

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: P641761

Luminaire Tested: GWS-SA6B-750-U-5WQ-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P641761
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-1)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA6B-750-U-5WQ-W
Description: GALLEON WALL SLIM LUMINAIRE. (6) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: (96) 5000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21956.6 lumens
Efficiency: N/A
Efficacy: 158.1 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B5 - U0 - G3

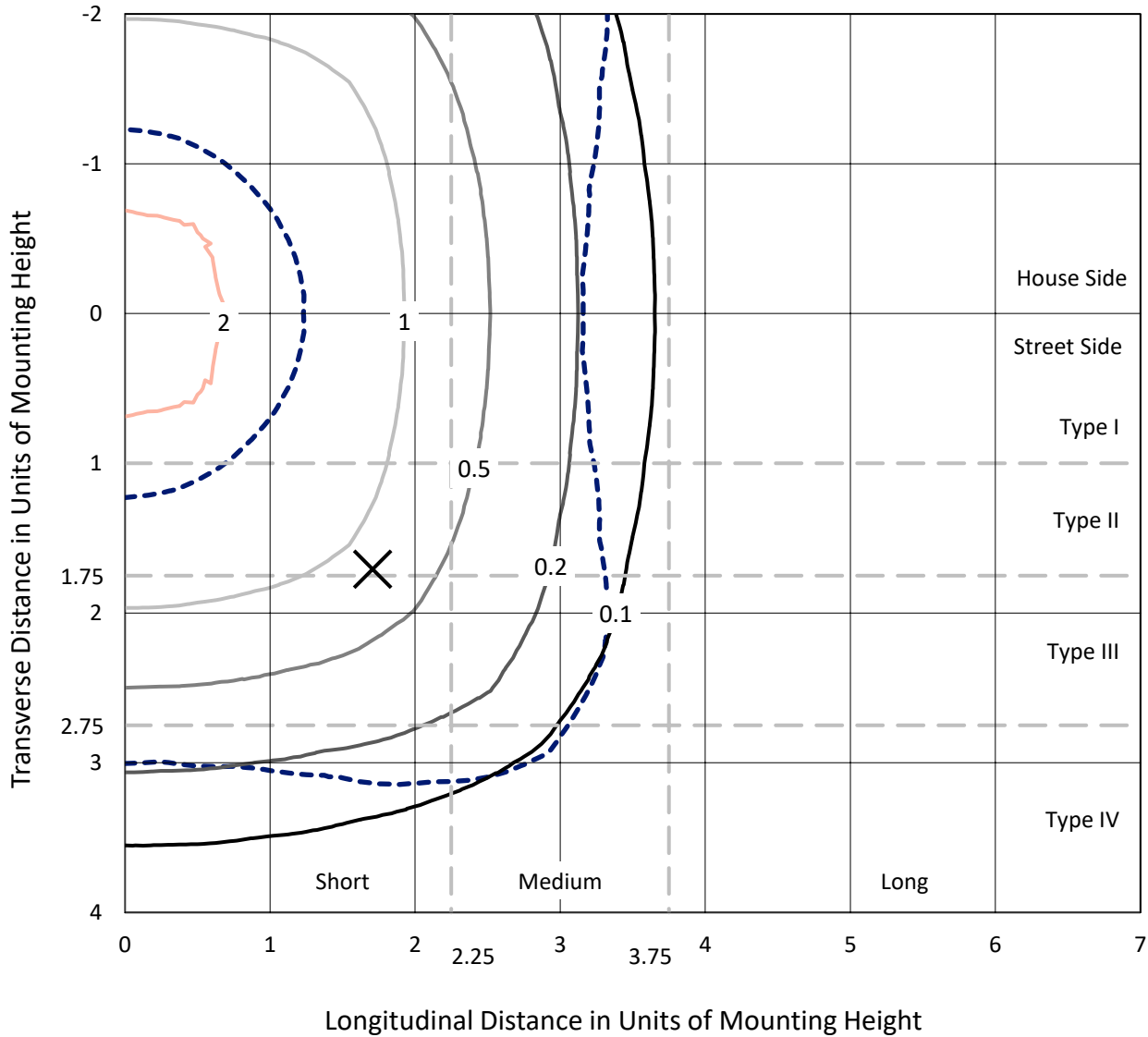
Input Watts (W): 138.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P641761
 CATALOG NUMBER: GWS-SA6B-750-U-5WQ-W

