

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059275

Luminaire Tested: S123RDR-S560D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059275
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-S560D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

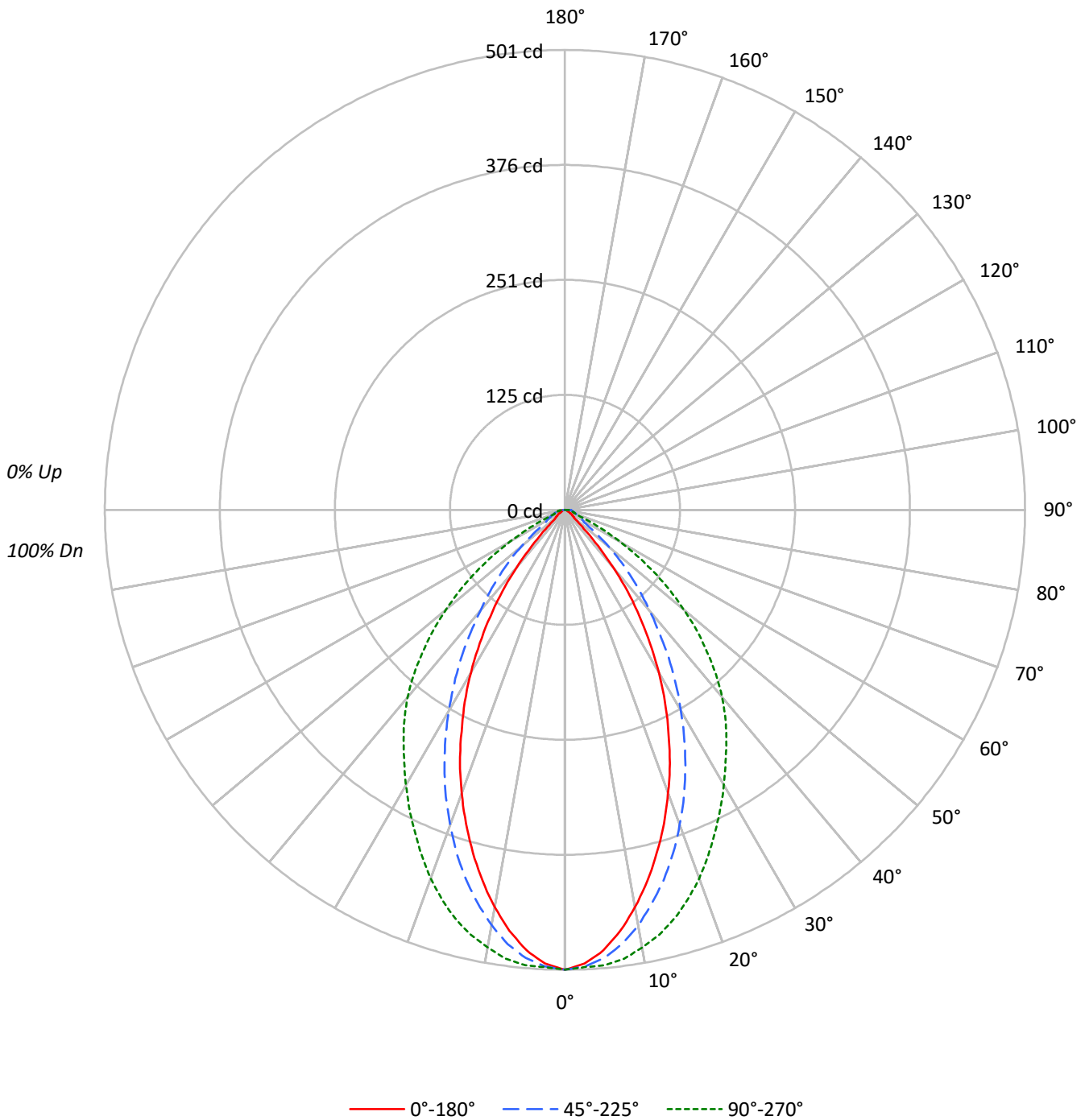
Lumens per Lamp: N/A
Luminaire Lumens: 601.6 lumens
Efficiency: N/A
Efficacy: 30.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): 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 | 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 | 94 | 90 | 86 | 90 | 87 | 85 | 88 | 85 | 83 | 81 | | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 | | | | |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 66 | | | | |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 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 | 64 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 | | | | |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 46 | | | | |
| 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 | 41 | 40 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5882 | 5882 | 5882 |
| 5° | 5678 | 5777 | 5868 |
| 10° | 5242 | 5479 | 5771 |
| 15° | 4702 | 5064 | 5604 |
| 20° | 4105 | 4565 | 5340 |
| 25° | 3453 | 4019 | 5012 |
| 30° | 2773 | 3426 | 4694 |
| 35° | 2031 | 2821 | 4391 |
| 40° | 1255 | 2195 | 4085 |
| 45° | 483 | 1654 | 3637 |
| 50° | 237 | 1133 | 3078 |
| 55° | 188 | 626 | 2414 |
| 60° | 127 | 521 | 1618 |
| 65° | 106 | 467 | 722 |
| 70° | 106 | 422 | 422 |
| 75° | 141 | 454 | 417 |
| 80° | 210 | 568 | 467 |
| 85° | 310 | 930 | 620 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3637 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.9 | 7.6 |
| 10°-20° | 117.6 | 19.5 |
| 20°-30° | 145.9 | 24.3 |
| 30°-40° | 130.7 | 21.7 |
| 40°-50° | 85.9 | 14.3 |
| 50°-60° | 43.1 | 7.2 |
| 60°-70° | 17.0 | 2.8 |
| 70°-80° | 9.5 | 1.6 |
| 80°-90° | 6.0 | 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° | 309.4 | 51.4 |
| 0°-40° | 440.1 | 73.2 |
| 0°-60° | 569.1 | 94.6 |
| 0°-90° | 601.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 601.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 501 | 501 | 501 | 501 | 501 | |
| 5° | 482 | 489 | 490 | 493 | 498 | 45 |
| 15° | 387 | 399 | 417 | 445 | 461 | 108 |
| 25° | 266 | 283 | 310 | 354 | 387 | 122 |
| 35° | 142 | 161 | 197 | 257 | 306 | 88 |
| 45° | 29 | 48 | 100 | 168 | 219 | 28 |
| 55° | 9 | 11 | 31 | 83 | 118 | 8 |
| 65° | 4 | 11 | 17 | 21 | 26 | 4 |
| 75° | 3 | 10 | 10 | 9 | 9 | 3 |
| 85° | 2 | 7 | 7 | 7 | 5 | 3 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1059275

