

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: P1032623

Luminaire Tested: S124DIW-B350D1050UB2750-4F0-XX-W2A-D\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1032623  
REPORT IS A COMBINATION OF REPORTS P997301 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B350D1050UB2750-4F0-XX-W2A-D\_5000K  
Description: Define 4 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

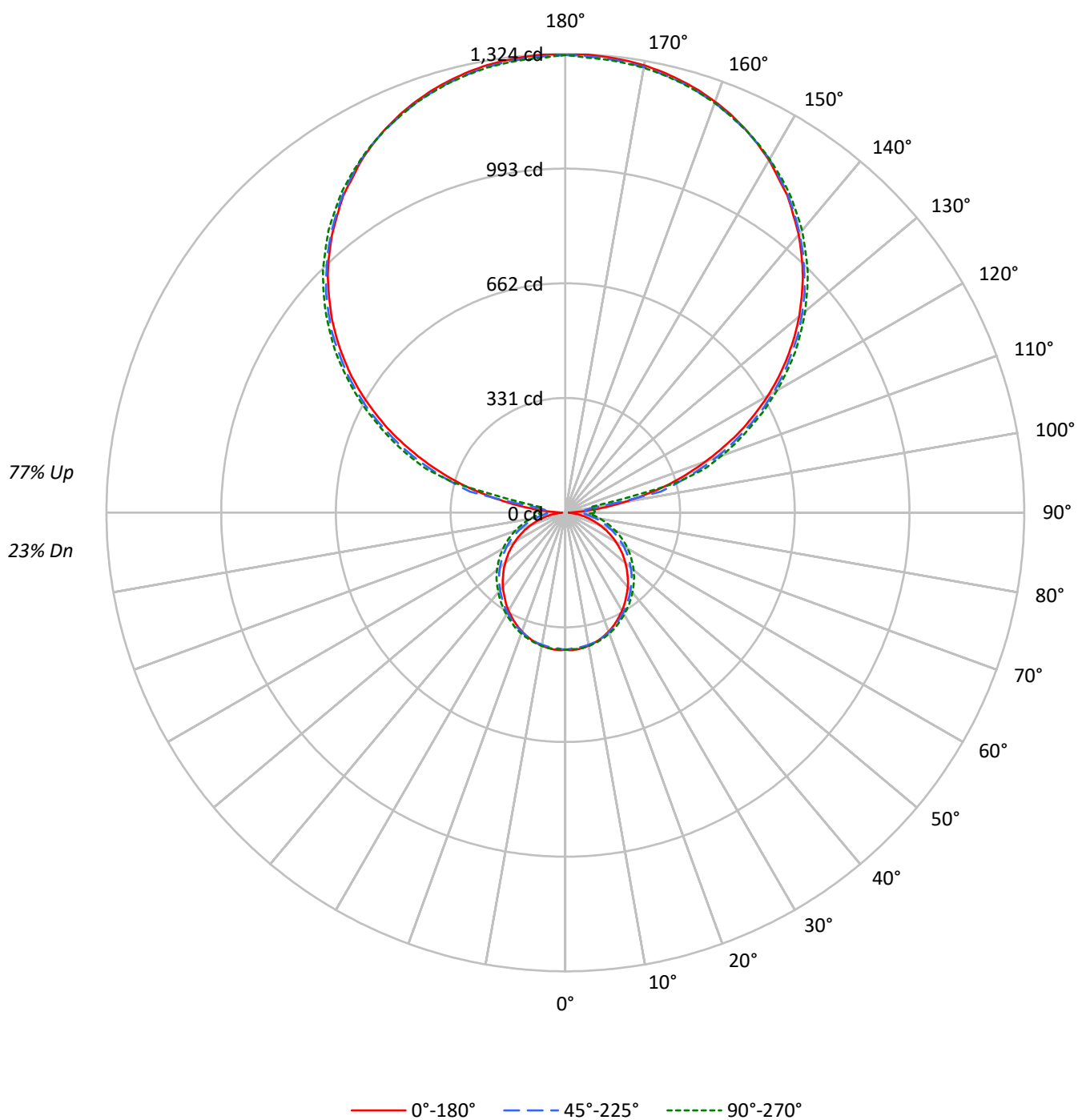
Lumens per Lamp: N/A  
Luminaire Lumens: 5439.0 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 44.5  
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   | 101 | 101 | 101 | 101 | 89 | 89 | 89 | 89 | 68 | 68 | 68 | 49 | 49 | 49 | 31 | 31 | 31 | 31 | 31 | 23 |
| 1   | 91  | 87  | 83  | 79  | 81 | 77 | 74 | 71 | 59 | 57 | 55 | 42 | 41 | 40 | 27 | 26 | 25 | 25 | 25 | 18 |
| 2   | 83  | 76  | 70  | 64  | 73 | 67 | 62 | 58 | 51 | 48 | 45 | 37 | 35 | 33 | 23 | 22 | 21 | 21 | 21 | 15 |
| 3   | 75  | 66  | 59  | 53  | 67 | 59 | 53 | 48 | 45 | 41 | 37 | 32 | 30 | 27 | 21 | 19 | 18 | 18 | 18 | 12 |
| 4   | 69  | 58  | 51  | 45  | 61 | 52 | 45 | 40 | 40 | 35 | 32 | 29 | 26 | 23 | 18 | 16 | 15 | 15 | 15 | 11 |
| 5   | 63  | 52  | 44  | 38  | 56 | 46 | 39 | 34 | 35 | 31 | 27 | 26 | 22 | 20 | 16 | 14 | 13 | 13 | 13 | 9  |
| 6   | 58  | 46  | 38  | 33  | 51 | 41 | 34 | 30 | 32 | 27 | 23 | 23 | 20 | 17 | 15 | 13 | 11 | 11 | 11 | 8  |
| 7   | 53  | 41  | 34  | 28  | 47 | 37 | 30 | 26 | 29 | 24 | 20 | 21 | 18 | 15 | 13 | 11 | 10 | 10 | 10 | 7  |
| 8   | 49  | 37  | 30  | 25  | 44 | 33 | 27 | 22 | 26 | 21 | 18 | 19 | 16 | 13 | 12 | 10 | 9  | 9  | 9  | 6  |
| 9   | 46  | 34  | 27  | 22  | 40 | 30 | 24 | 20 | 24 | 19 | 16 | 17 | 14 | 12 | 11 | 9  | 8  | 8  | 8  | 6  |
| 10  | 43  | 31  | 24  | 19  | 38 | 28 | 22 | 18 | 22 | 17 | 14 | 16 | 13 | 11 | 10 | 8  | 7  | 7  | 7  | 5  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3227 | 3227 | 3227 |
| 5°  | 3235 | 3143 | 3148 |
| 10° | 3214 | 3081 | 3072 |
| 15° | 3184 | 3011 | 2986 |
| 20° | 3140 | 2936 | 2902 |
| 25° | 3090 | 2853 | 2812 |
| 30° | 3035 | 2770 | 2720 |
| 35° | 2974 | 2686 | 2638 |
| 40° | 2925 | 2605 | 2554 |
