

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: P637232

Luminaire Tested: GWS-SA4C-735-U-T3-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P637232
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-25)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4C-735-U-T3-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (64) 3500K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16340.9 lumens
Efficiency: N/A
Efficacy: 127.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

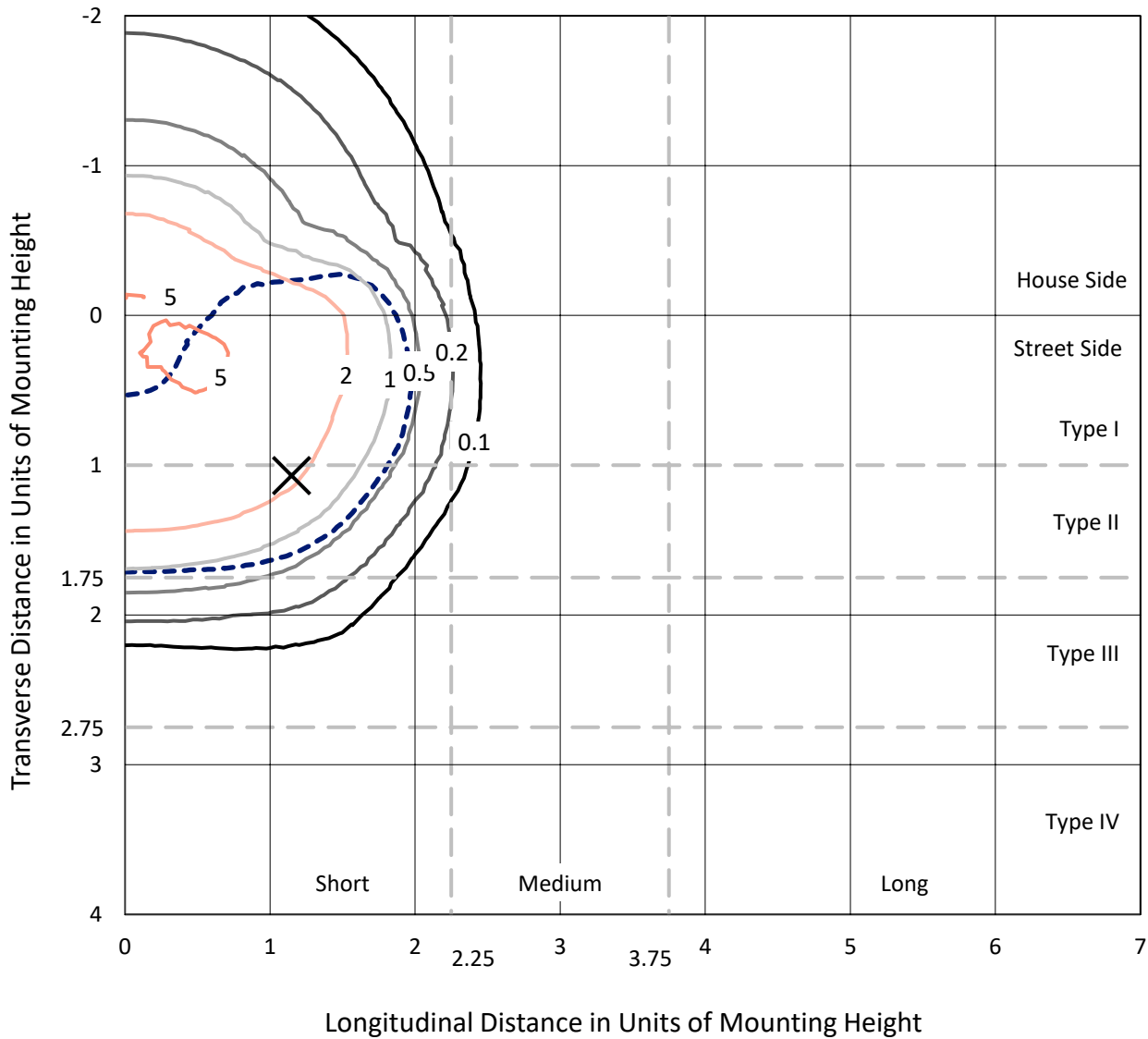
Input Watts (W): 128.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

