

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: P1059276

Luminaire Tested: S123RDR-S560D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059276  
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-S560D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

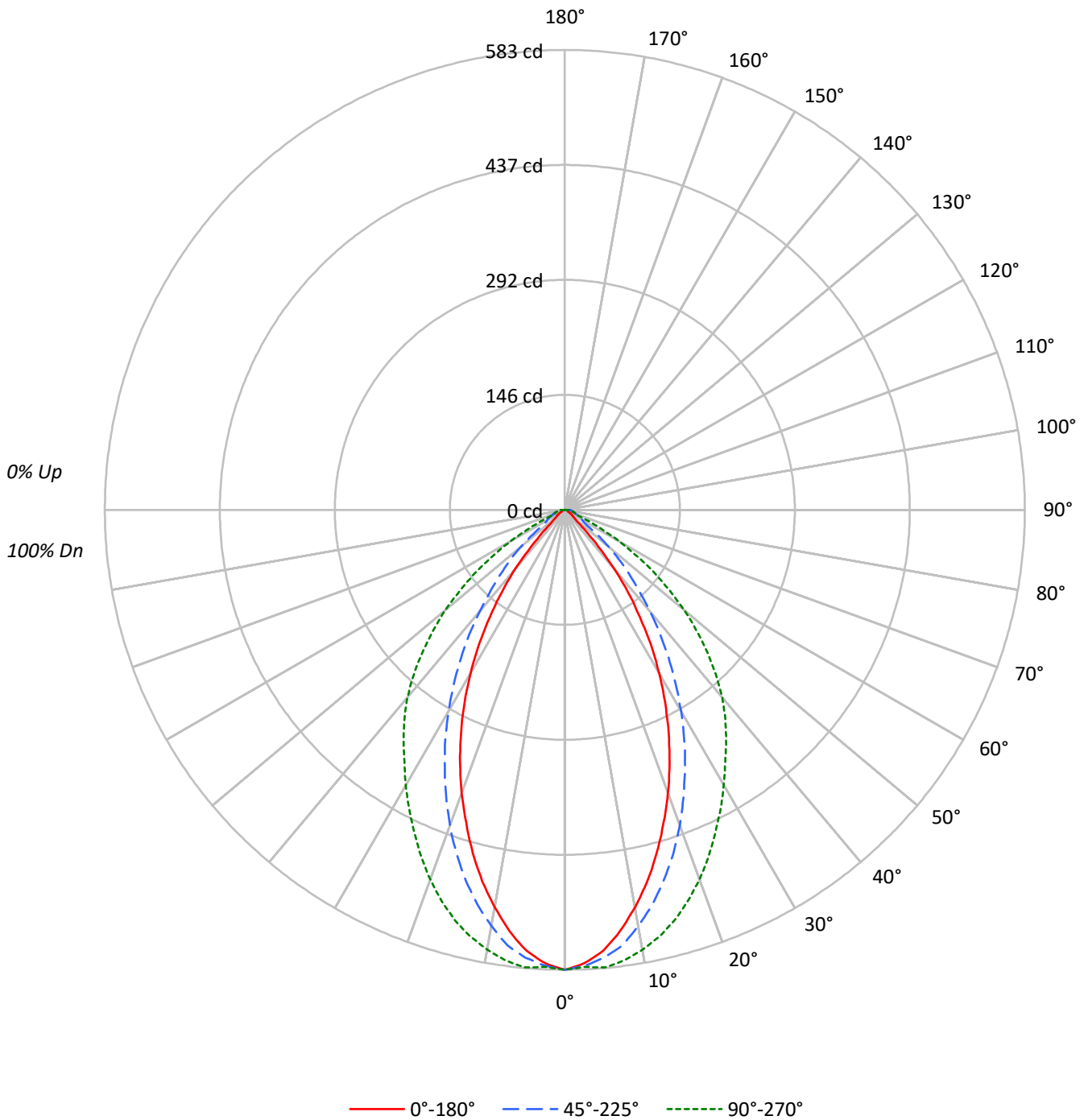
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 700.0 lumens  
Efficiency: N/A  
Efficacy: 35.7 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): 19.6  
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 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |    |   |
| 2   | 105 | 99  | 94  | 90  | 102 | 97  | 92  | 88  | 94  | 90  | 86  | 91  | 87  | 85  | 88  | 85  | 83  | 81  |    |    |    |   |
| 3   | 98  | 90  | 84  | 79  | 96  | 89  | 83  | 79  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 78  | 75  | 73  |    |    |    |   |
| 4   | 92  | 83  | 76  | 71  | 90  | 81  | 75  | 70  | 79  | 74  | 70  | 77  | 72  | 69  | 75  | 71  | 68  | 66  |    |    |    |   |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 69  | 64  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |    |    |    |   |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 63  | 58  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |    |    |    |   |
| 7   | 76  | 65  | 58  | 53  | 75  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 56  | 52  | 61  | 56  | 52  | 50  |    |    |    |   |
| 8   | 72  | 61  | 54  | 49  | 70  | 60  | 53  | 49  | 59  | 53  | 49  | 58  | 52  | 48  | 57  | 52  | 48  | 47  |    |    |    |   |
| 9   | 68  | 57  | 50  | 45  | 67  | 56  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 43  |    |    |    |   |
| 10  | 64  | 53  | 46  | 42  | 63  | 53  | 46  | 42  | 52  | 46  | 42  | 51  | 45  | 42  | 50  | 45  | 42  | 40  |    |    |    |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 6846 | 6846 | 6846 |
| 5°  | 6610 | 6718 | 6863 |
| 10° | 6101 | 6385 | 6750 |
| 15° | 5475 | 5904 | 6546 |
| 20° | 4777 | 5322 | 6232 |
| 25° | 4029 | 4664 | 5846 |
| 30° | 3241 | 3989 | 5463 |
| 35° | 2372 | 3284 | 5106 |
| 40° | 1479 | 2560 | 4756 |
| 45° | 560  | 1908 | 4236 |
| 50° | 267  | 1315 | 3610 |
| 55° | 205  | 721  | 2792 |
| 60° | 143  | 611  | 1834 |
| 65° | 106  | 533  | 767  |
| 70° | 106  | 501  | 501  |
| 75° | 141  | 522  | 522  |
| 80° | 210  | 622  | 568  |
| 85° | 418  | 1037 | 822  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4236 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 53.5   | 7.6       |
| 10°-20°   | 137.2  | 19.6      |
| 20°-30°   | 169.9  | 24.3      |
| 30°-40°   | 152.3  | 21.8      |
| 40°-50°   | 99.8   | 14.3      |
| 50°-60°   | 50.0   | 7.1       |
| 60°-70°   | 19.5   | 2.8       |
