

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: P1063931

Luminaire Tested: **GLAN-SA6C-722-U-T4BC**

Issue Date: 08/07/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P1063931  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 08/07/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GLAN-SA6C-722-U-T4BC  
Description: GALLEON II AREA AND ROADWAY LUMINAIRE 1050mA 6xLight Square PACKAGE  
70CRI 2200K FIXTURE w/ TYPE IV ANGLED BACKLIGHT CONTROL  
Light Source: (84) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24603.6 lumens  
Efficiency: N/A  
Efficacy: 87.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G5

Input Watts (W): 282.5  
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

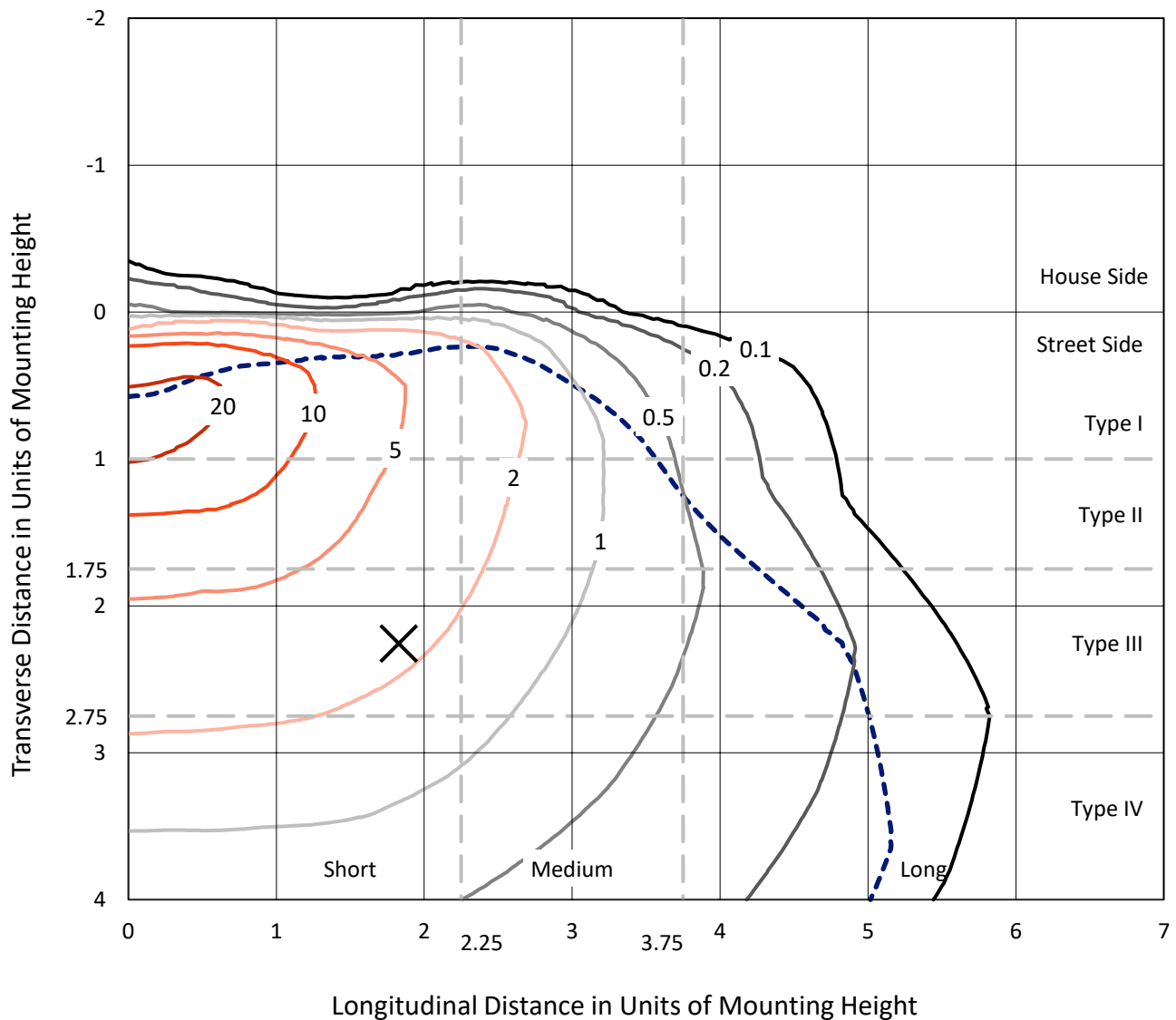


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

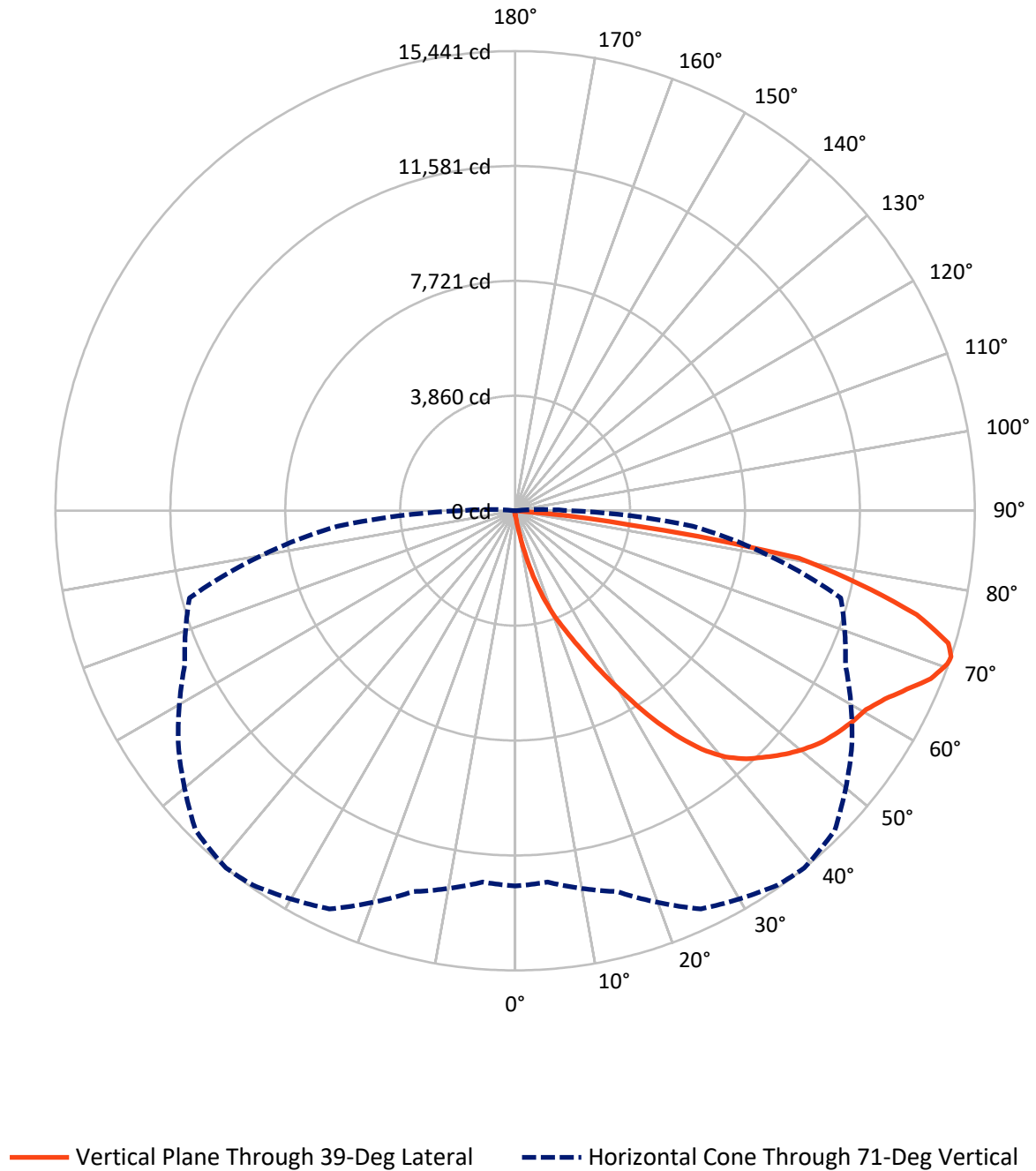


Based on 15 foot mounting height. Maximum calculated value = 25.3 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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CATALOG NUMBER: GLAN-SA6C-722-U-T4BC

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 87.4     | 0.0    | 87.4    |
|                    | % Fixture | 0.4      | 0.0    | 0.4     |
| <b>Street Side</b> | Lumens    | 24516.2  | 0.0    | 24516.2 |
|                    | % Fixture | 99.6     | 0.0    | 99.6    |
| <b>Total</b>       | Lumens    | 24603.6  | 0.0    | 24603.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 20.6    | 0.1       |
| 10°-20°   | 263.0   | 1.1       |
| 20°-30°   | 936.5   | 3.8       |
| 30°-40°   | 2257.0  | 9.2       |
| 40°-50°   | 3777.3  | 15.4      |
| 50°-60°   | 4851.4  | 19.7      |
| 60°-70°   | 6139.5  | 25.0      |
| 70°-80°   | 5473.6  | 22.2      |
| 80°-90°   | 884.8   | 3.6       |
| 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°    | 24603.6 | 100.0     |
| 0°-180°   | 24603.6 | 100.0     |



