

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: P1059094

Luminaire Tested: S123RDRP-S1165D835-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059094
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1165D835-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

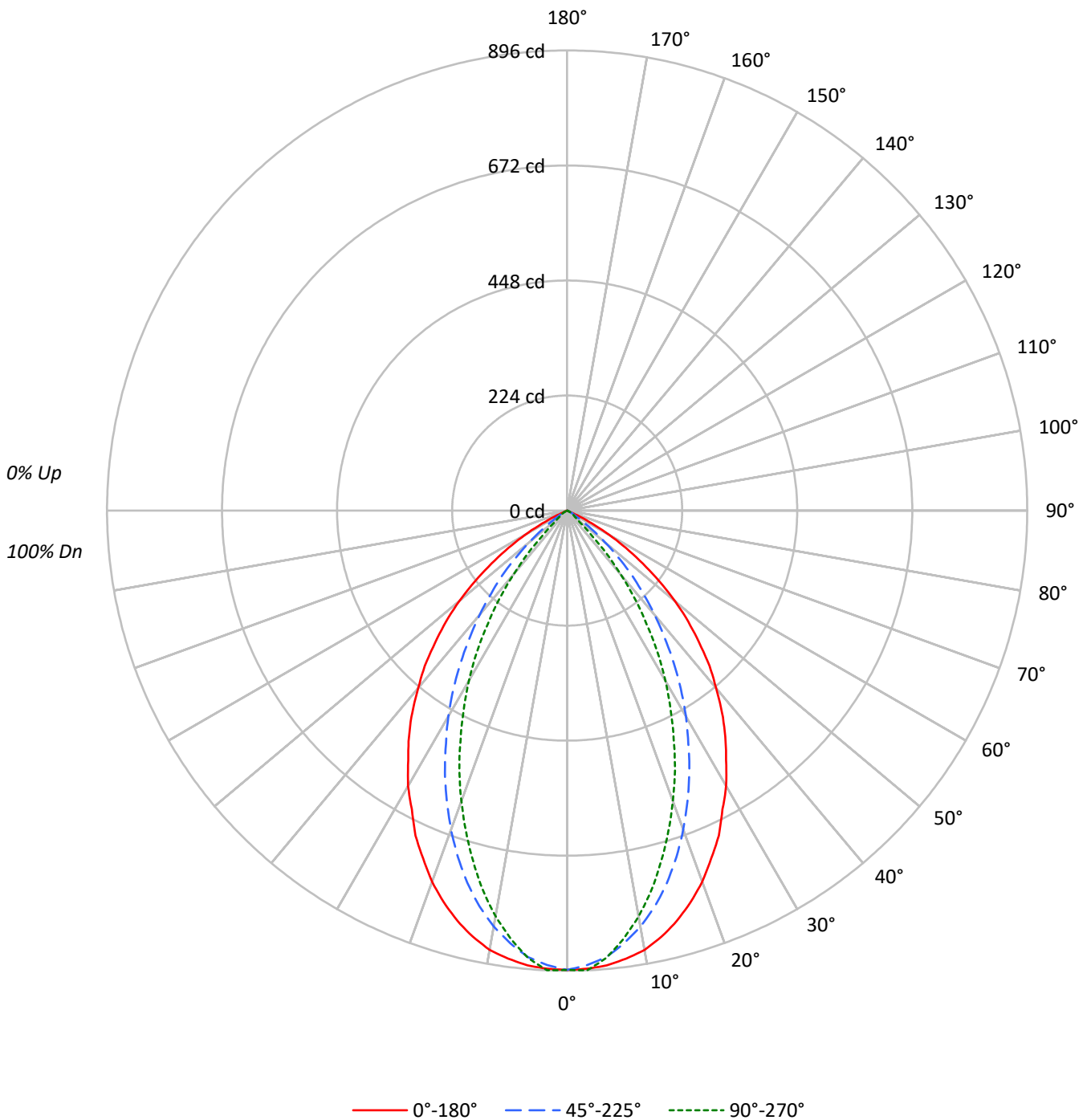
Lumens per Lamp: N/A
Luminaire Lumens: 1020.6 lumens
Efficiency: N/A
Efficacy: 24.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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 | 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 | 113 | 110 | 107 | 104 | 110 | 107 | 105 | 103 | 103 | 101 | 100 | 100 | 98 | 97 | 96 | 95 | 94 | 92 | | | | | | | | | | | 92 | | | | | | | | | | | | | | | | | |
| 2 | 106 | 101 | 96 | 92 | 104 | 99 | 95 | 91 | 96 | 92 | 89 | 93 | 90 | 87 | 90 | 87 | 85 | 84 | | | | | | | | | | | 84 | | | | | | | | | | | | | | | | | |
| 3 | 100 | 92 | 87 | 82 | 98 | 91 | 86 | 82 | 88 | 84 | 80 | 86 | 82 | 79 | 83 | 80 | 78 | 76 | | | | | | | | | | | 76 | | | | | | | | | | | | | | | | | |
| 4 | 94 | 85 | 79 | 74 | 92 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 75 | 72 | 78 | 74 | 71 | 69 | | | | | | | | | | | 69 | | | | | | | | | | | | | | | | | |
| 5 | 88 | 79 | 72 | 67 | 86 | 78 | 71 | 67 | 76 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 | | | | | | | | | | | 63 | | | | | | | | | | | | | | | | | |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 66 | 61 | 70 | 65 | 60 | 69 | 64 | 60 | 67 | 63 | 60 | 58 | | | | | | | | | | | 58 | | | | | | | | | | | | | | | | | |
| 7 | 78 | 68 | 61 | 56 | 77 | 67 | 60 | 56 | 66 | 60 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 53 | | | | | | | | | | | 53 | | | | | | | | | | | | | | | | | |
| 8 | 74 | 63 | 56 | 52 | 72 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 59 | 54 | 51 | 49 | | | | | | | | | | | 49 | | | | | | | | | | | | | | | | | |
| 9 | 70 | 59 | 52 | 48 | 68 | 58 | 52 | 48 | 57 | 52 | 47 | 56 | 51 | 47 | 55 | 51 | 47 | 46 | | | | | | | | | | | 46 | | | | | | | | | | | | | | | | | |
| 10 | 66 | 55 | 49 | 44 | 65 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 | | | | | | | | | | | 42 | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10502 | 10502 | 10502 |
| 5° | 10475 | 10288 | 10306 |
| 10° | 10356 | 9806 | 9565 |
| 15° | 10050 | 9122 | 8597 |
