

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: P1056621

Luminaire Tested: S125R3DR-H850D935-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056621
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-10)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125R3DR-H850D935-X4F0-XX-UDD-FLL-W
Description: DEFINE 5, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

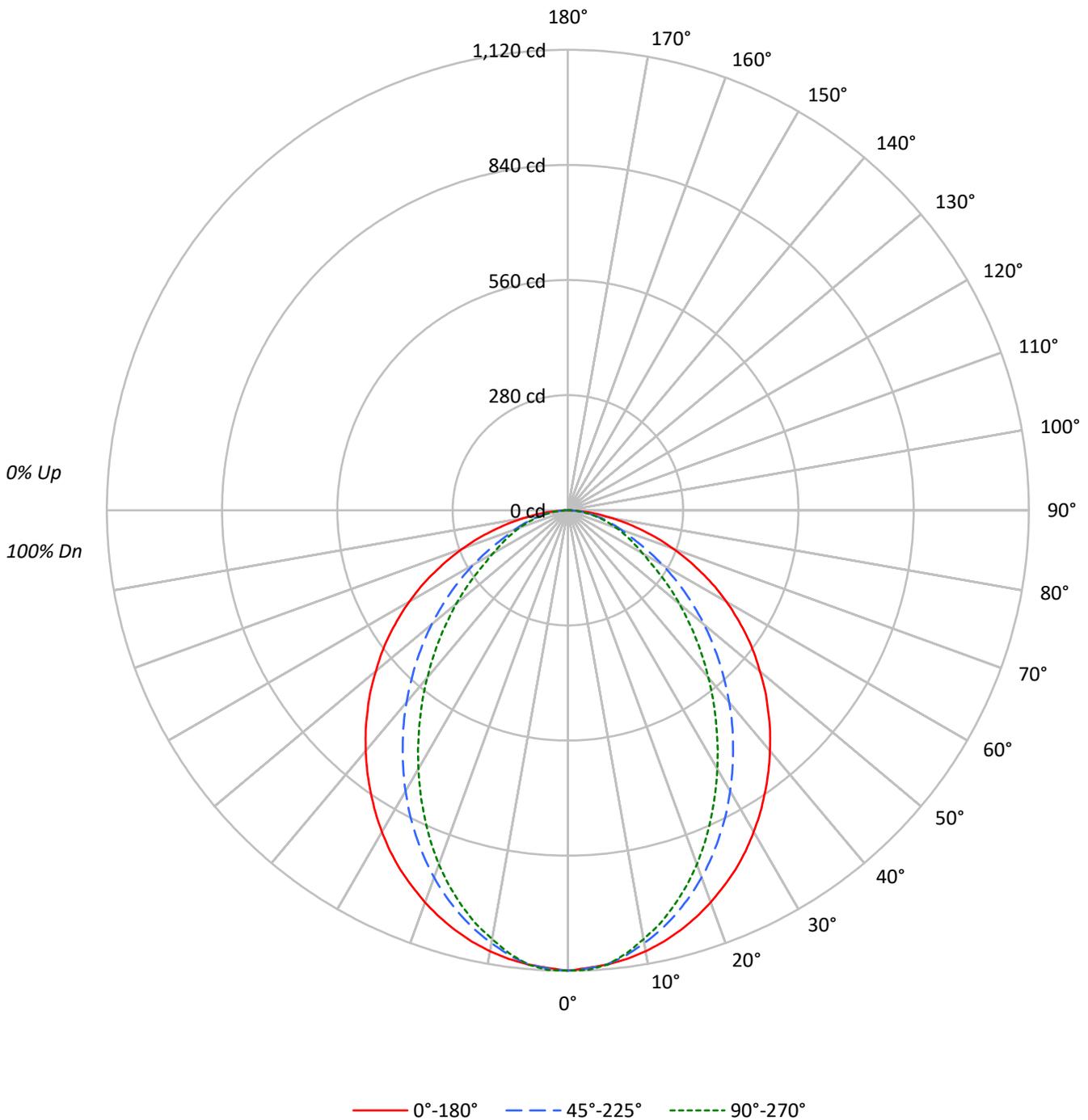
Lumens per Lamp: N/A
Luminaire Lumens: 2373.3 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.01 / 1.17
Luminous Opening: Rectangular (W 0.39' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (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 | 110 | 105 | 101 | 98 | 107 | 103 | 100 | 96 | 99 | 96 | 93 | 95 | 93 | 90 | 91 | 90 | 88 | 86 | | | | | 86 | | | |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | 63 | | | |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 63 | 58 | 68 | 62 | 57 | 66 | 61 | 57 | 55 | | | | | 55 | | | |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 63 | 56 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 | | | | | 48 | | | |
| 6 | 73 | 60 | 52 | 46 | 71 | 59 | 51 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | 43 | | | |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 46 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 | | | | | 34 | | | |
| 9 | 59 | 47 | 39 | 33 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 7916 | 7916 | 7916 |
| 5° | 7869 | 7863 | 7869 |
| 10° | 7817 | 7673 | 7601 |
| 15° | 7737 | 7439 | 7286 |
| 20° | 7634 | 7151 | 6893 |
| 25° | 7518 | 6810 | 6426 |
| 30° | 7371 | 6438 | 5928 |
| 35° | 7210 | 6037 | 5411 |
| 40° | 7048 | 5625 | 4901 |
| 45° | 6877 | 5193 | 4393 |
| 50° | 6693 | 4750 | 3888 |
| 55° | 6525 | 4264 | 3381 |
| 60° | 6295 | 3748 | 2971 |
| 65° | 5983 | 3180 | 2762 |
| 70° | 5618 | 2844 | 2586 |
| 75° | 5078 | 2619 | 2436 |
| 80° | 4413 | 2378 | 2276 |
| 85° | 3447 | 2093 | 2093 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6877 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 104.8 | 4.4 |
| 10°-20° | 287.7 | 12.1 |
| 20°-30° | 406.4 | 17.1 |
| 30°-40° | 447.3 | 18.8 |
| 40°-50° | 417.3 | 17.6 |
| 50°-60° | 333.1 | 14.0 |
