

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: LUMARK

Report Number: P1067943

Luminaire Tested: **NAV-SA1C-730-U-LBC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1067943  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SA1C-730-U-LBC  
Description: Navion AREA AND ROADWAY LUMINAIRE 1050mA 1xLight Square PACKAGE  
70CRI 3000K FIXTURE w/ LEFT CORNER BACKLIGHT CONTROL  
Light Source: (14) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4520.3 lumens  
Efficiency: N/A  
Efficacy: 90.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

Input Watts (W): 50.1  
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

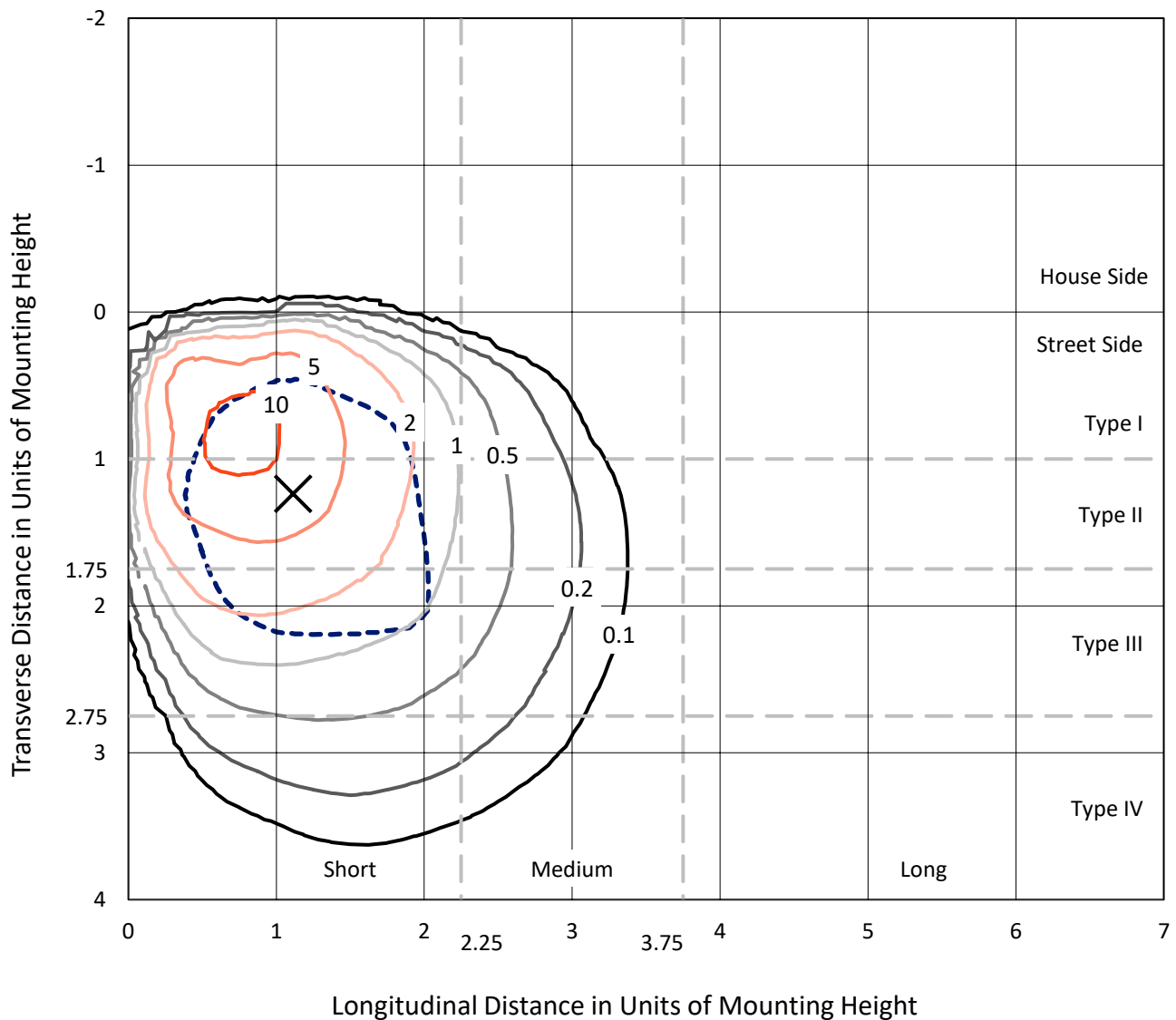


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
- - - 1/2 Max cd

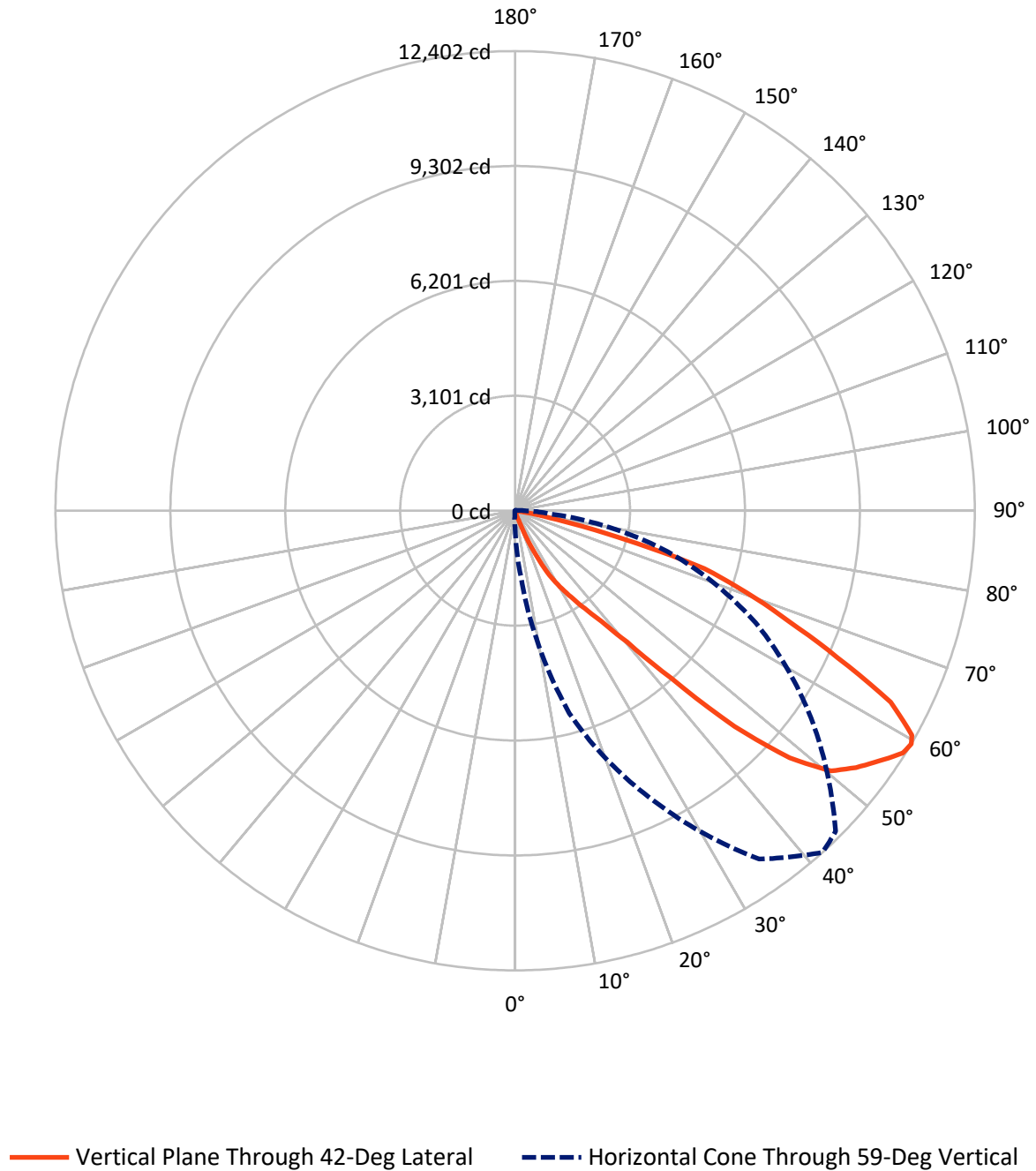


Based on 15 foot mounting height. Maximum calculated value = 13.4 fc  
Type III - Short - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 21.8     | 0.0    | 21.8   |
|                    | % Fixture | 0.5      | 0.0    | 0.5    |
| <b>Street Side</b> | Lumens    | 4498.5   | 0.0    | 4498.5 |
|                    | % Fixture | 99.5     | 0.0    | 99.5   |
| <b>Total</b>       | Lumens    | 4520.3   | 0.0    | 4520.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1.3    | 0.0       |
