

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: P1001344

Luminaire Tested: SA4XXDIP-B350D810UB27-4F0-XX-W2A-D1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1001344  
REPORT IS A COMBINATION OF REPORTS P995963 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B350D810UB27-4F0-XX-W2A-D1  
Description: Define 4 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

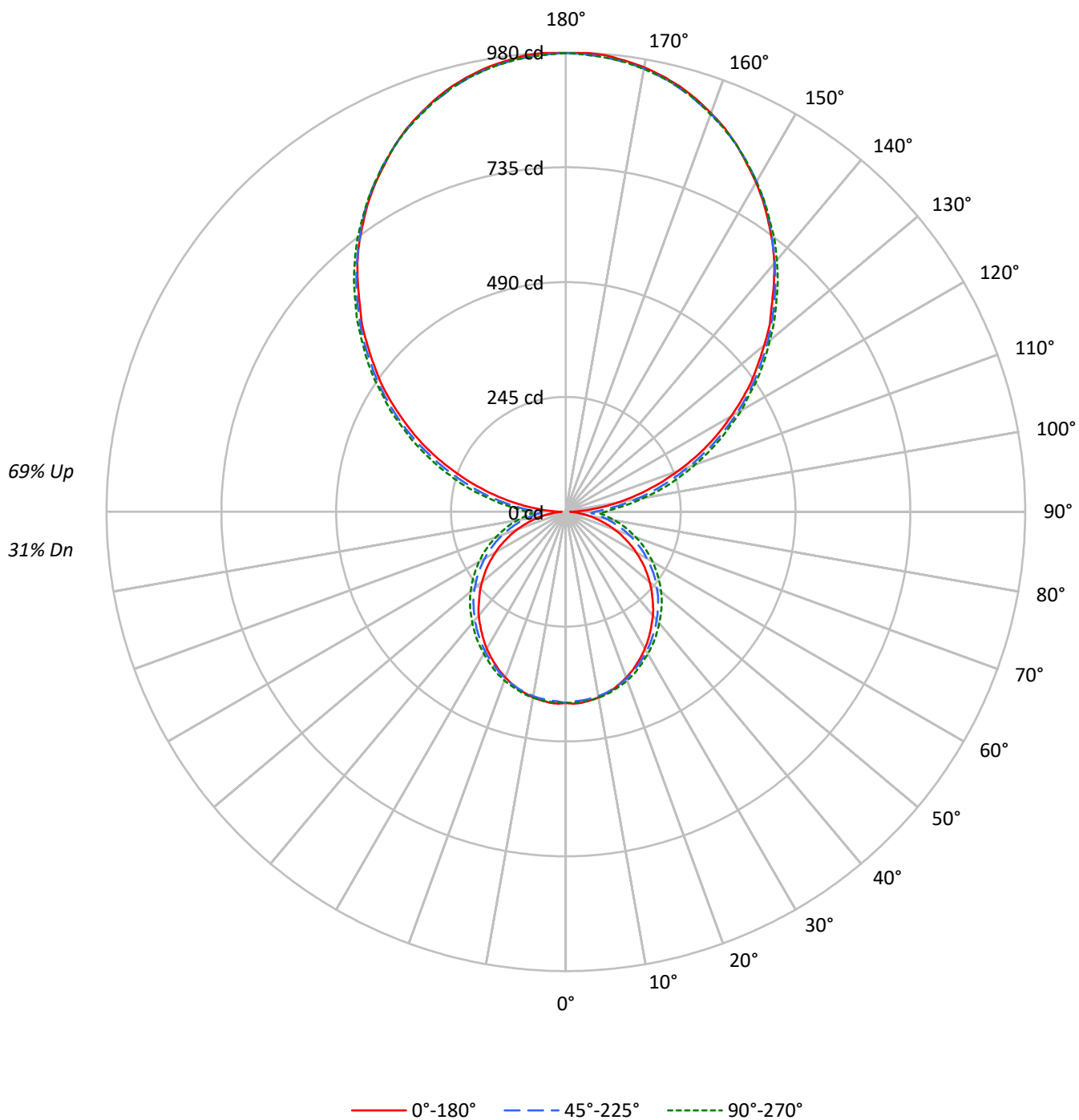
Lumens per Lamp: N/A  
Luminaire Lumens: 4109.0 lumens  
Efficiency: N/A  
Efficacy: 120.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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 | 39 | 39 | 39 |
| 1   | 93  | 88  | 84  | 81  | 83 | 80 | 76 | 73 | 63 | 61 | 58 | 48 | 46 | 45 | 33 | 32 | 32 |
| 2   | 84  | 77  | 71  | 65  | 75 | 69 | 64 | 59 | 55 | 51 | 48 | 41 | 39 | 37 | 29 | 27 | 26 |
| 3   | 77  | 67  | 60  | 54  | 69 | 61 | 54 | 49 | 48 | 43 | 40 | 36 | 33 | 31 | 25 | 24 | 22 |
| 4   | 70  | 59  | 51  | 45  | 63 | 53 | 47 | 41 | 42 | 37 | 34 | 32 | 29 | 26 | 23 | 20 | 19 |
| 5   | 64  | 53  | 45  | 39  | 57 | 47 | 40 | 35 | 38 | 33 | 29 | 29 | 25 | 22 | 20 | 18 | 16 |
| 6   | 59  | 47  | 39  | 33  | 53 | 42 | 35 | 30 | 34 | 29 | 25 | 26 | 22 | 19 | 18 | 16 | 14 |
| 7   | 54  | 42  | 34  | 29  | 49 | 38 | 31 | 26 | 31 | 25 | 22 | 23 | 20 | 17 | 17 | 14 | 12 |
| 8   | 50  | 38  | 31  | 25  | 45 | 35 | 28 | 23 | 28 | 23 | 19 | 21 | 18 | 15 | 15 | 13 | 11 |
| 9   | 47  | 35  | 27  | 22  | 42 | 31 | 25 | 21 | 25 | 20 | 17 | 19 | 16 | 13 | 14 | 12 | 10 |
| 10  | 44  | 32  | 25  | 20  | 39 | 29 | 23 | 18 | 23 | 18 | 15 | 18 | 14 | 12 | 13 | 11 | 9  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3327 | 3327 | 3327 |
| 5°  | 3336 | 3240 | 3246 |
| 10° | 3314 | 3176 | 3168 |
| 15° | 3283 | 3105 | 3079 |
| 20° | 3238 | 3027 | 2993 |
| 25° | 3186 | 2942 | 2900 |
| 30° | 3130 | 2857 | 2805 |
| 35° | 3066 | 2770 | 2720 |
| 40° | 3015 | 2687 | 2633 |
| 45° | 2940 | 2609 | 2555 |
| 50° | 2877 | 2520 | 2474 |
| 55° | 2810 | 2435 | 2380 |
| 60° | 2707 | 2328 | 2292 |
