

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



Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: STREETWORKS

Report Number: P1062813

Luminaire Tested: **GLAN-SA6A-735-U-T3BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1062813  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GLAN-SA6A-735-U-T3BC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 615mA 6xLight Square PACKAGE  
70CRI 3500K FIXTURE w/ TYPE III ANGLED BACKLIGHT CONTROL  
Light Source: (84) 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21986.5 lumens  
Efficiency: N/A  
Efficacy: 135.0 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G4

Input Watts (W): 162.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.97  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT

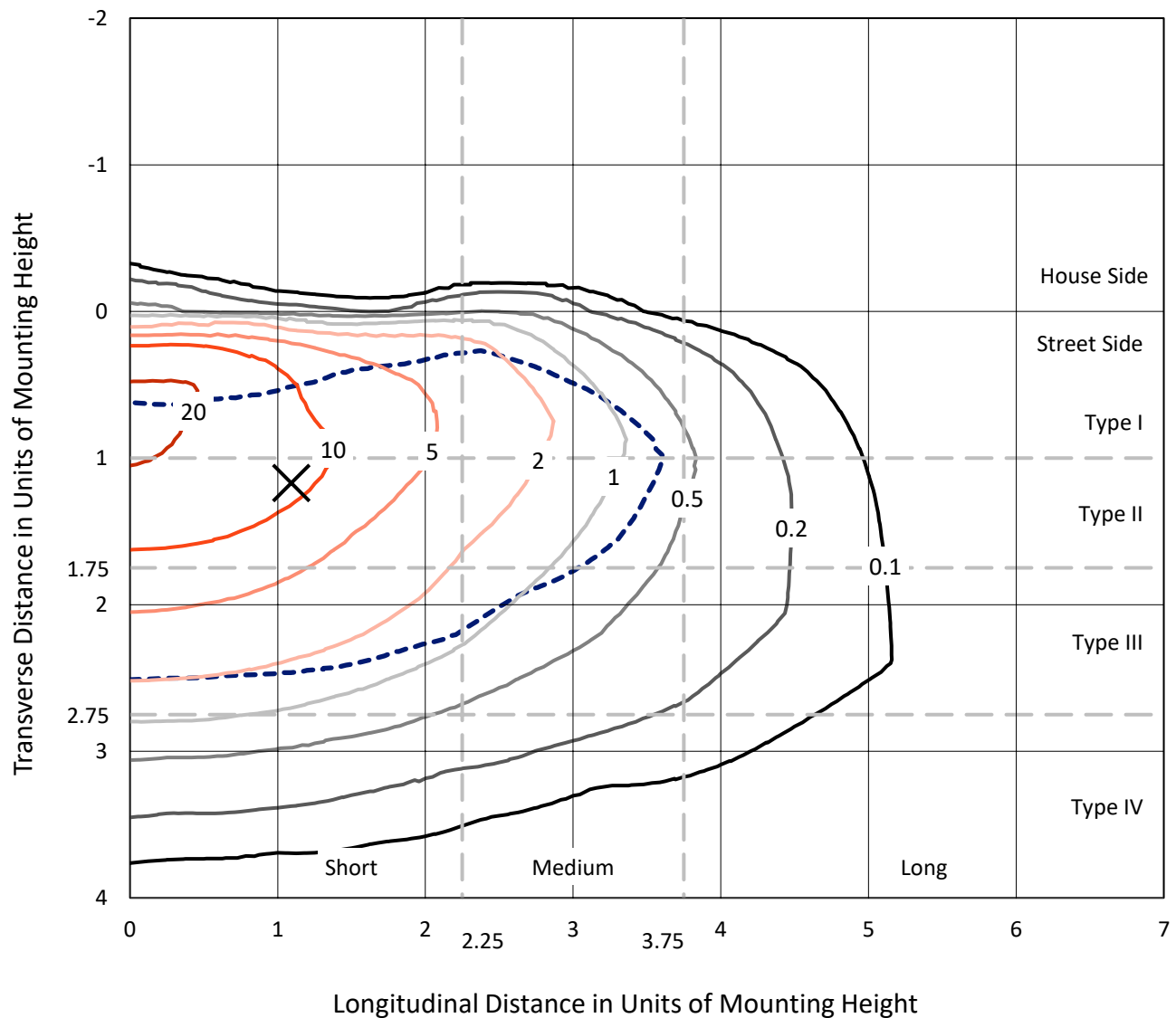


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## Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

