

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: P1058328

Luminaire Tested: S122RDR-H290D930-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-55)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D930-X4F0-XX-UDD-WVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

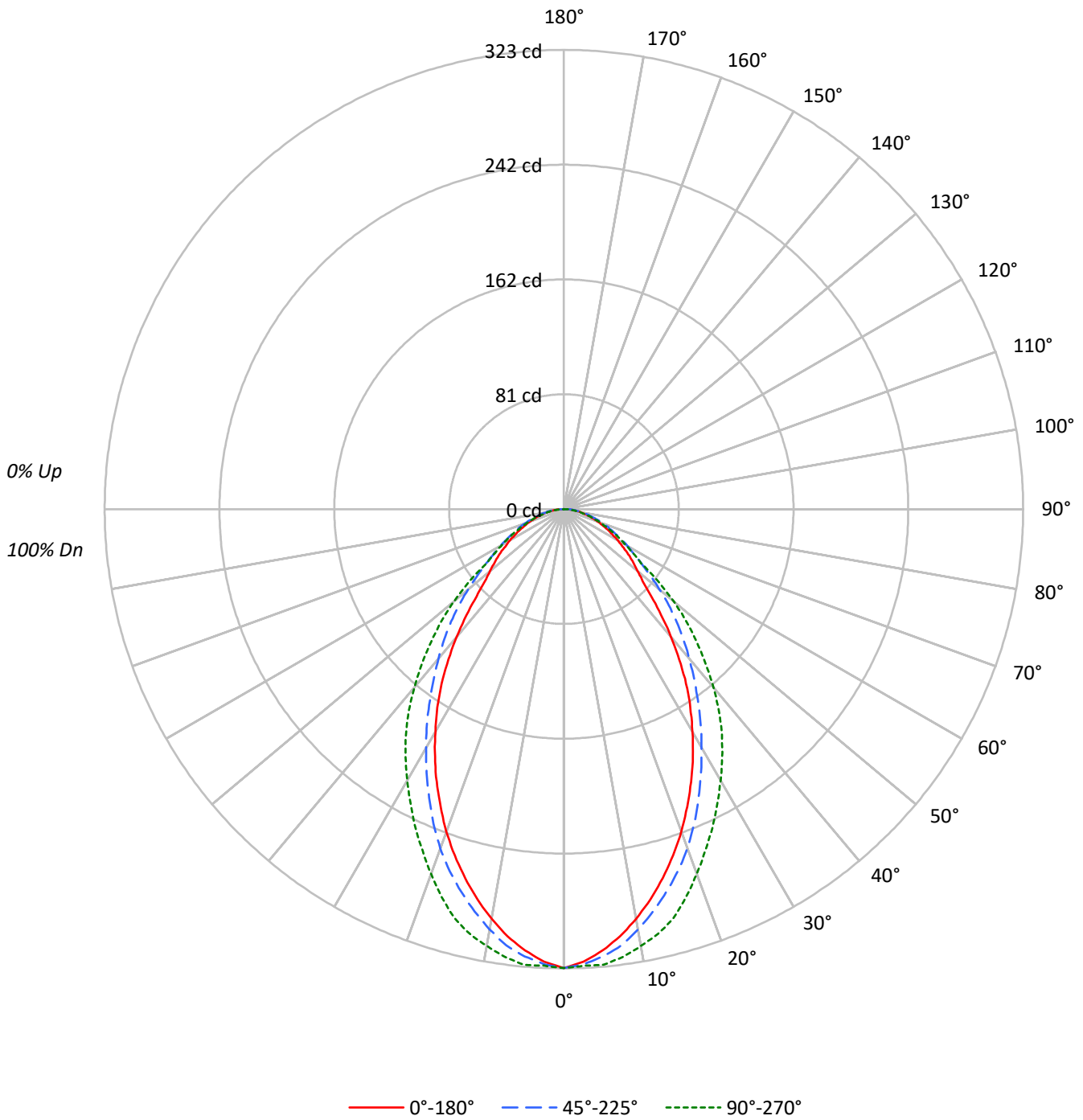
Lumens per Lamp: N/A
Luminaire Lumens: 526.2 lumens
Efficiency: N/A
Efficacy: 45.0 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | |
| 1 | 110 | 106 | 103 | 99 | 108 | 104 | 101 | 98 | 100 | 97 | 95 | 96 | 94 | 92 | 93 | 91 | 89 | 87 | | | | |
| 2 | 102 | 95 | 89 | 84 | 100 | 93 | 88 | 83 | 90 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 78 | 76 | | | | |
| 3 | 94 | 85 | 78 | 73 | 92 | 84 | 77 | 72 | 81 | 75 | 71 | 78 | 74 | 70 | 76 | 72 | 68 | 67 | | | | |
| 4 | 88 | 77 | 69 | 64 | 85 | 76 | 69 | 63 | 73 | 67 | 62 | 71 | 66 | 62 | 69 | 65 | 61 | 59 | | | | |
| 5 | 81 | 70 | 62 | 56 | 80 | 69 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 55 | 63 | 58 | 54 | 52 | | | | |
| 6 | 76 | 64 | 56 | 50 | 74 | 63 | 56 | 50 | 61 | 55 | 50 | 60 | 54 | 49 | 58 | 53 | 49 | 47 | | | | |
| 7 | 71 | 59 | 51 | 46 | 69 | 58 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 45 | 54 | 49 | 44 | 43 | | | | |
| 8 | 67 | 54 | 47 | 41 | 65 | 54 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 39 | | | | |
| 9 | 63 | 50 | 43 | 38 | 61 | 50 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 37 | 47 | 41 | 37 | 36 | | | | |
| 10 | 59 | 47 | 40 | 35 | 58 | 46 | 39 | 35 | 46 | 39 | 35 | 45 | 39 | 35 | 44 | 38 | 34 | 33 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5956 | 5956 | 5956 |
| 5° | 5774 | 5850 | 5959 |
| 10° | 5482 | 5625 | 5846 |
| 15° | 5131 | 5324 | 5689 |
| 20° | 4742 | 4988 | 5363 |
| 25° | 4310 | 4565 | 5031 |
| 30° | 3852 | 4127 | 4696 |
| 35° | 3377 | 3699 | 4363 |
| 40° | 2826 | 3302 | 3938 |
| 45° | 2265 | 2925 | 3442 |
| 50° | 1943 | 2520 | 2888 |
| 55° | 1776 | 2143 | 2133 |
| 60° | 1613 | 1897 | 1856 |
| 65° | 1471 | 1698 | 1620 |
| 70° | 1349 | 1554 | 1441 |
| 75° | 1262 | 1433 | 1262 |
| 80° | 1180 | 1328 | 1105 |
| 85° | 1186 | 1397 | 953 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3442 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 29.8 | 5.7 |
