

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: METALUX

Report Number: P976197

Luminaire Tested: 12SR-LD2-9-C-UNV-L950-CD1-U

Issue Date: 03/18/2025

Test Information

Test Method: LM-79-2019
Report Number: P976197
Test Lab: INNOVATION CENTER(P3)
Issue Date: 03/18/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 12SR-LD2-9-C-UNV-L950-CD1-U
Description: METALUX SKYRIDGE 1x2 900LM PACKAGE 90CRI 5000K CURVED REFLECTOR TROFFER
Light Source: 5000K CCT, 90+ CRI LEDS
Ballast/Driver: -

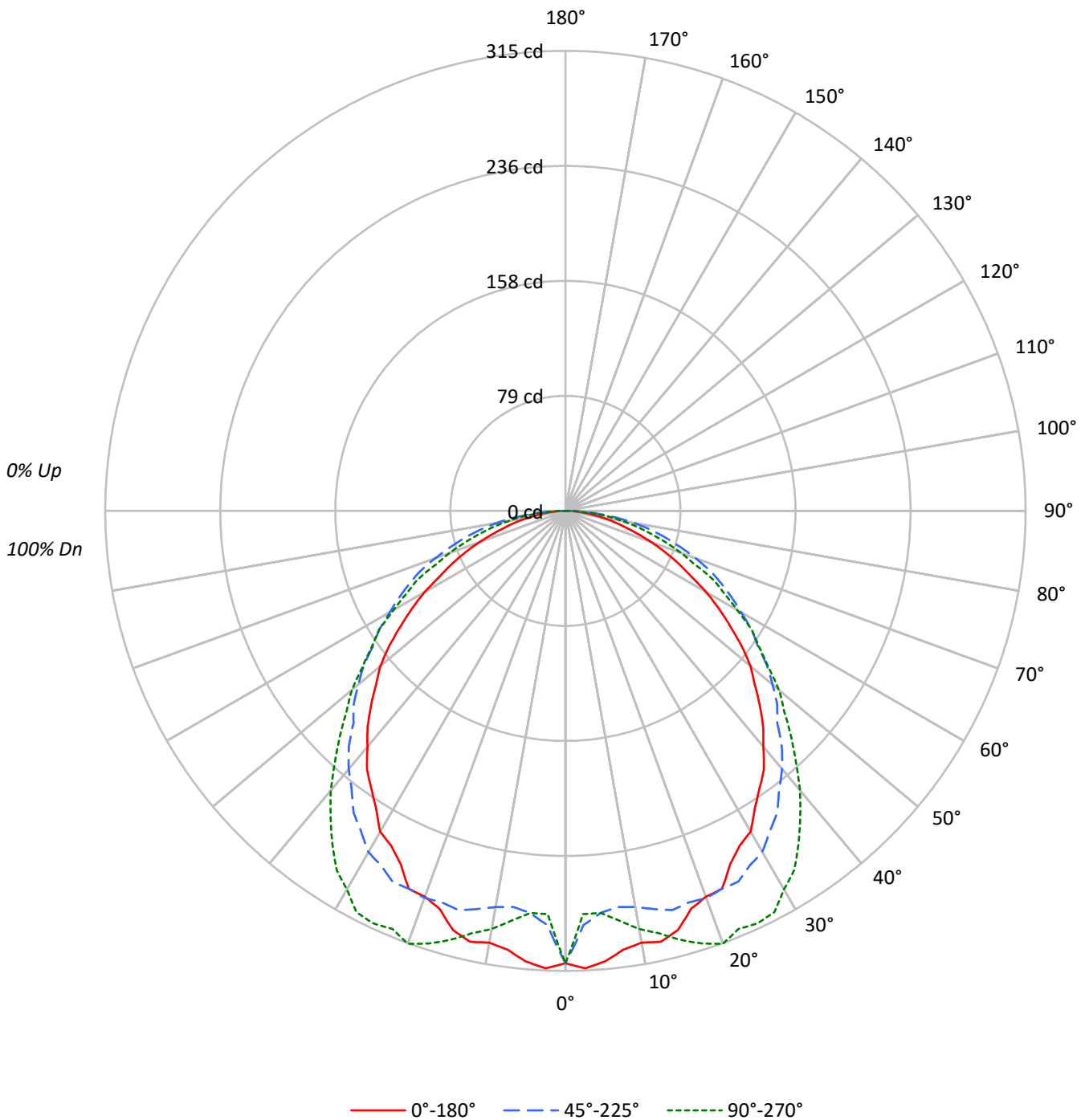
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 880.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.39 / 1.38
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 7.9
Input Voltage (V): 120
Input Current (A_{in}): 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: 28.75 FT

