

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: P1056614

Luminaire Tested: S125R3DR-H850D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056614
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-12)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H850D927-X4F0-XX-UDD-F-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

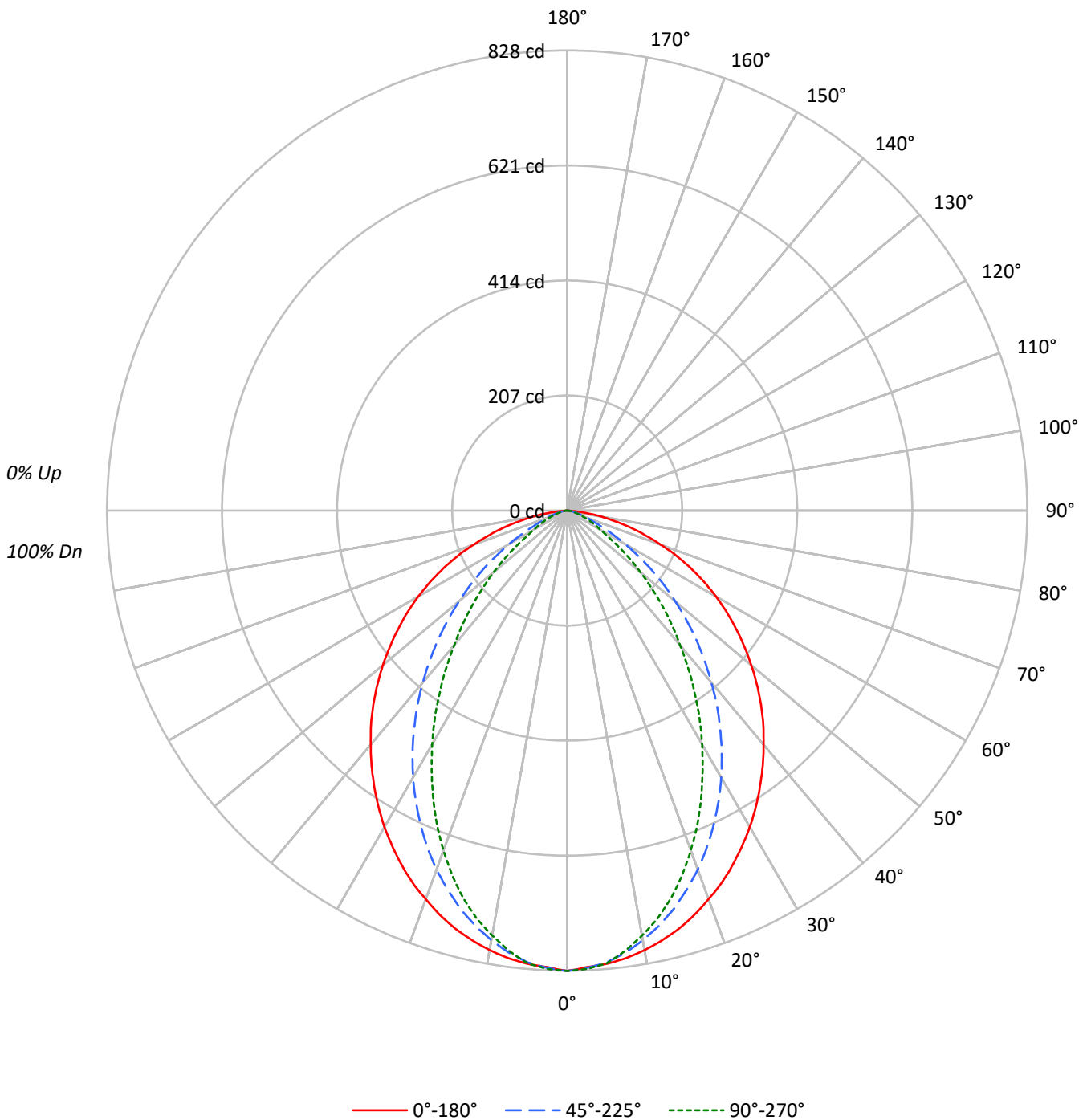
Lumens per Lamp: N/A
Luminaire Lumens: 1497.4 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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

