

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: P1056448

Luminaire Tested: S125R3DR-S610D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056448
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-11)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-S610D850-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

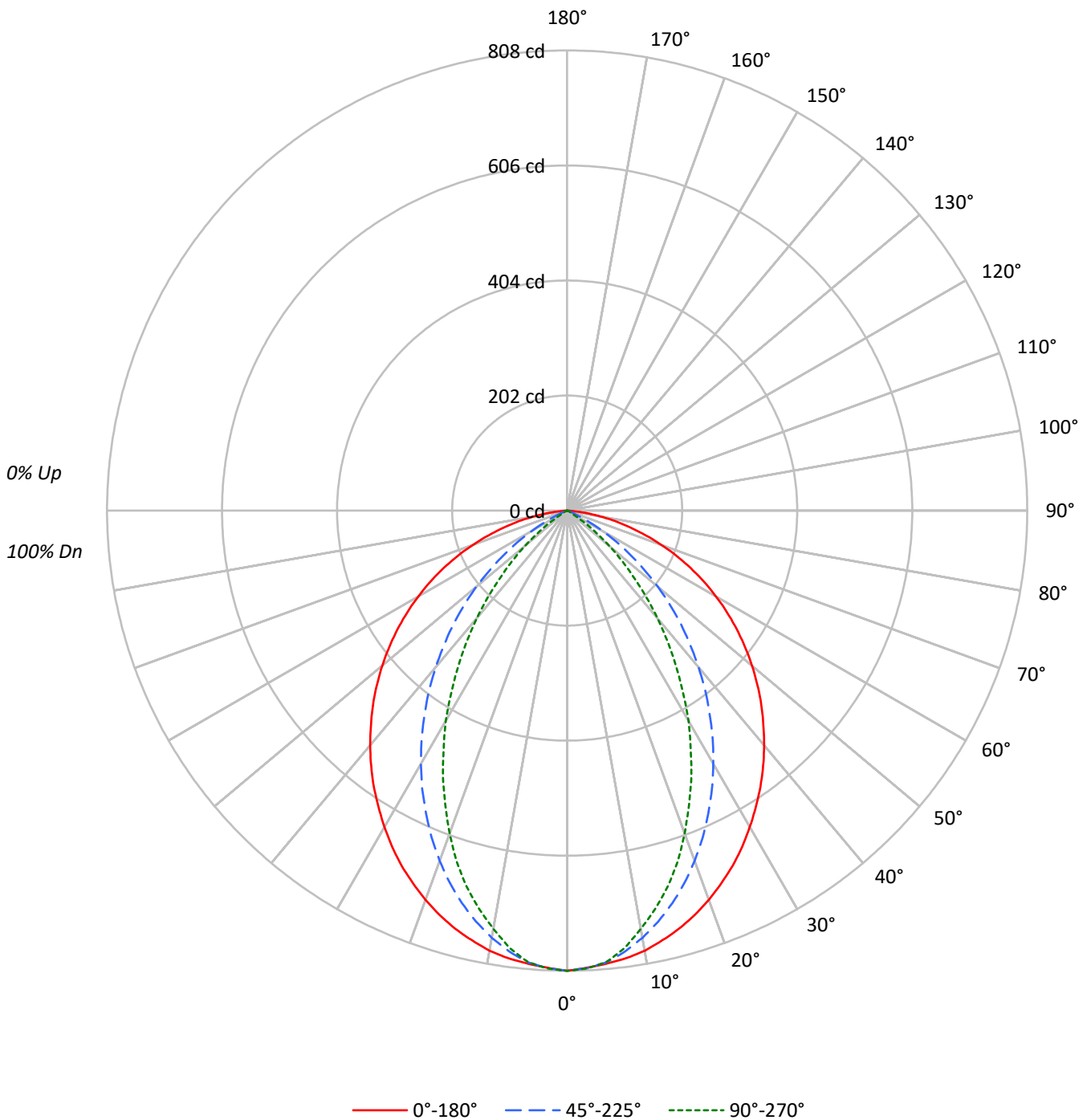
Lumens per Lamp: N/A
Luminaire Lumens: 1309.7 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1 | 111 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 80 |
| 3 | 96 | 87 | 81 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 80 | 76 | 72 | 78 | 74 | 71 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 |
| 5 | 83 | 72 | 64 | 59 | 81 | 71 | 64 | 58 | 69 | 63 | 58 | 67 | 62 | 57 | 65 | 61 | 57 |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 52 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 51 |
| 7 | 72 | 61 | 53 | 47 | 71 | 60 | 52 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 |
| 10 | 60 | 48 | 41 | 36 | 59 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 36 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5713 | 5713 | 5713 |
| 5° | 5666 | 5649 | 5644 |
| 10° | 5634 | 5467 | 5352 |
| 15° | 5562 | 5223 | 4999 |
| 20° | 5471 | 4922 | 4536 |
| 25° | 5366 | 4572 | 4023 |
| 30° | 5237 | 4191 | 3478 |
| 35° | 5107 | 3767 | 2876 |
| 40° | 4967 | 3311 | 2277 |
| 45° | 4820 | 2826 | 1650 |
| 50° | 4660 | 2281 | 1066 |
| 55° | 4481 | 1668 | 473 |
| 60° | 4268 | 1031 | 136 |
| 65° | 4006 | 375 | 80 |
| 70° | 3625 | 132 | 33 |
| 75° | 3149 | 44 | 22 |
| 80° | 2414 | 33 | 0 |
| 85° | 1103 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4820 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.1 | 5.7 |
| 10°-20° | 201.5 | 15.4 |
| 20°-30° | 272.6 | 20.8 |
| 30°-40° | 280.1 | 21.4 |
| 40°-50° | 232.0 | 17.7 |
| 50°-60° | 149.0 | 11.4 |
| 60°-70° | 72.0 | 5.5 |
| 70°-80° | 24.3 | 1.9 |
| 80°-90° | 3.1 | 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° | 549.2 | 41.9 |
