

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: P1216446

Luminaire Tested: 24-ID2-70-DBR-L935-U

Issue Date: 12/5/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1216446  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2508-510-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/5/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: CORELITE  
Catalog Number: 24-ID2-70-DBR-L935-U  
Description: 2X4 IN DEPTH TROFFER WITH 2INCH DOUBLE BARREL REGRESSED  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

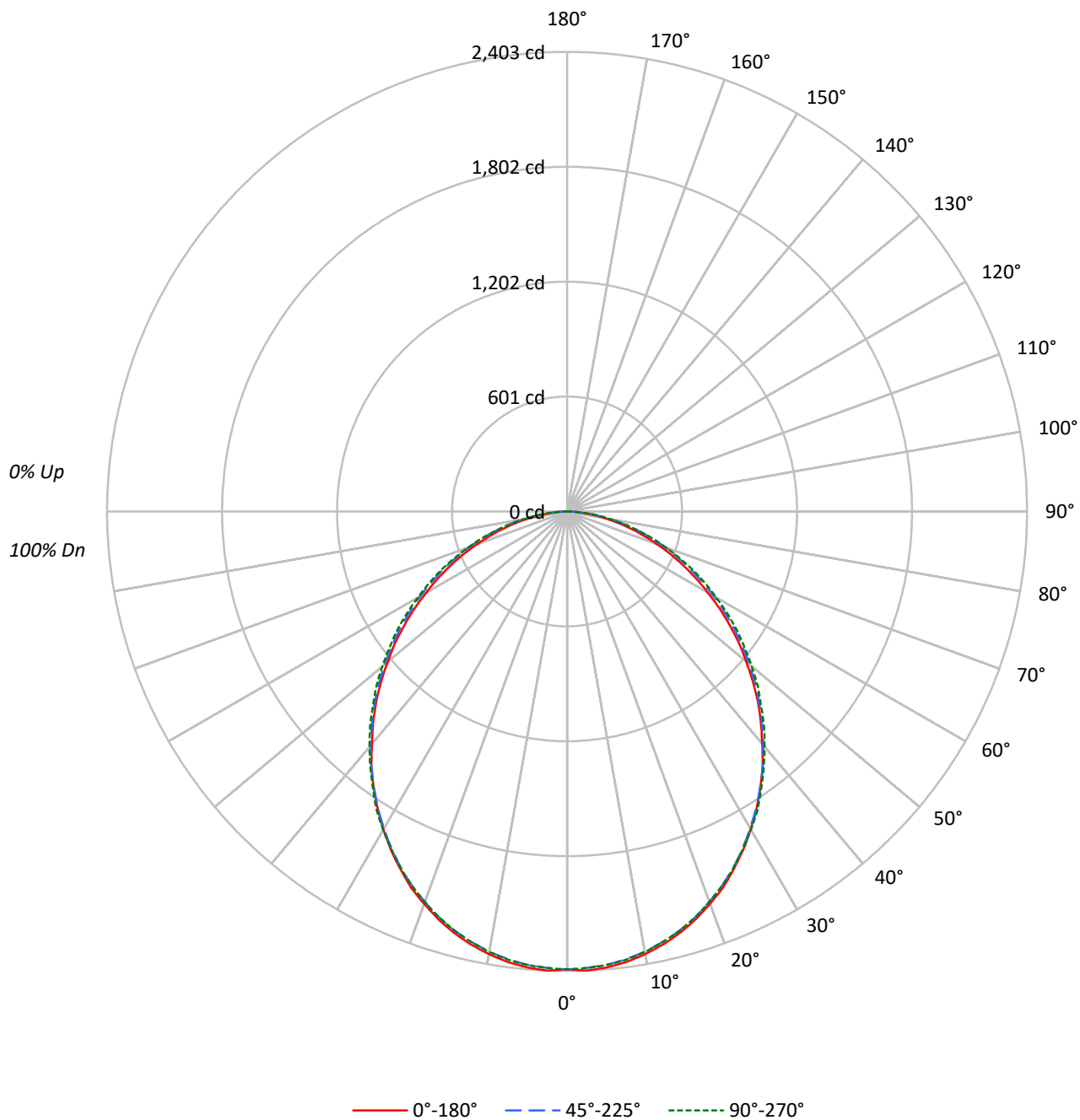
Lumens per Lamp: N/A  
Luminaire Lumens: 6155.9 lumens  
Efficiency: N/A  
Efficacy: 101.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.3  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 60.4  
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: P1216446  
CATALOG NUMBER: 24-ID2-70-DBR-L935-U

