

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: P1059147

Luminaire Tested: S123RDR-S1165D935-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059147  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1165D935-X4F0-XX-UDD-WVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

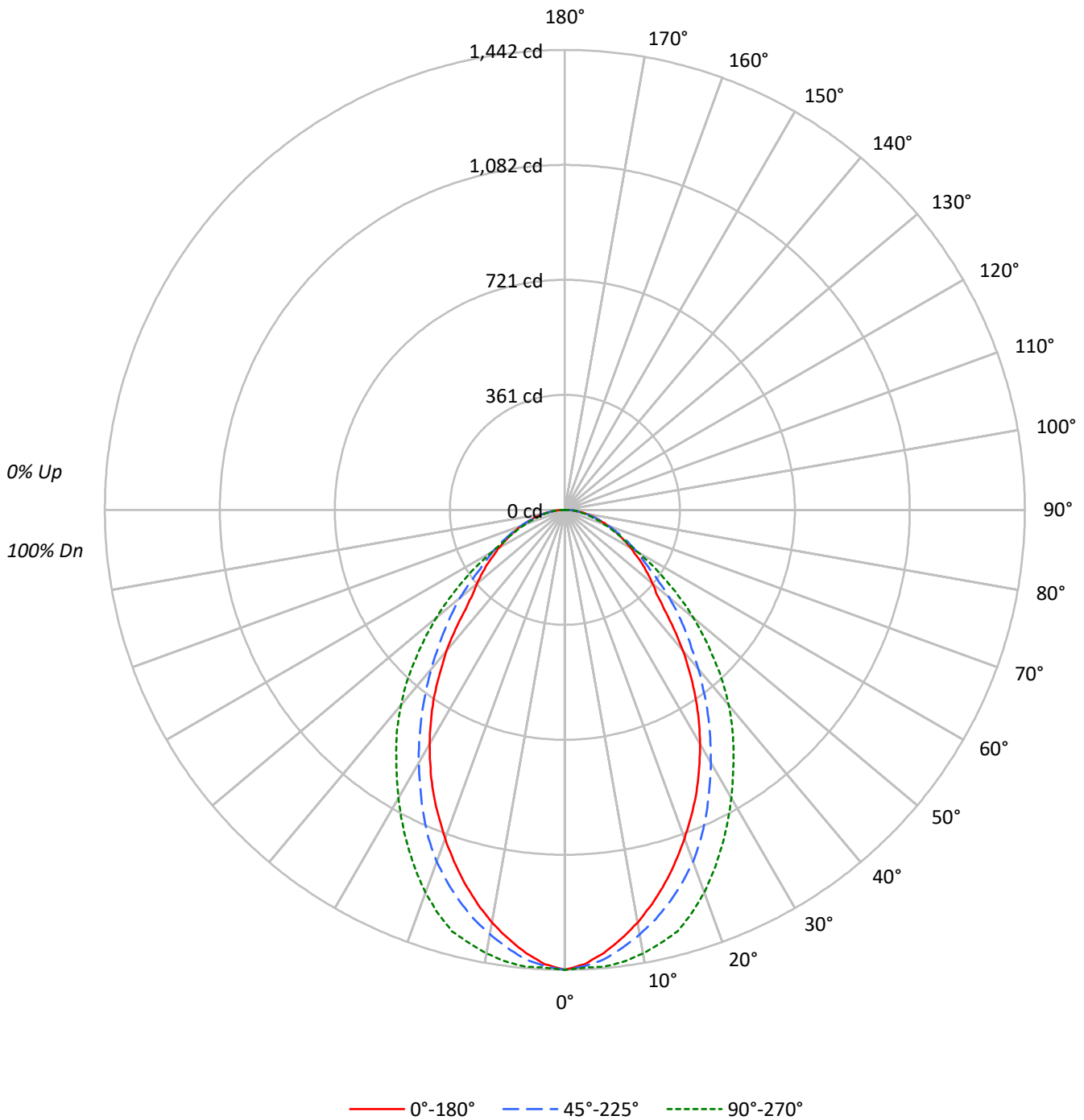
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2533.9 lumens  
Efficiency: N/A  
Efficacy: 60.6 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.8  
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   | 110 | 106 | 102 | 99  | 108 | 104 | 101 | 97  | 100 | 97  | 94  | 96  | 94  | 92  | 92  | 91  | 89  | 87  |    |    |    |   |
| 2   | 102 | 95  | 89  | 84  | 99  | 93  | 87  | 83  | 89  | 85  | 81  | 86  | 82  | 79  | 83  | 80  | 77  | 75  |    |    |    |   |
| 3   | 94  | 85  | 77  | 72  | 92  | 83  | 76  | 71  | 80  | 75  | 70  | 78  | 73  | 69  | 75  | 71  | 68  | 66  |    |    |    |   |
| 4   | 87  | 76  | 69  | 63  | 85  | 75  | 68  | 62  | 73  | 66  | 61  | 70  | 65  | 61  | 68  | 64  | 60  | 58  |    |    |    |   |
| 5   | 81  | 69  | 61  | 55  | 79  | 68  | 61  | 55  | 66  | 59  | 54  | 64  | 58  | 54  | 62  | 57  | 53  | 51  |    |    |    |   |
| 6   | 75  | 63  | 55  | 49  | 73  | 62  | 55  | 49  | 61  | 54  | 49  | 59  | 53  | 48  | 57  | 52  | 48  | 46  |    |    |    |   |
| 7   | 70  | 58  | 50  | 44  | 69  | 57  | 50  | 44  | 56  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 43  | 41  |    |    |    |   |
| 8   | 66  | 53  | 46  | 40  | 64  | 53  | 45  | 40  | 51  | 45  | 40  | 50  | 44  | 40  | 49  | 44  | 39  | 38  |    |    |    |   |
| 9   | 62  | 49  | 42  | 37  | 60  | 49  | 42  | 37  | 48  | 41  | 36  | 47  | 41  | 36  | 46  | 40  | 36  | 34  |    |    |    |   |
| 10  | 58  | 46  | 39  | 34  | 57  | 45  | 38  | 34  | 45  | 38  | 34  | 44  | 38  | 33  | 43  | 37  | 33  | 32  |    |    |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16934 | 16934 | 16934 |