| 10°-20°   | 6.6    | 0.1       |
| 20°-30°   | 84.3   | 1.9       |
| 30°-40°   | 284.3  | 6.3       |
| 40°-50°   | 858.6  | 19.0      |
| 50°-60°   | 1515.7 | 33.5      |
| 60°-70°   | 1334.6 | 29.5      |
| 70°-80°   | 424.8  | 9.4       |
| 80°-90°   | 10.2   | 0.2       |
| 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°    | 4520.3 | 100.0     |
| 0°-180°   | 4520.3 | 100.0     |



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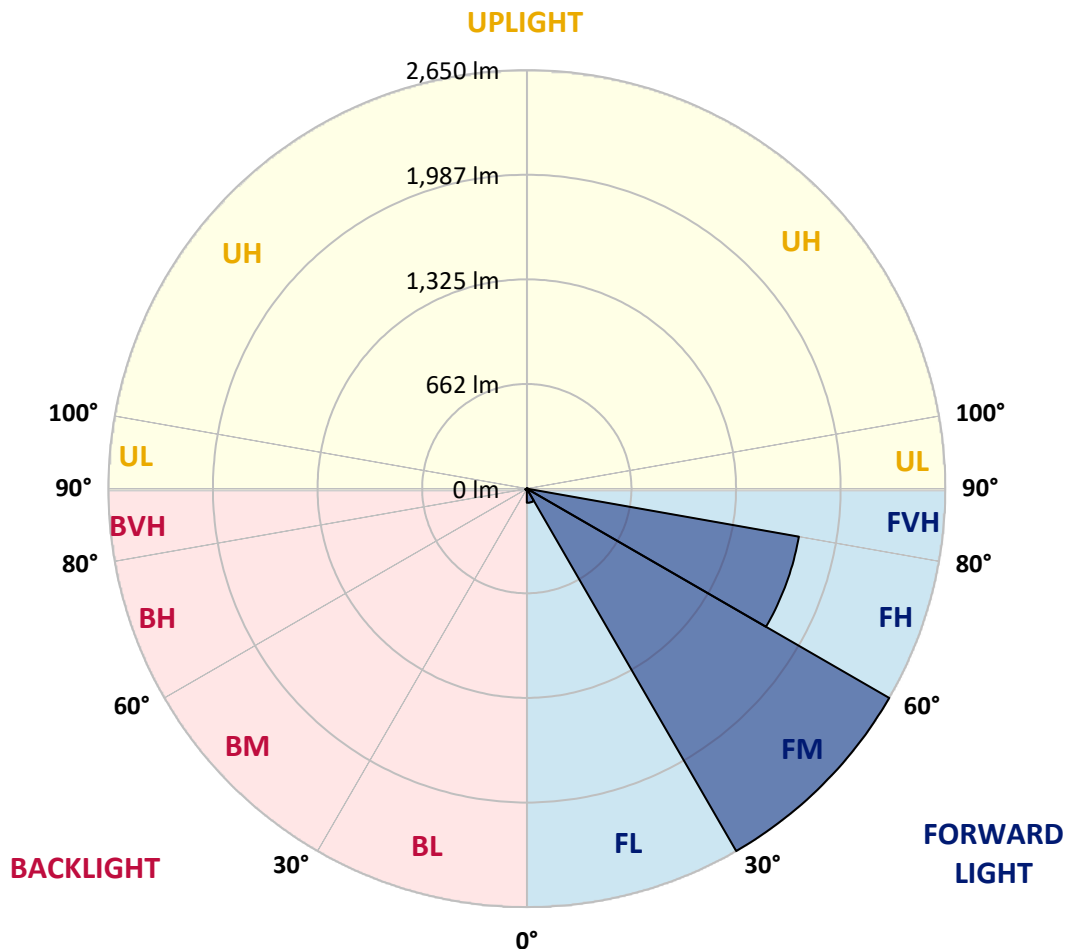
CATALOG NUMBER: NAV-SA1C-730-U-LBC

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 89.8   | 2.0       |                         |      |         |
| FM   | (30°-60°)   | 2649.6 | 58.6      |                         |      |         |
| FH   | (60°-80°)   | 1749.4 | 38.7      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 9.7    | 0.2       |                         |      | G0/10   |
| BL   | (0°-30°)    | 2.4    | 0.1       | B0/110                  |      |         |
| BM   | (30°-60°)   | 8.9    | 0.2       | B0/220                  |      |         |
| BH   | (60°-80°)   | 10.0   | 0.2       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.5    | 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-G1**

