

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: P1216872

Luminaire Tested: 14-ID2-50-CFR2-L850-U

Issue Date: 12/5/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1216872  
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-ID2-50-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**

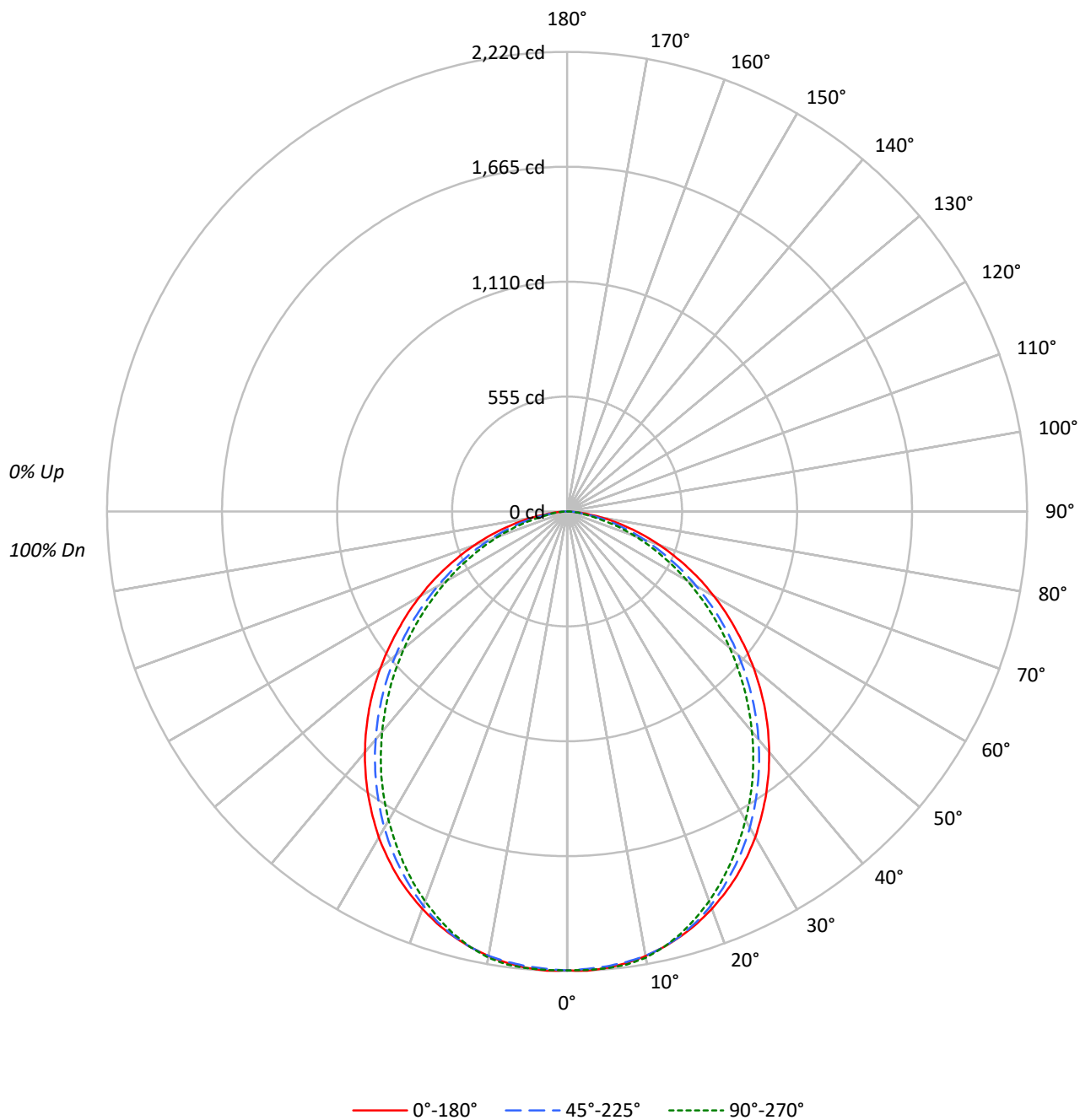
Lumens per Lamp: N/A  
Luminaire Lumens: 5378.4 lumens  
Efficiency: N/A  
Efficacy: 122.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.28  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P1216872  
CATALOG NUMBER: 14-ID2-50-CFR2-L850-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1216872

