

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: P1381441

Luminaire Tested: **VAL-T-SB5C-722-U-T1**

Issue Date: 02/18/2026

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been  
influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P1381441  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/18/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VAL-T-SB5C-722-U-T1  
Description: GALLEON II WALL SLIM HIGH DENSITY LED ARRAYS 5SQUARE 252W 70CRI  
2200K FIXTURE w/ TYPE I DISTRIBUTION OPTIC  
Light Source: (130) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

| <u>Sample No.</u> | <u>Condition</u> | <u>Description</u> |
|-------------------|------------------|--------------------|
| a                 | good             | reflector          |
| b                 | good             | lens               |
| c                 | good             | housing            |
| d                 | good             | cord               |

**Summary**

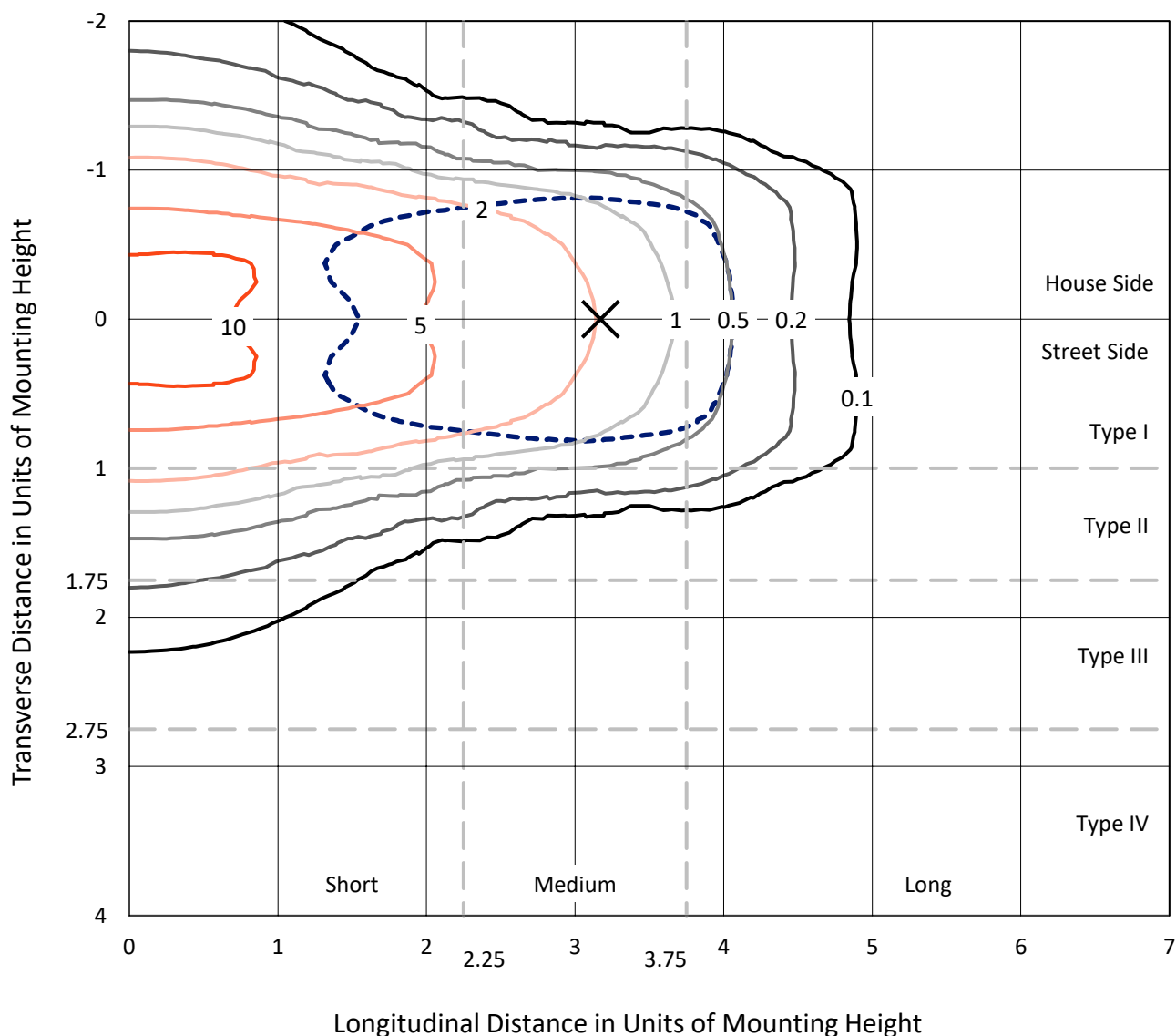
Lumens per Lamp: N/A  
Luminaire Lumens: 29507.2 lumens  
Efficiency: N/A  
Efficacy: 117.1 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type I - Short  
BUG Rating: B4 - U0 - G4

