

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: P638156

Luminaire Tested: GWS-SA4E-730-U-SLR-W

Issue Date: 1/10/2023

Test Information

Test Method: LM-79-2019
Report Number: P638156
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-41)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: McGRAW-EDISON
Catalog Number: GWS-SA4E-730-U-SLR-W
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND
SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: (64) 3000K CCT, 70 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26385.9 lumens
Efficiency: N/A
Efficacy: 130.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

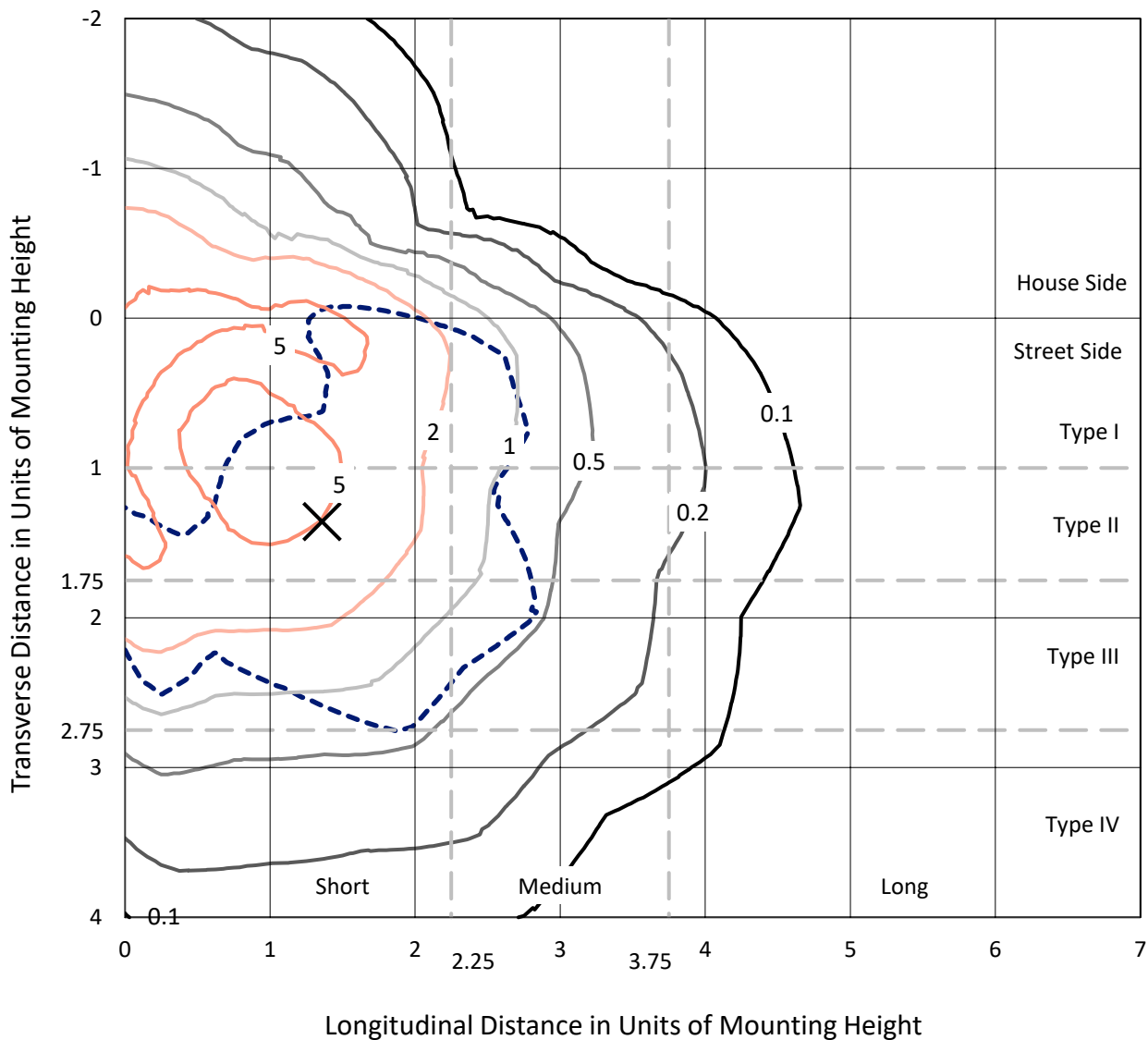
Input Watts (W): 202.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 0
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P638156
 CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

Iso-Footcandle Lines of Horizontal Illumination

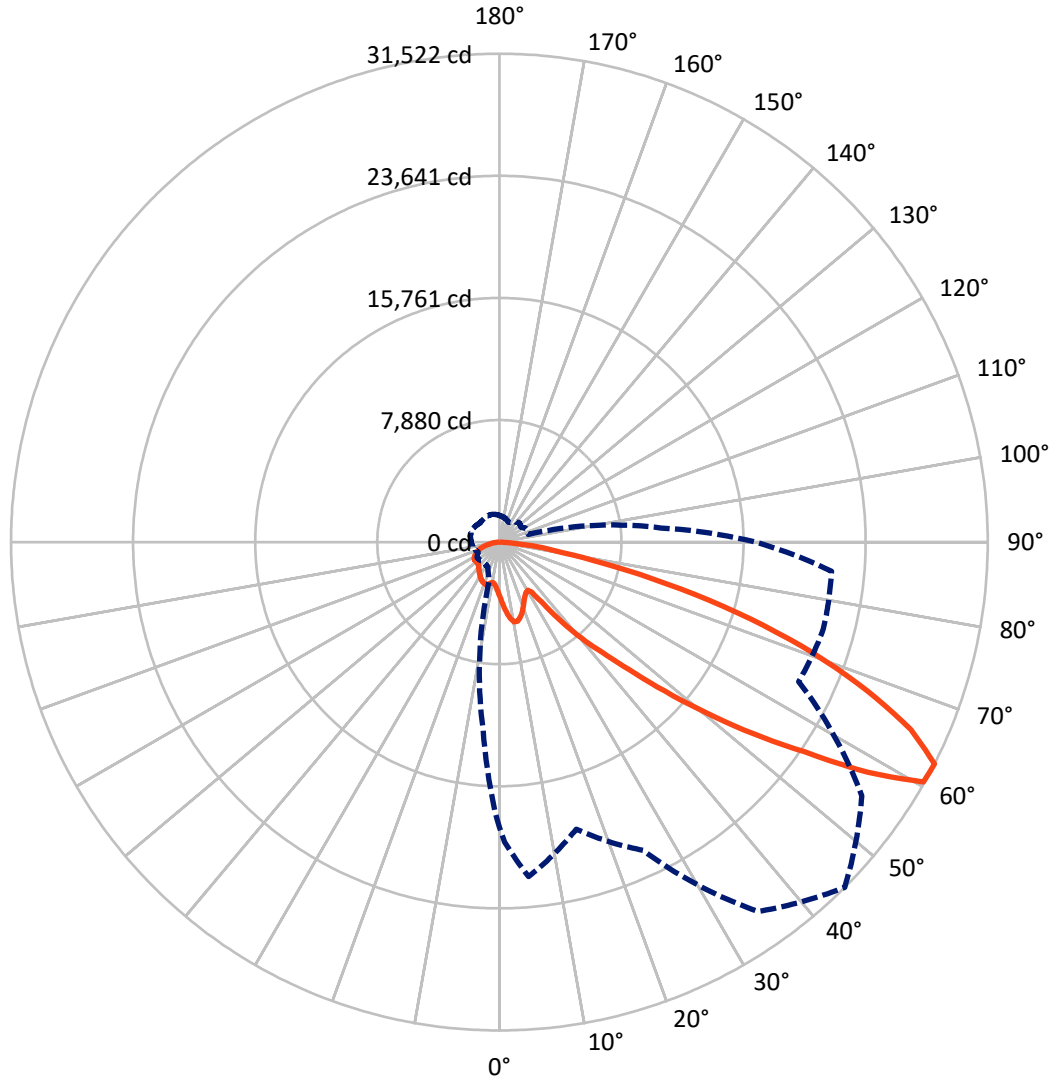
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8 fc
 Type III - Short - N/A

