

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: P641288

Luminaire Tested: GWS-SA5F-750-U-SLR-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P641288  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-42)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA5F-750-U-SLR-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND  
SPILL LIGHT ELIMINATOR RIGHT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (80) 5000K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

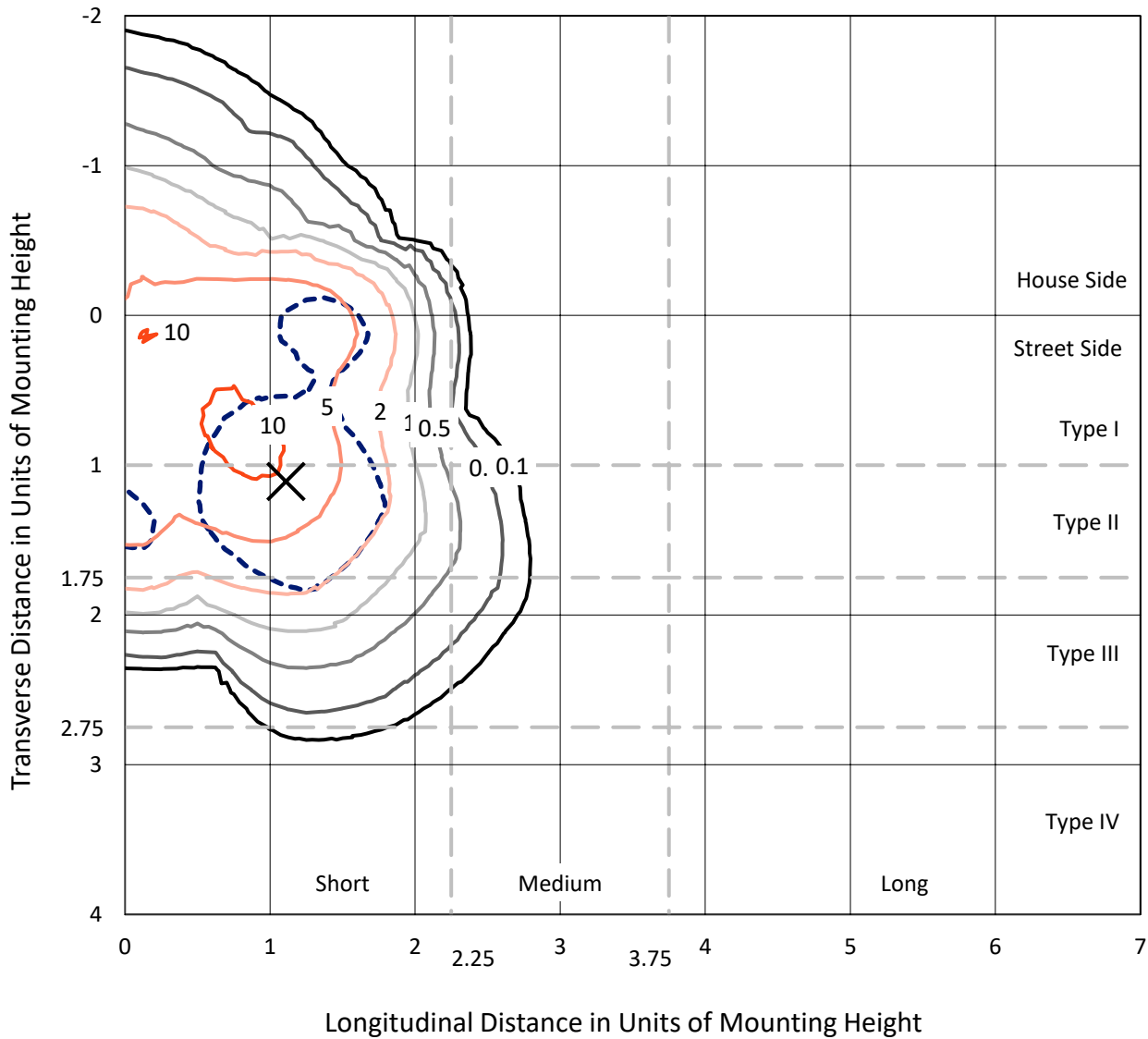
Lumens per Lamp: N/A  
Luminaire Lumens: 22777.5 lumens  
Efficiency: N/A  
Efficacy: 73.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G2  
  
