

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: P1217107

Luminaire Tested: 14-ID2-35-CNC-L835-U

Issue Date: 12/5/2025

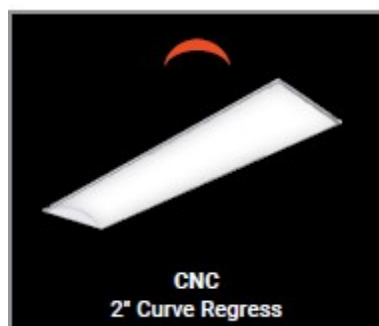
**Test Information**

Test Method: LM-79-2019  
Report Number: P1217107  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2508-507-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 14-ID2-35-CNC-L835-U  
Description: 1X4 IN DEPTH TROFFER WITH 2INCH CURVE REGRESS LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

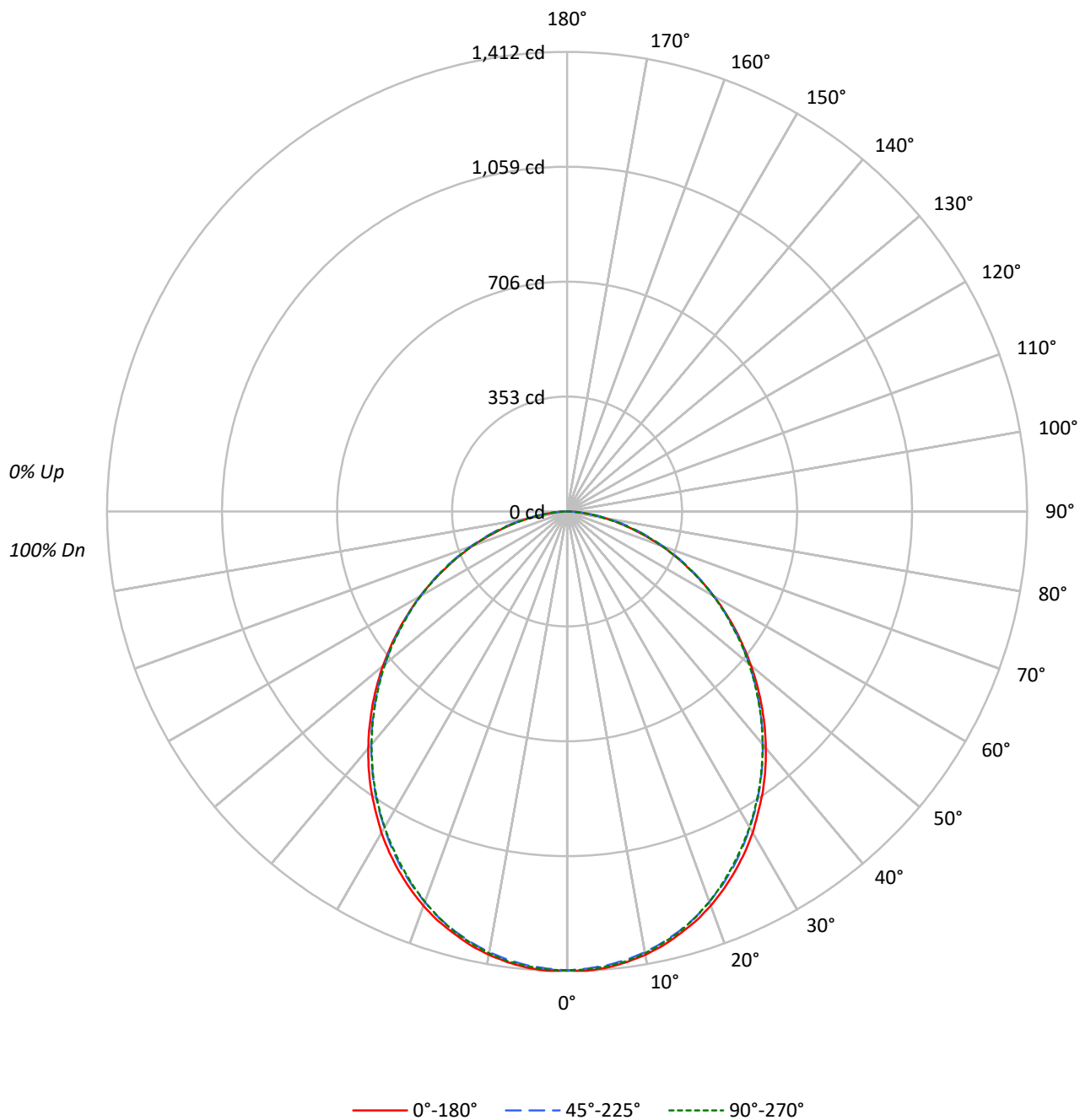
Lumens per Lamp: N/A  
Luminaire Lumens: 3608.9 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 30.6  
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



