

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: P1216888

Luminaire Tested: 14-ID2-60-CFR2-L850-U

Issue Date: 12/5/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1216888  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2508-507-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 14-ID2-60-CFR2-L850-U  
Description: 1X4 IN DEPTH TROFFER WITH 2INCH CUBE REGRESS LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

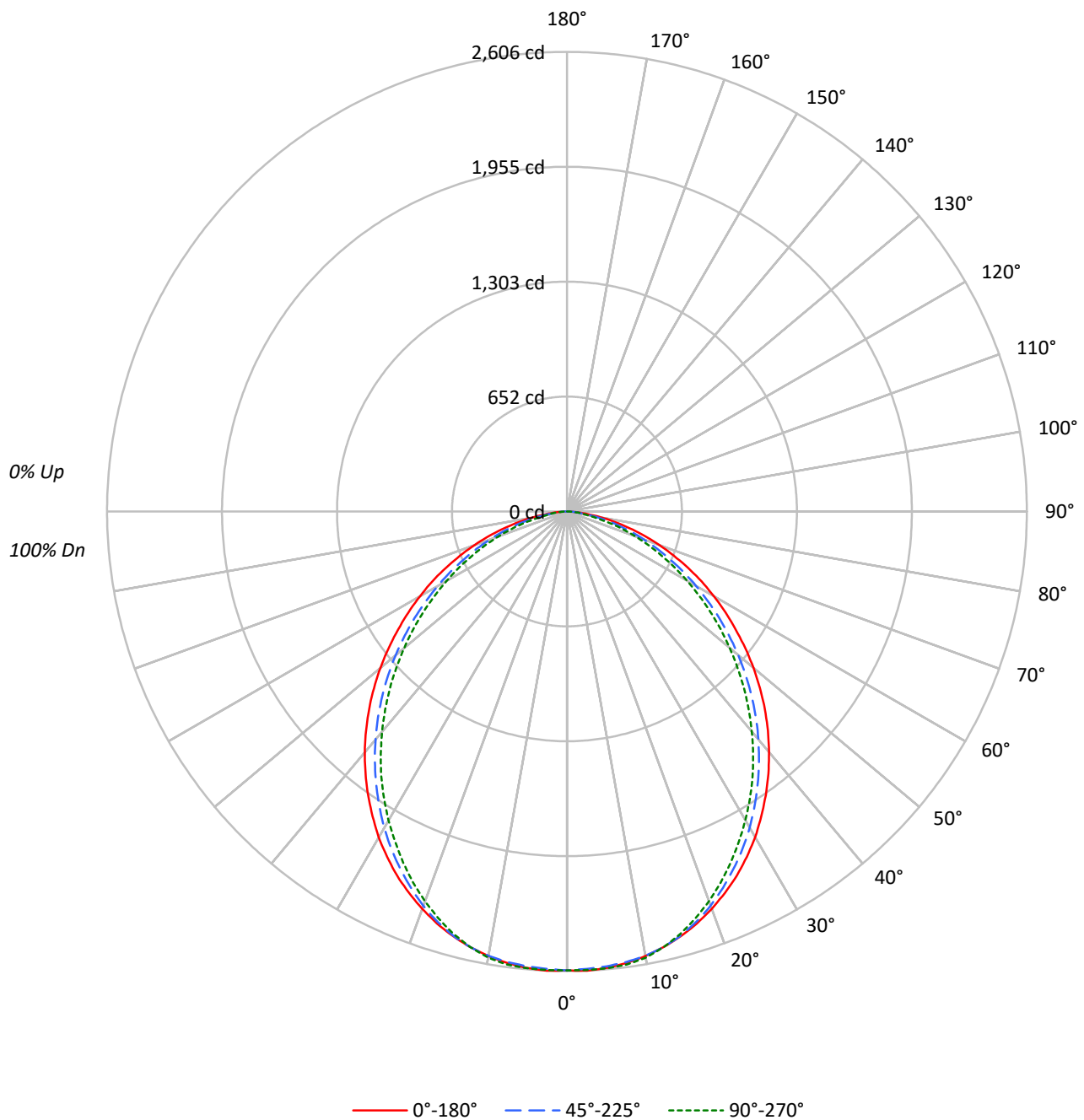
Lumens per Lamp: N/A  
Luminaire Lumens: 6313.5 lumens  
Efficiency: N/A  
Efficacy: 118.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.28  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 53.5  
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: P1216888  
CATALOG NUMBER: 14-ID2-60-CFR2-L850-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1216888