| 45° | 2851 | 2530 | 2478 |
| 50° | 2789 | 2444 | 2399 |
| 55° | 2725 | 2361 | 2308 |
| 60° | 2625 | 2258 | 2222 |
| 65° | 2516 | 2147 | 2119 |
| 70° | 2383 | 2020 | 2000 |
| 75° | 2196 | 1878 | 1887 |
| 80° | 1987 | 1734 | 1769 |
| 85° | 1710 | 1589 | 1673 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 90°  
Luminance: 3294 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 37.5   | 0.7       |
| 10°-20°   | 107.4  | 2.0       |
| 20°-30°   | 162.4  | 3.0       |
| 30°-40°   | 196.5  | 3.6       |
| 40°-50°   | 207.7  | 3.8       |
| 50°-60°   | 195.5  | 3.6       |
| 60°-70°   | 162.2  | 3.0       |
| 70°-80°   | 113.8  | 2.1       |
| 80°-90°   | 66.9   | 1.2       |
| 90°-100°  | 82.1   | 1.5       |
| 100°-110° | 317.0  | 5.8       |
| 110°-120° | 570.4  | 10.5      |
| 120°-130° | 710.7  | 13.1      |
| 130°-140° | 753.4  | 13.9      |
| 140°-150° | 701.1  | 12.9      |
| 150°-160° | 564.7  | 10.4      |
| 160°-170° | 364.2  | 6.7       |
| 170°-180° | 125.5  | 2.3       |
| 0°-30°    | 307.3  | 5.7       |
| 0°-40°    | 503.8  | 9.3       |
| 0°-60°    | 907.0  | 16.7      |
| 0°-90°    | 1250.0 | 23.0      |
| 90°-120°  | 969.5  | 17.8      |
| 90°-150°  | 3134.7 | 57.6      |
| 90°-180°  | 4189.0 | 77.0      |
| 0°-180°   | 5439.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 396  | 396   | 396  | 396   | 396  |      |
| 5°   | 396  | 395   | 392  | 395   | 395  | 38   |
| 15°  | 380  | 380   | 379  | 383   | 382  | 107  |
| 25°  | 347  | 350   | 351  | 356   | 357  | 160  |
| 35°  | 304  | 309   | 314  | 320   | 321  | 190  |
| 45°  | 253  | 262   | 270  | 278   | 280  | 196  |
| 55°  | 198  | 208   | 221  | 230   | 233  | 177  |
| 65°  | 137  | 152   | 167  | 178   | 181  | 136  |
| 75°  | 76   | 93    | 111  | 124   | 128  | 81   |
| 85°  | 24   | 42    | 62   | 75    | 80   | 24   |
| 90°  | 10   | 39    | 66   | 84    | 90   | 8    |
| 95°  | 60   | 41    | 60   | 78    | 83   | 72   |
| 105° | 301  | 316   | 337  | 357   | 326  | 316  |
| 115° | 558  | 565   | 578  | 590   | 593  | 549  |
| 125° | 782  | 786   | 795  | 806   | 810  | 699  |