| 5°  | 16442 | 16677 | 16940 |
| 10° | 15670 | 16115 | 16840 |
| 15° | 14740 | 15463 | 16625 |
| 20° | 13709 | 14670 | 15957 |
| 25° | 12654 | 13603 | 15082 |
| 30° | 11493 | 12419 | 14152 |
| 35° | 10229 | 11207 | 13218 |
| 40° | 8826  | 9987  | 12251 |
| 45° | 7295  | 8841  | 10985 |
| 50° | 6553  | 7799  | 9589  |
| 55° | 6072  | 6656  | 7951  |
| 60° | 5596  | 6061  | 6092  |
| 65° | 5207  | 5482  | 5104  |
| 70° | 4899  | 4985  | 4474  |
| 75° | 4619  | 4446  | 3943  |
| 80° | 4362  | 4030  | 3692  |
| 85° | 4177  | 4513  | 4177  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 10985 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 133.6  | 5.3       |
| 10°-20°   | 359.8  | 14.2      |
| 20°-30°   | 486.8  | 19.2      |
| 30°-40°   | 500.2  | 19.7      |
| 40°-50°   | 420.1  | 16.6      |
| 50°-60°   | 301.2  | 11.9      |
| 60°-70°   | 191.8  | 7.6       |
| 70°-80°   | 105.4  | 4.2       |
| 80°-90°   | 35.1   | 1.4       |
| 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°    | 980.2  | 38.7      |
| 0°-40°    | 1480.4 | 58.4      |
| 0°-60°    | 2201.7 | 86.9      |
| 0°-90°    | 2533.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2533.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1442 | 1442  | 1442 | 1442  | 1442 |      |
| 5°  | 1395 | 1420  | 1415 | 1425  | 1437 | 131  |
| 15° | 1212 | 1246  | 1272 | 1327  | 1368 | 340  |
| 25° | 977  | 1014  | 1050 | 1107  | 1164 | 448  |
| 35° | 714  | 752   | 782  | 851   | 922  | 444  |
| 45° | 439  | 478   | 532  | 609   | 662  | 347  |
| 55° | 297  | 303   | 325  | 369   | 388  | 265  |
| 65° | 187  | 199   | 197  | 186   | 184  | 187  |
| 75° | 102  | 112   | 98   | 91    | 87   | 108  |
| 85° | 31   | 32    | 34   | 35    | 31   | 34   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1442.1 | 1442.1 | 1442.1 | 1442.1 | 1442.1 |
| 2.5°  | 1425.9 | 1445.8 | 1432.1 | 1433.4 | 1437.1 |
