

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: P1056625

Luminaire Tested: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056625
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-H850D950-X4F0-XX-UDD-FLL-B
Description: DEFINE 5, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

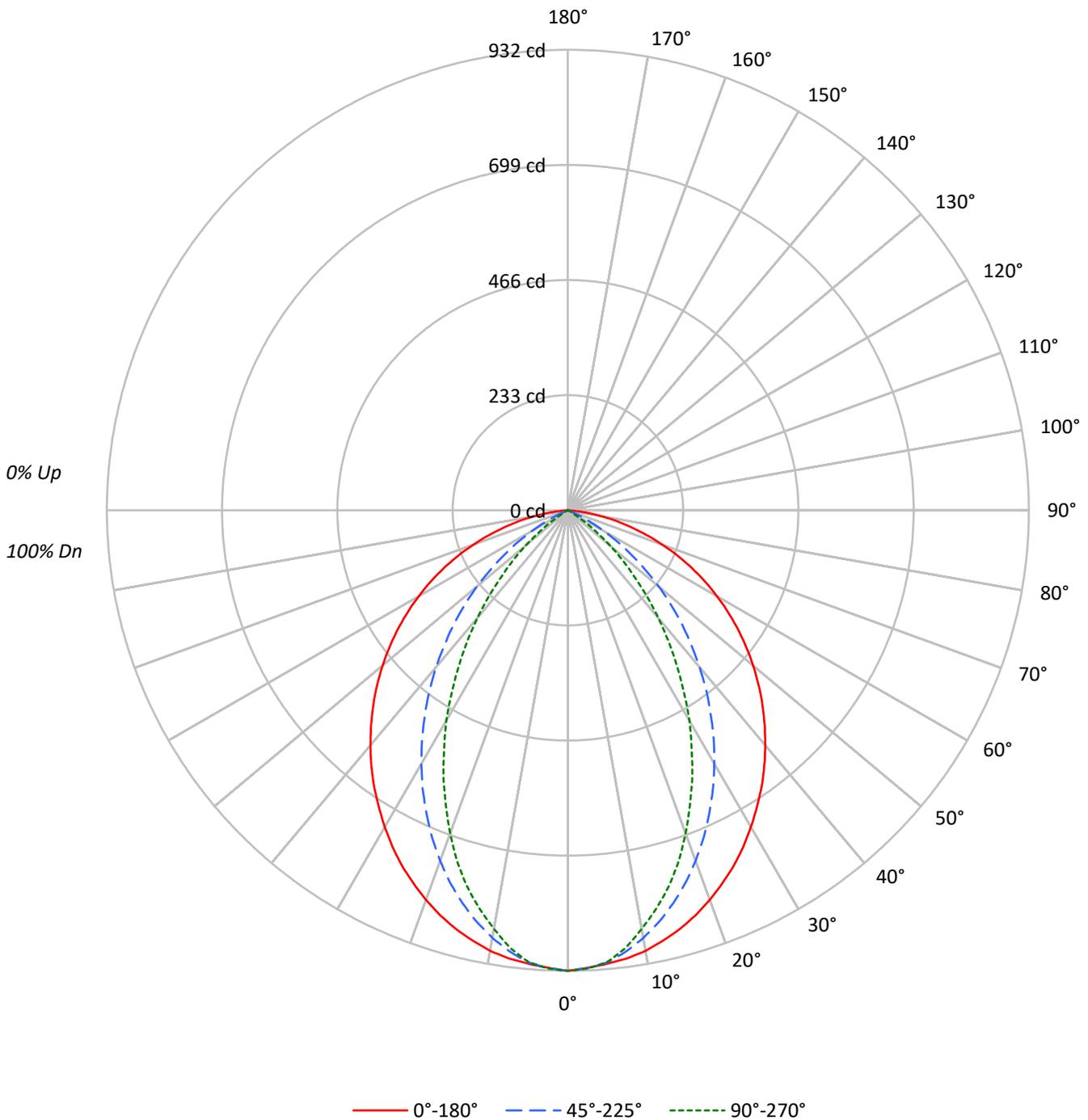
Lumens per Lamp: N/A
Luminaire Lumens: 1510.8 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.89 / 1.07
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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: P1056625

