

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: P1025448

Luminaire Tested: S124DIP-B350D810UB30-4F0-XX-W2A-D4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1025448  
REPORT IS A COMBINATION OF REPORTS P995988 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B350D810UB30-4F0-XX-W2A-D4  
Description: Define 4 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

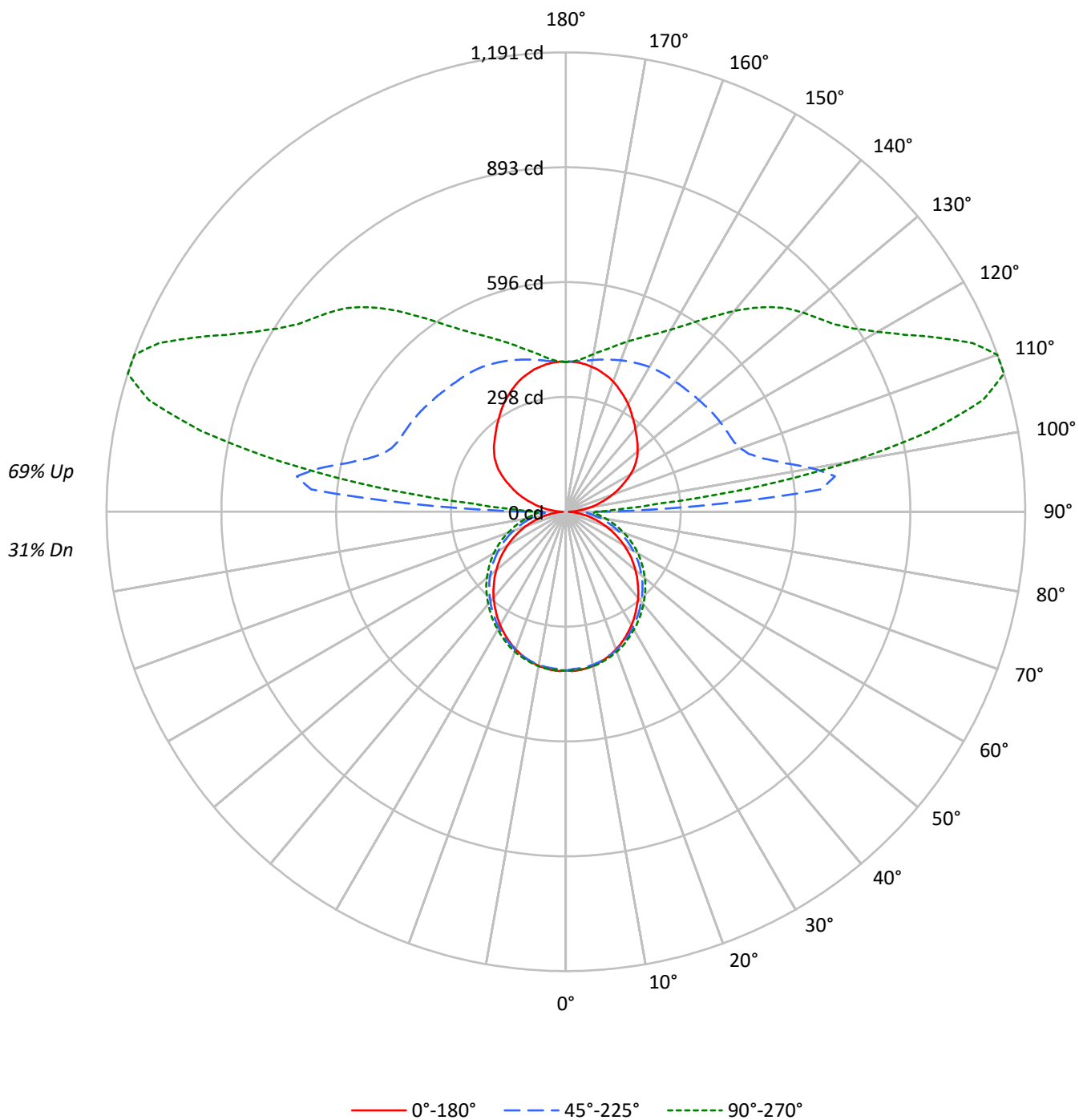
Lumens per Lamp: N/A  
Luminaire Lumens: 4241.7 lumens  
Efficiency: N/A  
Efficacy: 124.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 34.1  
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 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 103 | 103 | 103 | 103 | 92 | 92 | 92 | 92 | 73 | 73 | 73 | 55 | 55 | 55 | 38 | 38 | 38 |
| 1   | 93  | 88  | 84  | 81  | 83 | 79 | 76 | 73 | 63 | 60 | 58 | 47 | 46 | 44 | 33 | 32 | 31 |
| 2   | 84  | 77  | 71  | 65  | 75 | 69 | 64 | 59 | 54 | 51 | 48 | 41 | 38 | 36 | 29 | 27 | 26 |
| 3   | 77  | 67  | 60  | 54  | 68 | 60 | 54 | 49 | 48 | 43 | 40 | 36 | 33 | 30 | 25 | 23 | 22 |
| 4   | 70  | 59  | 51  | 45  | 62 | 53 | 47 | 41 | 42 | 37 | 33 | 32 | 28 | 26 | 22 | 20 | 18 |
| 5   | 64  | 53  | 44  | 39  | 57 | 47 | 40 | 35 | 38 | 32 | 29 | 28 | 25 | 22 | 20 | 18 | 16 |
| 6   | 59  | 47  | 39  | 33  | 52 | 42 | 35 | 30 | 34 | 29 | 25 | 26 | 22 | 19 | 18 | 16 | 14 |
| 7   | 54  | 42  | 34  | 29  | 48 | 38 | 31 | 26 | 30 | 25 | 22 | 23 | 20 | 17 | 16 | 14 | 12 |
| 8   | 50  | 38  | 30  | 25  | 45 | 34 | 28 | 23 | 28 | 23 | 19 | 21 | 18 | 15 | 15 | 13 | 11 |
| 9   | 47  | 35  | 27  | 22  | 42 | 31 | 25 | 20 | 25 | 20 | 17 | 19 | 16 | 13 | 14 | 11 | 10 |
| 10  | 43  | 32  | 25  | 20  | 39 | 29 | 22 | 18 | 23 | 18 | 15 | 18 | 14 | 12 | 13 | 10 | 9  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3356 | 3356 | 3356 |
| 5°  | 3365 | 3268 | 3274 |
| 10° | 3343 | 3204 | 3194 |
| 15° | 3312 | 3132 | 3105 |
| 20° | 3265 | 3054 | 3018 |
| 25° | 3213 | 2967 | 2925 |
| 30° | 3157 | 2881 | 2829 |
| 35° | 3093 | 2794 | 2744 |
| 40° | 3041 | 2710 | 2656 |
| 45° | 2966 | 2631 | 2577 |
| 50° | 2901 | 2542 | 2495 |
| 55° | 2833 | 2455 | 2400 |
