

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: P1033793

Luminaire Tested: S124DIW-B795D470UB50-4F0-XX-W2A-F1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033793  
REPORT IS A COMBINATION OF REPORTS P998201 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B795D470UB50-4F0-XX-W2A-F1  
Description: Define 4 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

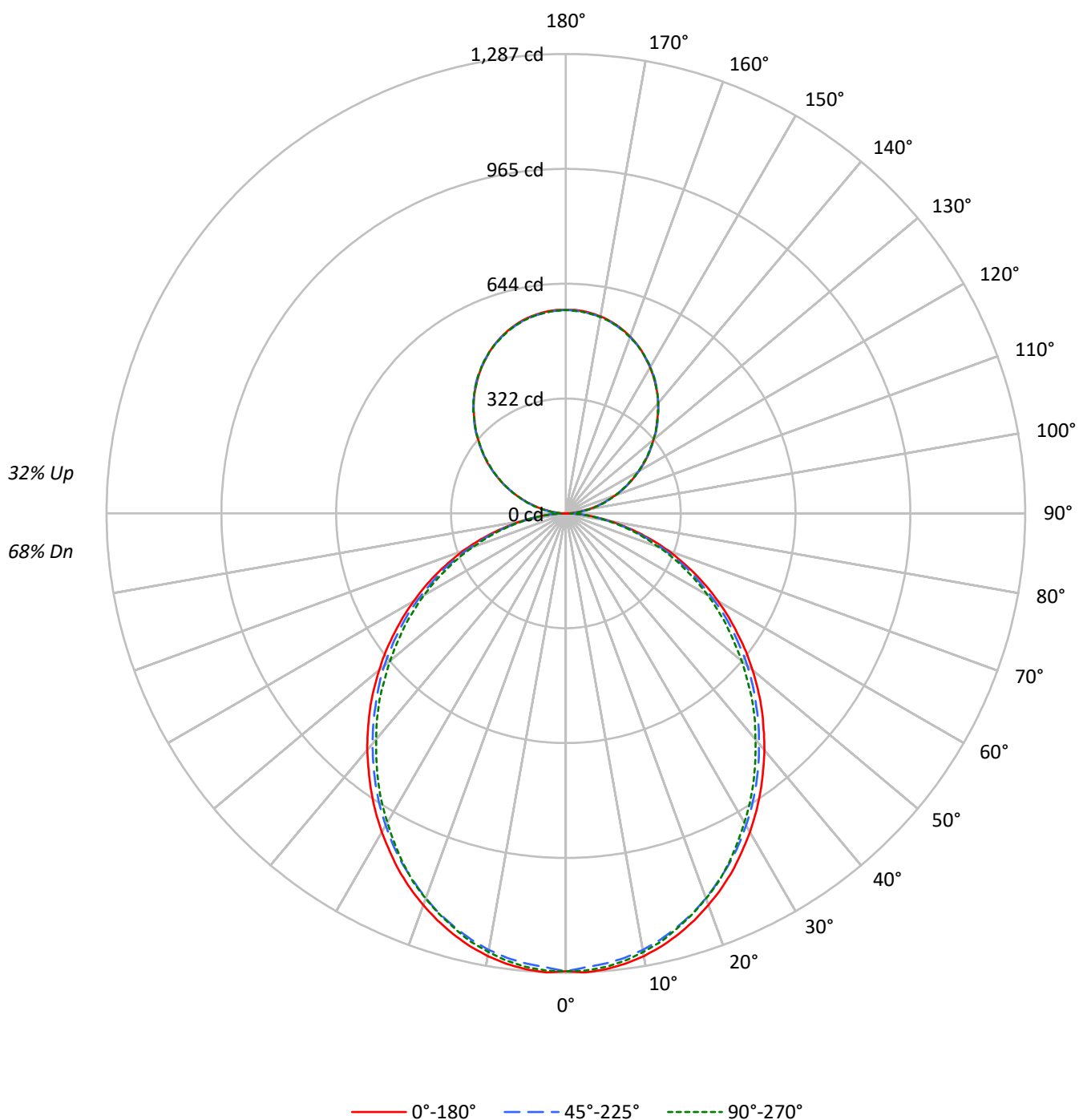
Lumens per Lamp: N/A  
Luminaire Lumens: 4875.0 lumens  
Efficiency: N/A  
Efficacy: 99.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 49.1  
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 |    |    |    |    | 0  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 82 | 82 | 82 | 72 | 72 | 72 | 68 |    |    |
| 1   | 102 | 97  | 93  | 90  | 96  | 92  | 88  | 85  | 82 | 79 | 77 | 72 | 70 | 69 | 64 | 62 | 61 | 57 |    |    |
| 2   | 93  | 85  | 79  | 73  | 87  | 80  | 75  | 70  | 72 | 67 | 63 | 64 | 60 | 57 | 56 | 54 | 51 | 48 |    |    |
| 3   | 85  | 75  | 67  | 61  | 79  | 71  | 64  | 58  | 63 | 58 | 53 | 56 | 52 | 48 | 50 | 47 | 44 | 40 |    |    |
| 4   | 77  | 66  | 58  | 52  | 73  | 63  | 55  | 50  | 56 | 50 | 46 | 50 | 45 | 42 | 45 | 41 | 38 | 35 |    |    |
| 5   | 71  | 59  | 51  | 44  | 67  | 56  | 48  | 43  | 50 | 44 | 39 | 45 | 40 | 36 | 40 | 36 | 33 | 30 |    |    |
| 6   | 66  | 53  | 45  | 39  | 62  | 50  | 43  | 37  | 45 | 39 | 34 | 41 | 36 | 32 | 36 | 32 | 29 | 26 |    |    |
| 7   | 61  | 48  | 40  | 34  | 57  | 46  | 38  | 33  | 41 | 35 | 30 | 37 | 32 | 28 | 33 | 29 | 26 | 23 |    |    |
| 8   | 56  | 44  | 36  | 30  | 53  | 42  | 34  | 29  | 38 | 32 | 27 | 34 | 29 | 25 | 31 | 26 | 23 | 21 |    |    |
| 9   | 53  | 40  | 32  | 27  | 50  | 38  | 31  | 26  | 35 | 29 | 24 | 31 | 26 | 23 | 28 | 24 | 21 | 19 |    |    |
| 10  | 49  | 37  | 29  | 24  | 46  | 35  | 28  | 24  | 32 | 26 | 22 | 29 | 24 | 21 | 26 | 22 | 19 | 17 |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10462 | 10462 | 10462 |
| 5°  | 10470 | 10161 | 10174 |
| 10° | 10382 | 9879  | 9810  |
| 15° | 10233 | 9543  | 9399  |
| 20° | 10043 | 9181  | 8975  |
| 25° | 9829  | 8797  | 8518  |
| 30° | 9571  | 8383  | 8016  |
