

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: P1037818

Luminaire Tested: S124R3DS-B795DB2750-4F0-XX-W2A-F\_3500K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1037818  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DS-B795DB2750-4F0-XX-W2A-F\_3500K  
Description: Define 4 3in Regressed Direct Surface with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

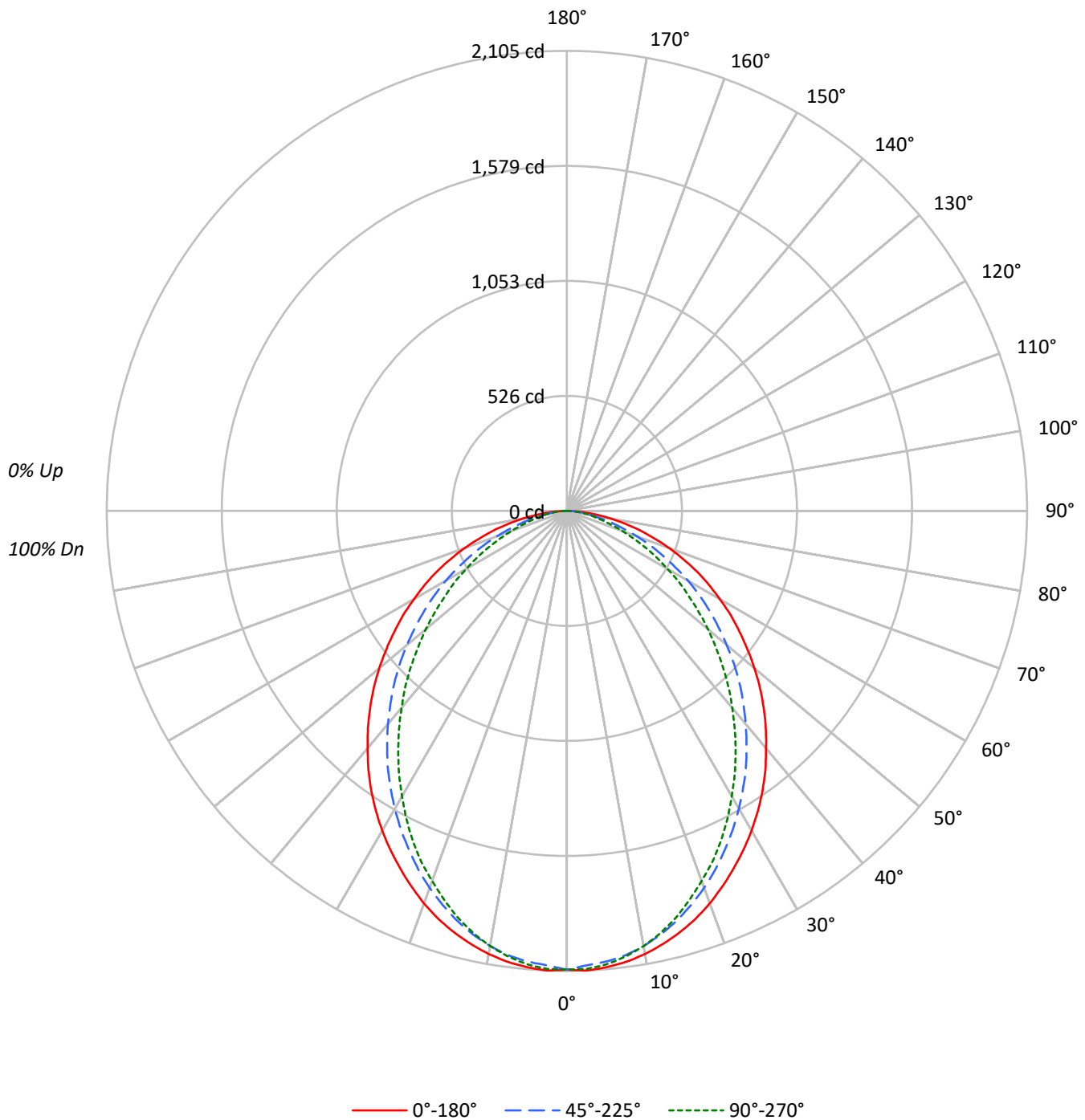
Lumens per Lamp: N/A  
Luminaire Lumens: 4850.0 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 61.3  
Input Voltage (V):  
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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 87  | 87  | 85  |
| 2   | 100 | 93  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 78  | 74  | 74  | 74  | 72  |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 75  | 69  | 65  | 72  | 68  | 64  | 64  | 64  | 62  |
| 4   | 84  | 73  | 65  | 58  | 82  | 72  | 64  | 58  | 69  | 62  | 57  | 67  | 61  | 56  | 65  | 60  | 56  | 56  | 56  | 54  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 56  | 50  | 62  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 49  | 49  | 47  |
| 6   | 72  | 59  | 51  | 45  | 70  | 58  | 50  | 44  | 57  | 49  | 44  | 55  | 49  | 44  | 53  | 48  | 43  | 43  | 43  | 41  |
| 7   | 67  | 54  | 46  | 40  | 65  | 53  | 45  | 40  | 52  | 45  | 39  | 50  | 44  | 39  | 49  | 43  | 39  | 39  | 39  | 37  |
| 8   | 63  | 50  | 41  | 36  | 61  | 49  | 41  | 36  | 48  | 40  | 35  | 46  | 40  | 35  | 45  | 39  | 35  | 35  | 35  | 33  |
| 9   | 59  | 46  | 38  | 32  | 57  | 45  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 32  | 32  | 32  | 30  |
| 10  | 55  | 42  | 35  | 29  | 54  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 39  | 33  | 29  | 29  | 29  | 27  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 17116 | 17116 | 17116 |
| 5°  | 17155 | 16945 | 17050 |