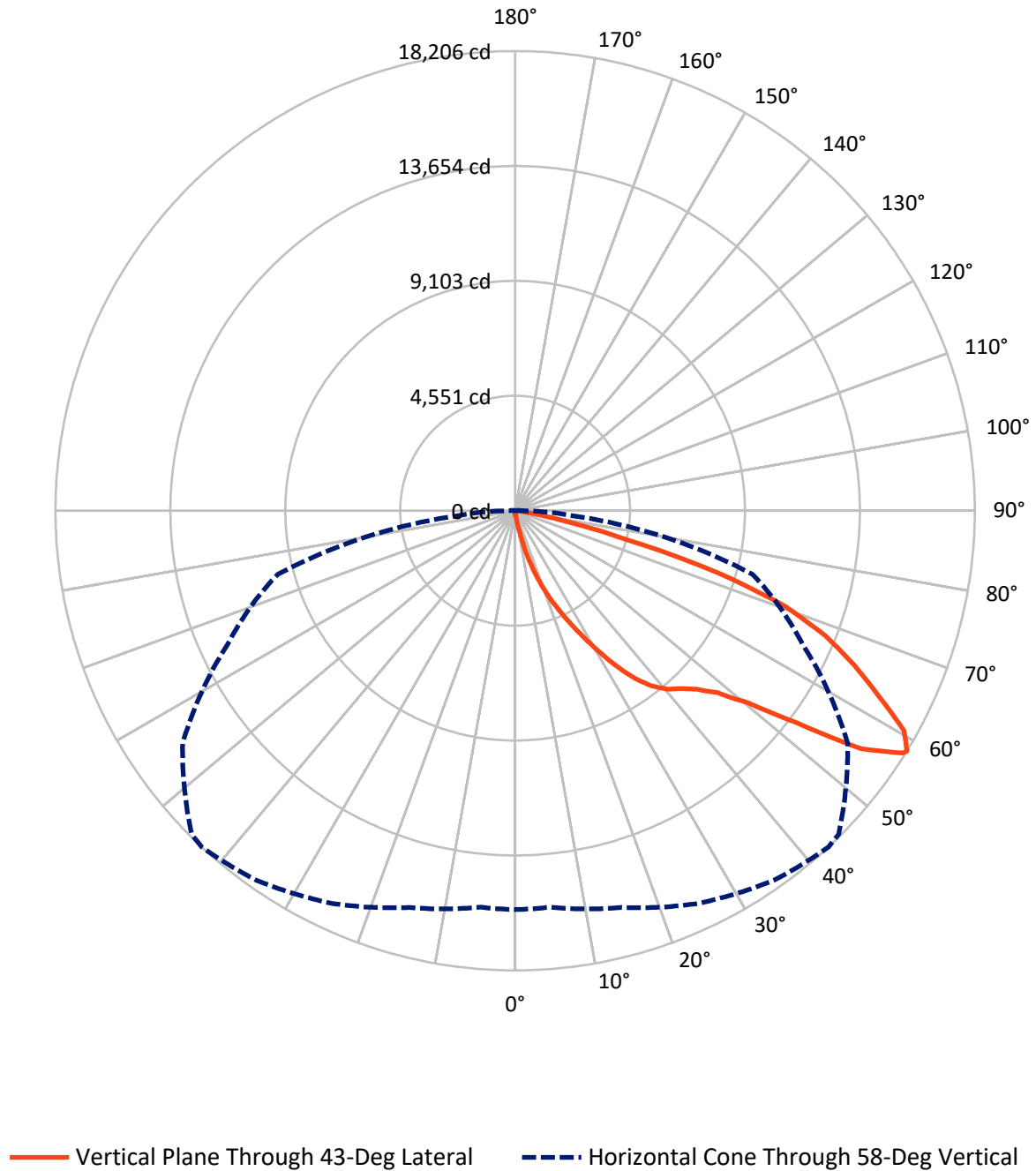


Based on 15 foot mounting height. Maximum calculated value = 24.7 fc  
 Type III - Short - N/A

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## Luminous Intensity Polar Plot



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CATALOG NUMBER: GLAN-SA6A-735-U-T3BC

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 80.3     | 0.0    | 80.3    |
|                    | % Fixture | 0.4      | 0.0    | 0.4     |
| <b>Street Side</b> | Lumens    | 21906.2  | 0.0    | 21906.2 |
|                    | % Fixture | 99.6     | 0.0    | 99.6    |
| <b>Total</b>       | Lumens    | 21986.5  | 0.0    | 21986.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 21.1    | 0.1       |
| 10°-20°   | 252.7   | 1.1       |
| 20°-30°   | 910.9   | 4.1       |
| 30°-40°   | 2084.2  | 9.5       |
| 40°-50°   | 3515.2  | 16.0      |
| 50°-60°   | 5800.9  | 26.4      |
| 60°-70°   | 6483.3  | 29.5      |
| 70°-80°   | 2676.8  | 12.2      |
| 80°-90°   | 241.3   | 1.1       |
| 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°    | 21986.5 | 100.0     |
| 0°-180°   | 21986.5 | 100.0     |