| 35° | 9303  | 7958  | 7531  |
| 40° | 9025  | 7503  | 7014  |
| 45° | 8733  | 7044  | 6532  |
| 50° | 8409  | 6600  | 5998  |
| 55° | 8058  | 6082  | 5467  |
| 60° | 7697  | 5514  | 4915  |
| 65° | 7285  | 4927  | 4292  |
| 70° | 6811  | 4222  | 3625  |
| 75° | 6104  | 3403  | 2904  |
| 80° | 5199  | 2460  | 2042  |
| 85° | 4039  | 1371  | 1098  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8733 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 120.9  | 2.5       |
| 10°-20°   | 340.7  | 7.0       |
| 20°-30°   | 501.4  | 10.3      |
| 30°-40°   | 582.8  | 12.0      |
| 40°-50°   | 582.8  | 12.0      |
| 50°-60°   | 509.7  | 10.5      |
| 60°-70°   | 378.4  | 7.8       |
| 70°-80°   | 214.7  | 4.4       |
| 80°-90°   | 62.7   | 1.3       |
| 90°-100°  | 37.1   | 0.8       |
| 100°-110° | 111.2  | 2.3       |
| 110°-120° | 189.0  | 3.9       |
| 120°-130° | 249.2  | 5.1       |
| 130°-140° | 279.9  | 5.7       |
| 140°-150° | 275.1  | 5.6       |
| 150°-160° | 231.4  | 4.7       |
| 160°-170° | 153.9  | 3.2       |
| 170°-180° | 53.9   | 1.1       |
| 0°-30°    | 963.0  | 19.8      |
| 0°-40°    | 1545.9 | 31.7      |
| 0°-60°    | 2638.4 | 54.1      |
| 0°-90°    | 3294.2 | 67.6      |
| 90°-120°  | 337.3  | 6.9       |
| 90°-150°  | 1141.5 | 23.4      |
| 90°-180°  | 1581.0 | 32.4      |
| 0°-180°   | 4875.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1283 | 1283  | 1283 | 1283  | 1283 |      |
| 5°   | 1282 | 1278  | 1266 | 1278  | 1276 | 122  |
| 15°  | 1220 | 1216  | 1201 | 1207  | 1204 | 344  |
| 25°  | 1105 | 1098  | 1084 | 1085  | 1080 | 509  |
| 35°  | 951  | 944   | 929  | 922   | 917  | 595  |
| 45°  | 776  | 769   | 752  | 741   | 738  | 598  |
| 55°  | 587  | 584   | 570  | 557   | 551  | 526  |
| 65°  | 398  | 393   | 382  | 372   | 367  | 394  |
| 75°  | 212  | 207   | 202  | 197   | 196  | 225  |
| 85°  | 56   | 56    | 54   | 54    | 52   | 60   |
| 90°  | 1    | 6     | 10   | 12    | 13   | 6    |
| 95°  | 26   | 30    | 34   | 35    | 35   | 29   |
| 105° | 103  | 103   | 105  | 106   | 108  | 109  |
| 115° | 192  | 192   | 191  | 191   | 190  | 189  |
| 125° | 280  | 280   | 279  | 278   | 278  | 249  |
