

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: P1000102

Luminaire Tested: SA2XXRDIP-B865D330UB27-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1000102  
REPORT IS A COMBINATION OF REPORTS P988661 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B865D330UB27-4F0-XX-W2A-F  
Description: Define 2 Regressed Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473}  
{m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

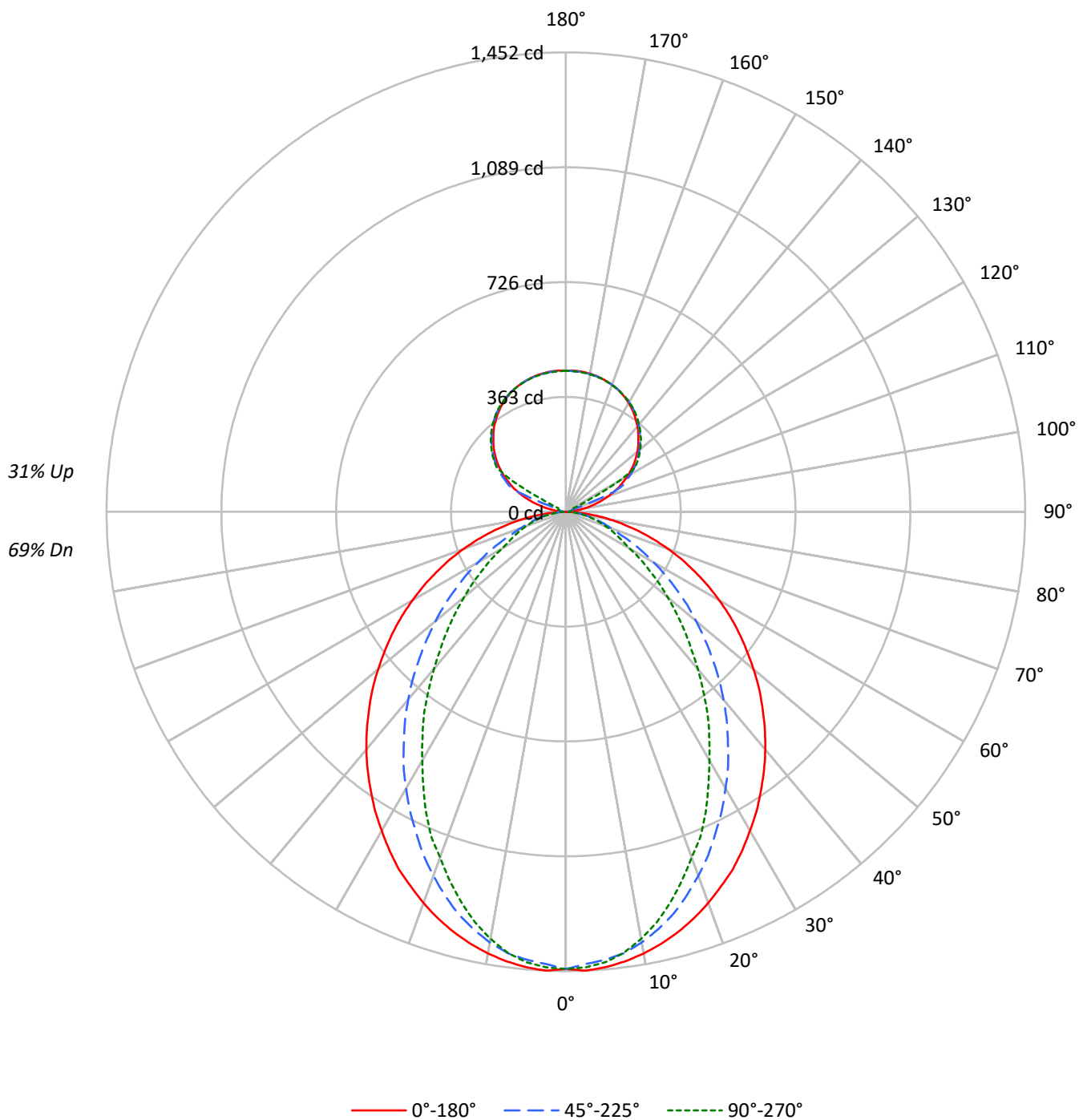
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4279.0 lumens  
Efficiency: N/A  
Efficacy: 76.3 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-Direct  
  
Input Watts (W): 56.1  
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   | 112 | 112 | 112 | 112 | 106 | 106 | 106 | 106 | 94 | 94 | 94 | 84 | 84 | 84 | 74 | 74 | 74 |
| 1   | 103 | 99  | 95  | 91  | 97  | 93  | 90  | 87  | 84 | 81 | 79 | 75 | 73 | 71 | 66 | 65 | 64 |
| 2   | 94  | 87  | 81  | 76  | 89  | 83  | 77  | 73  | 74 | 70 | 66 | 66 | 63 | 61 | 59 | 57 | 55 |
| 3   | 86  | 77  | 70  | 64  | 81  | 73  | 67  | 62  | 66 | 61 | 57 | 59 | 55 | 52 | 53 | 50 | 47 |
| 4   | 79  | 69  | 61  | 55  | 75  | 65  | 58  | 53  | 59 | 54 | 49 | 53 | 49 | 45 | 48 | 44 | 41 |
| 5   | 73  | 62  | 54  | 48  | 69  | 59  | 52  | 46  | 53 | 47 | 43 | 48 | 44 | 40 | 44 | 40 | 37 |
| 6   | 68  | 56  | 48  | 42  | 64  | 53  | 46  | 41  | 48 | 42 | 38 | 44 | 39 | 35 | 40 | 36 | 33 |
| 7   | 63  | 51  | 43  | 37  | 60  | 48  | 41  | 36  | 44 | 38 | 34 | 40 | 35 | 31 | 37 | 32 | 29 |
| 8   | 59  | 46  | 39  | 33  | 55  | 44  | 37  | 32  | 41 | 35 | 30 | 37 | 32 | 28 | 34 | 30 | 26 |
| 9   | 55  | 43  | 35  | 30  | 52  | 41  | 34  | 29  | 37 | 32 | 27 | 34 | 29 | 26 | 31 | 27 | 24 |
| 10  | 51  | 39  | 32  | 27  | 49  | 38  | 31  | 26  | 35 | 29 | 25 | 32 | 27 | 23 | 29 | 25 | 22 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 22875 | 22875 | 22875 |
| 5°  | 22912 | 21762 | 21601 |
| 10° | 22686 | 20640 | 19959 |
| 15° | 22375 | 19315 | 18088 |
| 20° | 21962 | 17809 | 16131 |
| 25° | 21539 | 16263 | 14339 |
| 30° | 20971 | 14759 | 12384 |
| 35° | 20416 | 13240 | 10703 |
| 40° | 19851 | 11750 | 8975  |
