

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P1217131

Luminaire Tested: 14-ID2-50-CNC-L835-U

Issue Date: 12/5/2025

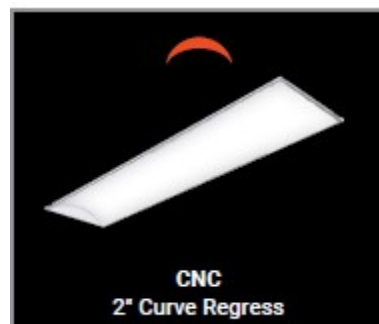
**Test Information**

Test Method: LM-79-2019  
Report Number: P1217131  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2508-507-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 14-ID2-50-CNC-L835-U  
Description: 1X4 IN DEPTH TROFFER WITH 2INCH CURVE REGRESS LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

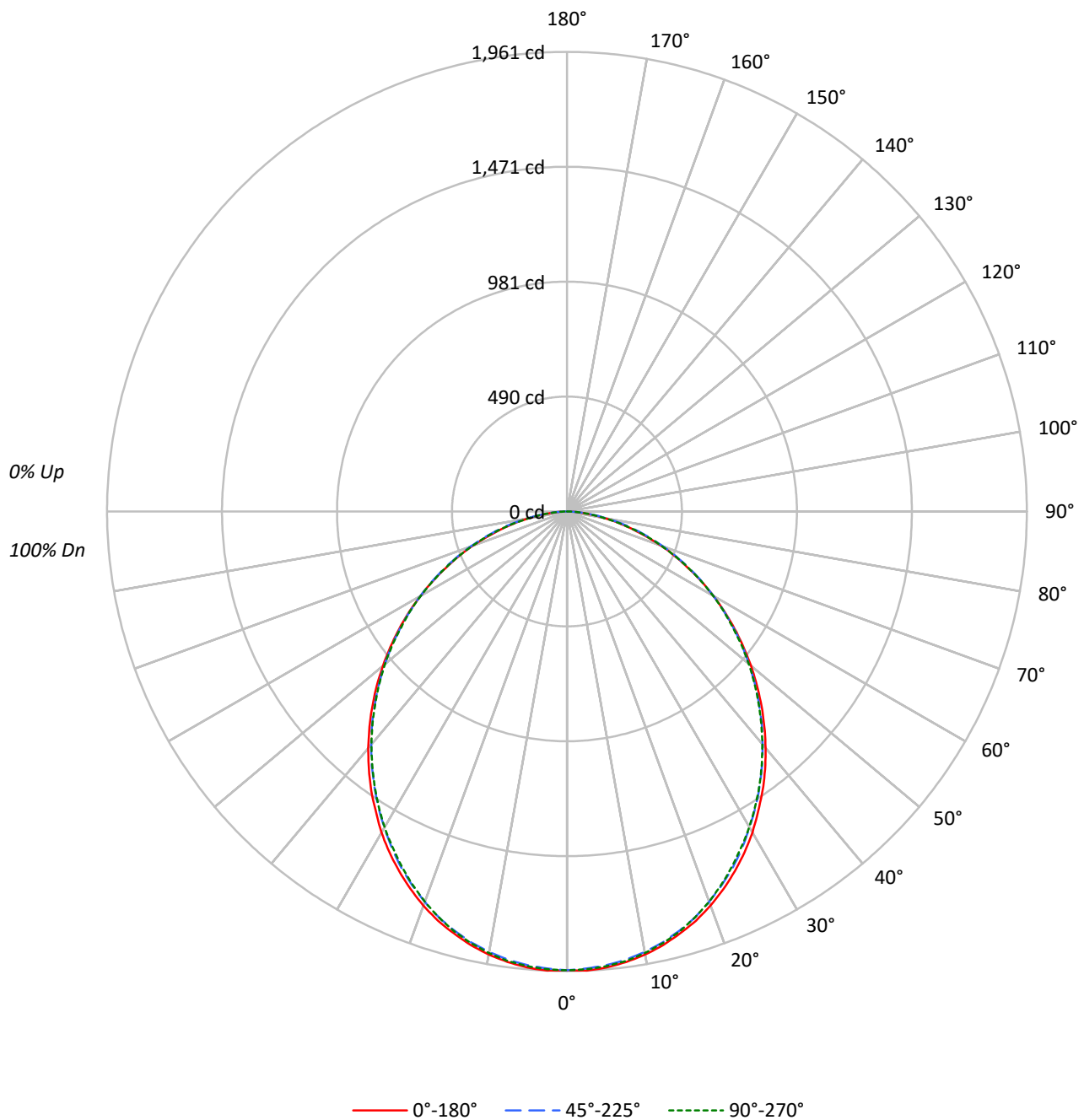
Lumens per Lamp: N/A  
Luminaire Lumens: 5009.9 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 44.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P1217131  
CATALOG NUMBER: 14-ID2-50-CNC-L835-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1217131

CATALOG NUMBER: 14-ID2-50-CNC-L835-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 100 |
| 1   | 109 | 104 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 92  | 89  |  | 84  |
| 2   | 99  | 91  | 85  | 79  | 97  | 90  | 83  | 78  | 86  | 81  | 76  |  | 83  | 78  | 75  |  | 71  |
| 3   | 91  | 81  | 73  | 66  | 88  | 79  | 72  | 66  | 76  | 70  | 64  |  | 73  | 68  | 63  |  | 60  |
| 4   | 83  | 72  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 61  | 55  |  | 65  | 59  | 54  |  | 52  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 48  | 61  | 54  | 48  |  | 59  | 53  | 47  |  | 45  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 49  | 43  | 55  | 48  | 42  |  | 53  | 47  | 42  |  | 39  |
| 7   | 66  | 53  | 44  | 38  | 64  | 52  | 44  | 38  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 35  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 34  |  | 45  | 38  | 33  |  | 31  |
| 9   | 57  | 44  | 36  | 31  | 56  | 44  | 36  | 31  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 28  |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 39  | 32  | 28  |  | 38  | 32  | 27  |  | 26  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5268 | 5268 | 5268 |
| 5°  | 5276 | 5249 | 5260 |
| 10° | 5246 | 5216 | 5228 |
| 15° | 5192 | 5159 | 5169 |
| 20° | 5125 | 5076 | 5074 |
| 25° | 5028 | 4972 | 4955 |
| 30° | 4915 | 4838 | 4833 |
| 35° | 4779 | 4704 | 4698 |
| 40° | 4629 | 4560 | 4554 |
| 45° | 4464 | 4405 | 4396 |
| 50° | 4286 | 4244 | 4237 |
| 55° | 4096 | 4069 | 4048 |
| 60° | 3883 | 3883 | 3869 |
| 65° | 3623 | 3677 | 3645 |
| 70° | 3358 | 3431 | 3378 |
| 75° | 2967 | 3152 | 3029 |
| 80° | 2521 | 2720 | 2521 |
| 85° | 1893 | 2050 | 1973 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4464 cd/sqm

