

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: P1060777

Luminaire Tested: S124RDR-H1195D950-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1195D950-X4F0-XX-UDD-BVL-B
Description: DEFINE 4 BLACK 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

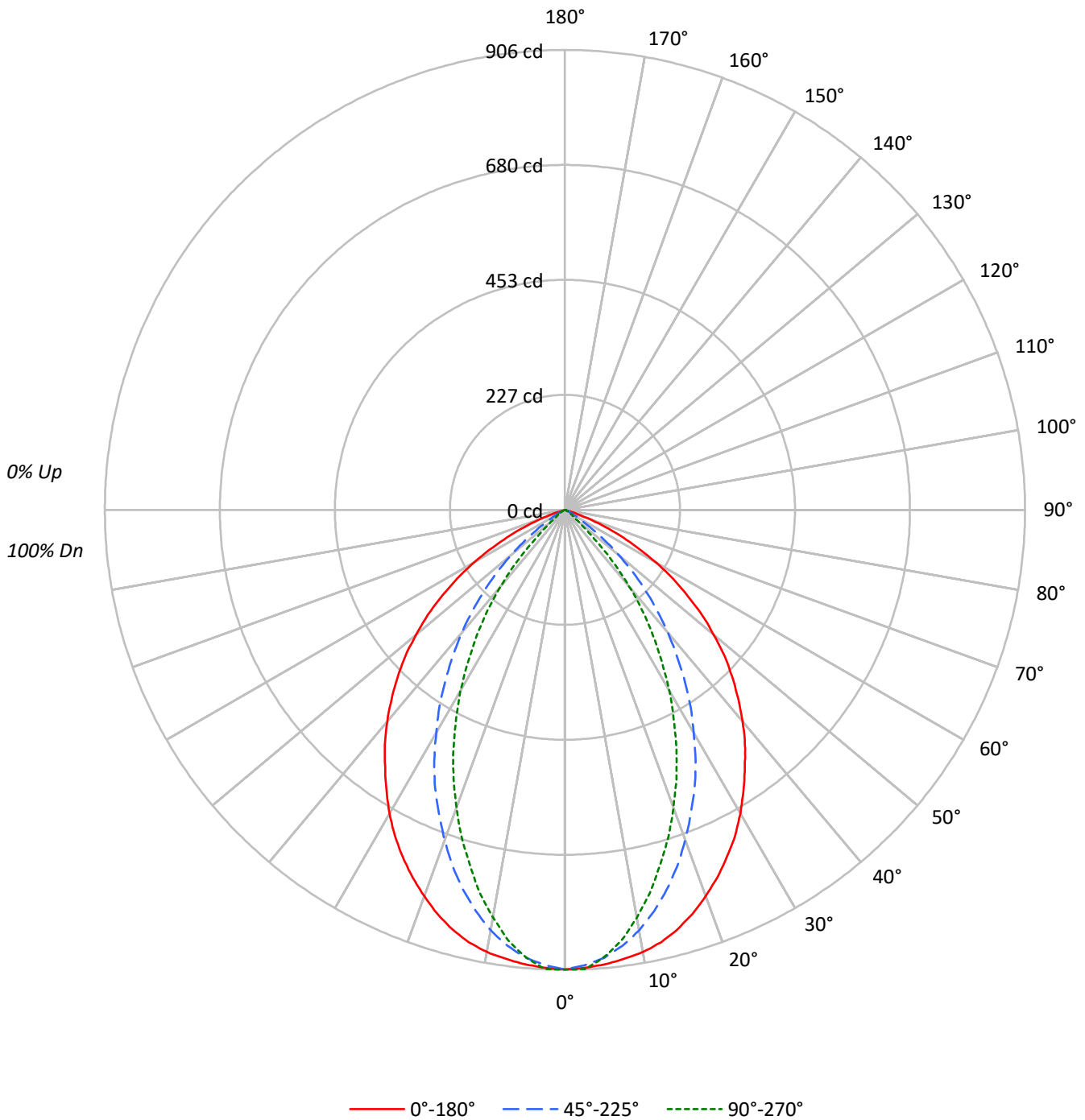
Lumens per Lamp: N/A
Luminaire Lumens: 1182.3 lumens
Efficiency: N/A
Efficacy: 32.4 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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 | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 101 | 99 | 99 | 97 | 96 | 96 | 94 | 93 | 91 |
| 2 | 105 | 99 | 95 | 90 | 103 | 98 | 93 | 89 | 94 | 91 | 87 | 91 | 88 | 86 | 88 | 86 | 84 | 82 |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 77 | 82 | 78 | 75 | 74 |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 76 | 71 | 79 | 74 | 70 | 77 | 73 | 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 | 56 | 55 |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 47 | 46 |
| 9 | 67 | 56 | 49 | 44 | 66 | 56 | 49 | 44 | 54 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 63 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7797 | 7797 | 7797 |
| 5° | 7770 | 7657 | 7646 |
| 10° | 7734 | 7357 | 7128 |
| 15° | 7628 | 6905 | 6451 |
| 20° | 7423 | 6343 | 5719 |
| 25° | 7174 | 5744 | 4936 |
| 30° | 6870 | 5035 | 4086 |
| 35° | 6492 | 4319 | 3178 |
| 40° | 6118 | 3544 | 2221 |
| 45° | 5673 | 2725 | 1100 |
| 50° | 5119 | 1841 | 368 |
| 55° | 4420 | 943 | 255 |
| 60° | 3537 | 338 | 181 |
| 65° | 2427 | 187 | 79 |
| 70° | 1088 | 98 | 65 |
| 75° | 0 | 43 | 43 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5673 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.6 | 7.1 |
| 10°-20° | 219.2 | 18.5 |
| 20°-30° | 283.8 | 24.0 |
| 30°-40° | 269.6 | 22.8 |
| 40°-50° | 190.9 | 16.1 |
| 50°-60° | 98.0 | 8.3 |
| 60°-70° | 34.3 | 2.9 |
| 70°-80° | 3.0 | 0.3 |
| 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° | 586.6 | 49.6 |
| 0°-40° | 856.2 | 72.4 |
| 0°-60° | 1145.1 | 96.9 |
