

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: P1058574

Luminaire Tested: S122RDR-H865D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058574
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H865D935-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

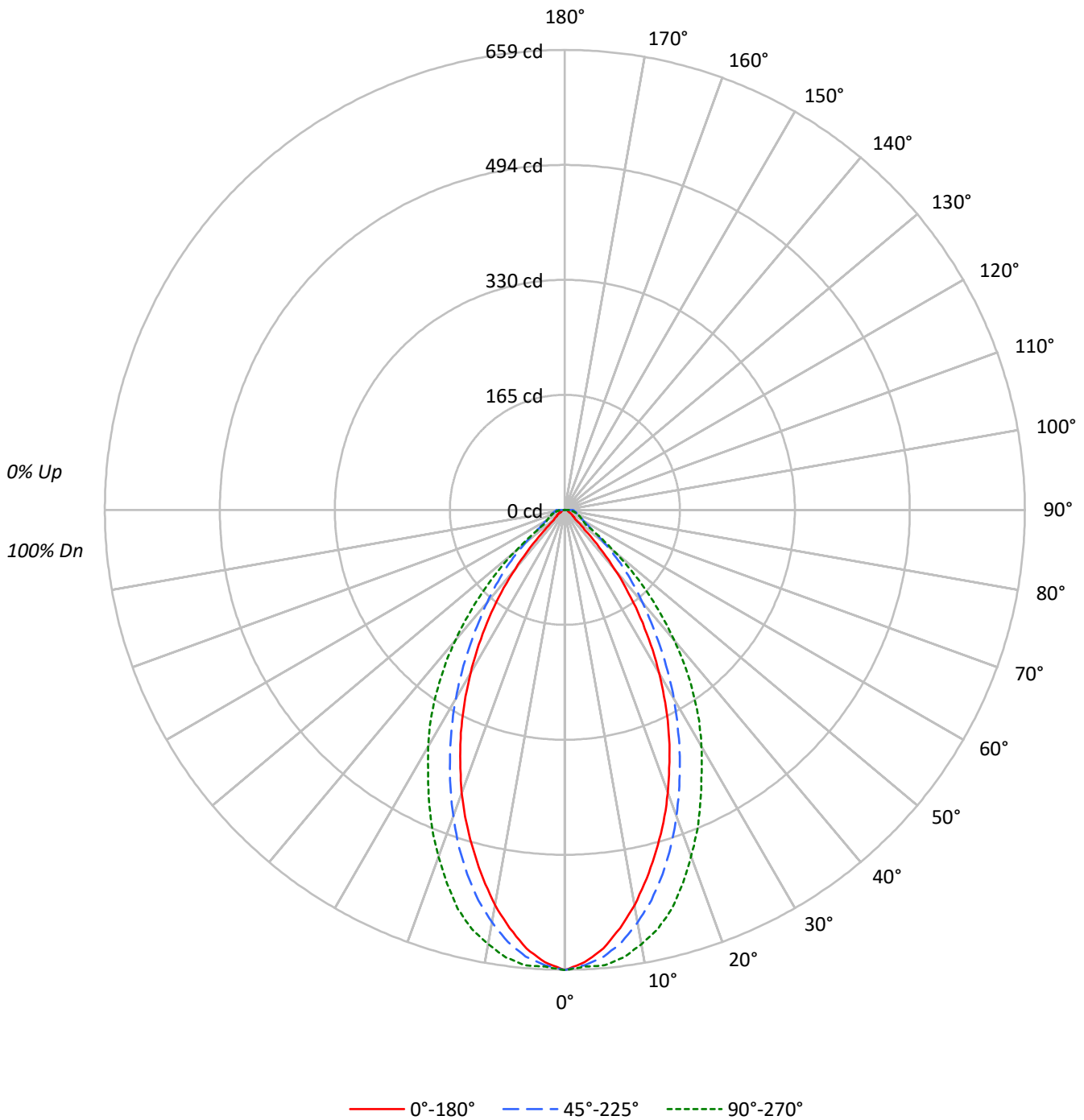
Lumens per Lamp: N/A
Luminaire Lumens: 717.7 lumens
Efficiency: N/A
Efficacy: 23.0 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 97 | 98 | 96 | 95 | 95 | 93 | 92 | 90 | | | | |
| 2 | 105 | 99 | 94 | 90 | 102 | 97 | 92 | 89 | 94 | 90 | 87 | 91 | 87 | 85 | 88 | 85 | 83 | 81 | | | | |
| 3 | 98 | 91 | 85 | 80 | 96 | 89 | 84 | 79 | 86 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 74 | | | | |
| 4 | 92 | 83 | 77 | 72 | 90 | 82 | 76 | 71 | 80 | 75 | 70 | 78 | 73 | 70 | 76 | 72 | 69 | 67 | | | | |
| 5 | 87 | 77 | 70 | 65 | 85 | 76 | 70 | 65 | 74 | 69 | 64 | 72 | 67 | 64 | 71 | 66 | 63 | 61 | | | | |
| 6 | 82 | 72 | 65 | 60 | 80 | 71 | 64 | 59 | 69 | 63 | 59 | 68 | 62 | 58 | 66 | 62 | 58 | 56 | | | | |
| 7 | 77 | 67 | 60 | 55 | 76 | 66 | 59 | 55 | 64 | 59 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 52 | | | | |
| 8 | 73 | 62 | 55 | 51 | 72 | 62 | 55 | 51 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 50 | 48 | | | | |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 50 | 47 | 55 | 50 | 46 | 45 | | | | |
| 10 | 66 | 55 | 48 | 44 | 64 | 54 | 48 | 44 | 53 | 48 | 44 | 53 | 47 | 43 | 52 | 47 | 43 | 42 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 12168 | 12168 | 12168 |
| 5° | 11686 | 11901 | 12136 |
| 10° | 10774 | 11248 | 11842 |
| 15° | 9655 | 10320 | 11307 |
| 20° | 8473 | 9178 | 10380 |
| 25° | 7175 | 7926 | 9366 |
| 30° | 5755 | 6654 | 8340 |
| 35° | 4255 | 5323 | 7224 |
| 40° | 2669 | 4167 | 5870 |
| 45° | 1046 | 3139 | 4350 |
| 50° | 514 | 2121 | 2664 |
| 55° | 409 | 1393 | 1187 |
| 60° | 310 | 1129 | 1089 |
| 65° | 231 | 1061 | 1061 |
| 70° | 286 | 1079 | 1079 |
| 75° | 299 | 1205 | 1126 |
| 80° | 446 | 1573 | 1233 |
| 85° | 889 | 2689 | 1778 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 4907 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 60.2 | 8.4 |