Type III Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°     | 15°    | 25°    | 35°     | 42°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|-------|--------|--------|--------|---------|---------|---------|--------|--------|--------|--------|
| 0°    | 12.8  | 12.8   | 12.8   | 12.8   | 12.8    | 12.8    | 12.8    | 12.8   | 12.8   | 12.8   | 12.8   |
| 2.5°  | 19.8  | 19.8   | 18.4   | 17.0   | 15.6    | 14.2    | 14.2    | 14.2   | 12.8   | 12.8   | 11.3   |
| 5°    | 22.7  | 22.7   | 21.3   | 19.8   | 19.8    | 18.4    | 18.4    | 17.0   | 15.6   | 15.6   | 14.2   |
| 7.5°  | 24.1  | 24.1   | 24.1   | 24.1   | 22.7    | 22.7    | 22.7    | 21.3   | 19.8   | 18.4   | 17.0   |
| 10°   | 25.5  | 26.9   | 28.3   | 28.3   | 28.3    | 28.3    | 28.3    | 26.9   | 24.1   | 22.7   | 19.8   |
| 12.5° | 28.3  | 29.8   | 32.6   | 35.4   | 35.4    | 36.8    | 35.4    | 34.0   | 31.2   | 26.9   | 22.7   |
| 15°   | 31.2  | 34.0   | 38.3   | 43.9   | 49.6    | 51.0    | 51.0    | 46.8   | 41.1   | 32.6   | 26.9   |
| 17.5° | 35.4  | 39.7   | 51.0   | 69.4   | 89.3    | 104.9   | 104.9   | 93.5   | 65.2   | 42.5   | 31.2   |
| 20°   | 38.3  | 46.8   | 82.2   | 167.2  | 255.1   | 320.3   | 307.5   | 272.1  | 146.0  | 66.6   | 34.0   |
| 22.5° | 42.5  | 59.5   | 174.3  | 439.3  | 680.3   | 799.3   | 771.0   | 585.3  | 327.4  | 119.0  | 41.1   |
| 25°   | 48.2  | 86.5   | 345.8  | 823.4  | 1264.2  | 1393.2  | 1374.7  | 1092.7 | 596.7  | 199.8  | 52.4   |
| 27.5° | 59.5  | 127.6  | 554.1  | 1248.6 | 1865.1  | 1975.7  | 1968.6  | 1600.1 | 953.8  | 321.7  | 68.0   |
| 30°   | 75.1  | 185.7  | 822.0  | 1696.5 | 2263.4  | 2375.3  | 2339.9  | 1971.4 | 1286.9 | 491.8  | 87.9   |
| 32.5° | 93.5  | 259.4  | 1064.4 | 2026.7 | 2630.4  | 2777.8  | 2735.3  | 2294.5 | 1554.7 | 636.3  | 130.4  |
| 35°   | 121.9 | 331.6  | 1303.9 | 2318.6 | 3054.2  | 3241.3  | 3170.4  | 2627.6 | 1785.7 | 799.3  | 157.3  |
| 37.5° | 136.1 | 374.2  | 1523.5 | 2636.1 | 3530.4  | 3785.5  | 3731.6  | 3048.5 | 2021.0 | 1007.7 | 192.7  |
| 40°   | 137.5 | 425.2  | 1751.7 | 3049.9 | 4203.6  | 4658.5  | 4562.1  | 3771.3 | 2458.9 | 1275.5 | 248.0  |
| 42.5° | 141.7 | 501.7  | 2047.9 | 3755.7 | 5525.9  | 6179.2  | 6070.1  | 5100.7 | 3452.4 | 1812.7 | 351.5  |
| 45°   | 161.6 | 646.3  | 2651.7 | 5075.2 | 7341.4  | 8299.4  | 8173.3  | 6953.1 | 4839.9 | 2823.2 | 599.5  |
| 47.5° | 231.0 | 972.2  | 3710.4 | 6499.5 | 9198.0  | 9961.9  | 9930.7  | 8412.8 | 6097.0 | 3859.2 | 1016.2 |
| 50°   | 371.3 | 1492.4 | 4915.0 | 7697.1 | 10380.0 | 11036.2 | 10958.2 | 9022.3 | 6814.2 | 4566.4 | 1302.5 |
| 52.5° | 496.0 | 1989.8 | 5671.9 | 8137.9 | 10732.9 | 11515.2 | 11420.2 | 9244.8 | 7002.7 | 4774.7 | 1381.8 |
| 55°   | 527.2 | 2169.8 | 5897.2 | 8273.9 | 10966.7 | 11920.5 | 11783.1 | 9393.6 | 7026.8 | 4625.9 | 1250.0 |
| 57.5° | 511.6 | 1999.7 | 5751.2 | 8407.2 | 11292.7 | 12337.2 | 12154.4 | 9684.1 | 7107.5 | 4373.7 | 1040.3 |
| 59°   | 484.7 | 1790.0 | 5660.5 | 8513.5 | 11472.7 | 12402.4 | 12230.9 | 9747.9 | 7161.4 | 4258.9 | 912.7  |
| 60°   | 453.5 | 1648.3 | 5589.7 | 8582.9 | 11461.3 | 12300.4 | 12123.2 | 9718.1 | 7182.7 | 4159.6 | 851.8  |
| 62.5° | 350.1 | 1315.2 | 5487.6 | 8533.3 | 10745.6 | 11369.2 | 11268.6 | 8989.7 | 6870.9 | 3842.2 | 671.8  |
| 65°   | 272.1 | 1006.3 | 5113.5 | 7610.7 | 9144.1  | 9563.6  | 9532.5  | 7612.1 | 5782.4 | 3312.1 | 484.7  |
| 67.5° | 215.4 | 734.1  | 4324.0 | 6163.6 | 7357.0  | 7953.6  | 7931.0  | 6179.2 | 4389.2 | 2531.2 | 348.6  |
| 70°   | 175.7 | 523.0  | 2964.9 | 4647.2 | 5884.4  | 6635.6  | 6603.0  | 4973.2 | 3252.6 | 1605.8 | 253.7  |
| 72.5° | 148.8 | 334.5  | 1798.5 | 3503.5 | 4910.8  | 5340.2  | 5245.3  | 4012.3 | 2365.4 | 874.4  | 201.3  |
| 75°   | 126.1 | 205.5  | 891.5  | 2184.0 | 2925.2  | 2922.4  | 2827.4  | 2124.5 | 1269.9 | 428.0  | 160.1  |
| 77.5° | 102.0 | 144.6  | 350.1  | 599.5  | 922.6   | 1142.3  | 1123.9  | 752.6  | 379.8  | 124.7  | 99.2   |
| 80°   | 66.6  | 68.0   | 93.5   | 164.4  | 253.7   | 280.6   | 318.9   | 229.6  | 110.5  | 59.5   | 41.1   |
| 82.5° | 29.8  | 32.6   | 42.5   | 53.9   | 53.9    | 49.6    | 43.9    | 32.6   | 24.1   | 19.8   | 9.9    |
| 85°   | 7.1   | 9.9    | 7.1    | 8.5    | 7.1     | 5.7     | 5.7     | 2.8    | 0.0    | 0.0    | 0.0    |
| 87.5° | 1.4   | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0   | 0.0    | 0.0    | 0.0    | 0.0     | 0.0     | 0.0     | 0.0    | 0.0    | 0.0    | 0.0    |



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**CANDELA DISTRIBUTION (continued):**

|       | 90°   | 95°  | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 0°    | 12.8  | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 |
| 2.5°  | 11.3  | 11.3 | 11.3 | 9.9  | 9.9  | 9.9  | 8.5  | 8.5  | 8.5  | 7.1  | 7.1  |
| 5°    | 14.2  | 12.8 | 11.3 | 11.3 | 9.9  | 9.9  | 8.5  | 7.1  | 7.1  | 7.1  | 5.7  |
| 7.5°  | 15.6  | 14.2 | 12.8 | 11.3 | 9.9  | 8.5  | 8.5  | 7.1  | 5.7  | 5.7  | 5.7  |
| 10°   | 18.4  | 17.0 | 14.2 | 11.3 | 9.9  | 8.5  | 7.1  | 7.1  | 5.7  | 4.3  | 4.3  |
| 12.5° | 21.3  | 18.4 | 15.6 | 12.8 | 9.9  | 8.5  | 7.1  | 7.1  | 5.7  | 4.3  | 2.8  |
| 15°   | 24.1  | 21.3 | 17.0 | 12.8 | 9.9  | 8.5  | 7.1  | 7.1  | 4.3  | 2.8  | 1.4  |
| 17.5° | 26.9  | 22.7 | 17.0 | 14.2 | 9.9  | 8.5  | 7.1  | 5.7  | 2.8  | 1.4  | 0.0  |
| 20°   | 28.3  | 24.1 | 18.4 | 14.2 | 9.9  | 8.5  | 7.1  | 4.3  | 1.4  | 0.0  | 0.0  |
| 22.5° | 31.2  | 26.9 | 19.8 | 14.2 | 9.9  | 7.1  | 4.3  | 1.4  | 0.0  | 0.0  | 0.0  |
| 25°   | 36.8  | 28.3 | 19.8 | 14.2 | 9.9  | 7.1  | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  |
| 27.5° | 41.1  | 31.2 | 19.8 | 14.2 | 9.9  | 5.7  | 1.4  | 0.0  | 0.0  | 0.0  | 0.0  |
| 30°   | 48.2  | 34.0 | 21.3 | 14.2 | 9.9  | 4.3  | 1.4  | 0.0  | 0.0  | 0.0  | 0.0  |
| 32.5° | 59.5  | 36.8 | 21.3 | 14.2 | 8.5  | 4.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 35°   | 72.3  | 42.5 | 21.3 | 14.2 | 8.5  | 4.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 37.5° | 73.7  | 45.4 | 21.3 | 14.2 | 8.5  | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 40°   | 76.5  | 42.5 | 22.7 | 14.2 | 8.5  | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 42.5° | 87.9  | 39.7 | 24.1 | 14.2 | 8.5  | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 45°   | 130.4 | 41.1 | 24.1 | 15.6 | 8.5  | 4.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 47.5° | 226.8 | 42.5 | 22.7 | 15.6 | 8.5  | 4.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 50°   | 290.5 | 49.6 | 22.7 | 17.0 | 9.9  | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 52.5° | 309.0 | 58.1 | 22.7 | 18.4 | 12.8 | 1.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 55°   | 300.5 | 68.0 | 24.1 | 19.8 | 15.6 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 57.5° | 277.8 | 73.7 | 25.5 | 21.3 | 17.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 59°   | 253.7 | 77.9 | 29.8 | 22.7 | 17.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 60°   | 233.8 | 82.2 | 31.2 | 24.1 | 17.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 62.5° | 188.5 | 87.9 | 34.0 | 28.3 | 14.2 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 65°   | 164.4 | 92.1 | 35.4 | 31.2 | 12.8 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 67.5° | 150.2 | 95.0 | 38.3 | 32.6 | 11.3 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 70°   | 138.9 | 93.5 | 41.1 | 31.2 | 9.9  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 72.5° | 126.1 | 89.3 | 49.6 | 28.3 | 8.5  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 75°   | 113.4 | 80.8 | 53.9 | 25.5 | 5.7  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 77.5° | 82.2  | 68.0 | 49.6 | 22.7 | 2.8  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 80°   | 35.4  | 36.8 | 35.4 | 17.0 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 82.5° | 7.1   | 8.5  | 7.1  | 4.3  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 85°   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 87.5° | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| 90°   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



