

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: P640240

Luminaire Tested: GWS-SA5D-740-U-SLL-W-GRSWH

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640240  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-39)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA5D-740-U-SLL-W-GRSWH  
Description: GALLEON WALL SLIM LUMINAIRE. (5) LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS W/ FACTORY INSTALLED GLARE SHIELD, WH  
Light Source: (80) 4000K CCT, 70 CRI LEDS  
Ballast/Driver: -

**Summary**

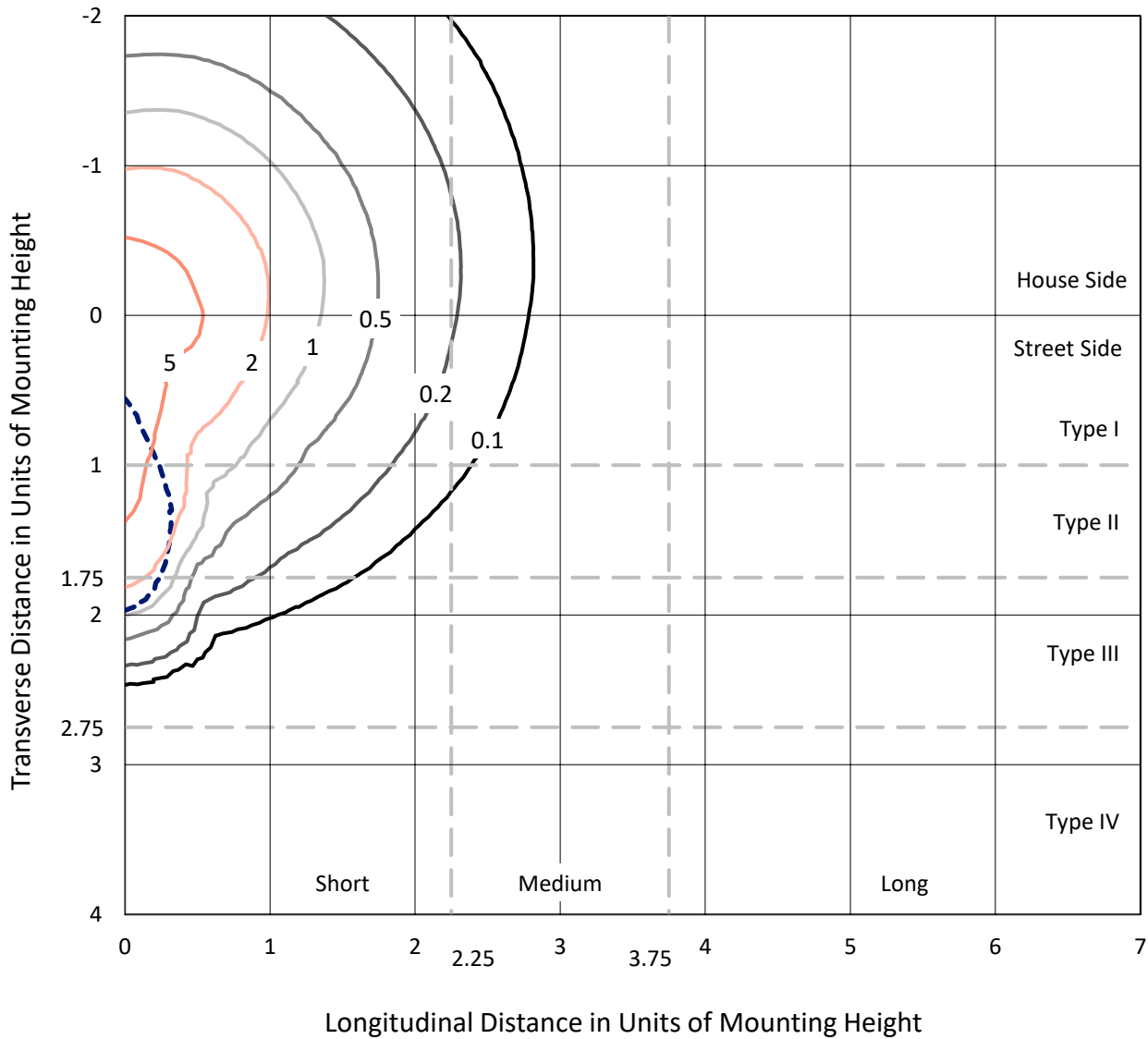
Lumens per Lamp: N/A  
Luminaire Lumens: 23383.2 lumens  
Efficiency: N/A  
Efficacy: 114.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3  
  
Input Watts (W): 204.6  
Input Voltage (V): 120  
Input Current (Ain): 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



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### Iso-Footcandle Lines of Horizontal Illumination

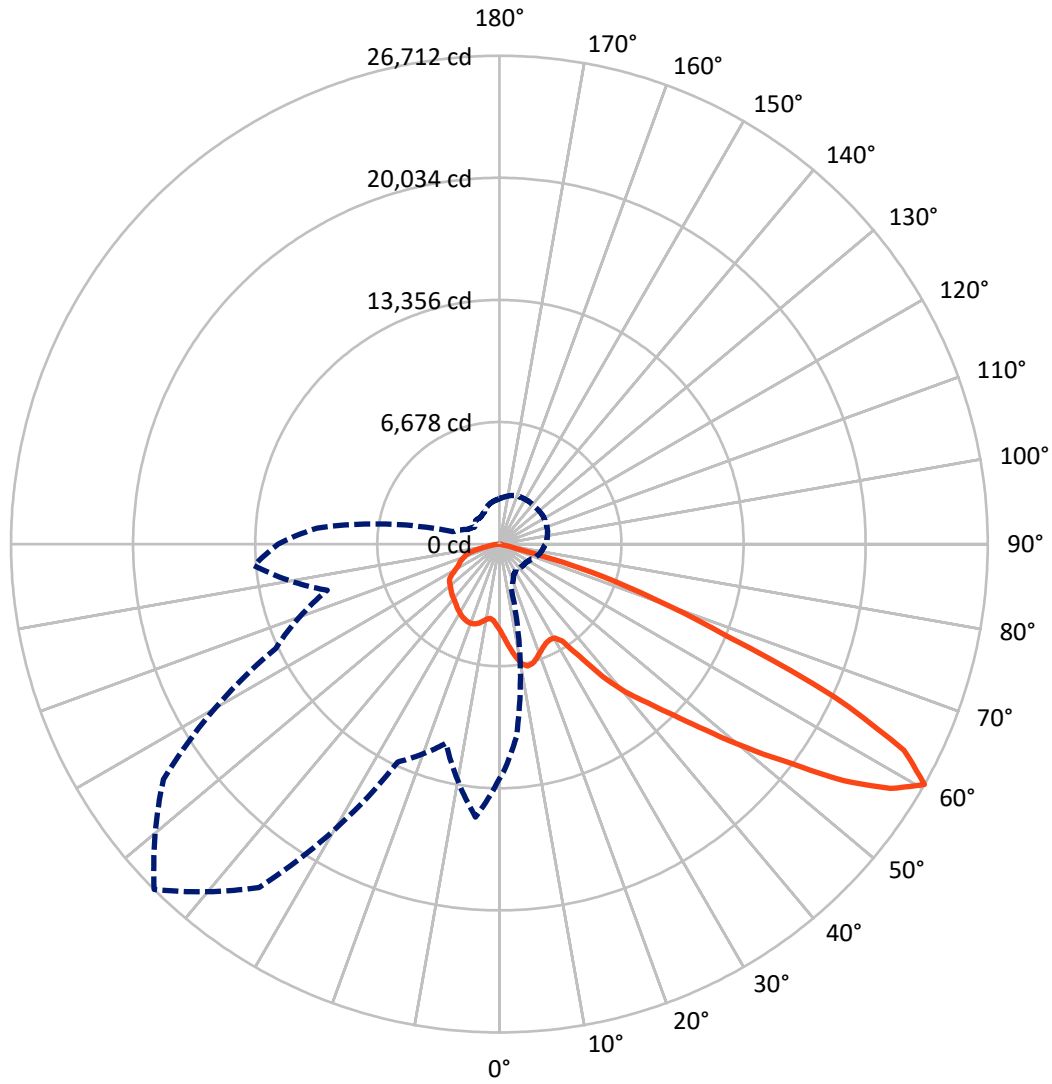
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 315-Deg Lateral    - - - Horizontal Cone Through 60-Deg Vertical