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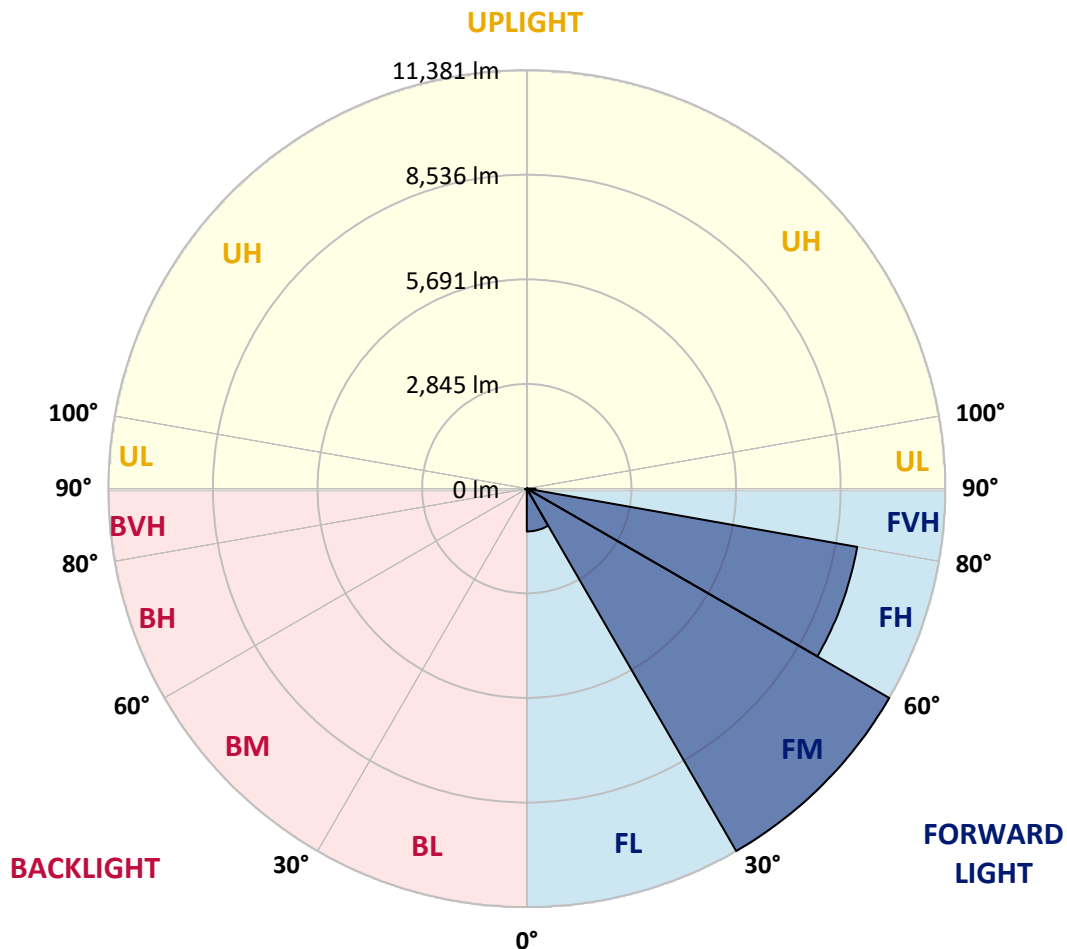
CATALOG NUMBER: GLAN-SA6A-735-U-T3BC