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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 | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 |
| 2 | 102 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 | 77 |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 | 67 |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 | 47 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 54 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 36 | 35 |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5857 | 5857 | 5857 |
| 5° | 5808 | 5792 | 5803 |
| 10° | 5766 | 5634 | 5573 |
| 15° | 5698 | 5429 | 5283 |
| 20° | 5598 | 5171 | 4894 |
| 25° | 5493 | 4865 | 4452 |
| 30° | 5366 | 4527 | 3964 |
| 35° | 5224 | 4144 | 3449 |
| 40° | 5076 | 3724 | 2917 |
| 45° | 4932 | 3282 | 2415 |
| 50° | 4759 | 2792 | 1898 |
| 55° | 4576 | 2269 | 1380 |
| 60° | 4372 | 1692 | 987 |
| 65° | 4107 | 1116 | 769 |
| 70° | 3710 | 777 | 539 |
| 75° | 3226 | 503 | 418 |
| 80° | 2528 | 375 | 342 |
| 85° | 1306 | 308 | 251 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4932 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 77.2 | 5.2 |
| 10°-20° | 209.8 | 14.0 |
| 20°-30° | 290.1 | 19.4 |
| 30°-40° | 307.3 | 20.5 |
| 40°-50° | 268.3 | 17.9 |
| 50°-60° | 190.8 | 12.7 |
| 60°-70° | 106.1 | 7.1 |
| 70°-80° | 40.8 | 2.7 |
| 80°-90° | 7.1 | 0.5 |
| 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° | 577.1 | 38.5 |
| 0°-40° | 884.4 | 59.1 |
| 0°-60° | 1343.5 | 89.7 |
| 0°-90° | 1497.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1497.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 828 | 828 | 828 | 828 | 828 | |
| 5° | 818 | 825 | 816 | 814 | 818 | 78 |
| 15° | 779 | 772 | 742 | 726 | 722 | 219 |
| 25° | 704 | 680 | 624 | 585 | 571 | 324 |
| 35° | 605 | 564 | 480 | 422 | 400 | 379 |
| 45° | 493 | 434 | 328 | 262 | 242 | 380 |
| 55° | 371 | 298 | 184 | 127 | 112 | 332 |
| 65° | 246 | 161 | 67 | 49 | 46 | 243 |
| 75° | 118 | 46 | 18 | 15 | 15 | 125 |
| 85° | 16 | 5 | 4 | 3 | 3 | 24 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056614

