

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: P1055572

Luminaire Tested: S123R3DR-S1000D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055572  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DR-S1000D950-X4F0-XX-UDD-FLL-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

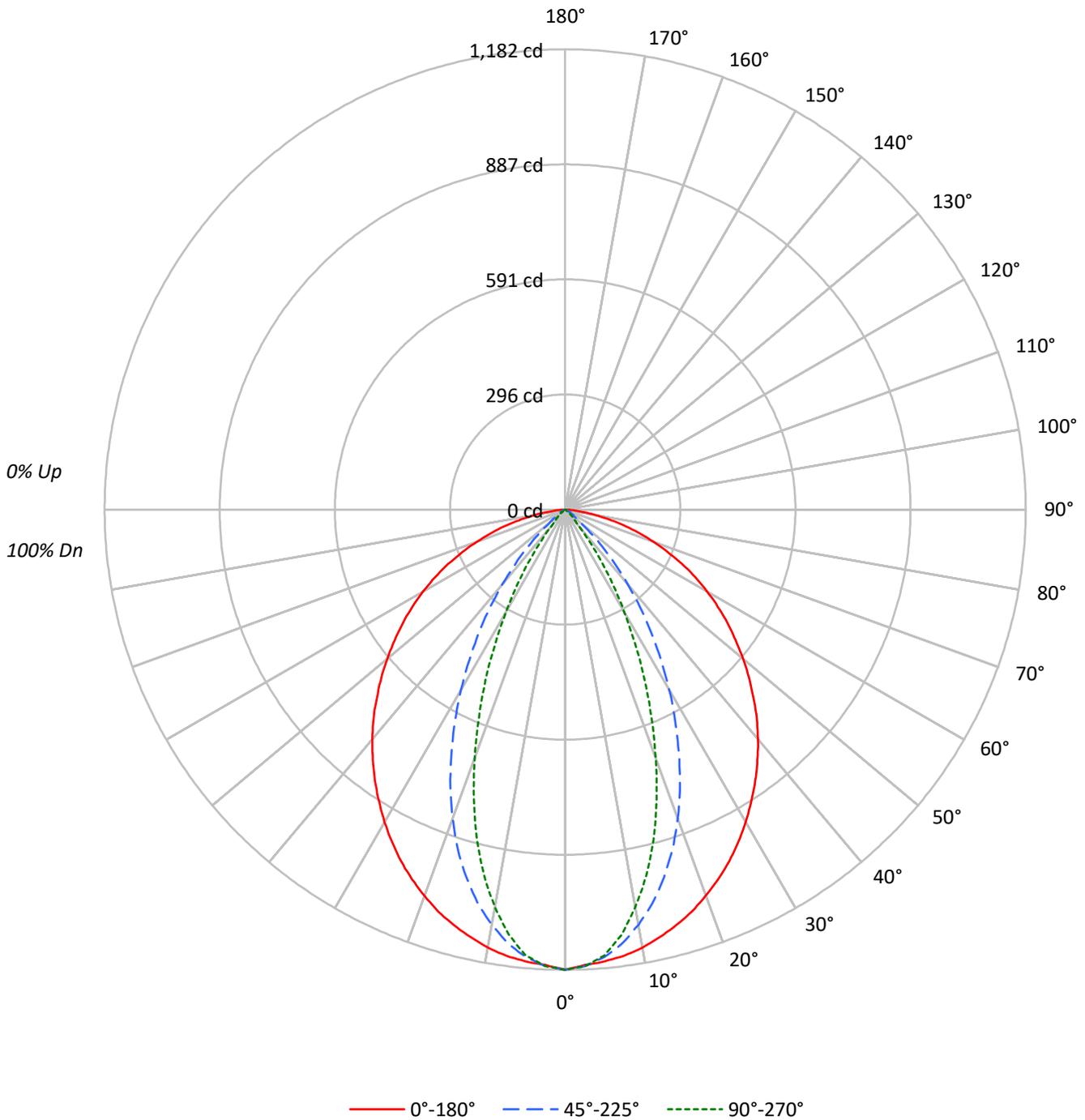
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1383.2 lumens  
Efficiency: N/A  
Efficacy: 39.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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   | 112 | 108 | 105 | 103 | 109 | 106 | 104 | 101 | 102 | 100 | 98  | 98  | 97  | 95  | 95  | 93  | 92  | 90  |    |    |    |   |
| 2   | 105 | 99  | 94  | 89  | 102 | 97  | 92  | 88  | 93  | 90  | 86  | 90  | 87  | 84  | 87  | 85  | 83  | 81  |    |    |    |   |
| 3   | 98  | 90  | 84  | 79  | 96  | 88  | 83  | 78  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 77  | 74  | 73  |    |    |    |   |
| 4   | 92  | 82  | 75  | 70  | 90  | 81  | 75  | 70  | 79  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 65  |    |    |    |   |
| 5   | 86  | 76  | 69  | 63  | 84  | 75  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  | 59  |    |    |    |   |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 62  | 57  | 67  | 61  | 57  | 66  | 61  | 56  | 64  | 60  | 56  | 54  |    |    |    |   |
| 7   | 76  | 65  | 58  | 53  | 74  | 64  | 57  | 52  | 63  | 57  | 52  | 61  | 56  | 52  | 60  | 55  | 52  | 50  |    |    |    |   |
| 8   | 71  | 60  | 53  | 48  | 70  | 60  | 53  | 48  | 58  | 52  | 48  | 57  | 52  | 48  | 56  | 51  | 48  | 46  |    |    |    |   |
| 9   | 68  | 56  | 49  | 45  | 66  | 56  | 49  | 45  | 55  | 49  | 45  | 54  | 48  | 44  | 53  | 48  | 44  | 43  |    |    |    |   |
| 10  | 64  | 53  | 46  | 42  | 63  | 52  | 46  | 42  | 51  | 46  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 40  |    |    |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14248 | 14248 | 14248 |