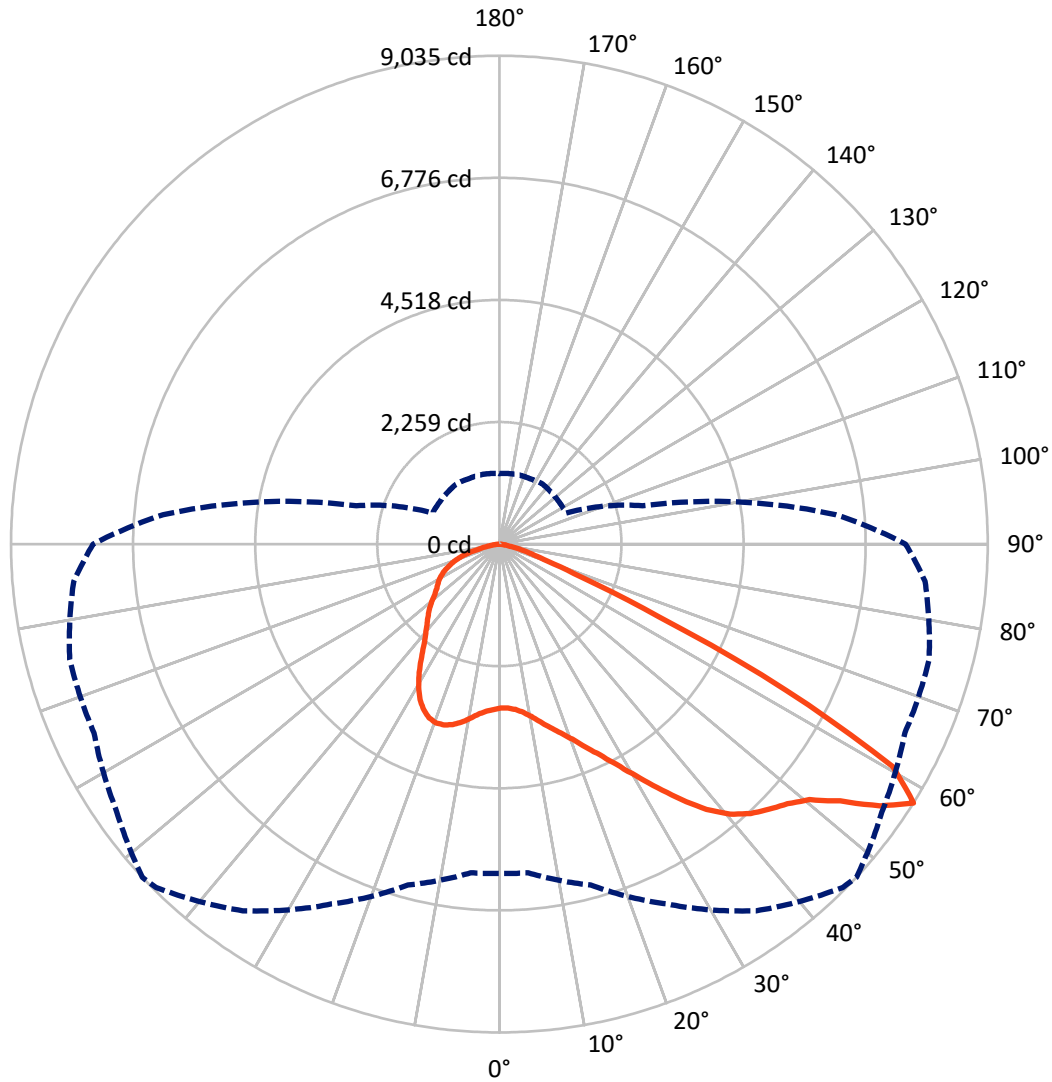
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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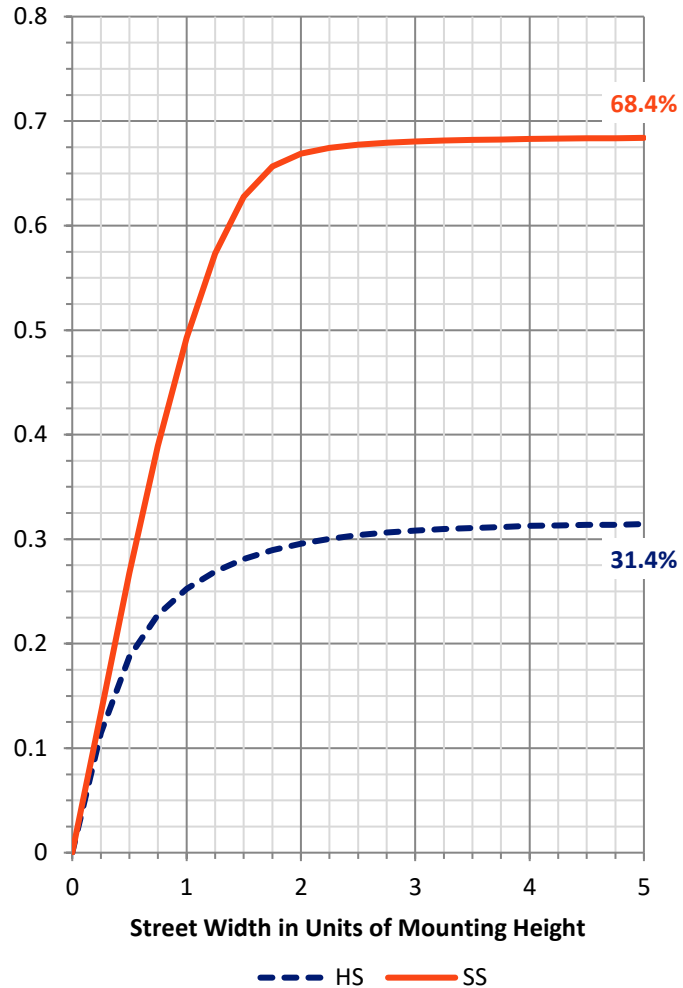
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5171.9 | 0.0 | 5171.9 |
| | % Fixture | 31.6 | 0.0 | 31.6 |
| Street Side | Lumens | 11169.1 | 0.0 | 11169.1 |
| | % Fixture | 68.4 | 0.0 | 68.4 |
| Total | Lumens | 16340.9 | 0.0 | 16340.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 298.9 | 1.8 |
| 10°-20° | 983.1 | 6.0 |
| 20°-30° | 1770.2 | 10.8 |
| 30°-40° | 2673.6 | 16.4 |
| 40°-50° | 3600.4 | 22.0 |
| 50°-60° | 4326.3 | 26.5 |
| 60°-70° | 2107.0 | 12.9 |
| 70°-80° | 519.1 | 3.2 |
| 80°-90° | 62.4 | 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° | 16340.9 | 100.0 |
| 0°-180° | 16340.9 | 100.0 |