### Luminous Intensity Polar Plot



TEST NUMBER: P1216446

CATALOG NUMBER: 24-ID2-70-DBR-L935-U

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

|     |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |  | 20  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 84  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  |  | 83  | 78  | 74  |  | 71  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 70  | 64  |  | 73  | 68  | 63  |  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 61  | 55  |  | 65  | 59  | 54  |  | 51  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 48  | 61  | 53  | 48  |  | 59  | 52  | 47  |  | 45  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 48  | 42  | 55  | 48  | 42  |  | 53  | 47  | 42  |  | 39  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 38  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 35  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 31  |
| 9   | 57  | 44  | 36  | 31  | 56  | 44  | 36  | 30  | 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°  | 3221 | 3221 | 3221 |
| 5°  | 3232 | 3213 | 3215 |
| 10° | 3211 | 3193 | 3196 |
| 15° | 3177 | 3160 | 3162 |
| 20° | 3126 | 3110 | 3111 |
| 25° | 3061 | 3051 | 3053 |
| 30° | 2981 | 2972 | 2985 |
| 35° | 2893 | 2888 | 2904 |
| 40° | 2784 | 2801 | 2820 |
| 45° | 2684 | 2703 | 2726 |
| 50° | 2558 | 2599 | 2636 |
| 55° | 2434 | 2492 | 2542 |
| 60° | 2285 | 2383 | 2422 |
| 65° | 2138 | 2249 | 2314 |
| 70° | 1967 | 2124 | 2161 |
| 75° | 1774 | 1978 | 1995 |
| 80° | 1506 | 1764 | 1783 |
| 85° | 1153 | 1456 | 1494 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 2726 cd/sqm

TEST NUMBER: P1216446  
 CATALOG NUMBER: 24-ID2-70-DBR-L935-U

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 226.0  | 3.7       |
| 10°-20°   | 639.8  | 10.4      |
| 20°-30°   | 946.3  | 15.4      |
| 30°-40°   | 1101.4 | 17.9      |
| 40°-50°   | 1095.9 | 17.8      |
| 50°-60°   | 948.3  | 15.4      |
| 60°-70°   | 697.4  | 11.3      |
| 70°-80°   | 393.9  | 6.4       |
| 80°-90°   | 106.9  | 1.7       |
| 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°    | 1812.0 | 29.4      |
| 0°-40°    | 2913.5 | 47.3      |
| 0°-60°    | 4957.7 | 80.5      |
| 0°-90°    | 6155.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 6155.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2394 | 2394  | 2394 | 2394  | 2394 |      |
| 5°  | 2393 | 2384  | 2379 | 2376  | 2380 | 227  |
| 15° | 2281 | 2274  | 2269 | 2265  | 2270 | 643  |
| 25° | 2062 | 2056  | 2055 | 2052  | 2057 | 949  |
| 35° | 1761 | 1758  | 1758 | 1766  | 1768 | 1101 |
| 45° | 1410 | 1410  | 1421 | 1432  | 1432 | 1086 |
| 55° | 1038 | 1043  | 1062 | 1077  | 1084 | 928  |
| 65° | 672  | 685   | 706  | 720   | 727  | 667  |
| 75° | 341  | 360   | 380  | 383   | 384  | 362  |
| 85° | 75   | 88    | 94   | 96    | 97   | 89   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

