

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: P1000880

Luminaire Tested: SA4XXDIP-B1195D1205UB2750-4F0-XX-W2A-D\_2700K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1000880  
REPORT IS A COMBINATION OF REPORTS P995493 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B1195D1205UB2750-4F0-XX-W2A-D\_2700K  
Description: Define 4 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

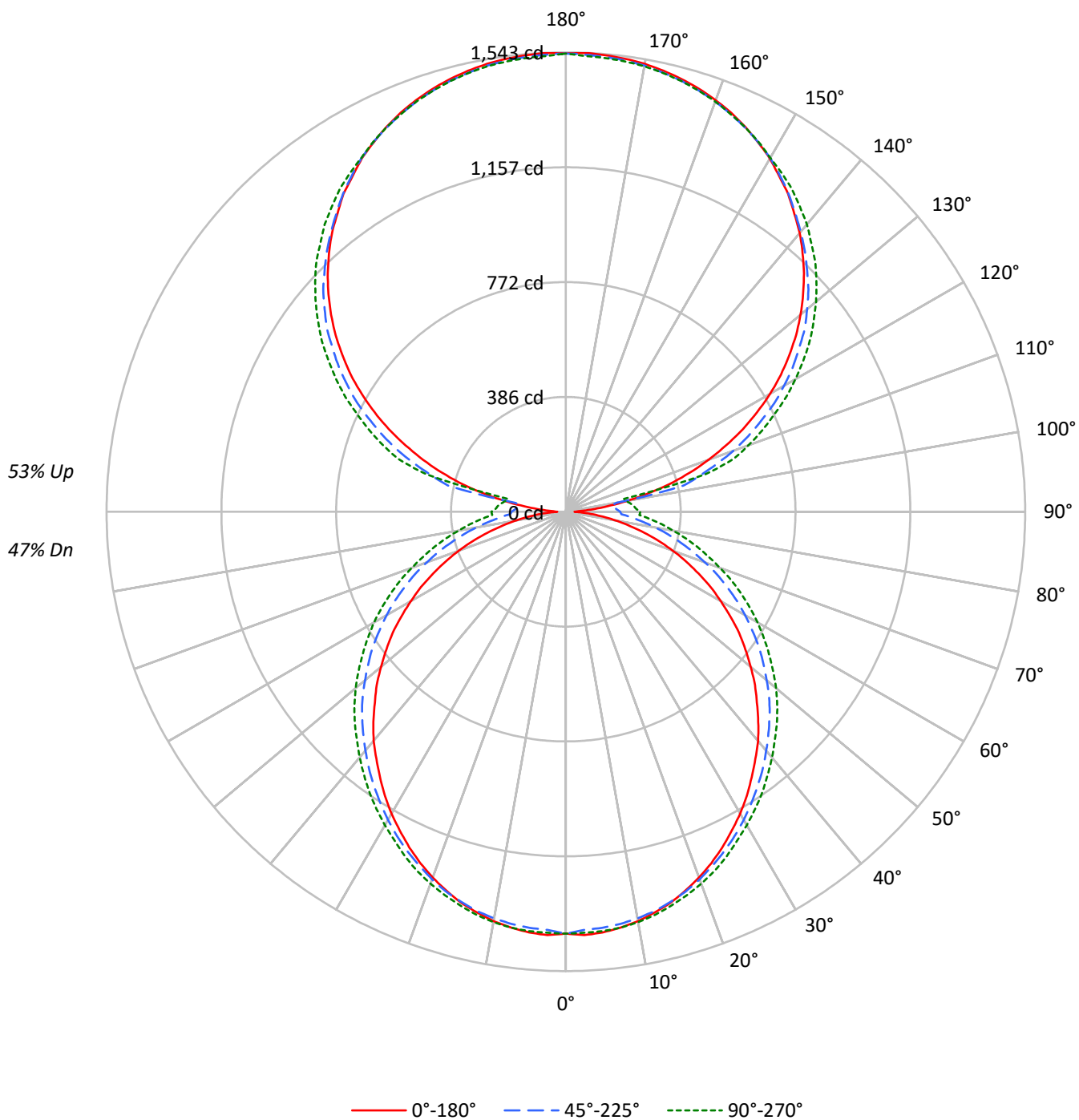
Lumens per Lamp: N/A  
Luminaire Lumens: 9597.0 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 96.3  
Input Voltage (V): 120  
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 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 106 | 106 | 106 | 106 | 98 | 98 | 98 | 98 | 81 | 81 | 81 | 67 | 67 | 67 | 53 | 53 | 53 |    |    | 47 |
| 1   | 96  | 91  | 87  | 83  | 88 | 84 | 80 | 77 | 70 | 67 | 65 | 57 | 55 | 54 | 45 | 44 | 43 |    |    | 37 |
| 2   | 87  | 79  | 73  | 67  | 80 | 73 | 67 | 62 | 61 | 57 | 53 | 50 | 47 | 44 | 39 | 37 | 35 |    |    | 30 |
| 3   | 79  | 69  | 62  | 56  | 72 | 64 | 57 | 52 | 53 | 48 | 44 | 44 | 40 | 37 | 34 | 32 | 30 |    |    | 25 |
| 4   | 72  | 61  | 53  | 47  | 66 | 56 | 49 | 43 | 47 | 42 | 37 | 39 | 34 | 31 | 31 | 28 | 25 |    |    | 21 |
| 5   | 66  | 54  | 46  | 40  | 60 | 50 | 43 | 37 | 42 | 36 | 32 | 34 | 30 | 27 | 27 | 24 | 22 |    |    | 18 |
| 6   | 61  | 49  | 40  | 34  | 56 | 45 | 37 | 32 | 38 | 32 | 28 | 31 | 27 | 23 | 25 | 22 | 19 |    |    | 16 |
| 7   | 56  | 44  | 36  | 30  | 51 | 40 | 33 | 28 | 34 | 28 | 24 | 28 | 24 | 20 | 23 | 19 | 17 |    |    | 14 |
| 8   | 52  | 40  | 32  | 26  | 48 | 37 | 30 | 25 | 31 | 25 | 21 | 26 | 21 | 18 | 21 | 17 | 15 |    |    | 13 |
| 9   | 48  | 36  | 28  | 23  | 44 | 33 | 27 | 22 | 28 | 23 | 19 | 24 | 19 | 16 | 19 | 16 | 13 |    |    | 11 |
| 10  | 45  | 33  | 26  | 21  | 41 | 31 | 24 | 20 | 26 | 21 | 17 | 22 | 18 | 15 | 18 | 15 | 12 |    |    | 10 |