Iso-Footcandle Lines of Horizontal Illumination

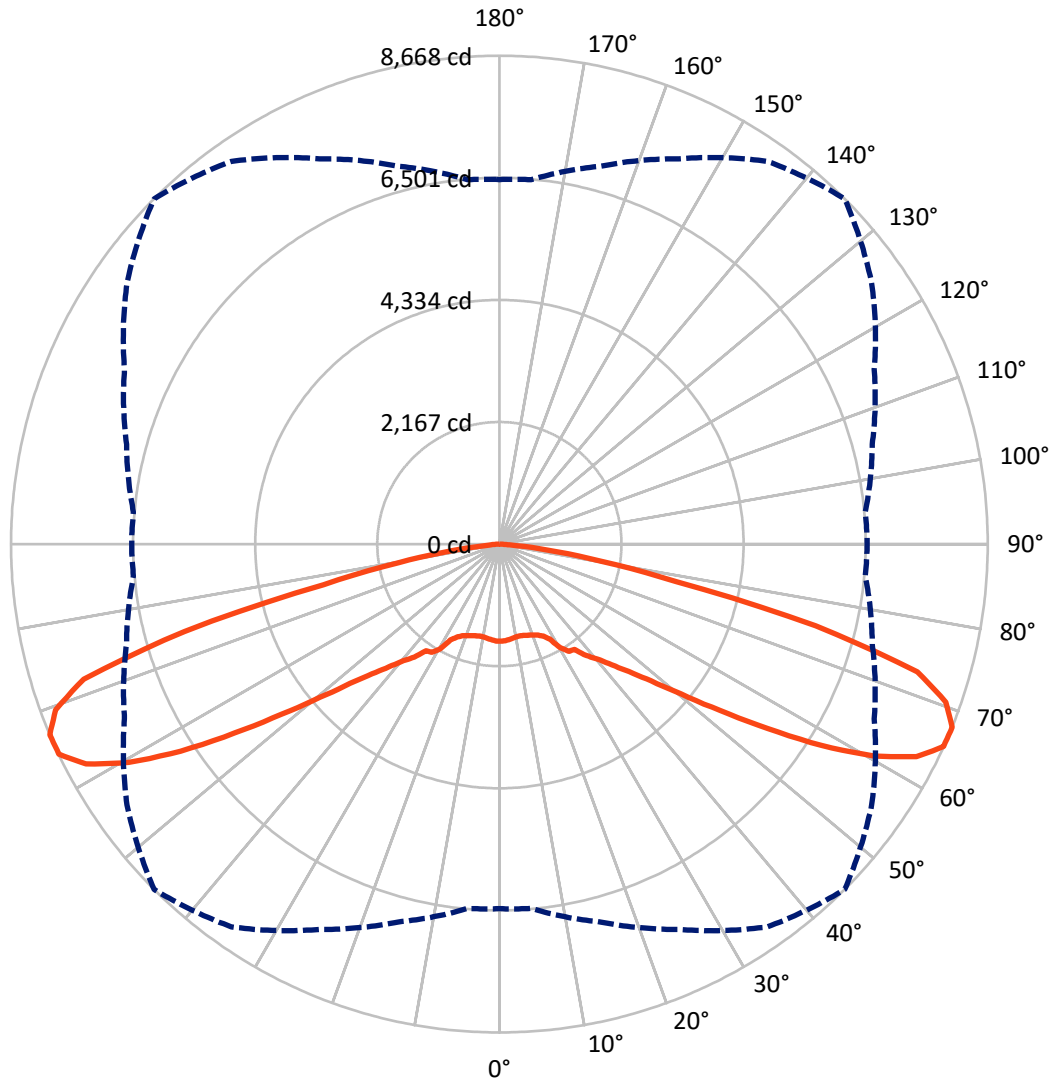
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - N/A