| 65° | 2593 | 2214 | 2186 |
| 70° | 2456 | 2082 | 2062 |
| 75° | 2265 | 1937 | 1946 |
| 80° | 2048 | 1789 | 1822 |
| 85° | 1761 | 1640 | 1723 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 90°

Luminance: 3131 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 38.7   | 0.9       |
| 10°-20°   | 110.8  | 2.7       |
| 20°-30°   | 167.5  | 4.1       |
| 30°-40°   | 202.6  | 4.9       |
| 40°-50°   | 214.2  | 5.2       |
| 50°-60°   | 201.6  | 4.9       |
| 60°-70°   | 167.3  | 4.1       |
| 70°-80°   | 117.4  | 2.9       |
| 80°-90°   | 68.3   | 1.7       |
| 90°-100°  | 103.2  | 2.5       |
| 100°-110° | 220.3  | 5.4       |
| 110°-120° | 344.2  | 8.4       |
| 120°-130° | 439.2  | 10.7      |
| 130°-140° | 485.7  | 11.8      |
| 140°-150° | 473.6  | 11.5      |
| 150°-160° | 397.5  | 9.7       |
| 160°-170° | 264.5  | 6.4       |
| 170°-180° | 92.6   | 2.3       |
| 0°-30°    | 316.9  | 7.7       |
| 0°-40°    | 519.5  | 12.6      |
| 0°-60°    | 935.3  | 22.8      |
| 0°-90°    | 1288.2 | 31.4      |
| 90°-120°  | 667.7  | 16.2      |
| 90°-150°  | 2066.1 | 50.3      |
| 90°-180°  | 2821.0 | 68.7      |
| 0°-180°   | 4109.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 408 | 408   | 408 | 408   | 408 |      |
| 5°   | 408 | 407   | 404 | 408   | 407 | 39   |
| 15°  | 392 | 392   | 391 | 395   | 394 | 110  |
| 25°  | 358 | 361   | 362 | 367   | 368 | 165  |
| 35°  | 313 | 319   | 324 | 330   | 331 | 196  |
| 45°  | 261 | 270   | 279 | 286   | 289 | 202  |
| 55°  | 205 | 214   | 228 | 237   | 240 | 182  |
| 65°  | 142 | 156   | 172 | 183   | 187 | 140  |
| 75°  | 79  | 96    | 115 | 128   | 132 | 84   |
| 85°  | 24  | 43    | 64  | 78    | 82  | 25   |
| 90°  | 10  | 36    | 62  | 80    | 85  | 8    |
| 95°  | 51  | 73    | 97  | 112   | 116 | 54   |
| 105° | 180 | 190   | 210 | 224   | 230 | 192  |
| 115° | 333 | 337   | 350 | 359   | 362 | 328  |
| 125° | 482 | 482   | 493 | 500   | 501 | 430  |
| 135° | 621 | 625   | 629 | 634   | 635 | 481  |