CATALOG NUMBER: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1056625

CATALOG NUMBER: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 108 | 104 | 101 | 109 | 106 | 103 | 100 | 101 | 99 | 97 | 98 | 96 | 94 | 94 | 93 | 91 | 89 |
| 2 | 103 | 97 | 91 | 87 | 101 | 95 | 90 | 86 | 92 | 88 | 84 | 89 | 85 | 82 | 86 | 83 | 80 | 78 |
| 3 | 96 | 87 | 81 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 74 | 80 | 76 | 72 | 78 | 74 | 71 | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 61 |
| 5 | 83 | 72 | 64 | 59 | 81 | 71 | 64 | 58 | 69 | 63 | 58 | 67 | 62 | 57 | 65 | 61 | 57 | 55 |
| 6 | 77 | 66 | 58 | 53 | 76 | 65 | 58 | 52 | 63 | 57 | 52 | 62 | 56 | 52 | 60 | 55 | 51 | 49 |
| 7 | 72 | 61 | 53 | 47 | 71 | 60 | 52 | 47 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 | 45 |
| 8 | 68 | 56 | 48 | 43 | 66 | 55 | 48 | 43 | 54 | 47 | 43 | 53 | 47 | 43 | 52 | 46 | 42 | 41 |
| 9 | 64 | 52 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 44 | 39 | 49 | 43 | 39 | 48 | 43 | 39 | 37 |
| 10 | 60 | 48 | 41 | 36 | 59 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 45 | 40 | 36 | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 6589 | 6589 | 6589 |
| 5° | 6536 | 6517 | 6510 |
| 10° | 6499 | 6307 | 6174 |
| 15° | 6416 | 6024 | 5767 |
| 20° | 6310 | 5678 | 5233 |
| 25° | 6190 | 5274 | 4640 |
| 30° | 6041 | 4834 | 4012 |
| 35° | 5892 | 4345 | 3317 |
| 40° | 5729 | 3820 | 2625 |
| 45° | 5560 | 3260 | 1903 |
| 50° | 5375 | 2632 | 1230 |
| 55° | 5169 | 1924 | 546 |
| 60° | 4925 | 1189 | 157 |
| 65° | 4620 | 433 | 92 |
| 70° | 4181 | 153 | 37 |
| 75° | 3633 | 49 | 25 |
| 80° | 2785 | 37 | 0 |
| 85° | 1273 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5560 cd/sqm

TEST NUMBER: P1056625

CATALOG NUMBER: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 86.6 | 5.7 |
| 10°-20° | 232.5 | 15.4 |
| 20°-30° | 314.5 | 20.8 |
| 30°-40° | 323.1 | 21.4 |
| 40°-50° | 267.7 | 17.7 |
| 50°-60° | 171.8 | 11.4 |
| 60°-70° | 83.0 | 5.5 |
| 70°-80° | 28.1 | 1.9 |
| 80°-90° | 3.6 | 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° | 633.6 | 41.9 |
| 0°-40° | 956.6 | 63.3 |
| 0°-60° | 1396.2 | 92.4 |
| 0°-90° | 1510.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1510.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 932 | 932 | 932 | 932 | 932 | |
| 5° | 921 | 928 | 918 | 913 | 917 | 87 |
| 15° | 877 | 866 | 823 | 794 | 788 | 247 |
| 25° | 794 | 755 | 676 | 615 | 595 | 365 |
| 35° | 683 | 617 | 504 | 416 | 384 | 427 |
| 45° | 556 | 465 | 326 | 225 | 190 | 429 |
| 55° | 419 | 308 | 156 | 68 | 44 | 375 |
| 65° | 276 | 152 | 26 | 7 | 6 | 273 |
| 75° | 133 | 29 | 2 | 1 | 1 | 141 |
| 85° | 16 | 0 | 0 | 0 | 0 | 25 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056625

CATALOG NUMBER: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 932.1 | 932.1 | 932.1 | 932.1 | 932.1 |
| 2.5° | 926.6 | 934.0 | 927.5 | 926.6 | 928.4 |
| 5° | 921.1 | 928.4 | 918.3 | 912.7 | 917.4 |
| 7.5° | 914.6 | 918.3 | 900.7 | 891.5 | 893.3 |
| 10° | 905.4 | 904.4 | 878.6 | 862.9 | 860.1 |
| 12.5° | 891.5 | 886.9 | 852.7 | 830.5 | 825.9 |
| 15° | 876.7 | 865.6 | 823.1 | 794.5 | 788.0 |
| 17.5° | 859.2 | 841.6 | 790.8 | 753.8 | 744.6 |
| 20° | 838.8 | 814.8 | 754.8 | 709.5 | 695.6 |
| 22.5° | 816.7 | 786.2 | 716.9 | 663.3 | 644.8 |
| 25° | 793.6 | 754.8 | 676.2 | 615.3 | 594.9 |
| 27.5° | 767.7 | 722.4 | 635.6 | 566.3 | 541.4 |
| 30° | 740.0 | 688.3 | 592.2 | 516.4 | 491.5 |
| 32.5° | 711.3 | 654.1 | 548.8 | 466.5 | 436.0 |
| 35° | 682.7 | 617.1 | 503.5 | 415.7 | 384.3 |
| 37.5° | 652.2 | 580.2 | 459.1 | 367.7 | 333.5 |
| 40° | 620.8 | 542.3 | 413.9 | 317.8 | 284.5 |
| 42.5° | 588.5 | 503.5 | 368.6 | 270.7 | 236.5 |
| 45° | 556.1 | 464.7 | 326.1 | 225.4 | 190.3 |
| 47.5° | 522.9 | 425.0 | 281.8 | 181.1 | 150.6 |
| 50° | 488.7 | 386.2 | 239.3 | 141.3 | 111.8 |
| 52.5° | 454.5 | 346.4 | 195.9 | 102.5 | 75.8 |
| 55° | 419.4 | 307.6 | 156.1 | 68.4 | 44.3 |
| 57.5° | 384.3 | 267.9 | 119.2 | 37.9 | 16.6 |
| 60° | 348.3 | 230.0 | 84.1 | 12.9 | 11.1 |
| 62.5° | 313.2 | 189.4 | 52.7 | 10.2 | 8.3 |
| 65° | 276.2 | 152.4 | 25.9 | 7.4 | 5.5 |
| 67.5° | 240.2 | 117.3 | 11.1 | 4.6 | 2.8 |
| 70° | 202.3 | 85.0 | 7.4 | 2.8 | 1.8 |
| 72.5° | 167.2 | 54.5 | 4.6 | 1.8 | 0.9 |
| 75° | 133.0 | 28.6 | 1.8 | 0.9 | 0.9 |
| 77.5° | 99.8 | 12.0 | 0.9 | 0.9 | 0.9 |
| 80° | 68.4 | 5.5 | 0.9 | 0.9 | 0.0 |
| 82.5° | 40.6 | 1.8 | 0.9 | 0.9 | 0.0 |
| 85° | 15.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

