

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: P1055328

Luminaire Tested: S122R3DRP-H290D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055328
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: S122R3DRP-H290D940-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

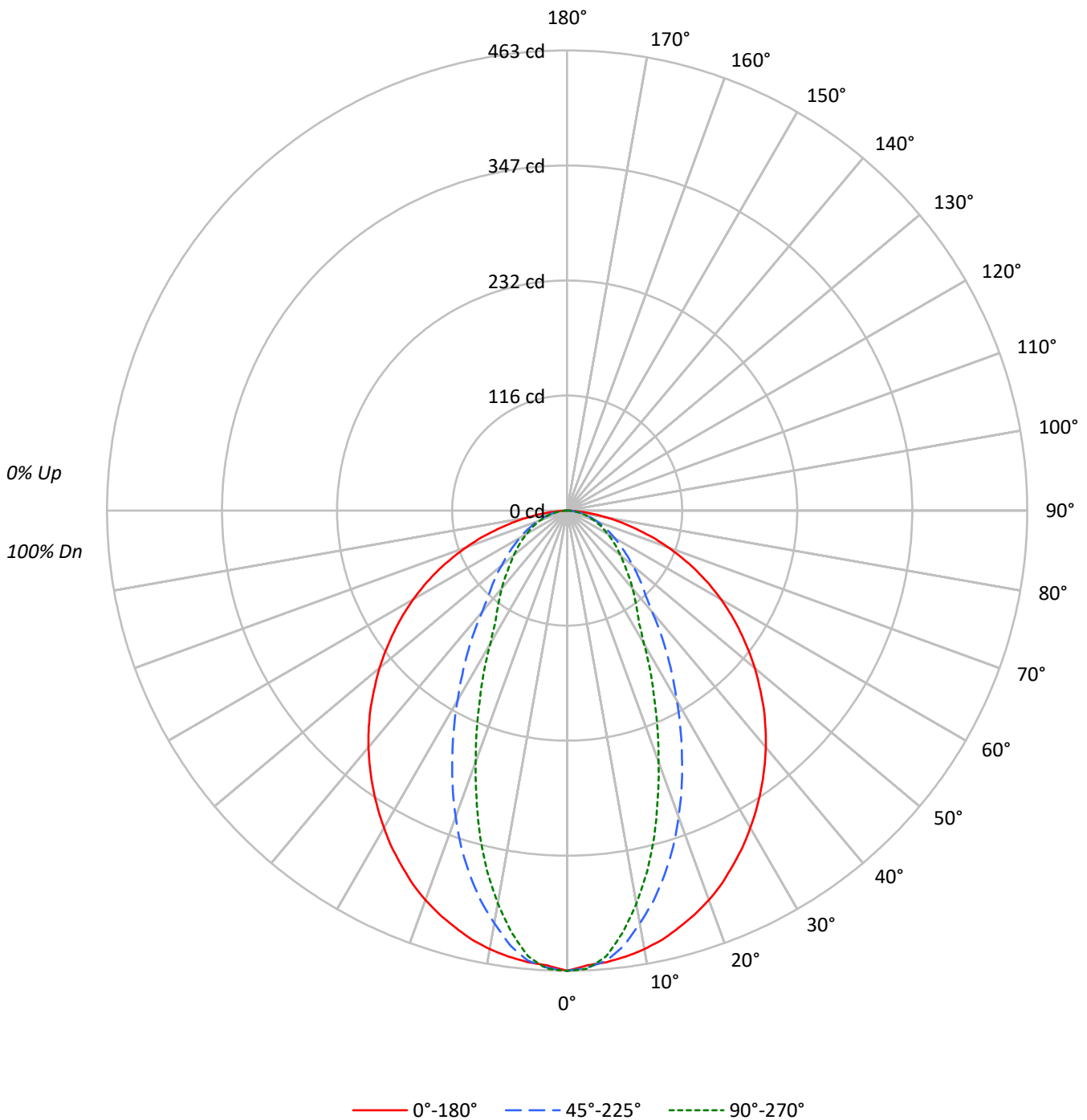
Lumens per Lamp: N/A
Luminaire Lumens: 700.4 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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° | 8774 | 8774 | 8774 |
| 5° | 8674 | 8644 | 8564 |
| 10° | 8619 | 8111 | 7724 |
| 15° | 8520 | 7434 | 6645 |
| 20° | 8407 | 6611 | 5426 |
| 25° | 8238 | 5713 | 4329 |
| 30° | 8064 | 4828 | 3380 |
| 35° | 7880 | 4038 | 2838 |
| 40° | 7689 | 3275 | 2528 |
| 45° | 7489 | 2864 | 2261 |
| 50° | 7268 | 2535 | 2066 |
| 55° | 7022 | 2289 | 1919 |
| 60° | 6779 | 2084 | 1788 |
| 65° | 6455 | 1910 | 1686 |
| 70° | 5983 | 1778 | 1590 |
| 75° | 5300 | 1618 | 1501 |
| 80° | 4517 | 1517 | 1397 |
| 85° | 3109 | 1348 | 1261 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7489 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 42.4 | 6.1 |
| 10°-20° | 107.1 | 15.3 |
| 20°-30° | 132.0 | 18.8 |
| 30°-40° | 126.6 | 18.1 |
| 40°-50° | 109.2 | 15.6 |
| 50°-60° | 84.8 | 12.1 |
| 60°-70° | 58.0 | 8.3 |
| 70°-80° | 31.5 | 4.5 |
| 80°-90° | 8.6 | 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° | 281.6 | 40.2 |
| 0°-40° | 408.2 | 58.3 |
| 0°-60° | 602.2 | 86.0 |
| 0°-90° | 700.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 700.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 463 | 463 | 463 | 463 | 463 | |
| 5° | 456 | 463 | 454 | 449 | 450 | 43 |
| 15° | 434 | 421 | 379 | 348 | 339 | 123 |
| 25° | 394 | 352 | 273 | 223 | 207 | 182 |
| 35° | 341 | 270 | 175 | 130 | 123 | 213 |
| 45° | 280 | 188 | 107 | 88 | 84 | 215 |
| 55° | 213 | 113 | 69 | 60 | 58 | 190 |
| 65° | 144 | 62 | 43 | 39 | 38 | 142 |
| 75° | 72 | 28 | 22 | 21 | 20 | 78 |
| 85° | 14 | 7 | 6 | 6 | 6 | 18 |
| 90° | 0 | 0 | 0 | 0 | 0 | |