| 145° | 754 | 756   | 757 | 759   | 759 | 472  |
| 155° | 863 | 863   | 862 | 865   | 862 | 397  |
| 165° | 940 | 937   | 936 | 940   | 937 | 265  |
| 175° | 977 | 974   | 973 | 978   | 973 | 93   |
| 180° | 979 | 979   | 979 | 979   | 979 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 408.0 | 408.0 | 408.0 | 408.0 | 408.0 |
| 2.5°   | 409.8 | 408.4 | 404.8 | 408.0 | 407.5 |
| 5°     | 408.4 | 407.1 | 403.9 | 407.5 | 407.1 |
| 7.5°   | 405.7 | 404.8 | 402.0 | 406.2 | 405.7 |
| 10°    | 402.0 | 401.6 | 399.3 | 403.4 | 403.0 |
| 12.5°  | 397.0 | 397.0 | 395.7 | 399.3 | 399.3 |
| 15°    | 391.5 | 392.0 | 390.6 | 394.7 | 394.3 |
| 17.5°  | 384.2 | 385.6 | 385.1 | 389.3 | 388.8 |
| 20°    | 376.5 | 377.8 | 378.3 | 382.9 | 382.9 |
| 22.5°  | 367.8 | 369.6 | 370.5 | 375.1 | 376.0 |
| 25°    | 358.2 | 360.9 | 362.3 | 367.3 | 367.8 |
| 27.5°  | 347.7 | 351.8 | 353.6 | 358.2 | 358.6 |
| 30°    | 337.2 | 340.8 | 344.0 | 349.1 | 350.0 |
| 32.5°  | 325.8 | 330.3 | 334.0 | 339.9 | 340.8 |
| 35°    | 313.4 | 318.9 | 323.5 | 329.9 | 331.2 |
| 37.5°  | 301.1 | 307.5 | 313.0 | 319.4 | 320.7 |
| 40°    | 289.2 | 295.1 | 301.5 | 308.4 | 310.2 |
| 42.5°  | 275.5 | 282.3 | 290.1 | 297.9 | 299.3 |
| 45°    | 261.3 | 270.0 | 278.7 | 286.5 | 288.7 |
| 47.5°  | 248.1 | 256.8 | 266.8 | 274.6 | 277.3 |
| 50°    | 233.5 | 243.5 | 253.6 | 262.7 | 265.4 |
| 52.5°  | 218.8 | 228.9 | 240.8 | 249.9 | 252.7 |
| 55°    | 204.7 | 214.3 | 228.0 | 237.1 | 239.9 |
| 57.5°  | 188.7 | 200.6 | 213.8 | 224.8 | 227.1 |
| 60°    | 173.2 | 185.0 | 200.1 | 210.6 | 214.3 |
| 62.5°  | 158.1 | 171.3 | 186.4 | 196.9 | 200.6 |
| 65°    | 141.6 | 156.3 | 171.8 | 183.2 | 186.9 |
| 67.5°  | 126.1 | 141.6 | 158.1 | 169.5 | 173.2 |
| 70°    | 110.1 | 125.6 | 143.0 | 155.3 | 158.5 |
| 72.5°  | 94.6  | 110.6 | 129.3 | 141.2 | 144.8 |
| 75°    | 78.6  | 95.5  | 114.7 | 127.5 | 131.6 |
| 77.5°  | 63.5  | 81.3  | 101.4 | 114.2 | 118.8 |
| 80°    | 49.8  | 68.1  | 88.2  | 101.9 | 105.5 |
| 82.5°  | 36.1  | 55.3  | 75.4  | 89.5  | 93.7  |
