

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: P1382641

Luminaire Tested: **VAL-T-SB5C-730-U-5NQ**

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: P1382641  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 02/18/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VAL-T-SB5C-730-U-5NQ  
Description: GALLEON II WALL SLIM HIGH DENSITY LED ARRAYS 55 SQUARE 252W 70CRI  
3000K FIXTURE w/ TYPE V SQUARE NARROW DISTRIBUTION OPTIC  
Light Source: (130) 3000K 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: 37670.1 lumens  
Efficiency: N/A  
Efficacy: 149.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B5 - U0 - G3  
  
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

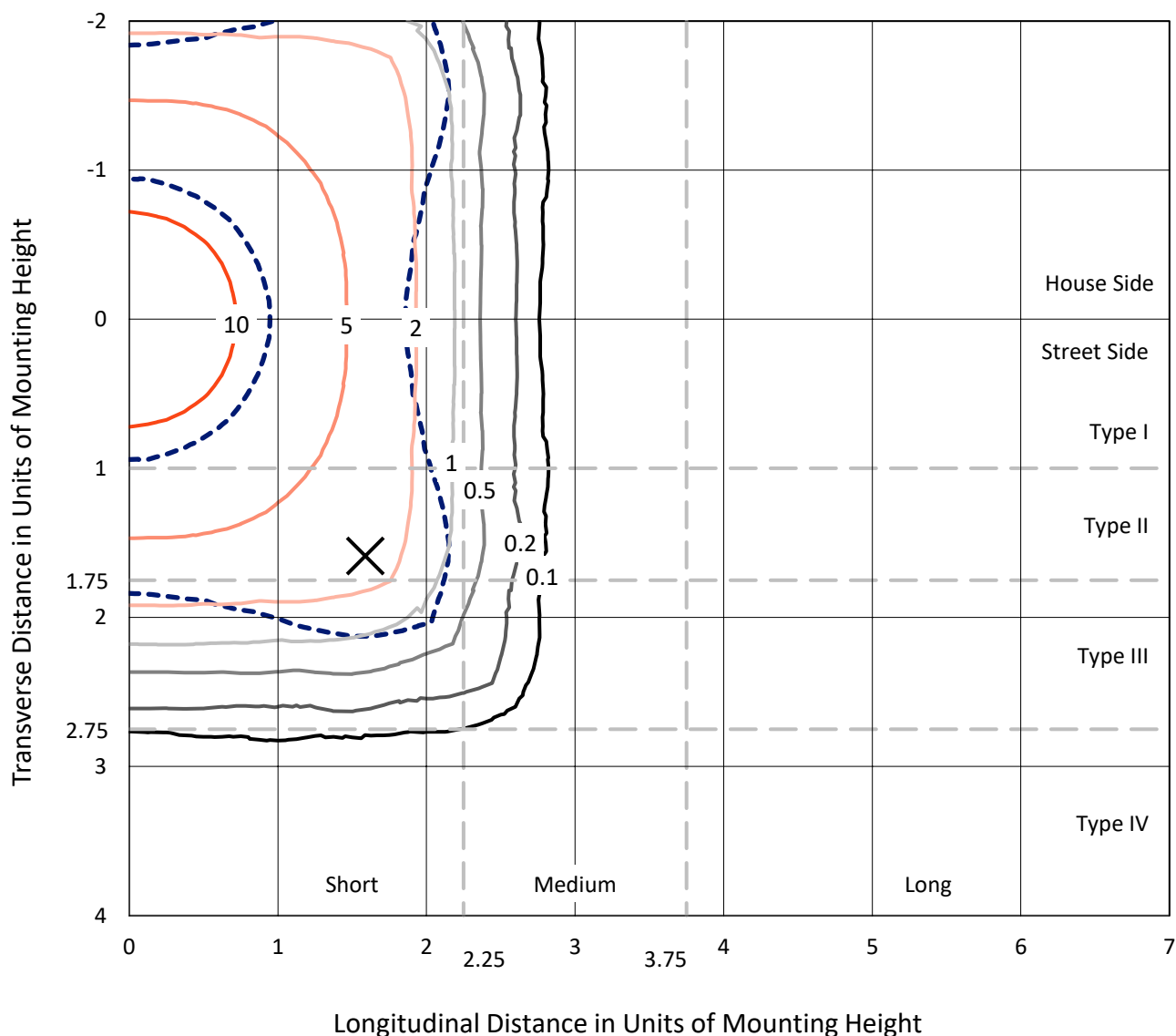
REPORT NUMBER: P1382641

CATALOG NUMBER: VAL-T-SB5C-730-U-5NQ

## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

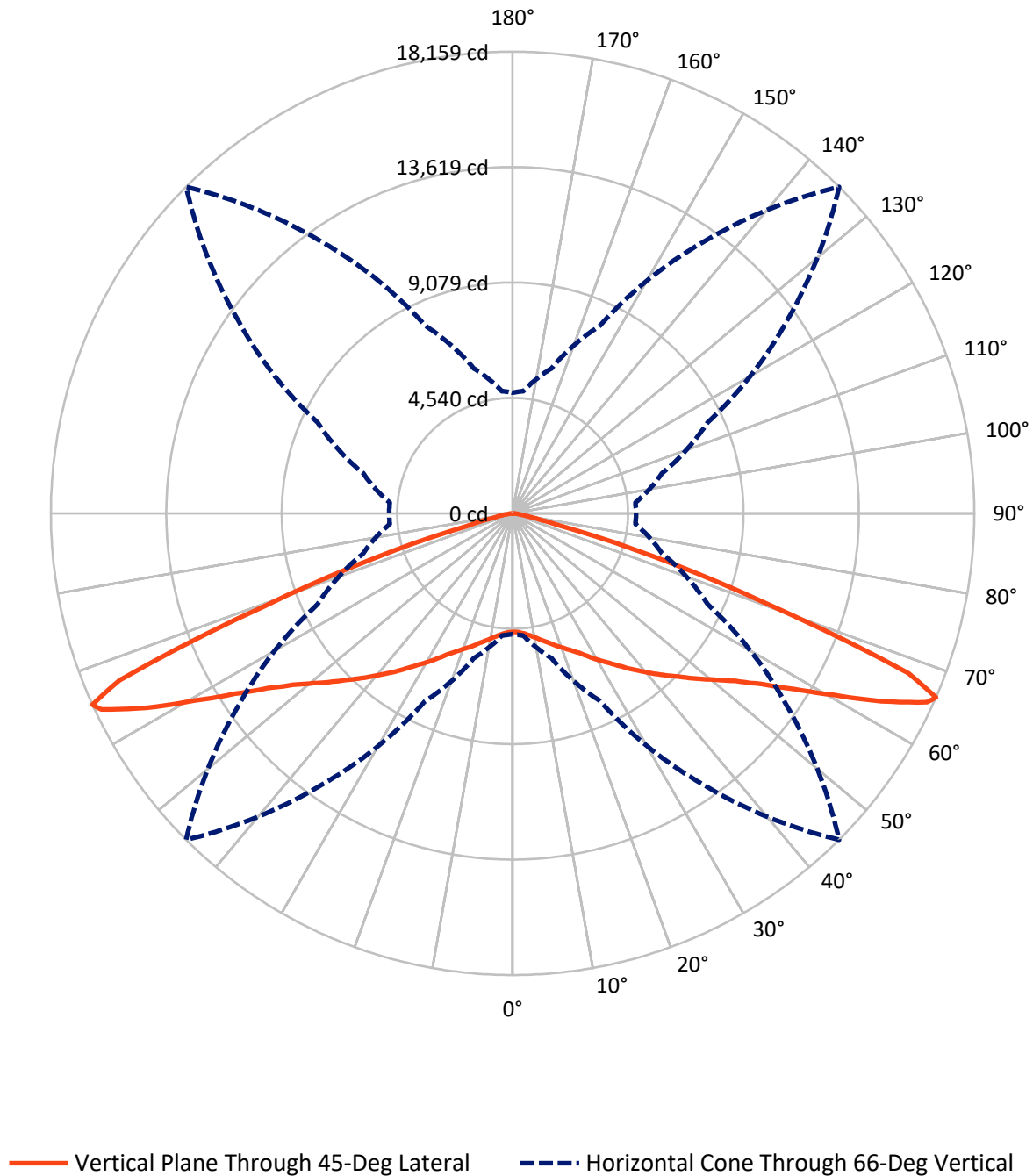


Based on 20 foot mounting height. Maximum calculated value = 11.9 fc

Type V - Short - N/A

REPORT NUMBER: P1382641  
CATALOG NUMBER: VAL-T-SB5C-730-U-5NQ

## Luminous Intensity Polar Plot



REPORT NUMBER: P1382641

CATALOG NUMBER: VAL-T-SB5C-730-U-5NQ

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 18835.0  | 0.0    | 18835.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 18835.0  | 0.0    | 18835.