

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: P1037622

Luminaire Tested: S124DS-B1195DB2750-4F0-XX-W2A-F\_2700K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1037622  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DS-B1195DB2750-4F0-XX-W2A-F\_2700K  
Description: Define 4 Direct Surface with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

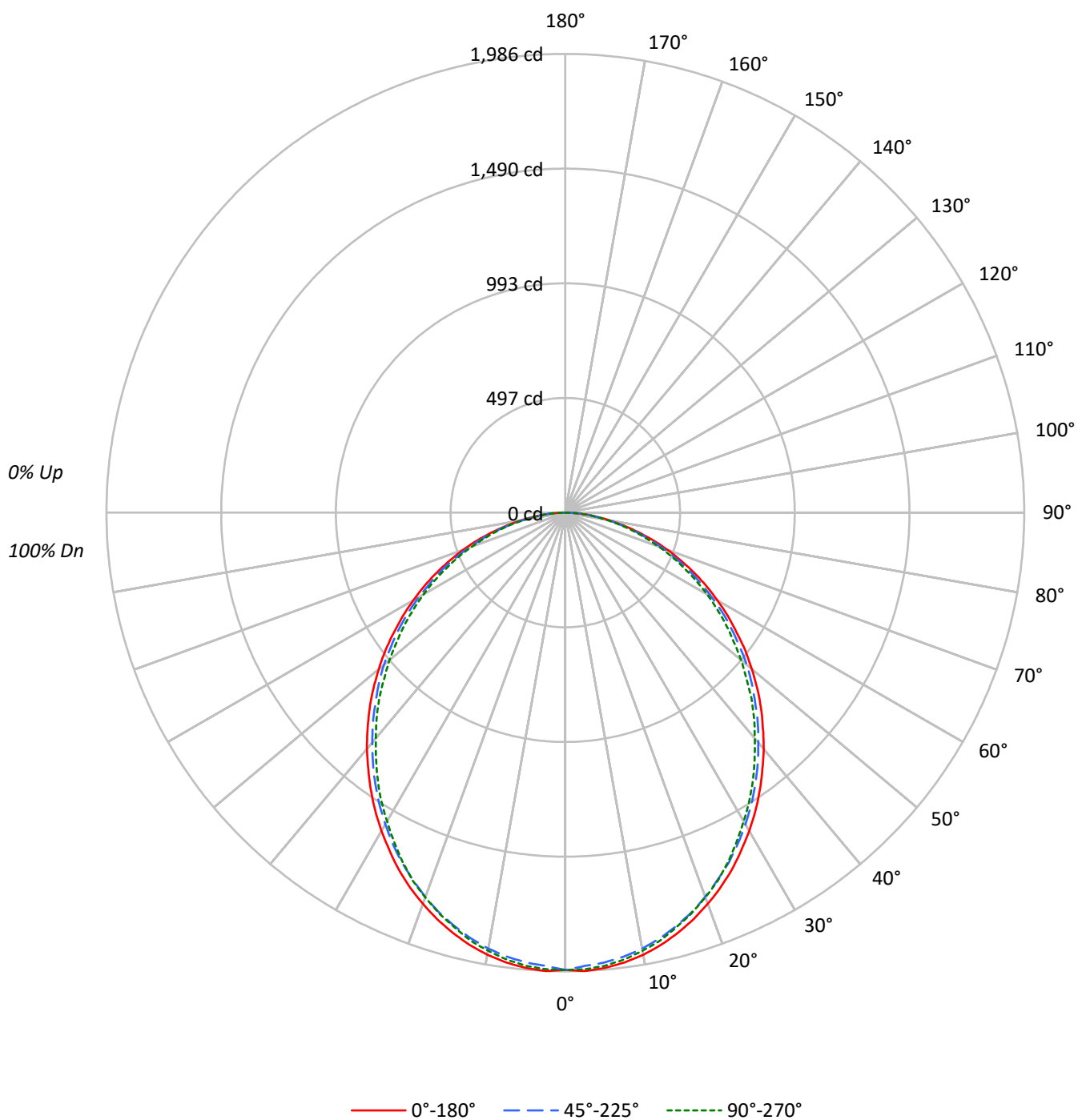
Lumens per Lamp: N/A  
Luminaire Lumens: 5082.0 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 61.3  
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  |     |     |  | 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  |  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |  | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  | 88  | 86  |  | 84  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  | 76  | 73  |  | 70  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  |  | 73  | 67  | 63  |  | 70  | 66  | 62  |  | 60  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  | 58  | 53  |  | 51  |
| 5   | 77  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 61  | 53  | 48  |  | 59  | 52  | 47  |  | 57  | 51  | 47  |  | 44  |
| 6   | 71  | 58  | 49  | 42  | 69  | 57  | 48  | 42  | 55  | 47  | 42  |  | 53  | 47  | 41  |  | 52  | 46  | 41  |  | 39  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 37  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 47  | 41  | 37  |  | 35  |
| 8   | 61  | 48  | 39  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 43  | 37  | 33  |  | 31  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  | 34  | 30  |  | 28  |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 28  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  | 31  | 27  |  | 25  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16146 | 16146 | 16146 |
| 5°  | 16194 | 16000 | 16117 |
| 10° | 16093 | 15869 | 15948 |
| 15° | 15898 | 15644 | 15684 |
| 20° | 15640 | 15365 | 15378 |
| 25° | 15345 | 15046 | 15002 |
| 30° | 14984 | 14670 | 14535 |
| 35° | 14609 | 14277 | 14088 |
| 40° | 14221 | 13832 | 13579 |
| 45° | 13813 | 13392 | 13136 |
| 50° | 13364 | 13002 | 12600 |
| 55° | 12879 | 12495 | 12090 |
| 60° | 12393 | 11928 | 11566 |
| 65° | 11847 | 11388 | 10929 |
| 70° | 11234 | 10667 | 10250 |
| 75° | 10296 | 9799  | 9546  |
| 80° | 9162  | 8791  | 8565  |
| 85° | 8018  | 7719  | 7569  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13813 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 186.6  | 3.7       |
| 10°-20°   | 525.8  | 10.3      |
| 20°-30°   | 773.8  | 15.2      |
| 30°-40°   | 899.5  | 17.7      |
| 40°-50°   | 899.4  | 17.7      |
| 50°-60°   | 786.6  | 15.5      |
| 60°-70°   | 584.0  | 11.5      |
| 70°-80°   | 331.4  | 6.5       |
| 80°-90°   | 94.9   | 1.9       |