| 20° | 9611 | 8261 | 7523 |
| 25° | 9050 | 7297 | 6363 |
| 30° | 8397 | 6268 | 5194 |
| 35° | 7701 | 5182 | 3860 |
| 40° | 6910 | 4062 | 2473 |
| 45° | 6028 | 2966 | 1028 |
| 50° | 5000 | 1763 | 395 |
| 55° | 3685 | 737 | 295 |
| 60° | 2233 | 270 | 169 |
| 65° | 600 | 161 | 81 |
| 70° | 0 | 48 | 48 |
| 75° | 0 | 0 | 64 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6028 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 82.3 | 8.1 |
| 10°-20° | 212.5 | 20.8 |
| 20°-30° | 264.8 | 25.9 |
| 30°-40° | 236.8 | 23.2 |
| 40°-50° | 149.4 | 14.6 |
| 50°-60° | 62.5 | 6.1 |
| 60°-70° | 11.8 | 1.2 |
| 70°-80° | 0.4 | 0.0 |
| 80°-90° | 0.0 | 0.0 |
| 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° | 559.7 | 54.8 |
| 0°-40° | 796.5 | 78.0 |
| 0°-60° | 1008.5 | 98.8 |
| 0°-90° | 1020.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1020.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 894 | 894 | 894 | 894 | 894 | |
| 5° | 889 | 887 | 873 | 876 | 874 | 84 |
| 15° | 827 | 807 | 750 | 719 | 707 | 232 |
| 25° | 698 | 642 | 563 | 514 | 491 | 320 |
| 35° | 537 | 460 | 362 | 297 | 269 | 335 |
| 45° | 363 | 282 | 179 | 95 | 62 | 280 |
| 55° | 180 | 124 | 36 | 14 | 14 | 161 |
| 65° | 22 | 16 | 6 | 3 | 3 | 30 |
| 75° | 0 | 0 | 0 | 0 | 1 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 894.4 | 894.4 | 894.4 | 894.4 | 894.4 |
| 2.5° | 893.0 | 894.4 | 885.8 | 894.4 | 895.9 |
| 5° | 888.7 | 887.2 | 872.8 | 875.7 | 874.3 |
| 7.5° | 880.0 | 875.7 | 849.8 | 844.0 | 841.1 |
| 10° | 868.5 | 857.0 | 822.4 | 808.0 | 802.2 |
| 12.5° | 849.8 | 833.9 | 789.3 | 766.2 | 757.6 |
| 15° | 826.7 | 806.6 | 750.4 | 718.7 | 707.2 |
| 17.5° | 799.4 | 770.6 | 707.2 | 672.6 | 655.3 |
| 20° | 769.1 | 728.8 | 661.1 | 619.3 | 602.0 |
| 22.5° | 733.1 | 688.5 | 612.1 | 567.5 | 548.8 |
| 25° | 698.5 | 642.4 | 563.2 | 514.2 | 491.1 |
| 27.5° | 655.3 | 596.3 | 511.3 | 460.9 | 436.4 |
| 30° | 619.3 | 551.6 | 462.3 | 406.2 | 383.1 |
| 32.5° | 576.1 | 505.5 | 411.9 | 350.0 | 328.4 |
| 35° | 537.2 | 459.5 | 361.5 | 296.7 | 269.3 |
| 37.5° | 495.5 | 414.8 | 311.1 | 243.4 | 217.5 |
| 40° | 450.8 | 370.2 | 265.0 | 190.1 | 161.3 |
| 42.5° | 410.5 | 325.5 | 218.9 | 141.1 | 112.3 |
| 45° | 363.0 | 282.3 | 178.6 | 95.1 | 61.9 |
| 47.5° | 319.7 | 242.0 | 135.4 | 53.3 | 33.1 |
