

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: P1059654

Luminaire Tested: S123RDRP-H560D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059654
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-H560D830-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE 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

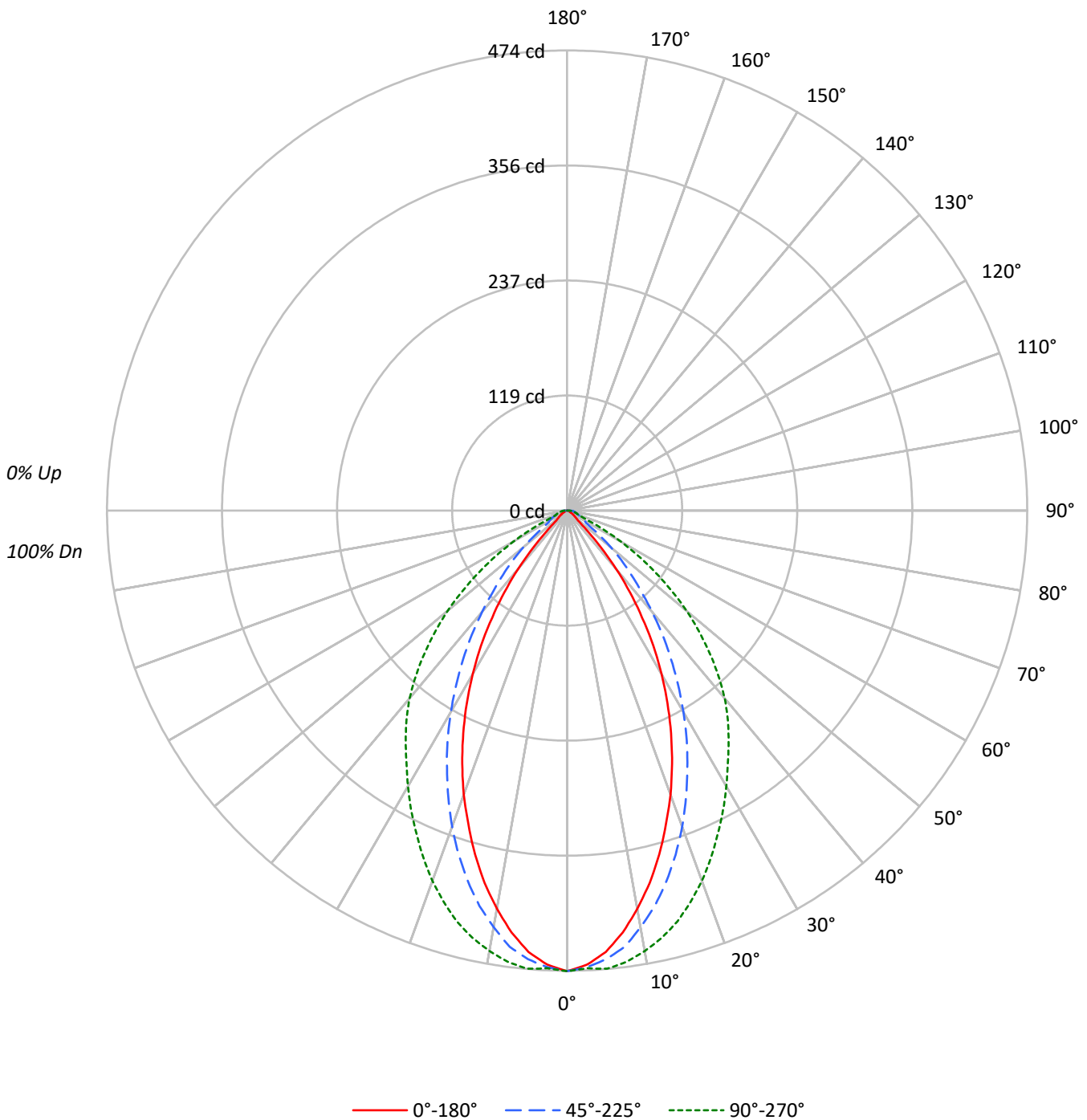
Lumens per Lamp: N/A
Luminaire Lumens: 569.6 lumens
Efficiency: N/A
Efficacy: 32.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 90 | 102 | 97 | 92 | 88 | 94 | 90 | 86 | 91 | 87 | 85 | 88 | 85 | 83 | 81 |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 79 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 70 | 77 | 72 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 69 | 64 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 57 | 55 |
| 7 | 76 | 65 | 58 | 53 | 75 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 47 |
| 9 | 68 | 57 | 50 | 45 | 67 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 43 |
| 10 | 64 | 53 | 46 | 42 | 63 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 45 | 42 | 50 | 45 | 42 | 40 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5571 | 5571 | 5571 |
| 5° | 5379 | 5467 | 5585 |
| 10° | 4965 | 5196 | 5493 |
| 15° | 4457 | 4804 | 5328 |
| 20° | 3888 | 4331 | 5071 |
| 25° | 3279 | 3796 | 4758 |
| 30° | 2637 | 3246 | 4446 |
| 35° | 1931 | 2672 | 4156 |
| 40° | 1203 | 2083 | 3870 |
| 45° | 455 | 1553 | 3447 |
| 50° | 216 | 1071 | 2937 |
| 55° | 166 | 588 | 2272 |
| 60° | 117 | 498 | 1494 |
| 65° | 86 | 433 | 622 |
| 70° | 86 | 405 | 405 |
| 75° | 113 | 426 | 426 |
| 80° | 169 | 507 | 467 |
| 85° | 337 | 835 | 674 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3447 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 43.5 | 7.6 |
| 10°-20° | 111.7 | 19.6 |
| 20°-30° | 138.2 | 24.3 |
| 30°-40° | 123.9 | 21.8 |
| 40°-50° | 81.2 | 14.3 |
| 50°-60° | 40.7 | 7.1 |
| 60°-70° | 15.9 | 2.8 |
| 70°-80° | 8.9 | 1.6 |
| 80°-90° | 5.5 | 1.0 |
