

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P641398

Luminaire Tested: GWS-SA5F-827-U-SLR-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641398
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA5F-827-U-SLR-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (80) 2700K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16369 lumens
Efficiency: N/A
Efficacy: 52.8 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G2

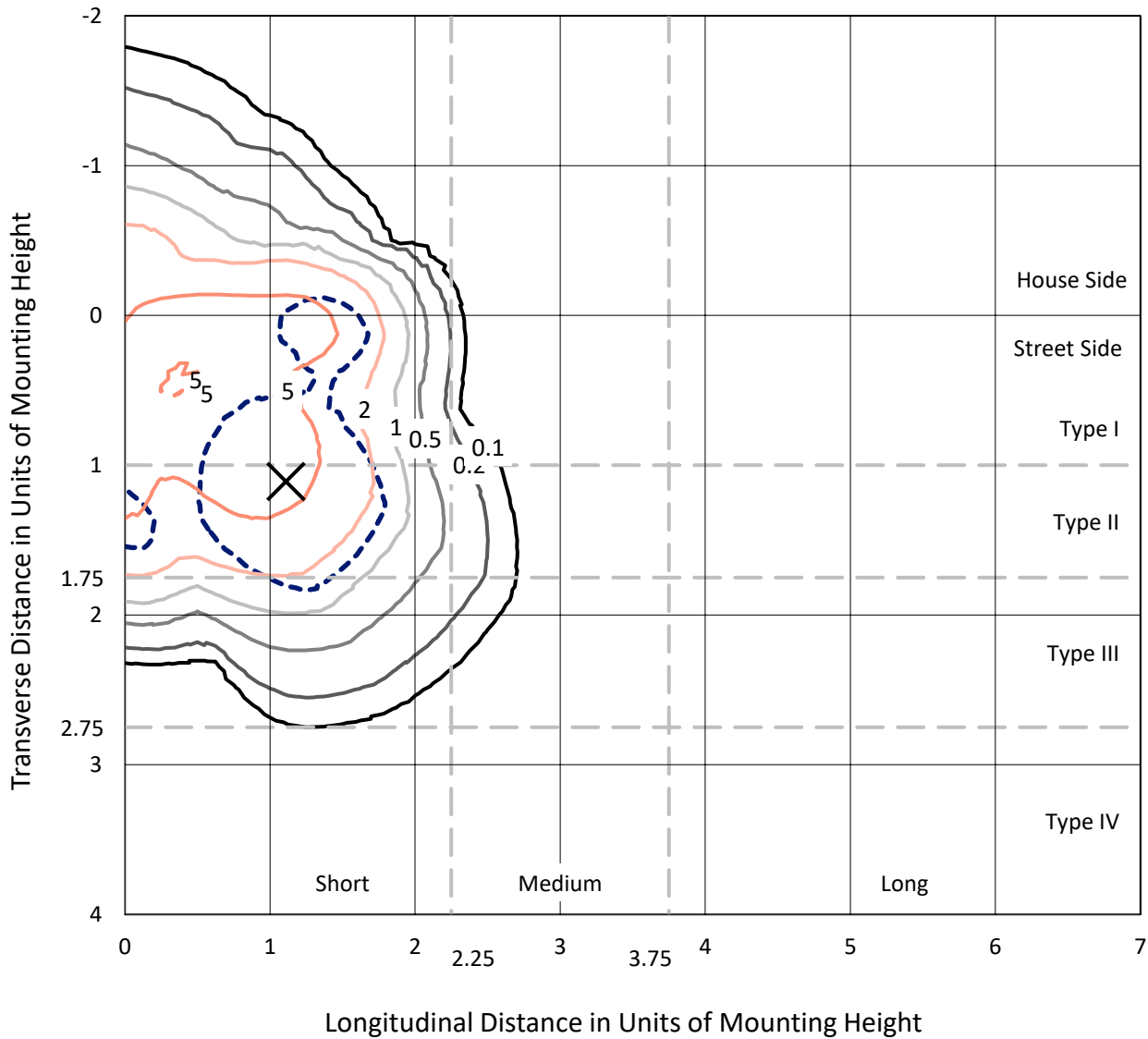
Input Watts (W): 310.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

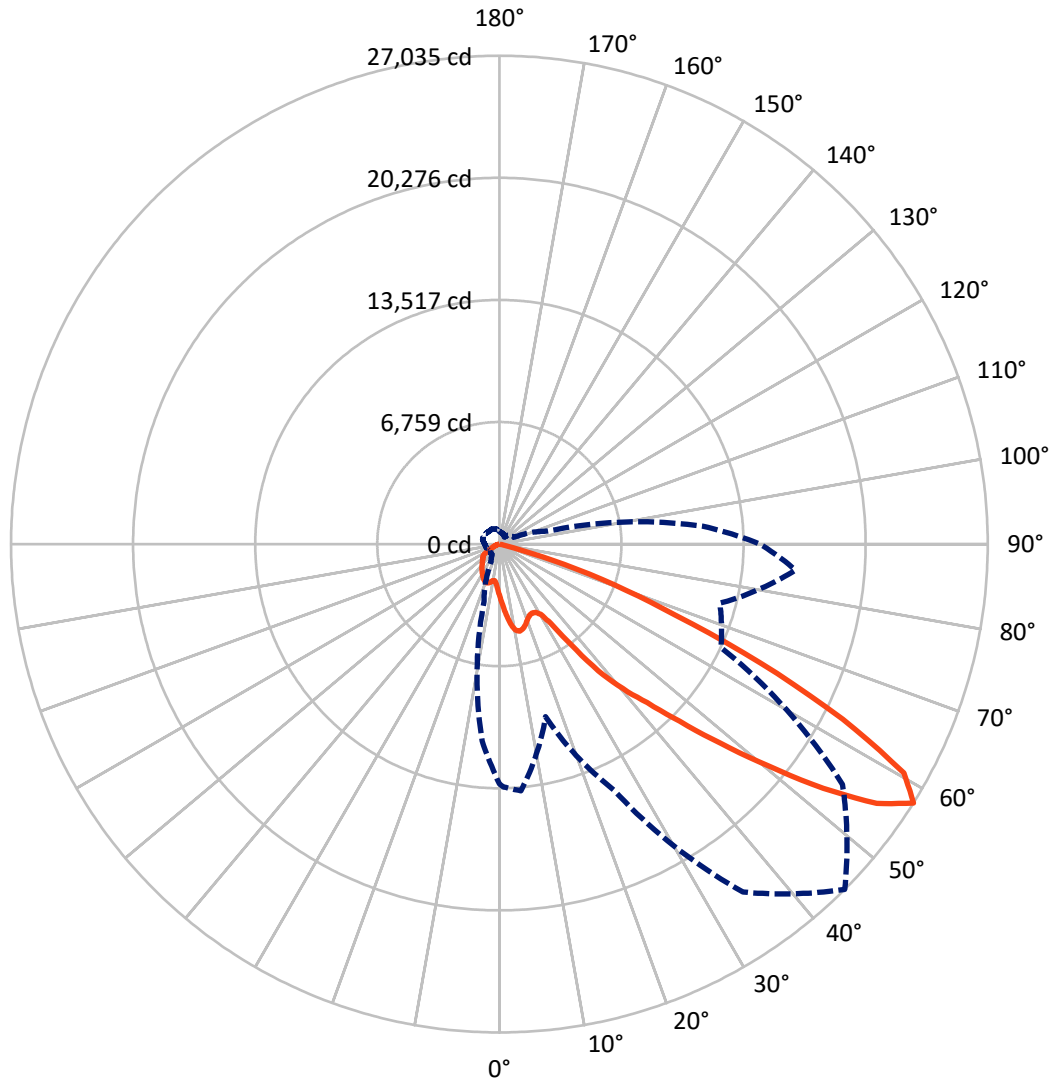
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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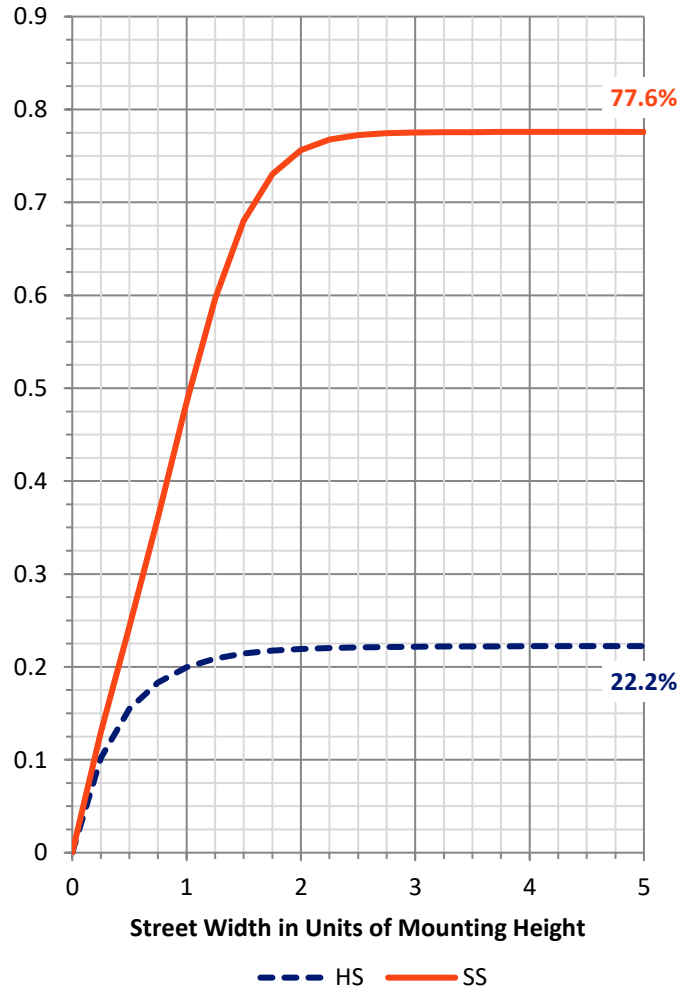
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3665.5 | 0.0 | 3665.5 |
| | % Fixture | 22.4 | 0.0 | 22.4 |
| Street Side | Lumens | 12703.6 | 0.0 | 12703.6 |
| | % Fixture | 77.6 | 0.0 | 77.6 |
| Total | Lumens | 16369.0 | 0.0 | 16369.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 283.0 | 1.7 |
| 10°-20° | 915.6 | 5.6 |
| 20°-30° | 1487.3 | 9.1 |
| 30°-40° | 2298.1 | 14.0 |
| 40°-50° | 3685.1 | 22.5 |
| 50°-60° | 5036.5 | 30.8 |
| 60°-70° | 2439.3 | 14.9 |
| 70°-80° | 223.4 | 1.4 |
| 80°-90° | 0.6 | 0.0 |
| 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° | 16369.0 | 100.0 |
| 0°-180° | 16369.0 | 100.0 |

