

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: P999684

Luminaire Tested: SA2XXRDIP-B485D1080UB30-4F0-XX-W2A-F

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999684  
REPORT IS A COMBINATION OF REPORTS P988237 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B485D1080UB30-4F0-XX-W2A-F  
Description: Define 2 Regressed Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589}  
{m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

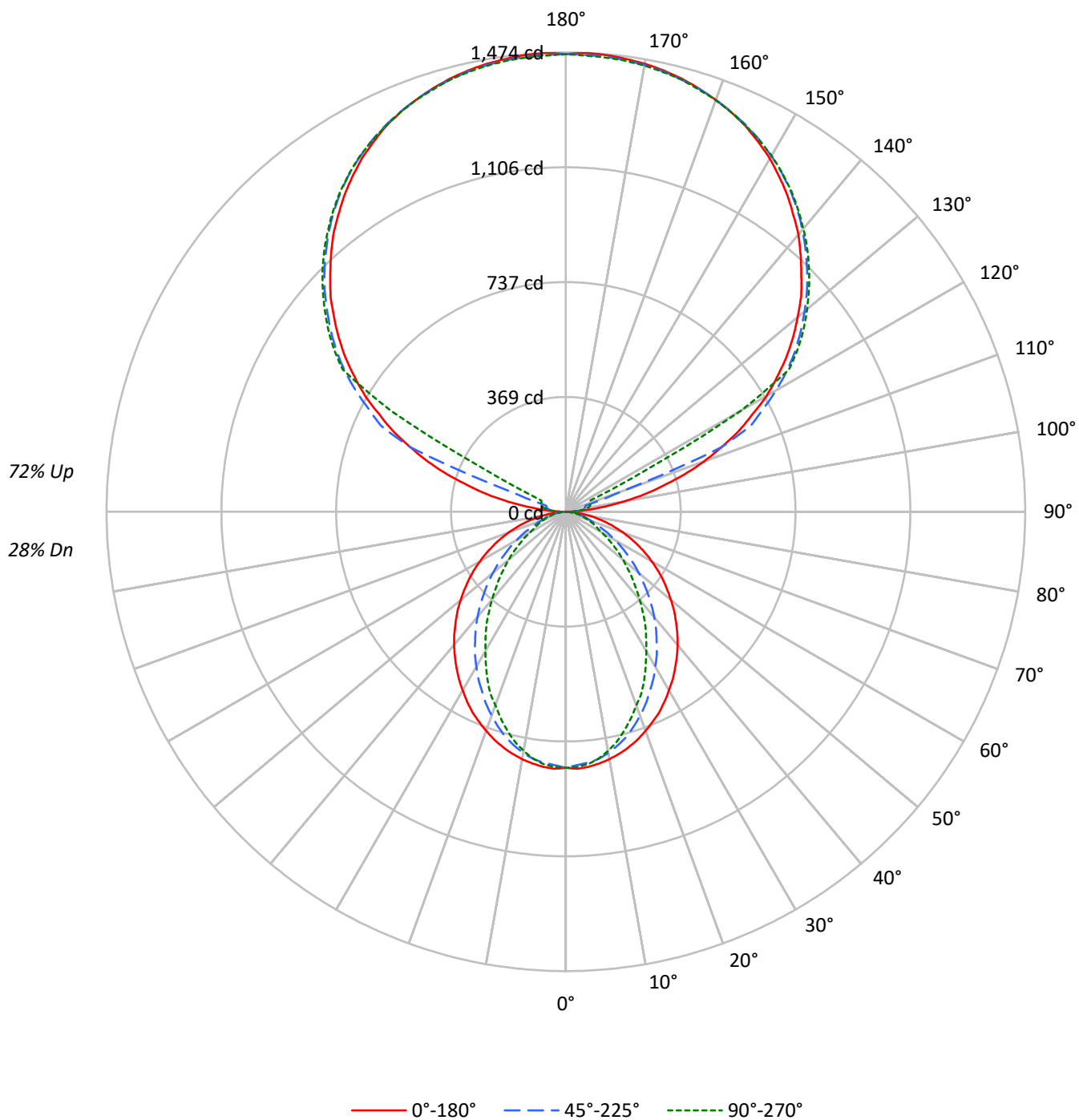
Lumens per Lamp: N/A  
Luminaire Lumens: 5997.0 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 59  
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   | 102 | 102 | 102 | 102 | 91 | 91 | 91 | 91 | 71 | 71 | 71 | 53 | 53 | 53 | 36 | 36 | 36 |
| 1   | 93  | 89  | 85  | 82  | 83 | 80 | 77 | 74 | 63 | 61 | 59 | 47 | 46 | 44 | 32 | 32 | 31 |
| 2   | 85  | 78  | 72  | 67  | 76 | 70 | 65 | 61 | 55 | 52 | 49 | 41 | 39 | 38 | 29 | 28 | 26 |
| 3   | 78  | 69  | 62  | 56  | 69 | 62 | 56 | 51 | 49 | 45 | 42 | 37 | 34 | 32 | 26 | 24 | 23 |
| 4   | 71  | 61  | 53  | 48  | 63 | 55 | 49 | 44 | 44 | 39 | 35 | 33 | 30 | 28 | 23 | 21 | 20 |
| 5   | 65  | 54  | 47  | 41  | 58 | 49 | 42 | 37 | 39 | 34 | 31 | 30 | 26 | 24 | 21 | 19 | 17 |
| 6   | 60  | 49  | 41  | 35  | 54 | 44 | 37 | 33 | 35 | 30 | 27 | 27 | 24 | 21 | 19 | 17 | 15 |
| 7   | 56  | 44  | 36  | 31  | 50 | 40 | 33 | 29 | 32 | 27 | 24 | 24 | 21 | 19 | 17 | 15 | 14 |
| 8   | 51  | 40  | 32  | 27  | 46 | 36 | 30 | 25 | 29 | 24 | 21 | 22 | 19 | 17 | 16 | 14 | 12 |
| 9   | 48  | 36  | 29  | 24  | 43 | 33 | 27 | 22 | 27 | 22 | 19 | 21 | 17 | 15 | 15 | 13 | 11 |
| 10  | 45  | 33  | 26  | 22  | 40 | 30 | 24 | 20 | 24 | 20 | 17 | 19 | 16 | 13 | 14 | 12 | 10 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13007 | 13007 | 13007 |
| 5°  | 13028 | 12374 | 12283 |
| 10° | 12900 | 11736 | 11349 |
| 15° | 12723 | 10983 | 10285 |
| 20° | 12488 | 10128 | 9173  |
| 25° | 12247 | 9249  | 8154  |
| 30° | 11924 | 8392  | 7042  |
| 35° | 11610 | 7529  | 6086  |
| 40° | 11287 | 6682  | 5104  |
| 45° | 10913 | 5806  | 4245  |
| 50° | 10527 | 4962  | 3456  |