| 60°-70° | 224.2 | 9.4 |
| 70°-80° | 119.4 | 5.0 |
| 80°-90° | 33.2 | 1.4 |
| 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° | 798.8 | 33.7 |
| 0°-40° | 1246.1 | 52.5 |
| 0°-60° | 1996.5 | 84.1 |
| 0°-90° | 2373.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2373.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1120 | 1120 | 1120 | 1120 | 1120 | |
| 5° | 1109 | 1118 | 1108 | 1105 | 1109 | 105 |
| 15° | 1057 | 1051 | 1016 | 999 | 996 | 298 |
| 25° | 964 | 935 | 873 | 835 | 824 | 444 |
| 35° | 835 | 786 | 700 | 644 | 627 | 523 |
| 45° | 688 | 623 | 519 | 456 | 439 | 531 |
| 55° | 529 | 449 | 346 | 291 | 274 | 473 |
| 65° | 358 | 279 | 190 | 168 | 165 | 355 |
| 75° | 186 | 123 | 96 | 90 | 89 | 198 |
| 85° | 42 | 29 | 26 | 27 | 26 | 51 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1056621

CATALOG NUMBER: S125R3DR-H850D935-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1119.7 | 1119.7 | 1119.7 | 1119.7 | 1119.7 |
| 2.5° | 1113.9 | 1123.1 | 1115.6 | 1117.2 | 1118.9 |
| 5° | 1108.9 | 1118.1 | 1108.1 | 1104.7 | 1108.9 |
| 7.5° | 1100.6 | 1108.1 | 1091.4 | 1083.9 | 1087.2 |
| 10° | 1088.9 | 1093.9 | 1068.9 | 1058.9 | 1058.9 |
| 12.5° | 1074.7 | 1074.7 | 1044.7 | 1030.5 | 1030.5 |
| 15° | 1057.2 | 1051.4 | 1016.4 | 998.9 | 995.5 |
| 17.5° | 1037.2 | 1026.4 | 984.7 | 962.2 | 958.0 |
| 20° | 1014.7 | 997.2 | 950.5 | 921.3 | 916.3 |
| 22.5° | 989.7 | 967.2 | 913.0 | 877.1 | 871.3 |
| 25° | 963.8 | 934.7 | 873.0 | 834.6 | 823.8 |
| 27.5° | 934.7 | 899.6 | 832.1 | 788.7 | 775.4 |
| 30° | 903.0 | 862.9 | 788.7 | 740.4 | 726.2 |
| 32.5° | 870.5 | 825.4 | 744.6 | 692.9 | 677.0 |
| 35° | 835.4 | 786.2 | 699.5 | 644.5 | 627.0 |
| 37.5° | 800.4 | 747.1 | 655.3 | 597.8 | 579.5 |
| 40° | 763.7 | 705.4 | 609.5 | 550.3 | 531.1 |
| 42.5° | 727.0 | 664.5 | 564.5 | 504.4 | 484.4 |
| 45° | 687.9 | 622.8 | 519.4 | 456.1 | 439.4 |
| 47.5° | 650.3 | 580.3 | 475.2 | 413.5 | 395.2 |
| 50° | 608.6 | 536.1 | 431.9 | 370.2 | 353.5 |
| 52.5° | 570.3 | 492.8 | 388.5 | 331.0 | 313.5 |
| 55° | 529.4 | 449.4 | 346.0 | 291.0 | 274.3 |
| 57.5° | 486.9 | 406.0 | 305.2 | 253.5 | 237.6 |
| 60° | 445.2 | 362.7 | 265.1 | 217.6 | 210.1 |
| 62.5° | 402.7 | 321.8 | 227.6 | 190.9 | 185.9 |