| 135° | 969  | 968   | 975  | 984   | 989  | 747  |
| 145° | 1117 | 1119  | 1119 | 1123  | 1127 | 698  |
| 155° | 1224 | 1225  | 1222 | 1226  | 1223 | 564  |
| 165° | 1291 | 1286  | 1286 | 1294  | 1285 | 365  |
| 175° | 1321 | 1315  | 1316 | 1325  | 1313 | 126  |
| 180° | 1321 | 1321  | 1321 | 1321  | 1321 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 395.7 | 395.7 | 395.7 | 395.7 | 395.7 |
| 2.5°   | 397.4 | 396.1 | 392.6 | 395.7 | 395.2 |
| 5°     | 396.1 | 394.8 | 391.7 | 395.2 | 394.8 |
| 7.5°   | 393.5 | 392.6 | 389.9 | 393.9 | 393.5 |
| 10°    | 389.9 | 389.5 | 387.3 | 391.2 | 390.8 |
| 12.5°  | 385.0 | 385.0 | 383.7 | 387.3 | 387.3 |
| 15°    | 379.7 | 380.2 | 378.8 | 382.8 | 382.4 |
| 17.5°  | 372.6 | 374.0 | 373.5 | 377.5 | 377.1 |
| 20°    | 365.1 | 366.4 | 366.9 | 371.3 | 371.3 |
| 22.5°  | 356.7 | 358.5 | 359.3 | 363.8 | 364.7 |
| 25°    | 347.4 | 350.0 | 351.4 | 356.2 | 356.7 |
| 27.5°  | 337.2 | 341.2 | 342.9 | 347.4 | 347.8 |
| 30°    | 327.0 | 330.5 | 333.6 | 338.5 | 339.4 |
| 32.5°  | 315.9 | 320.3 | 323.9 | 329.7 | 330.5 |
| 35°    | 304.0 | 309.3 | 313.7 | 319.9 | 321.2 |
| 37.5°  | 292.0 | 298.2 | 303.5 | 309.7 | 311.0 |
| 40°    | 280.5 | 286.2 | 292.4 | 299.1 | 300.9 |
| 42.5°  | 267.2 | 273.8 | 281.4 | 288.9 | 290.2 |
| 45°    | 253.4 | 261.9 | 270.3 | 277.8 | 280.0 |
| 47.5°  | 240.6 | 249.0 | 258.8 | 266.3 | 268.9 |
| 50°    | 226.4 | 236.2 | 245.9 | 254.8 | 257.4 |
| 52.5°  | 212.2 | 222.0 | 233.5 | 242.4 | 245.0 |
| 55°    | 198.5 | 207.8 | 221.1 | 230.0 | 232.6 |
| 57.5°  | 183.0 | 194.5 | 207.4 | 218.0 | 220.2 |
| 60°    | 167.9 | 179.4 | 194.1 | 204.3 | 207.8 |
| 62.5°  | 153.3 | 166.2 | 180.8 | 191.0 | 194.5 |
| 65°    | 137.4 | 151.5 | 166.6 | 177.7 | 181.2 |
| 67.5°  | 122.3 | 137.4 | 153.3 | 164.4 | 167.9 |
| 70°    | 106.8 | 121.8 | 138.7 | 150.6 | 153.7 |
| 72.5°  | 91.7  | 107.2 | 125.4 | 136.9 | 140.5 |
| 75°    | 76.2  | 92.6  | 111.2 | 123.6 | 127.6 |
| 77.5°  | 61.6  | 78.9  | 98.4  | 110.8 | 115.2 |
| 80°    | 48.3  | 66.0  | 85.5  | 98.8  | 102.4 |
| 82.5°  | 35.0  | 53.6  | 73.1  | 86.8  | 90.8  |
| 85°    | 23.5  | 42.1  | 62.0  | 75.3  | 79.8  |