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**CANDELA DISTRIBUTION (continued):**

|       | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|------|------|------|------|------|------|------|------|------|------|------|
| 0°    | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 |
| 2.5°  | 7.1  | 7.1  | 7.1  | 7.1  | 8.5  | 8.5  | 11.3 | 14.2 | 17.0 | 18.4 | 18.4 |
| 5°    | 5.7  | 5.7  | 5.7  | 5.7  | 5.7  | 7.1  | 8.5  | 11.3 | 15.6 | 17.0 | 17.0 |
| 7.5°  | 4.3  | 4.3  | 4.3  | 4.3  | 4.3  | 4.3  | 7.1  | 9.9  | 14.2 | 15.6 | 17.0 |
| 10°   | 4.3  | 2.8  | 2.8  | 1.4  | 1.4  | 2.8  | 4.3  | 8.5  | 12.8 | 14.2 | 15.6 |
| 12.5° | 2.8  | 1.4  | 1.4  | 0.0  | 0.0  | 1.4  | 2.8  | 7.1  | 11.3 | 12.8 | 14.2 |
| 15°   | 1.4  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 5.7  | 9.9  | 11.3 | 14.2 |
| 17.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.3  | 8.5  | 11.3 | 12.8 |
| 20°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 7.1  | 9.9  | 11.3 |
| 22.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 5.7  | 8.5  | 9.9  |
| 25°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.3  | 5.7  | 7.1  |
| 27.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 4.3  | 5.7  |
| 30°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 2.8  | 4.3  | 5.7  |
| 32.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  | 4.3  |
| 35°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  | 4.3  |
| 37.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  | 2.8  |
| 40°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 42.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 45°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 47.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 50°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 52.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 55°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 57.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 59°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 60°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 62.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 65°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 67.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 70°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 72.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  |
| 75°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 77.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 80°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 2.8  |
| 82.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 85°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 87.5° | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.4  | 1.4  |
| 90°   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |



REPORT NUMBER: P1067943

CATALOG NUMBER: NAV-SA1C-730-U-LBC

**CANDELA DISTRIBUTION (continued):**

|       | 285° | 295° | 305° | 315° | 318° | 325° | 335° | 345° | 355°  | 360°  |
|-------|------|------|------|------|------|------|------|------|-------|-------|
| 0°    | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8 | 12.8  | 12.8  |
| 2.5°  | 19.8 | 19.8 | 18.4 | 17.0 | 17.0 | 17.0 | 18.4 | 19.8 | 19.8  | 19.8  |
| 5°    | 18.4 | 18.4 | 17.0 | 17.0 | 17.0 | 17.0 | 18.4 | 21.3 | 22.7  | 22.7  |
| 7.5°  | 18.4 | 18.4 | 17.0 | 17.0 | 17.0 | 17.0 | 18.4 | 21.3 | 22.7  | 24.1  |
| 10°   | 17.0 | 17.0 | 17.0 | 17.0 | 15.6 | 17.0 | 18.4 | 21.3 | 25.5  | 25.5  |
| 12.5° | 17.0 | 17.0 | 17.0 | 17.0 | 15.6 | 17.0 | 19.8 | 22.7 | 26.9  | 28.3  |
| 15°   | 17.0 | 17.0 | 17.0 | 15.6 | 15.6 | 17.0 | 19.8 | 24.1 | 28.3  | 31.2  |
| 17.5° | 15.6 | 17.0 | 17.0 | 15.6 | 15.6 | 17.0 | 19.8 | 24.1 | 31.2  | 35.4  |
| 20°   | 14.2 | 15.6 | 17.0 | 15.6 | 15.6 | 15.6 | 19.8 | 24.1 | 32.6  | 38.3  |
| 22.5° | 12.8 | 14.2 | 15.6 | 15.6 | 14.2 | 15.6 | 19.8 | 25.5 | 35.4  | 42.5  |
| 25°   | 11.3 | 12.8 | 12.8 | 14.2 | 14.2 | 15.6 | 19.8 | 25.5 | 36.8  | 48.2  |
| 27.5° | 8.5  | 9.9  | 11.3 | 12.8 | 12.8 | 15.6 | 19.8 | 26.9 | 39.7  | 59.5  |
| 30°   | 7.1  | 8.5  | 9.9  | 11.3 | 12.8 | 15.6 | 19.8 | 26.9 | 42.5  | 75.1  |
| 32.5° | 7.1  | 8.5  | 9.9  | 11.3 | 12.8 | 14.2 | 19.8 | 28.3 | 46.8  | 93.5  |
| 35°   | 5.7  | 7.1  | 8.5  | 11.3 | 11.3 | 14.2 | 19.8 | 28.3 | 51.0  | 121.9 |
| 37.5° | 5.7  | 7.1  | 8.5  | 11.3 | 11.3 | 14.2 | 19.8 | 28.3 | 62.4  | 136.1 |
| 40°   | 4.3  | 5.7  | 7.1  | 11.3 | 11.3 | 14.2 | 21.3 | 29.8 | 63.8  | 137.5 |
| 42.5° | 4.3  | 5.7  | 7.1  | 9.9  | 11.3 | 14.2 | 21.3 | 29.8 | 59.5  | 141.7 |
| 45°   | 4.3  | 5.7  | 7.1  | 11.3 | 12.8 | 15.6 | 21.3 | 31.2 | 58.1  | 161.6 |
| 47.5° | 4.3  | 5.7  | 7.1  | 11.3 | 14.2 | 15.6 | 21.3 | 31.2 | 59.5  | 231.0 |
| 50°   | 4.3  | 5.7  | 7.1  | 11.3 | 15.6 | 15.6 | 21.3 | 31.2 | 65.2  | 371.3 |
| 52.5° | 2.8  | 4.3  | 5.7  | 9.9  | 12.8 | 17.0 | 22.7 | 29.8 | 69.4  | 496.0 |
| 55°   | 2.8  | 2.8  | 4.3  | 8.5  | 11.3 | 18.4 | 24.1 | 29.8 | 80.8  | 527.2 |
| 57.5° | 2.8  | 2.8  | 4.3  | 7.1  | 9.9  | 19.8 | 25.5 | 29.8 | 93.5  | 511.6 |
| 59°   | 2.8  | 2.8  | 2.8  | 7.1  | 8.5  | 19.8 | 25.5 | 31.2 | 95.0  | 484.7 |
| 60°   | 2.8  | 2.8  | 2.8  | 5.7  | 8.5  | 19.8 | 26.9 | 32.6 | 96.4  | 453.5 |
| 62.5° | 1.4  | 1.4  | 1.4  | 5.7  | 7.1  | 19.8 | 29.8 | 39.7 | 99.2  | 350.1 |
| 65°   | 2.8  | 2.8  | 1.4  | 4.3  | 7.1  | 17.0 | 34.0 | 42.5 | 100.6 | 272.1 |
| 67.5° | 2.8  | 2.8  | 2.8  | 5.7  | 7.1  | 17.0 | 35.4 | 43.9 | 100.6 | 215.4 |
| 70°   | 2.8  | 2.8  | 2.8  | 5.7  | 8.5  | 17.0 | 35.4 | 45.4 | 99.2  | 175.7 |
| 72.5° | 2.8  | 2.8  | 2.8  | 5.7  | 8.5  | 15.6 | 32.6 | 46.8 | 95.0  | 148.8 |
| 75°   | 2.8  | 2.8  | 2.8  | 4.3  | 7.1  | 14.2 | 31.2 | 51.0 | 86.5  | 126.1 |
| 77.5° | 2.8  | 2.8  | 2.8  | 2.8  | 5.7  | 11.3 | 28.3 | 56.7 | 76.5  | 102.0 |
| 80°   | 4.3  | 2.8  | 2.8  | 2.8  | 4.3  | 9.9  | 26.9 | 55.3 | 63.8  | 66.6  |
| 82.5° | 4.3  | 2.8  | 2.8  | 1.4  | 2.8  | 7.1  | 21.3 | 42.5 | 32.6  | 29.8  |
| 85°   | 2.8  | 2.8  | 2.8  | 1.4  | 1.4  | 4.3  | 9.9  | 12.8 | 9.9   | 7.1   |
| 87.5° | 2.8  | 2.8  | 2.8  | 1.4  | 1.4  | 1.4  | 1.4  | 1.4  | 1.4   | 1.4   |
| 90°   | 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: SP1-2407-184-4

