

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: P1056577

Luminaire Tested: S125R3DR-H610D835-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056577
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-H610D835-X4F0-XX-UDD-FLL-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

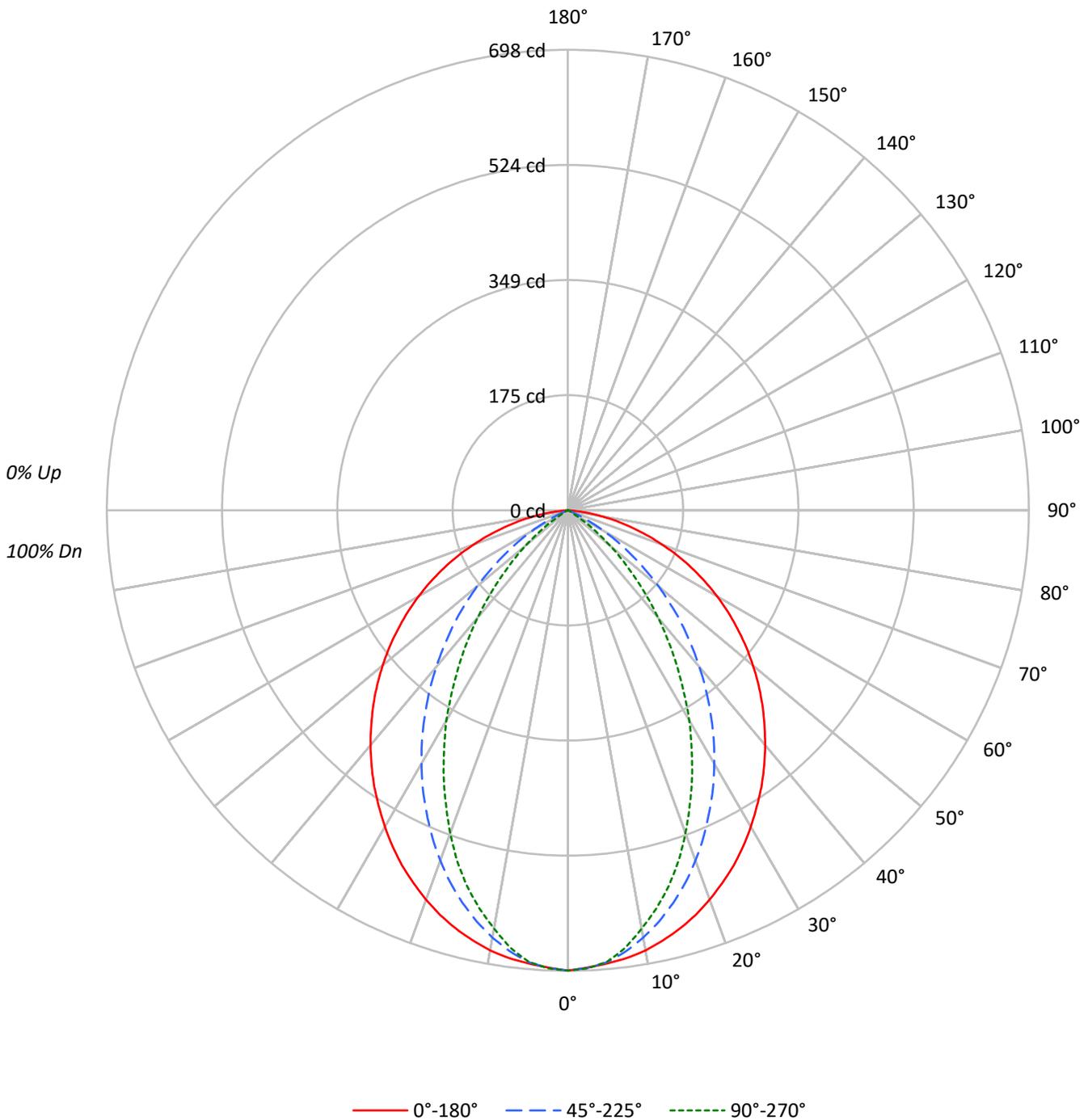
Lumens per Lamp: N/A
Luminaire Lumens: 1130.8 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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 | | | | | 0 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 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 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 | | | | | 89 | | | |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 80 | 78 | | | | | 78 | | | |
| 3 | 96 | 87 | 81 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 80 | 76 | 72 | 78 | 74 | 71 | 69 | | | | | 69 | | | |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 5 | 83 | 72 | 64 | 59 | 81 | 71 | 64 | 58 | 69 | 63 | 58 | 67 | 62 | 57 | 65 | 61 | 57 | 55 | | | | | 55 | | | |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 52 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 51 | 49 | | | | | 49 | | | |
| 7 | 72 | 61 | 53 | 47 | 71 | 60 | 52 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 | 45 | | | | | 45 | | | |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 41 | | | | | 41 | | | |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 | | | | | 37 | | | |
| 10 | 60 | 48 | 41 | 36 | 59 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 | | | | | 34 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4932 | 4932 | 4932 |
| 5° | 4892 | 4877 | 4872 |
| 10° | 4864 | 4721 | 4621 |
| 15° | 4803 | 4509 | 4317 |
| 20° | 4723 | 4250 | 3917 |
| 25° | 4633 | 3948 | 3473 |
| 30° | 4521 | 3618 | 3003 |
| 35° | 4410 | 3252 | 2482 |
| 40° | 4288 | 2859 | 1966 |
| 45° | 4162 | 2440 | 1424 |
| 50° | 4023 | 1970 | 921 |
| 55° | 3869 | 1441 | 409 |
| 60° | 3686 | 889 | 117 |
| 65° | 3458 | 325 | 69 |
| 70° | 3129 | 114 | 29 |
| 75° | 2720 | 38 | 19 |
| 80° | 2084 | 28 | 0 |
| 85° | 957 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4162 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 64.8 | 5.7 |