Coefficient of Utilization



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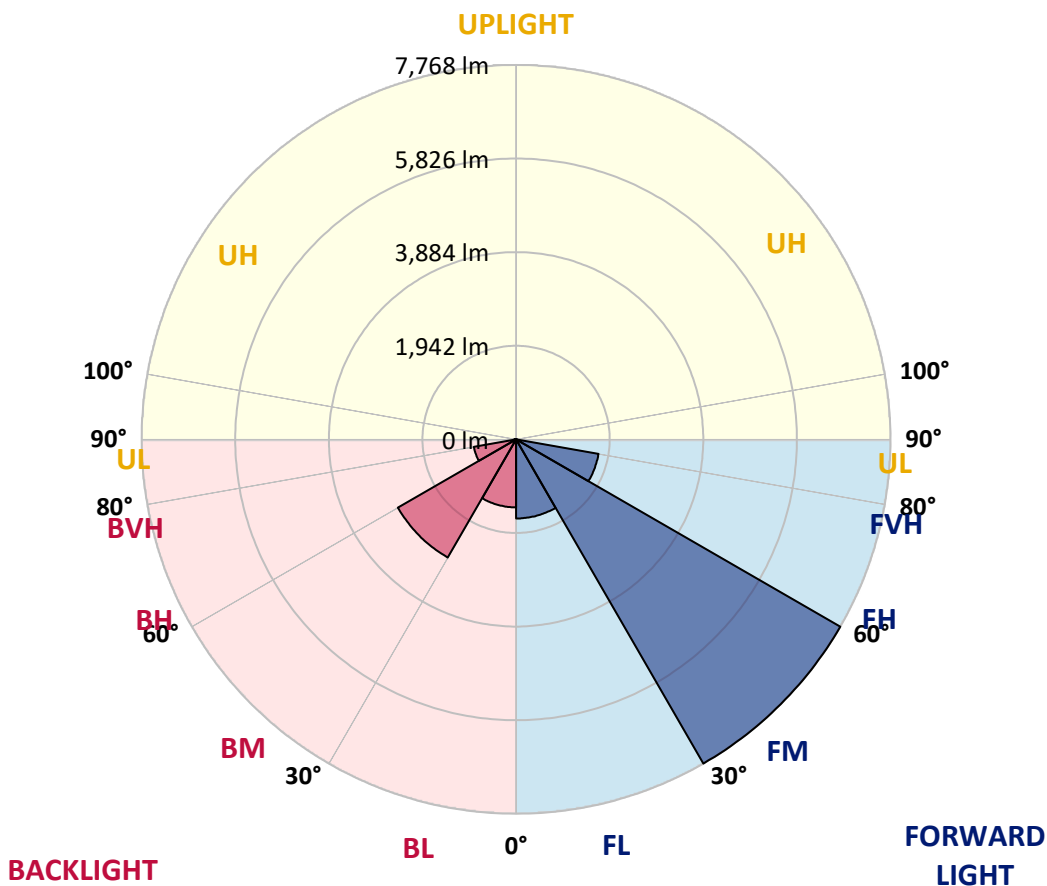
CATALOG NUMBER: GWS-SA4C-735-U-T3-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1641.4 | 10.0 | | | |
| FM (30°-60°) | 7767.7 | 47.5 | | | |
| FH (60°-80°) | 1736.5 | 10.6 | | | G1/1800 |
| FVH (80°-90°) | 23.4 | 0.1 | | | G1/100 |
| BL (0°-30°) | 1410.8 | 8.6 | B3/2500 | | |
| BM (30°-60°) | 2832.6 | 17.3 | B3/5000 | | |
| BH (60°-80°) | 889.5 | 5.4 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 38.9 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 47° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 |
| 2.5° | 3025.0 | 3023.6 | 3023.6 | 3031.8 | 3031.8 | 3034.6 | 3038.7 | 3042.8 | 3044.2 | 3037.3 | 3022.2 |
| 5° | 3057.9 | 3057.9 | 3057.9 | 3064.8 | 3064.8 | 3067.5 | 3073.0 | 3074.4 | 3073.0 | 3062.0 | 3046.9 |
| 7.5° | 3110.0 | 3110.0 | 3111.4 | 3119.7 | 3126.5 | 3130.6 | 3140.2 | 3138.9 | 3134.8 | 3116.9 | 3097.7 |
| 10° | 3195.1 | 3199.3 | 3203.4 | 3213.0 | 3226.7 | 3236.3 | 3243.2 | 3243.2 | 3237.7 | 3210.2 | 3185.5 |
| 12.5° | 3315.9 | 3321.4 | 3325.5 | 3333.8 | 3344.7 | 3361.2 | 3376.3 | 3376.3 | 3369.4 | 3335.1 | 3298.1 |
| 15° | 3457.3 | 3462.8 | 3461.4 | 3464.1 | 3484.7 | 3508.1 | 3520.4 | 3528.7 | 3531.4 | 3483.4 | 3425.7 |
| 17.5° | 3619.2 | 3624.7 | 3619.2 | 3611.0 | 3613.7 | 3650.8 | 3672.8 | 3703.0 | 3720.8 | 3656.3 | 3564.3 |
| 20° | 3766.1 | 3760.6 | 3760.6 | 3766.1 | 3774.3 | 3819.6 | 3852.6 | 3902.0 | 3923.9 | 3845.7 | 3703.0 |
| 22.5° | 3921.2 | 3933.5 | 3928.0 | 3928.0 | 3961.0 | 4036.5 | 4076.3 | 4140.8 | 4164.1 | 4062.6 | 3870.4 |
| 25° | 4121.6 | 4132.5 | 4129.8 | 4132.5 | 4171.0 | 4278.0 | 4317.8 | 4437.2 | 4460.6 | 4315.1 | 4055.7 |
| 27.5° | 4341.2 | 4359.0 | 4367.2 | 4364.5 | 4426.3 | 4566.3 | 4615.7 | 4781.7 | 4824.3 | 4597.8 | 4253.3 |
| 30° | 4626.6 | 4645.9 | 4652.7 | 4650.0 | 4722.7 | 4913.5 | 4969.8 | 5159.2 | 5219.6 | 4932.7 | 4504.5 |
| 32.5° | 4957.4 | 4976.6 | 4997.2 | 5005.4 | 5098.8 | 5293.7 | 5374.6 | 5570.9 | 5657.4 | 5319.7 | 4807.8 |
| 35° | 5285.4 | 5301.9 | 5341.7 | 5406.2 | 5533.9 | 5732.9 | 5804.2 | 5997.8 | 6081.5 | 5721.9 | 5174.3 |
