

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: P996184

Luminaire Tested: S123DRP-B560DB2750-4F0-XX-W2A-D\_2700K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P996184  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DRP-B560DB2750-4F0-XX-W2A-D\_2700K  
Description: Define 3 Direct Perimeter with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

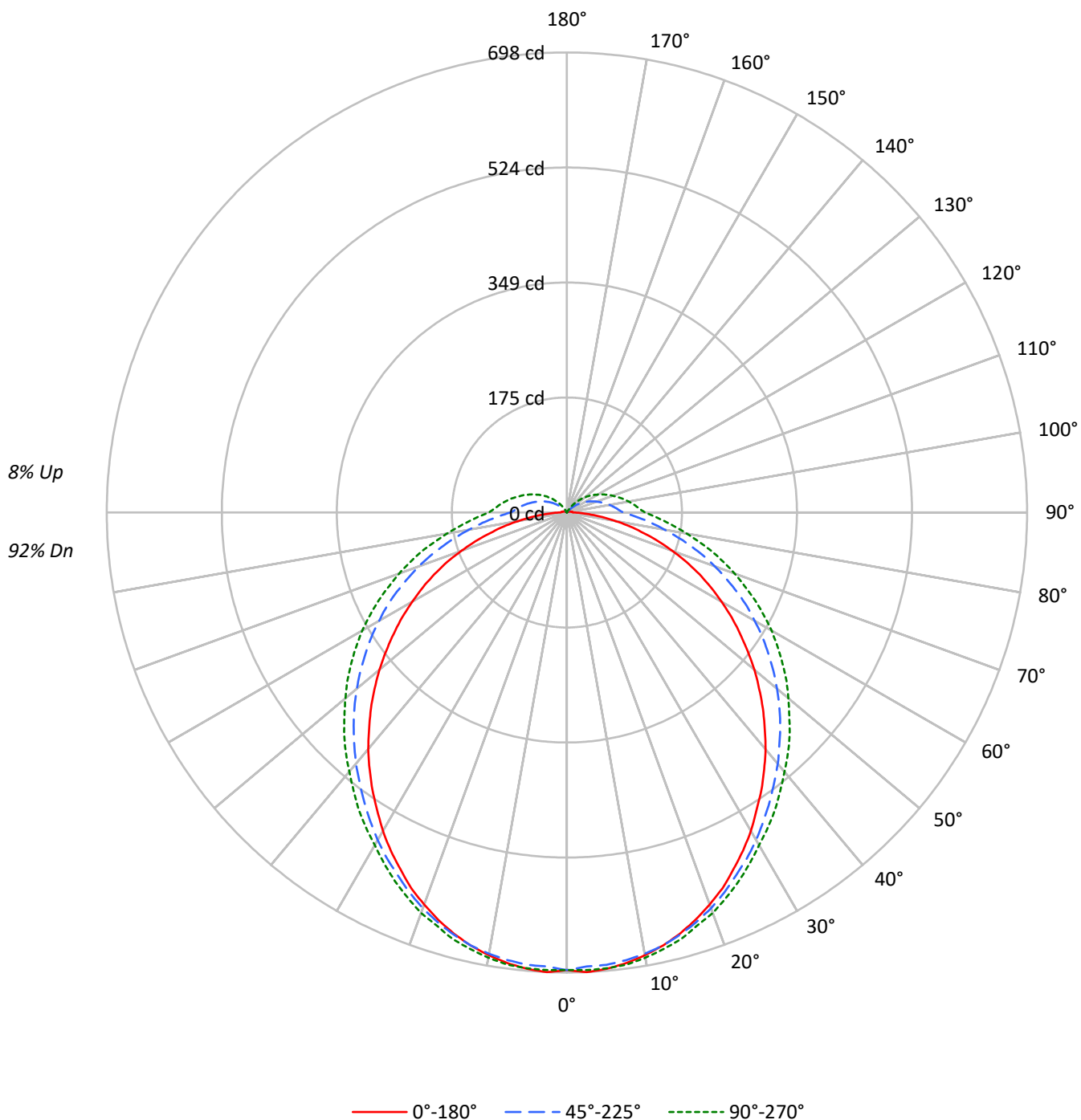
Lumens per Lamp: N/A  
Luminaire Lumens: 2333.0 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 24  
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 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |
| 0   | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | 100 | 100 | 100 | 94 | 94 | 94 |
| 1   | 105 | 100 | 95  | 90  | 102 | 97  | 92  | 88  | 91  | 87  | 84  | 85  | 82  | 80  | 80 | 78 | 76 |
| 2   | 95  | 86  | 79  | 72  | 92  | 83  | 77  | 71  | 79  | 73  | 68  | 74  | 69  | 65  | 70 | 66 | 63 |
| 3   | 86  | 75  | 67  | 60  | 83  | 73  | 65  | 59  | 69  | 62  | 56  | 65  | 59  | 54  | 61 | 56 | 52 |
| 4   | 79  | 66  | 57  | 50  | 76  | 64  | 56  | 49  | 61  | 54  | 48  | 57  | 51  | 46  | 54 | 49 | 45 |
| 5   | 72  | 59  | 50  | 43  | 70  | 58  | 49  | 42  | 54  | 47  | 41  | 52  | 45  | 40  | 49 | 43 | 39 |
| 6   | 67  | 53  | 44  | 37  | 64  | 52  | 43  | 37  | 49  | 42  | 36  | 47  | 40  | 35  | 44 | 38 | 34 |
| 7   | 62  | 48  | 39  | 33  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 42  | 36  | 31  | 40 | 35 | 30 |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 41  | 33  | 28  | 39  | 32  | 28  | 37 | 31 | 27 |
| 9   | 54  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 37  | 30  | 25  | 36  | 29  | 25  | 34 | 28 | 24 |
| 10  | 50  | 37  | 29  | 24  | 49  | 36  | 29  | 24  | 35  | 28  | 23  | 33  | 27  | 23  | 32 | 26 | 22 |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 7472 | 7472  | 7472  |
| 5°  | 7508 | 7444  | 7501  |
| 10° | 7455 | 7430  | 7497  |
| 15° | 7374 | 7390  | 7466  |
| 20° | 7250 | 7320  | 7405  |
| 25° | 7095 | 7212  | 7329  |
| 30° | 6937 | 7133  | 7246  |
| 35° | 6757 | 7045  | 7234  |
