

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: P1001046

Luminaire Tested: SA4XXDIP-B1195D810UB27-4F0-XX-W2A-D

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1001046  
REPORT IS A COMBINATION OF REPORTS P995662 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B1195D810UB27-4F0-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**

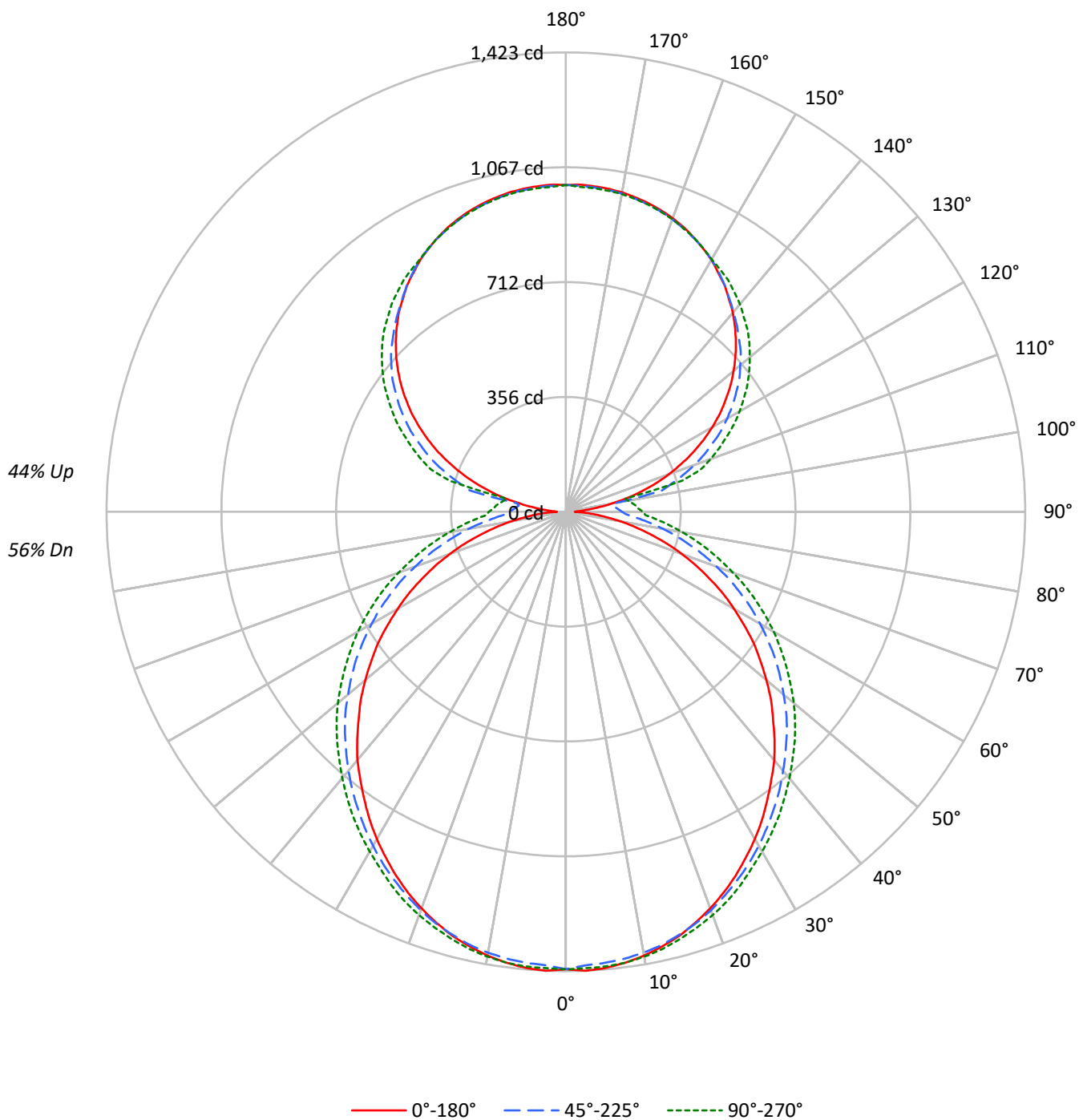
Lumens per Lamp: N/A  
Luminaire Lumens: 7965.0 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
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   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 |
| 1   | 98  | 93  | 89  | 85  | 91  | 87  | 83  | 79  | 74 | 72 | 69 | 63 | 61 | 59 | 53 | 51 | 50 |
| 2   | 89  | 81  | 74  | 68  | 82  | 75  | 69  | 64  | 65 | 60 | 56 | 55 | 51 | 48 | 46 | 43 | 41 |
| 3   | 81  | 71  | 63  | 56  | 75  | 66  | 59  | 53  | 57 | 51 | 47 | 48 | 44 | 40 | 40 | 37 | 34 |
| 4   | 74  | 62  | 54  | 47  | 68  | 58  | 50  | 45  | 50 | 44 | 39 | 43 | 38 | 34 | 36 | 32 | 29 |
| 5   | 68  | 55  | 47  | 40  | 62  | 52  | 44  | 38  | 45 | 38 | 34 | 38 | 33 | 30 | 32 | 28 | 25 |
| 6   | 62  | 49  | 41  | 35  | 57  | 46  | 39  | 33  | 40 | 34 | 29 | 34 | 29 | 26 | 29 | 25 | 22 |
| 7   | 57  | 45  | 36  | 30  | 53  | 42  | 34  | 29  | 36 | 30 | 26 | 31 | 26 | 23 | 26 | 23 | 20 |
| 8   | 53  | 40  | 32  | 27  | 49  | 38  | 31  | 26  | 33 | 27 | 23 | 28 | 24 | 20 | 24 | 20 | 17 |
| 9   | 50  | 37  | 29  | 24  | 46  | 35  | 28  | 23  | 30 | 24 | 20 | 26 | 21 | 18 | 22 | 19 | 16 |
| 10  | 46  | 34  | 26  | 21  | 43  | 32  | 25  | 20  | 28 | 22 | 18 | 24 | 20 | 16 | 21 | 17 | 14 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 11555 | 11555 | 11555 |
| 5°  | 11586 | 11254 | 11274 |
| 10° | 11511 | 11032 | 11000 |
| 15° | 11403 | 10783 | 10692 |
| 20° | 11244 | 10513 | 10393 |
| 25° | 11064 | 10216 | 10070 |
| 30° | 10869 | 9922  | 9740  |
| 35° | 10649 | 9621  | 9447  |
| 40° | 10472 | 9331  | 9144  |
| 45° | 10211 | 9060  | 8875  |
| 50° | 9988  | 8752  | 8592  |
| 55° | 9758  | 8456  | 8266  |
| 60° | 9401  | 8086  | 7959  |
| 65° | 9008  | 7688  | 7590  |
| 70° | 8531  | 7233  | 7163  |