Test Date: 10/10/2024

Luminaire Tested: GSS-SB1A-730-U-5WQ

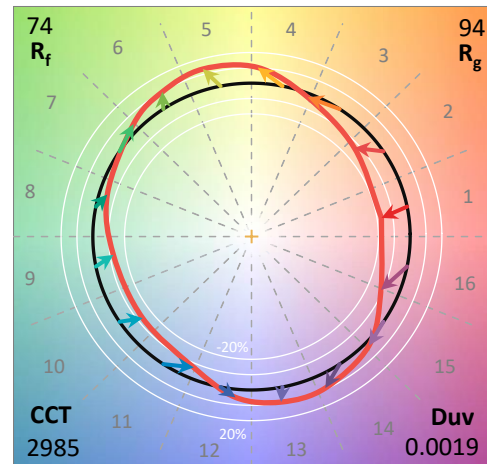
Data in this report applies to families of products including GSS-SB1A-730-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-4  
 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-730-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI 3000K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 2985     | CRI (Ra): | 70.8 |      |       |
| CIE u':                   | 0.2504   | R1:       | 66.3 | R9:  | -43.2 |
| CIE v':                   | 0.5243   | R2:       | 80.6 | R10: | 57.6  |
| Duv:                      | 0.0019   | R3:       | 94.5 | R11: | 64.8  |
| CIE x:                    | 0.4408   | R4:       | 68.2 | R12: | 53.5  |
| CIE y:                    | 0.4101   | R5:       | 66.5 | R13: | 68.7  |
| CIE z:                    | 0.1491   | R6:       | 74.7 | R14: | 97.0  |
| Peak Wavelength (nm):     | 595      | R7:       | 76.2 | R15: | 56.4  |
| Dominant Wavelength (nm): | 582      | R8:       | 39.6 |      |       |
| Purity:                   | 55.41818 |           |      |      |       |
| Rf:                       | 73.8     |           |      |      |       |
| Rg:                       | 94.4     |           |      |      |       |



### Test Conditions

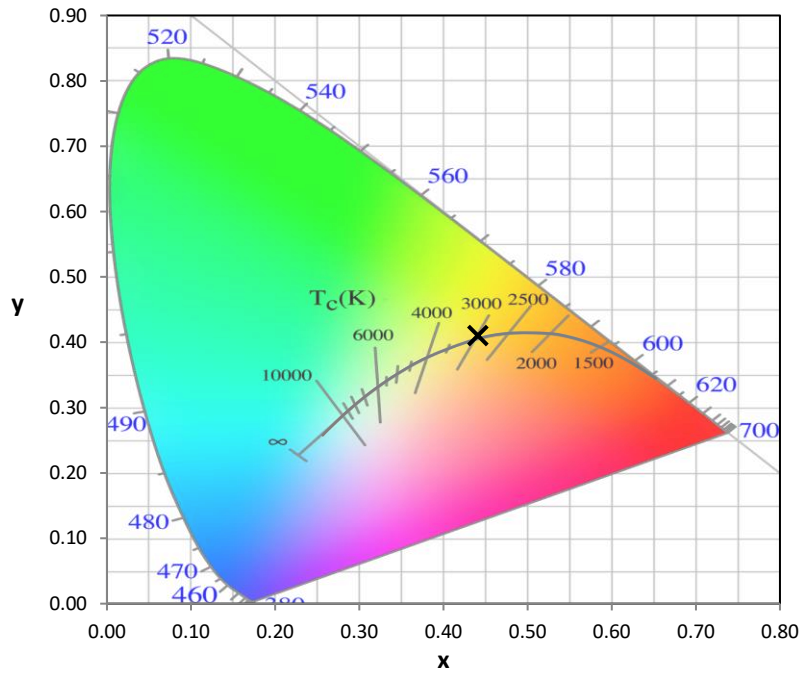
Stabilization Time: 36M  
 Operation Time: 1H 36M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2407-184-4

