

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: P999679

Luminaire Tested: SA2XXRDIP-B485D1080UB2750-4F0-XX-W2A-F\_4000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999679  
REPORT IS A COMBINATION OF REPORTS P988232 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B485D1080UB2750-4F0-XX-W2A-F\_4000K  
Description: Define 2 Regressed Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865}  
{m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

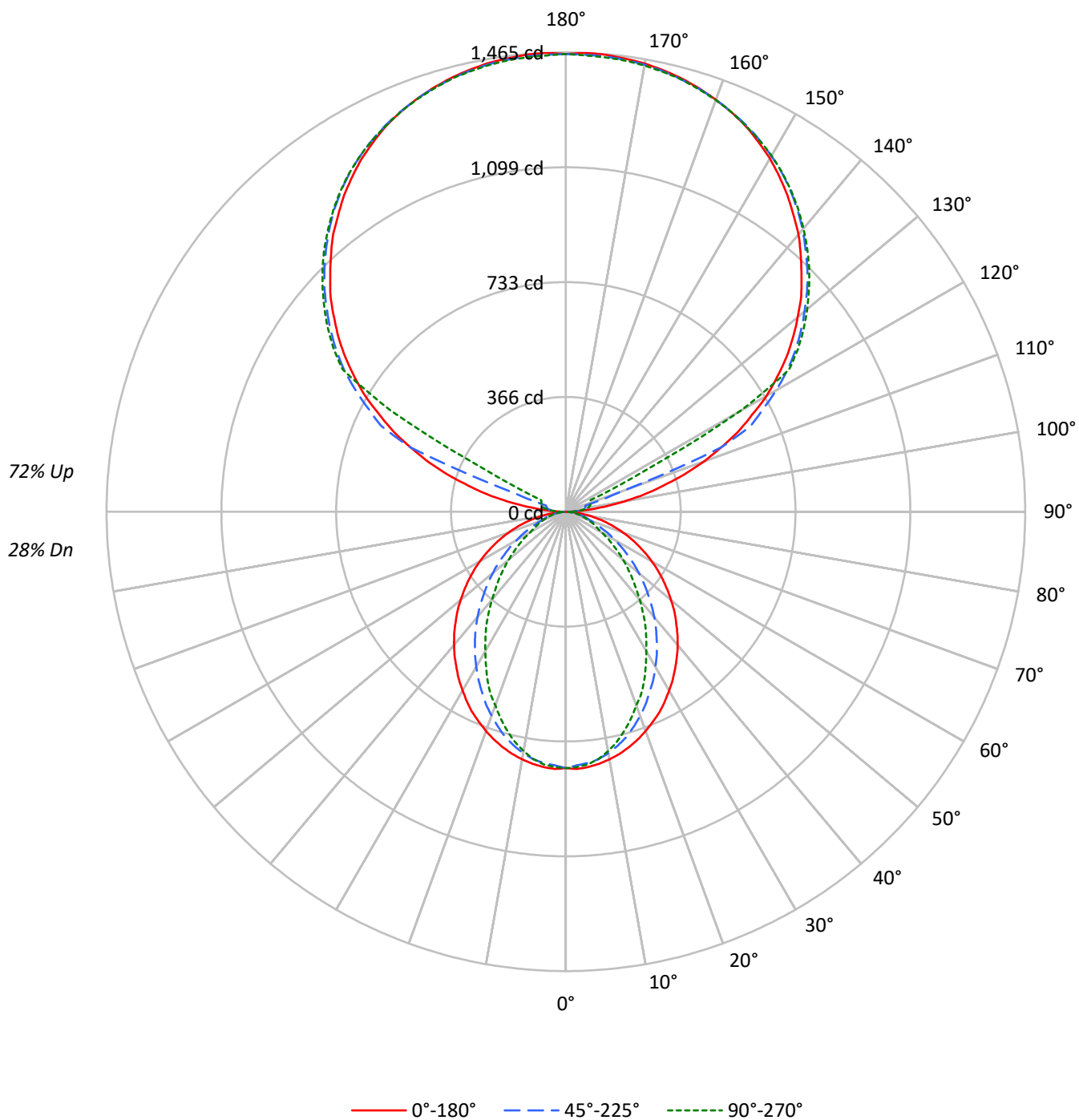
Lumens per Lamp: N/A  
Luminaire Lumens: 5963.0 lumens  
Efficiency: N/A  
Efficacy: 101.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

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  | 54  | 48  | 63 | 55 | 49 | 44 | 44 | 39 | 36 | 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°  | 12939 | 12939 | 12939 |
| 5°  | 12960 | 12308 | 12218 |
| 10° | 12831 | 11675 | 11289 |
| 15° | 12655 | 10925 | 10231 |
| 20° | 12421 | 10072 | 9124  |
| 25° | 12184 | 9199  | 8111  |
| 30° | 11861 | 8347  | 7004  |
| 35° | 11547 | 7489  | 6054  |
| 40° | 11229 | 6645  | 5076  |
| 45° | 10857 | 5774  | 4223  |
| 50° | 10472 | 4936  | 3437  |
| 55° | 10072 | 4097  | 2730  |
| 60° | 9607  | 3276  | 2065  |
| 65° | 9072  | 2498  | 1678  |
| 70° | 8423  | 1812  | 1334  |
| 75° | 7613  | 1383  | 1020  |
| 80° | 6435  | 936   | 683   |
| 85° | 4492  | 430   | 332   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 10857 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 76.6   | 1.3       |
| 10°-20°   | 210.3  | 3.5       |
| 20°-30°   | 295.2  | 5.0       |
| 30°-40°   | 321.8  | 5.4       |
| 40°-50°   | 295.8  | 5.0       |
| 50°-60°   | 232.3  | 3.9       |
| 60°-70°   | 151.2  | 2.5       |
| 70°-80°   | 77.8   | 1.3       |
| 80°-90°   | 22.4   | 0.4       |
| 90°-100°  | 48.1   | 0.8       |
| 100°-110° | 179.4  | 3.0       |
