

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: P635365

Luminaire Tested: GWS-SA3D-750-U-T3R-W-GRSBK

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P635365
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA3D-750-U-T3R-W-GRSBK
Description: GALLEON WALL SLIM LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK
Light Source: (48) 5000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11290.3 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G1

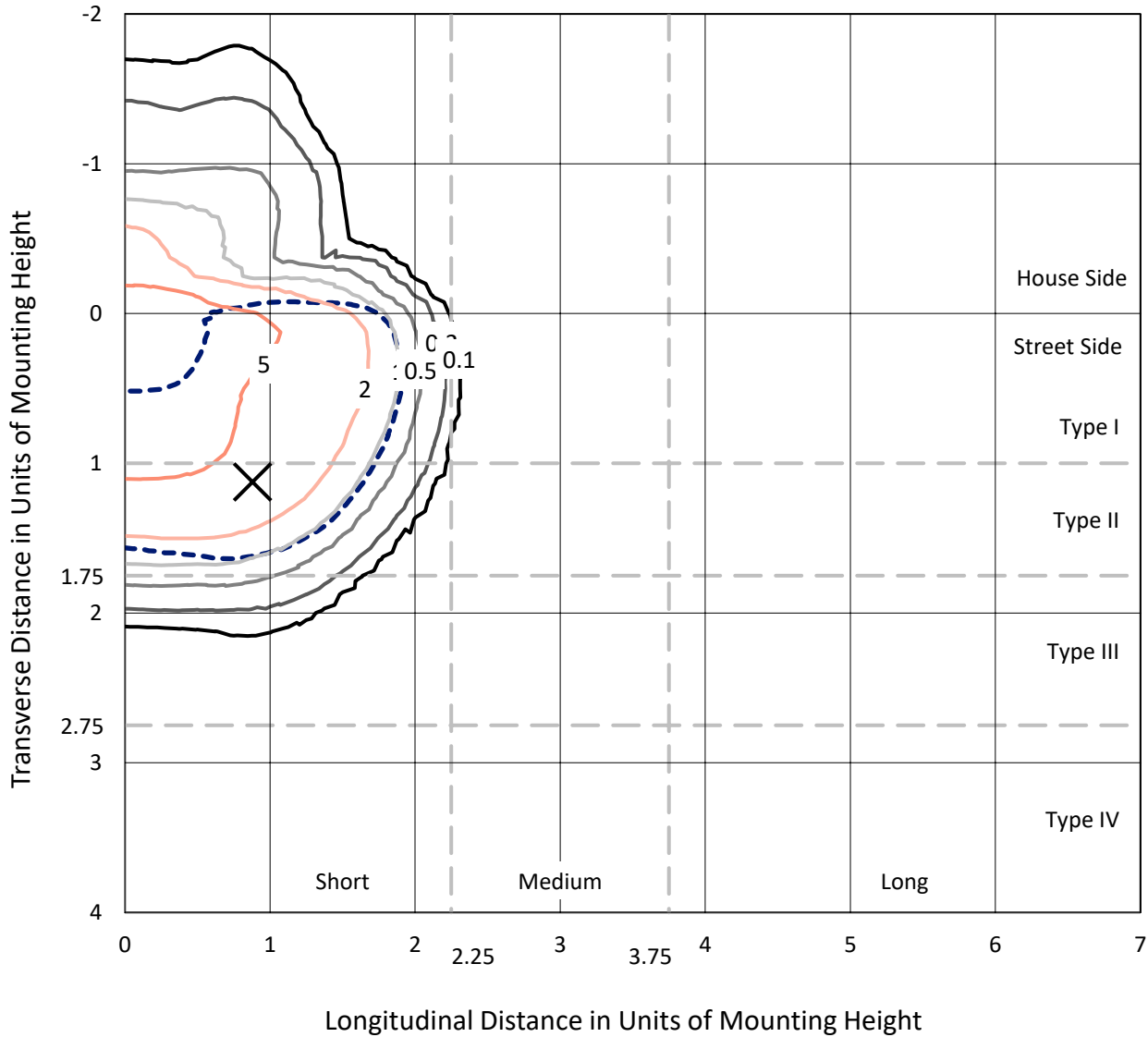
Input Watts (W): 120.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