CATALOG NUMBER: 14-ID2-60-CFR2-L850-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   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  |  | 95  | 93  | 90  |  | 86  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  |  | 84  | 80  | 76  |  | 72  |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  |  | 75  | 70  | 65  |  | 62  |
| 4   | 84  | 73  | 65  | 58  | 82  | 72  | 64  | 58  | 69  | 62  | 57  |  | 67  | 61  | 56  |  | 53  |
| 5   | 78  | 66  | 57  | 51  | 76  | 64  | 56  | 50  | 62  | 55  | 50  |  | 60  | 54  | 49  |  | 47  |
| 6   | 72  | 59  | 51  | 44  | 70  | 58  | 50  | 44  | 57  | 49  | 44  |  | 55  | 48  | 44  |  | 41  |
| 7   | 67  | 54  | 45  | 40  | 65  | 53  | 45  | 39  | 52  | 44  | 39  |  | 50  | 44  | 39  |  | 37  |
| 8   | 62  | 49  | 41  | 35  | 61  | 49  | 41  | 35  | 47  | 40  | 35  |  | 46  | 40  | 35  |  | 33  |
| 9   | 58  | 45  | 37  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  |  | 43  | 36  | 32  |  | 30  |
| 10  | 55  | 42  | 34  | 29  | 54  | 41  | 34  | 29  | 40  | 34  | 29  |  | 40  | 33  | 29  |  | 27  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7002 | 7002 | 7002 |
| 5°  | 7018 | 6993 | 7024 |
| 10° | 6995 | 6990 | 7021 |
| 15° | 6947 | 6938 | 6909 |
| 20° | 6867 | 6814 | 6735 |
| 25° | 6764 | 6636 | 6520 |
| 30° | 6629 | 6435 | 6282 |
| 35° | 6453 | 6193 | 6025 |
| 40° | 6258 | 5927 | 5725 |
| 45° | 6035 | 5633 | 5398 |
| 50° | 5776 | 5299 | 5037 |
| 55° | 5476 | 4942 | 4653 |
| 60° | 5167 | 4549 | 4234 |
| 65° | 4820 | 4115 | 3762 |
| 70° | 4382 | 3640 | 3236 |
| 75° | 3840 | 3093 | 2548 |
| 80° | 3099 | 2289 | 1781 |
| 85° | 2090 | 1680 | 1488 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6035 cd/sqm

TEST NUMBER: P1216888  
 CATALOG NUMBER: 14-ID2-60-CFR2-L850-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 246.6  | 3.9       |
| 10°-20°   | 700.8  | 11.1      |
| 20°-30°   | 1030.5 | 16.3      |
| 30°-40°   | 1184.9 | 18.8      |
| 40°-50°   | 1151.9 | 18.2      |
| 50°-60°   | 955.5  | 15.1      |
| 60°-70°   | 654.9  | 10.4      |
| 70°-80°   | 320.8  | 5.1       |
| 80°-90°   | 67.8   | 1.1       |
| 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°    | 1977.8 | 31.3      |
| 0°-40°    | 3162.8 | 50.1      |
| 0°-60°    | 5270.1 | 83.5      |
| 0°-90°    | 6313.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6313.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2602 | 2602  | 2602 | 2602  | 2602 |      |
| 5°  | 2598 | 2595  | 2589 | 2593  | 2600 | 247  |
| 15° | 2494 | 2496  | 2490 | 2480  | 2480 | 703  |
| 25° | 2278 | 2281  | 2235 | 2205  | 2196 | 1048 |
| 35° | 1964 | 1954  | 1885 | 1847  | 1834 | 1228 |
| 45° | 1586 | 1559  | 1480 | 1435  | 1418 | 1222 |
| 55° | 1167 | 1129  | 1053 | 1010  | 992  | 1045 |
| 65° | 757  | 710   | 646  | 609   | 591  | 750  |
| 75° | 369  | 338   | 298  | 260   | 245  | 393  |
| 85° | 68   | 60    | 54   | 50    | 48   | 87   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1216888

