

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: P987468

Luminaire Tested: S122DR-B290DB30-4F0-XX-W2A-F

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P987468  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-B290DB30-4F0-XX-W2A-F  
Description: Define 2 Direct Recessed with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

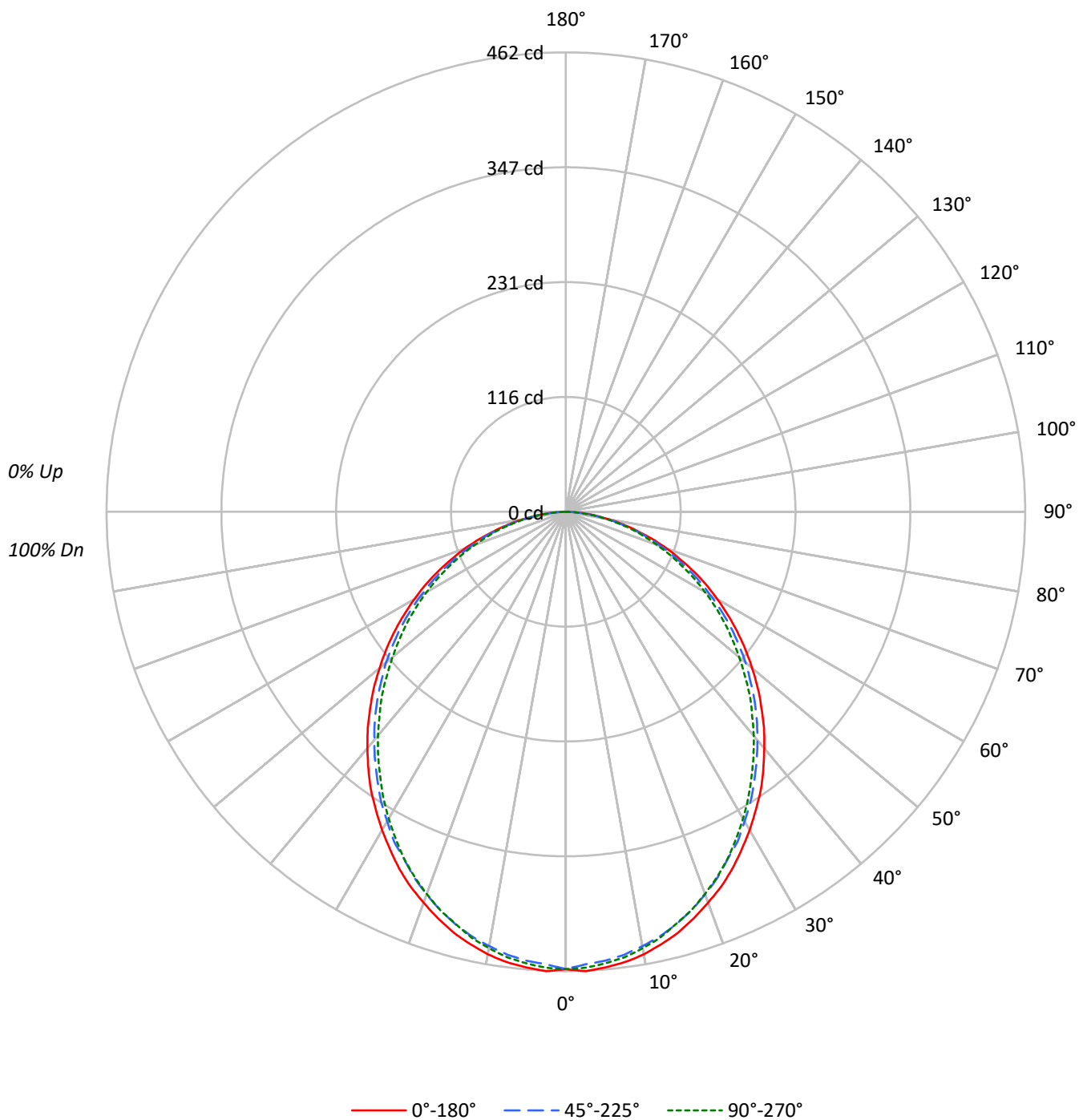
Lumens per Lamp: N/A  
Luminaire Lumens: 1170.0 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 13  
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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  |  | 94  | 91  | 89  |  | 90  |
| 2   | 99  | 91  | 85  | 79  | 97  | 89  | 83  | 78  | 86  | 81  | 76  |  | 83  | 78  | 74  |  | 80  |
| 3   | 91  | 80  | 72  | 66  | 88  | 79  | 71  | 65  | 76  | 69  | 64  |  | 73  | 68  | 63  |  | 71  |
| 4   | 83  | 71  | 63  | 56  | 81  | 70  | 62  | 56  | 68  | 61  | 55  |  | 65  | 59  | 54  |  | 63  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 48  | 61  | 53  | 48  |  | 59  | 52  | 47  |  | 57  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 48  | 42  | 55  | 48  | 42  |  | 53  | 47  | 42  |  | 52  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 38  | 50  | 43  | 37  |  | 49  | 42  | 37  |  | 47  |
| 8   | 61  | 48  | 40  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 44  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  |
| 10  | 54  | 41  | 33  | 28  | 53  | 40  | 33  | 28  | 39  | 32  | 27  |  | 38  | 32  | 27  |  | 37  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7280 | 7280 | 7280 |
| 5°  | 7308 | 7201 | 7244 |
| 10° | 7264 | 7129 | 7164 |
| 15° | 7175 | 7037 | 7029 |
| 20° | 7046 | 6898 | 6890 |
| 25° | 6920 | 6726 | 6726 |
| 30° | 6757 | 6571 | 6514 |
| 35° | 6605 | 6383 | 6290 |
| 40° | 6414 | 6195 | 6077 |
| 45° | 6226 | 6008 | 5861 |
| 50° | 6021 | 5814 | 5607 |
| 55° | 5809 | 5588 | 5382 |
| 60° | 5572 | 5319 | 5122 |
| 65° | 5315 | 5053 | 4820 |
| 70° | 4994 | 4725 | 4503 |
| 75° | 4544 | 4355 | 4244 |
| 80° | 4029 | 3911 | 3710 |
| 85° | 3287 | 3124 | 2815 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 6226 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 43.3   | 3.7       |
| 10°-20°   | 121.8  | 10.4      |
| 20°-30°   | 179.0  | 15.3      |
| 30°-40°   | 207.9  | 17.8      |
| 40°-50°   | 207.6  | 17.7      |
| 50°-60°   | 181.0  | 15.5      |
| 60°-70°   | 133.8  | 11.4      |
| 70°-80°   | 75.7   | 6.5       |
| 80°-90°   | 20.0   | 1.7       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 344.0  | 29.4      |