| 40° | 6587 | 6992  | 7215  |
| 45° | 6400 | 6964  | 7275  |
| 50° | 6218 | 6965  | 7345  |
| 55° | 6016 | 6996  | 7493  |
| 60° | 5828 | 7081  | 7716  |
| 65° | 5644 | 7241  | 8013  |
| 70° | 5353 | 7522  | 8519  |
| 75° | 4999 | 8052  | 9466  |
| 80° | 4643 | 9372  | 11437 |
| 85° | 4582 | 14190 | 18303 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 32648 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 65.9   | 2.8       |
| 10°-20°   | 187.7  | 8.0       |
| 20°-30°   | 280.7  | 12.0      |
| 30°-40°   | 335.2  | 14.4      |
| 40°-50°   | 350.7  | 15.0      |
| 50°-60°   | 329.1  | 14.1      |
| 60°-70°   | 274.9  | 11.8      |
| 70°-80°   | 196.5  | 8.4       |
| 80°-90°   | 117.0  | 5.0       |
| 90°-100°  | 73.5   | 3.2       |
| 100°-110° | 54.0   | 2.3       |
| 110°-120° | 36.1   | 1.5       |
| 120°-130° | 20.6   | 0.9       |
| 130°-140° | 9.2    | 0.4       |
| 140°-150° | 1.9    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| <hr/>     |        |           |
| 0°-30°    | 534.3  | 22.9      |
| 0°-40°    | 869.5  | 37.3      |
| 0°-60°    | 1549.3 | 66.4      |
| 0°-90°    | 2137.7 | 91.6      |
| 90°-120°  | 163.6  | 7.0       |
| 90°-150°  | 195.3  | 8.4       |
| 90°-180°  | 195.0  | 8.4       |
| 0°-180°   | 2333.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 694 | 694   | 694 | 694   | 694 |      |
| 5°   | 695 | 693   | 689 | 695   | 694 | 66   |
| 15°  | 662 | 664   | 663 | 671   | 670 | 186  |
| 25°  | 597 | 605   | 607 | 617   | 617 | 275  |
| 35°  | 514 | 526   | 536 | 548   | 550 | 322  |
| 45°  | 420 | 439   | 458 | 472   | 478 | 324  |
| 55°  | 321 | 346   | 373 | 393   | 399 | 287  |
| 65°  | 222 | 251   | 284 | 307   | 315 | 219  |
| 75°  | 120 | 156   | 194 | 218   | 228 | 128  |
| 85°  | 37  | 75    | 115 | 141   | 148 | 38   |
| 90°  | 10  | 47    | 85  | 111   | 119 | 7    |
| 95°  | 8   | 38    | 75  | 98    | 106 | 6    |
| 105° | 6   | 24    | 57  | 78    | 85  | 6    |
| 115° | 4   | 13    | 40  | 58    | 64  | 4    |
| 125° | 2   | 2     | 24  | 40    | 45  | 2    |
