

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: P1033349

Luminaire Tested: S124DIW-B1195D470UB50-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1033349  
REPORT IS A COMBINATION OF REPORTS P997207 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIW-B1195D470UB50-4F0-XX-W2A-D  
Description: Define 4 Direct/Indirect Wall Mount with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

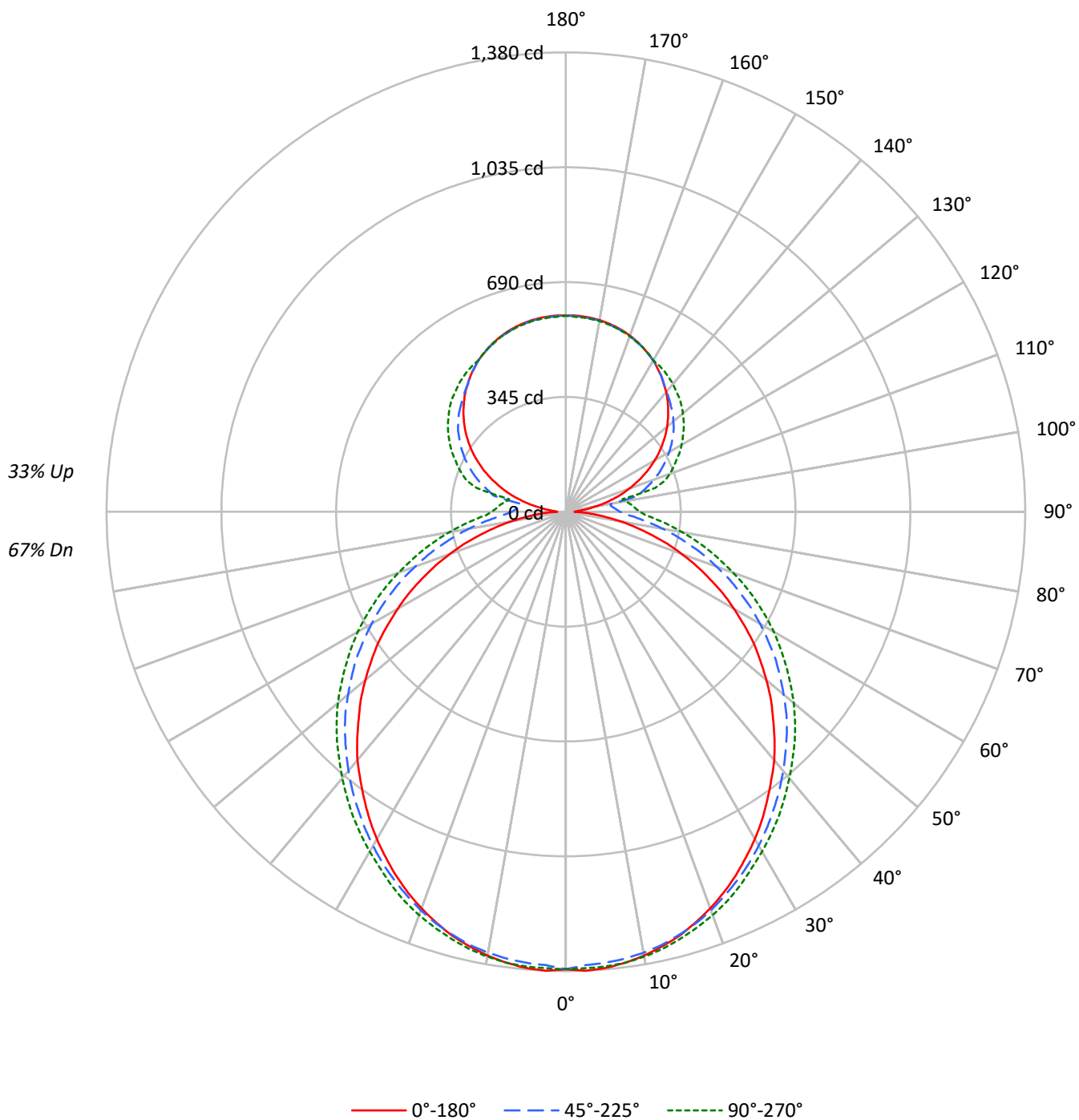
Lumens per Lamp: N/A  
Luminaire Lumens: 6509.0 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 74.5  
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   | 111 | 111 | 111 | 111 | 105 | 105 | 105 | 105 | 93 | 93 | 93 | 81 | 81 | 81 | 71 | 71 | 71 |
| 1   | 100 | 95  | 91  | 87  | 94  | 90  | 86  | 82  | 79 | 76 | 73 | 70 | 67 | 65 | 61 | 59 | 58 |
| 2   | 91  | 82  | 75  | 70  | 85  | 78  | 71  | 66  | 69 | 64 | 60 | 60 | 57 | 53 | 53 | 50 | 47 |
| 3   | 82  | 72  | 64  | 57  | 77  | 68  | 61  | 55  | 60 | 54 | 50 | 53 | 48 | 45 | 46 | 43 | 40 |
| 4   | 75  | 63  | 55  | 48  | 70  | 60  | 52  | 46  | 53 | 47 | 42 | 47 | 42 | 38 | 41 | 37 | 34 |
| 5   | 69  | 56  | 48  | 41  | 64  | 53  | 45  | 39  | 47 | 41 | 36 | 42 | 37 | 33 | 37 | 33 | 29 |
| 6   | 63  | 51  | 42  | 36  | 59  | 48  | 40  | 34  | 43 | 36 | 31 | 38 | 33 | 28 | 33 | 29 | 26 |
| 7   | 59  | 46  | 37  | 31  | 55  | 43  | 35  | 30  | 39 | 32 | 27 | 34 | 29 | 25 | 30 | 26 | 23 |
| 8   | 54  | 41  | 33  | 28  | 51  | 39  | 32  | 26  | 35 | 29 | 24 | 31 | 26 | 22 | 28 | 24 | 20 |
| 9   | 51  | 38  | 30  | 25  | 48  | 36  | 29  | 24  | 32 | 26 | 22 | 29 | 24 | 20 | 26 | 21 | 18 |
| 10  | 47  | 35  | 27  | 22  | 45  | 33  | 26  | 21  | 30 | 24 | 20 | 27 | 22 | 18 | 24 | 20 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11205 | 11205 | 11205 |
| 5°  | 11236 | 10913 | 10933 |
| 10° | 11163 | 10699 | 10668 |
| 15° | 11059 | 10457 | 10369 |
| 20° | 10904 | 10196 | 10078 |
| 25° | 10729 | 9908  | 9765  |
| 30° | 10541 | 9622  | 9446  |
| 35° | 10327 | 9330  | 9162  |
| 40° | 10156 | 9050  | 8867  |
| 45° | 9903  | 8787  | 8607  |
| 50° | 9686  | 8488  | 8332  |
| 55° | 9463  | 8201  | 8017  |
