

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: P1029313

Luminaire Tested: S122DIW-B290D1240UB2750-4F0-XX-W2A-D1\_3500K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1029313  
REPORT IS A COMBINATION OF REPORTS P985494 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DIW-B290D1240UB2750-4F0-XX-W2A-D1\_3500K  
Description: Define 2 Direct/Indirect Wall Mount with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

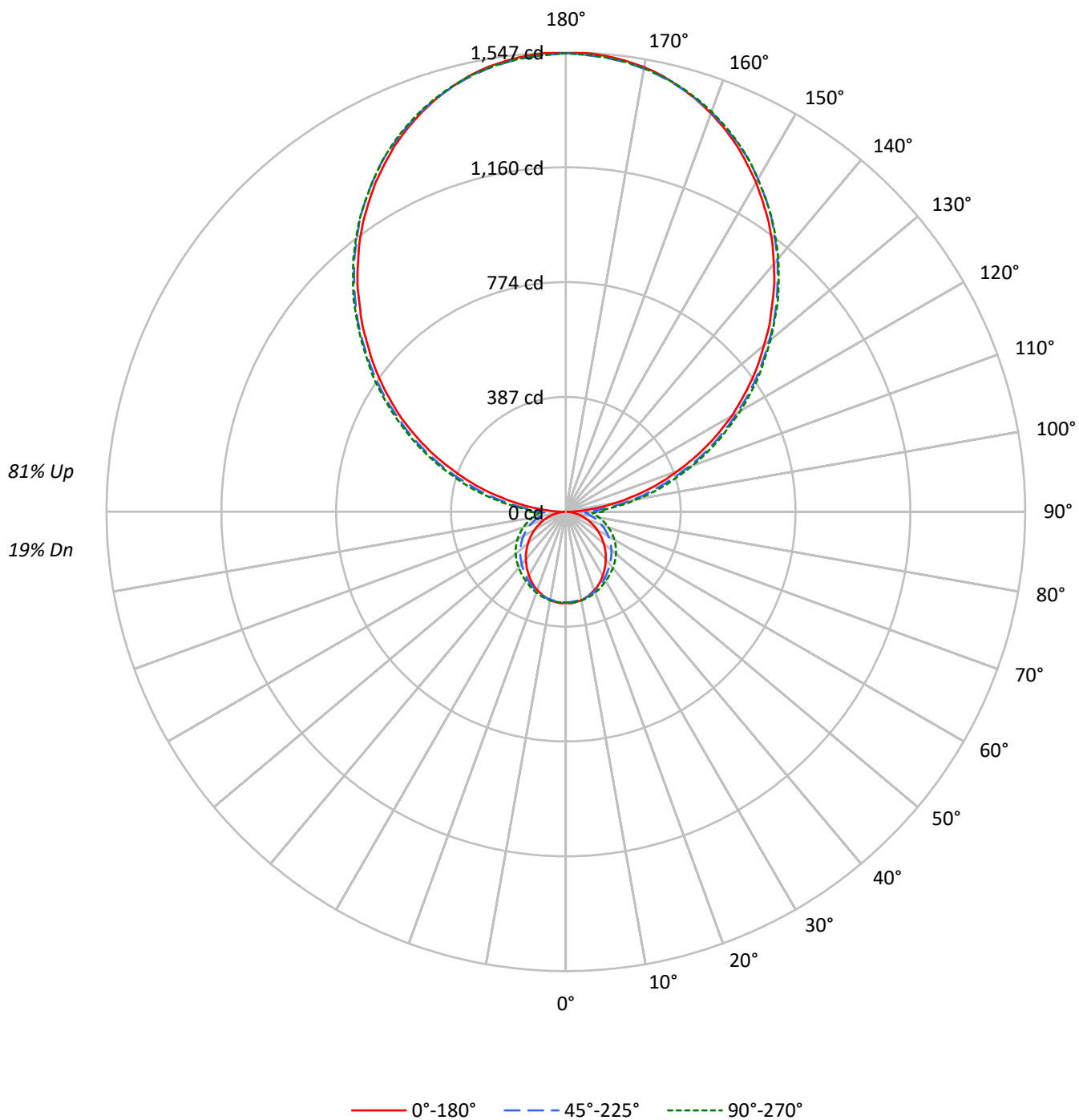
Lumens per Lamp: N/A  
Luminaire Lumens: 5490.0 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 55.1  
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 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 100 | 100 | 100 | 100 | 88 | 88 | 88 | 88 | 66 | 66 | 66 | 46 | 46 | 46 | 28 | 28 | 28 | 19 |    |    |
| 1   | 90  | 86  | 82  | 78  | 79 | 76 | 73 | 70 | 57 | 55 | 53 | 39 | 38 | 37 | 23 | 23 | 22 | 15 |    |    |
| 2   | 82  | 75  | 69  | 63  | 72 | 66 | 61 | 57 | 49 | 46 | 43 | 34 | 32 | 30 | 20 | 19 | 18 | 12 |    |    |
| 3   | 74  | 65  | 58  | 52  | 65 | 58 | 52 | 47 | 43 | 39 | 36 | 30 | 28 | 25 | 18 | 16 | 15 | 10 |    |    |
| 4   | 68  | 57  | 50  | 44  | 60 | 51 | 44 | 39 | 38 | 34 | 30 | 27 | 24 | 21 | 16 | 14 | 13 | 8  |    |    |
| 5   | 62  | 51  | 43  | 37  | 54 | 45 | 38 | 33 | 34 | 29 | 26 | 24 | 21 | 18 | 14 | 12 | 11 | 7  |    |    |
| 6   | 57  | 45  | 38  | 32  | 50 | 40 | 34 | 29 | 30 | 26 | 22 | 21 | 18 | 16 | 13 | 11 | 10 | 6  |    |    |
| 7   | 53  | 41  | 33  | 28  | 46 | 36 | 30 | 25 | 27 | 23 | 19 | 19 | 16 | 14 | 12 | 10 | 8  | 5  |    |    |
| 8   | 49  | 37  | 29  | 24  | 43 | 33 | 26 | 22 | 25 | 20 | 17 | 17 | 14 | 12 | 11 | 9  | 7  | 5  |    |    |
| 9   | 45  | 33  | 26  | 21  | 40 | 30 | 23 | 19 | 23 | 18 | 15 | 16 | 13 | 11 | 10 | 8  | 7  | 4  |    |    |
| 10  | 42  | 30  | 23  | 19  | 37 | 27 | 21 | 17 | 21 | 16 | 13 | 15 | 12 | 10 | 9  | 7  | 6  | 4  |    |    |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4850 | 4850 | 4850 |
| 5°  | 4872 | 4643 | 4617 |
| 10° | 4839 | 4483 | 4417 |
| 15° | 4770 | 4315 | 4212 |
| 20° | 4684 | 4141 | 4017 |
| 25° | 4599 | 3973 | 3840 |
