

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: P636504

Luminaire Tested: GWS-SA3F-830-U-SLR-W-GRSWH

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P636504
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-43)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3F-830-U-SLR-W-GRSWH
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH
Light Source: (48) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15196.6 lumens
Efficiency: N/A
Efficacy: 83.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

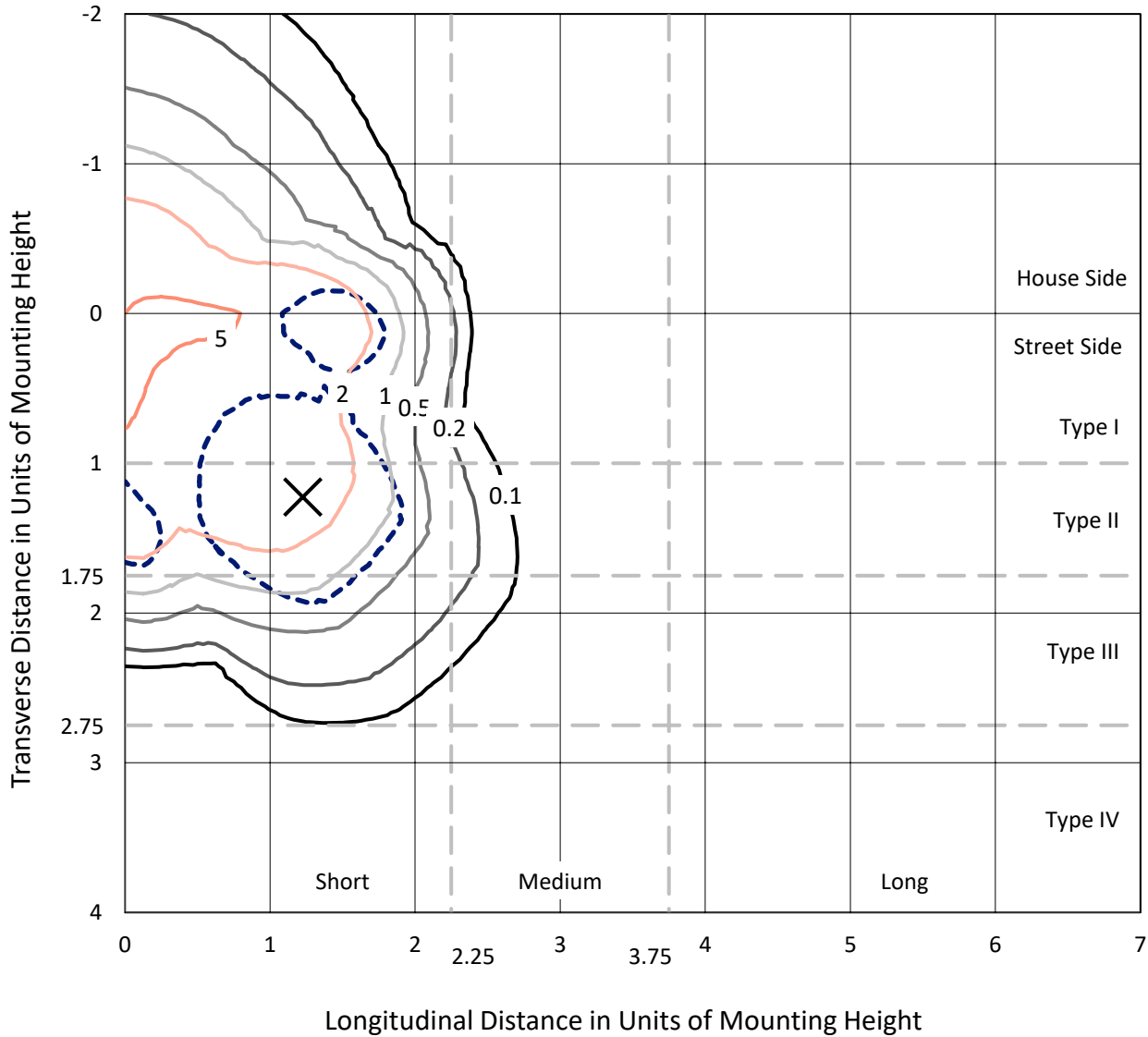
Input Watts (W): 183.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P636504
 CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

Iso-Footcandle Lines of Horizontal Illumination

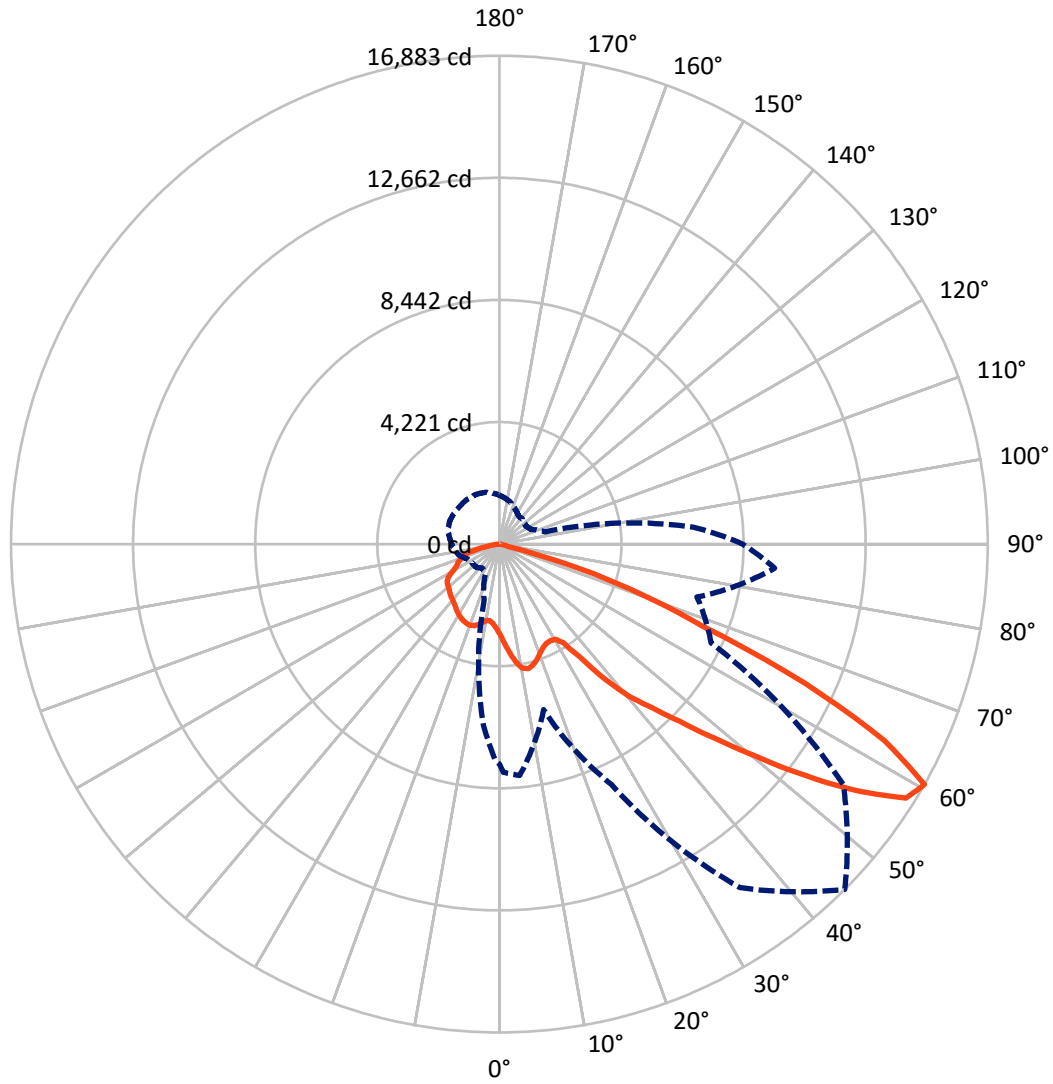
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 fc
 Type III - Short - N/A

