

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1058572

Luminaire Tested: S122RDR-H865D935-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-21)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H865D935-X4F0-XX-UDD-BVL-B
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

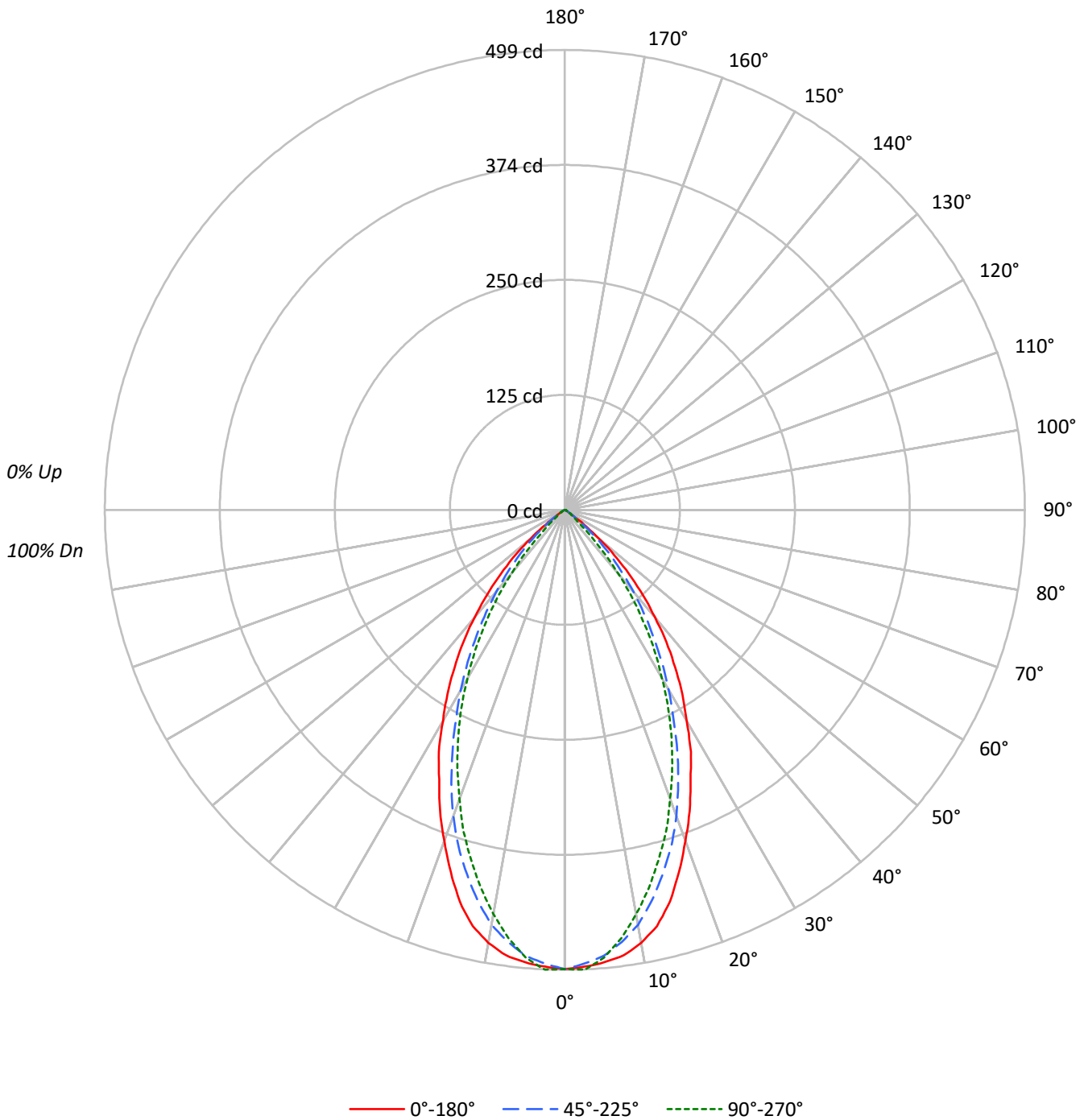
Lumens per Lamp: N/A
Luminaire Lumens: 468.5 lumens
Efficiency: N/A
Efficacy: 15.0 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 0.8 / 0.88
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 95 | 93 |
| 2 | 107 | 102 | 98 | 94 | 105 | 100 | 97 | 93 | 97 | 94 | 91 | 94 | 92 | 89 | 91 | 89 | 87 | 86 |
| 3 | 101 | 95 | 89 | 85 | 99 | 93 | 89 | 85 | 91 | 87 | 83 | 88 | 85 | 82 | 86 | 83 | 81 | 79 |
| 4 | 96 | 88 | 82 | 78 | 94 | 87 | 81 | 77 | 85 | 80 | 76 | 83 | 79 | 75 | 81 | 77 | 75 | 73 |
| 5 | 91 | 82 | 76 | 71 | 89 | 81 | 75 | 71 | 79 | 74 | 70 | 77 | 73 | 70 | 76 | 72 | 69 | 67 |
| 6 | 86 | 76 | 70 | 66 | 84 | 76 | 70 | 65 | 74 | 69 | 65 | 73 | 68 | 64 | 71 | 67 | 64 | 62 |
| 7 | 81 | 71 | 65 | 61 | 80 | 71 | 65 | 61 | 69 | 64 | 60 | 68 | 63 | 60 | 67 | 63 | 60 | 58 |
| 8 | 77 | 67 | 61 | 56 | 76 | 66 | 60 | 56 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 54 |
| 9 | 73 | 63 | 57 | 53 | 72 | 62 | 57 | 52 | 61 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 51 |
| 10 | 69 | 59 | 53 | 49 | 68 | 59 | 53 | 49 | 58 | 53 | 49 | 57 | 52 | 49 | 56 | 52 | 49 | 47 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9193 | 9193 | 9193 |
| 5° | 9130 | 8995 | 9034 |
| 10° | 8939 | 8565 | 8347 |
| 15° | 8411 | 7827 | 7506 |
| 20° | 7509 | 6949 | 6557 |
| 25° | 6562 | 5876 | 5577 |
| 30° | 5634 | 4803 | 4489 |
| 35° | 4699 | 3748 | 3370 |
| 40° | 3654 | 2765 | 2156 |
| 45° | 2557 | 1842 | 934 |
| 50° | 1392 | 967 | 333 |
| 55° | 203 | 338 | 238 |
| 60° | 41 | 78 | 155 |
| 65° | 0 | 48 | 92 |
| 70° | 0 | 0 | 59 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2557 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.8 | 9.8 |
| 10°-20° | 115.4 | 24.6 |
| 20°-30° | 134.5 | 28.7 |
| 30°-40° | 107.8 | 23.0 |
| 40°-50° | 53.5 | 11.4 |
| 50°-60° | 10.6 | 2.3 |
| 60°-70° | 1.0 | 0.2 |