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1163.8  | 5.3       |                         |      |          |
| FM   | (30°-60°)   | 11381.0 | 51.8      |                         |      |          |
| FH   | (60°-80°)   | 9123.4  | 41.5      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 238.0   | 1.1       |                         |      | G3/500   |
| BL   | (0°-30°)    | 20.9    | 0.1       | B0/110                  |      |          |
| BM   | (30°-60°)   | 19.3    | 0.1       | B0/220                  |      |          |
| BH   | (60°-80°)   | 36.8    | 0.2       | B0/110                  |      | G0/110   |
| BVH  | (80°-90°)   | 3.3     | 0.0       |                         |      | G0/10    |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B0-U0-G4**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 43°     | 45°     | 55°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8   | 143.8  |
| 2.5°  | 172.5   | 178.3   | 172.5   | 172.5   | 172.5   | 166.8   | 166.8   | 161.0   | 161.0   | 155.3   | 149.5  |
| 5°    | 253.0   | 253.0   | 235.8   | 224.3   | 212.8   | 207.0   | 201.3   | 189.8   | 178.3   | 166.8   | 155.3  |
| 7.5°  | 563.5   | 563.5   | 511.8   | 442.8   | 350.8   | 299.0   | 287.5   | 235.8   | 201.3   | 178.3   | 155.3  |
| 10°   | 1345.6  | 1345.6  | 1230.6  | 1040.8  | 805.1   | 598.0   | 534.8   | 339.3   | 241.5   | 189.8   | 161.0  |
| 12.5° | 2236.9  | 2265.6  | 2121.9  | 1880.4  | 1529.6  | 1167.3  | 1040.8  | 621.0   | 322.0   | 207.0   | 161.0  |
| 15°   | 3036.2  | 2967.2  | 2926.9  | 2696.9  | 2363.4  | 1932.1  | 1771.1  | 1046.6  | 465.8   | 235.8   | 161.0  |
| 17.5° | 3576.7  | 3576.7  | 3519.2  | 3364.0  | 3059.2  | 2679.7  | 2547.4  | 1690.6  | 753.3   | 270.3   | 166.8  |
| 20°   | 4209.3  | 4209.3  | 4105.8  | 3996.5  | 3726.2  | 3404.2  | 3277.7  | 2403.6  | 1167.3  | 345.0   | 166.8  |
| 22.5° | 4974.1  | 4985.6  | 4870.6  | 4675.0  | 4416.3  | 4059.8  | 3950.5  | 3064.9  | 1690.6  | 460.0   | 172.5  |
| 25°   | 5905.6  | 5917.1  | 5750.4  | 5566.3  | 5169.6  | 4784.3  | 4617.5  | 3824.0  | 2328.9  | 644.0   | 172.5  |
| 27.5° | 6934.9  | 7015.4  | 6768.2  | 6451.9  | 6032.1  | 5549.1  | 5422.6  | 4508.3  | 2961.4  | 908.6   | 184.0  |
| 30°   | 8217.3  | 8217.3  | 7889.5  | 7446.7  | 6992.4  | 6394.4  | 6233.4  | 5227.1  | 3634.2  | 1259.3  | 195.5  |
| 32.5° | 9321.3  | 9235.1  | 8815.3  | 8349.5  | 7866.5  | 7308.7  | 7136.2  | 5980.4  | 4324.3  | 1696.4  | 218.5  |
| 35°   | 10166.6 | 10091.9 | 9574.3  | 9074.1  | 8654.3  | 8142.5  | 7935.5  | 6796.9  | 5054.6  | 2190.9  | 253.0  |
| 37.5° | 10891.2 | 10862.4 | 10160.9 | 9534.1  | 9258.1  | 8809.5  | 8625.5  | 7567.5  | 5773.4  | 2725.7  | 293.3  |
| 40°   | 11684.7 | 11592.7 | 10845.2 | 10068.9 | 9654.9  | 9292.6  | 9125.8  | 8188.5  | 6463.4  | 3352.5  | 350.8  |
| 42.5° | 12363.3 | 12254.0 | 11581.2 | 10822.2 | 10114.9 | 9626.1  | 9465.1  | 8711.8  | 7136.2  | 3979.2  | 425.5  |
| 45°   | 13116.6 | 13059.1 | 12380.5 | 11805.5 | 10862.4 | 10080.4 | 9867.6  | 9131.6  | 7751.5  | 4726.8  | 523.3  |
| 47.5° | 14249.4 | 14145.9 | 13513.3 | 13041.8 | 11949.2 | 10770.4 | 10465.7 | 9562.8  | 8343.8  | 5462.8  | 672.8  |
| 50°   | 15566.2 | 15497.2 | 15123.4 | 14749.7 | 13662.9 | 11949.2 | 11587.0 | 10183.9 | 9005.1  | 6336.9  | 868.3  |
| 52.5° | 16641.5 | 16630.0 | 16676.0 | 16681.8 | 15859.5 | 13933.1 | 13392.6 | 11184.4 | 9764.1  | 7199.4  | 1144.3 |
| 55°   | 16618.5 | 16670.3 | 17176.3 | 17757.1 | 17820.4 | 16641.5 | 16118.3 | 12869.3 | 10753.2 | 8263.3  | 1529.6 |
| 57.5° | 15997.5 | 15957.2 | 16492.0 | 17366.1 | 17981.4 | 18107.9 | 18021.6 | 15485.7 | 12242.5 | 9545.6  | 2121.9 |
| 58°   | 15796.2 | 15761.7 | 16267.8 | 17159.1 | 17866.4 | 18205.6 | 18119.4 | 16078.0 | 12576.0 | 9729.6  | 2282.9 |
| 60°   | 15065.9 | 15071.7 | 15370.7 | 16181.5 | 16888.8 | 17693.9 | 17774.4 | 17768.6 | 14237.9 | 10960.2 | 3093.7 |
| 62.5° | 14099.9 | 14053.9 | 14329.9 | 14991.2 | 15612.2 | 16152.8 | 16290.8 | 17883.6 | 16670.3 | 12524.3 | 4640.5 |
| 65°   | 12765.8 | 12696.8 | 12990.1 | 13737.6 | 14404.6 | 14755.4 | 14761.2 | 16342.5 | 17814.6 | 14203.4 | 6848.7 |
| 67.5° | 10287.4 | 10229.9 | 10816.4 | 11776.7 | 12806.0 | 13266.1 | 13473.1 | 14180.4 | 16848.6 | 15342.0 | 8113.8 |
| 70°   | 6302.4  | 6423.2  | 7239.7  | 8746.3  | 10505.9 | 11351.2 | 11661.7 | 11880.2 | 14347.1 | 15169.4 | 6785.4 |
| 72.5° | 2909.7  | 2765.9  | 3461.7  | 4514.0  | 6520.9  | 8401.3  | 8723.3  | 9580.1  | 11374.2 | 13168.3 | 5060.3 |
| 75°   | 1357.1  | 1305.3  | 1466.3  | 1972.4  | 2955.7  | 4537.0  | 5123.6  | 7648.0  | 8723.3  | 9160.3  | 3651.5 |
| 77.5° | 695.8   | 701.5   | 833.8   | 897.1   | 1219.1  | 2098.9  | 2409.4  | 5031.6  | 6394.4  | 5112.1  | 2449.7 |
| 80°   | 304.8   | 316.3   | 322.0   | 350.8   | 494.5   | 810.8   | 914.3   | 2334.6  | 4370.3  | 2604.9  | 1339.8 |
| 82.5° | 195.5   | 201.3   | 201.3   | 201.3   | 235.8   | 322.0   | 368.0   | 937.3   | 2179.4  | 1293.8  | 414.0  |
| 85°   | 103.5   | 103.5   | 115.0   | 143.8   | 166.8   | 195.5   | 207.0   | 299.0   | 718.8   | 385.3   | 97.8   |
| 87.5° | 57.5    | 63.3    | 69.0    | 86.3    | 109.3   | 132.3   | 143.8   | 207.0   | 276.0   | 264.5   | 23.0   |
| 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: P1062813