Input Watts (W): 310.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

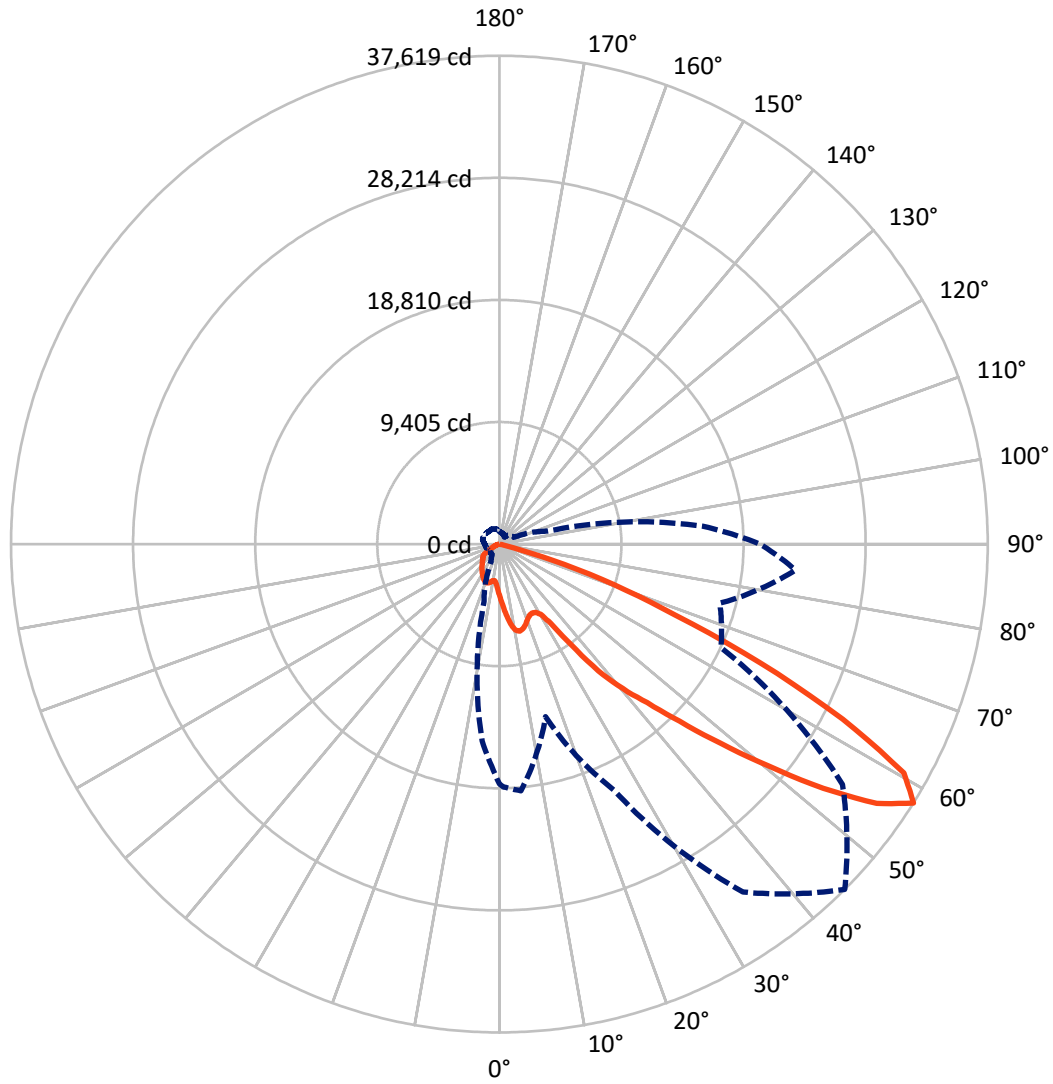
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 57.5-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5100.5   | 0.0    | 5100.5  |
|                    | % Fixture | 22.4     | 0.0    | 22.4    |
| <b>Street Side</b> | Lumens    | 17677.0  | 0.0    | 17677.0 |
|                    | % Fixture | 77.6     | 0.0    | 77.6    |
| <b>Total</b>       | Lumens    | 22777.5  | 0.0    | 22777.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 393.8   | 1.7       |
| 10°-20°   | 1274.0  | 5.6       |
| 20°-30°   | 2069.6  | 9.1       |
| 30°-40°   | 3197.9  | 14.0      |
| 40°-50°   | 5127.8  | 22.5      |
| 50°-60°   | 7008.3  | 30.8      |
| 60°-70°   | 3394.3  | 14.9      |
| 70°-80°   | 310.8   | 1.4       |
| 80°-90°   | 0.9     | 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°    | 22777.5 | 100.0     |
| 0°-180°   | 22777.5 | 100.0     |