| 10° | 17047 | 16742 | 16742 |
| 15° | 16852 | 16390 | 16268 |
| 20° | 16583 | 15927 | 15635 |
| 25° | 16240 | 15387 | 14996 |
| 30° | 15905 | 14816 | 14196 |
| 35° | 15535 | 14223 | 13391 |
| 40° | 15090 | 13550 | 12524 |
| 45° | 14679 | 12881 | 11639 |
| 50° | 14211 | 12111 | 10705 |
| 55° | 13709 | 11311 | 9689  |
| 60° | 13158 | 10433 | 8650  |
| 65° | 12652 | 9335  | 7629  |
| 70° | 11916 | 8123  | 6476  |
| 75° | 10989 | 6736  | 5265  |
| 80° | 9584  | 5133  | 4832  |
| 85° | 8121  | 4659  | 4360  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 14679 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 197.4  | 4.1       |
| 10°-20°   | 550.3  | 11.3      |
| 20°-30°   | 794.5  | 16.4      |
| 30°-40°   | 900.5  | 18.6      |
| 40°-50°   | 869.4  | 17.9      |
| 50°-60°   | 722.8  | 14.9      |
| 60°-70°   | 498.9  | 10.3      |
| 70°-80°   | 252.1  | 5.2       |
| 80°-90°   | 64.0   | 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°    | 1542.2 | 31.8      |
| 0°-40°    | 2442.7 | 50.4      |
| 0°-60°    | 4035.0 | 83.2      |
| 0°-90°    | 4850.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4850.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2099 | 2099  | 2099 | 2099  | 2099 |      |
| 5°  | 2096 | 2089  | 2070 | 2086  | 2083 | 199  |
| 15° | 1996 | 1982  | 1942 | 1938  | 1927 | 563  |
| 25° | 1805 | 1776  | 1710 | 1683  | 1667 | 832  |
| 35° | 1561 | 1509  | 1429 | 1374  | 1345 | 975  |
| 45° | 1273 | 1213  | 1117 | 1038  | 1009 | 982  |
| 55° | 964  | 900   | 796  | 712   | 682  | 863  |
| 65° | 656  | 587   | 484  | 415   | 395  | 648  |
| 75° | 349  | 289   | 214  | 177   | 167  | 368  |
| 85° | 87   | 55    | 50   | 47    | 47   | 100  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2099.0 | 2099.0 | 2099.0 | 2099.0 | 2099.0 |
| 2.5°  | 2105.4 | 2099.0 | 2081.3 | 2099.0 | 2097.4 |
| 5°    | 2095.8 | 2089.4 | 2070.1 | 2086.2 | 2082.9 |
