

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: P1030803

Luminaire Tested: S123DIW-B340D1030UB2750-4F0-XX-W2A-F\_5000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1030803  
REPORT IS A COMBINATION OF REPORTS P991208 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIW-B340D1030UB2750-4F0-XX-W2A-F\_5000K  
Description: Define 3 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

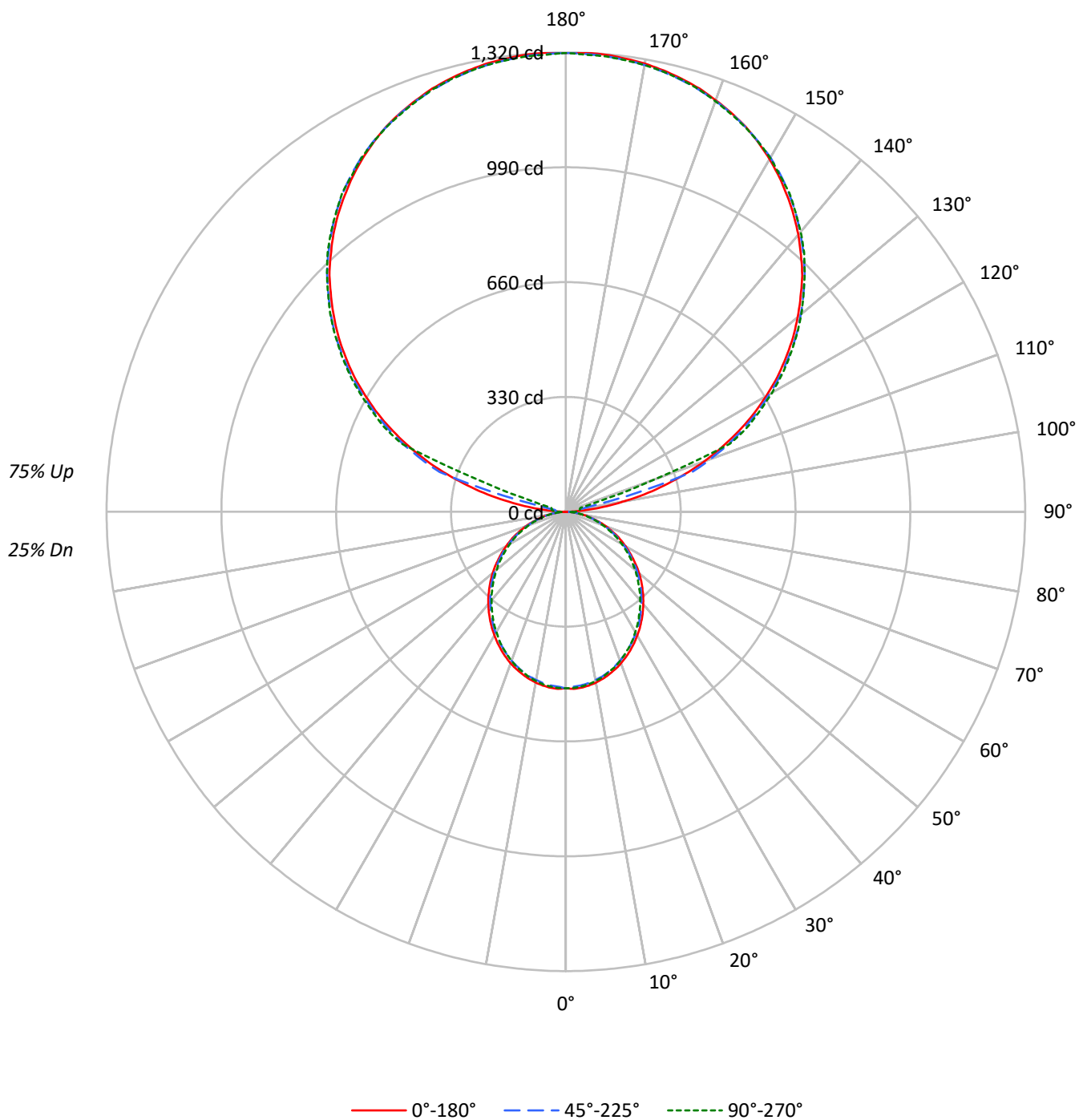
Lumens per Lamp: N/A  
Luminaire Lumens: 5342.0 lumens  
Efficiency: N/A  
Efficacy: 120.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 101 | 101 | 101 | 101 | 90 | 90 | 90 | 90 | 69 | 69 | 69 | 50 | 50 | 50 | 33 | 33 | 33 |
| 1   | 92  | 88  | 84  | 81  | 82 | 78 | 75 | 72 | 61 | 58 | 57 | 44 | 43 | 42 | 29 | 28 | 28 |
| 2   | 84  | 77  | 71  | 66  | 74 | 68 | 64 | 59 | 53 | 50 | 47 | 39 | 37 | 35 | 25 | 24 | 23 |
| 3   | 76  | 67  | 60  | 55  | 68 | 60 | 54 | 49 | 47 | 43 | 39 | 34 | 32 | 29 | 23 | 21 | 20 |
| 4   | 70  | 59  | 52  | 46  | 62 | 53 | 47 | 42 | 41 | 37 | 33 | 30 | 27 | 25 | 20 | 18 | 17 |
| 5   | 64  | 53  | 45  | 39  | 57 | 47 | 41 | 36 | 37 | 32 | 29 | 27 | 24 | 22 | 18 | 16 | 15 |
| 6   | 59  | 47  | 39  | 34  | 52 | 42 | 36 | 31 | 33 | 28 | 25 | 24 | 21 | 19 | 16 | 14 | 13 |
| 7   | 54  | 42  | 35  | 29  | 48 | 38 | 31 | 27 | 30 | 25 | 22 | 22 | 19 | 16 | 15 | 13 | 11 |
| 8   | 50  | 38  | 31  | 26  | 45 | 34 | 28 | 24 | 27 | 22 | 19 | 20 | 17 | 15 | 14 | 12 | 10 |
| 9   | 47  | 35  | 28  | 23  | 41 | 31 | 25 | 21 | 25 | 20 | 17 | 18 | 15 | 13 | 13 | 11 | 9  |
| 10  | 43  | 32  | 25  | 20  | 39 | 29 | 23 | 19 | 23 | 18 | 15 | 17 | 14 | 12 | 12 | 10 | 8  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5459 | 5459 | 5459 |
| 5°  | 5473 | 5271 | 5263 |
| 10° | 5425 | 5092 | 5041 |
| 15° | 5349 | 4907 | 4798 |
| 20° | 5263 | 4701 | 4557 |
| 25° | 5150 | 4483 | 4300 |
| 30° | 5028 | 4259 | 4029 |
| 35° | 4900 | 4029 | 3760 |
| 40° | 4766 | 3787 | 3496 |
| 45° | 4617 | 3552 | 3220 |
| 50° | 4467 | 3291 | 2943 |
| 55° | 4274 | 3017 | 2662 |
| 60° | 4077 | 2717 | 2363 |