| 110°-120° | 475.9  | 8.0       |
| 120°-130° | 789.3  | 13.2      |
| 130°-140° | 838.4  | 14.1      |
| 140°-150° | 779.2  | 13.1      |
| 150°-160° | 626.5  | 10.5      |
| 160°-170° | 403.7  | 6.8       |
| 170°-180° | 138.9  | 2.3       |
| 0°-30°    | 582.1  | 9.8       |
| 0°-40°    | 904.0  | 15.2      |
| 0°-60°    | 1432.1 | 24.0      |
| 0°-90°    | 1683.6 | 28.2      |
| 90°-120°  | 703.5  | 11.8      |
| 90°-150°  | 3110.3 | 52.2      |
| 90°-180°  | 4279.0 | 71.8      |
| 0°-180°   | 5963.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 817  | 817   | 817  | 817   | 817  |      |
| 5°   | 817  | 814   | 804  | 811   | 808  | 78   |
| 15°  | 777  | 769   | 744  | 730   | 723  | 219  |
| 25°  | 706  | 682   | 633  | 603   | 592  | 325  |
| 35°  | 608  | 570   | 505  | 459   | 442  | 381  |
| 45°  | 497  | 448   | 370  | 317   | 300  | 384  |
| 55°  | 378  | 320   | 240  | 196   | 182  | 338  |
| 65°  | 255  | 195   | 129  | 104   | 101  | 253  |
| 75°  | 136  | 84    | 59   | 54    | 53   | 144  |
| 85°  | 32   | 16    | 14   | 14    | 14   | 36   |
| 90°  | 1    | 13    | 21   | 26    | 28   | 6    |
| 95°  | 69   | 34    | 41   | 46    | 45   | 81   |
| 105° | 321  | 353   | 64   | 76    | 80   | 343  |
| 115° | 607  | 625   | 652  | 163   | 87   | 598  |
| 125° | 859  | 872   | 892  | 900   | 903  | 766  |
| 135° | 1063 | 1080  | 1089 | 1100  | 1097 | 821  |
| 145° | 1233 | 1232  | 1250 | 1257  | 1252 | 771  |
| 155° | 1357 | 1348  | 1360 | 1367  | 1358 | 625  |
| 165° | 1430 | 1424  | 1427 | 1434  | 1427 | 404  |
| 175° | 1463 | 1456  | 1458 | 1465  | 1454 | 139  |
| 180° | 1460 | 1460  | 1460 | 1460  | 1460 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 0°     | 817.4 | 817.4 | 817.4 | 817.4 | 817.4 |
| 2.5°   | 821.1 | 817.4 | 809.2 | 816.6 | 815.1 |
| 5°     | 817.4 | 813.7 | 804.0 | 810.7 | 808.5 |