**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  | 1.4       |
| 10°-20°   | 384.7  | 4.0       |
| 20°-30°   | 581.6  | 6.1       |
| 30°-40°   | 703.7  | 7.3       |
| 40°-50°   | 743.9  | 7.8       |
| 50°-60°   | 700.1  | 7.3       |
| 60°-70°   | 581.0  | 6.1       |
| 70°-80°   | 407.7  | 4.2       |
| 80°-90°   | 233.0  | 2.4       |
| 90°-100°  | 187.9  | 2.0       |
| 100°-110° | 437.8  | 4.6       |
| 110°-120° | 710.5  | 7.4       |
| 120°-130° | 854.0  | 8.9       |
| 130°-140° | 889.2  | 9.3       |
| 140°-150° | 819.2  | 8.5       |
| 150°-160° | 658.0  | 6.9       |
| 160°-170° | 424.3  | 4.4       |
| 170°-180° | 146.2  | 1.5       |
| 0°-30°    | 1100.6 | 11.5      |
| 0°-40°    | 1804.2 | 18.8      |
| 0°-60°    | 3248.2 | 33.8      |
| 0°-90°    | 4469.9 | 46.6      |
| 90°-120°  | 1336.2 | 13.9      |
| 90°-150°  | 3898.6 | 40.6      |
| 90°-180°  | 5127.0 | 53.4      |
| 0°-180°   | 9597.0 | 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°  | 29   | 105   | 182  | 235   | 250  | 21   |
| 95°  | 84   | 97    | 163  | 213   | 229  | 94   |
| 105° | 361  | 399   | 464  | 514   | 485  | 379  |
| 115° | 656  | 674   | 724  | 761   | 772  | 647  |
| 125° | 916  | 919   | 956  | 990   | 1000 | 818  |
| 135° | 1131 | 1130  | 1146 | 1174  | 1186 | 872  |
| 145° | 1302 | 1304  | 1304 | 1315  | 1324 | 814  |
| 155° | 1426 | 1428  | 1424 | 1429  | 1425 | 658  |
| 165° | 1505 | 1499  | 1499 | 1508  | 1498 | 425  |
| 175° | 1539 | 1532  | 1533 | 1544  | 1530 | 147  |
| 180° | 1539 | 1539  | 1539 | 1539  | 1539 |      |