| 10°-20° | 174.0 | 15.4 |
| 20°-30° | 235.4 | 20.8 |
| 30°-40° | 241.8 | 21.4 |
| 40°-50° | 200.3 | 17.7 |
| 50°-60° | 128.6 | 11.4 |
| 60°-70° | 62.1 | 5.5 |
| 70°-80° | 21.0 | 1.9 |
| 80°-90° | 2.7 | 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° | 474.2 | 41.9 |
| 0°-40° | 716.0 | 63.3 |
| 0°-60° | 1045.0 | 92.4 |
| 0°-90° | 1130.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1130.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 698 | 698 | 698 | 698 | 698 | |
| 5° | 689 | 695 | 687 | 683 | 687 | 65 |
| 15° | 656 | 648 | 616 | 595 | 590 | 185 |
| 25° | 594 | 565 | 506 | 460 | 445 | 273 |
| 35° | 511 | 462 | 377 | 311 | 288 | 319 |
| 45° | 416 | 348 | 244 | 169 | 142 | 321 |
| 55° | 314 | 230 | 117 | 51 | 33 | 281 |
| 65° | 207 | 114 | 19 | 6 | 4 | 205 |
| 75° | 100 | 21 | 1 | 1 | 1 | 106 |
| 85° | 12 | 0 | 0 | 0 | 0 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S125R3DR-H610D835-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 697.7 | 697.7 | 697.7 | 697.7 | 697.7 |
| 2.5° | 693.5 | 699.1 | 694.2 | 693.5 | 694.9 |
| 5° | 689.4 | 694.9 | 687.3 | 683.2 | 686.6 |
| 7.5° | 684.5 | 687.3 | 674.2 | 667.3 | 668.6 |
| 10° | 677.6 | 676.9 | 657.6 | 645.8 | 643.7 |
| 12.5° | 667.3 | 663.8 | 638.2 | 621.6 | 618.2 |
| 15° | 656.2 | 647.9 | 616.1 | 594.6 | 589.8 |
| 17.5° | 643.1 | 629.9 | 591.9 | 564.2 | 557.3 |
| 20° | 627.8 | 609.9 | 564.9 | 531.0 | 520.7 |
| 22.5° | 611.2 | 588.4 | 536.6 | 496.5 | 482.6 |
| 25° | 594.0 | 564.9 | 506.1 | 460.5 | 445.3 |
| 27.5° | 574.6 | 540.7 | 475.7 | 423.9 | 405.2 |
| 30° | 553.9 | 515.1 | 443.2 | 386.5 | 367.9 |
| 32.5° | 532.4 | 489.5 | 410.7 | 349.2 | 326.4 |
| 35° | 511.0 | 461.9 | 376.8 | 311.2 | 287.6 |
| 37.5° | 488.2 | 434.2 | 343.7 | 275.2 | 249.6 |
| 40° | 464.7 | 405.9 | 309.8 | 237.9 | 213.0 |
| 42.5° | 440.5 | 376.8 | 275.9 | 202.6 | 177.0 |
| 45° | 416.3 | 347.8 | 244.1 | 168.7 | 142.4 |
| 47.5° | 391.4 | 318.1 | 210.9 | 135.5 | 112.7 |
| 50° | 365.8 | 289.0 | 179.1 | 105.8 | 83.7 |
| 52.5° | 340.2 | 259.3 | 146.6 | 76.8 | 56.7 |
| 55° | 313.9 | 230.3 | 116.9 | 51.2 | 33.2 |
| 57.5° | 287.6 | 200.5 | 89.2 | 28.3 | 12.4 |
