

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: P999542

Luminaire Tested: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999542  
REPORT IS A COMBINATION OF REPORTS P988095 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F  
Description: Define 2 Regressed Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015}  
{m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

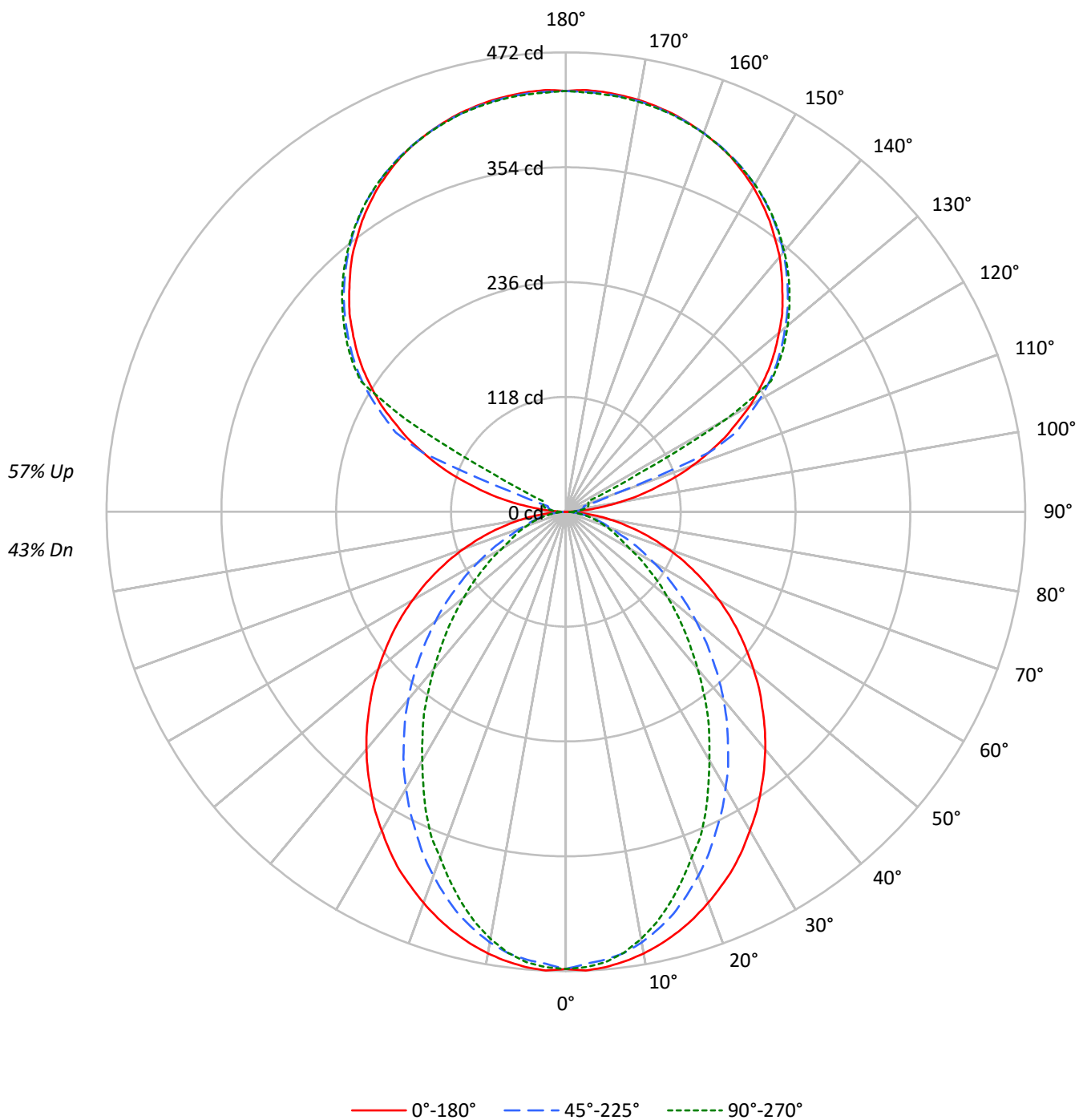
Lumens per Lamp: N/A  
Luminaire Lumens: 2234.0 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 22.3  
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