| 60° | 9117  | 7842  | 7719  |
| 65° | 8735  | 7456  | 7361  |
| 70° | 8272  | 7013  | 6947  |
| 75° | 7628  | 6522  | 6553  |
| 80° | 6897  | 6023  | 6141  |
| 85° | 5938  | 5520  | 5806  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 9903 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.2  | 2.0       |
| 10°-20°   | 373.1  | 5.7       |
| 20°-30°   | 564.1  | 8.7       |
| 30°-40°   | 682.4  | 10.5      |
| 40°-50°   | 721.4  | 11.1      |
| 50°-60°   | 678.9  | 10.4      |
| 60°-70°   | 563.4  | 8.7       |
| 70°-80°   | 395.4  | 6.1       |
| 80°-90°   | 224.1  | 3.4       |
| 90°-100°  | 152.3  | 2.3       |
| 100°-110° | 227.0  | 3.5       |
| 110°-120° | 311.8  | 4.8       |
| 120°-130° | 349.3  | 5.4       |
| 130°-140° | 350.0  | 5.4       |
| 140°-150° | 315.4  | 4.8       |
| 150°-160° | 251.8  | 3.9       |
| 160°-170° | 162.4  | 2.5       |
| 170°-180° | 56.0   | 0.9       |
| 0°-30°    | 1067.3 | 16.4      |
| 0°-40°    | 1749.7 | 26.9      |
| 0°-60°    | 3150.1 | 48.4      |
| 0°-90°    | 4332.9 | 66.6      |
| 90°-120°  | 691.1  | 10.6      |
| 90°-150°  | 1705.9 | 26.2      |
| 90°-180°  | 2176.0 | 33.4      |
| 0°-180°   | 6509.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1374 | 1374  | 1374 | 1374  | 1374 |      |
| 5°   | 1376 | 1371  | 1360 | 1373  | 1371 | 131  |
| 15°  | 1319 | 1320  | 1316 | 1330  | 1328 | 372  |
| 25°  | 1206 | 1216  | 1220 | 1237  | 1239 | 556  |
| 35°  | 1056 | 1074  | 1090 | 1111  | 1116 | 661  |
| 45°  | 880  | 909   | 939  | 965   | 972  | 680  |
| 55°  | 689  | 722   | 768  | 799   | 808  | 614  |
| 65°  | 477  | 526   | 579  | 617   | 629  | 473  |
| 75°  | 265  | 322   | 386  | 429   | 443  | 281  |
| 85°  | 82   | 146   | 215  | 262   | 277  | 85   |
| 90°  | 26   | 92    | 162  | 209   | 222  | 18   |
| 95°  | 44   | 80    | 144  | 188   | 202  | 46   |
| 105° | 146  | 180   | 239  | 281   | 278  | 154  |
| 115° | 257  | 272   | 321  | 356   | 366  | 253  |
| 125° | 354  | 354   | 392  | 423   | 432  | 317  |
| 135° | 435  | 434   | 447  | 472   | 483  | 336  |
| 145° | 499  | 499   | 499  | 509   | 516  | 312  |
