

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: P989009

Luminaire Tested: S122RDR-B865DB2750-4F0-XX-W2A-F\_4000K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P989009  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-B865DB2750-4F0-XX-W2A-F\_4000K  
Description: Define 2 Regressed Direct Recessed with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

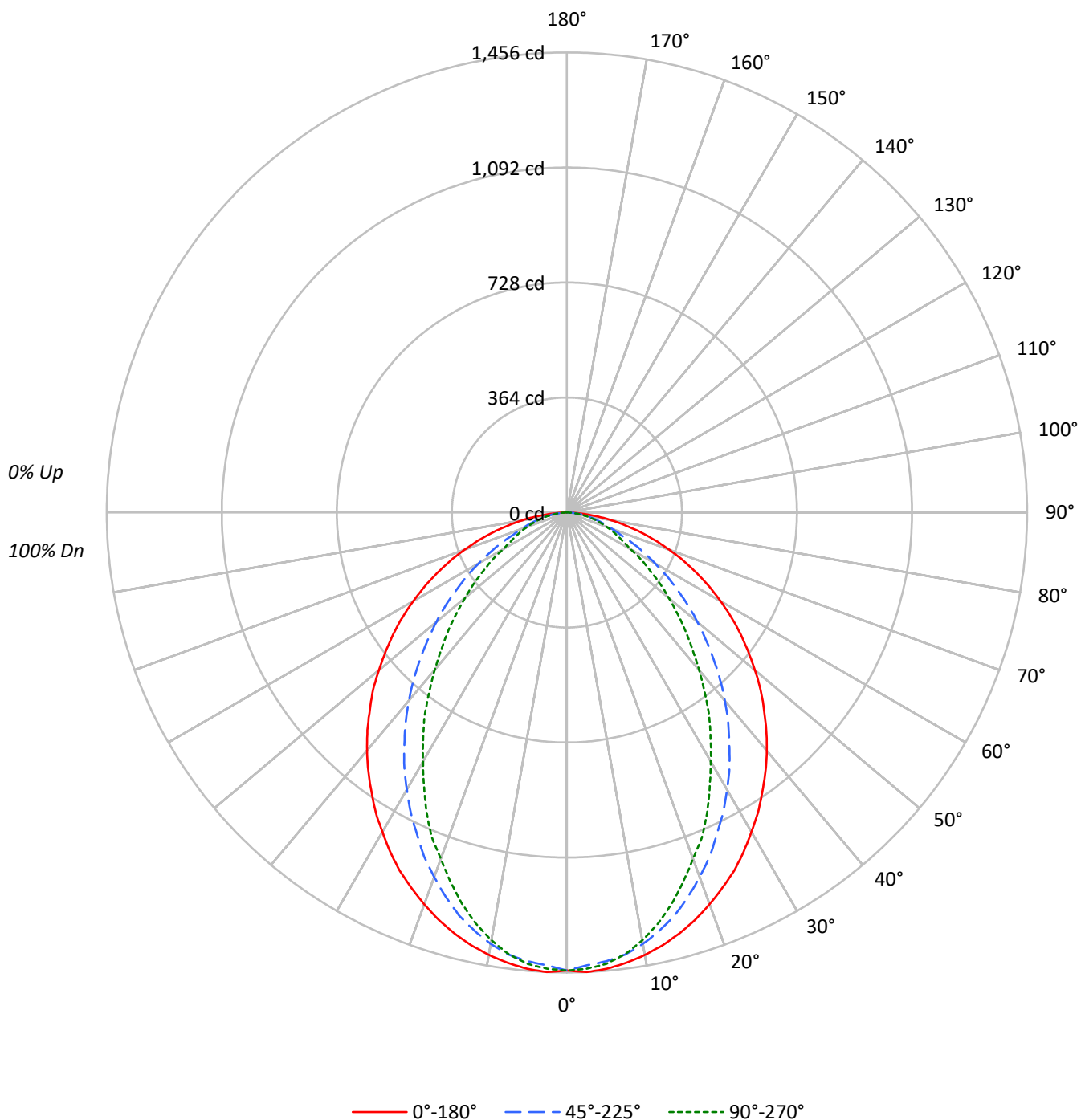
Lumens per Lamp: N/A  
Luminaire Lumens: 2981.0 lumens  
Efficiency: N/A  
Efficacy: 63.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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  |     |     |  | 20  |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |  | 30  |     |     |  | 10  |     |     |  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |  | 100 |
| 1   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  |  | 95  | 93  | 91  |  | 92  | 90  | 88  |  | 86  |
| 2   | 101 | 94  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  |  | 85  | 81  | 78  |  | 82  | 79  | 76  |  | 74  |
| 3   | 93  | 83  | 76  | 70  | 90  | 82  | 75  | 69  | 79  | 73  | 68  |  | 76  | 71  | 67  |  | 74  | 69  | 66  |  | 64  |
| 4   | 86  | 75  | 66  | 60  | 83  | 73  | 66  | 60  | 71  | 64  | 59  |  | 69  | 63  | 58  |  | 66  | 62  | 57  |  | 55  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  |  | 62  | 56  | 51  |  | 60  | 55  | 51  |  | 49  |
| 6   | 74  | 61  | 53  | 47  | 72  | 60  | 52  | 46  | 58  | 51  | 46  |  | 57  | 50  | 46  |  | 55  | 50  | 45  |  | 43  |
| 7   | 68  | 56  | 47  | 42  | 67  | 55  | 47  | 42  | 53  | 46  | 41  |  | 52  | 46  | 41  |  | 51  | 45  | 41  |  | 39  |
| 8   | 64  | 51  | 43  | 38  | 62  | 51  | 43  | 37  | 49  | 42  | 37  |  | 48  | 42  | 37  |  | 47  | 41  | 37  |  | 35  |
| 9   | 60  | 47  | 39  | 34  | 59  | 47  | 39  | 34  | 46  | 39  | 34  |  | 44  | 38  | 34  |  | 44  | 38  | 34  |  | 32  |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  | 42  | 36  | 31  |  | 41  | 35  | 31  |  | 41  | 35  | 31  |  | 29  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 22945 | 22945 | 22945 |
