

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: P1059141

Luminaire Tested: S123RDRP-S1165D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059141
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: S123RDRP-S1165D935-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

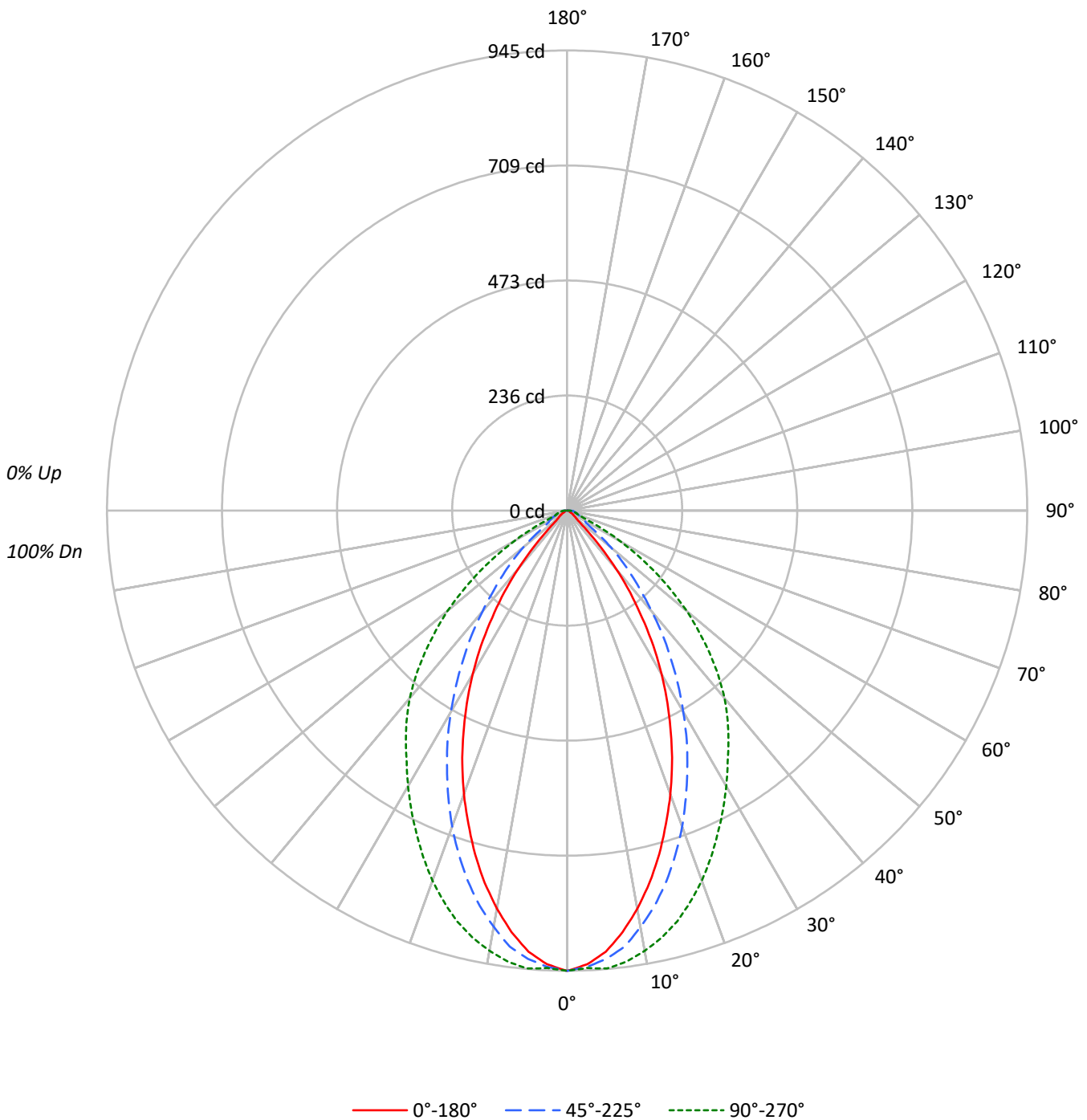
Lumens per Lamp: N/A
Luminaire Lumens: 1134.9 lumens
Efficiency: N/A
Efficacy: 27.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
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 | 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 | | | | |
| 2 | 105 | 99 | 94 | 90 | 102 | 97 | 92 | 88 | 94 | 90 | 87 | 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° | 11099 | 11099 | 11099 |
| 5° | 10717 | 10893 | 11127 |
| 10° | 9893 | 10352 | 10945 |
| 15° | 8879 | 9573 | 10615 |
| 20° | 7745 | 8630 | 10104 |
| 25° | 6534 | 7564 | 9479 |
| 30° | 5254 | 6468 | 8858 |
| 35° | 3846 | 5324 | 8280 |
| 40° | 2399 | 4151 | 7710 |
| 45° | 908 | 3094 | 6868 |
| 50° | 431 | 2134 | 5855 |
| 55° | 330 | 1169 | 4526 |
| 60° | 233 | 991 | 2976 |
| 65° | 172 | 864 | 1242 |
| 70° | 172 | 810 | 810 |
| 75° | 227 | 844 | 844 |
| 80° | 338 | 1008 | 926 |
| 85° | 674 | 1671 | 1334 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6868 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 86.8 | 7.6 |
| 10°-20° | 222.5 | 19.6 |
| 20°-30° | 275.4 | 24.3 |
| 30°-40° | 246.9 | 21.8 |
| 40°-50° | 161.9 | 14.3 |
| 50°-60° | 81.0 | 7.1 |
| 60°-70° | 31.6 | 2.8 |
| 70°-80° | 17.8 | 1.6 |
| 80°-90° | 11.0 | 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° | 584.7 | 51.5 |
| 0°-40° | 831.6 | 73.3 |
| 0°-60° | 1074.5 | 94.7 |
| 0°-90° | 1134.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1134.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 945 | 945 | 945 | 945 | 945 | |
| 5° | 909 | 924 | 924 | 934 | 944 | 84 |