| 7.5°  | 2081.3 | 2074.9 | 2050.8 | 2062.1 | 2057.2 |
| 10°   | 2058.8 | 2050.8 | 2021.9 | 2028.3 | 2021.9 |
| 12.5° | 2029.9 | 2020.3 | 1984.9 | 1988.1 | 1978.5 |
| 15°   | 1996.2 | 1981.7 | 1941.5 | 1938.3 | 1927.0 |
| 17.5° | 1957.6 | 1936.7 | 1890.1 | 1882.0 | 1866.0 |
| 20°   | 1911.0 | 1890.1 | 1835.4 | 1822.6 | 1801.7 |
| 22.5° | 1859.5 | 1835.4 | 1776.0 | 1755.1 | 1739.0 |
| 25°   | 1804.9 | 1776.0 | 1710.1 | 1682.7 | 1666.7 |
| 27.5° | 1748.6 | 1713.3 | 1644.2 | 1612.0 | 1589.5 |
| 30°   | 1689.2 | 1649.0 | 1573.5 | 1533.3 | 1507.6 |
| 32.5° | 1626.5 | 1579.9 | 1501.1 | 1452.9 | 1428.8 |
| 35°   | 1560.6 | 1509.2 | 1428.8 | 1374.2 | 1345.2 |
| 37.5° | 1491.5 | 1438.5 | 1350.1 | 1290.6 | 1261.7 |
| 40°   | 1417.6 | 1364.5 | 1272.9 | 1205.4 | 1176.5 |
| 42.5° | 1346.8 | 1290.6 | 1194.2 | 1125.0 | 1094.5 |
| 45°   | 1272.9 | 1213.4 | 1117.0 | 1038.3 | 1009.3 |
| 47.5° | 1197.4 | 1136.3 | 1036.7 | 954.7  | 922.5  |
| 50°   | 1120.2 | 1057.5 | 954.7  | 874.3  | 843.8  |
| 52.5° | 1041.5 | 980.4  | 874.3  | 792.4  | 760.2  |
| 55°   | 964.3  | 900.0  | 795.6  | 712.0  | 681.5  |
| 57.5° | 888.8  | 821.3  | 718.4  | 633.2  | 610.7  |
| 60°   | 806.8  | 742.5  | 639.7  | 556.1  | 530.4  |
| 62.5° | 732.9  | 665.4  | 559.3  | 483.8  | 464.5  |
| 65°   | 655.7  | 586.6  | 483.8  | 414.7  | 395.4  |
| 67.5° | 575.4  | 509.5  | 413.1  | 352.0  | 329.5  |
| 70°   | 499.8  | 432.3  | 340.7  | 287.7  | 271.6  |
| 72.5° | 419.5  | 360.0  | 274.8  | 231.4  | 217.0  |
| 75°   | 348.8  | 289.3  | 213.8  | 176.8  | 167.1  |
| 77.5° | 274.8  | 223.4  | 159.1  | 133.4  | 130.2  |
| 80°   | 204.1  | 157.5  | 109.3  | 104.5  | 102.9  |
| 82.5° | 143.0  | 101.3  | 78.8   | 75.5   | 73.9   |
| 85°   | 86.8   | 54.6   | 49.8   | 46.6   | 46.6   |
| 87.5° | 37.0   | 24.1   | 22.5   | 20.9   | 22.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)