

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: P1000549

Luminaire Tested: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1000549  
REPORT IS A COMBINATION OF REPORTS P995159 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1  
Description: Define 4 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

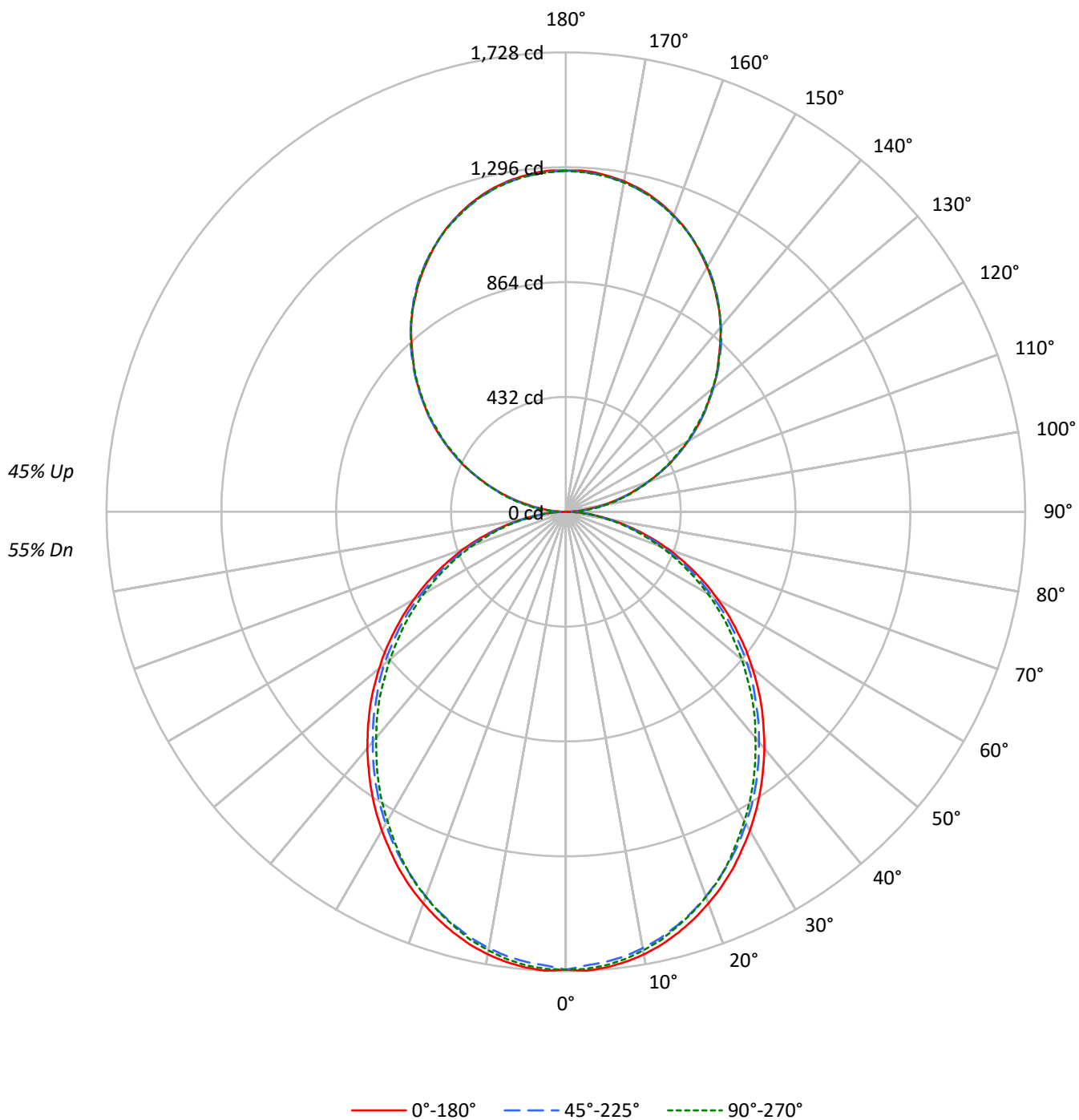
Lumens per Lamp: N/A  
Luminaire Lumens: 7984.0 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 75.3  
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

