

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: P1059494

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059494
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

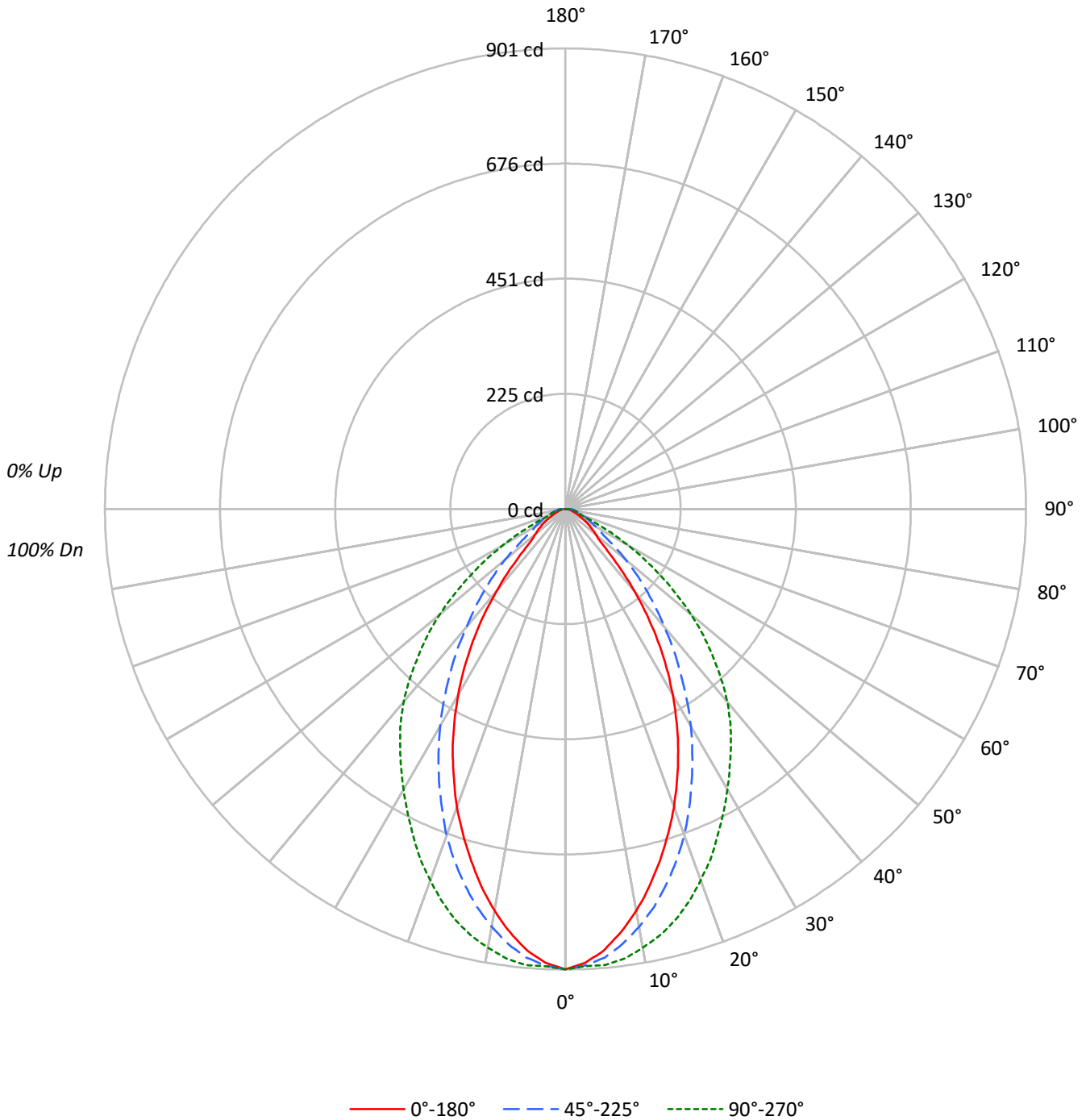
Lumens per Lamp: N/A
Luminaire Lumens: 1206.1 lumens
Efficiency: N/A
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059494