Input Watts (W): 252  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.98  
Total Harmonic Distortion (THDi): 7.9%  
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

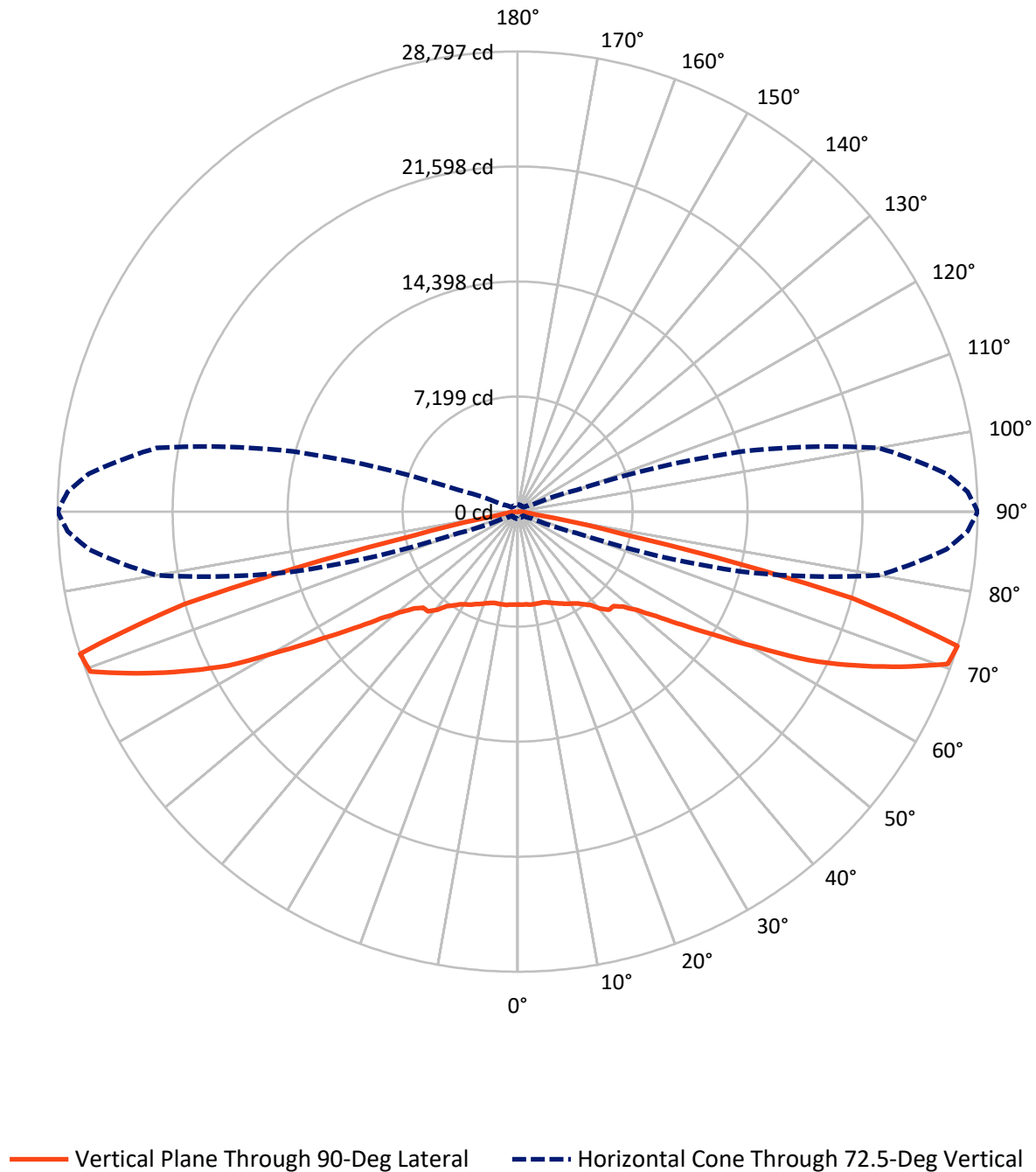
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 14.5 fc  
 Type I - Short - N/A

