

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: P1060895

Luminaire Tested: S124RDRP-H575D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060895
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-H575D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

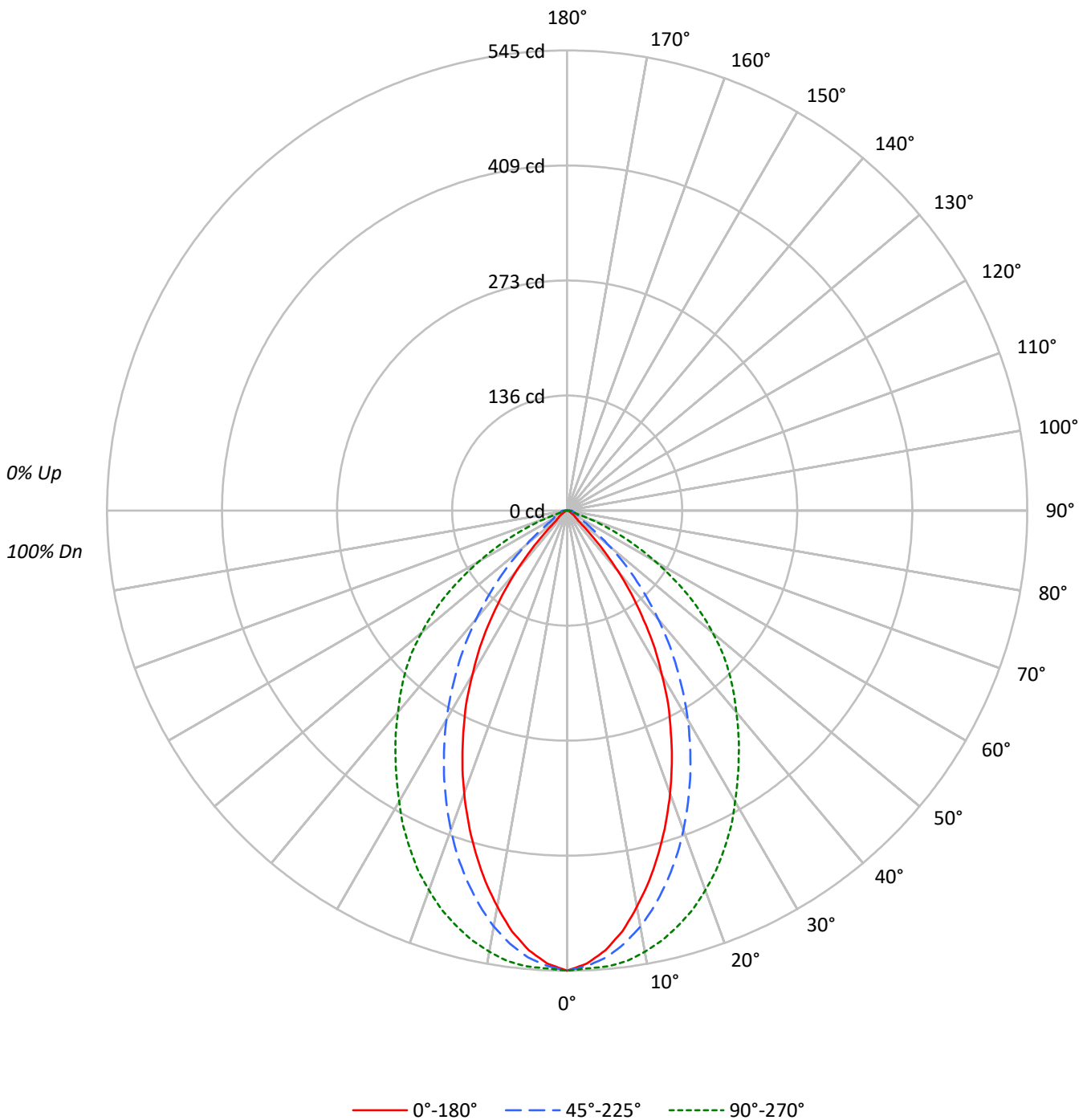
Lumens per Lamp: N/A
Luminaire Lumens: 683.9 lumens
Efficiency: N/A
Efficacy: 39.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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° | 4692 | 4692 | 4692 |
| 5° | 4517 | 4592 | 4685 |
| 10° | 4165 | 4374 | 4639 |
| 15° | 3738 | 4060 | 4536 |
| 20° | 3267 | 3690 | 4385 |
| 25° | 2764 | 3278 | 4190 |
| 30° | 2232 | 2842 | 3954 |
| 35° | 1662 | 2375 | 3726 |
| 40° | 1054 | 1882 | 3505 |
| 45° | 421 | 1380 | 3305 |
| 50° | 184 | 880 | 3017 |
| 55° | 141 | 455 | 2633 |
| 60° | 100 | 310 | 2087 |
| 65° | 73 | 310 | 1426 |
| 70° | 73 | 272 | 655 |
| 75° | 96 | 289 | 263 |
| 80° | 144 | 322 | 288 |
| 85° | 287 | 573 | 425 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3305 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 49.9 | 7.3 |
| 10°-20° | 128.7 | 18.8 |
| 20°-30° | 162.5 | 23.8 |
| 30°-40° | 149.3 | 21.8 |
| 40°-50° | 101.8 | 14.9 |
| 50°-60° | 55.2 | 8.1 |
| 60°-70° | 23.4 | 3.4 |
| 70°-80° | 8.1 | 1.2 |
| 80°-90° | 5.2 | 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° | 341.0 | 49.9 |
| 0°-40° | 490.3 | 71.7 |
| 0°-60° | 647.2 | 94.6 |
| 0°-90° | 683.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 683.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 545 | 545 | 545 | 545 | 545 | |
| 5° | 522 | 530 | 531 | 536 | 542 | 48 |
| 15° | 419 | 433 | 455 | 488 | 509 | 117 |
| 25° | 291 | 310 | 345 | 398 | 441 | 133 |
| 35° | 158 | 179 | 226 | 297 | 354 | 98 |
