

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060723

Luminaire Tested: S124RDRP-H1195D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060723
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: S124RDRP-H1195D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

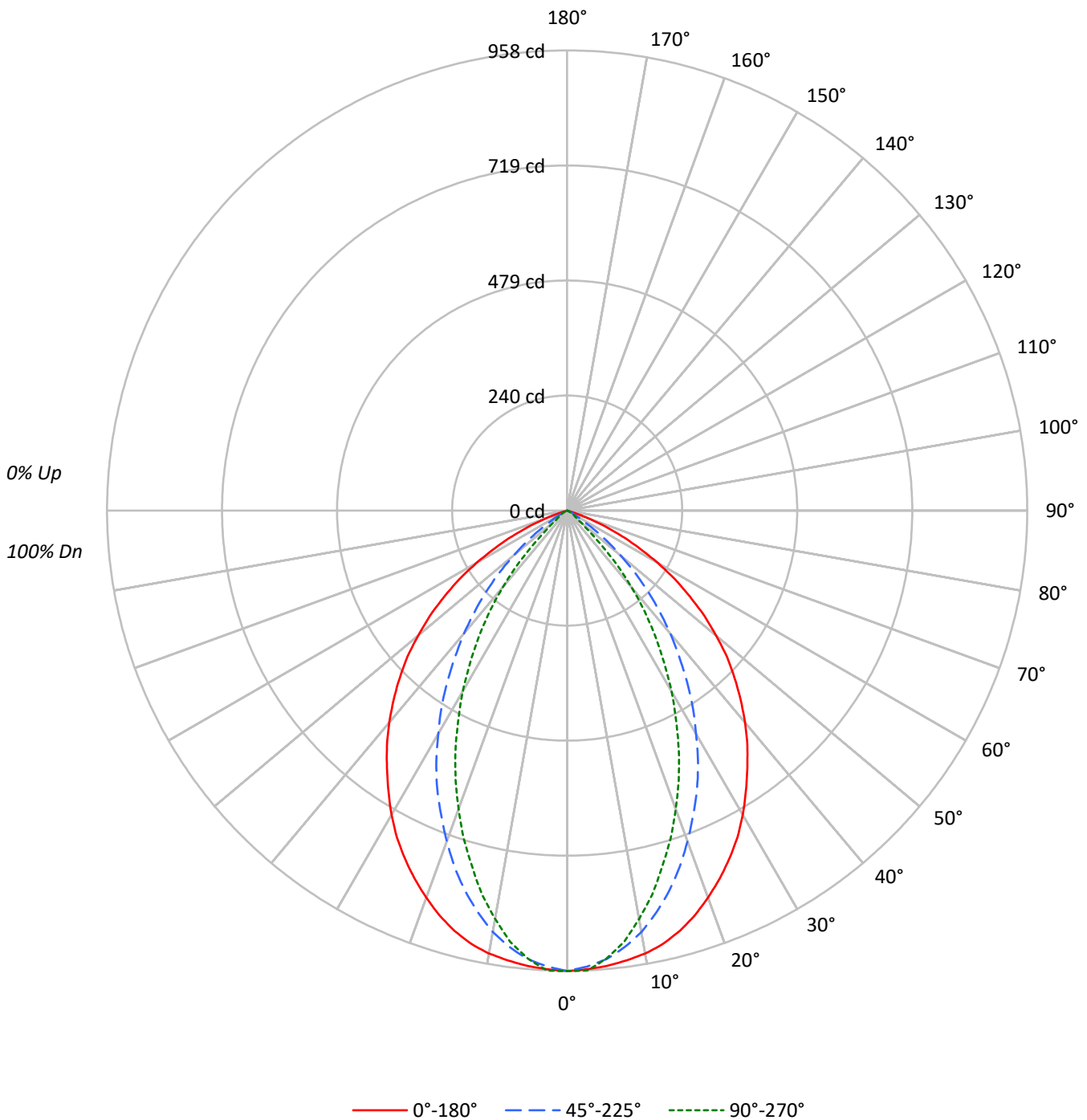
Lumens per Lamp: N/A
Luminaire Lumens: 1251.6 lumens
Efficiency: N/A
Efficacy: 34.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
Input Voltage (V): 120
Input Current (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 | | | | | | | | | | | | | | | | | | |
| 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 | 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° | 8254 | 8254 | 8254 |
| 5° | 8226 | 8106 | 8093 |
| 10° | 8187 | 7787 | 7545 |
| 15° | 8076 | 7310 | 6829 |
| 20° | 7857 | 6714 | 6055 |
| 25° | 7593 | 6080 | 5225 |
| 30° | 7272 | 5330 | 4324 |
| 35° | 6873 | 4572 | 3364 |
| 40° | 6477 | 3752 | 2352 |
| 45° | 6005 | 2885 | 1164 |
| 50° | 5419 | 1948 | 390 |
| 55° | 4678 | 998 | 270 |
| 60° | 3746 | 358 | 191 |
| 65° | 2567 | 198 | 86 |
| 70° | 1151 | 106 | 70 |
| 75° | 0 | 47 | 47 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6005 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 88.5 | 7.1 |
| 10°-20° | 232.0 | 18.5 |
| 20°-30° | 300.4 | 24.0 |
| 30°-40° | 285.4 | 22.8 |
| 40°-50° | 202.1 | 16.1 |
| 50°-60° | 103.7 | 8.3 |
| 60°-70° | 36.3 | 2.9 |
| 70°-80° | 3.1 | 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° | 620.9 | 49.6 |
| 0°-40° | 906.3 | 72.4 |
| 0°-60° | 1212.1 | 96.8 |
| 0°-90° | 1251.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1251.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 958 | 958 | 958 | 958 | 958 | |
| 5° | 952 | 953 | 938 | 938 | 936 | 90 |
| 15° | 906 | 878 | 820 | 781 | 766 | 255 |