Coefficient of Utilization



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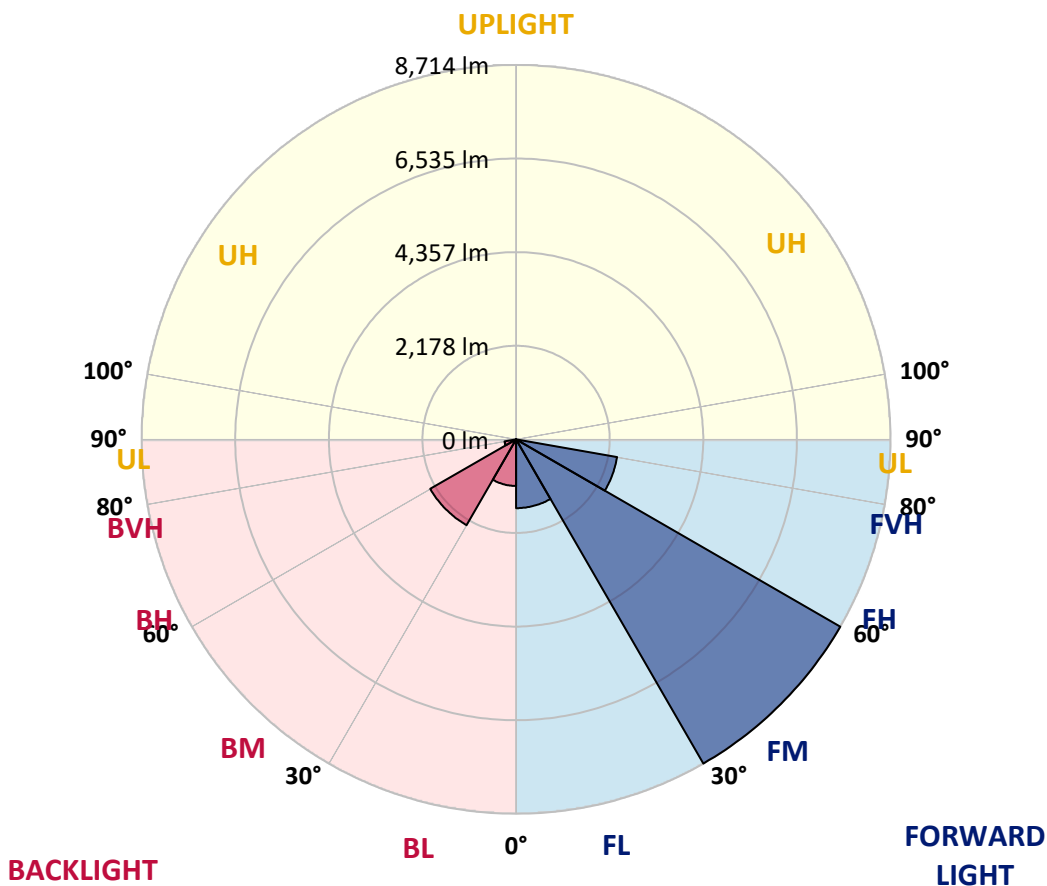
CATALOG NUMBER: GWS-SA5F-827-U-SLR-W-GRSBK