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CATALOG NUMBER: GWS-SA5D-740-U-SLL-W-GRSWH

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 7999.2   | 0.0    | 7999.2  |
|                    | % Fixture | 34.2     | 0.0    | 34.2    |
| <b>Street Side</b> | Lumens    | 15384.0  | 0.0    | 15384.0 |
|                    | % Fixture | 65.8     | 0.0    | 65.8    |
| <b>Total</b>       | Lumens    | 23383.2  | 0.0    | 23383.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 460.8   | 2.0       |
| 10°-20°   | 1477.9  | 6.3       |
| 20°-30°   | 2406.9  | 10.3      |
| 30°-40°   | 3381.2  | 14.5      |
| 40°-50°   | 4626.8  | 19.8      |
| 50°-60°   | 5935.9  | 25.4      |
| 60°-70°   | 3997.0  | 17.1      |
| 70°-80°   | 999.3   | 4.3       |
| 80°-90°   | 97.4    | 0.4       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 23383.2 | 100.0     |
| 0°-180°   | 23383.2 | 100.0     |

**Coefficient of Utilization**



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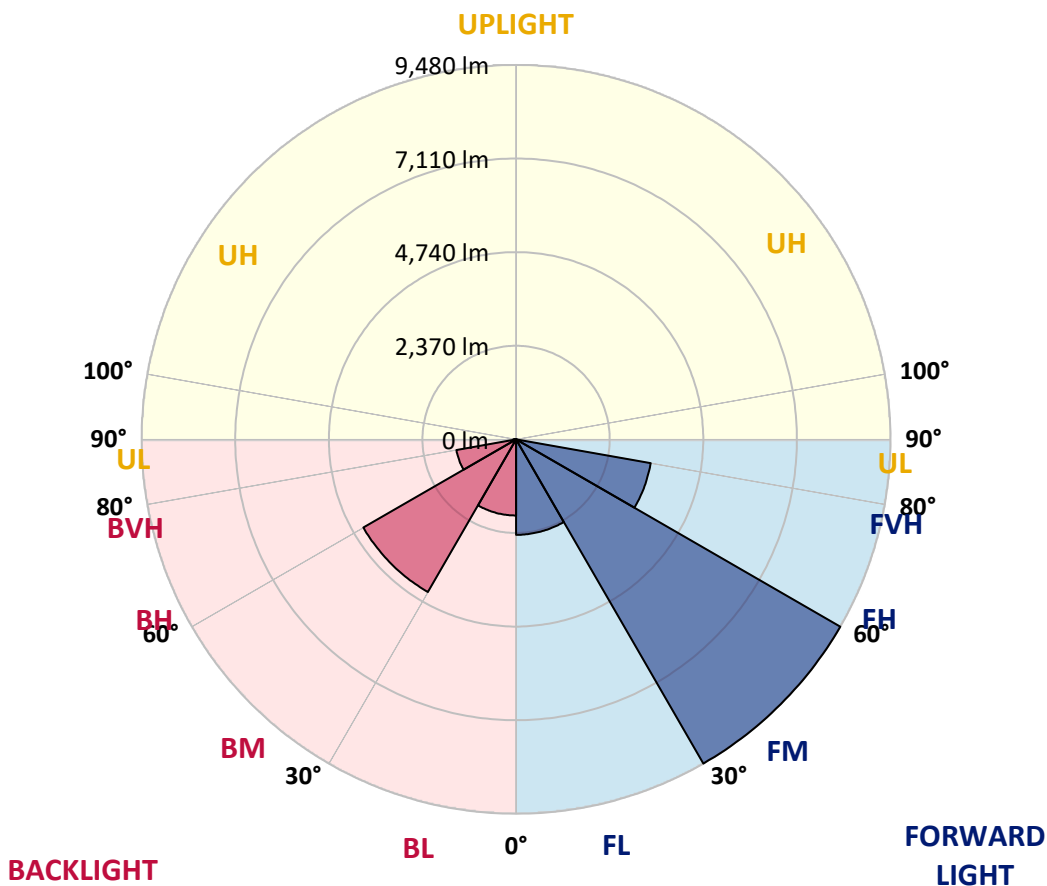
CATALOG NUMBER: GWS-SA5D-740-U-SLL-W-GRSWH