| 37.5° | 5647.8 | 5658.7 | 5693.1 | 5782.3 | 5966.2 | 6155.6 | 6227.0 | 6412.2 | 6421.9 | 6110.3 | 5588.8 |
| 40° | 6044.4 | 6044.4 | 6037.6 | 6125.4 | 6317.5 | 6508.3 | 6570.1 | 6677.1 | 6620.9 | 6409.5 | 5992.3 |
| 42.5° | 6380.7 | 6375.2 | 6380.7 | 6463.0 | 6605.8 | 6760.9 | 6814.4 | 6793.8 | 6722.4 | 6638.7 | 6357.3 |
| 45° | 6684.0 | 6688.1 | 6737.5 | 6800.7 | 6874.8 | 6966.7 | 6998.3 | 6881.6 | 6817.1 | 6822.6 | 6649.7 |
| 47.5° | 6889.9 | 6894.0 | 7009.3 | 7115.0 | 7160.2 | 7189.1 | 7175.3 | 7013.4 | 6980.5 | 7042.2 | 6874.8 |
| 50° | 6917.3 | 6939.3 | 7138.3 | 7355.1 | 7467.7 | 7471.8 | 7433.4 | 7235.7 | 7226.1 | 7296.1 | 6995.5 |
| 52.5° | 6922.8 | 6944.8 | 7193.2 | 7584.3 | 7876.7 | 7938.4 | 7894.5 | 7688.7 | 7588.5 | 7518.5 | 7143.8 |
| 55° | 6902.2 | 6926.9 | 7201.4 | 7738.1 | 8298.0 | 8545.1 | 8549.2 | 8258.2 | 7938.4 | 7891.8 | 7566.5 |
| 57.5° | 6093.8 | 6103.4 | 6528.9 | 7346.9 | 8281.6 | 8981.5 | 9035.1 | 8639.8 | 8274.7 | 8230.8 | 7905.5 |
| 60° | 4245.1 | 4283.5 | 4746.0 | 5826.2 | 6957.1 | 8191.0 | 8363.9 | 8248.6 | 8004.3 | 7684.5 | 6782.8 |
| 62.5° | 2126.0 | 2158.9 | 2622.8 | 3643.9 | 4798.2 | 5772.7 | 5958.0 | 6080.1 | 6137.7 | 5794.6 | 4618.4 |
| 65° | 915.4 | 940.2 | 1228.4 | 1903.6 | 2716.1 | 3186.9 | 3251.4 | 3398.3 | 3757.9 | 3353.0 | 2488.3 |
| 67.5° | 612.1 | 628.6 | 775.5 | 1161.1 | 1600.3 | 1630.5 | 1620.9 | 1652.5 | 1730.7 | 1428.8 | 1124.1 |
| 70° | 469.4 | 483.1 | 581.9 | 850.9 | 1150.1 | 984.1 | 931.9 | 845.4 | 918.2 | 936.0 | 911.3 |
| 72.5° | 340.4 | 351.4 | 425.5 | 580.6 | 720.6 | 628.6 | 620.4 | 664.3 | 763.1 | 790.6 | 775.5 |
| 75° | 219.6 | 225.1 | 270.4 | 318.4 | 371.9 | 403.5 | 420.0 | 499.6 | 599.8 | 620.4 | 602.5 |
| 77.5° | 146.9 | 151.0 | 177.1 | 204.5 | 211.4 | 212.7 | 218.2 | 253.9 | 322.5 | 361.0 | 356.8 |
| 80° | 76.9 | 76.9 | 86.5 | 86.5 | 98.8 | 118.0 | 123.5 | 146.9 | 178.4 | 197.6 | 199.0 |
| 82.5° | 30.2 | 31.6 | 37.1 | 41.2 | 49.4 | 60.4 | 64.5 | 76.9 | 93.3 | 107.1 | 119.4 |
| 85° | 12.4 | 13.7 | 15.1 | 17.8 | 22.0 | 27.4 | 28.8 | 32.9 | 43.9 | 54.9 | 61.8 |
| 87.5° | 0.0 | 0.0 | 1.4 | 1.4 | 2.7 | 4.1 | 4.1 | 5.5 | 6.9 | 12.4 | 16.5 |
| 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: P637232