| 85°    | 24.2  | 43.4  | 64.0  | 77.7  | 82.2  |
| 87.5°  | 15.1  | 33.8  | 53.9  | 67.2  | 71.3  |
| 90°    | 9.6   | 36.2  | 61.9  | 79.7  | 84.8  |
| 92.5°  | 26.6  | 52.3  | 75.8  | 90.9  | 95.2  |
| 95°    | 51.3  | 73.2  | 97.2  | 111.9 | 116.0 |
| 97.5°  | 78.2  | 97.4  | 122.3 | 137.1 | 141.3 |
| 100°   | 111.0 | 125.9 | 150.5 | 164.4 | 167.6 |
| 102.5° | 145.8 | 156.7 | 180.0 | 194.2 | 198.6 |
| 105°   | 180.5 | 190.3 | 210.4 | 224.0 | 229.9 |
| 107.5° | 217.6 | 226.1 | 242.9 | 257.3 | 259.8 |
| 110°   | 255.0 | 262.9 | 278.1 | 287.1 | 293.0 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 293.9 | 299.4 | 313.0 | 323.0 | 326.7 |
| 115°   | 332.8 | 337.0 | 350.0 | 359.3 | 361.7 |
| 117.5° | 369.9 | 372.7 | 385.6 | 392.9 | 394.3 |
| 120°   | 406.6 | 411.0 | 421.9 | 427.2 | 432.4 |
| 122.5° | 445.2 | 445.9 | 457.5 | 464.4 | 463.8 |
| 125°   | 482.5 | 482.1 | 492.8 | 499.9 | 501.1 |
| 127.5° | 516.6 | 518.4 | 526.0 | 532.7 | 535.2 |
| 130°   | 552.5 | 554.3 | 561.6 | 568.3 | 568.0 |
| 132.5° | 589.6 | 590.6 | 595.4 | 601.7 | 603.6 |
| 135°   | 620.9 | 625.4 | 628.6 | 634.4 | 635.0 |
| 137.5° | 656.5 | 658.4 | 661.7 | 666.2 | 669.3 |
| 140°   | 692.1 | 693.2 | 693.6 | 698.8 | 700.3 |
| 142.5° | 724.2 | 725.7 | 724.5 | 729.5 | 731.4 |
| 145°   | 753.7 | 756.3 | 757.0 | 759.0 | 758.6 |
| 147.5° | 784.0 | 787.3 | 786.6 | 786.3 | 787.3 |
| 150°   | 811.3 | 813.8 | 813.8 | 813.8 | 813.0 |
| 152.5° | 836.5 | 838.0 | 838.8 | 841.1 | 838.8 |
| 155°   | 863.0 | 863.0 | 862.3 | 865.3 | 862.3 |
| 157.5° | 885.7 | 884.2 | 884.2 | 886.5 | 884.2 |
| 160°   | 905.4 | 904.6 | 903.9 | 906.2 | 902.4 |
| 162.5° | 923.6 | 921.3 | 920.5 | 925.1 | 921.3 |
| 165°   | 939.5 | 937.2 | 935.7 | 940.2 | 937.2 |
| 167.5° | 952.3 | 949.3 | 949.3 | 953.9 | 949.3 |
| 170°   | 962.9 | 959.2 | 959.9 | 964.5 | 959.2 |
| 172.5° | 970.5 | 967.5 | 967.5 | 972.8 | 967.5 |
| 175°   | 977.3 | 973.5 | 972.8 | 978.1 | 972.8 |
| 177.5° | 980.3 | 976.6 | 976.6 | 981.9 | 975.8 |
| 180°   | 978.8 | 978.8 | 978.8 | 978.8 | 978.8 |

(END OF REPORT)