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

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 2417.3 | 10.3      |                         |      |         |
| FM (30°-60°)   | 9479.7 | 40.5      |                         |      |         |
| FH (60°-80°)   | 3461.7 | 14.8      |                         |      | G2/5000 |
| FVH (80°-90°)  | 25.3   | 0.1       |                         |      | G1/100  |
| BL (0°-30°)    | 1928.3 | 8.2       | B3/2500                 |      |         |
| BM (30°-60°)   | 4464.2 | 19.1      | B3/5000                 |      |         |
| BH (60°-80°)   | 1534.6 | 6.6       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 72.1   | 0.3       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 1°      | 5°      | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4716.1  | 4716.1  | 4716.1  | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 |
| 2.5°  | 4989.6  | 4978.9  | 4968.1  | 4884.1 | 4862.6 | 4802.3 | 4759.2 | 4705.4 | 4627.8 | 4584.8 | 4548.2 |
| 5°    | 5301.9  | 5284.7  | 5226.5  | 5054.2 | 4942.3 | 4819.5 | 4718.3 | 4606.3 | 4487.9 | 4410.3 | 4350.0 |
| 7.5°  | 5596.9  | 5592.6  | 5493.6  | 5209.3 | 5028.4 | 4851.8 | 4714.0 | 4550.3 | 4380.2 | 4263.9 | 4186.4 |
| 10°   | 5870.4  | 5838.1  | 5719.7  | 5349.3 | 5112.4 | 4910.0 | 4761.4 | 4580.5 | 4382.4 | 4225.1 | 4121.8 |
| 12.5° | 6111.6  | 6070.7  | 5907.0  | 5478.5 | 5185.6 | 4935.8 | 4774.3 | 4625.7 | 4494.3 | 4363.0 | 4244.5 |
| 15°   | 6309.7  | 6260.2  | 6094.4  | 5599.1 | 5250.2 | 4920.7 | 4694.6 | 4578.3 | 4623.5 | 4681.7 | 4550.3 |
| 17.5° | 6494.9  | 6443.2  | 6240.8  | 5687.4 | 5269.6 | 4828.1 | 4498.6 | 4449.1 | 4677.4 | 4942.3 | 4882.0 |
| 20°   | 6650.0  | 6591.8  | 6357.1  | 5730.4 | 5235.1 | 4651.5 | 4244.5 | 4330.7 | 4632.2 | 4948.7 | 5045.6 |
| 22.5° | 6817.9  | 6770.6  | 6488.5  | 5792.9 | 5192.1 | 4408.2 | 4031.3 | 4242.4 | 4554.6 | 4832.4 | 4978.9 |
| 25°   | 7087.1  | 7029.0  | 6693.0  | 5902.7 | 5170.5 | 4179.9 | 3878.4 | 4156.2 | 4447.0 | 4698.9 | 4813.0 |
| 27.5° | 7476.9  | 7369.2  | 6973.0  | 6094.4 | 5194.2 | 3964.6 | 3781.5 | 4050.7 | 4322.1 | 4537.4 | 4630.0 |
| 30°   | 7901.2  | 7771.9  | 7283.1  | 6292.5 | 5228.7 | 3833.2 | 3729.8 | 3930.1 | 4130.4 | 4345.7 | 4447.0 |
| 32.5° | 8402.9  | 8288.8  | 7614.7  | 6441.1 | 5155.5 | 3772.9 | 3691.1 | 3798.8 | 3958.1 | 4130.4 | 4214.4 |
| 35°   | 9001.6  | 8797.0  | 7976.5  | 6561.7 | 4918.6 | 3684.6 | 3656.6 | 3654.5 | 3738.5 | 3906.4 | 4001.2 |
| 37.5° | 9645.5  | 9425.8  | 8422.3  | 6690.9 | 4550.3 | 3544.6 | 3574.8 | 3484.3 | 3561.9 | 3695.4 | 3803.1 |
| 40°   | 10173.1 | 9942.7  | 8872.4  | 6867.5 | 4089.5 | 3325.0 | 3393.9 | 3297.0 | 3344.4 | 3482.2 | 3602.8 |
| 42.5° | 10689.9 | 10444.4 | 9292.3  | 7067.8 | 3643.7 | 3109.6 | 3144.1 | 3107.5 | 3122.6 | 3266.8 | 3434.8 |
| 45°   | 11368.3 | 11092.6 | 9809.1  | 7209.9 | 3243.2 | 2939.5 | 2907.2 | 2844.8 | 2924.4 | 3111.8 | 3290.5 |
| 47.5° | 12501.0 | 12171.5 | 10655.5 | 7302.5 | 2952.4 | 2842.6 | 2694.0 | 2657.4 | 2756.5 | 2965.4 | 3150.6 |
| 50°   | 13825.4 | 13541.1 | 12007.9 | 7298.2 | 2734.9 | 2760.8 | 2487.3 | 2455.0 | 2618.6 | 2829.7 | 3025.7 |
| 52.5° | 14910.8 | 14622.2 | 13164.3 | 7082.8 | 2556.2 | 2586.3 | 2366.7 | 2276.2 | 2500.2 | 2696.2 | 2892.1 |
| 55°   | 15787.2 | 15462.1 | 13696.2 | 6182.7 | 2330.1 | 2308.5 | 2235.3 | 2069.5 | 2351.6 | 2562.7 | 2745.7 |
| 57.5° | 15315.6 | 14928.0 | 13052.3 | 4701.1 | 2097.5 | 1961.8 | 2009.2 | 1886.5 | 2149.2 | 2414.1 | 2590.6 |
| 60°   | 12841.3 | 12492.4 | 10603.8 | 2502.4 | 1845.5 | 1638.8 | 1737.9 | 1757.2 | 1927.4 | 2235.3 | 2416.2 |
| 62.5° | 8820.7  | 8566.6  | 7186.2  | 1518.2 | 1455.8 | 1315.8 | 1470.8 | 1610.8 | 1737.9 | 1998.4 | 2155.6 |
| 65°   | 4315.6  | 4240.2  | 3594.2  | 973.4  | 1018.6 | 1063.8 | 1218.9 | 1389.0 | 1576.4 | 1804.6 | 1970.4 |
| 67.5° | 1188.7  | 1197.3  | 1089.7  | 760.2  | 803.3  | 928.2  | 1050.9 | 1186.6 | 1373.9 | 1585.0 | 1752.9 |
| 70°   | 523.3   | 531.9   | 549.1   | 585.7  | 667.6  | 781.7  | 908.8  | 1048.7 | 1221.0 | 1397.6 | 1559.1 |
| 72.5° | 363.9   | 372.6   | 398.4   | 445.8  | 519.0  | 626.7  | 747.3  | 880.8  | 1059.5 | 1208.1 | 1341.6 |
| 75°   | 224.0   | 230.4   | 254.1   | 295.0  | 344.6  | 426.4  | 544.8  | 667.6  | 824.8  | 960.5  | 1078.9 |
| 77.5° | 118.4   | 114.1   | 129.2   | 157.2  | 200.3  | 243.3  | 323.0  | 400.5  | 512.5  | 622.4  | 721.4  |
| 80°   | 64.6    | 62.5    | 71.1    | 86.1   | 99.1   | 133.5  | 187.4  | 239.0  | 303.6  | 366.1  | 419.9  |
| 82.5° | 28.0    | 25.8    | 28.0    | 36.6   | 45.2   | 64.6   | 94.8   | 131.4  | 168.0  | 211.0  | 245.5  |
| 85°   | 0.0     | 0.0     | 0.0     | 2.2    | 10.8   | 17.2   | 32.3   | 47.4   | 68.9   | 94.8   | 116.3  |
| 87.5° | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 8.6    | 19.4   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P640240

