

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: P999566

Luminaire Tested: SA2XXRDIP-B290D530UB30-4F0-XX-W2A-F4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999566  
REPORT IS A COMBINATION OF REPORTS P988119 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B290D530UB30-4F0-XX-W2A-F4  
Description: Define 2 Regressed Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589}  
{m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

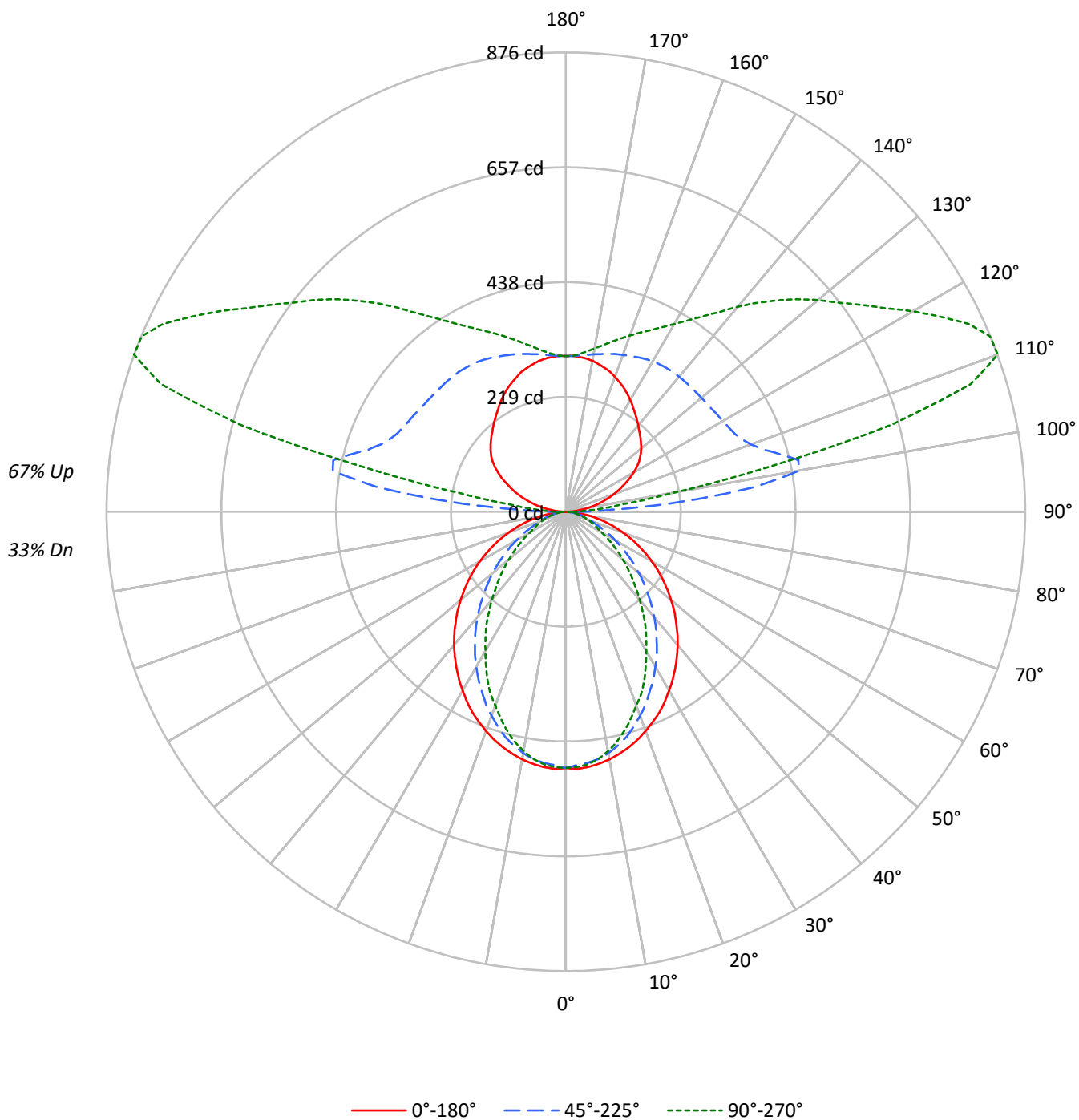
Lumens per Lamp: N/A  
Luminaire Lumens: 3078.4 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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   | 103 | 103 | 103 | 103 | 93 | 93 | 93 | 93 | 74 | 74 | 74 | 56 | 56 | 56 | 40 | 40 | 40 |
| 1   | 94  | 90  | 86  | 83  | 85 | 81 | 78 | 76 | 65 | 63 | 61 | 50 | 49 | 47 | 36 | 35 | 35 |
| 2   | 86  | 79  | 73  | 68  | 77 | 71 | 67 | 62 | 57 | 54 | 51 | 44 | 42 | 40 | 32 | 31 | 30 |
| 3   | 79  | 70  | 63  | 57  | 71 | 63 | 57 | 52 | 51 | 47 | 43 | 39 | 37 | 34 | 29 | 27 | 25 |
| 4   | 72  | 62  | 54  | 49  | 65 | 56 | 50 | 45 | 45 | 41 | 37 | 35 | 32 | 29 | 26 | 24 | 22 |
| 5   | 66  | 55  | 47  | 42  | 59 | 50 | 43 | 38 | 41 | 36 | 32 | 32 | 28 | 26 | 23 | 21 | 20 |
| 6   | 61  | 49  | 42  | 36  | 55 | 45 | 38 | 33 | 37 | 32 | 28 | 29 | 25 | 23 | 21 | 19 | 17 |
| 7   | 56  | 45  | 37  | 32  | 51 | 41 | 34 | 29 | 33 | 28 | 25 | 26 | 23 | 20 | 20 | 17 | 15 |
| 8   | 52  | 40  | 33  | 28  | 47 | 37 | 30 | 26 | 30 | 25 | 22 | 24 | 20 | 18 | 18 | 16 | 14 |
| 9   | 49  | 37  | 30  | 25  | 44 | 34 | 27 | 23 | 28 | 23 | 20 | 22 | 19 | 16 | 17 | 14 | 13 |
| 10  | 45  | 34  | 27  | 22  | 41 | 31 | 25 | 21 | 25 | 21 | 18 | 20 | 17 | 15 | 15 | 13 | 12 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7736 | 7736 | 7736 |
| 5°  | 7748 | 7359 | 7305 |
| 10° | 7672 | 6979 | 6750 |
| 15° | 7566 | 6532 | 6117 |
| 20° | 7427 | 6022 | 5454 |
| 25° | 7284 | 5499 | 4849 |
| 30° | 7092 | 4991 | 4187 |
| 35° | 6903 | 4477 | 3620 |
| 40° | 6713 | 3973 | 3034 |
| 45° | 6491 | 3452 | 2524 |