CATALOG NUMBER: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1059494

CATALOG NUMBER: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

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 | | | 100 | |
| 1 | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | 89 | |
| 2 | 104 | 98 | 92 | 88 | 102 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 84 | 81 | 79 | | | 79 | |
| 3 | 97 | 89 | 82 | 77 | 95 | 87 | 81 | 77 | 84 | 79 | 75 | 82 | 78 | 74 | 79 | 76 | 73 | 71 | | | 71 | |
| 4 | 91 | 81 | 74 | 69 | 88 | 80 | 73 | 68 | 77 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 66 | 64 | | | 64 | |
| 5 | 85 | 74 | 67 | 61 | 83 | 73 | 66 | 61 | 71 | 65 | 61 | 69 | 64 | 60 | 68 | 63 | 59 | 58 | | | 58 | |
| 6 | 79 | 68 | 61 | 56 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 | | | 52 | |
| 7 | 74 | 63 | 56 | 51 | 73 | 62 | 55 | 50 | 61 | 55 | 50 | 60 | 54 | 50 | 58 | 53 | 49 | 48 | | | 48 | |
| 8 | 70 | 58 | 51 | 46 | 69 | 58 | 51 | 46 | 57 | 50 | 46 | 56 | 50 | 46 | 54 | 49 | 45 | 44 | | | 44 | |
| 9 | 66 | 54 | 47 | 43 | 65 | 54 | 47 | 43 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | 40 | |
| 10 | 62 | 51 | 44 | 39 | 61 | 50 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | 37 | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10575 | 10575 | 10575 |
| 5° | 10213 | 10382 | 10553 |
| 10° | 9515 | 9892 | 10393 |
| 15° | 8663 | 9254 | 10117 |
| 20° | 7754 | 8494 | 9659 |
| 25° | 6762 | 7579 | 9130 |
| 30° | 5687 | 6649 | 8592 |
| 35° | 4523 | 5635 | 8085 |
| 40° | 3224 | 4594 | 7557 |
| 45° | 1921 | 3690 | 6769 |
| 50° | 1418 | 2810 | 5860 |
| 55° | 1183 | 1910 | 4655 |
| 60° | 958 | 1573 | 3274 |
| 65° | 767 | 1350 | 1753 |
| 70° | 632 | 1174 | 1085 |
| 75° | 594 | 1134 | 1012 |
| 80° | 622 | 1244 | 981 |
| 85° | 889 | 1765 | 1240 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6769 cd/sqm



TEST NUMBER: P1059494

CATALOG NUMBER: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 82.7 | 6.9 |
| 10°-20° | 214.9 | 17.8 |
| 20°-30° | 274.1 | 22.7 |
| 30°-40° | 257.9 | 21.4 |
| 40°-50° | 185.3 | 15.4 |
| 50°-60° | 106.2 | 8.8 |
| 60°-70° | 48.6 | 4.0 |
| 70°-80° | 24.4 | 2.0 |
| 80°-90° | 11.9 | 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° | 571.7 | 47.4 |
| 0°-40° | 829.6 | 68.8 |
| 0°-60° | 1121.2 | 93.0 |
| 0°-90° | 1206.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1206.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 901 | 901 | 901 | 901 | 901 | |
| 5° | 866 | 884 | 881 | 887 | 895 | 81 |
| 15° | 713 | 738 | 761 | 802 | 832 | 199 |
| 25° | 522 | 546 | 585 | 648 | 705 | 238 |
| 35° | 316 | 338 | 393 | 482 | 564 | 195 |
| 45° | 116 | 141 | 222 | 327 | 408 | 97 |
| 55° | 58 | 59 | 93 | 172 | 227 | 52 |
| 65° | 28 | 38 | 49 | 54 | 63 | 28 |
| 75° | 13 | 26 | 25 | 22 | 22 | 14 |
| 85° | 7 | 13 | 13 | 12 | 9 | 7 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1059494

CATALOG NUMBER: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 900.6 | 900.6 | 900.6 | 900.6 | 900.6 |
| 2.5° | 888.7 | 901.9 | 894.0 | 894.0 | 895.3 |
| 5° | 866.4 | 883.5 | 880.8 | 887.4 | 895.3 |
| 7.5° | 834.8 | 853.2 | 858.5 | 874.3 | 887.4 |
| 10° | 798.0 | 819.0 | 829.6 | 854.5 | 871.6 |
| 12.5° | 757.3 | 780.9 | 798.0 | 829.6 | 854.5 |
| 15° | 712.6 | 737.5 | 761.2 | 802.0 | 832.2 |
| 17.5° | 666.5 | 691.5 | 721.8 | 769.1 | 804.6 |
| 20° | 620.5 | 645.5 | 679.7 | 729.6 | 773.0 |
| 22.5° | 570.6 | 595.6 | 632.4 | 688.9 | 741.5 |
| 25° | 521.9 | 545.6 | 585.0 | 648.1 | 704.7 |
| 27.5° | 470.7 | 494.3 | 537.7 | 606.1 | 669.2 |
| 30° | 419.4 | 443.0 | 490.4 | 564.0 | 633.7 |
| 32.5° | 368.1 | 390.5 | 441.7 | 523.2 | 598.2 |
| 35° | 315.5 | 337.9 | 393.1 | 482.5 | 564.0 |
| 37.5° | 261.6 | 284.0 | 348.4 | 445.7 | 529.8 |
| 40° | 210.3 | 235.3 | 299.7 | 408.9 | 493.0 |
| 42.5° | 160.4 | 186.7 | 260.3 | 369.4 | 450.9 |
| 45° | 115.7 | 140.7 | 222.2 | 327.4 | 407.6 |
| 47.5° | 88.1 | 101.2 | 188.0 | 285.3 | 365.5 |
| 50° | 77.6 | 78.9 | 153.8 | 247.2 | 320.8 |
| 52.5° | 67.0 | 68.4 | 119.6 | 210.3 | 273.5 |
| 55° | 57.8 | 59.2 | 93.3 | 172.2 | 227.4 |
| 57.5° | 48.6 | 51.3 | 76.3 | 136.7 | 182.7 |
| 60° | 40.8 | 46.0 | 67.0 | 103.9 | 139.4 |
| 62.5° | 32.9 | 42.1 | 57.8 | 76.3 | 99.9 |
| 65° | 27.6 | 38.1 | 48.6 | 53.9 | 63.1 |
| 67.5° | 22.3 | 35.5 | 40.8 | 38.1 | 38.1 |
| 70° | 18.4 | 31.6 | 34.2 | 31.6 | 31.6 |
| 72.5° | 15.8 | 30.2 | 28.9 | 26.3 | 26.3 |
| 75° | 13.1 | 26.3 | 25.0 | 22.3 | 22.3 |
| 77.5° | 11.8 | 22.3 | 21.0 | 19.7 | 18.4 |
| 80° | 9.2 | 18.4 | 18.4 | 17.1 | 14.5 |
| 82.5° | 7.9 | 15.8 | 15.8 | 14.5 | 11.8 |
| 85° | 6.6 | 13.1 | 13.1 | 11.8 | 9.2 |
| 87.5° | 5.3 | 11.8 | 11.8 | 10.5 | 6.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1059494
 CATALOG NUMBER: S123RDR-H1165D830-X4F0-XX-UDD-SVL-S