| 70°-80° | 0.1 | 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° | 295.6 | 63.1 |
| 0°-40° | 403.4 | 86.1 |
| 0°-60° | 467.5 | 99.8 |
| 0°-90° | 468.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 468.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 498 | 498 | 498 | 498 | 498 | |
| 5° | 493 | 493 | 486 | 487 | 488 | 47 |
| 15° | 440 | 432 | 410 | 399 | 393 | 122 |
| 25° | 322 | 306 | 289 | 282 | 274 | 148 |
| 35° | 209 | 188 | 166 | 159 | 150 | 130 |
| 45° | 98 | 86 | 71 | 47 | 36 | 76 |
| 55° | 6 | 13 | 10 | 6 | 7 | 13 |
| 65° | 0 | 0 | 1 | 1 | 2 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: S122RDR-H865D935-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 498.2 | 498.2 | 498.2 | 498.2 | 498.2 |
| 2.5° | 496.1 | 498.2 | 492.9 | 498.2 | 499.3 |
| 5° | 492.9 | 492.9 | 485.6 | 486.6 | 487.7 |
| 7.5° | 487.7 | 485.6 | 472.9 | 470.8 | 468.7 |
| 10° | 477.1 | 472.9 | 457.1 | 448.7 | 445.5 |
| 12.5° | 462.4 | 456.1 | 435.0 | 425.5 | 420.3 |
| 15° | 440.3 | 431.9 | 409.7 | 399.2 | 392.9 |
| 17.5° | 411.8 | 404.5 | 383.4 | 371.8 | 365.5 |
| 20° | 382.4 | 371.8 | 353.9 | 342.3 | 333.9 |
| 22.5° | 353.9 | 340.2 | 321.3 | 312.8 | 304.4 |
| 25° | 322.3 | 306.5 | 288.6 | 282.3 | 273.9 |
| 27.5° | 296.0 | 276.0 | 254.9 | 250.7 | 243.3 |
| 30° | 264.4 | 245.4 | 225.4 | 219.1 | 210.7 |
| 32.5° | 237.0 | 215.9 | 195.9 | 188.5 | 181.2 |
| 35° | 208.6 | 187.5 | 166.4 | 159.0 | 149.6 |
| 37.5° | 181.2 | 161.2 | 140.1 | 128.5 | 120.1 |
| 40° | 151.7 | 134.8 | 114.8 | 100.1 | 89.5 |
| 42.5° | 125.3 | 110.6 | 91.6 | 72.7 | 62.1 |
| 45° | 98.0 | 86.4 | 70.6 | 47.4 | 35.8 |
| 47.5° | 72.7 | 64.3 | 51.6 | 27.4 | 19.0 |
| 50° | 48.5 | 45.3 | 33.7 | 13.7 | 11.6 |
| 52.5° | 26.3 | 28.4 | 20.0 | 8.4 | 9.5 |
| 55° | 6.3 | 12.6 | 10.5 | 6.3 | 7.4 |
| 57.5° | 1.1 | 2.1 | 5.3 | 5.3 | 5.3 |
| 60° | 1.1 | 1.1 | 2.1 | 3.2 | 4.2 |
| 62.5° | 1.1 | 0.0 | 1.1 | 2.1 | 3.2 |
| 65° | 0.0 | 0.0 | 1.1 | 1.1 | 2.1 |
| 67.5° | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 |
| 70° | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 |



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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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |