

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: P1025458

Luminaire Tested: S124DIP-B350D810UB35-4F0-XX-W2A-F

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1025458  
REPORT IS A COMBINATION OF REPORTS P995998 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B350D810UB35-4F0-XX-W2A-F  
Description: Define 4 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

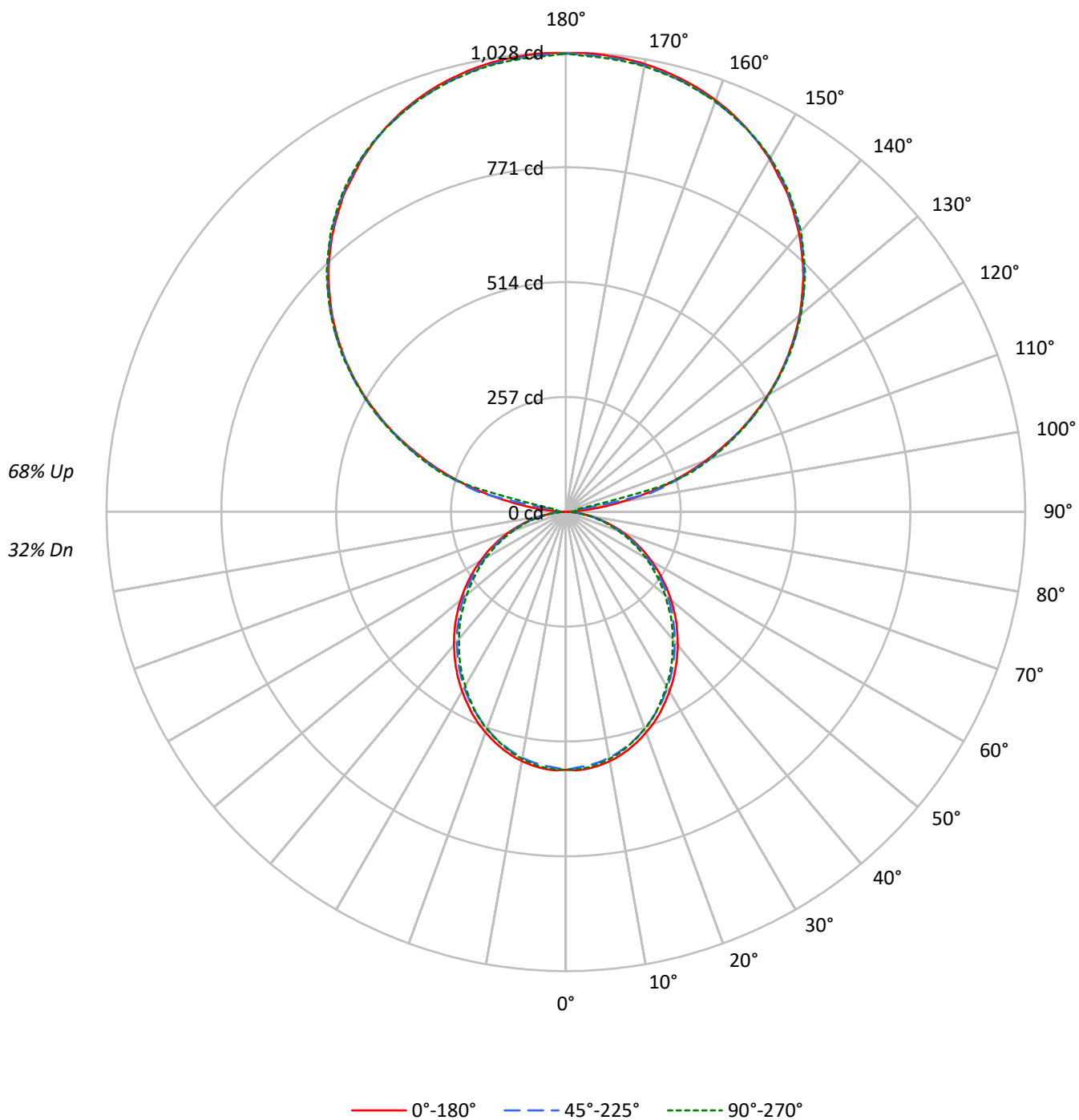
Lumens per Lamp: N/A  
Luminaire Lumens: 4657.0 lumens  
Efficiency: N/A  
Efficacy: 136.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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 | 93 | 93 | 93 | 93 | 73 | 73 | 73 | 56 | 56 | 56 | 39 | 39 | 39 |
| 1   | 94  | 89  | 86  | 82  | 84 | 81 | 77 | 75 | 64 | 62 | 60 | 49 | 47 | 46 | 35 | 34 | 33 |
| 2   | 85  | 78  | 72  | 67  | 76 | 70 | 65 | 61 | 56 | 53 | 50 | 43 | 41 | 38 | 31 | 29 | 28 |
| 3   | 78  | 69  | 61  | 56  | 70 | 62 | 56 | 51 | 49 | 45 | 42 | 38 | 35 | 33 | 27 | 25 | 24 |
| 4   | 71  | 61  | 53  | 47  | 64 | 55 | 48 | 43 | 44 | 39 | 35 | 34 | 30 | 28 | 24 | 22 | 20 |
| 5   | 65  | 54  | 46  | 40  | 58 | 49 | 42 | 37 | 39 | 34 | 30 | 30 | 27 | 24 | 22 | 20 | 18 |
| 6   | 60  | 48  | 40  | 35  | 54 | 44 | 37 | 32 | 35 | 30 | 26 | 27 | 24 | 21 | 20 | 17 | 16 |
| 7   | 55  | 43  | 36  | 30  | 50 | 39 | 33 | 28 | 32 | 27 | 23 | 25 | 21 | 18 | 18 | 16 | 14 |
| 8   | 51  | 39  | 32  | 27  | 46 | 36 | 29 | 25 | 29 | 24 | 20 | 23 | 19 | 16 | 17 | 14 | 12 |
| 9   | 48  | 36  | 28  | 24  | 43 | 33 | 26 | 22 | 26 | 22 | 18 | 21 | 17 | 15 | 15 | 13 | 11 |
| 10  | 44  | 33  | 26  | 21  | 40 | 30 | 24 | 19 | 24 | 20 | 16 | 19 | 16 | 13 | 14 | 12 | 10 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4708 | 4708 | 4708 |
| 5°  | 4712 | 4573 | 4579 |
| 10° | 4673 | 4446 | 4415 |
| 15° | 4606 | 4295 | 4230 |
| 20° | 4520 | 4132 | 4039 |
| 25° | 4424 | 3959 | 3834 |
| 30° | 4307 | 3772 | 3608 |
| 35° | 4187 | 3581 | 3389 |
| 40° | 4062 | 3376 | 3157 |
| 45° | 3930 | 3171 | 2940 |
| 50° | 3784 | 2971 | 2699 |
| 55° | 3627 | 2737 | 2461 |
| 60° | 3464 | 2482 | 2212 |