**Coefficient of Utilization**



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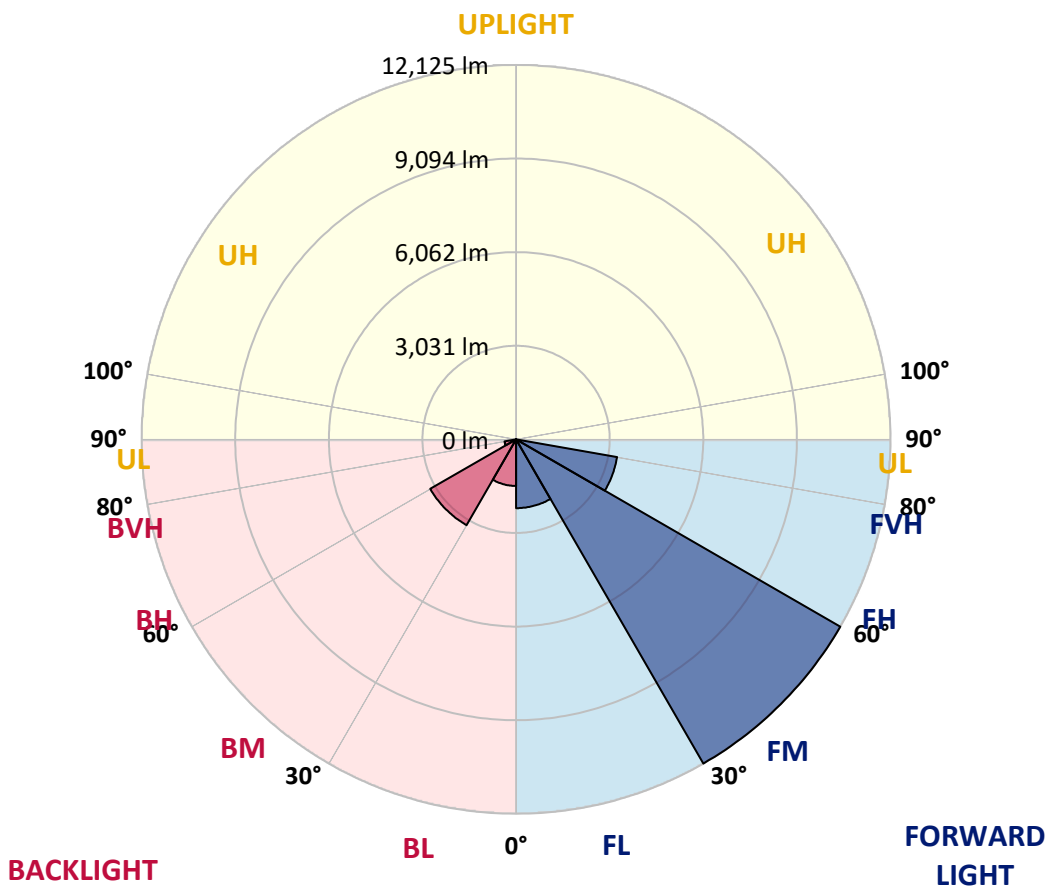
CATALOG NUMBER: GWS-SA5F-750-U-SLR-W-GRSBK

