° | 6880.3 | 7112.6 | 8003.1 | 9136.9 | 10337.1 | 11371.3 | 11802.7 | 12554.9 | 14922.1 | *15613.4* | 12593.6 |
| 60° | 4684.6 | 4590.6 | 5630.3 | 7820.5 | 9673.4 | 11775.1 | 13616.8 | 14059.3 | 15707.5 | *16636.6* | 13285.0 |
| 62.5° | 2544.2 | 2610.5 | 3252.1 | 5038.6 | 7726.5 | 11199.9 | 15171.0 | 16708.5 | 17123.3 | *18047.0* | 14086.9 |
| 65° | 1631.6 | 1692.4 | 2090.6 | 2870.5 | 4524.2 | 8744.2 | 14872.3 | 18976.2 | 18943.0 | *19639.9* | 14723.0 |
| 67.5° | *1117.2* | *1144.9* | *1465.7* | *2035.3* | *2472.3* | *4817.3* | *11564.9* | *18406.5* | *19706.2* | *20038.1* | *14512.8* |
| 70° | 752.2 | 779.8 | 1039.8 | 1504.4 | 1775.4 | 2112.8 | 6891.4 | 15187.6 | 18312.5 | *18522.6* | 12842.5 |
| 72.5° | 475.6 | 503.3 | 630.5 | 1006.6 | 1338.5 | 1194.7 | 3163.6 | 10591.5 | 15237.3 | *15663.2* | 10984.2 |
| 75° | 271.0 | 287.6 | 392.7 | 696.9 | 846.2 | 785.4 | 851.7 | 6631.4 | 10232.0 | *10414.5* | 7311.7 |
| 77.5° | 138.3 | 149.3 | 248.9 | 448.0 | 542.0 | 436.9 | 453.5 | 2887.1 | 3572.9 | *3440.2* | 2007.7 |
| 80° | 66.4 | 77.4 | 154.9 | 271.0 | 354.0 | 248.9 | 265.5 | 652.6 | 857.3 | *730.1* | 470.1 |
| 82.5° | 33.2 | 33.2 | 99.6 | 110.6 | 193.6 | 149.3 | 116.1 | 226.8 | 320.8 | *326.3* | 215.7 |
| 85° | 22.1 | 16.6 | 27.7 | 38.7 | 44.2 | 60.8 | 66.4 | 94.0 | 105.1 | *110.6* | 83.0 |
| 87.5° | 0.0 | 0.0 | 5.5 | 5.5 | 11.1 | 16.6 | 27.7 | 38.7 | 38.7 | *44.2* | 38.7 |
| 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: P1359576
CATALOG NUMBER: GSS-SB5B-727-U-T2-HSS