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1601.4 | 9.8 | | | |
| FM (30°-60°) | 8713.6 | 53.2 | | | |
| FH (60°-80°) | 2387.9 | 14.6 | | | G2/5000 |
| FVH (80°-90°) | 0.6 | 0.0 | | | G0/10 |
| BL (0°-30°) | 1084.6 | 6.6 | B3/2500 | | |
| BM (30°-60°) | 2306.1 | 14.1 | B2/2500 | | |
| BH (60°-80°) | 274.7 | 1.7 | B1/500 | | G1/500 |
| BVH (80°-90°) | 0.0 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 |
| 2.5° | 3116.8 | 3136.6 | 3169.6 | 3240.0 | 3299.3 | 3338.9 | 3356.5 | 3352.1 | 3327.9 | 3310.3 | 3275.1 |
| 5° | 3451.1 | 3451.1 | 3514.9 | 3675.5 | 3798.6 | 3875.6 | 3915.2 | 3891.0 | 3842.6 | 3765.7 | 3646.9 |
| 7.5° | 3743.7 | 3754.7 | 3862.4 | 4091.2 | 4278.1 | 4388.1 | 4451.9 | 4438.7 | 4352.9 | 4205.6 | 3968.0 |
| 10° | 3972.4 | 3985.6 | 4128.6 | 4407.9 | 4627.9 | 4740.1 | 4834.6 | 4843.4 | 4748.9 | 4553.1 | 4280.3 |
| 12.5° | 4194.6 | 4207.8 | 4357.3 | 4625.7 | 4819.2 | 4865.4 | 4949.0 | 4982.0 | 4957.8 | 4819.2 | 4535.5 |
| 15° | 4434.3 | 4465.1 | 4592.7 | 4792.8 | 4874.2 | 4819.2 | 4874.2 | 4933.6 | 5015.0 | 5001.8 | 4746.7 |
| 17.5° | 4669.7 | 4691.7 | 4821.4 | 4891.8 | 4801.6 | 4658.7 | 4685.1 | 4755.5 | 4940.2 | 5120.6 | 4955.6 |
| 20° | 4887.4 | 4918.2 | 5026.0 | 4933.6 | 4660.9 | 4438.7 | 4440.9 | 4533.3 | 4814.8 | 5193.2 | 5169.0 |
| 22.5° | 5116.2 | 5162.4 | 5239.4 | 4979.8 | 4531.1 | 4265.0 | 4275.9 | 4359.5 | 4715.9 | 5261.4 | 5410.9 |
| 25° | 5415.3 | 5459.3 | 5509.9 | 5094.2 | 4489.3 | 4179.2 | 4221.0 | 4297.9 | 4715.9 | 5377.9 | 5710.1 |
| 27.5° | 5820.0 | 5850.8 | 5853.0 | 5307.5 | 4561.9 | 4192.4 | 4280.3 | 4368.3 | 4856.6 | 5611.1 | 6110.4 |
| 30° | 6328.1 | 6376.5 | 6312.7 | 5639.7 | 4788.4 | 4368.3 | 4498.1 | 4608.1 | 5160.2 | 6004.8 | 6699.9 |
| 32.5° | 6946.2 | 7014.4 | 6928.6 | 6132.4 | 5261.4 | 4975.4 | 5210.8 | 5274.6 | 5644.1 | 6574.5 | 7368.5 |
| 35° | 7672.1 | 7729.3 | 7636.9 | 6814.2 | 6365.5 | 6418.3 | 6845.0 | 6763.7 | 6616.3 | 7276.2 | 8149.4 |
| 37.5° | 8468.3 | 8521.1 | 8342.9 | 7848.0 | 7997.6 | 8226.4 | 8908.2 | 8628.9 | 8153.8 | 8180.2 | 8996.2 |
| 40° | 9198.6 | 9255.8 | 8976.4 | 8972.0 | 9280.0 | 9697.9 | 10520.5 | 10135.6 | 9488.9 | 9363.5 | 9790.3 |
| 42.5° | 9955.2 | 9994.8 | 9741.9 | 9570.3 | 10269.8 | 11129.8 | 12000.8 | 11481.7 | 10373.1 | 10236.8 | 10784.5 |
| 45° | 11035.2 | 11118.8 | 10667.9 | 9865.0 | 11160.6 | 12777.3 | 13991.4 | 12977.4 | 10975.8 | 10865.8 | 12306.6 |
| 47.5° | 12623.3 | 12684.9 | 11765.5 | 10049.8 | 11989.8 | 14829.4 | 16479.1 | 14917.4 | 11505.9 | 11255.2 | 14387.3 |
| 50° | 13936.4 | 13978.2 | 12775.1 | 10252.2 | 12871.8 | 17042.2 | 19314.4 | 17218.2 | 12102.0 | 11899.6 | 16329.6 |
| 52.5° | 14904.2 | 15062.6 | 14101.4 | 10667.9 | 14031.0 | 19644.3 | 22453.1 | 19943.4 | 13032.4 | 13144.6 | 17939.6 |
| 55° | 15104.4 | 15320.0 | 15007.6 | 10923.0 | 15051.6 | 22294.8 | 25352.2 | 22382.7 | 13960.6 | 14088.2 | 18480.7 |
| 57.5° | 13274.4 | 13445.9 | 13705.5 | 9893.6 | 15027.4 | 23508.9 | 27034.8 | 23192.2 | 13538.3 | 12634.3 | 16454.9 |
| 60° | 9944.2 | 10063.0 | 10533.7 | 7562.1 | 13819.8 | 22435.5 | 25723.9 | 21815.3 | 11838.0 | 9640.7 | 12537.5 |
| 62.5° | 5897.0 | 5949.8 | 6545.9 | 4898.4 | 11470.7 | 19321.0 | 21333.6 | 18823.9 | 9354.7 | 6484.3 | 7678.7 |
| 65° | 2263.3 | 2241.4 | 2696.7 | 2417.3 | 8435.3 | 15390.3 | 15867.6 | 14349.9 | 6418.3 | 2971.6 | 2927.6 |
| 67.5° | 349.7 | 334.3 | 450.9 | 714.9 | 6084.0 | 10665.7 | 10469.9 | 10342.3 | 4020.8 | 692.9 | 604.9 |
| 70° | 79.2 | 79.2 | 96.8 | 211.2 | 3717.3 | 6266.6 | 6706.5 | 6394.1 | 2573.5 | 147.4 | 79.2 |
| 72.5° | 37.4 | 37.4 | 46.2 | 90.2 | 1346.1 | 2582.3 | 3009.0 | 2962.8 | 835.8 | 48.4 | 28.6 |
| 75° | 13.2 | 15.4 | 15.4 | 19.8 | 81.4 | 134.2 | 307.9 | 220.0 | 52.8 | 0.0 | 0.0 |
| 77.5° | 4.4 | 4.4 | 4.4 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 2.2 | 2.2 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: GWS-SA5F-827-U-SLR-W-GRSBK

