

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: P1055643

Luminaire Tested: S123R3DR-S560D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055643  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S560D927-X4F0-XX-UDD-FLL-W  
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

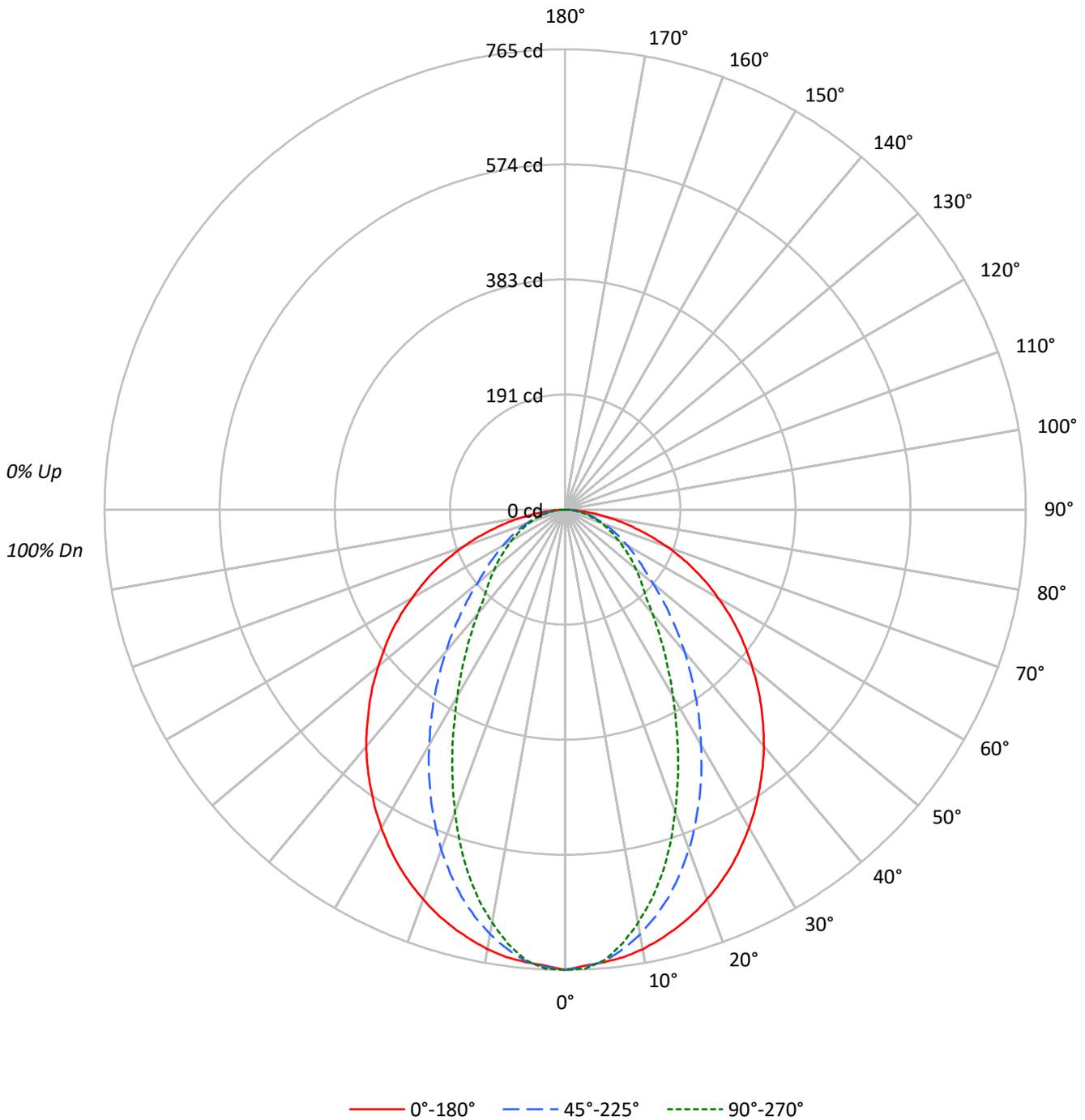
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1341.4 lumens  
Efficiency: N/A  
Efficacy: 70.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
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   | 110 | 106 | 102 | 99  | 107 | 104 | 100 | 97  | 99  | 97  | 94  | 96  | 93  | 91  | 92  | 90  | 88  | 86  |    |    | 86  |   |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 87  | 82  | 89  | 84  | 80  | 85  | 82  | 78  | 83  | 79  | 76  | 74  |    |    | 74  |   |
| 3   | 93  | 84  | 77  | 71  | 91  | 82  | 76  | 70  | 80  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 67  | 65  |    |    | 65  |   |
| 4   | 86  | 75  | 68  | 61  | 84  | 74  | 67  | 61  | 72  | 65  | 60  | 70  | 64  | 59  | 67  | 63  | 59  | 57  |    |    | 57  |   |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 60  | 54  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 56  | 52  | 50  |    |    | 50  |   |
| 6   | 75  | 62  | 54  | 48  | 73  | 61  | 54  | 48  | 60  | 53  | 48  | 58  | 52  | 47  | 57  | 51  | 47  | 45  |    |    | 45  |   |
| 7   | 70  | 57  | 49  | 43  | 68  | 56  | 49  | 43  | 55  | 48  | 43  | 53  | 47  | 43  | 52  | 47  | 42  | 40  |    |    | 40  |   |
| 8   | 65  | 53  | 45  | 39  | 64  | 52  | 44  | 39  | 51  | 44  | 39  | 49  | 43  | 39  | 48  | 43  | 39  | 37  |    |    | 37  |   |
| 9   | 61  | 49  | 41  | 36  | 60  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  | 45  | 39  | 35  | 34  |    |    | 34  |   |
