

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: P1063425

Luminaire Tested: **GLAN-SA6A-735-U-T2BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1063425  
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-T2BC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 615mA 6xLight Square PACKAGE  
70CRI 3500K FIXTURE w/ TYPE II ANGLED BACKLIGHT CONTROL  
Light Source: (84) 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20922.6 lumens  
Efficiency: N/A  
Efficacy: 128.4 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B0 - U0 - G3

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



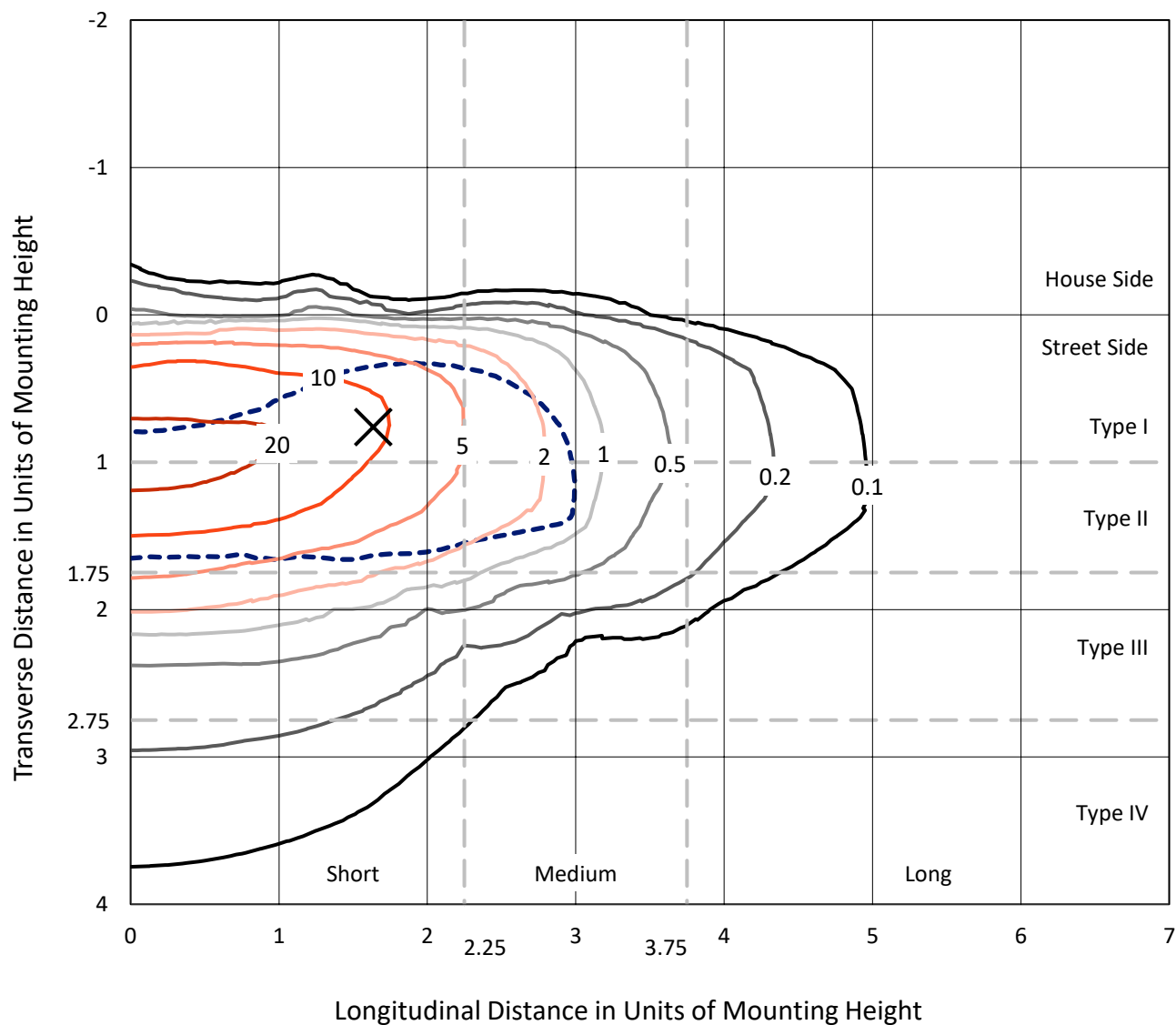
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## Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