| 45° | 35 | 56 | 113 | 201 | 271 | 32 |
| 55° | 9 | 10 | 30 | 110 | 175 | 8 |
| 65° | 4 | 4 | 15 | 35 | 70 | 4 |
| 75° | 3 | 8 | 9 | 8 | 8 | 3 |
| 85° | 3 | 6 | 6 | 6 | 4 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 544.9 | 544.9 | 544.9 | 544.9 | 544.9 |
| 2.5° | 537.0 | 543.5 | 539.8 | 541.3 | 542.7 |
| 5° | 522.5 | 530.5 | 531.2 | 535.5 | 542.0 |
| 7.5° | 502.3 | 511.7 | 517.5 | 528.3 | 538.4 |
| 10° | 476.3 | 487.9 | 500.2 | 517.5 | 530.5 |
| 12.5° | 448.9 | 461.2 | 479.2 | 503.8 | 521.1 |
| 15° | 419.3 | 433.0 | 455.4 | 487.9 | 508.8 |
| 17.5° | 388.3 | 403.4 | 430.1 | 468.4 | 495.1 |
| 20° | 356.5 | 373.1 | 402.7 | 446.0 | 478.5 |
| 22.5° | 324.1 | 341.4 | 373.9 | 422.9 | 461.2 |
| 25° | 290.9 | 309.6 | 345.0 | 398.4 | 441.0 |
| 27.5° | 259.1 | 276.4 | 315.4 | 373.9 | 420.8 |
| 30° | 224.5 | 243.9 | 285.8 | 348.6 | 397.7 |
| 32.5° | 192.7 | 211.5 | 255.5 | 322.6 | 376.0 |
| 35° | 158.1 | 179.0 | 225.9 | 296.6 | 354.4 |
| 37.5° | 125.6 | 145.8 | 197.0 | 272.1 | 333.4 |
| 40° | 93.8 | 114.8 | 167.4 | 247.5 | 311.8 |
| 42.5° | 62.8 | 85.2 | 139.3 | 222.3 | 291.6 |
| 45° | 34.6 | 55.6 | 113.3 | 200.6 | 271.4 |
| 47.5° | 18.0 | 30.3 | 88.8 | 179.0 | 249.7 |
| 50° | 13.7 | 16.6 | 65.7 | 155.2 | 225.2 |
| 52.5° | 11.5 | 12.3 | 44.7 | 131.4 | 200.6 |
| 55° | 9.4 | 10.1 | 30.3 | 110.4 | 175.4 |
| 57.5° | 7.2 | 7.9 | 21.7 | 90.2 | 147.2 |
| 60° | 5.8 | 6.5 | 18.0 | 69.3 | 121.2 |
| 62.5° | 4.3 | 5.1 | 17.3 | 51.2 | 95.3 |
| 65° | 3.6 | 4.3 | 15.2 | 34.6 | 70.0 |
| 67.5° | 2.9 | 4.3 | 13.0 | 22.4 | 46.9 |
| 70° | 2.9 | 5.8 | 10.8 | 14.4 | 26.0 |
| 72.5° | 2.9 | 6.5 | 9.4 | 9.4 | 9.4 |
| 75° | 2.9 | 7.9 | 8.7 | 7.9 | 7.9 |
| 77.5° | 2.9 | 7.2 | 7.2 | 7.2 | 7.2 |
| 80° | 2.9 | 6.5 | 6.5 | 6.5 | 5.8 |