| 87.5°  | 14.6  | 32.8  | 52.3  | 65.1  | 69.1  |
| 90°    | 10.1  | 38.6  | 65.6  | 84.4  | 89.9  |
| 92.5°  | 21.4  | 35.0  | 61.9  | 80.3  | 83.9  |
| 95°    | 60.1  | 41.1  | 60.2  | 78.2  | 83.2  |
| 97.5°  | 109.0 | 143.7 | 58.0  | 74.6  | 79.5  |
| 100°   | 166.9 | 196.2 | 77.2  | 72.3  | 76.4  |
| 102.5° | 232.1 | 253.7 | 282.4 | 71.7  | 75.2  |
| 105°   | 301.4 | 316.1 | 337.4 | 357.4 | 325.5 |
| 107.5° | 365.6 | 376.1 | 398.5 | 414.5 | 421.6 |
| 110°   | 430.3 | 439.5 | 461.0 | 473.1 | 479.6 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 493.1  | 504.3  | 520.9  | 529.7  | 537.2  |
| 115°   | 557.9  | 564.8  | 578.0  | 589.8  | 592.9  |
| 117.5° | 616.2  | 622.8  | 639.0  | 647.3  | 650.9  |
| 120°   | 675.0  | 680.2  | 692.2  | 703.0  | 704.6  |
| 122.5° | 730.3  | 732.3  | 746.3  | 756.1  | 757.2  |
| 125°   | 782.3  | 785.7  | 794.9  | 806.2  | 809.9  |
| 127.5° | 832.7  | 833.1  | 847.0  | 854.0  | 856.1  |
| 130°   | 880.6  | 881.2  | 891.2  | 900.2  | 902.8  |
| 132.5° | 925.0  | 926.6  | 935.9  | 944.3  | 946.1  |
| 135°   | 969.1  | 968.1  | 975.1  | 984.2  | 988.8  |
| 137.5° | 1008.6 | 1008.1 | 1014.8 | 1023.5 | 1024.7 |
| 140°   | 1047.1 | 1048.6 | 1051.1 | 1059.7 | 1063.0 |
| 142.5° | 1081.2 | 1085.2 | 1085.8 | 1092.6 | 1094.3 |
| 145°   | 1116.8 | 1119.3 | 1119.3 | 1123.0 | 1126.7 |
| 147.5° | 1144.4 | 1150.0 | 1149.0 | 1150.4 | 1153.2 |
| 150°   | 1175.1 | 1178.6 | 1177.6 | 1177.6 | 1178.6 |
| 152.5° | 1200.4 | 1203.3 | 1201.3 | 1203.3 | 1202.3 |
| 155°   | 1224.1 | 1225.1 | 1222.1 | 1226.0 | 1223.1 |
| 157.5° | 1244.8 | 1244.8 | 1240.9 | 1245.8 | 1240.9 |
| 160°   | 1262.6 | 1259.6 | 1258.6 | 1264.6 | 1258.6 |
| 162.5° | 1278.4 | 1274.4 | 1273.5 | 1279.4 | 1272.5 |
| 165°   | 1291.2 | 1286.3 | 1286.3 | 1294.2 | 1285.3 |
| 167.5° | 1302.1 | 1297.2 | 1296.2 | 1305.1 | 1295.2 |
| 170°   | 1311.0 | 1305.1 | 1306.1 | 1314.0 | 1304.1 |
| 172.5° | 1316.9 | 1311.0 | 1312.0 | 1319.9 | 1309.0 |
| 175°   | 1320.9 | 1315.0 | 1315.9 | 1324.8 | 1313.0 |
| 177.5° | 1323.8 | 1316.9 | 1318.9 | 1326.8 | 1315.0 |
| 180°   | 1320.9 | 1320.9 | 1320.9 | 1320.9 | 1320.9 |

(END OF REPORT)