| 10  | 58  | 45  | 38  | 33  | 56  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 42  | 37  | 33  | 31  |    |    | 31  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9222 | 9222 | 9222 |
| 5°  | 9139 | 9118 | 9097 |
| 10° | 9084 | 8775 | 8538 |
| 15° | 8976 | 8312 | 7797 |
| 20° | 8844 | 7713 | 6855 |
| 25° | 8691 | 7024 | 5898 |
| 30° | 8498 | 6284 | 4985 |
| 35° | 8294 | 5558 | 4209 |
| 40° | 8085 | 4852 | 3538 |
| 45° | 7841 | 4184 | 3122 |
| 50° | 7596 | 3562 | 2864 |
| 55° | 7372 | 3174 | 2646 |
| 60° | 7063 | 2869 | 2469 |
| 65° | 6773 | 2627 | 2316 |
| 70° | 6313 | 2418 | 2178 |
| 75° | 5650 | 2241 | 2050 |
| 80° | 4846 | 2062 | 1909 |
| 85° | 3403 | 1895 | 1826 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7841 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 70.9   | 5.3       |
| 10°-20°   | 187.6  | 14.0      |
| 20°-30°   | 247.1  | 18.4      |
| 30°-40°   | 250.8  | 18.7      |
| 40°-50°   | 218.0  | 16.3      |
| 50°-60°   | 170.8  | 12.7      |
| 60°-70°   | 116.0  | 8.7       |
| 70°-80°   | 62.9   | 4.7       |
| 80°-90°   | 17.3   | 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°    | 505.6  | 37.7      |
| 0°-40°    | 756.4  | 56.4      |
| 0°-60°    | 1145.2 | 85.4      |
| 0°-90°    | 1341.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1341.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 765 | 765   | 765 | 765   | 765 |      |
| 5°  | 755 | 764   | 753 | 746   | 752 | 72   |
| 15° | 719 | 709   | 666 | 633   | 625 | 203  |
| 25° | 653 | 614   | 528 | 462   | 443 | 301  |
| 35° | 564 | 497   | 378 | 306   | 286 | 352  |
| 45° | 460 | 369   | 245 | 189   | 183 | 355  |
| 55° | 351 | 244   | 151 | 129   | 126 | 313  |
| 65° | 237 | 132   | 92  | 82    | 81  | 234  |
| 75° | 121 | 61    | 48  | 45    | 44  | 129  |
| 85° | 25  | 15    | 14  | 13    | 13  | 31   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 764.9 | 764.9 | 764.9 | 764.9 | 764.9 |