| 45° | 19193 | 10211 | 7465  |
| 50° | 18514 | 8727  | 6077  |
| 55° | 17808 | 7243  | 4825  |
| 60° | 16984 | 5793  | 3651  |
| 65° | 16040 | 4417  | 2968  |
| 70° | 14893 | 3204  | 2360  |
| 75° | 13459 | 2443  | 1803  |
| 80° | 11377 | 1655  | 1209  |
| 85° | 7939  | 756   | 583   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 19193 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 135.4  | 3.2       |
| 10°-20°   | 371.8  | 8.7       |
| 20°-30°   | 522.0  | 12.2      |
| 30°-40°   | 569.0  | 13.3      |
| 40°-50°   | 523.0  | 12.2      |
| 50°-60°   | 410.7  | 9.6       |
| 60°-70°   | 267.3  | 6.2       |
| 70°-80°   | 137.6  | 3.2       |
| 80°-90°   | 35.9   | 0.8       |
| 90°-100°  | 14.7   | 0.3       |
| 100°-110° | 54.8   | 1.3       |
| 110°-120° | 145.3  | 3.4       |
| 120°-130° | 240.9  | 5.6       |
| 130°-140° | 255.9  | 6.0       |
| 140°-150° | 237.8  | 5.6       |
| 150°-160° | 191.2  | 4.5       |
| 160°-170° | 123.2  | 2.9       |
| 170°-180° | 42.4   | 1.0       |
| 0°-30°    | 1029.2 | 24.1      |
| 0°-40°    | 1598.2 | 37.4      |
| 0°-60°    | 2531.9 | 59.2      |
| 0°-90°    | 2972.8 | 69.5      |
| 90°-120°  | 214.7  | 5.0       |
| 90°-150°  | 949.4  | 22.2      |
| 90°-180°  | 1306.0 | 30.5      |
| 0°-180°   | 4279.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1445 | 1445  | 1445 | 1445  | 1445 |      |
| 5°   | 1445 | 1438  | 1422 | 1433  | 1429 | 137  |
| 15°  | 1374 | 1360  | 1316 | 1291  | 1278 | 387  |
| 25°  | 1248 | 1206  | 1119 | 1066  | 1046 | 574  |
| 35°  | 1075 | 1008  | 893  | 811   | 782  | 673  |
| 45°  | 879  | 791   | 654  | 561   | 530  | 679  |
| 55°  | 668  | 566   | 425  | 347   | 322  | 597  |
| 65°  | 451  | 345   | 228  | 183   | 179  | 447  |
| 75°  | 241  | 149   | 105  | 96    | 94   | 254  |
| 85°  | 56   | 29    | 25   | 25    | 25   | 65   |
| 90°  | 0    | 4     | 6    | 8     | 9    | 4    |
| 95°  | 21   | 10    | 13   | 14    | 14   | 25   |
| 105° | 98   | 108   | 20   | 23    | 24   | 105  |
| 115° | 185  | 191   | 199  | 50    | 26   | 183  |
| 125° | 262  | 266   | 272  | 275   | 276  | 234  |
| 135° | 324  | 330   | 332  | 336   | 335  | 251  |