| 135° | 361  | 364   | 364  | 363   | 361  | 279  |
| 145° | 438  | 440   | 441  | 440   | 439  | 274  |
| 155° | 502  | 502   | 502  | 504   | 502  | 231  |
| 165° | 547  | 546   | 545  | 547   | 546  | 154  |
| 175° | 569  | 567   | 566  | 569   | 566  | 54   |
| 180° | 570  | 570   | 570  | 570   | 570  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1283.0 | 1283.0 | 1283.0 | 1283.0 | 1283.0 |
| 2.5°   | 1287.1 | 1284.0 | 1272.7 | 1283.0 | 1281.9 |
| 5°     | 1281.9 | 1277.8 | 1266.5 | 1277.8 | 1275.8 |
| 7.5°   | 1272.7 | 1268.6 | 1256.2 | 1265.5 | 1264.5 |
| 10°    | 1259.3 | 1255.2 | 1241.9 | 1250.1 | 1248.0 |
| 12.5°  | 1241.9 | 1237.7 | 1223.3 | 1232.6 | 1229.5 |
| 15°    | 1220.3 | 1216.2 | 1200.7 | 1206.9 | 1203.8 |
| 17.5°  | 1195.6 | 1190.5 | 1176.1 | 1180.2 | 1178.1 |
| 20°    | 1167.8 | 1162.7 | 1147.3 | 1150.4 | 1148.3 |
| 22.5°  | 1138.0 | 1130.8 | 1115.4 | 1121.6 | 1117.5 |
| 25°    | 1105.1 | 1097.9 | 1083.5 | 1084.6 | 1080.5 |
| 27.5°  | 1068.1 | 1060.9 | 1047.6 | 1045.5 | 1040.4 |
| 30°    | 1031.1 | 1022.9 | 1009.5 | 1005.4 | 1000.3 |
| 32.5°  | 992.0  | 984.8  | 970.5  | 965.3  | 960.2  |
| 35°    | 950.9  | 943.7  | 929.3  | 922.1  | 917.0  |
| 37.5°  | 907.7  | 901.6  | 886.2  | 879.0  | 871.8  |
| 40°    | 865.6  | 857.4  | 842.0  | 831.7  | 826.5  |
| 42.5°  | 820.4  | 816.3  | 798.8  | 786.4  | 783.4  |
| 45°    | 776.2  | 769.0  | 752.5  | 741.2  | 738.1  |
| 47.5°  | 729.9  | 724.8  | 709.3  | 697.0  | 688.8  |
| 50°    | 682.6  | 678.5  | 664.1  | 649.7  | 643.5  |
| 52.5°  | 636.3  | 631.2  | 615.8  | 603.4  | 595.2  |
| 55°    | 587.0  | 583.9  | 569.5  | 557.2  | 551.0  |
| 57.5°  | 540.7  | 537.7  | 523.3  | 510.9  | 504.8  |
| 60°    | 492.4  | 487.3  | 473.9  | 464.7  | 459.5  |
| 62.5°  | 445.1  | 441.0  | 426.6  | 418.4  | 413.3  |
| 65°    | 397.8  | 392.7  | 382.4  | 372.1  | 367.0  |
| 67.5°  | 349.5  | 345.4  | 335.1  | 324.9  | 323.8  |
| 70°    | 305.3  | 298.1  | 289.9  | 281.7  | 278.6  |
| 72.5°  | 258.0  | 250.8  | 244.7  | 238.5  | 235.4  |
| 75°    | 211.8  | 206.6  | 201.5  | 197.4  | 196.4  |
| 77.5°  | 166.5  | 164.5  | 159.3  | 158.3  | 155.2  |
| 80°    | 126.4  | 123.4  | 121.3  | 119.3  | 118.2  |