| 2.5°  | 758.6 | 768.3 | 760.9 | 761.4 | 763.7 |
| 5°    | 755.1 | 764.3 | 753.4 | 746.5 | 751.7 |
| 7.5°  | 750.0 | 756.8 | 736.8 | 726.0 | 727.7 |
| 10°   | 742.0 | 744.3 | 716.8 | 699.6 | 697.4 |
| 12.5° | 731.1 | 727.1 | 692.8 | 667.6 | 663.6 |
| 15°   | 719.1 | 708.8 | 665.9 | 633.3 | 624.7 |
| 17.5° | 705.4 | 688.2 | 634.4 | 594.4 | 581.2 |
| 20°   | 689.3 | 665.3 | 601.2 | 550.3 | 534.3 |
| 22.5° | 672.2 | 641.3 | 565.2 | 505.1 | 488.5 |
| 25°   | 653.3 | 613.8 | 528.0 | 462.2 | 443.4 |
| 27.5° | 632.7 | 586.4 | 490.3 | 419.9 | 398.7 |
| 30°   | 610.4 | 557.8 | 451.4 | 378.7 | 358.1 |
| 32.5° | 587.5 | 527.4 | 414.2 | 340.4 | 320.4 |
| 35°   | 563.5 | 496.6 | 377.6 | 305.5 | 286.0 |
| 37.5° | 538.9 | 465.1 | 342.1 | 272.3 | 254.0 |
| 40°   | 513.7 | 433.1 | 308.3 | 241.4 | 224.8 |
| 42.5° | 486.8 | 401.0 | 275.7 | 212.2 | 199.7 |
| 45°   | 459.9 | 369.0 | 245.4 | 189.4 | 183.1 |
| 47.5° | 433.1 | 336.4 | 216.8 | 173.3 | 167.6 |
| 50°   | 405.0 | 304.9 | 189.9 | 158.5 | 152.7 |
| 52.5° | 377.6 | 274.0 | 167.6 | 144.2 | 140.2 |
| 55°   | 350.7 | 243.7 | 151.0 | 128.7 | 125.9 |
| 57.5° | 322.6 | 214.0 | 134.4 | 116.7 | 113.3 |
| 60°   | 292.9 | 185.3 | 119.0 | 104.1 | 102.4 |
| 62.5° | 266.0 | 158.5 | 105.3 | 93.2  | 91.5  |
| 65°   | 237.4 | 131.6 | 92.1  | 82.4  | 81.2  |
| 67.5° | 208.2 | 109.3 | 80.1  | 72.1  | 71.5  |
| 70°   | 179.1 | 92.1  | 68.6  | 62.4  | 61.8  |
| 72.5° | 150.5 | 76.1  | 57.8  | 53.8  | 52.6  |
| 75°   | 121.3 | 60.6  | 48.1  | 44.6  | 44.0  |
| 77.5° | 95.0  | 46.9  | 38.3  | 36.0  | 35.5  |
| 80°   | 69.8  | 34.9  | 29.7  | 28.0  | 27.5  |
| 82.5° | 45.8  | 24.0  | 21.2  | 20.0  | 20.0  |
| 85°   | 24.6  | 14.9  | 13.7  | 12.6  | 13.2  |
| 87.5° | 8.6   | 6.3   | 6.3   | 5.7   | 6.3   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)