CATALOG NUMBER: 14-ID2-50-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°  | 5965 | 5965 | 5965 |
| 5°  | 5979 | 5957 | 5983 |
| 10° | 5959 | 5955 | 5981 |
| 15° | 5918 | 5910 | 5886 |
| 20° | 5850 | 5805 | 5738 |
| 25° | 5762 | 5653 | 5554 |
| 30° | 5647 | 5482 | 5351 |
| 35° | 5497 | 5276 | 5132 |
| 40° | 5331 | 5049 | 4877 |
| 45° | 5141 | 4799 | 4599 |
| 50° | 4920 | 4514 | 4291 |
| 55° | 4665 | 4210 | 3964 |
| 60° | 4402 | 3875 | 3607 |
| 65° | 4106 | 3505 | 3205 |
| 70° | 3733 | 3101 | 2757 |
| 75° | 3271 | 2635 | 2171 |
| 80° | 2641 | 1949 | 1517 |
| 85° | 1782 | 1430 | 1269 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5141 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 210.1  | 3.9       |
| 10°-20°   | 597.0  | 11.1      |
| 20°-30°   | 877.9  | 16.3      |
| 30°-40°   | 1009.4 | 18.8      |
| 40°-50°   | 981.2  | 18.2      |
| 50°-60°   | 814.0  | 15.1      |
| 60°-70°   | 557.9  | 10.4      |
| 70°-80°   | 273.3  | 5.1       |
| 80°-90°   | 57.7   | 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°    | 1684.9 | 31.3      |
| 0°-40°    | 2694.3 | 50.1      |
| 0°-60°    | 4489.5 | 83.5      |
| 0°-90°    | 5378.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5378.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2217 | 2217  | 2217 | 2217  | 2217 |      |
| 5°  | 2213 | 2211  | 2205 | 2209  | 2215 | 210  |
| 15° | 2124 | 2126  | 2122 | 2113  | 2113 | 599  |
| 25° | 1941 | 1943  | 1904 | 1879  | 1871 | 893  |
| 35° | 1673 | 1664  | 1606 | 1574  | 1562 | 1046 |
| 45° | 1351 | 1328  | 1261 | 1222  | 1208 | 1041 |
| 55° | 994  | 962   | 897  | 861   | 845  | 891  |
| 65° | 645  | 605   | 550  | 519   | 503  | 639  |
| 75° | 315  | 288   | 253  | 221   | 209  | 335  |
| 85° | 58   | 51    | 46   | 43    | 41   | 74   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2216.8 | 2216.8 | 2216.8 | 2216.8 | 2216.8 |
| 2.5°  | 2220.3 | 2216.8 | 2211.5 | 2213.3 | 2216.8 |
| 5°    | 2213.3 | 2210.6 | 2205.4 | 2208.9 | 2215.0 |
| 7.5°  | 2200.2 | 2198.4 | 2194.9 | 2200.2 | 2208.0 |
| 10°   | 2180.9 | 2180.1 | 2179.2 | 2182.7 | 2188.8 |
| 12.5° | 2155.6 | 2155.6 | 2155.6 | 2153.0 | 2155.6 |
| 15°   | 2124.1 | 2125.9 | 2121.5 | 2112.8 | 2112.8 |
| 17.5° | 2086.6 | 2090.1 | 2078.7 | 2064.7 | 2061.2 |
| 20°   | 2042.9 | 2047.3 | 2027.2 | 2007.1 | 2003.6 |
| 22.5° | 1994.0 | 1998.3 | 1967.7 | 1944.1 | 1939.8 |
| 25°   | 1940.7 | 1943.3 | 1904.0 | 1878.6 | 1870.7 |
| 27.5° | 1880.4 | 1880.4 | 1836.7 | 1807.8 | 1797.4 |
| 30°   | 1817.4 | 1814.0 | 1764.1 | 1733.6 | 1722.2 |
| 32.5° | 1745.8 | 1741.4 | 1686.4 | 1654.9 | 1643.6 |
| 35°   | 1673.3 | 1664.5 | 1606.0 | 1573.7 | 1562.3 |
| 37.5° | 1597.3 | 1585.0 | 1523.0 | 1488.9 | 1475.8 |
| 40°   | 1517.7 | 1501.1 | 1437.4 | 1401.5 | 1388.4 |
| 42.5° | 1435.6 | 1416.4 | 1350.0 | 1315.0 | 1298.4 |
| 45°   | 1350.9 | 1328.1 | 1260.9 | 1222.4 | 1208.4 |
| 47.5° | 1263.5 | 1238.1 | 1170.0 | 1133.3 | 1116.7 |
| 50°   | 1175.2 | 1146.4 | 1078.2 | 1041.5 | 1024.9 |
| 52.5° | 1085.2 | 1052.0 | 987.4  | 950.7  | 934.9  |
| 55°   | 994.4  | 962.0  | 897.4  | 860.7  | 844.9  |
| 57.5° | 907.9  | 870.3  | 807.4  | 773.3  | 755.8  |
| 60°   | 817.9  | 780.3  | 720.0  | 685.9  | 670.2  |
| 62.5° | 733.1  | 691.2  | 634.4  | 601.2  | 585.4  |
| 65°   | 644.8  | 604.7  | 550.5  | 519.0  | 503.3  |
| 67.5° | 558.3  | 520.8  | 471.0  | 438.6  | 425.5  |
| 70°   | 474.5  | 438.6  | 394.1  | 363.5  | 350.4  |
| 72.5° | 393.2  | 362.6  | 323.3  | 290.1  | 278.7  |
| 75°   | 314.6  | 288.3  | 253.4  | 221.1  | 208.8  |
| 77.5° | 240.3  | 219.3  | 186.1  | 154.7  | 142.4  |
| 80°   | 170.4  | 154.7  | 125.8  | 99.6   | 97.9   |
| 82.5° | 110.1  | 98.7   | 75.1   | 71.6   | 69.9   |
| 85°   | 57.7   | 50.7   | 46.3   | 42.8   | 41.1   |
| 87.5° | 18.3   | 18.3   | 18.3   | 14.9   | 14.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