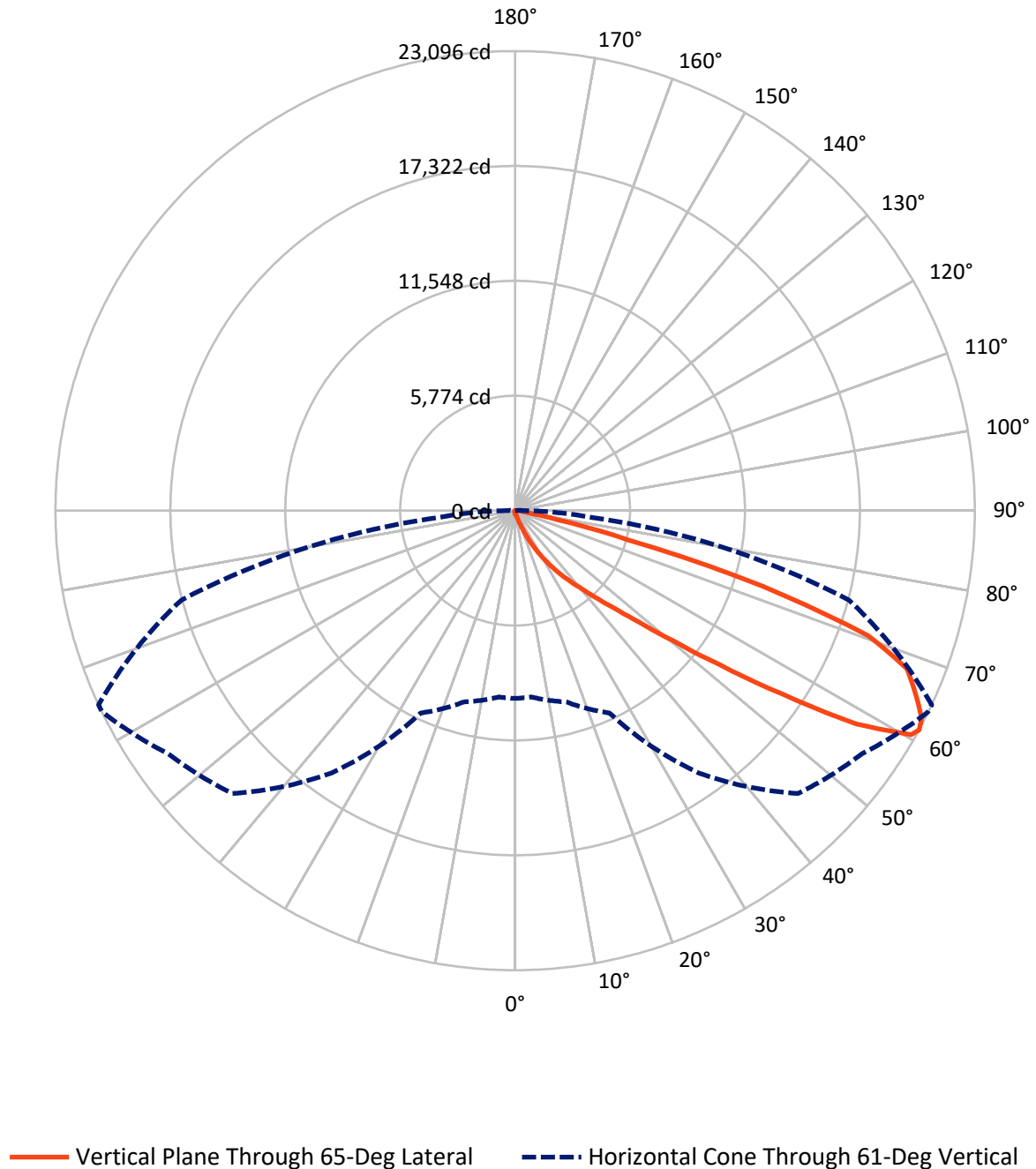


Based on 15 foot mounting height. Maximum calculated value = 27.7 fc  
 Type II - Short - N/A