| 10°-20° | 152.3 | 21.2 |
| 20°-30° | 182.2 | 25.4 |
| 30°-40° | 153.3 | 21.4 |
| 40°-50° | 87.3 | 12.2 |
| 50°-60° | 34.4 | 4.8 |
| 60°-70° | 21.7 | 3.0 |
| 70°-80° | 16.1 | 2.2 |
| 80°-90° | 10.3 | 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° | 394.6 | 55.0 |
| 0°-40° | 547.9 | 76.3 |
| 0°-60° | 669.7 | 93.3 |
| 0°-90° | 717.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 717.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 659 | 659 | 659 | 659 | 659 | |
| 5° | 631 | 645 | 642 | 650 | 655 | 58 |
| 15° | 505 | 523 | 540 | 572 | 592 | 141 |
| 25° | 352 | 368 | 389 | 429 | 460 | 160 |
| 35° | 189 | 206 | 236 | 287 | 321 | 117 |
| 45° | 40 | 71 | 120 | 151 | 167 | 38 |
| 55° | 13 | 27 | 43 | 44 | 37 | 11 |
| 65° | 5 | 24 | 24 | 23 | 24 | 6 |
| 75° | 4 | 17 | 17 | 16 | 16 | 5 |
| 85° | 4 | 12 | 13 | 12 | 8 | 4 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 659.4 | 659.4 | 659.4 | 659.4 | 659.4 |
| 2.5° | 648.9 | 660.5 | 653.1 | 654.1 | 655.2 |
| 5° | 630.9 | 644.6 | 642.5 | 649.9 | 655.2 |
| 7.5° | 604.5 | 619.3 | 624.6 | 637.2 | 646.7 |
| 10° | 575.0 | 591.9 | 600.3 | 620.4 | 632.0 |
| 12.5° | 541.2 | 560.2 | 572.9 | 598.2 | 615.1 |
| 15° | 505.4 | 523.3 | 540.2 | 571.8 | 591.9 |
| 17.5° | 469.5 | 487.4 | 505.4 | 540.2 | 561.3 |
| 20° | 431.5 | 448.4 | 467.4 | 504.3 | 528.6 |
| 22.5° | 391.4 | 409.4 | 428.3 | 466.3 | 495.9 |
| 25° | 352.4 | 368.2 | 389.3 | 429.4 | 460.0 |
| 27.5° | 311.2 | 327.1 | 350.3 | 391.4 | 424.1 |
| 30° | 270.1 | 285.9 | 312.3 | 354.5 | 391.4 |
| 32.5° | 228.9 | 245.8 | 274.3 | 320.7 | 357.7 |
| 35° | 188.9 | 205.7 | 236.3 | 287.0 | 320.7 |
| 37.5° | 149.8 | 168.8 | 202.6 | 252.2 | 283.8 |
| 40° | 110.8 | 132.9 | 173.0 | 217.3 | 243.7 |
| 42.5° | 73.9 | 101.3 | 145.6 | 182.5 | 204.7 |
| 45° | 40.1 | 70.7 | 120.3 | 150.9 | 166.7 |
| 47.5° | 22.2 | 45.4 | 96.0 | 120.3 | 129.8 |
| 50° | 17.9 | 31.7 | 73.9 | 91.8 | 92.8 |
| 52.5° | 14.8 | 28.5 | 54.9 | 65.4 | 60.1 |
| 55° | 12.7 | 27.4 | 43.3 | 44.3 | 36.9 |
| 57.5° | 10.6 | 26.4 | 35.9 | 31.7 | 31.7 |
| 60° | 8.4 | 26.4 | 30.6 | 28.5 | 29.5 |
| 62.5° | 6.3 | 26.4 | 27.4 | 25.3 | 26.4 |