| 82.5° | 2.9 | 5.8 | 6.5 | 6.5 | 5.1 |
| 85° | 2.9 | 5.8 | 5.8 | 5.8 | 4.3 |
| 87.5° | 2.2 | 5.8 | 5.8 | 5.8 | 2.9 |
| 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 | 13.81 | 15.09 | 14.18 | 15.40 | 15.72 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.17 | 15.30 | 14.55 | 15.63 | 15.99 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.10 | 0.48 | 14.13 | 15.18 | 14.54 | 15.53 | 15.92 |
| | 6H | 0.08 | 1.04 | 0.49 | 1.41 | 1.80 | 14.11 | 15.07 | 14.52 | 15.44 | 15.84 |
| | 8H | 0.76 | 1.67 | 1.19 | 2.06 | 2.47 | 14.10 | 15.01 | 14.53 | 15.40 | 15.81 |
| | 12H | 1.57 | 2.44 | 2.00 | 2.82 | 3.26 | 14.10 | 14.97 | 14.53 | 15.35 | 15.78 |
| 4H | 2H | 0.00 | 0.56 | 0.00 | 0.91 | 1.30 | 13.62 | 14.66 | 14.02 | 15.02 | 15.40 |
| | 3H | 0.94 | 1.79 | 1.35 | 2.20 | 2.60 | 14.01 | 14.86 | 14.42 | 15.27 | 15.67 |
| | 4H | 2.38 | 3.14 | 2.81 | 3.56 | 4.01 | 13.99 | 14.75 | 14.42 | 15.17 | 15.62 |
| | 6H | 3.63 | 4.28 | 4.09 | 4.73 | 5.20 | 14.01 | 14.67 | 14.47 | 15.11 | 15.58 |
| | 8H | 4.20 | 4.82 | 4.67 | 5.26 | 5.73 | 14.02 | 14.63 | 14.49 | 15.08 | 15.55 |
| | 12H | 4.88 | 5.42 | 5.37 | 5.91 | 6.38 | 14.06 | 14.60 | 14.54 | 15.08 | 15.56 |
| 8H | 4H | 3.45 | 4.07 | 3.92 | 4.52 | 4.99 | 13.89 | 14.50 | 14.36 | 14.95 | 15.42 |
| | 6H | 5.07 | 5.57 | 5.57 | 6.07 | 6.55 | 13.94 | 14.44 | 14.44 | 14.94 | 15.42 |
| | 8H | 5.91 | 6.36 | 6.43 | 6.88 | 7.37 | 14.00 | 14.45 | 14.52 | 14.97 | 15.46 |
| | 12H | 6.88 | 7.28 | 7.40 | 7.78 | 8.35 | 14.11 | 14.51 | 14.63 | 15.01 | 15.58 |
| 12H | 4H | 3.64 | 4.18 | 4.13 | 4.67 | 5.14 | 13.85 | 14.39 | 14.34 | 14.88 | 15.35 |
| | 6H | 5.41 | 5.87 | 5.94 | 6.38 | 6.88 | 13.91 | 14.36 | 14.43 | 14.88 | 15.37 |
| | 8H | 6.44 | 6.84 | 6.96 | 7.34 | 7.91 | 14.01 | 14.41 | 14.53 | 14.91 | 15.48 |