TEST NUMBER: P1056625
 CATALOG NUMBER: S125R3DR-H850D950-X4F0-XX-UDD-FLL-B

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 | 17.62 | 19.00 | 17.98 | 19.32 | 19.63 | 2.49 | 3.87 | 2.85 | 4.18 | 4.50 |
| | 3H | 19.17 | 20.40 | 19.55 | 20.73 | 21.09 | 2.41 | 3.64 | 2.79 | 3.97 | 4.33 |
| | 4H | 19.69 | 20.84 | 20.09 | 21.19 | 21.57 | 2.34 | 3.49 | 2.74 | 3.84 | 4.22 |
| | 6H | 20.03 | 21.08 | 20.44 | 21.45 | 21.84 | 2.27 | 3.32 | 2.69 | 3.69 | 4.09 |
| | 8H | 20.11 | 21.11 | 20.54 | 21.50 | 21.90 | 2.23 | 3.23 | 2.66 | 3.62 | 4.02 |
| | 12H | 20.13 | 21.08 | 20.56 | 21.46 | 21.89 | 2.19 | 3.14 | 2.62 | 3.53 | 3.96 |
| 4H | 2H | 17.42 | 18.57 | 17.82 | 18.92 | 19.30 | 3.35 | 4.50 | 3.75 | 4.85 | 5.23 |
| | 3H | 19.04 | 19.97 | 19.45 | 20.37 | 20.78 | 3.30 | 4.23 | 3.71 | 4.64 | 5.04 |
| | 4H | 19.56 | 20.39 | 19.99 | 20.81 | 21.25 | 3.22 | 4.06 | 3.66 | 4.47 | 4.92 |
| | 6H | 19.93 | 20.65 | 20.40 | 21.10 | 21.56 | 3.16 | 3.88 | 3.62 | 4.32 | 4.79 |
| | 8H | 20.03 | 20.70 | 20.50 | 21.15 | 21.62 | 3.11 | 3.78 | 3.57 | 4.22 | 4.69 |
| | 12H | 20.07 | 20.66 | 20.55 | 21.14 | 21.62 | 3.06 | 3.66 | 3.55 | 4.14 | 4.61 |
| 8H | 4H | 19.43 | 20.10 | 19.90 | 20.55 | 21.02 | 4.24 | 4.91 | 4.71 | 5.36 | 5.83 |
| | 6H | 19.79 | 20.33 | 20.29 | 20.83 | 21.31 | 4.16 | 4.71 | 4.66 | 5.20 | 5.68 |
| | 8H | 19.88 | 20.37 | 20.40 | 20.89 | 21.38 | 4.11 | 4.60 | 4.63 | 5.11 | 5.60 |
| | 12H | 19.92 | 20.36 | 20.44 | 20.85 | 21.42 | 4.07 | 4.50 | 4.58 | 4.99 | 5.56 |
| 12H | 4H | 19.39 | 19.98 | 19.87 | 20.46 | 20.94 | 4.32 | 4.91 | 4.81 | 5.40 | 5.87 |
| | 6H | 19.73 | 20.22 | 20.25 | 20.73 | 21.22 | 4.22 | 4.71 | 4.74 | 5.23 | 5.72 |
| | 8H | 19.84 | 20.27 | 20.35 | 20.77 | 21.34 | 4.19 | 4.62 | 4.70 | 5.12 | 5.69 |