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 2228.3  | 9.8       |                         |      |         |
| FM (30°-60°)   | 12125.0 | 53.2      |                         |      |         |
| FH (60°-80°)   | 3322.8  | 14.6      |                         |      | G2/5000 |
| FVH (80°-90°)  | 0.9     | 0.0       |                         |      | G0/10   |
| BL (0°-30°)    | 1509.2  | 6.6       | B3/2500                 |      |         |
| BM (30°-60°)   | 3209.0  | 14.1      | B3/5000                 |      |         |
| BH (60°-80°)   | 382.3   | 1.7       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 0.0     | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 1°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  | 4003.4  |
| 2.5°  | 4337.0  | 4364.6  | 4410.5  | 4508.4  | 4591.0  | 4646.1  | 4670.6  | 4664.5  | 4630.8  | 4606.3  | 4557.4  |
| 5°    | 4802.2  | 4802.2  | 4891.0  | 5114.4  | 5285.8  | 5392.9  | 5448.0  | 5414.4  | 5347.0  | 5239.9  | 5074.6  |
| 7.5°  | 5209.3  | 5224.6  | 5374.6  | 5692.9  | 5953.1  | 6106.1  | 6194.8  | 6176.5  | 6057.1  | 5852.1  | 5521.5  |
| 10°   | 5527.6  | 5546.0  | 5744.9  | 6133.6  | 6439.7  | 6595.8  | 6727.4  | 6739.7  | 6608.0  | 6335.6  | 5956.1  |
| 12.5° | 5836.7  | 5855.1  | 6063.2  | 6436.6  | 6706.0  | 6770.3  | 6886.6  | 6932.5  | 6898.8  | 6706.0  | 6311.2  |
| 15°   | 6170.4  | 6213.2  | 6390.7  | 6669.3  | 6782.5  | 6706.0  | 6782.5  | 6865.1  | 6978.4  | 6960.0  | 6605.0  |
| 17.5° | 6497.9  | 6528.5  | 6709.0  | 6807.0  | 6681.5  | 6482.6  | 6519.3  | 6617.2  | 6874.3  | 7125.3  | 6895.7  |
| 20°   | 6800.9  | 6843.7  | 6993.7  | 6865.1  | 6485.6  | 6176.5  | 6179.5  | 6308.1  | 6699.9  | 7226.3  | 7192.6  |
| 22.5° | 7119.2  | 7183.5  | 7290.6  | 6929.4  | 6305.0  | 5934.7  | 5950.0  | 6066.3  | 6562.1  | 7321.2  | 7529.3  |
| 25°   | 7535.4  | 7596.6  | 7667.0  | 7088.6  | 6246.9  | 5815.3  | 5873.5  | 5980.6  | 6562.1  | 7483.4  | 7945.6  |
| 27.5° | 8098.6  | 8141.5  | 8144.5  | 7385.5  | 6347.9  | 5833.7  | 5956.1  | 6078.5  | 6758.0  | 7807.8  | 8502.6  |
| 30°   | 8805.6  | 8873.0  | 8784.2  | 7847.6  | 6663.1  | 6078.5  | 6259.1  | 6412.2  | 7180.4  | 8355.7  | 9322.9  |
| 32.5° | 9665.7  | 9760.6  | 9641.2  | 8533.2  | 7321.2  | 6923.3  | 7250.8  | 7339.5  | 7853.7  | 9148.4  | 10253.3 |
| 35°   | 10675.7 | 10755.3 | 10626.7 | 9482.0  | 8857.7  | 8931.1  | 9524.9  | 9411.6  | 9206.6  | 10124.8 | 11339.9 |
| 37.5° | 11783.7 | 11857.1 | 11609.2 | 10920.6 | 11128.7 | 11447.0 | 12395.8 | 12007.1 | 11346.0 | 11382.7 | 12518.2 |
| 40°   | 12799.8 | 12879.4 | 12490.7 | 12484.6 | 12913.1 | 13494.6 | 14639.3 | 14103.7 | 13203.8 | 13029.4 | 13623.2 |
| 42.5° | 13852.7 | 13907.8 | 13555.8 | 13317.1 | 14290.4 | 15487.1 | 16699.2 | 15976.8 | 14434.2 | 14244.5 | 15006.6 |