| 0°-90° | 1182.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1182.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 906 | 906 | 906 | 906 | 906 | |
| 5° | 899 | 900 | 886 | 886 | 884 | 85 |
| 15° | 856 | 830 | 775 | 738 | 724 | 241 |
| 25° | 755 | 696 | 604 | 540 | 520 | 347 |
| 35° | 618 | 527 | 411 | 331 | 302 | 386 |
| 45° | 466 | 358 | 224 | 128 | 90 | 359 |
| 55° | 294 | 194 | 63 | 18 | 17 | 263 |
| 65° | 119 | 58 | 9 | 5 | 4 | 118 |
| 75° | 0 | 1 | 1 | 1 | 1 | 10 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1060777

CATALOG NUMBER: S124RDR-H1195D950-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 905.5 | 905.5 | 905.5 | 905.5 | 905.5 |
| 2.5° | 902.9 | 905.5 | 897.6 | 904.2 | 905.5 |
| 5° | 898.9 | 900.2 | 885.8 | 885.8 | 884.5 |
| 7.5° | 892.4 | 889.8 | 866.2 | 857.1 | 855.7 |
| 10° | 884.5 | 875.4 | 841.4 | 821.7 | 815.2 |
| 12.5° | 872.8 | 855.7 | 810.0 | 781.2 | 773.3 |
| 15° | 855.7 | 829.6 | 774.6 | 738.0 | 723.6 |
| 17.5° | 834.8 | 800.8 | 735.4 | 690.9 | 676.5 |
| 20° | 810.0 | 766.8 | 692.2 | 642.5 | 624.1 |
| 22.5° | 783.8 | 734.1 | 647.7 | 591.4 | 573.1 |
| 25° | 755.0 | 696.1 | 604.5 | 540.4 | 519.5 |
| 27.5° | 724.9 | 655.6 | 557.4 | 490.7 | 463.2 |
| 30° | 690.9 | 615.0 | 506.4 | 437.0 | 410.9 |
| 32.5° | 654.2 | 570.5 | 460.6 | 386.0 | 354.6 |
| 35° | 617.6 | 527.3 | 410.9 | 331.0 | 302.3 |
| 37.5° | 582.3 | 486.8 | 361.1 | 277.4 | 249.9 |
| 40° | 544.3 | 442.3 | 315.3 | 229.0 | 197.6 |
| 42.5° | 505.1 | 399.1 | 268.2 | 179.3 | 145.2 |
| 45° | 465.8 | 358.5 | 223.8 | 128.2 | 90.3 |
| 47.5° | 426.6 | 315.3 | 180.6 | 81.1 | 48.4 |
| 50° | 382.1 | 273.5 | 137.4 | 43.2 | 27.5 |
| 52.5° | 340.2 | 234.2 | 98.1 | 24.9 | 20.9 |
| 55° | 294.4 | 193.7 | 62.8 | 18.3 | 17.0 |
| 57.5° | 251.2 | 154.4 | 35.3 | 14.4 | 13.1 |
| 60° | 205.4 | 119.1 | 19.6 | 11.8 | 10.5 |
| 62.5° | 159.6 | 86.4 | 13.1 | 7.9 | 6.5 |
| 65° | 119.1 | 57.6 | 9.2 | 5.2 | 3.9 |
| 67.5° | 78.5 | 32.7 | 6.5 | 2.6 | 2.6 |
| 70° | 43.2 | 15.7 | 3.9 | 2.6 | 2.6 |