| 50° | 273.7 | 200.2 | 96.5 | 27.4 | 21.6 |
| 52.5° | 226.1 | 159.9 | 63.4 | 18.7 | 17.3 |
| 55° | 180.0 | 123.9 | 36.0 | 14.4 | 14.4 |
| 57.5° | 135.4 | 89.3 | 18.7 | 11.5 | 10.1 |
| 60° | 95.1 | 59.1 | 11.5 | 8.6 | 7.2 |
| 62.5° | 54.7 | 34.6 | 8.6 | 5.8 | 5.8 |
| 65° | 21.6 | 15.8 | 5.8 | 2.9 | 2.9 |
| 67.5° | 1.4 | 4.3 | 2.9 | 1.4 | 1.4 |
| 70° | 0.0 | 0.0 | 1.4 | 1.4 | 1.4 |
| 72.5° | 0.0 | 0.0 | 1.4 | 1.4 | 1.4 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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 | 13.36 | 14.54 | 13.73 | 14.85 | 15.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 |
| | 3H | 13.20 | 14.23 | 13.58 | 14.56 | 14.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 |
| | 4H | 13.12 | 14.07 | 13.52 | 14.42 | 14.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 13.02 | 13.90 | 13.44 | 14.27 | 14.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 12.97 | 13.80 | 13.41 | 14.19 | 14.59 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 12.92 | 13.71 | 13.36 | 14.09 | 14.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4H | 2H | 13.12 | 14.07 | 13.53 | 14.43 | 14.81 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 |
| | 3H | 12.96 | 13.72 | 13.37 | 14.13 | 14.54 | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 |
| | 4H | 12.85 | 13.53 | 13.29 | 13.95 | 14.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 |
| | 6H | 12.75 | 13.34 | 13.22 | 13.79 | 14.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 12.69 | 13.23 | 13.16 | 13.68 | 14.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 12.63 | 13.11 | 13.12 | 13.59 | 14.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8H | 4H | 12.69 | 13.23 | 13.16 | 13.68 | 14.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 12.57 | 13.01 | 13.08 | 13.51 | 14.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 12.50 | 12.90 | 13.03 | 13.42 | 13.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 12H | 12.45 | 12.80 | 12.97 | 13.29 | 13.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12H | 4H | 12.63 | 13.11 | 13.12 | 13.60 | 14.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6H | 12.50 | 12.90 | 13.03 | 13.42 | 13.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 8H | 12.45 | 12.80 | 12.97 | 13.29 | 13.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |