

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: P1001279

Luminaire Tested: SA4XXDIP-B350D365UB50-4F0-XX-W2A-F4

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1001279  
REPORT IS A COMBINATION OF REPORTS P995898 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B350D365UB50-4F0-XX-W2A-F4  
Description: Define 4 Direct/Indirect Pendant with 5000K BioUP LEDs {m-DER=1.015} {m-EER=1.115}  
Light Source: -  
Ballast/Driver: -

**Summary**

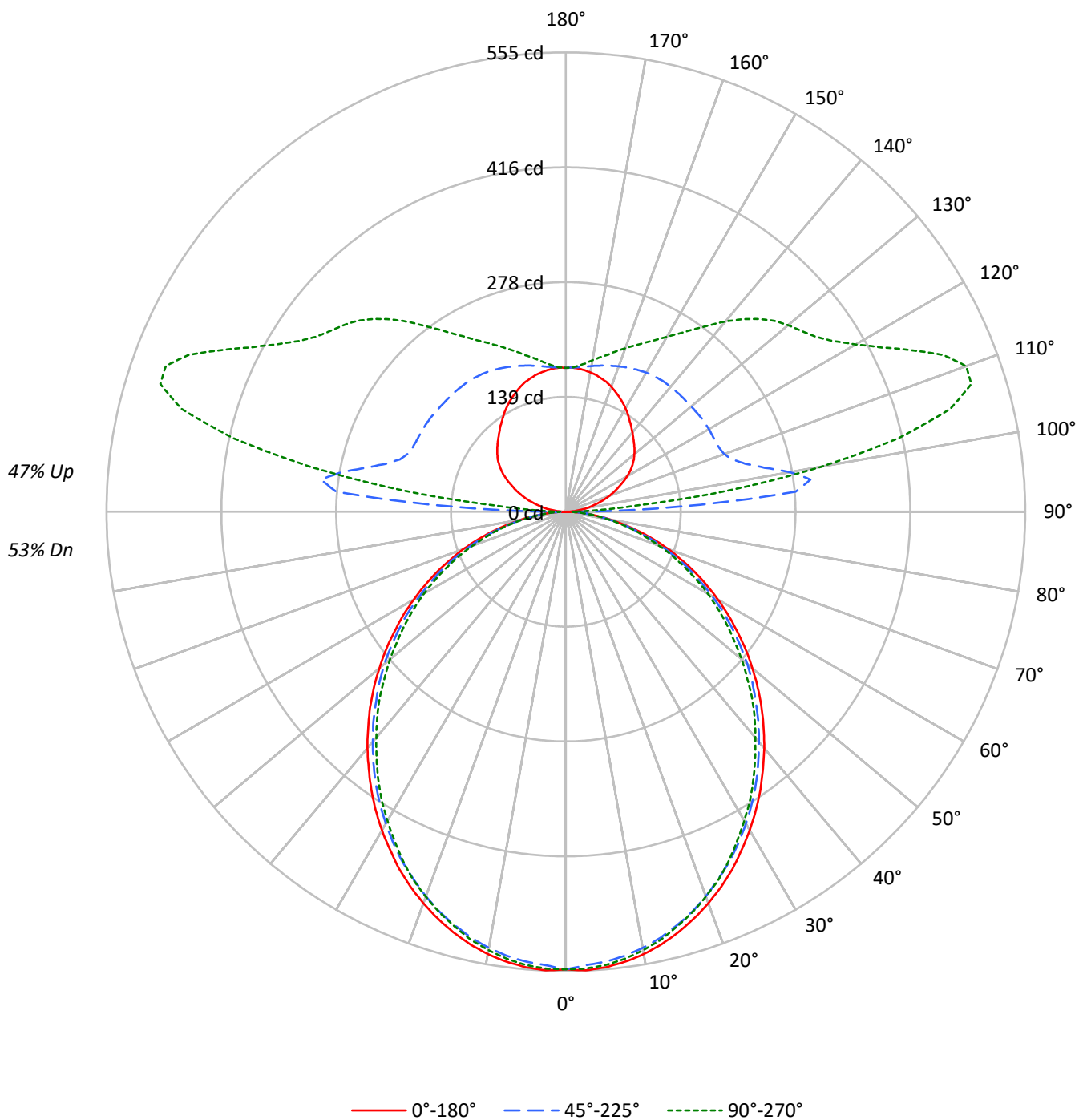
Lumens per Lamp: N/A  
Luminaire Lumens: 2689.5 lumens  
Efficiency: N/A  
Efficacy: 120.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 22.3  
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   | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 71 | 71 | 71 | 59 | 59 | 59 |
| 1   | 98  | 94  | 90  | 87  | 91  | 87  | 84  | 81  | 74 | 72 | 70 | 63 | 61 | 59 | 52 | 51 | 49 |
| 2   | 90  | 82  | 76  | 71  | 83  | 76  | 71  | 66  | 65 | 61 | 58 | 55 | 52 | 49 | 46 | 44 | 42 |
| 3   | 82  | 72  | 65  | 59  | 75  | 67  | 61  | 55  | 57 | 53 | 48 | 49 | 45 | 42 | 40 | 38 | 35 |
| 4   | 75  | 64  | 56  | 50  | 69  | 59  | 52  | 47  | 51 | 46 | 41 | 43 | 39 | 36 | 36 | 33 | 31 |
| 5   | 69  | 57  | 49  | 43  | 63  | 53  | 46  | 40  | 46 | 40 | 36 | 39 | 35 | 31 | 33 | 29 | 27 |
| 6   | 63  | 51  | 43  | 37  | 58  | 48  | 40  | 35  | 41 | 35 | 31 | 35 | 31 | 27 | 30 | 26 | 23 |
| 7   | 58  | 46  | 38  | 33  | 54  | 43  | 36  | 31  | 37 | 32 | 27 | 32 | 27 | 24 | 27 | 23 | 21 |
| 8   | 54  | 42  | 34  | 29  | 50  | 39  | 32  | 27  | 34 | 28 | 24 | 29 | 25 | 22 | 25 | 21 | 19 |
| 9   | 51  | 38  | 31  | 26  | 47  | 36  | 29  | 24  | 31 | 26 | 22 | 27 | 23 | 19 | 23 | 19 | 17 |
| 10  | 47  | 35  | 28  | 23  | 44  | 33  | 26  | 22  | 29 | 23 | 20 | 25 | 21 | 18 | 21 | 18 | 15 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4509 | 4509 | 4509 |
| 5°  | 4512 | 4379 | 4384 |
| 10° | 4474 | 4257 | 4227 |
| 15° | 4409 | 4112 | 4050 |
| 20° | 4327 | 3956 | 3867 |
| 25° | 4235 | 3791 | 3671 |
| 30° | 4124 | 3612 | 3454 |
| 35° | 4009 | 3430 | 3245 |
| 40° | 3889 | 3233 | 3023 |
| 45° | 3763 | 3036 | 2815 |
| 50° | 3623 | 2844 | 2585 |
| 55° | 3472 | 2621 | 2356 |
| 60° | 3317 | 2376 | 2118 |
| 65° | 3139 | 2124 | 1849 |
| 70° | 2936 | 1819 | 1563 |
| 75° | 2631 | 1466 | 1251 |
| 80° | 2242 | 1061 | 879  |
| 85° | 1739 | 589  | 474  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3763 cd/sqm

