

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: P1055217

Luminaire Tested: S122R3DR-S485D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055217
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S485D935-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

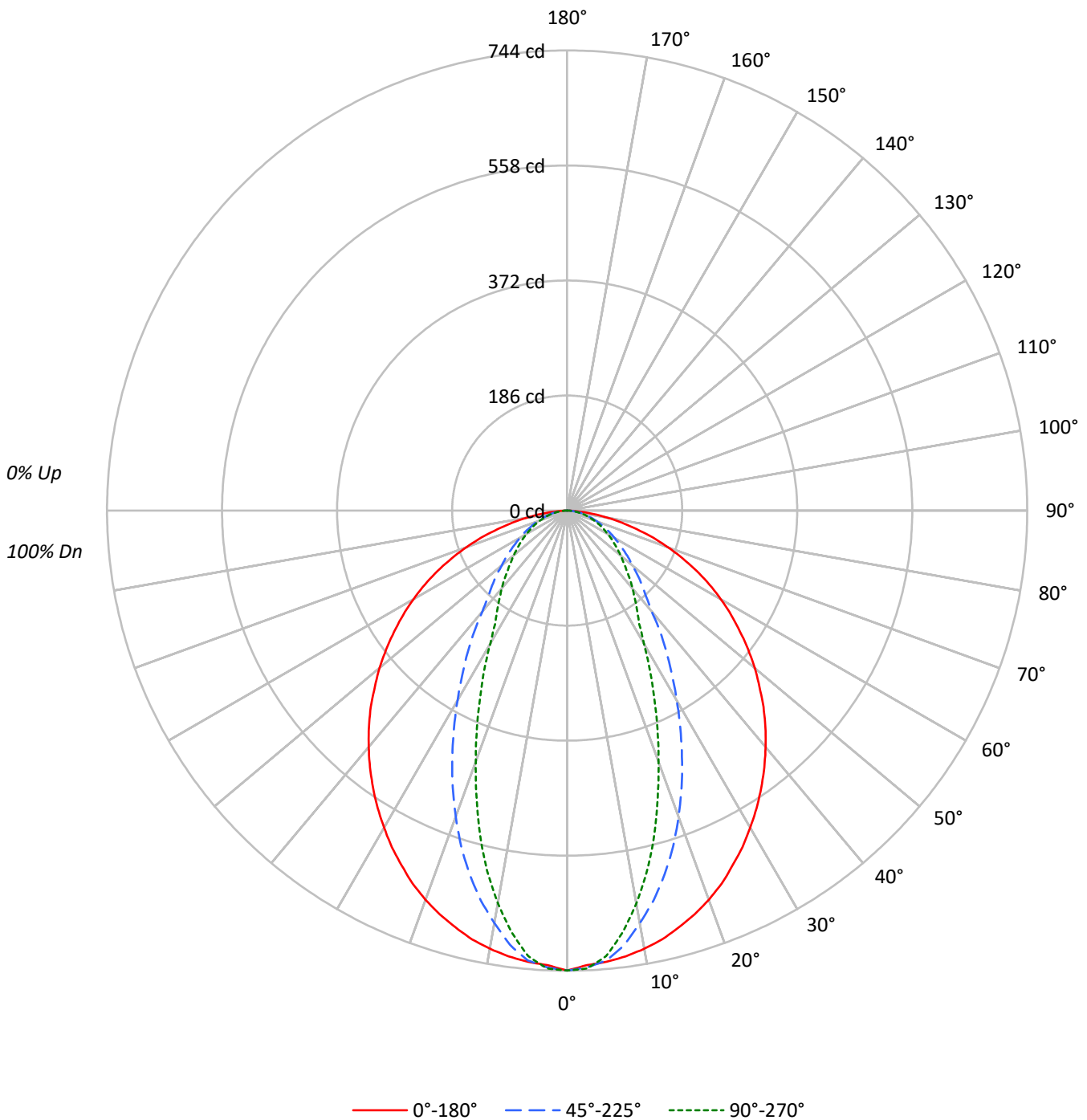
Lumens per Lamp: N/A
Luminaire Lumens: 1124.8 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 110 | 106 | 102 | 99 | 108 | 104 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 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 | 43 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 14088 | 14088 | 14088 |
| 5° | 13929 | 13883 | 13752 |
| 10° | 13840 | 13026 | 12405 |
| 15° | 13683 | 11939 | 10670 |
| 20° | 13500 | 10617 | 8712 |
| 25° | 13233 | 9177 | 6953 |
| 30° | 12949 | 7753 | 5428 |
| 35° | 12656 | 6485 | 4559 |
| 40° | 12349 | 5258 | 4059 |
| 45° | 12028 | 4598 | 3631 |
| 50° | 11675 | 4067 | 3316 |
| 55° | 11274 | 3676 | 3082 |
| 60° | 10886 | 3346 | 2876 |
| 65° | 10369 | 3066 | 2703 |
| 70° | 9611 | 2858 | 2548 |
| 75° | 8513 | 2591 | 2416 |
| 80° | 7255 | 2444 | 2237 |
| 85° | 5000 | 2152 | 2022 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12028 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 68.1 | 6.1 |
| 10°-20° | 172.0 | 15.3 |
| 20°-30° | 212.0 | 18.8 |
| 30°-40° | 203.4 | 18.1 |
| 40°-50° | 175.4 | 15.6 |
| 50°-60° | 136.1 | 12.1 |
| 60°-70° | 93.2 | 8.3 |
| 70°-80° | 50.6 | 4.5 |
| 80°-90° | 13.9 | 1.2 |
| 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° | 452.2 | 40.2 |
| 0°-40° | 655.6 | 58.3 |
| 0°-60° | 967.1 | 86.0 |
| 0°-90° | 1124.8 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1124.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 744 | 744 | 744 | 744 | 744 | |
| 5° | 732 | 743 | 730 | 721 | 723 | 70 |
| 15° | 698 | 676 | 609 | 559 | 544 | 197 |
| 25° | 633 | 565 | 439 | 358 | 333 | 292 |