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 37670.1  | 0.0    | 37670.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 460.5   | 1.2       |
| 10°-20°   | 1502.2  | 4.0       |
| 20°-30°   | 2843.6  | 7.5       |
| 30°-40°   | 4668.3  | 12.4      |
| 40°-50°   | 7201.1  | 19.1      |
| 50°-60°   | 10437.3 | 27.7      |
| 60°-70°   | 9185.7  | 24.4      |
| 70°-80°   | 1272.4  | 3.4       |
| 80°-90°   | 99.1    | 0.3       |
| 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°    | 37670.1 | 100.0     |
| 0°-180°   | 37670.1 | 100.0     |



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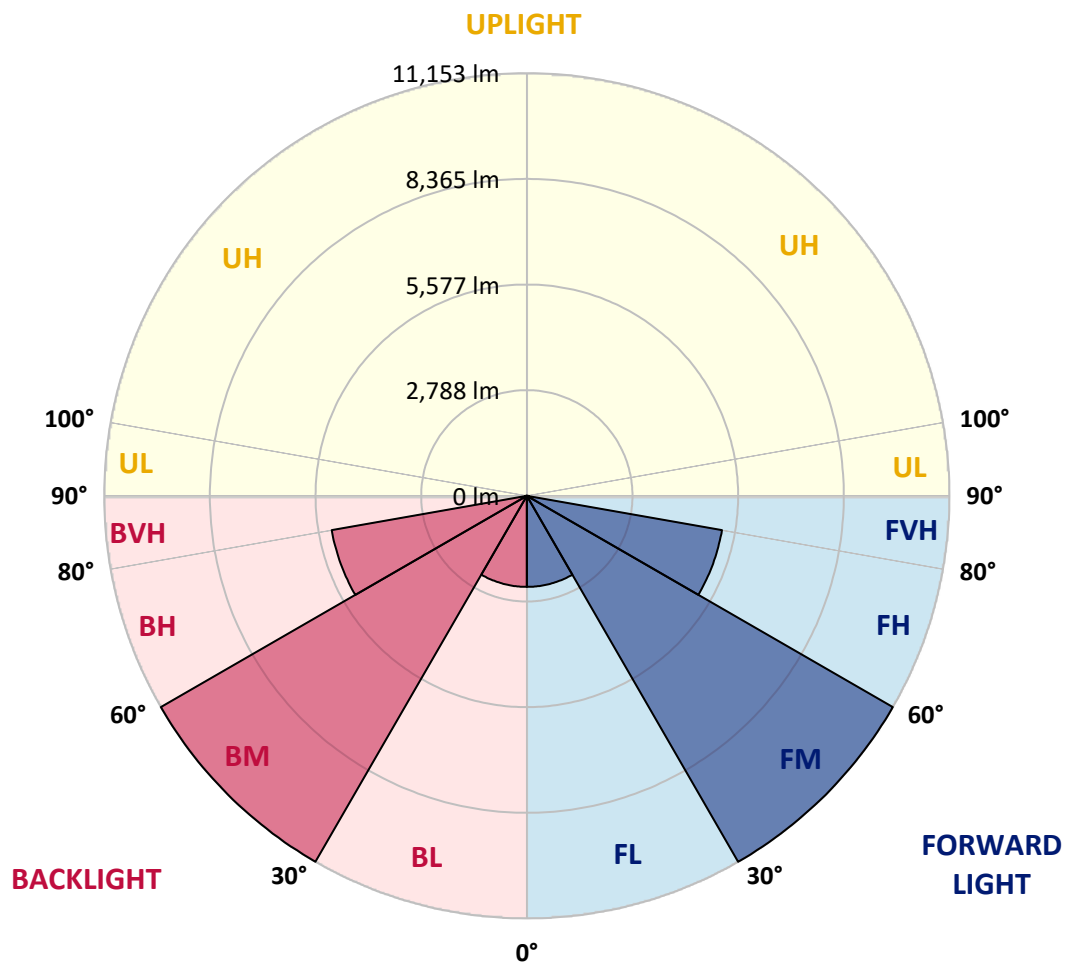
CATALOG NUMBER: VAL-T-SB5C-730-U-5NQ

