

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: P1056587

Luminaire Tested: S125R3DR-H610D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056587
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-H610D927-X4F0-XX-UDD-FLL-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

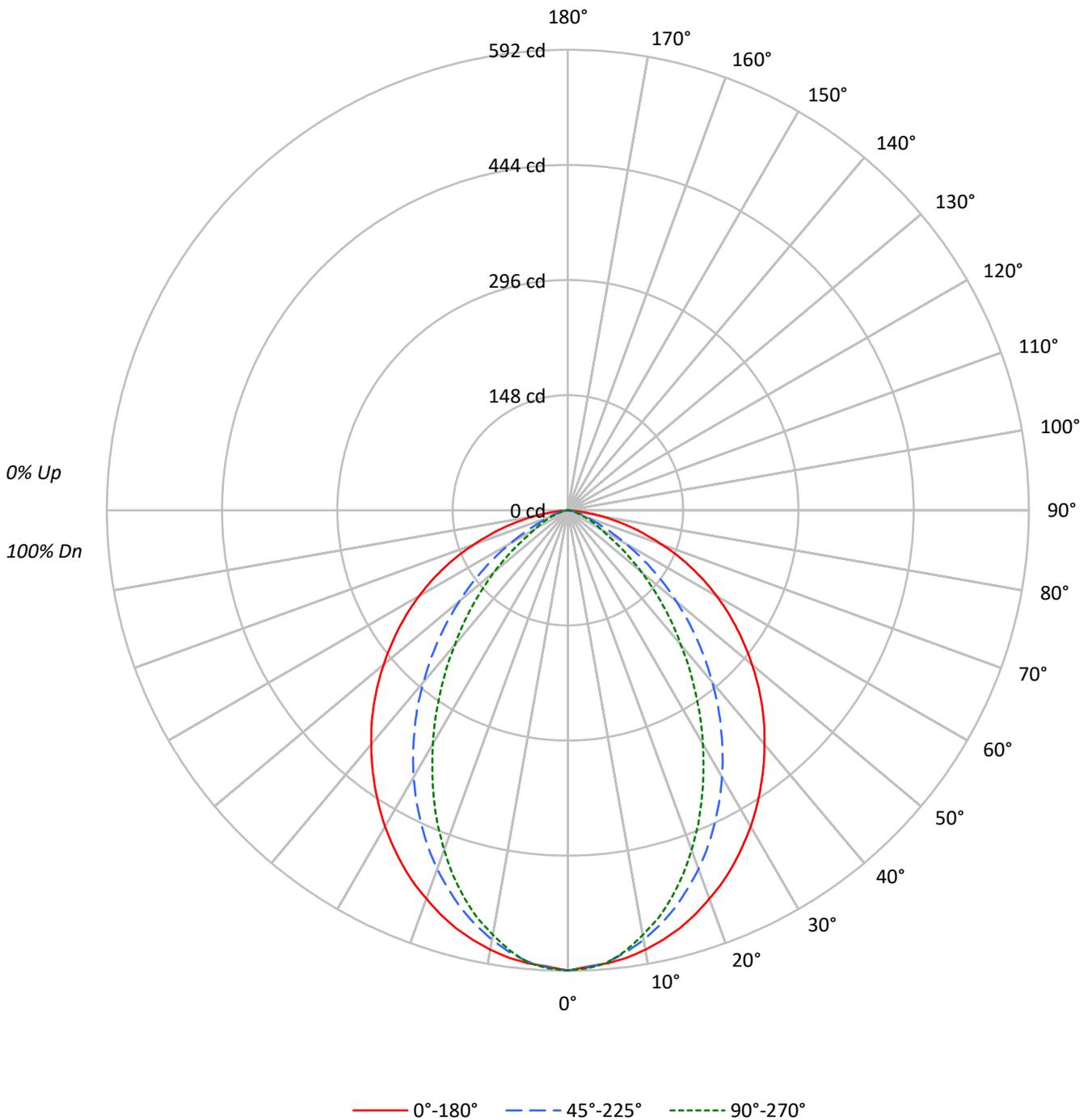
Lumens per Lamp: N/A
Luminaire Lumens: 1069.2 lumens
Efficiency: N/A
Efficacy: 61.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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 | 107 | 103 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 |
| 2 | 102 | 96 | 90 | 85 | 100 | 94 | 89 | 84 | 90 | 86 | 82 | 87 | 84 | 80 | 84 | 81 | 79 |
| 3 | 95 | 86 | 79 | 73 | 92 | 84 | 78 | 73 | 81 | 76 | 71 | 79 | 74 | 70 | 76 | 72 | 69 |
| 4 | 88 | 77 | 70 | 64 | 86 | 76 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 |
| 5 | 81 | 70 | 62 | 56 | 79 | 69 | 61 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 55 | 50 | 61 | 54 | 49 | 60 | 54 | 49 | 58 | 53 | 49 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 54 | 48 | 44 |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 37 | 46 | 41 | 36 |
| 10 | 58 | 46 | 39 | 34 | 57 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 43 | 38 | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4182 | 4182 | 4182 |
| 5° | 4148 | 4136 | 4144 |
| 10° | 4117 | 4023 | 3979 |
| 15° | 4069 | 3877 | 3772 |
| 20° | 3997 | 3692 | 3494 |
| 25° | 3922 | 3473 | 3179 |
| 30° | 3832 | 3233 | 2830 |
| 35° | 3730 | 2959 | 2463 |
| 40° | 3624 | 2659 | 2083 |
| 45° | 3521 | 2343 | 1725 |
| 50° | 3397 | 1994 | 1355 |
| 55° | 3267 | 1621 | 986 |
| 60° | 3120 | 1207 | 704 |
| 65° | 2932 | 798 | 550 |
| 70° | 2650 | 554 | 384 |
| 75° | 2305 | 358 | 300 |
| 80° | 1808 | 269 | 244 |
| 85° | 933 | 219 | 178 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3521 cd/sqm

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 55.1 | 5.2 |
| 10°-20° | 149.8 | 14.0 |
| 20°-30° | 207.1 | 19.4 |
| 30°-40° | 219.5 | 20.5 |
| 40°-50° | 191.5 | 17.9 |
| 50°-60° | 136.2 | 12.7 |
| 60°-70° | 75.8 | 7.1 |