| 35° | 547 | 434 | 280 | 209 | 197 | 342 |
| 45° | 449 | 302 | 172 | 142 | 136 | 346 |
| 55° | 341 | 182 | 111 | 96 | 93 | 306 |
| 65° | 231 | 99 | 68 | 62 | 60 | 228 |
| 75° | 116 | 45 | 35 | 34 | 33 | 125 |
| 85° | 23 | 11 | 10 | 10 | 9 | 29 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P105217

CATALOG NUMBER: S122R3DR-S485D935-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 743.6 | 743.6 | 743.6 | 743.6 | 743.6 |
| 2.5° | 735.5 | 748.0 | 739.3 | 739.3 | 741.1 |
| 5° | 732.4 | 743.0 | 730.0 | 720.6 | 723.1 |
| 7.5° | 726.8 | 734.3 | 708.2 | 688.3 | 687.7 |
| 10° | 719.4 | 720.0 | 677.1 | 651.0 | 644.8 |
| 12.5° | 710.1 | 700.1 | 645.4 | 606.2 | 596.9 |
| 15° | 697.6 | 676.5 | 608.7 | 559.0 | 544.0 |
| 17.5° | 684.6 | 652.2 | 569.5 | 507.4 | 486.8 |
| 20° | 669.6 | 623.0 | 526.6 | 455.8 | 432.1 |
| 22.5° | 652.9 | 595.0 | 483.7 | 406.0 | 381.1 |
| 25° | 633.0 | 565.2 | 439.0 | 358.1 | 332.6 |
| 27.5° | 613.7 | 534.7 | 396.1 | 315.9 | 289.7 |
| 30° | 591.9 | 501.8 | 354.4 | 275.4 | 248.1 |
| 32.5° | 570.2 | 468.2 | 315.9 | 236.9 | 216.4 |
| 35° | 547.2 | 434.0 | 280.4 | 208.9 | 197.1 |
| 37.5° | 523.5 | 400.4 | 246.8 | 190.3 | 179.7 |
| 40° | 499.3 | 366.8 | 212.6 | 172.2 | 164.1 |
| 42.5° | 474.4 | 333.9 | 189.0 | 157.3 | 149.8 |
| 45° | 448.9 | 302.2 | 171.6 | 141.8 | 135.5 |
| 47.5° | 421.6 | 270.5 | 154.8 | 128.7 | 123.1 |
| 50° | 396.1 | 240.0 | 138.0 | 116.9 | 112.5 |
| 52.5° | 368.7 | 210.2 | 124.4 | 106.3 | 102.6 |
| 55° | 341.3 | 181.6 | 111.3 | 96.4 | 93.3 |
| 57.5° | 314.6 | 154.2 | 98.9 | 87.0 | 84.6 |
| 60° | 287.3 | 132.4 | 88.3 | 78.3 | 75.9 |
| 62.5° | 259.3 | 115.0 | 78.3 | 70.3 | 67.8 |
| 65° | 231.3 | 98.9 | 68.4 | 62.2 | 60.3 |
| 67.5° | 202.1 | 83.3 | 59.7 | 54.7 | 53.5 |
| 70° | 173.5 | 69.6 | 51.6 | 47.3 | 46.0 |
| 72.5° | 145.5 | 56.6 | 43.5 | 40.4 | 39.2 |
| 75° | 116.3 | 45.4 | 35.4 | 33.6 | 33.0 |
| 77.5° | 90.8 | 35.4 | 28.6 | 27.4 | 26.7 |