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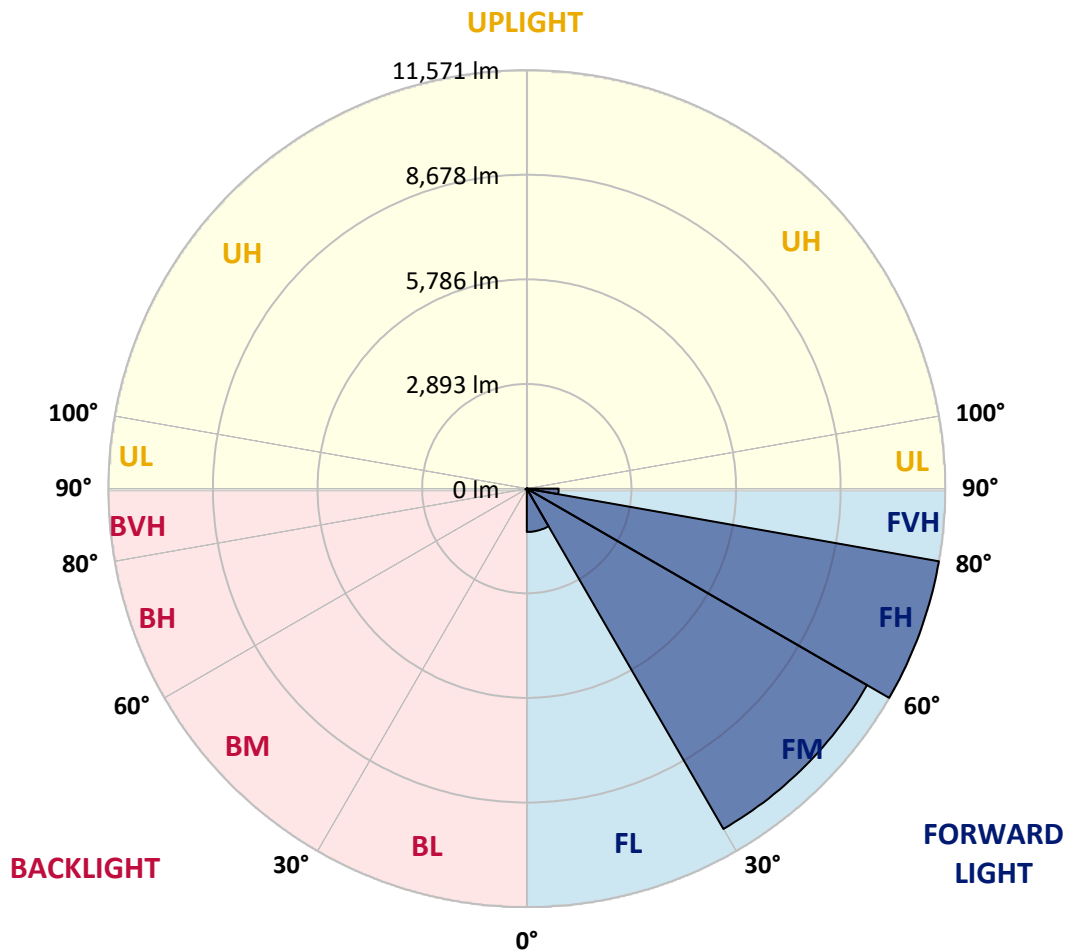
CATALOG NUMBER: GLAN-SA6C-722-U-T4BC