TEST NUMBER: P1000880

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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°    | 28.9   | 105.0  | 182.4  | 235.3  | 250.3  |
| 92.5°  | 41.1   | 94.3   | 171.8  | 223.1  | 235.8  |
| 95°    | 83.9   | 97.2   | 163.3  | 213.1  | 228.6  |
| 97.5°  | 139.9  | 211.3  | 155.4  | 202.5  | 217.8  |
| 100°   | 206.3  | 268.2  | 171.3  | 194.5  | 206.7  |
| 102.5° | 282.3  | 331.0  | 405.1  | 187.3  | 200.0  |
| 105°   | 360.8  | 399.4  | 463.9  | 513.9  | 485.2  |
| 107.5° | 435.7  | 466.1  | 529.7  | 575.1  | 590.8  |
| 110°   | 510.0  | 535.7  | 598.1  | 636.9  | 653.0  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 582.1  | 608.0  | 662.7  | 696.5  | 713.8  |
| 115°   | 656.5  | 674.2  | 723.9  | 761.1  | 772.2  |
| 117.5° | 724.4  | 738.5  | 789.6  | 821.8  | 834.5  |
| 120°   | 791.9  | 801.3  | 846.1  | 880.1  | 890.5  |
| 122.5° | 856.4  | 858.7  | 903.9  | 936.7  | 945.5  |
| 125°   | 915.8  | 918.9  | 956.2  | 989.8  | 1000.5 |
| 127.5° | 974.5  | 974.1  | 1011.6 | 1039.0 | 1049.0 |
| 130°   | 1029.4 | 1028.9 | 1057.8 | 1087.5 | 1097.0 |
| 132.5° | 1081.2 | 1081.9 | 1105.5 | 1133.7 | 1142.0 |
| 135°   | 1131.4 | 1130.3 | 1146.0 | 1173.7 | 1185.5 |
| 137.5° | 1177.5 | 1175.9 | 1187.9 | 1214.0 | 1220.9 |
| 140°   | 1222.4 | 1223.1 | 1227.0 | 1251.0 | 1260.1 |
| 142.5° | 1261.0 | 1265.7 | 1265.2 | 1285.0 | 1291.3 |
| 145°   | 1302.5 | 1304.3 | 1304.3 | 1315.0 | 1323.7 |
| 147.5° | 1334.7 | 1340.0 | 1338.9 | 1341.6 | 1349.1 |
| 150°   | 1370.4 | 1373.4 | 1372.3 | 1372.3 | 1373.4 |
| 152.5° | 1398.7 | 1402.2 | 1399.9 | 1402.2 | 1401.1 |
| 155°   | 1426.4 | 1427.5 | 1424.1 | 1428.7 | 1425.2 |
| 157.5° | 1450.6 | 1450.6 | 1445.9 | 1451.7 | 1445.9 |
| 160°   | 1471.3 | 1467.8 | 1466.7 | 1473.6 | 1466.7 |
| 162.5° | 1489.7 | 1485.1 | 1483.9 | 1490.8 | 1482.8 |
| 165°   | 1504.7 | 1498.9 | 1498.9 | 1508.1 | 1497.8 |
| 167.5° | 1517.3 | 1511.6 | 1510.4 | 1520.8 | 1509.3 |
| 170°   | 1527.7 | 1520.8 | 1521.9 | 1531.1 | 1519.6 |
| 172.5° | 1534.6 | 1527.7 | 1528.8 | 1538.0 | 1525.4 |
| 175°   | 1539.2 | 1532.3 | 1533.4 | 1543.8 | 1530.0 |
| 177.5° | 1542.7 | 1534.6 | 1536.9 | 1546.1 | 1532.3 |
| 180°   | 1539.2 | 1539.2 | 1539.2 | 1539.2 | 1539.2 |

(END OF REPORT)