

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: P1217154

Luminaire Tested: 14-ID2-70-CNC-L830-U

Issue Date: 12/5/2025

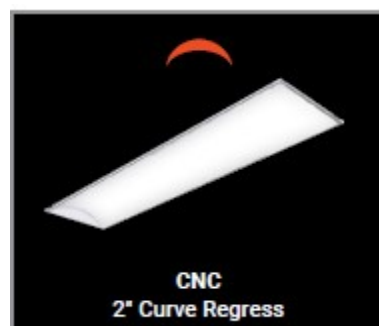
**Test Information**

Test Method: LM-79-2019  
Report Number: P1217154  
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-ID2-70-CNC-L830-U  
Description: 1X4 IN DEPTH TROFFER WITH 2INCH CURVE REGRESS LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

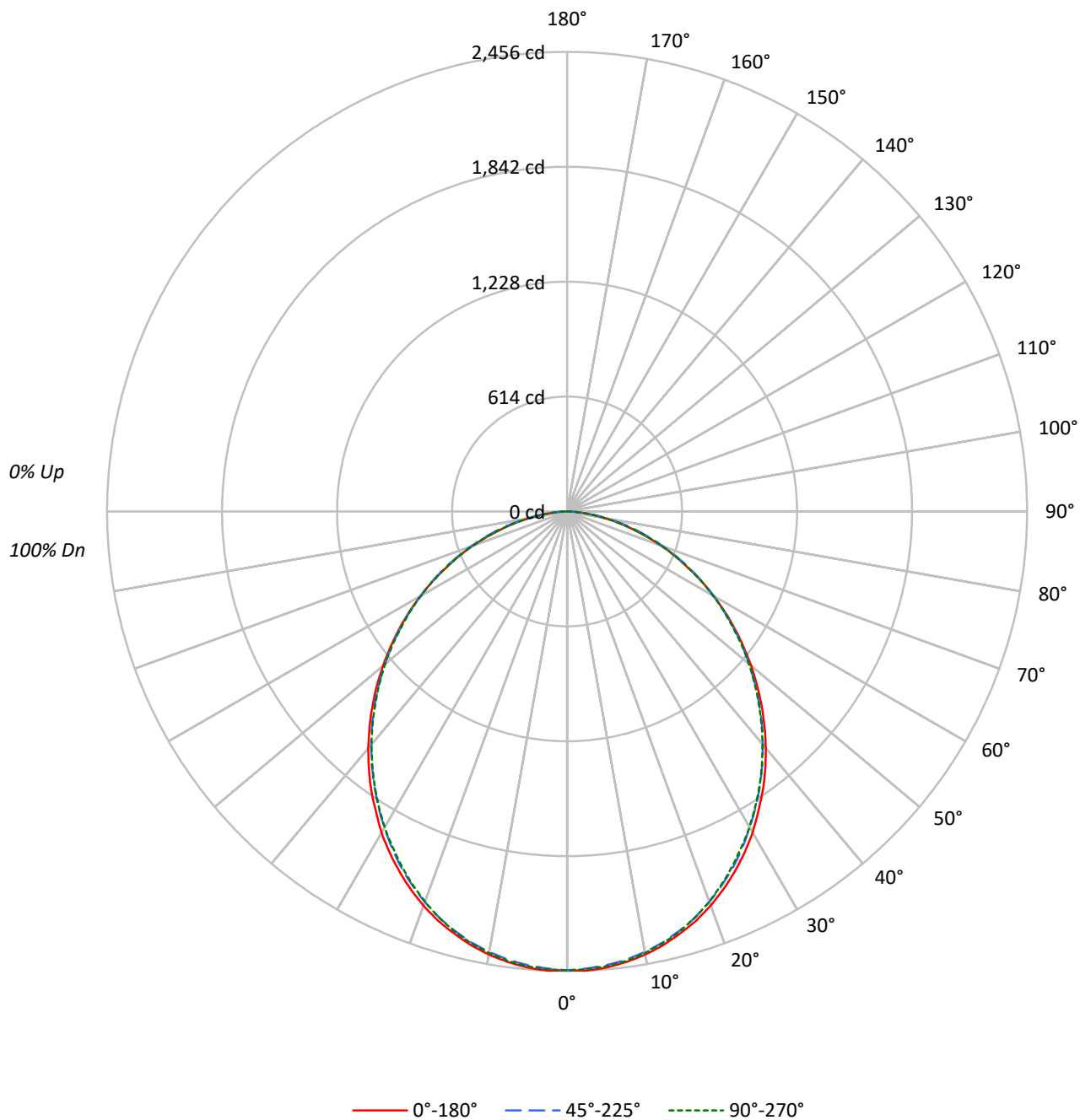
Lumens per Lamp: N/A  
Luminaire Lumens: 6274.8 lumens  
Efficiency: N/A  
Efficacy: 106.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 59  
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: P1217154  
CATALOG NUMBER: 14-ID2-70-CNC-L830-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1217154

CATALOG NUMBER: 14-ID2-70-CNC-L830-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°  | 6597 | 6597 | 6597 |
| 5°  | 6608 | 6574 | 6588 |
| 10° | 6571 | 6533 | 6548 |
| 15° | 6503 | 6462 | 6474 |
| 20° | 6419 | 6358 | 6355 |
| 25° | 6298 | 6228 | 6206 |
| 30° | 6156 | 6060 | 6053 |
| 35° | 5986 | 5891 | 5885 |
| 40° | 5798 | 5711 | 5704 |
| 45° | 5591 | 5518 | 5506 |
| 50° | 5369 | 5315 | 5306 |
| 55° | 5131 | 5096 | 5071 |
| 60° | 4864 | 4864 | 4846 |
| 65° | 4538 | 4606 | 4565 |
| 70° | 4205 | 4297 | 4231 |
| 75° | 3716 | 3949 | 3794 |
| 80° | 3158 | 3406 | 3158 |
| 85° | 2371 | 2569 | 2470 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5591 cd/sqm

TEST NUMBER: P1217154  
 CATALOG NUMBER: 14-ID2-70-CNC-L830-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 231.4  | 3.7       |
| 10°-20°   | 654.8  | 10.4      |
| 20°-30°   | 966.4  | 15.4      |
| 30°-40°   | 1124.6 | 17.9      |
| 40°-50°   | 1120.7 | 17.9      |
| 50°-60°   | 971.8  | 15.5      |
| 60°-70°   | 712.8  | 11.4      |
| 70°-80°   | 394.2  | 6.3       |
| 80°-90°   | 98.2   | 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°    | 1852.6 | 29.5      |
| 0°-40°    | 2977.2 | 47.4      |
| 0°-60°    | 5069.7 | 80.8      |
| 0°-90°    | 6274.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6274.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2452 | 2452  | 2452 | 2452  | 2452 |      |
| 5°  | 2446 | 2443  | 2434 | 2434  | 2439 | 232  |
| 15° | 2334 | 2330  | 2319 | 2316  | 2324 | 658  |
| 25° | 2121 | 2109  | 2098 | 2086  | 2090 | 977  |
| 35° | 1822 | 1810  | 1793 | 1785  | 1791 | 1139 |
| 45° | 1469 | 1462  | 1450 | 1441  | 1447 | 1133 |
| 55° | 1094 | 1091  | 1086 | 1080  | 1081 | 978  |
| 65° | 713  | 724   | 723  | 714   | 717  | 709  |
| 75° | 357  | 381   | 380  | 366   | 365  | 382  |
| 85° | 77   | 88    | 83   | 77    | 80   | 93   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1217154