| 75° | 7864  | 6726  | 6757  |
| 80° | 7115  | 6210  | 6331  |
| 85° | 6120  | 5691  | 5986  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 10211 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 134.3  | 1.7       |
| 10°-20°   | 384.7  | 4.8       |
| 20°-30°   | 581.6  | 7.3       |
| 30°-40°   | 703.7  | 8.8       |
| 40°-50°   | 743.9  | 9.3       |
| 50°-60°   | 700.1  | 8.8       |
| 60°-70°   | 581.0  | 7.3       |
| 70°-80°   | 407.7  | 5.1       |
| 80°-90°   | 231.9  | 2.9       |
| 90°-100°  | 170.4  | 2.1       |
| 100°-110° | 322.6  | 4.1       |
| 110°-120° | 490.5  | 6.2       |
| 120°-130° | 574.7  | 7.2       |
| 130°-140° | 590.4  | 7.4       |
| 140°-150° | 539.8  | 6.8       |
| 150°-160° | 432.7  | 5.4       |
| 160°-170° | 279.0  | 3.5       |
| 170°-180° | 96.2   | 1.2       |
| 0°-30°    | 1100.6 | 13.8      |
| 0°-40°    | 1804.2 | 22.7      |
| 0°-60°    | 3248.2 | 40.8      |
| 0°-90°    | 4468.8 | 56.1      |
| 90°-120°  | 983.5  | 12.3      |
| 90°-150°  | 2688.3 | 33.8      |
| 90°-180°  | 3496.0 | 43.9      |
| 0°-180°   | 7965.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1417 | 1417  | 1417 | 1417  | 1417 |      |
| 5°   | 1418 | 1414  | 1403 | 1415  | 1414 | 135  |
| 15°  | 1360 | 1361  | 1357 | 1371  | 1369 | 383  |
| 25°  | 1244 | 1254  | 1258 | 1276  | 1277 | 573  |
| 35°  | 1088 | 1108  | 1123 | 1146  | 1150 | 682  |
| 45°  | 908  | 938   | 968  | 995   | 1003 | 701  |
| 55°  | 711  | 744   | 792  | 824   | 833  | 633  |
| 65°  | 492  | 543   | 597  | 636   | 649  | 488  |
| 75°  | 273  | 332   | 398  | 443   | 457  | 290  |
| 85°  | 84   | 151   | 222  | 270   | 286  | 88   |
| 90°  | 28   | 100   | 174  | 224   | 238  | 20   |
| 95°  | 62   | 89    | 155  | 202   | 217  | 68   |
| 105° | 242  | 278   | 341  | 387   | 373  | 255  |
| 115° | 435  | 452   | 502  | 538   | 549  | 429  |
| 125° | 604  | 606   | 644  | 676   | 687  | 540  |
| 135° | 745  | 744   | 758  | 785   | 796  | 575  |
| 145° | 857  | 858   | 858  | 868   | 876  | 536  |
| 155° | 938  | 939   | 936  | 940   | 937  | 433  |
| 165° | 989  | 986   | 986  | 992   | 985  | 280  |