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### Luminous Intensity Polar Plot



TEST NUMBER: P1217107

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

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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3795 | 3795 | 3795 |
| 5°  | 3801 | 3781 | 3789 |
| 10° | 3779 | 3757 | 3766 |
| 15° | 3740 | 3716 | 3723 |
| 20° | 3692 | 3657 | 3655 |
| 25° | 3622 | 3582 | 3569 |
| 30° | 3541 | 3485 | 3481 |
| 35° | 3443 | 3389 | 3384 |
| 40° | 3335 | 3285 | 3281 |
| 45° | 3215 | 3174 | 3167 |
| 50° | 3088 | 3057 | 3052 |
| 55° | 2951 | 2931 | 2916 |
| 60° | 2797 | 2797 | 2787 |
| 65° | 2610 | 2649 | 2625 |
| 70° | 2419 | 2472 | 2434 |
| 75° | 2138 | 2271 | 2182 |
| 80° | 1816 | 1959 | 1816 |
| 85° | 1365 | 1479 | 1420 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3215 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 133.1  | 3.7       |
| 10°-20°   | 376.6  | 10.4      |
| 20°-30°   | 555.8  | 15.4      |
| 30°-40°   | 646.8  | 17.9      |
| 40°-50°   | 644.6  | 17.9      |
| 50°-60°   | 558.9  | 15.5      |
| 60°-70°   | 410.0  | 11.4      |
| 70°-80°   | 226.7  | 6.3       |
| 80°-90°   | 56.5   | 1.6       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 1065.5 | 29.5      |
| 0°-40°    | 1712.3 | 47.4      |
| 0°-60°    | 2915.8 | 80.8      |
| 0°-90°    | 3608.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3608.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1410 | 1410  | 1410 | 1410  | 1410 |      |
| 5°  | 1407 | 1405  | 1400 | 1400  | 1403 | 134  |
| 15° | 1343 | 1340  | 1334 | 1332  | 1336 | 379  |
| 25° | 1220 | 1213  | 1206 | 1200  | 1202 | 562  |
| 35° | 1048 | 1041  | 1032 | 1027  | 1030 | 655  |
| 45° | 845  | 841   | 834  | 829   | 832  | 652  |
| 55° | 629  | 628   | 625  | 621   | 622  | 562  |
| 65° | 410  | 417   | 416  | 410   | 412  | 408  |
| 75° | 206  | 219   | 218  | 210   | 210  | 220  |
| 85° | 44   | 50    | 48   | 44    | 46   | 53   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1410.1 | 1410.1 | 1410.1 | 1410.1 | 1410.1 |
| 2.5°  | 1412.5 | 1410.7 | 1405.8 | 1405.8 | 1408.2 |
| 5°    | 1407.0 | 1405.2 | 1399.6 | 1399.6 | 1402.7 |
| 7.5°  | 1396.6 | 1395.3 | 1389.2 | 1389.2 | 1393.5 |
| 10°   | 1383.1 | 1380.6 | 1375.1 | 1374.5 | 1378.2 |
| 12.5° | 1365.3 | 1362.8 | 1356.7 | 1355.5 | 1359.1 |
| 15°   | 1342.6 | 1340.1 | 1334.0 | 1332.1 | 1336.4 |
| 17.5° | 1318.6 | 1313.7 | 1308.2 | 1304.5 | 1308.2 |
| 20°   | 1289.2 | 1284.3 | 1276.9 | 1272.6 | 1276.3 |
| 22.5° | 1256.1 | 1250.5 | 1243.2 | 1236.4 | 1240.7 |
| 25°   | 1219.9 | 1213.1 | 1206.4 | 1199.6 | 1202.1 |
| 27.5° | 1181.2 | 1173.2 | 1165.2 | 1159.1 | 1161.6 |
| 30°   | 1139.5 | 1130.9 | 1121.7 | 1116.8 | 1120.4 |
| 32.5° | 1092.8 | 1087.9 | 1078.1 | 1072.6 | 1075.7 |
| 35°   | 1048.0 | 1041.3 | 1031.5 | 1026.6 | 1030.2 |
| 37.5° | 999.6  | 992.8  | 984.2  | 978.7  | 982.4  |
| 40°   | 949.3  | 943.1  | 935.1  | 929.6  | 933.9  |
| 42.5° | 897.7  | 894.0  | 885.4  | 879.3  | 883.6  |
| 45°   | 844.9  | 840.6  | 833.9  | 829.0  | 832.1  |
| 47.5° | 791.6  | 787.9  | 782.4  | 776.8  | 781.1  |
| 50°   | 737.6  | 736.3  | 730.2  | 725.3  | 729.0  |
| 52.5° | 682.9  | 682.9  | 677.4  | 673.1  | 676.8  |