| 10°-20° | 78.9 | 15.0 |
| 20°-30° | 104.0 | 19.8 |
| 30°-40° | 104.8 | 19.9 |
| 40°-50° | 85.3 | 16.2 |
| 50°-60° | 58.1 | 11.0 |
| 60°-70° | 37.7 | 7.2 |
| 70°-80° | 20.8 | 3.9 |
| 80°-90° | 6.8 | 1.3 |
| 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° | 212.7 | 40.4 |
| 0°-40° | 317.5 | 60.3 |
| 0°-60° | 460.9 | 87.6 |
| 0°-90° | 526.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 526.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 323 | 323 | 323 | 323 | 323 | |
| 5° | 312 | 318 | 316 | 319 | 322 | 29 |
| 15° | 269 | 276 | 279 | 290 | 298 | 75 |
| 25° | 212 | 219 | 224 | 234 | 247 | 97 |
| 35° | 150 | 158 | 164 | 178 | 194 | 93 |
| 45° | 87 | 98 | 112 | 122 | 132 | 68 |
| 55° | 55 | 61 | 67 | 67 | 66 | 49 |
| 65° | 34 | 40 | 39 | 37 | 37 | 33 |
| 75° | 18 | 22 | 20 | 18 | 18 | 19 |
| 85° | 6 | 7 | 7 | 5 | 4 | 6 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P1058328

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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 322.8 | 322.8 | 322.8 | 322.8 | 322.8 |
| 2.5° | 318.6 | 323.8 | 320.3 | 320.7 | 321.4 |
| 5° | 311.7 | 317.6 | 315.8 | 318.6 | 321.7 |
| 7.5° | 303.0 | 308.9 | 309.6 | 313.7 | 317.6 |
| 10° | 292.6 | 299.2 | 300.2 | 306.4 | 312.0 |
| 12.5° | 281.1 | 288.4 | 289.8 | 298.8 | 306.1 |
| 15° | 268.6 | 275.6 | 278.7 | 290.1 | 297.8 |
| 17.5° | 255.4 | 262.0 | 266.9 | 277.3 | 286.0 |
| 20° | 241.5 | 247.8 | 254.0 | 263.4 | 273.1 |
| 22.5° | 226.6 | 233.6 | 239.5 | 248.8 | 259.9 |
| 25° | 211.7 | 218.6 | 224.2 | 234.3 | 247.1 |
| 27.5° | 196.4 | 203.4 | 208.9 | 219.7 | 233.6 |
| 30° | 180.8 | 188.1 | 193.7 | 205.8 | 220.4 |
| 32.5° | 165.5 | 172.8 | 179.1 | 191.9 | 207.2 |
| 35° | 149.9 | 157.6 | 164.2 | 178.4 | 193.7 |
| 37.5° | 133.3 | 141.9 | 150.3 | 164.5 | 179.4 |
| 40° | 117.3 | 127.0 | 137.1 | 150.3 | 163.5 |
| 42.5° | 101.3 | 112.1 | 124.6 | 135.7 | 147.8 |
| 45° | 86.8 | 97.5 | 112.1 | 121.8 | 131.9 |
| 47.5° | 75.3 | 84.3 | 100.0 | 107.9 | 117.0 |
| 50° | 67.7 | 73.9 | 87.8 | 94.1 | 100.6 |
| 52.5° | 61.4 | 66.6 | 76.4 | 80.5 | 84.0 |
| 55° | 55.2 | 60.7 | 66.6 | 67.0 | 66.3 |
| 57.5° | 48.9 | 55.2 | 58.3 | 55.9 | 57.3 |
| 60° | 43.7 | 50.0 | 51.4 | 48.9 | 50.3 |
