

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: P1059546

Luminaire Tested: S123RDRP-H1165D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059546
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-H1165D935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

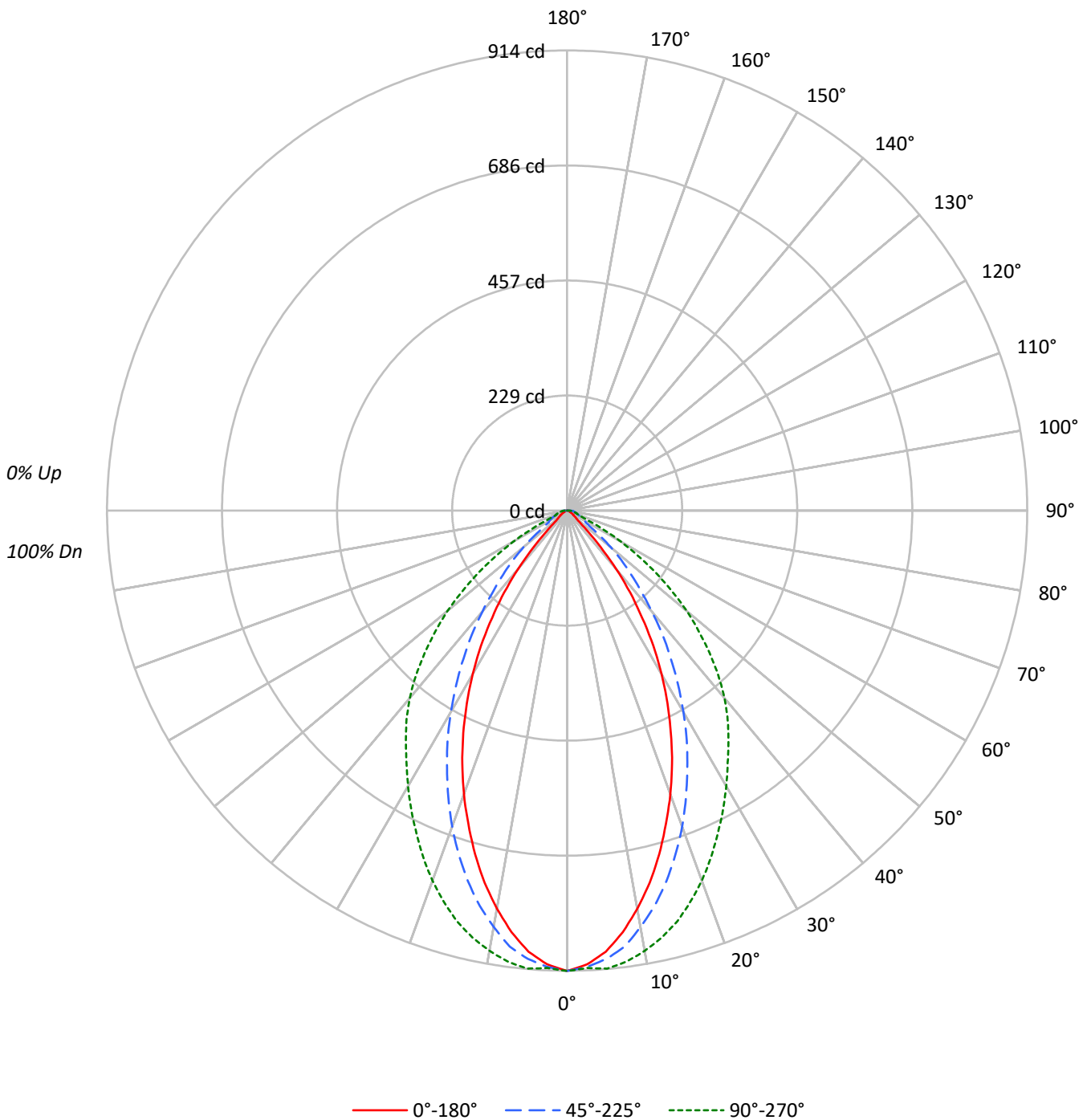
Lumens per Lamp: N/A
Luminaire Lumens: 1097.7 lumens
Efficiency: N/A
Efficacy: 30.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | 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 | 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° | 10737 | 10737 | 10737 |
| 5° | 10367 | 10537 | 10764 |
| 10° | 9570 | 10015 | 10587 |
| 15° | 8589 | 9261 | 10269 |
| 20° | 7493 | 8347 | 9774 |
| 25° | 6320 | 7316 | 9169 |
| 30° | 5083 | 6256 | 8569 |
| 35° | 3720 | 5151 | 8009 |
| 40° | 2321 | 4015 | 7459 |
| 45° | 878 | 2992 | 6644 |
| 50° | 417 | 2062 | 5663 |
| 55° | 319 | 1132 | 4379 |
| 60° | 225 | 961 | 2879 |
| 65° | 167 | 834 | 1203 |
| 70° | 165 | 783 | 783 |
| 75° | 218 | 817 | 817 |
| 80° | 325 | 974 | 893 |
| 85° | 647 | 1617 | 1293 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6644 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.9 | 7.6 |
| 10°-20° | 215.2 | 19.6 |
| 20°-30° | 266.4 | 24.3 |
| 30°-40° | 238.8 | 21.8 |
| 40°-50° | 156.6 | 14.3 |
| 50°-60° | 78.4 | 7.1 |
| 60°-70° | 30.5 | 2.8 |
| 70°-80° | 17.2 | 1.6 |
| 80°-90° | 10.6 | 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° | 565.6 | 51.5 |
| 0°-40° | 804.4 | 73.3 |
| 0°-60° | 1039.4 | 94.7 |
| 0°-90° | 1097.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1097.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 914 | 914 | 914 | 914 | 914 | |
| 5° | 880 | 894 | 894 | 904 | 913 | 81 |
| 15° | 706 | 735 | 762 | 812 | 845 | 197 |
| 25° | 488 | 518 | 565 | 645 | 708 | 223 |