CATALOG NUMBER: 14-ID2-60-CFR2-L850-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2602.2 | 2602.2 | 2602.2 | 2602.2 | 2602.2 |
| 2.5°  | 2606.3 | 2602.2 | 2596.0 | 2598.1 | 2602.2 |
| 5°    | 2598.1 | 2595.0 | 2588.9 | 2593.0 | 2600.1 |
| 7.5°  | 2582.7 | 2580.7 | 2576.6 | 2582.7 | 2591.9 |
| 10°   | 2560.1 | 2559.1 | 2558.1 | 2562.2 | 2569.4 |
| 12.5° | 2530.4 | 2530.4 | 2530.4 | 2527.3 | 2530.4 |
| 15°   | 2493.5 | 2495.5 | 2490.4 | 2480.1 | 2480.1 |
| 17.5° | 2449.4 | 2453.5 | 2440.1 | 2423.7 | 2419.6 |
| 20°   | 2398.1 | 2403.2 | 2379.6 | 2356.0 | 2351.9 |
| 22.5° | 2340.6 | 2345.8 | 2309.9 | 2282.2 | 2277.0 |
| 25°   | 2278.1 | 2281.1 | 2235.0 | 2205.2 | 2196.0 |
| 27.5° | 2207.3 | 2207.3 | 2156.0 | 2122.2 | 2109.9 |
| 30°   | 2133.4 | 2129.3 | 2070.9 | 2035.0 | 2021.6 |
| 32.5° | 2049.3 | 2044.2 | 1979.6 | 1942.7 | 1929.3 |
| 35°   | 1964.2 | 1954.0 | 1885.2 | 1847.3 | 1833.9 |
| 37.5° | 1875.0 | 1860.6 | 1787.8 | 1747.8 | 1732.4 |
| 40°   | 1781.6 | 1762.1 | 1687.3 | 1645.2 | 1629.8 |
| 42.5° | 1685.2 | 1662.7 | 1584.7 | 1543.7 | 1524.2 |
| 45°   | 1585.7 | 1559.1 | 1480.1 | 1434.9 | 1418.5 |
| 47.5° | 1483.2 | 1453.4 | 1373.4 | 1330.3 | 1310.8 |
| 50°   | 1379.6 | 1345.7 | 1265.7 | 1222.6 | 1203.1 |
| 52.5° | 1273.9 | 1234.9 | 1159.0 | 1116.0 | 1097.5 |
| 55°   | 1167.2 | 1129.3 | 1053.4 | 1010.3 | 991.8  |
| 57.5° | 1065.7 | 1021.6 | 947.7  | 907.7  | 887.2  |
| 60°   | 960.1  | 915.9  | 845.2  | 805.2  | 786.7  |
| 62.5° | 860.6  | 811.3  | 744.7  | 705.7  | 687.2  |
| 65°   | 757.0  | 709.8  | 646.2  | 609.3  | 590.8  |
| 67.5° | 655.4  | 611.3  | 552.9  | 514.9  | 499.5  |
| 70°   | 557.0  | 514.9  | 462.6  | 426.7  | 411.3  |
| 72.5° | 461.6  | 425.7  | 379.5  | 340.5  | 327.2  |
| 75°   | 369.3  | 338.5  | 297.5  | 259.5  | 245.1  |
| 77.5° | 282.1  | 257.4  | 218.5  | 181.5  | 167.2  |
| 80°   | 200.0  | 181.5  | 147.7  | 116.9  | 114.9  |
| 82.5° | 129.2  | 115.9  | 88.2   | 84.1   | 82.1   |
| 85°   | 67.7   | 59.5   | 54.4   | 50.3   | 48.2   |
| 87.5° | 21.5   | 21.5   | 21.5   | 17.4   | 16.4   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