TEST NUMBER: P1217131  
 CATALOG NUMBER: 14-ID2-50-CNC-L835-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 184.7  | 3.7       |
| 10°-20°   | 522.8  | 10.4      |
| 20°-30°   | 771.6  | 15.4      |
| 30°-40°   | 897.9  | 17.9      |
| 40°-50°   | 894.8  | 17.9      |
| 50°-60°   | 775.9  | 15.5      |
| 60°-70°   | 569.1  | 11.4      |
| 70°-80°   | 314.7  | 6.3       |
| 80°-90°   | 78.4   | 1.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1479.1 | 29.5      |
| 0°-40°    | 2377.0 | 47.4      |
| 0°-60°    | 4047.7 | 80.8      |
| 0°-90°    | 5009.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5009.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1958 | 1958  | 1958 | 1958  | 1958 |      |
| 5°  | 1953 | 1951  | 1943 | 1943  | 1947 | 185  |
| 15° | 1864 | 1860  | 1852 | 1849  | 1855 | 526  |
| 25° | 1693 | 1684  | 1675 | 1665  | 1669 | 780  |
| 35° | 1455 | 1446  | 1432 | 1425  | 1430 | 909  |
| 45° | 1173 | 1167  | 1158 | 1151  | 1155 | 905  |
| 55° | 873  | 871   | 867  | 862   | 863  | 780  |
| 65° | 569  | 578   | 578  | 570   | 572  | 566  |
| 75° | 285  | 304   | 303  | 292   | 291  | 305  |
| 85° | 61   | 70    | 66   | 61    | 64   | 74   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1217131

CATALOG NUMBER: 14-ID2-50-CNC-L835-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1957.5 | 1957.5 | 1957.5 | 1957.5 | 1957.5 |
| 2.5°  | 1960.9 | 1958.3 | 1951.5 | 1951.5 | 1954.9 |
| 5°    | 1953.2 | 1950.7 | 1943.0 | 1943.0 | 1947.3 |
| 7.5°  | 1938.7 | 1937.0 | 1928.5 | 1928.5 | 1934.5 |
| 10°   | 1920.0 | 1916.6 | 1908.9 | 1908.1 | 1913.2 |
| 12.5° | 1895.3 | 1891.9 | 1883.4 | 1881.7 | 1886.8 |
| 15°   | 1863.8 | 1860.4 | 1851.9 | 1849.3 | 1855.3 |
| 17.5° | 1830.6 | 1823.8 | 1816.1 | 1811.0 | 1816.1 |
| 20°   | 1789.7 | 1782.9 | 1772.6 | 1766.7 | 1771.8 |
| 22.5° | 1743.7 | 1736.0 | 1725.8 | 1716.4 | 1722.4 |
| 25°   | 1693.4 | 1684.1 | 1674.7 | 1665.3 | 1668.7 |
| 27.5° | 1639.8 | 1628.7 | 1617.6 | 1609.1 | 1612.5 |
| 30°   | 1581.8 | 1569.9 | 1557.1 | 1550.3 | 1555.4 |
| 32.5° | 1517.1 | 1510.3 | 1496.7 | 1489.0 | 1493.2 |
| 35°   | 1454.9 | 1445.5 | 1431.9 | 1425.1 | 1430.2 |
| 37.5° | 1387.6 | 1378.3 | 1366.3 | 1358.7 | 1363.8 |
| 40°   | 1317.8 | 1309.3 | 1298.2 | 1290.5 | 1296.5 |
| 42.5° | 1246.2 | 1241.1 | 1229.2 | 1220.7 | 1226.6 |
| 45°   | 1173.0 | 1167.0 | 1157.6 | 1150.8 | 1155.1 |
| 47.5° | 1098.9 | 1093.7 | 1086.1 | 1078.4 | 1084.4 |
| 50°   | 1023.9 | 1022.2 | 1013.7 | 1006.9 | 1012.0 |
| 52.5° | 948.1  | 948.1  | 940.4  | 934.5  | 939.6  |
| 55°   | 873.1  | 871.4  | 867.2  | 862.0  | 862.9  |
| 57.5° | 797.3  | 797.3  | 793.9  | 788.8  | 793.0  |
| 60°   | 721.5  | 724.9  | 721.5  | 715.5  | 718.9  |
| 62.5° | 646.5  | 650.8  | 649.1  | 642.3  | 645.7  |
| 65°   | 569.0  | 578.4  | 577.5  | 569.9  | 572.4  |
| 67.5° | 499.2  | 506.8  | 506.0  | 499.2  | 500.9  |
| 70°   | 426.8  | 437.0  | 436.1  | 428.5  | 429.3  |
| 72.5° | 353.5  | 368.8  | 368.0  | 359.5  | 359.5  |
| 75°   | 285.4  | 304.1  | 303.2  | 292.2  | 291.3  |
| 77.5° | 224.0  | 240.2  | 238.5  | 226.6  | 226.6  |
| 80°   | 162.7  | 177.2  | 175.5  | 162.7  | 162.7  |
| 82.5° | 108.2  | 121.0  | 117.6  | 107.3  | 109.0  |
| 85°   | 61.3   | 69.8   | 66.4   | 61.3   | 63.9   |
| 87.5° | 22.1   | 27.3   | 26.4   | 22.1   | 24.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

TEST NUMBER: P1217131

CATALOG NUMBER: 14-ID2-50-CNC-L835-U

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 16.89            | 18.49 | 17.25 | 18.81 | 19.12 | 16.82          | 18.43 | 17.18 | 18.74 | 19.05 |
|                 | 3H   | 18.57            | 20.02 | 18.95 | 20.35 | 20.71 | 18.51          | 19.96 | 18.89 | 20.29 | 20.65 |
|                 | 4H   | 19.16            | 20.53 | 19.56 | 20.88 | 21.25 | 19.12          | 20.48 | 19.51 | 20.83 | 21.20 |
|                 | 6H   | 19.58            | 20.84 | 19.99 | 21.20 | 21.60 | 19.52          | 20.79 | 19.93 | 21.15 | 21.54 |
|                 | 8H   | 19.69            | 20.90 | 20.11 | 21.28 | 21.68 | 19.63          | 20.84 | 20.06 | 21.23 | 21.63 |
|                 | 12H  | 19.75            | 20.91 | 20.18 | 21.29 | 21.72 | 19.70          | 20.85 | 20.13 | 21.24 | 21.66 |
| 4H              | 2H   | 17.49            | 18.85 | 17.89 | 19.20 | 19.57 | 17.43          | 18.80 | 17.83 | 19.14 | 19.52 |
|                 | 3H   | 19.40            | 20.54 | 19.80 | 20.93 | 21.33 | 19.34          | 20.48 | 19.75 | 20.88 | 21.28 |
|                 | 4H   | 20.13            | 21.16 | 20.56 | 21.57 | 22.01 | 20.06          | 21.09 | 20.49 | 21.51 | 21.94 |
|                 | 6H   | 20.67            | 21.57 | 21.12 | 22.01 | 22.47 | 20.58          | 21.48 | 21.03 | 21.92 | 22.38 |
|                 | 8H   | 20.83            | 21.67 | 21.29 | 22.11 | 22.57 | 20.73          | 21.57 | 21.19 | 22.01 | 22.48 |
|                 | 12H  | 20.92            | 21.68 | 21.40 | 22.15 | 22.62 | 20.83          | 21.58 | 21.31 | 22.06 | 22.53 |
| 8H              | 4H   | 20.42            | 21.26 | 20.88 | 21.70 | 22.17 | 20.36          | 21.20 | 20.82 | 21.64 | 22.11 |
|                 | 6H   | 21.08            | 21.78 | 21.57 | 22.26 | 22.74 | 20.98          | 21.68 | 21.47 | 22.17 | 22.64 |
|                 | 8H   | 21.30            | 21.93 | 21.81 | 22.44 | 22.92 | 21.18          | 21.81 | 21.69 | 22.32 | 22.80 |
|                 | 12H  | 21.46            | 22.02 | 21.97 | 22.51 | 23.07 | 21.33          | 21.89 | 21.84 | 22.38 | 22.94 |
| 12H             | 4H   | 20.44            | 21.20 | 20.92 | 21.67 | 22.14 | 20.39          | 21.14 | 20.87 | 21.62 | 22.09 |
|                 | 6H   | 21.12            | 21.75 | 21.63 | 22.25 | 22.74 | 21.03          | 21.65 | 21.54 | 22.16 | 22.65 |
|                 | 8H   | 21.40            | 21.95 | 21.90 | 22.44 | 23.00 | 21.28          | 21.83 | 21.79 | 22.32 | 22.89 |