| 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           |

REPORT NUMBER: SP1-2407-184-4

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2407-184-4

### Photopic Flux vs. Wavelength

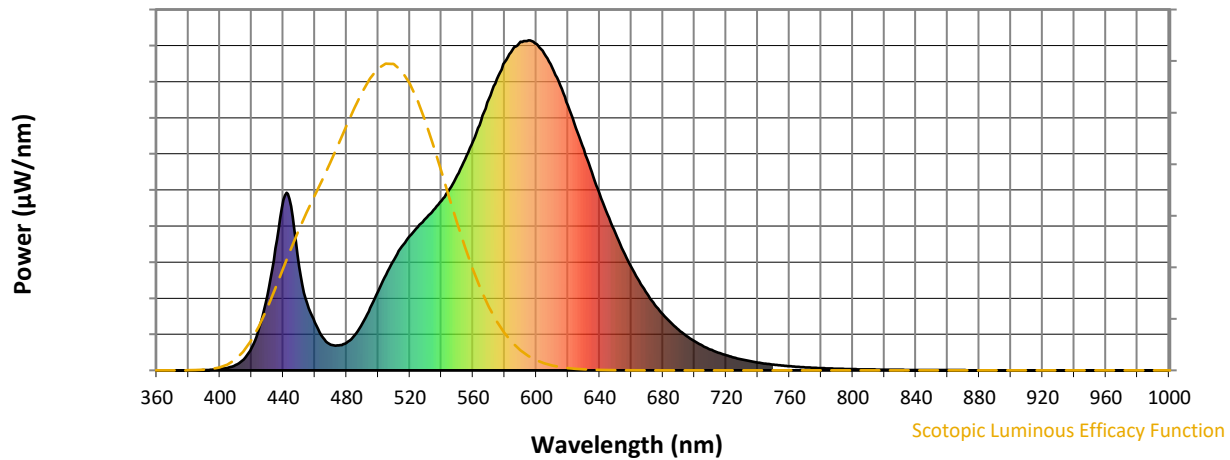


### Photopic Lumens: NR

| $\lambda$<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               | 142                           | NR                             | 620               | 803                           | NR                             | 750               | 17                            | NR                             | 880               | 0                             | NR                             |
| 365               | 0                             | NR                             | 495               | 189                           | NR                             | 625               | 734                           | NR                             | 755               | 15                            | NR                             | 885               | 0                             | NR                             |
| 370               | 0                             | NR                             | 500               | 240                           | NR                             | 630               | 670                           | NR                             | 760               | 13                            | NR                             | 890               | 0                             | NR                             |
| 375               | 0                             | NR                             | 505               | 290                           | NR                             | 635               | 600                           | NR                             | 765               | 11                            | NR                             | 895               | 0                             | NR                             |
| 380               | 0                             | NR                             | 510               | 335                           | NR                             | 640               | 535                           | NR                             | 770               | 9                             | NR                             | 900               | 0                             | NR                             |
| 385               | 0                             | NR                             | 515               | 375                           | NR                             | 645               | 473                           | NR                             | 775               | 8                             | NR                             | 905               | 0                             | NR                             |
| 390               | 1                             | NR                             | 520               | 408                           | NR                             | 650               | 415                           | NR                             | 780               | 7                             | NR                             | 910               | 0                             | NR                             |
| 395               | 2                             | NR                             | 525               | 434                           | NR                             | 655               | 362                           | NR                             | 785               | 6                             | NR                             | 915               | 0                             | NR                             |
| 400               | 4                             | NR                             | 530               | 461                           | NR                             | 660               | 313                           | NR                             | 790               | 5                             | NR                             | 920               | 0                             | NR                             |
| 405               | 8                             | NR                             | 535               | 486                           | NR                             | 665               | 271                           | NR                             | 795               | 4                             | NR                             | 925               | 0                             | NR                             |
| 410               | 16                            | NR                             | 540               | 514                           | NR                             | 670               | 231                           | NR                             | 800               | 4                             | NR                             | 930               | 0                             | NR                             |
| 415               | 33                            | NR                             | 545               | 549                           | NR                             | 675               | 198                           | NR                             | 805               | 3                             | NR                             | 935               | 0                             | NR                             |
| 420               | 69                            | NR                             | 550               | 591                           | NR                             | 680               | 169                           | NR                             | 810               | 3                             | NR                             | 940               | 0                             | NR                             |
| 425               | 131                           | NR                             | 555               | 640                           | NR                             | 685               | 144                           | NR                             | 815               | 2                             | NR                             | 945               | 0                             | NR                             |
| 430               | 227                           | NR                             | 560               | 695                           | NR                             | 690               | 123                           | NR                             | 820               | 2                             | NR                             | 950               | 0                             | NR                             |
| 435               | 369                           | NR                             | 565               | 757                           | NR                             | 695               | 104                           | NR                             | 825               | 2                             | NR                             | 955               | 0                             | NR                             |
| 440               | 517                           | NR                             | 570               | 822                           | NR                             | 700               | 88                            | NR                             | 830               | 2                             | NR                             | 960               | 0                             | NR                             |
| 445               | 498                           | NR                             | 575               | 882                           | NR                             | 705               | 75                            | NR                             | 835               | 1                             | NR                             | 965               | 0                             | NR                             |
| 450               | 315                           | NR                             | 580               | 935                           | NR                             | 710               | 63                            | NR                             | 840               | 1                             | NR                             | 970               | 0                             | NR                             |
| 455               | 204                           | NR                             | 585               | 972                           | NR                             | 715               | 54                            | NR                             | 845               | 1                             | NR                             | 975               | 0                             | NR                             |
| 460               | 145                           | NR                             | 590               | 996                           | NR                             | 720               | 46                            | NR                             | 850               | 1                             | NR                             | 980               | 0                             | NR                             |
| 465               | 100                           | NR                             | 595               | 1000                          | NR                             | 725               | 39                            | NR                             | 855               | 1                             | NR                             | 985               | 0                             | NR                             |
| 470               | 78                            | NR                             | 600               | 989                           | NR                             | 730               | 33                            | NR                             | 860               | 1                             | NR                             | 990               | 0                             | NR                             |
| 475               | 76                            | NR                             | 605               | 960                           | NR                             | 735               | 28                            | NR                             | 865               | 1                             | NR                             | 995               | 0                             | NR                             |
| 480               | 83                            | NR                             | 610               | 918                           | NR                             | 740               | 24                            | NR                             | 870               | 1                             | NR                             | 1000              | 0                             | NR                             |
| 485               | 105                           | NR                             | 615               | 864                           | NR                             | 745               | 20                            | NR                             | 875               | 1                             | NR                             |                   |                               |                                |

REPORT NUMBER: SP1-2407-184-4

### Scotopic Flux vs. Wavelength



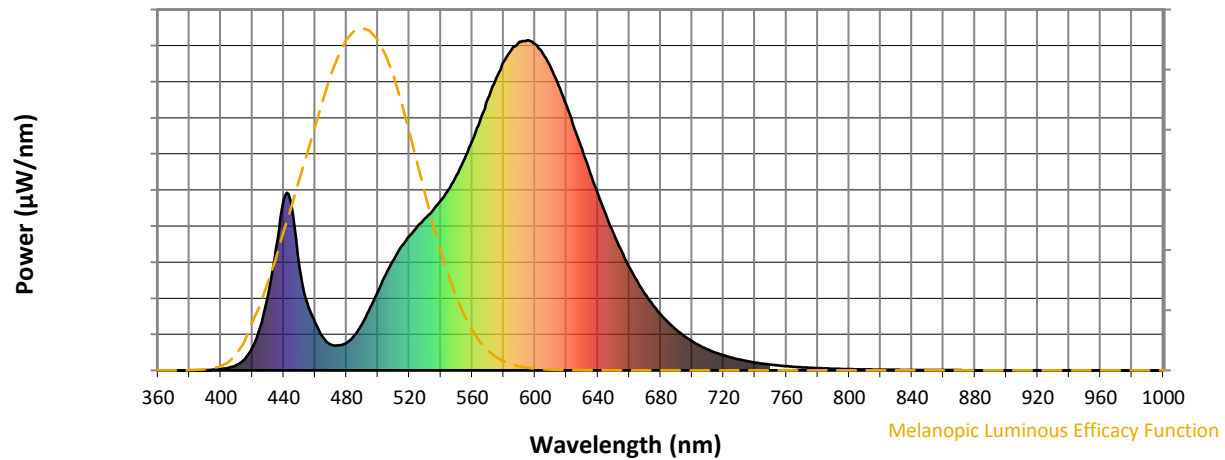
Scotopic Lumens: NR

S/P: 1.19

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (Φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 142                      | NR            | 620    | 803                      | NR            | 750    | 17                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 189                      | NR            | 625    | 734                      | NR            | 755    | 15                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 240                      | NR            | 630    | 670                      | NR            | 760    | 13                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 290                      | NR            | 635    | 600                      | NR            | 765    | 11                       | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 335                      | NR            | 640    | 535                      | NR            | 770    | 9                        | NR            | 900    | 0                        | NR            |
| 385    | 0                        | NR            | 515    | 375                      | NR            | 645    | 473                      | NR            | 775    | 8                        | NR            | 905    | 0                        | NR            |
| 390    | 1                        | NR            | 520    | 408                      | NR            | 650    | 415                      | NR            | 780    | 7                        | NR            | 910    | 0                        | NR            |
| 395    | 2                        | NR            | 525    | 434                      | NR            | 655    | 362                      | NR            | 785    | 6                        | NR            | 915    | 0                        | NR            |
| 400    | 4                        | NR            | 530    | 461                      | NR            | 660    | 313                      | NR            | 790    | 5                        | NR            | 920    | 0                        | NR            |
| 405    | 8                        | NR            | 535    | 486                      | NR            | 665    | 271                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 16                       | NR            | 540    | 514                      | NR            | 670    | 231                      | NR            | 800    | 4                        | NR            | 930    | 0                        | NR            |
| 415    | 33                       | NR            | 545    | 549                      | NR            | 675    | 198                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 69                       | NR            | 550    | 591                      | NR            | 680    | 169                      | NR            | 810    | 3                        | NR            | 940    | 0                        | NR            |
| 425    | 131                      | NR            | 555    | 640                      | NR            | 685    | 144                      | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 227                      | NR            | 560    | 695                      | NR            | 690    | 123                      | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 369                      | NR            | 565    | 757                      | NR            | 695    | 104                      | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 517                      | NR            | 570    | 822                      | NR            | 700    | 88                       | NR            | 830    | 2                        | NR            | 960    | 0                        | NR            |
| 445    | 498                      | NR            | 575    | 882                      | NR            | 705    | 75                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 315                      | NR            | 580    | 935                      | NR            | 710    | 63                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 204                      | NR            | 585    | 972                      | NR            | 715    | 54                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 145                      | NR            | 590    | 996                      | NR            | 720    | 46                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 100                      | NR            | 595    | 1000                     | NR            | 725    | 39                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 78                       | NR            | 600    | 989                      | NR            | 730    | 33                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 76                       | NR            | 605    | 960                      | NR            | 735    | 28                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 83                       | NR            | 610    | 918                      | NR            | 740    | 24                       | NR            | 870    | 1                        | NR            | 1000   | 0                        | NR            |
| 485    | 105                      | NR            | 615    | 864                      | NR            | 745    | 20                       | NR            | 875    | 1                        | NR            |        |                          |               |