REPORT NUMBER: P641761
CATALOG NUMBER: GWS-SA6B-750-U-5WQ-W

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P641761

CATALOG NUMBER: GWS-SA6B-750-U-5WQ-W

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 10978.3 | 0.0 | 10978.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 10978.3 | 0.0 | 10978.3 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 21956.6 | 0.0 | 21956.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 161.7 | 0.7 |
| 10°-20° | 479.8 | 2.2 |
| 20°-30° | 860.6 | 3.9 |
| 30°-40° | 1453.8 | 6.6 |
| 40°-50° | 2554.4 | 11.6 |
| 50°-60° | 4927.5 | 22.4 |
| 60°-70° | 7149.2 | 32.6 |
| 70°-80° | 4090.4 | 18.6 |
| 80°-90° | 279.2 | 1.3 |
| 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° | 21956.6 | 100.0 |
| 0°-180° | 21956.6 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P641761

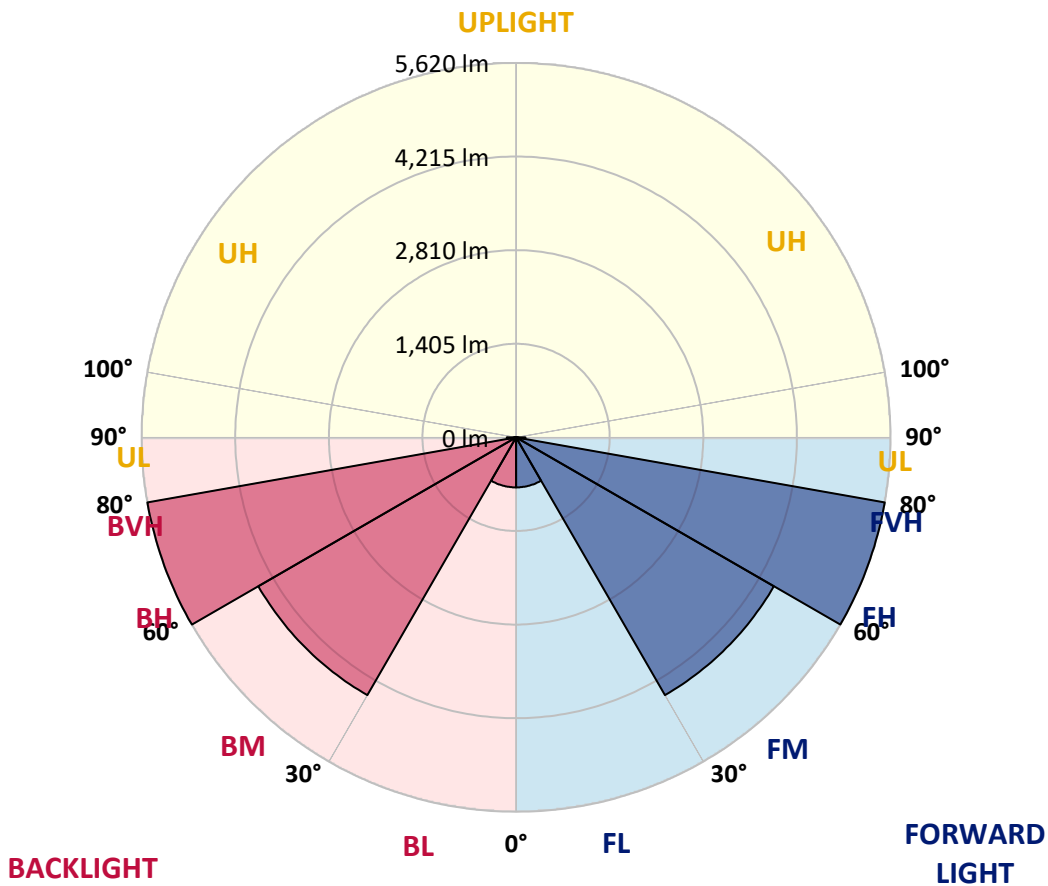
CATALOG NUMBER: GWS-SA6B-750-U-5WQ-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 751.0 | 3.4 | | | |
| FM (30°-60°) | 4467.9 | 20.3 | | | |
| FH (60°-80°) | 5619.8 | 25.6 | | | G3/7500 |
| FVH (80°-90°) | 139.6 | 0.6 | | | G2/225 |
| BL (0°-30°) | 751.0 | 3.4 | B2/1000 | | |
| BM (30°-60°) | 4467.9 | 20.3 | B3/5000 | | |
| BH (60°-80°) | 5619.8 | 25.6 | B5 | | G3/7500 |
| BVH (80°-90°) | 139.6 | 0.6 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G3