CATALOG NUMBER: GWS-SA4C-735-U-T3-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 | 3030.4 |
| 2.5° | 3040.1 | 3022.2 | 3040.1 | 3045.5 | 3060.6 | 3066.1 | 3056.5 | 3055.1 | 3055.1 | 3041.4 | 3037.3 |
| 5° | 3060.6 | 3044.2 | 3062.0 | 3070.2 | 3092.2 | 3105.9 | 3108.7 | 3119.7 | 3126.5 | 3121.0 | 3119.7 |
| 7.5° | 3111.4 | 3090.8 | 3110.0 | 3122.4 | 3151.2 | 3173.2 | 3182.8 | 3207.5 | 3225.3 | 3222.6 | 3221.2 |
| 10° | 3200.6 | 3173.2 | 3195.1 | 3215.7 | 3247.3 | 3273.4 | 3274.7 | 3288.5 | 3306.3 | 3300.8 | 3298.1 |
| 12.5° | 3303.6 | 3277.5 | 3302.2 | 3322.8 | 3359.8 | 3370.8 | 3353.0 | 3347.5 | 3350.2 | 3343.4 | 3337.9 |
| 15° | 3429.8 | 3392.8 | 3414.7 | 3438.1 | 3458.7 | 3446.3 | 3407.9 | 3392.8 | 3391.4 | 3381.8 | 3376.3 |
| 17.5° | 3556.1 | 3509.4 | 3525.9 | 3538.3 | 3528.7 | 3490.2 | 3442.2 | 3416.1 | 3403.8 | 3384.5 | 3379.1 |
| 20° | 3681.0 | 3622.0 | 3619.2 | 3609.6 | 3565.7 | 3495.7 | 3431.2 | 3379.1 | 3347.5 | 3321.4 | 3311.8 |
| 22.5° | 3823.7 | 3741.4 | 3700.2 | 3656.3 | 3560.2 | 3446.3 | 3348.9 | 3274.7 | 3224.0 | 3191.0 | 3180.0 |
| 25° | 3977.5 | 3860.8 | 3775.7 | 3687.9 | 3505.3 | 3340.6 | 3204.7 | 3103.2 | 3042.8 | 3007.1 | 2994.8 |
| 27.5° | 4129.8 | 3969.2 | 3841.6 | 3692.0 | 3395.5 | 3188.3 | 3005.7 | 2868.5 | 2808.1 | 2779.3 | 2769.7 |
| 30° | 4335.7 | 4113.3 | 3919.8 | 3638.5 | 3251.4 | 2976.9 | 2749.1 | 2610.5 | 2570.7 | 2550.1 | 2541.8 |
| 32.5° | 4573.1 | 4295.9 | 4024.1 | 3525.9 | 3067.5 | 2729.9 | 2489.7 | 2393.6 | 2366.2 | 2326.4 | 2325.0 |
| 35° | 4886.0 | 4556.6 | 4122.9 | 3359.8 | 2835.6 | 2465.0 | 2290.7 | 2222.1 | 2172.6 | 2109.5 | 2104.0 |
| 37.5° | 5251.1 | 4881.9 | 4176.5 | 3148.5 | 2565.2 | 2246.8 | 2142.4 | 2065.6 | 1986.0 | 1902.3 | 1891.3 |
| 40° | 5628.6 | 5262.1 | 4180.6 | 2898.7 | 2300.3 | 2102.6 | 2014.8 | 1914.6 | 1815.8 | 1722.5 | 1710.1 |
| 42.5° | 6025.2 | 5616.2 | 4107.8 | 2610.5 | 2083.4 | 1977.7 | 1888.5 | 1762.3 | 1651.1 | 1588.0 | 1581.1 |
| 45° | 6379.3 | 5901.7 | 3943.1 | 2307.1 | 1922.8 | 1873.4 | 1759.5 | 1623.6 | 1564.6 | 1519.3 | 1509.7 |
| 47.5° | 6657.9 | 6091.1 | 3720.8 | 2035.4 | 1792.5 | 1766.4 | 1618.2 | 1548.2 | 1502.9 | 1461.7 | 1452.1 |
| 50° | 6795.2 | 6133.6 | 3431.2 | 1814.4 | 1671.7 | 1640.1 | 1538.6 | 1485.0 | 1454.8 | 1421.9 | 1413.7 |
| 52.5° | 6965.4 | 6181.7 | 3181.4 | 1629.1 | 1553.7 | 1511.1 | 1472.7 | 1430.1 | 1408.2 | 1387.6 | 1380.7 |
| 55° | 7356.5 | 6362.8 | 3049.7 | 1480.9 | 1441.1 | 1421.9 | 1416.4 | 1380.7 | 1373.9 | 1360.1 | 1347.8 |
| 57.5° | 7515.7 | 6246.2 | 2738.1 | 1360.1 | 1351.9 | 1354.6 | 1368.4 | 1335.4 | 1328.6 | 1312.1 | 1303.9 |
| 60° | 6044.4 | 4721.3 | 1854.2 | 1255.8 | 1277.8 | 1295.6 | 1309.3 | 1276.4 | 1266.8 | 1264.1 | 1253.1 |
| 62.5° | 3873.1 | 2904.2 | 1294.3 | 1158.4 | 1191.3 | 1213.3 | 1221.5 | 1189.9 | 1183.1 | 1205.0 | 1206.4 |
| 65° | 2016.2 | 1582.5 | 1049.9 | 1054.1 | 1081.5 | 1114.5 | 1130.9 | 1119.9 | 1117.2 | 1140.5 | 1141.9 |
| 67.5° | 1029.4 | 967.6 | 915.4 | 930.5 | 952.5 | 995.1 | 1033.5 | 1081.5 | 1098.0 | 1100.7 | 1102.1 |
| 70° | 877.0 | 849.6 | 823.5 | 833.1 | 856.4 | 879.8 | 916.8 | 940.2 | 912.7 | 905.8 | 903.1 |
| 72.5° | 746.6 | 726.0 | 713.7 | 724.7 | 737.0 | 732.9 | 721.9 | 732.9 | 737.0 | 738.4 | 739.8 |
| 75° | 580.6 | 565.5 | 555.9 | 557.2 | 557.2 | 542.1 | 521.5 | 509.2 | 495.5 | 484.5 | 484.5 |
| 77.5° | 355.5 | 358.2 | 367.8 | 366.5 | 365.1 | 359.6 | 339.0 | 328.0 | 295.1 | 285.5 | 285.5 |
| 80° | 203.1 | 207.2 | 216.9 | 219.6 | 219.6 | 212.7 | 192.1 | 179.8 | 164.7 | 157.8 | 156.5 |
| 82.5° | 123.5 | 129.0 | 134.5 | 137.2 | 138.6 | 130.4 | 112.5 | 102.9 | 94.7 | 87.8 | 87.8 |
| 85° | 64.5 | 67.3 | 72.7 | 74.1 | 70.0 | 61.8 | 52.2 | 48.0 | 39.8 | 38.4 | 38.4 |
| 87.5° | 17.8 | 19.2 | 22.0 | 17.8 | 16.5 | 12.4 | 6.9 | 5.5 | 2.7 | 1.4 | 1.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