| 55°   | 628.9  | 627.7  | 624.7  | 621.0  | 621.6  |
| 57.5° | 574.3  | 574.3  | 571.9  | 568.2  | 571.3  |
| 60°   | 519.7  | 522.2  | 519.7  | 515.4  | 517.9  |
| 62.5° | 465.7  | 468.8  | 467.6  | 462.7  | 465.1  |
| 65°   | 409.9  | 416.6  | 416.0  | 410.5  | 412.3  |
| 67.5° | 359.6  | 365.1  | 364.5  | 359.6  | 360.8  |
| 70°   | 307.4  | 314.8  | 314.2  | 308.6  | 309.3  |
| 72.5° | 254.6  | 265.7  | 265.1  | 258.9  | 258.9  |
| 75°   | 205.6  | 219.1  | 218.4  | 210.5  | 209.9  |
| 77.5° | 161.4  | 173.0  | 171.8  | 163.2  | 163.2  |
| 80°   | 117.2  | 127.6  | 126.4  | 117.2  | 117.2  |
| 82.5° | 77.9   | 87.1   | 84.7   | 77.3   | 78.5   |
| 85°   | 44.2   | 50.3   | 47.9   | 44.2   | 46.0   |
| 87.5° | 16.0   | 19.6   | 19.0   | 16.0   | 17.8   |
| 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 | 15.75            | 17.35 | 16.11 | 17.67 | 17.98 | 15.68          | 17.29 | 16.04 | 17.60 | 17.91 |
|                 | 3H   | 17.43            | 18.88 | 17.81 | 19.21 | 19.57 | 17.37          | 18.82 | 17.75 | 19.15 | 19.51 |
|                 | 4H   | 18.02            | 19.39 | 18.42 | 19.74 | 20.11 | 17.98          | 19.34 | 18.37 | 19.69 | 20.06 |
|                 | 6H   | 18.44            | 19.70 | 18.85 | 20.06 | 20.46 | 18.38          | 19.65 | 18.79 | 20.01 | 20.40 |
|                 | 8H   | 18.55            | 19.76 | 18.97 | 20.14 | 20.54 | 18.49          | 19.70 | 18.92 | 20.09 | 20.49 |
|                 | 12H  | 18.61            | 19.77 | 19.04 | 20.15 | 20.58 | 18.56          | 19.71 | 18.99 | 20.10 | 20.52 |
| 4H              | 2H   | 16.35            | 17.71 | 16.75 | 18.06 | 18.44 | 16.29          | 17.66 | 16.69 | 18.00 | 18.38 |
|                 | 3H   | 18.26            | 19.40 | 18.67 | 19.79 | 20.19 | 18.20          | 19.34 | 18.61 | 19.74 | 20.14 |
|                 | 4H   | 18.99            | 20.02 | 19.42 | 20.43 | 20.87 | 18.92          | 19.95 | 19.35 | 20.37 | 20.80 |
|                 | 6H   | 19.53            | 20.43 | 19.98 | 20.87 | 21.33 | 19.44          | 20.34 | 19.89 | 20.78 | 21.24 |
|                 | 8H   | 19.69            | 20.53 | 20.15 | 20.97 | 21.43 | 19.59          | 20.43 | 20.05 | 20.87 | 21.34 |
|                 | 12H  | 19.78            | 20.54 | 20.26 | 21.02 | 21.48 | 19.69          | 20.44 | 20.17 | 20.92 | 21.39 |
| 8H              | 4H   | 19.28            | 20.12 | 19.74 | 20.56 | 21.03 | 19.22          | 20.06 | 19.68 | 20.50 | 20.97 |
|                 | 6H   | 19.94            | 20.64 | 20.43 | 21.12 | 21.60 | 19.84          | 20.54 | 20.33 | 21.03 | 21.50 |
|                 | 8H   | 20.16            | 20.79 | 20.67 | 21.30 | 21.78 | 20.04          | 20.67 | 20.55 | 21.18 | 21.66 |
|                 | 12H  | 20.32            | 20.88 | 20.83 | 21.37 | 21.93 | 20.19          | 20.75 | 20.70 | 21.24 | 21.80 |
| 12H             | 4H   | 19.30            | 20.06 | 19.78 | 20.53 | 21.00 | 19.25          | 20.00 | 19.73 | 20.48 | 20.95 |
|                 | 6H   | 19.98            | 20.61 | 20.49 | 21.11 | 21.60 | 19.89          | 20.51 | 20.40 | 21.02 | 21.51 |
|                 | 8H   | 20.26            | 20.81 | 20.76 | 21.30 | 21.86 | 20.14          | 20.69 | 20.65 | 21.18 | 21.75 |