| 70°-80° | 29.1 | 2.7 |
| 80°-90° | 5.0 | 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° | 412.0 | 38.5 |
| 0°-40° | 631.5 | 59.1 |
| 0°-60° | 959.3 | 89.7 |
| 0°-90° | 1069.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1069.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 592 | 592 | 592 | 592 | 592 | |
| 5° | 584 | 589 | 583 | 581 | 584 | 55 |
| 15° | 556 | 551 | 530 | 518 | 515 | 157 |
| 25° | 503 | 486 | 445 | 418 | 408 | 231 |
| 35° | 432 | 403 | 343 | 301 | 285 | 270 |
| 45° | 352 | 310 | 234 | 187 | 172 | 271 |
| 55° | 265 | 212 | 132 | 91 | 80 | 237 |
| 65° | 175 | 115 | 48 | 35 | 33 | 173 |
| 75° | 84 | 33 | 13 | 11 | 11 | 89 |
| 85° | 12 | 3 | 3 | 2 | 2 | 17 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 591.6 | 591.6 | 591.6 | 591.6 | 591.6 |
| 2.5° | 587.2 | 593.2 | 588.3 | 588.8 | 589.4 |
| 5° | 584.5 | 588.8 | 582.8 | 581.2 | 583.9 |
| 7.5° | 580.1 | 583.4 | 573.0 | 569.1 | 570.8 |
| 10° | 573.5 | 574.6 | 560.4 | 554.9 | 554.3 |
| 12.5° | 565.3 | 563.6 | 546.1 | 537.3 | 536.8 |
| 15° | 556.0 | 551.0 | 529.7 | 518.2 | 515.4 |
| 17.5° | 544.5 | 536.8 | 510.5 | 495.7 | 491.3 |
| 20° | 531.3 | 520.9 | 490.8 | 471.6 | 464.5 |
| 22.5° | 518.2 | 503.9 | 468.9 | 444.8 | 437.1 |
| 25° | 502.8 | 485.9 | 445.3 | 417.9 | 407.5 |
| 27.5° | 486.4 | 466.1 | 421.2 | 389.5 | 376.9 |
| 30° | 469.4 | 445.9 | 396.0 | 360.4 | 346.7 |
| 32.5° | 451.3 | 424.5 | 369.7 | 330.8 | 316.6 |
| 35° | 432.2 | 402.6 | 342.9 | 301.3 | 285.4 |
| 37.5° | 413.0 | 380.1 | 316.6 | 272.2 | 255.8 |
| 40° | 392.7 | 357.1 | 288.1 | 242.7 | 225.7 |
| 42.5° | 373.0 | 333.6 | 261.3 | 214.7 | 199.4 |
| 45° | 352.2 | 310.0 | 234.4 | 187.3 | 172.5 |
| 47.5° | 330.8 | 285.4 | 207.6 | 161.6 | 146.8 |
| 50° | 308.9 | 261.3 | 181.3 | 136.4 | 123.2 |
| 52.5° | 287.0 | 237.2 | 156.7 | 112.3 | 100.8 |
| 55° | 265.1 | 212.5 | 131.5 | 90.9 | 80.0 |
| 57.5° | 243.2 | 188.4 | 107.9 | 71.2 | 61.3 |
| 60° | 220.7 | 163.8 | 85.4 | 52.6 | 49.8 |
| 62.5° | 198.3 | 139.7 | 66.3 | 43.3 | 41.1 |
| 65° | 175.3 | 115.0 | 47.7 | 35.1 | 32.9 |
| 67.5° | 152.3 | 92.6 | 34.5 | 26.8 | 25.2 |
