

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: P1058430

Luminaire Tested: S122RDR-H485D950-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058430
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H485D950-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

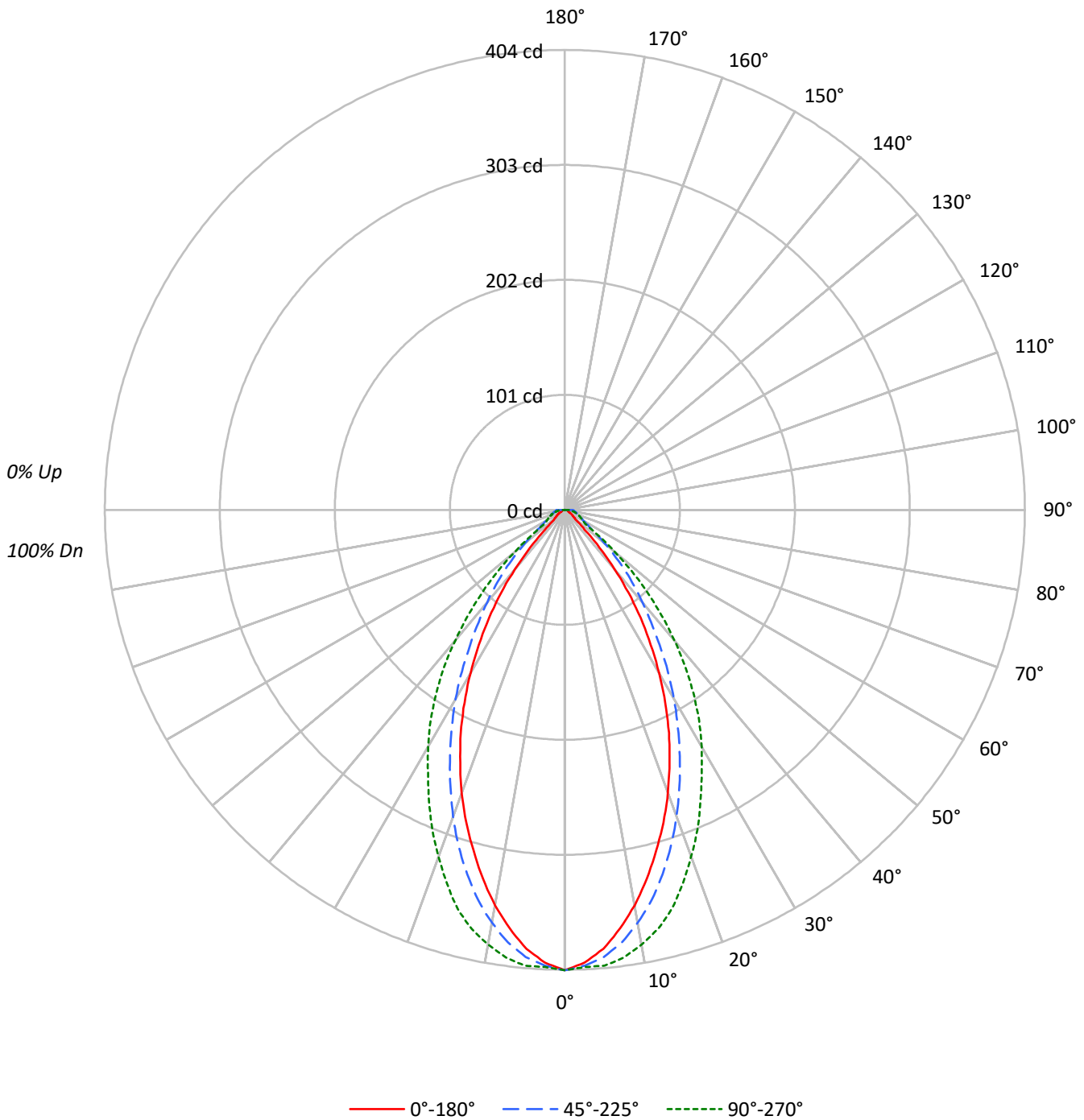
Lumens per Lamp: N/A
Luminaire Lumens: 440.3 lumens
Efficiency: N/A
Efficacy: 25.3 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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 | 97 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | |
| 2 | 105 | 99 | 94 | 90 | 102 | 97 | 92 | 89 | 94 | 90 | 87 | 91 | 87 | 85 | 88 | 85 | 83 | 81 | | | | |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 74 | | | | |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 70 | 76 | 72 | 69 | 67 | | | | |
| 5 | 87 | 77 | 70 | 65 | 85 | 76 | 70 | 65 | 74 | 69 | 64 | 72 | 67 | 64 | 71 | 66 | 63 | 61 | | | | |
| 6 | 82 | 72 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 62 | 58 | 66 | 62 | 58 | 56 | | | | |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 52 | | | | |
| 8 | 73 | 62 | 55 | 51 | 72 | 62 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 50 | 48 | | | | |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 50 | 47 | 55 | 50 | 46 | 45 | | | | |
| 10 | 66 | 55 | 48 | 44 | 64 | 54 | 48 | 44 | 53 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | 42 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7464 | 7464 | 7464 |
| 5° | 7170 | 7302 | 7444 |
| 10° | 6610 | 6901 | 7264 |
| 15° | 5922 | 6331 | 6936 |
| 20° | 5198 | 5630 | 6368 |
| 25° | 4402 | 4862 | 5746 |
| 30° | 3531 | 4082 | 5116 |
| 35° | 2611 | 3266 | 4433 |
| 40° | 1638 | 2556 | 3601 |
| 45° | 642 | 1926 | 2670 |
| 50° | 316 | 1300 | 1636 |
| 55° | 251 | 853 | 730 |
| 60° | 192 | 694 | 668 |
| 65° | 140 | 651 | 651 |
| 70° | 173 | 664 | 664 |
| 75° | 185 | 741 | 692 |
| 80° | 276 | 967 | 754 |
| 85° | 550 | 1651 | 1101 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 3004 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 36.9 | 8.4 |
| 10°-20° | 93.4 | 21.2 |