REPORT NUMBER: P636504
CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

REPORT NUMBER: P636504

CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5327.0 | 0.0 | 5327.0 |
| | % Fixture | 35.1 | 0.0 | 35.1 |
| Street Side | Lumens | 9869.7 | 0.0 | 9869.7 |
| | % Fixture | 64.9 | 0.0 | 64.9 |
| Total | Lumens | 15196.6 | 0.0 | 15196.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 304.6 | 2.0 |
| 10°-20° | 962.5 | 6.3 |
| 20°-30° | 1563.5 | 10.3 |
| 30°-40° | 2204.9 | 14.5 |
| 40°-50° | 3047.2 | 20.1 |
| 50°-60° | 3922.6 | 25.8 |
| 60°-70° | 2485.4 | 16.4 |
| 70°-80° | 637.8 | 4.2 |
| 80°-90° | 68.2 | 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° | 15196.6 | 100.0 |
| 0°-180° | 15196.6 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P636504

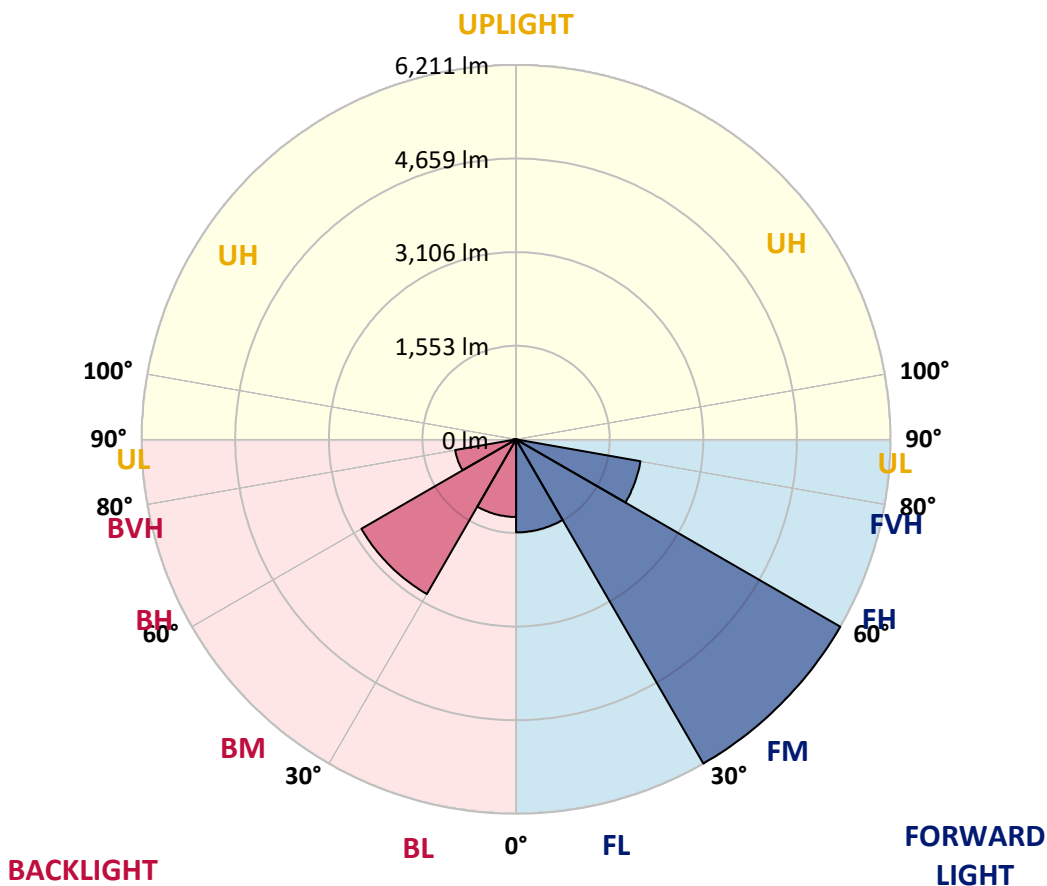
CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1543.0 | 10.2 | | | |
| FM (30°-60°) | 6211.5 | 40.9 | | | |
| FH (60°-80°) | 2096.6 | 13.8 | | | G2/5000 |
| FVH (80°-90°) | 18.5 | 0.1 | | | G1/100 |
| BL (0°-30°) | 1287.5 | 8.5 | B3/2500 | | |
| BM (30°-60°) | 2963.2 | 19.5 | B3/5000 | | |
| BH (60°-80°) | 1026.6 | 6.8 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 49.7 | 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