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-1

Test Date: 07/23/2025

Luminaire Tested: 22ID2-55-CFR1-L835-U

Data in this report applies to families of products including 22ID2-55-CFR1-L835-U



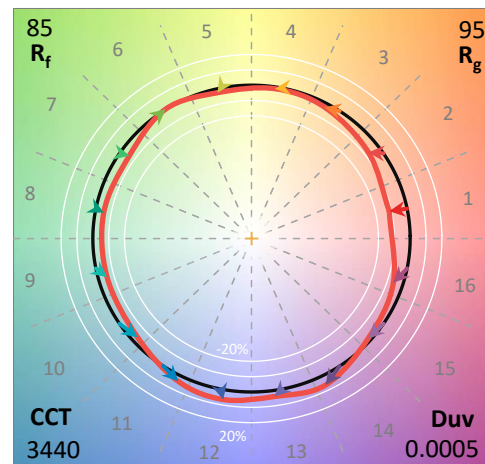
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2506-458-1  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 Issue Date: 08/27/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Corelite  
 Catalog Number: **22ID2-55-CFR1-L835-U**  
 Description: 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 3500K 80CRI

### Spectral Parameters

CCT (K): 3440  
 CIE  $u'$ : 0.2370  
 CIE  $v'$ : 0.5132  
 Duv: 0.0005  
 CIE x: 0.4093  
 CIE y: 0.3940  
 CIE z: 0.1967  
 Peak Wavelength (nm): 599  
 Dominant Wavelength (nm): 580  
 Purity: 41.09375  
 R<sub>f</sub>: 84.9  
 R<sub>g</sub>: 94.6

CRI (Ra): 84.2  
 R1: 82.8  
 R2: 91.7  
 R3: 96.7  
 R4: 81.9  
 R5: 82.6  
 R6: 88.8  
 R7: 85.0  
 R8: 63.7  
 R9: 13.6  
 R10: 80.1  
 R11: 81.1  
 R12: 65.8  
 R13: 85.2  
 R14: 98.7  
 R15: 76.2



### Test Conditions

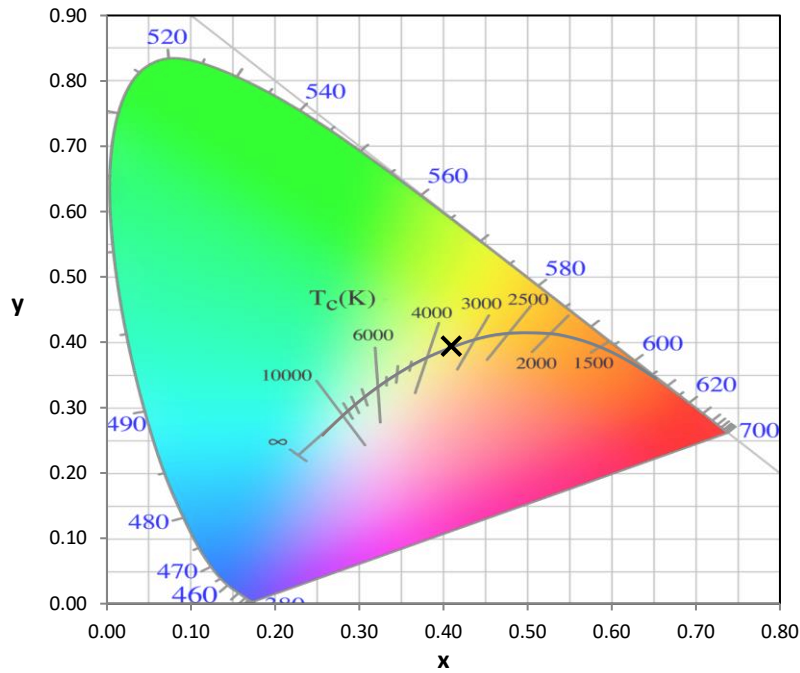
Stabilization Time: 36M  
 Operation Time: 1H 36M  
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2506-458-1

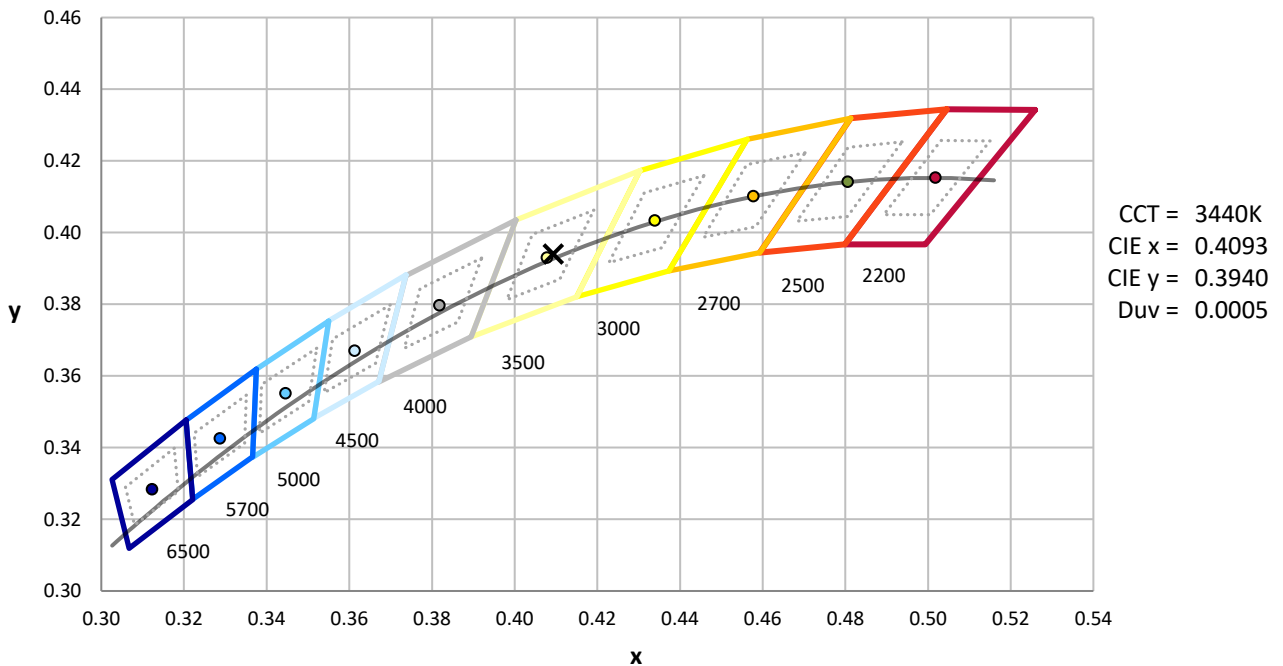
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| Photometer                     | 76INCH SPHERE IN0058  | 6/16/2025        | 12/16/2025           |
| Power Meter                    | XITRON INXT2011004    | 1/21/2025        | 1/21/2026            |
| AC Power Source                | CHROMA 61603 IN0063   | 10/22/2024       | 10/22/2025           |
| DC Power Source                | AGILENT E3634A IN0208 | 10/22/2024       | 10/22/2025           |
| Sphere Thermometer             | ONSET IN0085          | 10/22/2024       | 10/22/2025           |
| Room Thermometer               | ONSET IN0046          | 10/22/2024       | 10/22/2025           |

