

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: P1024897

Luminaire Tested: S124DIP-B1020D365UB27-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1024897  
REPORT IS A COMBINATION OF REPORTS P995242 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B1020D365UB27-4F0-XX-W2A-D  
Description: Define 4 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

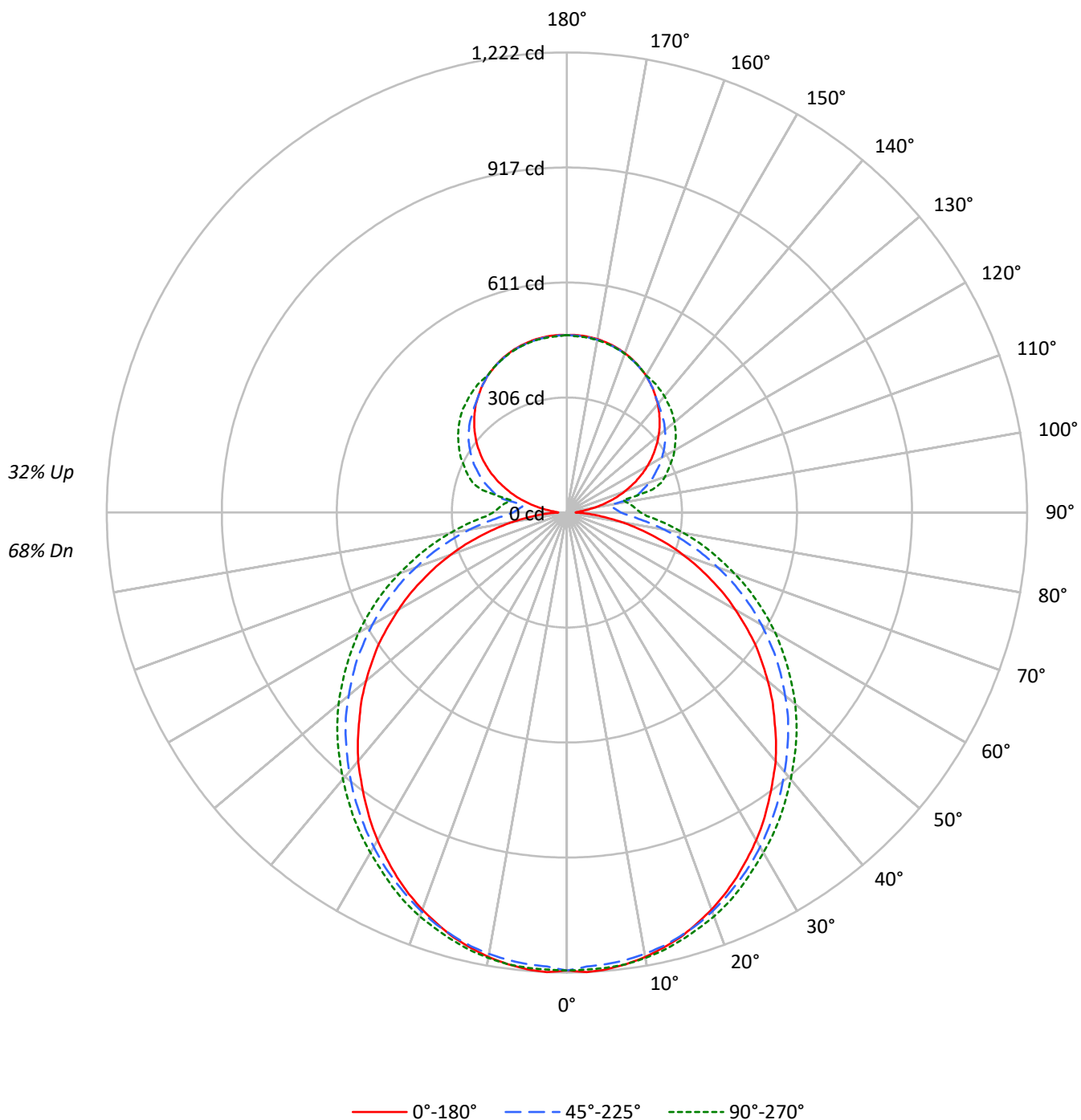
Lumens per Lamp: N/A  
Luminaire Lumens: 5607.0 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 56.1  
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 |    |    |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 112 | 112 | 112 | 112 | 105 | 105 | 105 | 105 | 94 | 94 | 94 | 83 | 83 | 83 | 73 | 73 | 73 |
| 1   | 101 | 95  | 91  | 87  | 95  | 90  | 86  | 83  | 80 | 77 | 74 | 71 | 69 | 66 | 62 | 61 | 59 |
| 2   | 91  | 83  | 76  | 70  | 85  | 78  | 72  | 67  | 69 | 65 | 60 | 61 | 58 | 54 | 54 | 51 | 49 |
| 3   | 83  | 72  | 64  | 58  | 78  | 68  | 61  | 55  | 61 | 55 | 50 | 54 | 49 | 45 | 47 | 44 | 41 |
| 4   | 75  | 64  | 55  | 48  | 71  | 60  | 52  | 46  | 54 | 47 | 42 | 48 | 43 | 38 | 42 | 38 | 35 |
| 5   | 69  | 57  | 48  | 41  | 65  | 54  | 46  | 40  | 48 | 41 | 36 | 43 | 37 | 33 | 38 | 33 | 30 |
| 6   | 64  | 51  | 42  | 36  | 60  | 48  | 40  | 34  | 43 | 37 | 32 | 39 | 33 | 29 | 34 | 30 | 26 |
| 7   | 59  | 46  | 37  | 31  | 55  | 43  | 36  | 30  | 39 | 33 | 28 | 35 | 30 | 25 | 31 | 27 | 23 |
| 8   | 55  | 42  | 33  | 28  | 51  | 40  | 32  | 27  | 36 | 29 | 25 | 32 | 27 | 23 | 29 | 24 | 21 |
| 9   | 51  | 38  | 30  | 25  | 48  | 36  | 29  | 24  | 33 | 26 | 22 | 29 | 24 | 20 | 26 | 22 | 19 |
| 10  | 48  | 35  | 27  | 22  | 45  | 33  | 26  | 21  | 30 | 24 | 20 | 27 | 22 | 18 | 24 | 20 | 17 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9921 | 9921 | 9921 |
| 5°  | 9948 | 9663 | 9680 |
| 10° | 9884 | 9472 | 9445 |
| 15° | 9791 | 9259 | 9181 |
| 20° | 9654 | 9027 | 8923 |
| 25° | 9499 | 8772 | 8646 |
| 30° | 9333 | 8519 | 8363 |
| 35° | 9144 | 8261 | 8111 |
| 40° | 8992 | 8012 | 7851 |
| 45° | 8768 | 7780 | 7620 |
| 50° | 8577 | 7515 | 7378 |
| 55° | 8379 | 7260 | 7098 |