| 60° | 2729 | 2348 | 2311 |
| 65° | 2617 | 2233 | 2205 |
| 70° | 2479 | 2100 | 2080 |
| 75° | 2285 | 1954 | 1962 |
| 80° | 2065 | 1803 | 1838 |
| 85° | 1776 | 1653 | 1738 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2966 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 39.0   | 0.9       |
| 10°-20°   | 111.7  | 2.6       |
| 20°-30°   | 168.9  | 4.0       |
| 30°-40°   | 204.4  | 4.8       |
| 40°-50°   | 216.0  | 5.1       |
| 50°-60°   | 203.3  | 4.8       |
| 60°-70°   | 168.7  | 4.0       |
| 70°-80°   | 118.4  | 2.8       |
| 80°-90°   | 68.2   | 1.6       |
| 90°-100°  | 328.5  | 7.7       |
| 100°-110° | 616.8  | 14.5      |
| 110°-120° | 543.3  | 12.8      |
| 120°-130° | 450.9  | 10.6      |
| 130°-140° | 371.8  | 8.8       |
| 140°-150° | 281.2  | 6.6       |
| 150°-160° | 197.0  | 4.6       |
| 160°-170° | 115.9  | 2.7       |
| 170°-180° | 37.7   | 0.9       |
| 0°-30°    | 319.6  | 7.5       |
| 0°-40°    | 524.0  | 12.4      |
| 0°-60°    | 943.3  | 22.2      |
| 0°-90°    | 1298.7 | 30.6      |
| 90°-120°  | 1488.6 | 35.1      |
| 90°-150°  | 2592.4 | 61.1      |
| 90°-180°  | 2943.0 | 69.4      |
| 0°-180°   | 4241.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90°  | Flux |
|------|-----|-------|-----|-------|------|------|
| 0°   | 412 | 412   | 412 | 412   | 412  |      |
| 5°   | 412 | 411   | 407 | 411   | 411  | 39   |
| 15°  | 395 | 395   | 394 | 398   | 398  | 111  |
| 25°  | 361 | 364   | 365 | 370   | 371  | 166  |
| 35°  | 316 | 322   | 326 | 333   | 334  | 198  |
| 45°  | 264 | 272   | 281 | 289   | 291  | 204  |
| 55°  | 206 | 216   | 230 | 239   | 242  | 184  |
| 65°  | 143 | 158   | 173 | 185   | 188  | 142  |
| 75°  | 79  | 96    | 116 | 129   | 133  | 84   |
| 85°  | 24  | 44    | 64  | 78    | 83   | 25   |
| 90°  | 8   | 32    | 59  | 74    | 79   | 7    |
| 95°  | 31  | 101   | 663 | 361   | 243  | 32   |
| 105° | 94  | 143   | 531 | 1121  | 1120 | 100  |
| 115° | 160 | 204   | 468 | 890   | 1067 | 159  |
| 125° | 221 | 262   | 457 | 752   | 848  | 197  |
| 135° | 261 | 311   | 445 | 660   | 751  | 202  |