CATALOG NUMBER: 14-ID2-70-CNC-L830-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2451.7 | 2451.7 | 2451.7 | 2451.7 | 2451.7 |
| 2.5°  | 2456.0 | 2452.8 | 2444.2 | 2444.2 | 2448.5 |
| 5°    | 2446.4 | 2443.2 | 2433.6 | 2433.6 | 2438.9 |
| 7.5°  | 2428.2 | 2426.1 | 2415.4 | 2415.4 | 2422.9 |
| 10°   | 2404.8 | 2400.5 | 2390.9 | 2389.8 | 2396.2 |
| 12.5° | 2373.8 | 2369.6 | 2358.9 | 2356.8 | 2363.2 |
| 15°   | 2334.3 | 2330.1 | 2319.4 | 2316.2 | 2323.7 |
| 17.5° | 2292.7 | 2284.2 | 2274.6 | 2268.2 | 2274.6 |
| 20°   | 2241.5 | 2233.0 | 2220.2 | 2212.7 | 2219.1 |
| 22.5° | 2183.9 | 2174.3 | 2161.5 | 2149.8 | 2157.2 |
| 25°   | 2121.0 | 2109.2 | 2097.5 | 2085.8 | 2090.0 |
| 27.5° | 2053.8 | 2039.9 | 2026.0 | 2015.3 | 2019.6 |
| 30°   | 1981.2 | 1966.3 | 1950.3 | 1941.7 | 1948.1 |
| 32.5° | 1900.1 | 1891.6 | 1874.5 | 1864.9 | 1870.3 |
| 35°   | 1822.2 | 1810.5 | 1793.4 | 1784.9 | 1791.3 |
| 37.5° | 1738.0 | 1726.2 | 1711.3 | 1701.7 | 1708.1 |
| 40°   | 1650.5 | 1639.8 | 1625.9 | 1616.3 | 1623.8 |
| 42.5° | 1560.9 | 1554.5 | 1539.5 | 1528.8 | 1536.3 |
| 45°   | 1469.1 | 1461.6 | 1449.9 | 1441.4 | 1446.7 |
| 47.5° | 1376.3 | 1369.9 | 1360.3 | 1350.7 | 1358.1 |
| 50°   | 1282.4 | 1280.3 | 1269.6 | 1261.1 | 1267.5 |
| 52.5° | 1187.4 | 1187.4 | 1177.8 | 1170.4 | 1176.8 |
| 55°   | 1093.6 | 1091.4 | 1086.1 | 1079.7 | 1080.8 |
| 57.5° | 998.6  | 998.6  | 994.3  | 987.9  | 993.3  |
| 60°   | 903.7  | 907.9  | 903.7  | 896.2  | 900.5  |
| 62.5° | 809.8  | 815.1  | 813.0  | 804.4  | 808.7  |
| 65°   | 712.7  | 724.4  | 723.3  | 713.7  | 716.9  |
| 67.5° | 625.2  | 634.8  | 633.7  | 625.2  | 627.3  |
| 70°   | 534.5  | 547.3  | 546.2  | 536.6  | 537.7  |
| 72.5° | 442.8  | 462.0  | 460.9  | 450.2  | 450.2  |
| 75°   | 357.4  | 380.9  | 379.8  | 365.9  | 364.9  |
| 77.5° | 280.6  | 300.9  | 298.7  | 283.8  | 283.8  |
| 80°   | 203.8  | 221.9  | 219.8  | 203.8  | 203.8  |
| 82.5° | 135.5  | 151.5  | 147.2  | 134.4  | 136.6  |
| 85°   | 76.8   | 87.5   | 83.2   | 76.8   | 80.0   |
| 87.5° | 27.7   | 34.1   | 33.1   | 27.7   | 30.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

TEST NUMBER: P1217154

CATALOG NUMBER: 14-ID2-70-CNC-L830-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 | 17.67            | 19.28 | 18.03 | 19.59 | 19.90 | 17.60          | 19.21 | 17.97 | 19.52 | 19.84 |
|                 | 3H   | 19.35            | 20.80 | 19.73 | 21.13 | 21.49 | 19.29          | 20.74 | 19.67 | 21.07 | 21.43 |
|                 | 4H   | 19.95            | 21.31 | 20.35 | 21.66 | 22.03 | 19.90          | 21.26 | 20.30 | 21.61 | 21.99 |
|                 | 6H   | 20.36            | 21.62 | 20.77 | 21.99 | 22.38 | 20.30          | 21.57 | 20.72 | 21.93 | 22.32 |
|                 | 8H   | 20.47            | 21.68 | 20.90 | 22.07 | 22.47 | 20.42          | 21.62 | 20.84 | 22.01 | 22.41 |
|                 | 12H  | 20.54            | 21.69 | 20.97 | 22.07 | 22.50 | 20.48          | 21.64 | 20.91 | 22.02 | 22.45 |
| 4H              | 2H   | 18.27            | 19.63 | 18.67 | 19.98 | 20.36 | 18.21          | 19.58 | 18.61 | 19.93 | 20.30 |
|                 | 3H   | 20.18            | 21.32 | 20.59 | 21.72 | 22.12 | 20.12          | 21.26 | 20.53 | 21.66 | 22.06 |
|                 | 4H   | 20.91            | 21.94 | 21.34 | 22.36 | 22.79 | 20.84          | 21.87 | 21.27 | 22.29 | 22.72 |
|                 | 6H   | 21.45            | 22.35 | 21.91 | 22.79 | 23.25 | 21.36          | 22.26 | 21.82 | 22.70 | 23.16 |
|                 | 8H   | 21.61            | 22.45 | 22.07 | 22.89 | 23.36 | 21.51          | 22.35 | 21.97 | 22.79 | 23.26 |
|                 | 12H  | 21.71            | 22.46 | 22.19 | 22.94 | 23.41 | 21.61          | 22.36 | 22.09 | 22.84 | 23.31 |
| 8H              | 4H   | 21.20            | 22.04 | 21.66 | 22.49 | 22.95 | 21.14          | 21.98 | 21.60 | 22.43 | 22.89 |
|                 | 6H   | 21.86            | 22.56 | 22.35 | 23.05 | 23.52 | 21.76          | 22.46 | 22.26 | 22.95 | 23.42 |
|                 | 8H   | 22.08            | 22.71 | 22.59 | 23.22 | 23.70 | 21.96          | 22.59 | 22.47 | 23.10 | 23.58 |
|                 | 12H  | 22.25            | 22.80 | 22.75 | 23.29 | 23.85 | 22.12          | 22.67 | 22.62 | 23.16 | 23.72 |
| 12H             | 4H   | 21.23            | 21.98 | 21.71 | 22.46 | 22.93 | 21.17          | 21.92 | 21.65 | 22.40 | 22.87 |
|                 | 6H   | 21.90            | 22.53 | 22.41 | 23.04 | 23.52 | 21.81          | 22.44 | 22.32 | 22.94 | 23.43 |
|                 | 8H   | 22.18            | 22.73 | 22.69 | 23.22 | 23.79 | 22.06          | 22.62 | 22.57 | 23.11 | 23.67 |