REPORT NUMBER: SP1-2506-458-1

**CIE 1931 Chromaticity Diagram**



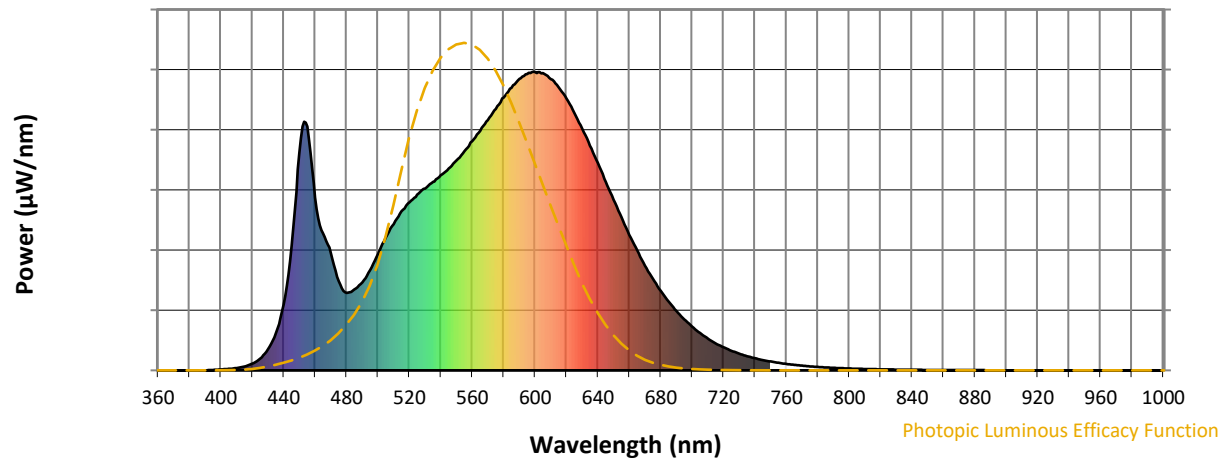
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-1

