

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: P1060625

Luminaire Tested: S124RDRP-H1020D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060625
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-H1020D830-X4F0-XX-UDD-BVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

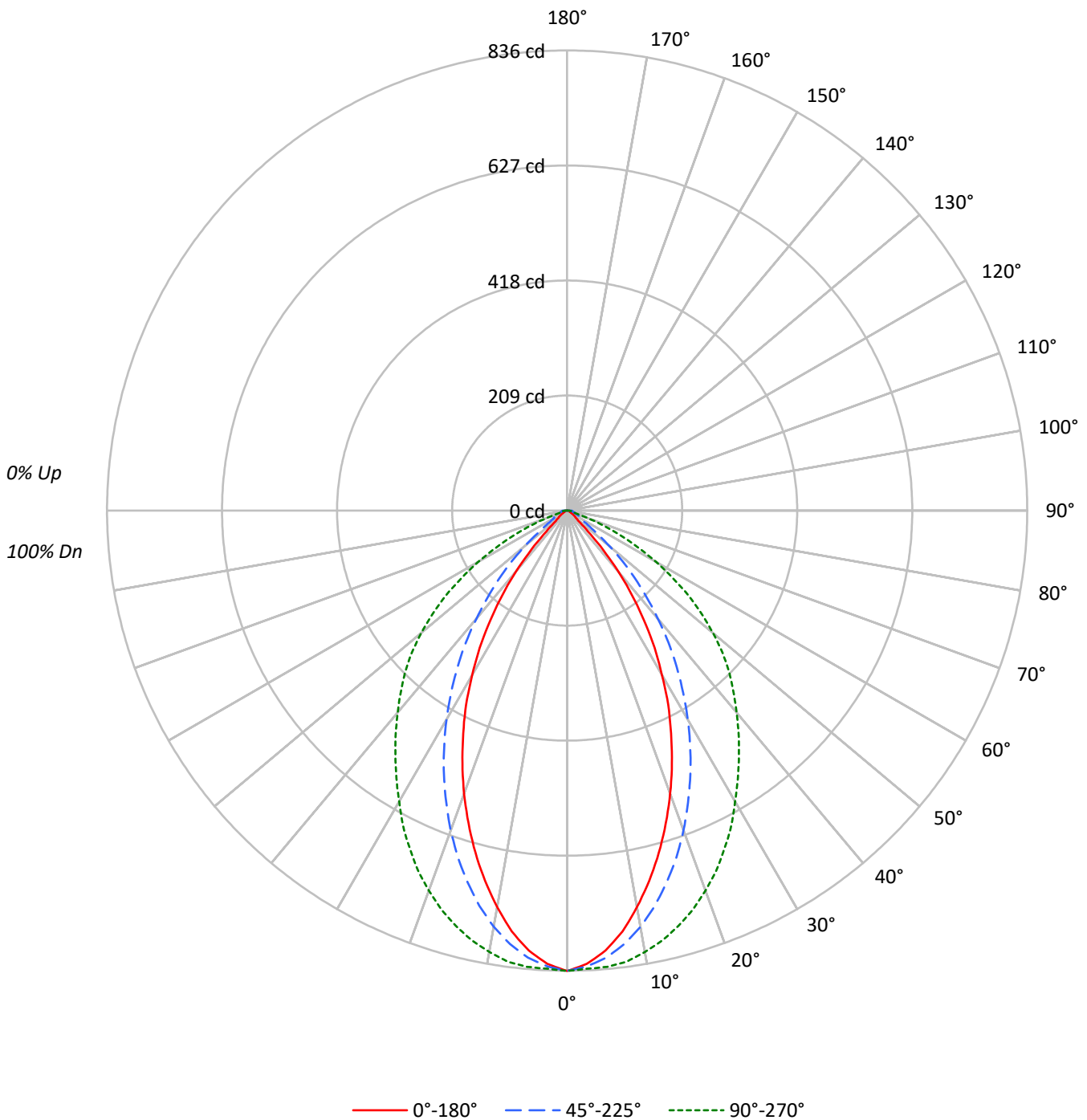
Lumens per Lamp: N/A
Luminaire Lumens: 1049.8 lumens
Efficiency: N/A
Efficacy: 33.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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° | 7202 | 7202 | 7202 |
| 5° | 6933 | 7048 | 7192 |
| 10° | 6394 | 6713 | 7120 |
| 15° | 5739 | 6232 | 6963 |
| 20° | 5015 | 5665 | 6731 |
| 25° | 4242 | 5032 | 6431 |
| 30° | 3425 | 4362 | 6069 |
| 35° | 2550 | 3646 | 5719 |
| 40° | 1619 | 2889 | 5380 |
| 45° | 648 | 2118 | 5073 |
| 50° | 281 | 1350 | 4631 |
| 55° | 216 | 698 | 4042 |
| 60° | 153 | 477 | 3205 |
| 65° | 112 | 475 | 2190 |
| 70° | 111 | 418 | 1005 |
| 75° | 146 | 443 | 406 |
| 80° | 218 | 496 | 441 |
| 85° | 435 | 879 | 652 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5073 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 76.6 | 7.3 |
| 10°-20° | 197.5 | 18.8 |
| 20°-30° | 249.4 | 23.8 |
| 30°-40° | 229.1 | 21.8 |
| 40°-50° | 156.2 | 14.9 |
| 50°-60° | 84.7 | 8.1 |
| 60°-70° | 35.9 | 3.4 |
| 70°-80° | 12.4 | 1.2 |
| 80°-90° | 7.9 | 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° | 523.5 | 49.9 |
| 0°-40° | 752.6 | 71.7 |
| 0°-60° | 993.5 | 94.6 |
| 0°-90° | 1049.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1049.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 836 | 836 | 836 | 836 | 836 | |
| 5° | 802 | 814 | 815 | 822 | 832 | 74 |
| 15° | 644 | 665 | 699 | 749 | 781 | 179 |
| 25° | 446 | 475 | 530 | 612 | 677 | 204 |