TEST NUMBER: P999542

CATALOG NUMBER: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

### Luminous Intensity Polar Plot



TEST NUMBER: P999542

CATALOG NUMBER: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

**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   | 106 | 106 | 106 | 106 | 96 | 96 | 96 | 96 | 80 | 80 | 80 | 64 | 64 | 64 | 50 | 50 | 50 |
| 1   | 97  | 93  | 89  | 86  | 88 | 85 | 82 | 79 | 70 | 68 | 66 | 57 | 56 | 54 | 45 | 44 | 43 |
| 2   | 88  | 81  | 75  | 71  | 81 | 75 | 70 | 65 | 62 | 59 | 55 | 51 | 48 | 46 | 40 | 38 | 37 |
| 3   | 81  | 72  | 65  | 59  | 74 | 66 | 60 | 55 | 55 | 51 | 47 | 45 | 42 | 39 | 36 | 34 | 32 |
| 4   | 74  | 64  | 56  | 50  | 68 | 59 | 52 | 47 | 49 | 44 | 40 | 40 | 37 | 34 | 32 | 30 | 28 |
| 5   | 68  | 57  | 49  | 43  | 62 | 53 | 46 | 41 | 44 | 39 | 35 | 36 | 33 | 30 | 29 | 27 | 24 |
| 6   | 63  | 51  | 43  | 38  | 57 | 47 | 40 | 35 | 40 | 35 | 31 | 33 | 29 | 26 | 27 | 24 | 22 |
| 7   | 58  | 46  | 39  | 33  | 53 | 43 | 36 | 31 | 36 | 31 | 27 | 30 | 26 | 23 | 24 | 22 | 19 |
| 8   | 54  | 42  | 35  | 30  | 49 | 39 | 32 | 28 | 33 | 28 | 24 | 28 | 24 | 21 | 23 | 20 | 18 |
| 9   | 50  | 39  | 31  | 26  | 46 | 36 | 29 | 25 | 31 | 25 | 22 | 26 | 22 | 19 | 21 | 18 | 16 |
| 10  | 47  | 35  | 28  | 24  | 43 | 33 | 27 | 22 | 28 | 23 | 20 | 24 | 20 | 17 | 19 | 17 | 15 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7435 | 7435 | 7435 |
| 5°  | 7447 | 7073 | 7021 |
| 10° | 7374 | 6709 | 6488 |
| 15° | 7272 | 6278 | 5879 |
| 20° | 7138 | 5789 | 5243 |
| 25° | 7001 | 5287 | 4661 |
| 30° | 6816 | 4798 | 4025 |
| 35° | 6636 | 4303 | 3479 |
| 40° | 6452 | 3820 | 2916 |
| 45° | 6238 | 3318 | 2427 |
| 50° | 6017 | 2836 | 1975 |
| 55° | 5788 | 2354 | 1569 |
| 60° | 5520 | 1882 | 1187 |
| 65° | 5212 | 1436 | 964  |
| 70° | 4842 | 1041 | 768  |
| 75° | 4375 | 794  | 586  |
| 80° | 3696 | 538  | 393  |
| 85° | 2585 | 247  | 190  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6238 cd/sqm