### Photopic Flux vs. Wavelength

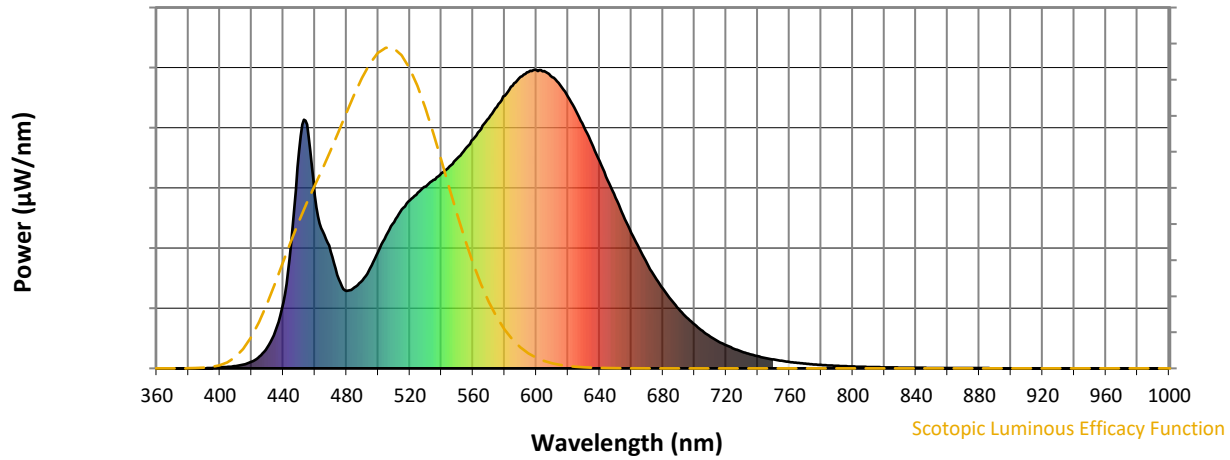


### Photopic Lumens: NR

| $\lambda$<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               | 295                           | NR                             | 620               | 910                           | NR                             | 750               | 30                            | NR                             | 880               | 1                             | NR                             |
| 365               | 0                             | NR                             | 495               | 335                           | NR                             | 625               | 862                           | NR                             | 755               | 25                            | NR                             | 885               | 1                             | NR                             |
| 370               | 0                             | NR                             | 500               | 390                           | NR                             | 630               | 809                           | NR                             | 760               | 21                            | NR                             | 890               | 1                             | NR                             |
| 375               | 0                             | NR                             | 505               | 445                           | NR                             | 635               | 752                           | NR                             | 765               | 18                            | NR                             | 895               | 0                             | NR                             |
| 380               | 0                             | NR                             | 510               | 490                           | NR                             | 640               | 694                           | NR                             | 770               | 16                            | NR                             | 900               | 0                             | NR                             |
| 385               | 0                             | NR                             | 515               | 532                           | NR                             | 645               | 630                           | NR                             | 775               | 13                            | NR                             | 905               | 0                             | NR                             |
| 390               | 0                             | NR                             | 520               | 563                           | NR                             | 650               | 571                           | NR                             | 780               | 12                            | NR                             | 910               | 0                             | NR                             |
| 395               | 2                             | NR                             | 525               | 588                           | NR                             | 655               | 512                           | NR                             | 785               | 10                            | NR                             | 915               | 0                             | NR                             |
| 400               | 3                             | NR                             | 530               | 609                           | NR                             | 660               | 453                           | NR                             | 790               | 8                             | NR                             | 920               | 0                             | NR                             |
| 405               | 5                             | NR                             | 535               | 631                           | NR                             | 665               | 401                           | NR                             | 795               | 7                             | NR                             | 925               | 0                             | NR                             |
| 410               | 8                             | NR                             | 540               | 654                           | NR                             | 670               | 351                           | NR                             | 800               | 6                             | NR                             | 930               | 0                             | NR                             |
| 415               | 13                            | NR                             | 545               | 677                           | NR                             | 675               | 306                           | NR                             | 805               | 5                             | NR                             | 935               | 0                             | NR                             |
| 420               | 23                            | NR                             | 550               | 702                           | NR                             | 680               | 267                           | NR                             | 810               | 5                             | NR                             | 940               | 0                             | NR                             |
| 425               | 40                            | NR                             | 555               | 734                           | NR                             | 685               | 230                           | NR                             | 815               | 4                             | NR                             | 945               | 0                             | NR                             |
| 430               | 70                            | NR                             | 560               | 767                           | NR                             | 690               | 199                           | NR                             | 820               | 4                             | NR                             | 950               | 0                             | NR                             |
| 435               | 126                           | NR                             | 565               | 802                           | NR                             | 695               | 171                           | NR                             | 825               | 3                             | NR                             | 955               | 0                             | NR                             |
| 440               | 221                           | NR                             | 570               | 838                           | NR                             | 700               | 146                           | NR                             | 830               | 3                             | NR                             | 960               | 0                             | NR                             |
| 445               | 418                           | NR                             | 575               | 875                           | NR                             | 705               | 125                           | NR                             | 835               | 2                             | NR                             | 965               | 0                             | NR                             |
| 450               | 729                           | NR                             | 580               | 913                           | NR                             | 710               | 107                           | NR                             | 840               | 2                             | NR                             | 970               | 0                             | NR                             |
| 455               | 816                           | NR                             | 585               | 946                           | NR                             | 715               | 90                            | NR                             | 845               | 2                             | NR                             | 975               | 0                             | NR                             |
| 460               | 578                           | NR                             | 590               | 976                           | NR                             | 720               | 77                            | NR                             | 850               | 1                             | NR                             | 980               | 0                             | NR                             |
| 465               | 458                           | NR                             | 595               | 992                           | NR                             | 725               | 66                            | NR                             | 855               | 1                             | NR                             | 985               | 0                             | NR                             |
| 470               | 390                           | NR                             | 600               | 999                           | NR                             | 730               | 56                            | NR                             | 860               | 1                             | NR                             | 990               | 0                             | NR                             |
| 475               | 299                           | NR                             | 605               | 995                           | NR                             | 735               | 47                            | NR                             | 865               | 1                             | NR                             | 995               | 0                             | NR                             |
| 480               | 260                           | NR                             | 610               | 975                           | NR                             | 740               | 40                            | NR                             | 870               | 1                             | NR                             | 1000              | 0                             | NR                             |
| 485               | 271                           | NR                             | 615               | 948                           | NR                             | 745               | 34                            | NR                             | 875               | 1                             | NR                             |                   |                               |                                |

REPORT NUMBER: SP1-2506-458-1

### Scotopic Flux vs. Wavelength



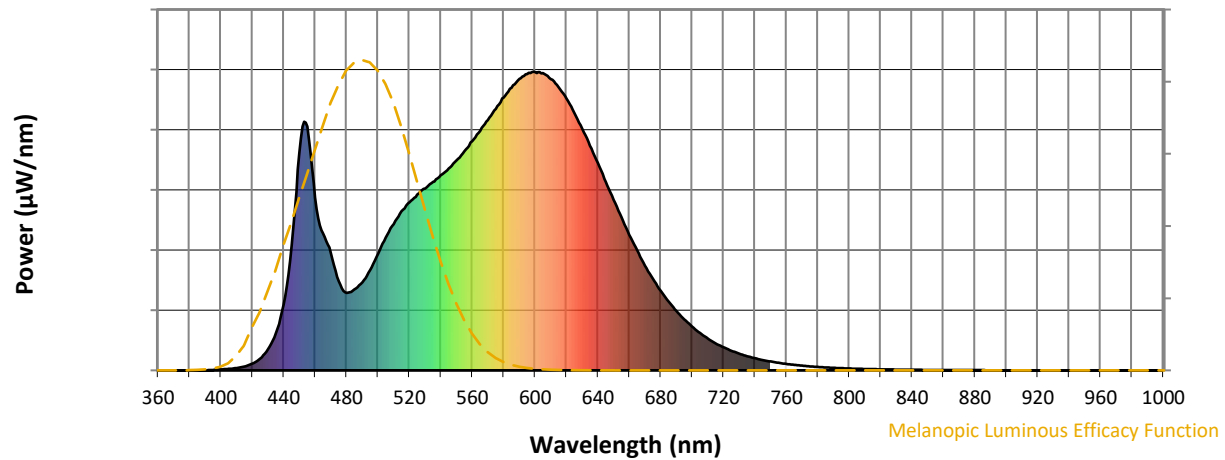
Scotopic Lumens: NR

S/P: 1.53

| 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       | 295                         | NR               | 620       | 910                         | NR               | 750       | 30                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 335                         | NR               | 625       | 862                         | NR               | 755       | 25                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 390                         | NR               | 630       | 809                         | NR               | 760       | 21                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 445                         | NR               | 635       | 752                         | NR               | 765       | 18                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 490                         | NR               | 640       | 694                         | NR               | 770       | 16                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 532                         | NR               | 645       | 630                         | NR               | 775       | 13                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 563                         | NR               | 650       | 571                         | NR               | 780       | 12                          | NR               | 910       | 0                           | NR               |
| 395       | 2                           | NR               | 525       | 588                         | NR               | 655       | 512                         | NR               | 785       | 10                          | NR               | 915       | 0                           | NR               |
| 400       | 3                           | NR               | 530       | 609                         | NR               | 660       | 453                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 5                           | NR               | 535       | 631                         | NR               | 665       | 401                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 8                           | NR               | 540       | 654                         | NR               | 670       | 351                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 13                          | NR               | 545       | 677                         | NR               | 675       | 306                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 23                          | NR               | 550       | 702                         | NR               | 680       | 267                         | NR               | 810       | 5                           | NR               | 940       | 0                           | NR               |
| 425       | 40                          | NR               | 555       | 734                         | NR               | 685       | 230                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 70                          | NR               | 560       | 767                         | NR               | 690       | 199                         | NR               | 820       | 4                           | NR               | 950       | 0                           | NR               |
| 435       | 126                         | NR               | 565       | 802                         | NR               | 695       | 171                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 221                         | NR               | 570       | 838                         | NR               | 700       | 146                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 418                         | NR               | 575       | 875                         | NR               | 705       | 125                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 729                         | NR               | 580       | 913                         | NR               | 710       | 107                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 816                         | NR               | 585       | 946                         | NR               | 715       | 90                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 578                         | NR               | 590       | 976                         | NR               | 720       | 77                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 458                         | NR               | 595       | 992                         | NR               | 725       | 66                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 390                         | NR               | 600       | 999                         | NR               | 730       | 56                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 299                         | NR               | 605       | 995                         | NR               | 735       | 47                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 260                         | NR               | 610       | 975                         | NR               | 740       | 40                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 271                         | NR               | 615       | 948                         | NR               | 745       | 34                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-1

