

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: P1013333

Luminaire Tested: S124RDIP-B350D590UB2750-4F0-XX-W2A-F\_2700K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1013333  
REPORT IS A COMBINATION OF REPORTS P999350 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-B350D590UB2750-4F0-XX-W2A-F\_2700K  
Description: Define 4 Regressed Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473}  
{m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

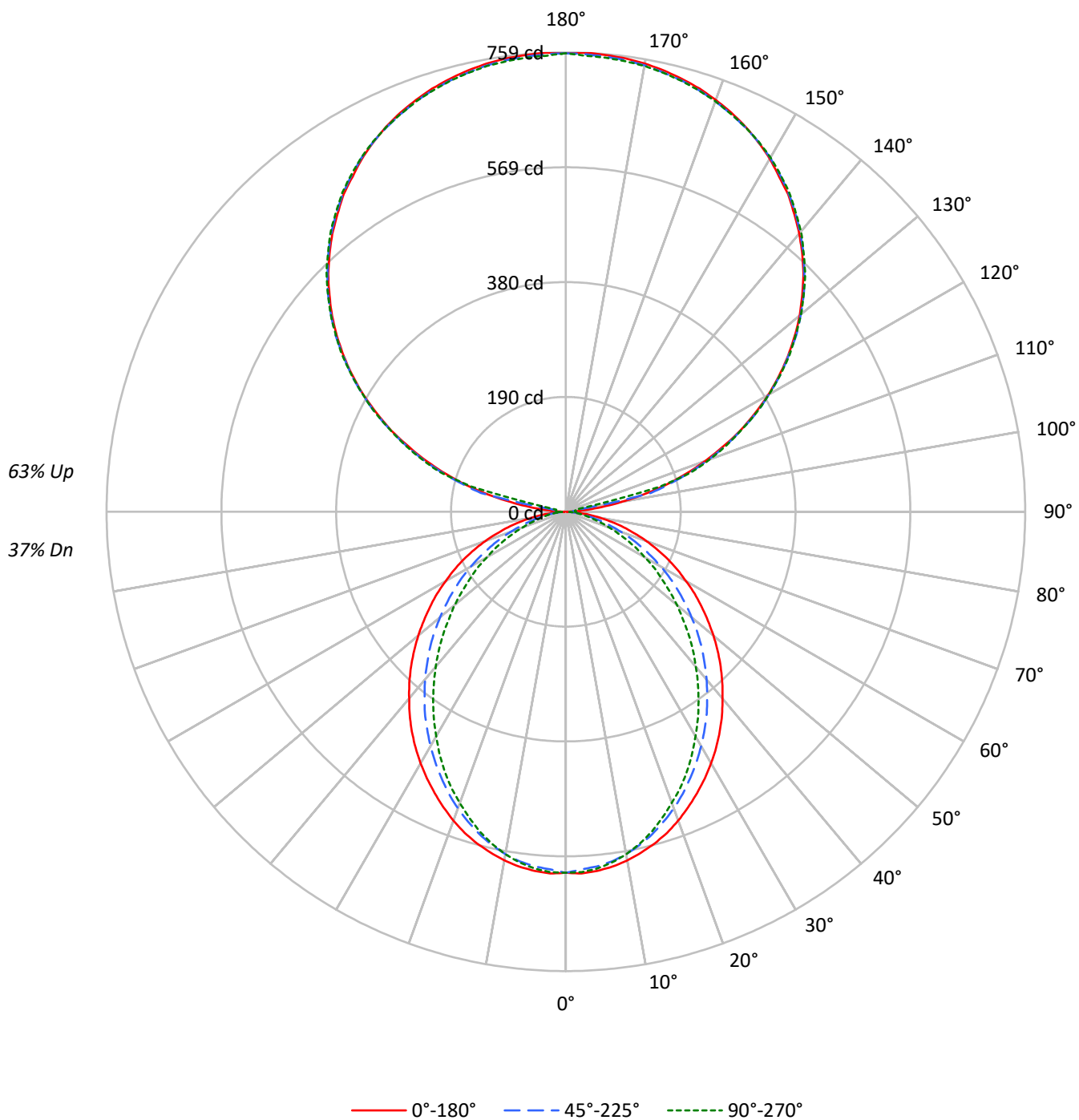
Lumens per Lamp: N/A  
Luminaire Lumens: 3724.0 lumens  
Efficiency: N/A  
Efficacy: 131.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 28.4  
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 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 104 | 104 | 104 | 104 | 94 | 94 | 94 | 94 | 76 | 76 | 76 | 60 | 60 | 60 | 44 | 44 | 44 |    |    | 37 |
| 1   | 95  | 91  | 87  | 84  | 86 | 83 | 79 | 77 | 67 | 65 | 63 | 53 | 51 | 50 | 39 | 39 | 38 |    |    | 32 |
| 2   | 87  | 80  | 74  | 69  | 78 | 72 | 67 | 63 | 59 | 55 | 52 | 46 | 44 | 42 | 35 | 33 | 32 |    |    | 27 |
| 3   | 79  | 70  | 63  | 57  | 72 | 64 | 58 | 53 | 52 | 48 | 44 | 41 | 38 | 36 | 31 | 29 | 27 |    |    | 23 |
| 4   | 72  | 62  | 54  | 49  | 65 | 57 | 50 | 45 | 46 | 41 | 38 | 37 | 33 | 31 | 28 | 26 | 24 |    |    | 20 |
| 5   | 67  | 55  | 47  | 42  | 60 | 51 | 44 | 39 | 41 | 36 | 33 | 33 | 29 | 27 | 25 | 23 | 21 |    |    | 17 |
| 6   | 61  | 50  | 42  | 36  | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 30 | 26 | 23 | 23 | 20 | 18 |    |    | 15 |
| 7   | 57  | 45  | 37  | 32  | 51 | 41 | 34 | 29 | 34 | 29 | 25 | 27 | 23 | 21 | 21 | 18 | 16 |    |    | 14 |
| 8   | 52  | 41  | 33  | 28  | 48 | 37 | 31 | 26 | 31 | 26 | 22 | 25 | 21 | 18 | 19 | 17 | 15 |    |    | 12 |
| 9   | 49  | 37  | 30  | 25  | 44 | 34 | 28 | 23 | 28 | 23 | 20 | 23 | 19 | 17 | 18 | 15 | 13 |    |    | 11 |
| 10  | 46  | 34  | 27  | 22  | 41 | 31 | 25 | 21 | 26 | 21 | 18 | 21 | 17 | 15 | 16 | 14 | 12 |    |    | 10 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4863 | 4863 | 4863 |
| 5°  | 4864 | 4719 | 4719 |
