

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: P1059007

Luminaire Tested: S123RDRP-S1000D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059007
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDRP-S1000D830-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

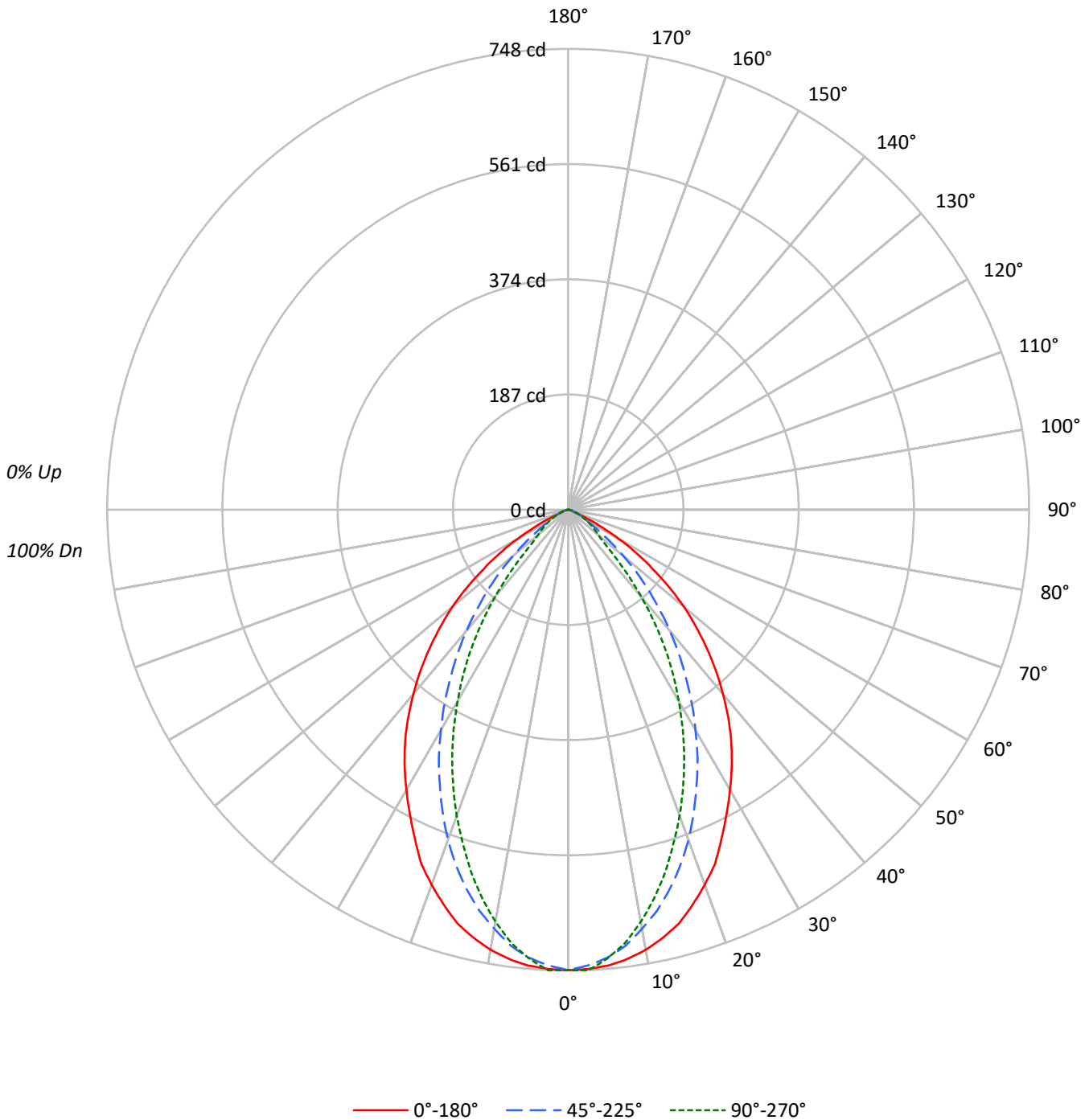
Lumens per Lamp: N/A
Luminaire Lumens: 964.8 lumens
Efficiency: N/A
Efficacy: 27.6 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 103 | 100 | 98 | 99 | 97 | 95 | 95 | 94 | 93 | 91 |
| 2 | 105 | 99 | 94 | 90 | 103 | 97 | 93 | 89 | 94 | 90 | 87 | 91 | 88 | 85 | 88 | 86 | 83 | 82 |
| 3 | 98 | 90 | 84 | 80 | 96 | 89 | 83 | 79 | 86 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 73 |
| 4 | 92 | 83 | 76 | 71 | 90 | 82 | 75 | 70 | 79 | 74 | 70 | 77 | 73 | 69 | 75 | 71 | 68 | 66 |
| 5 | 86 | 76 | 69 | 64 | 84 | 75 | 68 | 63 | 73 | 67 | 63 | 71 | 66 | 62 | 70 | 65 | 62 | 60 |
| 6 | 81 | 70 | 63 | 58 | 79 | 69 | 62 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 65 | 60 | 56 | 55 |
| 7 | 76 | 65 | 58 | 53 | 74 | 64 | 57 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 8 | 71 | 60 | 53 | 48 | 70 | 60 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 |
| 9 | 67 | 56 | 49 | 45 | 66 | 56 | 49 | 44 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 63 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8775 | 8775 | 8775 |
| 5° | 8754 | 8605 | 8618 |
| 10° | 8648 | 8234 | 8097 |
| 15° | 8451 | 7749 | 7397 |
| 20° | 8095 | 7126 | 6607 |
| 25° | 7629 | 6385 | 5771 |
| 30° | 7121 | 5600 | 4862 |
| 35° | 6617 | 4776 | 3913 |
| 40° | 5994 | 3936 | 2837 |
| 45° | 5282 | 3054 | 1710 |
| 50° | 4479 | 2134 | 1162 |
| 55° | 3411 | 1280 | 970 |
| 60° | 2229 | 815 | 761 |
| 65° | 931 | 611 | 611 |
| 70° | 319 | 436 | 477 |
| 75° | 263 | 313 | 367 |
| 80° | 156 | 237 | 311 |
| 85° | 162 | 162 | 310 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5282 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 69.0 | 7.2 |
| 10°-20° | 180.6 | 18.7 |
| 20°-30° | 231.6 | 24.0 |
| 30°-40° | 217.4 | 22.5 |
| 40°-50° | 151.6 | 15.7 |