| 35° | 260 | 294 | 359 | 467 | 559 | 162 |
| 45° | 53 | 85 | 180 | 309 | 400 | 50 |
| 55° | 16 | 19 | 55 | 151 | 214 | 14 |
| 65° | 6 | 18 | 30 | 40 | 43 | 6 |
| 75° | 5 | 18 | 18 | 18 | 18 | 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° | 914.4 | 914.4 | 914.4 | 914.4 | 914.4 |
| 2.5° | 902.3 | 915.6 | 907.1 | 908.3 | 909.5 |
| 5° | 879.5 | 893.9 | 893.9 | 903.5 | 913.2 |
| 7.5° | 844.7 | 861.5 | 873.5 | 890.3 | 903.5 |
| 10° | 802.6 | 823.0 | 839.9 | 869.9 | 887.9 |
| 12.5° | 757.0 | 782.2 | 803.8 | 843.5 | 868.7 |
| 15° | 706.5 | 735.3 | 761.8 | 812.2 | 844.7 |
| 17.5° | 652.4 | 681.3 | 716.1 | 775.0 | 814.6 |
| 20° | 599.6 | 628.4 | 668.0 | 734.1 | 782.2 |
| 22.5° | 544.3 | 574.3 | 616.4 | 689.7 | 746.1 |
| 25° | 487.8 | 517.9 | 564.7 | 645.2 | 707.7 |
| 27.5° | 431.3 | 461.4 | 514.2 | 602.0 | 670.4 |
| 30° | 374.9 | 404.9 | 461.4 | 555.1 | 632.0 |
| 32.5° | 318.4 | 350.8 | 409.7 | 511.8 | 593.6 |
| 35° | 259.5 | 294.4 | 359.3 | 467.4 | 558.7 |
| 37.5° | 205.5 | 237.9 | 311.2 | 428.9 | 523.9 |
| 40° | 151.4 | 186.2 | 261.9 | 391.7 | 486.6 |
| 42.5° | 98.5 | 135.8 | 217.5 | 350.8 | 444.6 |
| 45° | 52.9 | 85.3 | 180.2 | 308.8 | 400.1 |
| 47.5° | 28.8 | 46.9 | 145.4 | 264.3 | 354.4 |
| 50° | 22.8 | 26.4 | 112.9 | 225.9 | 310.0 |
| 52.5° | 19.2 | 21.6 | 80.5 | 189.8 | 260.7 |
| 55° | 15.6 | 19.2 | 55.3 | 151.4 | 213.9 |
| 57.5° | 13.2 | 16.8 | 43.3 | 117.7 | 167.0 |
| 60° | 9.6 | 14.4 | 40.9 | 86.5 | 122.6 |
| 62.5° | 7.2 | 15.6 | 36.0 | 60.1 | 80.5 |
| 65° | 6.0 | 18.0 | 30.0 | 39.7 | 43.3 |
| 67.5° | 4.8 | 19.2 | 26.4 | 25.2 | 25.2 |
| 70° | 4.8 | 18.0 | 22.8 | 21.6 | 22.8 |
| 72.5° | 4.8 | 19.2 | 20.4 | 19.2 | 20.4 |
| 75° | 4.8 | 18.0 | 18.0 | 18.0 | 18.0 |
| 77.5° | 4.8 | 16.8 | 16.8 | 15.6 | 15.6 |
| 80° | 4.8 | 14.4 | 14.4 | 14.4 | 13.2 |