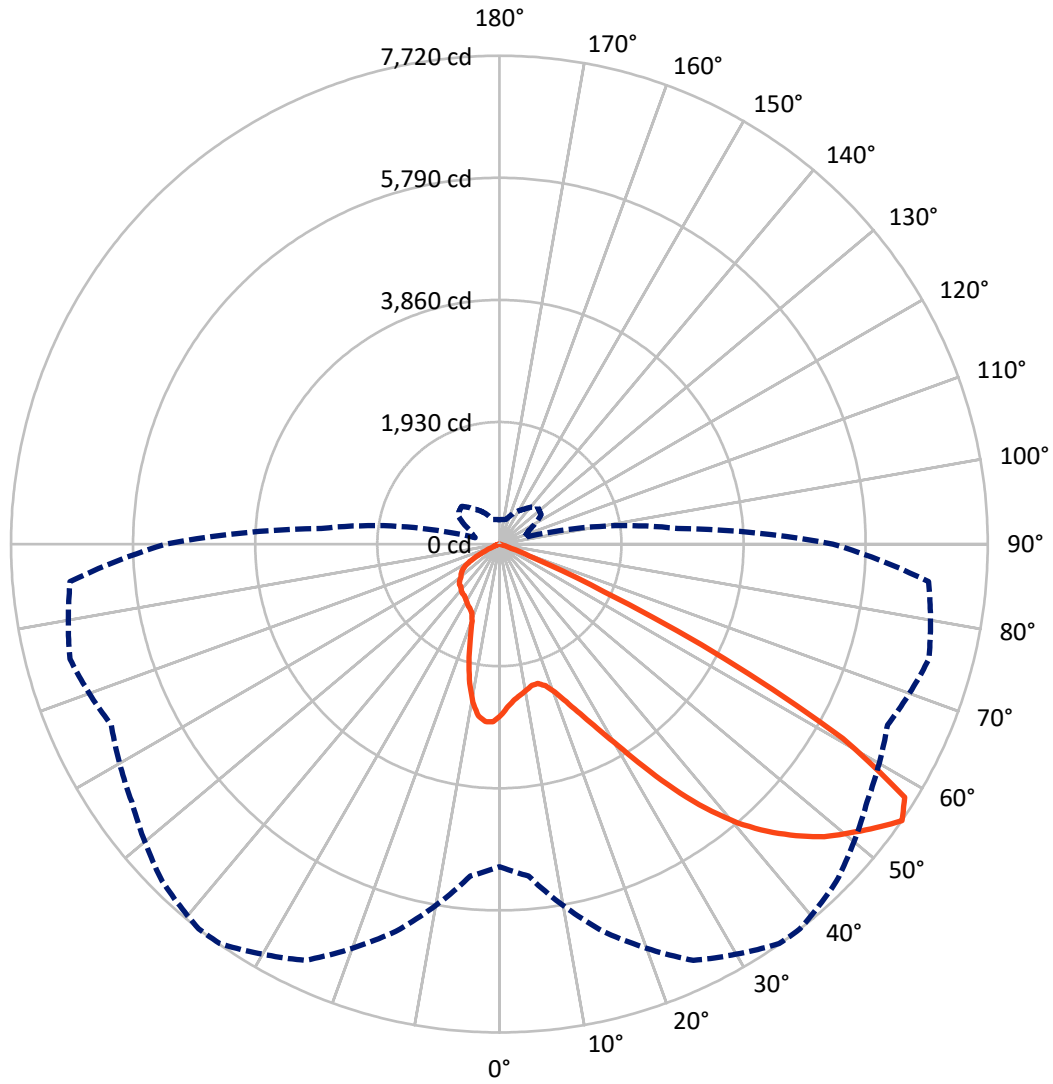
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.1 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2199.7 | 0.0 | 2199.7 |
| | % Fixture | 19.5 | 0.0 | 19.5 |
| Street Side | Lumens | 9090.6 | 0.0 | 9090.6 |
| | % Fixture | 80.5 | 0.0 | 80.5 |
| Total | Lumens | 11290.3 | 0.0 | 11290.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 250.3 | 2.2 |
| 10°-20° | 674.0 | 6.0 |
| 20°-30° | 1156.5 | 10.2 |
| 30°-40° | 1918.2 | 17.0 |
| 40°-50° | 2819.9 | 25.0 |
| 50°-60° | 3295.1 | 29.2 |
| 60°-70° | 1116.9 | 9.9 |
| 70°-80° | 57.1 | 0.5 |
| 80°-90° | 2.3 | 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° | 11290.3 | 100.0 |
| 0°-180° | 11290.3 | 100.0 |