| 65° | 3890 | 2391 | 2051 |
| 70° | 3622 | 2029 | 1687 |
| 75° | 3233 | 1607 | 1310 |
| 80° | 2796 | 1130 | 925  |
| 85° | 2180 | 607  | 463  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4617 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 47.8   | 0.9       |
| 10°-20°   | 135.0  | 2.5       |
| 20°-30°   | 199.4  | 3.7       |
| 30°-40°   | 232.9  | 4.4       |
| 40°-50°   | 234.1  | 4.4       |
| 50°-60°   | 205.7  | 3.8       |
| 60°-70°   | 153.2  | 2.9       |
| 70°-80°   | 87.2   | 1.6       |
| 80°-90°   | 27.4   | 0.5       |
| 90°-100°  | 46.5   | 0.9       |
| 100°-110° | 224.8  | 4.2       |
| 110°-120° | 550.8  | 10.3      |
| 120°-130° | 699.3  | 13.1      |
| 130°-140° | 747.0  | 14.0      |
| 140°-150° | 698.6  | 13.1      |
| 150°-160° | 563.5  | 10.5      |
| 160°-170° | 363.6  | 6.8       |
| 170°-180° | 125.3  | 2.3       |
| 0°-30°    | 382.2  | 7.2       |
| 0°-40°    | 615.1  | 11.5      |
| 0°-60°    | 1054.9 | 19.7      |
| 0°-90°    | 1322.6 | 24.8      |
| 90°-120°  | 822.1  | 15.4      |
| 90°-150°  | 2967.0 | 55.5      |
| 90°-180°  | 4019.0 | 75.2      |
| 0°-180°   | 5342.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 507  | 507   | 507  | 507   | 507  |      |
| 5°   | 508  | 505   | 501  | 505   | 504  | 48   |
| 15°  | 483  | 482   | 476  | 479   | 477  | 136  |
| 25°  | 439  | 436   | 430  | 431   | 430  | 202  |
| 35°  | 379  | 377   | 371  | 368   | 366  | 237  |
| 45°  | 311  | 309   | 304  | 298   | 296  | 240  |
| 55°  | 236  | 236   | 230  | 225   | 223  | 211  |
| 65°  | 161  | 159   | 154  | 151   | 150  | 159  |
| 75°  | 85   | 83    | 82   | 80    | 78   | 91   |
| 85°  | 23   | 22    | 22   | 21    | 21   | 24   |
| 90°  | 1    | 11    | 24   | 27    | 29   | 5    |
| 95°  | 60   | 20    | 30   | 37    | 37   | 71   |
| 105° | 292  | 303   | 214  | 41    | 43   | 309  |
| 115° | 548  | 553   | 562  | 572   | 576  | 541  |
| 125° | 772  | 780   | 784  | 786   | 788  | 690  |
| 135° | 961  | 967   | 971  | 974   | 971  | 740  |
| 145° | 1109 | 1116  | 1118 | 1120  | 1120 | 694  |