| 5°  | 14096 | 13961 | 13917 |
| 10° | 13988 | 13252 | 12698 |
| 15° | 13787 | 12211 | 10941 |
| 20° | 13542 | 10838 | 8714  |
| 25° | 13259 | 9182  | 6425  |
| 30° | 12902 | 7441  | 4215  |
| 35° | 12522 | 5665  | 2309  |
| 40° | 12117 | 3917  | 792   |
| 45° | 11644 | 2278  | 460   |
| 50° | 11175 | 897   | 276   |
| 55° | 10695 | 568   | 128   |
| 60° | 10139 | 354   | 60    |
| 65° | 9443  | 174   | 34    |
| 70° | 8471  | 88    | 42    |
| 75° | 7197  | 56    | 56    |
| 80° | 5360  | 83    | 0     |
| 85° | 2033  | 0     | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11644 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 108.4  | 7.8       |
| 10°-20°   | 275.0  | 19.9      |
| 20°-30°   | 328.0  | 23.7      |
| 30°-40°   | 278.2  | 20.1      |
| 40°-50°   | 189.1  | 13.7      |
| 50°-60°   | 117.2  | 8.5       |
| 60°-70°   | 59.4   | 4.3       |
| 70°-80°   | 24.2   | 1.7       |
| 80°-90°   | 3.7    | 0.3       |
| 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°    | 711.3  | 51.4      |
| 0°-40°    | 989.6  | 71.5      |
| 0°-60°    | 1295.9 | 93.7      |
| 0°-90°    | 1383.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1383.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1182 | 1182  | 1182 | 1182  | 1182 |      |
| 5°  | 1165 | 1176  | 1154 | 1145  | 1150 | 111  |
| 15° | 1105 | 1076  | 978  | 901   | 877  | 311  |
| 25° | 997  | 904   | 690  | 533   | 483  | 459  |
| 35° | 851  | 683   | 385  | 207   | 157  | 532  |
| 45° | 683  | 448   | 134  | 33    | 27   | 527  |
| 55° | 509  | 226   | 27   | 10    | 6    | 455  |
| 65° | 331  | 55    | 6    | 1     | 1    | 327  |
| 75° | 154  | 10    | 1    | 1     | 1    | 164  |
| 85° | 15   | 0     | 0    | 1     | 0    | 26   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1181.8 | 1181.8 | 1181.8 | 1181.8 | 1181.8 |
| 2.5°  | 1170.8 | 1186.7 | 1173.2 | 1172.0 | 1173.2 |