TEST NUMBER: P1216888

CATALOG NUMBER: 14-ID2-60-CFR2-L850-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 | 17.90            | 19.47 | 18.27 | 19.79 | 20.10 | 16.99          | 18.56 | 17.36 | 18.88 | 19.19 |
|                 | 3H   | 19.50            | 20.91 | 19.88 | 21.24 | 21.60 | 18.34          | 19.75 | 18.71 | 20.07 | 20.43 |
|                 | 4H   | 20.06            | 21.38 | 20.46 | 21.73 | 22.11 | 18.73          | 20.05 | 19.12 | 20.40 | 20.77 |
|                 | 6H   | 20.42            | 21.64 | 20.83 | 22.01 | 22.40 | 18.90          | 20.12 | 19.31 | 20.49 | 20.88 |
|                 | 8H   | 20.51            | 21.68 | 20.94 | 22.07 | 22.47 | 18.94          | 20.11 | 19.37 | 20.50 | 20.90 |
|                 | 12H  | 20.55            | 21.67 | 20.98 | 22.05 | 22.48 | 18.97          | 20.08 | 19.40 | 20.46 | 20.89 |
| 4H              | 2H   | 18.33            | 19.65 | 18.72 | 20.00 | 20.37 | 17.58          | 18.91 | 17.98 | 19.25 | 19.63 |
|                 | 3H   | 20.12            | 21.23 | 20.54 | 21.62 | 22.02 | 19.12          | 20.22 | 19.53 | 20.62 | 21.02 |
|                 | 4H   | 20.80            | 21.79 | 21.23 | 22.20 | 22.64 | 19.60          | 20.59 | 20.03 | 21.00 | 21.44 |
|                 | 6H   | 21.27            | 22.13 | 21.72 | 22.57 | 23.03 | 19.84          | 20.71 | 20.30 | 21.15 | 21.61 |
|                 | 8H   | 21.39            | 22.20 | 21.85 | 22.64 | 23.11 | 19.91          | 20.71 | 20.37 | 21.16 | 21.62 |
|                 | 12H  | 21.46            | 22.18 | 21.94 | 22.66 | 23.13 | 19.95          | 20.67 | 20.43 | 21.15 | 21.62 |
| 8H              | 4H   | 20.94            | 21.75 | 21.41 | 22.19 | 22.66 | 19.85          | 20.65 | 20.31 | 21.10 | 21.56 |
|                 | 6H   | 21.49            | 22.15 | 21.98 | 22.64 | 23.12 | 20.16          | 20.82 | 20.65 | 21.31 | 21.79 |
|                 | 8H   | 21.66            | 22.26 | 22.17 | 22.77 | 23.25 | 20.26          | 20.85 | 20.77 | 21.36 | 21.85 |
|                 | 12H  | 21.77            | 22.30 | 22.28 | 22.79 | 23.36 | 20.34          | 20.87 | 20.85 | 21.36 | 21.92 |
| 12H             | 4H   | 20.94            | 21.66 | 21.42 | 22.13 | 22.60 | 19.87          | 20.59 | 20.35 | 21.07 | 21.54 |
|                 | 6H   | 21.48            | 22.08 | 21.99 | 22.59 | 23.07 | 20.18          | 20.78 | 20.69 | 21.29 | 21.78 |
|                 | 8H   | 21.69            | 22.22 | 22.20 | 22.71 | 23.27 | 20.32          | 20.85 | 20.83 | 21.34 | 21.90 |

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

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-7

Test Date: 08/26/2025

Luminaire Tested: 22ID2-55-CFR1-L850-U

Data in this report applies to families of products including 22ID2-55-CFR1-L850-U

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2506-458-7  
 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-L850-U**  
 Description: 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 5000K 80CRI

### Spectral Parameters

CCT (K): 4966  
 CIE  $u'$ : 0.2093  
 CIE  $v'$ : 0.4890  
 Duv: 0.0036  
 CIE x: 0.3468  
 CIE y: 0.3601  
 CIE z: 0.2931  
 Peak Wavelength (nm): 450  
 Dominant Wavelength (nm): 570  
 Purity: 12.1135  
 R<sub>f</sub>: 84  
 R<sub>g</sub>: 96.2