| 135° | 2   | 1     | 9   | 23    | 26  | 1    |
| 145° | 1   | 0     | 0   | 6     | 9   | 0    |
| 155° | 0   | 0     | 0   | 0     | 0   | 0    |
| 165° | 0   | 0     | 0   | 0     | 0   | 0    |
| 175° | 0   | 0     | 0   | 0     | 0   | 0    |
| 180° | 0   | 0     | 0   | 0     | 0   | 0    |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 694.2 | 694.2 | 694.2 | 694.2 | 694.2 |
| 2.5°   | 698.0 | 695.7 | 689.6 | 695.7 | 694.9 |
| 5°     | 694.9 | 693.4 | 688.9 | 694.9 | 694.2 |
| 7.5°   | 689.6 | 689.6 | 685.1 | 692.7 | 691.9 |
| 10°    | 682.1 | 683.6 | 679.8 | 687.4 | 685.9 |
| 12.5°  | 673.0 | 675.3 | 673.0 | 679.8 | 678.3 |
| 15°    | 661.7 | 663.9 | 663.2 | 670.7 | 670.0 |
| 17.5°  | 648.1 | 652.6 | 651.8 | 658.6 | 657.1 |
| 20°    | 632.9 | 637.5 | 639.0 | 645.8 | 646.5 |
| 22.5°  | 617.1 | 621.6 | 623.9 | 632.9 | 632.2 |
| 25°    | 597.4 | 605.0 | 607.2 | 617.1 | 617.1 |
| 27.5°  | 578.5 | 586.8 | 591.3 | 599.7 | 600.4 |
| 30°    | 558.1 | 567.9 | 573.9 | 583.0 | 583.0 |
| 32.5°  | 535.4 | 546.7 | 555.0 | 564.9 | 567.1 |
| 35°    | 514.2 | 526.3 | 536.1 | 547.5 | 550.5 |
| 37.5°  | 491.5 | 505.1 | 516.5 | 529.3 | 531.6 |
| 40°    | 468.8 | 482.4 | 497.6 | 510.4 | 513.5 |
| 42.5°  | 443.9 | 461.3 | 477.2 | 491.5 | 496.1 |
| 45°    | 420.4 | 438.6 | 457.5 | 471.9 | 477.9 |
| 47.5°  | 395.5 | 415.9 | 437.1 | 453.0 | 457.5 |
| 50°    | 371.3 | 392.5 | 415.9 | 433.3 | 438.6 |
| 52.5°  | 345.6 | 368.3 | 394.7 | 412.9 | 419.7 |
| 55°    | 320.6 | 345.6 | 372.8 | 393.2 | 399.3 |
| 57.5°  | 296.4 | 322.1 | 351.6 | 372.0 | 378.9 |
| 60°    | 270.7 | 297.9 | 328.9 | 350.1 | 358.4 |
| 62.5°  | 246.5 | 274.5 | 307.8 | 328.9 | 336.5 |
| 65°    | 221.6 | 251.1 | 284.3 | 307.0 | 314.6 |
| 67.5°  | 196.6 | 227.6 | 260.9 | 285.8 | 291.9 |
| 70°    | 170.1 | 202.7 | 239.0 | 263.2 | 270.7 |
| 72.5°  | 145.9 | 178.5 | 216.3 | 241.2 | 248.8 |
| 75°    | 120.2 | 155.8 | 193.6 | 218.5 | 227.6 |
| 77.5°  | 98.3  | 133.8 | 171.7 | 198.1 | 204.9 |
| 80°    | 74.9  | 111.9 | 151.2 | 176.9 | 184.5 |
| 82.5°  | 54.4  | 92.3  | 132.3 | 158.0 | 165.6 |
| 85°    | 37.1  | 74.9  | 114.9 | 140.7 | 148.2 |