| 10° | 4823 | 4570 | 4516 |
| 15° | 4757 | 4384 | 4275 |
| 20° | 4670 | 4173 | 4001 |
| 25° | 4561 | 3945 | 3733 |
| 30° | 4454 | 3713 | 3432 |
| 35° | 4338 | 3477 | 3139 |
| 40° | 4200 | 3223 | 2837 |
| 45° | 4069 | 2971 | 2538 |
| 50° | 3921 | 2695 | 2234 |
| 55° | 3761 | 2414 | 1921 |
| 60° | 3583 | 2114 | 1612 |
| 65° | 3412 | 1772 | 1313 |
| 70° | 3168 | 1410 | 1004 |
| 75° | 2856 | 1025 | 702  |
| 80° | 2385 | 631  | 504  |
| 85° | 1797 | 364  | 277  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4069 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 56.1   | 1.5       |
| 10°-20°   | 156.4  | 4.2       |
| 20°-30°   | 225.7  | 6.1       |
| 30°-40°   | 255.9  | 6.9       |
| 40°-50°   | 247.0  | 6.6       |
| 50°-60°   | 205.4  | 5.5       |
| 60°-70°   | 141.8  | 3.8       |
| 70°-80°   | 71.6   | 1.9       |
| 80°-90°   | 19.8   | 0.5       |
| 90°-100°  | 25.2   | 0.7       |
| 100°-110° | 165.6  | 4.4       |
| 110°-120° | 316.3  | 8.5       |
| 120°-130° | 401.5  | 10.8      |
| 130°-140° | 429.5  | 11.5      |
| 140°-150° | 401.6  | 10.8      |
| 150°-160° | 323.9  | 8.7       |
| 160°-170° | 208.9  | 5.6       |
| 170°-180° | 72.0   | 1.9       |
| 0°-30°    | 438.2  | 11.8      |
| 0°-40°    | 694.0  | 18.6      |
| 0°-60°    | 1146.4 | 30.8      |
| 0°-90°    | 1379.6 | 37.0      |
| 90°-120°  | 507.0  | 13.6      |
| 90°-150°  | 1739.7 | 46.7      |
| 90°-180°  | 2344.0 | 62.9      |
| 0°-180°   | 3724.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 596 | 596   | 596 | 596   | 596 |      |
| 5°   | 596 | 594   | 588 | 593   | 592 | 57   |
| 15°  | 567 | 563   | 552 | 551   | 548 | 160  |
| 25°  | 513 | 505   | 486 | 478   | 474 | 236  |
| 35°  | 443 | 429   | 406 | 390   | 382 | 277  |
| 45°  | 362 | 345   | 317 | 295   | 287 | 279  |
| 55°  | 274 | 256   | 226 | 202   | 194 | 245  |
| 65°  | 186 | 167   | 138 | 118   | 112 | 184  |
| 75°  | 99  | 82    | 61  | 50    | 48  | 105  |
| 85°  | 25  | 16    | 14  | 13    | 13  | 27   |
| 90°  | 2   | 8     | 12  | 16    | 17  | 3    |
| 95°  | 31  | 12    | 12  | 16    | 16  | 38   |