| 45°   | 15355.5 | 15471.8 | 14844.4 | 13727.2 | 15530.0 | 17779.6 | 19469.1 | 18058.1 | 15272.9 | 15119.8 | 17124.6 |
| 47.5° | 17565.3 | 17651.0 | 16371.7 | 13984.3 | 16683.9 | 20635.2 | 22930.7 | 20757.6 | 16010.5 | 15661.6 | 20020.0 |
| 50°   | 19392.6 | 19450.7 | 17776.5 | 14265.9 | 17911.2 | 23714.3 | 26876.0 | 23959.1 | 16839.9 | 16558.4 | 22722.6 |
| 52.5° | 20739.3 | 20959.6 | 19622.1 | 14844.4 | 19524.2 | 27335.1 | 31243.6 | 27751.3 | 18134.6 | 18290.7 | 24963.0 |
| 55°   | 21017.8 | 21317.7 | 20883.1 | 15199.4 | 20944.3 | 31023.2 | 35277.6 | 31145.6 | 19426.2 | 19603.8 | 25716.0 |
| 57.5° | 18471.3 | 18710.0 | 19071.2 | 13767.0 | 20910.7 | 32712.7 | 37619.0 | 32272.0 | 18838.6 | 17580.6 | 22897.1 |
| 60°   | 13837.4 | 14002.7 | 14657.7 | 10522.7 | 19230.4 | 31219.1 | 35794.8 | 30356.0 | 16472.7 | 13415.0 | 17446.0 |
| 62.5° | 8205.7  | 8279.2  | 9108.6  | 6816.2  | 15961.5 | 26885.2 | 29685.7 | 26193.4 | 13017.1 | 9022.9  | 10684.9 |
| 65°   | 3149.5  | 3118.8  | 3752.4  | 3363.7  | 11737.8 | 21415.7 | 22079.9 | 19968.0 | 8931.1  | 4135.0  | 4073.8  |
| 67.5° | 486.7   | 465.2   | 627.4   | 994.7   | 8465.9  | 14841.3 | 14568.9 | 14391.4 | 5595.0  | 964.1   | 841.7   |
| 70°   | 110.2   | 110.2   | 134.7   | 293.8   | 5172.6  | 8719.9  | 9332.1  | 8897.4  | 3581.0  | 205.1   | 110.2   |
| 72.5° | 52.0    | 52.0    | 64.3    | 125.5   | 1873.1  | 3593.3  | 4187.0  | 4122.8  | 1163.1  | 67.3    | 39.8    |
| 75°   | 18.4    | 21.4    | 21.4    | 27.5    | 113.2   | 186.7   | 428.5   | 306.1   | 73.5    | 0.0     | 0.0     |
| 77.5° | 6.1     | 6.1     | 6.1     | 6.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 80°   | 3.1     | 3.1     | 3.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 82.5° | 3.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 85°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |
| 87.5° | 0.0     | 0.0     | 0.0     | 0.0     | 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     |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4003.4  | 4003.4  | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 |
| 2.5°  | 4450.3  | 4428.8  | 4349.2 | 4242.1 | 4138.1 | 4046.2 | 3951.4 | 3838.1 | 3755.5 | 3660.6 | 3630.0 |
| 5°    | 4946.1  | 4811.4  | 4594.1 | 4367.6 | 4159.5 | 3982.0 | 3810.6 | 3626.9 | 3492.3 | 3357.6 | 3311.7 |
| 7.5°  | 5365.4  | 5166.5  | 4814.5 | 4474.7 | 4190.1 | 3939.1 | 3691.2 | 3440.2 | 3244.3 | 3085.2 | 3036.2 |
| 10°   | 5741.9  | 5512.3  | 5041.0 | 4621.7 | 4263.5 | 3972.8 | 3672.8 | 3357.6 | 3103.5 | 2913.8 | 2867.9 |
| 12.5° | 6066.3  | 5800.0  | 5233.8 | 4731.8 | 4294.2 | 3960.5 | 3669.8 | 3418.8 | 3189.2 | 2971.9 | 2913.8 |
| 15°   | 6338.7  | 6044.9  | 5396.0 | 4805.3 | 4248.2 | 3807.5 | 3553.5 | 3513.7 | 3495.3 | 3256.6 | 3143.3 |
| 17.5° | 6605.0  | 6274.4  | 5527.6 | 4839.0 | 4119.7 | 3538.2 | 3354.5 | 3535.1 | 3727.9 | 3571.8 | 3428.0 |