| 87.5°  | 22.7  | 60.5  | 99.1  | 124.8 | 132.3 |
| 90°    | 9.8   | 46.9  | 85.4  | 111.2 | 118.7 |
| 92.5°  | 9.1   | 41.6  | 79.4  | 104.4 | 111.2 |
| 95°    | 8.3   | 37.8  | 74.9  | 98.3  | 105.9 |
| 97.5°  | 7.6   | 34.8  | 70.3  | 93.0  | 100.6 |
| 100°   | 6.8   | 31.0  | 65.8  | 87.7  | 95.3  |
| 102.5° | 6.0   | 27.2  | 61.3  | 82.4  | 90.0  |
| 105°   | 6.0   | 24.2  | 56.7  | 77.9  | 84.7  |
| 107.5° | 5.3   | 21.2  | 52.2  | 72.6  | 79.4  |
| 110°   | 4.5   | 18.1  | 48.4  | 68.1  | 74.1  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°  |
|--------|-----|-------|------|-------|------|
| 112.5° | 4.5 | 15.1  | 43.9 | 62.8  | 69.6 |
| 115°   | 3.8 | 12.9  | 40.1 | 58.2  | 64.3 |
| 117.5° | 3.8 | 9.8   | 35.5 | 53.7  | 59.7 |
| 120°   | 3.0 | 6.8   | 31.8 | 49.2  | 54.4 |
| 122.5° | 3.0 | 4.5   | 28.0 | 44.6  | 49.9 |
| 125°   | 2.3 | 2.3   | 24.2 | 40.1  | 45.4 |
| 127.5° | 2.3 | 1.5   | 20.4 | 35.5  | 40.8 |
| 130°   | 2.3 | 1.5   | 16.6 | 31.0  | 35.5 |
| 132.5° | 1.5 | 1.5   | 12.9 | 26.5  | 31.8 |
| 135°   | 1.5 | 0.8   | 9.1  | 22.7  | 26.5 |
| 137.5° | 1.5 | 0.8   | 6.0  | 18.1  | 21.9 |
| 140°   | 0.8 | 0.8   | 3.0  | 14.4  | 18.1 |
| 142.5° | 0.8 | 0.0   | 0.0  | 9.8   | 13.6 |
| 145°   | 0.8 | 0.0   | 0.0  | 6.0   | 9.1  |
| 147.5° | 0.0 | 0.0   | 0.0  | 2.3   | 5.3  |
| 150°   | 0.0 | 0.0   | 0.0  | 0.0   | 1.5  |
| 152.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 155°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 157.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 160°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 162.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 165°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 167.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 170°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 172.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 175°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 177.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |
| 180°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0  |

(END OF REPORT)