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## Luminous Intensity Polar Plot



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CATALOG NUMBER: GLAN-SA6A-735-U-T2BC

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 89.3     | 0.0    | 89.3    |
|                    | % Fixture | 0.4      | 0.0    | 0.4     |
| <b>Street Side</b> | Lumens    | 20833.3  | 0.0    | 20833.3 |
|                    | % Fixture | 99.6     | 0.0    | 99.6    |
| <b>Total</b>       | Lumens    | 20922.6  | 0.0    | 20922.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 16.3    | 0.1       |
| 10°-20°   | 172.0   | 0.8       |
| 20°-30°   | 617.5   | 3.0       |
| 30°-40°   | 1643.9  | 7.9       |
| 40°-50°   | 4318.5  | 20.6      |
| 50°-60°   | 6690.2  | 32.0      |
| 60°-70°   | 5609.7  | 26.8      |
| 70°-80°   | 1650.8  | 7.9       |
| 80°-90°   | 203.6   | 1.0       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-90°    | 20922.6 | 100.0     |
| 0°-180°   | 20922.6 | 100.0     |



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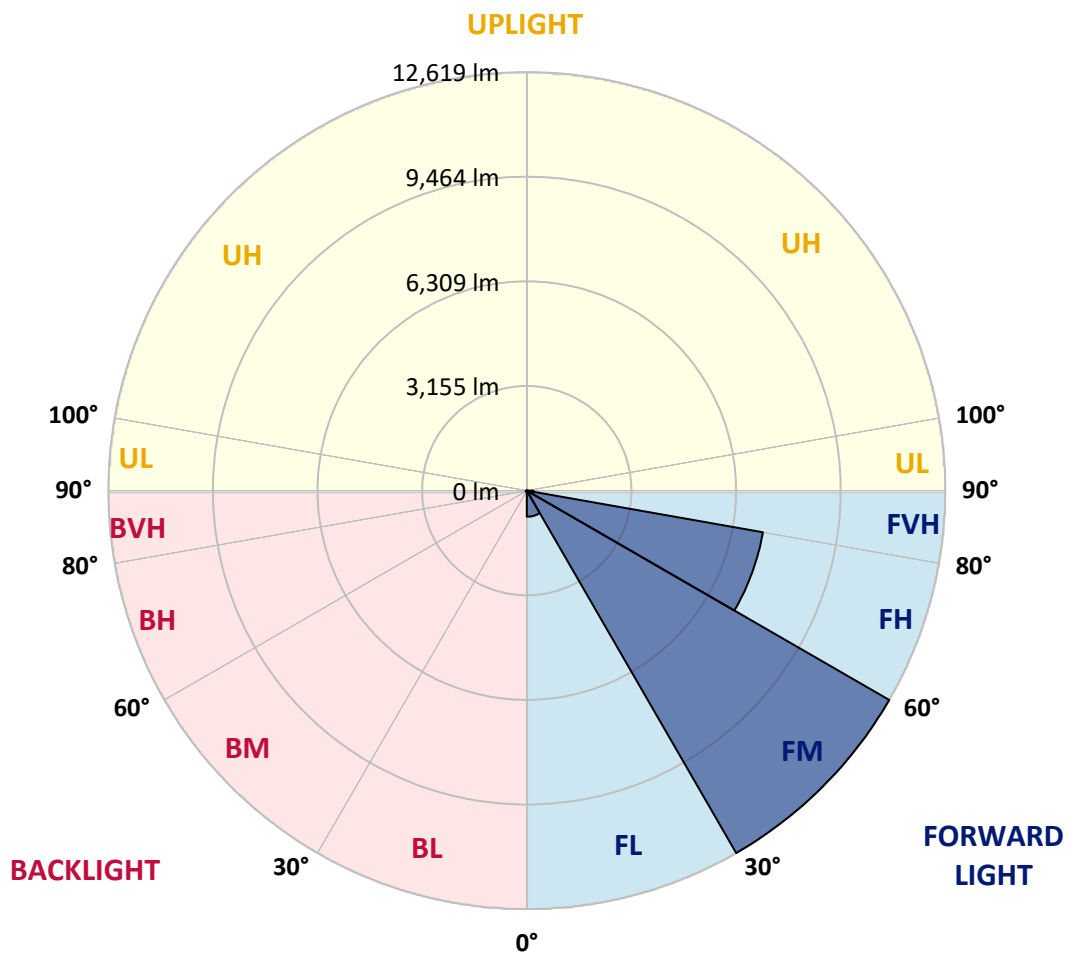
CATALOG NUMBER: GLAN-SA6A-735-U-T2BC