TEST NUMBER: P999542

CATALOG NUMBER: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 44.0   | 2.0       |
| 10°-20°   | 120.8  | 5.4       |
| 20°-30°   | 169.7  | 7.6       |
| 30°-40°   | 184.9  | 8.3       |
| 40°-50°   | 170.0  | 7.6       |
| 50°-60°   | 133.5  | 6.0       |
| 60°-70°   | 86.9   | 3.9       |
| 70°-80°   | 44.7   | 2.0       |
| 80°-90°   | 12.2   | 0.5       |
| 90°-100°  | 14.3   | 0.6       |
| 100°-110° | 53.1   | 2.4       |
| 110°-120° | 140.9  | 6.3       |
| 120°-130° | 233.7  | 10.5      |
| 130°-140° | 248.3  | 11.1      |
| 140°-150° | 230.7  | 10.3      |
| 150°-160° | 185.5  | 8.3       |
| 160°-170° | 119.5  | 5.4       |
| 170°-180° | 41.1   | 1.8       |
| 0°-30°    | 334.5  | 15.0      |
| 0°-40°    | 519.5  | 23.3      |
| 0°-60°    | 823.0  | 36.8      |
| 0°-90°    | 966.8  | 43.3      |
| 90°-120°  | 208.3  | 9.3       |
| 90°-150°  | 921.1  | 41.2      |
| 90°-180°  | 1267.0 | 56.7      |
| 0°-180°   | 2234.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 470 | 470   | 470 | 470   | 470 |      |
| 5°   | 470 | 468   | 462 | 466   | 465 | 45   |
| 15°  | 447 | 442   | 428 | 420   | 415 | 126  |
| 25°  | 406 | 392   | 364 | 346   | 340 | 186  |
| 35°  | 349 | 328   | 290 | 264   | 254 | 219  |
| 45°  | 286 | 257   | 212 | 182   | 172 | 221  |
| 55°  | 217 | 184   | 138 | 113   | 105 | 194  |
| 65°  | 147 | 112   | 74  | 60    | 58  | 145  |
| 75°  | 78  | 48    | 34  | 31    | 31  | 83   |
| 85°  | 18  | 9     | 8   | 8     | 8   | 21   |
| 90°  | 0   | 4     | 6   | 8     | 8   | 2    |
| 95°  | 20  | 10    | 12  | 14    | 13  | 24   |
| 105° | 95  | 104   | 19  | 22    | 24  | 102  |
| 115° | 180 | 185   | 193 | 48    | 26  | 177  |
| 125° | 254 | 258   | 264 | 266   | 267 | 227  |
| 135° | 315 | 320   | 322 | 326   | 325 | 243  |
| 145° | 365 | 365   | 370 | 372   | 371 | 228  |
| 155° | 402 | 399   | 403 | 405   | 402 | 185  |
| 165° | 424 | 422   | 423 | 425   | 423 | 120  |
| 175° | 433 | 431   | 432 | 434   | 431 | 41   |
| 180° | 432 | 432   | 432 | 432   | 432 |      |

TEST NUMBER: P999542

CATALOG NUMBER: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 469.7 | 469.7 | 469.7 | 469.7 | 469.7 |
| 2.5°   | 471.8 | 469.7 | 465.0 | 469.3 | 468.4 |
| 5°     | 469.7 | 467.6 | 462.0 | 465.9 | 464.6 |
| 7.5°   | 465.9 | 463.3 | 457.4 | 459.1 | 456.9 |
| 10°    | 460.8 | 457.8 | 449.3 | 448.0 | 445.5 |
| 12.5°  | 454.4 | 450.6 | 439.1 | 436.5 | 431.9 |
| 15°    | 446.7 | 442.1 | 427.6 | 419.5 | 415.3 |
| 17.5°  | 437.8 | 431.0 | 413.2 | 403.8 | 397.0 |
| 20°    | 427.6 | 419.1 | 397.9 | 387.2 | 377.9 |
| 22.5°  | 416.6 | 406.8 | 382.1 | 367.7 | 361.3 |
| 25°    | 405.5 | 391.9 | 363.9 | 346.4 | 340.1 |
| 27.5°  | 392.3 | 377.9 | 346.9 | 326.9 | 317.1 |
| 30°    | 378.3 | 362.2 | 328.2 | 306.5 | 295.0 |
| 32.5°  | 364.7 | 345.2 | 310.3 | 284.8 | 274.2 |
| 35°    | 349.4 | 327.7 | 290.3 | 263.5 | 254.2 |
| 37.5°  | 334.5 | 311.2 | 271.6 | 242.3 | 231.7 |
| 40°    | 318.8 | 293.3 | 252.1 | 221.9 | 210.8 |
| 42.5°  | 302.6 | 275.4 | 232.5 | 201.1 | 190.4 |
| 45°    | 285.6 | 257.2 | 212.5 | 182.4 | 172.2 |
| 47.5°  | 269.5 | 239.3 | 193.4 | 163.2 | 153.9 |
| 50°    | 251.6 | 221.5 | 174.7 | 145.4 | 136.4 |
| 52.5°  | 234.2 | 202.3 | 156.9 | 128.8 | 120.7 |
| 55°    | 217.2 | 184.1 | 138.1 | 112.6 | 104.6 |
| 57.5°  | 199.8 | 165.8 | 121.6 | 97.8  | 91.0  |
| 60°    | 181.9 | 147.9 | 104.1 | 82.5  | 75.7  |
| 62.5°  | 164.5 | 130.5 | 89.3  | 68.9  | 65.5  |
| 65°    | 146.6 | 112.2 | 74.0  | 59.5  | 58.2  |
| 67.5°  | 129.6 | 95.2  | 59.5  | 52.3  | 51.0  |
| 70°    | 111.8 | 78.6  | 49.3  | 45.1  | 43.4  |
| 72.5°  | 94.8  | 63.3  | 41.2  | 37.8  | 37.0  |
| 75°    | 78.2  | 48.5  | 34.0  | 31.0  | 30.6  |
| 77.5°  | 61.6  | 34.4  | 26.8  | 25.1  | 24.2  |
| 80°    | 46.3  | 24.7  | 20.4  | 18.7  | 18.7  |
| 82.5°  | 32.3  | 16.6  | 14.0  | 13.2  | 13.2  |
| 85°    | 18.3  | 9.4   | 8.1   | 8.1   | 8.1   |
| 87.5°  | 6.8   | 3.4   | 3.4   | 3.0   | 3.0   |
| 90°    | 0.3   | 3.8   | 6.3   | 7.8   | 8.4   |
| 92.5°  | 7.8   | 6.6   | 7.5   | 8.1   | 8.4   |
| 95°    | 20.3  | 10.0  | 12.2  | 13.8  | 13.4  |
| 97.5°  | 36.6  | 10.9  | 16.0  | 16.9  | 17.2  |
| 100°   | 55.4  | 12.5  | 17.8  | 20.3  | 21.0  |
| 102.5° | 76.0  | 75.4  | 18.5  | 21.9  | 22.8  |
| 105°   | 95.1  | 104.5 | 19.1  | 22.5  | 23.8  |
| 107.5° | 117.3 | 125.1 | 19.7  | 23.1  | 24.4  |
| 110°   | 138.6 | 145.1 | 54.7  | 23.5  | 24.7  |