CATALOG NUMBER: S125R3DR-H850D927-X4F0-XX-UDD-F-S

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 828.5 | 828.5 | 828.5 | 828.5 | 828.5 |
| 2.5° | 822.4 | 830.8 | 823.9 | 824.7 | 825.4 |
| 5° | 818.5 | 824.7 | 816.2 | 813.9 | 817.8 |
| 7.5° | 812.4 | 817.0 | 802.4 | 797.0 | 799.3 |
| 10° | 803.2 | 804.7 | 784.8 | 777.1 | 776.3 |
| 12.5° | 791.7 | 789.4 | 764.8 | 752.5 | 751.8 |
| 15° | 778.6 | 771.7 | 741.8 | 725.7 | 721.9 |
| 17.5° | 762.5 | 751.8 | 715.0 | 694.2 | 688.1 |
| 20° | 744.1 | 729.5 | 687.3 | 660.5 | 650.5 |
| 22.5° | 725.7 | 705.8 | 656.7 | 622.9 | 612.2 |
| 25° | 704.2 | 680.4 | 623.7 | 585.3 | 570.7 |
| 27.5° | 681.2 | 652.8 | 589.9 | 545.4 | 527.8 |
| 30° | 657.4 | 624.4 | 554.6 | 504.8 | 485.6 |
| 32.5° | 632.1 | 594.5 | 517.8 | 463.3 | 443.4 |
| 35° | 605.3 | 563.8 | 480.2 | 421.9 | 399.7 |
| 37.5° | 578.4 | 532.4 | 443.4 | 381.3 | 358.2 |
| 40° | 550.0 | 500.2 | 403.5 | 339.8 | 316.1 |
| 42.5° | 522.4 | 467.2 | 365.9 | 300.7 | 279.2 |
| 45° | 493.3 | 434.2 | 328.3 | 262.4 | 241.6 |
| 47.5° | 463.3 | 399.7 | 290.7 | 226.3 | 205.6 |
| 50° | 432.7 | 365.9 | 253.9 | 191.0 | 172.6 |
| 52.5° | 402.0 | 332.2 | 219.4 | 157.3 | 141.2 |
| 55° | 371.3 | 297.6 | 184.1 | 127.3 | 112.0 |
| 57.5° | 340.6 | 263.9 | 151.1 | 99.7 | 85.9 |
| 60° | 309.2 | 229.4 | 119.7 | 73.6 | 69.8 |
| 62.5° | 277.7 | 195.6 | 92.8 | 60.6 | 57.5 |
| 65° | 245.5 | 161.1 | 66.7 | 49.1 | 46.0 |
| 67.5° | 213.3 | 129.6 | 48.3 | 37.6 | 35.3 |
| 70° | 179.5 | 99.0 | 37.6 | 28.4 | 26.1 |
| 72.5° | 147.3 | 71.3 | 26.8 | 20.7 | 19.9 |
| 75° | 118.1 | 46.0 | 18.4 | 15.3 | 15.3 |
| 77.5° | 89.0 | 27.6 | 13.0 | 11.5 | 11.5 |
| 80° | 62.1 | 16.1 | 9.2 | 8.4 | 8.4 |
| 82.5° | 37.6 | 8.4 | 6.1 | 5.4 | 5.4 |
| 85° | 16.1 | 4.6 | 3.8 | 3.1 | 3.1 |
| 87.5° | 3.1 | 1.5 | 1.5 | 1.5 | 1.5 |
| 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 | 17.30 | 18.75 | 17.67 | 19.06 | 19.38 | 9.94 | 11.38 | 10.30 | 11.70 | 12.01 |
| | 3H | 18.86 | 20.15 | 19.24 | 20.48 | 20.84 | 10.50 | 11.79 | 10.88 | 12.12 | 12.48 |
| | 4H | 19.38 | 20.59 | 19.78 | 20.94 | 21.32 | 10.63 | 11.83 | 11.03 | 12.18 | 12.56 |
| | 6H | 19.72 | 20.83 | 20.13 | 21.20 | 21.59 | 10.69 | 11.80 | 11.11 | 12.17 | 12.56 |
| | 8H | 19.80 | 20.85 | 20.23 | 21.24 | 21.65 | 10.70 | 11.75 | 11.12 | 12.14 | 12.54 |
| | 12H | 19.83 | 20.83 | 20.26 | 21.21 | 21.64 | 10.69 | 11.69 | 11.12 | 12.08 | 12.50 |
| 4H | 2H | 17.20 | 18.40 | 17.60 | 18.75 | 19.13 | 10.50 | 11.71 | 10.90 | 12.06 | 12.44 |
| | 3H | 18.87 | 19.85 | 19.28 | 20.25 | 20.66 | 11.18 | 12.16 | 11.59 | 12.57 | 12.97 |
| | 4H | 19.41 | 20.30 | 19.85 | 20.72 | 21.16 | 11.33 | 12.22 | 11.77 | 12.63 | 13.07 |
| | 6H | 19.81 | 20.57 | 20.27 | 21.02 | 21.48 | 11.44 | 12.21 | 11.90 | 12.65 | 13.12 |
| | 8H | 19.91 | 20.63 | 20.38 | 21.07 | 21.54 | 11.46 | 12.17 | 11.92 | 12.61 | 13.08 |
| | 12H | 19.96 | 20.59 | 20.44 | 21.07 | 21.55 | 11.46 | 12.09 | 11.94 | 12.57 | 13.05 |
| 8H | 4H | 19.32 | 20.03 | 19.78 | 20.48 | 20.95 | 11.60 | 12.32 | 12.07 | 12.76 | 13.23 |
| | 6H | 19.70 | 20.29 | 20.20 | 20.78 | 21.26 | 11.74 | 12.32 | 12.24 | 12.81 | 13.29 |
| | 8H | 19.81 | 20.34 | 20.33 | 20.85 | 21.34 | 11.76 | 12.29 | 12.28 | 12.80 | 13.29 |
| | 12H | 19.88 | 20.34 | 20.39 | 20.83 | 21.40 | 11.79 | 12.25 | 12.30 | 12.74 | 13.31 |
| 12H | 4H | 19.28 | 19.92 | 19.77 | 20.40 | 20.87 | 11.62 | 12.25 | 12.10 | 12.73 | 13.20 |
| | 6H | 19.65 | 20.18 | 20.17 | 20.69 | 21.18 | 11.75 | 12.27 | 12.26 | 12.79 | 13.28 |
| | 8H | 19.78 | 20.24 | 20.29 | 20.74 | 21.31 | 11.81 | 12.27 | 12.32 | 12.76 | 13.33 |