**CANDELA DISTRIBUTION (continued):**

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0° | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 | 2953.4 |
| 2.5° | 2986.6 | 2970.0 | 2865.0 | 2776.5 | 2699.0 | 2643.7 | 2571.8 | 2555.2 | 2511.0 | 2483.3 | 2488.9 |
| 5° | 3036.4 | 2959.0 | 2765.4 | 2599.5 | 2417.0 | 2234.4 | 2074.0 | 2018.7 | 1908.1 | 1869.4 | 1880.5 |
| 7.5° | 3097.2 | 3003.2 | 2688.0 | 2361.6 | 2046.4 | 1814.1 | 1587.3 | 1449.1 | 1338.5 | 1294.2 | 1288.7 |
| 10° | 3213.4 | 3053.0 | 2593.9 | 2123.8 | 1686.9 | 1371.6 | 1172.5 | 1095.1 | 1056.4 | 1045.3 | 1045.3 |
| 12.5° | 3335.1 | 3108.3 | 2466.7 | 1836.2 | 1332.9 | 1089.6 | 1012.1 | 990.0 | 979.0 | 973.4 | 973.4 |
| 15° | 3456.7 | 3147.0 | 2284.2 | 1487.8 | 1084.0 | 984.5 | 951.3 | 940.2 | 923.6 | 918.1 | 929.2 |
| 17.5° | 3628.2 | 3174.7 | 2074.0 | 1216.8 | 973.4 | 923.6 | 890.5 | 879.4 | 862.8 | 857.3 | 862.8 |
| 20° | 3777.5 | 3218.9 | 1830.7 | 1039.8 | 907.1 | 868.3 | 824.1 | 802.0 | 796.4 | 790.9 | 790.9 |
| 22.5° | 3954.5 | 3268.7 | 1548.6 | 940.2 | 851.7 | 796.4 | 746.7 | 730.1 | 719.0 | 719.0 | 719.0 |
| 25° | 4203.4 | 3307.4 | 1321.9 | 896.0 | 790.9 | 724.5 | 674.8 | 658.2 | 652.6 | 647.1 | 652.6 |
| 27.5° | 4413.6 | 3307.4 | 1172.5 | 868.3 | 741.1 | 663.7 | 619.4 | 608.4 | 597.3 | 586.3 | 591.8 |
| 30° | 4612.7 | 3235.5 | 1061.9 | 846.2 | 707.9 | 613.9 | 580.7 | 558.6 | 547.5 | 531.0 | 531.0 |
| 32.5° | 4839.4 | 3169.1 | 1017.7 | 824.1 | 674.8 | 575.2 | 542.0 | 525.4 | 514.4 | 497.8 | 497.8 |
| 35° | 5082.8 | 3053.0 | 1012.1 | 807.5 | 641.6 | 547.5 | 514.4 | 503.3 | 486.7 | 475.6 | 475.6 |
| 37.5° | 5425.7 | 2981.1 | 1001.1 | 785.4 | 613.9 | 519.9 | 486.7 | 481.2 | 470.1 | 459.1 | 464.6 |
| 40° | 5884.8 | 2975.6 | 979.0 | 768.8 | 591.8 | 492.2 | 464.6 | 453.5 | 453.5 | 442.5 | 442.5 |
| 42.5° | 6327.2 | 2997.7 | 979.0 | 735.6 | 569.7 | 464.6 | 442.5 | 436.9 | 425.9 | 409.3 | 409.3 |
| 45° | 6869.2 | 3080.7 | 990.0 | 702.4 | 547.5 | 448.0 | 425.9 | 414.8 | 403.7 | 392.7 | 392.7 |
| 47.5° | 7372.5 | 3185.7 | 1001.1 | 669.2 | 525.4 | 431.4 | 414.8 | 409.3 | 392.7 | 381.6 | 387.2 |
| 50° | 7798.4 | 3312.9 | 973.4 | 636.0 | 492.2 | 425.9 | 403.7 | 398.2 | 376.1 | 370.6 | 376.1 |
| 52.5° | 8180.0 | 3390.4 | 890.5 | 602.9 | 459.1 | 414.8 | 392.7 | 387.2 | 365.0 | 359.5 | 354.0 |
| 55° | 8473.2 | 3418.0 | 796.4 | 553.1 | 431.4 | 398.2 | 376.1 | 365.0 | 348.4 | 337.4 | 331.8 |
| 57.5° | 8760.8 | 3307.4 | 674.8 | 486.7 | 398.2 | 370.6 | 354.0 | 342.9 | 320.8 | 298.7 | 293.1 |
| 60° | 9092.6 | 3169.1 | 564.1 | 403.7 | 359.5 | 342.9 | 326.3 | 315.3 | 287.6 | 248.9 | 248.9 |
| 62.5° | 9479.8 | 3102.8 | 448.0 | 331.8 | 315.3 | 298.7 | 298.7 | 287.6 | 243.4 | 204.6 | 199.1 |
| 65° | 9767.4 | 2704.6 | 342.9 | 276.5 | 271.0 | 254.4 | 259.9 | 254.4 | 204.6 | 154.9 | 149.3 |
| 67.5° | *9424.5* | *1935.8* | *265.5* | *232.3* | *226.8* | *204.6* | *221.2* | *215.7* | *177.0* | *132.7* | *121.7* |
| 70° | 8047.3 | 1261.0 | 215.7 | 193.6 | 182.5 | 154.9 | 182.5 | 188.0 | 149.3 | 105.1 | 99.6 |
| 72.5° | 6847.1 | 807.5 | 171.5 | 154.9 | 127.2 | 110.6 | 143.8 | 160.4 | 121.7 | 83.0 | 77.4 |
| 75° | 4739.9 | 508.8 | 127.2 | 116.1 | 88.5 | 77.4 | 116.1 | 127.2 | 99.6 | 55.3 | 55.3 |
| 77.5° | 1565.2 | 254.4 | 94.0 | 77.4 | 60.8 | 55.3 | 88.5 | 94.0 | 66.4 | 38.7 | 33.2 |
| 80° | 298.7 | 121.7 | 66.4 | 49.8 | 44.2 | 33.2 | 55.3 | 49.8 | 27.7 | 22.1 | 22.1 |
| 82.5° | 143.8 | 71.9 | 49.8 | 38.7 | 22.1 | 22.1 | 16.6 | 22.1 | 22.1 | 16.6 | 16.6 |
| 85° | 66.4 | 44.2 | 33.2 | 22.1 | 16.6 | 11.1 | 11.1 | 16.6 | 16.6 | 16.6 | 11.1 |
| 87.5° | 38.7 | 33.2 | 22.1 | 16.6 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 11.1 | 5.5 |
| 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: SP1-2407-184-3