Type V Short





REPORT NUMBER: P641761
 CATALOG NUMBER: GWS-SA6B-750-U-5WQ-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 | 1721.8 |
| 2.5° | 1707.9 | 1709.4 | 1712.5 | 1712.5 | 1715.6 | 1720.3 | 1721.8 | 1718.7 | 1720.3 | 1712.5 | 1720.3 |
| 5° | 1703.2 | 1704.8 | 1706.3 | 1703.2 | 1703.2 | 1704.8 | 1704.8 | 1701.7 | 1703.2 | 1695.5 | 1703.2 |
| 7.5° | 1692.3 | 1693.9 | 1693.9 | 1689.2 | 1684.6 | 1687.7 | 1687.7 | 1684.6 | 1686.1 | 1678.4 | 1687.7 |
| 10° | 1683.0 | 1683.0 | 1681.5 | 1672.2 | 1667.5 | 1672.2 | 1673.7 | 1675.3 | 1681.5 | 1675.3 | 1686.1 |
| 12.5° | 1689.2 | 1689.2 | 1684.6 | 1672.2 | 1664.4 | 1667.5 | 1670.6 | 1673.7 | 1684.6 | 1683.0 | 1695.5 |
| 15° | 1706.3 | 1707.9 | 1695.5 | 1681.5 | 1676.8 | 1681.5 | 1678.4 | 1676.8 | 1690.8 | 1695.5 | 1709.4 |
| 17.5° | 1720.3 | 1720.3 | 1704.8 | 1690.8 | 1692.3 | 1700.1 | 1693.9 | 1686.1 | 1700.1 | 1709.4 | 1725.0 |
| 20° | 1732.7 | 1731.2 | 1714.1 | 1704.8 | 1711.0 | 1721.8 | 1717.2 | 1706.3 | 1715.6 | 1726.5 | 1740.5 |
| 22.5° | 1763.8 | 1762.2 | 1743.6 | 1738.9 | 1745.1 | 1756.0 | 1751.3 | 1742.0 | 1752.9 | 1768.4 | 1785.5 |
| 25° | 1852.3 | 1849.2 | 1821.2 | 1805.7 | 1802.6 | 1810.3 | 1808.8 | 1805.7 | 1822.8 | 1841.4 | 1861.6 |
| 27.5° | 1970.3 | 1968.7 | 1948.5 | 1933.0 | 1912.8 | 1906.6 | 1911.3 | 1925.2 | 1950.1 | 1964.1 | 1981.1 |
| 30° | 2029.3 | 2029.3 | 2026.2 | 2051.0 | 2094.5 | 2136.4 | 2103.8 | 2051.0 | 2029.3 | 2023.1 | 2040.1 |
| 32.5° | 2106.9 | 2114.7 | 2103.8 | 2131.7 | 2204.7 | 2266.8 | 2204.7 | 2119.3 | 2103.8 | 2103.8 | 2122.4 |
| 35° | 2285.4 | 2288.5 | 2271.5 | 2266.8 | 2290.1 | 2297.9 | 2268.4 | 2237.3 | 2254.4 | 2257.5 | 2280.8 |
| 37.5° | 2428.3 | 2428.3 | 2420.5 | 2432.9 | 2481.1 | 2510.6 | 2462.4 | 2406.5 | 2411.2 | 2414.3 | 2443.8 |
| 40° | 2648.8 | 2655.0 | 2636.3 | 2634.8 | 2653.4 | 2679.8 | 2628.6 | 2592.9 | 2617.7 | 2625.5 | 2670.5 |
| 42.5° | 2923.6 | 2923.6 | 2895.6 | 2887.9 | 2900.3 | 2928.2 | 2880.1 | 2856.8 | 2889.4 | 2895.6 | 2922.0 |
| 45° | 3251.2 | 3258.9 | 3221.7 | 3207.7 | 3213.9 | 3223.2 | 3189.1 | 3178.2 | 3209.2 | 3223.2 | 3269.8 |