| 0°-40° | 829.3 | 63.3 |
| 0°-60° | 1210.3 | 92.4 |
| 0°-90° | 1309.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1309.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 808 | 808 | 808 | 808 | 808 | |
| 5° | 798 | 805 | 796 | 791 | 795 | 76 |
| 15° | 760 | 750 | 714 | 689 | 683 | 214 |
| 25° | 688 | 654 | 586 | 533 | 516 | 317 |
| 35° | 592 | 535 | 436 | 360 | 333 | 370 |
| 45° | 482 | 403 | 283 | 195 | 165 | 372 |
| 55° | 364 | 267 | 135 | 59 | 38 | 325 |
| 65° | 240 | 132 | 22 | 6 | 5 | 237 |
| 75° | 115 | 25 | 2 | 1 | 1 | 122 |
| 85° | 14 | 0 | 0 | 0 | 0 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056448

CATALOG NUMBER: S125R3DR-S610D850-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 808.1 | 808.1 | 808.1 | 808.1 | 808.1 |
| 2.5° | 803.3 | 809.7 | 804.1 | 803.3 | 804.9 |
| 5° | 798.5 | 804.9 | 796.1 | 791.2 | 795.3 |
| 7.5° | 792.8 | 796.1 | 780.8 | 772.8 | 774.4 |
| 10° | 784.8 | 784.0 | 761.6 | 748.0 | 745.6 |
| 12.5° | 772.8 | 768.8 | 739.2 | 720.0 | 716.0 |
| 15° | 760.0 | 750.4 | 713.6 | 688.7 | 683.1 |
| 17.5° | 744.8 | 729.6 | 685.5 | 653.5 | 645.5 |
| 20° | 727.2 | 706.4 | 654.3 | 615.1 | 603.0 |
| 22.5° | 708.0 | 681.5 | 621.5 | 575.0 | 559.0 |
| 25° | 687.9 | 654.3 | 586.2 | 533.4 | 515.8 |
| 27.5° | 665.5 | 626.3 | 551.0 | 490.9 | 469.3 |
| 30° | 641.5 | 596.6 | 513.4 | 447.7 | 426.1 |
| 32.5° | 616.7 | 567.0 | 475.7 | 404.4 | 378.0 |
| 35° | 591.8 | 535.0 | 436.5 | 360.4 | 333.2 |
| 37.5° | 565.4 | 502.9 | 398.0 | 318.7 | 289.1 |
| 40° | 538.2 | 470.1 | 358.8 | 275.5 | 246.7 |
| 42.5° | 510.1 | 436.5 | 319.5 | 234.7 | 205.0 |
| 45° | 482.1 | 402.8 | 282.7 | 195.4 | 165.0 |
| 47.5° | 453.3 | 368.4 | 244.3 | 157.0 | 130.5 |
| 50° | 423.7 | 334.8 | 207.4 | 122.5 | 96.9 |
| 52.5° | 394.0 | 300.3 | 169.8 | 88.9 | 65.7 |
| 55° | 363.6 | 266.7 | 135.3 | 59.3 | 38.4 |
| 57.5° | 333.2 | 232.2 | 103.3 | 32.8 | 14.4 |
| 60° | 301.9 | 199.4 | 72.9 | 11.2 | 9.6 |
| 62.5° | 271.5 | 164.2 | 45.6 | 8.8 | 7.2 |
| 65° | 239.5 | 132.1 | 22.4 | 6.4 | 4.8 |