| 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° | 293.4 | 51.5 |
| 0°-40° | 417.4 | 73.3 |
| 0°-60° | 539.3 | 94.7 |
| 0°-90° | 569.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 569.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 474 | 474 | 474 | 474 | 474 | |
| 5° | 456 | 464 | 464 | 469 | 474 | 42 |
| 15° | 367 | 382 | 395 | 421 | 438 | 102 |
| 25° | 253 | 269 | 293 | 335 | 367 | 116 |
| 35° | 135 | 153 | 186 | 242 | 290 | 84 |
| 45° | 27 | 44 | 94 | 160 | 208 | 26 |
| 55° | 8 | 10 | 29 | 78 | 111 | 7 |
| 65° | 3 | 9 | 16 | 21 | 22 | 3 |
| 75° | 2 | 9 | 9 | 9 | 9 | 3 |
| 85° | 2 | 6 | 6 | 6 | 5 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P1059654

CATALOG NUMBER: S123RDRP-H560D830-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 474.4 | 474.4 | 474.4 | 474.4 | 474.4 |
| 2.5° | 468.2 | 475.0 | 470.7 | 471.3 | 471.9 |
| 5° | 456.3 | 463.8 | 463.8 | 468.8 | 473.8 |
| 7.5° | 438.3 | 447.0 | 453.2 | 461.9 | 468.8 |
| 10° | 416.4 | 427.0 | 435.8 | 451.3 | 460.7 |
| 12.5° | 392.7 | 405.8 | 417.1 | 437.6 | 450.7 |
| 15° | 366.6 | 381.5 | 395.2 | 421.4 | 438.3 |
| 17.5° | 338.5 | 353.5 | 371.5 | 402.1 | 422.7 |
| 20° | 311.1 | 326.0 | 346.6 | 380.9 | 405.8 |
| 22.5° | 282.4 | 298.0 | 319.8 | 357.8 | 387.1 |
| 25° | 253.1 | 268.7 | 293.0 | 334.8 | 367.2 |
| 27.5° | 223.8 | 239.4 | 266.8 | 312.3 | 347.9 |
| 30° | 194.5 | 210.1 | 239.4 | 288.0 | 327.9 |
| 32.5° | 165.2 | 182.0 | 212.6 | 265.6 | 308.0 |
| 35° | 134.7 | 152.7 | 186.4 | 242.5 | 289.9 |
| 37.5° | 106.6 | 123.4 | 161.5 | 222.6 | 271.8 |
| 40° | 78.5 | 96.6 | 135.9 | 203.2 | 252.5 |
| 42.5° | 51.1 | 70.4 | 112.8 | 182.0 | 230.7 |
| 45° | 27.4 | 44.3 | 93.5 | 160.2 | 207.6 |
| 47.5° | 15.0 | 24.3 | 75.4 | 137.1 | 183.9 |
| 50° | 11.8 | 13.7 | 58.6 | 117.2 | 160.8 |
| 52.5° | 10.0 | 11.2 | 41.8 | 98.5 | 135.3 |
| 55° | 8.1 | 10.0 | 28.7 | 78.5 | 111.0 |
| 57.5° | 6.9 | 8.7 | 22.4 | 61.1 | 86.7 |
| 60° | 5.0 | 7.5 | 21.2 | 44.9 | 63.6 |
| 62.5° | 3.7 | 8.1 | 18.7 | 31.2 | 41.8 |
| 65° | 3.1 | 9.4 | 15.6 | 20.6 | 22.4 |
