

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: P1060261

Luminaire Tested: S124RDRP-S1020D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1060261
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-37)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S1020D927-X4F0-XX-UDD-WVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

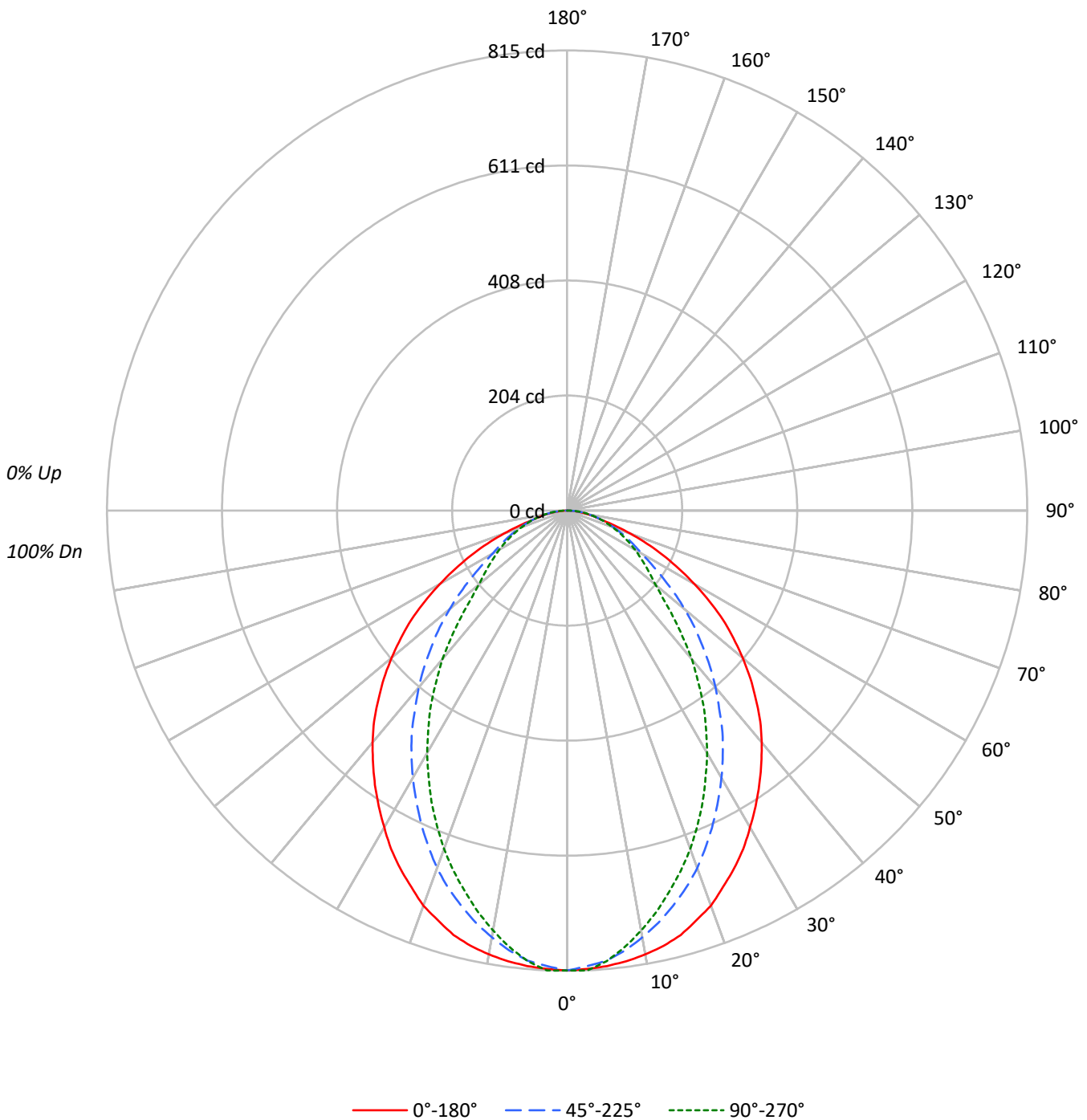
Lumens per Lamp: N/A
Luminaire Lumens: 1570.5 lumens
Efficiency: N/A
Efficacy: 44.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.96 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 86 | 82 | 89 | 84 | 80 | 85 | 82 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 84 | 76 | 71 | 91 | 82 | 75 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 |
| 4 | 86 | 75 | 67 | 61 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 53 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 50 |
| 6 | 74 | 62 | 54 | 48 | 72 | 61 | 53 | 47 | 59 | 52 | 47 | 58 | 51 | 47 | 56 | 51 | 46 | 44 |
| 7 | 69 | 57 | 48 | 43 | 68 | 56 | 48 | 43 | 54 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 40 |
| 8 | 65 | 52 | 44 | 39 | 63 | 51 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 9 | 61 | 48 | 40 | 35 | 59 | 48 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 |
| 10 | 57 | 45 | 37 | 32 | 56 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 41 | 36 | 32 | 30 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7014 | 7014 | 7014 |
| 5° | 6999 | 6916 | 6925 |
| 10° | 6979 | 6712 | 6603 |
| 15° | 6937 | 6459 | 6229 |
| 20° | 6823 | 6175 | 5841 |
| 25° | 6647 | 5811 | 5402 |
| 30° | 6442 | 5434 | 4930 |
| 35° | 6238 | 5041 | 4427 |
| 40° | 6025 | 4594 | 3862 |
| 45° | 5758 | 4126 | 3228 |
| 50° | 5436 | 3641 | 2732 |
| 55° | 5058 | 3090 | 2528 |
| 60° | 4483 | 2621 | 2390 |
| 65° | 3822 | 2419 | 2262 |
| 70° | 2989 | 2241 | 2145 |
| 75° | 2040 | 2069 | 2069 |
| 80° | 1755 | 1944 | 1993 |
| 85° | 1512 | 1887 | 2085 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5758 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.8 | 4.8 |
| 10°-20° | 205.8 | 13.1 |
| 20°-30° | 285.7 | 18.2 |
| 30°-40° | 306.3 | 19.5 |
| 40°-50° | 271.3 | 17.3 |
| 50°-60° | 204.5 | 13.0 |