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 3.07**

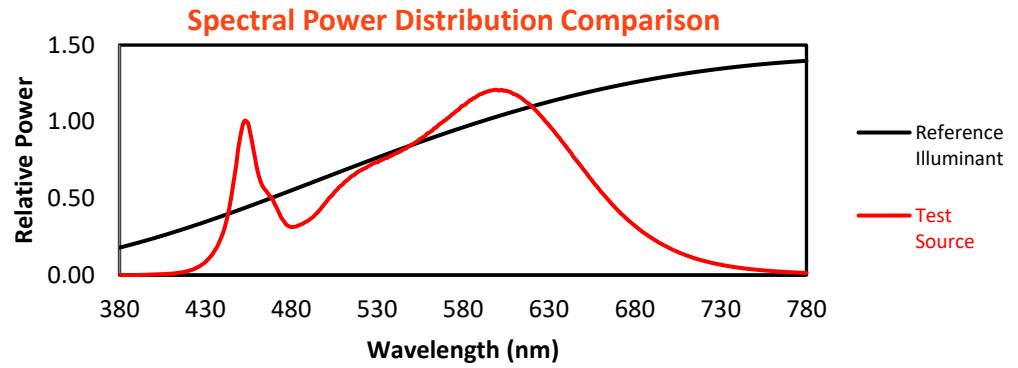
| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | 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               | 295                                    | NR                             | 620               | 910                                    | NR                             | 750               | 30                                     | NR                             | 880               | 1                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 335                                    | NR                             | 625               | 862                                    | NR                             | 755               | 25                                     | NR                             | 885               | 1                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 390                                    | NR                             | 630               | 809                                    | NR                             | 760               | 21                                     | NR                             | 890               | 1                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 445                                    | NR                             | 635               | 752                                    | NR                             | 765               | 18                                     | NR                             | 895               | 0                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 490                                    | NR                             | 640               | 694                                    | NR                             | 770               | 16                                     | NR                             | 900               | 0                                      | NR                             |
| 385               | 0                                      | NR                             | 515               | 532                                    | NR                             | 645               | 630                                    | NR                             | 775               | 13                                     | NR                             | 905               | 0                                      | NR                             |
| 390               | 0                                      | NR                             | 520               | 563                                    | NR                             | 650               | 571                                    | NR                             | 780               | 12                                     | NR                             | 910               | 0                                      | NR                             |
| 395               | 2                                      | NR                             | 525               | 588                                    | NR                             | 655               | 512                                    | NR                             | 785               | 10                                     | NR                             | 915               | 0                                      | NR                             |
| 400               | 3                                      | NR                             | 530               | 609                                    | NR                             | 660               | 453                                    | NR                             | 790               | 8                                      | NR                             | 920               | 0                                      | NR                             |
| 405               | 5                                      | NR                             | 535               | 631                                    | NR                             | 665               | 401                                    | NR                             | 795               | 7                                      | NR                             | 925               | 0                                      | NR                             |
| 410               | 8                                      | NR                             | 540               | 654                                    | NR                             | 670               | 351                                    | NR                             | 800               | 6                                      | NR                             | 930               | 0                                      | NR                             |
| 415               | 13                                     | NR                             | 545               | 677                                    | NR                             | 675               | 306                                    | NR                             | 805               | 5                                      | NR                             | 935               | 0                                      | NR                             |
| 420               | 23                                     | NR                             | 550               | 702                                    | NR                             | 680               | 267                                    | NR                             | 810               | 5                                      | NR                             | 940               | 0                                      | NR                             |
| 425               | 40                                     | NR                             | 555               | 734                                    | NR                             | 685               | 230                                    | NR                             | 815               | 4                                      | NR                             | 945               | 0                                      | NR                             |
| 430               | 70                                     | NR                             | 560               | 767                                    | NR                             | 690               | 199                                    | NR                             | 820               | 4                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 126                                    | NR                             | 565               | 802                                    | NR                             | 695               | 171                                    | NR                             | 825               | 3                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 221                                    | NR                             | 570               | 838                                    | NR                             | 700               | 146                                    | NR                             | 830               | 3                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 418                                    | NR                             | 575               | 875                                    | NR                             | 705               | 125                                    | NR                             | 835               | 2                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 729                                    | NR                             | 580               | 913                                    | NR                             | 710               | 107                                    | NR                             | 840               | 2                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 816                                    | NR                             | 585               | 946                                    | NR                             | 715               | 90                                     | NR                             | 845               | 2                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 578                                    | NR                             | 590               | 976                                    | NR                             | 720               | 77                                     | NR                             | 850               | 1                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 458                                    | NR                             | 595               | 992                                    | NR                             | 725               | 66                                     | NR                             | 855               | 1                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 390                                    | NR                             | 600               | 999                                    | NR                             | 730               | 56                                     | NR                             | 860               | 1                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 299                                    | NR                             | 605               | 995                                    | NR                             | 735               | 47                                     | NR                             | 865               | 1                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 260                                    | NR                             | 610               | 975                                    | NR                             | 740               | 40                                     | NR                             | 870               | 1                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 271                                    | NR                             | 615               | 948                                    | NR                             | 745               | 34                                     | NR                             | 875               | 1                                      | NR                             |                   |                                        |                                |

REPORT NUMBER: SP1-2506-458-1

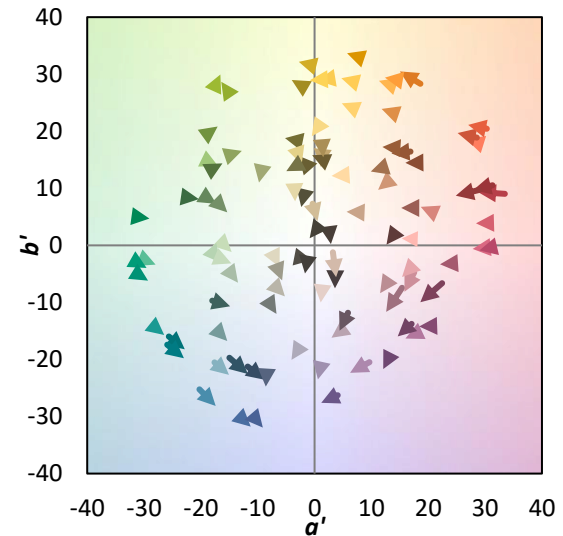
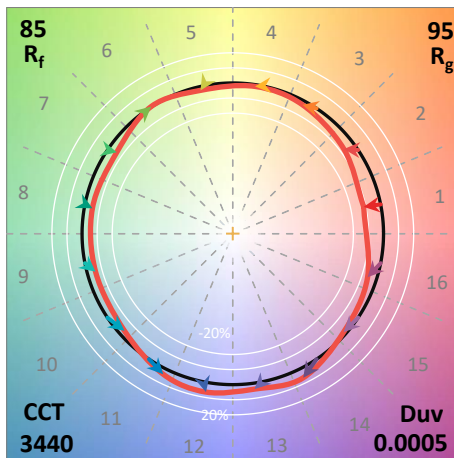
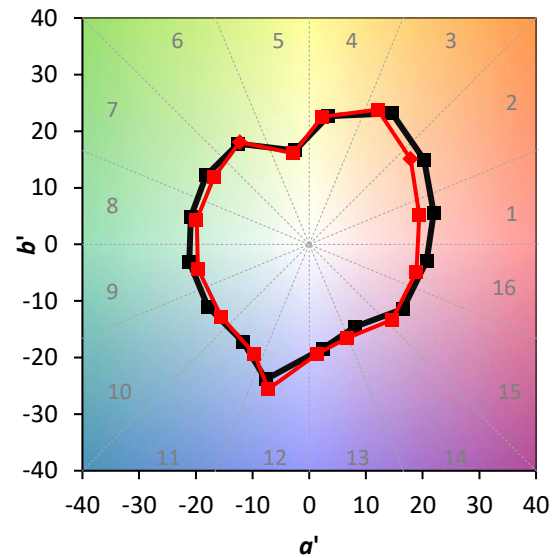
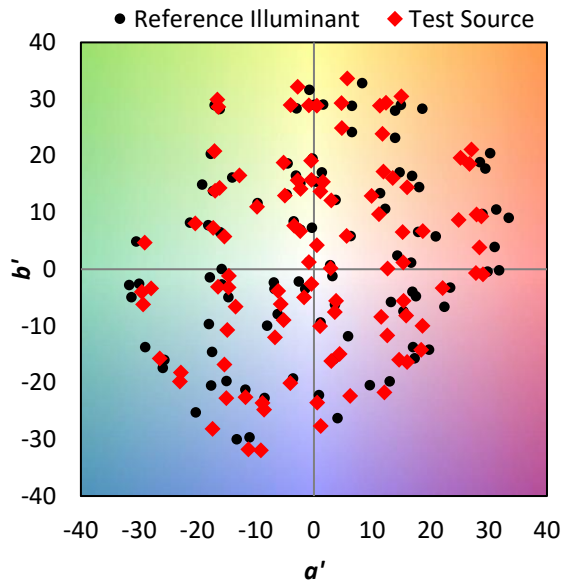
TM-30-18