TEST NUMBER: P1001279

CATALOG NUMBER: SA4XXDIP-B350D365UB50-4F0-XX-W2A-F4

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 52.1   | 1.9       |
| 10°-20°   | 146.8  | 5.5       |
| 20°-30°   | 216.1  | 8.0       |
| 30°-40°   | 251.2  | 9.3       |
| 40°-50°   | 251.1  | 9.3       |
| 50°-60°   | 219.6  | 8.2       |
| 60°-70°   | 163.1  | 6.1       |
| 70°-80°   | 92.5   | 3.4       |
| 80°-90°   | 27.2   | 1.0       |
| 90°-100°  | 129.3  | 4.8       |
| 100°-110° | 262.9  | 9.8       |
| 110°-120° | 234.3  | 8.7       |
| 120°-130° | 196.8  | 7.3       |
| 130°-140° | 164.2  | 6.1       |
| 140°-150° | 125.4  | 4.7       |
| 150°-160° | 88.2   | 3.3       |
| 160°-170° | 51.9   | 1.9       |
| 170°-180° | 16.9   | 0.6       |
| 0°-30°    | 415.0  | 15.4      |
| 0°-40°    | 666.1  | 24.8      |
| 0°-60°    | 1136.9 | 42.3      |
| 0°-90°    | 1419.7 | 52.8      |
| 90°-120°  | 626.5  | 23.3      |
| 90°-150°  | 1113.0 | 41.4      |
| 90°-180°  | 1270.0 | 47.2      |
| 0°-180°   | 2689.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 553 | 553   | 553 | 553   | 553 |      |
| 5°   | 552 | 551   | 546 | 551   | 550 | 52   |
| 15°  | 526 | 524   | 517 | 520   | 519 | 148  |
| 25°  | 476 | 473   | 467 | 467   | 466 | 219  |
| 35°  | 410 | 407   | 400 | 397   | 395 | 256  |
| 45°  | 334 | 331   | 324 | 319   | 318 | 258  |
| 55°  | 253 | 252   | 245 | 240   | 237 | 227  |
| 65°  | 171 | 169   | 165 | 160   | 158 | 170  |
| 75°  | 91  | 89    | 87  | 85    | 85  | 97   |
| 85°  | 24  | 24    | 23  | 23    | 23  | 26   |
| 90°  | 0   | 3     | 6   | 7     | 7   | 2    |
| 95°  | 11  | 36    | 279 | 138   | 83  | 12   |
| 105° | 40  | 58    | 224 | 483   | 481 | 43   |
| 115° | 70  | 88    | 200 | 384   | 462 | 70   |
| 125° | 98  | 117   | 199 | 327   | 368 | 87   |
| 135° | 117 | 139   | 197 | 290   | 330 | 90   |
| 145° | 134 | 154   | 196 | 245   | 269 | 84   |
| 155° | 153 | 165   | 191 | 216   | 225 | 70   |
| 165° | 166 | 172   | 183 | 194   | 197 | 47   |
| 175° | 174 | 174   | 175 | 178   | 177 | 16   |
| 180° | 174 | 174   | 174 | 174   | 174 |      |

TEST NUMBER: P1001279

CATALOG NUMBER: SA4XXDIP-B350D365UB50-4F0-XX-W2A-F4

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 552.9 | 552.9 | 552.9 | 552.9 | 552.9 |