| 145° | 301 | 344   | 438 | 550   | 606  | 189  |
| 155° | 341 | 369   | 426 | 483   | 503  | 157  |
| 165° | 372 | 383   | 409 | 433   | 439  | 105  |
| 175° | 388 | 389   | 392 | 397   | 396  | 37   |
| 180° | 389 | 389   | 389 | 389   | 389  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 0°     | 411.5 | 411.5 | 411.5 | 411.5  | 411.5  |
| 2.5°   | 413.4 | 412.0 | 408.3 | 411.5  | 411.0  |
| 5°     | 412.0 | 410.6 | 407.4 | 411.0  | 410.6  |
| 7.5°   | 409.2 | 408.3 | 405.5 | 409.7  | 409.2  |
| 10°    | 405.5 | 405.1 | 402.8 | 406.9  | 406.4  |
| 12.5°  | 400.4 | 400.4 | 399.1 | 402.8  | 402.8  |
| 15°    | 394.9 | 395.4 | 394.0 | 398.1  | 397.7  |
| 17.5°  | 387.5 | 388.9 | 388.5 | 392.6  | 392.2  |
| 20°    | 379.7 | 381.1 | 381.6 | 386.2  | 386.2  |
| 22.5°  | 371.0 | 372.8 | 373.7 | 378.3  | 379.3  |
| 25°    | 361.3 | 364.0 | 365.4 | 370.5  | 371.0  |
| 27.5°  | 350.7 | 354.8 | 356.7 | 361.3  | 361.7  |
| 30°    | 340.1 | 343.8 | 347.0 | 352.1  | 353.0  |
| 32.5°  | 328.6 | 333.2 | 336.9 | 342.8  | 343.8  |
| 35°    | 316.1 | 321.6 | 326.3 | 332.7  | 334.1  |
| 37.5°  | 303.7 | 310.1 | 315.7 | 322.1  | 323.5  |
| 40°    | 291.7 | 297.7 | 304.1 | 311.1  | 312.9  |
| 42.5°  | 277.9 | 284.8 | 292.6 | 300.5  | 301.8  |
| 45°    | 263.6 | 272.3 | 281.1 | 288.9  | 291.2  |
| 47.5°  | 250.2 | 259.0 | 269.1 | 277.0  | 279.7  |
| 50°    | 235.5 | 245.6 | 255.8 | 265.0  | 267.7  |
| 52.5°  | 220.7 | 230.9 | 242.8 | 252.1  | 254.8  |
| 55°    | 206.4 | 216.1 | 229.9 | 239.2  | 241.9  |
| 57.5°  | 190.3 | 202.3 | 215.7 | 226.7  | 229.0  |
| 60°    | 174.6 | 186.6 | 201.8 | 212.4  | 216.1  |
| 62.5°  | 159.4 | 172.8 | 188.0 | 198.6  | 202.3  |
| 65°    | 142.9 | 157.6 | 173.3 | 184.8  | 188.5  |
| 67.5°  | 127.2 | 142.9 | 159.4 | 171.0  | 174.6  |
| 70°    | 111.1 | 126.7 | 144.2 | 156.7  | 159.9  |
| 72.5°  | 95.4  | 111.5 | 130.4 | 142.4  | 146.1  |
| 75°    | 79.3  | 96.3  | 115.7 | 128.6  | 132.7  |
| 77.5°  | 64.1  | 82.0  | 102.3 | 115.2  | 119.8  |
| 80°    | 50.2  | 68.7  | 88.9  | 102.8  | 106.4  |
| 82.5°  | 36.4  | 55.8  | 76.0  | 90.3   | 94.5   |
| 85°    | 24.4  | 43.8  | 64.5  | 78.3   | 82.9   |
