

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: P1000933

Luminaire Tested: SA4XXDIP-B1195D365UB27-4F0-XX-W2A-F1

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1000933  
REPORT IS A COMBINATION OF REPORTS P995546 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA4XXDIP-B1195D365UB27-4F0-XX-W2A-F1  
Description: Define 4 Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

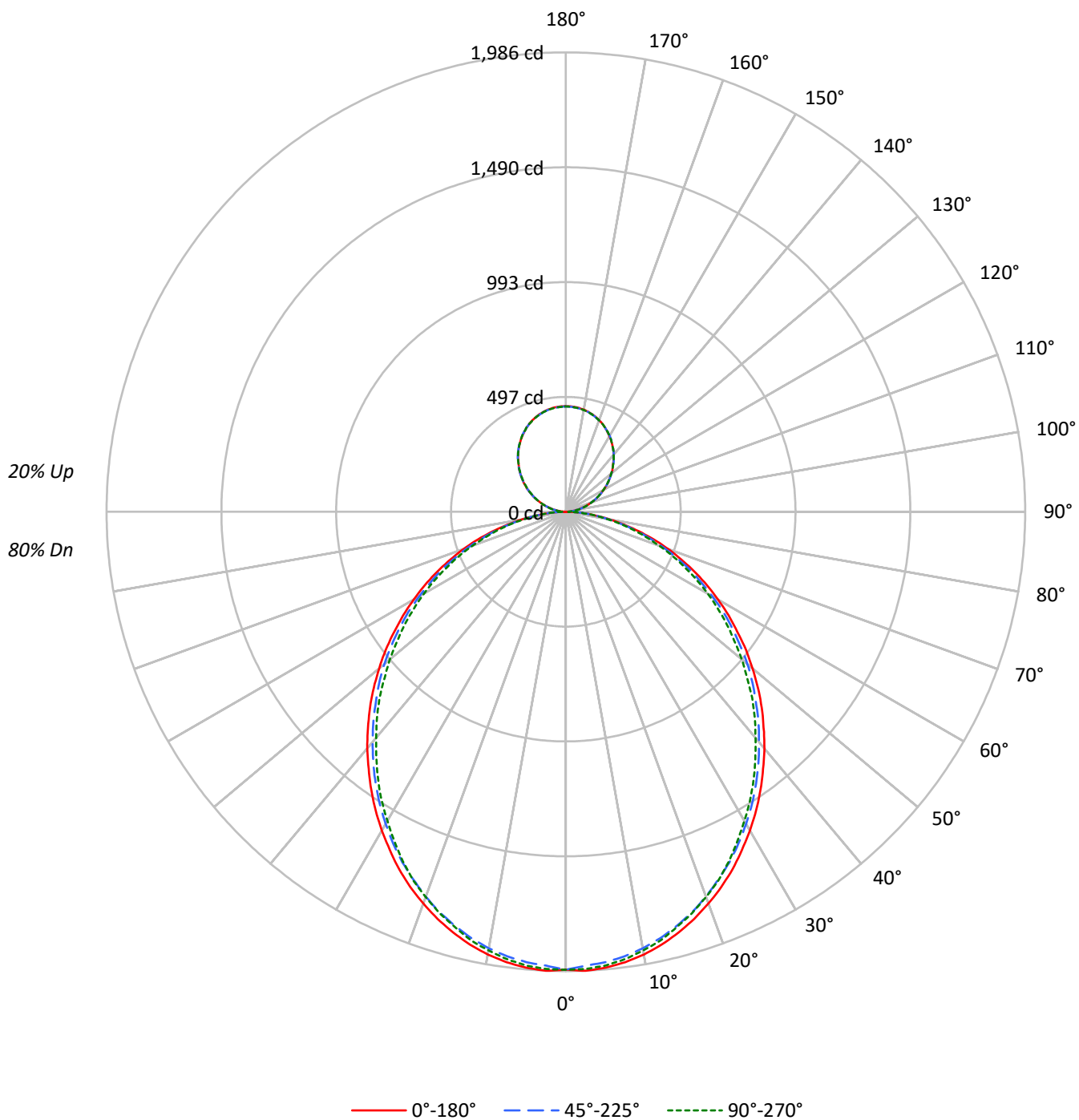
Lumens per Lamp: N/A  
Luminaire Lumens: 6347.0 lumens  
Efficiency: N/A  
Efficacy: 89.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 70.6  
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   | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 100 | 100 | 100 | 92 | 92 | 92 | 84 | 84 | 84 |
| 1   | 104 | 100 | 96  | 92  | 100 | 96  | 92  | 89  | 88  | 85  | 82  | 81 | 78 | 76 | 74 | 72 | 71 |
| 2   | 95  | 87  | 81  | 75  | 91  | 84  | 78  | 73  | 77  | 72  | 68  | 71 | 67 | 64 | 65 | 62 | 60 |
| 3   | 87  | 77  | 69  | 63  | 83  | 74  | 67  | 61  | 68  | 62  | 57  | 63 | 58 | 54 | 58 | 54 | 51 |
| 4   | 80  | 68  | 60  | 53  | 76  | 66  | 58  | 52  | 61  | 54  | 49  | 56 | 51 | 46 | 52 | 47 | 44 |
| 5   | 73  | 61  | 52  | 46  | 70  | 59  | 51  | 45  | 54  | 48  | 43  | 50 | 45 | 40 | 47 | 42 | 38 |
| 6   | 68  | 55  | 46  | 40  | 64  | 53  | 45  | 39  | 49  | 42  | 37  | 46 | 40 | 35 | 42 | 37 | 34 |
| 7   | 63  | 50  | 41  | 35  | 60  | 48  | 40  | 35  | 45  | 38  | 33  | 42 | 36 | 31 | 39 | 34 | 30 |
| 8   | 58  | 45  | 37  | 32  | 56  | 44  | 36  | 31  | 41  | 34  | 30  | 38 | 32 | 28 | 36 | 31 | 27 |
| 9   | 54  | 42  | 34  | 28  | 52  | 40  | 33  | 28  | 38  | 31  | 27  | 35 | 30 | 25 | 33 | 28 | 24 |
| 10  | 51  | 38  | 31  | 26  | 49  | 37  | 30  | 25  | 35  | 28  | 24  | 33 | 27 | 23 | 31 | 26 | 22 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 16146 | 16146 | 16146 |
| 5°  | 16159 | 15681 | 15700 |
| 10° | 16022 | 15246 | 15139 |
| 15° | 15792 | 14729 | 14506 |
| 20° | 15499 | 14169 | 13850 |
| 25° | 15168 | 13577 | 13145 |
| 30° | 14770 | 12938 | 12371 |
| 35° | 14357 | 12282 | 11622 |
| 40° | 13928 | 11578 | 10826 |
| 45° | 13476 | 10871 | 10081 |