| 55° | 10126 | 4119  | 2743  |
| 60° | 9659  | 3294  | 2076  |
| 65° | 9122  | 2511  | 1688  |
| 70° | 8471  | 1823  | 1343  |
| 75° | 7653  | 1390  | 1024  |
| 80° | 6475  | 941   | 687   |
| 85° | 4520  | 430   | 332   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 10913 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 77.0   | 1.3       |
| 10°-20°   | 211.4  | 3.5       |
| 20°-30°   | 296.8  | 4.9       |
| 30°-40°   | 323.6  | 5.4       |
| 40°-50°   | 297.4  | 5.0       |
| 50°-60°   | 233.5  | 3.9       |
| 60°-70°   | 152.0  | 2.5       |
| 70°-80°   | 78.3   | 1.3       |
| 80°-90°   | 22.6   | 0.4       |
| 90°-100°  | 48.4   | 0.8       |
| 100°-110° | 180.5  | 3.0       |
| 110°-120° | 478.7  | 8.0       |
| 120°-130° | 793.9  | 13.2      |
| 130°-140° | 843.3  | 14.1      |
| 140°-150° | 783.8  | 13.1      |
| 150°-160° | 630.1  | 10.5      |
| 160°-170° | 406.0  | 6.8       |
| 170°-180° | 139.7  | 2.3       |
| 0°-30°    | 585.3  | 9.8       |
| 0°-40°    | 908.8  | 15.2      |
| 0°-60°    | 1439.7 | 24.0      |
| 0°-90°    | 1692.6 | 28.2      |
| 90°-120°  | 707.6  | 11.8      |
| 90°-150°  | 3128.5 | 52.2      |
| 90°-180°  | 4304.0 | 71.8      |
| 0°-180°   | 5997.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 822  | 822   | 822  | 822   | 822  |      |
| 5°   | 822  | 818   | 808  | 815   | 813  | 78   |
| 15°  | 782  | 773   | 748  | 734   | 726  | 220  |
| 25°  | 709  | 686   | 637  | 606   | 595  | 326  |
| 35°  | 611  | 573   | 508  | 461   | 445  | 383  |
| 45°  | 500  | 450   | 372  | 319   | 301  | 386  |
| 55°  | 380  | 322   | 242  | 197   | 183  | 340  |
| 65°  | 257  | 196   | 129  | 104   | 102  | 254  |
| 75°  | 137  | 85    | 60   | 54    | 54   | 145  |
| 85°  | 32   | 16    | 14   | 14    | 14   | 37   |
| 90°  | 1    | 13    | 21   | 27    | 29   | 6    |
| 95°  | 69   | 34    | 41   | 47    | 46   | 82   |
| 105° | 323  | 355   | 65   | 76    | 81   | 345  |
| 115° | 611  | 629   | 656  | 164   | 87   | 601  |
| 125° | 864  | 878   | 898  | 905   | 908  | 770  |
| 135° | 1069 | 1086  | 1095 | 1106  | 1104 | 826  |