CRI (Ra): 83.1  
 R1: 81.0  
 R2: 87.8  
 R3: 92.7  
 R4: 82.4  
 R5: 81.0  
 R6: 82.6  
 R7: 88.5  
 R8: 68.6  
 R9: 10.3  
 R10: 70.9  
 R11: 81.3  
 R12: 55.9  
 R13: 82.8  
 R14: 96.1  
 R15: 75.1



### Test Conditions

Stabilization Time: 37M  
 Operation Time: 1H 37M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2506-458-7

| 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: SP1-2506-458-7

**CIE 1931 Chromaticity Diagram**



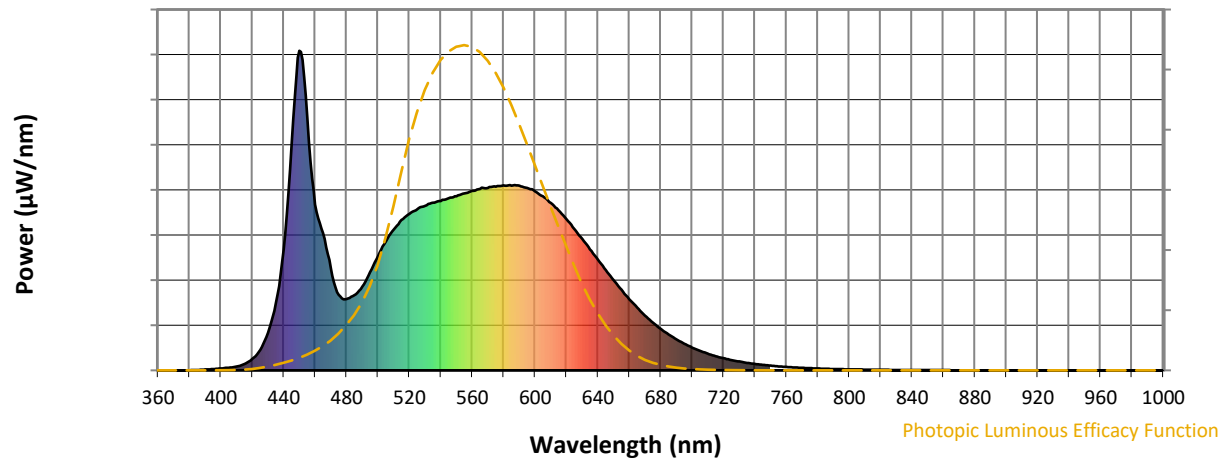
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-7