| 50° | 12977 | 10186 | 9257  |
| 55° | 12435 | 9386  | 8438  |
| 60° | 11879 | 8510  | 7585  |
| 65° | 11244 | 7605  | 6624  |
| 70° | 10512 | 6515  | 5593  |
| 75° | 9418  | 5252  | 4480  |
| 80° | 8024  | 3797  | 3151  |
| 85° | 6236  | 2114  | 1696  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13476 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 186.6  | 2.9       |
| 10°-20°   | 525.8  | 8.3       |
| 20°-30°   | 773.8  | 12.2      |
| 30°-40°   | 899.5  | 14.2      |
| 40°-50°   | 899.4  | 14.2      |
| 50°-60°   | 786.6  | 12.4      |
| 60°-70°   | 584.0  | 9.2       |
| 70°-80°   | 331.4  | 5.2       |
| 80°-90°   | 95.9   | 1.5       |
| 90°-100°  | 29.7   | 0.5       |
| 100°-110° | 88.9   | 1.4       |
| 110°-120° | 151.1  | 2.4       |
| 120°-130° | 199.3  | 3.1       |
| 130°-140° | 223.8  | 3.5       |
| 140°-150° | 220.0  | 3.5       |
| 150°-160° | 185.0  | 2.9       |
| 160°-170° | 123.1  | 1.9       |
| 170°-180° | 43.1   | 0.7       |
| 0°-30°    | 1486.2 | 23.4      |
| 0°-40°    | 2385.7 | 37.6      |
| 0°-60°    | 4071.7 | 64.2      |
| 0°-90°    | 5083.0 | 80.1      |
| 90°-120°  | 269.7  | 4.2       |
| 90°-150°  | 912.8  | 14.4      |
| 90°-180°  | 1264.0 | 19.9      |
| 0°-180°   | 6347.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1980 | 1980  | 1980 | 1980  | 1980 |      |
| 5°   | 1978 | 1972  | 1955 | 1972  | 1969 | 188  |
| 15°  | 1883 | 1877  | 1853 | 1863  | 1858 | 531  |
| 25°  | 1706 | 1694  | 1672 | 1674  | 1667 | 785  |
| 35°  | 1468 | 1456  | 1434 | 1423  | 1415 | 918  |
| 45°  | 1198 | 1187  | 1161 | 1144  | 1139 | 923  |
| 55°  | 906  | 901   | 879  | 860   | 850  | 811  |
| 65°  | 614  | 606   | 590  | 574   | 566  | 608  |
| 75°  | 327  | 319   | 311  | 305   | 303  | 347  |
| 85°  | 86   | 86    | 82   | 82    | 81   | 92   |
| 90°  | 1    | 5     | 8    | 10    | 11   | 7    |
| 95°  | 21   | 24    | 27   | 28    | 28   | 23   |
| 105° | 82   | 82    | 84   | 85    | 86   | 87   |
| 115° | 154  | 154   | 153  | 153   | 152  | 152  |
| 125° | 224  | 224   | 223  | 223   | 222  | 199  |
| 135° | 289  | 291   | 291  | 290   | 289  | 223  |