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**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 | 17.35            | 18.92 | 17.71 | 19.23 | 19.54 | 16.44          | 18.01 | 16.80 | 18.32 | 18.63 |
|                 | 3H   | 18.95            | 20.35 | 19.32 | 20.68 | 21.04 | 17.78          | 19.19 | 18.16 | 19.52 | 19.88 |
|                 | 4H   | 19.50            | 20.83 | 19.90 | 21.17 | 21.55 | 18.17          | 19.49 | 18.57 | 19.84 | 20.22 |
|                 | 6H   | 19.86            | 21.09 | 20.27 | 21.45 | 21.84 | 18.34          | 19.57 | 18.76 | 19.93 | 20.33 |
|                 | 8H   | 19.95            | 21.12 | 20.38 | 21.51 | 21.91 | 18.39          | 19.55 | 18.81 | 19.94 | 20.34 |
|                 | 12H  | 20.00            | 21.11 | 20.43 | 21.50 | 21.92 | 18.41          | 19.53 | 18.84 | 19.91 | 20.34 |
| 4H              | 2H   | 17.77            | 19.09 | 18.17 | 19.44 | 19.82 | 17.02          | 18.35 | 17.42 | 18.70 | 19.07 |
|                 | 3H   | 19.57            | 20.67 | 19.98 | 21.07 | 21.47 | 18.56          | 19.66 | 18.97 | 20.06 | 20.46 |
|                 | 4H   | 20.24            | 21.23 | 20.67 | 21.64 | 22.08 | 19.04          | 20.03 | 19.47 | 20.44 | 20.88 |
|                 | 6H   | 20.71            | 21.57 | 21.17 | 22.01 | 22.47 | 19.29          | 20.15 | 19.74 | 20.59 | 21.05 |
|                 | 8H   | 20.83            | 21.64 | 21.30 | 22.08 | 22.55 | 19.35          | 20.16 | 19.81 | 20.60 | 21.07 |
|                 | 12H  | 20.91            | 21.63 | 21.39 | 22.10 | 22.57 | 19.40          | 20.12 | 19.88 | 20.59 | 21.06 |
| 8H              | 4H   | 20.39            | 21.19 | 20.85 | 21.64 | 22.10 | 19.29          | 20.10 | 19.75 | 20.54 | 21.01 |
|                 | 6H   | 20.93            | 21.60 | 21.43 | 22.09 | 22.56 | 19.60          | 20.27 | 20.10 | 20.76 | 21.23 |
|                 | 8H   | 21.10            | 21.70 | 21.62 | 22.21 | 22.70 | 19.70          | 20.30 | 20.21 | 20.80 | 21.29 |
|                 | 12H  | 21.22            | 21.74 | 21.73 | 22.24 | 22.80 | 19.78          | 20.31 | 20.29 | 20.80 | 21.37 |
| 12H             | 4H   | 20.38            | 21.10 | 20.86 | 21.58 | 22.05 | 19.31          | 20.03 | 19.79 | 20.51 | 20.98 |
|                 | 6H   | 20.92            | 21.52 | 21.44 | 22.03 | 22.52 | 19.63          | 20.22 | 20.14 | 20.73 | 21.22 |
|                 | 8H   | 21.13            | 21.66 | 21.64 | 22.15 | 22.71 | 19.76          | 20.29 | 20.27 | 20.78 | 21.35 |