REPORT NUMBER: P636504

CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|---------|
| 0° | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 |
| 2.5° | 3265.2 | 3287.5 | 3301.5 | 3327.9 | 3375.2 | 3401.7 | 3430.9 | 3398.9 | 3407.3 | 3403.1 | 3351.6 |
| 5° | 3458.8 | 3485.3 | 3521.5 | 3599.4 | 3687.2 | 3735.9 | 3781.8 | 3774.9 | 3731.7 | 3659.3 | 3607.8 |
| 7.5° | 3639.8 | 3670.4 | 3733.1 | 3859.8 | 3989.3 | 4064.5 | 4120.2 | 4084.0 | 4047.8 | 3933.6 | 3804.1 |
| 10° | 3781.8 | 3799.9 | 3884.9 | 4054.8 | 4205.1 | 4290.1 | 4358.3 | 4349.9 | 4299.8 | 4171.7 | 3997.7 |
| 12.5° | 3915.5 | 3928.0 | 4019.9 | 4189.8 | 4324.9 | 4362.5 | 4418.2 | 4436.3 | 4419.6 | 4323.5 | 4152.2 |
| 15° | 4058.9 | 4082.6 | 4167.5 | 4297.0 | 4358.3 | 4319.3 | 4338.8 | 4388.9 | 4436.3 | 4436.3 | 4278.9 |
| 17.5° | 4192.6 | 4213.5 | 4299.8 | 4355.5 | 4297.0 | 4194.0 | 4199.6 | 4263.6 | 4376.4 | 4494.8 | 4394.5 |
| 20° | 4311.0 | 4330.5 | 4415.4 | 4362.5 | 4177.3 | 4026.9 | 4022.7 | 4100.7 | 4283.1 | 4532.4 | 4518.4 |
| 22.5° | 4440.5 | 4468.3 | 4539.3 | 4368.1 | 4065.9 | 3875.1 | 3873.7 | 3954.5 | 4201.0 | 4570.0 | 4660.5 |
| 25° | 4624.3 | 4667.4 | 4703.6 | 4416.8 | 4006.0 | 3776.3 | 3794.4 | 3871.0 | 4174.5 | 4631.2 | 4870.7 |
| 27.5° | 4897.2 | 4932.0 | 4929.2 | 4518.4 | 4003.2 | 3735.9 | 3773.5 | 3862.6 | 4221.8 | 4739.8 | 5092.1 |
| 30° | 5192.4 | 5210.5 | 5181.2 | 4660.5 | 4067.3 | 3761.0 | 3816.6 | 3922.5 | 4341.6 | 4919.5 | 5417.9 |
| 32.5° | 5519.6 | 5541.9 | 5486.2 | 4873.5 | 4216.3 | 3946.1 | 4068.7 | 4120.2 | 4510.1 | 5178.4 | 5763.3 |
| 35° | 5895.5 | 5938.7 | 5823.1 | 5154.8 | 4654.9 | 4621.5 | 4799.7 | 4732.9 | 4867.9 | 5484.8 | 6132.3 |
| 37.5° | 6291.0 | 6292.4 | 6126.7 | 5571.1 | 5515.4 | 5572.5 | 5929.0 | 5720.1 | 5626.8 | 5825.9 | 6508.2 |
| 40° | 6626.6 | 6618.2 | 6363.4 | 6132.3 | 6264.5 | 6491.5 | 6921.8 | 6601.5 | 6356.4 | 6284.0 | 6820.1 |
| 42.5° | 6962.1 | 6931.5 | 6673.9 | 6488.7 | 6781.1 | 7247.6 | 7733.6 | 7340.9 | 6824.3 | 6700.4 | 7127.8 |
| 45° | 7391.0 | 7381.3 | 7070.8 | 6630.7 | 7247.6 | 8094.2 | 8738.9 | 8102.5 | 7101.4 | 6942.7 | 7640.3 |
| 47.5° | 8083.1 | 8035.7 | 7457.9 | 6619.6 | 7684.8 | 9222.1 | 10036.6 | 9061.9 | 7294.9 | 6948.2 | 8467.4 |
| 50° | 8759.8 | 8701.3 | 7920.1 | 6618.2 | 8136.0 | 10391.7 | 11568.3 | 10227.4 | 7492.7 | 6981.6 | 9308.4 |
| 52.5° | 9443.5 | 9443.5 | 8679.0 | 6775.6 | 8609.4 | 11697.8 | 13338.1 | 11679.7 | 7829.6 | 7418.9 | 10343.0 |
| 55° | 9850.0 | 9958.7 | 9532.6 | 7041.5 | 9163.6 | 13235.0 | 15088.4 | 13247.6 | 8350.4 | 8208.4 | 11298.2 |
| 57.5° | 9333.5 | 9536.8 | 9475.5 | 6856.3 | 9490.8 | 14364.3 | 16572.7 | 14436.7 | 8608.0 | 8301.7 | 11154.8 |
| 60° | 7605.5 | 7888.1 | 8028.7 | 5920.6 | 9167.8 | 14495.2 | 16883.2 | 14514.7 | 8076.1 | 7069.4 | 9554.9 |
| 62.5° | 5055.9 | 5288.4 | 5502.9 | 4230.2 | 7936.8 | 13040.1 | 14932.4 | 13044.3 | 6744.9 | 5275.9 | 6619.6 |
| 65° | 2479.9 | 2652.6 | 2883.7 | 2500.8 | 6200.5 | 10895.8 | 11642.1 | 10540.7 | 4879.1 | 2953.3 | 3376.6 |
| 67.5° | 648.9 | 697.6 | 729.6 | 970.5 | 4441.9 | 7828.2 | 7592.9 | 7709.9 | 3134.4 | 965.0 | 882.8 |
| 70° | 337.0 | 339.8 | 338.4 | 401.0 | 3002.1 | 4975.2 | 5232.8 | 4841.5 | 2187.5 | 403.8 | 348.1 |
| 72.5° | 240.9 | 242.3 | 238.1 | 270.1 | 1449.5 | 2850.3 | 2953.3 | 2921.3 | 1146.0 | 239.5 | 238.1 |
| 75° | 157.3 | 158.7 | 156.0 | 158.7 | 218.6 | 324.4 | 299.4 | 314.7 | 190.8 | 151.8 | 151.8 |
| 77.5° | 93.3 | 94.7 | 93.3 | 96.1 | 93.3 | 93.3 | 86.3 | 86.3 | 82.2 | 82.2 | 83.5 |
| 80° | 62.7 | 62.7 | 61.3 | 64.1 | 58.5 | 58.5 | 55.7 | 54.3 | 50.1 | 48.7 | 48.7 |
| 82.5° | 37.6 | 39.0 | 37.6 | 37.6 | 34.8 | 34.8 | 32.0 | 30.6 | 26.5 | 26.5 | 25.1 |
| 85° | 19.5 | 19.5 | 18.1 | 18.1 | 15.3 | 13.9 | 11.1 | 11.1 | 8.4 | 7.0 | 7.0 |
| 87.5° | 2.8 | 2.8 | 1.4 | 1.4 | 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: P636504

CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 |
| 2.5° | 3337.7 | 3309.8 | 3268.0 | 3227.7 | 3190.1 | 3151.1 | 3106.5 | 3060.6 | 3021.6 | 2981.2 | 2960.3 |
| 5° | 3539.6 | 3482.5 | 3373.9 | 3277.8 | 3191.4 | 3120.4 | 3043.9 | 2978.4 | 2917.1 | 2867.0 | 2841.9 |
| 7.5° | 3722.0 | 3632.8 | 3468.5 | 3316.8 | 3199.8 | 3102.3 | 2996.5 | 2899.0 | 2816.9 | 2755.6 | 2731.9 |
| 10° | 3890.4 | 3784.6 | 3568.8 | 3376.6 | 3240.2 | 3131.6 | 3002.1 | 2869.8 | 2761.2 | 2680.4 | 2660.9 |
| 12.5° | 4026.9 | 3905.8 | 3648.2 | 3425.4 | 3263.9 | 3146.9 | 3032.7 | 2918.5 | 2811.3 | 2706.9 | 2690.2 |
| 15° | 4148.0 | 4004.6 | 3708.0 | 3456.0 | 3255.5 | 3106.5 | 3010.4 | 2996.5 | 2996.5 | 2878.2 | 2844.7 |
| 17.5° | 4252.5 | 4095.1 | 3756.8 | 3469.9 | 3202.6 | 2986.8 | 2928.3 | 3049.4 | 3185.9 | 3100.9 | 3025.7 |
| 20° | 4372.2 | 4181.5 | 3797.2 | 3469.9 | 3105.1 | 2835.0 | 2829.4 | 3035.5 | 3237.4 | 3238.8 | 3159.4 |
| 22.5° | 4493.4 | 4281.7 | 3844.5 | 3457.4 | 2971.4 | 2659.5 | 2762.6 | 2979.8 | 3159.4 | 3236.0 | 3181.7 |
| 25° | 4689.7 | 4421.0 | 3919.7 | 3447.7 | 2815.5 | 2539.8 | 2702.7 | 2906.0 | 3057.8 | 3138.5 | 3103.7 |
| 27.5° | 4938.9 | 4604.8 | 4033.9 | 3463.0 | 2660.9 | 2468.8 | 2638.7 | 2809.9 | 2947.8 | 3018.8 | 2993.7 |
| 30° | 5217.4 | 4816.4 | 4156.4 | 3489.4 | 2549.5 | 2432.6 | 2562.1 | 2699.9 | 2822.5 | 2893.5 | 2882.3 |
| 32.5° | 5572.5 | 5046.2 | 4262.2 | 3453.2 | 2486.9 | 2414.5 | 2481.3 | 2580.2 | 2698.5 | 2743.1 | 2752.8 |
| 35° | 5997.2 | 5299.6 | 4343.0 | 3311.2 | 2429.8 | 2395.0 | 2393.6 | 2454.9 | 2538.4 | 2609.4 | 2616.4 |
| 37.5° | 6388.5 | 5596.2 | 4432.1 | 3067.5 | 2326.7 | 2346.2 | 2290.5 | 2326.7 | 2408.9 | 2479.9 | 2507.8 |
| 40° | 6775.6 | 5896.9 | 4556.0 | 2757.0 | 2191.7 | 2237.6 | 2172.2 | 2197.3 | 2262.7 | 2356.0 | 2400.5 |
| 42.5° | 7151.5 | 6168.5 | 4686.9 | 2439.5 | 2056.6 | 2085.9 | 2037.1 | 2062.2 | 2130.4 | 2247.4 | 2297.5 |
| 45° | 7560.9 | 6536.1 | 4788.6 | 2140.2 | 1939.7 | 1927.1 | 1888.1 | 1924.3 | 2027.4 | 2155.5 | 2215.4 |
| 47.5° | 8335.1 | 7115.3 | 4855.4 | 1941.0 | 1877.0 | 1786.5 | 1741.9 | 1819.9 | 1936.9 | 2066.4 | 2138.8 |
| 50° | 9280.5 | 7953.6 | 4835.9 | 1814.3 | 1822.7 | 1641.7 | 1626.4 | 1729.4 | 1854.7 | 1989.8 | 2069.2 |
| 52.5° | 10029.7 | 8776.5 | 4614.5 | 1693.2 | 1716.9 | 1549.8 | 1505.2 | 1655.6 | 1775.3 | 1913.2 | 1995.4 |
| 55° | 10602.0 | 9053.6 | 3935.0 | 1549.8 | 1544.2 | 1482.9 | 1389.6 | 1579.0 | 1696.0 | 1824.1 | 1913.2 |
| 57.5° | 10135.5 | 8436.7 | 2917.1 | 1352.0 | 1318.6 | 1350.7 | 1260.1 | 1449.5 | 1598.5 | 1725.2 | 1804.6 |
| 60° | 8411.7 | 6726.8 | 1625.0 | 1197.5 | 1102.8 | 1180.8 | 1166.9 | 1313.1 | 1492.7 | 1626.4 | 1694.6 |
| 62.5° | 5710.4 | 4479.4 | 963.6 | 946.9 | 893.9 | 1005.3 | 1079.1 | 1175.2 | 1352.0 | 1460.7 | 1524.7 |
| 65° | 2846.1 | 2176.4 | 640.5 | 708.7 | 715.7 | 827.1 | 966.3 | 1072.2 | 1219.8 | 1331.2 | 1395.2 |
| 67.5° | 825.7 | 676.7 | 487.4 | 541.7 | 616.8 | 706.0 | 817.4 | 942.7 | 1086.1 | 1218.4 | 1293.6 |
| 70° | 356.5 | 360.6 | 387.1 | 451.1 | 524.9 | 616.8 | 728.2 | 850.8 | 971.9 | 1073.6 | 1130.7 |
| 72.5° | 252.0 | 261.8 | 291.0 | 356.5 | 426.1 | 513.8 | 625.2 | 743.6 | 831.3 | 934.3 | 994.2 |
| 75° | 161.5 | 168.5 | 192.2 | 242.3 | 293.8 | 378.7 | 484.6 | 593.2 | 683.7 | 757.5 | 814.6 |
| 77.5° | 89.1 | 90.5 | 110.0 | 139.2 | 174.1 | 228.4 | 306.3 | 391.3 | 458.1 | 499.9 | 551.4 |
| 80° | 51.5 | 51.5 | 61.3 | 79.4 | 100.3 | 133.7 | 176.8 | 218.6 | 259.0 | 285.4 | 310.5 |
| 82.5° | 27.8 | 27.8 | 32.0 | 43.2 | 54.3 | 73.8 | 98.9 | 119.7 | 144.8 | 158.7 | 175.4 |
| 85° | 8.4 | 8.4 | 11.1 | 15.3 | 19.5 | 27.8 | 39.0 | 50.1 | 61.3 | 71.0 | 80.8 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 |