TEST NUMBER: P1055328

CATALOG NUMBER: S122R3DRP-H290D940-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 463.1 | 463.1 | 463.1 | 463.1 | 463.1 |
| 2.5° | 458.0 | 465.8 | 460.3 | 460.3 | 461.5 |
| 5° | 456.1 | 462.7 | 454.5 | 448.7 | 450.3 |
| 7.5° | 452.6 | 457.3 | 441.0 | 428.6 | 428.2 |
| 10° | 448.0 | 448.3 | 421.6 | 405.4 | 401.5 |
| 12.5° | 442.2 | 436.0 | 401.9 | 377.5 | 371.7 |
| 15° | 434.4 | 421.2 | 379.0 | 348.1 | 338.8 |
| 17.5° | 426.3 | 406.1 | 354.7 | 315.9 | 303.2 |
| 20° | 417.0 | 387.9 | 327.9 | 283.8 | 269.1 |
| 22.5° | 406.5 | 370.5 | 301.2 | 252.8 | 237.3 |
| 25° | 394.1 | 351.9 | 273.3 | 223.0 | 207.1 |
| 27.5° | 382.1 | 333.0 | 246.6 | 196.7 | 180.4 |
| 30° | 368.6 | 312.4 | 220.7 | 171.5 | 154.5 |
| 32.5° | 355.0 | 291.5 | 196.7 | 147.5 | 134.7 |
| 35° | 340.7 | 270.2 | 174.6 | 130.1 | 122.7 |
| 37.5° | 326.0 | 249.3 | 153.7 | 118.5 | 111.9 |
| 40° | 310.9 | 228.4 | 132.4 | 107.2 | 102.2 |
| 42.5° | 295.4 | 207.9 | 117.7 | 98.0 | 93.3 |
| 45° | 279.5 | 188.2 | 106.9 | 88.3 | 84.4 |
| 47.5° | 262.5 | 168.4 | 96.4 | 80.1 | 76.7 |
| 50° | 246.6 | 149.4 | 86.0 | 72.8 | 70.1 |
| 52.5° | 229.6 | 130.9 | 77.4 | 66.2 | 63.9 |
| 55° | 212.6 | 113.1 | 69.3 | 60.0 | 58.1 |
| 57.5° | 195.9 | 96.0 | 61.6 | 54.2 | 52.7 |
| 60° | 178.9 | 82.5 | 55.0 | 48.8 | 47.2 |
| 62.5° | 161.5 | 71.6 | 48.8 | 43.8 | 42.2 |
| 65° | 144.0 | 61.6 | 42.6 | 38.7 | 37.6 |
| 67.5° | 125.8 | 51.9 | 37.2 | 34.1 | 33.3 |
| 70° | 108.0 | 43.4 | 32.1 | 29.4 | 28.7 |
| 72.5° | 90.6 | 35.2 | 27.1 | 25.2 | 24.4 |
| 75° | 72.4 | 28.3 | 22.1 | 20.9 | 20.5 |
| 77.5° | 56.5 | 22.1 | 17.8 | 17.0 | 16.6 |
| 80° | 41.4 | 16.3 | 13.9 | 13.2 | 12.8 |
| 82.5° | 27.5 | 11.2 | 10.1 | 9.7 | 9.3 |
| 85° | 14.3 | 7.0 | 6.2 | 6.2 | 5.8 |
| 87.5° | 4.6 | 3.1 | 3.1 | 3.1 | 2.7 |
