

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: P1055196

Luminaire Tested: S122R3DRP-S290D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055196
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-S290D950-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

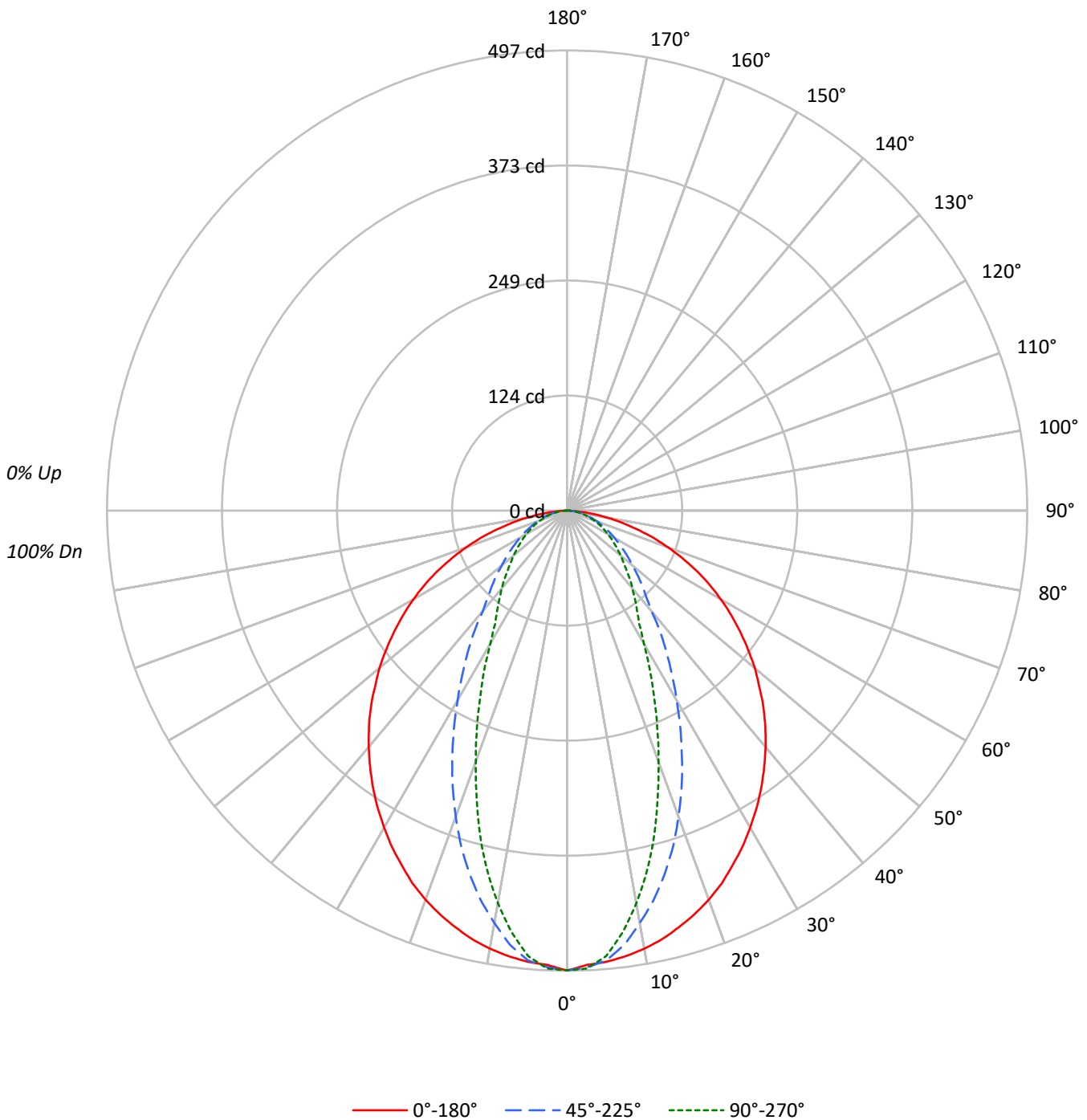
Lumens per Lamp: N/A
Luminaire Lumens: 751.2 lumens
Efficiency: N/A
Efficacy: 59.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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 | 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 | 106 | 102 | 99 | 108 | 104 | 101 | 97 | 100 | 97 | 94 | 96 | 94 | 92 | 92 | 91 | 89 | 87 | | | | | 87 | | | |
| 2 | 102 | 95 | 89 | 84 | 99 | 93 | 87 | 83 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 | | | | | 75 | | | |
| 3 | 94 | 85 | 78 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 | | | | | 66 | | | |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 | | | | | 58 | | | |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 52 | | | | | 52 | | | |
| 6 | 75 | 63 | 55 | 50 | 74 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 49 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 7 | 71 | 58 | 50 | 45 | 69 | 58 | 50 | 45 | 56 | 49 | 44 | 55 | 49 | 44 | 53 | 48 | 44 | 42 | | | | | 42 | | | |
| 8 | 66 | 54 | 46 | 41 | 65 | 53 | 46 | 41 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 38 | | | | | 38 | | | |
| 9 | 62 | 50 | 43 | 37 | 61 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 | | | | | 35 | | | |
| 10 | 59 | 47 | 39 | 35 | 58 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 34 | 32 | | | | | 32 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 9409 | 9409 | 9409 |
| 5° | 9302 | 9271 | 9184 |
| 10° | 9242 | 8699 | 8284 |
| 15° | 9138 | 7973 | 7126 |
| 20° | 9016 | 7091 | 5819 |
| 25° | 8836 | 6129 | 4645 |
| 30° | 8648 | 5178 | 3625 |
| 35° | 8451 | 4332 | 3044 |
| 40° | 8246 | 3512 | 2711 |
| 45° | 8033 | 3071 | 2425 |
| 50° | 7796 | 2718 | 2216 |
| 55° | 7531 | 2454 | 2058 |
| 60° | 7268 | 2236 | 1921 |
| 65° | 6926 | 2049 | 1807 |
| 70° | 6420 | 1911 | 1701 |
| 75° | 5680 | 1735 | 1610 |
| 80° | 4844 | 1626 | 1495 |
| 85° | 3348 | 1435 | 1348 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8033 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 45.5 | 6.1 |