REPORT NUMBER: P636504

CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 |
| 2.5° | 2956.1 | 2936.6 | 2925.5 | 2911.6 | 2915.7 | 2903.2 | 2896.3 | 2900.4 | 2875.4 | 2900.4 | 2925.5 |
| 5° | 2832.2 | 2804.4 | 2782.1 | 2764.0 | 2755.6 | 2738.9 | 2729.2 | 2729.2 | 2713.8 | 2738.9 | 2769.5 |
| 7.5° | 2723.6 | 2701.3 | 2690.2 | 2679.0 | 2666.5 | 2651.2 | 2634.5 | 2628.9 | 2619.2 | 2645.6 | 2672.1 |
| 10° | 2651.2 | 2654.0 | 2660.9 | 2676.2 | 2673.5 | 2663.7 | 2638.7 | 2624.7 | 2624.7 | 2655.4 | 2695.7 |
| 12.5° | 2684.6 | 2713.8 | 2730.6 | 2758.4 | 2764.0 | 2755.6 | 2730.6 | 2719.4 | 2747.3 | 2793.2 | 2860.1 |
| 15° | 2814.1 | 2833.6 | 2847.5 | 2869.8 | 2868.4 | 2861.4 | 2841.9 | 2850.3 | 2942.2 | 3031.3 | 3091.2 |
| 17.5° | 2954.7 | 2932.5 | 2929.7 | 2943.6 | 2947.8 | 2939.4 | 2928.3 | 2965.9 | 3117.6 | 3201.2 | 3231.8 |
| 20° | 3056.4 | 2979.8 | 2963.1 | 2968.7 | 2979.8 | 2975.6 | 2975.6 | 3036.9 | 3194.2 | 3233.2 | 3194.2 |
| 22.5° | 3087.0 | 2978.4 | 2953.3 | 2954.7 | 2970.1 | 2971.4 | 2978.4 | 3042.5 | 3134.4 | 3135.8 | 3075.9 |
| 25° | 3038.3 | 2933.8 | 2915.7 | 2918.5 | 2936.6 | 2935.2 | 2938.0 | 2974.2 | 3014.6 | 2997.9 | 2953.3 |
| 27.5° | 2946.4 | 2855.9 | 2850.3 | 2865.6 | 2889.3 | 2876.8 | 2868.4 | 2878.2 | 2897.6 | 2876.8 | 2837.8 |
| 30° | 2841.9 | 2765.4 | 2768.1 | 2797.4 | 2822.5 | 2801.6 | 2780.7 | 2786.3 | 2787.6 | 2765.4 | 2720.8 |
| 32.5° | 2731.9 | 2674.9 | 2684.6 | 2715.2 | 2744.5 | 2722.2 | 2699.9 | 2697.1 | 2670.7 | 2644.2 | 2601.1 |
| 35° | 2621.9 | 2599.7 | 2612.2 | 2637.3 | 2662.3 | 2644.2 | 2630.3 | 2621.9 | 2564.9 | 2525.9 | 2489.7 |
| 37.5° | 2521.7 | 2538.4 | 2560.7 | 2576.0 | 2584.3 | 2583.0 | 2574.6 | 2555.1 | 2479.9 | 2434.0 | 2386.6 |
| 40° | 2432.6 | 2484.1 | 2507.8 | 2514.7 | 2527.3 | 2524.5 | 2523.1 | 2495.2 | 2396.4 | 2347.6 | 2293.3 |
| 42.5° | 2351.8 | 2424.2 | 2464.6 | 2471.6 | 2478.5 | 2479.9 | 2475.7 | 2435.4 | 2322.6 | 2265.5 | 2214.0 |
| 45° | 2273.8 | 2368.5 | 2420.0 | 2413.1 | 2422.8 | 2422.8 | 2427.0 | 2374.1 | 2250.2 | 2191.7 | 2137.4 |
| 47.5° | 2205.6 | 2317.0 | 2364.3 | 2356.0 | 2361.6 | 2365.7 | 2369.9 | 2308.6 | 2170.8 | 2115.1 | 2059.4 |
| 50° | 2142.9 | 2261.3 | 2301.7 | 2304.5 | 2304.5 | 2314.2 | 2312.8 | 2253.0 | 2104.0 | 2044.1 | 1988.4 |
| 52.5° | 2076.1 | 2204.2 | 2247.4 | 2265.5 | 2271.1 | 2275.2 | 2255.7 | 2186.1 | 2035.7 | 1963.3 | 1911.8 |
| 55° | 1998.1 | 2145.7 | 2184.7 | 2208.4 | 2219.5 | 2216.7 | 2190.3 | 2119.3 | 1966.1 | 1893.7 | 1835.2 |
| 57.5° | 1879.8 | 2020.4 | 2076.1 | 2087.3 | 2105.4 | 2094.2 | 2063.6 | 2003.7 | 1854.7 | 1782.3 | 1722.4 |
| 60° | 1750.3 | 1851.9 | 1896.5 | 1906.2 | 1892.3 | 1896.5 | 1892.3 | 1835.2 | 1705.7 | 1648.6 | 1587.4 |
| 62.5° | 1580.4 | 1670.9 | 1718.3 | 1730.8 | 1707.1 | 1722.4 | 1716.9 | 1645.9 | 1516.4 | 1456.5 | 1402.2 |
| 65° | 1452.3 | 1551.2 | 1606.9 | 1613.8 | 1606.9 | 1613.8 | 1594.3 | 1508.0 | 1385.5 | 1324.2 | 1268.5 |
| 67.5° | 1352.0 | 1453.7 | 1512.2 | 1531.7 | 1524.7 | 1523.3 | 1492.7 | 1392.4 | 1265.7 | 1198.9 | 1127.9 |
| 70° | 1179.4 | 1268.5 | 1343.7 | 1391.0 | 1391.0 | 1364.6 | 1306.1 | 1212.8 | 1111.2 | 1054.1 | 998.4 |
| 72.5° | 1044.3 | 1157.1 | 1230.9 | 1279.6 | 1289.4 | 1274.1 | 1191.9 | 1093.1 | 976.1 | 919.0 | 860.5 |
| 75° | 860.5 | 970.5 | 1049.9 | 1113.9 | 1126.5 | 1109.8 | 1015.1 | 917.6 | 809.0 | 753.3 | 694.8 |
| 77.5° | 575.1 | 640.5 | 704.6 | 763.1 | 750.5 | 761.7 | 697.6 | 623.8 | 557.0 | 515.2 | 488.7 |
| 80° | 324.4 | 367.6 | 387.1 | 419.1 | 419.1 | 419.1 | 377.3 | 342.5 | 304.9 | 281.3 | 254.8 |
| 82.5° | 183.8 | 211.6 | 220.0 | 246.5 | 253.4 | 254.8 | 227.0 | 204.7 | 181.0 | 168.5 | 150.4 |
| 85° | 84.9 | 100.3 | 101.6 | 117.0 | 122.5 | 133.7 | 121.1 | 105.8 | 91.9 | 86.3 | 75.2 |
| 87.5° | 2.8 | 8.4 | 11.1 | 20.9 | 27.8 | 32.0 | 34.8 | 34.8 | 29.2 | 26.5 | 22.3 |
| 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: P636504

