

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: P1059049

Luminaire Tested: S123RDR-S1000D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059049
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-S1000D930-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

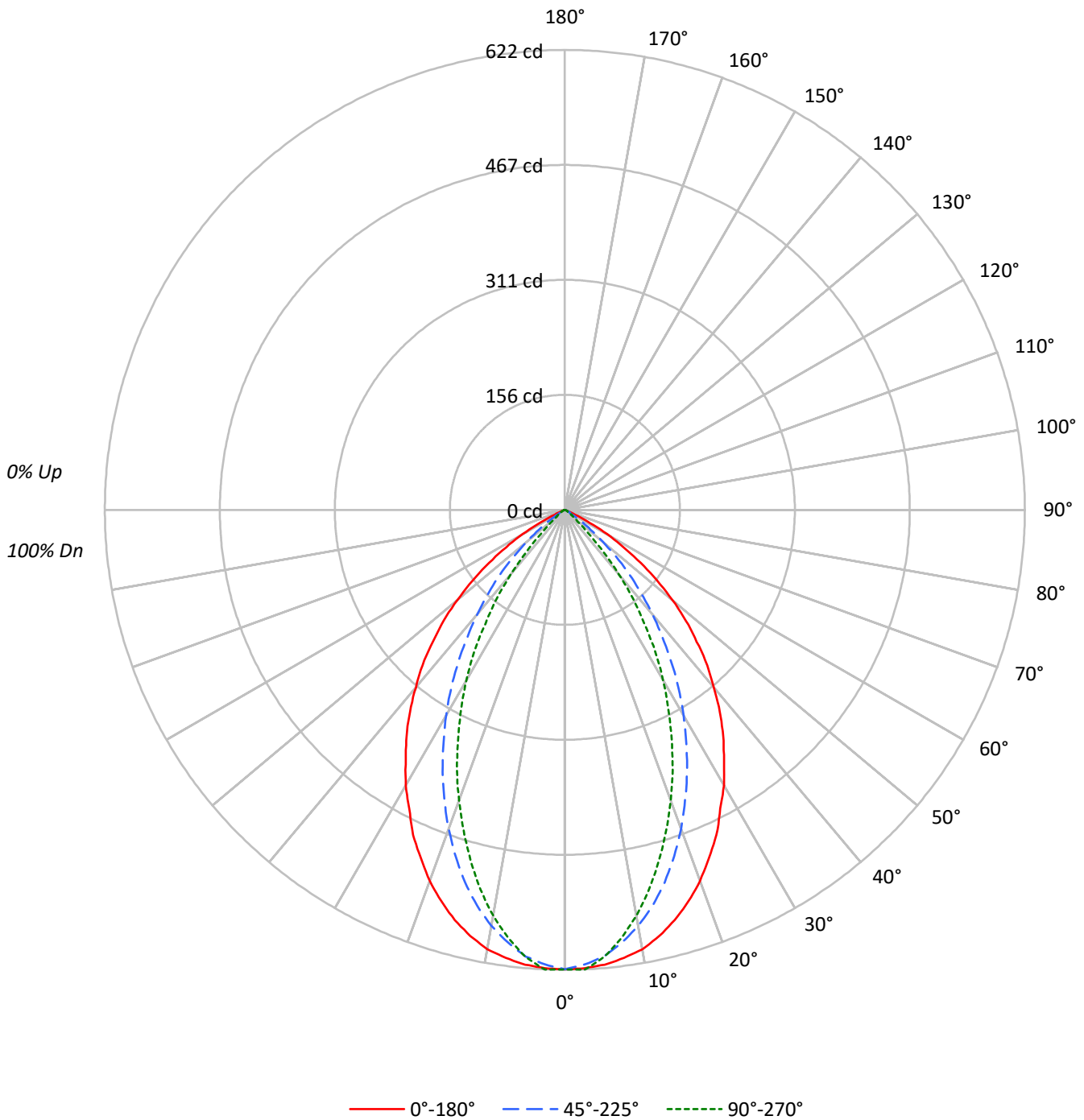
Lumens per Lamp: N/A
Luminaire Lumens: 709.0 lumens
Efficiency: N/A
Efficacy: 20.3 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 87 | 85 | 84 |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 78 | 76 |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | 69 |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 66 | 61 | 70 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 60 | 58 |
| 7 | 78 | 68 | 61 | 56 | 77 | 67 | 60 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 53 |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 48 | 57 | 52 | 47 | 56 | 51 | 47 | 55 | 51 | 47 | 46 |
| 10 | 66 | 55 | 49 | 44 | 65 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7297 | 7297 | 7297 |
| 5° | 7277 | 7147 | 7158 |
| 10° | 7193 | 6812 | 6645 |
| 15° | 6982 | 6337 | 5973 |
| 20° | 6677 | 5739 | 5226 |
| 25° | 6288 | 5069 | 4421 |
| 30° | 5833 | 4355 | 3609 |
| 35° | 5350 | 3599 | 2682 |
| 40° | 4801 | 2822 | 1718 |
| 45° | 4186 | 2061 | 714 |
| 50° | 3473 | 1224 | 274 |
| 55° | 2561 | 512 | 205 |
| 60° | 1550 | 188 | 117 |
| 65° | 417 | 111 | 56 |
| 70° | 0 | 34 | 34 |
| 75° | 0 | 0 | 45 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4186 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.2 | 8.1 |
| 10°-20° | 147.6 | 20.8 |
| 20°-30° | 184.0 | 25.9 |
| 30°-40° | 164.5 | 23.2 |
| 40°-50° | 103.8 | 14.6 |
| 50°-60° | 43.4 | 6.1 |
| 60°-70° | 8.2 | 1.2 |
| 70°-80° | 0.3 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 388.8 | 54.8 |
| 0°-40° | 553.3 | 78.0 |
| 0°-60° | 700.6 | 98.8 |
| 0°-90° | 709.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 709.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 621 | 621 | 621 | 621 | 621 | |
| 5° | 617 | 616 | 606 | 608 | 607 | 58 |
| 15° | 574 | 560 | 521 | 499 | 491 | 161 |
| 25° | 485 | 446 | 391 | 357 | 341 | 222 |
| 35° | 373 | 319 | 251 | 206 | 187 | 232 |
| 45° | 252 | 196 | 124 | 66 | 43 | 194 |
| 55° | 125 | 86 | 25 | 10 | 10 | 112 |
| 65° | 15 | 11 | 4 | 2 | 2 | 21 |
| 75° | 0 | 0 | 0 | 0 | 1 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1059049