| 80° | 66.5 | 26.1 | 22.4 | 21.1 | 20.5 |
| 82.5° | 44.1 | 18.0 | 16.2 | 15.5 | 14.9 |
| 85° | 23.0 | 11.2 | 9.9 | 9.9 | 9.3 |
| 87.5° | 7.5 | 5.0 | 5.0 | 5.0 | 4.4 |
| 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 | 18.80 | 20.27 | 19.16 | 20.58 | 20.90 | 13.60 | 15.07 | 13.97 | 15.38 | 15.70 |
| | 3H | 21.13 | 22.45 | 21.51 | 22.77 | 23.14 | 15.25 | 16.57 | 15.63 | 16.90 | 17.26 |
| | 4H | 22.03 | 23.26 | 22.43 | 23.61 | 23.99 | 15.89 | 17.12 | 16.29 | 17.47 | 17.85 |
| | 6H | 22.69 | 23.83 | 23.10 | 24.19 | 24.59 | 16.38 | 17.52 | 16.79 | 17.89 | 18.28 |
| | 8H | 22.90 | 23.98 | 23.32 | 24.37 | 24.77 | 16.55 | 17.64 | 16.98 | 18.03 | 18.43 |
| | 12H | 23.01 | 24.05 | 23.44 | 24.43 | 24.86 | 16.67 | 17.70 | 17.10 | 18.09 | 18.52 |
| 4H | 2H | 18.82 | 20.05 | 19.22 | 20.40 | 20.78 | 14.32 | 15.55 | 14.72 | 15.90 | 16.28 |
| | 3H | 21.23 | 22.25 | 21.64 | 22.65 | 23.06 | 16.17 | 17.19 | 16.58 | 17.59 | 18.00 |
| | 4H | 22.16 | 23.08 | 22.59 | 23.50 | 23.94 | 16.92 | 17.84 | 17.35 | 18.26 | 18.70 |
| | 6H | 22.94 | 23.74 | 23.39 | 24.18 | 24.64 | 17.53 | 18.33 | 17.99 | 18.78 | 19.24 |
| | 8H | 23.21 | 23.95 | 23.67 | 24.40 | 24.87 | 17.75 | 18.50 | 18.21 | 18.94 | 19.41 |
| | 12H | 23.38 | 24.05 | 23.87 | 24.53 | 25.00 | 17.91 | 18.57 | 18.39 | 19.05 | 19.53 |
| 8H | 4H | 22.15 | 22.90 | 22.62 | 23.35 | 23.81 | 17.30 | 18.04 | 17.76 | 18.49 | 18.96 |
| | 6H | 22.96 | 23.58 | 23.46 | 24.07 | 24.55 | 18.03 | 18.65 | 18.53 | 19.14 | 19.62 |
| | 8H | 23.26 | 23.81 | 23.77 | 24.32 | 24.81 | 18.33 | 18.88 | 18.84 | 19.39 | 19.88 |
| | 12H | 23.49 | 23.98 | 24.00 | 24.47 | 25.04 | 18.57 | 19.06 | 19.08 | 19.55 | 20.12 |
| 12H | 4H | 22.13 | 22.80 | 22.61 | 23.28 | 23.75 | 17.35 | 18.02 | 17.84 | 18.50 | 18.97 |
| | 6H | 22.93 | 23.49 | 23.45 | 24.00 | 24.49 | 18.12 | 18.67 | 18.63 | 19.18 | 19.67 |
| | 8H | 23.27 | 23.76 | 23.78 | 24.25 | 24.82 | 18.47 | 18.96 | 18.98 | 19.45 | 20.02 |