CATALOG NUMBER: S123RDR-S560D850-X4F0-XX-UDD-BVL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 500.9 | 500.9 | 500.9 | 500.9 | 500.9 |
| 2.5° | 494.7 | 501.6 | 497.8 | 497.8 | 498.6 |
| 5° | 481.7 | 489.4 | 490.1 | 493.2 | 497.8 |
| 7.5° | 462.6 | 472.5 | 477.1 | 486.3 | 493.2 |
| 10° | 439.6 | 450.3 | 459.5 | 475.6 | 484.0 |
| 12.5° | 414.3 | 425.0 | 438.8 | 461.0 | 474.1 |
| 15° | 386.8 | 399.0 | 416.6 | 445.0 | 461.0 |
| 17.5° | 358.4 | 370.7 | 392.1 | 424.3 | 445.0 |
| 20° | 328.5 | 342.3 | 365.3 | 402.1 | 427.3 |
| 22.5° | 298.7 | 314.0 | 338.5 | 378.3 | 407.4 |
| 25° | 266.5 | 283.4 | 310.2 | 353.8 | 386.8 |
| 27.5° | 235.9 | 253.5 | 281.8 | 329.3 | 366.8 |
| 30° | 204.5 | 222.1 | 252.7 | 304.0 | 346.2 |
| 32.5° | 172.3 | 192.2 | 224.4 | 280.3 | 325.5 |
| 35° | 141.7 | 160.8 | 196.8 | 257.3 | 306.3 |
| 37.5° | 111.8 | 131.0 | 168.5 | 235.1 | 287.2 |
| 40° | 81.9 | 101.9 | 143.2 | 213.7 | 266.5 |
| 42.5° | 53.6 | 74.3 | 121.0 | 192.2 | 243.5 |
| 45° | 29.1 | 48.2 | 99.6 | 167.7 | 219.0 |
| 47.5° | 16.1 | 26.0 | 80.4 | 144.7 | 195.3 |
| 50° | 13.0 | 14.6 | 62.0 | 123.3 | 168.5 |
| 52.5° | 10.7 | 12.3 | 44.4 | 102.6 | 144.0 |
| 55° | 9.2 | 10.7 | 30.6 | 82.7 | 117.9 |
| 57.5° | 7.7 | 9.2 | 24.5 | 63.6 | 92.7 |
| 60° | 5.4 | 9.2 | 22.2 | 46.7 | 68.9 |
| 62.5° | 4.6 | 9.2 | 19.1 | 32.2 | 46.0 |
| 65° | 3.8 | 10.7 | 16.8 | 21.4 | 26.0 |
| 67.5° | 3.1 | 10.7 | 14.6 | 13.8 | 13.8 |
| 70° | 3.1 | 10.7 | 12.3 | 11.5 | 12.3 |
| 72.5° | 3.1 | 11.5 | 11.5 | 10.7 | 10.7 |
| 75° | 3.1 | 10.0 | 10.0 | 9.2 | 9.2 |
| 77.5° | 3.1 | 9.2 | 9.2 | 8.4 | 8.4 |
| 80° | 3.1 | 8.4 | 8.4 | 7.7 | 6.9 |
| 82.5° | 3.1 | 7.7 | 7.7 | 6.9 | 6.1 |
| 85° | 2.3 | 6.9 | 6.9 | 6.9 | 4.6 |
| 87.5° | 2.3 | 6.1 | 6.9 | 6.1 | 3.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)