

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: P1025406

Luminaire Tested: S124DIP-B350D590UB30-4F0-XX-W2A-F4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1025406  
REPORT IS A COMBINATION OF REPORTS P995931 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B350D590UB30-4F0-XX-W2A-F4  
Description: Define 4 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

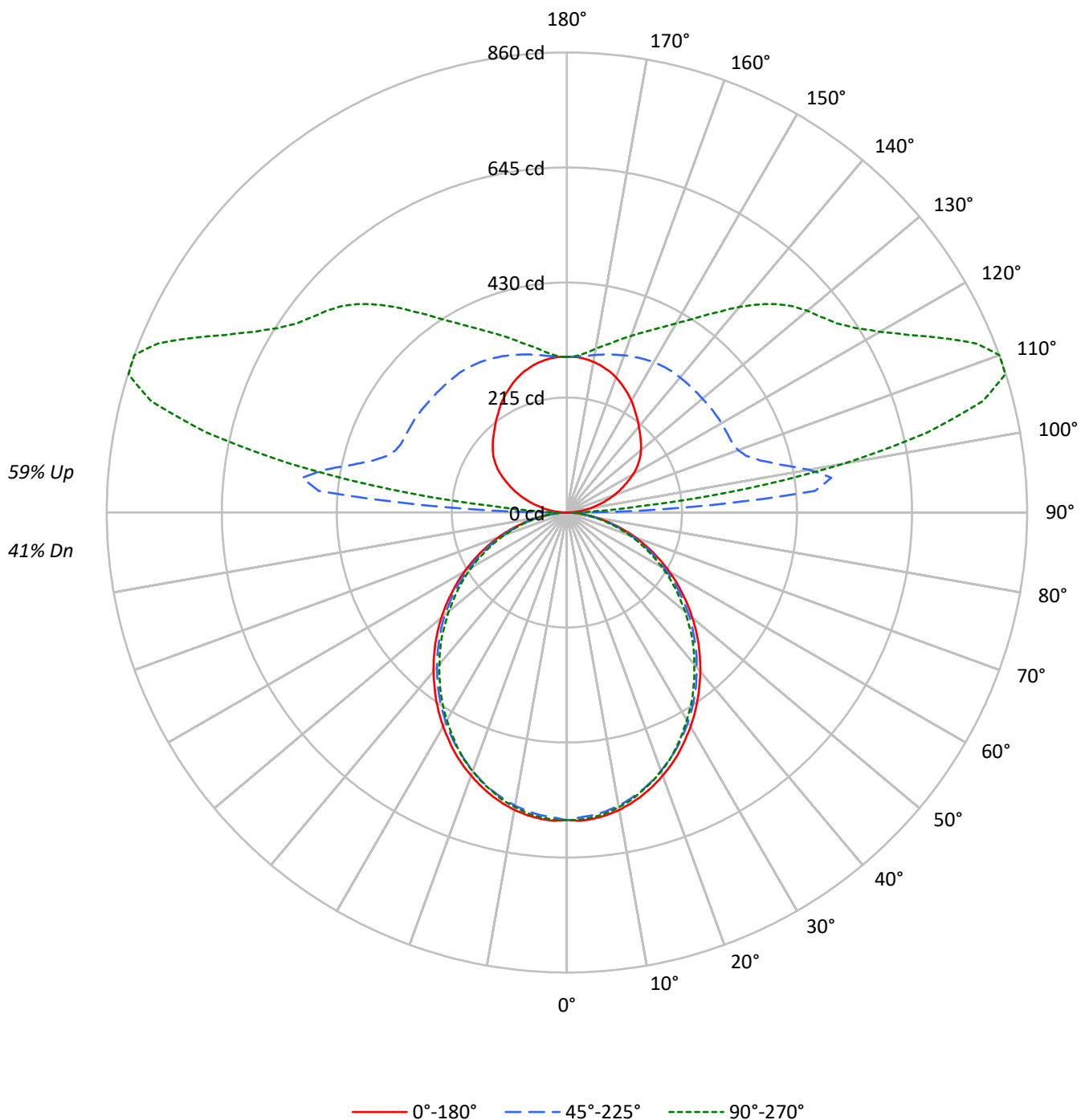
Lumens per Lamp: N/A  
Luminaire Lumens: 3600.2 lumens  
Efficiency: N/A  
Efficacy: 126.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 28.4  
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   | 105 | 105 | 105 | 105 | 96 | 96 | 96 | 96 | 78 | 78 | 78 | 62 | 62 | 62 | 48 | 48 | 48 |
| 1   | 96  | 91  | 88  | 84  | 87 | 83 | 80 | 77 | 69 | 66 | 64 | 55 | 53 | 52 | 42 | 41 | 40 |
| 2   | 87  | 80  | 74  | 69  | 79 | 73 | 68 | 63 | 60 | 56 | 53 | 48 | 46 | 43 | 37 | 35 | 34 |
| 3   | 79  | 70  | 63  | 57  | 72 | 64 | 58 | 53 | 53 | 48 | 45 | 43 | 39 | 37 | 33 | 31 | 29 |
| 4   | 73  | 62  | 54  | 48  | 66 | 57 | 50 | 45 | 47 | 42 | 38 | 38 | 34 | 31 | 29 | 27 | 25 |
| 5   | 67  | 55  | 47  | 41  | 61 | 51 | 44 | 38 | 42 | 37 | 33 | 34 | 30 | 27 | 26 | 24 | 22 |
| 6   | 61  | 49  | 41  | 36  | 56 | 45 | 38 | 33 | 38 | 32 | 28 | 31 | 27 | 24 | 24 | 21 | 19 |
| 7   | 57  | 45  | 37  | 31  | 52 | 41 | 34 | 29 | 34 | 29 | 25 | 28 | 24 | 21 | 22 | 19 | 17 |
| 8   | 53  | 40  | 33  | 28  | 48 | 37 | 30 | 26 | 31 | 26 | 22 | 25 | 22 | 19 | 20 | 17 | 15 |
| 9   | 49  | 37  | 29  | 24  | 45 | 34 | 27 | 23 | 29 | 23 | 20 | 23 | 20 | 17 | 19 | 16 | 14 |
| 10  | 46  | 34  | 27  | 22  | 42 | 31 | 25 | 21 | 26 | 21 | 18 | 22 | 18 | 15 | 17 | 14 | 12 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4690 | 4690 | 4690 |
| 5°  | 4693 | 4555 | 4560 |
| 10° | 4654 | 4428 | 4397 |
| 15° | 4587 | 4278 | 4213 |
| 20° | 4502 | 4115 | 4023 |
| 25° | 4405 | 3944 | 3818 |
| 30° | 4290 | 3758 | 3593 |
| 35° | 4170 | 3567 | 3375 |
| 40° | 4045 | 3363 | 3144 |
| 45° | 3914 | 3157 | 2928 |