Coefficient of Utilization



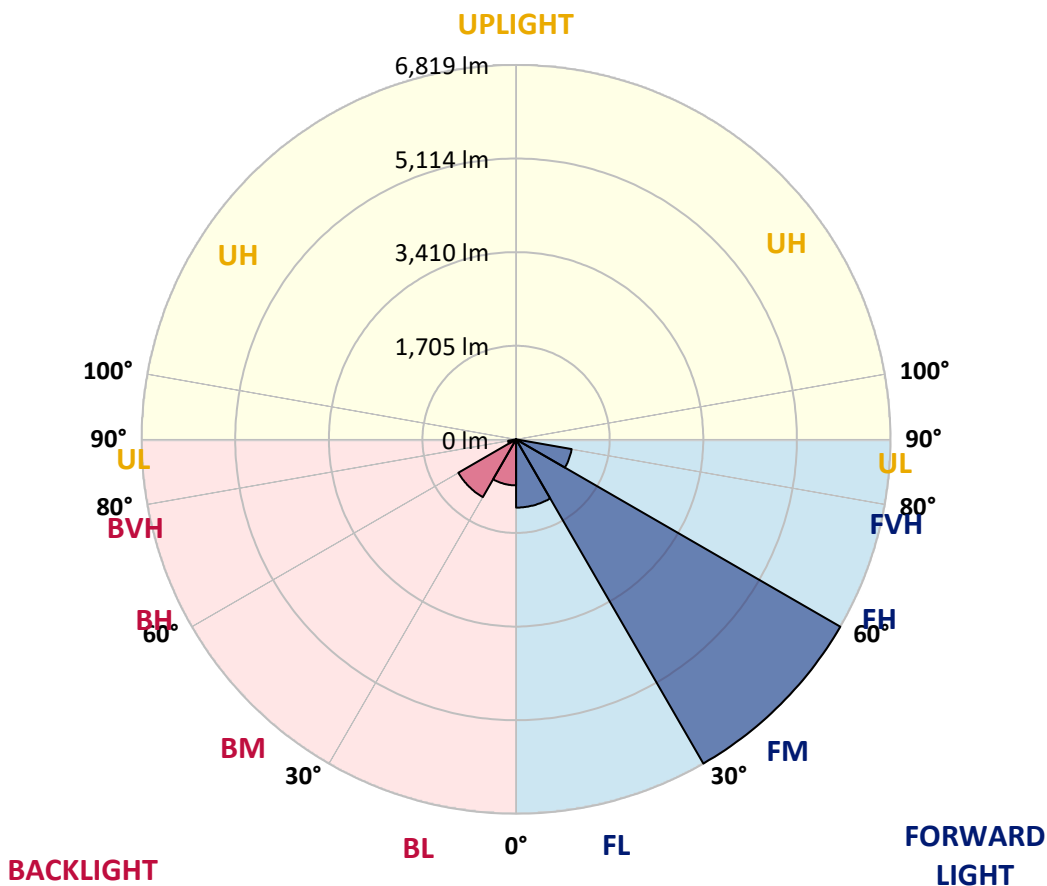
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1242.8 | 11.0 | | | |
| FM (30°-60°) | 6819.0 | 60.4 | | | |
| FH (60°-80°) | 1027.6 | 9.1 | | | G1/1800 |
| FVH (80°-90°) | 1.2 | 0.0 | | | G0/10 |
| BL (0°-30°) | 838.1 | 7.4 | B2/1000 | | |
| BM (30°-60°) | 1214.1 | 10.8 | B2/2500 | | |
| BH (60°-80°) | 146.4 | 1.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 1.1 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1
 Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 |
| 2.5° | 2521.7 | 2516.5 | 2526.8 | 2547.5 | 2566.8 | 2573.3 | 2592.6 | 2619.7 | 2636.5 | 2676.5 | 2708.8 |
| 5° | 2408.1 | 2405.5 | 2415.8 | 2433.9 | 2459.7 | 2468.8 | 2498.4 | 2543.6 | 2588.8 | 2658.5 | 2726.9 |
| 7.5° | 2304.9 | 2303.6 | 2319.1 | 2359.1 | 2396.5 | 2408.1 | 2444.2 | 2499.7 | 2560.4 | 2667.5 | 2768.2 |
| 10° | 2169.4 | 2170.6 | 2200.3 | 2257.1 | 2325.5 | 2348.7 | 2406.8 | 2486.8 | 2565.5 | 2703.6 | 2843.0 |
| 12.5° | 2125.5 | 2128.1 | 2143.5 | 2187.4 | 2262.3 | 2292.0 | 2373.3 | 2494.6 | 2595.2 | 2755.2 | 2939.8 |
| 15° | 2232.6 | 2232.6 | 2219.7 | 2224.8 | 2258.4 | 2285.5 | 2370.7 | 2520.4 | 2645.6 | 2817.2 | 3035.3 |
| 17.5° | 2440.4 | 2432.6 | 2400.4 | 2356.5 | 2344.9 | 2353.9 | 2422.3 | 2575.9 | 2716.5 | 2889.5 | 3143.7 |
| 20° | 2721.7 | 2724.3 | 2661.0 | 2569.4 | 2495.9 | 2494.6 | 2535.9 | 2673.9 | 2818.5 | 2975.9 | 3261.1 |
| 22.5° | 3062.4 | 3052.1 | 2968.2 | 2843.0 | 2715.2 | 2704.9 | 2721.7 | 2823.6 | 2965.6 | 3112.7 | 3405.7 |
| 25° | 3457.3 | 3452.1 | 3333.4 | 3165.6 | 2996.6 | 2972.1 | 2972.1 | 3072.7 | 3176.0 | 3307.6 | 3578.6 |
| 27.5° | 3870.3 | 3870.3 | 3755.4 | 3561.8 | 3337.3 | 3293.4 | 3286.9 | 3405.7 | 3474.1 | 3499.9 | 3724.4 |
| 30° | 4294.8 | 4289.7 | 4176.1 | 3977.4 | 3737.3 | 3692.2 | 3674.1 | 3761.9 | 3810.9 | 3733.5 | 3906.4 |
| 32.5° | 4725.9 | 4734.9 | 4620.0 | 4435.5 | 4221.3 | 4191.6 | 4136.1 | 4136.1 | 4176.1 | 4067.7 | 4192.9 |
| 35° | 5189.2 | 5186.6 | 5096.2 | 4971.1 | 4787.8 | 4754.3 | 4662.6 | 4519.4 | 4580.0 | 4532.3 | 4589.1 |
| 37.5° | 5598.3 | 5617.6 | 5573.7 | 5480.8 | 5332.4 | 5298.9 | 5147.9 | 4888.5 | 4934.9 | 5009.8 | 5060.1 |