| 20°   | 6883.5  | 6507.0  | 5662.3 | 4845.1 | 3905.4 | 3235.2 | 3204.5 | 3489.2 | 3734.0 | 3685.1 | 3550.4 |
| 22.5° | 7211.0  | 6797.8  | 5830.6 | 4842.0 | 3636.1 | 2978.1 | 3094.4 | 3400.4 | 3599.4 | 3596.3 | 3489.2 |
| 25°   | 7685.4  | 7165.1  | 6057.1 | 4860.4 | 3342.3 | 2779.1 | 2971.9 | 3250.5 | 3412.7 | 3406.6 | 3317.8 |
| 27.5° | 8193.5  | 7602.8  | 6350.9 | 4906.3 | 3091.3 | 2662.8 | 2828.1 | 3045.4 | 3186.2 | 3180.1 | 3103.5 |
| 30°   | 8906.6  | 8107.8  | 6632.5 | 4909.4 | 2910.7 | 2601.6 | 2668.9 | 2818.9 | 2953.6 | 2938.3 | 2880.1 |
| 32.5° | 9772.8  | 8677.1  | 6868.2 | 4734.9 | 2797.5 | 2543.4 | 2503.6 | 2580.2 | 2684.2 | 2662.8 | 2647.5 |
| 35°   | 10819.6 | 9353.5  | 7070.2 | 4352.3 | 2623.0 | 2427.1 | 2320.0 | 2335.3 | 2408.8 | 2421.0 | 2414.9 |
| 37.5° | 12013.2 | 10158.4 | 7321.2 | 3847.3 | 2387.3 | 2258.8 | 2114.9 | 2102.7 | 2145.5 | 2185.3 | 2215.9 |
| 40°   | 13191.6 | 11064.4 | 7660.9 | 3336.2 | 2173.1 | 2044.5 | 1906.8 | 1876.2 | 1894.6 | 1965.0 | 2029.2 |
| 42.5° | 14516.9 | 12114.2 | 8028.2 | 2898.5 | 2026.2 | 1808.9 | 1677.3 | 1619.1 | 1671.1 | 1784.4 | 1860.9 |
| 45°   | 16426.8 | 13586.4 | 8386.3 | 2549.6 | 1965.0 | 1600.7 | 1423.2 | 1417.1 | 1475.3 | 1622.2 | 1707.9 |
| 47.5° | 19107.9 | 15490.2 | 8622.0 | 2277.2 | 1961.9 | 1438.5 | 1227.3 | 1264.1 | 1331.4 | 1475.3 | 1573.2 |
| 50°   | 21721.8 | 17874.5 | 8361.8 | 2069.0 | 1897.6 | 1331.4 | 1080.4 | 1153.9 | 1221.2 | 1346.7 | 1447.7 |
| 52.5° | 23298.0 | 19156.9 | 7348.7 | 1873.1 | 1698.7 | 1282.4 | 936.6  | 1065.1 | 1077.4 | 1190.6 | 1297.7 |
| 55°   | 23132.7 | 18327.4 | 5628.6 | 1570.1 | 1404.9 | 1212.0 | 786.6  | 961.1  | 967.2  | 1052.9 | 1144.7 |
| 57.5° | 20078.2 | 15735.0 | 3865.7 | 1273.2 | 1055.9 | 1000.8 | 648.9  | 811.1  | 869.2  | 921.3  | 988.6  |
| 60°   | 14963.7 | 11480.7 | 1723.2 | 1034.5 | 670.3  | 676.4  | 554.0  | 612.1  | 700.9  | 762.1  | 820.3  |
| 62.5° | 8817.9  | 6605.0  | 700.9  | 621.3  | 370.3  | 425.4  | 446.9  | 446.9  | 502.0  | 547.9  | 584.6  |
| 65°   | 3333.1  | 2310.8  | 284.6  | 312.2  | 192.8  | 198.9  | 263.2  | 324.4  | 367.3  | 407.1  | 456.0  |
| 67.5° | 584.6   | 404.0   | 146.9  | 116.3  | 113.2  | 101.0  | 134.7  | 211.2  | 235.7  | 266.3  | 287.7  |
| 70°   | 97.9    | 82.6    | 61.2   | 58.2   | 52.0   | 55.1   | 88.8   | 150.0  | 165.3  | 174.5  | 183.6  |
| 72.5° | 27.5    | 24.5    | 18.4   | 15.3   | 12.2   | 15.3   | 55.1   | 116.3  | 122.4  | 128.5  | 137.7  |
| 75°   | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 21.4   | 82.6   | 88.8   | 91.8   | 101.0  |
| 77.5° | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 18.4   | 24.5   | 30.6   | 24.5   |
| 80°   | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0     | 0.0     | 0.0    | 0.0    | 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    |





