

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: P1029319

Luminaire Tested: S122DIW-B290D1240UB2750-4F0-XX-W2A-D\_4000K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1029319  
REPORT IS A COMBINATION OF REPORTS P985505 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-D\_4000K  
Description: Define 2 Direct/Indirect Wall Mount with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

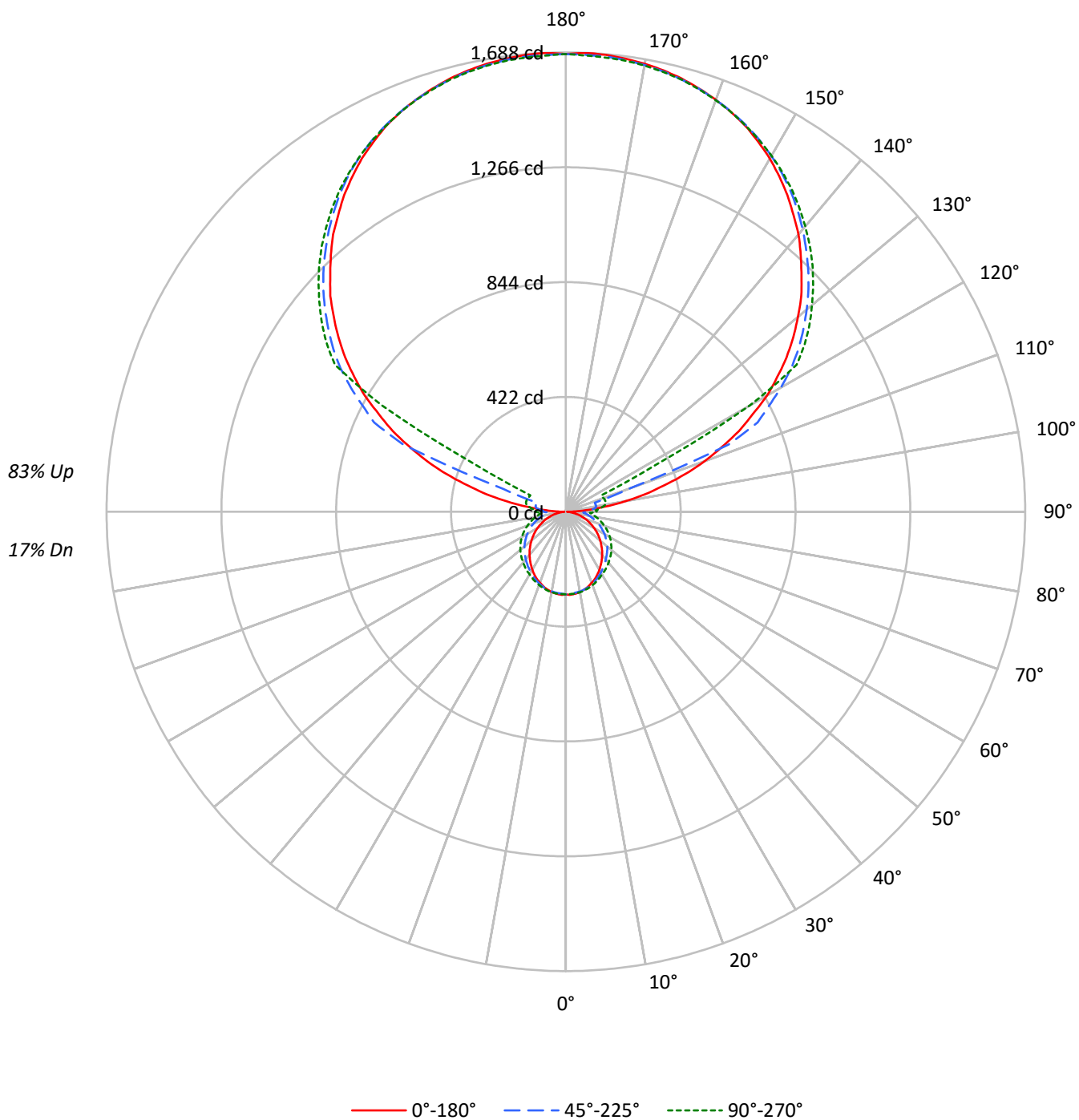
Lumens per Lamp: N/A  
Luminaire Lumens: 6091.0 lumens  
Efficiency: N/A  
Efficacy: 110.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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



TEST NUMBER: P1029319

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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   | 99 | 99 | 99 | 99 | 87 | 87 | 87 | 87 | 65 | 65 | 65 | 45 | 45 | 45 | 26 | 26 | 26 |
| 1   | 90 | 86 | 82 | 78 | 79 | 75 | 72 | 69 | 56 | 54 | 52 | 38 | 37 | 36 | 22 | 21 | 21 |
| 2   | 82 | 74 | 68 | 63 | 71 | 65 | 60 | 56 | 49 | 45 | 43 | 33 | 31 | 29 | 19 | 18 | 17 |
| 3   | 74 | 65 | 58 | 52 | 65 | 57 | 51 | 47 | 43 | 39 | 35 | 29 | 27 | 25 | 17 | 15 | 14 |
| 4   | 68 | 57 | 50 | 44 | 59 | 51 | 44 | 39 | 38 | 33 | 30 | 26 | 23 | 21 | 15 | 13 | 12 |
| 5   | 62 | 51 | 43 | 37 | 54 | 45 | 38 | 33 | 33 | 29 | 25 | 23 | 20 | 18 | 13 | 12 | 10 |
| 6   | 57 | 45 | 37 | 32 | 50 | 40 | 33 | 29 | 30 | 25 | 22 | 21 | 18 | 15 | 12 | 10 | 9  |
| 7   | 52 | 41 | 33 | 28 | 46 | 36 | 29 | 25 | 27 | 22 | 19 | 19 | 16 | 13 | 11 | 9  | 8  |
| 8   | 48 | 37 | 29 | 24 | 42 | 32 | 26 | 22 | 24 | 20 | 17 | 17 | 14 | 12 | 10 | 8  | 7  |
| 9   | 45 | 33 | 26 | 21 | 39 | 29 | 23 | 19 | 22 | 18 | 15 | 15 | 13 | 10 | 9  | 7  | 6  |
| 10  | 42 | 30 | 23 | 19 | 37 | 27 | 21 | 17 | 20 | 16 | 13 | 14 | 11 | 9  | 8  | 7  | 6  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4804 | 4804 | 4804 |
| 5°  | 4826 | 4599 | 4573 |
| 10° | 4793 | 4439 | 4375 |
| 15° | 4726 | 4275 | 4172 |
| 20° | 4641 | 4101 | 3979 |
| 25° | 4556 | 3936 | 3803 |
| 30° | 4438 | 3767 | 3631 |
| 35° | 4319 | 3605 | 3504 |
| 40° | 4194 | 3465 | 3377 |
| 45° | 4073 | 3338 | 3267 |