| 50° | 3770 | 2959 | 2689 |
| 55° | 3612 | 2726 | 2451 |
| 60° | 3450 | 2471 | 2203 |
| 65° | 3265 | 2209 | 1924 |
| 70° | 3054 | 1892 | 1625 |
| 75° | 2735 | 1525 | 1301 |
| 80° | 2332 | 1103 | 916  |
| 85° | 1812 | 615  | 493  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3914 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 54.2   | 1.5       |
| 10°-20°   | 152.7  | 4.2       |
| 20°-30°   | 224.7  | 6.2       |
| 30°-40°   | 261.2  | 7.3       |
| 40°-50°   | 261.2  | 7.3       |
| 50°-60°   | 228.5  | 6.3       |
| 60°-70°   | 169.6  | 4.7       |
| 70°-80°   | 96.2   | 2.7       |
| 80°-90°   | 28.7   | 0.8       |
| 90°-100°  | 216.1  | 6.0       |
| 100°-110° | 439.5  | 12.2      |
| 110°-120° | 391.8  | 10.9      |
| 120°-130° | 329.1  | 9.1       |
| 130°-140° | 274.6  | 7.6       |
| 140°-150° | 209.7  | 5.8       |
| 150°-160° | 147.4  | 4.1       |
| 160°-170° | 86.7   | 2.4       |
| 170°-180° | 28.2   | 0.8       |
| 0°-30°    | 431.6  | 12.0      |
| 0°-40°    | 692.9  | 19.2      |
| 0°-60°    | 1182.6 | 32.8      |
| 0°-90°    | 1477.1 | 41.0      |
| 90°-120°  | 1047.4 | 29.1      |
| 90°-150°  | 1860.8 | 51.7      |
| 90°-180°  | 2123.0 | 59.0      |
| 0°-180°   | 3600.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 575 | 575   | 575 | 575   | 575 |      |
| 5°   | 575 | 573   | 568 | 573   | 572 | 55   |
| 15°  | 547 | 545   | 538 | 541   | 540 | 154  |
| 25°  | 495 | 492   | 486 | 486   | 484 | 228  |
| 35°  | 426 | 423   | 416 | 413   | 411 | 267  |
| 45°  | 348 | 345   | 337 | 332   | 331 | 268  |
| 55°  | 263 | 262   | 255 | 250   | 247 | 236  |
| 65°  | 178 | 176   | 171 | 167   | 164 | 176  |
| 75°  | 95  | 93    | 90  | 88    | 88  | 101  |
| 85°  | 25  | 25    | 24  | 24    | 24  | 27   |
| 90°  | 1   | 5     | 10  | 11    | 12  | 3    |
| 95°  | 19  | 59    | 466 | 231   | 140 | 21   |
| 105° | 67  | 97    | 375 | 807   | 804 | 71   |
| 115° | 118 | 148   | 334 | 642   | 772 | 117  |
| 125° | 164 | 195   | 333 | 547   | 616 | 146  |
| 135° | 195 | 232   | 330 | 485   | 551 | 151  |