| 25° | 799 | 737 | 640 | 572 | 550 | 368 |
| 35° | 654 | 558 | 435 | 350 | 320 | 409 |
| 45° | 493 | 380 | 237 | 136 | 96 | 380 |
| 55° | 312 | 205 | 66 | 19 | 18 | 278 |
| 65° | 126 | 61 | 10 | 6 | 4 | 125 |
| 75° | 0 | 1 | 1 | 1 | 1 | 10 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 958.5 | 958.5 | 958.5 | 958.5 | 958.5 |
| 2.5° | 955.7 | 958.5 | 950.2 | 957.1 | 958.5 |
| 5° | 951.6 | 953.0 | 937.7 | 937.7 | 936.3 |
| 7.5° | 944.6 | 941.9 | 916.9 | 907.2 | 905.9 |
| 10° | 936.3 | 926.6 | 890.6 | 869.8 | 862.9 |
| 12.5° | 923.9 | 905.9 | 857.4 | 826.9 | 818.6 |
| 15° | 905.9 | 878.2 | 820.0 | 781.2 | 766.0 |
| 17.5° | 883.7 | 847.7 | 778.4 | 731.3 | 716.1 |
| 20° | 857.4 | 811.7 | 732.7 | 680.1 | 660.7 |
| 22.5° | 829.7 | 777.0 | 685.6 | 626.1 | 606.7 |
| 25° | 799.2 | 736.9 | 639.9 | 572.1 | 549.9 |
| 27.5° | 767.4 | 693.9 | 590.1 | 519.4 | 490.3 |
| 30° | 731.3 | 651.0 | 536.0 | 462.6 | 434.9 |
| 32.5° | 692.6 | 603.9 | 487.6 | 408.6 | 375.4 |
| 35° | 653.8 | 558.2 | 434.9 | 350.4 | 320.0 |
| 37.5° | 616.4 | 515.3 | 382.3 | 293.6 | 264.6 |
| 40° | 576.2 | 468.2 | 333.8 | 242.4 | 209.2 |
| 42.5° | 534.7 | 422.5 | 283.9 | 189.8 | 153.7 |
| 45° | 493.1 | 379.5 | 236.9 | 135.7 | 95.6 |
| 47.5° | 451.5 | 333.8 | 191.1 | 85.9 | 51.2 |
| 50° | 404.5 | 289.5 | 145.4 | 45.7 | 29.1 |
| 52.5° | 360.1 | 247.9 | 103.9 | 26.3 | 22.2 |
| 55° | 311.6 | 205.0 | 66.5 | 19.4 | 18.0 |
| 57.5° | 265.9 | 163.4 | 37.4 | 15.2 | 13.9 |
| 60° | 217.5 | 126.0 | 20.8 | 12.5 | 11.1 |
| 62.5° | 169.0 | 91.4 | 13.9 | 8.3 | 6.9 |
| 65° | 126.0 | 60.9 | 9.7 | 5.5 | 4.2 |
| 67.5° | 83.1 | 34.6 | 6.9 | 2.8 | 2.8 |
| 70° | 45.7 | 16.6 | 4.2 | 2.8 | 2.8 |
| 72.5° | 16.6 | 5.5 | 2.8 | 1.4 | 1.4 |
| 75° | 0.0 | 1.4 | 1.4 | 1.4 | 1.4 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 |