CATALOG NUMBER: GLAN-SA6A-735-U-T3BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 143.8  | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 | 143.8 |
| 2.5°  | 149.5  | 143.8 | 138.0 | 132.3 | 126.5 | 120.8 | 120.8 | 120.8 | 120.8 | 120.8 | 120.8 |
| 5°    | 143.8  | 138.0 | 132.3 | 120.8 | 109.3 | 103.5 | 97.8  | 92.0  | 92.0  | 92.0  | 92.0  |
| 7.5°  | 143.8  | 138.0 | 120.8 | 109.3 | 97.8  | 86.3  | 74.8  | 74.8  | 74.8  | 74.8  | 74.8  |
| 10°   | 143.8  | 132.3 | 115.0 | 97.8  | 80.5  | 69.0  | 63.3  | 57.5  | 57.5  | 57.5  | 57.5  |
| 12.5° | 143.8  | 126.5 | 109.3 | 86.3  | 69.0  | 57.5  | 51.8  | 46.0  | 46.0  | 46.0  | 46.0  |
| 15°   | 143.8  | 126.5 | 103.5 | 80.5  | 63.3  | 46.0  | 40.3  | 34.5  | 34.5  | 34.5  | 34.5  |
| 17.5° | 138.0  | 120.8 | 97.8  | 69.0  | 51.8  | 34.5  | 28.8  | 23.0  | 23.0  | 28.8  | 28.8  |
| 20°   | 132.3  | 115.0 | 86.3  | 57.5  | 40.3  | 28.8  | 17.3  | 17.3  | 17.3  | 17.3  | 17.3  |
| 22.5° | 132.3  | 115.0 | 80.5  | 51.8  | 34.5  | 17.3  | 11.5  | 11.5  | 11.5  | 11.5  | 17.3  |
| 25°   | 132.3  | 109.3 | 69.0  | 40.3  | 23.0  | 11.5  | 5.8   | 5.8   | 5.8   | 5.8   | 5.8   |
| 27.5° | 132.3  | 109.3 | 63.3  | 34.5  | 17.3  | 11.5  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   |
| 30°   | 126.5  | 103.5 | 57.5  | 28.8  | 11.5  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 32.5° | 126.5  | 97.8  | 46.0  | 23.0  | 11.5  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 35°   | 132.3  | 92.0  | 40.3  | 17.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 5.8   |
| 37.5° | 138.0  | 86.3  | 34.5  | 11.5  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 40°   | 143.8  | 80.5  | 34.5  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 42.5° | 155.3  | 80.5  | 28.8  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 45°   | 166.8  | 80.5  | 23.0  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 47.5° | 189.8  | 86.3  | 23.0  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 50°   | 207.0  | 92.0  | 17.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 52.5° | 230.0  | 86.3  | 17.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 55°   | 258.8  | 86.3  | 17.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 57.5° | 281.8  | 80.5  | 17.3  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 58°   | 293.3  | 74.8  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 60°   | 350.8  | 69.0  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 62.5° | 546.3  | 57.5  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 65°   | 1109.8 | 51.8  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 2070.1 | 46.0  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 2317.4 | 51.8  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 1460.6 | 40.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 770.5  | 40.3  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 385.3  | 40.3  | 5.8   | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 178.3  | 28.8  | 5.8   | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 74.8   | 17.3  | 11.5  | 5.8   | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 34.5   | 17.3  | 11.5  | 11.5  | 5.8   | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 17.3   | 17.3  | 17.3  | 11.5  | 11.5  | 5.8   | 5.8   | 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   |