### Summary

$R_f = 84.9$   
 $R_g = 94.6$   
 $CIE R_a = 84.2$   
 $R_9 = 13.6$

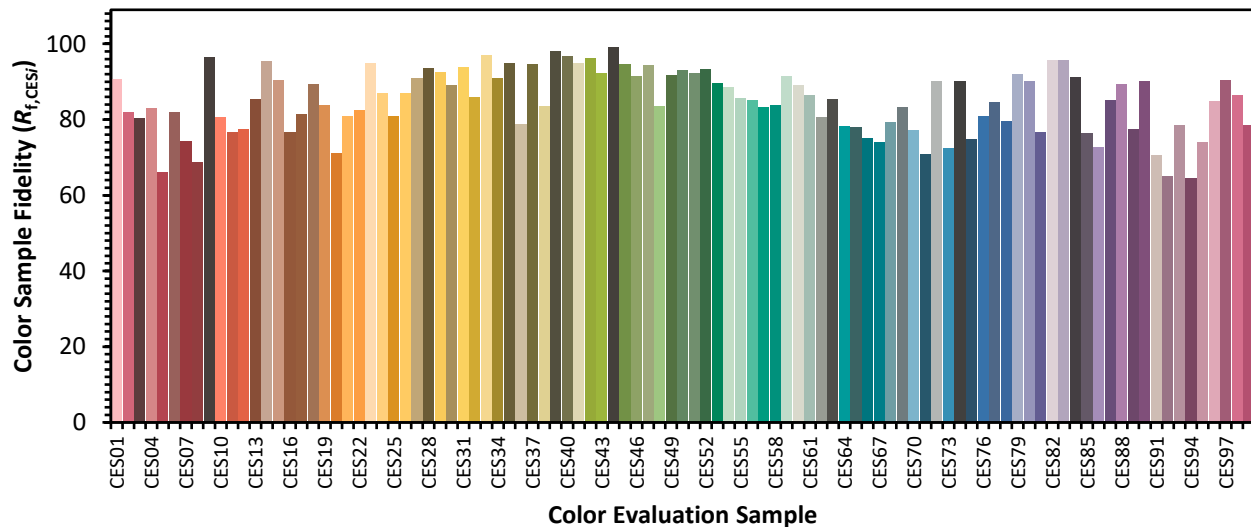


### Color Vector Graphics



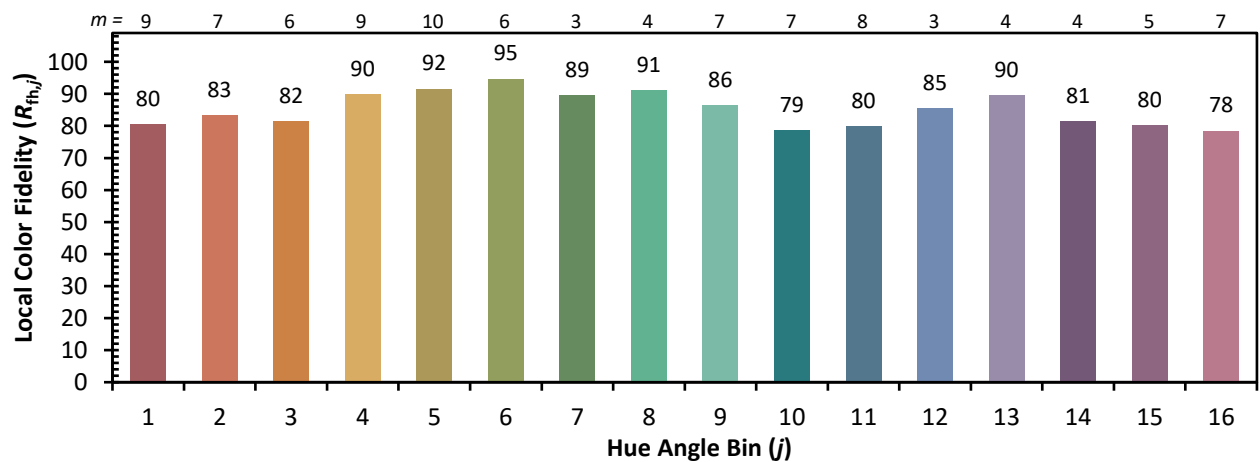
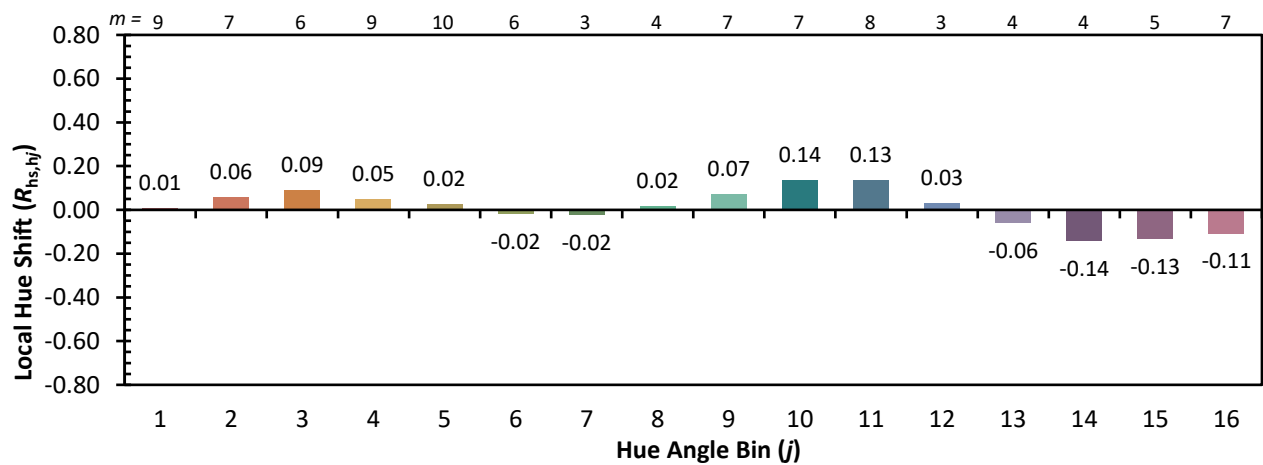
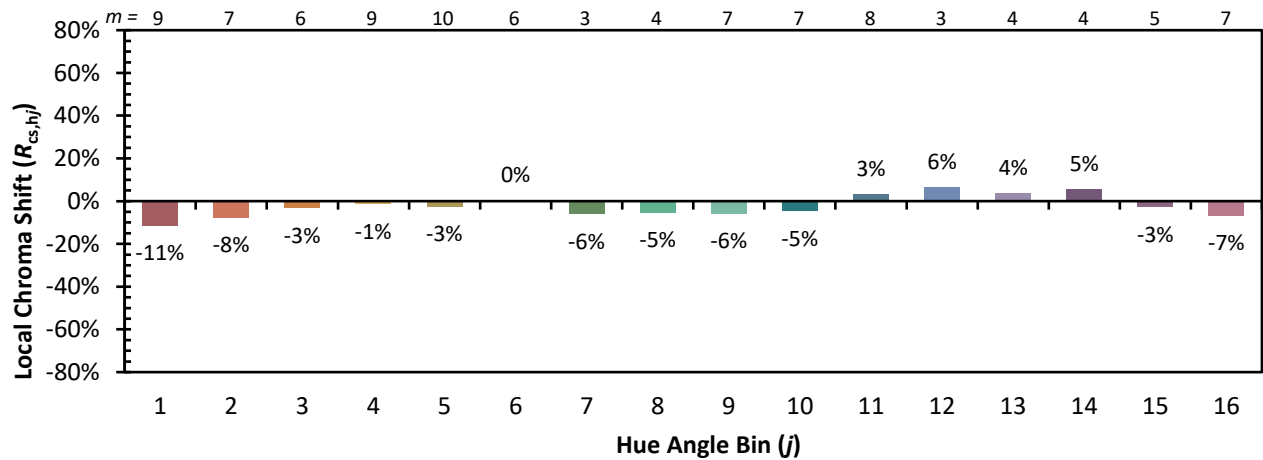
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 87 | CES51 = 92 | CES76 = 81 |
| CES02 = 62 | CES27 = 91 | CES52 = 93 | CES77 = 85 |
| CES03 = 31 | CES28 = 94 | CES53 = 90 | CES78 = 80 |
| CES04 = 70 | CES29 = 92 | CES54 = 89 | CES79 = 92 |
| CES05 = 49 | CES30 = 89 | CES55 = 86 | CES80 = 90 |
| CES06 = 51 | CES31 = 94 | CES56 = 85 | CES81 = 77 |
| CES07 = 41 | CES32 = 86 | CES57 = 83 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 84 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 91 | CES84 = 91 |
| CES10 = 75 | CES35 = 95 | CES60 = 89 | CES85 = 76 |
| CES11 = 58 | CES36 = 79 | CES61 = 87 | CES86 = 73 |