All Brands

Data applicable to all product families using SA light engines

Report Number: SP1-2101-121-7

Luminaire Tested: IFLD-S-SA2A-735-U-T2

Test Date: 03/04/2021

Test Information

Test Method: LM-79-08
 Report Number: SP1-2101-121-7
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1
 Measurement Geometry: 4π
 Issue Date: 03/04/2021
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: STREETWORKS
 Catalog Number: **IFLD-S-SA2A-735-U-T2**
 Description: STREETWORKS INF FLOOD

PROGRAMMED @ 615mA.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 3388 | CRI (Ra): | 73.1 | R9: | -34.6 |
| CIE u': | 0.2371 | R1: | 68.9 | R10: | 57.8 |
| CIE v': | 0.5177 | R2: | 81.1 | R11: | 68.6 |
| Duv: | 0.0032 | R3: | 93.1 | R12: | 53.9 |
| CIE x: | 0.4153 | R4: | 71.6 | R13: | 70.9 |
| CIE y: | 0.4030 | R5: | 69.4 | R14: | 96.2 |
| CIE z: | 0.1817 | R6: | 75.0 | | |
| Peak Wavelength (nm): | 590 | R7: | 79.5 | | |
| Dominant Wavelength (nm): | 580 | R8: | 46.4 | | |
| Purity: | 45.7 | | | | |
| Rf: | 76.9 | | | | |
| Rg: | 94.4 | | | | |



Test Conditions

Stabilization Time: 81M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0/30%
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-7

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 1/31/2021 | 7/31/2021 |
| Power Meter | IN0071 | 12/1/2020 | 12/1/2021 |
| AC Power Source | IN0063 | 12/1/2020 | 12/1/2021 |
| DC Power Source | IN0208 | 12/1/2020 | 12/1/2021 |
| Sphere Thermometer | IN0085 | 12/1/2020 | 12/1/2021 |
| Room Thermometer | IN0046 | 12/1/2020 | 12/1/2021 |