| 40° | 6013.8 | 6029.3 | 6073.2 | 6043.5 | 5856.4 | 5794.4 | 5526.0 | 5100.1 | 5151.7 | 5408.5 | 5553.1 |
| 42.5° | 6421.6 | 6429.3 | 6518.4 | 6567.4 | 6317.1 | 6208.7 | 5812.5 | 5229.2 | 5283.4 | 5720.9 | 5973.8 |
| 45° | 6681.0 | 6697.8 | 6844.9 | 6994.6 | 6723.6 | 6575.2 | 6061.5 | 5394.4 | 5417.6 | 5937.7 | 6284.8 |
| 47.5° | 6670.7 | 6709.4 | 6985.6 | 7257.9 | 7073.3 | 6913.3 | 6360.9 | 5658.9 | 5620.2 | 6141.6 | 6490.0 |
| 50° | 6462.9 | 6509.4 | 6905.5 | 7337.9 | 7325.0 | 7176.6 | 6693.9 | 6042.2 | 5920.9 | 6322.2 | 6515.8 |
| 52.5° | 6031.9 | 6166.1 | 6764.9 | 7348.2 | 7527.6 | 7452.7 | 7105.6 | 6558.4 | 6327.4 | 6581.6 | 6557.1 |
| 55° | 5100.1 | 5265.3 | 6337.7 | 7260.4 | 7710.8 | 7719.9 | 7537.9 | 7096.5 | 6768.8 | 7028.1 | 6811.3 |
| 57.5° | 3871.5 | 4003.2 | 4878.1 | 6462.9 | 7407.6 | 7556.0 | 7705.7 | 7380.5 | 7041.0 | 7332.7 | 6870.7 |
| 60° | 2333.3 | 2485.5 | 3054.6 | 4742.6 | 5982.8 | 6235.8 | 6823.0 | 6759.7 | 6350.6 | 6475.8 | 5634.4 |
| 62.5° | 945.9 | 1026.0 | 1410.5 | 2613.3 | 3765.7 | 4001.9 | 4564.6 | 4660.0 | 4559.4 | 4431.6 | 3417.3 |
| 65° | 345.9 | 378.1 | 565.2 | 1080.2 | 1731.9 | 1818.3 | 2115.2 | 2284.2 | 2423.6 | 2063.5 | 1271.2 |
| 67.5° | 214.2 | 234.9 | 367.8 | 554.9 | 629.8 | 585.9 | 596.2 | 711.1 | 678.8 | 419.4 | 227.1 |
| 70° | 158.7 | 175.5 | 287.8 | 384.6 | 254.2 | 196.2 | 132.9 | 142.0 | 127.8 | 112.3 | 111.0 |
| 72.5° | 109.7 | 125.2 | 215.5 | 227.1 | 98.1 | 69.7 | 49.0 | 68.4 | 77.4 | 76.1 | 78.7 |
| 75° | 72.3 | 83.9 | 135.5 | 89.0 | 24.5 | 19.4 | 16.8 | 36.1 | 46.5 | 46.5 | 47.7 |
| 77.5° | 42.6 | 49.0 | 47.7 | 18.1 | 5.2 | 5.2 | 3.9 | 6.5 | 10.3 | 11.6 | 14.2 |
| 80° | 5.2 | 3.9 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 3.9 | 3.9 | 3.9 |
| 82.5° | 1.3 | 1.3 | 1.3 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 3.9 | 3.9 |
| 85° | 0.0 | 0.0 | 1.3 | 1.3 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 3.9 | 3.9 |
| 87.5° | 0.0 | 0.0 | 1.3 | 1.3 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 3.9 | 3.9 |
| 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: P635365

