

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: P1060283

Luminaire Tested: S124RDRP-S1020D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060283
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-S1020D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

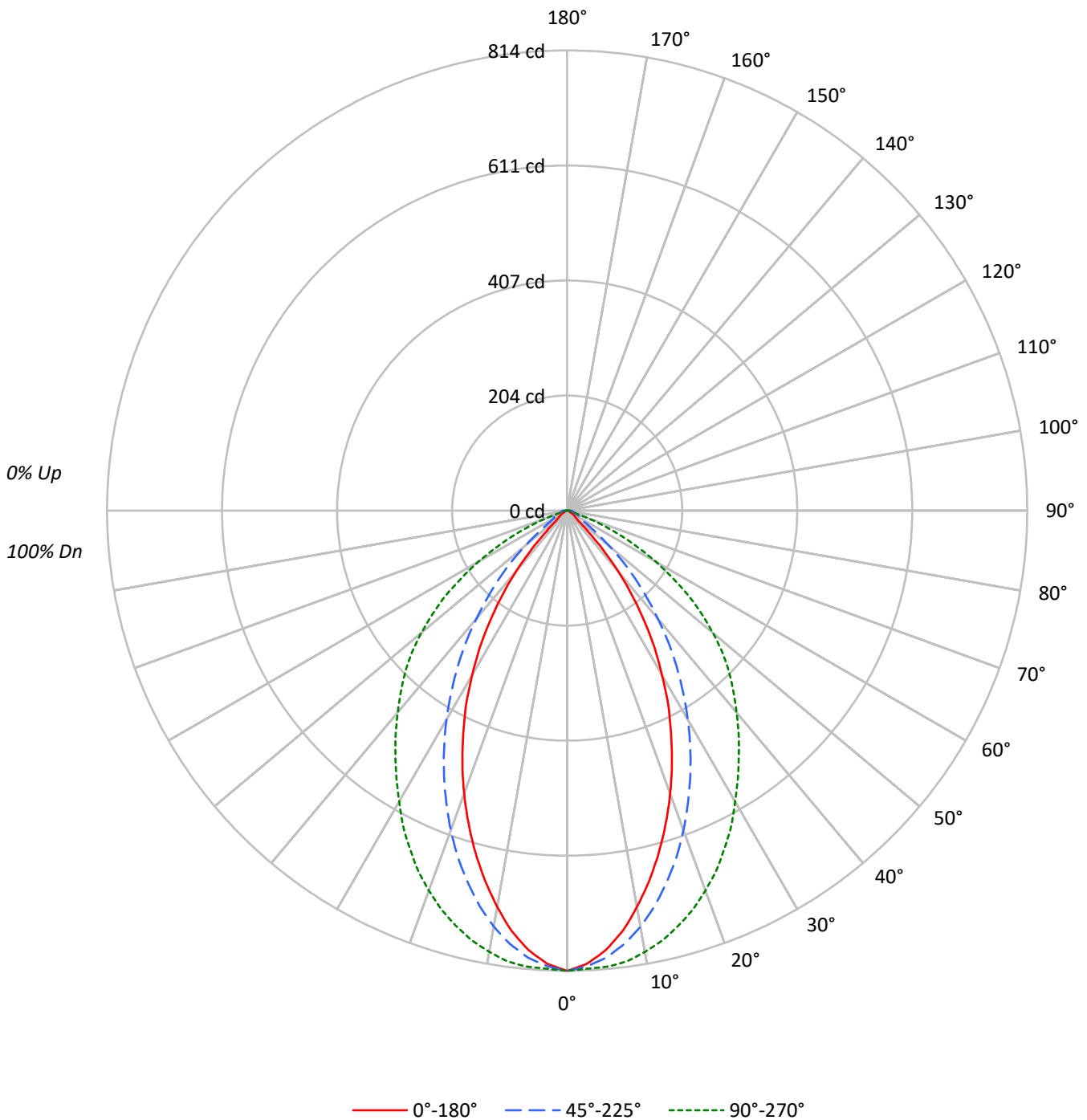
Lumens per Lamp: N/A
Luminaire Lumens: 1021.9 lumens
Efficiency: N/A
Efficacy: 29.2 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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 | 103 | 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° | 7012 | 7012 | 7012 |
| 5° | 6749 | 6862 | 7002 |
| 10° | 6224 | 6535 | 6931 |
| 15° | 5586 | 6067 | 6778 |
| 20° | 4882 | 5515 | 6553 |
| 25° | 4129 | 4898 | 6261 |
| 30° | 3335 | 4247 | 5909 |
| 35° | 2483 | 3549 | 5566 |
| 40° | 1576 | 2813 | 5237 |
| 45° | 631 | 2062 | 4938 |
| 50° | 275 | 1314 | 4508 |
| 55° | 210 | 680 | 3935 |
| 60° | 148 | 465 | 3121 |
| 65° | 110 | 460 | 2131 |
| 70° | 108 | 408 | 977 |
| 75° | 143 | 429 | 396 |
| 80° | 213 | 481 | 426 |
| 85° | 425 | 850 | 642 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4938 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 74.5 | 7.3 |
| 10°-20° | 192.3 | 18.8 |
| 20°-30° | 242.8 | 23.8 |
| 30°-40° | 223.0 | 21.8 |
| 40°-50° | 152.1 | 14.9 |
| 50°-60° | 82.5 | 8.1 |
| 60°-70° | 35.0 | 3.4 |
| 70°-80° | 12.1 | 1.2 |
| 80°-90° | 7.7 | 0.7 |
| 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° | 509.6 | 49.9 |
| 0°-40° | 732.6 | 71.7 |
| 0°-60° | 967.2 | 94.6 |
| 0°-90° | 1021.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1021.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 814 | 814 | 814 | 814 | 814 | |
| 5° | 781 | 793 | 794 | 800 | 810 | 72 |
| 15° | 627 | 647 | 680 | 729 | 760 | 175 |
| 25° | 435 | 463 | 516 | 595 | 659 | 199 |