TEST NUMBER: P1216446

CATALOG NUMBER: 24-ID2-70-DBR-L935-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2393.7 | 2393.7 | 2393.7 | 2393.7 | 2393.7 |
| 2.5°  | 2403.0 | 2393.7 | 2388.6 | 2386.0 | 2389.4 |
| 5°    | 2392.8 | 2384.3 | 2379.2 | 2375.9 | 2380.1 |
| 7.5°  | 2375.9 | 2366.5 | 2361.4 | 2358.0 | 2364.0 |
| 10°   | 2350.4 | 2341.0 | 2336.8 | 2334.2 | 2339.3 |
| 12.5° | 2319.0 | 2311.3 | 2306.2 | 2302.8 | 2306.2 |
| 15°   | 2280.7 | 2274.0 | 2268.9 | 2264.6 | 2269.7 |
| 17.5° | 2235.7 | 2227.3 | 2225.6 | 2220.5 | 2224.7 |
| 20°   | 2183.1 | 2176.3 | 2172.1 | 2169.5 | 2172.9 |
| 22.5° | 2128.8 | 2119.4 | 2116.9 | 2114.3 | 2117.7 |
| 25°   | 2061.7 | 2055.7 | 2054.9 | 2052.3 | 2056.6 |
| 27.5° | 1993.7 | 1990.3 | 1986.1 | 1987.8 | 1988.7 |
| 30°   | 1919.0 | 1914.8 | 1913.1 | 1916.5 | 1921.6 |
| 32.5° | 1841.8 | 1838.4 | 1839.2 | 1842.6 | 1851.9 |
| 35°   | 1761.1 | 1757.7 | 1758.5 | 1766.2 | 1767.9 |
| 37.5° | 1678.7 | 1672.8 | 1678.7 | 1683.8 | 1688.1 |
| 40°   | 1585.3 | 1586.2 | 1594.7 | 1601.4 | 1605.7 |
| 42.5° | 1498.7 | 1498.7 | 1507.2 | 1517.4 | 1522.5 |
| 45°   | 1410.4 | 1410.4 | 1420.6 | 1432.5 | 1432.5 |
| 47.5° | 1317.0 | 1315.3 | 1334.0 | 1346.7 | 1351.0 |
| 50°   | 1221.9 | 1225.3 | 1241.4 | 1254.2 | 1259.3 |
| 52.5° | 1132.7 | 1134.4 | 1152.3 | 1165.8 | 1168.4 |
| 55°   | 1037.6 | 1042.7 | 1062.3 | 1076.7 | 1083.5 |
| 57.5° | 944.2  | 952.7  | 972.2  | 990.1  | 991.8  |
| 60°   | 849.1  | 862.7  | 885.6  | 895.0  | 900.1  |
| 62.5° | 762.5  | 776.1  | 794.8  | 810.1  | 813.5  |
| 65°   | 671.7  | 685.2  | 706.5  | 720.1  | 726.9  |
| 67.5° | 586.7  | 602.9  | 624.1  | 634.3  | 634.3  |
| 70°   | 500.1  | 518.0  | 540.0  | 548.5  | 549.4  |
| 72.5° | 418.6  | 439.0  | 458.5  | 465.3  | 467.0  |
| 75°   | 341.3  | 360.0  | 380.4  | 383.0  | 383.8  |
| 77.5° | 265.8  | 285.3  | 300.6  | 305.7  | 303.1  |
| 80°   | 194.4  | 214.0  | 227.6  | 231.0  | 230.1  |
| 82.5° | 132.5  | 148.6  | 161.3  | 161.3  | 161.3  |
| 85°   | 74.7   | 88.3   | 94.3   | 96.0   | 96.8   |
| 87.5° | 24.6   | 34.8   | 39.9   | 39.9   | 39.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