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### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 2.13

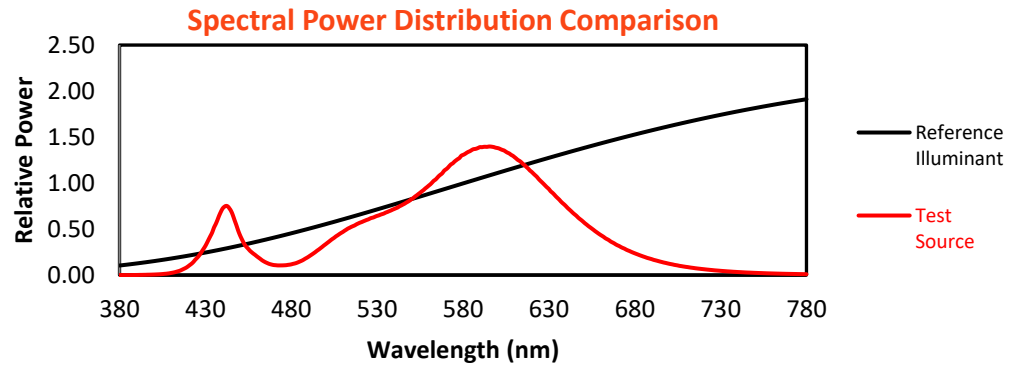
| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 142                         | NR               | 620       | 803                         | NR               | 750       | 17                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 189                         | NR               | 625       | 734                         | NR               | 755       | 15                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 240                         | NR               | 630       | 670                         | NR               | 760       | 13                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 290                         | NR               | 635       | 600                         | NR               | 765       | 11                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 335                         | NR               | 640       | 535                         | NR               | 770       | 9                           | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 375                         | NR               | 645       | 473                         | NR               | 775       | 8                           | NR               | 905       | 0                           | NR               |
| 390       | 1                           | NR               | 520       | 408                         | NR               | 650       | 415                         | NR               | 780       | 7                           | NR               | 910       | 0                           | NR               |
| 395       | 2                           | NR               | 525       | 434                         | NR               | 655       | 362                         | NR               | 785       | 6                           | NR               | 915       | 0                           | NR               |
| 400       | 4                           | NR               | 530       | 461                         | NR               | 660       | 313                         | NR               | 790       | 5                           | NR               | 920       | 0                           | NR               |
| 405       | 8                           | NR               | 535       | 486                         | NR               | 665       | 271                         | NR               | 795       | 4                           | NR               | 925       | 0                           | NR               |
| 410       | 16                          | NR               | 540       | 514                         | NR               | 670       | 231                         | NR               | 800       | 4                           | NR               | 930       | 0                           | NR               |
| 415       | 33                          | NR               | 545       | 549                         | NR               | 675       | 198                         | NR               | 805       | 3                           | NR               | 935       | 0                           | NR               |
| 420       | 69                          | NR               | 550       | 591                         | NR               | 680       | 169                         | NR               | 810       | 3                           | NR               | 940       | 0                           | NR               |
| 425       | 131                         | NR               | 555       | 640                         | NR               | 685       | 144                         | NR               | 815       | 2                           | NR               | 945       | 0                           | NR               |
| 430       | 227                         | NR               | 560       | 695                         | NR               | 690       | 123                         | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 369                         | NR               | 565       | 757                         | NR               | 695       | 104                         | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 517                         | NR               | 570       | 822                         | NR               | 700       | 88                          | NR               | 830       | 2                           | NR               | 960       | 0                           | NR               |
| 445       | 498                         | NR               | 575       | 882                         | NR               | 705       | 75                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 315                         | NR               | 580       | 935                         | NR               | 710       | 63                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 204                         | NR               | 585       | 972                         | NR               | 715       | 54                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 145                         | NR               | 590       | 996                         | NR               | 720       | 46                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 100                         | NR               | 595       | 1000                        | NR               | 725       | 39                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 78                          | NR               | 600       | 989                         | NR               | 730       | 33                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 76                          | NR               | 605       | 960                         | NR               | 735       | 28                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 83                          | NR               | 610       | 918                         | NR               | 740       | 24                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 105                         | NR               | 615       | 864                         | NR               | 745       | 20                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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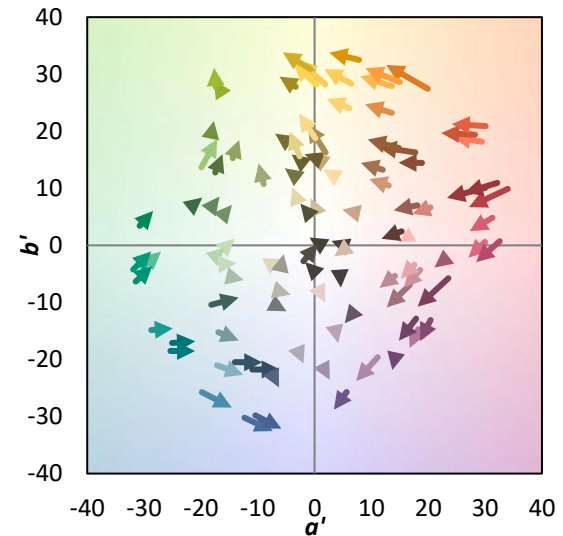
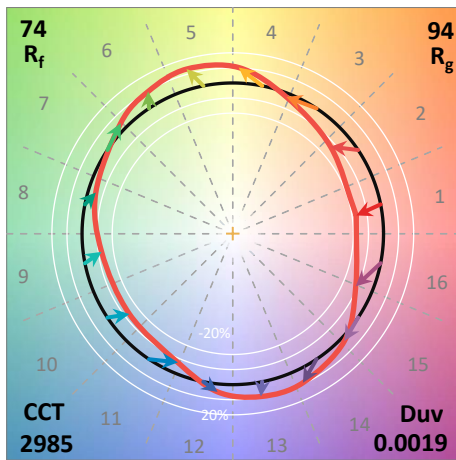
TM-30-18