| 155° | 1222 | 1220  | 1220 | 1225  | 1220 | 563  |
| 165° | 1288 | 1285  | 1284 | 1292  | 1285 | 364  |
| 175° | 1318 | 1314  | 1314 | 1321  | 1314 | 125  |
| 180° | 1318 | 1318  | 1318 | 1318  | 1318 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 507.2 | 507.2 | 507.2 | 507.2 | 507.2 |
| 2.5°   | 509.4 | 507.6 | 502.8 | 507.2 | 506.8 |
| 5°     | 507.6 | 505.4 | 500.7 | 505.0 | 504.1 |
| 7.5°   | 503.7 | 501.5 | 496.7 | 500.7 | 500.2 |
| 10°    | 498.5 | 496.3 | 490.6 | 494.5 | 493.7 |
| 12.5°  | 491.5 | 489.7 | 484.5 | 487.1 | 486.7 |
| 15°    | 483.2 | 481.5 | 475.8 | 479.3 | 476.7 |
| 17.5°  | 474.0 | 471.9 | 466.2 | 468.8 | 467.9 |
| 20°    | 463.6 | 461.0 | 455.3 | 457.0 | 455.7 |
| 22.5°  | 451.8 | 449.2 | 443.5 | 444.8 | 443.1 |
| 25°    | 438.7 | 436.1 | 430.4 | 430.9 | 429.6 |
| 27.5°  | 425.2 | 422.6 | 416.5 | 416.9 | 415.6 |
| 30°    | 410.4 | 408.2 | 402.1 | 402.1 | 399.0 |
| 32.5°  | 395.5 | 392.5 | 388.1 | 385.1 | 383.8 |
| 35°    | 379.4 | 376.8 | 371.1 | 368.5 | 366.3 |
| 37.5°  | 363.3 | 359.8 | 354.1 | 351.1 | 349.8 |
| 40°    | 346.3 | 343.7 | 337.5 | 334.1 | 332.3 |
| 42.5°  | 329.3 | 326.2 | 320.1 | 316.6 | 314.9 |
| 45°    | 310.9 | 309.2 | 303.5 | 298.3 | 296.1 |
| 47.5°  | 293.1 | 290.4 | 285.2 | 280.0 | 278.2 |
| 50°    | 274.7 | 272.6 | 266.9 | 262.1 | 259.5 |
| 52.5°  | 255.6 | 254.3 | 248.1 | 244.2 | 241.6 |
| 55°    | 235.9 | 235.5 | 229.8 | 225.0 | 222.9 |
| 57.5°  | 217.6 | 215.9 | 211.5 | 207.2 | 204.5 |
| 60°    | 197.6 | 197.1 | 191.9 | 188.0 | 185.8 |
| 62.5°  | 179.7 | 178.4 | 173.1 | 169.2 | 167.9 |
| 65°    | 160.9 | 158.7 | 154.4 | 150.9 | 149.6 |
| 67.5°  | 140.9 | 139.1 | 135.6 | 132.6 | 130.8 |
| 70°    | 123.0 | 120.4 | 117.7 | 114.7 | 112.5 |
| 72.5°  | 104.2 | 102.5 | 99.4  | 96.8  | 95.9  |
| 75°    | 85.0  | 83.3  | 82.0  | 79.8  | 78.5  |
| 77.5°  | 68.0  | 67.2  | 65.4  | 63.7  | 63.7  |
| 80°    | 51.5  | 50.2  | 49.3  | 48.8  | 48.8  |
| 82.5°  | 35.3  | 35.3  | 35.3  | 34.5  | 34.0  |
| 85°    | 22.7  | 21.8  | 21.8  | 20.9  | 20.9  |
| 87.5°  | 11.3  | 10.0  | 9.6   | 9.2   | 9.2   |