TEST NUMBER: P976197
CATALOG NUMBER: 12SR-LD2-9-C-UNV-L950-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P976197
 CATALOG NUMBER: 12SR-LD2-9-C-UNV-L950-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | |
| RC | 80 | | | | 70 | | | | 50 | | | | 30 | | | | 10 | | | | 0 | |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 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 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 94 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 | | | | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 | | | | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 | | | | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 | | | | 49 |
| 5 | 75 | 62 | 53 | 47 | 73 | 61 | 53 | 46 | 59 | 52 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 43 | | | | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 40 | 53 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 39 | 37 | | | | 37 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 48 | 41 | 35 | 47 | 40 | 35 | 46 | 40 | 35 | 33 | | | | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 46 | 37 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 42 | 36 | 31 | 29 | | | | 29 |
| 9 | 56 | 43 | 34 | 29 | 55 | 42 | 34 | 29 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 | | | | 26 |
| 10 | 53 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 26 | 36 | 30 | 25 | 24 | | | | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1667 | 1667 | 1667 |
| 5° | 1673 | 1493 | 1493 |
| 10° | 1641 | 1505 | 1588 |
| 15° | 1656 | 1577 | 1694 |
| 20° | 1610 | 1615 | 1806 |
| 25° | 1584 | 1663 | 1850 |
| 30° | 1576 | 1676 | 1859 |
| 35° | 1522 | 1660 | 1828 |
| 40° | 1481 | 1622 | 1755 |
| 45° | 1432 | 1561 | 1662 |
| 50° | 1384 | 1551 | 1598 |
| 55° | 1292 | 1506 | 1515 |
| 60° | 1197 | 1493 | 1462 |
| 65° | 1088 | 1500 | 1428 |
| 70° | 987 | 1493 | 1330 |
| 75° | 869 | 1481 | 1264 |
| 80° | 766 | 1472 | 1206 |
| 85° | 704 | 1408 | 1112 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 1662 cd/sqm