| 175° | 1012 | 1008  | 1008 | 1015  | 1006 | 96   |
| 180° | 1012 | 1012  | 1012 | 1012  | 1012 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1417.0 | 1417.0 | 1417.0 | 1417.0 | 1417.0 |
| 2.5°   | 1423.3 | 1418.5 | 1405.9 | 1417.0 | 1415.4 |
| 5°     | 1418.5 | 1413.8 | 1402.7 | 1415.4 | 1413.8 |
| 7.5°   | 1409.0 | 1405.9 | 1396.3 | 1410.6 | 1409.0 |
| 10°    | 1396.3 | 1394.7 | 1386.8 | 1401.1 | 1399.5 |
| 12.5°  | 1378.9 | 1378.9 | 1374.1 | 1386.8 | 1386.8 |
| 15°    | 1359.8 | 1361.4 | 1356.7 | 1370.9 | 1369.4 |
| 17.5°  | 1334.5 | 1339.2 | 1337.6 | 1351.9 | 1350.3 |
| 20°    | 1307.5 | 1312.2 | 1313.8 | 1329.7 | 1329.7 |
| 22.5°  | 1277.3 | 1283.7 | 1286.8 | 1302.7 | 1305.9 |
| 25°    | 1244.0 | 1253.5 | 1258.3 | 1275.7 | 1277.3 |
| 27.5°  | 1207.5 | 1221.8 | 1228.1 | 1244.0 | 1245.6 |
| 30°    | 1171.0 | 1183.7 | 1194.8 | 1212.3 | 1215.4 |
| 32.5°  | 1131.3 | 1147.2 | 1159.9 | 1180.5 | 1183.7 |
| 35°    | 1088.5 | 1107.5 | 1123.4 | 1145.6 | 1150.4 |
| 37.5°  | 1045.7 | 1067.9 | 1086.9 | 1109.1 | 1113.9 |
| 40°    | 1004.4 | 1025.0 | 1047.2 | 1071.1 | 1077.4 |
| 42.5°  | 956.8  | 980.6  | 1007.6 | 1034.6 | 1039.3 |
| 45°    | 907.6  | 937.8  | 967.9  | 994.9  | 1002.8 |
| 47.5°  | 861.6  | 891.7  | 926.7  | 953.6  | 963.2  |
| 50°    | 810.8  | 845.7  | 880.6  | 912.4  | 921.9  |
| 52.5°  | 760.0  | 795.0  | 836.2  | 867.9  | 877.5  |
| 55°    | 710.9  | 744.2  | 791.8  | 823.5  | 833.0  |
| 57.5°  | 655.3  | 696.6  | 742.6  | 780.7  | 788.6  |
| 60°    | 601.4  | 642.6  | 695.0  | 731.5  | 744.2  |
| 62.5°  | 549.0  | 595.0  | 647.4  | 683.9  | 696.6  |
| 65°    | 491.9  | 542.7  | 596.6  | 636.3  | 649.0  |
| 67.5°  | 437.9  | 491.9  | 549.0  | 588.7  | 601.4  |
| 70°    | 382.4  | 436.4  | 496.7  | 539.5  | 550.6  |
| 72.5°  | 328.5  | 384.0  | 449.0  | 490.3  | 503.0  |
| 75°    | 272.9  | 331.6  | 398.3  | 442.7  | 457.0  |
| 77.5°  | 220.6  | 282.4  | 352.3  | 396.7  | 412.6  |
| 80°    | 173.0  | 236.4  | 306.2  | 353.8  | 366.5  |
| 82.5°  | 125.4  | 192.0  | 261.8  | 311.0  | 325.3  |
| 85°    | 84.1   | 150.7  | 222.1  | 269.7  | 285.6  |
| 87.5°  | 52.4   | 117.4  | 187.2  | 233.3  | 247.5  |