| 65° | 5.3 | 24.3 | 24.3 | 23.2 | 24.3 |
| 67.5° | 5.3 | 22.2 | 22.2 | 21.1 | 22.2 |
| 70° | 5.3 | 21.1 | 20.0 | 20.0 | 20.0 |
| 72.5° | 4.2 | 19.0 | 19.0 | 17.9 | 17.9 |
| 75° | 4.2 | 16.9 | 16.9 | 15.8 | 15.8 |
| 77.5° | 4.2 | 15.8 | 15.8 | 14.8 | 13.7 |
| 80° | 4.2 | 13.7 | 14.8 | 13.7 | 11.6 |
| 82.5° | 4.2 | 12.7 | 13.7 | 12.7 | 9.5 |
| 85° | 4.2 | 11.6 | 12.7 | 11.6 | 8.4 |
| 87.5° | 3.2 | 11.6 | 11.6 | 9.5 | 6.3 |
| 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 | 6.38 | 7.60 | 6.75 | 7.91 | 8.23 | 8.41 | 9.63 | 8.77 | 9.94 | 10.26 |
| | 3H | 7.93 | 9.01 | 8.31 | 9.34 | 9.71 | 10.37 | 11.46 | 10.76 | 11.79 | 12.16 |
| | 4H | 8.48 | 9.49 | 8.88 | 9.84 | 10.23 | 11.29 | 12.30 | 11.69 | 12.65 | 13.03 |
| | 6H | 9.03 | 9.96 | 9.45 | 10.33 | 10.73 | 12.17 | 13.10 | 12.58 | 13.47 | 13.86 |
| | 8H | 9.32 | 10.20 | 9.76 | 10.60 | 11.00 | 12.57 | 13.45 | 13.00 | 13.84 | 14.25 |
| | 12H | 9.68 | 10.52 | 10.11 | 10.91 | 11.34 | 13.01 | 13.85 | 13.45 | 14.24 | 14.67 |
| 4H | 2H | 7.57 | 8.58 | 7.97 | 8.93 | 9.32 | 9.03 | 10.04 | 9.43 | 10.39 | 10.77 |
| | 3H | 9.77 | 10.60 | 10.18 | 11.00 | 11.41 | 11.26 | 12.10 | 11.68 | 12.50 | 12.91 |
| | 4H | 10.82 | 11.57 | 11.25 | 11.99 | 12.43 | 12.33 | 13.08 | 12.77 | 13.50 | 13.94 |
| | 6H | 11.71 | 12.36 | 12.17 | 12.80 | 13.27 | 13.44 | 14.09 | 13.91 | 14.54 | 15.01 |
| | 8H | 12.09 | 12.70 | 12.56 | 13.15 | 13.62 | 13.97 | 14.57 | 14.44 | 15.02 | 15.49 |
| | 12H | 12.51 | 13.05 | 13.00 | 13.53 | 14.01 | 14.54 | 15.08 | 15.03 | 15.56 | 16.03 |
| 8H | 4H | 11.62 | 12.22 | 12.09 | 12.67 | 13.14 | 12.82 | 13.43 | 13.29 | 13.88 | 14.35 |
| | 6H | 13.00 | 13.49 | 13.50 | 13.99 | 14.47 | 14.22 | 14.72 | 14.73 | 15.22 | 15.70 |
| | 8H | 13.72 | 14.16 | 14.24 | 14.68 | 15.17 | 14.96 | 15.41 | 15.49 | 15.93 | 16.42 |
| | 12H | 14.47 | 14.86 | 14.98 | 15.36 | 15.93 | 15.79 | 16.19 | 16.31 | 16.68 | 17.26 |
| 12H | 4H | 11.78 | 12.31 | 12.27 | 12.80 | 13.27 | 12.92 | 13.46 | 13.41 | 13.94 | 14.42 |
| | 6H | 13.33 | 13.77 | 13.85 | 14.29 | 14.78 | 14.44 | 14.89 | 14.96 | 15.40 | 15.90 |
| | 8H | 14.24 | 14.64 | 14.76 | 15.13 | 15.71 | 15.33 | 15.72 | 15.84 | 16.22 | 16.79 |