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## Luminous Intensity Polar Plot



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CATALOG NUMBER: VAL-T-SB5C-722-U-T1

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 14753.6  | 0.0    | 14753.6 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 14753.6  | 0.0    | 14753.6 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 29507.2  | 0.0    | 29507.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 562.7   | 1.9       |
| 10°-20°   | 1715.1  | 5.8       |
| 20°-30°   | 2866.6  | 9.7       |
| 30°-40°   | 3953.2  | 13.4      |
| 40°-50°   | 4846.1  | 16.4      |
| 50°-60°   | 5679.0  | 19.2      |
| 60°-70°   | 6306.4  | 21.4      |
| 70°-80°   | 3429.4  | 11.6      |
| 80°-90°   | 148.6   | 0.5       |
| 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°    | 29507.2 | 100.0     |
| 0°-180°   | 29507.2 | 100.0     |



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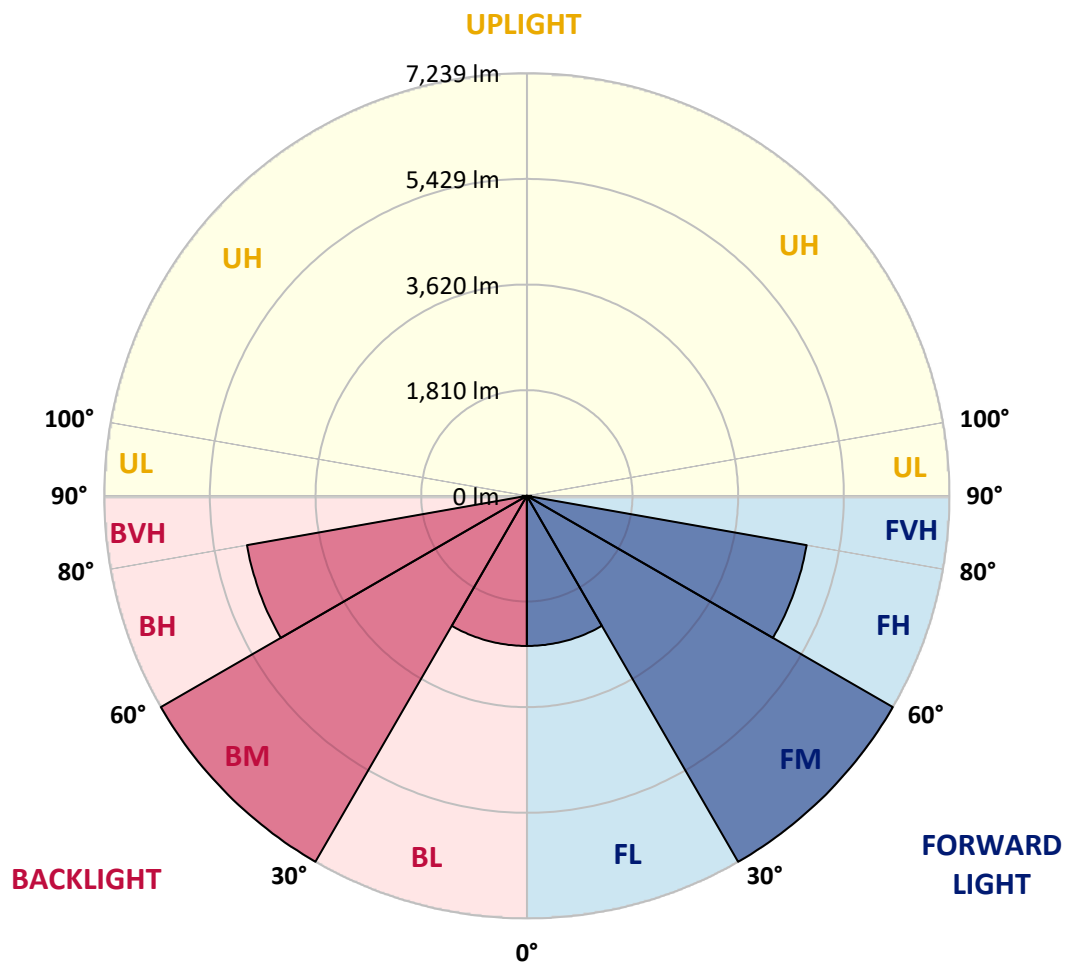
CATALOG NUMBER: VAL-T-SB5C-722-U-T1