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) | λ (nm) | Power W <sup>^</sup> /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360    | 0                        | NR            | 490    | 262                      | NR            | 620    | 472                      | NR            | 750    | 15                       | NR            | 880    | 0                        | NR            |
| 365    | 0                        | NR            | 495    | 307                      | NR            | 625    | 443                      | NR            | 755    | 13                       | NR            | 885    | 0                        | NR            |
| 370    | 0                        | NR            | 500    | 358                      | NR            | 630    | 412                      | NR            | 760    | 11                       | NR            | 890    | 0                        | NR            |
| 375    | 0                        | NR            | 505    | 403                      | NR            | 635    | 379                      | NR            | 765    | 9                        | NR            | 895    | 0                        | NR            |
| 380    | 0                        | NR            | 510    | 440                      | NR            | 640    | 346                      | NR            | 770    | 8                        | NR            | 900    | 0                        | NR            |
| 385    | 1                        | NR            | 515    | 471                      | NR            | 645    | 313                      | NR            | 775    | 7                        | NR            | 905    | 0                        | NR            |
| 390    | 3                        | NR            | 520    | 490                      | NR            | 650    | 282                      | NR            | 780    | 6                        | NR            | 910    | 0                        | NR            |
| 395    | 4                        | NR            | 525    | 504                      | NR            | 655    | 252                      | NR            | 785    | 5                        | NR            | 915    | 0                        | NR            |
| 400    | 6                        | NR            | 530    | 515                      | NR            | 660    | 223                      | NR            | 790    | 4                        | NR            | 920    | 0                        | NR            |
| 405    | 9                        | NR            | 535    | 524                      | NR            | 665    | 197                      | NR            | 795    | 4                        | NR            | 925    | 0                        | NR            |
| 410    | 12                       | NR            | 540    | 530                      | NR            | 670    | 171                      | NR            | 800    | 3                        | NR            | 930    | 0                        | NR            |
| 415    | 20                       | NR            | 545    | 539                      | NR            | 675    | 149                      | NR            | 805    | 3                        | NR            | 935    | 0                        | NR            |
| 420    | 36                       | NR            | 550    | 545                      | NR            | 680    | 130                      | NR            | 810    | 2                        | NR            | 940    | 0                        | NR            |
| 425    | 64                       | NR            | 555    | 554                      | NR            | 685    | 112                      | NR            | 815    | 2                        | NR            | 945    | 0                        | NR            |
| 430    | 117                      | NR            | 560    | 562                      | NR            | 690    | 97                       | NR            | 820    | 2                        | NR            | 950    | 0                        | NR            |
| 435    | 212                      | NR            | 565    | 567                      | NR            | 695    | 83                       | NR            | 825    | 2                        | NR            | 955    | 0                        | NR            |
| 440    | 378                      | NR            | 570    | 571                      | NR            | 700    | 71                       | NR            | 830    | 1                        | NR            | 960    | 0                        | NR            |
| 445    | 709                      | NR            | 575    | 574                      | NR            | 705    | 61                       | NR            | 835    | 1                        | NR            | 965    | 0                        | NR            |
| 450    | 1000                     | NR            | 580    | 579                      | NR            | 710    | 52                       | NR            | 840    | 1                        | NR            | 970    | 0                        | NR            |
| 455    | 789                      | NR            | 585    | 578                      | NR            | 715    | 44                       | NR            | 845    | 1                        | NR            | 975    | 0                        | NR            |
| 460    | 519                      | NR            | 590    | 578                      | NR            | 720    | 38                       | NR            | 850    | 1                        | NR            | 980    | 0                        | NR            |
| 465    | 429                      | NR            | 595    | 571                      | NR            | 725    | 32                       | NR            | 855    | 1                        | NR            | 985    | 0                        | NR            |
| 470    | 316                      | NR            | 600    | 560                      | NR            | 730    | 28                       | NR            | 860    | 1                        | NR            | 990    | 0                        | NR            |
| 475    | 236                      | NR            | 605    | 545                      | NR            | 735    | 24                       | NR            | 865    | 1                        | NR            | 995    | 0                        | NR            |
| 480    | 224                      | NR            | 610    | 524                      | NR            | 740    | 20                       | NR            | 870    | 0                        | NR            | 1000   | 0                        | NR            |
| 485    | 235                      | NR            | 615    | 501                      | NR            | 745    | 17                       | NR            | 875    | 0                        | NR            |        |                          |               |

REPORT NUMBER: SP1-2506-458-7

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.94

| λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(Φ/nm) | λ<br>(nm) | Power<br>W <sup>λ</sup> /nm | Lumens<br>(Φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 262                         | NR               | 620       | 472                         | NR               | 750       | 15                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 307                         | NR               | 625       | 443                         | NR               | 755       | 13                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 358                         | NR               | 630       | 412                         | NR               | 760       | 11                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 403                         | NR               | 635       | 379                         | NR               | 765       | 9                           | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 440                         | NR               | 640       | 346                         | NR               | 770       | 8                           | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 471                         | NR               | 645       | 313                         | NR               | 775       | 7                           | NR               | 905       | 0                           | NR               |
| 390       | 3                           | NR               | 520       | 490                         | NR               | 650       | 282                         | NR               | 780       | 6                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 504                         | NR               | 655       | 252                         | NR               | 785       | 5                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 515                         | NR               | 660       | 223                         | NR               | 790       | 4                           | NR               | 920       | 0                           | NR               |
| 405       | 9                           | NR               | 535       | 524                         | NR               | 665       | 197                         | NR               | 795       | 4                           | NR               | 925       | 0                           | NR               |
| 410       | 12                          | NR               | 540       | 530                         | NR               | 670       | 171                         | NR               | 800       | 3                           | NR               | 930       | 0                           | NR               |
| 415       | 20                          | NR               | 545       | 539                         | NR               | 675       | 149                         | NR               | 805       | 3                           | NR               | 935       | 0                           | NR               |
| 420       | 36                          | NR               | 550       | 545                         | NR               | 680       | 130                         | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 64                          | NR               | 555       | 554                         | NR               | 685       | 112                         | NR               | 815       | 2                           | NR               | 945       | 0                           | NR               |
| 430       | 117                         | NR               | 560       | 562                         | NR               | 690       | 97                          | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 212                         | NR               | 565       | 567                         | NR               | 695       | 83                          | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 378                         | NR               | 570       | 571                         | NR               | 700       | 71                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 709                         | NR               | 575       | 574                         | NR               | 705       | 61                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 1000                        | NR               | 580       | 579                         | NR               | 710       | 52                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 789                         | NR               | 585       | 578                         | NR               | 715       | 44                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 519                         | NR               | 590       | 578                         | NR               | 720       | 38                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 429                         | NR               | 595       | 571                         | NR               | 725       | 32                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 316                         | NR               | 600       | 560                         | NR               | 730       | 28                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 236                         | NR               | 605       | 545                         | NR               | 735       | 24                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 224                         | NR               | 610       | 524                         | NR               | 740       | 20                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 235                         | NR               | 615       | 501                         | NR               | 745       | 17                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-7