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

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-1

Test Date: 07/23/2025

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

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

### Test Information

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

### Spectral Parameters

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

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



### Test Conditions

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

REPORT NUMBER: SP1-2506-458-1

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

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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 3500K 4-step quadrangle

REPORT NUMBER: SP1-2506-458-1

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|-------------------|-------------------------------|--------------------------------|
| 360               | 0                             | NR                             | 490               | 295                           | NR                             | 620               | 910                           | NR                             | 750               | 30                            | NR                             | 880               | 1                             | NR                             |
| 365               | 0                             | NR                             | 495               | 335                           | NR                             | 625               | 862                           | NR                             | 755               | 25                            | NR                             | 885               | 1                             | NR                             |
| 370               | 0                             | NR                             | 500               | 390                           | NR                             | 630               | 809                           | NR                             | 760               | 21                            | NR                             | 890               | 1                             | NR                             |
| 375               | 0                             | NR                             | 505               | 445                           | NR                             | 635               | 752                           | NR                             | 765               | 18                            | NR                             | 895               | 0                             | NR                             |
| 380               | 0                             | NR                             | 510               | 490                           | NR                             | 640               | 694                           | NR                             | 770               | 16                            | NR                             | 900               | 0                             | NR                             |
| 385               | 0                             | NR                             | 515               | 532                           | NR                             | 645               | 630                           | NR                             | 775               | 13                            | NR                             | 905               | 0                             | NR                             |
| 390               | 0                             | NR                             | 520               | 563                           | NR                             | 650               | 571                           | NR                             | 780               | 12                            | NR                             | 910               | 0                             | NR                             |
| 395               | 2                             | NR                             | 525               | 588                           | NR                             | 655               | 512                           | NR                             | 785               | 10                            | NR                             | 915               | 0                             | NR                             |
| 400               | 3                             | NR                             | 530               | 609                           | NR                             | 660               | 453                           | NR                             | 790               | 8                             | NR                             | 920               | 0                             | NR                             |
| 405               | 5                             | NR                             | 535               | 631                           | NR                             | 665               | 401                           | NR                             | 795               | 7                             | NR                             | 925               | 0                             | NR                             |
| 410               | 8                             | NR                             | 540               | 654                           | NR                             | 670               | 351                           | NR                             | 800               | 6                             | NR                             | 930               | 0                             | NR                             |
| 415               | 13                            | NR                             | 545               | 677                           | NR                             | 675               | 306                           | NR                             | 805               | 5                             | NR                             | 935               | 0                             | NR                             |
| 420               | 23                            | NR                             | 550               | 702                           | NR                             | 680               | 267                           | NR                             | 810               | 5                             | NR                             | 940               | 0                             | NR                             |
| 425               | 40                            | NR                             | 555               | 734                           | NR                             | 685               | 230                           | NR                             | 815               | 4                             | NR                             | 945               | 0                             | NR                             |
| 430               | 70                            | NR                             | 560               | 767                           | NR                             | 690               | 199                           | NR                             | 820               | 4                             | NR                             | 950               | 0                             | NR                             |
| 435               | 126                           | NR                             | 565               | 802                           | NR                             | 695               | 171                           | NR                             | 825               | 3                             | NR                             | 955               | 0                             | NR                             |
| 440               | 221                           | NR                             | 570               | 838                           | NR                             | 700               | 146                           | NR                             | 830               | 3                             | NR                             | 960               | 0                             | NR                             |
| 445               | 418                           | NR                             | 575               | 875                           | NR                             | 705               | 125                           | NR                             | 835               | 2                             | NR                             | 965               | 0                             | NR                             |
| 450               | 729                           | NR                             | 580               | 913                           | NR                             | 710               | 107                           | NR                             | 840               | 2                             | NR                             | 970               | 0                             | NR                             |
| 455               | 816                           | NR                             | 585               | 946                           | NR                             | 715               | 90                            | NR                             | 845               | 2                             | NR                             | 975               | 0                             | NR                             |
| 460               | 578                           | NR                             | 590               | 976                           | NR                             | 720               | 77                            | NR                             | 850               | 1                             | NR                             | 980               | 0                             | NR                             |
| 465               | 458                           | NR                             | 595               | 992                           | NR                             | 725               | 66                            | NR                             | 855               | 1                             | NR                             | 985               | 0                             | NR                             |
| 470               | 390                           | NR                             | 600               | 999                           | NR                             | 730               | 56                            | NR                             | 860               | 1                             | NR                             | 990               | 0                             | NR                             |
| 475               | 299                           | NR                             | 605               | 995                           | NR                             | 735               | 47                            | NR                             | 865               | 1                             | NR                             | 995               | 0                             | NR                             |
| 480               | 260                           | NR                             | 610               | 975                           | NR                             | 740               | 40                            | NR                             | 870               | 1                             | NR                             | 1000              | 0                             | NR                             |
| 485               | 271                           | NR                             | 615               | 948                           | NR                             | 745               | 34                            | NR                             | 875               | 1                             | NR                             |                   |                               |                                |