| 67.5° | 2.5 | 10.0 | 13.7 | 13.1 | 13.1 |
| 70° | 2.5 | 9.4 | 11.8 | 11.2 | 11.8 |
| 72.5° | 2.5 | 10.0 | 10.6 | 10.0 | 10.6 |
| 75° | 2.5 | 9.4 | 9.4 | 9.4 | 9.4 |
| 77.5° | 2.5 | 8.7 | 8.7 | 8.1 | 8.1 |
| 80° | 2.5 | 7.5 | 7.5 | 7.5 | 6.9 |
| 82.5° | 2.5 | 6.9 | 6.9 | 6.9 | 5.6 |
| 85° | 2.5 | 6.2 | 6.2 | 6.2 | 5.0 |
| 87.5° | 1.9 | 5.6 | 6.2 | 5.6 | 3.7 |
| 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 | 0.20 | 12.57 | 13.83 | 12.94 | 14.14 | 14.46 |
| | 3H | 0.66 | 1.77 | 1.04 | 2.10 | 2.47 | 12.65 | 13.76 | 13.03 | 14.09 | 14.46 |
| | 4H | 1.77 | 2.81 | 2.18 | 3.16 | 3.54 | 12.73 | 13.77 | 13.14 | 14.12 | 14.50 |
| | 6H | 2.76 | 3.71 | 3.18 | 4.08 | 4.47 | 12.84 | 13.79 | 13.25 | 14.16 | 14.55 |
| | 8H | 3.24 | 4.14 | 3.68 | 4.53 | 4.94 | 12.89 | 13.79 | 13.33 | 14.18 | 14.59 |
| | 12H | 3.80 | 4.66 | 4.23 | 5.04 | 5.47 | 12.98 | 13.83 | 13.41 | 14.22 | 14.65 |
| 4H | 2H | 1.57 | 2.61 | 1.98 | 2.96 | 3.34 | 12.43 | 13.46 | 12.83 | 13.81 | 14.20 |
| | 3H | 3.90 | 4.74 | 4.31 | 5.15 | 5.55 | 12.60 | 13.45 | 13.02 | 13.85 | 14.26 |
| | 4H | 5.28 | 6.03 | 5.71 | 6.45 | 6.90 | 12.76 | 13.51 | 13.19 | 13.93 | 14.38 |
| | 6H | 6.36 | 7.01 | 6.82 | 7.46 | 7.93 | 12.98 | 13.63 | 13.45 | 14.08 | 14.55 |
| | 8H | 6.82 | 7.43 | 7.29 | 7.88 | 8.35 | 13.11 | 13.72 | 13.58 | 14.16 | 14.64 |
| | 12H | 7.31 | 7.85 | 7.80 | 8.33 | 8.81 | 13.28 | 13.82 | 13.77 | 14.30 | 14.78 |
| 8H | 4H | 6.25 | 6.86 | 6.72 | 7.31 | 7.78 | 12.75 | 13.36 | 13.22 | 13.81 | 14.28 |
| | 6H | 7.77 | 8.27 | 8.27 | 8.77 | 9.25 | 13.09 | 13.59 | 13.60 | 14.09 | 14.57 |
| | 8H | 8.55 | 9.00 | 9.07 | 9.51 | 10.01 | 13.33 | 13.78 | 13.85 | 14.29 | 14.78 |
| | 12H | 9.35 | 9.74 | 9.86 | 10.24 | 10.81 | 13.66 | 14.06 | 14.18 | 14.55 | 15.13 |
| 12H | 4H | 6.42 | 6.96 | 6.91 | 7.45 | 7.92 | 12.74 | 13.28 | 13.23 | 13.76 | 14.23 |
| | 6H | 8.09 | 8.53 | 8.61 | 9.05 | 9.54 | 13.11 | 13.56 | 13.64 | 14.08 | 14.57 |
| | 8H | 9.04 | 9.44 | 9.56 | 9.94 | 10.51 | 13.42 | 13.82 | 13.94 | 14.32 | 14.89 |