| 5°    | 1164.7 | 1175.7 | 1153.6 | 1145.0 | 1149.9 |
| 7.5°  | 1156.1 | 1161.0 | 1124.2 | 1102.1 | 1102.1 |
| 10°   | 1142.6 | 1138.9 | 1082.5 | 1045.7 | 1037.2 |
| 12.5° | 1124.2 | 1109.5 | 1035.9 | 978.3  | 962.4  |
| 15°   | 1104.6 | 1076.4 | 978.3  | 901.1  | 876.6  |
| 17.5° | 1082.5 | 1039.6 | 915.8  | 815.3  | 779.7  |
| 20°   | 1055.5 | 997.9  | 844.7  | 722.1  | 679.2  |
| 22.5° | 1027.3 | 952.6  | 769.9  | 626.5  | 578.6  |
| 25°   | 996.7  | 903.5  | 690.2  | 533.3  | 483.0  |
| 27.5° | 962.4  | 852.0  | 611.7  | 443.8  | 388.6  |
| 30°   | 926.8  | 798.1  | 534.5  | 358.0  | 302.8  |
| 32.5° | 888.8  | 741.7  | 457.3  | 279.5  | 228.0  |
| 35°   | 850.8  | 682.9  | 384.9  | 207.2  | 156.9  |
| 37.5° | 810.4  | 624.0  | 315.1  | 143.4  | 99.3   |
| 40°   | 769.9  | 566.4  | 248.9  | 90.7   | 50.3   |
| 42.5° | 728.2  | 506.3  | 188.8  | 45.4   | 34.3   |
| 45°   | 682.9  | 447.5  | 133.6  | 33.1   | 27.0   |
| 47.5° | 639.9  | 391.1  | 88.3   | 27.0   | 20.8   |
| 50°   | 595.8  | 334.7  | 47.8   | 19.6   | 14.7   |
| 52.5° | 551.7  | 280.7  | 34.3   | 14.7   | 9.8    |
| 55°   | 508.8  | 225.6  | 27.0   | 9.8    | 6.1    |
| 57.5° | 464.6  | 177.8  | 20.8   | 6.1    | 3.7    |
| 60°   | 420.5  | 131.2  | 14.7   | 3.7    | 2.5    |
| 62.5° | 376.4  | 90.7   | 9.8    | 2.5    | 1.2    |
| 65°   | 331.0  | 55.2   | 6.1    | 1.2    | 1.2    |
| 67.5° | 284.4  | 38.0   | 3.7    | 1.2    | 1.2    |
| 70°   | 240.3  | 27.0   | 2.5    | 1.2    | 1.2    |
| 72.5° | 196.2  | 17.2   | 1.2    | 1.2    | 0.0    |
| 75°   | 154.5  | 9.8    | 1.2    | 1.2    | 1.2    |
| 77.5° | 114.0  | 3.7    | 1.2    | 1.2    | 0.0    |
| 80°   | 77.2   | 1.2    | 1.2    | 1.2    | 0.0    |
| 82.5° | 42.9   | 0.0    | 1.2    | 1.2    | 0.0    |
| 85°   | 14.7   | 0.0    | 0.0    | 1.2    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 1.2    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)