

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: P1216817

Luminaire Tested: 14-ID2-80-CFR1-L850-U

Issue Date: 12/5/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1216817  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2508-507-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 14-ID2-80-CFR1-L850-U  
Description: 1X4 IN DEPTH TROFFER WITH 1INCH CUBE REGRESS LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

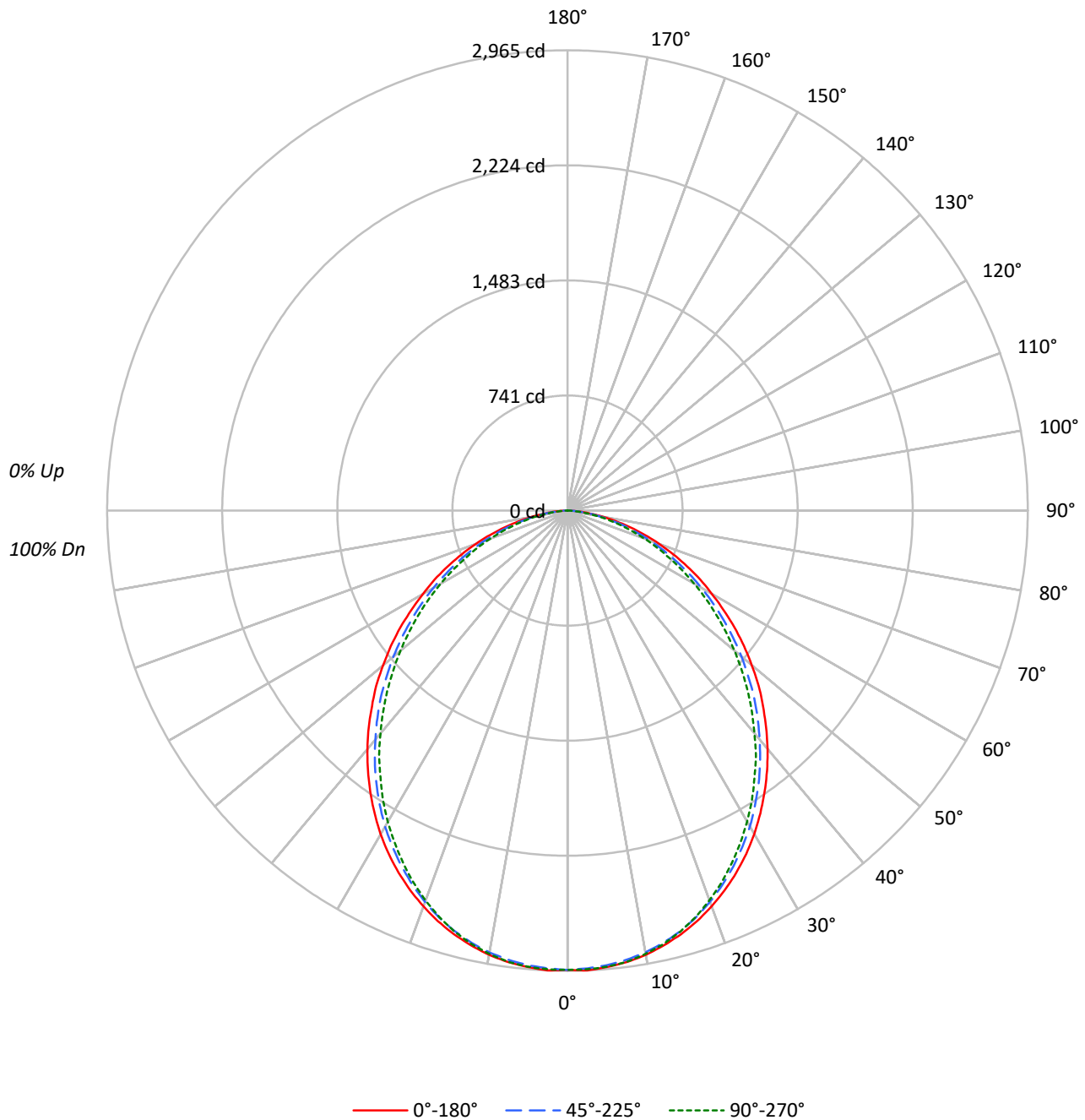
Lumens per Lamp: N/A  
Luminaire Lumens: 7271.3 lumens  
Efficiency: N/A  
Efficacy: 103.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.28  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70  
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: P1216817  
CATALOG NUMBER: 14-ID2-80-CFR1-L850-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1216817