| 50° | 6261 | 2952 | 2056 |
| 55° | 6022 | 2449 | 1632 |
| 60° | 5744 | 1958 | 1234 |
| 65° | 5425 | 1492 | 1004 |
| 70° | 5037 | 1083 | 798  |
| 75° | 4554 | 827  | 609  |
| 80° | 3848 | 559  | 410  |
| 85° | 2684 | 256  | 198  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6491 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 45.8   | 1.5       |
| 10°-20°   | 125.7  | 4.1       |
| 20°-30°   | 176.5  | 5.7       |
| 30°-40°   | 192.4  | 6.3       |
| 40°-50°   | 176.8  | 5.7       |
| 50°-60°   | 138.9  | 4.5       |
| 60°-70°   | 90.4   | 2.9       |
| 70°-80°   | 46.5   | 1.5       |
| 80°-90°   | 13.8   | 0.4       |
| 90°-100°  | 120.5  | 3.9       |
| 100°-110° | 407.2  | 13.2      |
| 110°-120° | 428.0  | 13.9      |
| 120°-130° | 352.0  | 11.4      |
| 130°-140° | 282.8  | 9.2       |
| 140°-150° | 213.7  | 6.9       |
| 150°-160° | 150.2  | 4.9       |
| 160°-170° | 88.4   | 2.9       |
| 170°-180° | 28.8   | 0.9       |
| 0°-30°    | 348.0  | 11.3      |
| 0°-40°    | 540.4  | 17.6      |
| 0°-60°    | 856.2  | 27.8      |
| 0°-90°    | 1006.9 | 32.7      |
| 90°-120°  | 955.6  | 31.0      |
| 90°-150°  | 1804.1 | 58.6      |
| 90°-180°  | 2071.0 | 67.3      |
| 0°-180°   | 3078.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 489 | 489   | 489 | 489   | 489 |      |
| 5°   | 489 | 486   | 481 | 485   | 483 | 46   |
| 15°  | 465 | 460   | 445 | 436   | 432 | 131  |
| 25°  | 422 | 408   | 378 | 360   | 354 | 194  |
| 35°  | 364 | 341   | 302 | 274   | 264 | 228  |
| 45°  | 297 | 268   | 221 | 190   | 179 | 230  |
| 55°  | 226 | 192   | 144 | 117   | 109 | 202  |
| 65°  | 153 | 117   | 77  | 62    | 61  | 151  |
| 75°  | 81  | 50    | 35  | 32    | 32  | 86   |
| 85°  | 19  | 10    | 8   | 8     | 8   | 22   |
| 90°  | 1   | 8     | 19  | 19    | 19  | 2    |
| 95°  | 20  | 49    | 224 | 85    | 65  | 21   |
| 105° | 70  | 105   | 423 | 757   | 644 | 74   |
| 115° | 123 | 155   | 354 | 731   | 847 | 122  |
| 125° | 171 | 203   | 340 | 592   | 687 | 152  |