| 70° | 128.2 | 70.7 | 26.8 | 20.3 | 18.6 |
| 72.5° | 105.2 | 50.9 | 19.2 | 14.8 | 14.2 |
| 75° | 84.4 | 32.9 | 13.1 | 11.0 | 11.0 |
| 77.5° | 63.5 | 19.7 | 9.3 | 8.2 | 8.2 |
| 80° | 44.4 | 11.5 | 6.6 | 6.0 | 6.0 |
| 82.5° | 26.8 | 6.0 | 4.4 | 3.8 | 3.8 |
| 85° | 11.5 | 3.3 | 2.7 | 2.2 | 2.2 |
| 87.5° | 2.2 | 1.1 | 1.1 | 1.1 | 1.1 |
| 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 | 16.13 | 17.58 | 16.50 | 17.89 | 18.20 | 8.77 | 10.21 | 9.13 | 10.53 | 10.84 |
| | 3H | 17.69 | 18.98 | 18.07 | 19.31 | 19.67 | 9.33 | 10.62 | 9.71 | 10.95 | 11.31 |
| | 4H | 18.21 | 19.42 | 18.61 | 19.77 | 20.15 | 9.46 | 10.66 | 9.86 | 11.01 | 11.39 |
| | 6H | 18.55 | 19.66 | 18.96 | 20.03 | 20.42 | 9.52 | 10.63 | 9.94 | 11.00 | 11.39 |
| | 8H | 18.63 | 19.68 | 19.06 | 20.07 | 20.48 | 9.53 | 10.58 | 9.95 | 10.97 | 11.37 |
| | 12H | 18.66 | 19.66 | 19.09 | 20.04 | 20.47 | 9.52 | 10.52 | 9.95 | 10.90 | 11.33 |
| 4H | 2H | 16.03 | 17.23 | 16.43 | 17.58 | 17.96 | 9.34 | 10.54 | 9.74 | 10.89 | 11.27 |
| | 3H | 17.70 | 18.68 | 18.11 | 19.08 | 19.49 | 10.01 | 11.00 | 10.42 | 11.40 | 11.80 |
| | 4H | 18.25 | 19.13 | 18.68 | 19.55 | 19.99 | 10.17 | 11.05 | 10.60 | 11.47 | 11.91 |
| | 6H | 18.64 | 19.40 | 19.10 | 19.85 | 20.31 | 10.28 | 11.04 | 10.74 | 11.49 | 11.95 |
| | 8H | 18.74 | 19.46 | 19.21 | 19.90 | 20.37 | 10.29 | 11.00 | 10.75 | 11.45 | 11.92 |
| | 12H | 18.79 | 19.42 | 19.27 | 19.90 | 20.38 | 10.29 | 10.92 | 10.77 | 11.40 | 11.88 |
| 8H | 4H | 18.15 | 18.86 | 18.62 | 19.31 | 19.78 | 10.44 | 11.15 | 10.90 | 11.59 | 12.06 |
| | 6H | 18.54 | 19.12 | 19.03 | 19.61 | 20.09 | 10.57 | 11.15 | 11.07 | 11.65 | 12.13 |
| | 8H | 18.64 | 19.17 | 19.16 | 19.68 | 20.17 | 10.60 | 11.12 | 11.11 | 11.63 | 12.12 |
| | 12H | 18.71 | 19.17 | 19.22 | 19.66 | 20.23 | 10.62 | 11.08 | 11.13 | 11.57 | 12.14 |
| 12H | 4H | 18.11 | 18.75 | 18.60 | 19.23 | 19.70 | 10.45 | 11.08 | 10.94 | 11.56 | 12.04 |
| | 6H | 18.48 | 19.01 | 19.00 | 19.52 | 20.01 | 10.58 | 11.11 | 11.10 | 11.62 | 12.11 |
| | 8H | 18.61 | 19.07 | 19.12 | 19.57 | 20.14 | 10.64 | 11.10 | 11.15 | 11.59 | 12.16 |