| 60°-70° | 132.4 | 8.4 |
| 70°-80° | 67.9 | 4.3 |
| 80°-90° | 20.9 | 1.3 |
| 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° | 567.3 | 36.1 |
| 0°-40° | 873.5 | 55.6 |
| 0°-60° | 1349.3 | 85.9 |
| 0°-90° | 1570.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1570.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 814 | 814 | 814 | 814 | 814 | |
| 5° | 810 | 811 | 800 | 801 | 801 | 77 |
| 15° | 778 | 761 | 724 | 706 | 699 | 219 |
| 25° | 700 | 662 | 612 | 579 | 568 | 322 |
| 35° | 593 | 540 | 480 | 436 | 421 | 371 |
| 45° | 473 | 412 | 339 | 286 | 265 | 365 |
| 55° | 337 | 280 | 206 | 173 | 168 | 299 |
| 65° | 188 | 151 | 119 | 112 | 111 | 186 |
| 75° | 61 | 64 | 62 | 62 | 62 | 72 |
| 85° | 15 | 16 | 19 | 21 | 21 | 18 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1060261

CATALOG NUMBER: S124RDRP-S1020D927-X4F0-XX-UDD-WVL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 814.5 | 814.5 | 814.5 | 814.5 | 814.5 |
| 2.5° | 812.6 | 815.4 | 807.8 | 813.5 | 815.4 |
| 5° | 809.7 | 810.6 | 800.1 | 801.1 | 801.1 |
| 7.5° | 804.9 | 803.0 | 785.8 | 781.0 | 780.0 |
| 10° | 798.2 | 792.5 | 767.6 | 758.0 | 755.1 |
| 12.5° | 789.6 | 779.1 | 747.5 | 734.1 | 728.3 |
| 15° | 778.1 | 760.9 | 724.5 | 706.3 | 698.7 |
| 17.5° | 760.9 | 738.9 | 700.6 | 677.6 | 669.0 |
| 20° | 744.6 | 714.9 | 673.8 | 645.1 | 637.4 |
| 22.5° | 721.6 | 690.1 | 643.2 | 612.5 | 603.0 |
| 25° | 699.6 | 662.3 | 611.6 | 579.0 | 568.5 |
| 27.5° | 675.7 | 633.6 | 579.0 | 544.6 | 531.2 |
| 30° | 647.9 | 603.0 | 546.5 | 510.1 | 495.8 |
| 32.5° | 621.1 | 573.3 | 513.0 | 472.8 | 457.5 |
| 35° | 593.4 | 539.8 | 479.5 | 436.4 | 421.1 |
| 37.5° | 564.7 | 508.2 | 442.2 | 400.1 | 380.0 |
| 40° | 536.0 | 476.6 | 408.7 | 360.8 | 343.6 |
| 42.5° | 506.3 | 444.1 | 374.2 | 324.5 | 302.4 |
| 45° | 472.8 | 411.5 | 338.8 | 286.2 | 265.1 |
| 47.5° | 440.3 | 380.0 | 306.3 | 248.8 | 229.7 |
| 50° | 405.8 | 346.5 | 271.8 | 216.3 | 203.9 |
| 52.5° | 371.3 | 312.0 | 238.3 | 191.4 | 185.7 |
| 55° | 336.9 | 280.4 | 205.8 | 173.2 | 168.4 |
| 57.5° | 298.6 | 247.9 | 177.1 | 157.0 | 153.1 |
| 60° | 260.3 | 212.5 | 152.2 | 141.6 | 138.8 |
| 62.5° | 223.0 | 181.8 | 134.9 | 126.3 | 124.4 |