REPORT NUMBER: P638156
CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P638156

CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

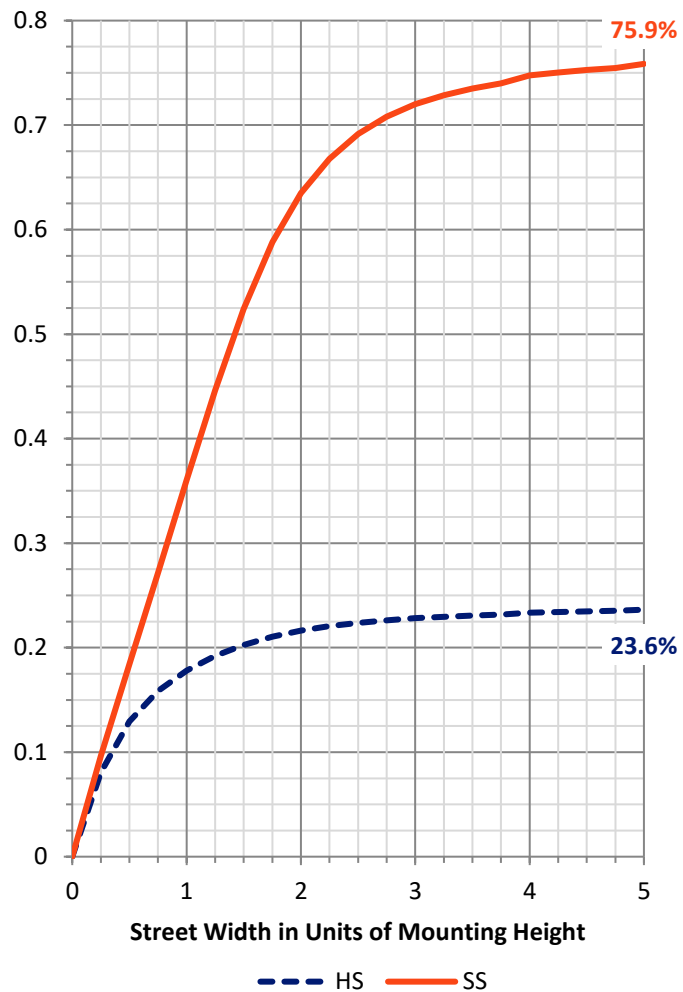
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6296.2 | 0.0 | 6296.2 |
| | % Fixture | 23.9 | 0.0 | 23.9 |
| Street Side | Lumens | 20089.7 | 0.0 | 20089.7 |
| | % Fixture | 76.1 | 0.0 | 76.1 |
| Total | Lumens | 26385.9 | 0.0 | 26385.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 342.0 | 1.3 |
| 10°-20° | 1072.1 | 4.1 |
| 20°-30° | 1665.3 | 6.3 |
| 30°-40° | 2261.0 | 8.6 |
| 40°-50° | 3583.5 | 13.6 |
| 50°-60° | 6321.3 | 24.0 |
| 60°-70° | 7033.4 | 26.7 |
| 70°-80° | 3567.1 | 13.5 |
| 80°-90° | 540.1 | 2.0 |
| 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° | 26385.9 | 100.0 |
| 0°-180° | 26385.9 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P638156

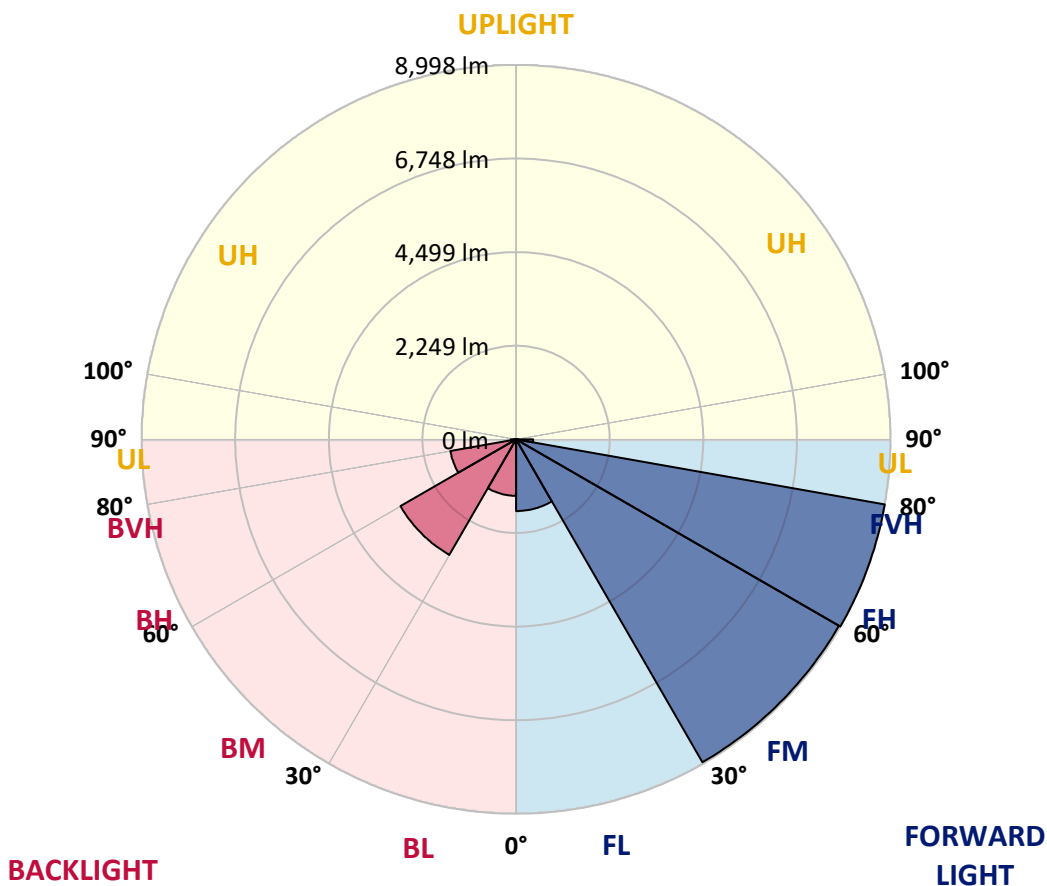
CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1722.8 | 6.5 | | | |
| FM (30°-60°) | 8959.1 | 34.0 | | | |
| FH (60°-80°) | 8997.8 | 34.1 | | | G4/12000 |
| FVH (80°-90°) | 410.0 | 1.6 | | | G3/500 |
| BL (0°-30°) | 1356.7 | 5.1 | B3/2500 | | |
| BM (30°-60°) | 3206.7 | 12.2 | B3/5000 | | |
| BH (60°-80°) | 1602.7 | 6.1 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 130.2 | 0.5 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type III Short