| 82.5° | 4.8 | 13.2 | 13.2 | 13.2 | 10.8 |
| 85° | 4.8 | 12.0 | 12.0 | 12.0 | 9.6 |
| 87.5° | 3.6 | 10.8 | 12.0 | 10.8 | 7.2 |
| 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 | 0.60 | 1.85 | 0.96 | 2.16 | 2.48 | 14.85 | 16.11 | 15.21 | 16.42 | 16.73 |
| | 3H | 2.93 | 4.04 | 3.31 | 4.37 | 4.73 | 14.93 | 16.04 | 15.31 | 16.37 | 16.74 |
| | 4H | 4.03 | 5.06 | 4.43 | 5.42 | 5.80 | 15.01 | 16.04 | 15.41 | 16.39 | 16.78 |
| | 6H | 5.02 | 5.97 | 5.44 | 6.34 | 6.74 | 15.11 | 16.06 | 15.53 | 16.43 | 16.83 |
| | 8H | 5.50 | 6.40 | 5.93 | 6.79 | 7.20 | 15.17 | 16.07 | 15.60 | 16.46 | 16.86 |
| | 12H | 6.06 | 6.92 | 6.49 | 7.30 | 7.73 | 15.25 | 16.11 | 15.68 | 16.49 | 16.92 |
| 4H | 2H | 3.85 | 4.88 | 4.25 | 5.23 | 5.61 | 14.70 | 15.74 | 15.11 | 16.09 | 16.47 |
| | 3H | 6.16 | 7.01 | 6.58 | 7.41 | 7.82 | 14.88 | 15.72 | 15.29 | 16.13 | 16.53 |
| | 4H | 7.53 | 8.29 | 7.97 | 8.71 | 9.15 | 15.03 | 15.79 | 15.47 | 16.21 | 16.65 |
| | 6H | 8.62 | 9.27 | 9.08 | 9.72 | 10.19 | 15.25 | 15.91 | 15.72 | 16.35 | 16.82 |
| | 8H | 9.08 | 9.69 | 9.55 | 10.13 | 10.61 | 15.38 | 15.99 | 15.85 | 16.44 | 16.91 |
| | 12H | 9.57 | 10.11 | 10.06 | 10.59 | 11.07 | 15.55 | 16.09 | 16.04 | 16.57 | 17.05 |
| 8H | 4H | 8.51 | 9.12 | 8.98 | 9.57 | 10.04 | 15.03 | 15.64 | 15.50 | 16.08 | 16.56 |
| | 6H | 10.03 | 10.53 | 10.53 | 11.03 | 11.51 | 15.36 | 15.86 | 15.87 | 16.36 | 16.84 |
| | 8H | 10.80 | 11.25 | 11.33 | 11.77 | 12.26 | 15.60 | 16.05 | 16.12 | 16.56 | 17.05 |
| | 12H | 11.61 | 12.00 | 12.12 | 12.50 | 13.07 | 15.93 | 16.33 | 16.45 | 16.82 | 17.40 |
| 12H | 4H | 8.68 | 9.22 | 9.17 | 9.71 | 10.18 | 15.01 | 15.55 | 15.50 | 16.03 | 16.51 |
| | 6H | 10.34 | 10.79 | 10.87 | 11.31 | 11.80 | 15.38 | 15.83 | 15.91 | 16.35 | 16.84 |
| | 8H | 11.30 | 11.70 | 11.82 | 12.19 | 12.77 | 15.69 | 16.09 | 16.21 | 16.59 | 17.16 |