CATALOG NUMBER: GWS-SA5D-740-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 |
| 2.5°  | 4526.6 | 4472.8 | 4468.5 | 4425.4 | 4429.7 | 4431.9 | 4388.8 | 4371.6 | 4386.7 | 4403.9 | 4395.3 |
| 5°    | 4328.5 | 4272.5 | 4248.8 | 4207.9 | 4203.6 | 4184.2 | 4167.0 | 4145.5 | 4160.5 | 4175.6 | 4184.2 |
| 7.5°  | 4156.2 | 4119.6 | 4104.6 | 4093.8 | 4098.1 | 4089.5 | 4055.0 | 4035.6 | 4033.5 | 4039.9 | 4048.6 |
| 10°   | 4100.2 | 4070.1 | 4089.5 | 4119.6 | 4141.2 | 4156.2 | 4119.6 | 4087.3 | 4057.2 | 4044.3 | 4044.3 |
| 12.5° | 4220.8 | 4182.1 | 4220.8 | 4253.1 | 4296.2 | 4307.0 | 4266.1 | 4231.6 | 4220.8 | 4233.8 | 4259.6 |
| 15°   | 4487.9 | 4397.4 | 4395.3 | 4414.7 | 4449.1 | 4466.3 | 4427.6 | 4410.3 | 4410.3 | 4492.2 | 4556.8 |
| 17.5° | 4754.9 | 4606.3 | 4543.9 | 4533.1 | 4554.6 | 4561.1 | 4528.8 | 4513.7 | 4552.5 | 4711.8 | 4832.4 |
| 20°   | 4942.3 | 4761.4 | 4625.7 | 4599.9 | 4606.3 | 4608.5 | 4582.6 | 4571.9 | 4627.8 | 4821.7 | 4922.9 |
| 22.5° | 4922.9 | 4789.4 | 4623.5 | 4591.2 | 4602.0 | 4597.7 | 4574.0 | 4569.7 | 4614.9 | 4782.9 | 4830.3 |
| 25°   | 4789.4 | 4686.0 | 4546.0 | 4524.5 | 4541.7 | 4539.6 | 4515.9 | 4505.1 | 4524.5 | 4636.5 | 4640.8 |
| 27.5° | 4636.5 | 4546.0 | 4425.4 | 4419.0 | 4447.0 | 4462.0 | 4421.1 | 4388.8 | 4382.4 | 4457.7 | 4440.5 |
| 30°   | 4453.4 | 4386.7 | 4289.8 | 4294.1 | 4345.7 | 4354.4 | 4304.8 | 4257.4 | 4244.5 | 4285.4 | 4261.8 |
| 32.5° | 4235.9 | 4214.4 | 4162.7 | 4173.5 | 4223.0 | 4240.2 | 4188.5 | 4139.0 | 4123.9 | 4136.9 | 4087.3 |
| 35°   | 4050.7 | 4042.1 | 4046.4 | 4065.8 | 4108.9 | 4121.8 | 4078.7 | 4039.9 | 4018.4 | 3973.2 | 3908.6 |
| 37.5° | 3859.1 | 3882.7 | 3945.2 | 3981.8 | 4005.5 | 4001.2 | 3977.5 | 3949.5 | 3915.0 | 3831.1 | 3751.4 |
| 40°   | 3680.3 | 3740.6 | 3852.6 | 3893.5 | 3902.1 | 3904.3 | 3887.0 | 3863.4 | 3820.3 | 3708.3 | 3617.9 |
| 42.5° | 3542.5 | 3609.2 | 3757.8 | 3820.3 | 3824.6 | 3828.9 | 3811.7 | 3792.3 | 3732.0 | 3583.4 | 3495.1 |
| 45°   | 3398.2 | 3486.5 | 3660.9 | 3736.3 | 3732.0 | 3729.8 | 3714.8 | 3706.2 | 3635.1 | 3462.8 | 3365.9 |
| 47.5° | 3275.5 | 3378.8 | 3566.2 | 3630.8 | 3628.6 | 3626.5 | 3615.7 | 3615.7 | 3544.6 | 3357.3 | 3247.5 |
| 50°   | 3154.9 | 3273.3 | 3469.3 | 3523.1 | 3527.4 | 3523.1 | 3518.8 | 3525.3 | 3441.3 | 3241.0 | 3133.3 |
| 52.5° | 3023.5 | 3157.0 | 3361.6 | 3411.1 | 3437.0 | 3447.7 | 3447.7 | 3432.7 | 3333.6 | 3124.7 | 3006.3 |
| 55°   | 2879.2 | 3006.3 | 3243.2 | 3309.9 | 3331.4 | 3350.8 | 3350.8 | 3320.7 | 3228.1 | 3017.0 | 2890.0 |
| 57.5° | 2700.5 | 2812.5 | 2999.8 | 3066.6 | 3118.3 | 3131.2 | 3131.2 | 3081.6 | 3006.3 | 2803.8 | 2700.5 |
| 60°   | 2506.7 | 2603.6 | 2730.6 | 2801.7 | 2840.5 | 2814.6 | 2834.0 | 2821.1 | 2760.8 | 2573.4 | 2487.3 |
| 62.5° | 2248.2 | 2347.3 | 2487.3 | 2560.5 | 2577.7 | 2551.9 | 2577.7 | 2575.6 | 2493.7 | 2325.8 | 2222.4 |
| 65°   | 2063.0 | 2160.0 | 2297.8 | 2392.5 | 2420.5 | 2414.1 | 2431.3 | 2405.4 | 2304.2 | 2144.9 | 2045.8 |
| 67.5° | 1843.4 | 1946.8 | 2106.1 | 2211.6 | 2269.8 | 2276.2 | 2299.9 | 2246.1 | 2142.7 | 1968.3 | 1843.4 |
| 70°   | 1634.5 | 1722.8 | 1845.5 | 1944.6 | 2026.4 | 2067.4 | 2071.7 | 1994.1 | 1864.9 | 1720.6 | 1630.2 |
| 72.5° | 1414.8 | 1505.3 | 1653.9 | 1761.6 | 1864.9 | 1912.3 | 1912.3 | 1817.5 | 1677.6 | 1518.2 | 1421.3 |
| 75°   | 1147.8 | 1231.8 | 1367.5 | 1483.8 | 1602.2 | 1662.5 | 1660.3 | 1578.5 | 1423.5 | 1272.7 | 1171.5 |
| 77.5° | 777.4  | 839.9  | 926.0  | 1014.3 | 1031.5 | 1078.9 | 1102.6 | 999.2  | 913.1  | 831.2  | 740.8  |
| 80°   | 452.2  | 491.0  | 538.4  | 587.9  | 598.7  | 613.7  | 575.0  | 536.2  | 491.0  | 437.2  | 396.2  |
| 82.5° | 264.9  | 290.7  | 314.4  | 353.2  | 359.6  | 363.9  | 329.5  | 312.3  | 275.6  | 243.3  | 217.5  |
| 85°   | 129.2  | 137.8  | 159.4  | 178.7  | 170.1  | 165.8  | 150.7  | 133.5  | 118.4  | 105.5  | 92.6   |
| 87.5° | 25.8   | 25.8   | 38.8   | 36.6   | 30.1   | 25.8   | 15.1   | 19.4   | 4.3    | 4.3    | 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-SA5D-740-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 185°   | 195°   | 205°   | 215°   | 225°   | 235°   | 245°   | 255°   | 265°    | 270°    | 275°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0°    | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1 | 4716.1  | 4716.1  | 4716.1  |
| 2.5°  | 4423.3 | 4459.9 | 4505.1 | 4565.4 | 4634.3 | 4707.5 | 4778.6 | 4832.4 | 4886.3  | 4965.9  | 4953.0  |
| 5°    | 4197.2 | 4259.6 | 4330.7 | 4423.3 | 4535.2 | 4662.3 | 4804.4 | 4946.6 | 5099.5  | 5228.7  | 5284.7  |
| 7.5°  | 4065.8 | 4134.7 | 4218.7 | 4339.3 | 4483.6 | 4638.6 | 4838.9 | 5069.3 | 5317.0  | 5487.1  | 5592.6  |
| 10°   | 4065.8 | 4154.1 | 4263.9 | 4380.2 | 4507.3 | 4666.6 | 4914.3 | 5202.8 | 5521.5  | 5745.5  | 5868.3  |
| 12.5° | 4300.5 | 4388.8 | 4412.5 | 4408.2 | 4479.3 | 4655.8 | 4974.6 | 5342.8 | 5724.0  | 5960.9  | 6111.6  |
| 15°   | 4666.6 | 4696.8 | 4518.0 | 4354.4 | 4365.1 | 4578.3 | 5002.6 | 5454.8 | 5898.4  | 6182.7  | 6346.3  |
| 17.5° | 4912.1 | 4832.4 | 4513.7 | 4227.3 | 4167.0 | 4447.0 | 5002.6 | 5562.5 | 6083.6  | 6404.5  | 6557.4  |
| 20°   | 4931.5 | 4733.4 | 4403.9 | 4104.6 | 3949.5 | 4272.5 | 4968.1 | 5644.3 | 6262.3  | 6617.7  | 6781.3  |
| 22.5° | 4761.4 | 4565.4 | 4287.6 | 3999.0 | 3770.8 | 4061.5 | 4912.1 | 5706.7 | 6415.2  | 6817.9  | 7020.4  |
| 25°   | 4567.6 | 4403.9 | 4169.2 | 3891.4 | 3648.0 | 3848.3 | 4860.4 | 5812.3 | 6628.4  | 7089.3  | 7293.9  |
| 27.5° | 4378.0 | 4240.2 | 4027.0 | 3800.9 | 3579.1 | 3663.1 | 4828.1 | 5967.3 | 6882.6  | 7474.8  | 7651.3  |
| 30°   | 4192.8 | 4067.9 | 3874.1 | 3714.8 | 3542.5 | 3542.5 | 4800.1 | 6146.1 | 7218.5  | 7907.6  | 8084.2  |
| 32.5° | 4005.5 | 3887.0 | 3729.8 | 3630.8 | 3521.0 | 3495.1 | 4722.6 | 6314.0 | 7565.2  | 8381.4  | 8562.3  |
| 35°   | 3831.1 | 3712.6 | 3592.0 | 3551.1 | 3510.2 | 3458.5 | 4530.9 | 6445.4 | 7903.3  | 8934.8  | 9089.9  |
| 37.5° | 3667.4 | 3553.3 | 3462.8 | 3452.0 | 3456.4 | 3359.4 | 4229.5 | 6555.2 | 8325.4  | 9501.2  | 9583.0  |
| 40°   | 3525.3 | 3398.2 | 3327.1 | 3325.0 | 3346.5 | 3200.1 | 3848.3 | 6712.4 | 8807.8  | 9981.4  | 9947.0  |
| 42.5° | 3398.2 | 3264.7 | 3178.6 | 3197.9 | 3185.0 | 3040.7 | 3475.7 | 6856.7 | 9227.7  | 10431.5 | 10362.6 |
| 45°   | 3273.3 | 3144.1 | 3023.5 | 3051.5 | 3036.4 | 2941.7 | 3159.2 | 6962.2 | 9692.9  | 10972.0 | 10980.6 |
| 47.5° | 3152.7 | 3025.7 | 2905.1 | 2870.6 | 2868.4 | 2911.5 | 2915.8 | 6996.7 | 10450.9 | 11842.0 | 11646.1 |
| 50°   | 3040.7 | 2913.7 | 2788.8 | 2672.5 | 2717.7 | 2851.2 | 2734.9 | 6970.8 | 11585.8 | 12802.5 | 12255.5 |
| 52.5° | 2924.4 | 2803.8 | 2666.0 | 2457.1 | 2575.6 | 2706.9 | 2573.4 | 6878.2 | 12279.2 | 13651.0 | 13323.6 |
| 55°   | 2790.9 | 2676.8 | 2489.4 | 2235.3 | 2379.6 | 2407.6 | 2407.6 | 5982.4 | 12574.2 | 14490.8 | 14693.3 |
| 57.5° | 2612.2 | 2461.4 | 2164.3 | 1959.7 | 2088.9 | 1981.2 | 2231.0 | 4186.4 | 12087.5 | 14226.0 | 15012.0 |
| 60°   | 2409.8 | 2248.2 | 1933.8 | 1787.4 | 1826.2 | 1636.7 | 1901.5 | 2625.1 | 10018.0 | 12104.8 | 13465.8 |
| 62.5° | 2142.7 | 1994.1 | 1733.6 | 1619.4 | 1539.7 | 1335.2 | 1531.1 | 1660.3 | 6867.5  | 8988.7  | 9916.8  |
| 65°   | 1964.0 | 1800.3 | 1567.7 | 1417.0 | 1253.3 | 1074.6 | 1016.4 | 1089.7 | 3693.2  | 5030.6  | 5657.2  |
| 67.5° | 1752.9 | 1591.4 | 1371.8 | 1182.3 | 1050.9 | 921.7  | 820.5  | 794.6  | 1266.3  | 1675.4  | 1813.2  |
| 70°   | 1552.7 | 1397.6 | 1214.6 | 1038.0 | 906.6  | 779.6  | 680.5  | 609.4  | 585.7   | 581.4   | 572.8   |
| 72.5° | 1348.1 | 1203.8 | 1050.9 | 887.2  | 743.0  | 626.7  | 538.4  | 456.5  | 422.1   | 411.3   | 400.5   |
| 75°   | 1104.7 | 990.6  | 837.7  | 661.1  | 544.8  | 437.2  | 368.2  | 314.4  | 284.3   | 273.5   | 260.6   |
| 77.5° | 710.7  | 659.0  | 525.5  | 426.4  | 329.5  | 260.6  | 224.0  | 189.5  | 170.1   | 165.8   | 155.1   |
| 80°   | 379.0  | 353.2  | 290.7  | 245.5  | 196.0  | 159.4  | 140.0  | 120.6  | 109.8   | 105.5   | 101.2   |
| 82.5° | 211.0  | 191.7  | 161.5  | 142.1  | 114.1  | 96.9   | 86.1   | 77.5   | 71.1    | 68.9    | 66.8    |
| 85°   | 94.8   | 81.8   | 64.6   | 60.3   | 53.8   | 49.5   | 47.4   | 43.1   | 40.9    | 38.8    | 36.6    |
| 87.5° | 4.3    | 8.6    | 10.8   | 8.6    | 8.6    | 12.9   | 15.1   | 15.1   | 12.9    | 12.9    | 10.8    |
| 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: P640240