TEST NUMBER: P1000549

CATALOG NUMBER: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

### Luminous Intensity Polar Plot



TEST NUMBER: P1000549

CATALOG NUMBER: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

**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 | 101 | 101 | 101 | 101 | 86 | 86 | 86 | 73 | 73 | 73 | 61 | 61 | 61 |
| 1   | 99  | 95  | 91  | 87  | 92  | 88  | 85  | 81  | 76 | 73 | 71 | 64 | 63 | 61 | 54 | 53 | 52 |
| 2   | 90  | 83  | 76  | 71  | 83  | 77  | 71  | 67  | 66 | 62 | 59 | 57 | 53 | 51 | 47 | 45 | 43 |
| 3   | 82  | 73  | 65  | 59  | 76  | 68  | 61  | 56  | 58 | 53 | 49 | 50 | 46 | 43 | 42 | 39 | 37 |
| 4   | 75  | 64  | 56  | 50  | 70  | 60  | 53  | 47  | 52 | 46 | 42 | 45 | 40 | 37 | 38 | 34 | 32 |
| 5   | 69  | 57  | 49  | 43  | 64  | 54  | 46  | 41  | 47 | 41 | 36 | 40 | 36 | 32 | 34 | 30 | 28 |
| 6   | 64  | 51  | 43  | 37  | 59  | 48  | 41  | 35  | 42 | 36 | 32 | 36 | 32 | 28 | 31 | 27 | 24 |
| 7   | 59  | 46  | 38  | 33  | 55  | 44  | 36  | 31  | 38 | 32 | 28 | 33 | 28 | 25 | 28 | 24 | 22 |
| 8   | 55  | 42  | 34  | 29  | 51  | 40  | 33  | 28  | 35 | 29 | 25 | 30 | 26 | 22 | 26 | 22 | 19 |
| 9   | 51  | 39  | 31  | 26  | 47  | 36  | 29  | 25  | 32 | 26 | 22 | 28 | 23 | 20 | 24 | 20 | 18 |
| 10  | 48  | 35  | 28  | 23  | 44  | 33  | 27  | 22  | 29 | 24 | 20 | 26 | 21 | 18 | 22 | 19 | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14045 | 14045 | 14045 |
| 5°  | 14058 | 13642 | 13658 |
| 10° | 13938 | 13262 | 13170 |
| 15° | 13739 | 12812 | 12620 |
| 20° | 13483 | 12326 | 12049 |
| 25° | 13196 | 11811 | 11436 |
| 30° | 12849 | 11254 | 10762 |
| 35° | 12491 | 10685 | 10110 |
| 40° | 12116 | 10073 | 9418  |
| 45° | 11723 | 9457  | 8771  |
| 50° | 11289 | 8861  | 8053  |
| 55° | 10818 | 8165  | 7341  |
| 60° | 10334 | 7403  | 6598  |
| 65° | 9781  | 6615  | 5762  |
| 70° | 9145  | 5668  | 4866  |
| 75° | 8193  | 4568  | 3897  |
| 80° | 6984  | 3304  | 2741  |
| 85° | 5421  | 1840  | 1476  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11723 cd/sqm

TEST NUMBER: P1000549

CATALOG NUMBER: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 162.3  | 2.0       |
| 10°-20°   | 457.4  | 5.7       |
| 20°-30°   | 673.1  | 8.4       |
| 30°-40°   | 782.5  | 9.8       |
| 40°-50°   | 782.4  | 9.8       |
| 50°-60°   | 684.3  | 8.6       |
| 60°-70°   | 508.0  | 6.4       |
| 70°-80°   | 288.3  | 3.6       |
| 80°-90°   | 85.3   | 1.1       |
| 90°-100°  | 83.6   | 1.0       |
| 100°-110° | 250.5  | 3.1       |
| 110°-120° | 425.6  | 5.3       |
| 120°-130° | 561.3  | 7.0       |
| 130°-140° | 630.4  | 7.9       |
| 140°-150° | 619.6  | 7.8       |
| 150°-160° | 521.1  | 6.5       |
| 160°-170° | 346.7  | 4.3       |
| 170°-180° | 121.4  | 1.5       |
| 0°-30°    | 1292.9 | 16.2      |
| 0°-40°    | 2075.4 | 26.0      |
| 0°-60°    | 3542.1 | 44.4      |
| 0°-90°    | 4423.7 | 55.4      |
| 90°-120°  | 759.7  | 9.5       |
| 90°-150°  | 2571.0 | 32.2      |
| 90°-180°  | 3560.0 | 44.6      |
| 0°-180°   | 7984.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1722 | 1722  | 1722 | 1722  | 1722 |      |
| 5°   | 1721 | 1716  | 1700 | 1716  | 1713 | 163  |
| 15°  | 1638 | 1633  | 1612 | 1620  | 1616 | 462  |
| 25°  | 1484 | 1474  | 1455 | 1456  | 1451 | 683  |
| 35°  | 1277 | 1267  | 1248 | 1238  | 1231 | 798  |
| 45°  | 1042 | 1032  | 1010 | 995   | 991  | 803  |
| 55°  | 788  | 784   | 765  | 748   | 740  | 706  |
| 65°  | 534  | 527   | 513  | 500   | 493  | 529  |
| 75°  | 284  | 277   | 270  | 265   | 264  | 302  |
| 85°  | 74   | 74    | 72   | 72    | 70   | 80   |
| 90°  | 3    | 14    | 22   | 28    | 30   | 9    |
| 95°  | 60   | 68    | 75   | 78    | 78   | 64   |
| 105° | 231  | 232   | 236  | 239   | 242  | 245  |
| 115° | 433  | 433   | 431  | 430   | 429  | 427  |
| 125° | 630  | 630   | 629  | 627   | 625  | 562  |
| 135° | 813  | 819   | 819  | 817   | 814  | 629  |
| 145° | 987  | 991   | 992  | 991   | 988  | 618  |
| 155° | 1131 | 1131  | 1130 | 1134  | 1130 | 521  |
| 165° | 1232 | 1229  | 1227 | 1232  | 1229 | 347  |
| 175° | 1281 | 1276  | 1275 | 1282  | 1275 | 122  |
| 180° | 1283 | 1283  | 1283 | 1283  | 1283 |      |