| 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 | 15.86 | 17.12 | 16.23 | 17.43 | 17.74 | 0.00 | 0.00 | 0.00 | 0.09 | 0.41 |
| | 3H | 16.14 | 17.24 | 16.52 | 17.57 | 17.94 | 0.00 | 0.00 | 0.00 | 0.04 | 0.40 |
| | 4H | 16.06 | 17.09 | 16.46 | 17.44 | 17.82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.35 |
| | 6H | 15.98 | 16.91 | 16.39 | 17.28 | 17.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 |
| | 8H | 15.93 | 16.81 | 16.36 | 17.21 | 17.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.17 |
| | 12H | 15.88 | 16.73 | 16.32 | 17.11 | 17.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 |
| 4H | 2H | 15.63 | 16.66 | 16.04 | 17.01 | 17.39 | 0.00 | 0.01 | 0.00 | 0.36 | 0.74 |
| | 3H | 15.92 | 16.74 | 16.33 | 17.15 | 17.55 | 0.00 | 0.00 | 0.00 | 0.36 | 0.76 |
| | 4H | 15.82 | 16.56 | 16.26 | 16.98 | 17.43 | 0.00 | 0.00 | 0.00 | 0.27 | 0.71 |
| | 6H | 15.74 | 16.37 | 16.20 | 16.81 | 17.28 | 0.00 | 0.00 | 0.00 | 0.13 | 0.60 |
| | 8H | 15.68 | 16.26 | 16.15 | 16.71 | 17.18 | 0.00 | 0.00 | 0.00 | 0.03 | 0.50 |
| | 12H | 15.62 | 16.14 | 16.11 | 16.62 | 17.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 |
| 8H | 4H | 15.68 | 16.26 | 16.15 | 16.71 | 17.18 | 0.00 | 0.00 | 0.00 | 0.21 | 0.68 |
| | 6H | 15.57 | 16.04 | 16.07 | 16.54 | 17.03 | 0.00 | 0.00 | 0.00 | 0.07 | 0.55 |
| | 8H | 15.50 | 15.93 | 16.02 | 16.45 | 16.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.46 |
| | 12H | 15.45 | 15.83 | 15.97 | 16.32 | 16.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 |
| 12H | 4H | 15.62 | 16.14 | 16.11 | 16.63 | 17.10 | 0.00 | 0.00 | 0.00 | 0.12 | 0.60 |
| | 6H | 15.50 | 15.93 | 16.02 | 16.45 | 16.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.46 |
| | 8H | 15.45 | 15.83 | 15.97 | 16.32 | 16.90 | 0.00 | 0.00 | 0.00 | 0.00 | 0.42 |