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1198.9  | 4.9       |                         |      |          |
| FM   | (30°-60°)   | 10865.4 | 44.2      |                         |      |          |
| FH   | (60°-80°)   | 11571.1 | 47.0      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 880.8   | 3.6       |                         |      | G5       |
| BL   | (0°-30°)    | 21.1    | 0.1       | B0/110                  |      |          |
| BM   | (30°-60°)   | 20.2    | 0.1       | B0/220                  |      |          |
| BH   | (60°-80°)   | 42.0    | 0.2       | B0/110                  |      | G0/110   |
| BVH  | (80°-90°)   | 4.0     | 0.0       |                         |      | G0/10    |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B0-U0-G5**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 39°     | 45°     | 55°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9   | 134.9  |
| 2.5°  | 154.9   | 154.9   | 154.9   | 149.9   | 149.9   | 148.2   | 146.6   | 146.6   | 143.2   | 141.6   | 138.2  |
| 5°    | 234.8   | 229.8   | 218.2   | 211.5   | 198.2   | 189.9   | 181.5   | 169.9   | 158.2   | 149.9   | 139.9  |
| 7.5°  | 531.3   | 543.0   | 504.7   | 433.0   | 359.8   | 328.1   | 274.8   | 221.5   | 183.2   | 158.2   | 141.6  |
| 10°   | 1354.1  | 1347.4  | 1217.5  | 1074.3  | 829.4   | 731.2   | 572.9   | 361.4   | 236.5   | 173.2   | 143.2  |
| 12.5° | 2303.4  | 2296.8  | 2143.5  | 1948.7  | 1625.6  | 1420.7  | 1120.9  | 674.5   | 339.8   | 196.5   | 143.2  |
| 15°   | 3101.2  | 3074.6  | 3026.3  | 2833.1  | 2455.0  | 2283.4  | 1887.0  | 1192.5  | 549.6   | 236.5   | 146.6  |
| 17.5° | 3629.2  | 3605.9  | 3560.9  | 3491.0  | 3251.1  | 3047.9  | 2729.8  | 1873.7  | 889.4   | 306.5   | 153.2  |
| 20°   | 4113.9  | 4097.2  | 4060.6  | 4047.2  | 3892.3  | 3784.1  | 3520.9  | 2656.5  | 1385.7  | 416.4   | 163.2  |
| 22.5° | 4780.1  | 4745.1  | 4760.1  | 4680.1  | 4528.6  | 4398.7  | 4237.1  | 3476.0  | 1992.0  | 599.6   | 181.5  |
| 25°   | 5596.2  | 5579.5  | 5537.9  | 5481.3  | 5271.4  | 5158.2  | 4910.0  | 4248.8  | 2669.8  | 839.4   | 201.5  |
| 27.5° | 6582.2  | 6563.9  | 6553.9  | 6424.0  | 6182.5  | 6059.2  | 5712.8  | 4978.3  | 3432.7  | 1175.9  | 228.2  |
| 30°   | 7718.1  | 7726.4  | 7661.4  | 7494.9  | 7213.4  | 7040.2  | 6683.8  | 5742.8  | 4213.8  | 1570.6  | 256.5  |
| 32.5° | 8893.9  | 8877.3  | 8777.4  | 8580.8  | 8329.3  | 8167.8  | 7714.7  | 6580.5  | 5033.2  | 2091.9  | 289.8  |
| 35°   | 10161.4 | 10129.8 | 9866.6  | 9641.8  | 9426.9  | 9223.7  | 8810.7  | 7553.2  | 5852.7  | 2676.5  | 334.8  |
| 37.5° | 11440.5 | 11292.3 | 10764.3 | 10479.5 | 10331.3 | 10164.7 | 9780.0  | 8590.8  | 6667.1  | 3329.4  | 389.7  |
| 40°   | 12406.5 | 12291.6 | 11665.4 | 11140.7 | 11022.5 | 10880.9 | 10594.4 | 9486.9  | 7533.2  | 4030.6  | 456.4  |
| 42.5° | 12941.2 | 12877.9 | 12314.9 | 11797.0 | 11518.8 | 11393.9 | 11149.1 | 10269.7 | 8389.3  | 4805.1  | 553.0  |
| 45°   | 13169.4 | 13071.1 | 12694.7 | 12453.2 | 12010.2 | 11803.6 | 11512.2 | 10860.9 | 9283.7  | 5684.5  | 687.9  |
| 47.5° | 13099.4 | 13042.8 | 12773.0 | 12861.2 | 12539.8 | 12218.3 | 11790.3 | 11314.0 | 10048.2 | 6693.8  | 872.7  |
| 50°   | 12659.7 | 12611.4 | 12528.1 | 13006.1 | 12966.2 | 12586.4 | 12150.1 | 11672.0 | 10672.7 | 7734.7  | 1159.2 |
| 52.5° | 11823.6 | 11803.6 | 12016.8 | 12892.9 | 13207.7 | 12911.2 | 12496.5 | 11988.5 | 11255.7 | 8822.3  | 1568.9 |
| 55°   | 10746.0 | 10827.6 | 11437.2 | 12716.3 | 13330.9 | 13151.0 | 12802.9 | 12285.0 | 11723.7 | 9795.0  | 2173.5 |
| 57.5° | 10303.0 | 10324.6 | 11085.8 | 12591.4 | 13385.9 | 13362.6 | 13101.1 | 12568.1 | 12153.4 | 10572.8 | 3096.2 |
| 60°   | 10821.0 | 10787.7 | 11189.0 | 12686.4 | 13495.8 | 13552.4 | 13365.9 | 12831.3 | 12526.5 | 11240.7 | 4325.4 |
| 62.5° | 11757.0 | 11738.7 | 11866.9 | 13091.1 | 13817.3 | 13932.2 | 13734.0 | 13021.1 | 12856.2 | 11680.4 | 5727.8 |
| 65°   | 12593.1 | 12554.8 | 12793.0 | 13808.9 | 14381.9 | 14463.5 | 14290.3 | 13345.9 | 13001.1 | 12000.2 | 7045.2 |
| 67.5° | 12954.5 | 12946.2 | 13329.3 | 14491.8 | 14974.8 | 15063.1 | 14911.5 | 13793.9 | 12967.8 | 12101.8 | 7626.5 |
| 70°   | 12789.6 | 12758.0 | 13370.9 | 14781.6 | 15309.6 | 15409.5 | 15262.9 | 13960.5 | 12606.4 | 11780.3 | 6765.4 |
| 71°   | 12608.1 | 12523.1 | 13246.0 | 14761.6 | 15356.2 | 15441.1 | 15184.7 | 13808.9 | 12243.3 | 11324.0 | 5984.3 |
| 72.5° | 12045.1 | 12060.1 | 12902.9 | 14553.4 | 15244.6 | 15219.6 | 14741.6 | 13266.0 | 11805.3 | 10288.0 | 4806.7 |
| 75°   | 10659.4 | 10747.7 | 11792.0 | 13679.0 | 14248.6 | 13930.5 | 13199.3 | 12228.3 | 10925.9 | 7376.6  | 3337.7 |
| 77.5° | 8710.7  | 8842.3  | 9989.9  | 11996.8 | 11835.3 | 11803.6 | 11773.6 | 10774.3 | 9330.3  | 3962.3  | 2321.8 |
| 80°   | 4158.8  | 4443.6  | 6025.9  | 8564.2  | 9303.7  | 9661.8  | 9436.9  | 8682.4  | 7215.1  | 1887.0  | 1387.4 |
| 82.5° | 271.5   | 268.2   | 379.7   | 719.5   | 3032.9  | 3920.7  | 6229.1  | 6205.8  | 5029.9  | 919.4   | 566.3  |
| 85°   | 128.2   | 131.6   | 144.9   | 164.9   | 191.5   | 209.9   | 289.8   | 1698.8  | 2406.7  | 438.0   | 123.2  |
| 87.5° | 74.9    | 76.6    | 89.9    | 114.9   | 149.9   | 166.6   | 198.2   | 254.8   | 313.1   | 241.5   | 26.6   |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    |

