

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: P1059069

Luminaire Tested: S123RDR-S1000D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059069  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1000D940-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

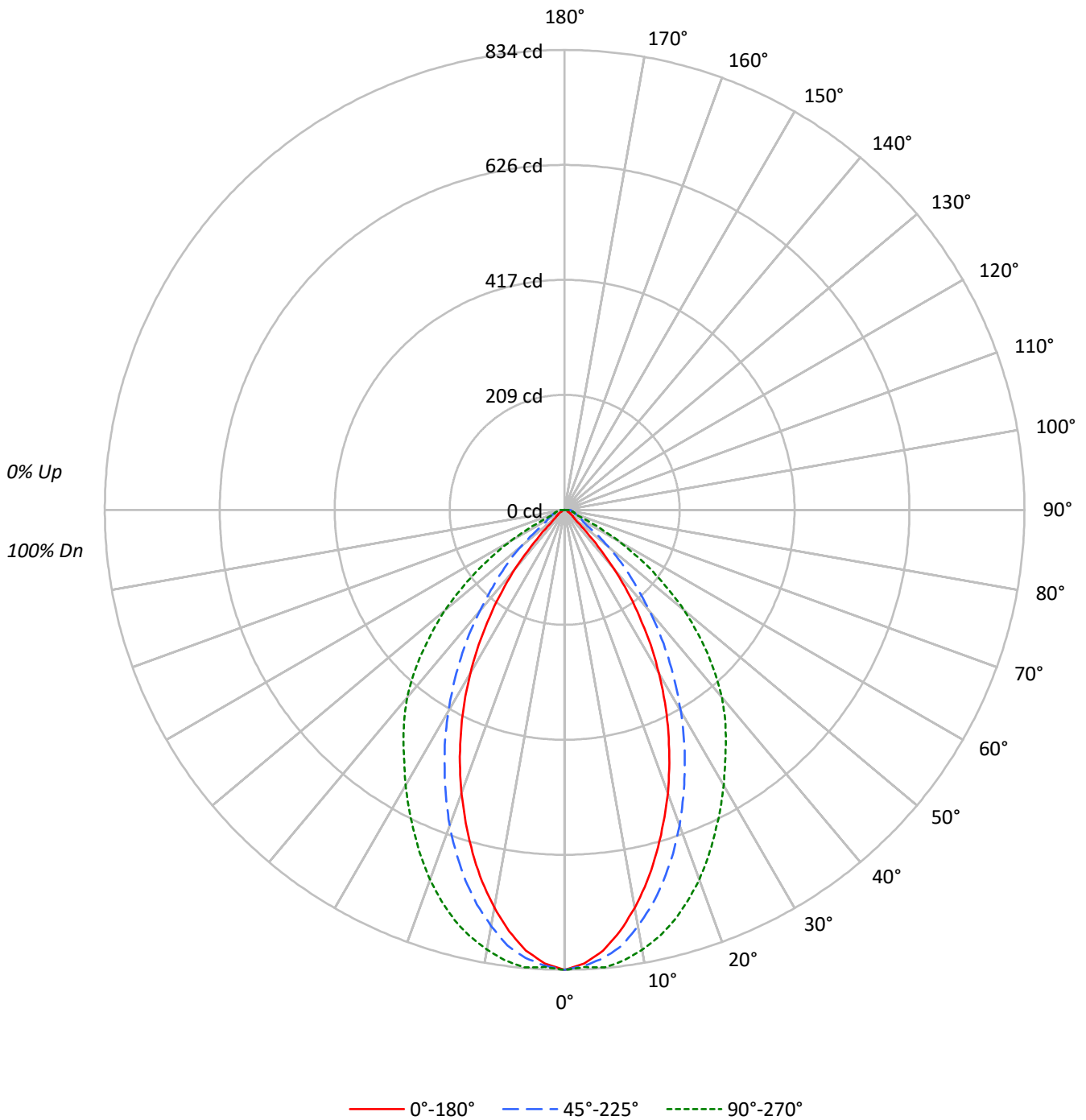
Lumens per Lamp: N/A  
Luminaire Lumens: 1001.5 lumens  
Efficiency: N/A  
Efficacy: 28.6 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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 |    |    | 100 |   |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    | 90  |   |
| 2   | 105 | 99  | 94  | 90  | 102 | 97  | 92  | 88  | 94  | 90  | 86  | 91  | 87  | 85  | 88  | 85  | 83  | 81  |    |    | 81  |   |
| 3   | 98  | 90  | 84  | 79  | 96  | 89  | 83  | 79  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 78  | 75  | 73  |    |    | 73  |   |
| 4   | 92  | 83  | 76  | 71  | 90  | 81  | 75  | 70  | 79  | 74  | 70  | 77  | 72  | 69  | 75  | 71  | 68  | 66  |    |    | 66  |   |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 69  | 64  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |    |    | 60  |   |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |    |    | 55  |   |
| 7   | 76  | 65  | 58  | 53  | 75  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 56  | 52  | 61  | 56  | 52  | 50  |    |    | 50  |   |
| 8   | 72  | 61  | 54  | 49  | 70  | 60  | 53  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 57  | 52  | 48  | 47  |    |    | 47  |   |
| 9   | 68  | 57  | 50  | 45  | 67  | 56  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 43  |    |    | 43  |   |
| 10  | 64  | 53  | 46  | 42  | 63  | 53  | 46  | 42  | 52  | 46  | 42  | 51  | 45  | 42  | 50  | 45  | 42  | 40  |    |    | 40  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9794 | 9794 | 9794 |
| 5°  | 9458 | 9613 | 9819 |
| 10° | 8730 | 9136 | 9658 |
| 15° | 7835 | 8448 | 9368 |
| 20° | 6835 | 7615 | 8917 |
| 25° | 5766 | 6675 | 8365 |
| 30° | 4637 | 5707 | 7818 |
| 35° | 3394 | 4698 | 7306 |
| 40° | 2117 | 3664 | 6804 |
| 45° | 800  | 2730 | 6061 |
| 50° | 380  | 1882 | 5166 |
| 55° | 291  | 1032 | 3994 |
| 60° | 207  | 876  | 2626 |
| 65° | 153  | 761  | 1098 |
| 70° | 151  | 714  | 714  |
| 75° | 200  | 744  | 744  |
| 80° | 298  | 893  | 818  |
| 85° | 593  | 1482 | 1186 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6061 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 76.6   | 7.6       |
| 10°-20°   | 196.3  | 19.6      |
| 20°-30°   | 243.1  | 24.3      |
| 30°-40°   | 217.9  | 21.8      |
| 40°-50°   | 142.8  | 14.3      |
| 50°-60°   | 71.5   | 7.1       |
| 60°-70°   | 27.9   | 2.8       |
| 70°-80°   | 15.7   | 1.6       |