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

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-3

Test Date: 07/24/2025

Luminaire Tested: 22ID2-55-CFR1-L830-U

Data in this report applies to families of products including 22ID2-55-CFR1-L830-U



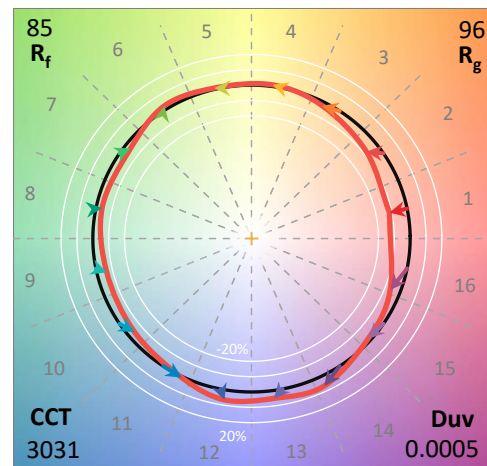
### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2506-458-3  
 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-L830-U**  
 Description: 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 3000K 80CRI

### Spectral Parameters

CCT (K): 3031  
 CIE  $u'$ : 0.2493  
 CIE  $v'$ : 0.5215  
 Duv: 0.0005  
 CIE x: 0.4355  
 CIE y: 0.4049  
 CIE z: 0.1596  
 Peak Wavelength (nm): 603  
 Dominant Wavelength (nm): 582  
 Purity: 52.24762  
 R<sub>f</sub>: 84.8  
 R<sub>g</sub>: 95.8

CRI (Ra): 82.5  
 R1: 80.7  
 R2: 90.5  
 R3: 96.7  
 R4: 80.7  
 R5: 80.9  
 R6: 88.5  
 R7: 83.0  
 R8: 58.8  
 R9: 5.8  
 R10: 78.6  
 R11: 80.2  
 R12: 69.8  
 R13: 83.0  
 R14: 98.8  
 R15: 73.0



### Test Conditions

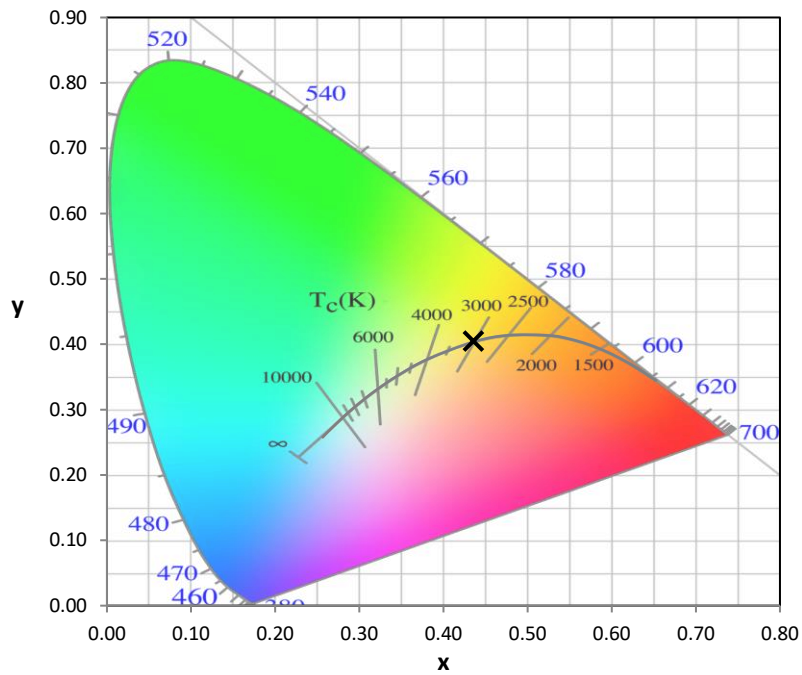
Stabilization Time: 38M  
 Operation Time: 1H 38M  
 Sphere Temperature (°C): 24.0

REPORT NUMBER: SP1-2506-458-3

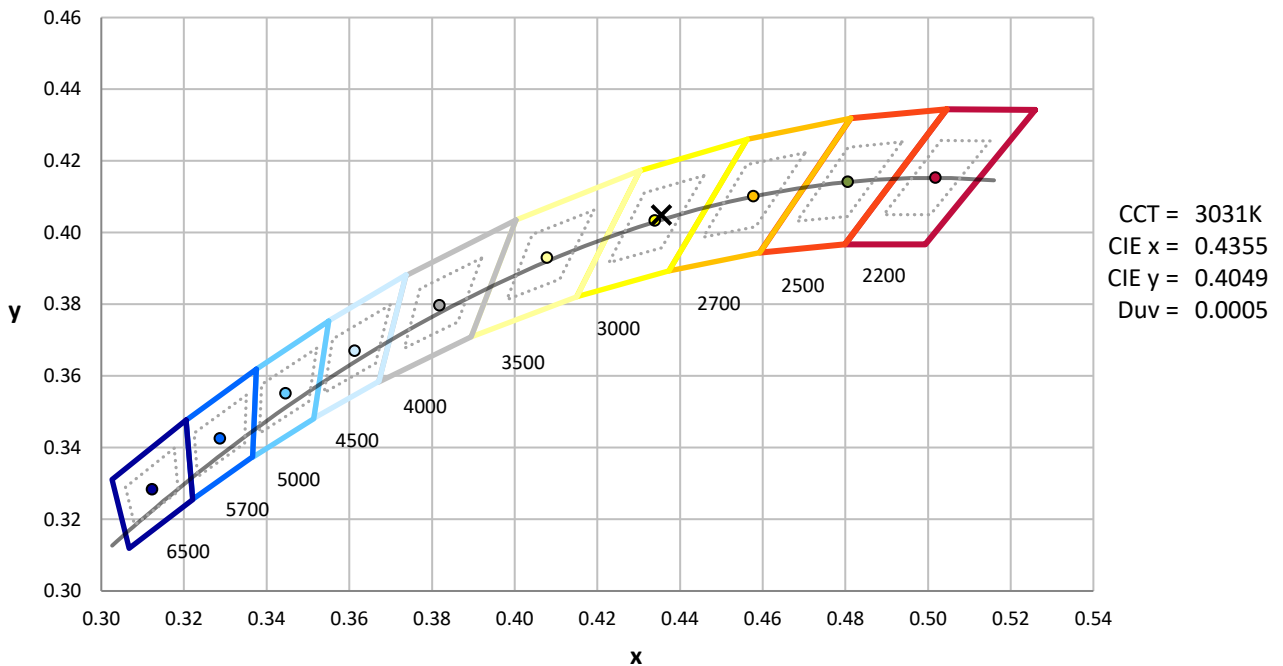
| Measurement and Test Equipment |                       |                  |                      |
|--------------------------------|-----------------------|------------------|----------------------|
| Instrument                     | Identification Number | Calibration Date | Calibration Due Date |
| 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: SP1-2506-458-3