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 |
| 2.5° | 3198.2 | 3182.8 | 3125.6 | 3048.6 | 2973.8 | 2907.8 | 2839.6 | 2758.3 | 2698.9 | 2630.7 | 2608.7 |
| 5° | 3554.5 | 3457.7 | 3301.5 | 3138.8 | 2989.2 | 2861.6 | 2738.5 | 2606.5 | 2509.7 | 2412.9 | 2379.9 |
| 7.5° | 3855.8 | 3712.9 | 3459.9 | 3215.8 | 3011.2 | 2830.8 | 2652.7 | 2472.3 | 2331.5 | 2217.2 | 2182.0 |
| 10° | 4126.4 | 3961.4 | 3622.7 | 3321.3 | 3064.0 | 2855.0 | 2639.5 | 2412.9 | 2230.4 | 2094.0 | 2061.0 |
| 12.5° | 4359.5 | 4168.2 | 3761.3 | 3400.5 | 3086.0 | 2846.2 | 2637.3 | 2456.9 | 2291.9 | 2135.8 | 2094.0 |
| 15° | 4555.3 | 4344.1 | 3877.8 | 3453.3 | 3053.0 | 2736.3 | 2553.7 | 2525.1 | 2511.9 | 2340.3 | 2259.0 |
| 17.5° | 4746.7 | 4509.1 | 3972.4 | 3477.5 | 2960.6 | 2542.7 | 2410.7 | 2540.5 | 2679.1 | 2566.9 | 2463.5 |
| 20° | 4946.8 | 4676.3 | 4069.2 | 3481.9 | 2806.6 | 2324.9 | 2302.9 | 2507.5 | 2683.5 | 2648.3 | 2551.5 |
| 22.5° | 5182.2 | 4885.2 | 4190.2 | 3479.7 | 2613.1 | 2140.2 | 2223.8 | 2443.7 | 2586.7 | 2584.5 | 2507.5 |
| 25° | 5523.1 | 5149.2 | 4352.9 | 3492.9 | 2401.9 | 1997.2 | 2135.8 | 2335.9 | 2452.5 | 2448.1 | 2384.3 |
| 27.5° | 5888.2 | 5463.7 | 4564.1 | 3525.9 | 2221.6 | 1913.6 | 2032.4 | 2188.6 | 2289.7 | 2285.3 | 2230.4 |
| 30° | 6400.7 | 5826.6 | 4766.5 | 3528.1 | 2091.8 | 1869.6 | 1918.0 | 2025.8 | 2122.6 | 2111.6 | 2069.8 |
| 32.5° | 7023.2 | 6235.8 | 4935.8 | 3402.7 | 2010.4 | 1827.8 | 1799.2 | 1854.2 | 1929.0 | 1913.6 | 1902.6 |
| 35° | 7775.5 | 6721.9 | 5081.0 | 3127.8 | 1885.0 | 1744.3 | 1667.3 | 1678.3 | 1731.1 | 1739.9 | 1735.5 |
| 37.5° | 8633.3 | 7300.3 | 5261.4 | 2764.8 | 1715.7 | 1623.3 | 1519.9 | 1511.1 | 1541.9 | 1570.5 | 1592.5 |
| 40° | 9480.1 | 7951.4 | 5505.5 | 2397.5 | 1561.7 | 1469.3 | 1370.3 | 1348.3 | 1361.5 | 1412.1 | 1458.3 |
| 42.5° | 10432.5 | 8705.9 | 5769.5 | 2083.0 | 1456.1 | 1299.9 | 1205.4 | 1163.6 | 1201.0 | 1282.3 | 1337.3 |
| 45° | 11805.1 | 9763.9 | 6026.8 | 1832.2 | 1412.1 | 1150.4 | 1022.8 | 1018.4 | 1060.2 | 1165.8 | 1227.4 |
| 47.5° | 13731.9 | 11132.0 | 6196.2 | 1636.5 | 1409.9 | 1033.8 | 882.0 | 908.4 | 956.8 | 1060.2 | 1130.6 |
| 50° | 15610.3 | 12845.4 | 6009.2 | 1486.9 | 1363.7 | 956.8 | 776.4 | 829.2 | 877.6 | 967.8 | 1040.4 |
| 52.5° | 16743.1 | 13767.1 | 5281.1 | 1346.1 | 1220.8 | 921.6 | 673.1 | 765.4 | 774.2 | 855.6 | 932.6 |
| 55° | 16624.3 | 13171.0 | 4045.0 | 1128.4 | 1009.6 | 871.0 | 565.3 | 690.7 | 695.1 | 756.6 | 822.6 |
| 57.5° | 14429.1 | 11307.9 | 2778.0 | 915.0 | 758.8 | 719.3 | 466.3 | 582.9 | 624.7 | 662.1 | 710.5 |
| 60° | 10753.7 | 8250.6 | 1238.4 | 743.5 | 481.7 | 486.1 | 398.1 | 439.9 | 503.7 | 547.7 | 589.5 |
| 62.5° | 6336.9 | 4746.7 | 503.7 | 446.5 | 266.1 | 305.7 | 321.1 | 321.1 | 360.7 | 393.7 | 420.1 |
| 65° | 2395.3 | 1660.7 | 204.6 | 224.4 | 138.6 | 143.0 | 189.2 | 233.2 | 263.9 | 292.5 | 327.7 |
| 67.5° | 420.1 | 290.3 | 105.6 | 83.6 | 81.4 | 72.6 | 96.8 | 151.8 | 169.4 | 191.4 | 206.8 |
| 70° | 70.4 | 59.4 | 44.0 | 41.8 | 37.4 | 39.6 | 63.8 | 107.8 | 118.8 | 125.4 | 132.0 |
| 72.5° | 19.8 | 17.6 | 13.2 | 11.0 | 8.8 | 11.0 | 39.6 | 83.6 | 88.0 | 92.4 | 99.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.4 | 59.4 | 63.8 | 66.0 | 72.6 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.2 | 17.6 | 22.0 | 17.6 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: GWS-SA5F-827-U-SLR-W-GRSBK

CANDELA DISTRIBUTION (continued):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 |
| 2.5° | 2595.5 | 2551.5 | 2527.3 | 2514.1 | 2514.1 | 2496.5 | 2476.7 | 2470.1 | 2498.7 | 2498.7 | 2547.1 |
| 5° | 2338.1 | 2302.9 | 2263.3 | 2239.2 | 2201.8 | 2208.4 | 2186.4 | 2184.2 | 2212.8 | 2226.0 | 2276.5 |
| 7.5° | 2160.0 | 2116.0 | 2091.8 | 2076.4 | 2056.6 | 2047.8 | 2028.0 | 2021.4 | 2036.8 | 2058.8 | 2107.2 |
| 10° | 2041.2 | 2034.6 | 2032.4 | 2043.4 | 2043.4 | 2032.4 | 2014.8 | 2003.8 | 2008.2 | 2050.0 | 2105.0 |
| 12.5° | 2072.0 | 2085.2 | 2089.6 | 2107.2 | 2116.0 | 2107.2 | 2094.0 | 2098.4 | 2127.0 | 2204.0 | 2285.3 |
| 15° | 2206.2 | 2195.2 | 2190.8 | 2199.6 | 2206.2 | 2197.4 | 2193.0 | 2226.0 | 2324.9 | 2434.9 | 2527.3 |
| 17.5° | 2349.1 | 2278.7 | 2248.0 | 2248.0 | 2252.4 | 2248.0 | 2252.4 | 2316.1 | 2476.7 | 2586.7 | 2654.9 |
| 20° | 2421.7 | 2291.9 | 2243.6 | 2232.6 | 2241.4 | 2243.6 | 2259.0 | 2331.5 | 2507.5 | 2584.5 | 2599.9 |
| 22.5° | 2399.7 | 2237.0 | 2182.0 | 2173.2 | 2182.0 | 2190.8 | 2206.2 | 2267.7 | 2432.7 | 2472.3 | 2465.7 |
| 25° | 2289.7 | 2129.2 | 2085.2 | 2085.2 | 2105.0 | 2102.8 | 2109.4 | 2153.4 | 2289.7 | 2313.9 | 2302.9 |
| 27.5° | 2151.2 | 1999.4 | 1962.0 | 1984.0 | 2001.6 | 1997.2 | 1999.4 | 2036.8 | 2138.0 | 2144.6 | 2133.6 |
| 30° | 2010.4 | 1878.4 | 1843.2 | 1869.6 | 1893.8 | 1889.4 | 1891.6 | 1929.0 | 1992.8 | 1986.2 | 1970.8 |
| 32.5° | 1867.4 | 1770.6 | 1744.3 | 1759.6 | 1797.0 | 1792.6 | 1801.4 | 1841.0 | 1865.2 | 1836.6 | 1819.0 |
| 35° | 1735.5 | 1684.9 | 1665.1 | 1673.9 | 1702.5 | 1709.1 | 1724.5 | 1750.9 | 1750.9 | 1715.7 | 1684.9 |
| 37.5° | 1612.3 | 1605.7 | 1592.5 | 1581.5 | 1607.9 | 1627.7 | 1649.7 | 1680.5 | 1636.5 | 1585.9 | 1557.3 |
| 40° | 1497.9 | 1526.5 | 1508.9 | 1480.3 | 1495.7 | 1524.3 | 1568.3 | 1592.5 | 1539.7 | 1489.1 | 1440.7 |
| 42.5° | 1392.3 | 1440.7 | 1434.1 | 1398.9 | 1412.1 | 1438.5 | 1489.1 | 1508.9 | 1447.3 | 1390.1 | 1343.9 |
| 45° | 1291.1 | 1359.3 | 1363.7 | 1319.7 | 1332.9 | 1359.3 | 1418.7 | 1425.3 | 1346.1 | 1284.5 | 1251.6 |
| 47.5° | 1203.2 | 1277.9 | 1280.1 | 1247.2 | 1251.6 | 1288.9 | 1343.9 | 1346.1 | 1256.0 | 1198.8 | 1157.0 |
| 50° | 1119.6 | 1205.4 | 1212.0 | 1183.4 | 1187.8 | 1231.8 | 1277.9 | 1269.1 | 1172.4 | 1113.0 | 1075.6 |
| 52.5° | 1018.4 | 1135.0 | 1150.4 | 1137.2 | 1154.8 | 1190.0 | 1218.6 | 1187.8 | 1075.6 | 1016.2 | 983.2 |
| 55° | 908.4 | 1060.2 | 1093.2 | 1084.4 | 1104.2 | 1132.8 | 1139.4 | 1119.6 | 978.8 | 919.4 | 888.6 |
| 57.5° | 780.8 | 873.2 | 930.4 | 912.8 | 928.2 | 956.8 | 976.6 | 961.2 | 855.6 | 809.4 | 783.0 |
| 60° | 646.7 | 708.3 | 721.5 | 692.9 | 679.7 | 730.3 | 776.4 | 756.6 | 666.5 | 637.9 | 607.1 |
| 62.5° | 472.9 | 543.3 | 552.1 | 514.7 | 499.3 | 554.3 | 593.9 | 574.1 | 475.1 | 444.3 | 420.1 |
| 65° | 378.3 | 444.3 | 461.9 | 426.7 | 417.9 | 459.7 | 483.9 | 435.5 | 365.1 | 332.1 | 305.7 |
| 67.5° | 248.6 | 301.3 | 347.5 | 345.3 | 327.7 | 340.9 | 323.3 | 283.7 | 233.2 | 215.6 | 198.0 |
| 70° | 154.0 | 184.8 | 213.4 | 224.4 | 222.2 | 217.8 | 193.6 | 165.0 | 149.6 | 143.0 | 134.2 |
| 72.5° | 118.8 | 149.6 | 171.6 | 178.2 | 180.4 | 173.8 | 154.0 | 127.6 | 112.2 | 103.4 | 96.8 |
| 75° | 88.0 | 112.2 | 129.8 | 138.6 | 143.0 | 138.6 | 118.8 | 101.2 | 85.8 | 79.2 | 72.6 |
| 77.5° | 30.8 | 37.4 | 46.2 | 50.6 | 48.4 | 46.2 | 41.8 | 41.8 | 33.0 | 30.8 | 26.4 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P641398