| 0°-40°    | 551.9  | 47.2      |
| 0°-60°    | 940.5  | 80.4      |
| 0°-90°    | 1170.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1170.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 460 | 460   | 460 | 460   | 460 |      |
| 5°  | 460 | 458   | 453 | 457   | 456 | 44   |
| 15° | 438 | 435   | 429 | 431   | 429 | 123  |
| 25° | 396 | 393   | 385 | 386   | 385 | 182  |
| 35° | 342 | 337   | 330 | 328   | 326 | 213  |
| 45° | 278 | 275   | 268 | 264   | 262 | 215  |
| 55° | 210 | 208   | 202 | 197   | 195 | 188  |
| 65° | 142 | 139   | 135 | 131   | 129 | 140  |
| 75° | 74  | 73    | 71  | 68    | 69  | 79   |
| 85° | 18  | 18    | 17  | 16    | 16  | 21   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 459.9 | 459.9 | 459.9 | 459.9 | 459.9 |
| 2.5°  | 462.5 | 460.3 | 455.5 | 459.9 | 459.0 |
| 5°    | 459.9 | 458.1 | 453.2 | 456.8 | 455.9 |
| 7.5°  | 456.8 | 454.1 | 449.3 | 452.8 | 451.9 |
| 10°   | 451.9 | 448.8 | 443.5 | 447.1 | 445.7 |
| 12.5° | 445.3 | 442.6 | 437.3 | 439.5 | 438.7 |
| 15°   | 437.8 | 435.1 | 429.4 | 431.1 | 428.9 |
| 17.5° | 428.5 | 425.8 | 420.1 | 422.3 | 420.1 |
| 20°   | 418.3 | 415.7 | 409.5 | 410.8 | 409.0 |
| 22.5° | 408.1 | 404.2 | 398.4 | 398.4 | 397.5 |
| 25°   | 396.2 | 392.7 | 385.1 | 386.0 | 385.1 |
| 27.5° | 382.9 | 379.8 | 374.1 | 372.8 | 370.6 |
| 30°   | 369.7 | 366.1 | 359.5 | 358.2 | 356.4 |
| 32.5° | 355.5 | 352.9 | 345.8 | 343.1 | 341.4 |
| 35°   | 341.8 | 337.4 | 330.3 | 327.7 | 325.5 |
| 37.5° | 326.3 | 322.4 | 315.3 | 312.2 | 310.0 |
| 40°   | 310.4 | 306.9 | 299.8 | 295.8 | 294.1 |
| 42.5° | 294.9 | 291.4 | 284.3 | 279.9 | 277.3 |
| 45°   | 278.1 | 275.0 | 268.4 | 263.5 | 261.8 |
| 47.5° | 261.8 | 258.7 | 251.6 | 246.7 | 244.1 |
| 50°   | 244.5 | 242.3 | 236.1 | 229.9 | 227.7 |
| 52.5° | 227.7 | 224.6 | 218.9 | 214.0 | 210.9 |
| 55°   | 210.5 | 207.8 | 202.5 | 197.2 | 195.0 |
| 57.5° | 193.2 | 191.0 | 185.3 | 180.0 | 178.2 |
| 60°   | 176.0 | 174.2 | 168.0 | 163.2 | 161.8 |
| 62.5° | 159.2 | 156.1 | 151.7 | 147.2 | 145.5 |
| 65°   | 141.9 | 139.3 | 134.9 | 130.9 | 128.7 |
| 67.5° | 124.3 | 122.0 | 118.1 | 115.0 | 113.2 |
| 70°   | 107.9 | 106.1 | 102.1 | 99.1  | 97.3  |
| 72.5° | 91.1  | 89.3  | 87.1  | 84.0  | 82.7  |
| 75°   | 74.3  | 73.4  | 71.2  | 68.5  | 69.4  |
| 77.5° | 59.3  | 57.5  | 56.6  | 55.3  | 53.9  |
| 80°   | 44.2  | 43.8  | 42.9  | 41.6  | 40.7  |
| 82.5° | 30.1  | 30.1  | 29.6  | 27.9  | 27.9  |
| 85°   | 18.1  | 17.7  | 17.2  | 15.9  | 15.5  |
| 87.5° | 8.0   | 7.1   | 6.2   | 4.9   | 4.4   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)