REPORT NUMBER: P638156

CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 |
| 2.5° | 3763.6 | 3761.6 | 3799.6 | 3857.5 | 3911.5 | 3935.4 | 3975.4 | 3971.4 | 3939.4 | 3897.5 | 3883.5 |
| 5° | 4059.3 | 4067.3 | 4133.2 | 4261.1 | 4402.9 | 4462.8 | 4488.8 | 4478.8 | 4420.9 | 4347.0 | 4217.1 |
| 7.5° | 4327.0 | 4341.0 | 4442.9 | 4634.6 | 4810.4 | 4890.3 | 4954.3 | 4942.3 | 4858.4 | 4720.5 | 4528.8 |
| 10° | 4522.8 | 4538.7 | 4660.6 | 4886.3 | 5082.1 | 5152.0 | 5233.9 | 5237.9 | 5164.0 | 4978.2 | 4782.5 |
| 12.5° | 4718.5 | 4734.5 | 4848.4 | 5054.2 | 5182.0 | 5184.0 | 5231.9 | 5257.9 | 5261.9 | 5176.0 | 4980.2 |
| 15° | 4922.3 | 4936.3 | 5040.2 | 5156.0 | 5150.0 | 5038.2 | 5038.2 | 5088.1 | 5198.0 | 5259.9 | 5124.1 |
| 17.5° | 5096.1 | 5114.1 | 5194.0 | 5156.0 | 4978.2 | 4776.5 | 4752.5 | 4816.4 | 5008.2 | 5245.9 | 5231.9 |
| 20° | 5239.9 | 5253.9 | 5297.9 | 5046.2 | 4722.5 | 4458.8 | 4412.9 | 4486.8 | 4746.5 | 5160.0 | 5313.9 |
| 22.5° | 5377.8 | 5385.8 | 5361.8 | 4902.3 | 4446.9 | 4145.2 | 4089.3 | 4167.2 | 4446.9 | 5008.2 | 5383.8 |
| 25° | 5541.6 | 5533.6 | 5419.7 | 4752.5 | 4195.1 | 3897.5 | 3839.6 | 3927.5 | 4219.1 | 4806.4 | 5459.7 |
| 27.5° | 5731.4 | 5701.4 | 5469.7 | 4590.7 | 4001.4 | 3713.7 | 3673.7 | 3767.6 | 4039.3 | 4620.7 | 5519.6 |
| 30° | 5893.2 | 5835.2 | 5477.7 | 4446.9 | 3901.5 | 3635.8 | 3611.8 | 3699.7 | 3951.4 | 4494.8 | 5595.5 |
| 32.5° | 6073.0 | 5993.1 | 5523.6 | 4408.9 | 3957.4 | 3823.6 | 3855.5 | 3861.5 | 3975.4 | 4458.8 | 5709.4 |
| 35° | 6330.7 | 6226.8 | 5649.5 | 4518.8 | 4532.8 | 4758.5 | 4874.4 | 4718.5 | 4337.0 | 4538.7 | 5925.1 |
| 37.5° | 6720.2 | 6588.4 | 5905.2 | 4994.2 | 5721.4 | 6226.8 | 6506.5 | 6150.9 | 5435.7 | 4840.4 | 6250.8 |
| 40° | 7193.7 | 7025.9 | 6232.8 | 5873.2 | 6832.1 | 7641.2 | 8138.6 | 7617.2 | 6566.4 | 5593.5 | 6708.2 |
| 42.5° | 7854.9 | 7679.1 | 6868.1 | 6736.2 | 7860.9 | 9065.5 | 9714.8 | 8937.7 | 7563.2 | 6566.4 | 7441.4 |
| 45° | 9007.6 | 8837.8 | 8032.7 | 7601.2 | 9065.5 | 10819.5 | 11730.4 | 10649.7 | 8576.1 | 7543.3 | 8811.8 |
| 47.5° | 11137.1 | 10937.3 | 9762.7 | 8560.1 | 10439.9 | 13096.8 | 14371.4 | 12797.2 | 9628.9 | 8662.0 | 11113.1 |
| 50° | 13694.2 | 13502.4 | 11934.2 | 9694.8 | 11958.2 | 15532.0 | 17304.0 | 15320.3 | 10841.5 | 10022.4 | 13864.0 |
| 52.5° | 16770.6 | 16734.6 | 15032.6 | 11129.1 | 13538.3 | 18129.0 | 20558.2 | 18115.0 | 12169.9 | 11854.3 | 16980.4 |
| 55° | 19543.4 | 19895.0 | 18968.1 | 13316.6 | 15580.0 | 21391.2 | 23904.3 | 21163.5 | 13971.8 | 14882.8 | 20630.1 |
| 57.5° | 21037.7 | 21982.6 | 23406.9 | 17779.4 | 18548.5 | 25290.7 | 28033.6 | 24885.2 | 17068.2 | 19924.9 | 24014.2 |
| 60° | 20050.8 | 21121.6 | 23702.6 | 21139.5 | 21493.1 | 28415.1 | 31441.6 | 28013.6 | 20108.7 | 23424.9 | 23822.4 |
| 62.5° | 18408.7 | 19369.6 | 21664.9 | 19177.8 | 21948.6 | 29102.3 | 31521.5 | 28559.0 | 21317.3 | 21648.9 | 21519.1 |
| 65° | 16461.0 | 17429.8 | 19861.0 | 16740.6 | 20500.3 | 27470.2 | 29196.2 | 26954.8 | 19145.8 | 19559.4 | 19607.3 |
| 67.5° | 13873.9 | 14768.9 | 17244.0 | 14884.8 | 18686.4 | 25075.0 | 25626.3 | 24669.5 | 17631.6 | 18290.8 | 17601.6 |
| 70° | 10366.0 | 11173.1 | 13358.5 | 12096.0 | 15751.8 | 21954.6 | 21509.1 | 21650.9 | 15931.6 | 16586.8 | 14703.0 |
| 72.5° | 7083.8 | 7691.1 | 9564.9 | 9505.0 | 12062.0 | 17575.7 | 16954.4 | 18298.8 | 13306.6 | 14175.6 | 11209.0 |
| 75° | 4954.3 | 5427.7 | 6914.0 | 7509.3 | 9117.4 | 13026.9 | 12074.0 | 13696.2 | 10392.0 | 11632.5 | 8178.5 |
| 77.5° | 3040.5 | 3354.1 | 4366.9 | 5563.6 | 5865.2 | 8915.7 | 7499.3 | 10306.1 | 7297.6 | 8484.2 | 5455.7 |
| 80° | 1520.2 | 1672.1 | 2121.5 | 3498.0 | 3889.5 | 5253.9 | 4141.2 | 5983.1 | 4938.3 | 5253.9 | 3018.5 |
| 82.5° | 459.5 | 507.4 | 621.3 | 1328.5 | 2015.7 | 3024.5 | 2447.2 | 3476.0 | 2696.9 | 2463.1 | 1188.6 |
| 85° | 121.9 | 137.8 | 171.8 | 393.5 | 707.2 | 1084.7 | 827.0 | 1684.1 | 1292.5 | 908.9 | 447.5 |
| 87.5° | 10.0 | 10.0 | 8.0 | 8.0 | 4.0 | 0.0 | 0.0 | 119.9 | 241.7 | 137.8 | 77.9 |