| 35° | 236 | 268 | 338 | 443 | 530 | 147 |
| 45° | 52 | 83 | 169 | 300 | 406 | 48 |
| 55° | 14 | 15 | 45 | 165 | 262 | 13 |
| 65° | 5 | 6 | 23 | 52 | 105 | 6 |
| 75° | 4 | 12 | 13 | 12 | 12 | 5 |
| 85° | 4 | 9 | 9 | 9 | 6 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 814.3 | 814.3 | 814.3 | 814.3 | 814.3 |
| 2.5° | 802.4 | 812.1 | 806.7 | 808.9 | 811.0 |
| 5° | 780.8 | 792.7 | 793.8 | 800.3 | 810.0 |
| 7.5° | 750.6 | 764.7 | 773.3 | 789.5 | 804.6 |
| 10° | 711.8 | 729.1 | 747.4 | 773.3 | 792.7 |
| 12.5° | 670.8 | 689.2 | 716.1 | 752.8 | 778.7 |
| 15° | 626.6 | 647.1 | 680.5 | 729.1 | 760.3 |
| 17.5° | 580.2 | 602.9 | 642.8 | 700.0 | 739.9 |
| 20° | 532.8 | 557.6 | 601.8 | 666.5 | 715.1 |
| 22.5° | 484.3 | 510.1 | 558.7 | 632.0 | 689.2 |
| 25° | 434.6 | 462.7 | 515.5 | 595.3 | 659.0 |
| 27.5° | 387.2 | 413.1 | 471.3 | 558.7 | 628.8 |
| 30° | 335.4 | 364.5 | 427.1 | 520.9 | 594.3 |
| 32.5° | 288.0 | 316.0 | 381.8 | 482.1 | 561.9 |
| 35° | 236.2 | 267.5 | 337.6 | 443.3 | 529.5 |
| 37.5° | 187.7 | 217.9 | 294.4 | 406.6 | 498.3 |
| 40° | 140.2 | 171.5 | 250.2 | 369.9 | 465.9 |
| 42.5° | 93.8 | 127.3 | 208.2 | 332.2 | 435.7 |
| 45° | 51.8 | 83.0 | 169.3 | 299.8 | 405.5 |
| 47.5° | 27.0 | 45.3 | 132.7 | 267.5 | 373.2 |
| 50° | 20.5 | 24.8 | 98.1 | 231.9 | 336.5 |
| 52.5° | 17.3 | 18.3 | 66.9 | 196.3 | 299.8 |
| 55° | 14.0 | 15.1 | 45.3 | 165.0 | 262.1 |
| 57.5° | 10.8 | 11.9 | 32.4 | 134.8 | 220.0 |
| 60° | 8.6 | 9.7 | 27.0 | 103.5 | 181.2 |
| 62.5° | 6.5 | 7.5 | 25.9 | 76.6 | 142.4 |
| 65° | 5.4 | 6.5 | 22.6 | 51.8 | 104.6 |
| 67.5° | 4.3 | 6.5 | 19.4 | 33.4 | 70.1 |
| 70° | 4.3 | 8.6 | 16.2 | 21.6 | 38.8 |
| 72.5° | 4.3 | 9.7 | 14.0 | 14.0 | 14.0 |
| 75° | 4.3 | 11.9 | 12.9 | 11.9 | 11.9 |
| 77.5° | 4.3 | 10.8 | 10.8 | 10.8 | 10.8 |