| 15° | 730 | 760 | 788 | 840 | 873 | 203 |
| 25° | 504 | 535 | 584 | 667 | 732 | 230 |
| 35° | 268 | 304 | 371 | 483 | 578 | 167 |
| 45° | 55 | 88 | 186 | 319 | 414 | 52 |
| 55° | 16 | 20 | 57 | 156 | 221 | 15 |
| 65° | 6 | 19 | 31 | 41 | 45 | 6 |
| 75° | 5 | 19 | 19 | 19 | 19 | 5 |
| 85° | 5 | 12 | 12 | 12 | 10 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 945.2 | 945.2 | 945.2 | 945.2 | 945.2 |
| 2.5° | 932.8 | 946.5 | 937.8 | 939.0 | 940.3 |
| 5° | 909.2 | 924.1 | 924.1 | 934.1 | 944.0 |
| 7.5° | 873.2 | 890.6 | 903.0 | 920.4 | 934.1 |
| 10° | 829.7 | 850.8 | 868.2 | 899.3 | 917.9 |
| 12.5° | 782.5 | 808.6 | 831.0 | 872.0 | 898.0 |
| 15° | 730.4 | 760.2 | 787.5 | 839.7 | 873.2 |
| 17.5° | 674.5 | 704.3 | 740.3 | 801.2 | 842.1 |
| 20° | 619.8 | 649.6 | 690.6 | 758.9 | 808.6 |
| 22.5° | 562.7 | 593.7 | 637.2 | 713.0 | 771.3 |
| 25° | 504.3 | 535.3 | 583.8 | 667.0 | 731.6 |
| 27.5° | 445.9 | 477.0 | 531.6 | 622.3 | 693.1 |
| 30° | 387.5 | 418.6 | 477.0 | 573.8 | 653.3 |
| 32.5° | 329.2 | 362.7 | 423.6 | 529.1 | 613.6 |
| 35° | 268.3 | 304.3 | 371.4 | 483.2 | 577.6 |
| 37.5° | 212.4 | 245.9 | 321.7 | 443.4 | 541.6 |
| 40° | 156.5 | 192.5 | 270.8 | 404.9 | 503.0 |
| 42.5° | 101.9 | 140.4 | 224.8 | 362.7 | 459.6 |
| 45° | 54.7 | 88.2 | 186.3 | 319.2 | 413.6 |
| 47.5° | 29.8 | 48.4 | 150.3 | 273.3 | 366.4 |
| 50° | 23.6 | 27.3 | 116.8 | 233.5 | 320.5 |
| 52.5° | 19.9 | 22.4 | 83.2 | 196.3 | 269.5 |
| 55° | 16.1 | 19.9 | 57.1 | 156.5 | 221.1 |
| 57.5° | 13.7 | 17.4 | 44.7 | 121.7 | 172.7 |
| 60° | 9.9 | 14.9 | 42.2 | 89.4 | 126.7 |
| 62.5° | 7.5 | 16.1 | 37.3 | 62.1 | 83.2 |
| 65° | 6.2 | 18.6 | 31.1 | 41.0 | 44.7 |
| 67.5° | 5.0 | 19.9 | 27.3 | 26.1 | 26.1 |
| 70° | 5.0 | 18.6 | 23.6 | 22.4 | 23.6 |
| 72.5° | 5.0 | 19.9 | 21.1 | 19.9 | 21.1 |
| 75° | 5.0 | 18.6 | 18.6 | 18.6 | 18.6 |
| 77.5° | 5.0 | 17.4 | 17.4 | 16.1 | 16.1 |