| 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: P638156
 CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 |
| 2.5° | 3813.6 | 3805.6 | 3723.7 | 3663.8 | 3593.8 | 3525.9 | 3456.0 | 3394.1 | 3324.2 | 3254.2 | 3234.3 |
| 5° | 4121.2 | 4065.3 | 3891.5 | 3745.7 | 3601.8 | 3476.0 | 3366.1 | 3252.2 | 3160.3 | 3070.4 | 3036.5 |
| 7.5° | 4392.9 | 4295.0 | 4043.3 | 3821.6 | 3621.8 | 3466.0 | 3304.2 | 3138.4 | 3008.5 | 2880.7 | 2848.7 |
| 10° | 4638.6 | 4508.8 | 4191.2 | 3911.5 | 3689.7 | 3511.9 | 3322.2 | 3100.4 | 2912.6 | 2756.8 | 2714.9 |
| 12.5° | 4820.4 | 4678.6 | 4319.0 | 3997.4 | 3745.7 | 3545.9 | 3358.1 | 3162.3 | 2964.6 | 2762.8 | 2716.9 |
| 15° | 4964.3 | 4816.4 | 4424.9 | 4063.3 | 3747.7 | 3490.0 | 3308.2 | 3240.3 | 3178.3 | 2980.6 | 2896.6 |
| 17.5° | 5080.1 | 4924.3 | 4516.8 | 4103.3 | 3693.7 | 3320.2 | 3162.3 | 3262.2 | 3420.0 | 3296.2 | 3138.4 |
| 20° | 5186.0 | 5028.2 | 4586.7 | 4131.2 | 3573.9 | 3086.4 | 2998.5 | 3210.3 | 3448.0 | 3444.0 | 3302.2 |
| 22.5° | 5301.9 | 5148.0 | 4688.6 | 4147.2 | 3406.1 | 2848.7 | 2900.6 | 3134.4 | 3328.1 | 3386.1 | 3298.2 |
| 25° | 5449.7 | 5313.9 | 4830.4 | 4183.2 | 3216.3 | 2684.9 | 2828.7 | 3036.5 | 3198.3 | 3212.3 | 3160.3 |
| 27.5° | 5621.5 | 5519.6 | 5042.2 | 4267.1 | 3032.5 | 2601.0 | 2744.8 | 2898.6 | 3046.5 | 3052.5 | 2990.5 |
| 30° | 5809.3 | 5741.4 | 5237.9 | 4337.0 | 2894.7 | 2575.0 | 2636.9 | 2760.8 | 2854.7 | 2870.7 | 2816.7 |
| 32.5° | 6049.0 | 5989.1 | 5411.7 | 4291.0 | 2812.7 | 2569.0 | 2537.1 | 2601.0 | 2678.9 | 2678.9 | 2636.9 |
| 35° | 6378.6 | 6294.7 | 5595.5 | 4115.2 | 2712.9 | 2545.1 | 2431.2 | 2449.2 | 2483.1 | 2489.1 | 2465.1 |
| 37.5° | 6846.1 | 6708.2 | 5781.3 | 3767.6 | 2549.1 | 2459.2 | 2309.3 | 2287.4 | 2299.3 | 2315.3 | 2309.3 |
| 40° | 7425.4 | 7199.7 | 6053.0 | 3350.1 | 2353.3 | 2293.3 | 2183.5 | 2141.5 | 2131.5 | 2163.5 | 2175.5 |
| 42.5° | 8154.6 | 7809.0 | 6344.7 | 2960.6 | 2175.5 | 2103.6 | 2035.6 | 1999.7 | 1983.7 | 2037.6 | 2069.6 |
| 45° | 9319.2 | 8749.9 | 6624.3 | 2575.0 | 2075.6 | 1941.8 | 1895.8 | 1869.8 | 1877.8 | 1941.8 | 1981.7 |
| 47.5° | 11330.9 | 10186.2 | 6890.0 | 2331.3 | 2067.6 | 1825.9 | 1770.0 | 1775.9 | 1797.9 | 1865.8 | 1913.8 |
| 50° | 13875.9 | 12110.0 | 7067.8 | 2229.4 | 2091.6 | 1756.0 | 1682.1 | 1714.0 | 1748.0 | 1813.9 | 1869.8 |
| 52.5° | 16466.9 | 13901.9 | 6856.1 | 2173.5 | 2089.6 | 1758.0 | 1600.1 | 1696.0 | 1712.0 | 1777.9 | 1837.9 |
| 55° | 18248.9 | 14101.7 | 5923.1 | 2087.6 | 2057.6 | 1837.9 | 1536.2 | 1688.0 | 1698.0 | 1758.0 | 1811.9 |
| 57.5° | 18928.1 | 13418.5 | 4516.8 | 2111.6 | 1961.7 | 1899.8 | 1508.3 | 1632.1 | 1704.0 | 1756.0 | 1811.9 |
| 60° | 18107.0 | 12130.0 | 2744.8 | 2173.5 | 1807.9 | 1895.8 | 1526.2 | 1530.2 | 1654.1 | 1742.0 | 1797.9 |
| 62.5° | 16558.8 | 10475.9 | 1927.8 | 1997.7 | 1696.0 | 1789.9 | 1568.2 | 1410.4 | 1566.2 | 1672.1 | 1722.0 |
| 65° | 14784.9 | 8530.1 | 1470.3 | 1720.0 | 1642.1 | 1626.1 | 1582.2 | 1304.5 | 1446.3 | 1550.2 | 1594.2 |
| 67.5° | 12937.0 | 6630.3 | 1194.6 | 1282.5 | 1484.3 | 1470.3 | 1446.3 | 1210.6 | 1304.5 | 1378.4 | 1428.3 |
| 70° | 10609.7 | 4638.6 | 1008.8 | 962.9 | 1272.5 | 1318.5 | 1264.5 | 1092.7 | 1122.7 | 1198.6 | 1238.6 |
| 72.5° | 7761.0 | 2890.7 | 829.0 | 795.1 | 1022.8 | 1152.7 | 1124.7 | 962.9 | 976.9 | 1048.8 | 1080.7 |
| 75° | 5581.5 | 1654.1 | 665.2 | 655.2 | 781.1 | 986.9 | 930.9 | 829.0 | 845.0 | 899.0 | 920.9 |
| 77.5° | 3547.9 | 920.9 | 513.4 | 527.4 | 559.4 | 737.1 | 795.1 | 709.2 | 709.2 | 741.1 | 759.1 |
| 80° | 1899.8 | 527.4 | 375.6 | 381.6 | 391.5 | 563.3 | 627.3 | 549.4 | 549.4 | 527.4 | 549.4 |
| 82.5° | 775.1 | 303.6 | 257.7 | 239.7 | 261.7 | 385.6 | 439.5 | 349.6 | 365.6 | 329.6 | 337.6 |
| 85° | 255.7 | 151.8 | 127.9 | 125.9 | 123.9 | 169.8 | 211.8 | 173.8 | 207.8 | 131.8 | 137.8 |
| 87.5° | 34.0 | 28.0 | 16.0 | 12.0 | 14.0 | 6.0 | 12.0 | 14.0 | 14.0 | 10.0 | 10.0 |
| 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: P638156