CATALOG NUMBER: 14-ID2-80-CFR1-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  | 50  | 30  | 10  | 50  | 30  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 87  | 87  | 85  |
| 2   | 100 | 92  | 86  | 80  | 97  | 90  | 84  | 79  | 87  | 82  | 77  | 84  | 79  | 76  | 81  | 77  | 74  | 74  | 74  | 72  |
| 3   | 92  | 81  | 74  | 67  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 74  | 69  | 65  | 72  | 67  | 63  | 63  | 63  | 61  |
| 4   | 84  | 73  | 64  | 58  | 82  | 71  | 63  | 57  | 69  | 62  | 56  | 66  | 61  | 56  | 64  | 59  | 55  | 55  | 55  | 53  |
| 5   | 78  | 65  | 56  | 50  | 75  | 64  | 56  | 50  | 62  | 55  | 49  | 60  | 54  | 49  | 58  | 53  | 48  | 48  | 48  | 46  |
| 6   | 72  | 59  | 50  | 44  | 70  | 58  | 50  | 44  | 56  | 49  | 43  | 54  | 48  | 43  | 53  | 47  | 43  | 43  | 43  | 41  |
| 7   | 67  | 53  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 38  | 48  | 43  | 38  | 38  | 38  | 36  |
| 8   | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 34  | 34  | 32  |
| 9   | 58  | 45  | 37  | 32  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 31  | 31  | 29  |
| 10  | 55  | 42  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 28  | 38  | 32  | 28  | 28  | 28  | 27  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7963 | 7963 | 7963 |
| 5°  | 7973 | 7940 | 7967 |
| 10° | 7941 | 7898 | 7925 |
| 15° | 7871 | 7816 | 7823 |
| 20° | 7771 | 7683 | 7655 |
| 25° | 7641 | 7506 | 7437 |
| 30° | 7478 | 7302 | 7192 |
| 35° | 7273 | 7051 | 6897 |
| 40° | 7044 | 6763 | 6582 |
| 45° | 6776 | 6467 | 6243 |
| 50° | 6487 | 6122 | 5875 |
| 55° | 6164 | 5755 | 5490 |
| 60° | 5782 | 5366 | 5075 |
| 65° | 5410 | 4933 | 4613 |
| 70° | 4947 | 4463 | 4135 |
| 75° | 4378 | 3881 | 3549 |
| 80° | 3577 | 3140 | 2816 |
| 85° | 2541 | 2084 | 1707 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6776 cd/sqm

TEST NUMBER: P1216817  
 CATALOG NUMBER: 14-ID2-80-CFR1-L850-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 279.6  | 3.8       |
| 10°-20°   | 791.7  | 10.9      |
| 20°-30°   | 1165.9 | 16.0      |
| 30°-40°   | 1344.9 | 18.5      |
| 40°-50°   | 1315.1 | 18.1      |
| 50°-60°   | 1105.7 | 15.2      |
| 60°-70°   | 776.9  | 10.7      |
| 70°-80°   | 402.3  | 5.5       |
| 80°-90°   | 89.2   | 1.2       |
| 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°    | 2237.2 | 30.8      |
| 0°-40°    | 3582.0 | 49.3      |
| 0°-60°    | 6002.9 | 82.6      |
| 0°-90°    | 7271.3 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7271.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2959 | 2959  | 2959 | 2959  | 2959 |      |
| 5°  | 2952 | 2948  | 2940 | 2941  | 2949 | 280  |
| 15° | 2825 | 2819  | 2806 | 2801  | 2808 | 796  |
| 25° | 2574 | 2562  | 2528 | 2502  | 2505 | 1185 |
| 35° | 2214 | 2195  | 2146 | 2107  | 2100 | 1384 |
| 45° | 1780 | 1758  | 1699 | 1653  | 1640 | 1374 |
| 55° | 1314 | 1289  | 1227 | 1186  | 1170 | 1173 |
| 65° | 850  | 828   | 775  | 740   | 724  | 842  |
| 75° | 421  | 406   | 373  | 349   | 341  | 447  |
| 85° | 82   | 85    | 68   | 58    | 55   | 103  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1216817