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

McGraw-Edison

Report Number: SP1-2407-184-5

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-735-U-5WQ

Data in this report applies to families of products including GSS-SB1A-735-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-5  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-735-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3500K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 3369     | CRI (Ra): | 70.1 |      |       |
| CIE u':                   | 0.2386   | R1:       | 66.6 | R9:  | -40.2 |
| CIE v':                   | 0.5156   | R2:       | 77.6 | R10: | 49.1  |
| Duv:                      | 0.0013   | R3:       | 88.5 | R11: | 66.3  |
| CIE x:                    | 0.4143   | R4:       | 69.5 | R12: | 45.7  |
| CIE y:                    | 0.3980   | R5:       | 66.4 | R13: | 68.0  |
| CIE z:                    | 0.1877   | R6:       | 69.6 | R14: | 93.4  |
| Peak Wavelength (nm):     | 590      | R7:       | 77.5 | R15: | 57.6  |
| Dominant Wavelength (nm): | 580      | R8:       | 44.9 |      |       |
| Purity:                   | 43.80166 |           |      |      |       |
| Rf:                       | 71.4     |           |      |      |       |
| Rg:                       | 96       |           |      |      |       |



### Test Conditions

Stabilization Time: 21M  
 Operation Time: 1H 21M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-5

| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | IN0058                | 6/18/2024        | 12/18/2024           |
| Power Meter                    | INXT2011004           | 2/8/2024         | 2/8/2025             |
| AC Power Source                | IN0063                | 10/24/2023       | 10/24/2024           |
| DC Power Source                | IN0208                | 10/24/2023       | 10/24/2024           |
| Sphere Thermometer             | IN0085                | 10/24/2023       | 10/24/2024           |
| Room Thermometer               | IN0046                | 10/24/2023       | 10/24/2024           |

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**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 3500K 4-step quadrangle

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### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 119                                  | NR                             | 620               | 778                                  | NR                             | 750               | 19                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 173                                  | NR                             | 625               | 711                                  | NR                             | 755               | 16                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 239                                  | NR                             | 630               | 648                                  | NR                             | 760               | 14                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 313                                  | NR                             | 635               | 582                                  | NR                             | 765               | 12                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 383                                  | NR                             | 640               | 520                                  | NR                             | 770               | 11                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 448                                  | NR                             | 645               | 460                                  | NR                             | 775               | 9                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 500                                  | NR                             | 650               | 406                                  | NR                             | 780               | 8                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 539                                  | NR                             | 655               | 355                                  | NR                             | 785               | 7                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 575                                  | NR                             | 660               | 309                                  | NR                             | 790               | 6                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 606                                  | NR                             | 665               | 269                                  | NR                             | 795               | 5                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 22                                   | NR                             | 540               | 633                                  | NR                             | 670               | 231                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 45                                   | NR                             | 545               | 666                                  | NR                             | 675               | 199                                  | NR                             | 805               | 4                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 96                                   | NR                             | 550               | 701                                  | NR                             | 680               | 171                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 193                                  | NR                             | 555               | 743                                  | NR                             | 685               | 147                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 341                                  | NR                             | 560               | 788                                  | NR                             | 690               | 126                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 547                                  | NR                             | 565               | 837                                  | NR                             | 695               | 107                                  | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 799                                  | NR                             | 570               | 887                                  | NR                             | 700               | 92                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 831                                  | NR                             | 575               | 931                                  | NR                             | 705               | 78                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 461                                  | NR                             | 580               | 967                                  | NR                             | 710               | 67                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 256                                  | NR                             | 585               | 990                                  | NR                             | 715               | 57                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 176                                  | NR                             | 590               | 1000                                 | NR                             | 720               | 49                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 107                                  | NR                             | 595               | 994                                  | NR                             | 725               | 42                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 74                                   | NR                             | 600               | 973                                  | NR                             | 730               | 36                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 67                                   | NR                             | 605               | 938                                  | NR                             | 735               | 31                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 68                                   | NR                             | 610               | 892                                  | NR                             | 740               | 26                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 84                                   | NR                             | 615               | 838                                  | NR                             | 745               | 22                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.29