| 62.5° | 38.2 | 45.1 | 45.1 | 42.7 | 43.4 |
| 65° | 33.7 | 39.9 | 38.9 | 36.8 | 37.1 |
| 67.5° | 29.2 | 35.4 | 33.7 | 31.6 | 31.6 |
| 70° | 25.0 | 30.9 | 28.8 | 26.7 | 26.7 |
| 72.5° | 21.2 | 26.0 | 24.6 | 22.2 | 21.9 |
| 75° | 17.7 | 21.9 | 20.1 | 18.0 | 17.7 |
| 77.5° | 14.2 | 17.7 | 16.3 | 14.6 | 13.9 |
| 80° | 11.1 | 14.2 | 12.5 | 11.1 | 10.4 |
| 82.5° | 8.3 | 10.8 | 9.4 | 8.0 | 7.3 |
| 85° | 5.6 | 7.3 | 6.6 | 5.2 | 4.5 |
| 87.5° | 2.8 | 4.9 | 4.2 | 3.5 | 2.8 |
| 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 | 12.92 | 14.36 | 13.28 | 14.67 | 14.99 | 13.17 | 14.61 | 13.53 | 14.92 | 15.23 |
| | 3H | 14.45 | 15.74 | 14.83 | 16.06 | 16.43 | 14.53 | 15.81 | 14.90 | 16.14 | 16.50 |
| | 4H | 15.01 | 16.22 | 15.41 | 16.57 | 16.95 | 15.01 | 16.21 | 15.41 | 16.56 | 16.94 |
| | 6H | 15.43 | 16.55 | 15.85 | 16.91 | 17.31 | 15.35 | 16.47 | 15.77 | 16.83 | 17.23 |
| | 8H | 15.59 | 16.64 | 16.01 | 17.03 | 17.44 | 15.46 | 16.52 | 15.89 | 16.91 | 17.31 |
| | 12H | 15.70 | 16.71 | 16.13 | 17.09 | 17.52 | 15.53 | 16.54 | 15.96 | 16.93 | 17.36 |
| 4H | 2H | 13.49 | 14.70 | 13.89 | 15.05 | 15.43 | 13.69 | 14.90 | 14.09 | 15.25 | 15.63 |
| | 3H | 15.30 | 16.29 | 15.71 | 16.70 | 17.10 | 15.27 | 16.26 | 15.68 | 16.67 | 17.07 |
| | 4H | 16.04 | 16.94 | 16.47 | 17.35 | 17.79 | 15.86 | 16.75 | 16.29 | 17.17 | 17.61 |
| | 6H | 16.62 | 17.40 | 17.08 | 17.85 | 18.31 | 16.33 | 17.11 | 16.79 | 17.55 | 18.01 |
| | 8H | 16.83 | 17.56 | 17.30 | 18.01 | 18.48 | 16.48 | 17.21 | 16.94 | 17.65 | 18.12 |
| | 12H | 17.00 | 17.65 | 17.48 | 18.13 | 18.60 | 16.59 | 17.24 | 17.07 | 17.72 | 18.19 |
| 8H | 4H | 16.30 | 17.03 | 16.77 | 17.48 | 17.95 | 16.15 | 16.88 | 16.61 | 17.32 | 17.79 |
| | 6H | 17.06 | 17.66 | 17.56 | 18.15 | 18.63 | 16.74 | 17.34 | 17.24 | 17.83 | 18.31 |
| | 8H | 17.38 | 17.92 | 17.90 | 18.43 | 18.92 | 16.96 | 17.50 | 17.48 | 18.01 | 18.50 |
| | 12H | 17.67 | 18.14 | 18.18 | 18.64 | 19.20 | 17.14 | 17.62 | 17.66 | 18.11 | 18.68 |
| 12H | 4H | 16.32 | 16.97 | 16.80 | 17.45 | 17.92 | 16.18 | 16.83 | 16.66 | 17.31 | 17.78 |
| | 6H | 17.10 | 17.64 | 17.62 | 18.16 | 18.64 | 16.81 | 17.35 | 17.32 | 17.86 | 18.35 |
| | 8H | 17.50 | 17.98 | 18.01 | 18.47 | 19.04 | 17.09 | 17.57 | 17.60 | 18.06 | 18.63 |