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

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 2403.1  | 6.4       |                         |      |         |
| FM   | (30°-60°)   | 11153.3 | 29.6      |                         |      |         |
| FH   | (60°-80°)   | 5229.1  | 13.9      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 49.5    | 0.1       |                         |      | G1/100  |
| BL   | (0°-30°)    | 2403.1  | 6.4       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 11153.3 | 29.6      | B5                      |      |         |
| BH   | (60°-80°)   | 5229.1  | 13.9      | B5                      |      | G3/7500 |
| BVH  | (80°-90°)   | 49.5    | 0.1       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B5-U0-G3**

Type V Short



REPORT NUMBER: P1382641

CATALOG NUMBER: VAL-T-SB5C-730-U-5NQ

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 85°     | 90°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  | 4663.4  |
| 2.5°  | 4688.5  | 4680.1  | 4663.4  | 4671.7  | 4663.4  | 4680.1  | 4705.3  | 4671.7  | 4688.5  | 4696.9  | 4688.5  |
| 5°    | 4747.2  | 4747.2  | 4722.1  | 4738.8  | 4738.8  | 4747.2  | 4755.6  | 4738.8  | 4755.6  | 4755.6  | 4755.6  |
| 7.5°  | 4856.3  | 4864.7  | 4839.5  | 4839.5  | 4847.9  | 4847.9  | 4864.7  | 4856.3  | 4856.3  | 4864.7  | 4873.0  |
| 10°   | 4982.1  | 4982.1  | 4956.9  | 4956.9  | 4965.3  | 4973.7  | 4982.1  | 4965.3  | 4973.7  | 4973.7  | 4973.7  |
| 12.5° | 5116.3  | 5107.9  | 5082.7  | 5091.1  | 5091.1  | 5124.7  | 5124.7  | 5099.5  | 5091.1  | 5091.1  | 5091.1  |
| 15°   | 5250.5  | 5250.5  | 5233.7  | 5242.1  | 5267.2  | 5275.6  | 5284.0  | 5233.7  | 5233.7  | 5216.9  | 5216.9  |
| 17.5° | 5435.0  | 5418.2  | 5418.2  | 5409.8  | 5443.4  | 5468.5  | 5451.8  | 5401.4  | 5409.8  | 5393.1  | 5393.1  |
| 20°   | 5644.7  | 5627.9  | 5602.7  | 5619.5  | 5619.5  | 5644.7  | 5636.3  | 5594.4  | 5594.4  | 5594.4  | 5594.4  |
| 22.5° | 5871.1  | 5862.7  | 5837.6  | 5862.7  | 5854.4  | 5846.0  | 5854.4  | 5846.0  | 5829.2  | 5837.6  | 5846.0  |
| 25°   | 6114.4  | 6097.6  | 6080.8  | 6122.8  | 6097.6  | 6080.8  | 6106.0  | 6106.0  | 6089.2  | 6080.8  | 6114.4  |
| 27.5° | 6366.0  | 6349.2  | 6349.2  | 6391.1  | 6349.2  | 6382.8  | 6391.1  | 6366.0  | 6357.6  | 6349.2  | 6374.4  |
| 30°   | 6642.8  | 6626.0  | 6642.8  | 6684.7  | 6659.5  | 6701.5  | 6701.5  | 6684.7  | 6634.4  | 6634.4  | 6651.2  |
| 32.5° | 6978.3  | 6953.1  | 6978.3  | 7003.4  | 7003.4  | 7028.6  | 7037.0  | 7011.8  | 7003.4  | 6969.9  | 7011.8  |
| 35°   | 7355.7  | 7338.9  | 7338.9  | 7364.1  | 7364.1  | 7406.0  | 7406.0  | 7389.2  | 7372.5  | 7355.7  | 7372.5  |