| 90°    | 27.7   | 99.5   | 173.8  | 224.3  | 238.5  |
| 92.5°  | 35.2   | 89.1   | 163.5  | 212.4  | 225.1  |
| 95°    | 62.2   | 88.9   | 154.7  | 202.1  | 217.2  |
| 97.5°  | 98.5   | 161.2  | 146.8  | 191.8  | 206.8  |
| 100°   | 141.7  | 196.5  | 153.9  | 183.8  | 195.7  |
| 102.5° | 191.6  | 235.6  | 305.0  | 175.9  | 188.6  |
| 105°   | 242.2  | 278.4  | 340.9  | 387.4  | 372.9  |
| 107.5° | 291.4  | 320.6  | 381.4  | 424.9  | 439.1  |
| 110°   | 339.7  | 364.2  | 424.2  | 462.3  | 477.2  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 386.6  | 410.1  | 464.0  | 498.2  | 513.9  |
| 115°   | 434.9  | 451.5  | 501.6  | 538.0  | 549.1  |
| 117.5° | 479.6  | 492.1  | 542.0  | 574.7  | 587.4  |
| 120°   | 523.4  | 531.3  | 576.5  | 609.7  | 620.9  |
| 122.5° | 565.8  | 567.3  | 611.8  | 644.2  | 653.8  |
| 125°   | 604.3  | 605.9  | 644.0  | 676.4  | 686.7  |
| 127.5° | 643.0  | 642.2  | 677.7  | 705.5  | 715.9  |
| 130°   | 678.5  | 677.7  | 705.4  | 734.6  | 744.1  |
| 132.5° | 712.6  | 712.5  | 734.6  | 762.3  | 771.1  |
| 135°   | 745.1  | 744.3  | 758.5  | 785.4  | 796.4  |
| 137.5° | 775.4  | 773.8  | 783.8  | 809.2  | 816.4  |
| 140°   | 804.9  | 804.8  | 807.9  | 830.8  | 839.4  |
| 142.5° | 829.8  | 832.8  | 832.0  | 851.0  | 857.3  |
| 145°   | 857.0  | 857.7  | 857.7  | 868.0  | 875.9  |
| 147.5° | 878.2  | 881.2  | 880.4  | 882.8  | 889.8  |
| 150°   | 901.7  | 903.1  | 902.4  | 902.4  | 903.1  |
| 152.5° | 919.8  | 922.1  | 920.5  | 922.1  | 921.3  |
| 155°   | 937.9  | 938.7  | 936.4  | 939.5  | 937.2  |
| 157.5° | 953.8  | 953.8  | 950.8  | 954.6  | 950.8  |
| 160°   | 967.5  | 965.2  | 964.4  | 969.0  | 964.4  |
| 162.5° | 979.6  | 976.6  | 975.8  | 980.3  | 975.0  |
| 165°   | 989.4  | 985.6  | 985.6  | 991.7  | 984.9  |
| 167.5° | 997.8  | 994.0  | 993.2  | 1000.0 | 992.5  |
| 170°   | 1004.6 | 1000.0 | 1000.8 | 1006.8 | 999.3  |
| 172.5° | 1009.1 | 1004.6 | 1005.3 | 1011.4 | 1003.1 |
| 175°   | 1012.1 | 1007.6 | 1008.4 | 1015.2 | 1006.1 |
| 177.5° | 1014.4 | 1009.1 | 1010.6 | 1016.7 | 1007.6 |
| 180°   | 1012.1 | 1012.1 | 1012.1 | 1012.1 | 1012.1 |

(END OF REPORT)