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(Φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 119                         | NR               | 620       | 778                         | NR               | 750       | 19                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 173                         | NR               | 625       | 711                         | NR               | 755       | 16                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 239                         | NR               | 630       | 648                         | NR               | 760       | 14                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 313                         | NR               | 635       | 582                         | NR               | 765       | 12                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 383                         | NR               | 640       | 520                         | NR               | 770       | 11                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 448                         | NR               | 645       | 460                         | NR               | 775       | 9                           | NR               | 905       | 0                           | NR               |
| 390       | 2                           | NR               | 520       | 500                         | NR               | 650       | 406                         | NR               | 780       | 8                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 539                         | NR               | 655       | 355                         | NR               | 785       | 7                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 575                         | NR               | 660       | 309                         | NR               | 790       | 6                           | NR               | 920       | 0                           | NR               |
| 405       | 11                          | NR               | 535       | 606                         | NR               | 665       | 269                         | NR               | 795       | 5                           | NR               | 925       | 0                           | NR               |
| 410       | 22                          | NR               | 540       | 633                         | NR               | 670       | 231                         | NR               | 800       | 4                           | NR               | 930       | 0                           | NR               |
| 415       | 45                          | NR               | 545       | 666                         | NR               | 675       | 199                         | NR               | 805       | 4                           | NR               | 935       | 0                           | NR               |
| 420       | 96                          | NR               | 550       | 701                         | NR               | 680       | 171                         | NR               | 810       | 3                           | NR               | 940       | 0                           | NR               |
| 425       | 193                         | NR               | 555       | 743                         | NR               | 685       | 147                         | NR               | 815       | 3                           | NR               | 945       | 0                           | NR               |
| 430       | 341                         | NR               | 560       | 788                         | NR               | 690       | 126                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 547                         | NR               | 565       | 837                         | NR               | 695       | 107                         | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 799                         | NR               | 570       | 887                         | NR               | 700       | 92                          | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 831                         | NR               | 575       | 931                         | NR               | 705       | 78                          | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 461                         | NR               | 580       | 967                         | NR               | 710       | 67                          | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 256                         | NR               | 585       | 990                         | NR               | 715       | 57                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 176                         | NR               | 590       | 1000                        | NR               | 720       | 49                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 107                         | NR               | 595       | 994                         | NR               | 725       | 42                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 74                          | NR               | 600       | 973                         | NR               | 730       | 36                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 67                          | NR               | 605       | 938                         | NR               | 735       | 31                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 68                          | NR               | 610       | 892                         | NR               | 740       | 26                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 84                          | NR               | 615       | 838                         | NR               | 745       | 22                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.36**