TEST NUMBER: P1216446

CATALOG NUMBER: 24-ID2-70-DBR-L935-U

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 14.98            | 16.59 | 15.35 | 16.91 | 17.22 | 15.27          | 16.87 | 15.63 | 17.19 | 17.50 |
|                 | 3H   | 16.64            | 18.09 | 17.02 | 18.42 | 18.78 | 17.00          | 18.45 | 17.38 | 18.78 | 19.14 |
|                 | 4H   | 17.24            | 18.60 | 17.63 | 18.95 | 19.33 | 17.65          | 19.02 | 18.05 | 19.36 | 19.74 |
|                 | 6H   | 17.65            | 18.91 | 18.06 | 19.28 | 19.67 | 18.12          | 19.39 | 18.53 | 19.75 | 20.15 |
|                 | 8H   | 17.77            | 18.98 | 18.19 | 19.37 | 19.77 | 18.28          | 19.48 | 18.70 | 19.87 | 20.27 |
|                 | 12H  | 17.84            | 19.00 | 18.27 | 19.38 | 19.81 | 18.37          | 19.53 | 18.80 | 19.91 | 20.34 |
| 4H              | 2H   | 15.62            | 16.99 | 16.02 | 17.34 | 17.71 | 15.84          | 17.21 | 16.24 | 17.56 | 17.93 |
|                 | 3H   | 17.50            | 18.65 | 17.91 | 19.05 | 19.45 | 17.81          | 18.95 | 18.22 | 19.35 | 19.75 |
|                 | 4H   | 18.23            | 19.26 | 18.66 | 19.68 | 20.11 | 18.59          | 19.62 | 19.02 | 20.04 | 20.47 |
|                 | 6H   | 18.77            | 19.67 | 19.22 | 20.11 | 20.57 | 19.20          | 20.10 | 19.65 | 20.54 | 21.00 |
|                 | 8H   | 18.93            | 19.78 | 19.39 | 20.22 | 20.69 | 19.40          | 20.24 | 19.86 | 20.68 | 21.15 |
|                 | 12H  | 19.04            | 19.80 | 19.52 | 20.27 | 20.74 | 19.54          | 20.30 | 20.02 | 20.77 | 21.24 |
| 8H              | 4H   | 18.56            | 19.41 | 19.02 | 19.85 | 20.31 | 18.88          | 19.72 | 19.34 | 20.17 | 20.63 |
|                 | 6H   | 19.22            | 19.93 | 19.72 | 20.41 | 20.89 | 19.61          | 20.31 | 20.10 | 20.80 | 21.27 |
|                 | 8H   | 19.46            | 20.09 | 19.97 | 20.59 | 21.08 | 19.88          | 20.51 | 20.39 | 21.02 | 21.50 |
|                 | 12H  | 19.63            | 20.19 | 20.14 | 20.68 | 21.24 | 20.09          | 20.65 | 20.60 | 21.14 | 21.70 |
| 12H             | 4H   | 18.60            | 19.36 | 19.08 | 19.83 | 20.30 | 18.90          | 19.66 | 19.38 | 20.14 | 20.61 |
|                 | 6H   | 19.29            | 19.92 | 19.80 | 20.42 | 20.91 | 19.65          | 20.29 | 20.16 | 20.79 | 21.28 |
|                 | 8H   | 19.58            | 20.14 | 20.09 | 20.63 | 21.19 | 19.99          | 20.54 | 20.49 | 21.03 | 21.59 |

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

Report Prepared for

Cooper Lighting Solutions

Corelite

Report Number: SP1-2506-458-10

Test Date: 08/26/2025

Luminaire Tested: 22ID2-55-CFR1-L935-U

Data in this report applies to families of products including 22ID2-55-CFR1-L935-U

### Test Information

Test Method: LM-79-2019  
 Report Number: SP1-2506-458-10  
 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-L935-U**  
 Description: 2X2 CGTX WITH INDEPTH FRAME AND CFR1 LENS - 5500 LUMEN 3500K 90CRI

### Spectral Parameters

CCT (K): 3377  
 CIE  $u'$ : 0.2392  
 CIE  $v'$ : 0.5128  
 Duv: -0.0007  
 CIE x: 0.4116  
 CIE y: 0.3922  
 CIE z: 0.1962  
 Peak Wavelength (nm): 618  
 Dominant Wavelength (nm): 581  
 Purity: 41.24368  
 Rf: 91.8  
 Rg: 99.6

CRI (Ra): 93.6  
 R1: 94.1  
 R2: 96.6  
 R3: 97.5  
 R4: 94.0  
 R5: 93.6  
 R6: 94.8  
 R7: 93.4  
 R8: 84.8  
 R9: 64.2  
 R10: 91.1  
 R11: 94.7  
 R12: 78.5  
 R13: 95.0  
 R14: 98.1  
 R15: 91.0



### Test Conditions

Stabilization Time: 32M  
 Operation Time: 1H 32M  
 Sphere Temperature (°C): 25.2