| 155° | 546  | 546   | 545  | 547   | 545  | 252  |
| 165° | 576  | 574   | 574  | 577   | 573  | 163  |
| 175° | 589  | 586   | 587  | 591   | 586  | 56   |
| 180° | 589  | 589   | 589  | 589   | 589  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1374.1 | 1374.1 | 1374.1 | 1374.1 | 1374.1 |
| 2.5°   | 1380.3 | 1375.7 | 1363.4 | 1374.1 | 1372.6 |
| 5°     | 1375.7 | 1371.1 | 1360.3 | 1372.6 | 1371.1 |
| 7.5°   | 1366.4 | 1363.4 | 1354.1 | 1368.0 | 1366.4 |
| 10°    | 1354.1 | 1352.6 | 1344.9 | 1358.8 | 1357.2 |
| 12.5°  | 1337.2 | 1337.2 | 1332.6 | 1344.9 | 1344.9 |
| 15°    | 1318.7 | 1320.3 | 1315.7 | 1329.5 | 1328.0 |
| 17.5°  | 1294.1 | 1298.7 | 1297.2 | 1311.0 | 1309.5 |
| 20°    | 1268.0 | 1272.6 | 1274.1 | 1289.5 | 1289.5 |
| 22.5°  | 1238.7 | 1244.9 | 1248.0 | 1263.3 | 1266.4 |
| 25°    | 1206.4 | 1215.6 | 1220.3 | 1237.2 | 1238.7 |
| 27.5°  | 1171.0 | 1184.9 | 1191.0 | 1206.4 | 1207.9 |
| 30°    | 1135.6 | 1147.9 | 1158.7 | 1175.6 | 1178.7 |
| 32.5°  | 1097.2 | 1112.5 | 1124.9 | 1144.9 | 1147.9 |
| 35°    | 1055.6 | 1074.1 | 1089.5 | 1111.0 | 1115.6 |
| 37.5°  | 1014.1 | 1035.6 | 1054.1 | 1075.6 | 1080.2 |
| 40°    | 974.1  | 994.1  | 1015.6 | 1038.7 | 1044.8 |
| 42.5°  | 927.9  | 951.0  | 977.1  | 1003.3 | 1007.9 |
| 45°    | 880.2  | 909.4  | 938.7  | 964.8  | 972.5  |
| 47.5°  | 835.6  | 864.8  | 898.7  | 924.8  | 934.0  |
| 50°    | 786.3  | 820.2  | 854.0  | 884.8  | 894.0  |
| 52.5°  | 737.1  | 770.9  | 810.9  | 841.7  | 850.9  |
| 55°    | 689.4  | 721.7  | 767.9  | 798.6  | 807.9  |
| 57.5°  | 635.5  | 675.5  | 720.2  | 757.1  | 764.8  |
| 60°    | 583.2  | 623.2  | 674.0  | 709.4  | 721.7  |
| 62.5°  | 532.4  | 577.0  | 627.8  | 663.2  | 675.5  |
| 65°    | 477.0  | 526.3  | 578.6  | 617.1  | 629.4  |
| 67.5°  | 424.7  | 477.0  | 532.4  | 570.9  | 583.2  |
| 70°    | 370.8  | 423.2  | 481.6  | 523.2  | 534.0  |
| 72.5°  | 318.5  | 372.4  | 435.5  | 475.5  | 487.8  |
| 75°    | 264.7  | 321.6  | 386.2  | 429.3  | 443.2  |
| 77.5°  | 213.9  | 273.9  | 341.6  | 384.7  | 400.1  |
| 80°    | 167.7  | 229.3  | 297.0  | 343.1  | 355.5  |