**CIE 1931 Chromaticity Diagram**



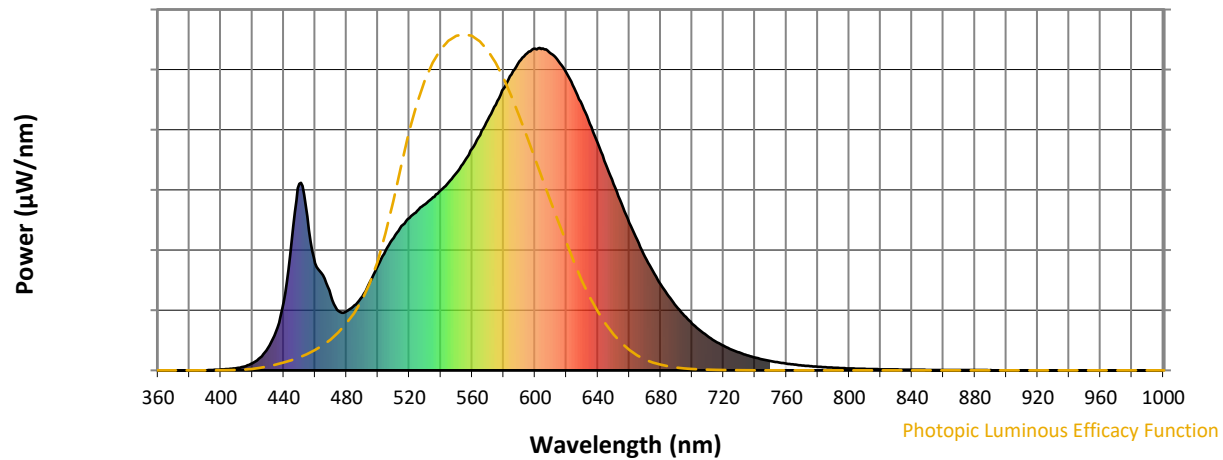
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-3

### Photopic Flux vs. Wavelength

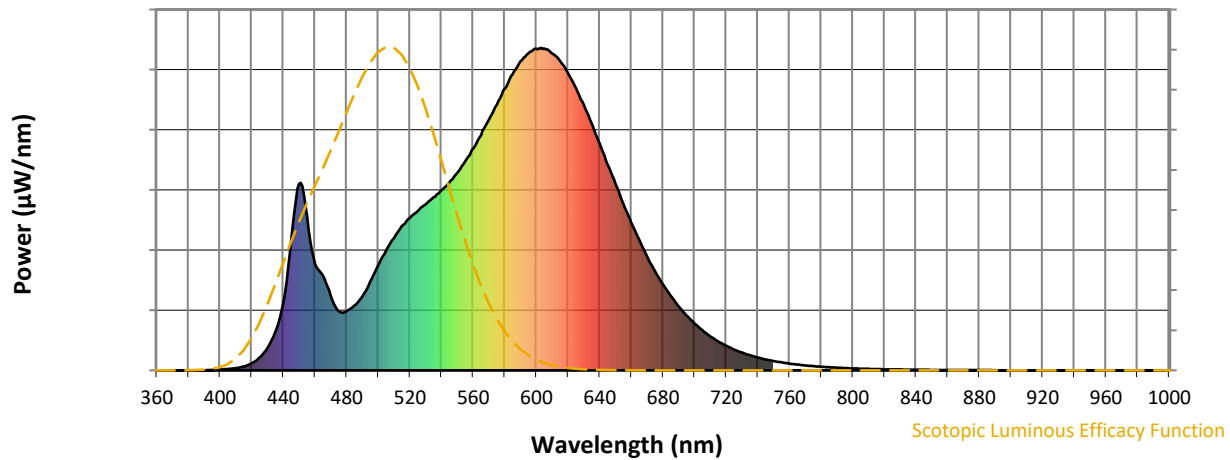


### Photopic Lumens: NR

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 229                         | NR               | 620       | 922                         | NR               | 750       | 29                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 275                         | NR               | 625       | 875                         | NR               | 755       | 25                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 326                         | NR               | 630       | 822                         | NR               | 760       | 21                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 372                         | NR               | 635       | 764                         | NR               | 765       | 18                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 411                         | NR               | 640       | 704                         | NR               | 770       | 15                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 447                         | NR               | 645       | 638                         | NR               | 775       | 13                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 473                         | NR               | 650       | 577                         | NR               | 780       | 11                          | NR               | 910       | 0                           | NR               |
| 395       | 1                           | NR               | 525       | 495                         | NR               | 655       | 517                         | NR               | 785       | 10                          | NR               | 915       | 0                           | NR               |
| 400       | 3                           | NR               | 530       | 515                         | NR               | 660       | 457                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 4                           | NR               | 535       | 537                         | NR               | 665       | 404                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 7                           | NR               | 540       | 559                         | NR               | 670       | 353                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 12                          | NR               | 545       | 584                         | NR               | 675       | 307                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 22                          | NR               | 550       | 612                         | NR               | 680       | 267                         | NR               | 810       | 5                           | NR               | 940       | 0                           | NR               |
| 425       | 40                          | NR               | 555       | 648                         | NR               | 685       | 230                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 69                          | NR               | 560       | 688                         | NR               | 690       | 199                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 120                         | NR               | 565       | 730                         | NR               | 695       | 170                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 212                         | NR               | 570       | 777                         | NR               | 700       | 145                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 400                         | NR               | 575       | 824                         | NR               | 705       | 124                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 578                         | NR               | 580       | 873                         | NR               | 710       | 106                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 478                         | NR               | 585       | 918                         | NR               | 715       | 90                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 332                         | NR               | 590       | 958                         | NR               | 720       | 76                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 295                         | NR               | 595       | 983                         | NR               | 725       | 65                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 231                         | NR               | 600       | 997                         | NR               | 730       | 55                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 183                         | NR               | 605       | 998                         | NR               | 735       | 47                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 184                         | NR               | 610       | 982                         | NR               | 740       | 40                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 201                         | NR               | 615       | 958                         | NR               | 745       | 34                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-3