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CATALOG NUMBER: GLAN-SA6C-722-U-T4BC

**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 134.9  | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 | 134.9 |
| 2.5°  | 136.6  | 134.9 | 129.9 | 124.9 | 119.9 | 116.6 | 114.9 | 116.6 | 116.6 | 118.3 | 118.3 |
| 5°    | 136.6  | 131.6 | 123.2 | 113.3 | 106.6 | 99.9  | 96.6  | 94.9  | 96.6  | 96.6  | 96.6  |
| 7.5°  | 134.9  | 126.6 | 114.9 | 103.3 | 94.9  | 86.6  | 83.3  | 81.6  | 81.6  | 83.3  | 83.3  |
| 10°   | 131.6  | 123.2 | 108.3 | 94.9  | 84.9  | 74.9  | 70.0  | 65.0  | 65.0  | 65.0  | 66.6  |
| 12.5° | 129.9  | 118.3 | 99.9  | 86.6  | 73.3  | 61.6  | 51.6  | 46.6  | 48.3  | 48.3  | 48.3  |
| 15°   | 126.6  | 113.3 | 94.9  | 78.3  | 61.6  | 46.6  | 38.3  | 33.3  | 35.0  | 36.6  | 35.0  |
| 17.5° | 126.6  | 111.6 | 88.3  | 68.3  | 48.3  | 35.0  | 28.3  | 25.0  | 25.0  | 26.6  | 26.6  |
| 20°   | 126.6  | 108.3 | 83.3  | 58.3  | 36.6  | 26.6  | 20.0  | 18.3  | 18.3  | 21.7  | 23.3  |
| 22.5° | 129.9  | 108.3 | 76.6  | 48.3  | 30.0  | 20.0  | 15.0  | 13.3  | 15.0  | 18.3  | 20.0  |
| 25°   | 134.9  | 106.6 | 70.0  | 43.3  | 25.0  | 15.0  | 11.7  | 8.3   | 10.0  | 13.3  | 15.0  |
| 27.5° | 139.9  | 104.9 | 63.3  | 38.3  | 20.0  | 11.7  | 8.3   | 6.7   | 5.0   | 6.7   | 6.7   |
| 30°   | 144.9  | 104.9 | 56.6  | 31.6  | 16.7  | 8.3   | 5.0   | 3.3   | 1.7   | 0.0   | 0.0   |
| 32.5° | 148.2  | 101.6 | 51.6  | 25.0  | 13.3  | 6.7   | 3.3   | 1.7   | 0.0   | 0.0   | 0.0   |
| 35°   | 151.6  | 98.3  | 45.0  | 20.0  | 10.0  | 5.0   | 1.7   | 0.0   | 0.0   | 0.0   | 0.0   |
| 37.5° | 154.9  | 93.3  | 38.3  | 16.7  | 8.3   | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 40°   | 158.2  | 86.6  | 31.6  | 15.0  | 5.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 42.5° | 161.6  | 81.6  | 26.6  | 11.7  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 45°   | 169.9  | 78.3  | 21.7  | 10.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 47.5° | 184.9  | 74.9  | 20.0  | 6.7   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 50°   | 206.5  | 71.6  | 18.3  | 5.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 52.5° | 236.5  | 70.0  | 16.7  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 55°   | 289.8  | 68.3  | 15.0  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 57.5° | 381.4  | 66.6  | 15.0  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 60°   | 584.6  | 63.3  | 15.0  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 62.5° | 1044.3 | 61.6  | 13.3  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 65°   | 1820.4 | 63.3  | 13.3  | 3.3   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 67.5° | 2609.9 | 66.6  | 11.7  | 5.0   | 1.7   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 70°   | 2233.5 | 58.3  | 11.7  | 6.7   | 3.3   | 1.7   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| 71°   | 1820.4 | 51.6  | 11.7  | 6.7   | 3.3   | 1.7   | 1.7   | 0.0   | 0.0   | 0.0   | 0.0   |
| 72.5° | 1170.9 | 40.0  | 10.0  | 6.7   | 3.3   | 3.3   | 1.7   | 0.0   | 0.0   | 0.0   | 0.0   |
| 75°   | 494.7  | 33.3  | 10.0  | 6.7   | 5.0   | 3.3   | 3.3   | 1.7   | 0.0   | 0.0   | 0.0   |
| 77.5° | 211.5  | 25.0  | 10.0  | 8.3   | 6.7   | 5.0   | 5.0   | 3.3   | 1.7   | 0.0   | 0.0   |
| 80°   | 79.9   | 20.0  | 11.7  | 10.0  | 8.3   | 8.3   | 6.7   | 3.3   | 1.7   | 0.0   | 0.0   |
| 82.5° | 36.6   | 16.7  | 11.7  | 10.0  | 10.0  | 8.3   | 6.7   | 5.0   | 3.3   | 0.0   | 0.0   |
| 85°   | 23.3   | 15.0  | 11.7  | 10.0  | 10.0  | 8.3   | 8.3   | 5.0   | 3.3   | 0.0   | 0.0   |
| 87.5° | 18.3   | 15.0  | 11.7  | 11.7  | 10.0  | 10.0  | 6.7   | 5.0   | 1.7   | 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: SP1-2407-184-2

