

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: P999398

Luminaire Tested: SA2XXRDIP-B1005D725UB2750-4F0-XX-W2A-F\_2700K

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P999398  
REPORT IS A COMBINATION OF REPORTS P987949 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXRDIP-B1005D725UB2750-4F0-XX-W2A-F\_2700K  
Description: Define 2 Regressed Direct/Indirect Pendant with 2700K BioUP LEDs {m-DER=0.473}  
{m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

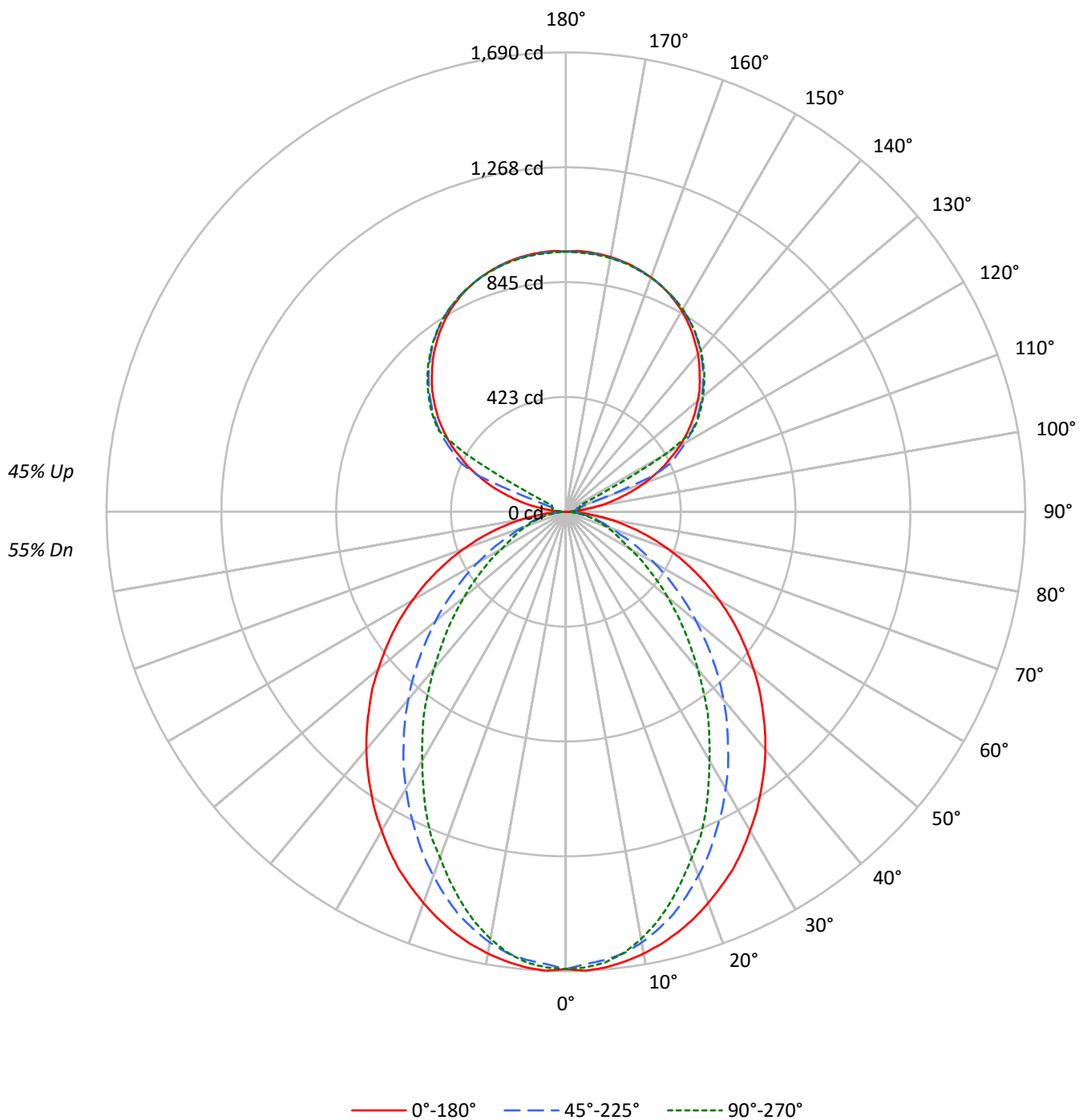
Lumens per Lamp: N/A  
Luminaire Lumens: 6268.0 lumens  
Efficiency: N/A  
Efficacy: 76.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
Input Voltage (V): 120  
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 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 108 | 108 | 108 | 108 | 101 | 101 | 101 | 101 | 86 | 86 | 86 | 73 | 73 | 73 | 61 | 61 | 61 |    |    | 55 |
| 1   | 99  | 95  | 92  | 88  | 92  | 89  | 86  | 83  | 76 | 74 | 72 | 65 | 63 | 62 | 55 | 54 | 53 |    |    | 48 |
| 2   | 91  | 84  | 78  | 73  | 84  | 78  | 73  | 69  | 68 | 64 | 60 | 58 | 55 | 53 | 49 | 47 | 45 |    |    | 41 |
| 3   | 83  | 74  | 67  | 61  | 77  | 69  | 63  | 58  | 60 | 55 | 51 | 52 | 48 | 45 | 44 | 41 | 39 |    |    | 35 |
| 4   | 77  | 66  | 58  | 52  | 71  | 62  | 55  | 50  | 54 | 49 | 44 | 46 | 42 | 39 | 39 | 36 | 34 |    |    | 31 |
| 5   | 71  | 59  | 51  | 45  | 65  | 55  | 48  | 43  | 48 | 43 | 39 | 42 | 38 | 34 | 36 | 33 | 30 |    |    | 27 |
| 6   | 65  | 53  | 45  | 40  | 60  | 50  | 43  | 38  | 44 | 38 | 34 | 38 | 34 | 30 | 33 | 29 | 27 |    |    | 24 |
| 7   | 60  | 48  | 41  | 35  | 56  | 45  | 38  | 33  | 40 | 34 | 30 | 35 | 30 | 27 | 30 | 27 | 24 |    |    | 21 |
| 8   | 56  | 44  | 36  | 31  | 52  | 41  | 35  | 30  | 37 | 31 | 27 | 32 | 28 | 24 | 28 | 24 | 22 |    |    | 19 |
| 9   | 52  | 40  | 33  | 28  | 49  | 38  | 31  | 27  | 34 | 28 | 24 | 30 | 25 | 22 | 26 | 22 | 20 |    |    | 18 |
| 10  | 49  | 37  | 30  | 25  | 46  | 35  | 29  | 24  | 31 | 26 | 22 | 27 | 23 | 20 | 24 | 20 | 18 |    |    | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 26631 | 26631 | 26631 |
| 5°  | 26675 | 25336 | 25148 |
| 10° | 26411 | 24030 | 23237 |