| 65° | 187.6 | 151.2 | 118.7 | 112.0 | 111.0 |
| 67.5° | 153.1 | 124.4 | 103.4 | 99.5 | 97.6 |
| 70° | 118.7 | 99.5 | 89.0 | 87.1 | 85.2 |
| 72.5° | 88.1 | 80.4 | 75.6 | 74.7 | 73.7 |
| 75° | 61.3 | 64.1 | 62.2 | 62.2 | 62.2 |
| 77.5° | 48.8 | 49.8 | 50.7 | 51.7 | 50.7 |
| 80° | 35.4 | 38.3 | 39.2 | 41.2 | 40.2 |
| 82.5° | 24.9 | 26.8 | 29.7 | 30.6 | 31.6 |
| 85° | 15.3 | 16.3 | 19.1 | 21.1 | 21.1 |
| 87.5° | 6.7 | 7.7 | 9.6 | 11.5 | 12.4 |
| 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 | 17.21 | 18.71 | 17.57 | 19.02 | 19.33 | 13.77 | 15.27 | 14.14 | 15.58 | 15.90 |
| | 3H | 18.41 | 19.76 | 18.79 | 20.08 | 20.45 | 15.47 | 16.81 | 15.84 | 17.14 | 17.50 |
| | 4H | 18.72 | 19.98 | 19.12 | 20.33 | 20.71 | 16.14 | 17.40 | 16.54 | 17.75 | 18.13 |
| | 6H | 18.92 | 20.08 | 19.33 | 20.45 | 20.84 | 16.69 | 17.86 | 17.11 | 18.22 | 18.62 |
| | 8H | 18.98 | 20.09 | 19.41 | 20.48 | 20.88 | 16.91 | 18.02 | 17.34 | 18.41 | 18.81 |
| | 12H | 19.01 | 20.07 | 19.44 | 20.45 | 20.88 | 17.08 | 18.14 | 17.52 | 18.53 | 18.96 |
| 4H | 2H | 17.35 | 18.61 | 17.75 | 18.96 | 19.34 | 14.43 | 15.69 | 14.83 | 16.04 | 16.42 |
| | 3H | 18.75 | 19.80 | 19.16 | 20.20 | 20.60 | 16.34 | 17.39 | 16.75 | 17.79 | 18.19 |
| | 4H | 19.18 | 20.12 | 19.61 | 20.53 | 20.97 | 17.14 | 18.08 | 17.58 | 18.50 | 18.94 |
| | 6H | 19.50 | 20.32 | 19.96 | 20.76 | 21.22 | 17.83 | 18.65 | 18.29 | 19.09 | 19.55 |
| | 8H | 19.60 | 20.36 | 20.06 | 20.81 | 21.28 | 18.10 | 18.87 | 18.57 | 19.31 | 19.78 |
| | 12H | 19.67 | 20.35 | 20.15 | 20.83 | 21.30 | 18.34 | 19.02 | 18.82 | 19.50 | 19.97 |
| 8H | 4H | 19.30 | 20.07 | 19.77 | 20.51 | 20.98 | 17.46 | 18.22 | 17.92 | 18.67 | 19.14 |
| | 6H | 19.73 | 20.36 | 20.22 | 20.85 | 21.33 | 18.29 | 18.92 | 18.79 | 19.41 | 19.89 |
| | 8H | 19.88 | 20.45 | 20.40 | 20.96 | 21.45 | 18.65 | 19.22 | 19.17 | 19.73 | 20.22 |
| | 12H | 20.01 | 20.51 | 20.52 | 21.01 | 21.57 | 18.99 | 19.49 | 19.50 | 19.98 | 20.55 |
| 12H | 4H | 19.31 | 19.99 | 19.79 | 20.47 | 20.94 | 17.49 | 18.17 | 17.97 | 18.65 | 19.12 |
| | 6H | 19.75 | 20.32 | 20.26 | 20.83 | 21.32 | 18.35 | 18.92 | 18.86 | 19.43 | 19.92 |
| | 8H | 19.96 | 20.46 | 20.47 | 20.95 | 21.52 | 18.78 | 19.28 | 19.29 | 19.77 | 20.34 |