| 7.5°   | 810.7 | 806.3 | 795.9 | 798.9 | 795.2 |
| 10°    | 801.8 | 796.6 | 781.9 | 779.6 | 775.2 |
| 12.5°  | 790.7 | 784.1 | 764.1 | 759.7 | 751.5 |
| 15°    | 777.4 | 769.3 | 744.1 | 730.1 | 722.7 |
| 17.5°  | 761.9 | 750.0 | 719.0 | 702.7 | 690.9 |
| 20°    | 744.1 | 729.3 | 692.3 | 673.9 | 657.6 |
| 22.5°  | 724.9 | 707.9 | 665.0 | 639.8 | 628.7 |
| 25°    | 705.7 | 682.0 | 633.2 | 602.8 | 591.8 |
| 27.5°  | 682.7 | 657.6 | 603.6 | 568.8 | 551.8 |
| 30°    | 658.3 | 630.2 | 571.0 | 533.3 | 513.3 |
| 32.5°  | 634.7 | 600.6 | 540.0 | 495.6 | 477.1 |
| 35°    | 608.0 | 570.3 | 505.2 | 458.6 | 442.3 |
| 37.5°  | 582.1 | 541.5 | 472.7 | 421.6 | 403.1 |
| 40°    | 554.8 | 510.4 | 438.6 | 386.1 | 366.9 |
| 42.5°  | 526.7 | 479.3 | 404.6 | 349.9 | 331.4 |
| 45°    | 497.1 | 447.5 | 369.8 | 317.3 | 299.6 |
| 47.5°  | 469.0 | 416.4 | 336.6 | 284.0 | 267.8 |
| 50°    | 437.9 | 385.4 | 304.0 | 253.0 | 237.4 |
| 52.5°  | 407.6 | 352.1 | 272.9 | 224.1 | 210.1 |
| 55°    | 378.0 | 320.3 | 240.4 | 196.0 | 182.0 |
| 57.5°  | 347.7 | 288.5 | 211.6 | 170.1 | 158.3 |
| 60°    | 316.6 | 257.4 | 181.2 | 143.5 | 131.7 |
| 62.5°  | 286.3 | 227.1 | 155.3 | 119.8 | 113.9 |
| 65°    | 255.2 | 195.3 | 128.7 | 103.6 | 101.3 |
| 67.5°  | 225.6 | 165.7 | 103.6 | 91.0  | 88.8  |
| 70°    | 194.5 | 136.8 | 85.8  | 78.4  | 75.4  |
| 72.5°  | 165.0 | 110.2 | 71.7  | 65.8  | 64.4  |
| 75°    | 136.1 | 84.3  | 59.2  | 54.0  | 53.3  |
| 77.5°  | 107.3 | 59.9  | 46.6  | 43.6  | 42.2  |
| 80°    | 80.6  | 42.9  | 35.5  | 32.5  | 32.5  |
| 82.5°  | 56.2  | 28.8  | 24.4  | 22.9  | 22.9  |
| 85°    | 31.8  | 16.3  | 14.1  | 14.1  | 14.1  |
| 87.5°  | 11.8  | 5.9   | 5.9   | 5.2   | 5.2   |
| 90°    | 1.1   | 12.7  | 21.1  | 26.4  | 28.5  |
| 92.5°  | 26.4  | 22.2  | 25.3  | 27.5  | 28.5  |
| 95°    | 68.7  | 33.8  | 41.2  | 46.5  | 45.4  |
| 97.5°  | 123.6 | 37.0  | 53.9  | 57.0  | 58.1  |
