

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: P1059528

Luminaire Tested: S123RDR-H1165D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059528
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D927-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 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

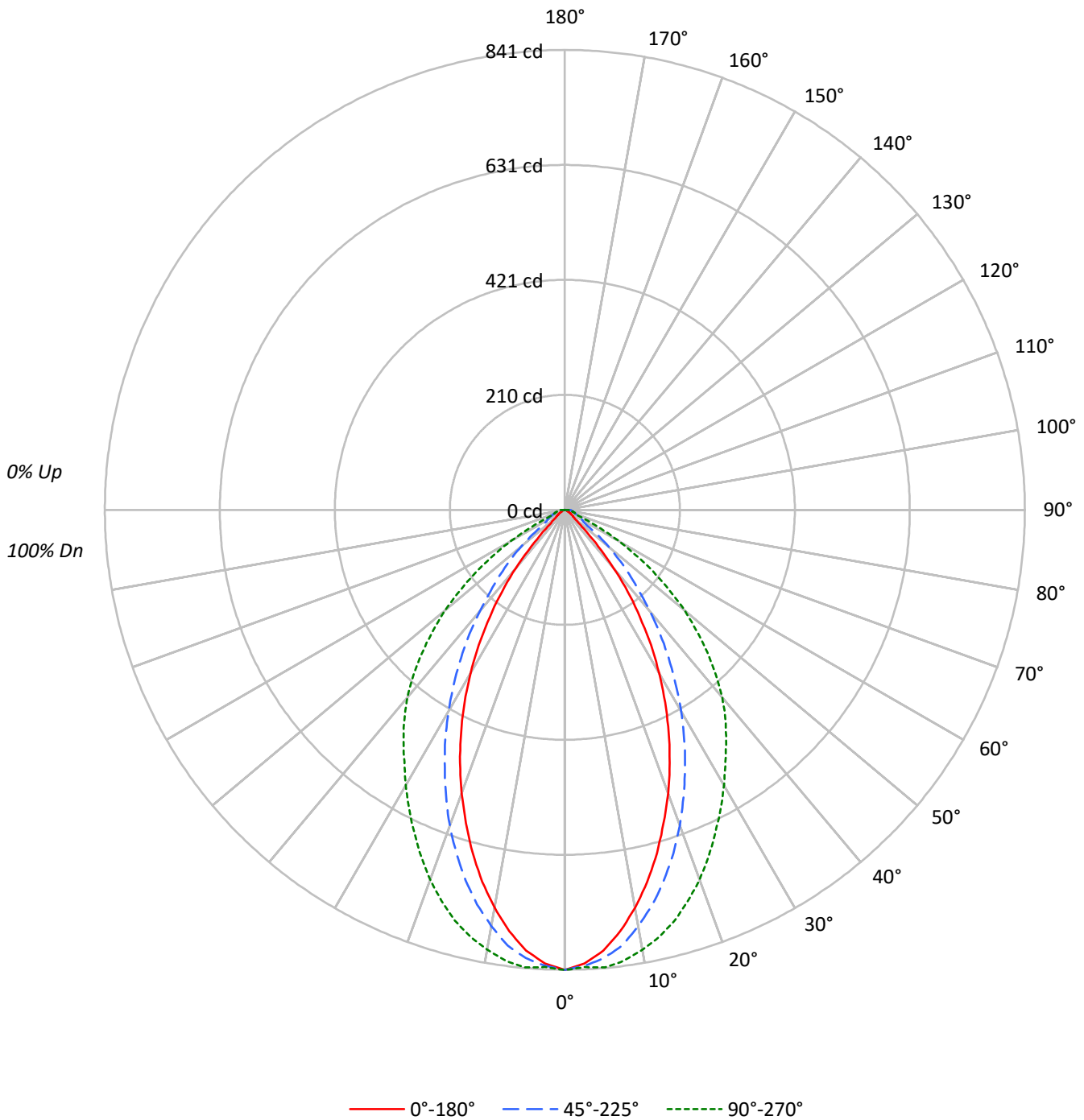
Lumens per Lamp: N/A
Luminaire Lumens: 1010.1 lumens
Efficiency: N/A
Efficacy: 27.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | | | | |
| 1 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | |
| 2 | 105 | 99 | 94 | 90 | 102 | 97 | 92 | 88 | 94 | 90 | 86 | 91 | 87 | 85 | 88 | 85 | 83 | 81 | | | | |
| 3 | 98 | 90 | 84 | 79 | 96 | 89 | 83 | 79 | 86 | 81 | 77 | 83 | 79 | 76 | 81 | 78 | 75 | 73 | | | | |
| 4 | 92 | 83 | 76 | 71 | 90 | 81 | 75 | 70 | 79 | 74 | 70 | 77 | 72 | 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 | 57 | 55 | | | | |
| 7 | 76 | 65 | 58 | 53 | 75 | 65 | 58 | 53 | 63 | 57 | 53 | 62 | 56 | 52 | 61 | 56 | 52 | 50 | | | | |
| 8 | 72 | 61 | 54 | 49 | 70 | 60 | 53 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 47 | | | | |
| 9 | 68 | 57 | 50 | 45 | 67 | 56 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 45 | 53 | 48 | 45 | 43 | | | | |
| 10 | 64 | 53 | 46 | 42 | 63 | 53 | 46 | 42 | 52 | 46 | 42 | 51 | 45 | 42 | 50 | 45 | 42 | 40 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9879 | 9879 | 9879 |
| 5° | 9538 | 9695 | 9904 |
| 10° | 8806 | 9213 | 9742 |
| 15° | 7902 | 8521 | 9448 |
| 20° | 6893 | 7680 | 8993 |
| 25° | 5815 | 6732 | 8436 |
| 30° | 4676 | 5756 | 7885 |
| 35° | 3423 | 4738 | 7370 |
| 40° | 2135 | 3694 | 6863 |
| 45° | 807 | 2753 | 6113 |
| 50° | 384 | 1898 | 5210 |
| 55° | 295 | 1042 | 4029 |
| 60° | 207 | 883 | 2649 |
| 65° | 153 | 767 | 1106 |
| 70° | 151 | 721 | 721 |
| 75° | 200 | 753 | 753 |
| 80° | 298 | 899 | 825 |
| 85° | 593 | 1495 | 1186 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6113 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 77.2 | 7.6 |
| 10°-20° | 198.0 | 19.6 |
| 20°-30° | 245.1 | 24.3 |