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### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.53

| λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) | λ<br>(nm) | Power<br>W <sup>^</sup> /nm | Lumens<br>(φ/nm) |
|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|-----------|-----------------------------|------------------|
| 360       | 0                           | NR               | 490       | 295                         | NR               | 620       | 910                         | NR               | 750       | 30                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 335                         | NR               | 625       | 862                         | NR               | 755       | 25                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 390                         | NR               | 630       | 809                         | NR               | 760       | 21                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 445                         | NR               | 635       | 752                         | NR               | 765       | 18                          | NR               | 895       | 0                           | NR               |
| 380       | 0                           | NR               | 510       | 490                         | NR               | 640       | 694                         | NR               | 770       | 16                          | NR               | 900       | 0                           | NR               |
| 385       | 0                           | NR               | 515       | 532                         | NR               | 645       | 630                         | NR               | 775       | 13                          | NR               | 905       | 0                           | NR               |
| 390       | 0                           | NR               | 520       | 563                         | NR               | 650       | 571                         | NR               | 780       | 12                          | NR               | 910       | 0                           | NR               |
| 395       | 2                           | NR               | 525       | 588                         | NR               | 655       | 512                         | NR               | 785       | 10                          | NR               | 915       | 0                           | NR               |
| 400       | 3                           | NR               | 530       | 609                         | NR               | 660       | 453                         | NR               | 790       | 8                           | NR               | 920       | 0                           | NR               |
| 405       | 5                           | NR               | 535       | 631                         | NR               | 665       | 401                         | NR               | 795       | 7                           | NR               | 925       | 0                           | NR               |
| 410       | 8                           | NR               | 540       | 654                         | NR               | 670       | 351                         | NR               | 800       | 6                           | NR               | 930       | 0                           | NR               |
| 415       | 13                          | NR               | 545       | 677                         | NR               | 675       | 306                         | NR               | 805       | 5                           | NR               | 935       | 0                           | NR               |
| 420       | 23                          | NR               | 550       | 702                         | NR               | 680       | 267                         | NR               | 810       | 5                           | NR               | 940       | 0                           | NR               |
| 425       | 40                          | NR               | 555       | 734                         | NR               | 685       | 230                         | NR               | 815       | 4                           | NR               | 945       | 0                           | NR               |
| 430       | 70                          | NR               | 560       | 767                         | NR               | 690       | 199                         | NR               | 820       | 4                           | NR               | 950       | 0                           | NR               |
| 435       | 126                         | NR               | 565       | 802                         | NR               | 695       | 171                         | NR               | 825       | 3                           | NR               | 955       | 0                           | NR               |
| 440       | 221                         | NR               | 570       | 838                         | NR               | 700       | 146                         | NR               | 830       | 3                           | NR               | 960       | 0                           | NR               |
| 445       | 418                         | NR               | 575       | 875                         | NR               | 705       | 125                         | NR               | 835       | 2                           | NR               | 965       | 0                           | NR               |
| 450       | 729                         | NR               | 580       | 913                         | NR               | 710       | 107                         | NR               | 840       | 2                           | NR               | 970       | 0                           | NR               |
| 455       | 816                         | NR               | 585       | 946                         | NR               | 715       | 90                          | NR               | 845       | 2                           | NR               | 975       | 0                           | NR               |
| 460       | 578                         | NR               | 590       | 976                         | NR               | 720       | 77                          | NR               | 850       | 1                           | NR               | 980       | 0                           | NR               |
| 465       | 458                         | NR               | 595       | 992                         | NR               | 725       | 66                          | NR               | 855       | 1                           | NR               | 985       | 0                           | NR               |
| 470       | 390                         | NR               | 600       | 999                         | NR               | 730       | 56                          | NR               | 860       | 1                           | NR               | 990       | 0                           | NR               |
| 475       | 299                         | NR               | 605       | 995                         | NR               | 735       | 47                          | NR               | 865       | 1                           | NR               | 995       | 0                           | NR               |
| 480       | 260                         | NR               | 610       | 975                         | NR               | 740       | 40                          | NR               | 870       | 1                           | NR               | 1000      | 0                           | NR               |
| 485       | 271                         | NR               | 615       | 948                         | NR               | 745       | 34                          | NR               | 875       | 1                           | NR               |           |                             |                  |