| 15° | 26047 | 22487 | 21058 |
| 20° | 25567 | 20734 | 18779 |
| 25° | 25077 | 18934 | 16694 |
| 30° | 24414 | 17182 | 14417 |
| 35° | 23768 | 15415 | 12462 |
| 40° | 23111 | 13678 | 10448 |
| 45° | 22344 | 11888 | 8691  |
| 50° | 21553 | 10159 | 7075  |
| 55° | 20731 | 8433  | 5617  |
| 60° | 19773 | 6744  | 4250  |
| 65° | 18674 | 5141  | 3455  |
| 70° | 17340 | 3730  | 2747  |
| 75° | 15669 | 2845  | 2098  |
| 80° | 13253 | 1926  | 1409  |
| 85° | 9252  | 881   | 680   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 22344 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 157.7  | 2.5       |
| 10°-20°   | 432.8  | 6.9       |
| 20°-30°   | 607.7  | 9.7       |
| 30°-40°   | 662.4  | 10.6      |
| 40°-50°   | 608.8  | 9.7       |
| 50°-60°   | 478.1  | 7.6       |
| 60°-70°   | 311.2  | 5.0       |
| 70°-80°   | 160.2  | 2.6       |
| 80°-90°   | 42.6   | 0.7       |
| 90°-100°  | 31.6   | 0.5       |
| 100°-110° | 117.7  | 1.9       |
| 110°-120° | 312.1  | 5.0       |
| 120°-130° | 517.6  | 8.3       |
| 130°-140° | 549.8  | 8.8       |
| 140°-150° | 511.0  | 8.2       |
| 150°-160° | 410.8  | 6.6       |
| 160°-170° | 264.7  | 4.2       |
| 170°-180° | 91.1   | 1.5       |
| 0°-30°    | 1198.2 | 19.1      |
| 0°-40°    | 1860.7 | 29.7      |
| 0°-60°    | 2947.6 | 47.0      |
| 0°-90°    | 3461.7 | 55.2      |
| 90°-120°  | 461.3  | 7.4       |
| 90°-150°  | 2039.7 | 32.5      |
| 90°-180°  | 2806.0 | 44.8      |
| 0°-180°   | 6268.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1682 | 1682  | 1682 | 1682  | 1682 |      |
| 5°   | 1682 | 1675  | 1655 | 1669  | 1664 | 160  |
| 15°  | 1600 | 1583  | 1532 | 1503  | 1488 | 451  |
| 25°  | 1452 | 1404  | 1303 | 1241  | 1218 | 668  |
| 35°  | 1252 | 1174  | 1040 | 944   | 910  | 783  |
| 45°  | 1023 | 921   | 761  | 653   | 617  | 790  |
| 55°  | 778  | 659   | 495  | 404   | 374  | 695  |
| 65°  | 525  | 402   | 265  | 213   | 209  | 521  |
| 75°  | 280  | 174   | 122  | 111   | 110  | 296  |
| 85°  | 66   | 34    | 29   | 29    | 29   | 75   |
| 90°  | 1    | 8     | 14   | 17    | 19   | 6    |
| 95°  | 45   | 22    | 27   | 30    | 30   | 53   |
| 105° | 211  | 231   | 42   | 50    | 53   | 225  |