| 30°-40° | 219.7 | 21.8 |
| 40°-50° | 144.1 | 14.3 |
| 50°-60° | 72.1 | 7.1 |
| 60°-70° | 28.1 | 2.8 |
| 70°-80° | 15.9 | 1.6 |
| 80°-90° | 9.8 | 1.0 |
| 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° | 520.4 | 51.5 |
| 0°-40° | 740.1 | 73.3 |
| 0°-60° | 956.3 | 94.7 |
| 0°-90° | 1010.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1010.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 841 | 841 | 841 | 841 | 841 | |
| 5° | 809 | 822 | 822 | 831 | 840 | 75 |
| 15° | 650 | 677 | 701 | 747 | 777 | 181 |
| 25° | 449 | 476 | 520 | 594 | 651 | 205 |
| 35° | 239 | 271 | 330 | 430 | 514 | 149 |
| 45° | 49 | 78 | 166 | 284 | 368 | 46 |
| 55° | 14 | 18 | 51 | 139 | 197 | 13 |
| 65° | 6 | 17 | 28 | 36 | 40 | 6 |
| 75° | 4 | 17 | 17 | 17 | 17 | 5 |
| 85° | 4 | 11 | 11 | 11 | 9 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 841.3 | 841.3 | 841.3 | 841.3 | 841.3 |
| 2.5° | 830.2 | 842.4 | 834.6 | 835.7 | 836.9 |
| 5° | 809.2 | 822.5 | 822.5 | 831.3 | 840.2 |
| 7.5° | 777.2 | 792.6 | 803.7 | 819.2 | 831.3 |
| 10° | 738.5 | 757.3 | 772.7 | 800.4 | 817.0 |
| 12.5° | 696.5 | 719.7 | 739.6 | 776.1 | 799.3 |
| 15° | 650.0 | 676.6 | 700.9 | 747.3 | 777.2 |
| 17.5° | 600.3 | 626.8 | 658.9 | 713.0 | 749.5 |
| 20° | 551.6 | 578.2 | 614.6 | 675.5 | 719.7 |
| 22.5° | 500.8 | 528.4 | 567.1 | 634.5 | 686.5 |
| 25° | 448.8 | 476.5 | 519.6 | 593.6 | 651.1 |
| 27.5° | 396.9 | 424.5 | 473.1 | 553.8 | 616.9 |
| 30° | 344.9 | 372.5 | 424.5 | 510.7 | 581.5 |
| 32.5° | 293.0 | 322.8 | 377.0 | 470.9 | 546.1 |
| 35° | 238.8 | 270.8 | 330.5 | 430.0 | 514.1 |
| 37.5° | 189.0 | 218.9 | 286.3 | 394.7 | 482.0 |
| 40° | 139.3 | 171.4 | 241.0 | 360.4 | 447.7 |
| 42.5° | 90.6 | 124.9 | 200.1 | 322.8 | 409.0 |
| 45° | 48.6 | 78.5 | 165.8 | 284.1 | 368.1 |
| 47.5° | 26.5 | 43.1 | 133.8 | 243.2 | 326.1 |
| 50° | 21.0 | 24.3 | 103.9 | 207.8 | 285.2 |
| 52.5° | 17.7 | 19.9 | 74.1 | 174.7 | 239.9 |
| 55° | 14.4 | 17.7 | 50.9 | 139.3 | 196.8 |
| 57.5° | 12.2 | 15.5 | 39.8 | 108.3 | 153.7 |
| 60° | 8.8 | 13.3 | 37.6 | 79.6 | 112.8 |
| 62.5° | 6.6 | 14.4 | 33.2 | 55.3 | 74.1 |