REPORT NUMBER: SP1-2506-458-10

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



REPORT NUMBER: SP1-2506-458-10

### Photopic Flux vs. Wavelength



### Photopic Lumens: NR

| $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) | $\lambda$<br>(nm) | Power<br>$\text{W}^\wedge/\text{nm}$ | Lumens<br>( $\phi/\text{nm}$ ) |
|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|-------------------|--------------------------------------|--------------------------------|
| 360               | 0                                    | NR                             | 490               | 362                                  | NR                             | 620               | 996                                  | NR                             | 750               | 68                                   | NR                             | 880               | 1                                    | NR                             |
| 365               | 0                                    | NR                             | 495               | 412                                  | NR                             | 625               | 989                                  | NR                             | 755               | 58                                   | NR                             | 885               | 1                                    | NR                             |
| 370               | 0                                    | NR                             | 500               | 463                                  | NR                             | 630               | 973                                  | NR                             | 760               | 49                                   | NR                             | 890               | 1                                    | NR                             |
| 375               | 0                                    | NR                             | 505               | 509                                  | NR                             | 635               | 947                                  | NR                             | 765               | 42                                   | NR                             | 895               | 1                                    | NR                             |
| 380               | 0                                    | NR                             | 510               | 548                                  | NR                             | 640               | 914                                  | NR                             | 770               | 36                                   | NR                             | 900               | 1                                    | NR                             |
| 385               | 0                                    | NR                             | 515               | 582                                  | NR                             | 645               | 872                                  | NR                             | 775               | 31                                   | NR                             | 905               | 1                                    | NR                             |
| 390               | 1                                    | NR                             | 520               | 605                                  | NR                             | 650               | 822                                  | NR                             | 780               | 26                                   | NR                             | 910               | 1                                    | NR                             |
| 395               | 2                                    | NR                             | 525               | 626                                  | NR                             | 655               | 770                                  | NR                             | 785               | 22                                   | NR                             | 915               | 1                                    | NR                             |
| 400               | 4                                    | NR                             | 530               | 646                                  | NR                             | 660               | 712                                  | NR                             | 790               | 19                                   | NR                             | 920               | 0                                    | NR                             |
| 405               | 6                                    | NR                             | 535               | 666                                  | NR                             | 665               | 656                                  | NR                             | 795               | 16                                   | NR                             | 925               | 0                                    | NR                             |
| 410               | 9                                    | NR                             | 540               | 683                                  | NR                             | 670               | 596                                  | NR                             | 800               | 14                                   | NR                             | 930               | 0                                    | NR                             |
| 415               | 15                                   | NR                             | 545               | 702                                  | NR                             | 675               | 538                                  | NR                             | 805               | 12                                   | NR                             | 935               | 0                                    | NR                             |
| 420               | 27                                   | NR                             | 550               | 720                                  | NR                             | 680               | 486                                  | NR                             | 810               | 10                                   | NR                             | 940               | 0                                    | NR                             |
| 425               | 48                                   | NR                             | 555               | 740                                  | NR                             | 685               | 432                                  | NR                             | 815               | 9                                    | NR                             | 945               | 0                                    | NR                             |
| 430               | 85                                   | NR                             | 560               | 757                                  | NR                             | 690               | 385                                  | NR                             | 820               | 7                                    | NR                             | 950               | 0                                    | NR                             |
| 435               | 152                                  | NR                             | 565               | 776                                  | NR                             | 695               | 339                                  | NR                             | 825               | 6                                    | NR                             | 955               | 0                                    | NR                             |
| 440               | 274                                  | NR                             | 570               | 794                                  | NR                             | 700               | 297                                  | NR                             | 830               | 5                                    | NR                             | 960               | 0                                    | NR                             |
| 445               | 536                                  | NR                             | 575               | 816                                  | NR                             | 705               | 260                                  | NR                             | 835               | 5                                    | NR                             | 965               | 0                                    | NR                             |
| 450               | 793                                  | NR                             | 580               | 842                                  | NR                             | 710               | 225                                  | NR                             | 840               | 4                                    | NR                             | 970               | 0                                    | NR                             |
| 455               | 659                                  | NR                             | 585               | 867                                  | NR                             | 715               | 194                                  | NR                             | 845               | 3                                    | NR                             | 975               | 0                                    | NR                             |
| 460               | 484                                  | NR                             | 590               | 899                                  | NR                             | 720               | 169                                  | NR                             | 850               | 3                                    | NR                             | 980               | 0                                    | NR                             |
| 465               | 441                                  | NR                             | 595               | 927                                  | NR                             | 725               | 146                                  | NR                             | 855               | 2                                    | NR                             | 985               | 0                                    | NR                             |
| 470               | 353                                  | NR                             | 600               | 950                                  | NR                             | 730               | 125                                  | NR                             | 860               | 2                                    | NR                             | 990               | 0                                    | NR                             |
| 475               | 293                                  | NR                             | 605               | 974                                  | NR                             | 735               | 107                                  | NR                             | 865               | 2                                    | NR                             | 995               | 0                                    | NR                             |
| 480               | 300                                  | NR                             | 610               | 986                                  | NR                             | 740               | 92                                   | NR                             | 870               | 2                                    | NR                             | 1000              | 0                                    | NR                             |
| 485               | 325                                  | NR                             | 615               | 998                                  | NR                             | 745               | 79                                   | NR                             | 875               | 1                                    | NR                             |                   |                                      |                                |