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

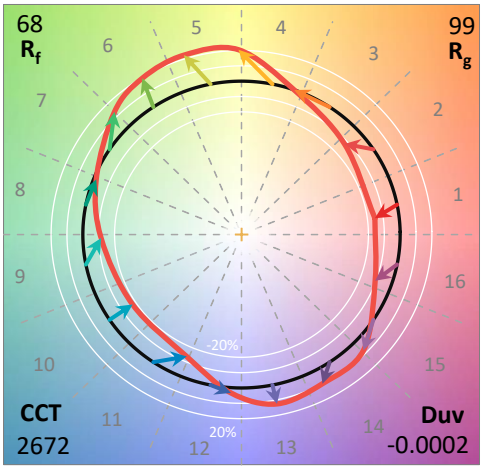
## Test Information

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

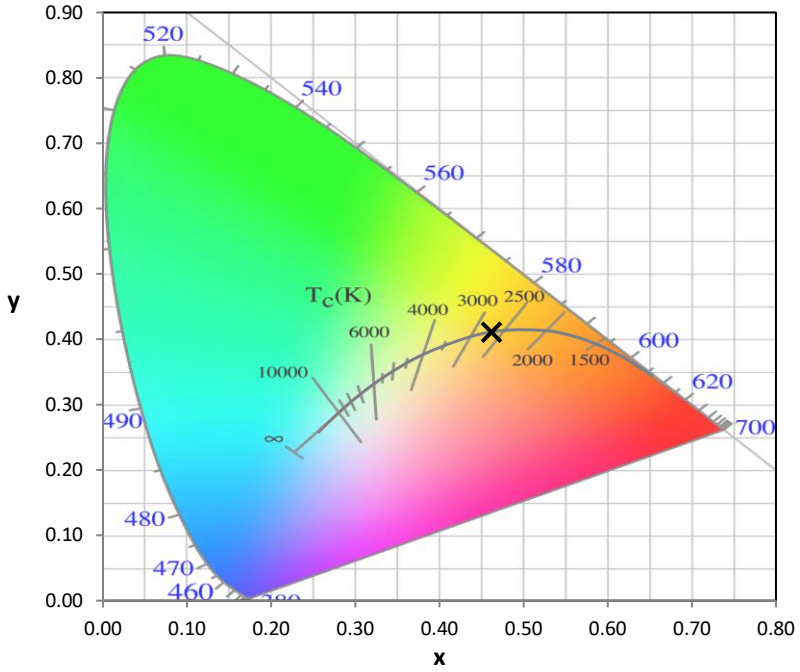
| | |
|---|---|
| Stabilization Time: | 21M |
| Operation Time: | 1H 21M |
| Sphere Temperature (°C): | 25.2 |

REPORT NUMBER: SP1-2407-184-3

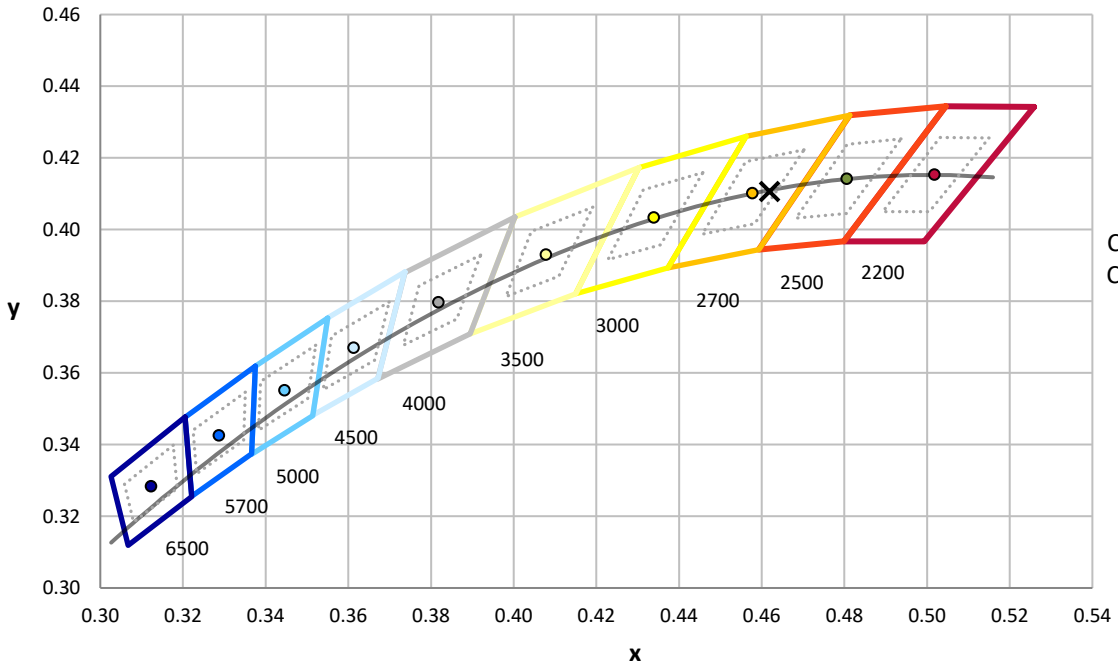
| Measurement and Test Equipment | | | |
|---|---|---|---|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/18/2024 | 12/18/2024 |
| Power Meter | INXT2011004 | 2/8/2024 | 2/8/2025 |
| AC Power Source | IN0063 | 10/24/2023 | 10/24/2024 |
| DC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