TEST NUMBER: P976197
 CATALOG NUMBER: 12SR-LD2-9-C-UNV-L950-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.0 | 3.1 |
| 10°-20° | 80.9 | 9.2 |
| 20°-30° | 128.8 | 14.6 |
| 30°-40° | 155.1 | 17.6 |
| 40°-50° | 155.6 | 17.7 |
| 50°-60° | 137.6 | 15.6 |
| 60°-70° | 106.3 | 12.1 |
| 70°-80° | 66.6 | 7.6 |
| 80°-90° | 22.1 | 2.5 |
| 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° | 236.7 | 26.9 |
| 0°-40° | 391.8 | 44.5 |
| 0°-60° | 685.0 | 77.8 |
| 0°-90° | 880.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 880.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 310 | 310 | 310 | 310 | 310 | |
| 5° | 310 | 279 | 276 | 278 | 276 | 29 |
| 15° | 297 | 263 | 283 | 299 | 304 | 83 |
| 25° | 267 | 248 | 280 | 306 | 312 | 124 |
| 35° | 232 | 216 | 253 | 272 | 278 | 145 |
| 45° | 188 | 180 | 205 | 214 | 218 | 145 |
| 55° | 138 | 141 | 160 | 162 | 162 | 123 |
| 65° | 85 | 103 | 118 | 111 | 112 | 85 |
| 75° | 42 | 66 | 71 | 63 | 61 | 45 |
| 85° | 11 | 25 | 23 | 19 | 18 | 13 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P976197
 CATALOG NUMBER: 12SR-LD2-9-C-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 309.7 | 309.7 | 309.7 | 309.7 | 309.7 |
| 2.5° | 313.5 | 301.1 | 283.9 | 278.2 | 276.3 |
| 5° | 309.7 | 279.2 | 276.3 | 278.2 | 276.3 |
| 7.5° | 303.0 | 271.6 | 273.5 | 281.1 | 283.0 |
| 10° | 300.2 | 272.5 | 275.4 | 288.7 | 290.6 |
| 12.5° | 302.1 | 266.8 | 279.2 | 293.4 | 296.3 |
| 15° | 297.2 | 263.1 | 283.0 | 299.2 | 304.0 |
| 17.5° | 285.8 | 261.2 | 281.1 | 302.1 | 310.6 |
| 20° | 281.1 | 258.3 | 282.0 | 304.9 | 315.4 |
| 22.5° | 280.1 | 252.6 | 280.1 | 305.9 | 309.7 |
| 25° | 266.8 | 247.9 | 280.1 | 305.9 | 311.6 |
| 27.5° | 258.3 | 241.2 | 273.5 | 297.2 | 309.7 |
| 30° | 253.6 | 232.7 | 269.7 | 291.5 | 299.2 |
| 32.5° | 241.2 | 225.1 | 260.2 | 282.0 | 291.5 |
| 35° | 231.7 | 215.6 | 252.6 | 271.6 | 278.2 |
| 37.5° | 223.2 | 207.0 | 240.3 | 258.3 | 264.0 |
| 40° | 210.8 | 198.5 | 230.8 | 244.1 | 249.8 |
| 42.5° | 200.4 | 190.0 | 219.4 | 231.7 | 233.6 |
| 45° | 188.1 | 179.5 | 205.1 | 213.7 | 218.4 |
| 47.5° | 175.7 | 169.1 | 196.6 | 201.3 | 203.2 |
| 50° | 165.3 | 160.5 | 185.2 | 189.0 | 190.9 |
| 52.5° | 152.0 | 150.1 | 173.8 | 174.8 | 174.8 |
| 55° | 137.7 | 140.6 | 160.5 | 162.4 | 161.5 |
| 57.5° | 124.5 | 131.1 | 151.0 | 149.1 | 151.0 |
| 60° | 111.2 | 120.7 | 138.7 | 137.7 | 135.8 |
| 62.5° | 96.8 | 112.1 | 128.3 | 124.5 | 122.6 |
| 65° | 85.4 | 102.6 | 117.8 | 111.2 | 112.1 |
| 67.5° | 74.0 | 93.0 | 107.4 | 97.8 | 95.9 |
| 70° | 62.7 | 83.5 | 94.9 | 86.4 | 84.5 |
| 72.5° | 51.3 | 75.9 | 82.6 | 74.0 | 72.1 |
| 75° | 41.8 | 66.5 | 71.2 | 62.7 | 60.8 |
| 77.5° | 33.2 | 57.0 | 59.8 | 52.2 | 50.3 |
| 80° | 24.7 | 47.5 | 47.5 | 40.8 | 38.9 |
| 82.5° | 18.0 | 36.1 | 35.1 | 29.4 | 29.4 |
| 85° | 11.4 | 24.7 | 22.8 | 19.0 | 18.0 |
| 87.5° | 5.7 | 11.4 | 10.4 | 7.6 | 7.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P976197
 CATALOG NUMBER: 12SR-LD2-9-C-UNV-L950-CD1-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 | 12.7 | 14.3 | 13.0 | 14.6 | 15.0 | 13.7 | 15.3 | 14.0 | 15.6 | 15.9 |
| | 3H | 14.4 | 15.9 | 14.8 | 16.3 | 16.6 | 15.4 | 16.9 | 15.8 | 17.3 | 17.6 |
| | 4H | 15.1 | 16.5 | 15.5 | 16.8 | 17.2 | 16.2 | 17.6 | 16.5 | 17.9 | 18.3 |
| | 6H | 15.6 | 16.9 | 16.0 | 17.2 | 17.6 | 16.7 | 18.0 | 17.1 | 18.4 | 18.8 |
| | 8H | 15.7 | 17.0 | 16.1 | 17.3 | 17.7 | 16.9 | 18.2 | 17.4 | 18.6 | 19.0 |
| | 12H | 15.8 | 17.0 | 16.2 | 17.4 | 17.8 | 17.1 | 18.3 | 17.5 | 18.7 | 19.1 |
| 4H | 2H | 13.7 | 15.1 | 14.1 | 15.4 | 15.8 | 14.4 | 15.8 | 14.8 | 16.1 | 16.5 |
| | 3H | 15.7 | 16.9 | 16.1 | 17.3 | 17.7 | 16.4 | 17.6 | 16.8 | 18.0 | 18.4 |
| | 4H | 16.6 | 17.7 | 17.0 | 18.1 | 18.5 | 17.2 | 18.3 | 17.7 | 18.7 | 19.2 |
| | 6H | 17.3 | 18.2 | 17.7 | 18.7 | 19.1 | 18.0 | 18.9 | 18.4 | 19.3 | 19.8 |
| | 8H | 17.5 | 18.4 | 17.9 | 18.8 | 19.3 | 18.2 | 19.1 | 18.7 | 19.5 | 20.0 |
| | 12H | 17.6 | 18.4 | 18.1 | 18.9 | 19.4 | 18.4 | 19.2 | 18.9 | 19.7 | 20.2 |
| 8H | 4H | 17.1 | 18.0 | 17.6 | 18.5 | 18.9 | 17.7 | 18.6 | 18.1 | 19.0 | 19.5 |
| | 6H | 18.1 | 18.8 | 18.6 | 19.3 | 19.8 | 18.5 | 19.3 | 19.0 | 19.8 | 20.2 |
| | 8H | 18.4 | 19.1 | 18.9 | 19.6 | 20.1 | 18.9 | 19.6 | 19.4 | 20.1 | 20.5 |
| | 12H | 18.7 | 19.3 | 19.2 | 19.8 | 20.4 | 19.2 | 19.8 | 19.7 | 20.3 | 20.8 |
| 12H | 4H | 17.2 | 18.0 | 17.7 | 18.5 | 18.9 | 17.7 | 18.5 | 18.2 | 19.0 | 19.5 |
| | 6H | 18.2 | 18.9 | 18.7 | 19.3 | 19.9 | 18.7 | 19.3 | 19.2 | 19.8 | 20.3 |
| | 8H | 18.7 | 19.2 | 19.2 | 19.7 | 20.3 | 19.1 | 19.7 | 19.6 | 20.2 | 20.7 |