CATALOG NUMBER: GWS-SA5F-827-U-SLR-W-GRSBK

CANDELA DISTRIBUTION (continued):

| | 285° | 295° | 305° | 315° | 325° | 335° | 345° | 355° | 359° | 360° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 | 2877.0 |
| 2.5° | 2602.1 | 2641.7 | 2714.3 | 2780.2 | 2850.6 | 2923.2 | 3002.4 | 3083.8 | 3121.2 | 3116.8 |
| 5° | 2353.5 | 2439.3 | 2558.1 | 2687.9 | 2833.0 | 2989.2 | 3163.0 | 3341.1 | 3418.1 | 3451.1 |
| 7.5° | 2197.4 | 2318.3 | 2474.5 | 2639.5 | 2830.8 | 3053.0 | 3314.7 | 3594.1 | 3706.3 | 3743.7 |
| 10° | 2217.2 | 2357.9 | 2487.7 | 2648.3 | 2852.8 | 3141.0 | 3466.5 | 3798.6 | 3930.6 | 3972.4 |
| 12.5° | 2377.7 | 2408.5 | 2443.7 | 2575.7 | 2833.0 | 3207.0 | 3605.1 | 4001.0 | 4152.8 | 4194.6 |
| 15° | 2522.9 | 2379.9 | 2313.9 | 2434.9 | 2762.7 | 3253.2 | 3745.9 | 4218.8 | 4385.9 | 4434.3 |
| 17.5° | 2529.5 | 2313.9 | 2166.6 | 2261.2 | 2648.3 | 3272.9 | 3884.4 | 4440.9 | 4623.5 | 4669.7 |
| 20° | 2448.1 | 2241.4 | 2052.2 | 2054.4 | 2492.1 | 3268.5 | 3998.8 | 4641.1 | 4845.6 | 4887.4 |
| 22.5° | 2329.3 | 2155.6 | 1959.8 | 1891.6 | 2324.9 | 3259.8 | 4124.2 | 4854.4 | 5076.6 | 5116.2 |
| 25° | 2197.4 | 2045.6 | 1871.8 | 1768.4 | 2157.8 | 3268.5 | 4300.1 | 5133.8 | 5377.9 | 5415.3 |
| 27.5° | 2054.4 | 1924.6 | 1803.6 | 1720.1 | 2017.0 | 3301.5 | 4511.3 | 5490.1 | 5780.4 | 5820.0 |
| 30° | 1904.8 | 1808.0 | 1759.6 | 1709.1 | 1929.0 | 3310.3 | 4740.1 | 5905.8 | 6273.2 | 6328.1 |
| 32.5° | 1757.5 | 1704.7 | 1706.9 | 1715.7 | 1845.4 | 3248.8 | 4949.0 | 6367.7 | 6858.2 | 6946.2 |
| 35° | 1621.1 | 1605.7 | 1649.7 | 1693.7 | 1724.5 | 3090.4 | 5131.6 | 6913.2 | 7581.9 | 7672.1 |
| 37.5° | 1504.5 | 1517.7 | 1572.7 | 1616.7 | 1592.5 | 2866.0 | 5373.5 | 7595.1 | 8391.3 | 8468.3 |
| 40° | 1392.3 | 1425.3 | 1489.1 | 1508.9 | 1491.3 | 2604.3 | 5663.9 | 8252.8 | 9093.0 | 9198.6 |
| 42.5° | 1288.9 | 1313.1 | 1403.3 | 1407.7 | 1462.7 | 2338.1 | 5943.2 | 8961.0 | 9900.2 | 9955.2 |
| 45° | 1205.4 | 1201.0 | 1293.3 | 1321.9 | 1500.1 | 2043.4 | 6216.0 | 9904.6 | 10956.0 | 11035.2 |
| 47.5° | 1124.0 | 1119.6 | 1141.6 | 1271.3 | 1515.5 | 1770.6 | 6486.5 | 11286.0 | 12486.9 | 12623.3 |
| 50° | 1047.0 | 1053.6 | 985.4 | 1247.2 | 1431.9 | 1561.7 | 6609.7 | 12563.9 | 13879.2 | 13936.4 |
| 52.5° | 978.8 | 954.6 | 835.8 | 1168.0 | 1253.8 | 1363.7 | 6260.0 | 13144.6 | 14741.5 | 14904.2 |
| 55° | 882.0 | 747.9 | 688.5 | 948.0 | 989.8 | 1190.0 | 5127.2 | 12808.1 | 14816.3 | 15104.4 |
| 57.5° | 754.4 | 587.3 | 585.1 | 699.5 | 699.5 | 1104.2 | 3283.9 | 10942.8 | 12768.5 | 13274.4 |
| 60° | 580.7 | 455.3 | 483.9 | 486.1 | 448.7 | 805.0 | 1843.2 | 7927.2 | 9440.5 | 9944.2 |
| 62.5° | 413.5 | 347.5 | 365.1 | 290.3 | 257.3 | 402.5 | 884.2 | 4564.1 | 5826.6 | 5897.0 |
| 65° | 277.1 | 235.4 | 191.4 | 160.6 | 158.4 | 171.6 | 365.1 | 1649.7 | 2006.0 | 2263.3 |
| 67.5° | 182.6 | 143.0 | 101.2 | 101.2 | 114.4 | 114.4 | 138.6 | 272.7 | 382.7 | 349.7 |
| 70° | 118.8 | 99.0 | 63.8 | 61.6 | 74.8 | 74.8 | 70.4 | 74.8 | 79.2 | 79.2 |
| 72.5° | 88.0 | 74.8 | 37.4 | 33.0 | 41.8 | 44.0 | 39.6 | 37.4 | 37.4 | 37.4 |
| 75° | 66.0 | 52.8 | 22.0 | 15.4 | 19.8 | 26.4 | 22.0 | 15.4 | 15.4 | 13.2 |
| 77.5° | 26.4 | 19.8 | 8.8 | 6.6 | 11.0 | 15.4 | 13.2 | 6.6 | 4.4 | 4.4 |
| 80° | 2.2 | 4.4 | 4.4 | 4.4 | 6.6 | 8.8 | 11.0 | 4.4 | 2.2 | 2.2 |
| 82.5° | 0.0 | 2.2 | 2.2 | 2.2 | 4.4 | 6.6 | 8.8 | 4.4 | 2.2 | 2.2 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 4.4 | 6.6 | 4.4 | 2.2 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 6.6 | 4.4 | 2.2 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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