CATALOG NUMBER: 14-ID2-80-CFR1-L850-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2959.1 | 2959.1 | 2959.1 | 2959.1 | 2959.1 |
| 2.5°  | 2965.2 | 2959.1 | 2951.7 | 2954.2 | 2957.9 |
| 5°    | 2951.7 | 2948.0 | 2939.5 | 2940.7 | 2949.3 |
| 7.5°  | 2933.3 | 2928.4 | 2918.6 | 2921.0 | 2930.9 |
| 10°   | 2906.3 | 2898.9 | 2890.3 | 2891.6 | 2900.2 |
| 12.5° | 2869.5 | 2863.3 | 2852.3 | 2851.0 | 2859.6 |
| 15°   | 2825.3 | 2819.1 | 2805.6 | 2800.7 | 2808.1 |
| 17.5° | 2773.7 | 2766.3 | 2749.1 | 2740.5 | 2745.5 |
| 20°   | 2713.5 | 2706.2 | 2682.8 | 2666.9 | 2673.0 |
| 22.5° | 2647.2 | 2638.6 | 2609.2 | 2590.7 | 2593.2 |
| 25°   | 2573.6 | 2562.5 | 2528.1 | 2502.3 | 2504.8 |
| 27.5° | 2493.7 | 2479.0 | 2440.9 | 2412.7 | 2411.5 |
| 30°   | 2406.6 | 2390.6 | 2350.1 | 2316.9 | 2314.5 |
| 32.5° | 2312.0 | 2296.1 | 2249.4 | 2213.8 | 2211.3 |
| 35°   | 2213.8 | 2195.4 | 2146.3 | 2107.0 | 2099.6 |
| 37.5° | 2111.9 | 2091.0 | 2038.2 | 2000.2 | 1994.0 |
| 40°   | 2005.1 | 1983.0 | 1925.3 | 1884.7 | 1873.7 |
| 42.5° | 1894.6 | 1873.7 | 1812.3 | 1773.0 | 1758.3 |
| 45°   | 1780.4 | 1758.3 | 1699.3 | 1652.7 | 1640.4 |
| 47.5° | 1671.1 | 1641.6 | 1579.0 | 1539.7 | 1521.3 |
| 50°   | 1549.5 | 1525.0 | 1462.4 | 1421.8 | 1403.4 |
| 52.5° | 1432.9 | 1408.3 | 1343.3 | 1302.7 | 1286.8 |
| 55°   | 1313.8 | 1289.2 | 1226.6 | 1186.1 | 1170.1 |
| 57.5° | 1191.0 | 1171.4 | 1111.2 | 1073.1 | 1055.9 |
| 60°   | 1074.4 | 1054.7 | 997.0  | 961.4  | 943.0  |
| 62.5° | 965.1  | 940.5  | 884.0  | 850.9  | 832.5  |
| 65°   | 849.7  | 827.6  | 774.8  | 740.4  | 724.4  |
| 67.5° | 737.9  | 717.1  | 667.9  | 638.5  | 626.2  |
| 70°   | 628.7  | 610.2  | 567.3  | 537.8  | 525.5  |
| 72.5° | 521.8  | 505.9  | 467.8  | 439.6  | 431.0  |
| 75°   | 421.1  | 406.4  | 373.3  | 348.7  | 341.3  |
| 77.5° | 322.9  | 314.3  | 283.6  | 262.8  | 256.6  |
| 80°   | 230.8  | 227.2  | 202.6  | 185.4  | 181.7  |
| 82.5° | 149.8  | 148.6  | 132.6  | 117.9  | 113.0  |
| 85°   | 82.3   | 84.7   | 67.5   | 57.7   | 55.3   |
| 87.5° | 29.5   | 29.5   | 20.9   | 18.4   | 17.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