| 60° | 260.7 | 172.2 | 62.9 | 9.7 | 8.3 |
| 62.5° | 234.4 | 141.7 | 39.4 | 7.6 | 6.2 |
| 65° | 206.7 | 114.1 | 19.4 | 5.5 | 4.1 |
| 67.5° | 179.8 | 87.8 | 8.3 | 3.5 | 2.1 |
| 70° | 151.4 | 63.6 | 5.5 | 2.1 | 1.4 |
| 72.5° | 125.2 | 40.8 | 3.5 | 1.4 | 0.7 |
| 75° | 99.6 | 21.4 | 1.4 | 0.7 | 0.7 |
| 77.5° | 74.7 | 9.0 | 0.7 | 0.7 | 0.7 |
| 80° | 51.2 | 4.1 | 0.7 | 0.7 | 0.0 |
| 82.5° | 30.4 | 1.4 | 0.7 | 0.7 | 0.0 |
| 85° | 11.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.7 | 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 | 16.61 | 18.00 | 16.98 | 18.31 | 18.62 | 1.46 | 2.85 | 1.83 | 3.16 | 3.48 |
| | 3H | 18.16 | 19.39 | 18.54 | 19.72 | 20.08 | 1.39 | 2.62 | 1.77 | 2.95 | 3.31 |
| | 4H | 18.68 | 19.83 | 19.09 | 20.18 | 20.56 | 1.32 | 2.47 | 1.72 | 2.82 | 3.20 |
| | 6H | 19.02 | 20.08 | 19.44 | 20.44 | 20.84 | 1.25 | 2.30 | 1.67 | 2.67 | 3.07 |
| | 8H | 19.11 | 20.10 | 19.53 | 20.49 | 20.90 | 1.21 | 2.21 | 1.64 | 2.60 | 3.00 |
| | 12H | 19.12 | 20.08 | 19.55 | 20.46 | 20.89 | 1.17 | 2.12 | 1.60 | 2.51 | 2.94 |
| 4H | 2H | 16.42 | 17.56 | 16.82 | 17.91 | 18.29 | 2.34 | 3.48 | 2.74 | 3.83 | 4.21 |
| | 3H | 18.03 | 18.96 | 18.44 | 19.37 | 19.77 | 2.29 | 3.22 | 2.70 | 3.62 | 4.03 |
| | 4H | 18.55 | 19.39 | 18.99 | 19.80 | 20.25 | 2.21 | 3.04 | 2.64 | 3.46 | 3.90 |
| | 6H | 18.93 | 19.65 | 19.39 | 20.09 | 20.56 | 2.14 | 2.86 | 2.61 | 3.31 | 3.77 |
| | 8H | 19.03 | 19.70 | 19.49 | 20.14 | 20.61 | 2.09 | 2.76 | 2.56 | 3.21 | 3.68 |
| | 12H | 19.06 | 19.65 | 19.55 | 20.14 | 20.61 | 2.05 | 2.64 | 2.54 | 3.13 | 3.60 |
| 8H | 4H | 18.42 | 19.09 | 18.89 | 19.54 | 20.01 | 3.23 | 3.90 | 3.70 | 4.35 | 4.82 |
| | 6H | 18.78 | 19.33 | 19.28 | 19.82 | 20.30 | 3.15 | 3.70 | 3.65 | 4.19 | 4.67 |
| | 8H | 18.87 | 19.37 | 19.39 | 19.88 | 20.37 | 3.10 | 3.59 | 3.62 | 4.10 | 4.59 |
| | 12H | 18.92 | 19.35 | 19.43 | 19.85 | 20.42 | 3.06 | 3.49 | 3.57 | 3.98 | 4.55 |
| 12H | 4H | 18.38 | 18.98 | 18.87 | 19.46 | 19.93 | 3.31 | 3.90 | 3.79 | 4.38 | 4.86 |
| | 6H | 18.72 | 19.21 | 19.24 | 19.73 | 20.22 | 3.21 | 3.70 | 3.73 | 4.22 | 4.71 |
| | 8H | 18.83 | 19.27 | 19.35 | 19.76 | 20.33 | 3.18 | 3.61 | 3.69 | 4.11 | 4.68 |