

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: P1060743

Luminaire Tested: S124RDR-H1195D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060743
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-75)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1195D927-X4F0-XX-UDD-BVL-W
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

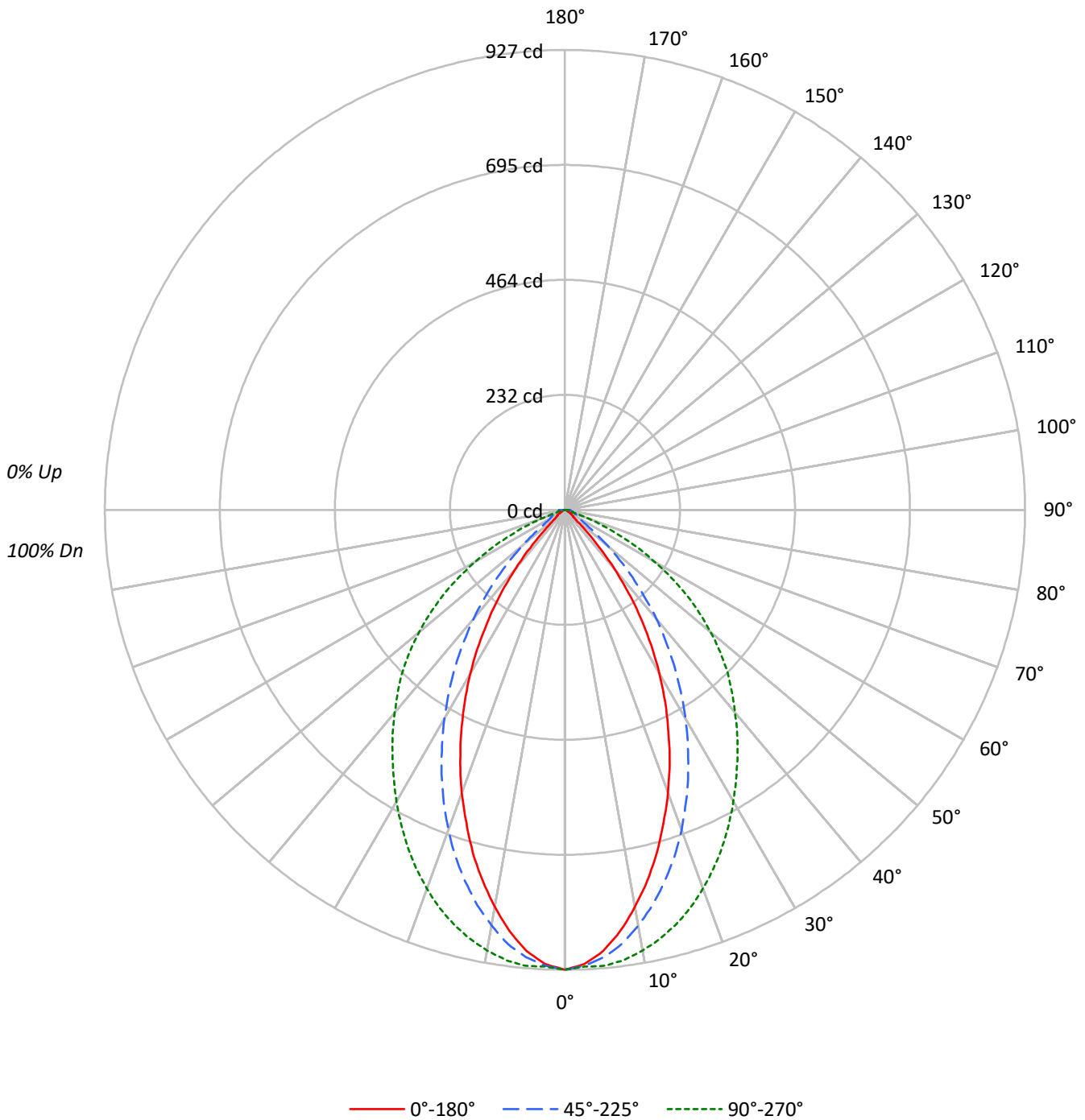
Lumens per Lamp: N/A
Luminaire Lumens: 1168.3 lumens
Efficiency: N/A
Efficacy: 32.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.96
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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 | 50 | 30 | 10 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | 100 | |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | 90 | |
| 2 | 105 | 98 | 93 | 89 | 102 | 97 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 81 | | | 81 | |
| 3 | 98 | 90 | 84 | 79 | 96 | 88 | 83 | 78 | 86 | 81 | 77 | 83 | 79 | 75 | 81 | 77 | 74 | 72 | | | 72 | |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 75 | 70 | 79 | 73 | 69 | 76 | 72 | 68 | 74 | 70 | 67 | 65 | | | 65 | |
| 5 | 86 | 75 | 68 | 63 | 84 | 74 | 68 | 63 | 72 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | 59 | |
| 6 | 80 | 70 | 62 | 57 | 79 | 69 | 62 | 57 | 67 | 61 | 56 | 66 | 60 | 56 | 64 | 59 | 56 | 54 | | | 54 | |
| 7 | 75 | 64 | 57 | 52 | 74 | 64 | 57 | 52 | 62 | 56 | 52 | 61 | 55 | 51 | 60 | 55 | 51 | 49 | | | 49 | |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 51 | 47 | 56 | 51 | 47 | 45 | | | 45 | |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | 42 | |
| 10 | 63 | 52 | 45 | 41 | 62 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 44 | 41 | 49 | 44 | 40 | 39 | | | 39 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7982 | 7982 | 7982 |
| 5° | 7711 | 7825 | 7975 |
| 10° | 7106 | 7439 | 7886 |
| 15° | 6382 | 6915 | 7710 |
| 20° | 5563 | 6291 | 7447 |
| 25° | 4693 | 5582 | 7122 |
| 30° | 3786 | 4824 | 6750 |
| 35° | 2802 | 4037 | 6370 |
| 40° | 1737 | 3216 | 5993 |
| 45° | 689 | 2345 | 5644 |
| 50° | 305 | 1472 | 5131 |
| 55° | 245 | 767 | 4492 |
| 60° | 169 | 580 | 3579 |
| 65° | 110 | 577 | 2461 |
| 70° | 111 | 521 | 1151 |