| 50° | 3943 | 3221 | 3159 |
| 55° | 3808 | 3097 | 3048 |
| 60° | 3644 | 2967 | 2931 |
| 65° | 3470 | 2816 | 2797 |
| 70° | 3278 | 2657 | 2654 |
| 75° | 3026 | 2497 | 2517 |
| 80° | 2635 | 2330 | 2376 |
| 85° | 2232 | 2174 | 2255 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 4073 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 28.8   | 0.5       |
| 10°-20°   | 82.5   | 1.4       |
| 20°-30°   | 125.0  | 2.1       |
| 30°-40°   | 152.2  | 2.5       |
| 40°-50°   | 163.8  | 2.7       |
| 50°-60°   | 159.1  | 2.6       |
| 60°-70°   | 138.9  | 2.3       |
| 70°-80°   | 106.9  | 1.8       |
| 80°-90°   | 74.6   | 1.2       |
| 90°-100°  | 104.9  | 1.7       |
| 100°-110° | 242.8  | 4.0       |
| 110°-120° | 572.1  | 9.4       |
| 120°-130° | 922.5  | 15.1      |
| 130°-140° | 971.4  | 15.9      |
| 140°-150° | 898.6  | 14.8      |
| 150°-160° | 721.7  | 11.8      |
| 160°-170° | 465.0  | 7.6       |
| 170°-180° | 160.1  | 2.6       |
| 0°-30°    | 236.3  | 3.9       |
| 0°-40°    | 388.5  | 6.4       |
| 0°-60°    | 711.5  | 11.7      |
| 0°-90°    | 1031.9 | 16.9      |
| 90°-120°  | 919.7  | 15.1      |
| 90°-150°  | 3712.3 | 60.9      |
| 90°-180°  | 5059.0 | 83.1      |
| 0°-180°   | 6091.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 304  | 304   | 304  | 304   | 304  |      |
| 5°   | 304  | 303   | 300  | 303   | 303  | 29   |
| 15°  | 290  | 291   | 291  | 295   | 295  | 82   |
| 25°  | 264  | 267   | 271  | 276   | 278  | 121  |
| 35°  | 227  | 235   | 243  | 253   | 256  | 142  |
| 45°  | 186  | 198   | 214  | 227   | 232  | 144  |
| 55°  | 143  | 159   | 182  | 198   | 203  | 128  |
| 65°  | 98   | 119   | 145  | 163   | 169  | 97   |
| 75°  | 54   | 79    | 107  | 126   | 132  | 57   |
| 85°  | 16   | 43    | 71   | 90    | 96   | 17   |
| 90°  | 6    | 44    | 82   | 106   | 114  | 8    |
| 95°  | 83   | 63    | 98   | 121   | 125  | 96   |
| 105° | 372  | 421   | 112  | 141   | 151  | 398  |
| 115° | 702  | 727   | 777  | 227   | 144  | 690  |
| 125° | 990  | 1006  | 1043 | 1064  | 1071 | 883  |
| 135° | 1224 | 1244  | 1259 | 1281  | 1282 | 946  |