| 20°-30° | 111.7 | 25.4 |
| 30°-40° | 94.1 | 21.4 |
| 40°-50° | 53.6 | 12.2 |
| 50°-60° | 21.1 | 4.8 |
| 60°-70° | 13.3 | 3.0 |
| 70°-80° | 9.9 | 2.2 |
| 80°-90° | 6.3 | 1.4 |
| 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° | 242.1 | 55.0 |
| 0°-40° | 336.2 | 76.3 |
| 0°-60° | 410.8 | 93.3 |
| 0°-90° | 440.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 440.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 404 | 404 | 404 | 404 | 404 | |
| 5° | 387 | 396 | 394 | 399 | 402 | 36 |
| 15° | 310 | 321 | 331 | 351 | 363 | 87 |
| 25° | 216 | 226 | 239 | 263 | 282 | 98 |
| 35° | 116 | 126 | 145 | 176 | 197 | 72 |
| 45° | 25 | 43 | 74 | 93 | 102 | 23 |
| 55° | 8 | 17 | 26 | 27 | 23 | 7 |
| 65° | 3 | 15 | 15 | 14 | 15 | 4 |
| 75° | 3 | 10 | 10 | 10 | 10 | 3 |
| 85° | 3 | 7 | 8 | 7 | 5 | 2 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 404.5 | 404.5 | 404.5 | 404.5 | 404.5 |
| 2.5° | 398.1 | 405.2 | 400.6 | 401.3 | 401.9 |
| 5° | 387.1 | 395.5 | 394.2 | 398.7 | 401.9 |
| 7.5° | 370.9 | 379.9 | 383.2 | 390.9 | 396.8 |
| 10° | 352.8 | 363.1 | 368.3 | 380.6 | 387.7 |
| 12.5° | 332.0 | 343.7 | 351.5 | 367.0 | 377.3 |
| 15° | 310.0 | 321.0 | 331.4 | 350.8 | 363.1 |
| 17.5° | 288.0 | 299.0 | 310.0 | 331.4 | 344.3 |
| 20° | 264.7 | 275.1 | 286.7 | 309.4 | 324.3 |
| 22.5° | 240.1 | 251.1 | 262.8 | 286.1 | 304.2 |
| 25° | 216.2 | 225.9 | 238.8 | 263.4 | 282.2 |
| 27.5° | 190.9 | 200.6 | 214.9 | 240.1 | 260.2 |
| 30° | 165.7 | 175.4 | 191.6 | 217.5 | 240.1 |
| 32.5° | 140.5 | 150.8 | 168.3 | 196.8 | 219.4 |
| 35° | 115.9 | 126.2 | 145.0 | 176.1 | 196.8 |
| 37.5° | 91.9 | 103.6 | 124.3 | 154.7 | 174.1 |
| 40° | 68.0 | 81.6 | 106.1 | 133.3 | 149.5 |
| 42.5° | 45.3 | 62.1 | 89.3 | 112.0 | 125.6 |
| 45° | 24.6 | 43.4 | 73.8 | 92.6 | 102.3 |
| 47.5° | 13.6 | 27.8 | 58.9 | 73.8 | 79.6 |
| 50° | 11.0 | 19.4 | 45.3 | 56.3 | 57.0 |
| 52.5° | 9.1 | 17.5 | 33.7 | 40.1 | 36.9 |
| 55° | 7.8 | 16.8 | 26.5 | 27.2 | 22.7 |
| 57.5° | 6.5 | 16.2 | 22.0 | 19.4 | 19.4 |
| 60° | 5.2 | 16.2 | 18.8 | 17.5 | 18.1 |
| 62.5° | 3.9 | 16.2 | 16.8 | 15.5 | 16.2 |