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CANDELA DISTRIBUTION (continued):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 |
| 2.5° | 3220.3 | 3204.3 | 3146.4 | 3160.3 | 3150.4 | 3134.4 | 3150.4 | 3120.4 | 3144.4 | 3152.4 | 3202.3 |
| 5° | 3010.5 | 2972.6 | 2916.6 | 2888.7 | 2882.7 | 2866.7 | 2868.7 | 2854.7 | 2858.7 | 2892.7 | 2948.6 |
| 7.5° | 2822.7 | 2786.8 | 2742.8 | 2722.8 | 2704.9 | 2686.9 | 2684.9 | 2682.9 | 2698.9 | 2728.8 | 2782.8 |
| 10° | 2686.9 | 2666.9 | 2648.9 | 2656.9 | 2648.9 | 2640.9 | 2627.0 | 2627.0 | 2652.9 | 2706.9 | 2772.8 |
| 12.5° | 2686.9 | 2682.9 | 2686.9 | 2710.9 | 2708.9 | 2710.9 | 2692.9 | 2702.9 | 2774.8 | 2866.7 | 2960.6 |
| 15° | 2830.7 | 2798.8 | 2798.8 | 2810.7 | 2806.8 | 2806.8 | 2806.8 | 2848.7 | 3012.5 | 3154.3 | 3254.2 |
| 17.5° | 3006.5 | 2912.6 | 2872.7 | 2866.7 | 2864.7 | 2864.7 | 2872.7 | 2962.6 | 3218.3 | 3368.1 | 3426.0 |
| 20° | 3128.4 | 2950.6 | 2884.7 | 2858.7 | 2860.7 | 2864.7 | 2888.7 | 3012.5 | 3294.2 | 3370.1 | 3356.1 |
| 22.5° | 3150.4 | 2920.6 | 2840.7 | 2802.8 | 2808.7 | 2812.7 | 2848.7 | 2980.6 | 3190.3 | 3202.3 | 3174.3 |
| 25° | 3048.5 | 2836.7 | 2750.8 | 2720.9 | 2728.8 | 2726.8 | 2758.8 | 2854.7 | 3004.5 | 3000.5 | 2984.5 |
| 27.5° | 2896.6 | 2702.9 | 2638.9 | 2619.0 | 2633.0 | 2617.0 | 2627.0 | 2700.9 | 2816.7 | 2812.7 | 2806.8 |
| 30° | 2740.8 | 2573.0 | 2515.1 | 2505.1 | 2523.1 | 2499.1 | 2501.1 | 2563.0 | 2642.9 | 2638.9 | 2636.9 |
| 32.5° | 2585.0 | 2443.2 | 2391.2 | 2391.2 | 2409.2 | 2383.2 | 2387.2 | 2441.2 | 2495.1 | 2479.1 | 2479.1 |
| 35° | 2437.2 | 2337.3 | 2295.3 | 2287.4 | 2301.3 | 2283.4 | 2291.3 | 2341.3 | 2361.3 | 2339.3 | 2325.3 |
| 37.5° | 2307.3 | 2263.4 | 2221.4 | 2193.5 | 2195.5 | 2197.5 | 2221.4 | 2259.4 | 2247.4 | 2215.4 | 2197.5 |
| 40° | 2187.5 | 2187.5 | 2147.5 | 2095.6 | 2089.6 | 2103.6 | 2143.5 | 2185.5 | 2151.5 | 2115.6 | 2093.6 |
| 42.5° | 2101.6 | 2119.5 | 2081.6 | 2029.7 | 2017.7 | 2041.6 | 2085.6 | 2115.6 | 2075.6 | 2035.6 | 2005.7 |
| 45° | 2021.7 | 2065.6 | 2039.6 | 1981.7 | 1965.7 | 1993.7 | 2049.6 | 2061.6 | 2007.7 | 1969.7 | 1947.7 |
| 47.5° | 1965.7 | 2025.7 | 2007.7 | 1951.7 | 1927.8 | 1967.7 | 2025.7 | 2023.7 | 1955.7 | 1915.8 | 1897.8 |
| 50° | 1925.8 | 2001.7 | 1999.7 | 1951.7 | 1925.8 | 1975.7 | 2027.7 | 2001.7 | 1927.8 | 1885.8 | 1867.8 |
| 52.5° | 1893.8 | 1999.7 | 2013.7 | 1985.7 | 1967.7 | 2011.7 | 2043.6 | 1993.7 | 1907.8 | 1863.8 | 1849.9 |
| 55° | 1879.8 | 2007.7 | 2017.7 | 1991.7 | 1975.7 | 2015.7 | 2043.6 | 2009.7 | 1907.8 | 1867.8 | 1855.9 |
| 57.5° | 1883.8 | 1997.7 | 1999.7 | 1963.7 | 1935.8 | 1985.7 | 2029.7 | 2019.7 | 1929.8 | 1883.8 | 1869.8 |
| 60° | 1859.8 | 1943.8 | 1947.7 | 1891.8 | 1859.8 | 1919.8 | 1997.7 | 1991.7 | 1919.8 | 1871.8 | 1845.9 |
| 62.5° | 1779.9 | 1853.9 | 1855.9 | 1803.9 | 1758.0 | 1843.9 | 1929.8 | 1927.8 | 1861.8 | 1813.9 | 1783.9 |
| 65° | 1646.1 | 1724.0 | 1744.0 | 1694.0 | 1658.1 | 1750.0 | 1839.9 | 1835.9 | 1770.0 | 1726.0 | 1696.0 |
| 67.5° | 1480.3 | 1564.2 | 1602.1 | 1568.2 | 1554.2 | 1638.1 | 1722.0 | 1720.0 | 1666.1 | 1624.1 | 1598.2 |
| 70° | 1278.5 | 1348.4 | 1412.4 | 1412.4 | 1402.4 | 1498.3 | 1588.2 | 1580.2 | 1530.2 | 1498.3 | 1478.3 |
| 72.5° | 1110.7 | 1164.7 | 1184.6 | 1204.6 | 1234.6 | 1334.5 | 1410.4 | 1416.4 | 1380.4 | 1364.4 | 1380.4 |
| 75° | 944.9 | 978.9 | 996.8 | 980.9 | 1032.8 | 1136.7 | 1236.6 | 1246.6 | 1208.6 | 1182.6 | 1188.6 |
| 77.5° | 777.1 | 815.1 | 833.0 | 797.1 | 793.1 | 924.9 | 1046.8 | 1068.8 | 1036.8 | 996.8 | 1008.8 |
| 80° | 561.4 | 611.3 | 641.3 | 617.3 | 609.3 | 667.2 | 835.0 | 859.0 | 829.0 | 797.1 | 815.1 |
| 82.5° | 343.6 | 371.6 | 379.6 | 403.5 | 453.5 | 477.4 | 537.4 | 617.3 | 595.3 | 567.3 | 617.3 |
| 85° | 135.8 | 161.8 | 179.8 | 203.8 | 237.7 | 281.7 | 331.6 | 395.5 | 359.6 | 347.6 | 409.5 |
| 87.5° | 8.0 | 2.0 | 0.0 | 4.0 | 34.0 | 65.9 | 141.8 | 195.8 | 163.8 | 175.8 | 211.8 |
| 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: P638156
 CATALOG NUMBER: GWS-SA4E-730-U-SLR-W