| 60° | 8072 | 6942 | 6834 |
| 65° | 7734 | 6601 | 6517 |
| 70° | 7324 | 6209 | 6151 |
| 75° | 6752 | 5776 | 5802 |
| 80° | 6108 | 5332 | 5436 |
| 85° | 5254 | 4887 | 5140 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8768 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 115.3  | 2.1       |
| 10°-20°   | 330.3  | 5.9       |
| 20°-30°   | 499.4  | 8.9       |
| 30°-40°   | 604.2  | 10.8      |
| 40°-50°   | 638.7  | 11.4      |
| 50°-60°   | 601.1  | 10.7      |
| 60°-70°   | 498.8  | 8.9       |
| 70°-80°   | 350.0  | 6.2       |
| 80°-90°   | 198.3  | 3.5       |
| 90°-100°  | 133.1  | 2.4       |
| 100°-110° | 190.0  | 3.4       |
| 110°-120° | 255.1  | 4.5       |
| 120°-130° | 282.6  | 5.0       |
| 130°-140° | 281.3  | 5.0       |
| 140°-150° | 252.6  | 4.5       |
| 150°-160° | 201.4  | 3.6       |
| 160°-170° | 129.9  | 2.3       |
| 170°-180° | 44.8   | 0.8       |
| 0°-30°    | 945.0  | 16.9      |
| 0°-40°    | 1549.1 | 27.6      |
| 0°-60°    | 2789.0 | 49.7      |
| 0°-90°    | 3836.2 | 68.4      |
| 90°-120°  | 578.2  | 10.3      |
| 90°-150°  | 1394.7 | 24.9      |
| 90°-180°  | 1771.0 | 31.6      |
| 0°-180°   | 5607.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1217 | 1217  | 1217 | 1217  | 1217 |      |
| 5°   | 1218 | 1214  | 1204 | 1215  | 1214 | 116  |
| 15°  | 1168 | 1169  | 1165 | 1177  | 1176 | 329  |
| 25°  | 1068 | 1076  | 1080 | 1095  | 1097 | 492  |
| 35°  | 935  | 951   | 965  | 984   | 988  | 585  |
| 45°  | 779  | 805   | 831  | 854   | 861  | 602  |
| 55°  | 610  | 639   | 680  | 707   | 715  | 544  |
| 65°  | 422  | 466   | 512  | 546   | 557  | 419  |
| 75°  | 234  | 285   | 342  | 380   | 392  | 249  |
| 85°  | 72   | 129   | 191  | 232   | 245  | 75   |
| 90°  | 23   | 81    | 143  | 184   | 196  | 16   |
| 95°  | 37   | 70    | 126  | 165   | 178  | 38   |
| 105° | 118  | 148   | 200  | 237   | 235  | 125  |
| 115° | 206  | 220   | 263  | 294   | 303  | 204  |
| 125° | 284  | 284   | 317  | 344   | 353  | 254  |
| 135° | 348  | 348   | 359  | 381   | 390  | 269  |
| 145° | 400  | 399   | 399  | 408   | 414  | 250  |