| 145° | 225 | 257   | 328 | 409   | 450 | 141  |
| 155° | 256 | 276   | 319 | 361   | 377 | 118  |
| 165° | 278 | 287   | 306 | 324   | 329 | 79   |
| 175° | 290 | 291   | 293 | 297   | 296 | 28   |
| 180° | 291 | 291   | 291 | 291   | 291 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 575.1 | 575.1 | 575.1 | 575.1 | 575.1 |
| 2.5°   | 576.9 | 575.5 | 570.5 | 575.1 | 574.6 |
| 5°     | 574.6 | 572.8 | 567.7 | 572.8 | 571.8 |
| 7.5°   | 570.5 | 568.6 | 563.1 | 567.2 | 566.8 |
| 10°    | 564.5 | 562.6 | 556.6 | 560.3 | 559.4 |
| 12.5°  | 556.6 | 554.8 | 548.3 | 552.5 | 551.1 |
| 15°    | 547.0 | 545.1 | 538.2 | 541.0 | 539.6 |
| 17.5°  | 535.9 | 533.6 | 527.1 | 529.0 | 528.1 |
| 20°    | 523.5 | 521.1 | 514.2 | 515.6 | 514.7 |
| 22.5°  | 510.1 | 506.9 | 500.0 | 502.7 | 500.9 |
| 25°    | 495.3 | 492.1 | 485.7 | 486.1 | 484.3 |
| 27.5°  | 478.8 | 475.5 | 469.5 | 468.6 | 466.3 |
| 30°    | 462.2 | 458.5 | 452.5 | 450.6 | 448.3 |
| 32.5°  | 444.7 | 441.4 | 435.0 | 432.7 | 430.4 |
| 35°    | 426.2 | 423.0 | 416.5 | 413.3 | 411.0 |
| 37.5°  | 406.9 | 404.1 | 397.2 | 394.0 | 390.7 |
| 40°    | 388.0 | 384.3 | 377.4 | 372.8 | 370.5 |
| 42.5°  | 367.7 | 365.9 | 358.0 | 352.5 | 351.1 |
| 45°    | 347.9 | 344.7 | 337.3 | 332.2 | 330.8 |
| 47.5°  | 327.2 | 324.9 | 317.9 | 312.4 | 308.7 |
| 50°    | 306.0 | 304.1 | 297.7 | 291.2 | 288.5 |
| 52.5°  | 285.2 | 282.9 | 276.0 | 270.5 | 266.8 |
| 55°    | 263.1 | 261.7 | 255.3 | 249.7 | 247.0 |
| 57.5°  | 242.4 | 241.0 | 234.5 | 229.0 | 226.2 |
| 60°    | 220.7 | 218.4 | 212.4 | 208.3 | 206.0 |
| 62.5°  | 199.5 | 197.7 | 191.2 | 187.5 | 185.2 |
| 65°    | 178.3 | 176.0 | 171.4 | 166.8 | 164.5 |
| 67.5°  | 156.7 | 154.8 | 150.2 | 145.6 | 145.1 |
| 70°    | 136.9 | 133.6 | 129.9 | 126.3 | 124.9 |
| 72.5°  | 115.7 | 112.4 | 109.7 | 106.9 | 105.5 |
| 75°    | 94.9  | 92.6  | 90.3  | 88.5  | 88.0  |
| 77.5°  | 74.6  | 73.7  | 71.4  | 71.0  | 69.6  |
| 80°    | 56.7  | 55.3  | 54.4  | 53.5  | 53.0  |
| 82.5°  | 39.2  | 38.7  | 38.7  | 38.2  | 37.8  |