| 75° | 146 | 506 | 506 |
| 80° | 218 | 595 | 595 |
| 85° | 435 | 1186 | 860 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5644 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 85.0 | 7.3 |
| 10°-20° | 219.5 | 18.8 |
| 20°-30° | 277.0 | 23.7 |
| 30°-40° | 254.1 | 21.8 |
| 40°-50° | 173.1 | 14.8 |
| 50°-60° | 94.3 | 8.1 |
| 60°-70° | 40.8 | 3.5 |
| 70°-80° | 14.9 | 1.3 |
| 80°-90° | 9.6 | 0.8 |
| 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° | 581.5 | 49.8 |
| 0°-40° | 835.6 | 71.5 |
| 0°-60° | 1103.0 | 94.4 |
| 0°-90° | 1168.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1168.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 927 | 927 | 927 | 927 | 927 | |
| 5° | 892 | 904 | 905 | 915 | 923 | 83 |
| 15° | 716 | 741 | 776 | 831 | 865 | 199 |
| 25° | 494 | 529 | 588 | 681 | 750 | 226 |
| 35° | 266 | 306 | 384 | 506 | 606 | 165 |
| 45° | 57 | 95 | 193 | 342 | 464 | 53 |
| 55° | 16 | 17 | 51 | 188 | 299 | 15 |
| 65° | 5 | 8 | 28 | 59 | 121 | 6 |
| 75° | 4 | 14 | 15 | 15 | 15 | 5 |
| 85° | 4 | 10 | 12 | 12 | 9 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 926.9 | 926.9 | 926.9 | 926.9 | 926.9 |
| 2.5° | 916.1 | 926.9 | 919.3 | 921.5 | 921.5 |
| 5° | 892.1 | 904.1 | 905.2 | 915.0 | 922.6 |
| 7.5° | 856.2 | 873.6 | 882.3 | 901.9 | 915.0 |
| 10° | 812.7 | 833.4 | 850.8 | 884.5 | 901.9 |
| 12.5° | 765.9 | 789.9 | 816.0 | 860.6 | 885.6 |
| 15° | 715.9 | 740.9 | 775.7 | 831.2 | 864.9 |
| 17.5° | 660.4 | 690.9 | 733.3 | 799.6 | 841.0 |
| 20° | 607.1 | 637.5 | 686.5 | 761.6 | 812.7 |
| 22.5° | 551.6 | 583.1 | 637.5 | 721.3 | 782.2 |
| 25° | 493.9 | 528.7 | 587.5 | 681.1 | 749.6 |
| 27.5° | 437.4 | 474.3 | 536.4 | 638.6 | 714.8 |
| 30° | 380.8 | 417.8 | 485.2 | 595.1 | 678.9 |
| 32.5° | 323.1 | 361.2 | 434.1 | 549.4 | 641.9 |
| 35° | 266.5 | 305.7 | 384.0 | 505.9 | 606.0 |
| 37.5° | 208.9 | 250.2 | 334.0 | 463.5 | 570.1 |
| 40° | 154.5 | 195.8 | 286.1 | 421.0 | 533.1 |
| 42.5° | 103.4 | 144.7 | 237.2 | 379.7 | 498.3 |
| 45° | 56.6 | 94.7 | 192.6 | 341.6 | 463.5 |
| 47.5° | 30.5 | 52.2 | 149.0 | 304.6 | 424.3 |
| 50° | 22.8 | 28.3 | 109.9 | 265.5 | 383.0 |
| 52.5° | 19.6 | 21.8 | 76.2 | 224.1 | 341.6 |
| 55° | 16.3 | 17.4 | 51.1 | 188.2 | 299.2 |