CATALOG NUMBER: GWS-SA5D-740-U-SLL-W-GRSWH

**CANDELA DISTRIBUTION (continued):**

|       | 285°    | 295°    | 305°    | 315°    | 325°    | 335°    | 345°    | 355°    | 359°    | 360°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  | 4716.1  |
| 2.5°  | 5032.7  | 5097.3  | 5103.8  | 5125.3  | 5097.3  | 5090.9  | 5045.6  | 5019.8  | 4996.1  | 4989.6  |
| 5°    | 5424.6  | 5553.9  | 5605.5  | 5642.1  | 5607.7  | 5590.5  | 5491.4  | 5388.0  | 5329.9  | 5301.9  |
| 7.5°  | 5827.3  | 6021.2  | 6122.4  | 6167.6  | 6171.9  | 6094.4  | 5924.3  | 5730.4  | 5633.5  | 5596.9  |
| 10°   | 6187.0  | 6426.0  | 6559.5  | 6645.7  | 6615.5  | 6520.8  | 6288.2  | 6025.5  | 5902.7  | 5870.4  |
| 12.5° | 6454.0  | 6682.3  | 6785.6  | 6841.6  | 6839.5  | 6787.8  | 6568.1  | 6283.9  | 6143.9  | 6111.6  |
| 15°   | 6626.3  | 6762.0  | 6768.4  | 6781.3  | 6817.9  | 6886.9  | 6772.7  | 6510.0  | 6354.9  | 6309.7  |
| 17.5° | 6762.0  | 6708.1  | 6606.9  | 6572.5  | 6654.3  | 6845.9  | 6914.9  | 6701.7  | 6533.7  | 6494.9  |
| 20°   | 6848.1  | 6576.8  | 6398.0  | 6331.3  | 6426.0  | 6738.3  | 7001.0  | 6873.9  | 6699.5  | 6650.0  |
| 22.5° | 6914.9  | 6454.0  | 6165.4  | 6120.2  | 6219.3  | 6622.0  | 7089.3  | 7078.5  | 6886.9  | 6817.9  |
| 25°   | 7020.4  | 6372.2  | 6001.8  | 5969.5  | 6062.1  | 6566.0  | 7207.7  | 7356.3  | 7186.2  | 7087.1  |
| 27.5° | 7186.2  | 6363.6  | 5917.8  | 5907.0  | 6034.1  | 6615.5  | 7377.9  | 7763.3  | 7550.1  | 7476.9  |
| 30°   | 7416.6  | 6445.4  | 5937.2  | 5958.7  | 6113.8  | 6794.3  | 7642.7  | 8228.5  | 8015.3  | 7901.2  |
| 32.5° | 7748.3  | 6665.1  | 6232.2  | 6324.8  | 6438.9  | 7080.7  | 8030.4  | 8732.4  | 8570.9  | 8402.9  |
| 35°   | 8185.4  | 7268.0  | 7104.4  | 7498.5  | 7390.8  | 7707.3  | 8497.7  | 9344.0  | 9148.0  | 9001.6  |
| 37.5° | 8769.0  | 8504.1  | 8654.9  | 9197.6  | 8937.0  | 8891.8  | 9068.3  | 9899.6  | 9791.9  | 9645.5  |
| 40°   | 9587.3  | 9641.2  | 9919.0  | 10631.8 | 10254.9 | 9964.2  | 9768.2  | 10317.4 | 10354.0 | 10173.1 |
| 42.5° | 10130.0 | 10377.7 | 11047.4 | 11857.1 | 11338.1 | 10642.5 | 10354.0 | 10851.4 | 10853.6 | 10689.9 |
| 45°   | 10332.4 | 10980.6 | 12380.4 | 13312.9 | 12445.0 | 11030.2 | 10677.0 | 11577.2 | 11555.6 | 11368.3 |
| 47.5° | 10259.2 | 11488.9 | 13765.1 | 15190.7 | 13866.3 | 11305.8 | 10631.8 | 12610.8 | 12785.3 | 12501.0 |
| 50°   | 10106.3 | 11999.2 | 15382.4 | 17490.6 | 15610.6 | 11598.7 | 10562.9 | 13756.5 | 14045.1 | 13825.4 |
| 52.5° | 10261.4 | 12567.8 | 17294.7 | 19868.1 | 17798.6 | 12066.0 | 11028.0 | 15227.3 | 15175.6 | 14910.8 |
| 55°   | 10752.4 | 13239.7 | 19618.3 | 22855.0 | 20201.9 | 12856.3 | 12223.2 | 16629.2 | 16103.8 | 15787.2 |
| 57.5° | 10728.7 | 13719.9 | 21655.5 | 25217.4 | 22292.9 | 13504.5 | 12638.8 | 16777.8 | 15716.2 | 15315.6 |
| 60°   | 9738.1  | 13500.2 | 22430.8 | 26711.9 | 22923.9 | 13147.1 | 11271.4 | 14986.1 | 13261.2 | 12841.3 |
| 62.5° | 7268.0  | 11979.9 | 20927.6 | 24840.5 | 21138.7 | 11355.4 | 8476.1  | 10756.7 | 9529.2  | 8820.7  |
| 65°   | 4649.4  | 9372.0  | 17594.0 | 20124.4 | 17423.9 | 8685.0  | 5047.8  | 5767.0  | 4518.0  | 4315.6  |
| 67.5° | 1979.1  | 6615.5  | 13676.8 | 13450.7 | 13035.1 | 5627.1  | 1948.9  | 1623.7  | 1210.3  | 1188.7  |
| 70°   | 654.7   | 4500.8  | 8430.9  | 8971.4  | 7784.9  | 3876.3  | 643.9   | 544.8   | 542.7   | 523.3   |
| 72.5° | 428.5   | 2416.2  | 4746.3  | 5284.7  | 5009.0  | 2231.0  | 389.8   | 363.9   | 372.6   | 363.9   |
| 75°   | 256.3   | 525.5   | 798.9   | 1038.0  | 798.9   | 374.7   | 234.7   | 230.4   | 234.7   | 224.0   |
| 77.5° | 150.7   | 146.4   | 142.1   | 142.1   | 140.0   | 129.2   | 118.4   | 114.1   | 116.3   | 118.4   |
| 80°   | 96.9    | 92.6    | 88.3    | 86.1    | 75.4    | 71.1    | 66.8    | 62.5    | 62.5    | 64.6    |
| 82.5° | 62.5    | 58.1    | 53.8    | 47.4    | 38.8    | 32.3    | 30.1    | 25.8    | 25.8    | 28.0    |
| 85°   | 32.3    | 25.8    | 19.4    | 15.1    | 8.6     | 4.3     | 0.0     | 0.0     | 0.0     | 0.0     |
| 87.5° | 6.5     | 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     |