| 145° | 1240 | 1239  | 1257 | 1264  | 1259 | 775  |
| 155° | 1365 | 1356  | 1368 | 1375  | 1366 | 629  |
| 165° | 1438 | 1432  | 1435 | 1443  | 1435 | 406  |
| 175° | 1471 | 1464  | 1466 | 1474  | 1463 | 140  |
| 180° | 1468 | 1468  | 1468 | 1468  | 1468 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 821.7 | 821.7 | 821.7 | 821.7 | 821.7 |
| 2.5°   | 825.5 | 821.7 | 813.6 | 821.0 | 819.5 |
| 5°     | 821.7 | 818.0 | 808.3 | 815.0 | 812.8 |
| 7.5°   | 815.0 | 810.6 | 800.2 | 803.1 | 799.4 |
| 10°    | 806.1 | 800.9 | 786.0 | 783.8 | 779.3 |
| 12.5°  | 795.0 | 788.3 | 768.2 | 763.7 | 755.5 |
| 15°    | 781.6 | 773.4 | 748.1 | 734.0 | 726.5 |
| 17.5°  | 766.0 | 754.1 | 722.8 | 706.5 | 694.6 |
| 20°    | 748.1 | 733.2 | 696.1 | 677.5 | 661.1 |
| 22.5°  | 728.8 | 711.7 | 668.5 | 643.3 | 632.1 |
| 25°    | 709.4 | 685.6 | 636.6 | 606.1 | 594.9 |
| 27.5°  | 686.4 | 661.1 | 606.8 | 571.9 | 554.8 |
| 30°    | 661.8 | 633.6 | 574.1 | 536.2 | 516.1 |
| 32.5°  | 638.1 | 603.8 | 542.9 | 498.2 | 479.7 |
| 35°    | 611.3 | 573.4 | 507.9 | 461.1 | 444.7 |
| 37.5°  | 585.3 | 544.4 | 475.2 | 423.9 | 405.3 |
| 40°    | 557.7 | 513.1 | 441.0 | 388.2 | 368.9 |
| 42.5°  | 529.5 | 481.9 | 406.8 | 351.7 | 333.2 |
| 45°    | 499.7 | 449.9 | 371.8 | 319.0 | 301.2 |
| 47.5°  | 471.5 | 418.7 | 338.4 | 285.6 | 269.2 |
| 50°    | 440.2 | 387.4 | 305.6 | 254.3 | 238.7 |
| 52.5°  | 409.8 | 354.0 | 274.4 | 225.3 | 211.2 |
| 55°    | 380.0 | 322.0 | 241.7 | 197.1 | 182.9 |
| 57.5°  | 349.5 | 290.0 | 212.7 | 171.0 | 159.1 |
| 60°    | 318.3 | 258.8 | 182.2 | 144.3 | 132.4 |
| 62.5°  | 287.8 | 228.3 | 156.2 | 120.5 | 114.5 |
| 65°    | 256.6 | 196.3 | 129.4 | 104.1 | 101.9 |
| 67.5°  | 226.8 | 166.6 | 104.1 | 91.5  | 89.2  |
| 70°    | 195.6 | 137.6 | 86.3  | 78.8  | 75.9  |
| 72.5°  | 165.8 | 110.8 | 72.1  | 66.2  | 64.7  |
| 75°    | 136.8 | 84.8  | 59.5  | 54.3  | 53.5  |
| 77.5°  | 107.8 | 60.2  | 46.8  | 43.9  | 42.4  |
| 80°    | 81.1  | 43.1  | 35.7  | 32.7  | 32.7  |
| 82.5°  | 56.5  | 29.0  | 24.5  | 23.1  | 23.1  |
| 85°    | 32.0  | 16.4  | 14.1  | 14.1  | 14.1  |