| 135° | 201 | 240   | 336 | 498   | 570 | 155  |
| 145° | 230 | 264   | 335 | 416   | 455 | 144  |
| 155° | 261 | 282   | 325 | 368   | 382 | 120  |
| 165° | 284 | 293   | 311 | 330   | 335 | 80   |
| 175° | 296 | 297   | 299 | 303   | 302 | 28   |
| 180° | 297 | 297   | 297 | 297   | 297 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 488.7 | 488.7 | 488.7 | 488.7 | 488.7 |
| 2.5°   | 490.9 | 488.7 | 483.8 | 488.2 | 487.3 |
| 5°     | 488.7 | 486.5 | 480.7 | 484.7 | 483.4 |
| 7.5°   | 484.7 | 482.0 | 475.8 | 477.6 | 475.4 |
| 10°    | 479.4 | 476.3 | 467.4 | 466.1 | 463.5 |
| 12.5°  | 472.7 | 468.8 | 456.8 | 454.2 | 449.3 |
| 15°    | 464.8 | 459.9 | 444.9 | 436.5 | 432.1 |
| 17.5°  | 455.5 | 448.4 | 429.8 | 420.1 | 413.0 |
| 20°    | 444.9 | 436.0 | 413.9 | 402.9 | 393.1 |
| 22.5°  | 433.4 | 423.2 | 397.6 | 382.5 | 375.9 |
| 25°    | 421.9 | 407.7 | 378.5 | 360.4 | 353.8 |
| 27.5°  | 408.2 | 393.1 | 360.9 | 340.1 | 329.9 |
| 30°    | 393.6 | 376.8 | 341.4 | 318.8 | 306.9 |
| 32.5°  | 379.4 | 359.1 | 322.8 | 296.3 | 285.2 |
| 35°    | 363.5 | 341.0 | 302.0 | 274.2 | 264.5 |
| 37.5°  | 348.0 | 323.7 | 282.6 | 252.1 | 241.0 |
| 40°    | 331.7 | 305.1 | 262.2 | 230.8 | 219.3 |
| 42.5°  | 314.9 | 286.6 | 241.9 | 209.2 | 198.1 |
| 45°    | 297.2 | 267.5 | 221.1 | 189.7 | 179.1 |
| 47.5°  | 280.4 | 249.0 | 201.2 | 169.8 | 160.1 |
| 50°    | 261.8 | 230.4 | 181.8 | 151.2 | 142.0 |
| 52.5°  | 243.7 | 210.5 | 163.2 | 134.0 | 125.6 |
| 55°    | 226.0 | 191.5 | 143.7 | 117.2 | 108.8 |
| 57.5°  | 207.8 | 172.5 | 126.5 | 101.7 | 94.6  |
| 60°    | 189.3 | 153.9 | 108.3 | 85.8  | 78.7  |
| 62.5°  | 171.1 | 135.8 | 92.9  | 71.6  | 68.1  |
| 65°    | 152.6 | 116.7 | 76.9  | 61.9  | 60.6  |
| 67.5°  | 134.9 | 99.1  | 61.9  | 54.4  | 53.1  |
| 70°    | 116.3 | 81.8  | 51.3  | 46.9  | 45.1  |
| 72.5°  | 98.6  | 65.9  | 42.9  | 39.4  | 38.5  |
| 75°    | 81.4  | 50.4  | 35.4  | 32.3  | 31.8  |
| 77.5°  | 64.1  | 35.8  | 27.9  | 26.1  | 25.2  |
| 80°    | 48.2  | 25.6  | 21.2  | 19.5  | 19.5  |
| 82.5°  | 33.6  | 17.2  | 14.6  | 13.7  | 13.7  |