LM-79-08: Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Report Prepared for

Cooper Lighting Solutions

MCGRAW, INVUE, LUMARK AND STREETWORKS

DATA VALID FOR LUMINAIRES UTILIZING SA LIGHT ENGINES

Report Number: SP1-2101-121-2

Luminaire Tested: IFLD-S-SA2A-740-U-T3R-HSS

Test Date: 03/05/2021

**Test Information**

Test Method: LM-79-08  
 Report Number: SP1-2101-121-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1  
 Measurement Geometry: 4π  
 Issue Date: 03/05/2021  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: STREETWORKS  
 Catalog Number: **IFLD-S-SA2A-740-U-T3R-HSS**  
 Description: STREETWORKS INF FLOOD

SHIELD, DRIVER PROGRAMMED @ 615mA.

**Spectral Parameters**

|                           |         |           |      |      |       |
|---------------------------|---------|-----------|------|------|-------|
| CCT (K):                  | 3905    | CRI (Ra): | 71.2 | R9:  | -29.7 |
| CIE u':                   | 0.2273  | R1:       | 68.9 | R10: | 46.2  |
| CIE v':                   | 0.5024  | R2:       | 77.0 | R11: | 68.8  |
| Duv:                      | -0.0008 | R3:       | 84.0 | R12: | 45.6  |
| CIE x:                    | 0.3841  | R4:       | 71.6 | R13: | 69.5  |
| CIE y:                    | 0.3774  | R5:       | 68.9 | R14: | 90.7  |
| CIE z:                    | 0.2385  | R6:       | 68.3 |      |       |
| Peak Wavelength (nm):     | 443     | R7:       | 78.7 |      |       |
| Dominant Wavelength (nm): | 579     | R8:       | 52.2 |      |       |
| Purity:                   | 28.7    |           |      |      |       |
| Rf:                       | 71.7    |           |      |      |       |
| Rg:                       | 96.9    |           |      |      |       |



**Test Conditions**

Stabilization Time: 211M  
 Operation Time: 12H  
 Room Temperature (°C) / RH%: 24.8/312%  
 Sphere Temperature (°C): 24.1

REPORT NUMBER: SP1-2101-121-2

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 1/31/2021        | 7/31/2021            |
| Power Meter                    | IN0071                | 12/1/2020        | 12/1/2021            |
| AC Power Source                | IN0063                | 12/1/2020        | 12/1/2021            |
| DC Power Source                | IN0208                | 12/1/2020        | 12/1/2021            |
| Sphere Thermometer             | IN0085                | 12/1/2020        | 12/1/2021            |
| Room Thermometer               | IN0046                | 12/1/2020        | 12/1/2021            |

REPORT NUMBER: SP1-2101-121-2

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 4000K 4-step quadrangle

REPORT NUMBER: SP1-2101-121-2

**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    | 2304          | 0.0           | 490    | 19043         | 2.7           | 620    | 97577         | 25.4          | 750    | 4830          | 0.0           | 880    | 3505          | 0.0           |
| 365    | 2150          | 0.0           | 495    | 26606         | 4.8           | 625    | 90158         | 19.9          | 755    | 4664          | 0.0           | 885    | 2991          | 0.0           |
| 370    | 2146          | 0.0           | 500    | 36376         | 8.0           | 630    | 82240         | 14.9          | 760    | 4006          | 0.0           | 890    | 2327          | 0.0           |
| 375    | 2332          | 0.0           | 505    | 47714         | 13.3          | 635    | 74361         | 11.2          | 765    | 3715          | 0.0           | 895    | 2775          | 0.0           |
| 380    | 2527          | 0.0           | 510    | 58741         | 20.2          | 640    | 66994         | 8.0           | 770    | 3696          | 0.0           | 900    | 2141          | 0.0           |
| 385    | 2304          | 0.0           | 515    | 68716         | 28.5          | 645    | 60405         | 5.8           | 775    | 3117          | 0.0           | 905    | 2421          | 0.0           |
| 390    | 2064          | 0.0           | 520    | 77136         | 37.4          | 650    | 53806         | 3.9           | 780    | 3062          | 0.0           | 910    | 2200          | 0.0           |
| 395    | 1856          | 0.0           | 525    | 83567         | 44.9          | 655    | 47610         | 2.7           | 785    | 2907          | 0.0           | 915    | 2716          | 0.0           |
| 400    | 1856          | 0.0           | 530    | 89283         | 52.6          | 660    | 42018         | 1.8           | 790    | 2655          | 0.0           | 920    | 2656          | 0.0           |
| 405    | 2374          | 0.0           | 535    | 94097         | 58.4          | 665    | 36742         | 1.2           | 795    | 2467          | 0.0           | 925    | 2671          | 0.0           |
| 410    | 4084          | 0.0           | 540    | 96845         | 63.1          | 670    | 32105         | 0.7           | 800    | 2609          | 0.0           | 930    | 3292          | 0.0           |
| 415    | 8543          | 0.0           | 545    | 100829        | 67.1          | 675    | 27946         | 0.5           | 805    | 2293          | 0.0           | 935    | 3188          | 0.0           |
| 420    | 18394         | 0.1           | 550    | 105648        | 71.8          | 680    | 24146         | 0.3           | 810    | 2188          | 0.0           | 940    | 1997          | 0.0           |
| 425    | 37987         | 0.2           | 555    | 110017        | 75.1          | 685    | 21191         | 0.2           | 815    | 2386          | 0.0           | 945    | 2623          | 0.0           |
| 430    | 67605         | 0.5           | 560    | 114586        | 77.9          | 690    | 18544         | 0.1           | 820    | 2712          | 0.0           | 950    | 2969          | 0.0           |
| 435    | 102160        | 1.2           | 565    | 118987        | 79.1          | 695    | 16058         | 0.1           | 825    | 2473          | 0.0           | 955    | 2277          | 0.0           |
| 440    | 135103        | 2.1           | 570    | 122326        | 79.5          | 700    | 14133         | 0.0           | 830    | 1969          | 0.0           | 960    | 4267          | 0.0           |
| 445    | 140126        | 2.9           | 575    | 125968        | 78.4          | 705    | 12309         | 0.0           | 835    | 1917          | 0.0           | 965    | 2034          | 0.0           |
| 450    | 102339        | 2.7           | 580    | 127613        | 75.8          | 710    | 11142         | 0.0           | 840    | 2248          | 0.0           | 970    | 3586          | 0.0           |
| 455    | 58751         | 2.0           | 585    | 129466        | 71.9          | 715    | 10143         | 0.0           | 845    | 2266          | 0.0           | 975    | 2505          | 0.0           |
| 460    | 36892         | 1.5           | 590    | 128813        | 66.6          | 720    | 9072          | 0.0           | 850    | 2558          | 0.0           | 980    | 2666          | 0.0           |
| 465    | 24637         | 1.3           | 595    | 126387        | 59.9          | 725    | 8130          | 0.0           | 855    | 2767          | 0.0           | 985    | 2934          | 0.0           |
| 470    | 16738         | 1.0           | 600    | 123477        | 53.2          | 730    | 7149          | 0.0           | 860    | 2826          | 0.0           | 990    | 4120          | 0.0           |
| 475    | 13456         | 1.1           | 605    | 118718        | 46.0          | 735    | 6311          | 0.0           | 865    | 2385          | 0.0           | 995    | 3858          | 0.0           |
| 480    | 13081         | 1.2           | 610    | 112091        | 38.5          | 740    | 5711          | 0.0           | 870    | 3194          | 0.0           | 1000   | 3405          | 0.0           |
| 485    | 14734         | 1.7           | 615    | 105039        | 31.7          | 745    | 5111          | 0.0           | 875    | 3189          | 0.0           |        |               |               |