| 80°-90°   | 9.7    | 1.0       |
| 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°    | 516.0  | 51.5      |
| 0°-40°    | 733.8  | 73.3      |
| 0°-60°    | 948.2  | 94.7      |
| 0°-90°    | 1001.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1001.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 834 | 834   | 834 | 834   | 834 |      |
| 5°  | 802 | 816   | 816 | 824   | 833 | 74   |
| 15° | 644 | 671   | 695 | 741   | 771 | 179  |
| 25° | 445 | 472   | 515 | 589   | 646 | 203  |
| 35° | 237 | 268   | 328 | 426   | 510 | 147  |
| 45° | 48  | 78    | 164 | 282   | 365 | 46   |
| 55° | 14  | 18    | 50  | 138   | 195 | 13   |
| 65° | 6   | 16    | 27  | 36    | 40  | 6    |
| 75° | 4   | 16    | 16  | 16    | 16  | 5    |
| 85° | 4   | 11    | 11  | 11    | 9   | 4    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 834.1 | 834.1 | 834.1 | 834.1 | 834.1 |
| 2.5°  | 823.2 | 835.2 | 827.6 | 828.7 | 829.8 |
| 5°    | 802.4 | 815.5 | 815.5 | 824.3 | 833.0 |
| 7.5°  | 770.6 | 785.9 | 796.9 | 812.2 | 824.3 |
| 10°   | 732.2 | 750.8 | 766.2 | 793.6 | 810.0 |
| 12.5° | 690.6 | 713.6 | 733.3 | 769.5 | 792.5 |
| 15°   | 644.5 | 670.8 | 694.9 | 741.0 | 770.6 |
| 17.5° | 595.2 | 621.5 | 653.3 | 707.0 | 743.2 |
| 20°   | 547.0 | 573.3 | 609.4 | 669.7 | 713.6 |
| 22.5° | 496.5 | 523.9 | 562.3 | 629.2 | 680.7 |
| 25°   | 445.0 | 472.4 | 515.2 | 588.6 | 645.6 |
| 27.5° | 393.5 | 420.9 | 469.1 | 549.2 | 611.6 |
| 30°   | 342.0 | 369.4 | 420.9 | 506.4 | 576.6 |
| 32.5° | 290.5 | 320.1 | 373.8 | 466.9 | 541.5 |
| 35°   | 236.8 | 268.5 | 327.7 | 426.4 | 509.7 |
| 37.5° | 187.4 | 217.0 | 283.9 | 391.3 | 477.9 |
| 40°   | 138.1 | 169.9 | 239.0 | 357.3 | 443.9 |
| 42.5° | 89.9  | 123.9 | 198.4 | 320.1 | 405.6 |
| 45°   | 48.2  | 77.8  | 164.4 | 281.7 | 365.0 |
| 47.5° | 26.3  | 42.7  | 132.6 | 241.1 | 323.4 |
| 50°   | 20.8  | 24.1  | 103.0 | 206.1 | 282.8 |
| 52.5° | 17.5  | 19.7  | 73.4  | 173.2 | 237.9 |
| 55°   | 14.2  | 17.5  | 50.4  | 138.1 | 195.1 |
| 57.5° | 12.1  | 15.3  | 39.5  | 107.4 | 152.4 |
| 60°   | 8.8   | 13.2  | 37.3  | 78.9  | 111.8 |
| 62.5° | 6.6   | 14.2  | 32.9  | 54.8  | 73.4  |
| 65°   | 5.5   | 16.4  | 27.4  | 36.2  | 39.5  |
| 67.5° | 4.4   | 17.5  | 24.1  | 23.0  | 23.0  |
| 70°   | 4.4   | 16.4  | 20.8  | 19.7  | 20.8  |
| 72.5° | 4.4   | 17.5  | 18.6  | 17.5  | 18.6  |
| 75°   | 4.4   | 16.4  | 16.4  | 16.4  | 16.4  |
| 77.5° | 4.4   | 15.3  | 15.3  | 14.2  | 14.2  |
| 80°   | 4.4   | 13.2  | 13.2  | 13.2  | 12.1  |
| 82.5° | 4.4   | 12.1  | 12.1  | 12.1  | 9.9   |
| 85°   | 4.4   | 11.0  | 11.0  | 11.0  | 8.8   |
| 87.5° | 3.3   | 9.9   | 11.0  | 9.9   | 6.6   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)