| 30° | 4479 | 3804 | 3665 |
| 35° | 4360 | 3639 | 3537 |
| 40° | 4232 | 3498 | 3409 |
| 45° | 4112 | 3370 | 3298 |
| 50° | 3982 | 3252 | 3188 |
| 55° | 3845 | 3126 | 3076 |
| 60° | 3678 | 2994 | 2959 |
| 65° | 3505 | 2843 | 2824 |
| 70° | 3309 | 2682 | 2678 |
| 75° | 3054 | 2520 | 2542 |
| 80° | 2659 | 2351 | 2399 |
| 85° | 2260 | 2192 | 2276 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4112 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 29.0   | 0.5       |
| 10°-20°   | 83.3   | 1.5       |
| 20°-30°   | 126.2  | 2.3       |
| 30°-40°   | 153.7  | 2.8       |
| 40°-50°   | 165.4  | 3.0       |
| 50°-60°   | 160.6  | 2.9       |
| 60°-70°   | 140.2  | 2.6       |
| 70°-80°   | 108.0  | 2.0       |
| 80°-90°   | 76.7   | 1.4       |
| 90°-100°  | 145.4  | 2.6       |
| 100°-110° | 340.1  | 6.2       |
| 110°-120° | 543.6  | 9.9       |
| 120°-130° | 696.7  | 12.7      |
| 130°-140° | 772.6  | 14.1      |
| 140°-150° | 753.1  | 13.7      |
| 150°-160° | 630.9  | 11.5      |
| 160°-170° | 418.4  | 7.6       |
| 170°-180° | 146.2  | 2.7       |
| 0°-30°    | 238.5  | 4.3       |
| 0°-40°    | 392.2  | 7.1       |
| 0°-60°    | 718.2  | 13.1      |
| 0°-90°    | 1043.1 | 19.0      |
| 90°-120°  | 1029.0 | 18.7      |
| 90°-150°  | 3251.4 | 59.2      |
| 90°-180°  | 4447.0 | 81.0      |
| 0°-180°   | 5490.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 306  | 306   | 306  | 306   | 306  |      |
| 5°   | 307  | 306   | 303  | 306   | 306  | 29   |
| 15°  | 293  | 294   | 294  | 298   | 298  | 83   |
| 25°  | 266  | 270   | 274  | 279   | 280  | 123  |
| 35°  | 230  | 237   | 246  | 255   | 258  | 143  |
| 45°  | 188  | 200   | 216  | 230   | 234  | 145  |
| 55°  | 144  | 160   | 183  | 199   | 205  | 129  |
| 65°  | 99   | 120   | 146  | 165   | 170  | 98   |
| 75°  | 55   | 80    | 108  | 127   | 133  | 58   |
| 85°  | 16   | 44    | 72   | 91    | 97   | 17   |
| 90°  | 6    | 47    | 104  | 119   | 126  | 7    |
| 95°  | 71   | 105   | 134  | 151   | 154  | 78   |
| 105° | 282  | 299   | 325  | 343   | 348  | 298  |
| 115° | 523  | 536   | 553  | 565   | 566  | 517  |
| 125° | 759  | 771   | 781  | 789   | 792  | 679  |