| 37.5° | 7808.6  | 7749.9  | 7783.4  | 7775.1  | 7783.4  | 7817.0  | 7817.0  | 7758.3  | 7791.8  | 7766.7  | 7800.2  |
| 40°   | 8236.4  | 8169.3  | 8253.1  | 8228.0  | 8244.8  | 8236.4  | 8253.1  | 8228.0  | 8219.6  | 8186.0  | 8219.6  |
| 42.5° | 8706.1  | 8655.7  | 8731.2  | 8731.2  | 8739.6  | 8697.7  | 8722.8  | 8714.4  | 8714.4  | 8655.7  | 8672.5  |
| 45°   | 9251.2  | 9167.4  | 9276.4  | 9276.4  | 9251.2  | 9167.4  | 9259.6  | 9242.8  | 9259.6  | 9175.7  | 9200.9  |
| 47.5° | 9779.6  | 9712.5  | 9880.3  | 9897.1  | 9830.0  | 9712.5  | 9821.6  | 9838.3  | 9830.0  | 9712.5  | 9754.5  |
| 50°   | 10333.2 | 10266.1 | 10467.4 | 10593.2 | 10484.2 | 10282.9 | 10425.5 | 10526.1 | 10467.4 | 10257.7 | 10274.5 |
| 52.5° | 10836.4 | 10802.9 | 11096.4 | 11306.1 | 11180.3 | 10953.9 | 11155.2 | 11222.3 | 11079.7 | 10802.9 | 10811.3 |
| 55°   | 11213.9 | 11222.3 | 11641.6 | 12035.8 | 12035.8 | 11842.9 | 11985.5 | 11943.6 | 11591.3 | 11188.7 | 11171.9 |
| 57.5° | 11272.6 | 11314.5 | 11893.2 | 12698.4 | 13075.9 | 13025.5 | 12950.0 | 12530.7 | 11809.4 | 11188.7 | 11155.2 |
| 60°   | 10090.0 | 10274.5 | 11297.7 | 12966.8 | 14065.6 | 14501.7 | 13948.1 | 12698.4 | 11239.0 | 10324.8 | 10240.9 |
| 62.5° | 7976.4  | 8085.4  | 9184.1  | 11742.3 | 14862.4 | 16279.8 | 14602.4 | 11834.5 | 9460.9  | 8337.0  | 8219.6  |
| 65°   | 5862.7  | 6038.9  | 6978.3  | 9175.7  | 13998.5 | 17915.3 | 13981.7 | 9452.5  | 7187.9  | 6198.2  | 6122.8  |
| 66°   | 4747.2  | 4822.7  | 5896.3  | 8144.1  | 12992.0 | 18158.6 | 13143.0 | 8462.8  | 6080.8  | 4847.9  | 4856.3  |
| 67.5° | 2851.7  | 2935.6  | 3950.4  | 6382.8  | 10886.8 | 16791.4 | 11448.7 | 6592.4  | 3958.8  | 2910.4  | 2675.6  |
| 70°   | 1031.6  | 1065.2  | 1383.9  | 2591.7  | 7322.1  | 10383.5 | 7607.3  | 2574.9  | 1316.8  | 1056.8  | 1023.3  |
| 72.5° | 629.1   | 637.4   | 704.5   | 981.3   | 2256.2  | 5762.1  | 2189.1  | 989.7   | 704.5   | 603.9   | 603.9   |
| 75°   | 360.7   | 360.7   | 478.1   | 587.1   | 838.7   | 1828.4  | 813.6   | 595.5   | 486.5   | 427.8   | 411.0   |
| 77.5° | 260.0   | 268.4   | 352.3   | 402.6   | 486.5   | 738.1   | 494.9   | 369.0   | 310.3   | 251.6   | 251.6   |
| 80°   | 184.5   | 192.9   | 234.8   | 285.2   | 335.5   | 419.4   | 268.4   | 234.8   | 226.5   | 159.4   | 159.4   |
| 82.5° | 125.8   | 125.8   | 134.2   | 167.7   | 176.1   | 167.7   | 142.6   | 151.0   | 142.6   | 109.0   | 100.6   |
| 85°   | 50.3    | 50.3    | 58.7    | 67.1    | 67.1    | 58.7    | 67.1    | 75.5    | 67.1    | 50.3    | 50.3    |
| 87.5° | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    | 25.2    |
| 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: SP1-2407-184-4