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

Report Prepared for

Cooper Lighting Solutions

Invue

Report Number: SP1-2407-157-9

Test Date: 10/03/2024

Luminaire Tested: EMM2-HTN-SA1A-827-U-5WQ

Data applicable to all product families utilizing light square engine

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2407-157-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/03/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Invue
 Catalog Number: **EMM2-HTN-SA1A-827-U-5WQ**
 Description: Epic Modern Light Square 40W 5WQ Optic

Spectral Parameters

CCT (K): 2764
 CIE u': 0.2591
 CIE v': 0.5290
 Duv: 0.0020
 CIE x: 0.4581
 CIE y: 0.4156
 CIE z: 0.1263
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 583
 Purity: 62.2537
 Rf: 84.7
 Rg: 94.6

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 80.9 | | |
| R1: | 78.8 | R9: | -1.5 |
| R2: | 89.9 | R10: | 77.9 |
| R3: | 96.2 | R11: | 78.9 |
| R4: | 79.1 | R12: | 71.6 |
| R5: | 79.1 | R13: | 81.2 |
| R6: | 88.8 | R14: | 98.5 |
| R7: | 81.3 | R15: | 69.9 |
| R8: | 54.3 | | |



Test Conditions

Stabilization Time: 81M
 Operation Time: 2H 21M
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-157-9

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

REPORT NUMBER: SP1-2407-157-9

CIE 1931 Chromaticity Diagram



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



CCT = 2764K
 CIE x = 0.4581
 CIE y = 0.4156
 Duv = 0.0020

Point lies inside the ANSI 2700K 4-step quadrangle

REPORT NUMBER: SP1-2407-157-9

Photopic Flux vs. Wavelength



Photopic Lumens: 4337.9

| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 0 | 0.0 | 490 | 18018 | 2.6 | 620 | 87426 | 22.8 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 3.9 | 625 | 83013 | 18.2 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 5.8 | 630 | 78077 | 14.1 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 8.5 | 635 | 72080 | 10.7 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 11.5 | 640 | 66249 | 7.9 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 15.2 | 645 | 59973 | 5.7 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 18.7 | 650 | 53972 | 3.9 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 21.9 | 655 | 48369 | 2.7 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 24.9 | 660 | 42641 | 1.8 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 27.6 | 665 | 37602 | 1.1 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.0 | 540 | 46032 | 30.0 | 670 | 32798 | 0.7 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.0 | 545 | 48553 | 32.5 | 675 | 28558 | 0.5 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 0.0 | 550 | 51408 | 34.9 | 680 | 24782 | 0.3 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 0.0 | 555 | 54711 | 37.4 | 685 | 21386 | 0.2 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 0.0 | 560 | 58847 | 40.0 | 690 | 18413 | 0.1 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 0.1 | 565 | 63386 | 42.4 | 695 | 15721 | 0.1 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 0.2 | 570 | 68196 | 44.3 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 0.6 | 575 | 73613 | 46.0 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 0.9 | 580 | 79207 | 47.1 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 0.9 | 585 | 84248 | 47.0 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 0.9 | 590 | 88397 | 45.7 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 1.0 | 595 | 91428 | 43.4 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 0.9 | 600 | 93452 | 40.3 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 1.0 | 605 | 93959 | 36.4 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 1.3 | 610 | 93079 | 32.0 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 1.8 | 615 | 90707 | 27.3 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

REPORT NUMBER: SP1-2407-157-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: 5286.7

S/P: 1.22

| λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) | λ (nm) | Power ($\mu\text{W}/\text{nm}$) | Lumens (ϕ/nm) |
|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|----------------|-----------------------------------|-----------------------------|
| 360 | 0 | 0.0 | 490 | 18018 | 75.9 | 620 | 87426 | 0.4 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 93.2 | 625 | 83013 | 0.2 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 107.8 | 630 | 78077 | 0.1 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 118.7 | 635 | 72080 | 0.1 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 122.2 | 640 | 66249 | 0.1 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 120.8 | 645 | 59973 | 0.0 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 113.9 | 650 | 53972 | 0.0 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 104.1 | 655 | 48369 | 0.0 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 92.4 | 660 | 42641 | 0.0 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 80.5 | 665 | 37602 | 0.0 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.1 | 540 | 46032 | 68.2 | 670 | 32798 | 0.0 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.3 | 545 | 48553 | 57.1 | 675 | 28558 | 0.0 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 1.1 | 550 | 51408 | 46.7 | 680 | 24782 | 0.0 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 2.5 | 555 | 54711 | 37.4 | 685 | 21386 | 0.0 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 5.9 | 560 | 58847 | 29.4 | 690 | 18413 | 0.0 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 12.5 | 565 | 63386 | 22.5 | 695 | 15721 | 0.0 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 26.3 | 570 | 68196 | 16.9 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 55.2 | 575 | 73613 | 12.4 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 85.4 | 580 | 79207 | 9.0 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 75.1 | 585 | 84248 | 6.3 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 63.2 | 590 | 88397 | 4.4 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 63.2 | 595 | 91428 | 3.0 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 54.2 | 600 | 93452 | 2.0 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 48.8 | 605 | 93959 | 1.3 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 54.2 | 610 | 93079 | 0.9 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 63.3 | 615 | 90707 | 0.5 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