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### Melanopic Flux vs. Wavelength


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

| $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^{\wedge}/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|-------------------|----------------------------------------|--------------------------------|
| 360               | 0                                      | NR                             | 490               | 295                                    | NR                             | 620               | 910                                    | NR                             | 750               | 30                                     | NR                             | 880               | 1                                      | NR                             |
| 365               | 0                                      | NR                             | 495               | 335                                    | NR                             | 625               | 862                                    | NR                             | 755               | 25                                     | NR                             | 885               | 1                                      | NR                             |
| 370               | 0                                      | NR                             | 500               | 390                                    | NR                             | 630               | 809                                    | NR                             | 760               | 21                                     | NR                             | 890               | 1                                      | NR                             |
| 375               | 0                                      | NR                             | 505               | 445                                    | NR                             | 635               | 752                                    | NR                             | 765               | 18                                     | NR                             | 895               | 0                                      | NR                             |
| 380               | 0                                      | NR                             | 510               | 490                                    | NR                             | 640               | 694                                    | NR                             | 770               | 16                                     | NR                             | 900               | 0                                      | NR                             |
| 385               | 0                                      | NR                             | 515               | 532                                    | NR                             | 645               | 630                                    | NR                             | 775               | 13                                     | NR                             | 905               | 0                                      | NR                             |
| 390               | 0                                      | NR                             | 520               | 563                                    | NR                             | 650               | 571                                    | NR                             | 780               | 12                                     | NR                             | 910               | 0                                      | NR                             |
| 395               | 2                                      | NR                             | 525               | 588                                    | NR                             | 655               | 512                                    | NR                             | 785               | 10                                     | NR                             | 915               | 0                                      | NR                             |
| 400               | 3                                      | NR                             | 530               | 609                                    | NR                             | 660               | 453                                    | NR                             | 790               | 8                                      | NR                             | 920               | 0                                      | NR                             |
| 405               | 5                                      | NR                             | 535               | 631                                    | NR                             | 665               | 401                                    | NR                             | 795               | 7                                      | NR                             | 925               | 0                                      | NR                             |
| 410               | 8                                      | NR                             | 540               | 654                                    | NR                             | 670               | 351                                    | NR                             | 800               | 6                                      | NR                             | 930               | 0                                      | NR                             |
| 415               | 13                                     | NR                             | 545               | 677                                    | NR                             | 675               | 306                                    | NR                             | 805               | 5                                      | NR                             | 935               | 0                                      | NR                             |
| 420               | 23                                     | NR                             | 550               | 702                                    | NR                             | 680               | 267                                    | NR                             | 810               | 5                                      | NR                             | 940               | 0                                      | NR                             |