| 135° | 982  | 996   | 1003 | 1011  | 1011 | 759  |
| 145° | 1191 | 1200  | 1208 | 1212  | 1209 | 744  |
| 155° | 1362 | 1366  | 1369 | 1376  | 1372 | 627  |
| 165° | 1481 | 1480  | 1480 | 1489  | 1483 | 418  |
| 175° | 1541 | 1537  | 1535 | 1544  | 1536 | 146  |
| 180° | 1544 | 1544  | 1544 | 1544  | 1544 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 306.4 | 306.4 | 306.4 | 306.4 | 306.4 |
| 2.5°   | 308.6 | 307.3 | 304.1 | 306.4 | 305.5 |
| 5°     | 307.3 | 305.9 | 303.3 | 305.9 | 305.5 |
| 7.5°   | 305.0 | 304.1 | 301.9 | 305.0 | 304.6 |
| 10°    | 302.4 | 301.5 | 300.2 | 303.7 | 303.3 |
| 12.5°  | 297.9 | 298.4 | 297.5 | 301.0 | 300.6 |
| 15°    | 293.0 | 293.9 | 293.9 | 297.9 | 297.5 |
| 17.5°  | 286.8 | 288.6 | 289.9 | 293.9 | 293.9 |
| 20°    | 280.6 | 282.8 | 284.6 | 289.5 | 289.5 |
| 22.5°  | 274.0 | 276.6 | 279.3 | 284.2 | 285.1 |
| 25°    | 266.4 | 269.5 | 273.5 | 278.8 | 280.2 |
| 27.5°  | 257.5 | 262.4 | 266.9 | 273.5 | 274.4 |
| 30°    | 248.6 | 254.4 | 260.2 | 267.3 | 268.6 |
| 32.5°  | 238.9 | 245.5 | 252.6 | 261.1 | 263.7 |
| 35°    | 229.6 | 237.1 | 245.5 | 255.3 | 258.4 |
| 37.5°  | 219.3 | 227.8 | 238.4 | 249.1 | 252.2 |
| 40°    | 209.1 | 218.9 | 230.9 | 242.4 | 246.4 |
| 42.5°  | 199.4 | 209.1 | 223.3 | 236.2 | 240.2 |
| 45°    | 188.3 | 200.3 | 215.8 | 229.6 | 234.0 |
| 47.5°  | 177.6 | 190.5 | 208.2 | 222.5 | 227.3 |
| 50°    | 166.5 | 180.3 | 200.3 | 215.3 | 220.2 |
| 52.5°  | 155.8 | 170.5 | 191.8 | 207.4 | 212.7 |
| 55°    | 144.3 | 160.3 | 183.4 | 199.4 | 205.1 |
| 57.5°  | 133.2 | 151.0 | 174.1 | 191.4 | 197.1 |
| 60°    | 121.2 | 140.3 | 165.6 | 182.5 | 188.7 |
| 62.5°  | 110.6 | 130.5 | 155.8 | 174.1 | 179.8 |
| 65°    | 98.6  | 120.3 | 146.5 | 164.7 | 170.5 |
| 67.5°  | 87.9  | 110.6 | 137.2 | 155.4 | 161.6 |
| 70°    | 76.4  | 99.5  | 127.0 | 146.1 | 151.4 |
| 72.5°  | 65.7  | 89.7  | 117.7 | 136.3 | 143.0 |
| 75°    | 54.6  | 79.5  | 107.9 | 127.0 | 132.8 |
| 77.5°  | 44.0  | 69.7  | 98.6  | 117.7 | 123.9 |
| 80°    | 33.3  | 60.4  | 89.2  | 107.9 | 114.1 |
| 82.5°  | 24.4  | 51.1  | 80.4  | 99.0  | 104.8 |
| 85°    | 16.0  | 43.5  | 71.9  | 90.6  | 96.8  |