TEST NUMBER: P1216817

CATALOG NUMBER: 14-ID2-80-CFR1-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 | 18.32            | 19.90 | 18.68 | 20.21 | 20.53 | 17.66          | 19.24 | 18.03 | 19.56 | 19.87 |
|                 | 3H   | 19.94            | 21.36 | 20.32 | 21.69 | 22.05 | 19.15          | 20.57 | 19.53 | 20.90 | 21.26 |
|                 | 4H   | 20.51            | 21.84 | 20.91 | 22.19 | 22.57 | 19.64          | 20.98 | 20.04 | 21.33 | 21.70 |
|                 | 6H   | 20.88            | 22.12 | 21.29 | 22.49 | 22.88 | 19.94          | 21.18 | 20.36 | 21.55 | 21.94 |
|                 | 8H   | 20.98            | 22.16 | 21.41 | 22.55 | 22.95 | 20.01          | 21.19 | 20.44 | 21.58 | 21.98 |
|                 | 12H  | 21.03            | 22.16 | 21.46 | 22.54 | 22.97 | 20.04          | 21.17 | 20.47 | 21.55 | 21.98 |
| 4H              | 2H   | 18.80            | 20.13 | 19.19 | 20.48 | 20.86 | 18.27          | 19.60 | 18.67 | 19.95 | 20.33 |
|                 | 3H   | 20.63            | 21.74 | 21.04 | 22.14 | 22.54 | 19.96          | 21.07 | 20.37 | 21.47 | 21.87 |
|                 | 4H   | 21.32            | 22.33 | 21.75 | 22.74 | 23.18 | 20.55          | 21.56 | 20.98 | 21.97 | 22.41 |
|                 | 6H   | 21.82            | 22.69 | 22.27 | 23.13 | 23.59 | 20.95          | 21.83 | 21.41 | 22.27 | 22.72 |
|                 | 8H   | 21.95            | 22.77 | 22.41 | 23.21 | 23.68 | 21.05          | 21.86 | 21.51 | 22.31 | 22.77 |
|                 | 12H  | 22.03            | 22.76 | 22.51 | 23.24 | 23.71 | 21.09          | 21.83 | 21.57 | 22.30 | 22.77 |
| 8H              | 4H   | 21.52            | 22.33 | 21.98 | 22.78 | 23.24 | 20.82          | 21.64 | 21.28 | 22.08 | 22.55 |
|                 | 6H   | 22.10            | 22.78 | 22.60 | 23.27 | 23.75 | 21.31          | 21.98 | 21.80 | 22.47 | 22.95 |
|                 | 8H   | 22.29            | 22.90 | 22.81 | 23.41 | 23.90 | 21.45          | 22.05 | 21.96 | 22.56 | 23.05 |
|                 | 12H  | 22.43            | 22.97 | 22.94 | 23.46 | 24.02 | 21.53          | 22.06 | 22.04 | 22.55 | 23.12 |
| 12H             | 4H   | 21.52            | 22.25 | 22.00 | 22.73 | 23.20 | 20.85          | 21.58 | 21.33 | 22.05 | 22.52 |
|                 | 6H   | 22.12            | 22.72 | 22.63 | 23.23 | 23.72 | 21.34          | 21.95 | 21.85 | 22.46 | 22.94 |
|                 | 8H   | 22.35            | 22.89 | 22.86 | 23.38 | 23.94 | 21.53          | 22.06 | 22.03 | 22.55 | 23.11 |

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**



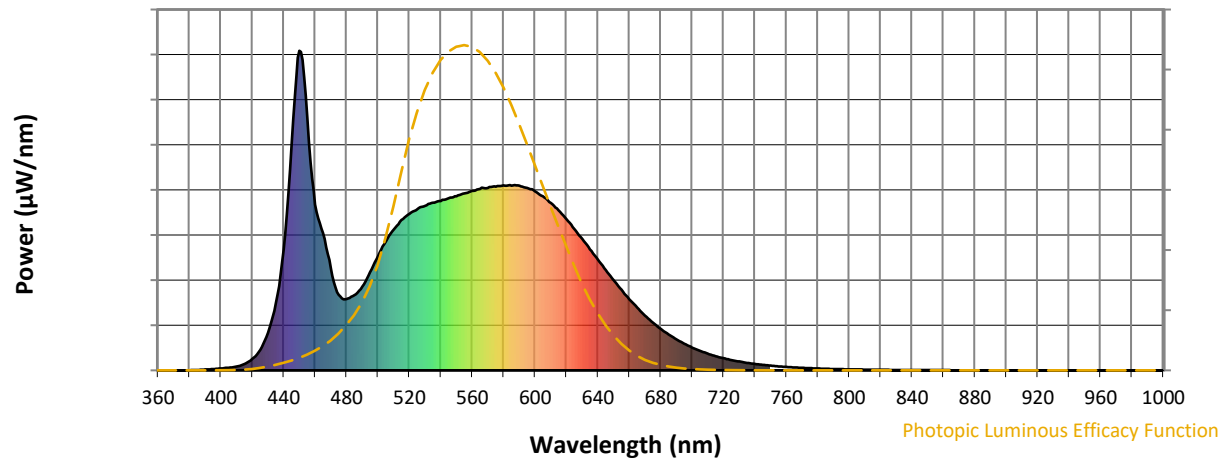
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-7

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| $\lambda$<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               | 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

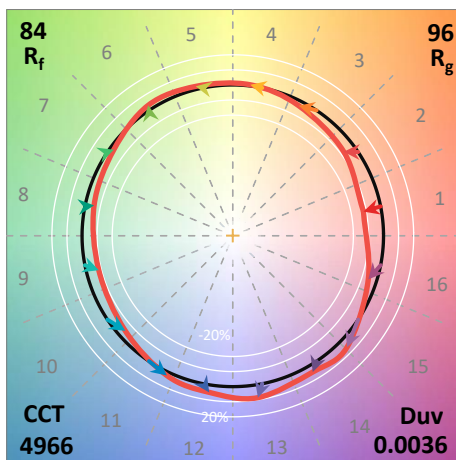
TM-30-18

### 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 ( $R_{fi}$ )**

|            |            |            |            |
|------------|------------|------------|------------|
| 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)