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## CIE 1931 Chromaticity Diagram




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

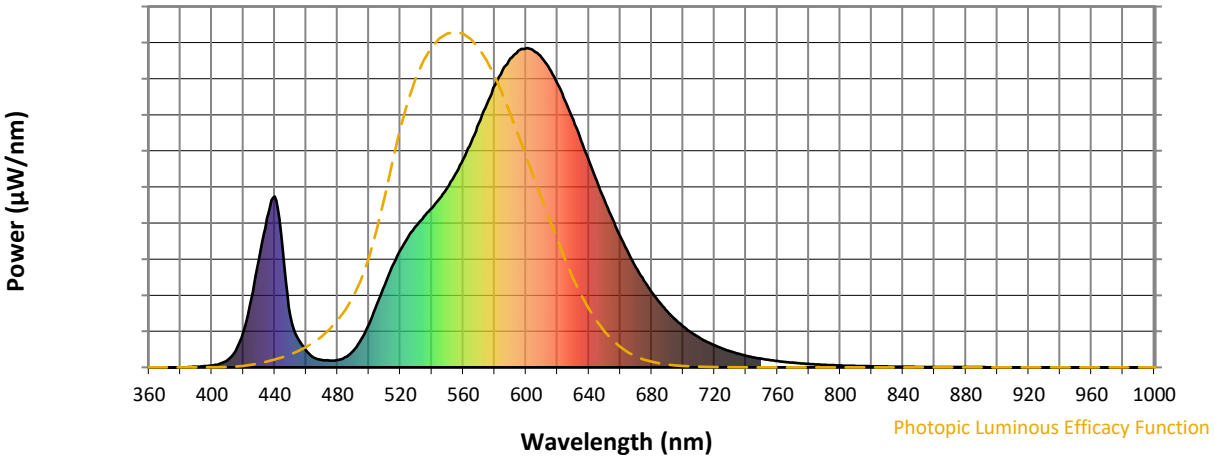



CCT = 2672K
CIE x = 0.4619
CIE y = 0.4106
Duv = -0.0002

Point lies inside the ANSI 2700K 4-step quadrangle

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## Photopic Flux vs. Wavelength

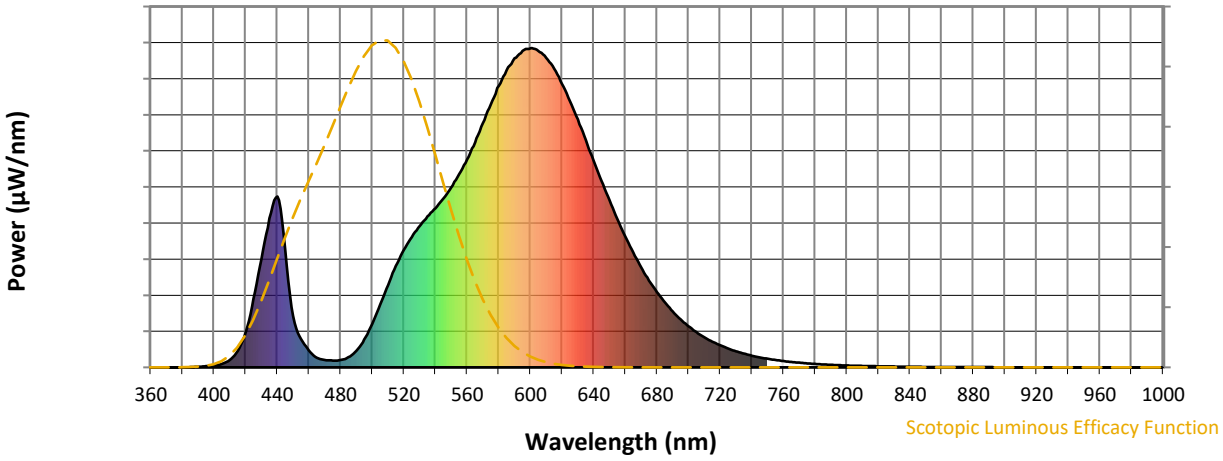



## Photopic Lumens: NR

| 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 | 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 | | | |