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 785.8   | 3.8       |                         |      |         |
| FM   | (30°-60°)   | 12618.7 | 60.3      |                         |      |         |
| FH   | (60°-80°)   | 7229.0  | 34.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 199.9   | 1.0       |                         |      | G2/225  |
| BL   | (0°-30°)    | 20.0    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 34.0    | 0.2       | B0/220                  |      |         |
| BH   | (60°-80°)   | 31.5    | 0.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 3.8     | 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-G3**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 64°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1   | 128.1  |
| 2.5°  | 155.4   | 156.9   | 154.0   | 148.2   | 143.9   | 143.9   | 142.5   | 138.2   | 138.2   | 133.9   | 131.0  |
| 5°    | 217.3   | 214.4   | 208.7   | 197.2   | 187.1   | 177.0   | 167.0   | 156.9   | 155.4   | 142.5   | 133.9  |
| 7.5°  | 355.5   | 358.4   | 339.7   | 303.7   | 273.5   | 234.6   | 198.6   | 177.0   | 174.1   | 152.6   | 135.3  |
| 10°   | 780.1   | 758.5   | 715.3   | 575.7   | 473.5   | 356.9   | 264.8   | 205.8   | 202.9   | 164.1   | 138.2  |
| 12.5° | 1422.0  | 1404.7  | 1325.5  | 1181.6  | 918.2   | 639.0   | 387.2   | 254.7   | 246.1   | 174.1   | 139.6  |
| 15°   | 2049.5  | 2022.1  | 1979.0  | 1833.6  | 1525.6  | 1145.6  | 633.3   | 348.3   | 325.3   | 188.5   | 138.2  |
| 17.5° | 2449.6  | 2453.9  | 2415.1  | 2353.2  | 2154.6  | 1695.4  | 1093.8  | 519.6   | 475.0   | 214.4   | 135.3  |
| 20°   | 2799.3  | 2789.3  | 2810.9  | 2777.7  | 2638.1  | 2304.2  | 1591.8  | 823.2   | 747.0   | 256.2   | 136.7  |
| 22.5° | 3202.3  | 3226.8  | 3242.6  | 3235.4  | 3081.4  | 2796.5  | 2157.4  | 1232.0  | 1135.6  | 332.5   | 141.0  |
| 25°   | 3742.0  | 3739.2  | 3740.6  | 3721.9  | 3572.2  | 3255.6  | 2724.5  | 1740.1  | 1642.2  | 456.2   | 151.1  |
| 27.5° | 4307.7  | 4324.9  | 4332.1  | 4264.5  | 4068.8  | 3757.9  | 3249.8  | 2295.6  | 2180.5  | 654.9   | 164.1  |
| 30°   | 5080.5  | 5066.2  | 5033.1  | 4894.9  | 4657.4  | 4271.7  | 3768.0  | 2878.5  | 2757.6  | 932.6   | 184.2  |
| 32.5° | 6122.6  | 6106.7  | 5939.8  | 5634.7  | 5279.2  | 4807.1  | 4289.0  | 3462.8  | 3316.0  | 1279.5  | 211.6  |
| 35°   | 7839.6  | 7864.1  | 7453.9  | 6663.7  | 6026.1  | 5450.4  | 4866.1  | 4044.3  | 3914.8  | 1706.9  | 249.0  |
| 37.5° | 10469.1 | 10335.2 | 9778.3  | 8382.2  | 7009.1  | 6253.5  | 5417.3  | 4631.5  | 4519.2  | 2233.7  | 297.9  |