| 50°-60° | 78.4 | 8.1 |
| 60°-70° | 26.8 | 2.8 |
| 70°-80° | 7.7 | 0.8 |
| 80°-90° | 1.6 | 0.2 |
| 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° | 481.3 | 49.9 |
| 0°-40° | 698.6 | 72.4 |
| 0°-60° | 928.7 | 96.3 |
| 0°-90° | 964.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 964.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 747 | 747 | 747 | 747 | 747 | |
| 5° | 743 | 742 | 730 | 733 | 731 | 70 |
| 15° | 695 | 678 | 637 | 617 | 608 | 195 |
| 25° | 589 | 552 | 493 | 459 | 445 | 271 |
| 35° | 462 | 405 | 333 | 290 | 273 | 287 |
| 45° | 318 | 260 | 184 | 127 | 103 | 245 |
| 55° | 167 | 125 | 62 | 49 | 47 | 150 |
| 65° | 34 | 29 | 22 | 21 | 22 | 40 |
| 75° | 6 | 6 | 7 | 8 | 8 | 6 |
| 85° | 1 | 1 | 1 | 1 | 2 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1059007

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 747.3 | 747.3 | 747.3 | 747.3 | 747.3 |
| 2.5° | 746.1 | 747.3 | 740.4 | 747.3 | 748.5 |
| 5° | 742.7 | 741.5 | 730.0 | 733.4 | 731.1 |
| 7.5° | 735.7 | 732.3 | 713.8 | 709.1 | 709.1 |
| 10° | 725.3 | 718.4 | 690.6 | 682.5 | 679.1 |
| 12.5° | 711.4 | 702.2 | 666.3 | 651.3 | 645.5 |
| 15° | 695.2 | 677.9 | 637.4 | 616.6 | 608.5 |
| 17.5° | 672.1 | 649.0 | 605.0 | 580.7 | 568.0 |
| 20° | 647.8 | 618.9 | 570.3 | 541.4 | 528.7 |
| 22.5° | 622.4 | 587.7 | 532.1 | 500.9 | 487.0 |
| 25° | 588.8 | 551.8 | 492.8 | 459.3 | 445.4 |
| 27.5° | 556.4 | 517.1 | 454.6 | 416.5 | 402.6 |
| 30° | 525.2 | 478.9 | 413.0 | 376.0 | 358.6 |
| 32.5° | 494.0 | 441.9 | 373.7 | 333.2 | 317.0 |
| 35° | 461.6 | 404.9 | 333.2 | 290.4 | 273.0 |
| 37.5° | 426.9 | 369.0 | 295.0 | 248.7 | 227.9 |
| 40° | 391.0 | 330.8 | 256.8 | 204.8 | 185.1 |
| 42.5° | 355.1 | 296.1 | 218.6 | 165.4 | 142.3 |
| 45° | 318.1 | 260.3 | 183.9 | 127.2 | 103.0 |
| 47.5° | 281.1 | 224.4 | 150.4 | 92.5 | 77.5 |
| 50° | 245.2 | 190.9 | 116.8 | 68.3 | 63.6 |
| 52.5° | 205.9 | 158.5 | 87.9 | 56.7 | 55.5 |
| 55° | 166.6 | 124.9 | 62.5 | 48.6 | 47.4 |
| 57.5° | 131.9 | 97.2 | 45.1 | 40.5 | 39.3 |
| 60° | 94.9 | 69.4 | 34.7 | 33.5 | 32.4 |
| 62.5° | 62.5 | 47.4 | 27.8 | 26.6 | 26.6 |