CATALOG NUMBER: GWS-SA3D-750-U-T3R-W-GRSBK

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 | 2707.5 |
| 2.5° | 2733.3 | 2724.3 | 2761.7 | 2788.8 | 2810.7 | 2821.1 | 2806.9 | 2805.6 | 2805.6 | 2777.2 | 2769.4 |
| 5° | 2765.6 | 2769.4 | 2822.4 | 2845.6 | 2849.5 | 2836.6 | 2804.3 | 2782.4 | 2769.4 | 2739.8 | 2723.0 |
| 7.5° | 2827.5 | 2840.4 | 2890.8 | 2886.9 | 2852.0 | 2792.7 | 2707.5 | 2641.7 | 2599.1 | 2552.6 | 2524.2 |
| 10° | 2916.6 | 2941.1 | 2972.1 | 2917.9 | 2806.9 | 2655.9 | 2480.4 | 2355.2 | 2280.3 | 2227.4 | 2195.2 |
| 12.5° | 3025.0 | 3049.5 | 3039.2 | 2911.4 | 2680.4 | 2410.7 | 2184.8 | 2004.2 | 1917.7 | 1870.0 | 1836.4 |
| 15° | 3134.7 | 3150.1 | 3083.0 | 2834.0 | 2457.1 | 2094.5 | 1842.9 | 1663.5 | 1557.7 | 1518.9 | 1490.5 |
| 17.5° | 3246.9 | 3243.1 | 3090.8 | 2681.7 | 2159.0 | 1738.3 | 1490.5 | 1367.9 | 1338.3 | 1331.8 | 1329.2 |
| 20° | 3364.4 | 3329.5 | 3059.8 | 2463.6 | 1800.3 | 1386.0 | 1245.3 | 1253.1 | 1307.3 | 1333.1 | 1338.3 |
| 22.5° | 3498.6 | 3410.8 | 2982.4 | 2168.1 | 1433.8 | 1155.0 | 1169.2 | 1245.3 | 1318.9 | 1353.8 | 1358.9 |
| 25° | 3641.8 | 3485.7 | 2853.3 | 1788.7 | 1130.5 | 1062.1 | 1146.0 | 1233.7 | 1312.5 | 1355.0 | 1360.2 |
| 27.5° | 3736.0 | 3503.7 | 2641.7 | 1406.7 | 970.5 | 1026.0 | 1115.0 | 1198.9 | 1280.2 | 1326.6 | 1333.1 |
| 30° | 3838.0 | 3496.0 | 2353.9 | 1084.0 | 916.3 | 995.0 | 1072.4 | 1148.6 | 1223.4 | 1275.0 | 1280.2 |
| 32.5° | 3987.7 | 3490.8 | 2002.9 | 880.1 | 894.3 | 970.5 | 1027.2 | 1090.5 | 1142.1 | 1171.8 | 1167.9 |
| 35° | 4183.8 | 3484.4 | 1593.8 | 793.7 | 881.4 | 951.1 | 996.3 | 1026.0 | 969.2 | 951.1 | 955.0 |
| 37.5° | 4435.5 | 3499.9 | 1249.2 | 757.5 | 877.6 | 945.9 | 984.7 | 899.5 | 811.7 | 778.2 | 773.0 |
| 40° | 4714.3 | 3539.9 | 952.4 | 743.3 | 890.5 | 958.9 | 940.8 | 800.1 | 691.7 | 625.9 | 611.7 |
| 42.5° | 4994.3 | 3583.8 | 753.7 | 738.2 | 912.4 | 995.0 | 868.5 | 727.9 | 565.2 | 527.8 | 522.7 |
| 45° | 5202.1 | 3576.0 | 651.7 | 729.1 | 931.8 | 1015.6 | 849.2 | 624.6 | 504.6 | 487.8 | 489.1 |
| 47.5° | 5306.6 | 3490.8 | 596.2 | 708.5 | 939.5 | 995.0 | 801.4 | 582.0 | 463.3 | 481.4 | 496.8 |