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2572.2 | 8.7       |                         |      |         |
| FM   | (30°-60°)   | 7239.2 | 24.5      |                         |      |         |
| FH   | (60°-80°)   | 4867.9 | 16.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 74.3   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 2572.2 | 8.7       | B4/5000                 |      |         |
| BM   | (30°-60°)   | 7239.2 | 24.5      | B4/8500                 |      |         |
| BH   | (60°-80°)   | 4867.9 | 16.5      | B4/5000                 |      | G4/5000 |
| BVH  | (80°-90°)   | 74.3   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G4**

Type I Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°     | 70°     | 75°     | 80°     |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0°    | 5813.6 | 5813.6 | 5813.6 | 5813.6 | 5813.6 | 5813.6 | 5813.6 | 5813.6  | 5813.6  | 5813.6  | 5813.6  |
| 2.5°  | 5820.1 | 5820.1 | 5800.7 | 5826.6 | 5813.6 | 5820.1 | 5826.6 | 5820.1  | 5813.6  | 5820.1  | 5826.6  |
| 5°    | 5852.4 | 5839.5 | 5852.4 | 5865.3 | 5845.9 | 5858.9 | 5852.4 | 5820.1  | 5839.5  | 5839.5  | 5839.5  |
| 7.5°  | 5910.5 | 5923.5 | 5910.5 | 5942.8 | 5923.5 | 5962.2 | 5923.5 | 5897.6  | 5891.2  | 5884.7  | 5884.7  |
| 10°   | 5936.4 | 5936.4 | 5929.9 | 5988.1 | 6001.0 | 6039.7 | 6013.9 | 5975.1  | 5955.8  | 5929.9  | 5904.1  |
| 12.5° | 5865.3 | 5878.2 | 5910.5 | 6020.4 | 6072.0 | 6149.5 | 6130.2 | 6052.7  | 5994.5  | 5975.1  | 5936.4  |
| 15°   | 5787.8 | 5800.7 | 5865.3 | 6001.0 | 6123.7 | 6240.0 | 6233.5 | 6136.6  | 6065.6  | 6013.9  | 5955.8  |
| 17.5° | 5665.1 | 5684.5 | 5774.9 | 5981.6 | 6201.2 | 6330.4 | 6369.2 | 6272.3  | 6194.8  | 6110.8  | 6033.3  |
| 20°   | 5458.4 | 5458.4 | 5619.9 | 5884.7 | 6188.3 | 6479.0 | 6582.3 | 6504.8  | 6414.4  | 6278.7  | 6175.4  |
| 22.5° | 5225.8 | 5238.7 | 5400.2 | 5749.1 | 6181.8 | 6608.2 | 6808.4 | 6724.5  | 6634.0  | 6485.4  | 6330.4  |
| 25°   | 4993.3 | 4993.3 | 5174.1 | 5568.2 | 6097.9 | 6698.6 | 7073.3 | 7028.1  | 6847.2  | 6711.5  | 6511.3  |
| 27.5° | 4780.1 | 4780.1 | 4973.9 | 5387.3 | 5955.8 | 6724.5 | 7338.1 | 7338.1  | 7137.9  | 6937.6  | 6718.0  |
| 30°   | 4528.2 | 4592.8 | 4812.4 | 5245.2 | 5826.6 | 6679.2 | 7531.9 | 7654.6  | 7473.8  | 7215.4  | 6892.4  |
| 32.5° | 4315.0 | 4360.2 | 4586.3 | 5045.0 | 5639.2 | 6627.6 | 7751.5 | 8055.1  | 7867.8  | 7512.5  | 7150.8  |
| 35°   | 4063.1 | 4056.6 | 4315.0 | 4767.2 | 5374.4 | 6511.3 | 7925.9 | 8533.1  | 8352.3  | 7971.2  | 7480.2  |