REPORT NUMBER: SP1-2101-121-7

CIE 1931 Chromaticity Diagram



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



CCT = 3388K
 CIE x = 0.4153
 CIE y = 0.4030
 Duv = 0.0032

Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

| 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 | 2672 | 0.0 | 490 | 34553 | 4.9 | 620 | 136720 | 35.6 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 8.0 | 625 | 126308 | 27.9 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 12.1 | 630 | 114625 | 20.7 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 18.1 | 635 | 103216 | 15.5 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 25.4 | 640 | 92605 | 11.1 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 33.9 | 645 | 83234 | 8.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 43.0 | 650 | 73263 | 5.4 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 50.1 | 655 | 64627 | 3.7 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 57.9 | 660 | 56614 | 2.4 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 64.0 | 665 | 49537 | 1.6 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.0 | 540 | 107316 | 69.9 | 670 | 42866 | 0.9 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.0 | 545 | 113101 | 75.3 | 675 | 36708 | 0.6 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 0.0 | 550 | 120690 | 82.0 | 680 | 31814 | 0.4 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 0.1 | 555 | 128583 | 87.8 | 685 | 27485 | 0.2 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 0.3 | 560 | 137796 | 93.6 | 690 | 23698 | 0.1 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 0.8 | 565 | 146577 | 97.5 | 695 | 20309 | 0.1 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 1.6 | 570 | 154581 | 100.5 | 700 | 17890 | 0.1 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 2.4 | 575 | 162633 | 101.2 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 2.5 | 580 | 168101 | 99.9 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 2.1 | 585 | 173145 | 96.2 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 1.8 | 590 | 174675 | 90.3 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 1.7 | 595 | 173724 | 82.3 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 1.5 | 600 | 171241 | 73.8 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 1.7 | 605 | 165134 | 64.0 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 2.2 | 610 | 156652 | 53.8 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 3.3 | 615 | 147879 | 44.6 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Scotopic Flux vs. Wavelength



Scotopic Lumens: 12126

S/P: 1.36

| 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 | 2672 | 0.0 | 490 | 34553 | 53.2 | 620 | 136720 | 1.7 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 71.7 | 625 | 126308 | 1.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 91.4 | 630 | 114625 | 0.6 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 110.0 | 635 | 103216 | 0.4 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 125.1 | 640 | 92605 | 0.2 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 135.7 | 645 | 83234 | 0.1 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 140.8 | 650 | 73263 | 0.1 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 139.6 | 655 | 64627 | 0.1 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 135.7 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.1 | 535 | 103269 | 128.7 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.2 | 540 | 107316 | 118.6 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.6 | 545 | 113101 | 108.4 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 2.0 | 550 | 120690 | 98.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 5.9 | 555 | 128583 | 87.9 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 14.3 | 560 | 137796 | 77.0 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 30.5 | 565 | 146577 | 65.8 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 55.5 | 570 | 154581 | 54.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 77.4 | 575 | 162633 | 44.3 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 73.6 | 580 | 168101 | 34.6 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 53.7 | 585 | 173145 | 26.5 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 41.9 | 590 | 174675 | 19.5 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 34.3 | 595 | 173724 | 13.9 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 27.9 | 600 | 171241 | 9.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 27.1 | 605 | 165134 | 6.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 31.3 | 610 | 156652 | 4.2 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 40.0 | 615 | 147879 | 2.7 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