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## Scotopic Flux vs. Wavelength

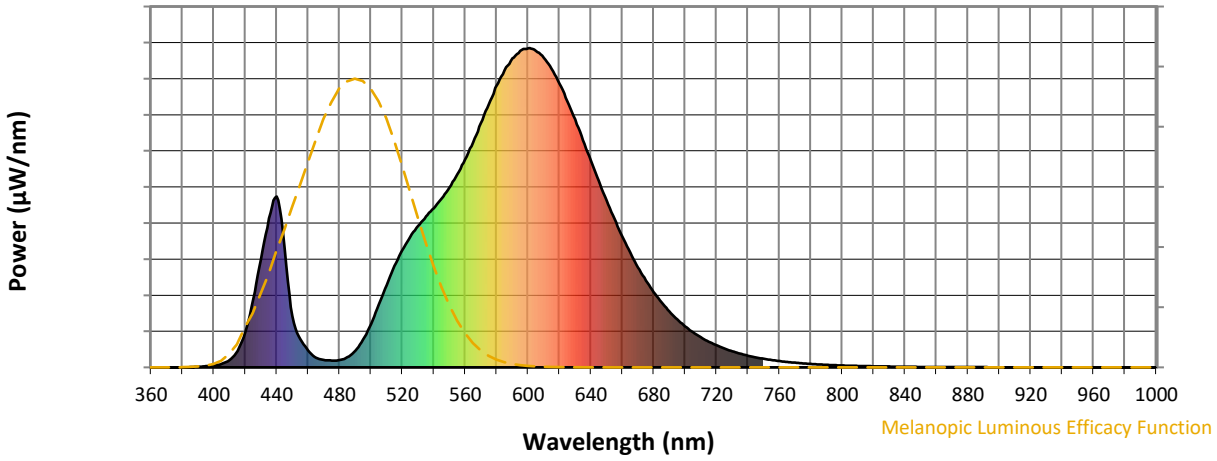



**Scotopic Lumens: NR** **S/P: 1.02**

| 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 | | | |

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## 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 | | | |

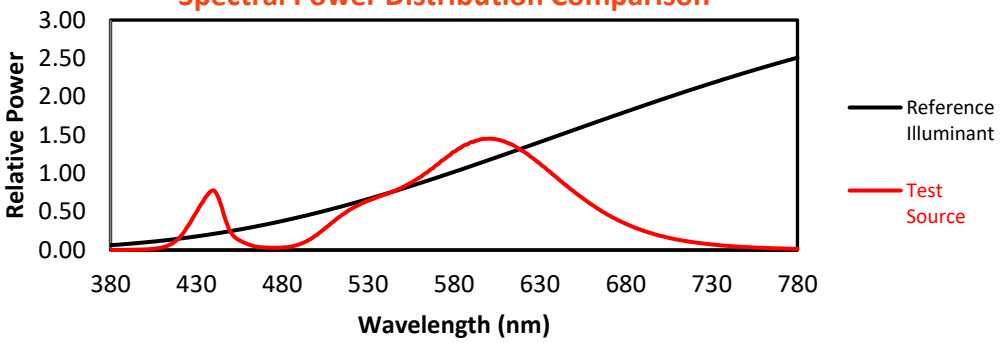
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# TM-30-18