| 5°  | 23032 | 22656 | 22781 |
| 10° | 22855 | 22286 | 22096 |
| 15° | 22592 | 21625 | 21002 |
| 20° | 22229 | 20683 | 19643 |
| 25° | 21857 | 19610 | 18328 |
| 30° | 21338 | 18510 | 16639 |
| 35° | 20835 | 17312 | 15158 |
| 40° | 20329 | 16074 | 13444 |
| 45° | 19733 | 14683 | 11891 |
| 50° | 19122 | 13276 | 10370 |
| 55° | 18499 | 11765 | 8906  |
| 60° | 17773 | 10175 | 7392  |
| 65° | 16949 | 8547  | 6731  |
| 70° | 15967 | 7044  | 6192  |
| 75° | 14764 | 6416  | 5773  |
| 80° | 13035 | 5743  | 5260  |
| 85° | 10243 | 4522  | 4522  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 19733 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.8  | 4.6       |
| 10°-20°   | 372.9  | 12.5      |
| 20°-30°   | 523.6  | 17.6      |
| 30°-40°   | 570.7  | 19.1      |
| 40°-50°   | 524.5  | 17.6      |
| 50°-60°   | 412.0  | 13.8      |
| 60°-70°   | 268.1  | 9.0       |
| 70°-80°   | 138.0  | 4.6       |
| 80°-90°   | 35.3   | 1.2       |
| 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°    | 1032.3 | 34.6      |
| 0°-40°    | 1603.1 | 53.8      |
| 0°-60°    | 2539.6 | 85.2      |
| 0°-90°    | 2981.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2981.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1450 | 1450  | 1450 | 1450  | 1450 |      |
| 5°  | 1450 | 1443  | 1426 | 1438  | 1434 | 137  |
| 15° | 1379 | 1364  | 1320 | 1295  | 1282 | 388  |
| 25° | 1251 | 1209  | 1123 | 1069  | 1049 | 576  |
| 35° | 1078 | 1011  | 896  | 813   | 784  | 675  |
| 45° | 882  | 794   | 656  | 563   | 531  | 681  |
| 55° | 670  | 568   | 426  | 348   | 323  | 599  |
| 65° | 452  | 346   | 228  | 184   | 180  | 449  |
| 75° | 241  | 150   | 105  | 96    | 94   | 255  |
| 85° | 56   | 29    | 25   | 25    | 25   | 68   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |

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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1449.5 | 1449.5 | 1449.5 | 1449.5 | 1449.5 |