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

Report Prepared for

Cooper Lighting Solutions

Metalux

Report Number: SP1-2506-457-8

Test Date: 07/02/2025

Luminaire Tested: 24SR-LD2-64-C-UNV-L950-CD1-U

Data in this report applies to families of products including 24SR-LD2-64-C-UNV-L950-CD1-U

Test Information

Test Method: LM-79-2019
 Report Number: SP1-2506-457-8
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 07/02/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Metalux
 Catalog Number: **24SR-LD2-64-C-UNV-L950-CD1-U**
 Description: 2X4 SKYRIDGE 6400LM Fixture with new LTN chip

Spectral Parameters

CCT (K): 4803
 CIE u': 0.2133
 CIE v': 0.4881
 Duv: 0.0004
 CIE x: 0.3510
 CIE y: 0.3570
 CIE z: 0.2921
 Peak Wavelength (nm): 630
 Dominant Wavelength (nm): 574
 Purity: 12.41797
 Rf: 91.5
 Rg: 100.9

| | | | |
|-----------|------|------|------|
| CRI (Ra): | 94.6 | | |
| R1: | 95.9 | R9: | 74.3 |
| R2: | 96.0 | R10: | 88.6 |
| R3: | 94.0 | R11: | 95.2 |
| R4: | 95.8 | R12: | 71.3 |
| R5: | 94.6 | R13: | 96.0 |
| R6: | 92.9 | R14: | 96.1 |
| R7: | 96.3 | R15: | 94.1 |
| R8: | 91.2 | | |