| 65° | 5.5 | 16.6 | 27.6 | 36.5 | 39.8 |
| 67.5° | 4.4 | 17.7 | 24.3 | 23.2 | 23.2 |
| 70° | 4.4 | 16.6 | 21.0 | 19.9 | 21.0 |
| 72.5° | 4.4 | 17.7 | 18.8 | 17.7 | 18.8 |
| 75° | 4.4 | 16.6 | 16.6 | 16.6 | 16.6 |
| 77.5° | 4.4 | 15.5 | 15.5 | 14.4 | 14.4 |
| 80° | 4.4 | 13.3 | 13.3 | 13.3 | 12.2 |
| 82.5° | 4.4 | 12.2 | 12.2 | 12.2 | 9.9 |
| 85° | 4.4 | 11.1 | 11.1 | 11.1 | 8.8 |
| 87.5° | 3.3 | 9.9 | 11.1 | 9.9 | 6.6 |
| 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 | 0.33 | 1.58 | 0.69 | 1.89 | 2.21 | 14.56 | 15.82 | 14.93 | 16.13 | 16.44 |
| | 3H | 2.65 | 3.76 | 3.03 | 4.09 | 4.46 | 14.64 | 15.75 | 15.02 | 16.08 | 16.45 |
| | 4H | 3.75 | 4.78 | 4.15 | 5.14 | 5.52 | 14.72 | 15.75 | 15.12 | 16.10 | 16.49 |
| | 6H | 4.74 | 5.69 | 5.15 | 6.06 | 6.45 | 14.82 | 15.77 | 15.24 | 16.14 | 16.54 |
| | 8H | 5.22 | 6.12 | 5.65 | 6.51 | 6.91 | 14.88 | 15.78 | 15.31 | 16.17 | 16.58 |
| | 12H | 5.77 | 6.63 | 6.21 | 7.02 | 7.45 | 14.96 | 15.82 | 15.39 | 16.20 | 16.63 |
| 4H | 2H | 3.56 | 4.60 | 3.97 | 4.95 | 5.33 | 14.42 | 15.45 | 14.82 | 15.80 | 16.18 |
| | 3H | 5.88 | 6.73 | 6.30 | 7.13 | 7.54 | 14.59 | 15.44 | 15.00 | 15.84 | 16.24 |
| | 4H | 7.25 | 8.01 | 7.69 | 8.43 | 8.87 | 14.74 | 15.50 | 15.18 | 15.92 | 16.36 |
| | 6H | 8.34 | 8.99 | 8.81 | 9.44 | 9.91 | 14.97 | 15.62 | 15.43 | 16.07 | 16.54 |
| | 8H | 8.80 | 9.41 | 9.27 | 9.86 | 10.33 | 15.09 | 15.70 | 15.56 | 16.15 | 16.62 |
| | 12H | 9.29 | 9.83 | 9.78 | 10.31 | 10.79 | 15.27 | 15.80 | 15.75 | 16.29 | 16.76 |
| 8H | 4H | 8.23 | 8.84 | 8.70 | 9.29 | 9.76 | 14.74 | 15.35 | 15.21 | 15.80 | 16.27 |
| | 6H | 9.75 | 10.25 | 10.26 | 10.75 | 11.23 | 15.08 | 15.58 | 15.58 | 16.08 | 16.56 |
| | 8H | 10.53 | 10.98 | 11.05 | 11.50 | 11.99 | 15.31 | 15.76 | 15.84 | 16.28 | 16.77 |
| | 12H | 11.33 | 11.73 | 11.85 | 12.23 | 12.80 | 15.65 | 16.05 | 16.16 | 16.54 | 17.11 |
| 12H | 4H | 8.41 | 8.95 | 8.89 | 9.43 | 9.90 | 14.72 | 15.26 | 15.21 | 15.75 | 16.22 |
| | 6H | 10.07 | 10.52 | 10.59 | 11.04 | 11.53 | 15.10 | 15.55 | 15.62 | 16.07 | 16.56 |
| | 8H | 11.03 | 11.43 | 11.54 | 11.92 | 12.49 | 15.41 | 15.81 | 15.93 | 16.30 | 16.88 |