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

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| 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           |

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**CIE 1931 Chromaticity Diagram**



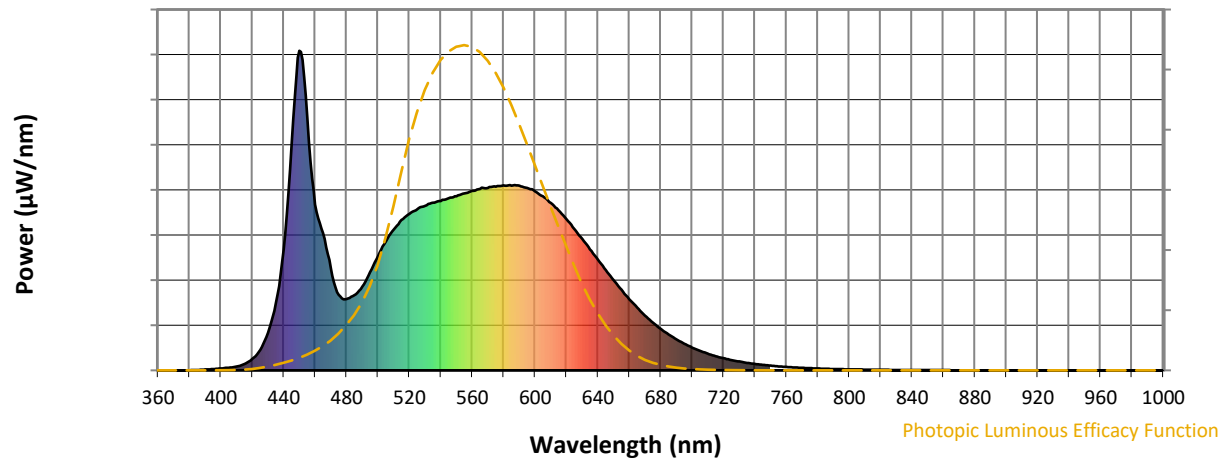
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 5000K 4-step quadrangle

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### 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       | 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               |           |                             |                  |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.94

| 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

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.11

| 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

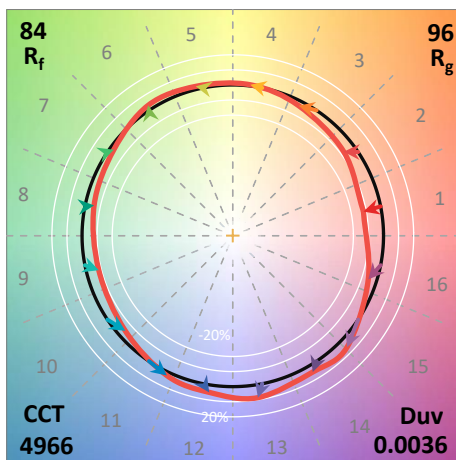
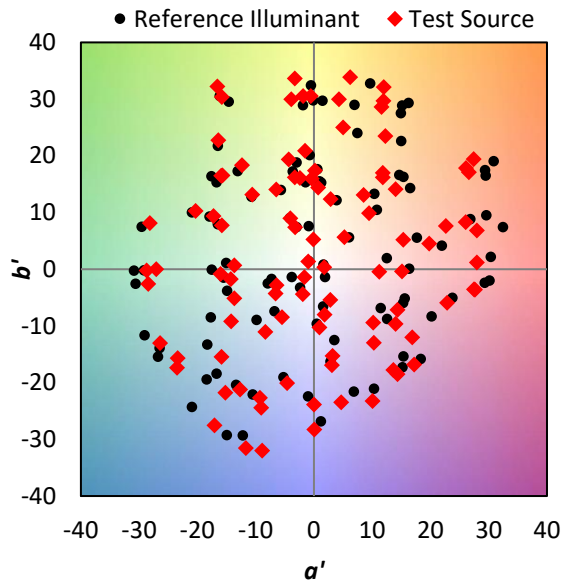
TM-30-18

### Summary

$R_f = 84$   
 $R_g = 96.2$   
 $CIE R_a = 83.1$   
 $R_9 = 10.3$



### 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)