| 115° | 398  | 410   | 427  | 107   | 57   | 392  |
| 125° | 563  | 572   | 585  | 590   | 592  | 502  |
| 135° | 697  | 708   | 714  | 721   | 720  | 538  |
| 145° | 808  | 808   | 819  | 824   | 821  | 506  |
| 155° | 890  | 884   | 892  | 896   | 891  | 410  |
| 165° | 938  | 934   | 936  | 941   | 936  | 265  |
| 175° | 959  | 954   | 956  | 961   | 954  | 91   |
| 180° | 957  | 957   | 957  | 957   | 957  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1682.4 | 1682.4 | 1682.4 | 1682.4 | 1682.4 |
| 2.5°   | 1690.0 | 1682.4 | 1665.6 | 1680.8 | 1677.8 |
| 5°     | 1682.4 | 1674.8 | 1655.0 | 1668.7 | 1664.1 |
| 7.5°   | 1668.7 | 1659.5 | 1638.2 | 1644.3 | 1636.7 |
| 10°    | 1650.4 | 1639.7 | 1609.3 | 1604.7 | 1595.6 |
| 12.5°  | 1627.6 | 1613.9 | 1572.7 | 1563.6 | 1546.9 |
| 15°    | 1600.1 | 1583.4 | 1531.6 | 1502.7 | 1487.5 |
| 17.5°  | 1568.2 | 1543.8 | 1479.9 | 1446.4 | 1422.0 |
| 20°    | 1531.6 | 1501.2 | 1425.1 | 1387.0 | 1353.5 |
| 22.5°  | 1492.1 | 1457.0 | 1368.7 | 1317.0 | 1294.1 |
| 25°    | 1452.5 | 1403.7 | 1303.3 | 1240.8 | 1218.0 |
| 27.5°  | 1405.3 | 1353.5 | 1242.4 | 1170.8 | 1135.8 |
| 30°    | 1355.0 | 1297.2 | 1175.4 | 1097.7 | 1056.6 |
| 32.5°  | 1306.3 | 1236.3 | 1111.4 | 1020.1 | 982.0  |
| 35°    | 1251.5 | 1173.8 | 1039.9 | 944.0  | 910.5  |
| 37.5°  | 1198.2 | 1114.5 | 972.9  | 867.8  | 829.8  |
| 40°    | 1141.9 | 1050.5 | 902.8  | 794.7  | 755.2  |
| 42.5°  | 1084.0 | 986.6  | 832.8  | 720.1  | 682.1  |
| 45°    | 1023.1 | 921.1  | 761.3  | 653.2  | 616.6  |
| 47.5°  | 965.3  | 857.2  | 692.7  | 584.6  | 551.1  |
| 50°    | 901.3  | 793.2  | 625.7  | 520.7  | 488.7  |
| 52.5°  | 838.9  | 724.7  | 561.8  | 461.3  | 432.4  |
| 55°    | 778.0  | 659.2  | 494.8  | 403.5  | 374.5  |
| 57.5°  | 715.6  | 593.8  | 435.4  | 350.2  | 325.8  |
| 60°    | 651.6  | 529.8  | 373.0  | 295.4  | 271.0  |
| 62.5°  | 589.2  | 467.4  | 319.7  | 246.6  | 234.5  |
| 65°    | 525.3  | 401.9  | 264.9  | 213.2  | 208.6  |
| 67.5°  | 464.4  | 341.0  | 213.2  | 187.3  | 182.7  |
| 70°    | 400.4  | 281.7  | 176.6  | 161.4  | 155.3  |
| 72.5°  | 339.5  | 226.9  | 147.7  | 135.5  | 132.5  |
| 75°    | 280.1  | 173.6  | 121.8  | 111.1  | 109.6  |
| 77.5°  | 220.8  | 123.3  | 95.9   | 89.8   | 86.8   |