| 145° | 376  | 376   | 381  | 384   | 382  | 235  |
| 155° | 414  | 411   | 415  | 417   | 415  | 191  |
| 165° | 436  | 435   | 436  | 438   | 436  | 123  |
| 175° | 446  | 444   | 445  | 447   | 444  | 42   |
| 180° | 446  | 446   | 446  | 446   | 446  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1445.1 | 1445.1 | 1445.1 | 1445.1 | 1445.1 |
| 2.5°   | 1451.6 | 1445.1 | 1430.7 | 1443.8 | 1441.2 |
| 5°     | 1445.1 | 1438.5 | 1421.5 | 1433.3 | 1429.4 |
| 7.5°   | 1433.3 | 1425.5 | 1407.2 | 1412.4 | 1405.9 |
| 10°    | 1417.6 | 1408.5 | 1382.3 | 1378.4 | 1370.5 |
| 12.5°  | 1398.0 | 1386.2 | 1350.9 | 1343.1 | 1328.7 |
| 15°    | 1374.5 | 1360.1 | 1315.6 | 1290.8 | 1277.7 |
| 17.5°  | 1347.0 | 1326.1 | 1271.2 | 1242.4 | 1221.5 |
| 20°    | 1315.6 | 1289.5 | 1224.1 | 1191.4 | 1162.6 |
| 22.5°  | 1281.6 | 1251.5 | 1175.7 | 1131.2 | 1111.6 |
| 25°    | 1247.6 | 1205.8 | 1119.4 | 1065.8 | 1046.2 |
| 27.5°  | 1207.1 | 1162.6 | 1067.1 | 1005.7 | 975.6  |
| 30°    | 1163.9 | 1114.2 | 1009.6 | 942.9  | 907.6  |
| 32.5°  | 1122.1 | 1061.9 | 954.7  | 876.2  | 843.5  |
| 35°    | 1075.0 | 1008.3 | 893.2  | 810.8  | 782.0  |
| 37.5°  | 1029.2 | 957.3  | 835.7  | 745.4  | 712.7  |
| 40°    | 980.8  | 902.4  | 775.5  | 682.7  | 648.7  |
| 42.5°  | 931.1  | 847.4  | 715.3  | 618.6  | 585.9  |
| 45°    | 878.8  | 791.2  | 653.9  | 561.0  | 529.6  |
| 47.5°  | 829.1  | 736.3  | 595.0  | 502.2  | 473.4  |
| 50°    | 774.2  | 681.3  | 537.5  | 447.3  | 419.8  |
| 52.5°  | 720.6  | 622.5  | 482.6  | 396.3  | 371.4  |
| 55°    | 668.3  | 566.3  | 425.0  | 346.6  | 321.7  |
| 57.5°  | 614.7  | 510.0  | 374.0  | 300.8  | 279.9  |
| 60°    | 559.7  | 455.1  | 320.4  | 253.7  | 232.8  |
| 62.5°  | 506.1  | 401.5  | 274.6  | 211.9  | 201.4  |
| 65°    | 451.2  | 345.3  | 227.6  | 183.1  | 179.2  |
| 67.5°  | 398.9  | 292.9  | 183.1  | 160.9  | 156.9  |
| 70°    | 343.9  | 241.9  | 151.7  | 138.6  | 133.4  |
| 72.5°  | 291.6  | 194.9  | 126.9  | 116.4  | 113.8  |
| 75°    | 240.6  | 149.1  | 104.6  | 95.5   | 94.2   |
| 77.5°  | 189.6  | 105.9  | 82.4   | 77.2   | 74.5   |
| 80°    | 142.5  | 75.9   | 62.8   | 57.5   | 57.5   |