| 70°-80°   | 11.0   | 1.6       |
| 80°-90°   | 6.8    | 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°    | 360.6  | 51.5      |
| 0°-40°    | 512.9  | 73.3      |
| 0°-60°    | 662.7  | 94.7      |
| 0°-90°    | 700.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 700.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 583 | 583   | 583 | 583   | 583 |      |
| 5°  | 561 | 570   | 570 | 576   | 582 | 52   |
| 15° | 450 | 469   | 486 | 518   | 538 | 125  |
| 25° | 311 | 330   | 360 | 411   | 451 | 142  |
| 35° | 166 | 188   | 229 | 298   | 356 | 103  |
| 45° | 34  | 54    | 115 | 197   | 255 | 32   |
| 55° | 10  | 12    | 35  | 96    | 136 | 9    |
| 65° | 4   | 12    | 19  | 25    | 28  | 4    |
| 75° | 3   | 12    | 12  | 12    | 12  | 3    |
| 85° | 3   | 8     | 8   | 8     | 6   | 3    |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 583.0 | 583.0 | 583.0 | 583.0 | 583.0 |
| 2.5°  | 575.3 | 583.7 | 578.4 | 579.1 | 579.9 |
| 5°    | 560.8 | 569.9 | 569.9 | 576.1 | 582.2 |
| 7.5°  | 538.5 | 549.3 | 556.9 | 567.7 | 576.1 |
| 10°   | 511.7 | 524.8 | 535.5 | 554.6 | 566.1 |
| 12.5° | 482.6 | 498.7 | 512.5 | 537.8 | 553.9 |
| 15°   | 450.4 | 468.8 | 485.7 | 517.9 | 538.5 |
| 17.5° | 416.0 | 434.4 | 456.6 | 494.1 | 519.4 |
| 20°   | 382.3 | 400.6 | 425.9 | 468.1 | 498.7 |
| 22.5° | 347.0 | 366.2 | 393.0 | 439.7 | 475.7 |
| 25°   | 311.0 | 330.2 | 360.0 | 411.4 | 451.2 |
| 27.5° | 275.0 | 294.2 | 327.9 | 383.8 | 427.5 |
| 30°   | 239.0 | 258.2 | 294.2 | 353.9 | 402.9 |
| 32.5° | 203.0 | 223.7 | 261.2 | 326.3 | 378.4 |
| 35°   | 165.5 | 187.7 | 229.1 | 298.0 | 356.2 |
| 37.5° | 131.0 | 151.7 | 198.4 | 273.5 | 334.0 |
| 40°   | 96.5  | 118.7 | 167.0 | 249.7 | 310.3 |
| 42.5° | 62.8  | 86.6  | 138.7 | 223.7 | 283.4 |
| 45°   | 33.7  | 54.4  | 114.9 | 196.9 | 255.1 |
| 47.5° | 18.4  | 29.9  | 92.7  | 168.5 | 226.0 |
| 50°   | 14.6  | 16.9  | 72.0  | 144.0 | 197.6 |
| 52.5° | 12.3  | 13.8  | 51.3  | 121.0 | 166.2 |
| 55°   | 10.0  | 12.3  | 35.2  | 96.5  | 136.4 |
| 57.5° | 8.4   | 10.7  | 27.6  | 75.1  | 106.5 |
| 60°   | 6.1   | 9.2   | 26.0  | 55.2  | 78.1  |
| 62.5° | 4.6   | 10.0  | 23.0  | 38.3  | 51.3  |
| 65°   | 3.8   | 11.5  | 19.2  | 25.3  | 27.6  |
| 67.5° | 3.1   | 12.3  | 16.9  | 16.1  | 16.1  |
| 70°   | 3.1   | 11.5  | 14.6  | 13.8  | 14.6  |
| 72.5° | 3.1   | 12.3  | 13.0  | 12.3  | 13.0  |
| 75°   | 3.1   | 11.5  | 11.5  | 11.5  | 11.5  |
| 77.5° | 3.1   | 10.7  | 10.7  | 10.0  | 10.0  |
| 80°   | 3.1   | 9.2   | 9.2   | 9.2   | 8.4   |
| 82.5° | 3.1   | 8.4   | 8.4   | 8.4   | 6.9   |
| 85°   | 3.1   | 7.7   | 7.7   | 7.7   | 6.1   |
| 87.5° | 2.3   | 6.9   | 7.7   | 6.9   | 4.6   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)