| 65° | 3278 | 2218 | 1932 |
| 70° | 3065 | 1900 | 1631 |
| 75° | 2746 | 1532 | 1307 |
| 80° | 2340 | 1107 | 919  |
| 85° | 1819 | 618  | 495  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 3930 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 54.4   | 1.2       |
| 10°-20°   | 153.3  | 3.3       |
| 20°-30°   | 225.7  | 4.8       |
| 30°-40°   | 262.3  | 5.6       |
| 40°-50°   | 262.3  | 5.6       |
| 50°-60°   | 229.4  | 4.9       |
| 60°-70°   | 170.3  | 3.7       |
| 70°-80°   | 96.6   | 2.1       |
| 80°-90°   | 29.8   | 0.6       |
| 90°-100°  | 34.0   | 0.7       |
| 100°-110° | 224.1  | 4.8       |
| 110°-120° | 428.0  | 9.2       |
| 120°-130° | 543.4  | 11.7      |
| 130°-140° | 581.3  | 12.5      |
| 140°-150° | 543.6  | 11.7      |
| 150°-160° | 438.3  | 9.4       |
| 160°-170° | 282.7  | 6.1       |
| 170°-180° | 97.4   | 2.1       |
| 0°-30°    | 433.4  | 9.3       |
| 0°-40°    | 695.7  | 14.9      |
| 0°-60°    | 1187.4 | 25.5      |
| 0°-90°    | 1484.1 | 31.9      |
| 90°-120°  | 686.2  | 14.7      |
| 90°-150°  | 2354.4 | 50.6      |
| 90°-180°  | 3173.0 | 68.1      |
| 0°-180°   | 4657.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 577  | 577   | 577  | 577   | 577  |      |
| 5°   | 577  | 575   | 570  | 575   | 574  | 55   |
| 15°  | 549  | 547   | 540  | 543   | 542  | 155  |
| 25°  | 497  | 494   | 488  | 488   | 486  | 229  |
| 35°  | 428  | 425   | 418  | 415   | 413  | 268  |
| 45°  | 349  | 346   | 339  | 334   | 332  | 269  |
| 55°  | 264  | 263   | 256  | 251   | 248  | 237  |
| 65°  | 179  | 177   | 172  | 168   | 165  | 177  |
| 75°  | 95   | 93    | 91   | 89    | 88   | 101  |
| 85°  | 25   | 25    | 24   | 24    | 24   | 27   |
| 90°  | 2    | 11    | 17   | 22    | 23   | 4    |
| 95°  | 42   | 16    | 17   | 22    | 22   | 52   |
| 105° | 231  | 235   | 239  | 246   | 219  | 242  |
| 115° | 431  | 433   | 432  | 434   | 434  | 424  |
| 125° | 606  | 609   | 607  | 610   | 610  | 541  |
| 135° | 752  | 751   | 754  | 755   | 757  | 579  |
| 145° | 867  | 869   | 869  | 870   | 871  | 542  |
