

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: P1056596

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056596
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-H610D940-X4F0-XX-UDD-F-S
Description: DEFINE 5, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

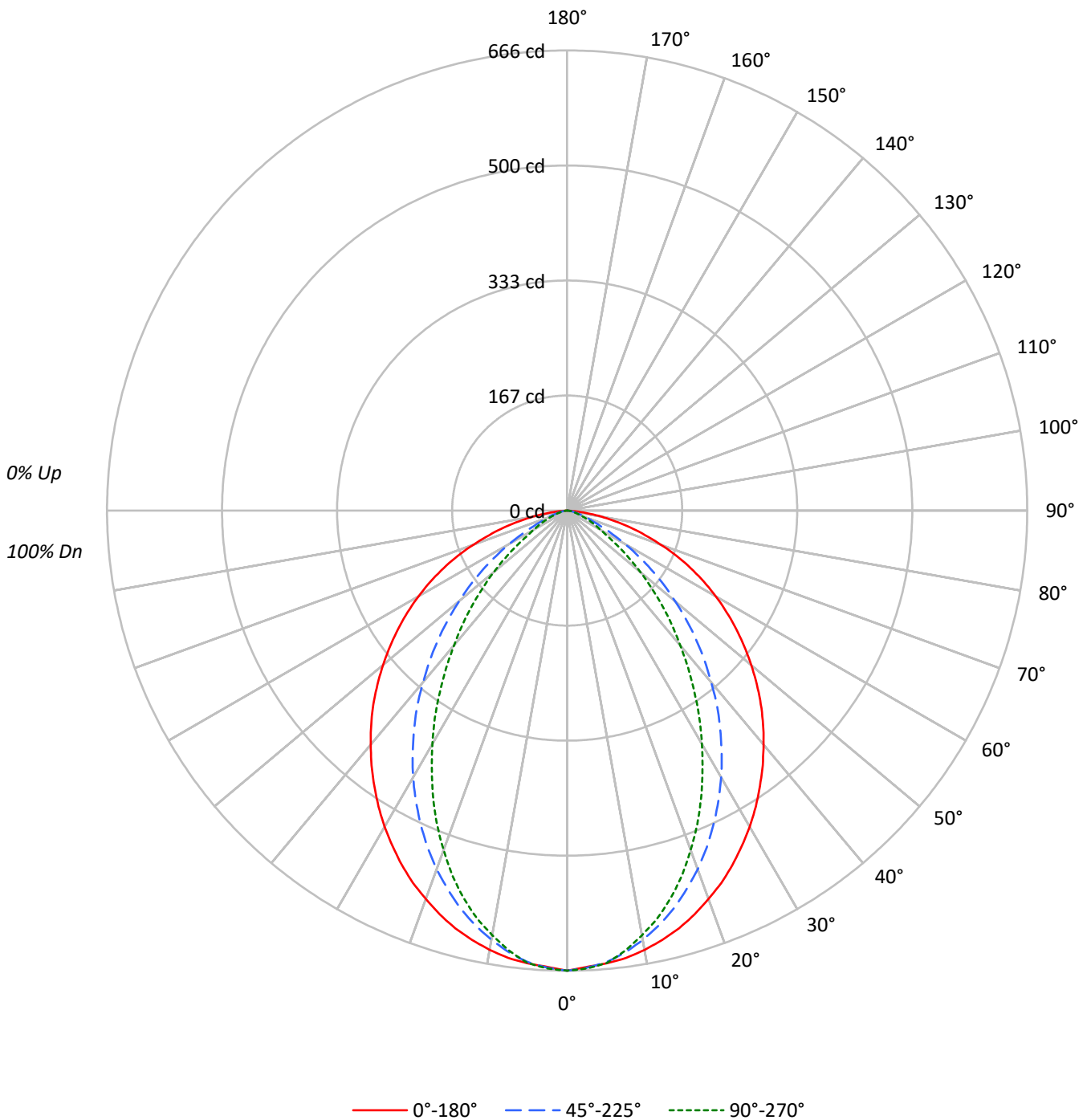
Lumens per Lamp: N/A
Luminaire Lumens: 1203.5 lumens
Efficiency: N/A
Efficacy: 69.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.95 / 1.11
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1056596