CANDELA DISTRIBUTION (continued):

| | 285° | 295° | 305° | 315° | 325° | 335° | 345° | 355° | 359° | 360° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 | 3501.9 |
| 2.5° | 3242.2 | 3294.2 | 3364.1 | 3422.0 | 3496.0 | 3565.9 | 3637.8 | 3709.7 | 3747.7 | 3763.6 |
| 5° | 3012.5 | 3108.4 | 3220.3 | 3344.1 | 3488.0 | 3639.8 | 3793.6 | 3951.4 | 4051.3 | 4059.3 |
| 7.5° | 2874.7 | 3012.5 | 3166.3 | 3322.2 | 3500.0 | 3709.7 | 3953.4 | 4197.1 | 4299.0 | 4327.0 |
| 10° | 2918.6 | 3072.4 | 3194.3 | 3340.1 | 3535.9 | 3797.6 | 4085.3 | 4370.9 | 4488.8 | 4522.8 |
| 12.5° | 3094.4 | 3124.4 | 3162.3 | 3296.2 | 3535.9 | 3873.5 | 4221.1 | 4560.7 | 4686.6 | 4718.5 |
| 15° | 3240.3 | 3096.4 | 3028.5 | 3170.3 | 3488.0 | 3939.4 | 4364.9 | 4740.5 | 4892.3 | 4922.3 |
| 17.5° | 3252.2 | 3004.5 | 2856.7 | 2984.5 | 3404.1 | 3985.4 | 4502.8 | 4940.3 | 5068.1 | 5096.1 |
| 20° | 3130.4 | 2906.6 | 2714.9 | 2792.8 | 3290.2 | 4005.4 | 4602.7 | 5086.1 | 5212.0 | 5239.9 |
| 22.5° | 2992.5 | 2826.7 | 2619.0 | 2615.0 | 3152.4 | 4027.3 | 4722.5 | 5224.0 | 5359.8 | 5377.8 |
| 25° | 2862.7 | 2716.9 | 2541.1 | 2485.1 | 2992.5 | 4069.3 | 4884.3 | 5431.7 | 5535.6 | 5541.6 |
| 27.5° | 2710.9 | 2599.0 | 2479.1 | 2425.2 | 2852.7 | 4149.2 | 5124.1 | 5679.4 | 5741.4 | 5731.4 |
| 30° | 2573.0 | 2489.1 | 2435.2 | 2419.2 | 2764.8 | 4209.1 | 5351.8 | 5923.1 | 5927.1 | 5893.2 |
| 32.5° | 2427.2 | 2395.2 | 2395.2 | 2447.2 | 2692.9 | 4195.1 | 5537.6 | 6160.9 | 6122.9 | 6073.0 |
| 35° | 2297.3 | 2303.3 | 2345.3 | 2467.1 | 2573.0 | 4055.3 | 5715.4 | 6458.5 | 6402.6 | 6330.7 |
| 37.5° | 2173.5 | 2219.4 | 2279.4 | 2397.2 | 2415.2 | 3847.5 | 5923.1 | 6880.0 | 6810.1 | 6720.2 |
| 40° | 2067.6 | 2137.5 | 2207.4 | 2265.4 | 2247.4 | 3551.9 | 6212.8 | 7375.5 | 7297.6 | 7193.7 |
| 42.5° | 1983.7 | 2051.6 | 2129.5 | 2135.5 | 2141.5 | 3244.2 | 6520.5 | 7982.8 | 7968.8 | 7854.9 |
| 45° | 1929.8 | 1973.7 | 2047.6 | 2037.6 | 2135.5 | 2904.6 | 6804.1 | 8909.7 | 9093.5 | 9007.6 |
| 47.5° | 1893.8 | 1927.8 | 1935.8 | 1977.7 | 2187.5 | 2601.0 | 7169.7 | 10723.6 | 11235.0 | 11137.1 |
| 50° | 1873.8 | 1907.8 | 1817.9 | 1981.7 | 2195.5 | 2405.2 | 7675.1 | 13001.0 | 13824.0 | 13694.2 |
| 52.5° | 1871.8 | 1863.8 | 1728.0 | 2023.7 | 2151.5 | 2285.4 | 7938.8 | 14663.0 | 16488.9 | 16770.6 |
| 55° | 1875.8 | 1775.9 | 1682.1 | 2035.6 | 2063.6 | 2241.4 | 7055.8 | 15462.1 | 18948.1 | 19543.4 |
| 57.5° | 1839.9 | 1680.1 | 1708.0 | 1987.7 | 1897.8 | 2359.3 | 5216.0 | 15176.4 | 19930.9 | 21037.7 |
| 60° | 1771.9 | 1588.2 | 1756.0 | 1857.9 | 1728.0 | 2157.5 | 3591.8 | 13901.9 | 18912.1 | 20050.8 |
| 62.5° | 1674.1 | 1524.2 | 1750.0 | 1690.0 | 1666.1 | 1766.0 | 2469.1 | 12118.0 | 17296.0 | 18408.7 |
| 65° | 1564.2 | 1472.3 | 1656.1 | 1528.2 | 1542.2 | 1358.4 | 1746.0 | 10104.3 | 15366.2 | 16461.0 |
| 67.5° | 1446.3 | 1440.3 | 1518.2 | 1360.4 | 1302.5 | 1076.8 | 1272.5 | 8098.6 | 12887.1 | 13873.9 |
| 70° | 1312.5 | 1356.4 | 1380.4 | 1208.6 | 1056.8 | 845.0 | 944.9 | 5663.4 | 9507.0 | 10366.0 |
| 72.5° | 1178.6 | 1182.6 | 1216.6 | 1050.8 | 791.1 | 677.2 | 709.2 | 3430.0 | 6458.5 | 7083.8 |
| 75° | 1042.8 | 1004.8 | 1036.8 | 855.0 | 589.3 | 555.4 | 547.4 | 2119.5 | 4460.8 | 4954.3 |
| 77.5° | 897.0 | 855.0 | 813.1 | 643.3 | 473.5 | 429.5 | 419.5 | 1188.6 | 2736.8 | 3040.5 |
| 80° | 729.2 | 673.2 | 607.3 | 471.5 | 345.6 | 307.6 | 305.6 | 579.3 | 1364.4 | 1520.2 |
| 82.5° | 567.3 | 461.5 | 443.5 | 293.7 | 213.8 | 187.8 | 199.8 | 221.7 | 411.5 | 459.5 |
| 85° | 397.5 | 335.6 | 235.7 | 117.9 | 95.9 | 77.9 | 75.9 | 65.9 | 109.9 | 121.9 |
| 87.5° | 221.7 | 145.8 | 75.9 | 14.0 | 16.0 | 18.0 | 14.0 | 10.0 | 10.0 | 10.0 |
| 90° | 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: SP1-1908-441-2-R4

Test Date: 10/03/2019

Luminaire Tested: SA1C-730-U-5WQ

Data in this report applies to families of products SA1C-730-U-5WQ .