| 80°    | 166.0  | 88.3   | 73.1   | 67.0   | 67.0   |
| 82.5°  | 115.7  | 59.4   | 50.2   | 47.2   | 47.2   |
| 85°    | 65.5   | 33.5   | 28.9   | 28.9   | 28.9   |
| 87.5°  | 24.4   | 12.2   | 12.2   | 10.7   | 10.7   |
| 90°    | 0.7    | 8.3    | 13.9   | 17.3   | 18.7   |
| 92.5°  | 17.3   | 14.5   | 16.6   | 18.0   | 18.7   |
| 95°    | 45.0   | 22.2   | 27.0   | 30.5   | 29.8   |
| 97.5°  | 81.0   | 24.2   | 35.3   | 37.4   | 38.1   |
| 100°   | 122.6  | 27.7   | 39.5   | 45.0   | 46.4   |
| 102.5° | 168.3  | 166.9  | 40.9   | 48.5   | 50.6   |
| 105°   | 210.6  | 231.3  | 42.3   | 49.9   | 52.6   |
| 107.5° | 259.7  | 277.1  | 43.6   | 51.3   | 54.0   |
| 110°   | 306.8  | 321.4  | 121.2  | 51.9   | 54.7   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 351.2 | 363.6 | 351.9 | 53.3  | 55.4  |
| 115°   | 398.3 | 410.1 | 427.4 | 106.7 | 56.8  |
| 117.5° | 439.1 | 453.0 | 464.8 | 365.7 | 184.2 |
| 120°   | 484.9 | 495.2 | 507.7 | 516.0 | 422.5 |
| 122.5° | 523.6 | 534.7 | 548.6 | 552.7 | 553.4 |
| 125°   | 563.1 | 572.1 | 585.3 | 590.1 | 592.2 |
| 127.5° | 599.1 | 608.8 | 619.2 | 626.2 | 626.9 |
| 130°   | 633.1 | 644.2 | 651.8 | 659.4 | 658.7 |
| 132.5° | 667.7 | 676.7 | 684.3 | 690.6 | 689.9 |
| 135°   | 696.8 | 707.9 | 714.1 | 721.1 | 719.7 |
| 137.5° | 727.3 | 735.6 | 742.5 | 749.5 | 747.4 |
| 140°   | 757.1 | 762.6 | 770.2 | 776.5 | 773.0 |
| 142.5° | 782.0 | 786.9 | 795.9 | 801.4 | 797.9 |
| 145°   | 808.3 | 807.6 | 819.4 | 824.3 | 820.8 |
| 147.5° | 831.2 | 829.1 | 840.9 | 844.3 | 841.6 |
| 150°   | 853.3 | 848.5 | 859.6 | 863.7 | 860.3 |
| 152.5° | 872.1 | 866.5 | 876.9 | 881.1 | 876.2 |
| 155°   | 890.1 | 883.8 | 892.1 | 896.3 | 890.8 |
| 157.5° | 904.6 | 899.1 | 905.3 | 910.1 | 904.6 |
| 160°   | 917.1 | 912.9 | 917.1 | 921.2 | 916.4 |
| 162.5° | 928.2 | 924.0 | 927.5 | 932.3 | 926.1 |
| 165°   | 937.9 | 933.7 | 935.8 | 940.6 | 935.8 |
| 167.5° | 945.5 | 941.3 | 943.4 | 948.2 | 942.0 |
| 170°   | 951.7 | 947.6 | 948.9 | 953.8 | 947.6 |
| 172.5° | 955.9 | 951.7 | 953.1 | 957.9 | 951.7 |
| 175°   | 959.3 | 954.5 | 955.9 | 960.7 | 953.8 |
| 177.5° | 960.7 | 955.9 | 956.6 | 961.4 | 955.2 |
| 180°   | 957.2 | 957.2 | 957.2 | 957.2 | 957.2 |

(END OF REPORT)