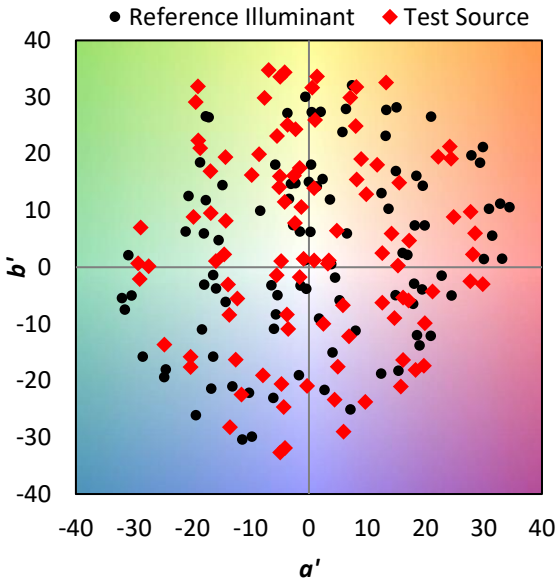
## Summary

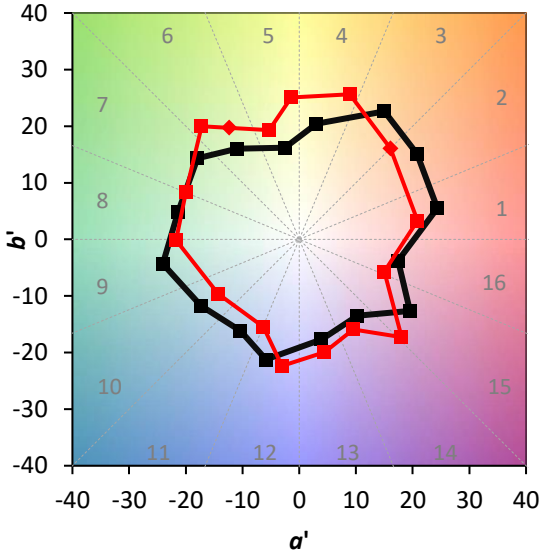
$R_f$ = 67.9
$R_g$ = 98.6
CIE $R_a$ = 71.1
$R_9$ = -27.8

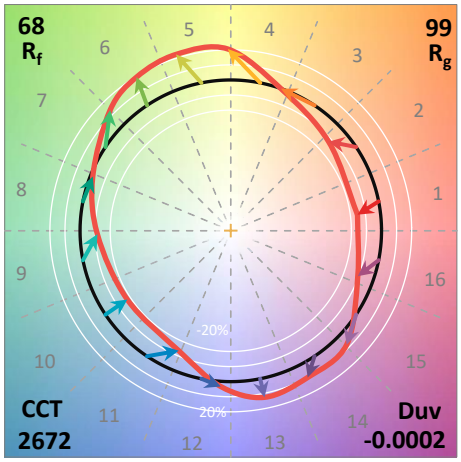
## Spectral Power Distribution Comparison

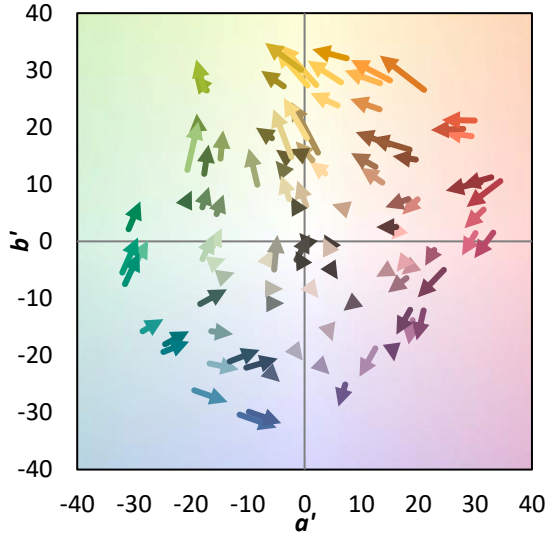



## Color Vector Graphics



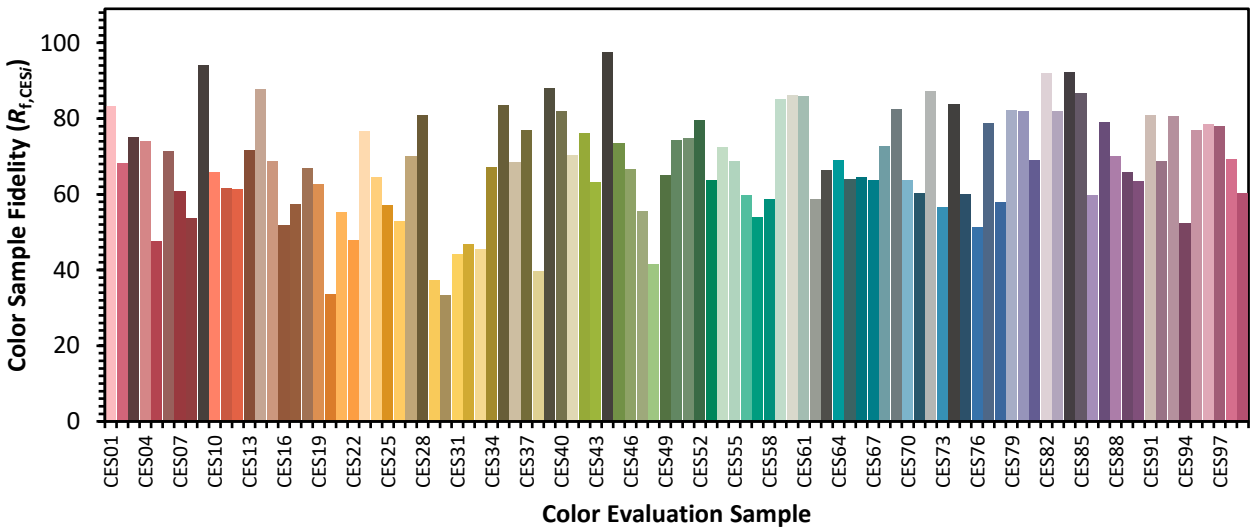



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**Individual Sample Fidelity Index ($R_{f,i}$)**