| 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 | 17.15 | 18.62 | 17.52 | 18.93 | 19.25 | 11.96 | 13.43 | 12.33 | 13.74 | 14.06 |
| | 3H | 19.48 | 20.80 | 19.86 | 21.13 | 21.49 | 13.61 | 14.93 | 13.99 | 15.25 | 15.62 |
| | 4H | 20.38 | 21.61 | 20.78 | 21.96 | 22.34 | 14.24 | 15.48 | 14.64 | 15.83 | 16.21 |
| | 6H | 21.04 | 22.18 | 21.45 | 22.55 | 22.94 | 14.74 | 15.88 | 15.15 | 16.24 | 16.64 |
| | 8H | 21.25 | 22.33 | 21.68 | 22.72 | 23.13 | 14.91 | 15.99 | 15.33 | 16.38 | 16.78 |
| | 12H | 21.36 | 22.40 | 21.80 | 22.78 | 23.21 | 15.02 | 16.06 | 15.45 | 16.44 | 16.87 |
| 4H | 2H | 17.17 | 18.40 | 17.57 | 18.75 | 19.13 | 12.68 | 13.91 | 13.08 | 14.26 | 14.64 |
| | 3H | 19.58 | 20.61 | 19.99 | 21.01 | 21.41 | 14.52 | 15.55 | 14.94 | 15.95 | 16.35 |
| | 4H | 20.51 | 21.43 | 20.95 | 21.85 | 22.29 | 15.27 | 16.19 | 15.70 | 16.61 | 17.05 |
| | 6H | 21.29 | 22.09 | 21.75 | 22.54 | 23.00 | 15.88 | 16.69 | 16.34 | 17.13 | 17.59 |
| | 8H | 21.56 | 22.31 | 22.02 | 22.75 | 23.22 | 16.10 | 16.85 | 16.57 | 17.30 | 17.76 |
| | 12H | 21.74 | 22.41 | 22.22 | 22.88 | 23.36 | 16.26 | 16.93 | 16.75 | 17.41 | 17.88 |
| 8H | 4H | 20.51 | 21.25 | 20.97 | 21.70 | 22.17 | 15.65 | 16.40 | 16.11 | 16.84 | 17.31 |
| | 6H | 21.31 | 21.93 | 21.81 | 22.42 | 22.90 | 16.39 | 17.00 | 16.88 | 17.50 | 17.98 |
| | 8H | 21.61 | 22.17 | 22.13 | 22.68 | 23.17 | 16.68 | 17.24 | 17.20 | 17.75 | 18.24 |
| | 12H | 21.85 | 22.33 | 22.36 | 22.83 | 23.39 | 16.93 | 17.42 | 17.44 | 17.91 | 18.48 |
| 12H | 4H | 20.49 | 21.15 | 20.97 | 21.63 | 22.11 | 15.71 | 16.37 | 16.19 | 16.85 | 17.33 |
| | 6H | 21.29 | 21.84 | 21.80 | 22.35 | 22.84 | 16.47 | 17.03 | 16.99 | 17.54 | 18.03 |
| | 8H | 21.62 | 22.11 | 22.13 | 22.60 | 23.17 | 16.83 | 17.32 | 17.34 | 17.81 | 18.38 |