### Scotopic Flux vs. Wavelength



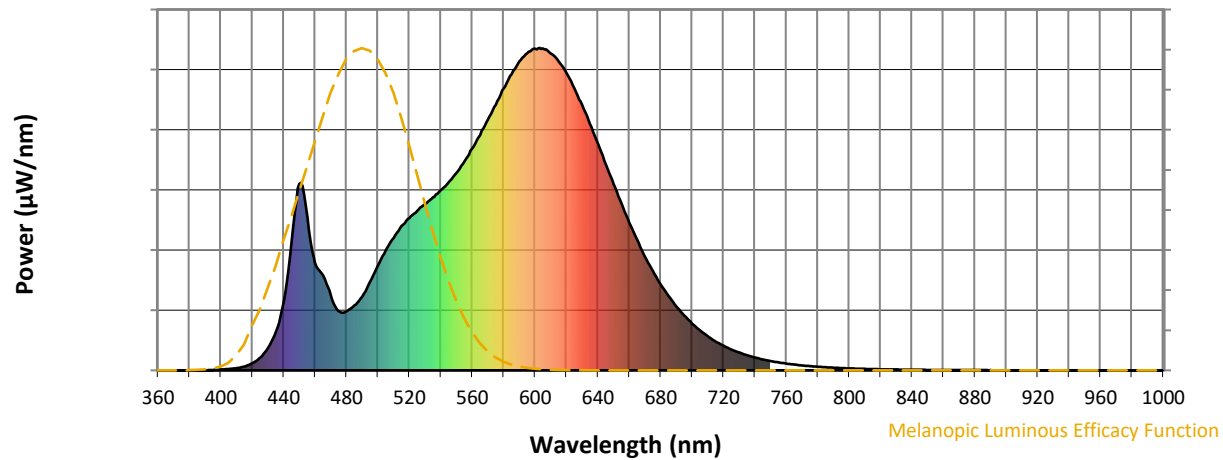
Scotopic Lumens: NR

S/P: 1.35

| 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       | 229                         | NR               | 620       | 922                         | NR               | 750       | 29                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 275                         | NR               | 625       | 875                         | NR               | 755       | 25                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 326                         | NR               | 630       | 822                         | NR               | 760       | 21                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 372                         | NR               | 635       | 764                         | NR               | 765       | 18                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 411                         | NR               | 640       | 704                         | NR               | 770       | 15                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 447                         | NR               | 645       | 638                         | NR               | 775       | 13                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 473                         | NR               | 650       | 577                         | NR               | 780       | 11                          | NR               | 910       | 0                           | NR               |
| 395       | 1                           | NR               | 525       | 495                         | NR               | 655       | 517                         | NR               | 785       | 10                          | NR               | 915       | 0                           | NR               |
| 400       | 3                           | NR               | 530       | 515                         | NR               | 660       | 457                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 4                           | NR               | 535       | 537                         | NR               | 665       | 404                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 7                           | NR               | 540       | 559                         | NR               | 670       | 353                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 12                          | NR               | 545       | 584                         | NR               | 675       | 307                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 22                          | NR               | 550       | 612                         | NR               | 680       | 267                         | NR               | 810       | 5                           | NR               | 940       | 0                           | NR               |
| 425       | 40                          | NR               | 555       | 648                         | NR               | 685       | 230                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 69                          | NR               | 560       | 688                         | NR               | 690       | 199                         | NR               | 820       | 3                           | NR               | 950       | 0                           | NR               |
| 435       | 120                         | NR               | 565       | 730                         | NR               | 695       | 170                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 212                         | NR               | 570       | 777                         | NR               | 700       | 145                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 400                         | NR               | 575       | 824                         | NR               | 705       | 124                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 578                         | NR               | 580       | 873                         | NR               | 710       | 106                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 478                         | NR               | 585       | 918                         | NR               | 715       | 90                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 332                         | NR               | 590       | 958                         | NR               | 720       | 76                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 295                         | NR               | 595       | 983                         | NR               | 725       | 65                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 231                         | NR               | 600       | 997                         | NR               | 730       | 55                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 183                         | NR               | 605       | 998                         | NR               | 735       | 47                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 184                         | NR               | 610       | 982                         | NR               | 740       | 40                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 201                         | NR               | 615       | 958                         | NR               | 745       | 34                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-3