| 40°   | 13023.8 | 12891.3 | 12730.1 | 11407.5 | 8717.5  | 7138.7  | 6188.8  | 5320.9  | 5175.5  | 2828.1  | 369.9  |
| 42.5° | 15709.4 | 15636.0 | 15628.8 | 14631.4 | 11834.9 | 8530.4  | 7117.1  | 6128.3  | 6004.5  | 3480.1  | 487.9  |
| 45°   | 17612.1 | 17538.7 | 17692.7 | 17866.8 | 16080.7 | 11512.5 | 8733.4  | 7177.5  | 6997.6  | 4271.7  | 676.4  |
| 47.5° | 17868.3 | 17871.1 | 18282.8 | 18828.2 | 19235.6 | 16125.3 | 10886.5 | 8567.8  | 8349.1  | 5404.4  | 993.1  |
| 50°   | 17016.2 | 17049.3 | 17704.2 | 18680.0 | 19776.7 | 19995.5 | 14683.2 | 10585.7 | 10261.8 | 6747.2  | 1442.1 |
| 52.5° | 15394.2 | 15431.6 | 16344.1 | 17948.9 | 19278.7 | 20925.2 | 19153.5 | 13225.3 | 12852.5 | 8422.5  | 2075.4 |
| 55°   | 13933.4 | 13956.4 | 15002.7 | 17030.6 | 18678.6 | 20420.1 | 21807.5 | 16750.0 | 16260.6 | 10483.5 | 2700.0 |
| 57.5° | 12486.9 | 12433.7 | 13114.4 | 15435.9 | 18576.4 | 19799.7 | 22199.0 | 20766.9 | 20227.2 | 12735.9 | 3186.5 |
| 60°   | 10552.6 | 10463.3 | 11010.2 | 12486.9 | 17232.1 | 20207.0 | 21466.4 | 22989.1 | 22866.8 | 15872.0 | 3562.1 |
| 61°   | 9440.0  | 9402.6  | 9952.4  | 11218.9 | 16100.9 | 20103.4 | 21290.8 | 23082.7 | 23095.6 | 17355.9 | 3730.5 |
| 62.5° | 6741.4  | 6847.9  | 7688.5  | 9335.0  | 13485.8 | 19431.3 | 21313.8 | 22793.4 | 22921.5 | 19327.7 | 4166.6 |
| 65°   | 2996.5  | 3167.8  | 3821.2  | 5161.1  | 7842.5  | 16164.2 | 21109.5 | 22158.7 | 22095.3 | 19868.8 | 5669.2 |
| 67.5° | 1777.5  | 1803.4  | 2128.6  | 2924.6  | 4153.7  | 8694.5  | 18628.2 | 21319.6 | 21234.7 | 17296.9 | 7053.8 |
| 70°   | 1400.4  | 1413.3  | 1517.0  | 1835.0  | 2410.7  | 3330.4  | 10631.7 | 18445.4 | 18815.3 | 14025.5 | 6905.5 |
| 72.5° | 1328.4  | 1325.5  | 1339.9  | 1396.1  | 1518.4  | 1652.3  | 4116.2  | 12261.0 | 13013.7 | 10100.6 | 5790.1 |
| 75°   | 1311.2  | 1305.4  | 1291.0  | 1269.4  | 1099.6  | 972.9   | 1275.2  | 5423.1  | 5859.2  | 6901.2  | 4359.5 |
| 77.5° | 1272.3  | 1273.7  | 1276.6  | 1217.6  | 942.7   | 688.0   | 617.4   | 1740.1  | 2140.2  | 4379.6  | 3098.7 |
| 80°   | 860.7   | 873.6   | 895.2   | 872.2   | 847.7   | 498.0   | 436.1   | 618.9   | 627.5   | 2458.2  | 2046.6 |
| 82.5° | 436.1   | 436.1   | 426.0   | 380.0   | 328.1   | 323.8   | 346.9   | 449.0   | 454.8   | 1243.5  | 962.9  |
| 85°   | 263.4   | 277.8   | 283.5   | 257.6   | 236.0   | 217.3   | 264.8   | 356.9   | 369.9   | 482.1   | 224.5  |
| 87.5° | 59.0    | 60.4    | 66.2    | 87.8    | 128.1   | 174.1   | 246.1   | 326.7   | 332.5   | 309.4   | 27.3   |
| 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: P1063425

