

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: P1010661

Luminaire Tested: S123DIP-B560D365UB2750-4F0-XX-W2A-F\_3500K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1010661  
REPORT IS A COMBINATION OF REPORTS P990060 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B560D365UB2750-4F0-XX-W2A-F\_3500K  
Description: Define 3 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

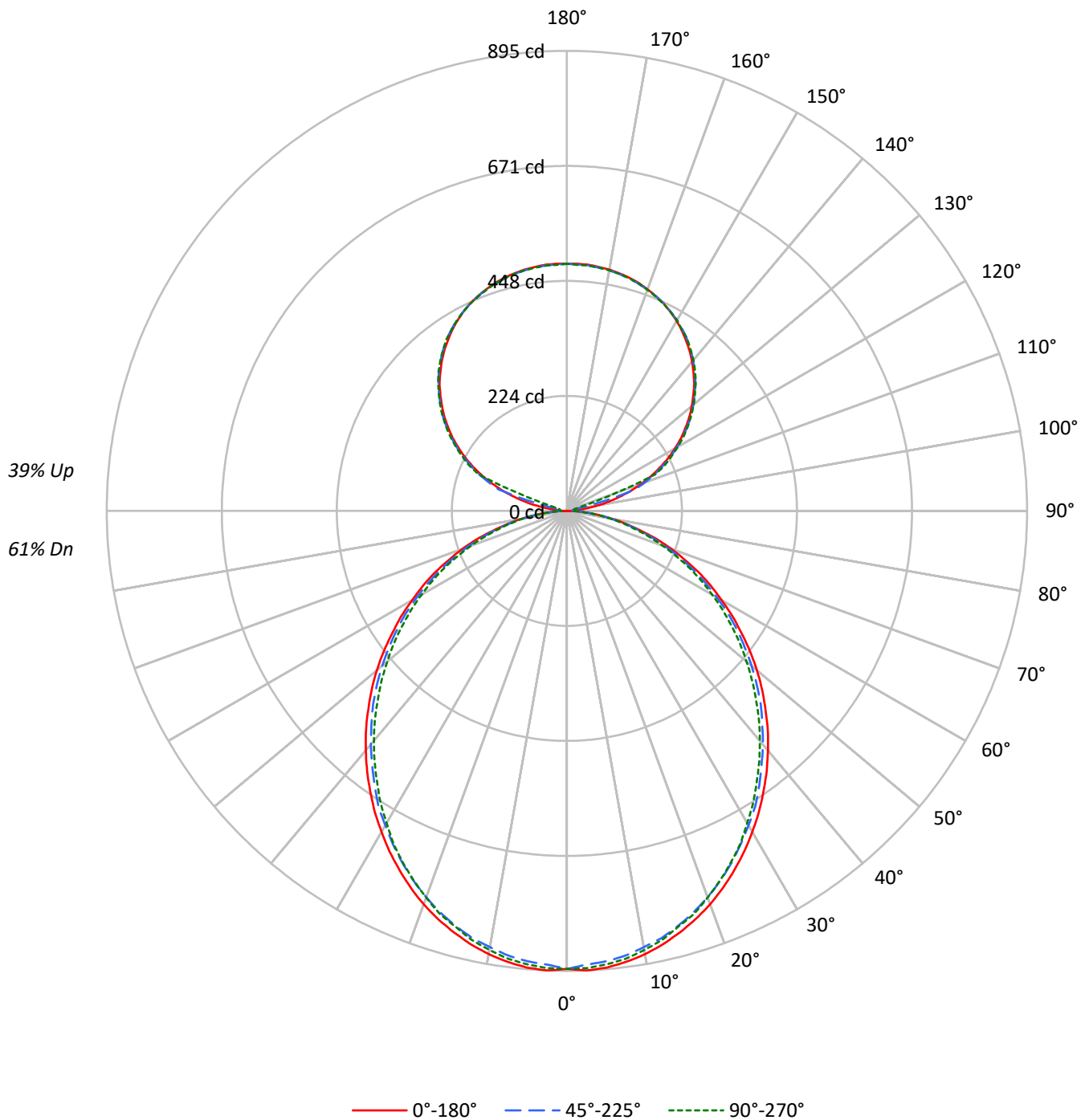
Lumens per Lamp: N/A  
Luminaire Lumens: 3785.0 lumens  
Efficiency: N/A  
Efficacy: 113.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 33.3  
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 |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 110 | 110 | 110 | 110 | 103 | 103 | 103 | 103 | 90 | 90 | 90 | 78 | 78 | 78 | 66 | 66 | 66 | 66 | 66 | 61 |
| 1   | 100 | 96  | 92  | 88  | 94  | 90  | 86  | 83  | 79 | 76 | 74 | 68 | 66 | 65 | 59 | 57 | 56 | 56 | 56 | 51 |
| 2   | 91  | 84  | 77  | 72  | 85  | 78  | 73  | 68  | 69 | 65 | 61 | 60 | 57 | 54 | 52 | 49 | 47 | 47 | 47 | 43 |
| 3   | 83  | 74  | 66  | 60  | 78  | 69  | 62  | 57  | 61 | 55 | 51 | 53 | 49 | 46 | 46 | 43 | 40 | 40 | 40 | 36 |
| 4   | 76  | 65  | 57  | 51  | 71  | 61  | 54  | 48  | 54 | 48 | 44 | 47 | 43 | 39 | 41 | 37 | 35 | 35 | 35 | 31 |
| 5   | 70  | 58  | 50  | 44  | 65  | 55  | 47  | 42  | 48 | 42 | 38 | 42 | 38 | 34 | 37 | 33 | 30 | 30 | 30 | 27 |
| 6   | 65  | 52  | 44  | 38  | 60  | 49  | 42  | 36  | 44 | 37 | 33 | 38 | 33 | 30 | 33 | 30 | 27 | 27 | 27 | 24 |
| 7   | 60  | 47  | 39  | 33  | 56  | 45  | 37  | 32  | 40 | 33 | 29 | 35 | 30 | 26 | 30 | 27 | 24 | 24 | 24 | 21 |
| 8   | 55  | 43  | 35  | 30  | 52  | 41  | 33  | 28  | 36 | 30 | 26 | 32 | 27 | 23 | 28 | 24 | 21 | 21 | 21 | 19 |
| 9   | 52  | 39  | 32  | 26  | 48  | 37  | 30  | 25  | 33 | 27 | 23 | 29 | 25 | 21 | 26 | 22 | 19 | 19 | 19 | 17 |
| 10  | 48  | 36  | 29  | 24  | 45  | 34  | 27  | 23  | 31 | 25 | 21 | 27 | 22 | 19 | 24 | 20 | 17 | 17 | 17 | 15 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9591 | 9591 | 9591 |
| 5°  | 9615 | 9261 | 9246 |
| 10° | 9529 | 8946 | 8855 |
| 15° | 9397 | 8621 | 8428 |