| 90°    | 1.0   | 10.8  | 23.5  | 27.4  | 29.4  |
| 92.5°  | 22.5  | 16.7  | 25.5  | 32.3  | 33.3  |
| 95°    | 59.8  | 19.6  | 30.4  | 37.2  | 37.2  |
| 97.5°  | 108.7 | 81.3  | 31.3  | 39.2  | 40.2  |
| 100°   | 165.5 | 185.1 | 32.3  | 40.2  | 41.1  |
| 102.5° | 230.2 | 242.9 | 72.5  | 40.2  | 42.1  |
| 105°   | 291.9 | 302.7 | 214.5 | 41.1  | 43.1  |
| 107.5° | 357.5 | 366.3 | 381.0 | 230.2 | 101.9 |
| 110°   | 423.2 | 431.0 | 441.8 | 409.4 | 269.4 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 485.8  | 492.7  | 503.5  | 512.3  | 510.3  |
| 115°   | 547.6  | 553.4  | 562.2  | 572.0  | 576.0  |
| 117.5° | 608.3  | 615.1  | 620.0  | 627.9  | 628.9  |
| 120°   | 664.1  | 672.9  | 675.9  | 683.7  | 683.7  |
| 122.5° | 720.9  | 727.8  | 731.7  | 736.6  | 737.6  |
| 125°   | 771.9  | 779.7  | 783.6  | 785.6  | 787.5  |
| 127.5° | 822.8  | 830.6  | 835.5  | 838.5  | 836.5  |
| 130°   | 869.8  | 877.7  | 881.6  | 885.5  | 883.5  |
| 132.5° | 914.9  | 922.7  | 925.6  | 929.6  | 926.6  |
| 135°   | 960.9  | 966.8  | 970.7  | 973.6  | 970.7  |
| 137.5° | 1000.1 | 1007.9 | 1009.9 | 1014.8 | 1012.8 |
| 140°   | 1039.3 | 1045.2 | 1048.1 | 1052.0 | 1050.0 |
| 142.5° | 1075.5 | 1081.4 | 1084.3 | 1087.3 | 1084.3 |
| 145°   | 1108.8 | 1115.7 | 1117.6 | 1119.6 | 1119.6 |
| 147.5° | 1141.1 | 1146.0 | 1148.0 | 1150.0 | 1145.1 |
| 150°   | 1170.5 | 1173.5 | 1175.4 | 1177.4 | 1174.4 |
| 152.5° | 1197.0 | 1198.0 | 1198.9 | 1202.9 | 1198.0 |
| 155°   | 1221.5 | 1219.5 | 1220.5 | 1225.4 | 1219.5 |
| 157.5° | 1241.1 | 1241.1 | 1240.1 | 1246.0 | 1238.1 |
| 160°   | 1258.7 | 1257.7 | 1256.7 | 1262.6 | 1255.7 |
| 162.5° | 1275.3 | 1272.4 | 1271.4 | 1278.3 | 1272.4 |
| 165°   | 1288.1 | 1285.1 | 1284.2 | 1292.0 | 1285.1 |
| 167.5° | 1298.8 | 1294.9 | 1294.9 | 1302.8 | 1294.9 |
| 170°   | 1307.7 | 1303.7 | 1303.7 | 1311.6 | 1303.7 |
| 172.5° | 1313.5 | 1308.6 | 1309.6 | 1317.5 | 1308.6 |
| 175°   | 1318.4 | 1313.5 | 1314.5 | 1321.4 | 1313.5 |
| 177.5° | 1320.4 | 1315.5 | 1316.5 | 1324.3 | 1314.5 |
| 180°   | 1318.4 | 1318.4 | 1318.4 | 1318.4 | 1318.4 |

(END OF REPORT)