| 5°    | 1394.9 | 1419.7 | 1414.8 | 1424.7 | 1437.1 |
| 7.5°  | 1356.4 | 1383.7 | 1385.0 | 1408.5 | 1428.4 |
| 10°   | 1314.2 | 1342.8 | 1351.5 | 1387.4 | 1412.3 |
| 12.5° | 1264.6 | 1295.6 | 1314.2 | 1358.9 | 1391.2 |
| 15°   | 1212.5 | 1246.0 | 1272.0 | 1326.6 | 1367.6 |
| 17.5° | 1155.4 | 1191.4 | 1224.9 | 1283.2 | 1325.4 |
| 20°   | 1097.1 | 1135.5 | 1174.0 | 1228.6 | 1277.0 |
| 22.5° | 1036.2 | 1076.0 | 1115.7 | 1169.0 | 1222.4 |
| 25°   | 976.7  | 1013.9 | 1049.9 | 1107.0 | 1164.1 |
| 27.5° | 912.1  | 950.6  | 981.6  | 1044.9 | 1104.5 |
| 30°   | 847.6  | 886.1  | 915.9  | 981.6  | 1043.7 |
| 32.5° | 780.6  | 820.3  | 847.6  | 915.9  | 980.4  |
| 35°   | 713.6  | 752.1  | 781.8  | 851.3  | 922.1  |
| 37.5° | 642.8  | 685.0  | 714.8  | 793.0  | 862.5  |
| 40°   | 575.8  | 615.5  | 651.5  | 733.4  | 799.2  |
| 42.5° | 506.3  | 547.3  | 588.2  | 672.6  | 733.4  |
| 45°   | 439.3  | 477.8  | 532.4  | 609.3  | 661.5  |
| 47.5° | 390.9  | 415.7  | 479.0  | 543.6  | 593.2  |
| 50°   | 358.7  | 368.6  | 426.9  | 484.0  | 524.9  |
| 52.5° | 326.4  | 333.8  | 373.5  | 425.7  | 456.7  |
| 55°   | 296.6  | 302.8  | 325.1  | 368.6  | 388.4  |
| 57.5° | 264.3  | 270.5  | 289.2  | 314.0  | 325.1  |
| 60°   | 238.3  | 243.2  | 258.1  | 261.9  | 259.4  |
| 62.5° | 212.2  | 219.7  | 227.1  | 218.4  | 214.7  |
| 65°   | 187.4  | 198.6  | 197.3  | 186.2  | 183.7  |
| 67.5° | 165.1  | 176.2  | 170.0  | 158.8  | 155.1  |
| 70°   | 142.7  | 153.9  | 145.2  | 134.0  | 130.3  |
| 72.5° | 121.6  | 134.0  | 120.4  | 110.4  | 108.0  |
| 75°   | 101.8  | 111.7  | 98.0   | 90.6   | 86.9   |
| 77.5° | 83.1   | 90.6   | 78.2   | 72.0   | 69.5   |
| 80°   | 64.5   | 69.5   | 59.6   | 55.8   | 54.6   |
| 82.5° | 47.2   | 49.6   | 43.4   | 45.9   | 44.7   |
| 85°   | 31.0   | 32.3   | 33.5   | 34.7   | 31.0   |
| 87.5° | 14.9   | 21.1   | 21.1   | 19.9   | 16.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)