| 37.5° | 3733.7 | 3733.7 | 3998.5 | 4437.8 | 5122.5 | 6311.0 | 8068.1 | 9062.8  | 8927.2  | 8494.4  | 7971.2  |
| 40°   | 3378.4 | 3417.1 | 3649.7 | 4095.4 | 4818.9 | 6072.0 | 8068.1 | 9495.6  | 9566.7  | 9121.0  | 8578.4  |
| 42.5° | 3120.0 | 3132.9 | 3346.1 | 3766.0 | 4483.0 | 5762.0 | 7964.7 | 9870.3  | 10083.5 | 9708.8  | 9004.7  |
| 45°   | 2848.7 | 2881.0 | 3061.9 | 3449.4 | 4134.2 | 5393.8 | 7783.8 | 10290.2 | 10632.5 | 10374.1 | 9450.4  |
| 47.5° | 2519.2 | 2551.5 | 2758.3 | 3152.3 | 3804.7 | 4993.3 | 7480.2 | 10729.4 | 11446.4 | 11259.1 | 10244.9 |
| 50°   | 2138.1 | 2164.0 | 2357.8 | 2777.6 | 3436.5 | 4534.6 | 7099.1 | 11058.9 | 12260.3 | 12447.7 | 11446.4 |
| 52.5° | 1673.0 | 1692.4 | 1899.1 | 2306.1 | 2997.3 | 4095.4 | 6563.0 | 11259.1 | 13080.7 | 13739.6 | 13054.9 |
| 55°   | 1201.5 | 1233.8 | 1414.7 | 1750.6 | 2415.9 | 3507.6 | 5923.5 | 11362.5 | 13978.6 | 15270.5 | 15050.9 |
| 57.5° | 865.6  | 878.5  | 1001.2 | 1259.6 | 1795.8 | 2816.4 | 5103.1 | 11188.0 | 14786.0 | 17098.6 | 17557.2 |
| 60°   | 717.0  | 717.0  | 736.4  | 859.1  | 1227.3 | 1989.6 | 4121.2 | 10542.1 | 15477.2 | 18946.0 | 20360.7 |
| 62.5° | 658.9  | 658.9  | 671.8  | 691.2  | 807.5  | 1291.9 | 2945.6 | 9230.8  | 15554.7 | 20722.4 | 23435.5 |
| 65°   | 600.7  | 600.7  | 613.7  | 626.6  | 652.4  | 839.7  | 1776.4 | 6756.8  | 14036.7 | 20741.8 | 25089.1 |
| 67.5° | 549.1  | 549.1  | 555.5  | 562.0  | 574.9  | 613.7  | 975.4  | 4095.4  | 11233.3 | 20192.7 | 25722.2 |
| 70°   | 497.4  | 497.4  | 497.4  | 490.9  | 510.3  | 516.8  | 646.0  | 2080.0  | 7512.5  | 18235.5 | 25418.6 |
| 72.5° | 439.3  | 439.3  | 432.8  | 419.9  | 426.3  | 426.3  | 478.0  | 1020.6  | 3901.6  | 14495.4 | 22951.0 |
| 75°   | 374.7  | 381.1  | 355.3  | 342.4  | 335.9  | 342.4  | 381.1  | 581.4   | 1744.1  | 8791.5  | 17150.3 |
| 77.5° | 316.5  | 329.4  | 290.7  | 264.8  | 258.4  | 258.4  | 297.1  | 361.7   | 749.3   | 3191.0  | 7686.9  |
| 80°   | 239.0  | 245.5  | 213.2  | 187.3  | 187.3  | 180.9  | 219.6  | 264.8   | 355.3   | 949.6   | 1724.7  |
| 82.5° | 135.7  | 135.7  | 122.7  | 109.8  | 103.4  | 109.8  | 148.6  | 180.9   | 219.6   | 335.9   | 471.6   |
| 85°   | 32.3   | 32.3   | 38.8   | 45.2   | 45.2   | 58.1   | 84.0   | 96.9    | 116.3   | 135.7   | 180.9   |
| 87.5° | 6.5    | 6.5    | 6.5    | 12.9   | 19.4   | 19.4   | 32.3   | 45.2    | 58.1    | 71.1    | 77.5    |
| 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: VAL-T-SB5C-722-U-T1