Test Date: 10/10/2024

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

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

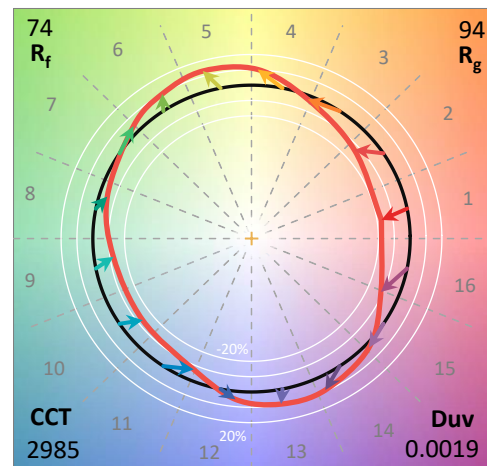
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2407-184-4  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 10/15/2024  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: McGraw-Edison  
 Catalog Number: **GSS-SB1A-730-U-5WQ**  
 Description: GALLEON II SITE SLIM 1SQ 350MA 5WQ HIGH DENSITY LIGHTSQUARE WITH 70 CRI  
 3000K CCT 26 LEDS

### Spectral Parameters

CCT (K): 2985  
 CIE  $u'$ : 0.2504  
 CIE  $v'$ : 0.5243  
 Duv: 0.0019  
 CIE x: 0.4408  
 CIE y: 0.4101  
 CIE z: 0.1491  
 Peak Wavelength (nm): 595  
 Dominant Wavelength (nm): 582  
 Purity: 55.41818  
 R<sub>f</sub>: 73.8  
 R<sub>g</sub>: 94.4

CRI (Ra): 70.8  
 R1: 66.3  
 R2: 80.6  
 R3: 94.5  
 R4: 68.2  
 R5: 66.5  
 R6: 74.7  
 R7: 76.2  
 R8: 39.6  
 R9: -43.2  
 R10: 57.6  
 R11: 64.8  
 R12: 53.5  
 R13: 68.7  
 R14: 97.0  
 R15: 56.4



### Test Conditions

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

REPORT NUMBER: SP1-2407-184-4

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

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**CIE 1931 Chromaticity Diagram**



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



Point lies inside the ANSI 3000K 4-step quadrangle

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### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

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

REPORT NUMBER: SP1-2407-184-4

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.19

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

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### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.13**

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

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TM-30-18

### Summary

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



### Color Vector Graphics

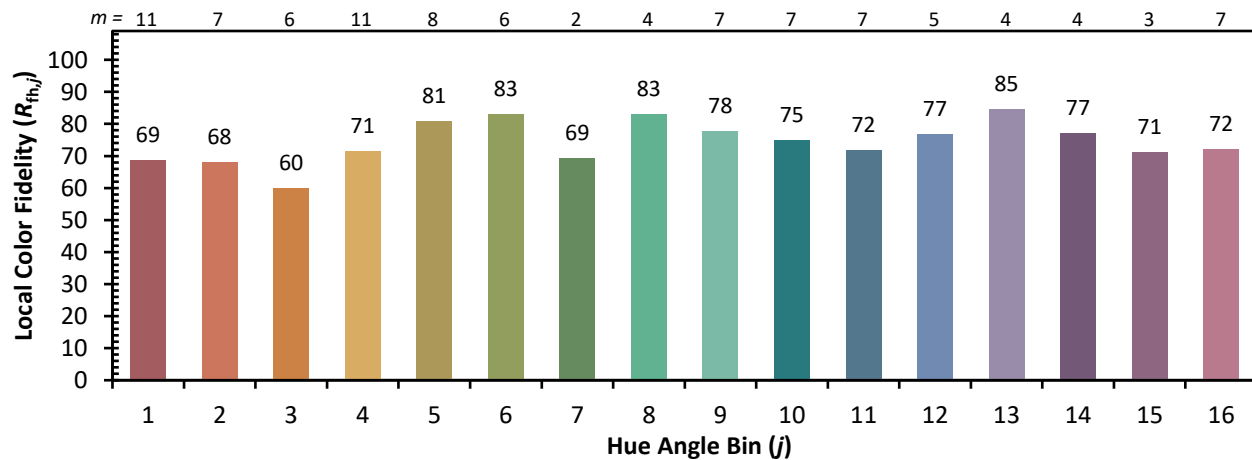


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

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



### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)