TEST NUMBER: P1000549

CATALOG NUMBER: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1722.4 | 1722.4 | 1722.4 | 1722.4 | 1722.4 |
| 2.5°   | 1728.0 | 1723.8 | 1708.6 | 1722.4 | 1721.1 |
| 5°     | 1721.1 | 1715.5 | 1700.4 | 1715.5 | 1712.8 |
| 7.5°   | 1708.6 | 1703.1 | 1686.6 | 1699.0 | 1697.6 |
| 10°    | 1690.7 | 1685.2 | 1667.2 | 1678.3 | 1675.5 |
| 12.5°  | 1667.2 | 1661.7 | 1642.4 | 1654.8 | 1650.7 |
| 15°    | 1638.3 | 1632.7 | 1612.0 | 1620.3 | 1616.2 |
| 17.5°  | 1605.1 | 1598.2 | 1578.9 | 1584.4 | 1581.7 |
| 20°    | 1567.9 | 1561.0 | 1540.3 | 1544.4 | 1541.6 |
| 22.5°  | 1527.8 | 1518.2 | 1497.5 | 1505.8 | 1500.2 |
| 25°    | 1483.7 | 1474.0 | 1454.7 | 1456.1 | 1450.6 |
| 27.5°  | 1434.0 | 1424.3 | 1406.4 | 1403.6 | 1396.7 |
| 30°    | 1384.3 | 1373.3 | 1355.3 | 1349.8 | 1342.9 |
| 32.5°  | 1331.9 | 1322.2 | 1302.9 | 1296.0 | 1289.1 |
| 35°    | 1276.7 | 1267.0 | 1247.7 | 1238.0 | 1231.1 |
| 37.5°  | 1218.7 | 1210.4 | 1189.7 | 1180.0 | 1170.4 |
| 40°    | 1162.1 | 1151.1 | 1130.4 | 1116.6 | 1109.7 |
| 42.5°  | 1101.4 | 1095.9 | 1072.4 | 1055.8 | 1051.7 |
| 45°    | 1042.0 | 1032.4 | 1010.3 | 995.1  | 991.0  |
| 47.5°  | 979.9  | 973.0  | 952.3  | 935.8  | 924.7  |
| 50°    | 916.4  | 910.9  | 891.6  | 872.3  | 864.0  |
| 52.5°  | 854.3  | 847.4  | 826.7  | 810.2  | 799.1  |
| 55°    | 788.1  | 783.9  | 764.6  | 748.1  | 739.8  |
| 57.5°  | 726.0  | 721.8  | 702.5  | 685.9  | 677.7  |
| 60°    | 661.1  | 654.2  | 636.3  | 623.8  | 616.9  |
| 62.5°  | 597.6  | 592.1  | 572.8  | 561.7  | 554.8  |
| 65°    | 534.1  | 527.2  | 513.4  | 499.6  | 492.7  |
| 67.5°  | 469.3  | 463.7  | 449.9  | 436.1  | 434.8  |
| 70°    | 409.9  | 400.2  | 389.2  | 378.2  | 374.0  |
| 72.5°  | 346.4  | 336.8  | 328.5  | 320.2  | 316.1  |
| 75°    | 284.3  | 277.4  | 270.5  | 265.0  | 263.6  |
| 77.5°  | 223.6  | 220.8  | 213.9  | 212.5  | 208.4  |
| 80°    | 169.8  | 165.6  | 162.9  | 160.1  | 158.7  |
| 82.5°  | 117.3  | 115.9  | 115.9  | 114.6  | 113.2  |
| 85°    | 74.5   | 74.5   | 71.8   | 71.8   | 70.4   |
| 87.5°  | 35.9   | 34.5   | 33.1   | 33.1   | 33.1   |
| 90°    | 3.0    | 13.9   | 21.8   | 27.8   | 29.8   |
| 92.5°  | 25.8   | 38.7   | 43.7   | 46.6   | 47.6   |
| 95°    | 59.5   | 68.5   | 75.4   | 78.4   | 78.4   |
| 97.5°  | 95.3   | 103.2  | 111.1  | 115.1  | 115.1  |
| 100°   | 138.9  | 142.9  | 151.8  | 153.8  | 153.8  |
| 102.5° | 184.6  | 185.6  | 193.5  | 196.5  | 197.5  |
| 105°   | 231.2  | 232.2  | 236.2  | 239.2  | 242.1  |
| 107.5° | 279.9  | 280.8  | 281.8  | 285.8  | 284.8  |
| 110°   | 329.5  | 331.5  | 330.5  | 328.5  | 331.5  |