| 82.5°  | 121.6  | 186.2  | 253.9  | 301.6  | 315.5  |
| 85°    | 81.6   | 146.2  | 215.4  | 261.6  | 277.0  |
| 87.5°  | 50.8   | 113.9  | 181.6  | 226.2  | 240.1  |
| 90°    | 25.9   | 92.4   | 162.0  | 209.3  | 222.5  |
| 92.5°  | 29.7   | 82.6   | 152.4  | 198.1  | 210.4  |
| 95°    | 44.2   | 80.1   | 143.6  | 187.7  | 202.1  |
| 97.5°  | 64.8   | 119.1  | 135.9  | 178.1  | 192.3  |
| 100°   | 89.2   | 137.1  | 136.3  | 170.4  | 181.6  |
| 102.5° | 118.2  | 157.4  | 221.2  | 162.1  | 174.4  |
| 105°   | 146.4  | 179.9  | 239.1  | 281.4  | 277.9  |
| 107.5° | 175.1  | 202.6  | 259.6  | 300.2  | 312.7  |
| 110°   | 202.6  | 225.6  | 282.0  | 318.3  | 331.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 229.3 | 250.4 | 302.1 | 335.5 | 349.6 |
| 115°   | 256.8 | 272.0 | 320.8 | 355.6 | 366.3 |
| 117.5° | 282.8 | 293.9 | 341.3 | 373.1 | 385.5 |
| 120°   | 307.7 | 314.1 | 358.3 | 389.9 | 401.4 |
| 122.5° | 332.4 | 333.3 | 375.7 | 406.9 | 416.8 |
| 125°   | 354.3 | 354.4 | 392.0 | 422.6 | 432.3 |
| 127.5° | 376.7 | 375.6 | 408.6 | 435.8 | 446.2 |
| 130°   | 396.7 | 395.7 | 421.6 | 449.7 | 458.9 |
| 132.5° | 416.6 | 415.9 | 436.1 | 462.7 | 471.5 |
| 135°   | 434.9 | 434.4 | 446.9 | 472.5 | 482.6 |
| 137.5° | 452.5 | 450.9 | 459.3 | 483.3 | 490.5 |
| 140°   | 469.7 | 469.0 | 471.4 | 492.8 | 500.9 |
| 142.5° | 483.5 | 485.3 | 484.2 | 502.0 | 508.2 |
| 145°   | 499.4 | 499.2 | 499.2 | 508.8 | 515.9 |
| 147.5° | 511.7 | 512.8 | 512.4 | 514.3 | 521.0 |
| 150°   | 525.4 | 525.6 | 525.2 | 525.2 | 525.6 |
| 152.5° | 535.3 | 536.6 | 535.8 | 536.6 | 536.2 |
| 155°   | 545.9 | 546.3 | 545.0 | 546.8 | 545.4 |
| 157.5° | 555.1 | 555.1 | 553.4 | 555.6 | 553.4 |
| 160°   | 563.1 | 561.8 | 561.3 | 564.0 | 561.3 |
| 162.5° | 570.1 | 568.4 | 567.9 | 570.6 | 567.5 |
| 165°   | 575.9 | 573.6 | 573.6 | 577.2 | 573.2 |
| 167.5° | 580.7 | 578.5 | 578.1 | 582.0 | 577.6 |
| 170°   | 584.7 | 582.0 | 582.5 | 586.0 | 581.6 |
| 172.5° | 587.3 | 584.7 | 585.1 | 588.6 | 583.8 |
| 175°   | 589.1 | 586.4 | 586.9 | 590.8 | 585.5 |
| 177.5° | 590.4 | 587.3 | 588.2 | 591.7 | 586.4 |
| 180°   | 589.1 | 589.1 | 589.1 | 589.1 | 589.1 |

(END OF REPORT)