| 145° | 1420 | 1419  | 1440 | 1451  | 1447 | 888  |
| 155° | 1564 | 1553  | 1567 | 1575  | 1565 | 721  |
| 165° | 1648 | 1640  | 1644 | 1652  | 1644 | 465  |
| 175° | 1685 | 1677  | 1679 | 1688  | 1676 | 160  |
| 180° | 1682 | 1682  | 1682 | 1682  | 1682 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 303.5 | 303.5 | 303.5 | 303.5 | 303.5 |
| 2.5°   | 305.7 | 304.4 | 301.3 | 303.5 | 302.6 |
| 5°     | 304.4 | 303.0 | 300.4 | 303.0 | 302.6 |
| 7.5°   | 302.2 | 301.3 | 299.1 | 302.2 | 301.7 |
| 10°    | 299.5 | 298.6 | 297.3 | 300.8 | 300.4 |
| 12.5°  | 295.1 | 295.6 | 294.7 | 298.2 | 297.8 |
| 15°    | 290.3 | 291.2 | 291.2 | 295.1 | 294.7 |
| 17.5°  | 284.1 | 285.9 | 287.2 | 291.2 | 291.2 |
| 20°    | 278.0 | 280.2 | 281.9 | 286.8 | 286.8 |
| 22.5°  | 271.4 | 274.0 | 276.7 | 281.5 | 282.4 |
| 25°    | 263.9 | 267.0 | 270.9 | 276.2 | 277.5 |
| 27.5°  | 255.1 | 259.9 | 264.3 | 270.9 | 271.8 |
| 30°    | 246.3 | 252.0 | 257.7 | 264.8 | 266.1 |
| 32.5°  | 236.6 | 243.2 | 250.3 | 258.6 | 261.3 |
| 35°    | 227.4 | 234.9 | 243.2 | 252.9 | 256.0 |
| 37.5°  | 217.3 | 225.6 | 236.2 | 246.7 | 249.8 |
| 40°    | 207.2 | 216.8 | 228.7 | 240.2 | 244.1 |
| 42.5°  | 197.5 | 207.2 | 221.2 | 234.0 | 238.0 |
| 45°    | 186.5 | 198.4 | 213.8 | 227.4 | 231.8 |
| 47.5°  | 175.9 | 188.7 | 206.3 | 220.4 | 225.2 |
| 50°    | 164.9 | 178.6 | 198.4 | 213.3 | 218.2 |
| 52.5°  | 154.4 | 168.9 | 190.0 | 205.4 | 210.7 |
| 55°    | 142.9 | 158.8 | 181.7 | 197.5 | 203.2 |
| 57.5°  | 132.0 | 149.5 | 172.4 | 189.6 | 195.3 |
| 60°    | 120.1 | 139.0 | 164.1 | 180.8 | 186.9 |
| 62.5°  | 109.5 | 129.3 | 154.4 | 172.4 | 178.1 |
| 65°    | 97.6  | 119.2 | 145.1 | 163.2 | 168.9 |
| 67.5°  | 87.1  | 109.5 | 135.9 | 153.9 | 160.1 |
| 70°    | 75.7  | 98.5  | 125.8 | 144.7 | 150.0 |
| 72.5°  | 65.1  | 88.8  | 116.6 | 135.0 | 141.6 |
| 75°    | 54.1  | 78.7  | 106.9 | 125.8 | 131.5 |
| 77.5°  | 43.5  | 69.1  | 97.6  | 116.6 | 122.7 |
| 80°    | 33.0  | 59.8  | 88.4  | 106.9 | 113.0 |
| 82.5°  | 24.2  | 50.6  | 79.6  | 98.1  | 103.8 |
| 85°    | 15.8  | 43.1  | 71.3  | 89.7  | 95.9  |