| 10°-20° | 114.9 | 15.3 |
| 20°-30° | 141.6 | 18.8 |
| 30°-40° | 135.8 | 18.1 |
| 40°-50° | 117.2 | 15.6 |
| 50°-60° | 90.9 | 12.1 |
| 60°-70° | 62.2 | 8.3 |
| 70°-80° | 33.8 | 4.5 |
| 80°-90° | 9.3 | 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° | 302.0 | 40.2 |
| 0°-40° | 437.8 | 58.3 |
| 0°-60° | 645.9 | 86.0 |
| 0°-90° | 751.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 751.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 497 | 497 | 497 | 497 | 497 | |
| 5° | 489 | 496 | 488 | 481 | 483 | 46 |
| 15° | 466 | 452 | 406 | 373 | 363 | 131 |
| 25° | 423 | 378 | 293 | 239 | 222 | 195 |
| 35° | 365 | 290 | 187 | 140 | 132 | 229 |
| 45° | 300 | 202 | 115 | 95 | 90 | 231 |
| 55° | 228 | 121 | 74 | 64 | 62 | 204 |
| 65° | 154 | 66 | 46 | 42 | 40 | 153 |
| 75° | 78 | 30 | 24 | 22 | 22 | 83 |
| 85° | 15 | 8 | 7 | 7 | 6 | 20 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: S122R3DRP-S290D950-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 496.6 | 496.6 | 496.6 | 496.6 | 496.6 |
| 2.5° | 491.2 | 499.5 | 493.7 | 493.7 | 495.0 |
| 5° | 489.1 | 496.2 | 487.5 | 481.3 | 482.9 |
| 7.5° | 485.4 | 490.4 | 473.0 | 459.7 | 459.3 |
| 10° | 480.4 | 480.8 | 452.2 | 434.8 | 430.6 |
| 12.5° | 474.2 | 467.6 | 431.0 | 404.9 | 398.6 |
| 15° | 465.9 | 451.8 | 406.5 | 373.3 | 363.3 |
| 17.5° | 457.2 | 435.6 | 380.4 | 338.8 | 325.1 |
| 20° | 447.2 | 416.1 | 351.7 | 304.4 | 288.6 |
| 22.5° | 436.0 | 397.4 | 323.1 | 271.1 | 254.5 |
| 25° | 422.7 | 377.5 | 293.2 | 239.2 | 222.2 |
| 27.5° | 409.8 | 357.1 | 264.5 | 210.9 | 193.5 |
| 30° | 395.3 | 335.1 | 236.7 | 183.9 | 165.7 |
| 32.5° | 380.8 | 312.7 | 210.9 | 158.2 | 144.5 |
| 35° | 365.4 | 289.8 | 187.3 | 139.5 | 131.6 |
| 37.5° | 349.6 | 267.4 | 164.8 | 127.1 | 120.0 |
| 40° | 333.4 | 245.0 | 142.0 | 115.0 | 109.6 |
| 42.5° | 316.8 | 223.0 | 126.2 | 105.1 | 100.1 |
| 45° | 299.8 | 201.8 | 114.6 | 94.7 | 90.5 |
| 47.5° | 281.5 | 180.6 | 103.4 | 86.0 | 82.2 |
| 50° | 264.5 | 160.3 | 92.2 | 78.1 | 75.2 |
| 52.5° | 246.2 | 140.4 | 83.0 | 71.0 | 68.5 |
| 55° | 228.0 | 121.2 | 74.3 | 64.4 | 62.3 |
| 57.5° | 210.1 | 103.0 | 66.0 | 58.1 | 56.5 |
| 60° | 191.8 | 88.4 | 59.0 | 52.3 | 50.7 |