Test Conditions

Stabilization Time: 43M
 Operation Time: 1H 43M
 Sphere Temperature (°C): 24.9

REPORT NUMBER: SP1-2506-457-8

| 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: SP1-2506-457-8

CIE 1931 Chromaticity Diagram



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



Point lies inside the ANSI 5000K 7-step quadrangle

REPORT NUMBER: SP1-2506-457-8

Photopic Flux vs. Wavelength

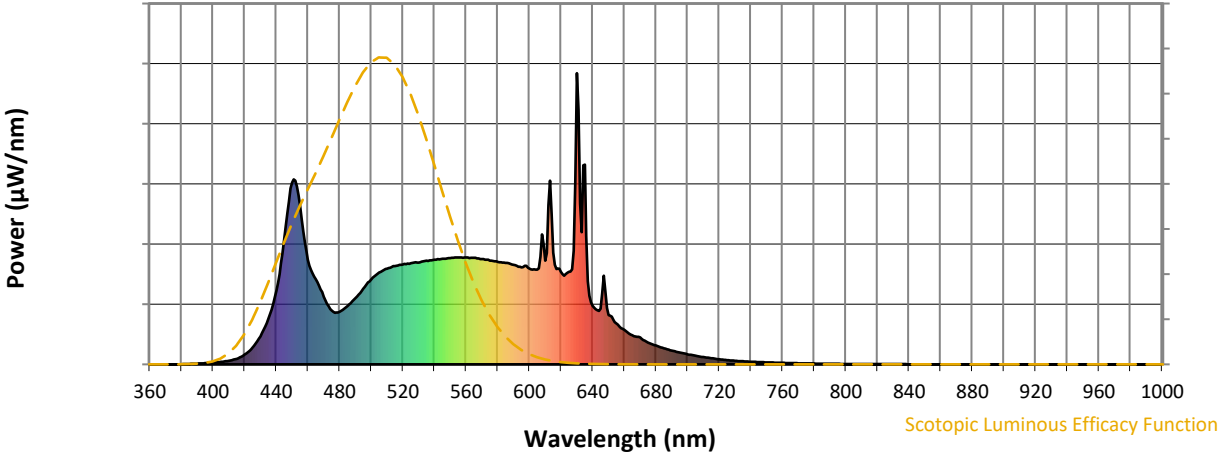


Photopic Lumens: NR

| λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) | λ (nm) | Power W [^] /nm | Lumens (ϕ /nm) |
|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|-------------------|-----------------------------|-------------------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-8

Scotopic Flux vs. Wavelength



Scotopic Lumens: NR S/P: 2.02

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

REPORT NUMBER: SP1-2506-457-8

Melanopic Flux vs. Wavelength



Melanopic Lumens: NR

M/P: 4.33

| λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) | λ (nm) | Power W [^] /nm | Lumens (φ/nm) |
|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|--------|--------------------------|---------------|
| 360 | 0 | NR | 490 | 227 | NR | 620 | 318 | NR | 750 | 7 | NR | 880 | 0 | NR |
| 365 | 0 | NR | 495 | 259 | NR | 625 | 318 | NR | 755 | 6 | NR | 885 | 0 | NR |
| 370 | 0 | NR | 500 | 292 | NR | 630 | 1000 | NR | 760 | 5 | NR | 890 | 0 | NR |
| 375 | 0 | NR | 505 | 315 | NR | 635 | 686 | NR | 765 | 4 | NR | 895 | 0 | NR |
| 380 | 0 | NR | 510 | 329 | NR | 640 | 202 | NR | 770 | 4 | NR | 900 | 0 | NR |
| 385 | 1 | NR | 515 | 338 | NR | 645 | 192 | NR | 775 | 3 | NR | 905 | 0 | NR |
| 390 | 3 | NR | 520 | 343 | NR | 650 | 169 | NR | 780 | 3 | NR | 910 | 0 | NR |
| 395 | 5 | NR | 525 | 347 | NR | 655 | 141 | NR | 785 | 2 | NR | 915 | 0 | NR |
| 400 | 6 | NR | 530 | 350 | NR | 660 | 119 | NR | 790 | 2 | NR | 920 | 0 | NR |
| 405 | 9 | NR | 535 | 356 | NR | 665 | 100 | NR | 795 | 2 | NR | 925 | 0 | NR |
| 410 | 12 | NR | 540 | 359 | NR | 670 | 92 | NR | 800 | 2 | NR | 930 | 0 | NR |
| 415 | 19 | NR | 545 | 363 | NR | 675 | 75 | NR | 805 | 1 | NR | 935 | 0 | NR |
| 420 | 34 | NR | 550 | 365 | NR | 680 | 64 | NR | 810 | 1 | NR | 940 | 0 | NR |
| 425 | 57 | NR | 555 | 368 | NR | 685 | 55 | NR | 815 | 1 | NR | 945 | 0 | NR |
| 430 | 96 | NR | 560 | 367 | NR | 690 | 47 | NR | 820 | 1 | NR | 950 | 0 | NR |
| 435 | 157 | NR | 565 | 366 | NR | 695 | 41 | NR | 825 | 1 | NR | 955 | 0 | NR |
| 440 | 252 | NR | 570 | 361 | NR | 700 | 34 | NR | 830 | 1 | NR | 960 | 0 | NR |
| 445 | 427 | NR | 575 | 356 | NR | 705 | 30 | NR | 835 | 1 | NR | 965 | 0 | NR |
| 450 | 625 | NR | 580 | 352 | NR | 710 | 25 | NR | 840 | 1 | NR | 970 | 0 | NR |
| 455 | 544 | NR | 585 | 348 | NR | 715 | 21 | NR | 845 | 0 | NR | 975 | 0 | NR |
| 460 | 360 | NR | 590 | 342 | NR | 720 | 18 | NR | 850 | 0 | NR | 980 | 0 | NR |
| 465 | 292 | NR | 595 | 333 | NR | 725 | 15 | NR | 855 | 0 | NR | 985 | 0 | NR |
| 470 | 232 | NR | 600 | 329 | NR | 730 | 12 | NR | 860 | 0 | NR | 990 | 0 | NR |
| 475 | 184 | NR | 605 | 325 | NR | 735 | 11 | NR | 865 | 0 | NR | 995 | 0 | NR |
| 480 | 180 | NR | 610 | 357 | NR | 740 | 9 | NR | 870 | 0 | NR | 1000 | 0 | NR |
| 485 | 201 | NR | 615 | 384 | NR | 745 | 8 | NR | 875 | 0 | NR | | | |