### Melanopic Flux vs. Wavelength


**Melanopic Lumens: NR**
**M/P: 2.59**

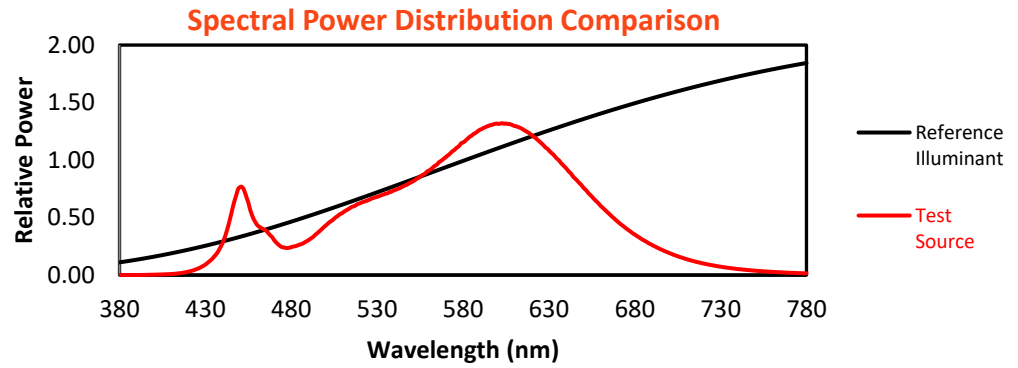
| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<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               | 229                                  | NR                             | 620               | 922                                  | NR                             | 750               | 29                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 275                                  | NR                             | 625               | 875                                  | NR                             | 755               | 25                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 326                                  | NR                             | 630               | 822                                  | NR                             | 760               | 21                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 372                                  | NR                             | 635               | 764                                  | NR                             | 765               | 18                                   | NR                             | 895               | 0                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 411                                  | NR                             | 640               | 704                                  | NR                             | 770               | 15                                   | NR                             | 900               | 0                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 447                                  | NR                             | 645               | 638                                  | NR                             | 775               | 13                                   | NR                             | 905               | 0                                    | NR                             |
| 390               | 0                                    | NR                             | 520               | 473                                  | NR                             | 650               | 577                                  | NR                             | 780               | 11                                   | NR                             | 910               | 0                                    | NR                             |
| 395               | 1                                    | NR                             | 525               | 495                                  | NR                             | 655               | 517                                  | NR                             | 785               | 10                                   | NR                             | 915               | 0                                    | NR                             |
| 400               | 3                                    | NR                             | 530               | 515                                  | NR                             | 660               | 457                                  | NR                             | 790               | 8                                    | NR                             | 920               | 0                                    | NR                             |
| 405               | 4                                    | NR                             | 535               | 537                                  | NR                             | 665               | 404                                  | NR                             | 795               | 7                                    | NR                             | 925               | 0                                    | NR                             |
| 410               | 7                                    | NR                             | 540               | 559                                  | NR                             | 670               | 353                                  | NR                             | 800               | 6                                    | NR                             | 930               | 0                                    | NR                             |
| 415               | 12                                   | NR                             | 545               | 584                                  | NR                             | 675               | 307                                  | NR                             | 805               | 5                                    | NR                             | 935               | 0                                    | NR                             |
| 420               | 22                                   | NR                             | 550               | 612                                  | NR                             | 680               | 267                                  | NR                             | 810               | 5                                    | NR                             | 940               | 0                                    | NR                             |
| 425               | 40                                   | NR                             | 555               | 648                                  | NR                             | 685               | 230                                  | NR                             | 815               | 4                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 69                                   | NR                             | 560               | 688                                  | NR                             | 690               | 199                                  | NR                             | 820               | 3                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 120                                  | NR                             | 565               | 730                                  | NR                             | 695               | 170                                  | NR                             | 825               | 3                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 212                                  | NR                             | 570               | 777                                  | NR                             | 700               | 145                                  | NR                             | 830               | 3                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 400                                  | NR                             | 575               | 824                                  | NR                             | 705               | 124                                  | NR                             | 835               | 2                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 578                                  | NR                             | 580               | 873                                  | NR                             | 710               | 106                                  | NR                             | 840               | 2                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 478                                  | NR                             | 585               | 918                                  | NR                             | 715               | 90                                   | NR                             | 845               | 2                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 332                                  | NR                             | 590               | 958                                  | NR                             | 720               | 76                                   | NR                             | 850               | 1                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 295                                  | NR                             | 595               | 983                                  | NR                             | 725               | 65                                   | NR                             | 855               | 1                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 231                                  | NR                             | 600               | 997                                  | NR                             | 730               | 55                                   | NR                             | 860               | 1                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 183                                  | NR                             | 605               | 998                                  | NR                             | 735               | 47                                   | NR                             | 865               | 1                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 184                                  | NR                             | 610               | 982                                  | NR                             | 740               | 40                                   | NR                             | 870               | 1                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 201                                  | NR                             | 615               | 958                                  | NR                             | 745               | 34                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2506-458-3

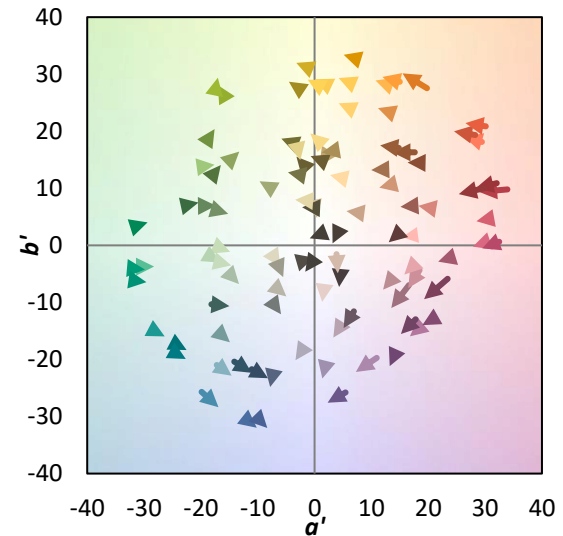
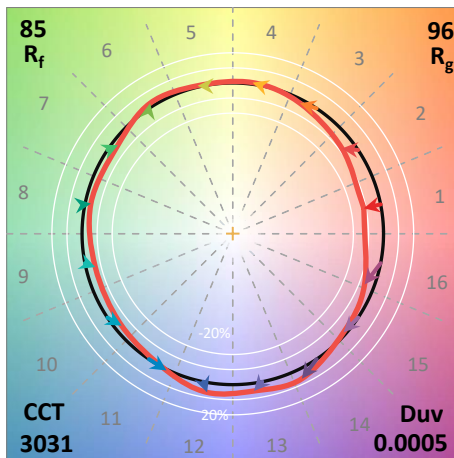
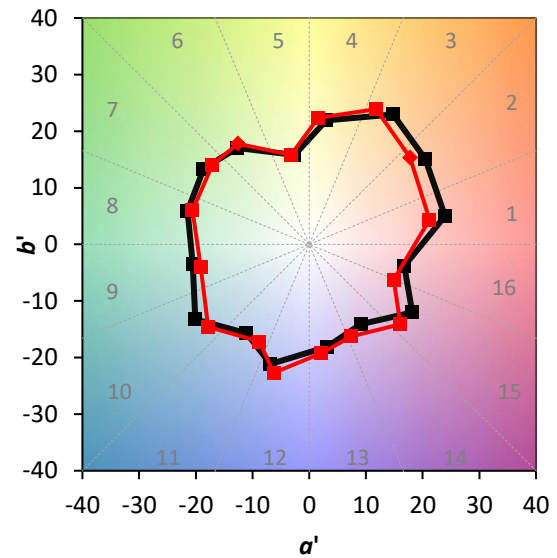
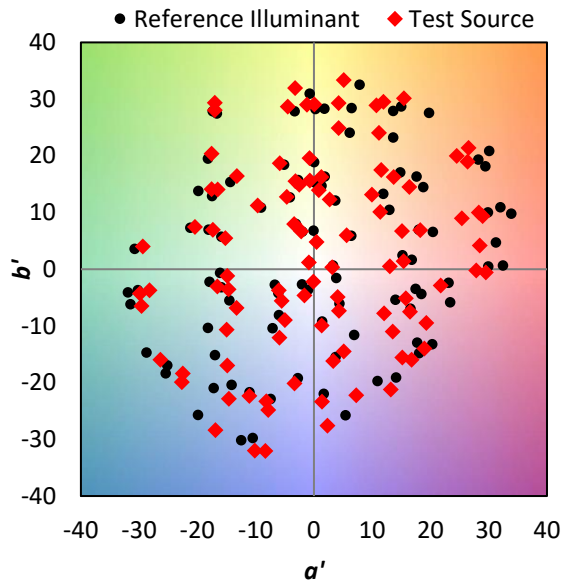
TM-30-18

