

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: P1037345

Luminaire Tested: S123DS-B560DB40-4F0-XX-W2A-F

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1037345  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DS-B560DB40-4F0-XX-W2A-F  
Description: Define 3 Direct Surface with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

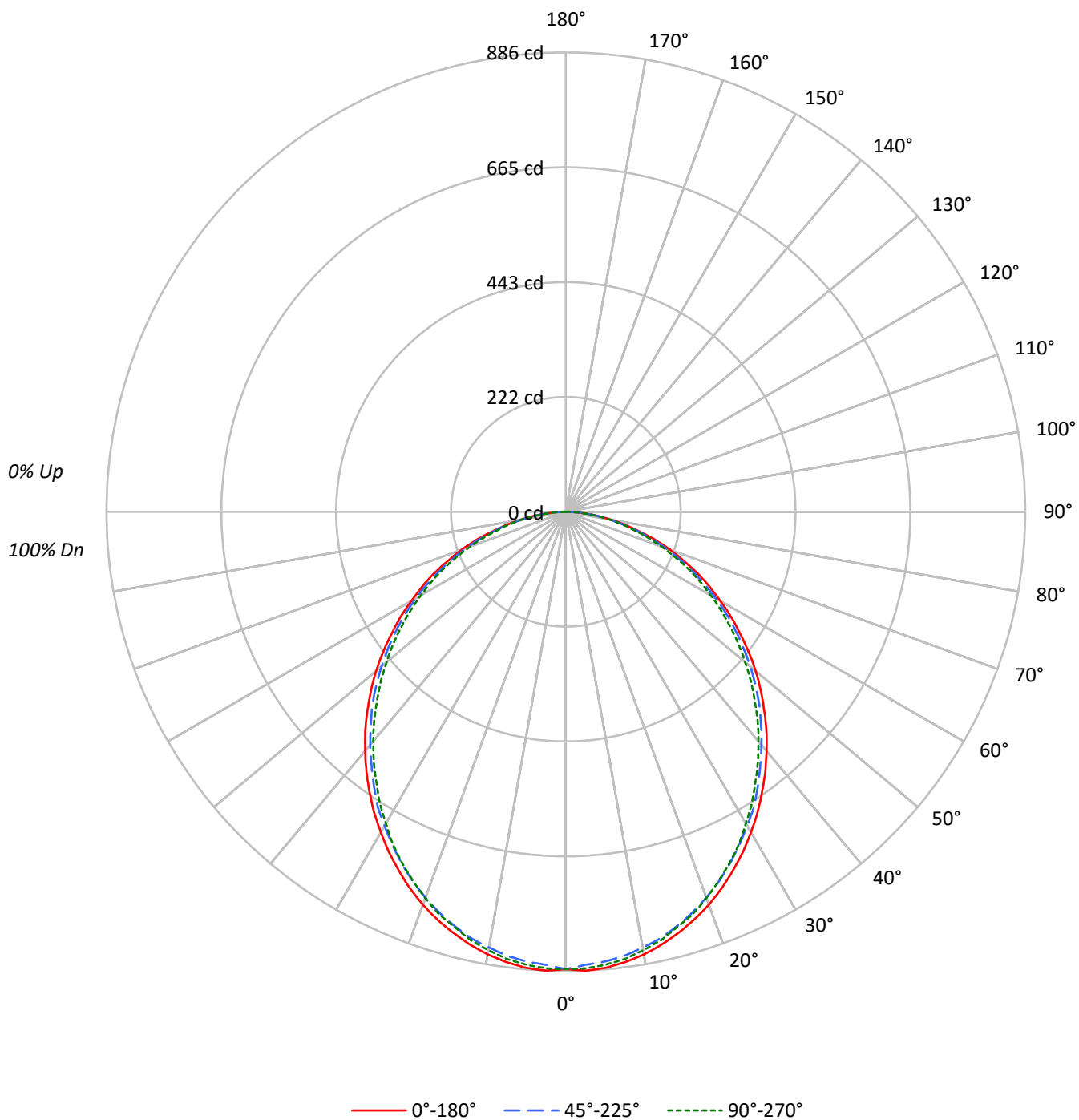
Lumens per Lamp: N/A  
Luminaire Lumens: 2296.0 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 24  
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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 94  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  |  | 82  | 78  | 74  |  | 79  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  |  | 73  | 67  | 63  |  | 70  |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 62  | 55  | 67  | 60  | 55  |  | 65  | 59  | 54  |  | 63  |
| 5   | 76  | 64  | 55  | 48  | 74  | 63  | 54  | 48  | 60  | 53  | 47  |  | 58  | 52  | 47  |  | 57  |
| 6   | 71  | 57  | 49  | 42  | 69  | 56  | 48  | 42  | 55  | 47  | 42  |  | 53  | 46  | 41  |  | 51  |
| 7   | 66  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 50  | 42  | 37  |  | 48  | 42  | 37  |  | 47  |
| 8   | 61  | 48  | 39  | 33  | 60  | 47  | 39  | 33  | 46  | 38  | 33  |  | 44  | 38  | 33  |  | 43  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 35  | 30  | 42  | 35  | 30  |  | 41  | 34  | 30  |  | 40  |
| 10  | 54  | 40  | 33  | 27  | 52  | 40  | 32  | 27  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9496 | 9496 | 9496 |
| 5°  | 9541 | 9409 | 9475 |
| 10° | 9476 | 9328 | 9386 |
| 15° | 9366 | 9222 | 9239 |
| 20° | 9237 | 9071 | 9080 |
| 25° | 9063 | 8892 | 8874 |
| 30° | 8872 | 8693 | 8627 |
| 35° | 8673 | 8482 | 8373 |
| 40° | 8463 | 8250 | 8122 |
| 45° | 8234 | 8037 | 7841 |
| 50° | 8003 | 7773 | 7557 |
| 55° | 7702 | 7503 | 7274 |
| 60° | 7397 | 7186 | 6956 |
| 65° | 7129 | 6839 | 6627 |
| 70° | 6732 | 6445 | 6159 |
| 75° | 6151 | 5931 | 5677 |
| 80° | 5548 | 5312 | 5269 |
| 85° | 4866 | 4681 | 4495 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8234 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.2   | 3.6       |
| 10°-20°   | 234.8  | 10.2      |
| 20°-30°   | 346.8  | 15.1      |
| 30°-40°   | 405.1  | 17.6      |
| 40°-50°   | 407.2  | 17.7      |
| 50°-60°   | 357.7  | 15.6      |
| 60°-70°   | 266.4  | 11.6      |
| 70°-80°   | 151.6  | 6.6       |
| 80°-90°   | 43.1   | 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°    | 664.8  | 29.0      |
| 0°-40°    | 1069.9 | 46.6      |
| 0°-60°    | 1834.9 | 79.9      |
| 0°-90°    | 2296.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2296.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 882 | 882   | 882 | 882   | 882 |      |
| 5°  | 883 | 879   | 871 | 878   | 877 | 84   |
| 15° | 840 | 838   | 828 | 834   | 829 | 237  |
| 25° | 763 | 759   | 749 | 750   | 747 | 352  |
| 35° | 660 | 655   | 646 | 641   | 637 | 413  |
| 45° | 541 | 538   | 528 | 519   | 515 | 418  |
| 55° | 410 | 410   | 400 | 391   | 388 | 368  |
| 65° | 280 | 276   | 268 | 262   | 260 | 276  |
| 75° | 148 | 145   | 143 | 139   | 136 | 158  |
| 85° | 39  | 38    | 38  | 36    | 36  | 45   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 882.2 | 882.2 | 882.2 | 882.2 | 882.2 |
| 2.5°  | 886.0 | 883.0 | 874.6 | 882.2 | 881.5 |
| 5°    | 883.0 | 879.2 | 870.8 | 878.4 | 876.9 |
| 7.5°  | 876.1 | 872.3 | 864.0 | 870.8 | 870.1 |
| 10°   | 867.0 | 863.2 | 853.4 | 860.2 | 858.7 |
| 12.5° | 854.9 | 851.9 | 842.8 | 847.3 | 846.6 |
| 15°   | 840.5 | 837.5 | 827.6 | 833.7 | 829.1 |
| 17.5° | 824.6 | 820.8 | 810.9 | 815.5 | 813.9 |
| 20°   | 806.4 | 801.8 | 791.9 | 795.0 | 792.7 |
| 22.5° | 785.9 | 781.3 | 771.5 | 773.7 | 770.7 |
| 25°   | 763.1 | 758.6 | 748.7 | 749.5 | 747.2 |
| 27.5° | 739.6 | 735.0 | 724.4 | 725.2 | 722.9 |
| 30°   | 713.8 | 710.0 | 699.4 | 699.4 | 694.1 |
| 32.5° | 688.0 | 682.7 | 675.1 | 669.8 | 667.5 |
| 35°   | 660.0 | 655.4 | 645.5 | 641.0 | 637.2 |
| 37.5° | 631.9 | 625.8 | 616.0 | 610.6 | 608.4 |
| 40°   | 602.3 | 597.7 | 587.1 | 581.1 | 578.0 |
| 42.5° | 572.7 | 567.4 | 556.8 | 550.7 | 547.7 |
| 45°   | 540.9 | 537.8 | 528.0 | 518.9 | 515.1 |
| 47.5° | 509.8 | 505.2 | 496.1 | 487.0 | 484.0 |
| 50°   | 477.9 | 474.1 | 464.2 | 455.9 | 451.3 |
| 52.5° | 444.5 | 442.2 | 431.6 | 424.8 | 420.2 |
| 55°   | 410.4 | 409.6 | 399.8 | 391.4 | 387.6 |
| 57.5° | 378.5 | 375.5 | 367.9 | 360.3 | 355.8 |
| 60°   | 343.6 | 342.9 | 333.8 | 326.9 | 323.1 |
| 62.5° | 312.5 | 310.3 | 301.1 | 294.3 | 292.0 |
| 65°   | 279.9 | 276.1 | 268.5 | 262.5 | 260.2 |
| 67.5° | 245.0 | 242.0 | 235.9 | 230.6 | 227.6 |
| 70°   | 213.9 | 209.4 | 204.8 | 199.5 | 195.7 |
| 72.5° | 181.3 | 178.3 | 173.0 | 168.4 | 166.9 |
| 75°   | 147.9 | 144.9 | 142.6 | 138.8 | 136.5 |
| 77.5° | 118.3 | 116.8 | 113.8 | 110.8 | 110.8 |
| 80°   | 89.5  | 87.2  | 85.7  | 85.0  | 85.0  |
| 82.5° | 61.4  | 61.4  | 61.4  | 59.9  | 59.2  |
| 85°   | 39.4  | 37.9  | 37.9  | 36.4  | 36.4  |
| 87.5° | 19.7  | 17.4  | 16.7  | 15.9  | 15.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)