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CATALOG NUMBER: GWS-SA5F-750-U-SLR-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°   | 270°   | 275°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 |
| 2.5°  | 3611.6 | 3550.4 | 3516.7 | 3498.4 | 3498.4 | 3473.9 | 3446.3 | 3437.2 | 3477.0 | 3477.0 | 3544.3 |
| 5°    | 3253.5 | 3204.5 | 3149.5 | 3115.8 | 3063.8 | 3072.9 | 3042.3 | 3039.3 | 3079.1 | 3097.4 | 3167.8 |
| 7.5°  | 3005.6 | 2944.4 | 2910.7 | 2889.3 | 2861.8 | 2849.5 | 2822.0 | 2812.8 | 2834.2 | 2864.8 | 2932.1 |
| 10°   | 2840.3 | 2831.1 | 2828.1 | 2843.4 | 2843.4 | 2828.1 | 2803.6 | 2788.3 | 2794.4 | 2852.6 | 2929.1 |
| 12.5° | 2883.2 | 2901.5 | 2907.7 | 2932.1 | 2944.4 | 2932.1 | 2913.8 | 2919.9 | 2959.7 | 3066.8 | 3180.1 |
| 15°   | 3069.9 | 3054.6 | 3048.5 | 3060.7 | 3069.9 | 3057.6 | 3051.5 | 3097.4 | 3235.2 | 3388.2 | 3516.7 |
| 17.5° | 3268.8 | 3170.9 | 3128.0 | 3128.0 | 3134.2 | 3128.0 | 3134.2 | 3222.9 | 3446.3 | 3599.4 | 3694.3 |
| 20°   | 3369.8 | 3189.2 | 3121.9 | 3106.6 | 3118.8 | 3121.9 | 3143.3 | 3244.3 | 3489.2 | 3596.3 | 3617.7 |
| 22.5° | 3339.2 | 3112.7 | 3036.2 | 3024.0 | 3036.2 | 3048.5 | 3069.9 | 3155.6 | 3385.1 | 3440.2 | 3431.0 |
| 25°   | 3186.2 | 2962.8 | 2901.5 | 2901.5 | 2929.1 | 2926.0 | 2935.2 | 2996.4 | 3186.2 | 3219.9 | 3204.5 |
| 27.5° | 2993.4 | 2782.2 | 2730.1 | 2760.7 | 2785.2 | 2779.1 | 2782.2 | 2834.2 | 2975.0 | 2984.2 | 2968.9 |
| 30°   | 2797.5 | 2613.8 | 2564.9 | 2601.6 | 2635.3 | 2629.1 | 2632.2 | 2684.2 | 2773.0 | 2763.8 | 2742.4 |
| 32.5° | 2598.5 | 2463.9 | 2427.1 | 2448.6 | 2500.6 | 2494.5 | 2506.7 | 2561.8 | 2595.5 | 2555.7 | 2531.2 |
| 35°   | 2414.9 | 2344.5 | 2316.9 | 2329.2 | 2369.0 | 2378.2 | 2399.6 | 2436.3 | 2436.3 | 2387.3 | 2344.5 |
| 37.5° | 2243.5 | 2234.3 | 2215.9 | 2200.6 | 2237.4 | 2264.9 | 2295.5 | 2338.4 | 2277.2 | 2206.8 | 2167.0 |
| 40°   | 2084.3 | 2124.1 | 2099.6 | 2059.8 | 2081.3 | 2121.1 | 2182.3 | 2215.9 | 2142.5 | 2072.1 | 2004.8 |
| 42.5° | 1937.4 | 2004.8 | 1995.6 | 1946.6 | 1965.0 | 2001.7 | 2072.1 | 2099.6 | 2013.9 | 1934.4 | 1870.1 |
| 45°   | 1796.6 | 1891.5 | 1897.6 | 1836.4 | 1854.8 | 1891.5 | 1974.1 | 1983.3 | 1873.1 | 1787.4 | 1741.5 |
| 47.5° | 1674.2 | 1778.3 | 1781.3 | 1735.4 | 1741.5 | 1793.6 | 1870.1 | 1873.1 | 1747.7 | 1668.1 | 1609.9 |
| 50°   | 1557.9 | 1677.3 | 1686.4 | 1646.7 | 1652.8 | 1714.0 | 1778.3 | 1766.0 | 1631.4 | 1548.7 | 1496.7 |
| 52.5° | 1417.1 | 1579.3 | 1600.7 | 1582.4 | 1606.9 | 1655.8 | 1695.6 | 1652.8 | 1496.7 | 1414.0 | 1368.1 |
| 55°   | 1264.1 | 1475.3 | 1521.2 | 1508.9 | 1536.5 | 1576.3 | 1585.4 | 1557.9 | 1362.0 | 1279.4 | 1236.5 |
| 57.5° | 1086.5 | 1215.1 | 1294.7 | 1270.2 | 1291.6 | 1331.4 | 1358.9 | 1337.5 | 1190.6 | 1126.3 | 1089.6 |
| 60°   | 899.8  | 985.5  | 1003.9 | 964.1  | 945.8  | 1016.2 | 1080.4 | 1052.9 | 927.4  | 887.6  | 844.8  |
| 62.5° | 658.0  | 756.0  | 768.2  | 716.2  | 694.8  | 771.3  | 826.4  | 798.8  | 661.1  | 618.3  | 584.6  |
| 65°   | 526.4  | 618.3  | 642.7  | 593.8  | 581.5  | 639.7  | 673.4  | 606.0  | 508.1  | 462.2  | 425.4  |
| 67.5° | 345.9  | 419.3  | 483.6  | 480.5  | 456.0  | 474.4  | 449.9  | 394.8  | 324.4  | 299.9  | 275.5  |
| 70°   | 214.2  | 257.1  | 296.9  | 312.2  | 309.1  | 303.0  | 269.3  | 229.6  | 208.1  | 198.9  | 186.7  |
| 72.5° | 165.3  | 208.1  | 238.7  | 247.9  | 251.0  | 241.8  | 214.2  | 177.5  | 156.1  | 143.9  | 134.7  |
| 75°   | 122.4  | 156.1  | 180.6  | 192.8  | 198.9  | 192.8  | 165.3  | 140.8  | 119.4  | 110.2  | 101.0  |
| 77.5° | 42.8   | 52.0   | 64.3   | 70.4   | 67.3   | 64.3   | 58.2   | 58.2   | 45.9   | 42.8   | 36.7   |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 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: P641288