REPORT NUMBER: SP1-2407-157-9

Melanopic Flux vs. Wavelength



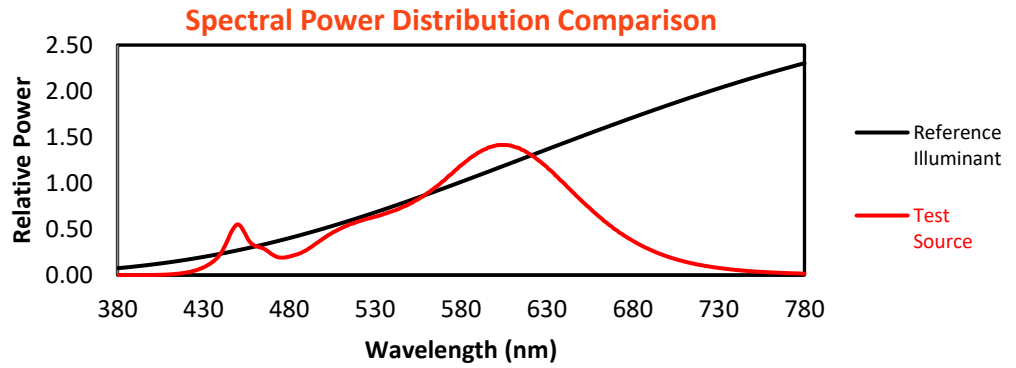
Melanopic Lumens: 9797

M/P: 2.26

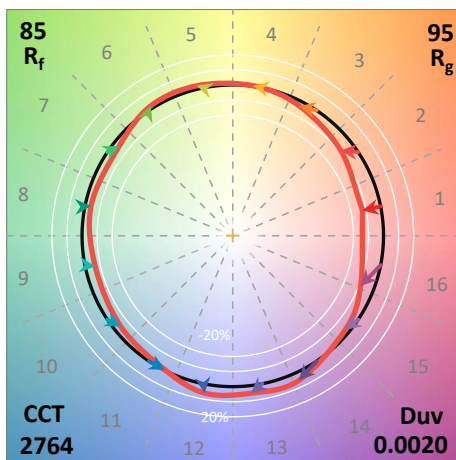
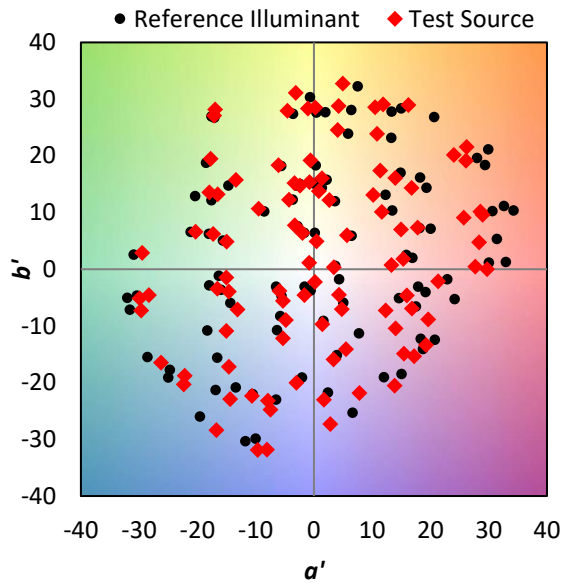
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 0 | 0.0 | 490 | 18018 | 27.7 | 620 | 87426 | 1.1 | 750 | 2680 | 0.0 | 880 | 58 | 0.0 |
| 365 | 0 | 0.0 | 495 | 22295 | 36.0 | 625 | 83013 | 0.7 | 755 | 2287 | 0.0 | 885 | 46 | 0.0 |
| 370 | 0 | 0.0 | 500 | 26478 | 44.2 | 630 | 78077 | 0.4 | 760 | 1944 | 0.0 | 890 | 45 | 0.0 |
| 375 | 0 | 0.0 | 505 | 30524 | 51.8 | 635 | 72080 | 0.3 | 765 | 1653 | 0.0 | 895 | 41 | 0.0 |
| 380 | 0 | 0.0 | 510 | 33611 | 57.0 | 640 | 66249 | 0.2 | 770 | 1413 | 0.0 | 900 | 38 | 0.0 |
| 385 | 0 | 0.0 | 515 | 36490 | 60.5 | 645 | 59973 | 0.1 | 775 | 1198 | 0.0 | 905 | 33 | 0.0 |
| 390 | 0 | 0.0 | 520 | 38610 | 61.4 | 650 | 53972 | 0.1 | 780 | 1025 | 0.0 | 910 | 30 | 0.0 |
| 395 | 0 | 0.0 | 525 | 40511 | 60.6 | 655 | 48369 | 0.0 | 785 | 874 | 0.0 | 915 | 23 | 0.0 |
| 400 | 48 | 0.0 | 530 | 42223 | 58.2 | 660 | 42641 | 0.0 | 790 | 747 | 0.0 | 920 | 24 | 0.0 |
| 405 | 201 | 0.0 | 535 | 44137 | 55.0 | 665 | 37602 | 0.0 | 795 | 639 | 0.0 | 925 | 22 | 0.0 |
| 410 | 457 | 0.0 | 540 | 46032 | 50.9 | 670 | 32798 | 0.0 | 800 | 547 | 0.0 | 930 | 22 | 0.0 |
| 415 | 925 | 0.1 | 545 | 48553 | 46.6 | 675 | 28558 | 0.0 | 805 | 473 | 0.0 | 935 | 17 | 0.0 |
| 420 | 1816 | 0.3 | 550 | 51408 | 42.0 | 680 | 24782 | 0.0 | 810 | 401 | 0.0 | 940 | 13 | 0.0 |
| 425 | 3217 | 0.8 | 555 | 54711 | 37.4 | 685 | 21386 | 0.0 | 815 | 351 | 0.0 | 945 | 6 | 0.0 |
| 430 | 5520 | 1.9 | 560 | 58847 | 32.9 | 690 | 18413 | 0.0 | 820 | 307 | 0.0 | 950 | 10 | 0.0 |
| 435 | 9225 | 4.1 | 565 | 63386 | 28.4 | 695 | 15721 | 0.0 | 825 | 261 | 0.0 | 955 | 11 | 0.0 |
| 440 | 15522 | 8.7 | 570 | 68196 | 24.1 | 700 | 13432 | 0.0 | 830 | 228 | 0.0 | 960 | 8 | 0.0 |
| 445 | 27642 | 18.5 | 575 | 73613 | 20.0 | 705 | 11513 | 0.0 | 835 | 193 | 0.0 | 965 | 12 | 0.0 |
| 450 | 36602 | 28.3 | 580 | 79207 | 16.3 | 710 | 9780 | 0.0 | 840 | 174 | 0.0 | 970 | 3 | 0.0 |
| 455 | 28292 | 24.7 | 585 | 84248 | 12.9 | 715 | 8356 | 0.0 | 845 | 151 | 0.0 | 975 | 8 | 0.0 |
| 460 | 21166 | 20.4 | 590 | 88397 | 9.8 | 720 | 7161 | 0.0 | 850 | 123 | 0.0 | 980 | 2 | 0.0 |
| 465 | 19092 | 20.1 | 595 | 91428 | 7.3 | 725 | 6067 | 0.0 | 855 | 106 | 0.0 | 985 | 13 | 0.0 |
| 470 | 14951 | 17.2 | 600 | 93452 | 5.3 | 730 | 5164 | 0.0 | 860 | 95 | 0.0 | 990 | 16 | 0.0 |
| 475 | 12606 | 15.7 | 605 | 93959 | 3.7 | 735 | 4393 | 0.0 | 865 | 82 | 0.0 | 995 | 20 | 0.0 |
| 480 | 13323 | 18.0 | 610 | 93079 | 2.5 | 740 | 3694 | 0.0 | 870 | 77 | 0.0 | 1000 | 0 | 0.0 |
| 485 | 15164 | 21.9 | 615 | 90707 | 1.7 | 745 | 3157 | 0.0 | 875 | 65 | 0.0 | | | |