| 2.5°  | 1456.0 | 1449.5 | 1435.0 | 1448.1 | 1445.5 |
| 5°    | 1449.5 | 1442.9 | 1425.8 | 1437.7 | 1433.7 |
| 7.5°  | 1437.7 | 1429.8 | 1411.4 | 1416.7 | 1410.1 |
| 10°   | 1421.9 | 1412.7 | 1386.5 | 1382.6 | 1374.7 |
| 12.5° | 1402.2 | 1390.4 | 1355.0 | 1347.1 | 1332.7 |
| 15°   | 1378.6 | 1364.2 | 1319.6 | 1294.7 | 1281.6 |
| 17.5° | 1351.1 | 1330.1 | 1275.0 | 1246.1 | 1225.2 |
| 20°   | 1319.6 | 1293.4 | 1227.8 | 1195.0 | 1166.1 |
| 22.5° | 1285.5 | 1255.3 | 1179.2 | 1134.6 | 1115.0 |
| 25°   | 1251.4 | 1209.4 | 1122.8 | 1069.1 | 1049.4 |
| 27.5° | 1210.7 | 1166.1 | 1070.4 | 1008.7 | 978.5  |
| 30°   | 1167.4 | 1117.6 | 1012.7 | 945.8  | 910.3  |
| 32.5° | 1125.5 | 1065.1 | 957.6  | 878.9  | 846.1  |
| 35°   | 1078.2 | 1011.3 | 895.9  | 813.3  | 784.4  |
| 37.5° | 1032.3 | 960.2  | 838.2  | 747.7  | 714.9  |
| 40°   | 983.8  | 905.1  | 777.9  | 684.7  | 650.6  |
| 42.5° | 934.0  | 850.0  | 717.5  | 620.4  | 587.7  |
| 45°   | 881.5  | 793.6  | 655.9  | 562.7  | 531.2  |
| 47.5° | 831.6  | 738.5  | 596.8  | 503.7  | 474.8  |
| 50°   | 776.5  | 683.4  | 539.1  | 448.6  | 421.1  |
| 52.5° | 722.8  | 624.4  | 484.0  | 397.5  | 372.5  |
| 55°   | 670.3  | 568.0  | 426.3  | 347.6  | 322.7  |
| 57.5° | 616.5  | 511.6  | 375.2  | 301.7  | 280.7  |
| 60°   | 561.4  | 456.5  | 321.4  | 254.5  | 233.5  |
| 62.5° | 507.6  | 402.7  | 275.5  | 212.5  | 202.0  |
| 65°   | 452.5  | 346.3  | 228.2  | 183.6  | 179.7  |
| 67.5° | 400.1  | 293.8  | 183.6  | 161.3  | 157.4  |
| 70°   | 345.0  | 242.7  | 152.2  | 139.0  | 133.8  |
| 72.5° | 292.5  | 195.4  | 127.2  | 116.7  | 114.1  |
| 75°   | 241.4  | 149.5  | 104.9  | 95.8   | 94.4   |
| 77.5° | 190.2  | 106.2  | 82.6   | 77.4   | 74.8   |
| 80°   | 143.0  | 76.1   | 63.0   | 57.7   | 57.7   |
| 82.5° | 99.7   | 51.2   | 43.3   | 40.7   | 40.7   |
| 85°   | 56.4   | 28.9   | 24.9   | 24.9   | 24.9   |
| 87.5° | 21.0   | 10.5   | 10.5   | 9.2    | 9.2    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)