| 425               | 40                                     | NR                             | 555               | 734                                    | NR                             | 685               | 230                                    | NR                             | 815               | 4                                      | NR                             | 945               | 0                                      | NR                             |
| 430               | 70                                     | NR                             | 560               | 767                                    | NR                             | 690               | 199                                    | NR                             | 820               | 4                                      | NR                             | 950               | 0                                      | NR                             |
| 435               | 126                                    | NR                             | 565               | 802                                    | NR                             | 695               | 171                                    | NR                             | 825               | 3                                      | NR                             | 955               | 0                                      | NR                             |
| 440               | 221                                    | NR                             | 570               | 838                                    | NR                             | 700               | 146                                    | NR                             | 830               | 3                                      | NR                             | 960               | 0                                      | NR                             |
| 445               | 418                                    | NR                             | 575               | 875                                    | NR                             | 705               | 125                                    | NR                             | 835               | 2                                      | NR                             | 965               | 0                                      | NR                             |
| 450               | 729                                    | NR                             | 580               | 913                                    | NR                             | 710               | 107                                    | NR                             | 840               | 2                                      | NR                             | 970               | 0                                      | NR                             |
| 455               | 816                                    | NR                             | 585               | 946                                    | NR                             | 715               | 90                                     | NR                             | 845               | 2                                      | NR                             | 975               | 0                                      | NR                             |
| 460               | 578                                    | NR                             | 590               | 976                                    | NR                             | 720               | 77                                     | NR                             | 850               | 1                                      | NR                             | 980               | 0                                      | NR                             |
| 465               | 458                                    | NR                             | 595               | 992                                    | NR                             | 725               | 66                                     | NR                             | 855               | 1                                      | NR                             | 985               | 0                                      | NR                             |
| 470               | 390                                    | NR                             | 600               | 999                                    | NR                             | 730               | 56                                     | NR                             | 860               | 1                                      | NR                             | 990               | 0                                      | NR                             |
| 475               | 299                                    | NR                             | 605               | 995                                    | NR                             | 735               | 47                                     | NR                             | 865               | 1                                      | NR                             | 995               | 0                                      | NR                             |
| 480               | 260                                    | NR                             | 610               | 975                                    | NR                             | 740               | 40                                     | NR                             | 870               | 1                                      | NR                             | 1000              | 0                                      | NR                             |
| 485               | 271                                    | NR                             | 615               | 948                                    | NR                             | 745               | 34                                     | NR                             | 875               | 1                                      | NR                             |                   |                                        |                                |

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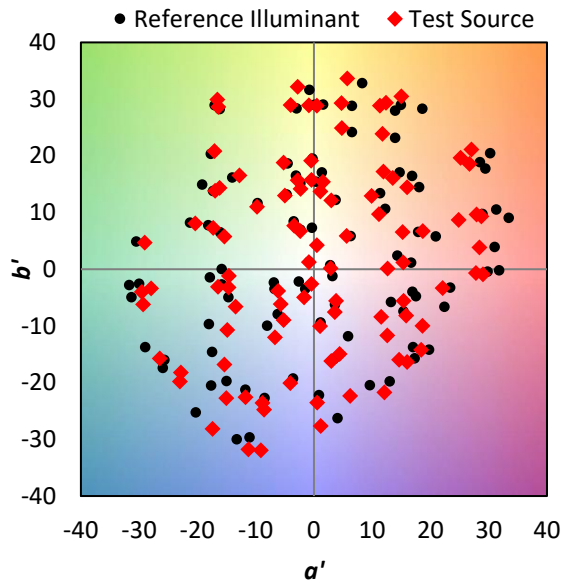
TM-30-18

### Summary

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



### Color Vector Graphics



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

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



Color Rendition by Hue-Angle Bin



**Measure Comparisons**



(END OF REPORT)