REPORT NUMBER: SP1-2506-458-10

### Scotopic Flux vs. Wavelength



Scotopic Lumens: NR

S/P: 1.58

| 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       | 362                         | NR               | 620       | 996                         | NR               | 750       | 68                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 412                         | NR               | 625       | 989                         | NR               | 755       | 58                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 463                         | NR               | 630       | 973                         | NR               | 760       | 49                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 509                         | NR               | 635       | 947                         | NR               | 765       | 42                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 548                         | NR               | 640       | 914                         | NR               | 770       | 36                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 582                         | NR               | 645       | 872                         | NR               | 775       | 31                          | NR               | 905       | 1                           | NR               |
| 390       | 1                           | NR               | 520       | 605                         | NR               | 650       | 822                         | NR               | 780       | 26                          | NR               | 910       | 1                           | NR               |
| 395       | 2                           | NR               | 525       | 626                         | NR               | 655       | 770                         | NR               | 785       | 22                          | NR               | 915       | 1                           | NR               |
| 400       | 4                           | NR               | 530       | 646                         | NR               | 660       | 712                         | NR               | 790       | 19                          | NR               | 920       | 0                           | NR               |
| 405       | 6                           | NR               | 535       | 666                         | NR               | 665       | 656                         | NR               | 795       | 16                          | NR               | 925       | 0                           | NR               |
| 410       | 9                           | NR               | 540       | 683                         | NR               | 670       | 596                         | NR               | 800       | 14                          | NR               | 930       | 0                           | NR               |
| 415       | 15                          | NR               | 545       | 702                         | NR               | 675       | 538                         | NR               | 805       | 12                          | NR               | 935       | 0                           | NR               |
| 420       | 27                          | NR               | 550       | 720                         | NR               | 680       | 486                         | NR               | 810       | 10                          | NR               | 940       | 0                           | NR               |
| 425       | 48                          | NR               | 555       | 740                         | NR               | 685       | 432                         | NR               | 815       | 9                           | NR               | 945       | 0                           | NR               |
| 430       | 85                          | NR               | 560       | 757                         | NR               | 690       | 385                         | NR               | 820       | 7                           | NR               | 950       | 0                           | NR               |
| 435       | 152                         | NR               | 565       | 776                         | NR               | 695       | 339                         | NR               | 825       | 6                           | NR               | 955       | 0                           | NR               |
| 440       | 274                         | NR               | 570       | 794                         | NR               | 700       | 297                         | NR               | 830       | 5                           | NR               | 960       | 0                           | NR               |
| 445       | 536                         | NR               | 575       | 816                         | NR               | 705       | 260                         | NR               | 835       | 5                           | NR               | 965       | 0                           | NR               |
| 450       | 793                         | NR               | 580       | 842                         | NR               | 710       | 225                         | NR               | 840       | 4                           | NR               | 970       | 0                           | NR               |
| 455       | 659                         | NR               | 585       | 867                         | NR               | 715       | 194                         | NR               | 845       | 3                           | NR               | 975       | 0                           | NR               |
| 460       | 484                         | NR               | 590       | 899                         | NR               | 720       | 169                         | NR               | 850       | 3                           | NR               | 980       | 0                           | NR               |
| 465       | 441                         | NR               | 595       | 927                         | NR               | 725       | 146                         | NR               | 855       | 2                           | NR               | 985       | 0                           | NR               |
| 470       | 353                         | NR               | 600       | 950                         | NR               | 730       | 125                         | NR               | 860       | 2                           | NR               | 990       | 0                           | NR               |
| 475       | 293                         | NR               | 605       | 974                         | NR               | 735       | 107                         | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 300                         | NR               | 610       | 986                         | NR               | 740       | 92                          | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 325                         | NR               | 615       | 998                         | NR               | 745       | 79                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-10

### Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 3.19

| 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       | 362                         | NR               | 620       | 996                         | NR               | 750       | 68                          | NR               | 880       | 1                           | NR               |
| 365       | 0                           | NR               | 495       | 412                         | NR               | 625       | 989                         | NR               | 755       | 58                          | NR               | 885       | 1                           | NR               |
| 370       | 0                           | NR               | 500       | 463                         | NR               | 630       | 973                         | NR               | 760       | 49                          | NR               | 890       | 1                           | NR               |
| 375       | 0                           | NR               | 505       | 509                         | NR               | 635       | 947                         | NR               | 765       | 42                          | NR               | 895       | 1                           | NR               |
| 380       | 0                           | NR               | 510       | 548                         | NR               | 640       | 914                         | NR               | 770       | 36                          | NR               | 900       | 1                           | NR               |
| 385       | 0                           | NR               | 515       | 582                         | NR               | 645       | 872                         | NR               | 775       | 31                          | NR               | 905       | 1                           | NR               |
| 390       | 1                           | NR               | 520       | 605                         | NR               | 650       | 822                         | NR               | 780       | 26                          | NR               | 910       | 1                           | NR               |
| 395       | 2                           | NR               | 525       | 626                         | NR               | 655       | 770                         | NR               | 785       | 22                          | NR               | 915       | 1                           | NR               |
| 400       | 4                           | NR               | 530       | 646                         | NR               | 660       | 712                         | NR               | 790       | 19                          | NR               | 920       | 0                           | NR               |
| 405       | 6                           | NR               | 535       | 666                         | NR               | 665       | 656                         | NR               | 795       | 16                          | NR               | 925       | 0                           | NR               |
| 410       | 9                           | NR               | 540       | 683                         | NR               | 670       | 596                         | NR               | 800       | 14                          | NR               | 930       | 0                           | NR               |
| 415       | 15                          | NR               | 545       | 702                         | NR               | 675       | 538                         | NR               | 805       | 12                          | NR               | 935       | 0                           | NR               |
| 420       | 27                          | NR               | 550       | 720                         | NR               | 680       | 486                         | NR               | 810       | 10                          | NR               | 940       | 0                           | NR               |
| 425       | 48                          | NR               | 555       | 740                         | NR               | 685       | 432                         | NR               | 815       | 9                           | NR               | 945       | 0                           | NR               |
| 430       | 85                          | NR               | 560       | 757                         | NR               | 690       | 385                         | NR               | 820       | 7                           | NR               | 950       | 0                           | NR               |
| 435       | 152                         | NR               | 565       | 776                         | NR               | 695       | 339                         | NR               | 825       | 6                           | NR               | 955       | 0                           | NR               |
| 440       | 274                         | NR               | 570       | 794                         | NR               | 700       | 297                         | NR               | 830       | 5                           | NR               | 960       | 0                           | NR               |
| 445       | 536                         | NR               | 575       | 816                         | NR               | 705       | 260                         | NR               | 835       | 5                           | NR               | 965       | 0                           | NR               |
| 450       | 793                         | NR               | 580       | 842                         | NR               | 710       | 225                         | NR               | 840       | 4                           | NR               | 970       | 0                           | NR               |
| 455       | 659                         | NR               | 585       | 867                         | NR               | 715       | 194                         | NR               | 845       | 3                           | NR               | 975       | 0                           | NR               |
| 460       | 484                         | NR               | 590       | 899                         | NR               | 720       | 169                         | NR               | 850       | 3                           | NR               | 980       | 0                           | NR               |
| 465       | 441                         | NR               | 595       | 927                         | NR               | 725       | 146                         | NR               | 855       | 2                           | NR               | 985       | 0                           | NR               |
| 470       | 353                         | NR               | 600       | 950                         | NR               | 730       | 125                         | NR               | 860       | 2                           | NR               | 990       | 0                           | NR               |
| 475       | 293                         | NR               | 605       | 974                         | NR               | 735       | 107                         | NR               | 865       | 2                           | NR               | 995       | 0                           | NR               |
| 480       | 300                         | NR               | 610       | 986                         | NR               | 740       | 92                          | NR               | 870       | 2                           | NR               | 1000      | 0                           | NR               |
| 485       | 325                         | NR               | 615       | 998                         | NR               | 745       | 79                          | NR               | 875       | 1                           | NR               |           |                             |                  |