TEST NUMBER: P1000549

CATALOG NUMBER: SA4XXDIP-B1020D1035UB35-4F0-XX-W2A-F1

**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 381.1  | 381.1  | 379.1  | 379.1  | 379.1  |
| 115°   | 432.7  | 432.7  | 430.7  | 429.7  | 428.7  |
| 117.5° | 481.3  | 481.3  | 480.3  | 477.3  | 474.4  |
| 120°   | 529.9  | 533.9  | 530.9  | 526.0  | 527.9  |
| 122.5° | 580.5  | 581.5  | 580.5  | 577.6  | 572.6  |
| 125°   | 630.2  | 630.2  | 629.2  | 627.2  | 625.2  |
| 127.5° | 674.8  | 677.8  | 675.8  | 673.8  | 672.8  |
| 130°   | 722.5  | 725.4  | 725.4  | 723.4  | 719.5  |
| 132.5° | 771.1  | 773.1  | 772.1  | 770.1  | 769.1  |
| 135°   | 812.8  | 818.7  | 818.7  | 816.7  | 813.8  |
| 137.5° | 859.4  | 862.4  | 864.4  | 861.4  | 862.4  |
| 140°   | 906.0  | 908.0  | 908.0  | 907.0  | 906.0  |
| 142.5° | 948.7  | 950.7  | 949.7  | 949.7  | 949.7  |
| 145°   | 987.4  | 991.4  | 992.4  | 991.4  | 988.4  |
| 147.5° | 1027.1 | 1032.1 | 1031.1 | 1030.1 | 1029.1 |
| 150°   | 1062.8 | 1066.8 | 1066.8 | 1066.8 | 1065.8 |
| 152.5° | 1096.6 | 1098.6 | 1099.6 | 1102.5 | 1099.6 |
| 155°   | 1131.3 | 1131.3 | 1130.3 | 1134.3 | 1130.3 |
| 157.5° | 1161.1 | 1159.1 | 1159.1 | 1162.1 | 1159.1 |
| 160°   | 1186.9 | 1185.9 | 1184.9 | 1187.9 | 1182.9 |
| 162.5° | 1210.7 | 1207.7 | 1206.7 | 1212.7 | 1207.7 |
| 165°   | 1231.5 | 1228.6 | 1226.6 | 1232.5 | 1228.6 |
| 167.5° | 1248.4 | 1244.4 | 1244.4 | 1250.4 | 1244.4 |
| 170°   | 1262.3 | 1257.3 | 1258.3 | 1264.3 | 1257.3 |
| 172.5° | 1272.2 | 1268.3 | 1268.3 | 1275.2 | 1268.3 |
| 175°   | 1281.2 | 1276.2 | 1275.2 | 1282.2 | 1275.2 |
| 177.5° | 1285.1 | 1280.2 | 1280.2 | 1287.1 | 1279.2 |
| 180°   | 1283.1 | 1283.1 | 1283.1 | 1283.1 | 1283.1 |

(END OF REPORT)