

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: P1056595

Luminaire Tested: S125R3DR-H610D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056595
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-H610D940-X4F0-XX-UDD-F-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

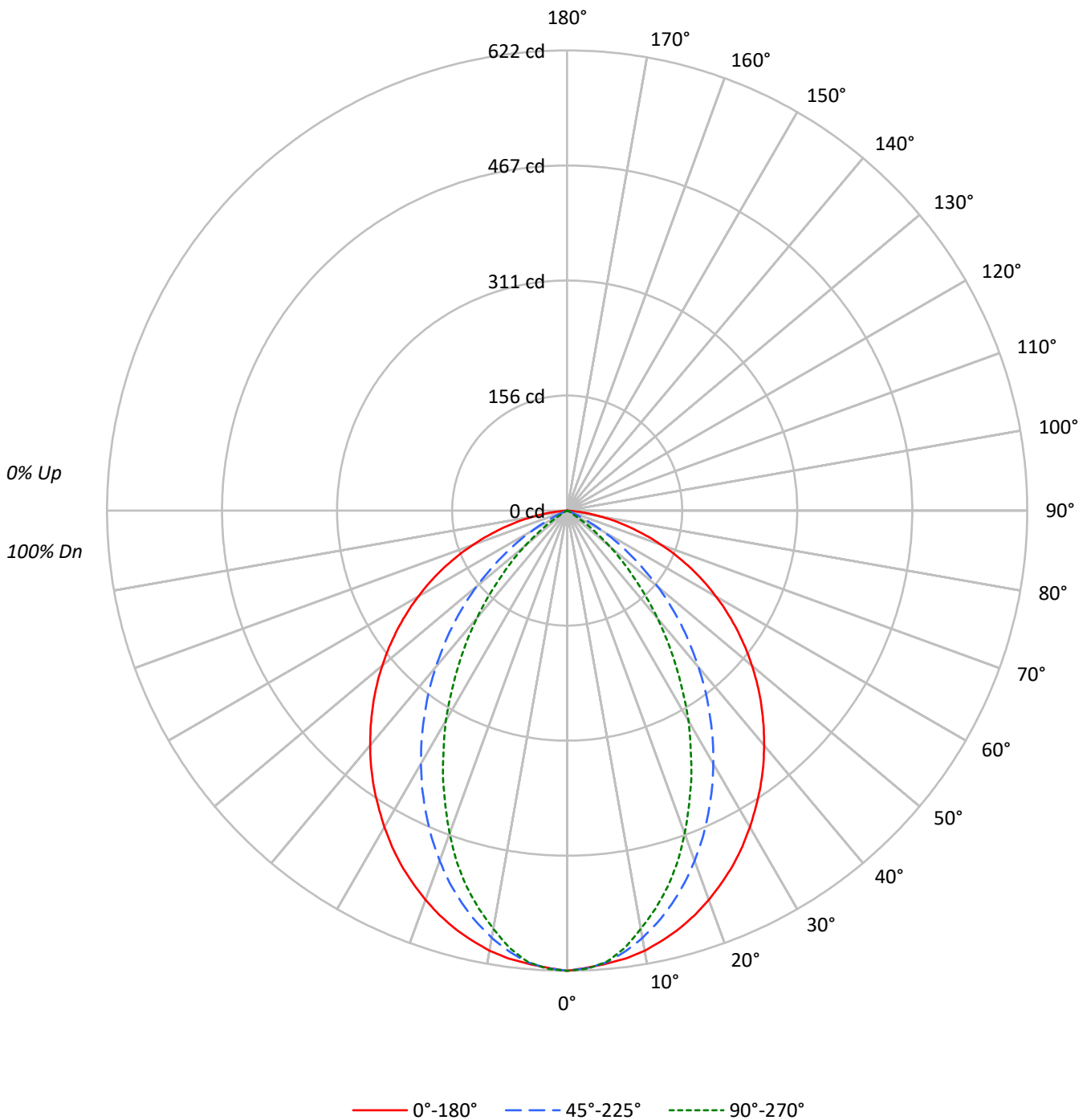
Lumens per Lamp: N/A
Luminaire Lumens: 1008.3 lumens
Efficiency: N/A
Efficacy: 58.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (A_{in}): 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° | 4398 | 4398 | 4398 |
| 5° | 4362 | 4349 | 4345 |
| 10° | 4337 | 4209 | 4120 |
| 15° | 4282 | 4021 | 3849 |
| 20° | 4212 | 3789 | 3493 |
| 25° | 4131 | 3520 | 3097 |
| 30° | 4032 | 3226 | 2677 |
| 35° | 3932 | 2900 | 2214 |
| 40° | 3823 | 2549 | 1752 |
| 45° | 3711 | 2176 | 1270 |
| 50° | 3588 | 1756 | 820 |
| 55° | 3450 | 1284 | 365 |
| 60° | 3286 | 793 | 105 |
| 65° | 3085 | 289 | 62 |
| 70° | 2790 | 101 | 25 |
| 75° | 2425 | 33 | 16 |
| 80° | 1856 | 24 | 0 |
| 85° | 852 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3711 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.8 | 5.7 |
| 10°-20° | 155.2 | 15.4 |
| 20°-30° | 209.9 | 20.8 |
| 30°-40° | 215.6 | 21.4 |
| 40°-50° | 178.6 | 17.7 |
| 50°-60° | 114.7 | 11.4 |
| 60°-70° | 55.4 | 5.5 |
| 70°-80° | 18.7 | 1.9 |
| 80°-90° | 2.4 | 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° | 422.8 | 41.9 |
| 0°-40° | 638.5 | 63.3 |
| 0°-60° | 931.8 | 92.4 |
| 0°-90° | 1008.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1008.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 622 | 622 | 622 | 622 | 622 | |
| 5° | 615 | 620 | 613 | 609 | 612 | 58 |
| 15° | 585 | 578 | 549 | 530 | 526 | 165 |
| 25° | 530 | 504 | 451 | 411 | 397 | 244 |
| 35° | 456 | 412 | 336 | 278 | 256 | 285 |