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 | 8.18 | 9.50 | 8.55 | 9.81 | 10.13 | 15.40 | 16.72 | 15.77 | 17.03 | 17.35 |
| | 3H | 9.58 | 10.75 | 9.96 | 11.08 | 11.44 | 15.64 | 16.81 | 16.02 | 17.14 | 17.50 |
| | 4H | 10.14 | 11.23 | 10.54 | 11.58 | 11.96 | 15.74 | 16.83 | 16.15 | 17.18 | 17.57 |
| | 6H | 10.60 | 11.60 | 11.01 | 11.97 | 12.36 | 15.85 | 16.85 | 16.27 | 17.22 | 17.62 |
| | 8H | 10.78 | 11.73 | 11.21 | 12.12 | 12.53 | 15.90 | 16.85 | 16.33 | 17.24 | 17.64 |
| | 12H | 10.98 | 11.88 | 11.41 | 12.27 | 12.70 | 15.95 | 16.86 | 16.38 | 17.24 | 17.67 |
| 4H | 2H | 9.25 | 10.34 | 9.65 | 10.69 | 11.08 | 15.36 | 16.45 | 15.76 | 16.80 | 17.18 |
| | 3H | 10.94 | 11.83 | 11.35 | 12.24 | 12.64 | 15.73 | 16.62 | 16.14 | 17.03 | 17.43 |
| | 4H | 11.77 | 12.57 | 12.21 | 12.99 | 13.44 | 15.91 | 16.71 | 16.35 | 17.13 | 17.57 |
| | 6H | 12.43 | 13.12 | 12.89 | 13.57 | 14.03 | 16.14 | 16.83 | 16.60 | 17.27 | 17.74 |
| | 8H | 12.69 | 13.33 | 13.16 | 13.78 | 14.25 | 16.24 | 16.88 | 16.71 | 17.33 | 17.80 |
| | 12H | 12.94 | 13.51 | 13.43 | 14.00 | 14.47 | 16.35 | 16.92 | 16.84 | 17.41 | 17.88 |
| 8H | 4H | 12.21 | 12.86 | 12.68 | 13.30 | 13.77 | 15.96 | 16.60 | 16.43 | 17.05 | 17.52 |
| | 6H | 13.16 | 13.69 | 13.66 | 14.19 | 14.67 | 16.29 | 16.82 | 16.79 | 17.32 | 17.80 |
| | 8H | 13.63 | 14.10 | 14.15 | 14.62 | 15.11 | 16.48 | 16.96 | 17.00 | 17.47 | 17.97 |
| | 12H | 14.10 | 14.53 | 14.62 | 15.02 | 15.59 | 16.71 | 17.14 | 17.23 | 17.63 | 18.20 |
| 12H | 4H | 12.27 | 12.84 | 12.76 | 13.32 | 13.80 | 15.95 | 16.52 | 16.44 | 17.01 | 17.48 |
| | 6H | 13.31 | 13.79 | 13.83 | 14.30 | 14.79 | 16.32 | 16.79 | 16.84 | 17.31 | 17.80 |
| | 8H | 13.90 | 14.32 | 14.42 | 14.82 | 15.39 | 16.58 | 17.00 | 17.09 | 17.50 | 18.07 |