

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: P1055989

Luminaire Tested: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055989  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

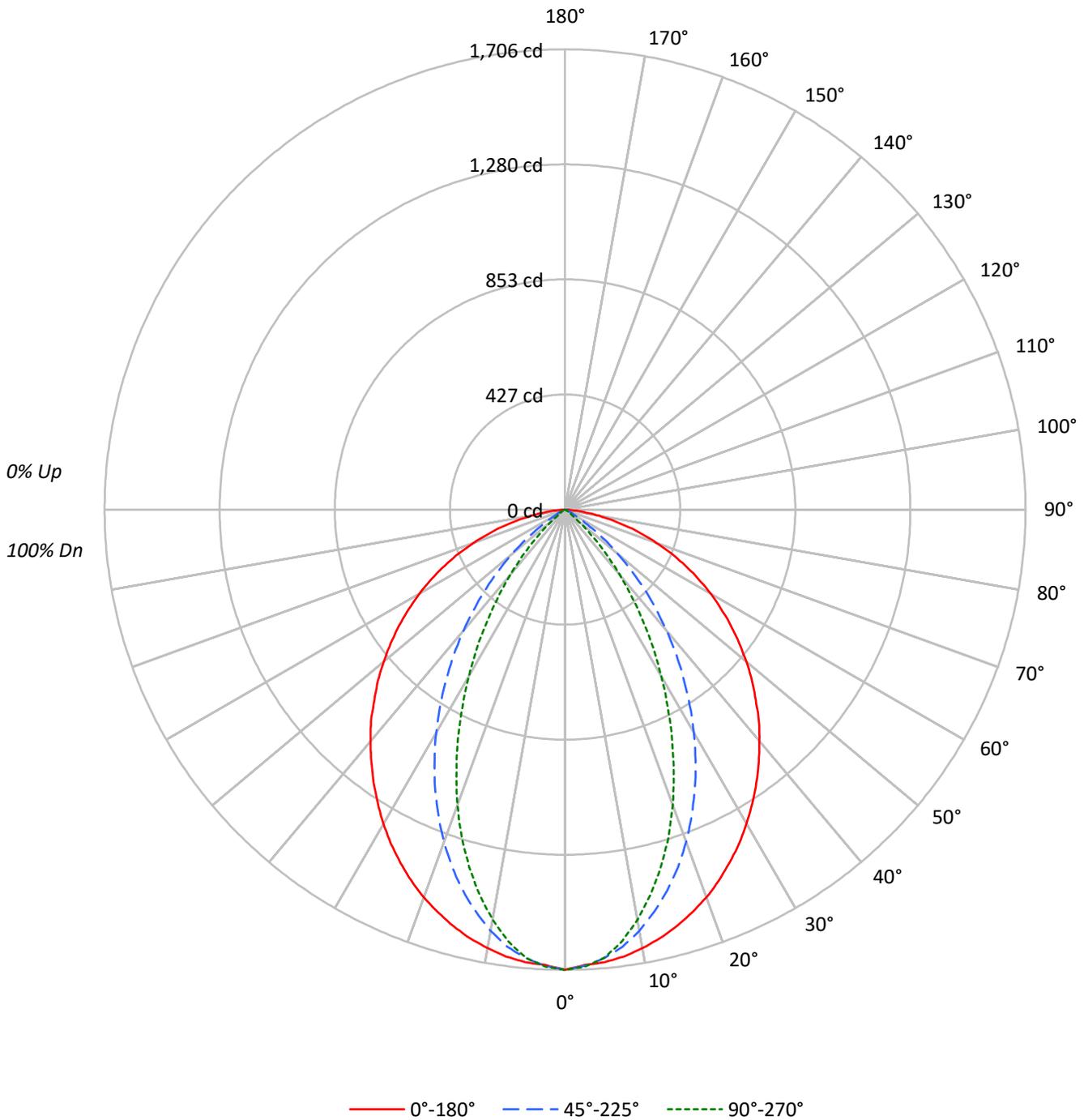
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2384.4 lumens  
Efficiency: N/A  
Efficacy: 56.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.9  
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