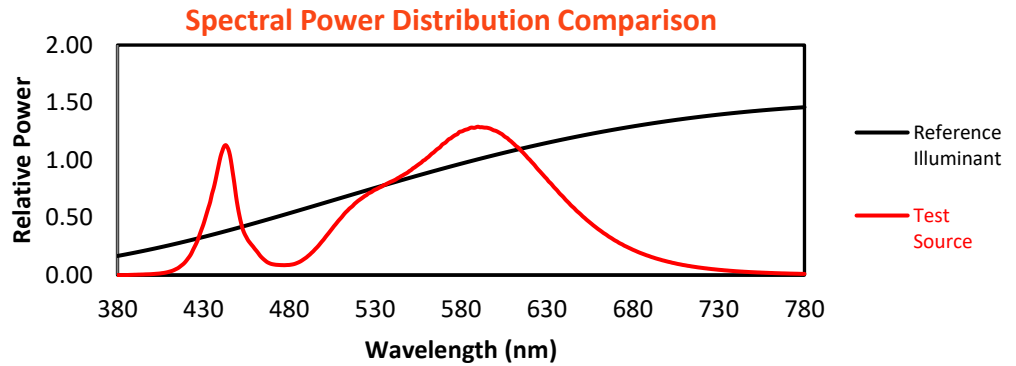
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 119                                  | NR                             | 620               | 778                                  | NR                             | 750               | 19                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 173                                  | NR                             | 625               | 711                                  | NR                             | 755               | 16                                   | NR                             | 885               | 0                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 239                                  | NR                             | 630               | 648                                  | NR                             | 760               | 14                                   | NR                             | 890               | 0                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 313                                  | NR                             | 635               | 582                                  | NR                             | 765               | 12                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 383                                  | NR                             | 640               | 520                                  | NR                             | 770               | 11                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 448                                  | NR                             | 645               | 460                                  | NR                             | 775               | 9                                    | NR                             | 905               | 0                                    | NR                             |
| 390               | 2                                    | NR                             | 520               | 500                                  | NR                             | 650               | 406                                  | NR                             | 780               | 8                                    | NR                             | 910               | 0                                    | NR                             |
| 395               | 4                                    | NR                             | 525               | 539                                  | NR                             | 655               | 355                                  | NR                             | 785               | 7                                    | NR                             | 915               | 0                                    | NR                             |
| 400               | 6                                    | NR                             | 530               | 575                                  | NR                             | 660               | 309                                  | NR                             | 790               | 6                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 11                                   | NR                             | 535               | 606                                  | NR                             | 665               | 269                                  | NR                             | 795               | 5                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 22                                   | NR                             | 540               | 633                                  | NR                             | 670               | 231                                  | NR                             | 800               | 4                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 45                                   | NR                             | 545               | 666                                  | NR                             | 675               | 199                                  | NR                             | 805               | 4                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 96                                   | NR                             | 550               | 701                                  | NR                             | 680               | 171                                  | NR                             | 810               | 3                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 193                                  | NR                             | 555               | 743                                  | NR                             | 685               | 147                                  | NR                             | 815               | 3                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 341                                  | NR                             | 560               | 788                                  | NR                             | 690               | 126                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 547                                  | NR                             | 565               | 837                                  | NR                             | 695               | 107                                  | NR                             | 825               | 2                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 799                                  | NR                             | 570               | 887                                  | NR                             | 700               | 92                                   | NR                             | 830               | 2                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 831                                  | NR                             | 575               | 931                                  | NR                             | 705               | 78                                   | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 461                                  | NR                             | 580               | 967                                  | NR                             | 710               | 67                                   | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 256                                  | NR                             | 585               | 990                                  | NR                             | 715               | 57                                   | NR                             | 845               | 1                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 176                                  | NR                             | 590               | 1000                                 | NR                             | 720               | 49                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 107                                  | NR                             | 595               | 994                                  | NR                             | 725               | 42                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 74                                   | NR                             | 600               | 973                                  | NR                             | 730               | 36                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 67                                   | NR                             | 605               | 938                                  | NR                             | 735               | 31                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 68                                   | NR                             | 610               | 892                                  | NR                             | 740               | 26                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 84                                   | NR                             | 615               | 838                                  | NR                             | 745               | 22                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

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TM-30-18

### Summary

$R_f = 71.4$   
 $R_g = 96$   
 CIE  $R_a = 70.1$   
 $R_g = -40.2$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 57 | CES51 = 84 | CES76 = 50 |
| CES02 = 62 | CES27 = 80 | CES52 = 86 | CES77 = 74 |
| CES03 = 31 | CES28 = 81 | CES53 = 72 | CES78 = 54 |
| CES04 = 70 | CES29 = 50 | CES54 = 79 | CES79 = 81 |
| CES05 = 48 | CES30 = 55 | CES55 = 78 | CES80 = 79 |
| CES06 = 51 | CES31 = 56 | CES56 = 67 | CES81 = 74 |
| CES07 = 40 | CES32 = 54 | CES57 = 65 | CES82 = 91 |
| CES08 = 39 | CES33 = 60 | CES58 = 68 | CES83 = 86 |
| CES09 = 29 | CES34 = 69 | CES59 = 85 | CES84 = 89 |
| CES10 = 75 | CES35 = 83 | CES60 = 91 | CES85 = 83 |
| CES11 = 58 | CES36 = 88 | CES61 = 85 | CES86 = 66 |
| CES12 = 64 | CES37 = 78 | CES62 = 78 | CES87 = 77 |
| CES13 = 43 | CES38 = 64 | CES63 = 71 | CES88 = 75 |
| CES14 = 74 | CES39 = 92 | CES64 = 70 | CES89 = 68 |
| CES15 = 71 | CES40 = 86 | CES65 = 64 | CES90 = 72 |
| CES16 = 47 | CES41 = 81 | CES66 = 65 | CES91 = 95 |
| CES17 = 50 | CES42 = 79 | CES67 = 63 | CES92 = 62 |
| CES18 = 56 | CES43 = 71 | CES68 = 69 | CES93 = 78 |
| CES19 = 72 | CES44 = 98 | CES69 = 80 | CES94 = 51 |
| CES20 = 65 | CES45 = 80 | CES70 = 60 | CES95 = 70 |
| CES21 = 87 | CES46 = 75 | CES71 = 58 | CES96 = 76 |
| CES22 = 79 | CES47 = 71 | CES72 = 85 | CES97 = 82 |
| CES23 = 92 | CES48 = 61 | CES73 = 51 | CES98 = 72 |
| CES24 = 91 | CES49 = 74 | CES74 = 94 | CES99 = 60 |
| CES25 = 72 | CES50 = 83 | CES75 = 57 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)