| 20° | 9245 | 8259 | 8005 |
| 25° | 9049 | 7877 | 7554 |
| 30° | 8834 | 7482 | 7078 |
| 35° | 8609 | 7078 | 6607 |
| 40° | 8372 | 6654 | 6142 |
| 45° | 8113 | 6241 | 5656 |
| 50° | 7849 | 5781 | 5170 |
| 55° | 7510 | 5302 | 4676 |
| 60° | 7162 | 4773 | 4151 |
| 65° | 6834 | 4200 | 3603 |
| 70° | 6364 | 3567 | 2964 |
| 75° | 5683 | 2823 | 2301 |
| 80° | 4908 | 1985 | 1627 |
| 85° | 3823 | 1067 | 816  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 8113 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.0   | 2.2       |
| 10°-20°   | 237.2  | 6.3       |
| 20°-30°   | 350.3  | 9.3       |
| 30°-40°   | 409.1  | 10.8      |
| 40°-50°   | 411.3  | 10.9      |
| 50°-60°   | 361.3  | 9.5       |
| 60°-70°   | 269.1  | 7.1       |
| 70°-80°   | 153.1  | 4.0       |
| 80°-90°   | 44.5   | 1.2       |
| 90°-100°  | 16.9   | 0.4       |
| 100°-110° | 81.9   | 2.2       |
| 110°-120° | 200.8  | 5.3       |
| 120°-130° | 254.9  | 6.7       |
| 130°-140° | 272.3  | 7.2       |
| 140°-150° | 254.6  | 6.7       |
| 150°-160° | 205.4  | 5.4       |
| 160°-170° | 132.5  | 3.5       |
| 170°-180° | 45.7   | 1.2       |
| <hr/>     |        |           |
| 0°-30°    | 671.5  | 17.7      |
| 0°-40°    | 1080.6 | 28.6      |
| 0°-60°    | 1853.3 | 49.0      |
| 0°-90°    | 2320.0 | 61.3      |
| 90°-120°  | 299.6  | 7.9       |
| 90°-150°  | 1081.4 | 28.6      |
| 90°-180°  | 1465.0 | 38.7      |
| 0°-180°   | 3785.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 891 | 891   | 891 | 891   | 891 |      |
| 5°   | 892 | 888   | 880 | 887   | 886 | 85   |
| 15°  | 849 | 846   | 836 | 842   | 837 | 239  |
| 25°  | 771 | 766   | 756 | 757   | 755 | 355  |
| 35°  | 667 | 662   | 652 | 647   | 644 | 417  |
| 45°  | 546 | 543   | 533 | 524   | 520 | 422  |
| 55°  | 414 | 414   | 404 | 395   | 392 | 371  |
| 65°  | 283 | 279   | 271 | 265   | 263 | 279  |
| 75°  | 149 | 146   | 144 | 140   | 138 | 160  |
| 85°  | 40  | 38    | 38  | 37    | 37  | 43   |
| 90°  | 0   | 4     | 9   | 10    | 11  | 4    |
| 95°  | 22  | 7     | 11  | 14    | 14  | 26   |
| 105° | 106 | 110   | 78  | 15    | 16  | 113  |