REPORT NUMBER: SP1-2101-121-7

Melanopic Flux vs. Wavelength



Melanopic Lumens: 4490.7 M/P: 0.5

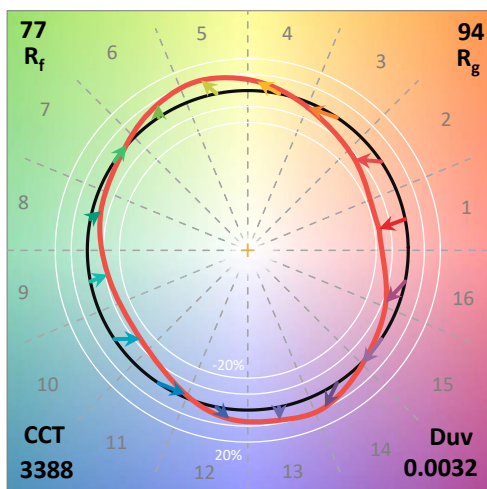
| λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) | λ (nm) | Power (µW/nm) | Lumens (Φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360 | 2672 | 0.0 | 490 | 34553 | 28.8 | 620 | 136720 | 0.1 | 750 | 5870 | 0.0 | 880 | 4216 | 0.0 |
| 365 | 2252 | 0.0 | 495 | 44336 | 36.6 | 625 | 126308 | 0.1 | 755 | 5421 | 0.0 | 885 | 4132 | 0.0 |
| 370 | 2217 | 0.0 | 500 | 54643 | 43.9 | 630 | 114625 | 0.0 | 760 | 5097 | 0.0 | 890 | 3992 | 0.0 |
| 375 | 2697 | 0.0 | 505 | 64676 | 49.6 | 635 | 103216 | 0.0 | 765 | 4626 | 0.0 | 895 | 3214 | 0.0 |
| 380 | 3039 | 0.0 | 510 | 73825 | 53.0 | 640 | 92605 | 0.0 | 770 | 3782 | 0.0 | 900 | 2580 | 0.0 |
| 385 | 2655 | 0.0 | 515 | 81872 | 53.5 | 645 | 83234 | 0.0 | 775 | 3506 | 0.0 | 905 | 1776 | 0.0 |
| 390 | 2357 | 0.0 | 520 | 88574 | 51.6 | 650 | 73263 | 0.0 | 780 | 3507 | 0.0 | 910 | 3995 | 0.0 |
| 395 | 2186 | 0.0 | 525 | 93289 | 47.3 | 655 | 64627 | 0.0 | 785 | 3267 | 0.0 | 915 | 4288 | 0.0 |
| 400 | 2015 | 0.0 | 530 | 98393 | 42.5 | 660 | 56614 | 0.0 | 790 | 2849 | 0.0 | 920 | 2446 | 0.0 |
| 405 | 2234 | 0.0 | 535 | 103269 | 37.2 | 665 | 49537 | 0.0 | 795 | 3037 | 0.0 | 925 | 3009 | 0.0 |
| 410 | 3412 | 0.1 | 540 | 107316 | 31.4 | 670 | 42866 | 0.0 | 800 | 2716 | 0.0 | 930 | 3026 | 0.0 |
| 415 | 6135 | 0.4 | 545 | 113101 | 26.3 | 675 | 36708 | 0.0 | 805 | 2648 | 0.0 | 935 | 4734 | 0.0 |
| 420 | 12146 | 1.4 | 550 | 120690 | 21.7 | 680 | 31814 | 0.0 | 810 | 3187 | 0.0 | 940 | 3719 | 0.0 |
| 425 | 23983 | 3.7 | 555 | 128583 | 17.3 | 685 | 27485 | 0.0 | 815 | 2931 | 0.0 | 945 | 1480 | 0.0 |
| 430 | 42142 | 8.9 | 560 | 137796 | 13.6 | 690 | 23698 | 0.0 | 820 | 2717 | 0.0 | 950 | 3450 | 0.0 |
| 435 | 68228 | 18.2 | 565 | 146577 | 10.3 | 695 | 20309 | 0.0 | 825 | 2236 | 0.0 | 955 | 5051 | 0.0 |
| 440 | 99323 | 33.2 | 570 | 154581 | 7.6 | 700 | 17890 | 0.0 | 830 | 2628 | 0.0 | 960 | 3176 | 0.0 |
| 445 | 115584 | 45.6 | 575 | 162633 | 5.4 | 705 | 15500 | 0.0 | 835 | 3140 | 0.0 | 965 | 5178 | 0.0 |
| 450 | 94997 | 43.8 | 580 | 168101 | 3.8 | 710 | 13699 | 0.0 | 840 | 3675 | 0.0 | 970 | 6385 | 0.0 |
| 455 | 61433 | 32.2 | 585 | 173145 | 2.6 | 715 | 12398 | 0.0 | 845 | 3283 | 0.0 | 975 | 3810 | 0.0 |
| 460 | 43373 | 25.6 | 590 | 174675 | 1.7 | 720 | 11147 | 0.0 | 850 | 3055 | 0.0 | 980 | 4322 | 0.0 |
| 465 | 32472 | 21.2 | 595 | 173724 | 1.1 | 725 | 9761 | 0.0 | 855 | 2932 | 0.0 | 985 | 4200 | 0.0 |
| 470 | 24257 | 17.4 | 600 | 171241 | 0.7 | 730 | 8651 | 0.0 | 860 | 3382 | 0.0 | 990 | 4661 | 0.0 |
| 475 | 21690 | 16.6 | 605 | 165134 | 0.5 | 735 | 7730 | 0.0 | 865 | 2605 | 0.0 | 995 | 6746 | 0.0 |
| 480 | 23173 | 18.6 | 610 | 156652 | 0.3 | 740 | 6847 | 0.0 | 870 | 3325 | 0.0 | 1000 | 4150 | 0.0 |
| 485 | 27564 | 22.7 | 615 | 147879 | 0.2 | 745 | 6124 | 0.0 | 875 | 3325 | 0.0 | | | |

Summary

$R_f = 76.9$
 $R_g = 94.4$
 $CIE R_a = 73.1$
 $R_g = -34.6$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 68 | CES51 = 90 | CES76 = 63 |
| CES02 = 62 | CES27 = 88 | CES52 = 89 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 80 | CES78 = 65 |
| CES04 = 70 | CES29 = 67 | CES54 = 84 | CES79 = 87 |
| CES05 = 48 | CES30 = 74 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 71 | CES56 = 75 | CES81 = 75 |
| CES07 = 40 | CES32 = 67 | CES57 = 74 | CES82 = 94 |
| CES08 = 39 | CES33 = 74 | CES58 = 76 | CES83 = 91 |
| CES09 = 29 | CES34 = 78 | CES59 = 87 | CES84 = 89 |
| CES10 = 75 | CES35 = 89 | CES60 = 93 | CES85 = 80 |
| CES11 = 58 | CES36 = 98 | CES61 = 86 | CES86 = 66 |
| CES12 = 64 | CES37 = 86 | CES62 = 89 | CES87 = 79 |
| CES13 = 43 | CES38 = 82 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 95 | CES64 = 74 | CES89 = 70 |
| CES15 = 71 | CES40 = 91 | CES65 = 68 | CES90 = 77 |
| CES16 = 47 | CES41 = 89 | CES66 = 71 | CES91 = 88 |
| CES17 = 50 | CES42 = 88 | CES67 = 69 | CES92 = 60 |
| CES18 = 56 | CES43 = 82 | CES68 = 74 | CES93 = 77 |
| CES19 = 72 | CES44 = 99 | CES69 = 82 | CES94 = 52 |
| CES20 = 65 | CES45 = 87 | CES70 = 67 | CES95 = 69 |
| CES21 = 86 | CES46 = 82 | CES71 = 66 | CES96 = 78 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 85 |
| CES23 = 92 | CES48 = 72 | CES73 = 59 | CES98 = 76 |
| CES24 = 91 | CES49 = 82 | CES74 = 97 | CES99 = 63 |
| CES25 = 72 | CES50 = 88 | CES75 = 66 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)