TEST NUMBER: P1055989

CATALOG NUMBER: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1055989

CATALOG NUMBER: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B

**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 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 95  | 93  | 92  | 90  |    |    | 90  |   |
| 2   | 104 | 98  | 93  | 88  | 102 | 96  | 91  | 87  | 93  | 89  | 85  | 90  | 86  | 83  | 87  | 84  | 82  | 80  |    |    | 80  |   |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 77  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |    |    | 71  |   |
| 4   | 90  | 81  | 74  | 68  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 64  |    |    | 64  |   |
| 5   | 84  | 74  | 66  | 61  | 83  | 73  | 66  | 61  | 71  | 65  | 60  | 69  | 64  | 60  | 67  | 63  | 59  | 57  |    |    | 57  |   |
| 6   | 79  | 68  | 60  | 55  | 77  | 67  | 60  | 55  | 65  | 59  | 54  | 64  | 58  | 54  | 62  | 57  | 54  | 52  |    |    | 52  |   |
| 7   | 74  | 63  | 55  | 50  | 73  | 62  | 55  | 50  | 60  | 54  | 50  | 59  | 53  | 49  | 58  | 53  | 49  | 47  |    |    | 47  |   |
| 8   | 70  | 58  | 51  | 46  | 68  | 57  | 50  | 46  | 56  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 43  |    |    | 43  |   |
| 9   | 66  | 54  | 47  | 42  | 64  | 53  | 47  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 50  | 45  | 41  | 40  |    |    | 40  |   |
| 10  | 62  | 50  | 43  | 39  | 61  | 50  | 43  | 39  | 49  | 43  | 39  | 48  | 42  | 39  | 47  | 42  | 38  | 37  |    |    | 37  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15083 | 15083 | 15083 |
| 5°  | 14948 | 14814 | 14799 |
| 10° | 14821 | 14235 | 13860 |
| 15° | 14635 | 13380 | 12554 |
| 20° | 14399 | 12338 | 10969 |
| 25° | 14081 | 11111 | 9153  |
| 30° | 13728 | 9750  | 7274  |
| 35° | 13341 | 8268  | 5416  |
| 40° | 12934 | 6737  | 3610  |
| 45° | 12485 | 5144  | 1987  |
| 50° | 12055 | 3520  | 552   |
| 55° | 11576 | 1908  | 361   |
| 60° | 11002 | 592   | 207   |
| 65° | 10287 | 385   | 105   |
| 70° | 9296  | 173   | 44    |
| 75° | 8000  | 58    | 0     |
| 80° | 6049  | 0     | 0     |
| 85° | 2546  | 0     | 0     |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12485 cd/sqm



TEST NUMBER: P1055989

CATALOG NUMBER: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 157.4  | 6.6       |
| 10°-20°   | 413.2  | 17.3      |
| 20°-30°   | 533.9  | 22.4      |
| 30°-40°   | 510.3  | 21.4      |
| 40°-50°   | 381.6  | 16.0      |
| 50°-60°   | 227.1  | 9.5       |
| 60°-70°   | 115.3  | 4.8       |
| 70°-80°   | 40.1   | 1.7       |
| 80°-90°   | 5.5    | 0.2       |
| 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°    | 1104.5 | 46.3      |
| 0°-40°    | 1614.8 | 67.7      |
| 0°-60°    | 2223.5 | 93.3      |
| 0°-90°    | 2384.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2384.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1706 | 1706  | 1706 | 1706  | 1706 |      |
| 5°  | 1684 | 1698  | 1669 | 1661  | 1668 | 160  |
| 15° | 1599 | 1566  | 1462 | 1393  | 1372 | 451  |
| 25° | 1443 | 1343  | 1139 | 988   | 938  | 665  |
| 35° | 1236 | 1065  | 766  | 570   | 502  | 773  |
| 45° | 998  | 766   | 411  | 219   | 159  | 772  |
| 55° | 751  | 467   | 124  | 28    | 23   | 670  |
| 65° | 492  | 189   | 18   | 7     | 5    | 486  |
| 75° | 234  | 25    | 2    | 2     | 0    | 249  |
| 85° | 25   | 0     | 0    | 0     | 0    | 42   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P1055989