**CANDELA DISTRIBUTION (continued):**

|       | 85°     | 87.5°   | 90°     |
|-------|---------|---------|---------|
| 0°    | 5813.6  | 5813.6  | 5813.6  |
| 2.5°  | 5826.6  | 5833.0  | 5826.6  |
| 5°    | 5865.3  | 5852.4  | 5833.0  |
| 7.5°  | 5871.8  | 5878.2  | 5884.7  |
| 10°   | 5897.6  | 5923.5  | 5884.7  |
| 12.5° | 5923.5  | 5904.1  | 5891.2  |
| 15°   | 5942.8  | 5936.4  | 5897.6  |
| 17.5° | 6013.9  | 5988.1  | 5981.6  |
| 20°   | 6123.7  | 6117.3  | 6097.9  |
| 22.5° | 6252.9  | 6240.0  | 6233.5  |
| 25°   | 6440.2  | 6395.0  | 6369.2  |
| 27.5° | 6595.3  | 6556.5  | 6543.6  |
| 30°   | 6750.3  | 6672.8  | 6672.8  |
| 32.5° | 6885.9  | 6866.6  | 6853.6  |
| 35°   | 7208.9  | 7112.0  | 7124.9  |
| 37.5° | 7603.0  | 7506.1  | 7422.1  |
| 40°   | 8158.5  | 8029.3  | 7977.6  |
| 42.5° | 8513.8  | 8384.6  | 8397.5  |
| 45°   | 8714.0  | 8487.9  | 8429.8  |
| 47.5° | 9256.6  | 8972.4  | 8894.9  |
| 50°   | 10135.1 | 9786.3  | 9689.4  |
| 52.5° | 11556.2 | 10994.3 | 10865.1 |
| 55°   | 13339.1 | 12647.9 | 12518.7 |
| 57.5° | 15780.8 | 14863.6 | 14585.8 |
| 60°   | 18752.2 | 17615.4 | 17195.5 |
| 62.5° | 22324.4 | 20922.7 | 20522.2 |
| 65°   | 25011.6 | 23842.4 | 23222.3 |
| 67.5° | 27162.7 | 26200.2 | 25903.0 |
| 70°   | 28441.7 | 28486.9 | 28564.4 |
| 72.5° | 26962.4 | 28202.7 | 28796.9 |
| 75°   | 19759.9 | 20722.4 | 21646.2 |
| 77.5° | 7635.3  | 6885.9  | 6666.3  |
| 80°   | 1233.8  | 1156.3  | 1195.0  |
| 82.5° | 555.5   | 587.8   | 620.1   |
| 85°   | 361.7   | 419.9   | 445.7   |
| 87.5° | 84.0    | 84.0    | 84.0    |
| 90°   | 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

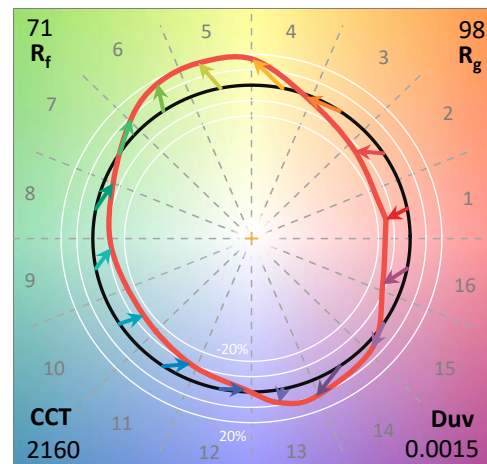
Data in this report applies to families of products including GSS-SB1A-722-U-5WQ