| 155° | 950  | 951   | 949  | 952   | 950  | 438  |
| 165° | 1002 | 998   | 998  | 1005  | 998  | 283  |
| 175° | 1025 | 1021  | 1022 | 1028  | 1019 | 98   |
| 180° | 1025 | 1025  | 1025 | 1025  | 1025 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 577.4 | 577.4 | 577.4 | 577.4 | 577.4 |
| 2.5°   | 579.2 | 577.9 | 572.8 | 577.4 | 576.9 |
| 5°     | 576.9 | 575.1 | 570.0 | 575.1 | 574.2 |
| 7.5°   | 572.8 | 570.9 | 565.4 | 569.5 | 569.1 |
| 10°    | 566.8 | 564.9 | 558.9 | 562.6 | 561.7 |
| 12.5°  | 558.9 | 557.0 | 550.6 | 554.7 | 553.3 |
| 15°    | 549.2 | 547.3 | 540.4 | 543.2 | 541.8 |
| 17.5°  | 538.1 | 535.8 | 529.3 | 531.1 | 530.2 |
| 20°    | 525.6 | 523.3 | 516.3 | 517.7 | 516.8 |
| 22.5°  | 512.2 | 508.9 | 502.0 | 504.8 | 502.9 |
| 25°    | 497.4 | 494.1 | 487.6 | 488.1 | 486.3 |
| 27.5°  | 480.7 | 477.5 | 471.4 | 470.5 | 468.2 |
| 30°    | 464.0 | 460.3 | 454.3 | 452.5 | 450.2 |
| 32.5°  | 446.5 | 443.2 | 436.7 | 434.4 | 432.1 |
| 35°    | 428.0 | 424.7 | 418.2 | 415.0 | 412.7 |
| 37.5°  | 408.5 | 405.8 | 398.8 | 395.6 | 392.3 |
| 40°    | 389.6 | 385.9 | 378.9 | 374.3 | 372.0 |
| 42.5°  | 369.2 | 367.3 | 359.5 | 353.9 | 352.5 |
| 45°    | 349.3 | 346.1 | 338.7 | 333.6 | 332.2 |
| 47.5°  | 328.5 | 326.2 | 319.2 | 313.7 | 310.0 |
| 50°    | 307.2 | 305.4 | 298.9 | 292.4 | 289.6 |
| 52.5°  | 286.4 | 284.1 | 277.1 | 271.6 | 267.9 |
| 55°    | 264.2 | 262.8 | 256.3 | 250.8 | 248.0 |
| 57.5°  | 243.4 | 242.0 | 235.5 | 229.9 | 227.2 |
| 60°    | 221.6 | 219.3 | 213.3 | 209.1 | 206.8 |
| 62.5°  | 200.3 | 198.5 | 192.0 | 188.3 | 186.0 |
| 65°    | 179.0 | 176.7 | 172.1 | 167.5 | 165.2 |
| 67.5°  | 157.3 | 155.5 | 150.8 | 146.2 | 145.7 |
| 70°    | 137.4 | 134.2 | 130.5 | 126.8 | 125.4 |
| 72.5°  | 116.1 | 112.9 | 110.1 | 107.3 | 105.9 |
| 75°    | 95.3  | 93.0  | 90.7  | 88.8  | 88.4  |
| 77.5°  | 75.0  | 74.0  | 71.7  | 71.2  | 69.9  |
| 80°    | 56.9  | 55.5  | 54.6  | 53.7  | 53.2  |
| 82.5°  | 39.3  | 38.9  | 38.9  | 38.4  | 37.9  |
| 85°    | 25.0  | 25.0  | 24.1  | 24.1  | 23.6  |
| 87.5°  | 12.0  | 11.6  | 11.1  | 11.1  | 11.1  |