| 145° | 351  | 352   | 352  | 352   | 351  | 219  |
| 155° | 402  | 402   | 401  | 403   | 401  | 185  |
| 165° | 437  | 436   | 436  | 438   | 436  | 123  |
| 175° | 455  | 453   | 453  | 455   | 453  | 43   |
| 180° | 456  | 456   | 456  | 456   | 456  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1980.0 | 1980.0 | 1980.0 | 1980.0 | 1980.0 |
| 2.5°   | 1986.3 | 1981.6 | 1964.1 | 1980.0 | 1978.4 |
| 5°     | 1978.4 | 1972.0 | 1954.6 | 1972.0 | 1968.9 |
| 7.5°   | 1964.1 | 1957.8 | 1938.7 | 1953.0 | 1951.4 |
| 10°    | 1943.5 | 1937.1 | 1916.5 | 1929.2 | 1926.0 |
| 12.5°  | 1916.5 | 1910.2 | 1888.0 | 1902.2 | 1897.5 |
| 15°    | 1883.2 | 1876.9 | 1853.1 | 1862.6 | 1857.8 |
| 17.5°  | 1845.1 | 1837.2 | 1815.0 | 1821.3 | 1818.2 |
| 20°    | 1802.3 | 1794.4 | 1770.6 | 1775.3 | 1772.1 |
| 22.5°  | 1756.3 | 1745.2 | 1721.4 | 1730.9 | 1724.5 |
| 25°    | 1705.5 | 1694.4 | 1672.2 | 1673.8 | 1667.4 |
| 27.5°  | 1648.4 | 1637.3 | 1616.7 | 1613.5 | 1605.6 |
| 30°    | 1591.3 | 1578.6 | 1558.0 | 1551.6 | 1543.7 |
| 32.5°  | 1531.0 | 1519.9 | 1497.7 | 1489.7 | 1481.8 |
| 35°    | 1467.5 | 1456.4 | 1434.2 | 1423.1 | 1415.2 |
| 37.5°  | 1400.9 | 1391.4 | 1367.6 | 1356.5 | 1345.4 |
| 40°    | 1335.9 | 1323.2 | 1299.4 | 1283.5 | 1275.6 |
| 42.5°  | 1266.0 | 1259.7 | 1232.7 | 1213.7 | 1208.9 |
| 45°    | 1197.8 | 1186.7 | 1161.3 | 1143.9 | 1139.1 |
| 47.5°  | 1126.4 | 1118.5 | 1094.7 | 1075.7 | 1063.0 |
| 50°    | 1053.4 | 1047.1 | 1024.9 | 1002.7 | 993.2  |
| 52.5°  | 982.1  | 974.1  | 950.3  | 931.3  | 918.6  |
| 55°    | 905.9  | 901.1  | 878.9  | 859.9  | 850.4  |
| 57.5°  | 834.5  | 829.8  | 807.5  | 788.5  | 779.0  |
| 60°    | 759.9  | 752.0  | 731.4  | 717.1  | 709.2  |
| 62.5°  | 687.0  | 680.6  | 658.4  | 645.7  | 637.8  |
| 65°    | 614.0  | 606.1  | 590.2  | 574.3  | 566.4  |
| 67.5°  | 539.4  | 533.1  | 517.2  | 501.3  | 499.8  |
| 70°    | 471.2  | 460.1  | 447.4  | 434.7  | 429.9  |
| 72.5°  | 398.2  | 387.1  | 377.6  | 368.1  | 363.3  |
| 75°    | 326.8  | 318.9  | 311.0  | 304.6  | 303.0  |
| 77.5°  | 257.0  | 253.8  | 245.9  | 244.3  | 239.6  |
| 80°    | 195.1  | 190.4  | 187.2  | 184.0  | 182.4  |