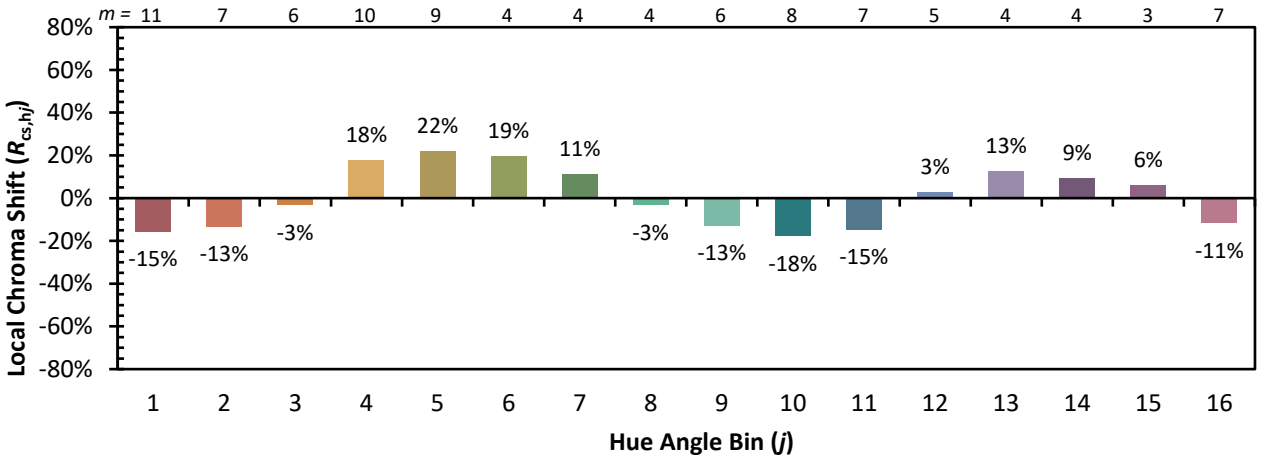
| | | | |
|---|---|---|---|
| CES01 = 86 | CES26 = 53 | CES51 = 75 | CES76 = 51 |
| CES02 = 63 | CES27 = 70 | CES52 = 80 | CES77 = 79 |
| CES03 = 31 | CES28 = 81 | CES53 = 64 | CES78 = 58 |
| CES04 = 71 | CES29 = 37 | CES54 = 73 | CES79 = 82 |
| CES05 = 50 | CES30 = 33 | CES55 = 69 | CES80 = 82 |
| CES06 = 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 | |