Test Date: 10/09/2024

Luminaire Tested: GSS-SB1A-722-U-5WQ

Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-2  
 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-722-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 2200K CCT 26 LEDS

### Spectral Parameters

|                           |          |           |      |      |       |
|---------------------------|----------|-----------|------|------|-------|
| CCT (K):                  | 2160     | CRI (Ra): | 71.9 |      |       |
| CIE u':                   | 0.2927   | R1:       | 68.7 | R9:  | -17.8 |
| CIE v':                   | 0.5388   | R2:       | 82.6 | R10: | 60.5  |
| Duv:                      | 0.0015   | R3:       | 95.5 | R11: | 60.2  |
| CIE x:                    | 0.5130   | R4:       | 66.4 | R12: | 48.2  |
| CIE y:                    | 0.4197   | R5:       | 65.4 | R13: | 70.7  |
| CIE z:                    | 0.0674   | R6:       | 75.9 | R14: | 96.8  |
| Peak Wavelength (nm):     | 609      | R7:       | 77.2 | R15: | 61.8  |
| Dominant Wavelength (nm): | 587      | R8:       | 43.5 |      |       |
| Purity:                   | 79.96089 |           |      |      |       |
| Rf:                       | 70.6     |           |      |      |       |
| Rg:                       | 97.6     |           |      |      |       |



### Test Conditions

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

REPORT NUMBER: SP1-2407-184-2

| 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: SP1-2407-184-2

**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 2200K 7-step quadrangle

REPORT NUMBER: SP1-2407-184-2

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| 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       | 27                          | NR               | 620       | 966                         | NR               | 750       | 46                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 42                          | NR               | 625       | 930                         | NR               | 755       | 39                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 67                          | NR               | 630       | 888                         | NR               | 760       | 34                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 101                         | NR               | 635       | 835                         | NR               | 765       | 30                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 139                         | NR               | 640       | 778                         | NR               | 770       | 26                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 183                         | NR               | 645       | 717                         | NR               | 775       | 22                          | NR               | 905       | 1                           | NR               |
| 390       | 0                           | NR               | 520       | 224                         | NR               | 650       | 656                         | NR               | 780       | 19                          | NR               | 910       | 1                           | NR               |
| 395       | 0                           | NR               | 525       | 262                         | NR               | 655       | 595                         | NR               | 785       | 17                          | NR               | 915       | 1                           | NR               |
| 400       | 1                           | NR               | 530       | 299                         | NR               | 660       | 536                         | NR               | 790       | 15                          | NR               | 920       | 1                           | NR               |
| 405       | 3                           | NR               | 535       | 332                         | NR               | 665       | 480                         | NR               | 795       | 13                          | NR               | 925       | 1                           | NR               |
| 410       | 7                           | NR               | 540       | 365                         | NR               | 670       | 425                         | NR               | 800       | 11                          | NR               | 930       | 1                           | NR               |
| 415       | 17                          | NR               | 545       | 400                         | NR               | 675       | 376                         | NR               | 805       | 10                          | NR               | 935       | 0                           | NR               |
| 420       | 36                          | NR               | 550       | 437                         | NR               | 680       | 332                         | NR               | 810       | 8                           | NR               | 940       | 0                           | NR               |
| 425       | 67                          | NR               | 555       | 479                         | NR               | 685       | 291                         | NR               | 815       | 8                           | NR               | 945       | 0                           | NR               |
| 430       | 105                         | NR               | 560       | 525                         | NR               | 690       | 255                         | NR               | 820       | 7                           | NR               | 950       | 0                           | NR               |
| 435       | 141                         | NR               | 565       | 579                         | NR               | 695       | 221                         | NR               | 825       | 6                           | NR               | 955       | 0                           | NR               |
| 440       | 169                         | NR               | 570       | 639                         | NR               | 700       | 192                         | NR               | 830       | 5                           | NR               | 960       | 0                           | NR               |
| 445       | 173                         | NR               | 575       | 703                         | NR               | 705       | 167                         | NR               | 835       | 4                           | NR               | 965       | 0                           | NR               |
| 450       | 136                         | NR               | 580       | 769                         | NR               | 710       | 144                         | NR               | 840       | 4                           | NR               | 970       | 0                           | NR               |
| 455       | 80                          | NR               | 585       | 832                         | NR               | 715       | 125                         | NR               | 845       | 3                           | NR               | 975       | 0                           | NR               |
| 460       | 45                          | NR               | 590       | 890                         | NR               | 720       | 109                         | NR               | 850       | 3                           | NR               | 980       | 0                           | NR               |
| 465       | 32                          | NR               | 595       | 937                         | NR               | 725       | 94                          | NR               | 855       | 3                           | NR               | 985       | 0                           | NR               |
| 470       | 23                          | NR               | 600       | 972                         | NR               | 730       | 81                          | NR               | 860       | 2                           | NR               | 990       | 0                           | NR               |
| 475       | 18                          | NR               | 605       | 992                         | NR               | 735       | 70                          | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 18                          | NR               | 610       | 998                         | NR               | 740       | 61                          | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 20                          | NR               | 615       | 990                         | NR               | 745       | 53                          | NR               | 875       | 2                           | NR               |           |                             |                  |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 0.8