| 82.5°  | 134.9  | 133.3  | 133.3  | 131.7  | 130.1  |
| 85°    | 85.7   | 85.7   | 82.5   | 82.5   | 80.9   |
| 87.5°  | 41.2   | 39.7   | 38.1   | 38.1   | 38.1   |
| 90°    | 1.1    | 4.9    | 7.8    | 9.9    | 10.6   |
| 92.5°  | 9.2    | 13.7   | 15.5   | 16.6   | 16.9   |
| 95°    | 21.1   | 24.3   | 26.8   | 27.8   | 27.8   |
| 97.5°  | 33.8   | 36.6   | 39.5   | 40.9   | 40.9   |
| 100°   | 49.3   | 50.7   | 53.9   | 54.6   | 54.6   |
| 102.5° | 65.5   | 65.9   | 68.7   | 69.8   | 70.1   |
| 105°   | 82.1   | 82.4   | 83.9   | 84.9   | 86.0   |
| 107.5° | 99.4   | 99.7   | 100.1  | 101.5  | 101.1  |
| 110°   | 117.0  | 117.7  | 117.3  | 116.6  | 117.7  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 135.3 | 135.3 | 134.6 | 134.6 | 134.6 |
| 115°   | 153.6 | 153.6 | 152.9 | 152.6 | 152.2 |
| 117.5° | 170.9 | 170.9 | 170.5 | 169.5 | 168.4 |
| 120°   | 188.1 | 189.6 | 188.5 | 186.7 | 187.4 |
| 122.5° | 206.1 | 206.5 | 206.1 | 205.1 | 203.3 |
| 125°   | 223.7 | 223.7 | 223.4 | 222.7 | 222.0 |
| 127.5° | 239.6 | 240.6 | 239.9 | 239.2 | 238.9 |
| 130°   | 256.5 | 257.6 | 257.6 | 256.9 | 255.4 |
| 132.5° | 273.8 | 274.5 | 274.1 | 273.4 | 273.1 |
| 135°   | 288.6 | 290.7 | 290.7 | 290.0 | 288.9 |
| 137.5° | 305.1 | 306.2 | 306.9 | 305.8 | 306.2 |
| 140°   | 321.7 | 322.4 | 322.4 | 322.0 | 321.7 |
| 142.5° | 336.8 | 337.5 | 337.2 | 337.2 | 337.2 |
| 145°   | 350.6 | 352.0 | 352.3 | 352.0 | 350.9 |
| 147.5° | 364.7 | 366.4 | 366.1 | 365.7 | 365.4 |
| 150°   | 377.3 | 378.8 | 378.8 | 378.8 | 378.4 |
| 152.5° | 389.3 | 390.0 | 390.4 | 391.4 | 390.4 |
| 155°   | 401.7 | 401.7 | 401.3 | 402.7 | 401.3 |
| 157.5° | 412.2 | 411.5 | 411.5 | 412.6 | 411.5 |
| 160°   | 421.4 | 421.0 | 420.7 | 421.7 | 420.0 |
| 162.5° | 429.8 | 428.8 | 428.4 | 430.5 | 428.8 |
| 165°   | 437.2 | 436.2 | 435.5 | 437.6 | 436.2 |
| 167.5° | 443.2 | 441.8 | 441.8 | 443.9 | 441.8 |
| 170°   | 448.2 | 446.4 | 446.8 | 448.9 | 446.4 |
| 172.5° | 451.7 | 450.3 | 450.3 | 452.7 | 450.3 |
| 175°   | 454.9 | 453.1 | 452.7 | 455.2 | 452.7 |
| 177.5° | 456.3 | 454.5 | 454.5 | 457.0 | 454.2 |
| 180°   | 455.6 | 455.6 | 455.6 | 455.6 | 455.6 |

(END OF REPORT)