| 100°   | 187.0 | 42.2  | 60.2  | 68.7  | 70.8  |
| 102.5° | 256.7 | 254.6 | 62.3  | 73.9  | 77.1  |
| 105°   | 321.1 | 352.8 | 64.4  | 76.0  | 80.3  |
| 107.5° | 396.1 | 422.5 | 66.5  | 78.2  | 82.4  |
| 110°   | 467.9 | 490.1 | 184.8 | 79.2  | 83.4  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 535.5  | 554.5  | 536.6  | 81.3   | 84.5   |
| 115°   | 607.3  | 625.3  | 651.7  | 162.7  | 86.6   |
| 117.5° | 669.7  | 690.8  | 708.7  | 557.7  | 281.0  |
| 120°   | 739.4  | 755.2  | 774.2  | 786.9  | 644.3  |
| 122.5° | 798.5  | 815.4  | 836.5  | 842.9  | 843.9  |
| 125°   | 858.7  | 872.5  | 892.5  | 899.9  | 903.1  |
| 127.5° | 913.7  | 928.4  | 944.3  | 954.8  | 955.9  |
| 130°   | 965.4  | 982.3  | 993.9  | 1005.5 | 1004.5 |
| 132.5° | 1018.2 | 1032.0 | 1043.6 | 1053.1 | 1052.0 |
| 135°   | 1062.6 | 1079.5 | 1089.0 | 1099.6 | 1097.4 |
| 137.5° | 1109.1 | 1121.7 | 1132.3 | 1142.9 | 1139.7 |
| 140°   | 1154.5 | 1162.9 | 1174.5 | 1184.1 | 1178.8 |
| 142.5° | 1192.5 | 1199.9 | 1213.6 | 1222.1 | 1216.8 |
| 145°   | 1232.6 | 1231.6 | 1249.5 | 1256.9 | 1251.7 |
| 147.5° | 1267.5 | 1264.3 | 1282.3 | 1287.6 | 1283.3 |
| 150°   | 1301.3 | 1293.9 | 1310.8 | 1317.1 | 1311.9 |
| 152.5° | 1329.8 | 1321.4 | 1337.2 | 1343.5 | 1336.2 |
| 155°   | 1357.3 | 1347.8 | 1360.4 | 1366.8 | 1358.3 |
| 157.5° | 1379.5 | 1371.0 | 1380.5 | 1387.9 | 1379.5 |
| 160°   | 1398.5 | 1392.1 | 1398.5 | 1404.8 | 1397.4 |
| 162.5° | 1415.4 | 1409.0 | 1414.3 | 1421.7 | 1412.2 |
| 165°   | 1430.2 | 1423.8 | 1427.0 | 1434.4 | 1427.0 |
| 167.5° | 1441.8 | 1435.4 | 1438.6 | 1446.0 | 1436.5 |
| 170°   | 1451.3 | 1444.9 | 1447.1 | 1454.5 | 1444.9 |
| 172.5° | 1457.6 | 1451.3 | 1453.4 | 1460.8 | 1451.3 |
| 175°   | 1462.9 | 1455.5 | 1457.6 | 1465.0 | 1454.5 |
| 177.5° | 1465.0 | 1457.6 | 1458.7 | 1466.1 | 1456.6 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

(END OF REPORT)