| 105° | 171 | 174   | 177 | 182   | 162 | 179  |
| 115° | 318 | 320   | 320 | 321   | 321 | 313  |
| 125° | 448 | 450   | 449 | 450   | 451 | 400  |
| 135° | 555 | 555   | 557 | 558   | 559 | 428  |
| 145° | 640 | 642   | 642 | 643   | 644 | 400  |
| 155° | 702 | 703   | 701 | 703   | 702 | 324  |
| 165° | 741 | 738   | 738 | 742   | 737 | 209  |
| 175° | 758 | 754   | 755 | 760   | 753 | 72   |
| 180° | 758 | 758   | 758 | 758   | 758 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 596.4 | 596.4 | 596.4 | 596.4 | 596.4 |
| 2.5°   | 598.2 | 596.4 | 591.4 | 596.4 | 595.9 |
| 5°     | 595.5 | 593.6 | 588.2 | 592.7 | 591.8 |
| 7.5°   | 591.4 | 589.5 | 582.7 | 585.9 | 584.5 |
| 10°    | 585.0 | 582.7 | 574.5 | 576.3 | 574.5 |
| 12.5°  | 576.7 | 574.0 | 564.0 | 564.9 | 562.1 |
| 15°    | 567.2 | 563.0 | 551.6 | 550.7 | 547.5 |
| 17.5°  | 556.2 | 550.3 | 537.0 | 534.7 | 530.2 |
| 20°    | 543.0 | 537.0 | 521.5 | 517.8 | 511.9 |
| 22.5°  | 528.3 | 521.5 | 504.6 | 498.7 | 494.1 |
| 25°    | 512.8 | 504.6 | 485.9 | 478.1 | 473.5 |
| 27.5°  | 496.8 | 486.8 | 467.1 | 458.0 | 451.6 |
| 30°    | 479.9 | 468.5 | 447.1 | 435.6 | 428.3 |
| 32.5°  | 462.1 | 448.9 | 426.5 | 412.8 | 406.0 |
| 35°    | 443.4 | 428.8 | 406.0 | 390.4 | 382.2 |
| 37.5°  | 423.8 | 408.7 | 383.6 | 366.7 | 358.5 |
| 40°    | 402.8 | 387.7 | 361.7 | 342.5 | 334.3 |
| 42.5°  | 382.7 | 366.7 | 339.3 | 319.7 | 311.0 |
| 45°    | 361.7 | 344.8 | 317.4 | 295.0 | 286.8 |
| 47.5°  | 340.2 | 322.8 | 294.5 | 271.2 | 262.1 |
| 50°    | 318.3 | 300.5 | 271.2 | 248.4 | 239.7 |
| 52.5°  | 295.9 | 278.6 | 248.4 | 225.1 | 216.0 |
| 55°    | 274.0 | 255.7 | 226.0 | 202.3 | 193.6 |
| 57.5°  | 252.5 | 233.3 | 204.1 | 179.9 | 173.5 |
| 60°    | 229.2 | 211.0 | 181.7 | 158.0 | 150.7 |
| 62.5°  | 208.2 | 189.1 | 158.9 | 137.5 | 132.0 |
| 65°    | 186.3 | 166.7 | 137.5 | 117.8 | 112.3 |
| 67.5°  | 163.5 | 144.8 | 117.4 | 100.0 | 93.6  |
| 70°    | 142.0 | 122.8 | 96.8  | 81.7  | 77.2  |
| 72.5°  | 119.2 | 102.3 | 78.1  | 65.8  | 61.6  |
| 75°    | 99.1  | 82.2  | 60.7  | 50.2  | 47.5  |
| 77.5°  | 78.1  | 63.5  | 45.2  | 37.9  | 37.0  |
| 80°    | 58.0  | 44.8  | 31.1  | 29.7  | 29.2  |