| 47.5° | 3650.2 | 3658.0 | 3625.3 | 3623.8 | 3617.6 | 3623.8 | 3591.2 | 3585.0 | 3609.8 | 3599.0 | 3648.6 |
| 50° | 4142.4 | 4156.3 | 4128.4 | 4167.2 | 4162.6 | 4181.2 | 4136.2 | 4103.6 | 4103.6 | 4074.1 | 4102.0 |
| 52.5° | 4693.5 | 4721.5 | 4735.5 | 4800.7 | 4850.4 | 4896.9 | 4822.4 | 4771.2 | 4696.6 | 4636.1 | 4712.2 |
| 55° | 5294.4 | 5286.6 | 5375.1 | 5518.0 | 5663.9 | 5774.2 | 5628.2 | 5466.7 | 5345.6 | 5219.9 | 5249.4 |
| 57.5° | 5820.7 | 5847.1 | 5963.6 | 6224.4 | 6513.2 | 6746.1 | 6483.7 | 6173.2 | 5898.4 | 5718.3 | 5743.1 |
| 60° | 6258.6 | 6280.3 | 6435.6 | 6811.3 | 7315.9 | 7637.3 | 7221.2 | 6708.8 | 6309.8 | 6061.4 | 6087.8 |
| 62.5° | 6662.3 | 6682.4 | 6839.3 | 7253.8 | 7890.4 | 8309.6 | 7772.4 | 7072.1 | 6628.1 | 6378.1 | 6393.7 |
| 65° | 6895.1 | 6907.6 | 7121.8 | 7558.1 | 8228.8 | 8662.0 | 8056.5 | 7334.5 | 6898.3 | 6643.6 | 6652.9 |
| 67.5° | 6471.3 | 6491.5 | 6943.3 | 7545.7 | 8294.0 | 8668.2 | 8068.9 | 7342.3 | 6851.7 | 6519.4 | 6527.2 |
| 70° | 5105.0 | 5087.9 | 5626.7 | 6662.3 | 7919.9 | 8407.4 | 7710.3 | 6791.1 | 6033.4 | 5569.2 | 5561.5 |
| 72.5° | 3892.4 | 3897.1 | 4196.7 | 4906.3 | 6457.3 | 7758.4 | 6803.5 | 5468.3 | 4651.6 | 4299.2 | 4285.2 |
| 75° | 2822.6 | 2866.1 | 3109.9 | 3630.0 | 4516.5 | 5799.0 | 5122.1 | 4052.3 | 3505.8 | 3294.6 | 3263.6 |
| 77.5° | 1271.6 | 1327.5 | 1667.5 | 2279.2 | 3019.8 | 3204.6 | 3217.0 | 2751.2 | 2075.8 | 1725.0 | 1670.6 |
| 80° | 371.1 | 397.5 | 510.8 | 874.1 | 1406.7 | 1818.1 | 1443.9 | 1214.1 | 756.1 | 593.1 | 565.2 |
| 82.5° | 156.8 | 178.6 | 218.9 | 242.2 | 408.3 | 843.1 | 524.8 | 333.8 | 310.5 | 251.5 | 229.8 |
| 85° | 66.8 | 71.4 | 91.6 | 97.8 | 132.0 | 180.1 | 166.1 | 150.6 | 144.4 | 111.8 | 102.5 |
| 87.5° | 27.9 | 27.9 | 27.9 | 24.8 | 23.3 | 24.8 | 34.2 | 43.5 | 57.4 | 45.0 | 41.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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



LM-79-2008: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGRAW-EDISON

Report Number: SP1-1908-441-4-R4

Test Date: 10/02/2019

Luminaire Tested: SA1C-750-U-5WQ

Data in this report applies to families of products SA1C-760-U-5WQ .

Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-4-R4
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 10/28/2024
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: McGRAW-EDISON
 Catalog Number: **SA1C-750-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-4-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. ROADWAY AND AREA LUMINAIRE. (1) 70 CRI, 5000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

| | | | | | |
|---------------------------|--------|-----------|------|------|-------|
| CCT (K): | 4884 | CRI (Ra): | 73.5 | R9: | -28.4 |
| CIE u': | 0.2101 | R1: | 70.5 | R10: | 48.6 |
| CIE v': | 0.4904 | R2: | 77.7 | R11: | 73.2 |
| Duv: | 0.0037 | R3: | 84.6 | R12: | 50.7 |
| CIE x: | 0.3493 | R4: | 74.7 | R13: | 71.2 |
| CIE y: | 0.3624 | R5: | 71.9 | R14: | 91.4 |
| CIE z: | 0.2884 | R6: | 70.7 | | |
| Peak Wavelength (nm): | 444 | R7: | 81.2 | | |
| Dominant Wavelength (nm): | 571 | R8: | 56.9 | | |
| Purity: | 13.7 | | | | |
| Rf: | 74.9 | | | | |
| Rg: | 96.3 | | | | |



Test Conditions

Stabilization Time: 240M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-4-R4

| Measurement and Test Equipment | | | |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument | Identification Number | Calibration Date | Calibration Due Date |
| Photometer | IN0058 | 6/28/2019 | 12/28/2019 |
| Power Meter | IN0071 | 12/5/2018 | 12/5/2019 |
| AC Power Source | IN0063 | 12/5/2018 | 12/5/2019 |
| DC Power Source | IN0208 | 12/5/2018 | 12/5/2019 |
| Sphere Thermometer | IN0085 | 12/5/2018 | 12/5/2019 |
| Room Thermometer | IN0046 | 12/5/2018 | 12/5/2019 |