TEST NUMBER: P999542

CATALOG NUMBER: SA2XXRDIP-B290D330UB50-4F0-XX-W2A-F

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 158.6 | 164.2 | 158.9 | 24.1  | 25.0  |
| 115°   | 179.8 | 185.2 | 193.0 | 48.2  | 25.6  |
| 117.5° | 198.3 | 204.6 | 209.9 | 165.1 | 83.2  |
| 120°   | 218.9 | 223.6 | 229.3 | 233.0 | 190.8 |
| 122.5° | 236.5 | 241.5 | 247.7 | 249.6 | 249.9 |
| 125°   | 254.3 | 258.4 | 264.3 | 266.5 | 267.4 |
| 127.5° | 270.6 | 274.9 | 279.6 | 282.8 | 283.1 |
| 130°   | 285.9 | 290.9 | 294.3 | 297.8 | 297.5 |
| 132.5° | 301.5 | 305.6 | 309.0 | 311.8 | 311.5 |
| 135°   | 314.7 | 319.7 | 322.5 | 325.6 | 325.0 |
| 137.5° | 328.4 | 332.2 | 335.3 | 338.4 | 337.5 |
| 140°   | 341.9 | 344.4 | 347.8 | 350.6 | 349.1 |
| 142.5° | 353.1 | 355.3 | 359.4 | 361.9 | 360.3 |
| 145°   | 365.0 | 364.7 | 370.0 | 372.2 | 370.6 |
| 147.5° | 375.3 | 374.4 | 379.7 | 381.3 | 380.0 |
| 150°   | 385.3 | 383.2 | 388.2 | 390.0 | 388.5 |
| 152.5° | 393.8 | 391.3 | 396.0 | 397.9 | 395.7 |
| 155°   | 401.9 | 399.1 | 402.9 | 404.7 | 402.2 |
| 157.5° | 408.5 | 406.0 | 408.8 | 411.0 | 408.5 |
| 160°   | 414.1 | 412.2 | 414.1 | 416.0 | 413.8 |
| 162.5° | 419.1 | 417.2 | 418.8 | 421.0 | 418.2 |
| 165°   | 423.5 | 421.6 | 422.6 | 424.8 | 422.6 |
| 167.5° | 426.9 | 425.1 | 426.0 | 428.2 | 425.4 |
| 170°   | 429.8 | 427.9 | 428.5 | 430.7 | 427.9 |
| 172.5° | 431.6 | 429.8 | 430.4 | 432.6 | 429.8 |
| 175°   | 433.2 | 431.0 | 431.6 | 433.8 | 430.7 |
| 177.5° | 433.8 | 431.6 | 431.9 | 434.1 | 431.3 |
| 180°   | 432.3 | 432.3 | 432.3 | 432.3 | 432.3 |

(END OF REPORT)