Test Information

Test Method: LM-79-2008
 Report Number: SP1-1908-441-2-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-730-U-5WQ**
 Description: McGRAW EDISON ROADWAY AND AREA LUMINAIRE

THIS IS A REVISION OF SP1-1908-441-2-R3. TO UPDATE THE CATALOG INFORMATION.TESTED IN SITU. (1) 70 CRI, 3000K, 1050MA LIGHTSQUARE WITH 16 LEDS AND TYPE V WIDE OPTICS.

Spectral Parameters

CCT (K): 2993
 CIE u': 0.2508
 CIE v': 0.5215
 Duv: 0.0000
 CIE x: 0.4374
 CIE y: 0.4043
 CIE z: 0.1583
 Peak Wavelength (nm): 593
 Dominant Wavelength (nm): 582
 Purity: 53

| | | | |
|-----------|------|------|-------|
| CRI (Ra): | 71.8 | | |
| R1: | 67.5 | R9: | -38.3 |
| R2: | 82.9 | R10: | 62.5 |
| R3: | 94.7 | R11: | 63.7 |
| R4: | 67.7 | R12: | 57.8 |
| R5: | 67.9 | R13: | 70.4 |
| R6: | 77.6 | R14: | 97.3 |
| R7: | 76.0 | | |
| R8: | 40.5 | | |

Rf: 75.7
 Rg: 93.9



Test Conditions

Stabilization Time: 53M
 Operation Time: 12H
 Room Temperature (°C) / RH%: 25.0./44%
 Sphere Temperature (°C): 25.7

REPORT NUMBER: SP1-1908-441-2-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: SP1-1908-441-2-R4

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: SP1-1908-441-2-R4

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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

REPORT NUMBER: SP1-1908-441-2-R4

Scotopic Flux vs. Wavelength



Scotopic Lumens: 8494.8

S/P: 1.23

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

REPORT NUMBER: SP1-1908-441-2-R4

Melanopic Flux vs. Wavelength



Melanopic Lumens: 3101.5 M/P: 0.45

| 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 | 2397 | NR | 490 | 24908 | NR | 620 | 118784 | NR | 750 | 5037 | NR | 880 | 2677 | NR |
| 365 | 2084 | NR | 495 | 30998 | NR | 625 | 108951 | NR | 755 | 4413 | NR | 885 | 2940 | NR |
| 370 | 2143 | NR | 500 | 37103 | NR | 630 | 99573 | NR | 760 | 4189 | NR | 890 | 3116 | NR |
| 375 | 2413 | NR | 505 | 42987 | NR | 635 | 90444 | NR | 765 | 3677 | NR | 895 | 3345 | NR |
| 380 | 2172 | NR | 510 | 48702 | NR | 640 | 80749 | NR | 770 | 3366 | NR | 900 | 2312 | NR |
| 385 | 1997 | NR | 515 | 53741 | NR | 645 | 71664 | NR | 775 | 3211 | NR | 905 | 2829 | NR |
| 390 | 1830 | NR | 520 | 57283 | NR | 650 | 63936 | NR | 780 | 2682 | NR | 910 | 2783 | NR |
| 395 | 1861 | NR | 525 | 61876 | NR | 655 | 56611 | NR | 785 | 2804 | NR | 915 | 2662 | NR |
| 400 | 1717 | NR | 530 | 65398 | NR | 660 | 49763 | NR | 790 | 2581 | NR | 920 | 3047 | NR |
| 405 | 1761 | NR | 535 | 69597 | NR | 665 | 42891 | NR | 795 | 2711 | NR | 925 | 2256 | NR |
| 410 | 2680 | NR | 540 | 74214 | NR | 670 | 36939 | NR | 800 | 2609 | NR | 930 | 2976 | NR |
| 415 | 4374 | NR | 545 | 79911 | NR | 675 | 31946 | NR | 805 | 2581 | NR | 935 | 3503 | NR |
| 420 | 8071 | NR | 550 | 86153 | NR | 680 | 27385 | NR | 810 | 2404 | NR | 940 | 4226 | NR |
| 425 | 15169 | NR | 555 | 93952 | NR | 685 | 23504 | NR | 815 | 2556 | NR | 945 | 2930 | NR |
| 430 | 26038 | NR | 560 | 102904 | NR | 690 | 20210 | NR | 820 | 2742 | NR | 950 | 2115 | NR |
| 435 | 41316 | NR | 565 | 112009 | NR | 695 | 17459 | NR | 825 | 2014 | NR | 955 | 2634 | NR |
| 440 | 59674 | NR | 570 | 121662 | NR | 700 | 15207 | NR | 830 | 2488 | NR | 960 | 4200 | NR |
| 445 | 72751 | NR | 575 | 130476 | NR | 705 | 13322 | NR | 835 | 2625 | NR | 965 | 1982 | NR |
| 450 | 65091 | NR | 580 | 137926 | NR | 710 | 11676 | NR | 840 | 2754 | NR | 970 | 3613 | NR |
| 455 | 44894 | NR | 585 | 143406 | NR | 715 | 10626 | NR | 845 | 2708 | NR | 975 | 4034 | NR |
| 460 | 32712 | NR | 590 | 147039 | NR | 720 | 9416 | NR | 850 | 2608 | NR | 980 | 3922 | NR |
| 465 | 25296 | NR | 595 | 147365 | NR | 725 | 8333 | NR | 855 | 2605 | NR | 985 | 1909 | NR |
| 470 | 19318 | NR | 600 | 145800 | NR | 730 | 7134 | NR | 860 | 1765 | NR | 990 | 3617 | NR |
| 475 | 17265 | NR | 605 | 141363 | NR | 735 | 6437 | NR | 865 | 2581 | NR | 995 | 4767 | NR |
| 480 | 18260 | NR | 610 | 134199 | NR | 740 | 5834 | NR | 870 | 3016 | NR | 1000 | 2528 | NR |
| 485 | 20845 | NR | 615 | 127683 | NR | 745 | 5500 | NR | 875 | 3952 | NR | | | |

REPORT NUMBER: SP1-1908-441-2-R4

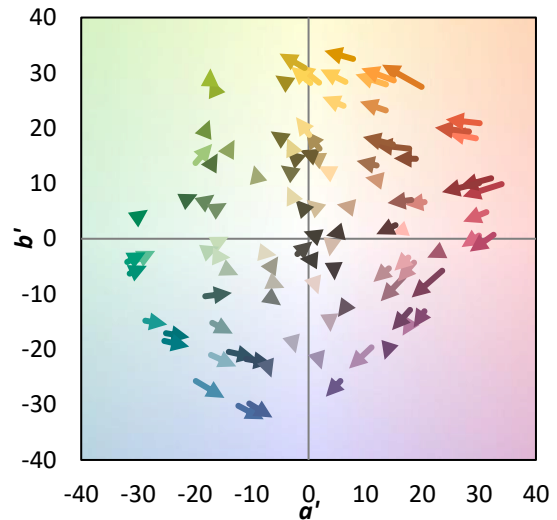
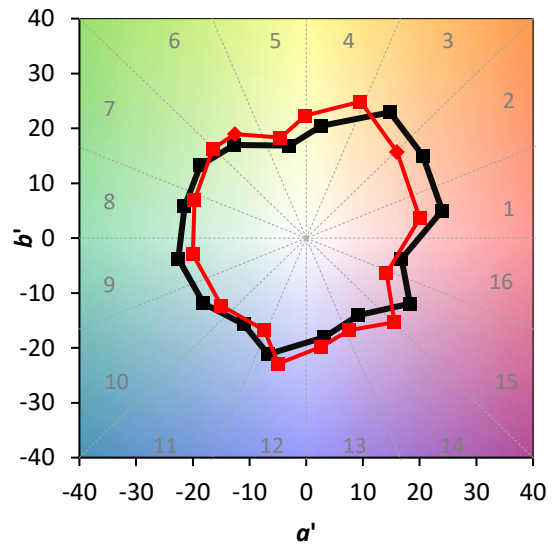
TM-30-18