CATALOG NUMBER: GLAN-SA6A-735-U-T2BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 128.1  | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 | 128.1 |
| 2.5°  | 129.5  | 126.7 | 125.2 | 120.9 | 116.6 | 112.3 | 109.4 | 107.9 | 109.4 | 110.8 | 110.8 |
| 5°    | 128.1  | 123.8 | 116.6 | 109.4 | 103.6 | 97.9  | 92.1  | 90.7  | 90.7  | 92.1  | 92.1  |
| 7.5°  | 128.1  | 120.9 | 110.8 | 102.2 | 93.6  | 84.9  | 80.6  | 77.7  | 79.2  | 79.2  | 79.2  |
| 10°   | 128.1  | 119.5 | 106.5 | 93.6  | 83.5  | 73.4  | 66.2  | 63.3  | 63.3  | 63.3  | 63.3  |
| 12.5° | 126.7  | 118.0 | 102.2 | 86.4  | 72.0  | 60.4  | 51.8  | 47.5  | 48.9  | 48.9  | 48.9  |
| 15°   | 123.8  | 113.7 | 96.4  | 73.4  | 57.6  | 46.1  | 37.4  | 33.1  | 34.5  | 37.4  | 38.9  |
| 17.5° | 119.5  | 109.4 | 86.4  | 61.9  | 46.1  | 34.5  | 25.9  | 23.0  | 24.5  | 28.8  | 28.8  |
| 20°   | 118.0  | 105.1 | 76.3  | 50.4  | 34.5  | 24.5  | 17.3  | 14.4  | 15.8  | 21.6  | 23.0  |
| 22.5° | 118.0  | 102.2 | 69.1  | 41.7  | 25.9  | 15.8  | 10.1  | 5.8   | 5.8   | 10.1  | 10.1  |
| 25°   | 119.5  | 100.7 | 63.3  | 34.5  | 18.7  | 11.5  | 5.8   | 2.9   | 5.8   | 15.8  | 18.7  |
| 27.5° | 122.3  | 99.3  | 60.4  | 28.8  | 14.4  | 10.1  | 4.3   | 10.1  | 17.3  | 17.3  | 17.3  |
| 30°   | 125.2  | 96.4  | 56.1  | 24.5  | 13.0  | 7.2   | 7.2   | 14.4  | 14.4  | 17.3  | 18.7  |
| 32.5° | 129.5  | 95.0  | 53.3  | 21.6  | 10.1  | 5.8   | 10.1  | 8.6   | 8.6   | 10.1  | 11.5  |
| 35°   | 138.2  | 96.4  | 50.4  | 21.6  | 10.1  | 7.2   | 8.6   | 4.3   | 2.9   | 2.9   | 2.9   |
| 37.5° | 149.7  | 97.9  | 46.1  | 18.7  | 8.6   | 8.6   | 4.3   | 0.0   | 0.0   | 0.0   | 0.0   |
| 40°   | 168.4  | 102.2 | 43.2  | 17.3  | 7.2   | 7.2   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| 42.5° | 200.1  | 110.8 | 41.7  | 15.8  | 7.2   | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 45°   | 263.4  | 131.0 | 38.9  | 14.4  | 7.2   | 2.9   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 47.5° | 378.5  | 178.5 | 37.4  | 11.5  | 4.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 50°   | 552.7  | 241.8 | 36.0  | 10.1  | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 52.5° | 705.2  | 254.7 | 24.5  | 8.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 55°   | 722.5  | 175.6 | 18.7  | 5.8   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 57.5° | 575.7  | 113.7 | 15.8  | 4.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 60°   | 436.1  | 86.4  | 14.4  | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 61°   | 418.8  | 77.7  | 14.4  | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 62.5° | 462.0  | 67.6  | 13.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 65°   | 751.3  | 56.1  | 11.5  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 1305.4 | 48.9  | 10.1  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 1649.4 | 46.1  | 8.6   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 1437.8 | 41.7  | 8.6   | 2.9   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 865.0  | 36.0  | 8.6   | 5.8   | 2.9   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 77.5° | 453.4  | 27.3  | 8.6   | 7.2   | 4.3   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 80°   | 220.2  | 24.5  | 10.1  | 7.2   | 5.8   | 2.9   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 82.5° | 86.4   | 20.1  | 11.5  | 10.1  | 7.2   | 4.3   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| 85°   | 38.9   | 17.3  | 13.0  | 11.5  | 10.1  | 5.8   | 1.4   | 0.0   | 0.0   | 0.0   | 0.0   |
| 87.5° | 20.1   | 15.8  | 14.4  | 13.0  | 10.1  | 7.2   | 2.9   | 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