| 65° | 33.5 | 28.9 | 22.0 | 20.8 | 22.0 |
| 67.5° | 13.9 | 16.2 | 16.2 | 17.4 | 17.4 |
| 70° | 9.3 | 10.4 | 12.7 | 13.9 | 13.9 |
| 72.5° | 6.9 | 8.1 | 9.3 | 10.4 | 10.4 |
| 75° | 5.8 | 5.8 | 6.9 | 8.1 | 8.1 |
| 77.5° | 3.5 | 4.6 | 4.6 | 5.8 | 6.9 |
| 80° | 2.3 | 3.5 | 3.5 | 4.6 | 4.6 |
| 82.5° | 1.2 | 2.3 | 2.3 | 3.5 | 3.5 |
| 85° | 1.2 | 1.2 | 1.2 | 1.2 | 2.3 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 1.2 |
| 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 | 13.88 | 15.14 | 14.25 | 15.45 | 15.77 | 7.38 | 8.64 | 7.75 | 8.96 | 9.27 |
| | 3H | 13.83 | 14.94 | 14.21 | 15.27 | 15.64 | 8.16 | 9.27 | 8.54 | 9.60 | 9.97 |
| | 4H | 13.78 | 14.81 | 14.18 | 15.16 | 15.55 | 8.36 | 9.39 | 8.77 | 9.75 | 10.13 |
| | 6H | 13.71 | 14.65 | 14.13 | 15.03 | 15.42 | 8.51 | 9.45 | 8.92 | 9.82 | 10.21 |
| | 8H | 13.67 | 14.56 | 14.10 | 14.95 | 15.36 | 8.54 | 9.43 | 8.97 | 9.83 | 10.23 |
| | 12H | 13.63 | 14.48 | 14.06 | 14.86 | 15.29 | 8.56 | 9.41 | 8.99 | 9.79 | 10.23 |
| 4H | 2H | 13.73 | 14.76 | 14.13 | 15.11 | 15.49 | 7.64 | 8.67 | 8.05 | 9.02 | 9.41 |
| | 3H | 13.71 | 14.55 | 14.13 | 14.95 | 15.36 | 8.55 | 9.39 | 8.97 | 9.79 | 10.20 |
| | 4H | 13.66 | 14.40 | 14.10 | 14.82 | 15.27 | 8.82 | 9.57 | 9.26 | 9.99 | 10.43 |
| | 6H | 13.60 | 14.24 | 14.07 | 14.69 | 15.16 | 9.04 | 9.68 | 9.50 | 10.12 | 10.59 |
| | 8H | 13.55 | 14.15 | 14.02 | 14.59 | 15.07 | 9.10 | 9.70 | 9.57 | 10.14 | 10.62 |
| | 12H | 13.51 | 14.03 | 13.99 | 14.51 | 14.99 | 9.14 | 9.66 | 9.63 | 10.15 | 10.62 |
| 8H | 4H | 13.55 | 14.14 | 14.02 | 14.59 | 15.06 | 8.81 | 9.40 | 9.28 | 9.85 | 10.32 |
| | 6H | 13.48 | 13.97 | 13.99 | 14.47 | 14.95 | 9.07 | 9.56 | 9.58 | 10.06 | 10.54 |
| | 8H | 13.43 | 13.87 | 13.96 | 14.39 | 14.88 | 9.18 | 9.62 | 9.71 | 10.14 | 10.63 |
| | 12H | 13.40 | 13.78 | 13.91 | 14.28 | 14.85 | 9.26 | 9.64 | 9.77 | 10.14 | 10.71 |
| 12H | 4H | 13.50 | 14.02 | 13.99 | 14.51 | 14.98 | 8.77 | 9.29 | 9.26 | 9.78 | 10.25 |
| | 6H | 13.43 | 13.86 | 13.95 | 14.38 | 14.87 | 9.04 | 9.47 | 9.56 | 9.99 | 10.48 |
| | 8H | 13.40 | 13.78 | 13.91 | 14.28 | 14.85 | 9.18 | 9.56 | 9.69 | 10.06 | 10.63 |