| 65° | 357.7 | 279.3 | 190.1 | 168.4 | 165.1 |
| 67.5° | 315.2 | 238.5 | 160.1 | 147.6 | 144.2 |
| 70° | 271.8 | 197.6 | 137.6 | 126.7 | 125.1 |
| 72.5° | 229.3 | 158.4 | 115.9 | 108.4 | 106.7 |
| 75° | 185.9 | 123.4 | 95.9 | 90.0 | 89.2 |
| 77.5° | 145.9 | 92.5 | 75.9 | 73.4 | 71.7 |
| 80° | 108.4 | 69.2 | 58.4 | 56.7 | 55.9 |
| 82.5° | 74.2 | 47.5 | 41.7 | 41.7 | 40.0 |
| 85° | 42.5 | 29.2 | 25.8 | 26.7 | 25.8 |
| 87.5° | 15.8 | 12.5 | 11.7 | 12.5 | 12.5 |
| 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 | 18.48 | 20.02 | 18.84 | 20.33 | 20.64 | 14.86 | 16.40 | 15.22 | 16.71 | 17.03 |
| | 3H | 20.26 | 21.65 | 20.64 | 21.97 | 22.33 | 16.33 | 17.72 | 16.71 | 18.05 | 18.41 |
| | 4H | 20.91 | 22.21 | 21.31 | 22.56 | 22.94 | 16.92 | 18.22 | 17.32 | 18.57 | 18.95 |
| | 6H | 21.39 | 22.59 | 21.80 | 22.96 | 23.35 | 17.39 | 18.59 | 17.80 | 18.95 | 19.35 |
| | 8H | 21.55 | 22.69 | 21.97 | 23.08 | 23.48 | 17.55 | 18.69 | 17.97 | 19.08 | 19.48 |
| | 12H | 21.64 | 22.74 | 22.07 | 23.12 | 23.55 | 17.66 | 18.76 | 18.09 | 19.14 | 19.57 |
| 4H | 2H | 18.61 | 19.91 | 19.01 | 20.26 | 20.64 | 15.54 | 16.83 | 15.94 | 17.18 | 17.56 |
| | 3H | 20.58 | 21.66 | 20.99 | 22.06 | 22.46 | 17.21 | 18.29 | 17.62 | 18.69 | 19.09 |
| | 4H | 21.33 | 22.30 | 21.76 | 22.72 | 23.15 | 17.92 | 18.89 | 18.35 | 19.30 | 19.74 |
| | 6H | 21.92 | 22.77 | 22.38 | 23.21 | 23.67 | 18.50 | 19.35 | 18.96 | 19.79 | 20.25 |
| | 8H | 22.13 | 22.92 | 22.59 | 23.36 | 23.83 | 18.71 | 19.50 | 19.17 | 19.95 | 20.41 |
| | 12H | 22.27 | 22.98 | 22.76 | 23.46 | 23.93 | 18.87 | 19.58 | 19.35 | 20.06 | 20.53 |
| 8H | 4H | 21.39 | 22.18 | 21.85 | 22.63 | 23.09 | 18.28 | 19.07 | 18.74 | 19.52 | 19.98 |
| | 6H | 22.05 | 22.71 | 22.54 | 23.20 | 23.67 | 18.98 | 19.64 | 19.48 | 20.13 | 20.61 |
| | 8H | 22.30 | 22.89 | 22.82 | 23.40 | 23.89 | 19.27 | 19.86 | 19.78 | 20.36 | 20.85 |
| | 12H | 22.51 | 23.03 | 23.02 | 23.52 | 24.09 | 19.51 | 20.03 | 20.02 | 20.52 | 21.08 |
| 12H | 4H | 21.38 | 22.09 | 21.86 | 22.57 | 23.04 | 18.33 | 19.04 | 18.81 | 19.51 | 19.99 |
| | 6H | 22.04 | 22.63 | 22.56 | 23.14 | 23.63 | 19.05 | 19.64 | 19.57 | 20.15 | 20.64 |
| | 8H | 22.34 | 22.86 | 22.85 | 23.35 | 23.91 | 19.40 | 19.92 | 19.91 | 20.41 | 20.97 |