| 82.5°  | 87.4   | 86.4   | 86.4   | 85.3   | 84.3   |
| 85°    | 55.5   | 55.5   | 53.5   | 53.5   | 52.4   |
| 87.5°  | 26.7   | 25.7   | 24.7   | 24.7   | 24.7   |
| 90°    | 1.3    | 6.2    | 9.7    | 12.3   | 13.2   |
| 92.5°  | 11.5   | 17.2   | 19.4   | 20.7   | 21.1   |
| 95°    | 26.4   | 30.4   | 33.5   | 34.8   | 34.8   |
| 97.5°  | 42.3   | 45.8   | 49.3   | 51.1   | 51.1   |
| 100°   | 61.7   | 63.4   | 67.4   | 68.3   | 68.3   |
| 102.5° | 82.0   | 82.4   | 85.9   | 87.2   | 87.7   |
| 105°   | 102.7  | 103.1  | 104.9  | 106.2  | 107.5  |
| 107.5° | 124.3  | 124.7  | 125.1  | 126.9  | 126.5  |
| 110°   | 146.3  | 147.2  | 146.7  | 145.8  | 147.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 169.2 | 169.2 | 168.3 | 168.3 | 168.3 |
| 115°   | 192.1 | 192.1 | 191.2 | 190.8 | 190.3 |
| 117.5° | 213.7 | 213.7 | 213.3 | 211.9 | 210.6 |
| 120°   | 235.3 | 237.1 | 235.7 | 233.5 | 234.4 |
| 122.5° | 257.8 | 258.2 | 257.8 | 256.4 | 254.2 |
| 125°   | 279.8 | 279.8 | 279.4 | 278.5 | 277.6 |
| 127.5° | 299.6 | 300.9 | 300.1 | 299.2 | 298.7 |
| 130°   | 320.8 | 322.1 | 322.1 | 321.2 | 319.5 |
| 132.5° | 342.4 | 343.2 | 342.8 | 341.9 | 341.5 |
| 135°   | 360.9 | 363.5 | 363.5 | 362.6 | 361.3 |
| 137.5° | 381.6 | 382.9 | 383.8 | 382.5 | 382.9 |
| 140°   | 402.3 | 403.2 | 403.2 | 402.7 | 402.3 |
| 142.5° | 421.2 | 422.1 | 421.7 | 421.7 | 421.7 |
| 145°   | 438.4 | 440.2 | 440.6 | 440.2 | 438.9 |
| 147.5° | 456.0 | 458.2 | 457.8 | 457.4 | 456.9 |
| 150°   | 471.9 | 473.7 | 473.7 | 473.7 | 473.2 |
| 152.5° | 486.9 | 487.8 | 488.2 | 489.5 | 488.2 |
| 155°   | 502.3 | 502.3 | 501.9 | 503.6 | 501.9 |
| 157.5° | 515.5 | 514.6 | 514.6 | 516.0 | 514.6 |
| 160°   | 527.0 | 526.5 | 526.1 | 527.4 | 525.2 |
| 162.5° | 537.6 | 536.2 | 535.8 | 538.4 | 536.2 |
| 165°   | 546.8 | 545.5 | 544.6 | 547.3 | 545.5 |
| 167.5° | 554.3 | 552.5 | 552.5 | 555.2 | 552.5 |
| 170°   | 560.5 | 558.3 | 558.7 | 561.4 | 558.3 |
| 172.5° | 564.9 | 563.1 | 563.1 | 566.2 | 563.1 |
| 175°   | 568.8 | 566.6 | 566.2 | 569.3 | 566.2 |
| 177.5° | 570.6 | 568.4 | 568.4 | 571.5 | 568.0 |
| 180°   | 569.7 | 569.7 | 569.7 | 569.7 | 569.7 |

(END OF REPORT)