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

Luminous Intensity Polar Plot





TEST NUMBER: P1056596

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

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 | 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° | 4707 | 4707 | 4707 |
| 5° | 4669 | 4655 | 4664 |
| 10° | 4634 | 4528 | 4479 |
| 15° | 4580 | 4363 | 4246 |
| 20° | 4500 | 4156 | 3934 |
| 25° | 4415 | 3910 | 3578 |
| 30° | 4313 | 3639 | 3186 |
| 35° | 4199 | 3331 | 2772 |
| 40° | 4080 | 2993 | 2344 |
| 45° | 3964 | 2638 | 1942 |
| 50° | 3824 | 2245 | 1525 |
| 55° | 3678 | 1824 | 1109 |
| 60° | 3513 | 1360 | 793 |
| 65° | 3300 | 897 | 619 |
| 70° | 2983 | 624 | 434 |
| 75° | 2595 | 404 | 336 |
| 80° | 2031 | 301 | 277 |
| 85° | 1046 | 251 | 203 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3964 cd/sqm



TEST NUMBER: P1056596

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

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 62.0 | 5.2 |
| 10°-20° | 168.6 | 14.0 |
| 20°-30° | 233.2 | 19.4 |
| 30°-40° | 247.0 | 20.5 |
| 40°-50° | 215.6 | 17.9 |
| 50°-60° | 153.4 | 12.7 |
| 60°-70° | 85.3 | 7.1 |
| 70°-80° | 32.8 | 2.7 |
| 80°-90° | 5.7 | 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° | 463.8 | 38.5 |
| 0°-40° | 710.8 | 59.1 |
| 0°-60° | 1079.8 | 89.7 |
| 0°-90° | 1203.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1203.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 666 | 666 | 666 | 666 | 666 | |
| 5° | 658 | 663 | 656 | 654 | 657 | 62 |
| 15° | 626 | 620 | 596 | 583 | 580 | 176 |
| 25° | 566 | 547 | 501 | 470 | 459 | 261 |
| 35° | 486 | 453 | 386 | 339 | 321 | 304 |
| 45° | 396 | 349 | 264 | 211 | 194 | 306 |
| 55° | 298 | 239 | 148 | 102 | 90 | 267 |
| 65° | 197 | 130 | 54 | 40 | 37 | 195 |
| 75° | 95 | 37 | 15 | 12 | 12 | 101 |
| 85° | 13 | 4 | 3 | 2 | 2 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056596

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

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 665.9 | 665.9 | 665.9 | 665.9 | 665.9 |
| 2.5° | 661.0 | 667.7 | 662.2 | 662.8 | 663.4 |
| 5° | 657.9 | 662.8 | 656.0 | 654.2 | 657.3 |
| 7.5° | 653.0 | 656.7 | 644.9 | 640.6 | 642.5 |
| 10° | 645.6 | 646.8 | 630.8 | 624.6 | 624.0 |
| 12.5° | 636.3 | 634.5 | 614.7 | 604.9 | 604.2 |
| 15° | 625.8 | 620.3 | 596.2 | 583.3 | 580.2 |
| 17.5° | 612.9 | 604.2 | 574.6 | 558.0 | 553.1 |
| 20° | 598.1 | 586.4 | 552.5 | 530.9 | 522.9 |
| 22.5° | 583.3 | 567.2 | 527.8 | 500.7 | 492.0 |
| 25° | 566.0 | 546.9 | 501.3 | 470.4 | 458.7 |
| 27.5° | 547.5 | 524.7 | 474.1 | 438.4 | 424.2 |
| 30° | 528.4 | 501.9 | 445.8 | 405.7 | 390.3 |
| 32.5° | 508.1 | 477.8 | 416.2 | 372.4 | 356.4 |
| 35° | 486.5 | 453.2 | 386.0 | 339.1 | 321.2 |
| 37.5° | 464.9 | 427.9 | 356.4 | 306.4 | 287.9 |
| 40° | 442.1 | 402.0 | 324.3 | 273.1 | 254.0 |
| 42.5° | 419.9 | 375.5 | 294.1 | 241.7 | 224.4 |
| 45° | 396.5 | 349.0 | 263.9 | 210.9 | 194.2 |
| 47.5° | 372.4 | 321.2 | 233.7 | 181.9 | 165.2 |
| 50° | 347.7 | 294.1 | 204.1 | 153.5 | 138.7 |
| 52.5° | 323.1 | 267.0 | 176.3 | 126.4 | 113.4 |
| 55° | 298.4 | 239.2 | 148.0 | 102.4 | 90.0 |
| 57.5° | 273.8 | 212.1 | 121.5 | 80.2 | 69.1 |
| 60° | 248.5 | 184.4 | 96.2 | 59.2 | 56.1 |
| 62.5° | 223.2 | 157.2 | 74.6 | 48.7 | 46.2 |
| 65° | 197.3 | 129.5 | 53.6 | 39.5 | 37.0 |
| 67.5° | 171.4 | 104.2 | 38.8 | 30.2 | 28.4 |
| 70° | 144.3 | 79.5 | 30.2 | 22.8 | 21.0 |
| 72.5° | 118.4 | 57.3 | 21.6 | 16.6 | 16.0 |
| 75° | 95.0 | 37.0 | 14.8 | 12.3 | 12.3 |
| 77.5° | 71.5 | 22.2 | 10.5 | 9.2 | 9.2 |
| 80° | 49.9 | 12.9 | 7.4 | 6.8 | 6.8 |
| 82.5° | 30.2 | 6.8 | 4.9 | 4.3 | 4.3 |
| 85° | 12.9 | 3.7 | 3.1 | 2.5 | 2.5 |
| 87.5° | 2.5 | 1.2 | 1.2 | 1.2 | 1.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P1056596
 CATALOG NUMBER: S125R3DR-H610D940-X4F0-XX-UDD-F-S

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 | 16.54 | 17.99 | 16.91 | 18.30 | 18.62 | 9.19 | 10.63 | 9.55 | 10.94 | 11.26 |
| | 3H | 18.10 | 19.39 | 18.48 | 19.72 | 20.08 | 9.75 | 11.04 | 10.13 | 11.36 | 11.73 |
| | 4H | 18.62 | 19.83 | 19.03 | 20.18 | 20.56 | 9.87 | 11.07 | 10.27 | 11.42 | 11.80 |
| | 6H | 18.96 | 20.07 | 19.38 | 20.44 | 20.83 | 9.94 | 11.04 | 10.35 | 11.41 | 11.80 |
| | 8H | 19.04 | 20.10 | 19.47 | 20.49 | 20.89 | 9.94 | 10.99 | 10.37 | 11.38 | 11.79 |
| | 12H | 19.07 | 20.07 | 19.50 | 20.46 | 20.89 | 9.93 | 10.94 | 10.36 | 11.32 | 11.75 |
| 4H | 2H | 16.44 | 17.64 | 16.84 | 17.99 | 18.37 | 9.75 | 10.95 | 10.15 | 11.30 | 11.68 |
| | 3H | 18.11 | 19.09 | 18.52 | 19.50 | 19.90 | 10.42 | 11.41 | 10.83 | 11.81 | 12.21 |
| | 4H | 18.66 | 19.54 | 19.09 | 19.96 | 20.40 | 10.58 | 11.46 | 11.01 | 11.88 | 12.32 |
| | 6H | 19.05 | 19.81 | 19.51 | 20.26 | 20.72 | 10.69 | 11.45 | 11.15 | 11.90 | 12.36 |
| | 8H | 19.15 | 19.87 | 19.62 | 20.31 | 20.78 | 10.70 | 11.41 | 11.17 | 11.86 | 12.33 |
| | 12H | 19.20 | 19.83 | 19.68 | 20.31 | 20.79 | 10.70 | 11.33 | 11.19 | 11.82 | 12.29 |
| 8H | 4H | 18.56 | 19.27 | 19.03 | 19.72 | 20.19 | 10.85 | 11.56 | 11.31 | 12.00 | 12.47 |
| | 6H | 18.95 | 19.53 | 19.45 | 20.02 | 20.50 | 10.98 | 11.56 | 11.48 | 12.06 | 12.54 |
| | 8H | 19.05 | 19.58 | 19.57 | 20.09 | 20.58 | 11.01 | 11.53 | 11.53 | 12.04 | 12.53 |
| | 12H | 19.12 | 19.58 | 19.63 | 20.07 | 20.64 | 11.03 | 11.49 | 11.54 | 11.99 | 12.55 |
| 12H | 4H | 18.52 | 19.16 | 19.01 | 19.64 | 20.11 | 10.86 | 11.49 | 11.35 | 11.98 | 12.45 |
| | 6H | 18.89 | 19.42 | 19.41 | 19.93 | 20.42 | 10.99 | 11.52 | 11.51 | 12.03 | 12.52 |
| | 8H | 19.02 | 19.48 | 19.53 | 19.98 | 20.55 | 11.05 | 11.51 | 11.56 | 12.01 | 12.57 |