| 2.5°   | 554.6 | 553.3 | 548.4 | 552.9 | 552.4 |
| 5°     | 552.4 | 550.6 | 545.8 | 550.6 | 549.8 |
| 7.5°   | 548.4 | 546.6 | 541.3 | 545.3 | 544.9 |
| 10°    | 542.7 | 540.9 | 535.1 | 538.7 | 537.8 |
| 12.5°  | 535.1 | 533.4 | 527.2 | 531.1 | 529.8 |
| 15°    | 525.8 | 524.1 | 517.4 | 520.1 | 518.7 |
| 17.5°  | 515.2 | 513.0 | 506.8 | 508.6 | 507.7 |
| 20°    | 503.2 | 501.0 | 494.4 | 495.7 | 494.8 |
| 22.5°  | 490.4 | 487.3 | 480.6 | 483.3 | 481.5 |
| 25°    | 476.2 | 473.1 | 466.9 | 467.4 | 465.6 |
| 27.5°  | 460.3 | 457.2 | 451.4 | 450.5 | 448.3 |
| 30°    | 444.3 | 440.8 | 435.0 | 433.2 | 431.0 |
| 32.5°  | 427.5 | 424.4 | 418.2 | 416.0 | 413.8 |
| 35°    | 409.8 | 406.7 | 400.5 | 397.4 | 395.1 |
| 37.5°  | 391.2 | 388.5 | 381.9 | 378.8 | 375.7 |
| 40°    | 373.0 | 369.5 | 362.8 | 358.4 | 356.2 |
| 42.5°  | 353.5 | 351.7 | 344.2 | 338.9 | 337.6 |
| 45°    | 334.5 | 331.4 | 324.3 | 319.4 | 318.1 |
| 47.5°  | 314.5 | 312.3 | 305.7 | 300.3 | 296.8 |
| 50°    | 294.1 | 292.4 | 286.2 | 280.0 | 277.3 |
| 52.5°  | 274.2 | 272.0 | 265.4 | 260.0 | 256.5 |
| 55°    | 252.9 | 251.6 | 245.4 | 240.1 | 237.4 |
| 57.5°  | 233.0 | 231.7 | 225.5 | 220.2 | 217.5 |
| 60°    | 212.2 | 210.0 | 204.2 | 200.2 | 198.0 |
| 62.5°  | 191.8 | 190.0 | 183.8 | 180.3 | 178.1 |
| 65°    | 171.4 | 169.2 | 164.8 | 160.4 | 158.1 |
| 67.5°  | 150.6 | 148.8 | 144.4 | 140.0 | 139.5 |
| 70°    | 131.6 | 128.5 | 124.9 | 121.4 | 120.1 |
| 72.5°  | 111.2 | 108.1 | 105.4 | 102.8 | 101.4 |
| 75°    | 91.3  | 89.0  | 86.8  | 85.1  | 84.6  |
| 77.5°  | 71.8  | 70.9  | 68.7  | 68.2  | 66.9  |
| 80°    | 54.5  | 53.2  | 52.3  | 51.4  | 50.9  |
| 82.5°  | 37.7  | 37.2  | 37.2  | 36.8  | 36.3  |
| 85°    | 23.9  | 23.9  | 23.0  | 23.0  | 22.6  |
| 87.5°  | 11.5  | 11.1  | 10.6  | 10.6  | 10.6  |
| 90°    | 0.3   | 2.7   | 6.2   | 6.8   | 7.2   |
| 92.5°  | 4.8   | 26.4  | 134.0 | 44.2  | 31.1  |
| 95°    | 11.3  | 35.6  | 278.6 | 138.0 | 83.4  |
| 97.5°  | 18.8  | 39.4  | 298.1 | 281.6 | 200.3 |
| 100°   | 26.0  | 44.4  | 274.9 | 389.8 | 313.5 |
| 102.5° | 32.8  | 50.6  | 245.8 | 457.4 | 411.9 |
| 105°   | 40.0  | 58.0  | 224.3 | 482.9 | 481.0 |
| 107.5° | 47.9  | 65.4  | 210.2 | 475.2 | 513.8 |
| 110°   | 55.7  | 73.0  | 203.7 | 447.8 | 514.5 |