Summary

$R_f = 84.7$
 $R_g = 94.6$
 CIE $R_a = 80.9$
 $R_g = -1.5$

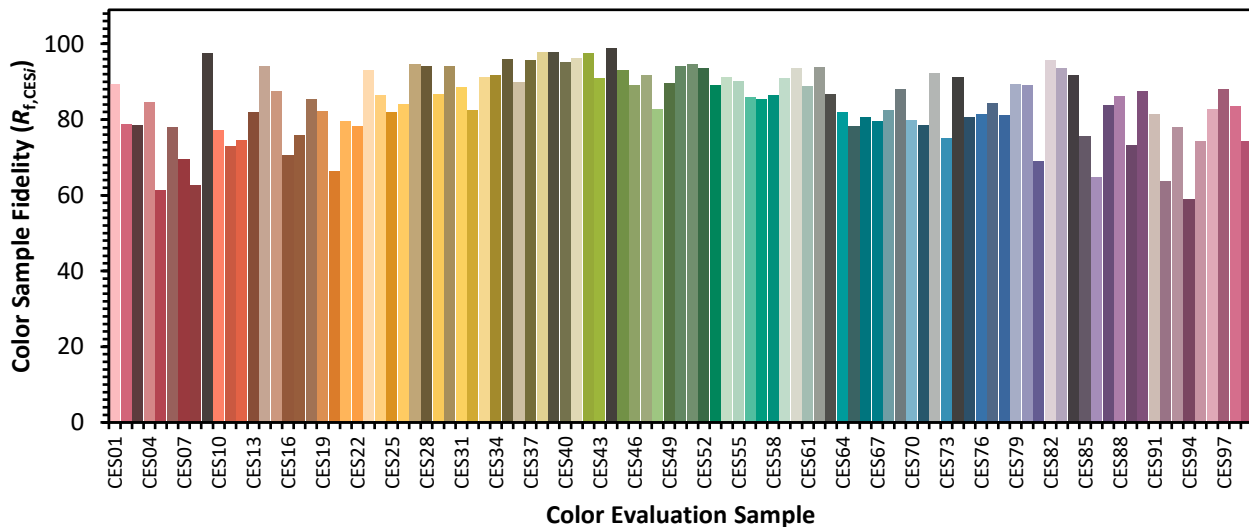


Color Vector Graphics

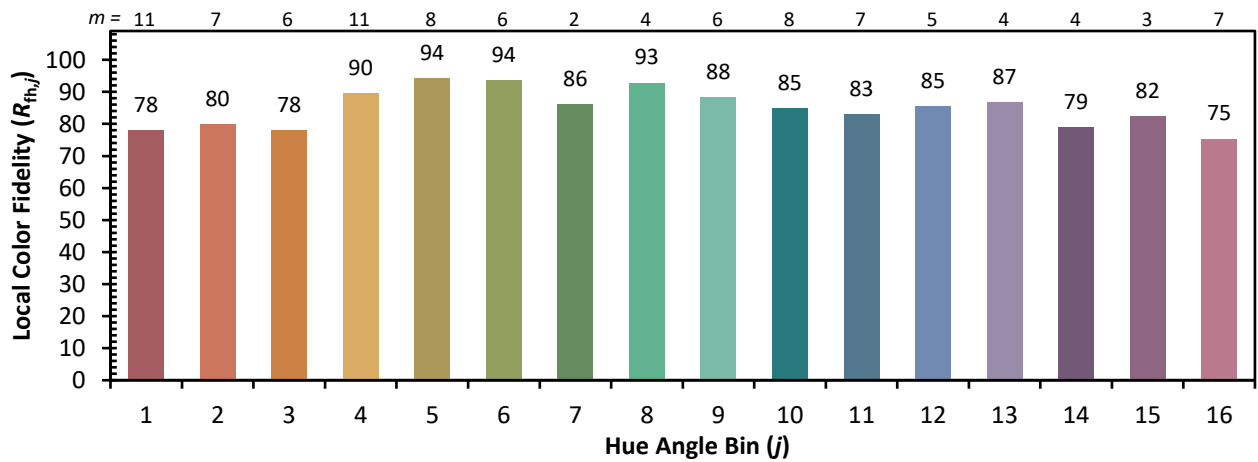


Individual Sample Fidelity Index ($R_{f,i}$)

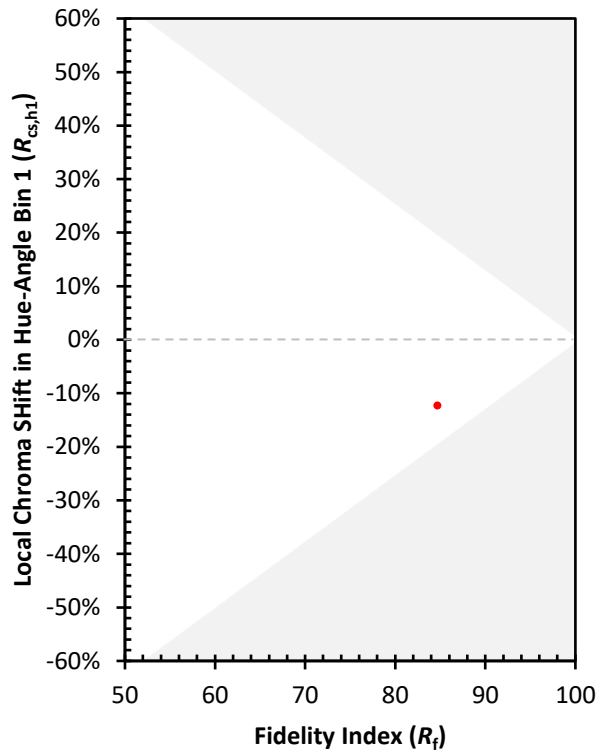
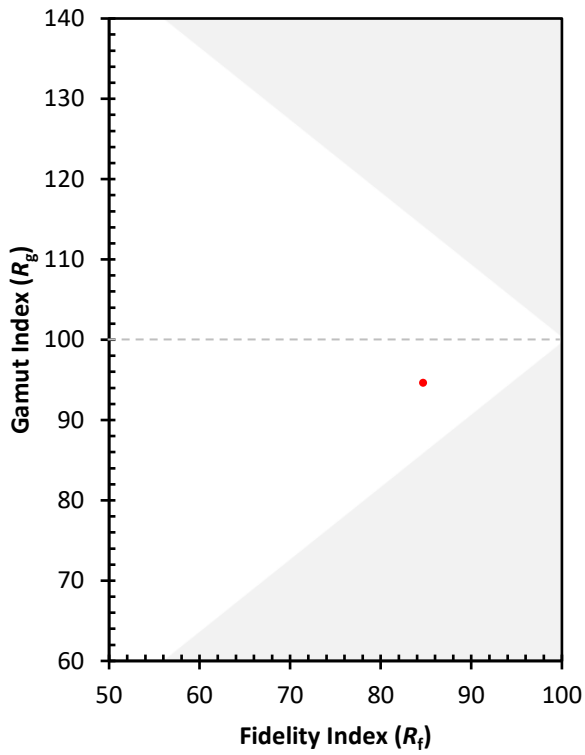
| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 84 | CES51 = 95 | CES76 = 81 |
| CES02 = 63 | CES27 = 95 | CES52 = 94 | CES77 = 84 |
| CES03 = 31 | CES28 = 94 | CES53 = 89 | CES78 = 81 |
| CES04 = 71 | CES29 = 87 | CES54 = 91 | CES79 = 89 |
| CES05 = 50 | CES30 = 94 | CES55 = 90 | CES80 = 89 |
| CES06 = 52 | CES31 = 89 | CES56 = 86 | CES81 = 69 |
| CES07 = 43 | CES32 = 82 | CES57 = 85 | CES82 = 96 |
| CES08 = 41 | CES33 = 91 | CES58 = 86 | CES83 = 93 |
| CES09 = 29 | CES34 = 92 | CES59 = 91 | CES84 = 92 |
| CES10 = 77 | CES35 = 96 | CES60 = 94 | CES85 = 76 |
| CES11 = 60 | CES36 = 90 | CES61 = 89 | CES86 = 65 |
| CES12 = 66 | CES37 = 96 | CES62 = 94 | CES87 = 84 |
| CES13 = 44 | CES38 = 98 | CES63 = 87 | CES88 = 86 |
| CES14 = 74 | CES39 = 98 | CES64 = 82 | CES89 = 73 |
| CES15 = 72 | CES40 = 95 | CES65 = 78 | CES90 = 88 |
| CES16 = 48 | CES41 = 96 | CES66 = 81 | CES91 = 82 |
| CES17 = 50 | CES42 = 97 | CES67 = 80 | CES92 = 64 |
| CES18 = 57 | CES43 = 91 | CES68 = 83 | CES93 = 78 |
| CES19 = 73 | CES44 = 99 | CES69 = 88 | CES94 = 59 |
| CES20 = 67 | CES45 = 93 | CES70 = 80 | CES95 = 74 |
| CES21 = 87 | CES46 = 89 | CES71 = 79 | CES96 = 83 |
| CES22 = 79 | CES47 = 92 | CES72 = 92 | CES97 = 88 |
| CES23 = 92 | CES48 = 83 | CES73 = 75 | CES98 = 83 |
| CES24 = 91 | CES49 = 90 | CES74 = 91 | CES99 = 74 |
| CES25 = 72 | CES50 = 94 | CES75 = 81 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)