| 67.5° | 208.2 | 101.7 | 9.6 | 4.0 | 2.4 |
| 70° | 175.4 | 73.7 | 6.4 | 2.4 | 1.6 |
| 72.5° | 145.0 | 47.3 | 4.0 | 1.6 | 0.8 |
| 75° | 115.3 | 24.8 | 1.6 | 0.8 | 0.8 |
| 77.5° | 86.5 | 10.4 | 0.8 | 0.8 | 0.8 |
| 80° | 59.3 | 4.8 | 0.8 | 0.8 | 0.0 |
| 82.5° | 35.2 | 1.6 | 0.8 | 0.8 | 0.0 |
| 85° | 13.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.8 | 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 | 17.12 | 18.51 | 17.49 | 18.82 | 19.13 | 1.98 | 3.37 | 2.35 | 3.68 | 3.99 |
| | 3H | 18.67 | 19.90 | 19.05 | 20.23 | 20.59 | 1.90 | 3.13 | 2.28 | 3.46 | 3.82 |
| | 4H | 19.20 | 20.34 | 19.60 | 20.69 | 21.07 | 1.84 | 2.98 | 2.24 | 3.33 | 3.71 |
| | 6H | 19.53 | 20.59 | 19.95 | 20.96 | 21.35 | 1.77 | 2.82 | 2.18 | 3.19 | 3.58 |
| | 8H | 19.62 | 20.61 | 20.05 | 21.00 | 21.41 | 1.73 | 2.72 | 2.15 | 3.11 | 3.52 |
| | 12H | 19.63 | 20.59 | 20.06 | 20.97 | 21.40 | 1.69 | 2.64 | 2.12 | 3.02 | 3.45 |
| 4H | 2H | 16.93 | 18.07 | 17.33 | 18.42 | 18.80 | 2.84 | 3.99 | 3.25 | 4.34 | 4.72 |
| | 3H | 18.54 | 19.47 | 18.95 | 19.88 | 20.28 | 2.79 | 3.73 | 3.21 | 4.13 | 4.53 |
| | 4H | 19.06 | 19.90 | 19.50 | 20.31 | 20.76 | 2.72 | 3.55 | 3.15 | 3.97 | 4.41 |
| | 6H | 19.44 | 20.16 | 19.90 | 20.60 | 21.07 | 2.65 | 3.37 | 3.11 | 3.81 | 4.28 |
| | 8H | 19.54 | 20.21 | 20.00 | 20.65 | 21.12 | 2.60 | 3.27 | 3.07 | 3.72 | 4.19 |
| | 12H | 19.57 | 20.16 | 20.06 | 20.65 | 21.12 | 2.56 | 3.15 | 3.04 | 3.63 | 4.11 |
| 8H | 4H | 18.93 | 19.61 | 19.40 | 20.05 | 20.52 | 3.74 | 4.41 | 4.21 | 4.86 | 5.33 |
| | 6H | 19.29 | 19.84 | 19.79 | 20.33 | 20.81 | 3.66 | 4.21 | 4.16 | 4.70 | 5.18 |
| | 8H | 19.38 | 19.88 | 19.91 | 20.39 | 20.88 | 3.60 | 4.10 | 4.12 | 4.61 | 5.10 |
| | 12H | 19.43 | 19.86 | 19.94 | 20.36 | 20.93 | 3.56 | 4.00 | 4.08 | 4.49 | 5.06 |
| 12H | 4H | 18.89 | 19.49 | 19.38 | 19.97 | 20.44 | 3.82 | 4.41 | 4.30 | 4.89 | 5.37 |
| | 6H | 19.23 | 19.72 | 19.75 | 20.24 | 20.73 | 3.72 | 4.21 | 4.24 | 4.73 | 5.22 |
| | 8H | 19.34 | 19.78 | 19.86 | 20.27 | 20.84 | 3.69 | 4.12 | 4.20 | 4.62 | 5.19 |