| 65° | 3.2 | 14.9 | 14.9 | 14.2 | 14.9 |
| 67.5° | 3.2 | 13.6 | 13.6 | 12.9 | 13.6 |
| 70° | 3.2 | 12.9 | 12.3 | 12.3 | 12.3 |
| 72.5° | 2.6 | 11.7 | 11.7 | 11.0 | 11.0 |
| 75° | 2.6 | 10.4 | 10.4 | 9.7 | 9.7 |
| 77.5° | 2.6 | 9.7 | 9.7 | 9.1 | 8.4 |
| 80° | 2.6 | 8.4 | 9.1 | 8.4 | 7.1 |
| 82.5° | 2.6 | 7.8 | 8.4 | 7.8 | 5.8 |
| 85° | 2.6 | 7.1 | 7.8 | 7.1 | 5.2 |
| 87.5° | 1.9 | 7.1 | 7.1 | 5.8 | 3.9 |
| 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 | 4.68 | 5.91 | 5.05 | 6.22 | 6.53 | 6.69 | 7.92 | 7.06 | 8.23 | 8.54 |
| | 3H | 6.22 | 7.30 | 6.60 | 7.63 | 8.00 | 8.67 | 9.75 | 9.05 | 10.08 | 10.45 |
| | 4H | 6.78 | 7.79 | 7.18 | 8.14 | 8.53 | 9.58 | 10.59 | 9.99 | 10.95 | 11.33 |
| | 6H | 7.34 | 8.27 | 7.75 | 8.64 | 9.03 | 10.46 | 11.39 | 10.88 | 11.77 | 12.16 |
| | 8H | 7.63 | 8.51 | 8.06 | 8.90 | 9.31 | 10.87 | 11.75 | 11.30 | 12.14 | 12.55 |
| | 12H | 7.99 | 8.83 | 8.43 | 9.22 | 9.65 | 11.31 | 12.15 | 11.74 | 12.54 | 12.97 |
| 4H | 2H | 5.87 | 6.88 | 6.27 | 7.23 | 7.62 | 7.32 | 8.33 | 7.72 | 8.68 | 9.06 |
| | 3H | 8.06 | 8.90 | 8.48 | 9.30 | 9.70 | 9.56 | 10.40 | 9.98 | 10.80 | 11.20 |
| | 4H | 9.12 | 9.87 | 9.56 | 10.29 | 10.74 | 10.63 | 11.38 | 11.07 | 11.80 | 12.25 |
| | 6H | 10.02 | 10.66 | 10.48 | 11.11 | 11.58 | 11.74 | 12.39 | 12.21 | 12.84 | 13.31 |
| | 8H | 10.40 | 11.01 | 10.87 | 11.46 | 11.93 | 12.27 | 12.87 | 12.74 | 13.32 | 13.79 |
| | 12H | 10.82 | 11.36 | 11.31 | 11.84 | 12.32 | 12.84 | 13.38 | 13.33 | 13.86 | 14.34 |
| 8H | 4H | 9.92 | 10.53 | 10.40 | 10.98 | 11.45 | 11.13 | 11.73 | 11.60 | 12.18 | 12.65 |
| | 6H | 11.30 | 11.80 | 11.81 | 12.30 | 12.78 | 12.53 | 13.02 | 13.03 | 13.52 | 14.00 |
| | 8H | 12.03 | 12.47 | 12.55 | 12.99 | 13.48 | 13.27 | 13.71 | 13.79 | 14.23 | 14.72 |
| | 12H | 12.78 | 13.17 | 13.29 | 13.67 | 14.24 | 14.10 | 14.49 | 14.61 | 14.99 | 15.56 |
| 12H | 4H | 10.09 | 10.62 | 10.58 | 11.11 | 11.58 | 11.23 | 11.76 | 11.72 | 12.25 | 12.72 |
| | 6H | 11.64 | 12.08 | 12.16 | 12.60 | 13.09 | 12.74 | 13.19 | 13.27 | 13.71 | 14.20 |
| | 8H | 12.55 | 12.95 | 13.07 | 13.44 | 14.02 | 13.63 | 14.02 | 14.15 | 14.52 | 15.09 |