| 115° | 200 | 202   | 205 | 208   | 210 | 197  |
| 125° | 281 | 284   | 286 | 286   | 287 | 251  |
| 135° | 350 | 352   | 354 | 355   | 354 | 270  |
| 145° | 404 | 407   | 407 | 408   | 408 | 253  |
| 155° | 445 | 444   | 445 | 447   | 444 | 205  |
| 165° | 470 | 468   | 468 | 471   | 468 | 133  |
| 175° | 481 | 479   | 479 | 482   | 479 | 46   |
| 180° | 481 | 481   | 481 | 481   | 481 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 891.0 | 891.0 | 891.0 | 891.0 | 891.0 |
| 2.5°   | 894.9 | 891.8 | 883.4 | 891.0 | 890.3 |
| 5°     | 891.8 | 888.0 | 879.6 | 887.2 | 885.7 |
| 7.5°   | 884.9 | 881.1 | 872.7 | 879.6 | 878.8 |
| 10°    | 875.7 | 871.9 | 861.9 | 868.8 | 867.3 |
| 12.5°  | 863.5 | 860.4 | 851.2 | 855.8 | 855.0 |
| 15°    | 848.9 | 845.8 | 835.9 | 842.0 | 837.4 |
| 17.5°  | 832.8 | 829.0 | 819.0 | 823.6 | 822.1 |
| 20°    | 814.4 | 809.8 | 799.9 | 802.9 | 800.6 |
| 22.5°  | 793.7 | 789.1 | 779.2 | 781.5 | 778.4 |
| 25°    | 770.8 | 766.2 | 756.2 | 757.0 | 754.7 |
| 27.5°  | 747.0 | 742.4 | 731.7 | 732.5 | 730.2 |
| 30°    | 721.0 | 717.1 | 706.4 | 706.4 | 701.0 |
| 32.5°  | 694.9 | 689.5 | 681.9 | 676.5 | 674.2 |
| 35°    | 666.6 | 662.0 | 652.0 | 647.4 | 643.6 |
| 37.5°  | 638.2 | 632.1 | 622.1 | 616.8 | 614.5 |
| 40°    | 608.3 | 603.7 | 593.0 | 586.9 | 583.8 |
| 42.5°  | 578.5 | 573.1 | 562.4 | 556.2 | 553.2 |
| 45°    | 546.3 | 543.2 | 533.2 | 524.1 | 520.2 |
| 47.5°  | 514.9 | 510.3 | 501.1 | 491.9 | 488.8 |
| 50°    | 482.7 | 478.9 | 468.9 | 460.5 | 455.9 |
| 52.5°  | 449.0 | 446.7 | 435.9 | 429.1 | 424.5 |
| 55°    | 414.5 | 413.7 | 403.8 | 395.3 | 391.5 |
| 57.5°  | 382.3 | 379.3 | 371.6 | 363.9 | 359.3 |
| 60°    | 347.1 | 346.3 | 337.1 | 330.2 | 326.4 |
| 62.5°  | 315.7 | 313.4 | 304.2 | 297.3 | 295.0 |
| 65°    | 282.7 | 278.9 | 271.2 | 265.1 | 262.8 |
| 67.5°  | 247.5 | 244.4 | 238.3 | 232.9 | 229.8 |
| 70°    | 216.1 | 211.5 | 206.9 | 201.5 | 197.7 |
| 72.5°  | 183.1 | 180.0 | 174.7 | 170.1 | 168.6 |
| 75°    | 149.4 | 146.3 | 144.0 | 140.2 | 137.9 |
| 77.5°  | 119.5 | 118.0 | 114.9 | 111.9 | 111.9 |
| 80°    | 90.4  | 88.1  | 86.6  | 85.8  | 85.8  |