| 90°    | 2.3   | 10.7  | 16.9  | 21.5  | 23.0  |
| 92.5°  | 11.5  | 10.0  | 16.1  | 20.7  | 20.7  |
| 95°    | 42.2  | 16.1  | 16.9  | 21.5  | 22.2  |
| 97.5°  | 80.5  | 97.4  | 16.9  | 20.7  | 21.5  |
| 100°   | 125.8 | 139.6 | 33.7  | 20.7  | 21.5  |
| 102.5° | 176.4 | 185.6 | 194.8 | 22.2  | 22.2  |
| 105°   | 230.8 | 235.4 | 239.3 | 246.2 | 218.6 |
| 107.5° | 280.7 | 283.0 | 288.4 | 292.2 | 295.3 |
| 110°   | 331.3 | 333.6 | 338.2 | 339.7 | 342.0 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 380.4  | 385.0  | 386.5  | 385.8  | 388.8  |
| 115°   | 431.0  | 433.3  | 432.5  | 434.1  | 434.1  |
| 117.5° | 476.3  | 479.3  | 481.6  | 480.9  | 480.9  |
| 120°   | 522.3  | 525.3  | 524.6  | 526.1  | 524.6  |
| 122.5° | 565.2  | 566.8  | 568.3  | 569.1  | 567.5  |
| 125°   | 605.9  | 608.9  | 607.4  | 609.7  | 610.5  |
| 127.5° | 645.0  | 645.8  | 649.6  | 648.8  | 648.1  |
| 130°   | 682.6  | 683.3  | 685.6  | 686.4  | 686.4  |
| 132.5° | 717.1  | 718.6  | 721.7  | 722.4  | 721.7  |
| 135°   | 751.6  | 750.8  | 753.9  | 755.4  | 757.0  |
| 137.5° | 782.3  | 782.3  | 786.1  | 787.6  | 786.9  |
| 140°   | 812.2  | 813.7  | 815.2  | 817.5  | 818.3  |
| 142.5° | 839.0  | 842.1  | 842.9  | 844.4  | 844.4  |
| 145°   | 866.6  | 868.9  | 868.9  | 869.7  | 871.2  |
| 147.5° | 888.1  | 892.7  | 891.9  | 892.7  | 893.5  |
| 150°   | 911.9  | 914.9  | 914.2  | 914.2  | 914.9  |
| 152.5° | 931.8  | 934.1  | 932.6  | 934.1  | 933.3  |
| 155°   | 950.2  | 951.0  | 948.7  | 951.8  | 949.5  |
| 157.5° | 966.3  | 966.3  | 963.3  | 967.1  | 963.3  |
| 160°   | 980.1  | 977.8  | 977.1  | 981.7  | 977.1  |
| 162.5° | 992.4  | 989.3  | 988.6  | 993.2  | 987.8  |
| 165°   | 1002.4 | 998.5  | 998.5  | 1004.7 | 997.8  |
| 167.5° | 1010.8 | 1007.0 | 1006.2 | 1013.1 | 1005.4 |
| 170°   | 1017.7 | 1013.1 | 1013.9 | 1020.0 | 1012.3 |
| 172.5° | 1022.3 | 1017.7 | 1018.5 | 1024.6 | 1016.2 |
| 175°   | 1025.4 | 1020.8 | 1021.5 | 1028.4 | 1019.2 |
| 177.5° | 1027.7 | 1022.3 | 1023.8 | 1030.0 | 1020.8 |
| 180°   | 1025.4 | 1025.4 | 1025.4 | 1025.4 | 1025.4 |

(END OF REPORT)