| 62.5° | 173.2 | 76.8 | 52.3 | 46.9 | 45.3 |
| 65° | 154.5 | 66.0 | 45.7 | 41.5 | 40.3 |
| 67.5° | 135.0 | 55.6 | 39.9 | 36.5 | 35.7 |
| 70° | 115.9 | 46.5 | 34.5 | 31.6 | 30.7 |
| 72.5° | 97.2 | 37.8 | 29.1 | 27.0 | 26.2 |
| 75° | 77.6 | 30.3 | 23.7 | 22.4 | 22.0 |
| 77.5° | 60.6 | 23.7 | 19.1 | 18.3 | 17.9 |
| 80° | 44.4 | 17.4 | 14.9 | 14.1 | 13.7 |
| 82.5° | 29.5 | 12.0 | 10.8 | 10.4 | 10.0 |
| 85° | 15.4 | 7.5 | 6.6 | 6.6 | 6.2 |
| 87.5° | 5.0 | 3.3 | 3.3 | 3.3 | 2.9 |
| 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 | 17.40 | 18.87 | 17.76 | 19.18 | 19.49 | 12.20 | 13.67 | 12.57 | 13.98 | 14.30 |
| | 3H | 19.73 | 21.04 | 20.11 | 21.37 | 21.73 | 13.85 | 15.16 | 14.23 | 15.49 | 15.86 |
| | 4H | 20.62 | 21.86 | 21.02 | 22.21 | 22.59 | 14.48 | 15.72 | 14.88 | 16.07 | 16.45 |
| | 6H | 21.28 | 22.42 | 21.70 | 22.79 | 23.18 | 14.98 | 16.12 | 15.39 | 16.49 | 16.88 |
| | 8H | 21.49 | 22.58 | 21.92 | 22.97 | 23.37 | 15.15 | 16.23 | 15.58 | 16.62 | 17.03 |
| | 12H | 21.61 | 22.65 | 22.04 | 23.03 | 23.46 | 15.27 | 16.30 | 15.70 | 16.69 | 17.12 |
| 4H | 2H | 17.41 | 18.65 | 17.81 | 19.00 | 19.38 | 12.92 | 14.15 | 13.32 | 14.50 | 14.88 |
| | 3H | 19.83 | 20.85 | 20.24 | 21.25 | 21.65 | 14.77 | 15.79 | 15.18 | 16.19 | 16.59 |
| | 4H | 20.76 | 21.68 | 21.19 | 22.09 | 22.53 | 15.51 | 16.44 | 15.95 | 16.85 | 17.29 |
| | 6H | 21.53 | 22.33 | 21.99 | 22.78 | 23.24 | 16.13 | 16.93 | 16.59 | 17.37 | 17.84 |
| | 8H | 21.80 | 22.55 | 22.27 | 23.00 | 23.47 | 16.35 | 17.10 | 16.81 | 17.54 | 18.01 |
| | 12H | 21.98 | 22.65 | 22.46 | 23.13 | 23.60 | 16.51 | 17.17 | 16.99 | 17.65 | 18.13 |
| 8H | 4H | 20.75 | 21.50 | 21.21 | 21.94 | 22.41 | 15.89 | 16.64 | 16.36 | 17.09 | 17.55 |
| | 6H | 21.56 | 22.17 | 22.05 | 22.67 | 23.14 | 16.63 | 17.25 | 17.13 | 17.74 | 18.22 |
| | 8H | 21.86 | 22.41 | 22.37 | 22.92 | 23.41 | 16.93 | 17.48 | 17.44 | 17.99 | 18.48 |
| | 12H | 22.09 | 22.58 | 22.60 | 23.07 | 23.64 | 17.17 | 17.66 | 17.68 | 18.15 | 18.72 |
| 12H | 4H | 20.73 | 21.40 | 21.21 | 21.88 | 22.35 | 15.95 | 16.62 | 16.43 | 17.10 | 17.57 |
| | 6H | 21.53 | 22.09 | 22.05 | 22.60 | 23.09 | 16.72 | 17.27 | 17.23 | 17.78 | 18.27 |
| | 8H | 21.86 | 22.35 | 22.38 | 22.85 | 23.41 | 17.07 | 17.56 | 17.58 | 18.05 | 18.62 |