CATALOG NUMBER: GWS-SA3F-830-U-SLR-W-GRSWH

CANDELA DISTRIBUTION (continued):

| | 285° | 295° | 305° | 315° | 325° | 335° | 345° | 355° | 359° | 360° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 | 3121.8 |
| 2.5° | 2956.1 | 2989.5 | 3028.5 | 3056.4 | 3106.5 | 3148.3 | 3191.4 | 3238.8 | 3273.6 | 3265.2 |
| 5° | 2807.1 | 2862.8 | 2933.8 | 2999.3 | 3092.6 | 3187.3 | 3291.7 | 3398.9 | 3461.6 | 3458.8 |
| 7.5° | 2723.6 | 2803.0 | 2889.3 | 2977.0 | 3087.0 | 3223.5 | 3383.6 | 3550.7 | 3635.6 | 3639.8 |
| 10° | 2768.1 | 2853.1 | 2911.6 | 2985.4 | 3100.9 | 3272.2 | 3464.4 | 3664.9 | 3762.3 | 3781.8 |
| 12.5° | 2908.8 | 2901.8 | 2897.6 | 2950.6 | 3089.8 | 3307.0 | 3542.3 | 3781.8 | 3891.8 | 3915.5 |
| 15° | 3042.5 | 2899.0 | 2812.7 | 2848.9 | 3039.7 | 3329.3 | 3618.9 | 3909.9 | 4033.9 | 4058.9 |
| 17.5° | 3067.5 | 2850.3 | 2690.2 | 2715.2 | 2960.3 | 3336.3 | 3692.7 | 4035.3 | 4168.9 | 4192.6 |
| 20° | 2997.9 | 2787.6 | 2601.1 | 2566.2 | 2860.1 | 3318.2 | 3738.7 | 4139.7 | 4285.9 | 4311.0 |
| 22.5° | 2910.2 | 2731.9 | 2534.2 | 2443.7 | 2737.5 | 3300.1 | 3790.2 | 4249.7 | 4418.2 | 4440.5 |
| 25° | 2818.3 | 2660.9 | 2471.6 | 2333.7 | 2598.3 | 3288.9 | 3876.5 | 4394.5 | 4597.8 | 4624.3 |
| 27.5° | 2720.8 | 2574.6 | 2417.3 | 2280.8 | 2470.2 | 3302.8 | 3999.1 | 4628.4 | 4859.6 | 4897.2 |
| 30° | 2616.4 | 2488.3 | 2382.4 | 2262.7 | 2382.4 | 3315.4 | 4134.1 | 4867.9 | 5139.5 | 5192.4 |
| 32.5° | 2507.8 | 2408.9 | 2346.2 | 2271.1 | 2328.1 | 3286.1 | 4252.5 | 5136.7 | 5473.6 | 5519.6 |
| 35° | 2399.2 | 2328.1 | 2300.3 | 2286.4 | 2255.7 | 3178.9 | 4348.6 | 5408.2 | 5855.2 | 5895.5 |
| 37.5° | 2297.5 | 2244.6 | 2236.2 | 2251.6 | 2144.3 | 3003.5 | 4460.0 | 5753.5 | 6229.7 | 6291.0 |
| 40° | 2202.8 | 2154.1 | 2152.7 | 2149.9 | 2021.8 | 2764.0 | 4610.3 | 6104.4 | 6598.7 | 6626.6 |
| 42.5° | 2115.1 | 2053.8 | 2065.0 | 2031.6 | 1921.6 | 2505.0 | 4752.4 | 6403.8 | 6942.7 | 6962.1 |
| 45° | 2037.1 | 1956.4 | 1968.9 | 1927.1 | 1874.2 | 2233.5 | 4877.7 | 6757.5 | 7378.5 | 7391.0 |
| 47.5° | 1961.9 | 1875.6 | 1840.8 | 1838.0 | 1865.9 | 1982.8 | 5000.2 | 7438.4 | 8060.8 | 8083.1 |
| 50° | 1892.3 | 1799.0 | 1700.2 | 1761.4 | 1814.3 | 1794.8 | 5153.4 | 8168.0 | 8765.3 | 8759.8 |
| 52.5° | 1825.5 | 1702.9 | 1562.3 | 1680.7 | 1680.7 | 1655.6 | 5110.2 | 8610.8 | 9347.4 | 9443.5 |
| 55° | 1748.9 | 1548.4 | 1418.9 | 1545.6 | 1484.3 | 1530.3 | 4345.8 | 8755.6 | 9713.6 | 9850.0 |
| 57.5° | 1597.1 | 1357.6 | 1244.8 | 1313.1 | 1221.2 | 1418.9 | 3121.8 | 8037.1 | 9091.2 | 9333.5 |
| 60° | 1450.9 | 1217.0 | 1143.2 | 1130.7 | 1010.9 | 1157.1 | 2023.2 | 6292.4 | 7482.9 | 7605.5 |
| 62.5° | 1279.6 | 1095.8 | 1033.2 | 937.1 | 813.2 | 842.4 | 1225.3 | 4141.1 | 5028.1 | 5055.9 |
| 65° | 1150.1 | 992.8 | 873.1 | 758.9 | 665.6 | 611.3 | 724.1 | 1996.7 | 2513.3 | 2479.9 |
| 67.5° | 987.2 | 850.8 | 736.6 | 654.4 | 577.9 | 509.6 | 481.8 | 593.2 | 671.2 | 648.9 |
| 70° | 878.6 | 747.7 | 637.7 | 559.8 | 488.7 | 420.5 | 371.8 | 349.5 | 342.5 | 337.0 |
| 72.5° | 757.5 | 643.3 | 529.1 | 453.9 | 387.1 | 324.4 | 279.9 | 253.4 | 246.5 | 240.9 |
| 75° | 604.3 | 497.1 | 392.7 | 321.7 | 263.2 | 218.6 | 189.4 | 167.1 | 162.9 | 157.3 |
| 77.5° | 399.6 | 318.9 | 233.9 | 190.8 | 156.0 | 132.3 | 112.8 | 98.9 | 96.1 | 93.3 |
| 80° | 220.0 | 183.8 | 143.4 | 115.6 | 93.3 | 80.8 | 73.8 | 65.4 | 64.1 | 62.7 |
| 82.5° | 130.9 | 110.0 | 82.2 | 65.4 | 54.3 | 48.7 | 44.6 | 40.4 | 39.0 | 37.6 |
| 85° | 65.4 | 51.5 | 36.2 | 30.6 | 27.8 | 25.1 | 25.1 | 20.9 | 19.5 | 19.5 |
| 87.5° | 16.7 | 13.9 | 8.4 | 7.0 | 7.0 | 7.0 | 5.6 | 4.2 | 4.2 | 2.8 |
| 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