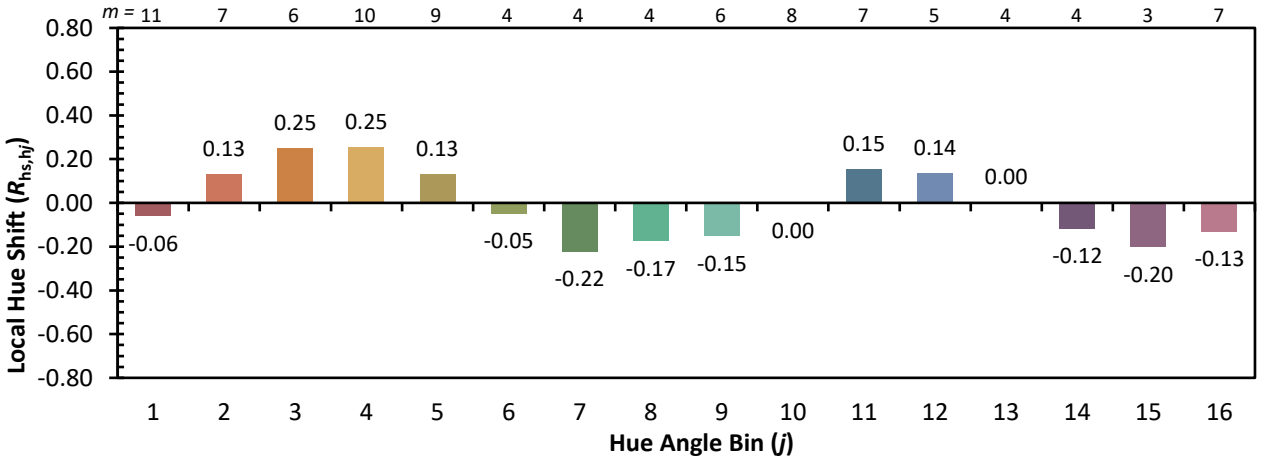


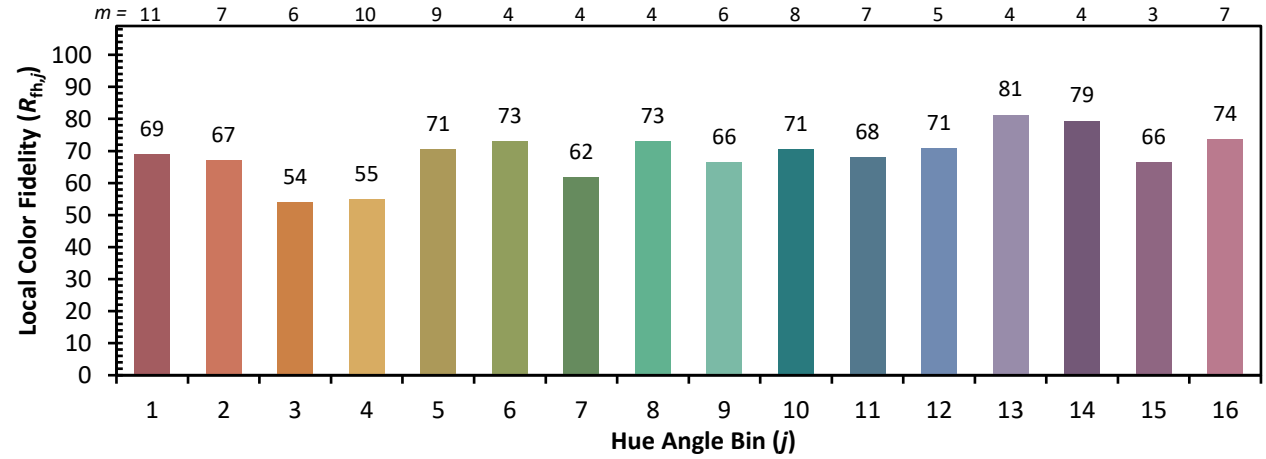
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## Color Rendition by Hue-Angle Bin



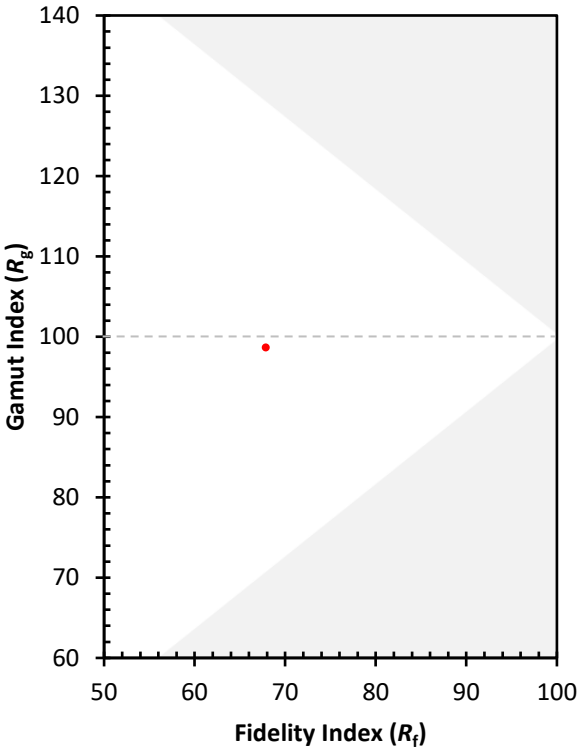



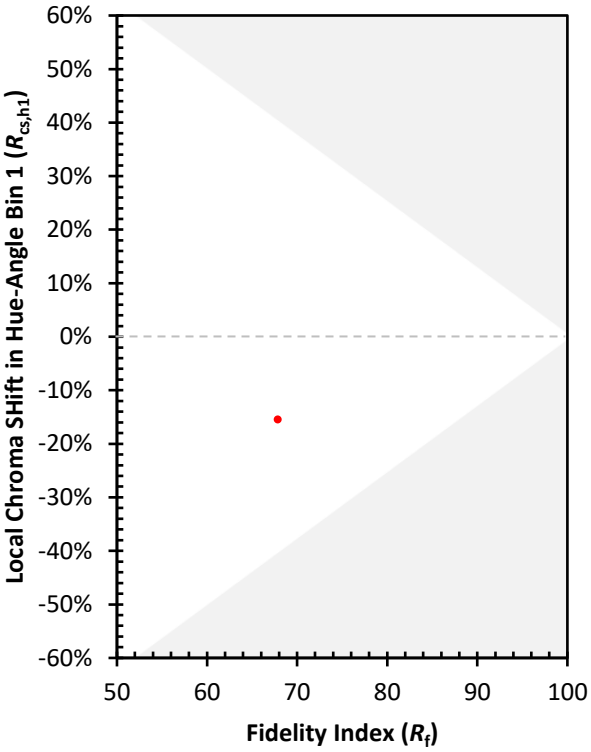



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## Measure Comparisons




(END OF REPORT)