REPORT NUMBER: SP1-2407-184-5

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

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

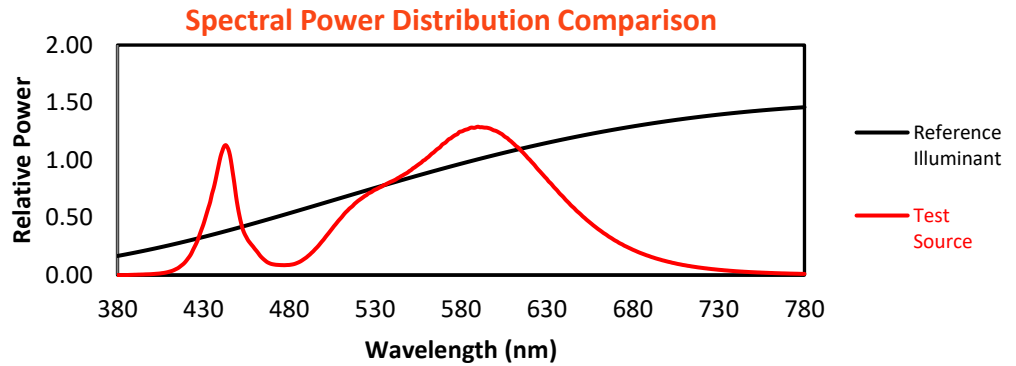
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<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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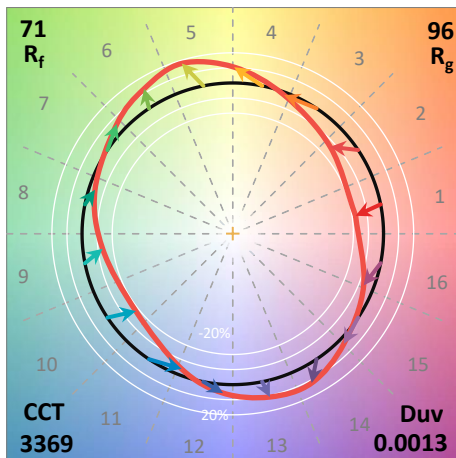
TM-30-18

### 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)