| 87.5°  | 9.7   | 36.1  | 64.2  | 82.2  | 88.0  |
| 90°    | 5.6   | 44.5  | 82.4  | 106.1 | 113.8 |
| 92.5°  | 34.4  | 52.9  | 83.3  | 102.9 | 109.4 |
| 95°    | 82.6  | 63.1  | 98.1  | 120.8 | 124.9 |
| 97.5°  | 145.5 | 64.6  | 109.6 | 129.5 | 136.0 |
| 100°   | 218.5 | 68.1  | 113.4 | 139.4 | 146.6 |
| 102.5° | 298.3 | 310.5 | 112.7 | 141.9 | 150.4 |
| 105°   | 372.1 | 421.4 | 112.0 | 140.8 | 150.6 |
| 107.5° | 458.5 | 499.5 | 111.4 | 139.7 | 149.4 |
| 110°   | 540.9 | 575.2 | 245.0 | 137.5 | 147.1 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 618.7  | 647.6  | 647.2  | 136.8  | 145.2  |
| 115°   | 701.5  | 727.0  | 777.2  | 227.0  | 144.2  |
| 117.5° | 772.8  | 800.6  | 839.8  | 679.0  | 364.6  |
| 120°   | 853.1  | 873.1  | 912.6  | 939.5  | 780.1  |
| 122.5° | 921.2  | 941.2  | 981.7  | 1000.9 | 1006.1 |
| 125°   | 990.2  | 1006.0 | 1043.2 | 1063.5 | 1071.2 |
| 127.5° | 1053.5 | 1070.0 | 1100.1 | 1123.3 | 1128.5 |
| 130°   | 1113.1 | 1132.1 | 1154.7 | 1178.6 | 1181.0 |
| 132.5° | 1173.9 | 1189.2 | 1209.2 | 1230.4 | 1232.7 |
| 135°   | 1224.5 | 1244.0 | 1259.4 | 1280.8 | 1281.9 |
| 137.5° | 1278.1 | 1292.7 | 1307.0 | 1327.6 | 1327.1 |
| 140°   | 1330.4 | 1339.7 | 1354.0 | 1372.0 | 1368.6 |
| 142.5° | 1374.2 | 1382.3 | 1398.1 | 1413.2 | 1409.3 |
| 145°   | 1420.0 | 1418.8 | 1439.5 | 1450.6 | 1446.7 |
| 147.5° | 1460.2 | 1456.5 | 1477.2 | 1483.7 | 1480.3 |
| 150°   | 1499.1 | 1490.6 | 1510.1 | 1517.4 | 1511.3 |
| 152.5° | 1532.0 | 1522.3 | 1540.5 | 1547.8 | 1539.3 |
| 155°   | 1563.6 | 1552.7 | 1567.3 | 1574.6 | 1564.8 |
| 157.5° | 1589.2 | 1579.4 | 1590.4 | 1598.9 | 1589.2 |
| 160°   | 1611.1 | 1603.8 | 1611.1 | 1618.4 | 1609.9 |
| 162.5° | 1630.6 | 1623.3 | 1629.3 | 1637.9 | 1626.9 |
| 165°   | 1647.6 | 1640.3 | 1643.9 | 1652.5 | 1643.9 |
| 167.5° | 1661.0 | 1653.7 | 1657.3 | 1665.8 | 1654.9 |
| 170°   | 1671.9 | 1664.6 | 1667.1 | 1675.6 | 1664.6 |
| 172.5° | 1679.2 | 1671.9 | 1674.4 | 1682.9 | 1671.9 |
| 175°   | 1685.3 | 1676.8 | 1679.2 | 1687.7 | 1675.6 |
| 177.5° | 1687.7 | 1679.2 | 1680.4 | 1689.0 | 1678.0 |
| 180°   | 1681.7 | 1681.7 | 1681.7 | 1681.7 | 1681.7 |

(END OF REPORT)