

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060256

Luminaire Tested: S124RDRP-S1020D927-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060256
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D927-X4F0-XX-UDD-BVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

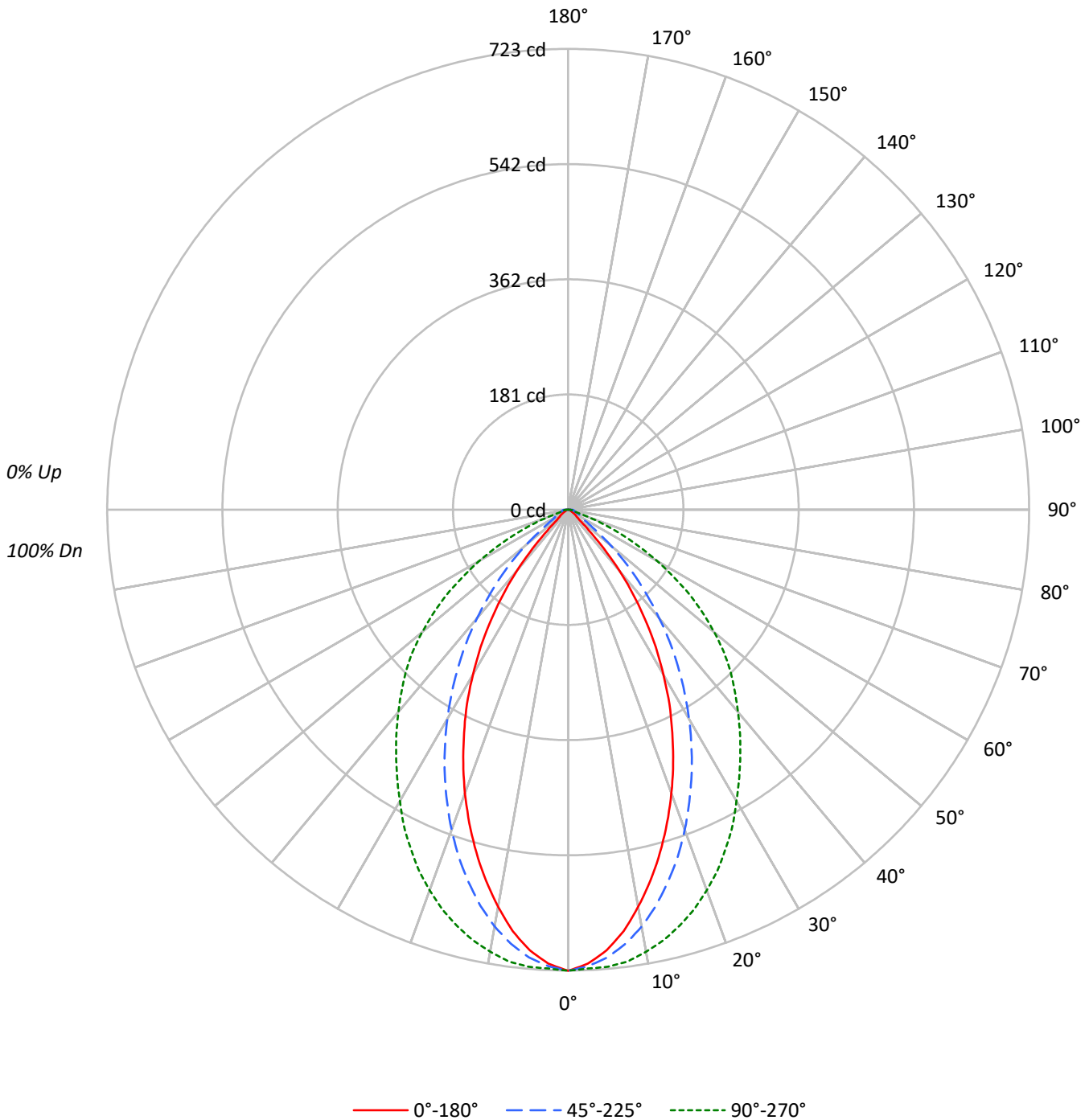
Lumens per Lamp: N/A
Luminaire Lumens: 907.9 lumens
Efficiency: N/A
Efficacy: 25.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 105 | 99 | 94 | 89 | 102 | 97 | 92 | 88 | 93 | 90 | 86 | 90 | 87 | 84 | 87 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 77 | 74 | 73 |
| 4 | 92 | 82 | 75 | 70 | 90 | 81 | 75 | 70 | 79 | 73 | 69 | 77 | 72 | 68 | 75 | 71 | 67 | 65 |
| 5 | 86 | 76 | 68 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 57 | 66 | 60 | 56 | 64 | 59 | 56 | 54 |
| 7 | 76 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 51 | 60 | 55 | 51 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 46 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6229 | 6229 | 6229 |
| 5° | 5996 | 6096 | 6220 |
| 10° | 5530 | 5806 | 6158 |
| 15° | 4963 | 5390 | 6022 |
| 20° | 4337 | 4899 | 5821 |
| 25° | 3668 | 4352 | 5562 |
| 30° | 2963 | 3772 | 5249 |
| 35° | 2205 | 3153 | 4945 |
| 40° | 1401 | 2499 | 4653 |
| 45° | 560 | 1832 | 4388 |
| 50° | 244 | 1168 | 4004 |
| 55° | 188 | 604 | 3495 |
| 60° | 133 | 413 | 2773 |
| 65° | 98 | 410 | 1893 |
| 70° | 96 | 363 | 869 |
| 75° | 126 | 383 | 349 |
| 80° | 188 | 426 | 382 |
| 85° | 375 | 761 | 563 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4388 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 66.2 | 7.3 |
| 10°-20° | 170.8 | 18.8 |
| 20°-30° | 215.7 | 23.8 |
| 30°-40° | 198.1 | 21.8 |
| 40°-50° | 135.1 | 14.9 |
| 50°-60° | 73.3 | 8.1 |
| 60°-70° | 31.1 | 3.4 |
| 70°-80° | 10.7 | 1.2 |
| 80°-90° | 6.8 | 0.8 |
| 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° | 452.7 | 49.9 |
| 0°-40° | 650.9 | 71.7 |