| 82.5°  | 99.4   | 51.0   | 43.2   | 40.5   | 40.5   |
| 85°    | 56.2   | 28.8   | 24.8   | 24.8   | 24.8   |
| 87.5°  | 20.9   | 10.5   | 10.5   | 9.2    | 9.2    |
| 90°    | 0.3    | 3.9    | 6.4    | 8.1    | 8.7    |
| 92.5°  | 8.1    | 6.8    | 7.7    | 8.4    | 8.7    |
| 95°    | 21.0   | 10.3   | 12.6   | 14.2   | 13.9   |
| 97.5°  | 37.7   | 11.3   | 16.4   | 17.4   | 17.7   |
| 100°   | 57.1   | 12.9   | 18.4   | 21.0   | 21.6   |
| 102.5° | 78.3   | 77.7   | 19.0   | 22.6   | 23.5   |
| 105°   | 98.0   | 107.7  | 19.7   | 23.2   | 24.5   |
| 107.5° | 120.9  | 129.0  | 20.3   | 23.9   | 25.1   |
| 110°   | 142.8  | 149.6  | 56.4   | 24.2   | 25.5   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 163.5 | 169.3 | 163.8 | 24.8  | 25.8  |
| 115°   | 185.4 | 190.9 | 198.9 | 49.6  | 26.4  |
| 117.5° | 204.4 | 210.8 | 216.3 | 170.2 | 85.8  |
| 120°   | 225.7 | 230.5 | 236.3 | 240.2 | 196.7 |
| 122.5° | 243.7 | 248.9 | 255.3 | 257.3 | 257.6 |
| 125°   | 262.1 | 266.3 | 272.4 | 274.7 | 275.7 |
| 127.5° | 278.9 | 283.4 | 288.2 | 291.4 | 291.8 |
| 130°   | 294.7 | 299.8 | 303.4 | 306.9 | 306.6 |
| 132.5° | 310.8 | 315.0 | 318.5 | 321.4 | 321.1 |
| 135°   | 324.3 | 329.5 | 332.4 | 335.6 | 335.0 |
| 137.5° | 338.5 | 342.4 | 345.6 | 348.8 | 347.9 |
| 140°   | 352.4 | 355.0 | 358.5 | 361.4 | 359.8 |
| 142.5° | 364.0 | 366.2 | 370.4 | 373.0 | 371.4 |
| 145°   | 376.2 | 375.9 | 381.4 | 383.7 | 382.0 |
| 147.5° | 386.9 | 385.9 | 391.4 | 393.0 | 391.7 |
| 150°   | 397.2 | 394.9 | 400.1 | 402.0 | 400.4 |
| 152.5° | 405.9 | 403.3 | 408.2 | 410.1 | 407.8 |
| 155°   | 414.3 | 411.4 | 415.3 | 417.2 | 414.6 |
| 157.5° | 421.1 | 418.5 | 421.4 | 423.6 | 421.1 |
| 160°   | 426.9 | 424.9 | 426.9 | 428.8 | 426.5 |
| 162.5° | 432.0 | 430.1 | 431.7 | 434.0 | 431.0 |
| 165°   | 436.5 | 434.6 | 435.6 | 437.8 | 435.6 |
| 167.5° | 440.1 | 438.1 | 439.1 | 441.4 | 438.5 |
| 170°   | 443.0 | 441.0 | 441.7 | 443.9 | 441.0 |
| 172.5° | 444.9 | 443.0 | 443.6 | 445.9 | 443.0 |
| 175°   | 446.5 | 444.3 | 444.9 | 447.2 | 443.9 |
| 177.5° | 447.2 | 444.9 | 445.2 | 447.5 | 444.6 |
| 180°   | 445.6 | 445.6 | 445.6 | 445.6 | 445.6 |

(END OF REPORT)