REPORT NUMBER: SP1-2101-121-2

**Scotopic Flux vs. Wavelength**



**Scotopic Lumens: 10425.8 S/P: 1.47**

| 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    | 2304          | 0.0           | 490    | 19043         | 29.3          | 620    | 97577         | 1.2           | 750    | 4830          | 0.0           | 880    | 3505          | 0.0           |
| 365    | 2150          | 0.0           | 495    | 26606         | 43.0          | 625    | 90158         | 0.8           | 755    | 4664          | 0.0           | 885    | 2991          | 0.0           |
| 370    | 2146          | 0.0           | 500    | 36376         | 60.8          | 630    | 82240         | 0.5           | 760    | 4006          | 0.0           | 890    | 2327          | 0.0           |
| 375    | 2332          | 0.0           | 505    | 47714         | 81.1          | 635    | 74361         | 0.3           | 765    | 3715          | 0.0           | 895    | 2775          | 0.0           |
| 380    | 2527          | 0.0           | 510    | 58741         | 99.6          | 640    | 66994         | 0.2           | 770    | 3696          | 0.0           | 900    | 2141          | 0.0           |
| 385    | 2304          | 0.0           | 515    | 68716         | 113.9         | 645    | 60405         | 0.1           | 775    | 3117          | 0.0           | 905    | 2421          | 0.0           |
| 390    | 2064          | 0.0           | 520    | 77136         | 122.6         | 650    | 53806         | 0.1           | 780    | 3062          | 0.0           | 910    | 2200          | 0.0           |
| 395    | 1856          | 0.0           | 525    | 83567         | 125.0         | 655    | 47610         | 0.0           | 785    | 2907          | 0.0           | 915    | 2716          | 0.0           |
| 400    | 1856          | 0.0           | 530    | 89283         | 123.1         | 660    | 42018         | 0.0           | 790    | 2655          | 0.0           | 920    | 2656          | 0.0           |
| 405    | 2374          | 0.1           | 535    | 94097         | 117.3         | 665    | 36742         | 0.0           | 795    | 2467          | 0.0           | 925    | 2671          | 0.0           |
| 410    | 4084          | 0.2           | 540    | 96845         | 107.0         | 670    | 32105         | 0.0           | 800    | 2609          | 0.0           | 930    | 3292          | 0.0           |
| 415    | 8543          | 0.9           | 545    | 100829        | 96.7          | 675    | 27946         | 0.0           | 805    | 2293          | 0.0           | 935    | 3188          | 0.0           |
| 420    | 18394         | 3.0           | 550    | 105648        | 86.4          | 680    | 24146         | 0.0           | 810    | 2188          | 0.0           | 940    | 1997          | 0.0           |
| 425    | 37987         | 9.3           | 555    | 110017        | 75.2          | 685    | 21191         | 0.0           | 815    | 2386          | 0.0           | 945    | 2623          | 0.0           |
| 430    | 67605         | 23.0          | 560    | 114586        | 64.0          | 690    | 18544         | 0.0           | 820    | 2712          | 0.0           | 950    | 2969          | 0.0           |
| 435    | 102160        | 45.7          | 565    | 118987        | 53.4          | 695    | 16058         | 0.0           | 825    | 2473          | 0.0           | 955    | 2277          | 0.0           |
| 440    | 135103        | 75.5          | 570    | 122326        | 43.2          | 700    | 14133         | 0.0           | 830    | 1969          | 0.0           | 960    | 4267          | 0.0           |
| 445    | 140126        | 93.8          | 575    | 125968        | 34.3          | 705    | 12309         | 0.0           | 835    | 1917          | 0.0           | 965    | 2034          | 0.0           |
| 450    | 102339        | 79.3          | 580    | 127613        | 26.3          | 710    | 11142         | 0.0           | 840    | 2248          | 0.0           | 970    | 3586          | 0.0           |
| 455    | 58751         | 51.3          | 585    | 129466        | 19.8          | 715    | 10143         | 0.0           | 845    | 2266          | 0.0           | 975    | 2505          | 0.0           |
| 460    | 36892         | 35.6          | 590    | 128813        | 14.3          | 720    | 9072          | 0.0           | 850    | 2558          | 0.0           | 980    | 2666          | 0.0           |
| 465    | 24637         | 26.0          | 595    | 126387        | 10.1          | 725    | 8130          | 0.0           | 855    | 2767          | 0.0           | 985    | 2934          | 0.0           |
| 470    | 16738         | 19.3          | 600    | 123477        | 7.0           | 730    | 7149          | 0.0           | 860    | 2826          | 0.0           | 990    | 4120          | 0.0           |
| 475    | 13456         | 16.8          | 605    | 118718        | 4.7           | 735    | 6311          | 0.0           | 865    | 2385          | 0.0           | 995    | 3858          | 0.0           |
| 480    | 13081         | 17.7          | 610    | 112091        | 3.0           | 740    | 5711          | 0.0           | 870    | 3194          | 0.0           | 1000   | 3405          | 0.0           |
| 485    | 14734         | 21.4          | 615    | 105039        | 1.9           | 745    | 5111          | 0.0           | 875    | 3189          | 0.0           |        |               |               |