### 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           |



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### 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

| $\lambda$<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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### 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

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

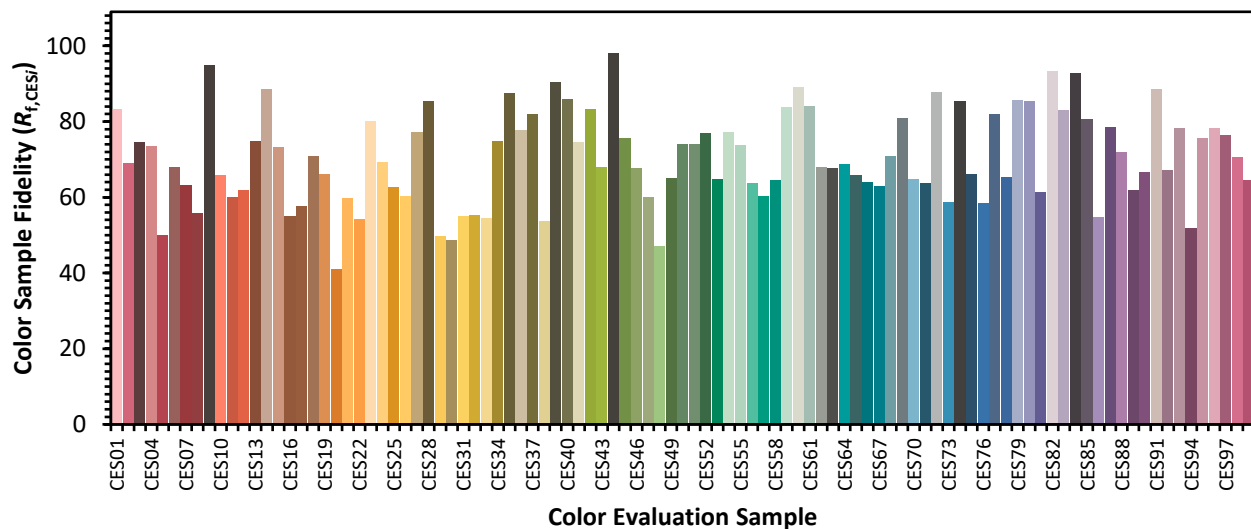


### Color Vector Graphics



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

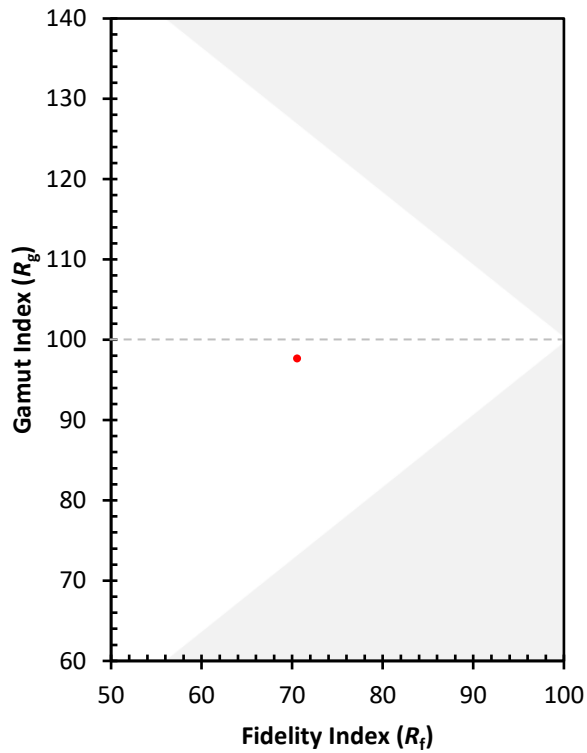
|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 87 | CES26 = 60 | CES51 = 74 | CES76 = 58 |
| CES02 = 65 | CES27 = 77 | CES52 = 77 | CES77 = 82 |
| CES03 = 32 | CES28 = 85 | CES53 = 65 | CES78 = 65 |
| CES04 = 72 | CES29 = 50 | CES54 = 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)