REPORT NUMBER: SP1-1908-441-4-R4

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-1908-441-4-R4

Photopic Flux vs. Wavelength



#####

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 13493.5 S/P: 1.77

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 5378.9 M/P: 0.71

| 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 | 2945 | NR | 490 | 37941 | NR | 620 | 88803 | NR | 750 | 3908 | NR | 880 | 2997 | NR |
| 365 | 2596 | NR | 495 | 48525 | NR | 625 | 80578 | NR | 755 | 3988 | NR | 885 | 2927 | NR |
| 370 | 2732 | NR | 500 | 60609 | NR | 630 | 73127 | NR | 760 | 3335 | NR | 890 | 2649 | NR |
| 375 | 2894 | NR | 505 | 72036 | NR | 635 | 66244 | NR | 765 | 3438 | NR | 895 | 2828 | NR |
| 380 | 2822 | NR | 510 | 82168 | NR | 640 | 59440 | NR | 770 | 3427 | NR | 900 | 1407 | NR |
| 385 | 2394 | NR | 515 | 90898 | NR | 645 | 52864 | NR | 775 | 2759 | NR | 905 | 2224 | NR |
| 390 | 2370 | NR | 520 | 97142 | NR | 650 | 47085 | NR | 780 | 2340 | NR | 910 | 2905 | NR |
| 395 | 2267 | NR | 525 | 103255 | NR | 655 | 41789 | NR | 785 | 2412 | NR | 915 | 3350 | NR |
| 400 | 2262 | NR | 530 | 106697 | NR | 660 | 37064 | NR | 790 | 1999 | NR | 920 | 3114 | NR |
| 405 | 3000 | NR | 535 | 110081 | NR | 665 | 32299 | NR | 795 | 2054 | NR | 925 | 2834 | NR |
| 410 | 5324 | NR | 540 | 112494 | NR | 670 | 28142 | NR | 800 | 2331 | NR | 930 | 2271 | NR |
| 415 | 10725 | NR | 545 | 115513 | NR | 675 | 24505 | NR | 805 | 2648 | NR | 935 | 2228 | NR |
| 420 | 22128 | NR | 550 | 117203 | NR | 680 | 21162 | NR | 810 | 2485 | NR | 940 | 2833 | NR |
| 425 | 44095 | NR | 555 | 119753 | NR | 685 | 18400 | NR | 815 | 2409 | NR | 945 | 2941 | NR |
| 430 | 77002 | NR | 560 | 122602 | NR | 690 | 16065 | NR | 820 | 2221 | NR | 950 | 2323 | NR |
| 435 | 119881 | NR | 565 | 124314 | NR | 695 | 13860 | NR | 825 | 1562 | NR | 955 | 1667 | NR |
| 440 | 164454 | NR | 570 | 126775 | NR | 700 | 12177 | NR | 830 | 2249 | NR | 960 | 749 | NR |
| 445 | 179997 | NR | 575 | 127511 | NR | 705 | 10757 | NR | 835 | 2573 | NR | 965 | 2669 | NR |
| 450 | 142822 | NR | 580 | 127577 | NR | 710 | 9601 | NR | 840 | 2764 | NR | 970 | 3968 | NR |
| 455 | 90008 | NR | 585 | 126153 | NR | 715 | 8944 | NR | 845 | 3109 | NR | 975 | 3886 | NR |
| 460 | 60557 | NR | 590 | 123678 | NR | 720 | 7947 | NR | 850 | 2963 | NR | 980 | 2788 | NR |
| 465 | 43305 | NR | 595 | 119774 | NR | 725 | 7062 | NR | 855 | 2336 | NR | 985 | 3496 | NR |
| 470 | 31089 | NR | 600 | 115733 | NR | 730 | 6004 | NR | 860 | 2118 | NR | 990 | 2913 | NR |
| 475 | 26278 | NR | 605 | 109231 | NR | 735 | 5594 | NR | 865 | 3144 | NR | 995 | 4659 | NR |
| 480 | 27060 | NR | 610 | 102408 | NR | 740 | 5165 | NR | 870 | 3069 | NR | 1000 | 1308 | NR |
| 485 | 30698 | NR | 615 | 96015 | NR | 745 | 4687 | NR | 875 | 3311 | NR | | | |