REPORT NUMBER: SP1-2101-121-2

**Melanopic Flux vs. Wavelength**



**Melanopic Lumens: 3927.2 M/P: 0.55**

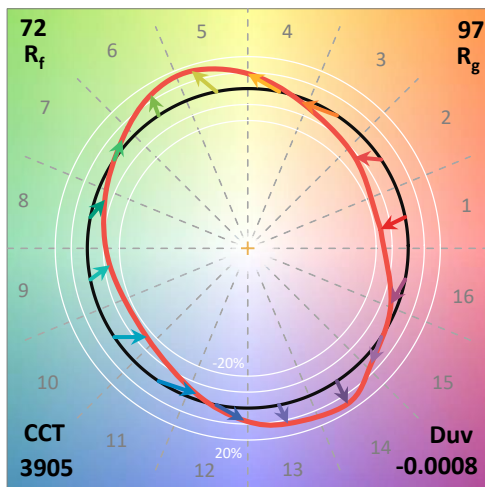
| λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) | λ (nm) | Power (µW/nm) | Lumens (φ/nm) |
|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|--------|---------------|---------------|
| 360    | 2304          | 0.0           | 490    | 19043         | 15.8          | 620    | 97577         | 0.1           | 750    | 4830          | 0.0           | 880    | 3505          | 0.0           |
| 365    | 2150          | 0.0           | 495    | 26606         | 22.0          | 625    | 90158         | 0.0           | 755    | 4664          | 0.0           | 885    | 2991          | 0.0           |
| 370    | 2146          | 0.0           | 500    | 36376         | 29.2          | 630    | 82240         | 0.0           | 760    | 4006          | 0.0           | 890    | 2327          | 0.0           |
| 375    | 2332          | 0.0           | 505    | 47714         | 36.6          | 635    | 74361         | 0.0           | 765    | 3715          | 0.0           | 895    | 2775          | 0.0           |
| 380    | 2527          | 0.0           | 510    | 58741         | 42.2          | 640    | 66994         | 0.0           | 770    | 3696          | 0.0           | 900    | 2141          | 0.0           |
| 385    | 2304          | 0.0           | 515    | 68716         | 44.9          | 645    | 60405         | 0.0           | 775    | 3117          | 0.0           | 905    | 2421          | 0.0           |
| 390    | 2064          | 0.0           | 520    | 77136         | 44.9          | 650    | 53806         | 0.0           | 780    | 3062          | 0.0           | 910    | 2200          | 0.0           |
| 395    | 1856          | 0.0           | 525    | 83567         | 42.4          | 655    | 47610         | 0.0           | 785    | 2907          | 0.0           | 915    | 2716          | 0.0           |
| 400    | 1856          | 0.0           | 530    | 89283         | 38.6          | 660    | 42018         | 0.0           | 790    | 2655          | 0.0           | 920    | 2656          | 0.0           |
| 405    | 2374          | 0.0           | 535    | 94097         | 33.9          | 665    | 36742         | 0.0           | 795    | 2467          | 0.0           | 925    | 2671          | 0.0           |
| 410    | 4084          | 0.2           | 540    | 96845         | 28.3          | 670    | 32105         | 0.0           | 800    | 2609          | 0.0           | 930    | 3292          | 0.0           |
| 415    | 8543          | 0.6           | 545    | 100829        | 23.4          | 675    | 27946         | 0.0           | 805    | 2293          | 0.0           | 935    | 3188          | 0.0           |
| 420    | 18394         | 2.1           | 550    | 105648        | 19.0          | 680    | 24146         | 0.0           | 810    | 2188          | 0.0           | 940    | 1997          | 0.0           |
| 425    | 37987         | 5.9           | 555    | 110017        | 14.8          | 685    | 21191         | 0.0           | 815    | 2386          | 0.0           | 945    | 2623          | 0.0           |
| 430    | 67605         | 14.3          | 560    | 114586        | 11.3          | 690    | 18544         | 0.0           | 820    | 2712          | 0.0           | 950    | 2969          | 0.0           |
| 435    | 102160        | 27.3          | 565    | 118987        | 8.4           | 695    | 16058         | 0.0           | 825    | 2473          | 0.0           | 955    | 2277          | 0.0           |
| 440    | 135103        | 45.1          | 570    | 122326        | 6.0           | 700    | 14133         | 0.0           | 830    | 1969          | 0.0           | 960    | 4267          | 0.0           |
| 445    | 140126        | 55.3          | 575    | 125968        | 4.2           | 705    | 12309         | 0.0           | 835    | 1917          | 0.0           | 965    | 2034          | 0.0           |
| 450    | 102339        | 47.2          | 580    | 127613        | 2.9           | 710    | 11142         | 0.0           | 840    | 2248          | 0.0           | 970    | 3586          | 0.0           |
| 455    | 58751         | 30.8          | 585    | 129466        | 1.9           | 715    | 10143         | 0.0           | 845    | 2266          | 0.0           | 975    | 2505          | 0.0           |
| 460    | 36892         | 21.7          | 590    | 128813        | 1.3           | 720    | 9072          | 0.0           | 850    | 2558          | 0.0           | 980    | 2666          | 0.0           |
| 465    | 24637         | 16.1          | 595    | 126387        | 0.8           | 725    | 8130          | 0.0           | 855    | 2767          | 0.0           | 985    | 2934          | 0.0           |
| 470    | 16738         | 12.0          | 600    | 123477        | 0.5           | 730    | 7149          | 0.0           | 860    | 2826          | 0.0           | 990    | 4120          | 0.0           |
| 475    | 13456         | 10.3          | 605    | 118718        | 0.3           | 735    | 6311          | 0.0           | 865    | 2385          | 0.0           | 995    | 3858          | 0.0           |
| 480    | 13081         | 10.5          | 610    | 112091        | 0.2           | 740    | 5711          | 0.0           | 870    | 3194          | 0.0           | 1000   | 3405          | 0.0           |
| 485    | 14734         | 12.1          | 615    | 105039        | 0.1           | 745    | 5111          | 0.0           | 875    | 3189          | 0.0           |        |               |               |

**Summary**

$R_f = 71.7$   
 $R_g = 96.9$   
 CIE  $R_a = 71.2$   
 $R_g = -29.7$



**Color Vector Graphics**



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 55 | CES51 = 86 | CES76 = 45 |
| CES02 = 61 | CES27 = 80 | CES52 = 87 | CES77 = 68 |
| CES03 = 30 | CES28 = 79 | CES53 = 74 | CES78 = 49 |
| CES04 = 70 | CES29 = 51 | CES54 = 81 | CES79 = 77 |
| CES05 = 47 | CES30 = 60 | CES55 = 80 | CES80 = 75 |
| CES06 = 50 | CES31 = 56 | CES56 = 69 | CES81 = 75 |
| CES07 = 40 | CES32 = 52 | CES57 = 67 | CES82 = 90 |
| CES08 = 39 | CES33 = 62 | CES58 = 69 | CES83 = 85 |
| CES09 = 29 | CES34 = 65 | CES59 = 86 | CES84 = 87 |
| CES10 = 74 | CES35 = 81 | CES60 = 91 | CES85 = 83 |
| CES11 = 57 | CES36 = 92 | CES61 = 85 | CES86 = 72 |
| CES12 = 63 | CES37 = 74 | CES62 = 81 | CES87 = 77 |
| CES13 = 42 | CES38 = 69 | CES63 = 72 | CES88 = 77 |
| CES14 = 74 | CES39 = 92 | CES64 = 69 | CES89 = 72 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 75 |
| CES16 = 46 | CES41 = 84 | CES66 = 63 | CES91 = 91 |
| CES17 = 49 | CES42 = 75 | CES67 = 60 | CES92 = 66 |
| CES18 = 56 | CES43 = 70 | CES68 = 67 | CES93 = 80 |
| CES19 = 72 | CES44 = 98 | CES69 = 77 | CES94 = 56 |
| CES20 = 65 | CES45 = 80 | CES70 = 57 | CES95 = 72 |
| CES21 = 86 | CES46 = 77 | CES71 = 53 | CES96 = 78 |
| CES22 = 78 | CES47 = 74 | CES72 = 84 | CES97 = 83 |
| CES23 = 92 | CES48 = 66 | CES73 = 47 | CES98 = 73 |
| CES24 = 91 | CES49 = 76 | CES74 = 96 | CES99 = 63 |
| CES25 = 72 | CES50 = 85 | CES75 = 52 |            |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)