### Summary

$R_f = 73.8$   
 $R_g = 94.4$   
 $CIE\ R_a = 70.8$   
 $R_g = -43.2$

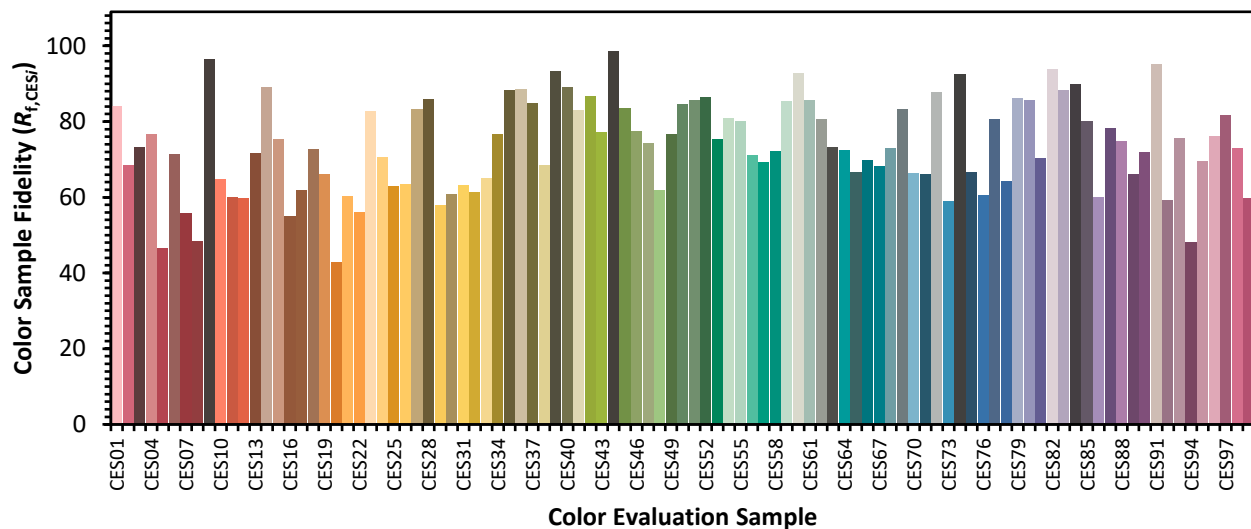


### Color Vector Graphics

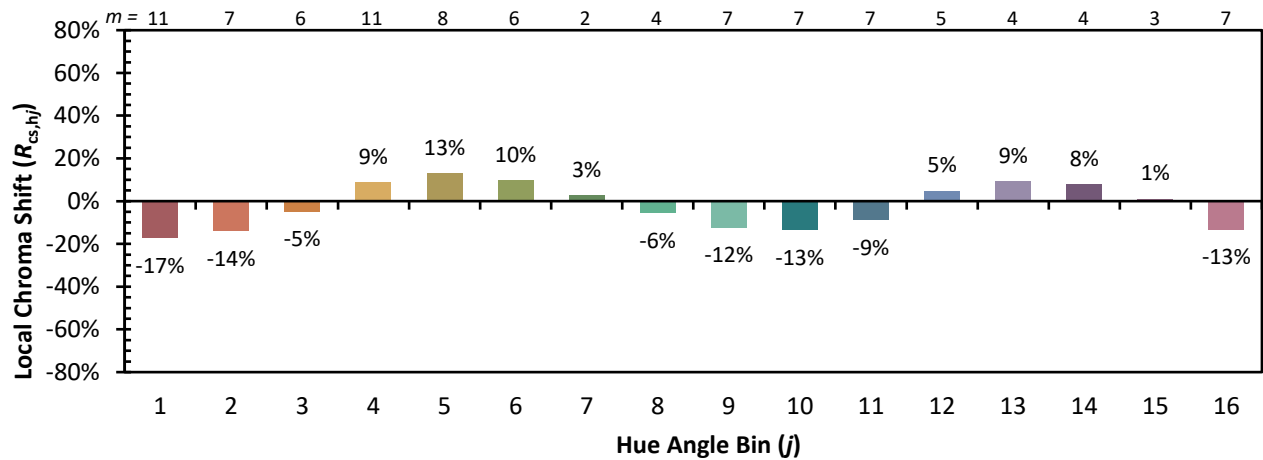


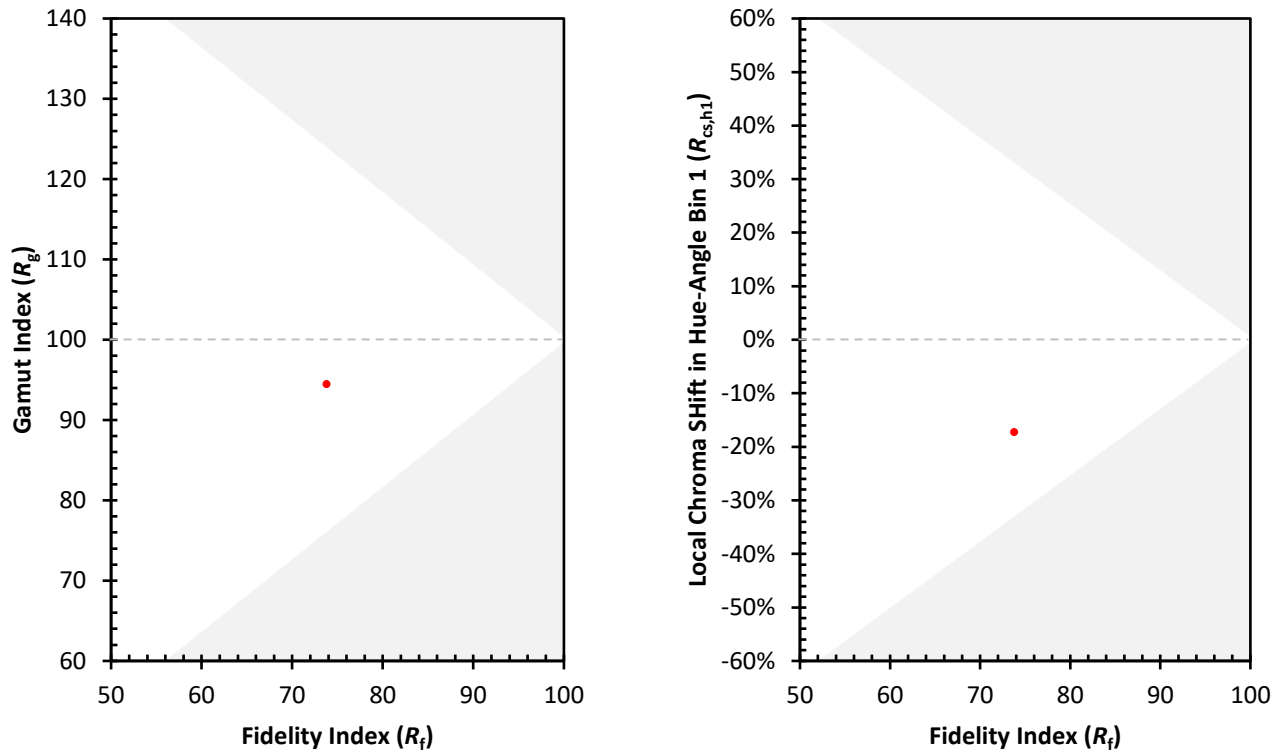
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 63 | CES51 = 86 | CES76 = 61 |
| CES02 = 62 | CES27 = 83 | CES52 = 86 | CES77 = 81 |
| CES03 = 31 | CES28 = 86 | CES53 = 75 | CES78 = 64 |
| CES04 = 71 | CES29 = 58 | CES54 = 81 | CES79 = 86 |
| CES05 = 49 | CES30 = 61 | CES55 = 80 | CES80 = 86 |
| CES06 = 51 | CES31 = 63 | CES56 = 71 | CES81 = 70 |
| CES07 = 41 | CES32 = 61 | CES57 = 69 | CES82 = 94 |
| CES08 = 40 | CES33 = 65 | CES58 = 72 | CES83 = 88 |
| CES09 = 29 | CES34 = 77 | CES59 = 85 | CES84 = 90 |
| CES10 = 76 | CES35 = 88 | CES60 = 93 | CES85 = 80 |
| CES11 = 59 | CES36 = 89 | CES61 = 86 | CES86 = 60 |
| CES12 = 65 | CES37 = 85 | CES62 = 81 | CES87 = 78 |
| CES13 = 43 | CES38 = 69 | CES63 = 73 | CES88 = 75 |
| CES14 = 74 | CES39 = 93 | CES64 = 72 | CES89 = 66 |
| CES15 = 71 | CES40 = 89 | CES65 = 67 | CES90 = 72 |
| CES16 = 47 | CES41 = 83 | CES66 = 70 | CES91 = 95 |
| CES17 = 50 | CES42 = 87 | CES67 = 68 | CES92 = 59 |
| CES18 = 56 | CES43 = 77 | CES68 = 73 | CES93 = 76 |
| CES19 = 73 | CES44 = 99 | CES69 = 83 | CES94 = 48 |
| CES20 = 66 | CES45 = 83 | CES70 = 66 | CES95 = 70 |
| CES21 = 87 | CES46 = 77 | CES71 = 66 | CES96 = 76 |
| CES22 = 79 | CES47 = 74 | CES72 = 88 | CES97 = 82 |
| CES23 = 92 | CES48 = 62 | CES73 = 59 | CES98 = 73 |
| CES24 = 91 | CES49 = 77 | CES74 = 93 | CES99 = 60 |
| CES25 = 73 | CES50 = 85 | CES75 = 67 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**


(END OF REPORT)