| CES12 = 64 | CES37 = 95 | CES62 = 81 | CES87 = 85 |
| CES13 = 43 | CES38 = 84 | CES63 = 85 | CES88 = 89 |
| CES14 = 74 | CES39 = 98 | CES64 = 78 | CES89 = 78 |
| CES15 = 71 | CES40 = 97 | CES65 = 78 | CES90 = 90 |
| CES16 = 47 | CES41 = 95 | CES66 = 75 | CES91 = 71 |
| CES17 = 50 | CES42 = 96 | CES67 = 74 | CES92 = 65 |
| CES18 = 56 | CES43 = 92 | CES68 = 79 | CES93 = 79 |
| CES19 = 72 | CES44 = 99 | CES69 = 83 | CES94 = 64 |
| CES20 = 66 | CES45 = 95 | CES70 = 77 | CES95 = 74 |
| CES21 = 86 | CES46 = 91 | CES71 = 71 | CES96 = 85 |
| CES22 = 78 | CES47 = 94 | CES72 = 90 | CES97 = 90 |
| CES23 = 92 | CES48 = 83 | CES73 = 72 | CES98 = 86 |
| CES24 = 90 | CES49 = 92 | CES74 = 90 | CES99 = 79 |
| CES25 = 72 | CES50 = 93 | CES75 = 75 |            |

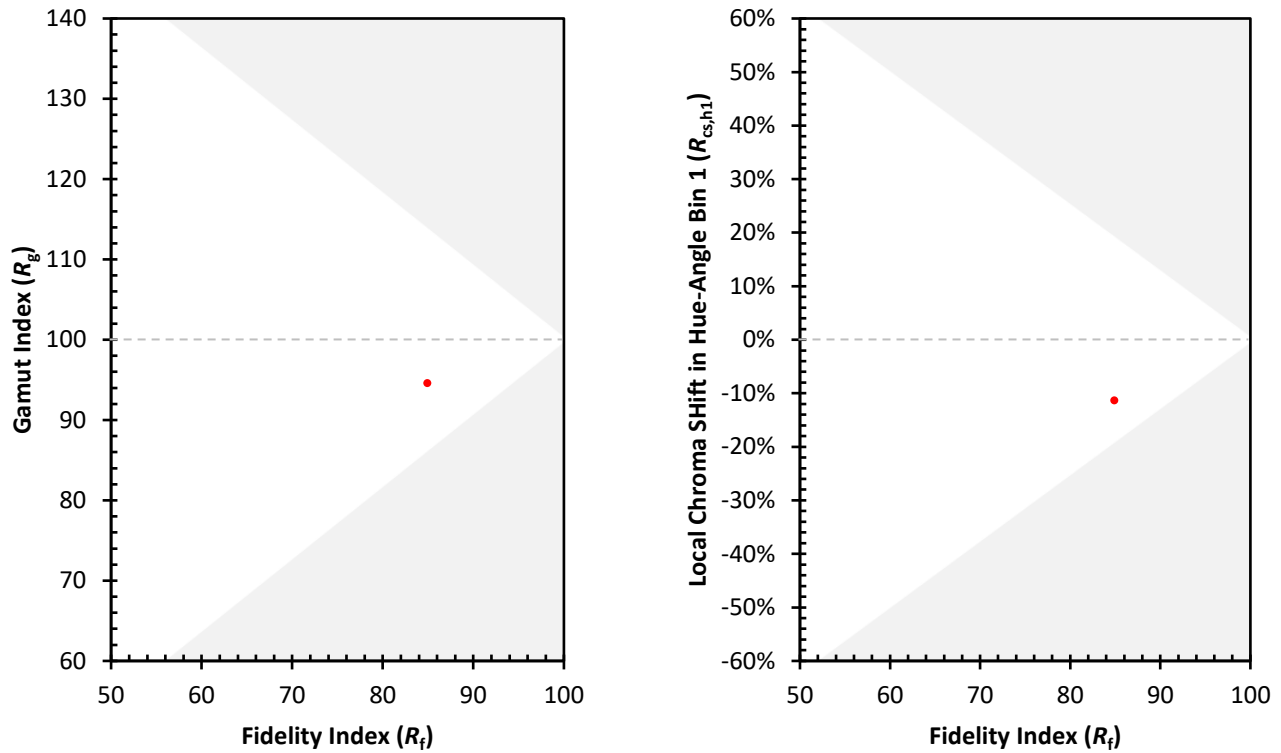




### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)