| 80° | 5.0 | 14.9 | 14.9 | 14.9 | 13.7 |
| 82.5° | 5.0 | 13.7 | 13.7 | 13.7 | 11.2 |
| 85° | 5.0 | 12.4 | 12.4 | 12.4 | 9.9 |
| 87.5° | 3.7 | 11.2 | 12.4 | 11.2 | 7.5 |
| 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 | 0.72 | 1.98 | 1.09 | 2.29 | 2.61 | 14.97 | 16.22 | 15.33 | 16.53 | 16.85 |
| | 3H | 3.06 | 4.17 | 3.44 | 4.50 | 4.87 | 15.05 | 16.16 | 15.43 | 16.49 | 16.85 |
| | 4H | 4.16 | 5.20 | 4.57 | 5.55 | 5.93 | 15.12 | 16.16 | 15.53 | 16.51 | 16.89 |
| | 6H | 5.16 | 6.11 | 5.57 | 6.48 | 6.87 | 15.23 | 16.18 | 15.64 | 16.55 | 16.94 |
| | 8H | 5.64 | 6.54 | 6.07 | 6.93 | 7.34 | 15.29 | 16.18 | 15.72 | 16.58 | 16.98 |
| | 12H | 6.20 | 7.06 | 6.64 | 7.44 | 7.87 | 15.37 | 16.23 | 15.80 | 16.61 | 17.04 |
| 4H | 2H | 3.98 | 5.01 | 4.38 | 5.36 | 5.75 | 14.82 | 15.85 | 15.22 | 16.21 | 16.59 |
| | 3H | 6.29 | 7.14 | 6.71 | 7.54 | 7.95 | 15.00 | 15.84 | 15.41 | 16.25 | 16.65 |
| | 4H | 7.66 | 8.41 | 8.10 | 8.84 | 9.28 | 15.15 | 15.90 | 15.58 | 16.32 | 16.77 |
| | 6H | 8.75 | 9.40 | 9.21 | 9.85 | 10.32 | 15.37 | 16.02 | 15.84 | 16.47 | 16.94 |
| | 8H | 9.21 | 9.82 | 9.68 | 10.27 | 10.74 | 15.50 | 16.11 | 15.97 | 16.56 | 17.03 |
| | 12H | 9.70 | 10.24 | 10.19 | 10.73 | 11.20 | 15.67 | 16.21 | 16.16 | 16.69 | 17.17 |
| 8H | 4H | 8.63 | 9.24 | 9.10 | 9.69 | 10.16 | 15.14 | 15.75 | 15.62 | 16.20 | 16.67 |
| | 6H | 10.16 | 10.65 | 10.66 | 11.15 | 11.63 | 15.48 | 15.98 | 15.99 | 16.48 | 16.96 |
| | 8H | 10.93 | 11.38 | 11.46 | 11.90 | 12.39 | 15.72 | 16.16 | 16.24 | 16.68 | 17.17 |
| | 12H | 11.74 | 12.14 | 12.25 | 12.63 | 13.20 | 16.05 | 16.45 | 16.57 | 16.94 | 17.52 |
| 12H | 4H | 8.81 | 9.35 | 9.30 | 9.83 | 10.31 | 15.13 | 15.67 | 15.62 | 16.15 | 16.63 |
| | 6H | 10.47 | 10.92 | 10.99 | 11.44 | 11.93 | 15.50 | 15.95 | 16.02 | 16.47 | 16.96 |
| | 8H | 11.43 | 11.83 | 11.95 | 12.32 | 12.90 | 15.81 | 16.21 | 16.33 | 16.71 | 17.28 |