MCGRAW EDISON

Report Number: SP1-2408-195-9

Test Date: 08/07/2024

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

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

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2408-195-9
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 08/07/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: MCGRAW EDISON
 Catalog Number: **GALN-SB1A-830-U-5WQ**
 Description: GALLEON AREA AND ROADWAY LUMINAIRE. (1) 80 CRI, 3000K, 350MA HIGH DENSITY LIGHTSQUARE WITH 26 LEDS AND TYPE V WIDE OPTICS

Spectral Parameters

CCT (K): 3050
 CIE u': 0.2476
 CIE v': 0.5251
 Duv: 0.0034
 CIE x: 0.4383
 CIE y: 0.4131
 CIE z: 0.1487
 Peak Wavelength (nm): 603
 Dominant Wavelength (nm): 581
 Purity: 55.55201
 Rf: 81.5
 Rg: 99.2

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 81.0 | | |
| R1: | 79.6 | R9: | 7.1 |
| R2: | 85.6 | R10: | 67.0 |
| R3: | 92.0 | R11: | 82.7 |
| R4: | 82.6 | R12: | 63.2 |
| R5: | 78.9 | R13: | 80.3 |
| R6: | 81.7 | R14: | 95.0 |
| R7: | 85.2 | R15: | 71.7 |
| R8: | 62.0 | | |