| 87.5°  | 15.2  | 34.1  | 54.4  | 67.7   | 71.9   |
| 90°    | 8.2   | 31.9  | 59.3  | 74.3   | 78.7   |
| 92.5°  | 17.6  | 81.8  | 342.3 | 154.8  | 128.9  |
| 95°    | 31.2  | 100.6 | 662.6 | 360.6  | 243.1  |
| 97.5°  | 47.5  | 106.8 | 703.8 | 679.2  | 501.5  |
| 100°   | 63.1  | 116.4 | 649.1 | 918.2  | 751.1  |
| 102.5° | 78.4  | 128.2 | 581.9 | 1066.6 | 968.8  |
| 105°   | 93.5  | 142.8 | 531.4 | 1120.8 | 1120.2 |
| 107.5° | 111.0 | 158.2 | 497.8 | 1101.2 | 1190.9 |
| 110°   | 128.2 | 173.2 | 481.5 | 1037.4 | 1190.1 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°    |
|--------|-------|-------|-------|-------|--------|
| 112.5° | 144.5 | 188.7 | 472.3 | 959.8 | 1142.2 |
| 115°   | 160.1 | 204.3 | 468.5 | 890.3 | 1066.9 |
| 117.5° | 176.9 | 219.4 | 465.4 | 834.8 | 993.5  |
| 120°   | 193.2 | 233.6 | 463.1 | 796.6 | 932.8  |
| 122.5° | 208.5 | 247.8 | 460.0 | 771.0 | 884.2  |
| 125°   | 221.0 | 261.8 | 457.4 | 752.3 | 847.8  |
| 127.5° | 233.2 | 275.6 | 453.6 | 733.8 | 824.1  |
| 130°   | 242.8 | 288.4 | 450.5 | 712.8 | 803.0  |
| 132.5° | 252.7 | 299.9 | 448.0 | 688.3 | 780.1  |
| 135°   | 261.3 | 311.0 | 444.8 | 660.0 | 750.6  |
| 137.5° | 270.5 | 320.2 | 443.0 | 630.2 | 716.5  |
| 140°   | 280.4 | 329.0 | 440.8 | 601.2 | 679.8  |
| 142.5° | 290.7 | 337.0 | 439.9 | 574.5 | 640.8  |
| 145°   | 300.7 | 343.7 | 438.4 | 549.7 | 605.7  |
| 147.5° | 312.1 | 350.5 | 436.1 | 528.6 | 572.8  |
| 150°   | 322.8 | 357.0 | 433.8 | 511.0 | 545.3  |
| 152.5° | 332.2 | 363.2 | 430.0 | 496.4 | 522.4  |
| 155°   | 341.4 | 368.6 | 426.2 | 482.7 | 503.3  |
| 157.5° | 350.6 | 373.5 | 422.4 | 469.7 | 485.8  |
| 160°   | 359.0 | 377.7 | 417.8 | 456.8 | 469.7  |
| 162.5° | 366.6 | 381.2 | 413.2 | 444.2 | 454.4  |
| 165°   | 372.0 | 383.4 | 408.6 | 432.7 | 439.2  |
| 167.5° | 378.1 | 385.3 | 404.0 | 422.8 | 427.0  |
| 170°   | 381.9 | 386.8 | 399.5 | 412.8 | 415.5  |
| 172.5° | 385.7 | 388.0 | 394.9 | 404.0 | 404.0  |
| 175°   | 388.0 | 388.8 | 391.8 | 397.2 | 395.6  |
| 177.5° | 389.5 | 388.8 | 389.5 | 392.2 | 389.5  |
| 180°   | 388.8 | 388.8 | 388.8 | 388.8 | 388.8  |

(END OF REPORT)