| 35° | 243 | 275 | 347 | 455 | 544 | 151 |
| 45° | 53 | 85 | 174 | 308 | 417 | 49 |
| 55° | 14 | 16 | 46 | 170 | 269 | 13 |
| 65° | 6 | 7 | 23 | 53 | 108 | 6 |
| 75° | 4 | 12 | 13 | 12 | 12 | 5 |
| 85° | 4 | 9 | 9 | 9 | 7 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 836.4 | 836.4 | 836.4 | 836.4 | 836.4 |
| 2.5° | 824.2 | 834.2 | 828.7 | 830.9 | 833.1 |
| 5° | 802.1 | 814.3 | 815.4 | 822.0 | 832.0 |
| 7.5° | 771.1 | 785.5 | 794.3 | 811.0 | 826.5 |
| 10° | 731.2 | 748.9 | 767.7 | 794.3 | 814.3 |
| 12.5° | 689.1 | 707.9 | 735.6 | 773.3 | 799.9 |
| 15° | 643.7 | 664.7 | 699.1 | 748.9 | 781.0 |
| 17.5° | 596.0 | 619.3 | 660.3 | 719.0 | 760.0 |
| 20° | 547.3 | 572.8 | 618.2 | 684.7 | 734.5 |
| 22.5° | 497.4 | 524.0 | 573.9 | 649.2 | 707.9 |
| 25° | 446.5 | 475.3 | 529.6 | 611.5 | 676.9 |
| 27.5° | 397.7 | 424.3 | 484.1 | 573.9 | 645.9 |
| 30° | 344.5 | 374.5 | 438.7 | 535.1 | 610.4 |
| 32.5° | 295.8 | 324.6 | 392.2 | 495.2 | 577.2 |
| 35° | 242.6 | 274.7 | 346.8 | 455.3 | 544.0 |
| 37.5° | 192.8 | 223.8 | 302.4 | 417.7 | 511.8 |
| 40° | 144.0 | 176.1 | 257.0 | 380.0 | 478.6 |
| 42.5° | 96.4 | 130.7 | 213.8 | 341.2 | 447.6 |
| 45° | 53.2 | 85.3 | 173.9 | 308.0 | 416.6 |
| 47.5° | 27.7 | 46.5 | 136.3 | 274.7 | 383.3 |
| 50° | 21.0 | 25.5 | 100.8 | 238.2 | 345.7 |
| 52.5° | 17.7 | 18.8 | 68.7 | 201.6 | 308.0 |
| 55° | 14.4 | 15.5 | 46.5 | 169.5 | 269.2 |
| 57.5° | 11.1 | 12.2 | 33.2 | 138.5 | 226.0 |
| 60° | 8.9 | 10.0 | 27.7 | 106.4 | 186.1 |
| 62.5° | 6.6 | 7.8 | 26.6 | 78.7 | 146.2 |
| 65° | 5.5 | 6.6 | 23.3 | 53.2 | 107.5 |
| 67.5° | 4.4 | 6.6 | 19.9 | 34.3 | 72.0 |
| 70° | 4.4 | 8.9 | 16.6 | 22.2 | 39.9 |
| 72.5° | 4.4 | 10.0 | 14.4 | 14.4 | 14.4 |
| 75° | 4.4 | 12.2 | 13.3 | 12.2 | 12.2 |
| 77.5° | 4.4 | 11.1 | 11.1 | 11.1 | 11.1 |
| 80° | 4.4 | 10.0 | 10.0 | 10.0 | 8.9 |