| 87.5°  | 11.9  | 5.9   | 5.9   | 5.2   | 5.2   |
| 90°    | 1.1   | 12.7  | 21.2  | 26.6  | 28.7  |
| 92.5°  | 26.6  | 22.3  | 25.5  | 27.6  | 28.7  |
| 95°    | 69.1  | 34.0  | 41.4  | 46.7  | 45.7  |
| 97.5°  | 124.3 | 37.2  | 54.2  | 57.4  | 58.4  |
| 100°   | 188.0 | 42.5  | 60.6  | 69.1  | 71.2  |
| 102.5° | 258.2 | 256.0 | 62.7  | 74.4  | 77.6  |
| 105°   | 323.0 | 354.8 | 64.8  | 76.5  | 80.7  |
| 107.5° | 398.4 | 425.0 | 66.9  | 78.6  | 82.9  |
| 110°   | 470.6 | 493.0 | 185.9 | 79.7  | 83.9  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 538.6  | 557.8  | 539.7  | 81.8   | 85.0   |
| 115°   | 610.9  | 628.9  | 655.5  | 163.6  | 87.1   |
| 117.5° | 673.6  | 694.8  | 712.9  | 561.0  | 282.6  |
| 120°   | 743.7  | 759.6  | 778.8  | 791.5  | 648.1  |
| 122.5° | 803.2  | 820.2  | 841.4  | 847.8  | 848.9  |
| 125°   | 863.7  | 877.6  | 897.7  | 905.2  | 908.4  |
| 127.5° | 919.0  | 933.9  | 949.8  | 960.4  | 961.5  |
| 130°   | 971.0  | 988.0  | 999.7  | 1011.4 | 1010.4 |
| 132.5° | 1024.2 | 1038.0 | 1049.7 | 1059.2 | 1058.2 |
| 135°   | 1068.8 | 1085.8 | 1095.3 | 1106.0 | 1103.8 |
| 137.5° | 1115.5 | 1128.3 | 1138.9 | 1149.5 | 1146.3 |
| 140°   | 1161.2 | 1169.7 | 1181.4 | 1191.0 | 1185.7 |
| 142.5° | 1199.5 | 1206.9 | 1220.7 | 1229.2 | 1223.9 |
| 145°   | 1239.8 | 1238.8 | 1256.8 | 1264.3 | 1259.0 |
| 147.5° | 1274.9 | 1271.7 | 1289.8 | 1295.1 | 1290.8 |
| 150°   | 1308.9 | 1301.5 | 1318.5 | 1324.8 | 1319.5 |
| 152.5° | 1337.6 | 1329.1 | 1345.0 | 1351.4 | 1344.0 |
| 155°   | 1365.2 | 1355.6 | 1368.4 | 1374.8 | 1366.3 |
| 157.5° | 1387.5 | 1379.0 | 1388.6 | 1396.0 | 1387.5 |
| 160°   | 1406.6 | 1400.3 | 1406.6 | 1413.0 | 1405.6 |
| 162.5° | 1423.6 | 1417.3 | 1422.6 | 1430.0 | 1420.4 |
| 165°   | 1438.5 | 1432.1 | 1435.3 | 1442.8 | 1435.3 |
| 167.5° | 1450.2 | 1443.8 | 1447.0 | 1454.4 | 1444.9 |
| 170°   | 1459.8 | 1453.4 | 1455.5 | 1462.9 | 1453.4 |
| 172.5° | 1466.1 | 1459.8 | 1461.9 | 1469.3 | 1459.8 |
| 175°   | 1471.4 | 1464.0 | 1466.1 | 1473.6 | 1462.9 |
| 177.5° | 1473.6 | 1466.1 | 1467.2 | 1474.6 | 1465.1 |
| 180°   | 1468.3 | 1468.3 | 1468.3 | 1468.3 | 1468.3 |

(END OF REPORT)