| 80° | 4.3 | 9.7 | 9.7 | 9.7 | 8.6 |
| 82.5° | 4.3 | 8.6 | 9.7 | 9.7 | 7.5 |
| 85° | 4.3 | 8.6 | 8.6 | 8.6 | 6.5 |
| 87.5° | 3.2 | 8.6 | 8.6 | 8.6 | 4.3 |
| 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 | 15.21 | 16.48 | 15.57 | 16.80 | 17.11 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.19 | 0.56 | 15.56 | 16.69 | 15.94 | 17.02 | 17.39 |
| | 4H | 0.11 | 1.16 | 0.52 | 1.51 | 1.90 | 15.53 | 16.58 | 15.93 | 16.93 | 17.31 |
| | 6H | 1.48 | 2.44 | 1.89 | 2.81 | 3.20 | 15.50 | 16.47 | 15.92 | 16.84 | 17.23 |
| | 8H | 2.15 | 3.06 | 2.58 | 3.45 | 3.86 | 15.49 | 16.40 | 15.93 | 16.80 | 17.20 |
| | 12H | 2.95 | 3.82 | 3.38 | 4.20 | 4.63 | 15.49 | 16.36 | 15.93 | 16.75 | 17.18 |
| 4H | 2H | 0.90 | 1.95 | 1.31 | 2.30 | 2.69 | 15.01 | 16.06 | 15.41 | 16.41 | 16.80 |
| | 3H | 2.33 | 3.18 | 2.74 | 3.59 | 3.99 | 15.41 | 16.26 | 15.82 | 16.67 | 17.07 |
| | 4H | 3.78 | 4.54 | 4.22 | 4.96 | 5.41 | 15.39 | 16.15 | 15.82 | 16.57 | 17.01 |
| | 6H | 5.02 | 5.68 | 5.49 | 6.13 | 6.60 | 15.40 | 16.06 | 15.87 | 16.51 | 16.98 |
| | 8H | 5.59 | 6.20 | 6.06 | 6.65 | 7.12 | 15.41 | 16.03 | 15.88 | 16.48 | 16.95 |
| | 12H | 6.26 | 6.80 | 6.75 | 7.29 | 7.76 | 15.45 | 15.99 | 15.94 | 16.48 | 16.95 |
| 8H | 4H | 4.85 | 5.47 | 5.32 | 5.92 | 6.39 | 15.29 | 15.90 | 15.76 | 16.35 | 16.82 |
| | 6H | 6.46 | 6.97 | 6.97 | 7.46 | 7.95 | 15.34 | 15.84 | 15.84 | 16.34 | 16.82 |
| | 8H | 7.29 | 7.74 | 7.82 | 8.26 | 8.75 | 15.39 | 15.84 | 15.92 | 16.36 | 16.85 |
| | 12H | 8.25 | 8.65 | 8.77 | 9.15 | 9.72 | 15.51 | 15.91 | 16.02 | 16.40 | 16.98 |
| 12H | 4H | 5.04 | 5.59 | 5.53 | 6.07 | 6.54 | 15.25 | 15.79 | 15.74 | 16.27 | 16.75 |
| | 6H | 6.81 | 7.26 | 7.33 | 7.78 | 8.27 | 15.30 | 15.76 | 15.83 | 16.27 | 16.77 |
| | 8H | 7.83 | 8.22 | 8.34 | 8.72 | 9.29 | 15.41 | 15.81 | 15.92 | 16.30 | 16.88 |