| 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    | 27                       | NR            | 620    | 966                      | NR            | 750    | 46                       | NR            | 880    | 1                        | NR            |
| 365    | 0                        | NR            | 495    | 42                       | NR            | 625    | 930                      | NR            | 755    | 39                       | NR            | 885    | 1                        | NR            |
| 370    | 0                        | NR            | 500    | 67                       | NR            | 630    | 888                      | NR            | 760    | 34                       | NR            | 890    | 1                        | NR            |
| 375    | 0                        | NR            | 505    | 101                      | NR            | 635    | 835                      | NR            | 765    | 30                       | NR            | 895    | 1                        | NR            |
| 380    | 0                        | NR            | 510    | 139                      | NR            | 640    | 778                      | NR            | 770    | 26                       | NR            | 900    | 1                        | NR            |
| 385    | 0                        | NR            | 515    | 183                      | NR            | 645    | 717                      | NR            | 775    | 22                       | NR            | 905    | 1                        | NR            |
| 390    | 0                        | NR            | 520    | 224                      | NR            | 650    | 656                      | NR            | 780    | 19                       | NR            | 910    | 1                        | NR            |
| 395    | 0                        | NR            | 525    | 262                      | NR            | 655    | 595                      | NR            | 785    | 17                       | NR            | 915    | 1                        | NR            |
| 400    | 1                        | NR            | 530    | 299                      | NR            | 660    | 536                      | NR            | 790    | 15                       | NR            | 920    | 1                        | NR            |
| 405    | 3                        | NR            | 535    | 332                      | NR            | 665    | 480                      | NR            | 795    | 13                       | NR            | 925    | 1                        | NR            |
| 410    | 7                        | NR            | 540    | 365                      | NR            | 670    | 425                      | NR            | 800    | 11                       | NR            | 930    | 1                        | NR            |
| 415    | 17                       | NR            | 545    | 400                      | NR            | 675    | 376                      | NR            | 805    | 10                       | NR            | 935    | 0                        | NR            |
| 420    | 36                       | NR            | 550    | 437                      | NR            | 680    | 332                      | NR            | 810    | 8                        | NR            | 940    | 0                        | NR            |
| 425    | 67                       | NR            | 555    | 479                      | NR            | 685    | 291                      | NR            | 815    | 8                        | NR            | 945    | 0                        | NR            |
| 430    | 105                      | NR            | 560    | 525                      | NR            | 690    | 255                      | NR            | 820    | 7                        | NR            | 950    | 0                        | NR            |
| 435    | 141                      | NR            | 565    | 579                      | NR            | 695    | 221                      | NR            | 825    | 6                        | NR            | 955    | 0                        | NR            |
| 440    | 169                      | NR            | 570    | 639                      | NR            | 700    | 192                      | NR            | 830    | 5                        | NR            | 960    | 0                        | NR            |
| 445    | 173                      | NR            | 575    | 703                      | NR            | 705    | 167                      | NR            | 835    | 4                        | NR            | 965    | 0                        | NR            |
| 450    | 136                      | NR            | 580    | 769                      | NR            | 710    | 144                      | NR            | 840    | 4                        | NR            | 970    | 0                        | NR            |
| 455    | 80                       | NR            | 585    | 832                      | NR            | 715    | 125                      | NR            | 845    | 3                        | NR            | 975    | 0                        | NR            |
| 460    | 45                       | NR            | 590    | 890                      | NR            | 720    | 109                      | NR            | 850    | 3                        | NR            | 980    | 0                        | NR            |
| 465    | 32                       | NR            | 595    | 937                      | NR            | 725    | 94                       | NR            | 855    | 3                        | NR            | 985    | 0                        | NR            |
| 470    | 23                       | NR            | 600    | 972                      | NR            | 730    | 81                       | NR            | 860    | 2                        | NR            | 990    | 0                        | NR            |
| 475    | 18                       | NR            | 605    | 992                      | NR            | 735    | 70                       | NR            | 865    | 2                        | NR            | 995    | 0                        | NR            |
| 480    | 18                       | NR            | 610    | 998                      | NR            | 740    | 61                       | NR            | 870    | 2                        | NR            | 1000   | 0                        | NR            |
| 485    | 20                       | NR            | 615    | 990                      | NR            | 745    | 53                       | NR            | 875    | 2                        | NR            |        |                          |               |