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 621.4 | 621.4 | 621.4 | 621.4 | 621.4 |
| 2.5° | 620.4 | 621.4 | 615.4 | 621.4 | 622.4 |
| 5° | 617.4 | 616.4 | 606.3 | 608.3 | 607.3 |
| 7.5° | 611.3 | 608.3 | 590.3 | 586.3 | 584.3 |
| 10° | 603.3 | 595.3 | 571.3 | 561.3 | 557.3 |
| 12.5° | 590.3 | 579.3 | 548.3 | 532.3 | 526.3 |
| 15° | 574.3 | 560.3 | 521.3 | 499.3 | 491.3 |
| 17.5° | 555.3 | 535.3 | 491.3 | 467.3 | 455.3 |
| 20° | 534.3 | 506.3 | 459.3 | 430.2 | 418.2 |
| 22.5° | 509.3 | 478.3 | 425.2 | 394.2 | 381.2 |
| 25° | 485.3 | 446.3 | 391.2 | 357.2 | 341.2 |
| 27.5° | 455.3 | 414.2 | 355.2 | 320.2 | 303.2 |
| 30° | 430.2 | 383.2 | 321.2 | 282.2 | 266.2 |
| 32.5° | 400.2 | 351.2 | 286.2 | 243.1 | 228.1 |
| 35° | 373.2 | 319.2 | 251.1 | 206.1 | 187.1 |
| 37.5° | 344.2 | 288.2 | 216.1 | 169.1 | 151.1 |
| 40° | 313.2 | 257.1 | 184.1 | 132.1 | 112.1 |
| 42.5° | 285.2 | 226.1 | 152.1 | 98.1 | 78.0 |
| 45° | 252.1 | 196.1 | 124.1 | 66.0 | 43.0 |
| 47.5° | 222.1 | 168.1 | 94.1 | 37.0 | 23.0 |
| 50° | 190.1 | 139.1 | 67.0 | 19.0 | 15.0 |
| 52.5° | 157.1 | 111.1 | 44.0 | 13.0 | 12.0 |
| 55° | 125.1 | 86.0 | 25.0 | 10.0 | 10.0 |
| 57.5° | 94.1 | 62.0 | 13.0 | 8.0 | 7.0 |
| 60° | 66.0 | 41.0 | 8.0 | 6.0 | 5.0 |
| 62.5° | 38.0 | 24.0 | 6.0 | 4.0 | 4.0 |
| 65° | 15.0 | 11.0 | 4.0 | 2.0 | 2.0 |
| 67.5° | 1.0 | 3.0 | 2.0 | 1.0 | 1.0 |
| 70° | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| 72.5° | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)