| 57.5° | 13.1 | 14.1 | 38.1 | 152.3 | 253.5 |
| 60° | 9.8 | 12.0 | 33.7 | 117.5 | 207.8 |
| 62.5° | 7.6 | 9.8 | 31.6 | 85.9 | 164.3 |
| 65° | 5.4 | 7.6 | 28.3 | 58.7 | 120.8 |
| 67.5° | 5.4 | 8.7 | 23.9 | 38.1 | 81.6 |
| 70° | 4.4 | 12.0 | 20.7 | 25.0 | 45.7 |
| 72.5° | 4.4 | 13.1 | 17.4 | 17.4 | 17.4 |
| 75° | 4.4 | 14.1 | 15.2 | 15.2 | 15.2 |
| 77.5° | 4.4 | 13.1 | 14.1 | 13.1 | 13.1 |
| 80° | 4.4 | 12.0 | 12.0 | 12.0 | 12.0 |
| 82.5° | 4.4 | 10.9 | 12.0 | 12.0 | 9.8 |
| 85° | 4.4 | 9.8 | 12.0 | 12.0 | 8.7 |
| 87.5° | 3.3 | 9.8 | 10.9 | 10.9 | 6.5 |
| 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 | 0.14 | 15.63 | 16.90 | 15.99 | 17.22 | 17.53 |
| | 3H | 0.00 | 0.81 | 0.06 | 1.14 | 1.50 | 16.00 | 17.13 | 16.38 | 17.46 | 17.83 |
| | 4H | 0.90 | 1.96 | 1.31 | 2.31 | 2.69 | 15.98 | 17.03 | 16.38 | 17.38 | 17.77 |
| | 6H | 2.10 | 3.07 | 2.52 | 3.44 | 3.83 | 15.97 | 16.93 | 16.38 | 17.30 | 17.70 |
| | 8H | 2.70 | 3.61 | 3.13 | 4.00 | 4.41 | 15.97 | 16.88 | 16.40 | 17.27 | 17.68 |
| | 12H | 3.37 | 4.25 | 3.81 | 4.63 | 5.06 | 15.98 | 16.85 | 16.41 | 17.24 | 17.67 |
| 4H | 2H | 1.87 | 2.92 | 2.27 | 3.27 | 3.66 | 15.44 | 16.49 | 15.84 | 16.84 | 17.22 |
| | 3H | 3.46 | 4.32 | 3.87 | 4.72 | 5.13 | 15.86 | 16.71 | 16.27 | 17.12 | 17.52 |
| | 4H | 4.75 | 5.52 | 5.18 | 5.94 | 6.38 | 15.85 | 16.62 | 16.29 | 17.04 | 17.49 |
| | 6H | 5.89 | 6.55 | 6.35 | 7.00 | 7.46 | 15.89 | 16.56 | 16.36 | 17.00 | 17.47 |
| | 8H | 6.40 | 7.02 | 6.87 | 7.47 | 7.94 | 15.92 | 16.54 | 16.39 | 16.99 | 17.46 |
| | 12H | 6.96 | 7.50 | 7.44 | 7.99 | 8.46 | 15.99 | 16.53 | 16.47 | 17.02 | 17.49 |
| 8H | 4H | 5.83 | 6.45 | 6.30 | 6.90 | 7.37 | 15.76 | 16.38 | 16.23 | 16.83 | 17.30 |
| | 6H | 7.38 | 7.89 | 7.89 | 8.39 | 8.87 | 15.84 | 16.35 | 16.35 | 16.85 | 17.33 |
| | 8H | 8.20 | 8.65 | 8.72 | 9.17 | 9.66 | 15.93 | 16.38 | 16.45 | 16.90 | 17.39 |
| | 12H | 9.03 | 9.43 | 9.55 | 9.93 | 10.50 | 16.10 | 16.50 | 16.61 | 17.00 | 17.57 |
| 12H | 4H | 6.02 | 6.57 | 6.51 | 7.05 | 7.53 | 15.73 | 16.27 | 16.21 | 16.76 | 17.23 |
| | 6H | 7.74 | 8.20 | 8.26 | 8.71 | 9.21 | 15.82 | 16.27 | 16.34 | 16.79 | 17.28 |
| | 8H | 8.76 | 9.16 | 9.27 | 9.65 | 10.23 | 15.95 | 16.36 | 16.47 | 16.85 | 17.42 |