| 85°    | 24.9  | 24.9  | 24.0  | 24.0  | 23.5  |
| 87.5°  | 12.0  | 11.5  | 11.1  | 11.1  | 11.1  |
| 90°    | 0.6   | 4.6   | 10.3  | 11.4  | 12.0  |
| 92.5°  | 8.0   | 44.0  | 224.0 | 74.1  | 52.0  |
| 95°    | 18.9  | 59.4  | 465.8 | 230.6 | 139.5 |
| 97.5°  | 31.4  | 65.7  | 498.4 | 471.0 | 334.9 |
| 100°   | 43.4  | 74.3  | 459.5 | 651.6 | 524.1 |
| 102.5° | 54.9  | 84.6  | 410.9 | 764.8 | 688.7 |
| 105°   | 66.9  | 96.9  | 374.9 | 807.3 | 804.2 |
| 107.5° | 80.0  | 109.4 | 351.5 | 794.5 | 859.0 |
| 110°   | 93.2  | 122.0 | 340.6 | 748.8 | 860.2 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 105.7 | 134.6 | 335.5 | 692.8 | 826.5 |
| 115°   | 117.7 | 147.8 | 334.4 | 642.4 | 772.2 |
| 117.5° | 130.3 | 160.0 | 333.8 | 603.0 | 719.0 |
| 120°   | 142.9 | 172.0 | 333.8 | 576.4 | 675.6 |
| 122.5° | 154.3 | 183.8 | 333.2 | 559.0 | 641.3 |
| 125°   | 164.0 | 194.9 | 332.6 | 546.7 | 616.1 |
| 127.5° | 173.2 | 205.2 | 331.5 | 535.0 | 600.1 |
| 130°   | 180.6 | 215.2 | 330.9 | 521.0 | 586.4 |
| 132.5° | 188.0 | 223.8 | 330.4 | 504.4 | 571.0 |
| 135°   | 194.9 | 232.0 | 329.8 | 485.2 | 551.0 |
| 137.5° | 201.8 | 239.2 | 329.8 | 464.6 | 527.5 |
| 140°   | 209.2 | 245.8 | 329.2 | 444.7 | 501.8 |
| 142.5° | 217.2 | 251.8 | 329.2 | 426.1 | 474.4 |
| 145°   | 224.6 | 257.2 | 328.1 | 409.2 | 449.8 |
| 147.5° | 233.2 | 262.4 | 326.4 | 395.2 | 427.0 |
| 150°   | 241.2 | 267.2 | 324.6 | 382.4 | 408.1 |
| 152.5° | 248.6 | 271.8 | 321.8 | 371.5 | 390.9 |
| 155°   | 255.5 | 275.8 | 318.9 | 361.2 | 376.7 |
| 157.5° | 262.3 | 279.5 | 316.1 | 351.5 | 363.5 |
| 160°   | 268.6 | 282.6 | 312.6 | 341.8 | 351.5 |
| 162.5° | 274.3 | 285.2 | 309.2 | 332.4 | 340.1 |
| 165°   | 278.3 | 286.9 | 305.8 | 323.8 | 328.6 |
| 167.5° | 282.9 | 288.4 | 302.4 | 316.4 | 319.5 |
| 170°   | 285.8 | 289.5 | 298.9 | 309.0 | 310.9 |
| 172.5° | 288.6 | 290.4 | 295.5 | 302.4 | 302.4 |
| 175°   | 290.4 | 290.9 | 293.2 | 297.2 | 296.1 |
| 177.5° | 291.5 | 290.9 | 291.5 | 293.5 | 291.5 |
| 180°   | 290.9 | 290.9 | 290.9 | 290.9 | 290.9 |

(END OF REPORT)