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 1.21**

| $\lambda$<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               | 27                                   | NR                             | 620               | 966                                  | NR                             | 750               | 46                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 42                                   | NR                             | 625               | 930                                  | NR                             | 755               | 39                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 67                                   | NR                             | 630               | 888                                  | NR                             | 760               | 34                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 101                                  | NR                             | 635               | 835                                  | NR                             | 765               | 30                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 139                                  | NR                             | 640               | 778                                  | NR                             | 770               | 26                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 183                                  | NR                             | 645               | 717                                  | NR                             | 775               | 22                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 224                                  | NR                             | 650               | 656                                  | NR                             | 780               | 19                                   | NR                             | 910               | 1                                    | NR                             |
| 395               | 0                                    | NR                             | 525               | 262                                  | NR                             | 655               | 595                                  | NR                             | 785               | 17                                   | NR                             | 915               | 1                                    | NR                             |
| 400               | 1                                    | NR                             | 530               | 299                                  | NR                             | 660               | 536                                  | NR                             | 790               | 15                                   | NR                             | 920               | 1                                    | NR                             |
| 405               | 3                                    | NR                             | 535               | 332                                  | NR                             | 665               | 480                                  | NR                             | 795               | 13                                   | NR                             | 925               | 1                                    | NR                             |
| 410               | 7                                    | NR                             | 540               | 365                                  | NR                             | 670               | 425                                  | NR                             | 800               | 11                                   | NR                             | 930               | 1                                    | NR                             |
| 415               | 17                                   | NR                             | 545               | 400                                  | NR                             | 675               | 376                                  | NR                             | 805               | 10                                   | NR                             | 935               | 0                                    | NR                             |
| 420               | 36                                   | NR                             | 550               | 437                                  | NR                             | 680               | 332                                  | NR                             | 810               | 8                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 67                                   | NR                             | 555               | 479                                  | NR                             | 685               | 291                                  | NR                             | 815               | 8                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 105                                  | NR                             | 560               | 525                                  | NR                             | 690               | 255                                  | NR                             | 820               | 7                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 141                                  | NR                             | 565               | 579                                  | NR                             | 695               | 221                                  | NR                             | 825               | 6                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 169                                  | NR                             | 570               | 639                                  | NR                             | 700               | 192                                  | NR                             | 830               | 5                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 173                                  | NR                             | 575               | 703                                  | NR                             | 705               | 167                                  | NR                             | 835               | 4                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 136                                  | NR                             | 580               | 769                                  | NR                             | 710               | 144                                  | NR                             | 840               | 4                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 80                                   | NR                             | 585               | 832                                  | NR                             | 715               | 125                                  | NR                             | 845               | 3                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 45                                   | NR                             | 590               | 890                                  | NR                             | 720               | 109                                  | NR                             | 850               | 3                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 32                                   | NR                             | 595               | 937                                  | NR                             | 725               | 94                                   | NR                             | 855               | 3                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 23                                   | NR                             | 600               | 972                                  | NR                             | 730               | 81                                   | NR                             | 860               | 2                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 18                                   | NR                             | 605               | 992                                  | NR                             | 735               | 70                                   | NR                             | 865               | 2                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 18                                   | NR                             | 610               | 998                                  | NR                             | 740               | 61                                   | NR                             | 870               | 2                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 20                                   | NR                             | 615               | 990                                  | NR                             | 745               | 53                                   | NR                             | 875               | 2                                    | NR                             |                   |                                      |                                |

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TM-30-18

### Summary

$R_f = 70.6$   
 $R_g = 97.6$   
 $CIE R_a = 71.9$   
 $R_g = -17.8$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 60 | CES51 = 74 | CES76 = 58 |
| CES02 = 65 | CES27 = 77 | CES52 = 77 | CES77 = 82 |
| CES03 = 32 | CES28 = 85 | CES53 = 65 | CES78 = 65 |
| CES04 = 72 | CES29 = 50 | CES54 = 77 | CES79 = 86 |
| CES05 = 52 | CES30 = 49 | CES55 = 74 | CES80 = 85 |
| CES06 = 53 | CES31 = 55 | CES56 = 64 | CES81 = 61 |
| CES07 = 44 | CES32 = 55 | CES57 = 60 | CES82 = 93 |
| CES08 = 43 | CES33 = 55 | CES58 = 64 | CES83 = 83 |
| CES09 = 29 | CES34 = 75 | CES59 = 84 | CES84 = 93 |
| CES10 = 79 | CES35 = 88 | CES60 = 89 | CES85 = 81 |
| CES11 = 62 | CES36 = 78 | CES61 = 84 | CES86 = 55 |
| CES12 = 68 | CES37 = 82 | CES62 = 68 | CES87 = 79 |
| CES13 = 45 | CES38 = 54 | CES63 = 68 | CES88 = 72 |
| CES14 = 75 | CES39 = 90 | CES64 = 69 | CES89 = 62 |
| CES15 = 72 | CES40 = 86 | CES65 = 66 | CES90 = 67 |
| CES16 = 49 | CES41 = 75 | CES66 = 64 | CES91 = 89 |
| CES17 = 51 | CES42 = 83 | CES67 = 63 | CES92 = 67 |
| CES18 = 57 | CES43 = 68 | CES68 = 71 | CES93 = 78 |
| CES19 = 74 | CES44 = 98 | CES69 = 81 | CES94 = 52 |
| CES20 = 68 | CES45 = 76 | CES70 = 65 | CES95 = 76 |
| CES21 = 89 | CES46 = 68 | CES71 = 64 | CES96 = 78 |
| CES22 = 81 | CES47 = 60 | CES72 = 88 | CES97 = 76 |
| CES23 = 92 | CES48 = 47 | CES73 = 59 | CES98 = 71 |
| CES24 = 92 | CES49 = 65 | CES74 = 85 | CES99 = 65 |
| CES25 = 74 | CES50 = 74 | CES75 = 66 |            |



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)