Summary

$R_f = 75.7$
 $R_g = 93.9$
 CIE $R_a = 71.8$
 $R_9 = -38.3$



Color Vector Graphics



REPORT NUMBER: SP1-1908-441-2-R4

TM-30-18

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

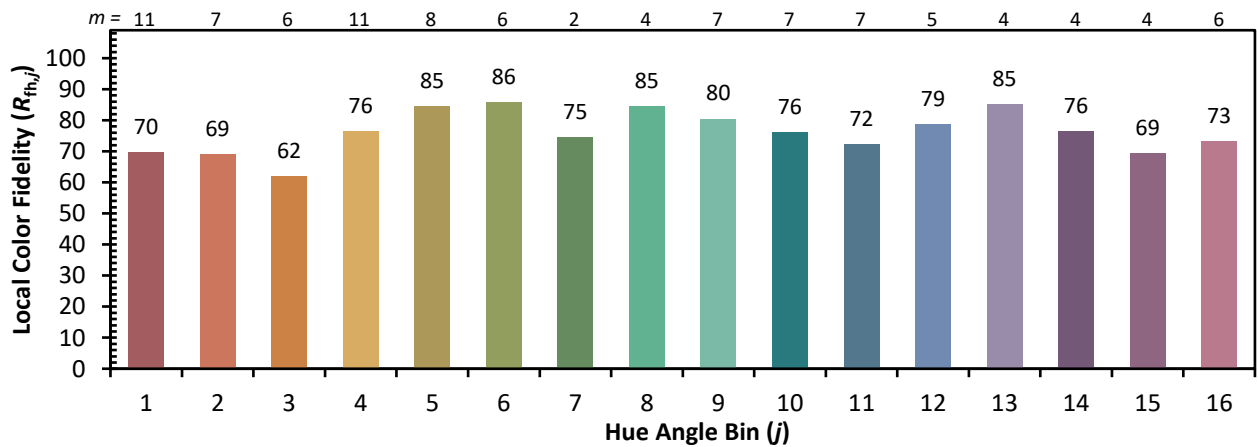
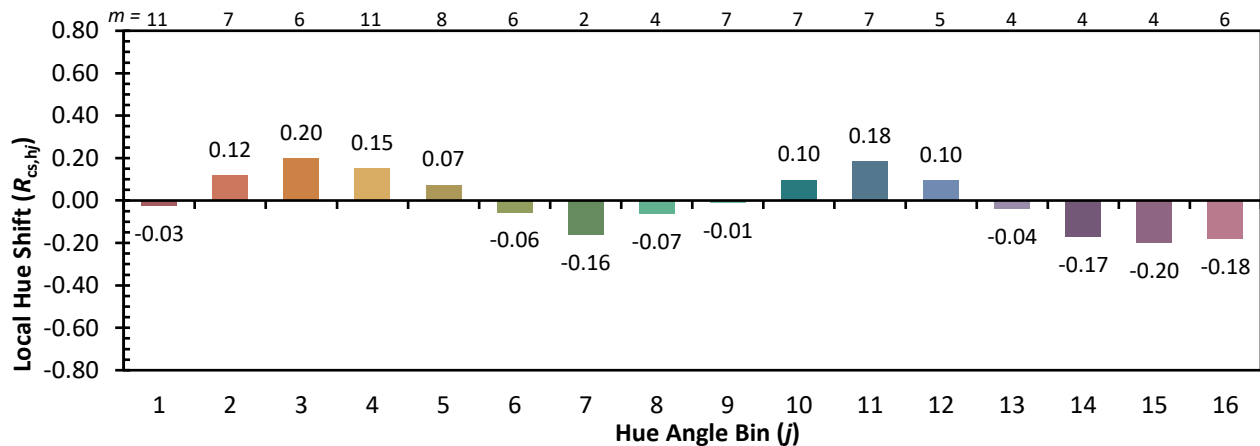
| | | | |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 67 | CES51 = 87 | CES76 = 63 |
| CES02 = 63 | CES27 = 88 | CES52 = 86 | CES77 = 80 |
| CES03 = 31 | CES28 = 87 | CES53 = 78 | CES78 = 67 |
| CES04 = 71 | CES29 = 66 | CES54 = 84 | CES79 = 87 |
| CES05 = 49 | CES30 = 73 | CES55 = 84 | CES80 = 86 |
| CES06 = 51 | CES31 = 70 | CES56 = 75 | CES81 = 71 |
| CES07 = 41 | CES32 = 65 | CES57 = 74 | CES82 = 94 |
| CES08 = 40 | CES33 = 73 | CES58 = 76 | CES83 = 90 |
| CES09 = 29 | CES34 = 79 | CES59 = 85 | CES84 = 89 |
| CES10 = 76 | CES35 = 89 | CES60 = 93 | CES85 = 77 |
| CES11 = 59 | CES36 = 97 | CES61 = 84 | CES86 = 61 |
| CES12 = 65 | CES37 = 87 | CES62 = 91 | CES87 = 78 |
| CES13 = 43 | CES38 = 81 | CES63 = 77 | CES88 = 77 |
| CES14 = 74 | CES39 = 95 | CES64 = 72 | CES89 = 67 |
| CES15 = 71 | CES40 = 92 | CES65 = 68 | CES90 = 76 |
| CES16 = 47 | CES41 = 88 | CES66 = 69 | CES91 = 89 |
| CES17 = 50 | CES42 = 89 | CES67 = 67 | CES92 = 58 |
| CES18 = 56 | CES43 = 79 | CES68 = 72 | CES93 = 74 |
| CES19 = 73 | CES44 = 99 | CES69 = 81 | CES94 = 49 |
| CES20 = 66 | CES45 = 85 | CES70 = 66 | CES95 = 68 |
| CES21 = 87 | CES46 = 80 | CES71 = 67 | CES96 = 76 |
| CES22 = 79 | CES47 = 82 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 69 | CES73 = 59 | CES98 = 75 |
| CES24 = 91 | CES49 = 80 | CES74 = 95 | CES99 = 62 |
| CES25 = 73 | CES50 = 87 | CES75 = 69 | |



REPORT NUMBER: SP1-1908-441-2-R4

TM-30-18

Color Rendition by Hue-Angle Bin



REPORT NUMBER: SP1-1908-441-2-R4

TM-30-18

Measure Comparisons



(END OF REPORT)