| 0°-60° | 859.2 | 94.6 |
| 0°-90° | 907.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 907.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 723 | 723 | 723 | 723 | 723 | |
| 5° | 694 | 704 | 705 | 711 | 720 | 64 |
| 15° | 557 | 575 | 605 | 648 | 676 | 155 |
| 25° | 386 | 411 | 458 | 529 | 585 | 177 |
| 35° | 210 | 238 | 300 | 394 | 470 | 130 |
| 45° | 46 | 74 | 150 | 266 | 360 | 42 |
| 55° | 12 | 13 | 40 | 147 | 233 | 11 |
| 65° | 5 | 6 | 20 | 46 | 93 | 5 |
| 75° | 4 | 10 | 12 | 10 | 10 | 4 |
| 85° | 4 | 8 | 8 | 8 | 6 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 723.4 | 723.4 | 723.4 | 723.4 | 723.4 |
| 2.5° | 712.8 | 721.5 | 716.7 | 718.6 | 720.5 |
| 5° | 693.7 | 704.2 | 705.2 | 710.9 | 719.6 |
| 7.5° | 666.9 | 679.3 | 687.0 | 701.4 | 714.8 |
| 10° | 632.4 | 647.7 | 664.0 | 687.0 | 704.2 |
| 12.5° | 596.0 | 612.2 | 636.2 | 668.8 | 691.8 |
| 15° | 556.7 | 574.9 | 604.6 | 647.7 | 675.5 |
| 17.5° | 515.5 | 535.6 | 571.0 | 621.8 | 657.3 |
| 20° | 473.3 | 495.4 | 534.6 | 592.1 | 635.2 |
| 22.5° | 430.2 | 453.2 | 496.3 | 561.5 | 612.2 |
| 25° | 386.1 | 411.0 | 458.0 | 528.9 | 585.4 |
| 27.5° | 344.0 | 367.0 | 418.7 | 496.3 | 558.6 |
| 30° | 298.0 | 323.8 | 379.4 | 462.8 | 527.9 |
| 32.5° | 255.8 | 280.7 | 339.2 | 428.3 | 499.2 |
| 35° | 209.8 | 237.6 | 299.9 | 393.8 | 470.4 |
| 37.5° | 166.7 | 193.5 | 261.6 | 361.2 | 442.7 |
| 40° | 124.6 | 152.3 | 222.3 | 328.6 | 413.9 |
| 42.5° | 83.4 | 113.1 | 184.9 | 295.1 | 387.1 |
| 45° | 46.0 | 73.8 | 150.4 | 266.4 | 360.3 |
| 47.5° | 24.0 | 40.2 | 117.9 | 237.6 | 331.5 |
| 50° | 18.2 | 22.0 | 87.2 | 206.0 | 298.9 |
| 52.5° | 15.3 | 16.3 | 59.4 | 174.4 | 266.4 |
| 55° | 12.5 | 13.4 | 40.2 | 146.6 | 232.8 |
| 57.5° | 9.6 | 10.5 | 28.7 | 119.8 | 195.5 |
| 60° | 7.7 | 8.6 | 24.0 | 92.0 | 161.0 |
| 62.5° | 5.7 | 6.7 | 23.0 | 68.0 | 126.5 |
| 65° | 4.8 | 5.7 | 20.1 | 46.0 | 92.9 |
| 67.5° | 3.8 | 5.7 | 17.2 | 29.7 | 62.3 |