| 82.5°  | 40.6  | 28.8  | 22.4  | 21.5  | 21.0  |
| 85°    | 24.7  | 15.5  | 14.2  | 13.2  | 13.2  |
| 87.5°  | 10.5  | 6.8   | 6.4   | 5.9   | 6.4   |
| 90°    | 1.7   | 7.9   | 12.5  | 15.9  | 17.0  |
| 92.5°  | 8.5   | 7.4   | 11.9  | 15.3  | 15.3  |
| 95°    | 31.2  | 11.9  | 12.5  | 15.9  | 16.4  |
| 97.5°  | 59.5  | 72.0  | 12.5  | 15.3  | 15.9  |
| 100°   | 92.9  | 103.1 | 24.9  | 15.3  | 15.9  |
| 102.5° | 130.3 | 137.1 | 143.9 | 16.4  | 16.4  |
| 105°   | 170.6 | 174.0 | 176.8 | 181.9 | 161.5 |
| 107.5° | 207.4 | 209.1 | 213.1 | 215.9 | 218.2 |
| 110°   | 244.8 | 246.5 | 249.9 | 251.0 | 252.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 281.1 | 284.5 | 285.6 | 285.0 | 287.3 |
| 115°   | 318.5 | 320.2 | 319.6 | 320.7 | 320.7 |
| 117.5° | 351.9 | 354.2 | 355.9 | 355.3 | 355.3 |
| 120°   | 385.9 | 388.2 | 387.6 | 388.7 | 387.6 |
| 122.5° | 417.6 | 418.8 | 419.9 | 420.5 | 419.3 |
| 125°   | 447.7 | 449.9 | 448.8 | 450.5 | 451.1 |
| 127.5° | 476.6 | 477.1 | 480.0 | 479.4 | 478.8 |
| 130°   | 504.3 | 504.9 | 506.6 | 507.2 | 507.2 |
| 132.5° | 529.8 | 531.0 | 533.2 | 533.8 | 533.2 |
| 135°   | 555.3 | 554.8 | 557.0 | 558.2 | 559.3 |
| 137.5° | 578.0 | 578.0 | 580.8 | 582.0 | 581.4 |
| 140°   | 600.1 | 601.2 | 602.4 | 604.1 | 604.6 |
| 142.5° | 619.9 | 622.2 | 622.8 | 623.9 | 623.9 |
| 145°   | 640.3 | 642.0 | 642.0 | 642.6 | 643.7 |
| 147.5° | 656.2 | 659.6 | 659.0 | 659.6 | 660.2 |
| 150°   | 673.8 | 676.0 | 675.5 | 675.5 | 676.0 |
| 152.5° | 688.5 | 690.2 | 689.1 | 690.2 | 689.6 |
| 155°   | 702.1 | 702.7 | 701.0 | 703.2 | 701.5 |
| 157.5° | 714.0 | 714.0 | 711.7 | 714.6 | 711.7 |
| 160°   | 724.2 | 722.5 | 721.9 | 725.3 | 721.9 |
| 162.5° | 733.3 | 731.0 | 730.4 | 733.8 | 729.9 |
| 165°   | 740.6 | 737.8 | 737.8 | 742.3 | 737.2 |
| 167.5° | 746.9 | 744.0 | 743.5 | 748.6 | 742.9 |
| 170°   | 752.0 | 748.6 | 749.1 | 753.7 | 748.0 |
| 172.5° | 755.4 | 752.0 | 752.5 | 757.1 | 750.8 |
| 175°   | 757.6 | 754.2 | 754.8 | 759.9 | 753.1 |
| 177.5° | 759.3 | 755.4 | 756.5 | 761.0 | 754.2 |
| 180°   | 757.6 | 757.6 | 757.6 | 757.6 | 757.6 |

(END OF REPORT)