TEST NUMBER: P1001279

CATALOG NUMBER: SA4XXDIP-B350D365UB50-4F0-XX-W2A-F4

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 63.2  | 80.5  | 200.7 | 414.3 | 494.3 |
| 115°   | 70.4  | 88.4  | 200.0 | 384.2 | 461.8 |
| 117.5° | 77.9  | 95.7  | 199.6 | 360.6 | 430.1 |
| 120°   | 85.5  | 102.9 | 199.6 | 344.8 | 404.1 |
| 122.5° | 92.3  | 109.9 | 199.3 | 334.4 | 383.6 |
| 125°   | 98.1  | 116.6 | 199.0 | 327.0 | 368.5 |
| 127.5° | 103.6 | 122.7 | 198.3 | 320.0 | 358.9 |
| 130°   | 108.0 | 128.8 | 197.9 | 311.6 | 350.7 |
| 132.5° | 112.5 | 133.8 | 197.6 | 301.6 | 341.5 |
| 135°   | 116.6 | 138.8 | 197.3 | 290.2 | 329.5 |
| 137.5° | 120.7 | 143.0 | 197.3 | 278.0 | 315.5 |
| 140°   | 125.1 | 147.0 | 196.9 | 266.0 | 300.1 |
| 142.5° | 129.9 | 150.6 | 196.9 | 254.8 | 283.7 |
| 145°   | 134.3 | 153.8 | 196.2 | 244.8 | 269.0 |
| 147.5° | 139.5 | 156.9 | 195.2 | 236.4 | 255.4 |
| 150°   | 144.3 | 159.8 | 194.2 | 228.7 | 244.1 |
| 152.5° | 148.7 | 162.6 | 192.5 | 222.2 | 233.8 |
| 155°   | 152.8 | 165.0 | 190.8 | 216.0 | 225.3 |
| 157.5° | 156.9 | 167.1 | 189.0 | 210.2 | 217.4 |
| 160°   | 160.7 | 169.0 | 187.0 | 204.4 | 210.2 |
| 162.5° | 164.1 | 170.6 | 184.9 | 198.8 | 203.4 |
| 165°   | 166.5 | 171.6 | 182.9 | 193.6 | 196.6 |
| 167.5° | 169.2 | 172.4 | 180.8 | 189.2 | 191.1 |
| 170°   | 170.9 | 173.1 | 178.8 | 184.8 | 186.0 |
| 172.5° | 172.6 | 173.6 | 176.7 | 180.8 | 180.8 |
| 175°   | 173.7 | 174.0 | 175.4 | 177.8 | 177.1 |
| 177.5° | 174.3 | 174.0 | 174.3 | 175.6 | 174.3 |
| 180°   | 174.0 | 174.0 | 174.0 | 174.0 | 174.0 |

(END OF REPORT)