| 82.5° | 4.4 | 8.9 | 10.0 | 10.0 | 7.8 |
| 85° | 4.4 | 8.9 | 8.9 | 8.9 | 6.6 |
| 87.5° | 3.3 | 8.9 | 8.9 | 8.9 | 4.4 |
| 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 | 15.30 | 16.58 | 15.67 | 16.89 | 17.21 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.27 | 0.64 | 15.66 | 16.79 | 16.04 | 17.12 | 17.48 |
| | 4H | 0.19 | 1.24 | 0.60 | 1.60 | 1.98 | 15.62 | 16.67 | 16.03 | 17.02 | 17.41 |
| | 6H | 1.56 | 2.52 | 1.97 | 2.89 | 3.29 | 15.60 | 16.56 | 16.02 | 16.93 | 17.33 |
| | 8H | 2.24 | 3.15 | 2.67 | 3.54 | 3.94 | 15.59 | 16.50 | 16.02 | 16.89 | 17.30 |
| | 12H | 3.03 | 3.90 | 3.47 | 4.29 | 4.72 | 15.59 | 16.46 | 16.02 | 16.84 | 17.27 |
| 4H | 2H | 1.01 | 2.06 | 1.41 | 2.41 | 2.79 | 15.11 | 16.15 | 15.51 | 16.51 | 16.89 |
| | 3H | 2.43 | 3.28 | 2.84 | 3.69 | 4.09 | 15.50 | 16.36 | 15.91 | 16.76 | 17.16 |
| | 4H | 3.88 | 4.64 | 4.31 | 5.06 | 5.50 | 15.48 | 16.24 | 15.92 | 16.66 | 17.11 |
| | 6H | 5.12 | 5.78 | 5.58 | 6.23 | 6.69 | 15.50 | 16.16 | 15.96 | 16.61 | 17.07 |
| | 8H | 5.69 | 6.30 | 6.16 | 6.75 | 7.22 | 15.51 | 16.12 | 15.98 | 16.57 | 17.04 |
| | 12H | 6.36 | 6.90 | 6.85 | 7.39 | 7.86 | 15.55 | 16.09 | 16.03 | 16.57 | 17.05 |
| 8H | 4H | 4.95 | 5.57 | 5.42 | 6.01 | 6.49 | 15.38 | 16.00 | 15.85 | 16.44 | 16.92 |
| | 6H | 6.56 | 7.07 | 7.07 | 7.56 | 8.05 | 15.43 | 15.93 | 15.94 | 16.43 | 16.91 |
| | 8H | 7.40 | 7.85 | 7.92 | 8.37 | 8.86 | 15.49 | 15.94 | 16.01 | 16.46 | 16.95 |
| | 12H | 8.36 | 8.76 | 8.88 | 9.26 | 9.83 | 15.61 | 16.01 | 16.12 | 16.50 | 17.07 |
| 12H | 4H | 5.14 | 5.68 | 5.63 | 6.17 | 6.64 | 15.34 | 15.89 | 15.83 | 16.37 | 16.84 |
| | 6H | 6.91 | 7.36 | 7.44 | 7.88 | 8.37 | 15.40 | 15.85 | 15.92 | 16.37 | 16.86 |
| | 8H | 7.93 | 8.33 | 8.45 | 8.83 | 9.40 | 15.51 | 15.90 | 16.02 | 16.40 | 16.97 |