### Summary

$R_f = 84.8$   
 $R_g = 95.8$   
 $CIE R_a = 82.5$   
 $R_9 = 5.8$

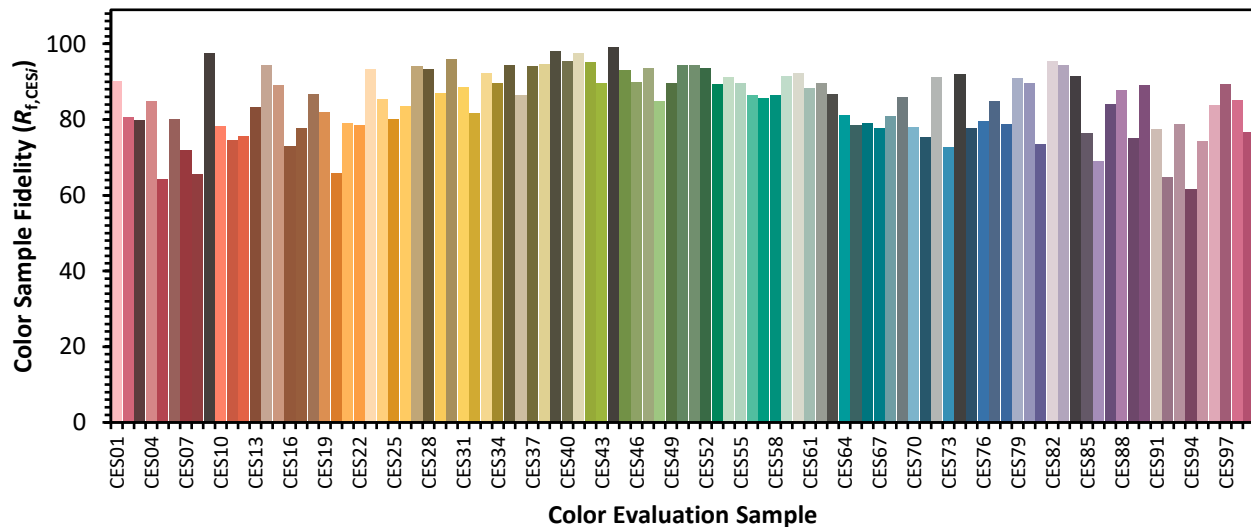


### Color Vector Graphics



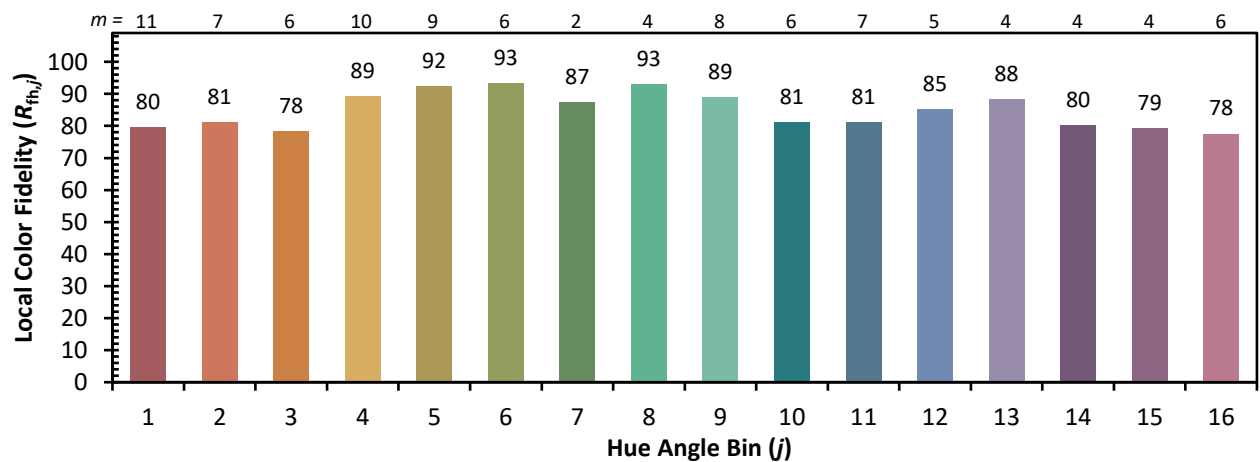
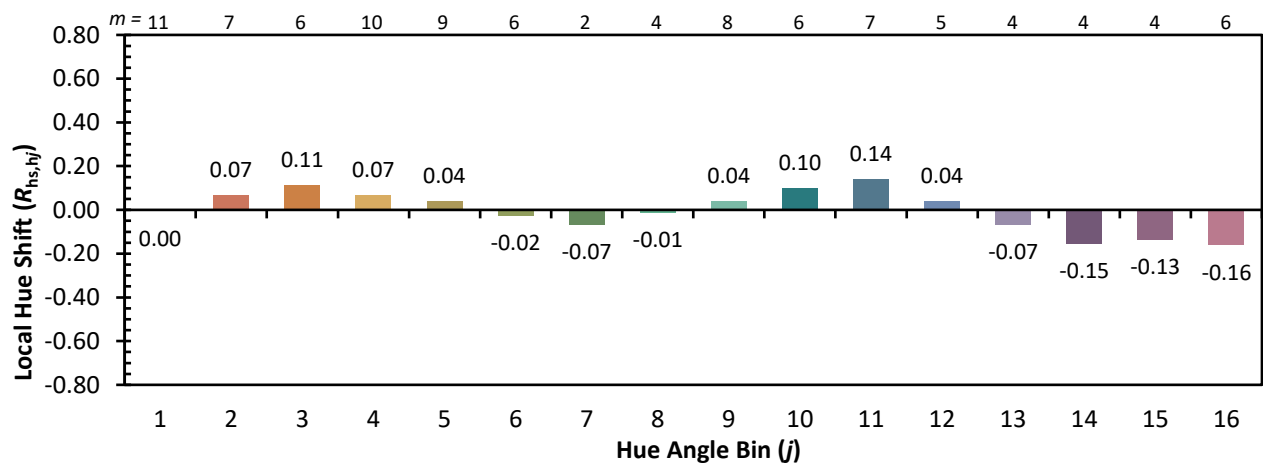
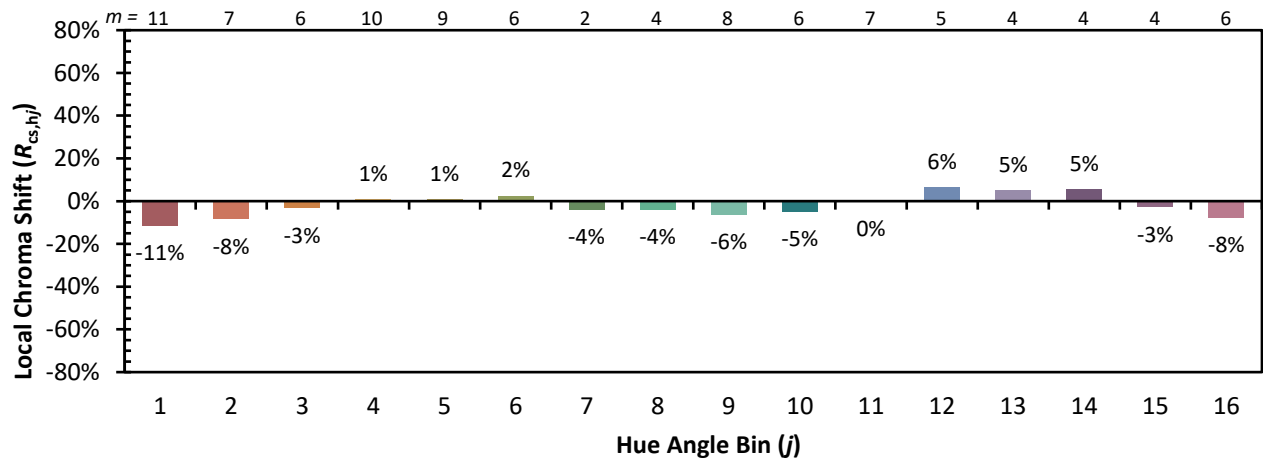
**Individual Sample Fidelity Index ( $R_{f,i}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 84 | CES51 = 94 | CES76 = 80 |
| CES02 = 63 | CES27 = 94 | CES52 = 94 | CES77 = 85 |
| CES03 = 31 | CES28 = 93 | CES53 = 89 | CES78 = 79 |
| CES04 = 70 | CES29 = 87 | CES54 = 91 | CES79 = 91 |
| CES05 = 50 | CES30 = 96 | CES55 = 90 | CES80 = 90 |
| CES06 = 51 | CES31 = 89 | CES56 = 87 | CES81 = 74 |
| CES07 = 42 | CES32 = 82 | CES57 = 86 | CES82 = 95 |
| CES08 = 41 | CES33 = 92 | CES58 = 87 | CES83 = 94 |
| CES09 = 29 | CES34 = 90 | CES59 = 91 | CES84 = 92 |
| CES10 = 76 | CES35 = 94 | CES60 = 92 | CES85 = 77 |
| CES11 = 59 | CES36 = 86 | CES61 = 88 | CES86 = 69 |
| CES12 = 65 | CES37 = 94 | CES62 = 90 | CES87 = 84 |
| CES13 = 43 | CES38 = 95 | CES63 = 87 | CES88 = 88 |
| CES14 = 74 | CES39 = 98 | CES64 = 81 | CES89 = 75 |
| CES15 = 72 | CES40 = 95 | CES65 = 79 | CES90 = 89 |
| CES16 = 47 | CES41 = 97 | CES66 = 79 | CES91 = 77 |
| CES17 = 50 | CES42 = 95 | CES67 = 78 | CES92 = 65 |
| CES18 = 56 | CES43 = 90 | CES68 = 81 | CES93 = 79 |
| CES19 = 72 | CES44 = 99 | CES69 = 86 | CES94 = 62 |
| CES20 = 67 | CES45 = 93 | CES70 = 78 | CES95 = 74 |
| CES21 = 87 | CES46 = 90 | CES71 = 75 | CES96 = 84 |
| CES22 = 79 | CES47 = 94 | CES72 = 91 | CES97 = 89 |
| CES23 = 92 | CES48 = 85 | CES73 = 73 | CES98 = 85 |
| CES24 = 91 | CES49 = 90 | CES74 = 92 | CES99 = 77 |
| CES25 = 72 | CES50 = 94 | CES75 = 78 |            |