| 155° | 437  | 437   | 436  | 437   | 436  | 201  |
| 165° | 461  | 459   | 459  | 462   | 458  | 130  |
| 175° | 471  | 469   | 469  | 473   | 468  | 45   |
| 180° | 471  | 471   | 471  | 471   | 471  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1216.6 | 1216.6 | 1216.6 | 1216.6 | 1216.6 |
| 2.5°   | 1222.1 | 1218.0 | 1207.1 | 1216.6 | 1215.3 |
| 5°     | 1218.0 | 1213.9 | 1204.4 | 1215.3 | 1213.9 |
| 7.5°   | 1209.8 | 1207.1 | 1198.9 | 1211.2 | 1209.8 |
| 10°    | 1198.9 | 1197.6 | 1190.7 | 1203.0 | 1201.6 |
| 12.5°  | 1183.9 | 1183.9 | 1179.8 | 1190.7 | 1190.7 |
| 15°    | 1167.6 | 1168.9 | 1164.9 | 1177.1 | 1175.8 |
| 17.5°  | 1145.8 | 1149.9 | 1148.5 | 1160.8 | 1159.4 |
| 20°    | 1122.6 | 1126.7 | 1128.1 | 1141.7 | 1141.7 |
| 22.5°  | 1096.7 | 1102.2 | 1104.9 | 1118.5 | 1121.3 |
| 25°    | 1068.1 | 1076.3 | 1080.4 | 1095.4 | 1096.7 |
| 27.5°  | 1036.8 | 1049.1 | 1054.5 | 1068.1 | 1069.5 |
| 30°    | 1005.5 | 1016.4 | 1025.9 | 1040.9 | 1043.6 |
| 32.5°  | 971.4  | 985.0  | 995.9  | 1013.6 | 1016.4 |
| 35°    | 934.6  | 951.0  | 964.6  | 983.7  | 987.7  |
| 37.5°  | 897.8  | 916.9  | 933.3  | 952.3  | 956.4  |
| 40°    | 862.4  | 880.1  | 899.2  | 919.6  | 925.1  |
| 42.5°  | 821.5  | 842.0  | 865.1  | 888.3  | 892.4  |
| 45°    | 779.3  | 805.2  | 831.1  | 854.2  | 861.0  |
| 47.5°  | 739.8  | 765.7  | 795.6  | 818.8  | 827.0  |
| 50°    | 696.2  | 726.2  | 756.1  | 783.4  | 791.6  |
| 52.5°  | 652.6  | 682.6  | 718.0  | 745.2  | 753.4  |
| 55°    | 610.4  | 639.0  | 679.8  | 707.1  | 715.3  |
| 57.5°  | 562.7  | 598.1  | 637.6  | 670.3  | 677.1  |
| 60°    | 516.4  | 551.8  | 596.7  | 628.1  | 639.0  |
| 62.5°  | 471.4  | 510.9  | 555.9  | 587.2  | 598.1  |
| 65°    | 422.3  | 465.9  | 512.3  | 546.3  | 557.2  |
| 67.5°  | 376.0  | 422.3  | 471.4  | 505.5  | 516.4  |
| 70°    | 328.3  | 374.7  | 426.4  | 463.2  | 472.8  |
| 72.5°  | 282.0  | 329.7  | 385.6  | 421.0  | 431.9  |
| 75°    | 234.3  | 284.7  | 342.0  | 380.1  | 392.4  |
| 77.5°  | 189.4  | 242.5  | 302.5  | 340.6  | 354.2  |
| 80°    | 148.5  | 203.0  | 262.9  | 303.8  | 314.7  |
| 82.5°  | 107.6  | 164.9  | 224.8  | 267.0  | 279.3  |