| 72.5° | 15.7 | 5.2 | 2.6 | 1.3 | 1.3 |
| 75° | 0.0 | 1.3 | 1.3 | 1.3 | 1.3 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| 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 | 15.66 | 16.92 | 16.03 | 17.23 | 17.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |
| | 3H | 15.94 | 17.05 | 16.32 | 17.38 | 17.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.21 |
| | 4H | 15.86 | 16.89 | 16.27 | 17.24 | 17.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.15 |
| | 6H | 15.78 | 16.72 | 16.19 | 17.09 | 17.48 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 |
| | 8H | 15.73 | 16.62 | 16.16 | 17.01 | 17.42 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 15.69 | 16.53 | 16.12 | 16.92 | 17.35 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 15.44 | 16.46 | 15.84 | 16.81 | 17.20 | 0.00 | 0.00 | 0.00 | 0.18 | 0.56 |
| | 3H | 15.72 | 16.55 | 16.13 | 16.95 | 17.36 | 0.00 | 0.00 | 0.00 | 0.17 | 0.57 |
| | 4H | 15.63 | 16.36 | 16.06 | 16.78 | 17.23 | 0.00 | 0.00 | 0.00 | 0.07 | 0.52 |
| | 6H | 15.54 | 16.17 | 16.01 | 16.62 | 17.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 |
| | 8H | 15.48 | 16.07 | 15.95 | 16.52 | 16.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |
| | 12H | 15.43 | 15.94 | 15.92 | 16.43 | 16.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |
| 8H | 4H | 15.48 | 16.07 | 15.95 | 16.52 | 16.99 | 0.00 | 0.00 | 0.00 | 0.01 | 0.48 |
| | 6H | 15.37 | 15.85 | 15.88 | 16.35 | 16.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 |
| | 8H | 15.30 | 15.73 | 15.83 | 16.25 | 16.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 |
| | 12H | 15.25 | 15.63 | 15.77 | 16.13 | 16.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |
| 12H | 4H | 15.43 | 15.94 | 15.92 | 16.43 | 16.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.40 |
| | 6H | 15.30 | 15.73 | 15.83 | 16.25 | 16.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 |
| | 8H | 15.25 | 15.63 | 15.77 | 16.13 | 16.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 |