Summary

$R_f = 91.5$
 $R_g = 100.9$
 $CIE R_a = 94.6$
 $R_9 = 74.3$



Color Vector Graphics



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

| | | | |
|------------|------------|------------|------------|
| CES01 = 85 | CES26 = 91 | CES51 = 98 | CES76 = 84 |
| CES02 = 61 | CES27 = 93 | CES52 = 98 | CES77 = 88 |
| CES03 = 31 | CES28 = 95 | CES53 = 97 | CES78 = 81 |
| CES04 = 69 | CES29 = 94 | CES54 = 95 | CES79 = 95 |
| CES05 = 48 | CES30 = 96 | CES55 = 94 | CES80 = 92 |
| CES06 = 50 | CES31 = 94 | CES56 = 96 | CES81 = 84 |
| CES07 = 41 | CES32 = 87 | CES57 = 95 | CES82 = 96 |
| CES08 = 40 | CES33 = 97 | CES58 = 95 | CES83 = 96 |
| CES09 = 29 | CES34 = 91 | CES59 = 98 | CES84 = 93 |
| CES10 = 73 | CES35 = 94 | CES60 = 93 | CES85 = 84 |
| CES11 = 56 | CES36 = 83 | CES61 = 93 | CES86 = 87 |
| CES12 = 62 | CES37 = 93 | CES62 = 89 | CES87 = 91 |
| CES13 = 43 | CES38 = 91 | CES63 = 93 | CES88 = 98 |
| CES14 = 74 | CES39 = 99 | CES64 = 91 | CES89 = 87 |
| CES15 = 71 | CES40 = 97 | CES65 = 89 | CES90 = 99 |
| CES16 = 47 | CES41 = 98 | CES66 = 88 | CES91 = 75 |
| CES17 = 48 | CES42 = 91 | CES67 = 87 | CES92 = 80 |
| CES18 = 56 | CES43 = 91 | CES68 = 88 | CES93 = 88 |
| CES19 = 70 | CES44 = 99 | CES69 = 88 | CES94 = 79 |
| CES20 = 65 | CES45 = 95 | CES70 = 85 | CES95 = 84 |
| CES21 = 85 | CES46 = 96 | CES71 = 80 | CES96 = 92 |
| CES22 = 77 | CES47 = 94 | CES72 = 93 | CES97 = 94 |
| CES23 = 91 | CES48 = 95 | CES73 = 79 | CES98 = 95 |
| CES24 = 90 | CES49 = 95 | CES74 = 93 | CES99 = 95 |
| CES25 = 70 | CES50 = 99 | CES75 = 81 | |



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)