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.11

| 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       | 262                         | NR               | 620       | 472                         | NR               | 750       | 15                          | NR               | 880       | 0                           | NR               |
| 365       | 0                           | NR               | 495       | 307                         | NR               | 625       | 443                         | NR               | 755       | 13                          | NR               | 885       | 0                           | NR               |
| 370       | 0                           | NR               | 500       | 358                         | NR               | 630       | 412                         | NR               | 760       | 11                          | NR               | 890       | 0                           | NR               |
| 375       | 0                           | NR               | 505       | 403                         | NR               | 635       | 379                         | NR               | 765       | 9                           | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 440                         | NR               | 640       | 346                         | NR               | 770       | 8                           | NR               | 900       | 0                           | NR               |
| 385       | 1                           | NR               | 515       | 471                         | NR               | 645       | 313                         | NR               | 775       | 7                           | NR               | 905       | 0                           | NR               |
| 390       | 3                           | NR               | 520       | 490                         | NR               | 650       | 282                         | NR               | 780       | 6                           | NR               | 910       | 0                           | NR               |
| 395       | 4                           | NR               | 525       | 504                         | NR               | 655       | 252                         | NR               | 785       | 5                           | NR               | 915       | 0                           | NR               |
| 400       | 6                           | NR               | 530       | 515                         | NR               | 660       | 223                         | NR               | 790       | 4                           | NR               | 920       | 0                           | NR               |
| 405       | 9                           | NR               | 535       | 524                         | NR               | 665       | 197                         | NR               | 795       | 4                           | NR               | 925       | 0                           | NR               |
| 410       | 12                          | NR               | 540       | 530                         | NR               | 670       | 171                         | NR               | 800       | 3                           | NR               | 930       | 0                           | NR               |
| 415       | 20                          | NR               | 545       | 539                         | NR               | 675       | 149                         | NR               | 805       | 3                           | NR               | 935       | 0                           | NR               |
| 420       | 36                          | NR               | 550       | 545                         | NR               | 680       | 130                         | NR               | 810       | 2                           | NR               | 940       | 0                           | NR               |
| 425       | 64                          | NR               | 555       | 554                         | NR               | 685       | 112                         | NR               | 815       | 2                           | NR               | 945       | 0                           | NR               |
| 430       | 117                         | NR               | 560       | 562                         | NR               | 690       | 97                          | NR               | 820       | 2                           | NR               | 950       | 0                           | NR               |
| 435       | 212                         | NR               | 565       | 567                         | NR               | 695       | 83                          | NR               | 825       | 2                           | NR               | 955       | 0                           | NR               |
| 440       | 378                         | NR               | 570       | 571                         | NR               | 700       | 71                          | NR               | 830       | 1                           | NR               | 960       | 0                           | NR               |
| 445       | 709                         | NR               | 575       | 574                         | NR               | 705       | 61                          | NR               | 835       | 1                           | NR               | 965       | 0                           | NR               |
| 450       | 1000                        | NR               | 580       | 579                         | NR               | 710       | 52                          | NR               | 840       | 1                           | NR               | 970       | 0                           | NR               |
| 455       | 789                         | NR               | 585       | 578                         | NR               | 715       | 44                          | NR               | 845       | 1                           | NR               | 975       | 0                           | NR               |
| 460       | 519                         | NR               | 590       | 578                         | NR               | 720       | 38                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 429                         | NR               | 595       | 571                         | NR               | 725       | 32                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 316                         | NR               | 600       | 560                         | NR               | 730       | 28                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 236                         | NR               | 605       | 545                         | NR               | 735       | 24                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 224                         | NR               | 610       | 524                         | NR               | 740       | 20                          | NR               | 870       | 0                           | NR               | 1000      | 0                           | NR               |
| 485       | 235                         | NR               | 615       | 501                         | NR               | 745       | 17                          | NR               | 875       | 0                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-7