| 82.5°  | 62.1  | 62.1  | 62.1  | 60.5  | 59.8  |
| 85°    | 39.8  | 38.3  | 38.3  | 36.8  | 36.8  |
| 87.5°  | 19.9  | 17.6  | 16.9  | 16.1  | 16.1  |
| 90°    | 0.4   | 3.9   | 8.6   | 10.0  | 10.7  |
| 92.5°  | 8.2   | 6.1   | 9.3   | 11.8  | 12.1  |
| 95°    | 21.8  | 7.1   | 11.1  | 13.6  | 13.6  |
| 97.5°  | 39.6  | 29.6  | 11.4  | 14.3  | 14.6  |
| 100°   | 60.3  | 67.5  | 11.8  | 14.6  | 15.0  |
| 102.5° | 83.9  | 88.5  | 26.4  | 14.6  | 15.4  |
| 105°   | 106.4 | 110.3 | 78.2  | 15.0  | 15.7  |
| 107.5° | 130.3 | 133.5 | 138.9 | 83.9  | 37.1  |
| 110°   | 154.2 | 157.1 | 161.0 | 149.2 | 98.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 177.1 | 179.6 | 183.5 | 186.7 | 186.0 |
| 115°   | 199.6 | 201.7 | 204.9 | 208.5 | 209.9 |
| 117.5° | 221.7 | 224.2 | 226.0 | 228.9 | 229.2 |
| 120°   | 242.1 | 245.3 | 246.4 | 249.2 | 249.2 |
| 122.5° | 262.8 | 265.3 | 266.7 | 268.5 | 268.8 |
| 125°   | 281.3 | 284.2 | 285.6 | 286.3 | 287.1 |
| 127.5° | 299.9 | 302.8 | 304.5 | 305.6 | 304.9 |
| 130°   | 317.0 | 319.9 | 321.3 | 322.8 | 322.0 |
| 132.5° | 333.5 | 336.3 | 337.4 | 338.8 | 337.8 |
| 135°   | 350.2 | 352.4 | 353.8 | 354.9 | 353.8 |
| 137.5° | 364.5 | 367.4 | 368.1 | 369.9 | 369.2 |
| 140°   | 378.8 | 381.0 | 382.0 | 383.5 | 382.7 |
| 142.5° | 392.0 | 394.2 | 395.2 | 396.3 | 395.2 |
| 145°   | 404.2 | 406.7 | 407.4 | 408.1 | 408.1 |
| 147.5° | 415.9 | 417.7 | 418.4 | 419.2 | 417.4 |
| 150°   | 426.7 | 427.7 | 428.4 | 429.2 | 428.1 |
| 152.5° | 436.3 | 436.6 | 437.0 | 438.4 | 436.6 |
| 155°   | 445.2 | 444.5 | 444.9 | 446.6 | 444.5 |
| 157.5° | 452.4 | 452.4 | 452.0 | 454.1 | 451.3 |
| 160°   | 458.8 | 458.4 | 458.1 | 460.2 | 457.7 |
| 162.5° | 464.9 | 463.8 | 463.4 | 465.9 | 463.8 |
| 165°   | 469.5 | 468.4 | 468.1 | 470.9 | 468.4 |
| 167.5° | 473.4 | 472.0 | 472.0 | 474.9 | 472.0 |
| 170°   | 476.6 | 475.2 | 475.2 | 478.1 | 475.2 |
| 172.5° | 478.8 | 477.0 | 477.4 | 480.2 | 477.0 |
| 175°   | 480.6 | 478.8 | 479.1 | 481.6 | 478.8 |
| 177.5° | 481.3 | 479.5 | 479.8 | 482.7 | 479.1 |
| 180°   | 480.6 | 480.6 | 480.6 | 480.6 | 480.6 |

(END OF REPORT)