| 70° | 3.8 | 7.7 | 14.4 | 19.2 | 34.5 |
| 72.5° | 3.8 | 8.6 | 12.5 | 12.5 | 12.5 |
| 75° | 3.8 | 10.5 | 11.5 | 10.5 | 10.5 |
| 77.5° | 3.8 | 9.6 | 9.6 | 9.6 | 9.6 |
| 80° | 3.8 | 8.6 | 8.6 | 8.6 | 7.7 |
| 82.5° | 3.8 | 7.7 | 8.6 | 8.6 | 6.7 |
| 85° | 3.8 | 7.7 | 7.7 | 7.7 | 5.7 |
| 87.5° | 2.9 | 7.7 | 7.7 | 7.7 | 3.8 |
| 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.80 | 16.08 | 15.16 | 16.39 | 16.70 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 15.16 | 16.28 | 15.54 | 16.61 | 16.98 |
| | 4H | 0.00 | 0.72 | 0.07 | 1.07 | 1.45 | 15.12 | 16.17 | 15.52 | 16.52 | 16.91 |
| | 6H | 1.03 | 2.00 | 1.45 | 2.37 | 2.76 | 15.10 | 16.06 | 15.51 | 16.43 | 16.82 |
| | 8H | 1.71 | 2.62 | 2.14 | 3.02 | 3.42 | 15.09 | 16.00 | 15.52 | 16.39 | 16.79 |
| | 12H | 2.51 | 3.39 | 2.95 | 3.77 | 4.20 | 15.08 | 15.95 | 15.52 | 16.34 | 16.77 |
| 4H | 2H | 0.49 | 1.53 | 0.89 | 1.89 | 2.27 | 14.60 | 15.65 | 15.01 | 16.00 | 16.39 |
| | 3H | 1.91 | 2.77 | 2.32 | 3.17 | 3.57 | 15.00 | 15.85 | 15.41 | 16.26 | 16.66 |
| | 4H | 3.35 | 4.12 | 3.79 | 4.54 | 4.98 | 14.98 | 15.74 | 15.41 | 16.16 | 16.60 |
| | 6H | 4.60 | 5.26 | 5.06 | 5.70 | 6.17 | 15.00 | 15.65 | 15.46 | 16.10 | 16.57 |
| | 8H | 5.17 | 5.78 | 5.64 | 6.23 | 6.70 | 15.01 | 15.62 | 15.48 | 16.07 | 16.54 |
| | 12H | 5.84 | 6.38 | 6.33 | 6.87 | 7.34 | 15.04 | 15.58 | 15.53 | 16.07 | 16.54 |
| 8H | 4H | 4.43 | 5.05 | 4.90 | 5.50 | 5.97 | 14.88 | 15.49 | 15.35 | 15.94 | 16.41 |
| | 6H | 6.04 | 6.55 | 6.55 | 7.04 | 7.53 | 14.93 | 15.43 | 15.43 | 15.93 | 16.41 |
| | 8H | 6.88 | 7.33 | 7.40 | 7.85 | 8.34 | 14.98 | 15.44 | 15.51 | 15.95 | 16.45 |
| | 12H | 7.85 | 8.25 | 8.36 | 8.74 | 9.32 | 15.10 | 15.50 | 15.62 | 16.00 | 16.57 |
| 12H | 4H | 4.62 | 5.17 | 5.11 | 5.65 | 6.12 | 14.84 | 15.38 | 15.33 | 15.87 | 16.34 |
| | 6H | 6.39 | 6.84 | 6.91 | 7.36 | 7.85 | 14.90 | 15.35 | 15.42 | 15.86 | 16.36 |
| | 8H | 7.41 | 7.81 | 7.93 | 8.31 | 8.88 | 15.00 | 15.40 | 15.52 | 15.89 | 16.47 |