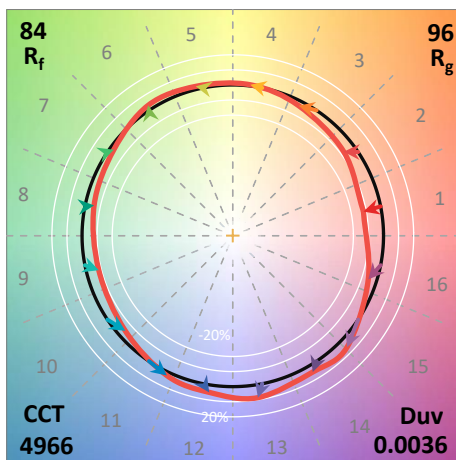
TM-30-18

### Summary

$R_f = 84$   
 $R_g = 96.2$   
 $\text{CIE } R_a = 83.1$   
 $R_9 = 10.3$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 80 | CES51 = 95 | CES76 = 72 |
| CES02 = 60 | CES27 = 93 | CES52 = 95 | CES77 = 81 |
| CES03 = 30 | CES28 = 90 | CES53 = 89 | CES78 = 71 |
| CES04 = 69 | CES29 = 85 | CES54 = 90 | CES79 = 91 |
| CES05 = 47 | CES30 = 97 | CES55 = 89 | CES80 = 87 |
| CES06 = 50 | CES31 = 87 | CES56 = 86 | CES81 = 84 |
| CES07 = 40 | CES32 = 79 | CES57 = 85 | CES82 = 95 |
| CES08 = 39 | CES33 = 92 | CES58 = 85 | CES83 = 95 |
| CES09 = 29 | CES34 = 84 | CES59 = 92 | CES84 = 90 |
| CES10 = 73 | CES35 = 91 | CES60 = 91 | CES85 = 81 |
| CES11 = 56 | CES36 = 83 | CES61 = 88 | CES86 = 79 |
| CES12 = 62 | CES37 = 90 | CES62 = 85 | CES87 = 84 |
| CES13 = 42 | CES38 = 93 | CES63 = 85 | CES88 = 89 |
| CES14 = 74 | CES39 = 98 | CES64 = 79 | CES89 = 79 |
| CES15 = 71 | CES40 = 94 | CES65 = 76 | CES90 = 89 |
| CES16 = 46 | CES41 = 99 | CES66 = 75 | CES91 = 72 |
| CES17 = 48 | CES42 = 89 | CES67 = 73 | CES92 = 67 |
| CES18 = 55 | CES43 = 88 | CES68 = 78 | CES93 = 80 |
| CES19 = 70 | CES44 = 99 | CES69 = 82 | CES94 = 65 |
| CES20 = 64 | CES45 = 93 | CES70 = 73 | CES95 = 73 |
| CES21 = 85 | CES46 = 91 | CES71 = 67 | CES96 = 84 |
| CES22 = 77 | CES47 = 96 | CES72 = 89 | CES97 = 92 |
| CES23 = 91 | CES48 = 87 | CES73 = 66 | CES98 = 86 |
| CES24 = 90 | CES49 = 90 | CES74 = 92 | CES99 = 77 |
| CES25 = 71 | CES50 = 95 | CES75 = 68 |            |



### Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)