Test Conditions

Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.2

REPORT NUMBER: SP1-2408-195-9

| 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: SP1-2408-195-9

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2408-195-9

Photopic Flux vs. Wavelength

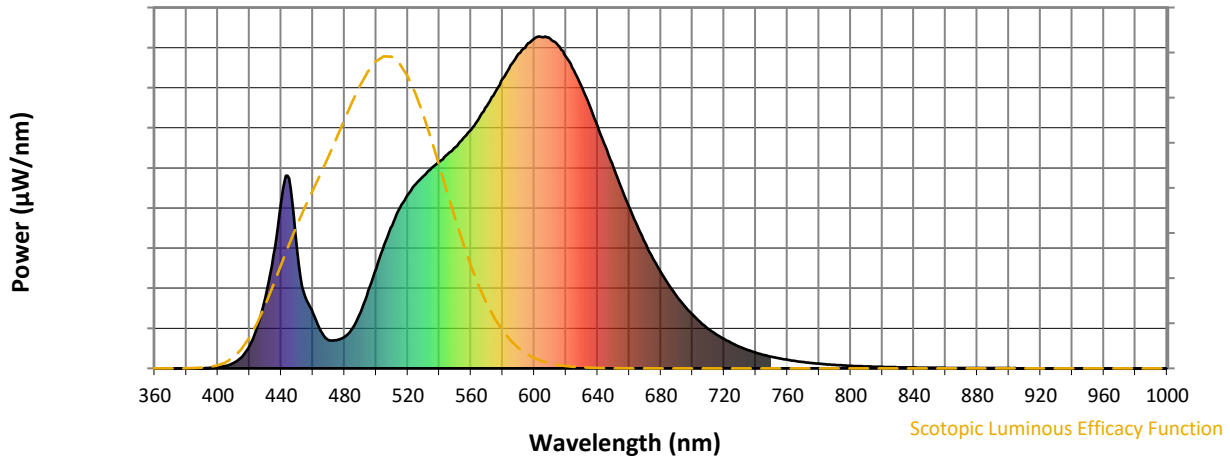


Photopic Lumens: NR

| 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.27

| 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

REPORT NUMBER: SP1-2408-195-9

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.32

| 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 | 168 | NR | 620 | 940 | NR | 750 | 35 | NR | 880 | 1 | NR |
| 365 | 0 | NR | 495 | 233 | NR | 625 | 897 | NR | 755 | 30 | NR | 885 | 1 | NR |
| 370 | 0 | NR | 500 | 300 | NR | 630 | 847 | NR | 760 | 26 | NR | 890 | 1 | NR |
| 375 | 0 | NR | 505 | 372 | NR | 635 | 790 | NR | 765 | 22 | NR | 895 | 1 | NR |
| 380 | 0 | NR | 510 | 430 | NR | 640 | 730 | NR | 770 | 19 | NR | 900 | 1 | NR |
| 385 | 0 | NR | 515 | 483 | NR | 645 | 668 | NR | 775 | 16 | NR | 905 | 1 | NR |
| 390 | 0 | NR | 520 | 524 | NR | 650 | 605 | NR | 780 | 14 | NR | 910 | 0 | NR |
| 395 | 2 | NR | 525 | 555 | NR | 655 | 545 | NR | 785 | 12 | NR | 915 | 0 | NR |
| 400 | 4 | NR | 530 | 581 | NR | 660 | 485 | NR | 790 | 10 | NR | 920 | 0 | NR |
| 405 | 7 | NR | 535 | 604 | NR | 665 | 430 | NR | 795 | 9 | NR | 925 | 0 | NR |
| 410 | 17 | NR | 540 | 623 | NR | 670 | 378 | NR | 800 | 8 | NR | 930 | 0 | NR |
| 415 | 34 | NR | 545 | 645 | NR | 675 | 331 | NR | 805 | 7 | NR | 935 | 0 | NR |
| 420 | 68 | NR | 550 | 667 | NR | 680 | 290 | NR | 810 | 6 | NR | 940 | 0 | NR |
| 425 | 128 | NR | 555 | 693 | NR | 685 | 251 | NR | 815 | 5 | NR | 945 | 0 | NR |
| 430 | 214 | NR | 560 | 719 | NR | 690 | 218 | NR | 820 | 4 | NR | 950 | 0 | NR |
| 435 | 339 | NR | 565 | 754 | NR | 695 | 188 | NR | 825 | 4 | NR | 955 | 0 | NR |
| 440 | 507 | NR | 570 | 791 | NR | 700 | 162 | NR | 830 | 3 | NR | 960 | 0 | NR |
| 445 | 573 | NR | 575 | 830 | NR | 705 | 139 | NR | 835 | 3 | NR | 965 | 0 | NR |
| 450 | 356 | NR | 580 | 873 | NR | 710 | 119 | NR | 840 | 3 | NR | 970 | 0 | NR |
| 455 | 217 | NR | 585 | 913 | NR | 715 | 102 | NR | 845 | 2 | NR | 975 | 0 | NR |
| 460 | 168 | NR | 590 | 948 | NR | 720 | 88 | NR | 850 | 2 | NR | 980 | 0 | NR |
| 465 | 113 | NR | 595 | 974 | NR | 725 | 76 | NR | 855 | 2 | NR | 985 | 0 | NR |
| 470 | 85 | NR | 600 | 994 | NR | 730 | 65 | NR | 860 | 1 | NR | 990 | 0 | NR |
| 475 | 85 | NR | 605 | 998 | NR | 735 | 55 | NR | 865 | 1 | NR | 995 | 0 | NR |
| 480 | 94 | NR | 610 | 994 | NR | 740 | 47 | NR | 870 | 1 | NR | 1000 | 0 | NR |
| 485 | 120 | NR | 615 | 973 | NR | 745 | 41 | NR | 875 | 1 | NR | | | |

Summary

$R_f = 81.5$
 $R_g = 99.2$
 $CIE R_a = 81.0$
 $R_9 = 7.1$



Color Vector Graphics

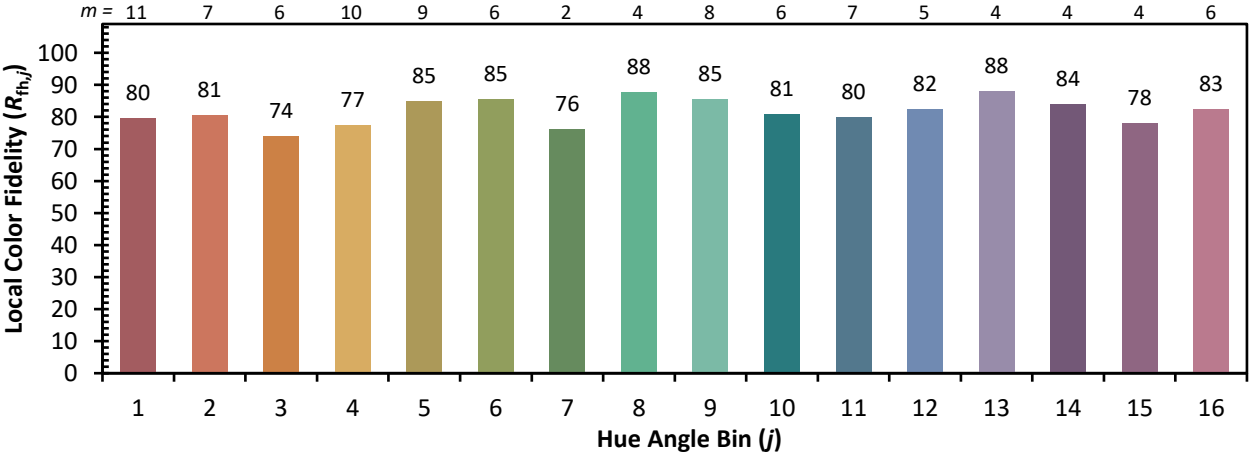


Individual Sample Fidelity Index ($R_{f,i}$)

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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)