| 85°    | 19.0  | 9.7   | 8.4   | 8.4   | 8.4   |
| 87.5°  | 7.1   | 3.5   | 3.5   | 3.1   | 3.1   |
| 90°    | 0.6   | 7.8   | 19.4  | 18.6  | 18.9  |
| 92.5°  | 8.6   | 27.2  | 88.0  | 40.6  | 34.9  |
| 95°    | 20.0  | 49.2  | 224.0 | 84.6  | 65.1  |
| 97.5°  | 29.7  | 64.8  | 365.1 | 169.7 | 109.1 |
| 100°   | 44.0  | 79.4  | 451.4 | 338.0 | 204.5 |
| 102.5° | 57.1  | 92.6  | 454.2 | 571.4 | 398.8 |
| 105°   | 69.7  | 105.1 | 423.4 | 756.8 | 643.9 |
| 107.5° | 83.4  | 117.7 | 394.8 | 823.9 | 809.1 |
| 110°   | 97.1  | 130.6 | 375.4 | 813.0 | 876.5 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 109.7 | 142.9 | 362.8 | 776.2 | 875.3 |
| 115°   | 122.8 | 155.1 | 354.2 | 731.0 | 847.3 |
| 117.5° | 136.6 | 167.4 | 349.7 | 687.9 | 805.1 |
| 120°   | 149.1 | 179.4 | 345.7 | 649.4 | 764.5 |
| 122.5° | 161.1 | 191.7 | 343.4 | 619.4 | 722.2 |
| 125°   | 171.4 | 202.8 | 340.5 | 592.2 | 687.4 |
| 127.5° | 180.0 | 213.4 | 338.8 | 569.1 | 654.8 |
| 130°   | 187.4 | 222.8 | 337.7 | 545.6 | 627.9 |
| 132.5° | 194.3 | 232.0 | 337.1 | 521.3 | 599.9 |
| 135°   | 201.1 | 240.0 | 336.5 | 497.7 | 569.7 |
| 137.5° | 207.4 | 246.8 | 336.5 | 473.6 | 540.5 |
| 140°   | 214.8 | 253.1 | 336.0 | 452.6 | 510.2 |
| 142.5° | 222.3 | 258.2 | 336.0 | 432.2 | 479.9 |
| 145°   | 229.7 | 264.0 | 334.8 | 415.7 | 454.8 |
| 147.5° | 237.7 | 268.6 | 333.1 | 401.1 | 432.5 |
| 150°   | 245.7 | 273.2 | 331.4 | 388.5 | 413.1 |
| 152.5° | 253.7 | 277.7 | 328.5 | 378.0 | 396.5 |
| 155°   | 261.1 | 282.0 | 325.1 | 367.6 | 382.2 |
| 157.5° | 267.4 | 285.4 | 321.7 | 358.0 | 369.7 |
| 160°   | 273.7 | 288.8 | 318.3 | 348.2 | 357.7 |
| 162.5° | 280.0 | 291.4 | 315.4 | 339.1 | 346.2 |
| 165°   | 284.5 | 293.1 | 311.4 | 330.2 | 335.4 |
| 167.5° | 288.5 | 294.8 | 308.0 | 322.2 | 325.1 |
| 170°   | 292.5 | 295.6 | 305.1 | 314.8 | 316.0 |
| 172.5° | 294.8 | 296.6 | 301.7 | 308.2 | 308.5 |
| 175°   | 296.5 | 296.8 | 299.4 | 303.1 | 302.3 |
| 177.5° | 297.7 | 297.1 | 297.1 | 299.4 | 297.7 |
| 180°   | 297.1 | 297.1 | 297.1 | 297.1 | 297.1 |

(END OF REPORT)