| 85°    | 72.2   | 129.4  | 190.7  | 231.6  | 245.2  |
| 87.5°  | 45.0   | 100.8  | 160.8  | 200.3  | 212.5  |
| 90°    | 22.9   | 81.2   | 142.7  | 184.3  | 195.9  |
| 92.5°  | 25.7   | 72.7   | 134.1  | 174.4  | 185.3  |
| 95°    | 37.1   | 70.1   | 126.3  | 165.2  | 177.8  |
| 97.5°  | 53.3   | 100.7  | 119.5  | 156.6  | 169.3  |
| 100°   | 72.8   | 114.5  | 119.0  | 149.8  | 159.8  |
| 102.5° | 96.1   | 130.3  | 186.2  | 142.4  | 153.3  |
| 105°   | 118.4  | 147.7  | 199.9  | 237.1  | 235.3  |
| 107.5° | 141.3  | 165.4  | 215.6  | 251.5  | 262.4  |
| 110°   | 163.1  | 183.3  | 233.1  | 265.1  | 277.1  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 184.3 | 202.8 | 248.4 | 278.1 | 290.4 |
| 115°   | 206.3 | 219.5 | 262.8 | 293.5 | 303.0 |
| 117.5° | 227.1 | 236.6 | 278.5 | 306.8 | 317.7 |
| 120°   | 246.8 | 252.3 | 291.5 | 319.5 | 329.7 |
| 122.5° | 266.5 | 267.2 | 304.7 | 332.3 | 341.2 |
| 125°   | 283.8 | 283.9 | 317.2 | 344.2 | 352.7 |
| 127.5° | 301.8 | 300.8 | 329.8 | 354.0 | 363.2 |
| 130°   | 317.8 | 316.7 | 339.6 | 364.4 | 372.6 |
| 132.5° | 333.6 | 332.9 | 350.7 | 374.2 | 382.0 |
| 135°   | 348.1 | 347.7 | 358.7 | 381.2 | 390.0 |
| 137.5° | 362.2 | 360.9 | 368.0 | 389.1 | 395.7 |
| 140°   | 375.9 | 375.3 | 377.3 | 396.1 | 403.2 |
| 142.5° | 387.0 | 388.4 | 387.3 | 403.0 | 408.4 |
| 145°   | 399.6 | 399.3 | 399.3 | 407.8 | 414.0 |
| 147.5° | 409.5 | 410.2 | 409.9 | 411.6 | 417.4 |
| 150°   | 420.4 | 420.4 | 420.1 | 420.1 | 420.4 |
| 152.5° | 428.2 | 429.3 | 428.5 | 429.3 | 428.9 |
| 155°   | 436.7 | 437.0 | 435.9 | 437.4 | 436.3 |
| 157.5° | 444.1 | 444.1 | 442.6 | 444.4 | 442.6 |
| 160°   | 450.4 | 449.3 | 449.0 | 451.1 | 449.0 |
| 162.5° | 456.0 | 454.6 | 454.3 | 456.4 | 453.9 |
| 165°   | 460.6 | 458.9 | 458.9 | 461.7 | 458.5 |
| 167.5° | 464.5 | 462.7 | 462.4 | 465.6 | 462.0 |
| 170°   | 467.7 | 465.6 | 465.9 | 468.7 | 465.2 |
| 172.5° | 469.8 | 467.7 | 468.0 | 470.8 | 467.0 |
| 175°   | 471.2 | 469.1 | 469.4 | 472.6 | 468.4 |
| 177.5° | 472.2 | 469.8 | 470.5 | 473.3 | 469.1 |
| 180°   | 471.2 | 471.2 | 471.2 | 471.2 | 471.2 |

(END OF REPORT)