CATALOG NUMBER: GWS-SA5F-750-U-SLR-W-GRSBK

**CANDELA DISTRIBUTION (continued):**

|       | 285°   | 295°   | 305°   | 315°   | 325°   | 335°   | 345°   | 355°    | 359°    | 360°    |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4 | 4003.4  | 4003.4  | 4003.4  |
| 2.5°  | 3620.8 | 3675.9 | 3776.9 | 3868.7 | 3966.7 | 4067.7 | 4177.8 | 4291.1  | 4343.1  | 4337.0  |
| 5°    | 3274.9 | 3394.3 | 3559.6 | 3740.2 | 3942.2 | 4159.5 | 4401.3 | 4649.2  | 4756.3  | 4802.2  |
| 7.5°  | 3057.6 | 3226.0 | 3443.3 | 3672.8 | 3939.1 | 4248.2 | 4612.5 | 5001.2  | 5157.3  | 5209.3  |
| 10°   | 3085.2 | 3281.1 | 3461.6 | 3685.1 | 3969.7 | 4370.7 | 4823.7 | 5285.8  | 5469.5  | 5527.6  |
| 12.5° | 3308.6 | 3351.5 | 3400.4 | 3584.1 | 3942.2 | 4462.5 | 5016.5 | 5567.4  | 5778.6  | 5836.7  |
| 15°   | 3510.6 | 3311.7 | 3219.9 | 3388.2 | 3844.2 | 4526.8 | 5212.4 | 5870.4  | 6103.0  | 6170.4  |
| 17.5° | 3519.8 | 3219.9 | 3014.8 | 3146.4 | 3685.1 | 4554.3 | 5405.2 | 6179.5  | 6433.6  | 6497.9  |
| 20°   | 3406.6 | 3118.8 | 2855.6 | 2858.7 | 3467.8 | 4548.2 | 5564.3 | 6458.1  | 6742.7  | 6800.9  |
| 22.5° | 3241.3 | 2999.5 | 2727.1 | 2632.2 | 3235.2 | 4536.0 | 5738.8 | 6755.0  | 7064.1  | 7119.2  |
| 25°   | 3057.6 | 2846.4 | 2604.7 | 2460.8 | 3002.5 | 4548.2 | 5983.7 | 7143.7  | 7483.4  | 7535.4  |
| 27.5° | 2858.7 | 2678.1 | 2509.8 | 2393.5 | 2806.7 | 4594.1 | 6277.5 | 7639.5  | 8043.5  | 8098.6  |
| 30°   | 2650.6 | 2515.9 | 2448.6 | 2378.2 | 2684.2 | 4606.3 | 6595.8 | 8218.0  | 8729.1  | 8805.6  |
| 32.5° | 2445.5 | 2372.0 | 2375.1 | 2387.3 | 2567.9 | 4520.6 | 6886.6 | 8860.7  | 9543.2  | 9665.7  |
| 35°   | 2255.7 | 2234.3 | 2295.5 | 2356.7 | 2399.6 | 4300.3 | 7140.6 | 9619.8  | 10550.2 | 10675.7 |
| 37.5° | 2093.5 | 2111.9 | 2188.4 | 2249.6 | 2215.9 | 3988.1 | 7477.3 | 10568.6 | 11676.6 | 11783.7 |
| 40°   | 1937.4 | 1983.3 | 2072.1 | 2099.6 | 2075.2 | 3623.9 | 7881.3 | 11483.7 | 12652.9 | 12799.8 |
| 42.5° | 1793.6 | 1827.2 | 1952.7 | 1958.8 | 2035.4 | 3253.5 | 8270.0 | 12469.3 | 13776.2 | 13852.7 |
| 45°   | 1677.3 | 1671.1 | 1799.7 | 1839.5 | 2087.4 | 2843.4 | 8649.5 | 13782.3 | 15245.3 | 15355.5 |
| 47.5° | 1564.0 | 1557.9 | 1588.5 | 1769.1 | 2108.8 | 2463.9 | 9026.0 | 15704.4 | 17375.6 | 17565.3 |
| 50°   | 1456.9 | 1466.1 | 1371.2 | 1735.4 | 1992.5 | 2173.1 | 9197.4 | 17482.7 | 19313.0 | 19392.6 |
| 52.5° | 1362.0 | 1328.3 | 1163.1 | 1625.2 | 1744.6 | 1897.6 | 8710.7 | 18290.7 | 20512.8 | 20739.3 |
| 55°   | 1227.3 | 1040.6 | 958.0  | 1319.2 | 1377.3 | 1655.8 | 7134.5 | 17822.4 | 20616.8 | 21017.8 |
| 57.5° | 1049.8 | 817.2  | 814.1  | 973.3  | 973.3  | 1536.5 | 4569.6 | 15227.0 | 17767.3 | 18471.3 |
| 60°   | 808.0  | 633.6  | 673.4  | 676.4  | 624.4  | 1120.2 | 2564.9 | 11030.7 | 13136.5 | 13837.4 |
| 62.5° | 575.4  | 483.6  | 508.1  | 404.0  | 358.1  | 560.1  | 1230.4 | 6350.9  | 8107.8  | 8205.7  |
| 65°   | 385.6  | 327.5  | 266.3  | 223.4  | 220.4  | 238.7  | 508.1  | 2295.5  | 2791.4  | 3149.5  |
| 67.5° | 254.0  | 198.9  | 140.8  | 140.8  | 159.2  | 159.2  | 192.8  | 379.5   | 532.6   | 486.7   |
| 70°   | 165.3  | 137.7  | 88.8   | 85.7   | 104.1  | 104.1  | 97.9   | 104.1   | 110.2   | 110.2   |
| 72.5° | 122.4  | 104.1  | 52.0   | 45.9   | 58.2   | 61.2   | 55.1   | 52.0    | 52.0    | 52.0    |
| 75°   | 91.8   | 73.5   | 30.6   | 21.4   | 27.5   | 36.7   | 30.6   | 21.4    | 21.4    | 18.4    |
| 77.5° | 36.7   | 27.5   | 12.2   | 9.2    | 15.3   | 21.4   | 18.4   | 9.2     | 6.1     | 6.1     |
| 80°   | 3.1    | 6.1    | 6.1    | 6.1    | 9.2    | 12.2   | 15.3   | 6.1     | 3.1     | 3.1     |
| 82.5° | 0.0    | 3.1    | 3.1    | 3.1    | 6.1    | 9.2    | 12.2   | 6.1     | 3.1     | 3.1     |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 6.1    | 9.2    | 6.1    | 3.1     | 0.0     | 0.0     |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 3.1    | 9.2    | 6.1    | 3.1     | 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     |

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**



#####

| $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>( $\mu\text{W}/\text{nm}$ ) | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 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            |        |               |               |



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**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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**Summary**

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



**Color Vector Graphics**



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**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 |            |



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Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)