| 87.5°  | 9.8   | 36.4  | 64.8  | 83.0  | 88.8  |
| 90°    | 5.7   | 47.1  | 104.2 | 119.4 | 126.0 |
| 92.5°  | 32.7  | 66.6  | 95.0  | 113.6 | 119.0 |
| 95°    | 71.4  | 105.2 | 134.5 | 151.3 | 154.1 |
| 97.5°  | 116.5 | 147.3 | 178.3 | 194.7 | 200.0 |
| 100°   | 168.6 | 195.4 | 224.2 | 240.6 | 244.2 |
| 102.5° | 222.9 | 245.3 | 274.5 | 291.8 | 295.4 |
| 105°   | 282.3 | 299.1 | 324.8 | 342.9 | 347.8 |
| 107.5° | 342.3 | 358.2 | 380.4 | 396.8 | 395.2 |
| 110°   | 399.2 | 415.9 | 437.6 | 451.8 | 452.8 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 461.7  | 476.6  | 495.7  | 506.0  | 508.3  |
| 115°   | 523.0  | 535.7  | 553.0  | 565.1  | 566.0  |
| 117.5° | 583.7  | 597.7  | 609.8  | 619.3  | 619.8  |
| 120°   | 644.9  | 657.2  | 664.5  | 676.9  | 677.9  |
| 122.5° | 701.0  | 714.5  | 724.4  | 732.5  | 733.9  |
| 125°   | 759.2  | 770.9  | 781.2  | 789.3  | 792.0  |
| 127.5° | 816.5  | 830.4  | 837.1  | 843.0  | 843.1  |
| 130°   | 869.9  | 886.4  | 893.2  | 901.2  | 899.6  |
| 132.5° | 929.9  | 942.4  | 950.4  | 954.1  | 953.8  |
| 135°   | 981.5  | 995.8  | 1002.9 | 1010.9 | 1010.6 |
| 137.5° | 1038.8 | 1050.6 | 1055.5 | 1062.6 | 1060.4 |
| 140°   | 1089.6 | 1101.0 | 1108.4 | 1115.5 | 1113.0 |
| 142.5° | 1141.8 | 1153.1 | 1157.0 | 1163.6 | 1160.6 |
| 145°   | 1190.9 | 1200.0 | 1207.8 | 1211.8 | 1208.8 |
| 147.5° | 1235.2 | 1246.9 | 1252.1 | 1255.1 | 1251.3 |
| 150°   | 1280.8 | 1288.6 | 1293.8 | 1297.7 | 1293.8 |
| 152.5° | 1321.2 | 1329.0 | 1335.5 | 1340.7 | 1335.5 |
| 155°   | 1361.5 | 1365.5 | 1369.4 | 1375.9 | 1372.0 |
| 157.5° | 1396.7 | 1399.3 | 1401.9 | 1411.1 | 1404.5 |
| 160°   | 1428.0 | 1430.6 | 1431.9 | 1439.7 | 1434.5 |
| 162.5° | 1456.7 | 1456.7 | 1458.0 | 1467.1 | 1460.6 |
| 165°   | 1481.4 | 1480.1 | 1480.1 | 1489.2 | 1482.7 |
| 167.5° | 1503.6 | 1499.7 | 1499.7 | 1508.8 | 1502.3 |
| 170°   | 1520.5 | 1516.6 | 1515.3 | 1524.4 | 1516.6 |
| 172.5° | 1532.2 | 1528.3 | 1527.0 | 1536.1 | 1528.3 |
| 175°   | 1541.3 | 1537.4 | 1534.8 | 1544.0 | 1536.1 |
| 177.5° | 1546.6 | 1542.7 | 1540.0 | 1547.9 | 1540.0 |
| 180°   | 1544.0 | 1544.0 | 1544.0 | 1544.0 | 1544.0 |

(END OF REPORT)