CATALOG NUMBER: S124R3DR-S1195D850-X4F0-XX-UDD-FLL-B

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1706.0 | 1706.0 | 1706.0 | 1706.0 | 1706.0 |
| 2.5°  | 1689.3 | 1709.3 | 1692.6 | 1694.3 | 1696.0 |
| 5°    | 1684.2 | 1697.6 | 1669.2 | 1660.8 | 1667.5 |
| 7.5°  | 1670.9 | 1675.9 | 1634.1 | 1612.3 | 1614.0 |
| 10°   | 1650.8 | 1645.8 | 1585.6 | 1548.8 | 1543.8 |
| 12.5° | 1627.4 | 1610.7 | 1527.0 | 1473.5 | 1461.8 |
| 15°   | 1598.9 | 1565.5 | 1461.8 | 1393.2 | 1371.5 |
| 17.5° | 1565.5 | 1517.0 | 1389.9 | 1299.6 | 1272.8 |
| 20°   | 1530.4 | 1463.5 | 1311.3 | 1199.2 | 1165.8 |
| 22.5° | 1488.6 | 1403.3 | 1226.0 | 1093.8 | 1052.0 |
| 25°   | 1443.4 | 1343.1 | 1139.0 | 988.5  | 938.3  |
| 27.5° | 1396.6 | 1277.8 | 1047.0 | 881.4  | 822.9  |
| 30°   | 1344.7 | 1209.2 | 955.0  | 772.7  | 712.5  |
| 32.5° | 1291.2 | 1139.0 | 859.7  | 672.4  | 605.5  |
| 35°   | 1236.0 | 1065.4 | 766.0  | 570.3  | 501.8  |
| 37.5° | 1179.1 | 991.8  | 675.7  | 473.3  | 403.1  |
| 40°   | 1120.6 | 916.6  | 583.7  | 381.3  | 312.8  |
| 42.5° | 1063.7 | 841.3  | 496.7  | 294.4  | 230.8  |
| 45°   | 998.5  | 766.0  | 411.4  | 219.1  | 158.9  |
| 47.5° | 940.0  | 692.4  | 329.5  | 148.9  | 93.7   |
| 50°   | 876.4  | 613.8  | 255.9  | 87.0   | 40.1   |
| 52.5° | 812.9  | 540.2  | 187.3  | 38.5   | 30.1   |
| 55°   | 751.0  | 466.6  | 123.8  | 28.4   | 23.4   |
| 57.5° | 685.7  | 393.0  | 66.9   | 21.7   | 16.7   |
| 60°   | 622.2  | 321.1  | 33.5   | 16.7   | 11.7   |
| 62.5° | 557.0  | 252.6  | 26.8   | 10.0   | 6.7    |
| 65°   | 491.7  | 189.0  | 18.4   | 6.7    | 5.0    |
| 67.5° | 426.5  | 128.8  | 11.7   | 3.3    | 1.7    |
| 70°   | 359.6  | 78.6   | 6.7    | 1.7    | 1.7    |
| 72.5° | 296.0  | 40.1   | 3.3    | 1.7    | 1.7    |
| 75°   | 234.2  | 25.1   | 1.7    | 1.7    | 0.0    |
| 77.5° | 173.9  | 13.4   | 1.7    | 1.7    | 0.0    |
| 80°   | 118.8  | 5.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 68.6   | 1.7    | 0.0    | 0.0    | 0.0    |
| 85°   | 25.1   | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)