REPORT NUMBER: SP1-2506-458-10

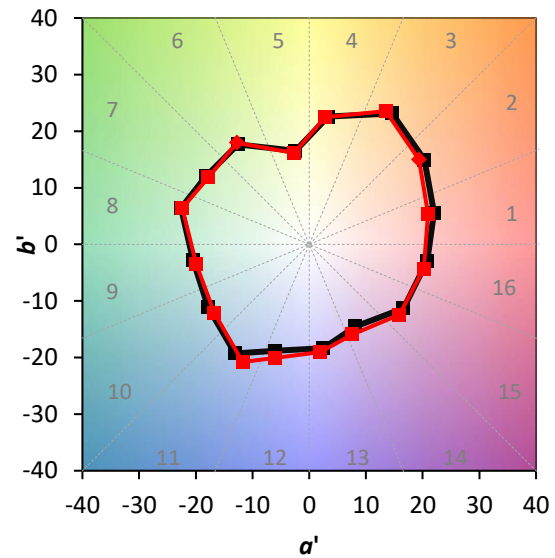
TM-30-18

### Summary

$R_f = 91.8$   
 $R_g = 99.6$   
 $CIE R_a = 93.6$   
 $R_9 = 64.2$



### Color Vector Graphics



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

|            |            |            |            |
|------------|------------|------------|------------|
| CES01 = 86 | CES26 = 94 | CES51 = 97 | CES76 = 88 |
| CES02 = 62 | CES27 = 92 | CES52 = 99 | CES77 = 89 |
| CES03 = 31 | CES28 = 96 | CES53 = 97 | CES78 = 85 |
| CES04 = 70 | CES29 = 96 | CES54 = 93 | CES79 = 95 |
| CES05 = 50 | CES30 = 92 | CES55 = 92 | CES80 = 93 |
| CES06 = 51 | CES31 = 97 | CES56 = 95 | CES81 = 86 |
| CES07 = 43 | CES32 = 91 | CES57 = 93 | CES82 = 97 |
| CES08 = 42 | CES33 = 99 | CES58 = 94 | CES83 = 97 |
| CES09 = 29 | CES34 = 94 | CES59 = 97 | CES84 = 94 |
| CES10 = 75 | CES35 = 96 | CES60 = 92 | CES85 = 83 |
| CES11 = 58 | CES36 = 82 | CES61 = 92 | CES86 = 86 |
| CES12 = 64 | CES37 = 95 | CES62 = 87 | CES87 = 91 |
| CES13 = 43 | CES38 = 87 | CES63 = 93 | CES88 = 97 |
| CES14 = 74 | CES39 = 99 | CES64 = 90 | CES89 = 87 |
| CES15 = 72 | CES40 = 98 | CES65 = 89 | CES90 = 96 |
| CES16 = 48 | CES41 = 97 | CES66 = 88 | CES91 = 75 |
| CES17 = 50 | CES42 = 95 | CES67 = 87 | CES92 = 80 |
| CES18 = 56 | CES43 = 94 | CES68 = 88 | CES93 = 88 |
| CES19 = 71 | CES44 = 99 | CES69 = 89 | CES94 = 81 |
| CES20 = 67 | CES45 = 97 | CES70 = 86 | CES95 = 84 |
| CES21 = 86 | CES46 = 97 | CES71 = 82 | CES96 = 92 |
| CES22 = 78 | CES47 = 96 | CES72 = 94 | CES97 = 96 |
| CES23 = 91 | CES48 = 92 | CES73 = 82 | CES98 = 95 |
| CES24 = 90 | CES49 = 96 | CES74 = 92 | CES99 = 92 |
| CES25 = 71 | CES50 = 98 | CES75 = 84 |            |



**Color Rendition by Hue-Angle Bin**


**Measure Comparisons**



(END OF REPORT)