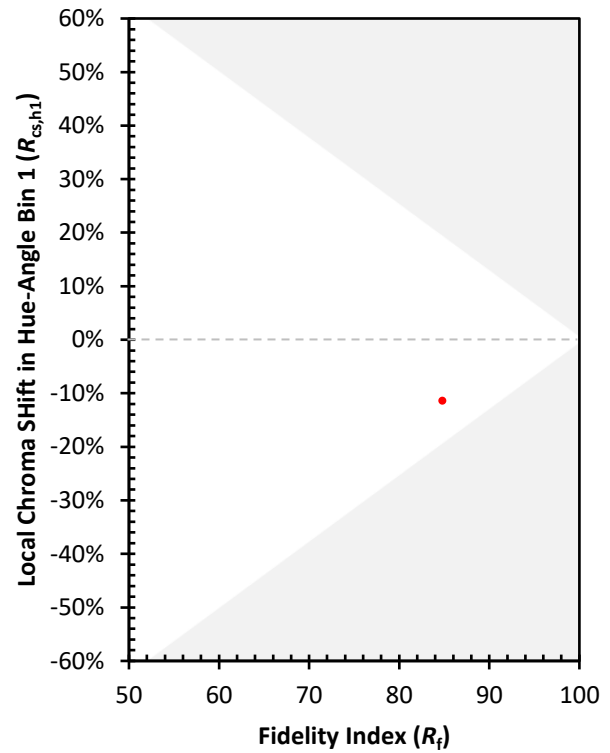
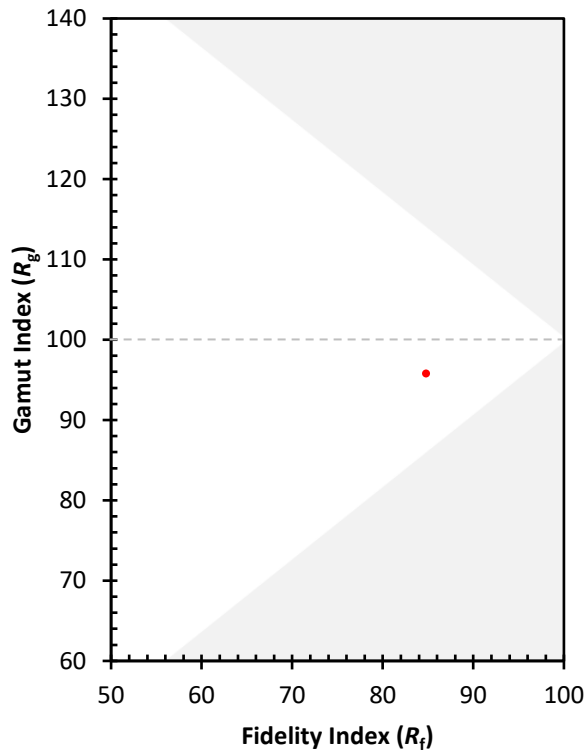




Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)