| 45° | 371 | 310 | 218 | 150 | 127 | 286 |
| 55° | 280 | 205 | 104 | 46 | 30 | 250 |
| 65° | 184 | 102 | 17 | 5 | 4 | 182 |
| 75° | 89 | 19 | 1 | 1 | 1 | 94 |
| 85° | 10 | 0 | 0 | 0 | 0 | 17 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056595

CATALOG NUMBER: S125R3DR-H610D940-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 622.1 | 622.1 | 622.1 | 622.1 | 622.1 |
| 2.5° | 618.4 | 623.4 | 619.0 | 618.4 | 619.7 |
| 5° | 614.7 | 619.7 | 612.9 | 609.2 | 612.3 |
| 7.5° | 610.4 | 612.9 | 601.2 | 595.0 | 596.2 |
| 10° | 604.2 | 603.6 | 586.4 | 575.9 | 574.0 |
| 12.5° | 595.0 | 591.9 | 569.1 | 554.3 | 551.2 |
| 15° | 585.1 | 577.7 | 549.4 | 530.3 | 525.9 |
| 17.5° | 573.4 | 561.7 | 527.8 | 503.1 | 497.0 |
| 20° | 559.9 | 543.8 | 503.7 | 473.5 | 464.3 |
| 22.5° | 545.1 | 524.7 | 478.5 | 442.7 | 430.4 |
| 25° | 529.6 | 503.7 | 451.3 | 410.6 | 397.1 |
| 27.5° | 512.4 | 482.2 | 424.2 | 378.0 | 361.3 |
| 30° | 493.9 | 459.3 | 395.2 | 344.7 | 328.0 |
| 32.5° | 474.8 | 436.5 | 366.2 | 311.4 | 291.0 |
| 35° | 455.6 | 411.9 | 336.0 | 277.5 | 256.5 |
| 37.5° | 435.3 | 387.2 | 306.4 | 245.4 | 222.6 |
| 40° | 414.3 | 361.9 | 276.2 | 212.1 | 189.9 |
| 42.5° | 392.8 | 336.0 | 246.0 | 180.7 | 157.8 |
| 45° | 371.2 | 310.1 | 217.7 | 150.4 | 127.0 |
| 47.5° | 349.0 | 283.6 | 188.1 | 120.8 | 100.5 |
| 50° | 326.2 | 257.7 | 159.7 | 94.3 | 74.6 |
| 52.5° | 303.4 | 231.2 | 130.7 | 68.4 | 50.6 |
| 55° | 279.9 | 205.3 | 104.2 | 45.6 | 29.6 |
| 57.5° | 256.5 | 178.8 | 79.5 | 25.3 | 11.1 |
| 60° | 232.4 | 153.5 | 56.1 | 8.6 | 7.4 |
| 62.5° | 209.0 | 126.4 | 35.1 | 6.8 | 5.5 |
| 65° | 184.4 | 101.7 | 17.3 | 4.9 | 3.7 |
| 67.5° | 160.3 | 78.3 | 7.4 | 3.1 | 1.8 |
| 70° | 135.0 | 56.7 | 4.9 | 1.8 | 1.2 |
| 72.5° | 111.6 | 36.4 | 3.1 | 1.2 | 0.6 |
| 75° | 88.8 | 19.1 | 1.2 | 0.6 | 0.6 |
| 77.5° | 66.6 | 8.0 | 0.6 | 0.6 | 0.6 |