| 50° | 5251.1 | 3270.2 | 544.6 | 668.5 | 922.7 | 967.9 | 725.3 | 549.8 | 442.6 | 517.5 | 552.3 |
| 52.5° | 5184.0 | 2999.2 | 487.8 | 606.5 | 882.7 | 930.5 | 695.6 | 540.7 | 429.7 | 499.4 | 525.2 |
| 55° | 5273.0 | 2827.5 | 394.9 | 511.0 | 804.0 | 842.7 | 672.4 | 539.4 | 400.1 | 388.4 | 384.6 |
| 57.5° | 5147.9 | 2485.5 | 282.6 | 367.8 | 616.9 | 667.2 | 655.6 | 530.4 | 354.9 | 353.6 | 358.8 |
| 60° | 3978.7 | 1516.4 | 193.6 | 233.6 | 378.1 | 425.9 | 594.9 | 507.2 | 305.9 | 281.3 | 282.6 |
| 62.5° | 2261.0 | 645.3 | 132.9 | 144.5 | 193.6 | 229.7 | 454.3 | 460.7 | 282.6 | 268.4 | 282.6 |
| 65° | 787.2 | 231.0 | 103.2 | 96.8 | 107.1 | 122.6 | 260.7 | 356.2 | 256.8 | 232.3 | 234.9 |
| 67.5° | 162.6 | 114.9 | 91.6 | 80.0 | 80.0 | 80.0 | 132.9 | 222.0 | 211.6 | 184.5 | 187.1 |
| 70° | 103.2 | 98.1 | 80.0 | 68.4 | 65.8 | 60.7 | 76.1 | 122.6 | 145.8 | 134.2 | 135.5 |
| 72.5° | 76.1 | 74.8 | 63.2 | 55.5 | 49.0 | 43.9 | 47.7 | 60.7 | 74.8 | 77.4 | 78.7 |
| 75° | 46.5 | 47.7 | 41.3 | 34.8 | 31.0 | 27.1 | 28.4 | 28.4 | 28.4 | 25.8 | 28.4 |
| 77.5° | 14.2 | 15.5 | 12.9 | 10.3 | 9.0 | 9.0 | 9.0 | 7.7 | 6.5 | 3.9 | 3.9 |
| 80° | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 2.6 | 2.6 | 1.3 | 1.3 | 0.0 | 0.0 |
| 82.5° | 3.9 | 3.9 | 3.9 | 3.9 | 2.6 | 2.6 | 1.3 | 1.3 | 0.0 | 0.0 | 0.0 |
| 85° | 3.9 | 3.9 | 3.9 | 3.9 | 2.6 | 2.6 | 1.3 | 1.3 | 0.0 | 0.0 | 0.0 |
| 87.5° | 3.9 | 3.9 | 3.9 | 3.9 | 2.6 | 2.6 | 1.3 | 1.3 | 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 |

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 |

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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

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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 | | | |

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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 (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 | | | |

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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)