REPORT NUMBER: SP1-1908-441-4-R4

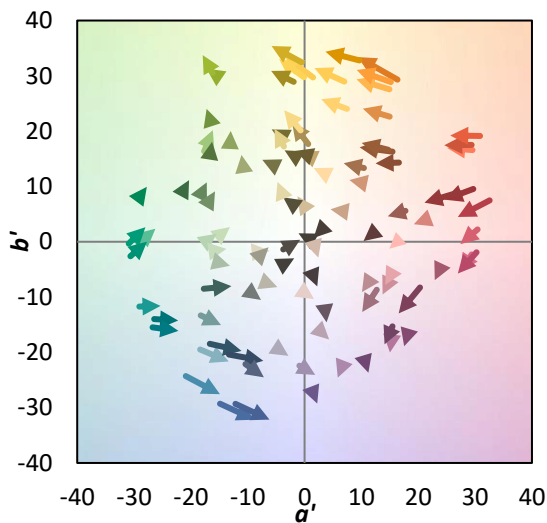
TM-30-18

Summary

$R_f = 74.9$
 $R_g = 96.3$
 CIE $R_a = 73.5$
 $R_g = -28.4$



Color Vector Graphics

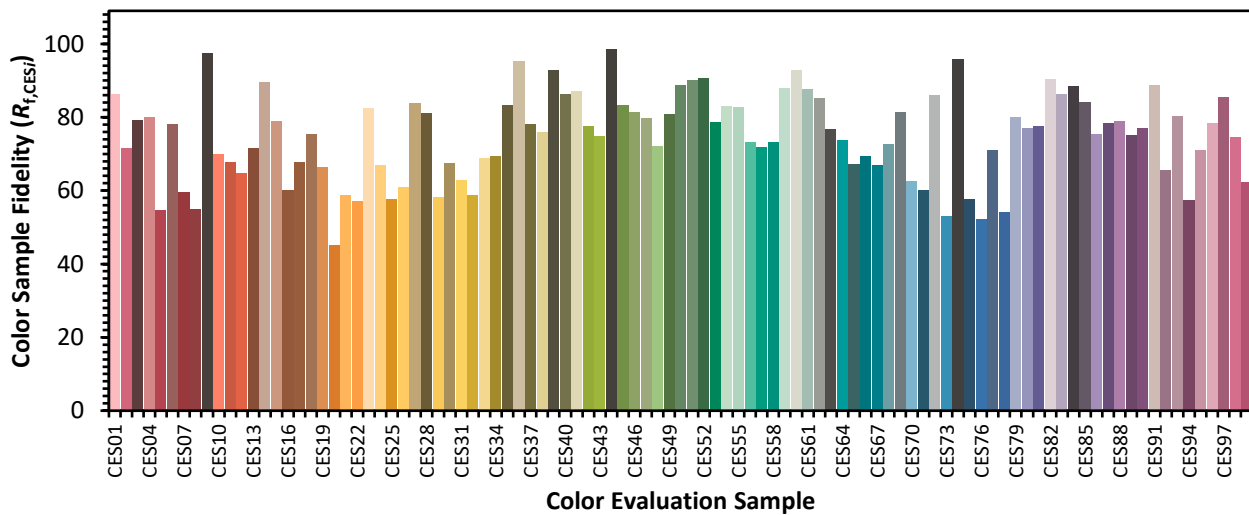


REPORT NUMBER: SP1-1908-441-4-R4

TM-30-18

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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 61 | CES51 = 90 | CES76 = 52 |
| CES02 = 60 | CES27 = 84 | CES52 = 91 | CES77 = 71 |
| CES03 = 30 | CES28 = 81 | CES53 = 79 | CES78 = 54 |
| CES04 = 69 | CES29 = 58 | CES54 = 83 | CES79 = 80 |
| CES05 = 46 | CES30 = 67 | CES55 = 83 | CES80 = 77 |
| CES06 = 50 | CES31 = 63 | CES56 = 73 | CES81 = 77 |
| CES07 = 39 | CES32 = 59 | CES57 = 72 | CES82 = 90 |
| CES08 = 38 | CES33 = 69 | CES58 = 73 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 88 | CES84 = 88 |
| CES10 = 73 | CES35 = 83 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 95 | CES61 = 88 | CES86 = 75 |
| CES12 = 61 | CES37 = 78 | CES62 = 85 | CES87 = 78 |
| CES13 = 41 | CES38 = 76 | CES63 = 77 | CES88 = 79 |
| CES14 = 74 | CES39 = 93 | CES64 = 74 | CES89 = 75 |
| CES15 = 70 | CES40 = 86 | CES65 = 67 | CES90 = 77 |
| CES16 = 46 | CES41 = 87 | CES66 = 69 | CES91 = 89 |
| CES17 = 49 | CES42 = 78 | CES67 = 67 | CES92 = 66 |
| CES18 = 55 | CES43 = 75 | CES68 = 73 | CES93 = 80 |
| CES19 = 71 | CES44 = 99 | CES69 = 81 | CES94 = 57 |
| CES20 = 64 | CES45 = 83 | CES70 = 63 | CES95 = 71 |
| CES21 = 85 | CES46 = 81 | CES71 = 60 | CES96 = 78 |
| CES22 = 77 | CES47 = 80 | CES72 = 86 | CES97 = 85 |
| CES23 = 91 | CES48 = 72 | CES73 = 53 | CES98 = 75 |
| CES24 = 90 | CES49 = 81 | CES74 = 96 | CES99 = 62 |
| CES25 = 71 | CES50 = 89 | CES75 = 58 | |



REPORT NUMBER: SP1-1908-441-4-R4

TM-30-18

Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-1908-441-4-R4

TM-30-18

Measure Comparisons



(END OF REPORT)