| 80° | 45.6 | 3.7 | 0.6 | 0.6 | 0.0 |
| 82.5° | 27.1 | 1.2 | 0.6 | 0.6 | 0.0 |
| 85° | 10.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.6 | 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 | 16.21 | 17.60 | 16.58 | 17.91 | 18.23 | 1.08 | 2.47 | 1.45 | 2.78 | 3.10 |
| | 3H | 17.76 | 18.99 | 18.14 | 19.32 | 19.69 | 1.00 | 2.23 | 1.38 | 2.56 | 2.93 |
| | 4H | 18.29 | 19.43 | 18.69 | 19.78 | 20.16 | 0.94 | 2.08 | 1.34 | 2.43 | 2.81 |
| | 6H | 18.63 | 19.68 | 19.04 | 20.05 | 20.44 | 0.87 | 1.92 | 1.28 | 2.29 | 2.68 |
| | 8H | 18.71 | 19.70 | 19.14 | 20.09 | 20.50 | 0.83 | 1.82 | 1.26 | 2.21 | 2.62 |
| | 12H | 18.72 | 19.68 | 19.16 | 20.06 | 20.49 | 0.79 | 1.74 | 1.22 | 2.12 | 2.55 |
| 4H | 2H | 16.02 | 17.16 | 16.42 | 17.51 | 17.89 | 1.95 | 3.09 | 2.35 | 3.44 | 3.83 |
| | 3H | 17.63 | 18.57 | 18.04 | 18.97 | 19.37 | 1.90 | 2.83 | 2.31 | 3.23 | 3.64 |
| | 4H | 18.15 | 18.99 | 18.59 | 19.41 | 19.85 | 1.82 | 2.65 | 2.25 | 3.07 | 3.51 |
| | 6H | 18.53 | 19.25 | 18.99 | 19.69 | 20.16 | 1.75 | 2.47 | 2.21 | 2.92 | 3.38 |
| | 8H | 18.63 | 19.30 | 19.10 | 19.74 | 20.21 | 1.70 | 2.37 | 2.17 | 2.82 | 3.29 |
| | 12H | 18.66 | 19.26 | 19.15 | 19.74 | 20.21 | 1.66 | 2.25 | 2.14 | 2.73 | 3.21 |
| 8H | 4H | 18.03 | 18.70 | 18.49 | 19.14 | 19.61 | 2.84 | 3.51 | 3.31 | 3.96 | 4.43 |
| | 6H | 18.38 | 18.93 | 18.88 | 19.43 | 19.91 | 2.75 | 3.30 | 3.26 | 3.80 | 4.28 |
| | 8H | 18.48 | 18.97 | 19.00 | 19.48 | 19.97 | 2.70 | 3.19 | 3.22 | 3.71 | 4.20 |
| | 12H | 18.52 | 18.95 | 19.03 | 19.45 | 20.02 | 2.66 | 3.10 | 3.17 | 3.59 | 4.16 |
| 12H | 4H | 17.98 | 18.58 | 18.47 | 19.06 | 19.53 | 2.92 | 3.51 | 3.40 | 3.99 | 4.46 |
| | 6H | 18.32 | 18.81 | 18.84 | 19.33 | 19.82 | 2.82 | 3.31 | 3.34 | 3.82 | 4.32 |
| | 8H | 18.43 | 18.87 | 18.95 | 19.36 | 19.93 | 2.78 | 3.22 | 3.30 | 3.71 | 4.28 |