| 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°    | 1486.2 | 29.2      |
| 0°-40°    | 2385.7 | 46.9      |
| 0°-60°    | 4071.7 | 80.1      |
| 0°-90°    | 5082.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5082.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1980 | 1980  | 1980 | 1980  | 1980 |      |
| 5°  | 1978 | 1972  | 1955 | 1972  | 1969 | 188  |
| 15° | 1883 | 1877  | 1853 | 1863  | 1858 | 531  |
| 25° | 1706 | 1694  | 1672 | 1674  | 1667 | 785  |
| 35° | 1468 | 1456  | 1434 | 1423  | 1415 | 918  |
| 45° | 1198 | 1187  | 1161 | 1144  | 1139 | 923  |
| 55° | 906  | 901   | 879  | 860   | 850  | 811  |
| 65° | 614  | 606   | 590  | 574   | 566  | 608  |
| 75° | 327  | 319   | 311  | 305   | 303  | 347  |
| 85° | 86   | 86    | 82   | 82    | 81   | 98   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1980.0 | 1980.0 | 1980.0 | 1980.0 | 1980.0 |
| 2.5°  | 1986.3 | 1981.6 | 1964.1 | 1980.0 | 1978.4 |
| 5°    | 1978.4 | 1972.0 | 1954.6 | 1972.0 | 1968.9 |
| 7.5°  | 1964.1 | 1957.8 | 1938.7 | 1953.0 | 1951.4 |
| 10°   | 1943.5 | 1937.1 | 1916.5 | 1929.2 | 1926.0 |
| 12.5° | 1916.5 | 1910.2 | 1888.0 | 1902.2 | 1897.5 |
| 15°   | 1883.2 | 1876.9 | 1853.1 | 1862.6 | 1857.8 |
| 17.5° | 1845.1 | 1837.2 | 1815.0 | 1821.3 | 1818.2 |
| 20°   | 1802.3 | 1794.4 | 1770.6 | 1775.3 | 1772.1 |
| 22.5° | 1756.3 | 1745.2 | 1721.4 | 1730.9 | 1724.5 |
| 25°   | 1705.5 | 1694.4 | 1672.2 | 1673.8 | 1667.4 |
| 27.5° | 1648.4 | 1637.3 | 1616.7 | 1613.5 | 1605.6 |
| 30°   | 1591.3 | 1578.6 | 1558.0 | 1551.6 | 1543.7 |
| 32.5° | 1531.0 | 1519.9 | 1497.7 | 1489.7 | 1481.8 |
| 35°   | 1467.5 | 1456.4 | 1434.2 | 1423.1 | 1415.2 |
| 37.5° | 1400.9 | 1391.4 | 1367.6 | 1356.5 | 1345.4 |
| 40°   | 1335.9 | 1323.2 | 1299.4 | 1283.5 | 1275.6 |
| 42.5° | 1266.0 | 1259.7 | 1232.7 | 1213.7 | 1208.9 |
| 45°   | 1197.8 | 1186.7 | 1161.3 | 1143.9 | 1139.1 |
| 47.5° | 1126.4 | 1118.5 | 1094.7 | 1075.7 | 1063.0 |
| 50°   | 1053.4 | 1047.1 | 1024.9 | 1002.7 | 993.2  |
| 52.5° | 982.1  | 974.1  | 950.3  | 931.3  | 918.6  |
| 55°   | 905.9  | 901.1  | 878.9  | 859.9  | 850.4  |
| 57.5° | 834.5  | 829.8  | 807.5  | 788.5  | 779.0  |
| 60°   | 759.9  | 752.0  | 731.4  | 717.1  | 709.2  |
| 62.5° | 687.0  | 680.6  | 658.4  | 645.7  | 637.8  |
| 65°   | 614.0  | 606.1  | 590.2  | 574.3  | 566.4  |
| 67.5° | 539.4  | 533.1  | 517.2  | 501.3  | 499.8  |
| 70°   | 471.2  | 460.1  | 447.4  | 434.7  | 429.9  |
| 72.5° | 398.2  | 387.1  | 377.6  | 368.1  | 363.3  |
| 75°   | 326.8  | 318.9  | 311.0  | 304.6  | 303.0  |
| 77.5° | 257.0  | 253.8  | 245.9  | 244.3  | 239.6  |
| 80°   | 195.1  | 190.4  | 187.2  | 184.0  | 182.4  |
| 82.5° | 134.9  | 133.3  | 133.3  | 131.7  | 130.1  |
| 85°   | 85.7   | 85.7   | 82.5   | 82.5   | 80.9   |
| 87.5° | 41.2   | 39.7   | 38.1   | 38.1   | 38.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)