

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: P1026058

Luminaire Tested: S124RDIP-B1020D810UB30-4F0-XX-W2A-F

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1026058  
REPORT IS A COMBINATION OF REPORTS P998998 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDIP-B1020D810UB30-4F0-XX-W2A-F  
Description: Define 4 Regressed Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589}  
{m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

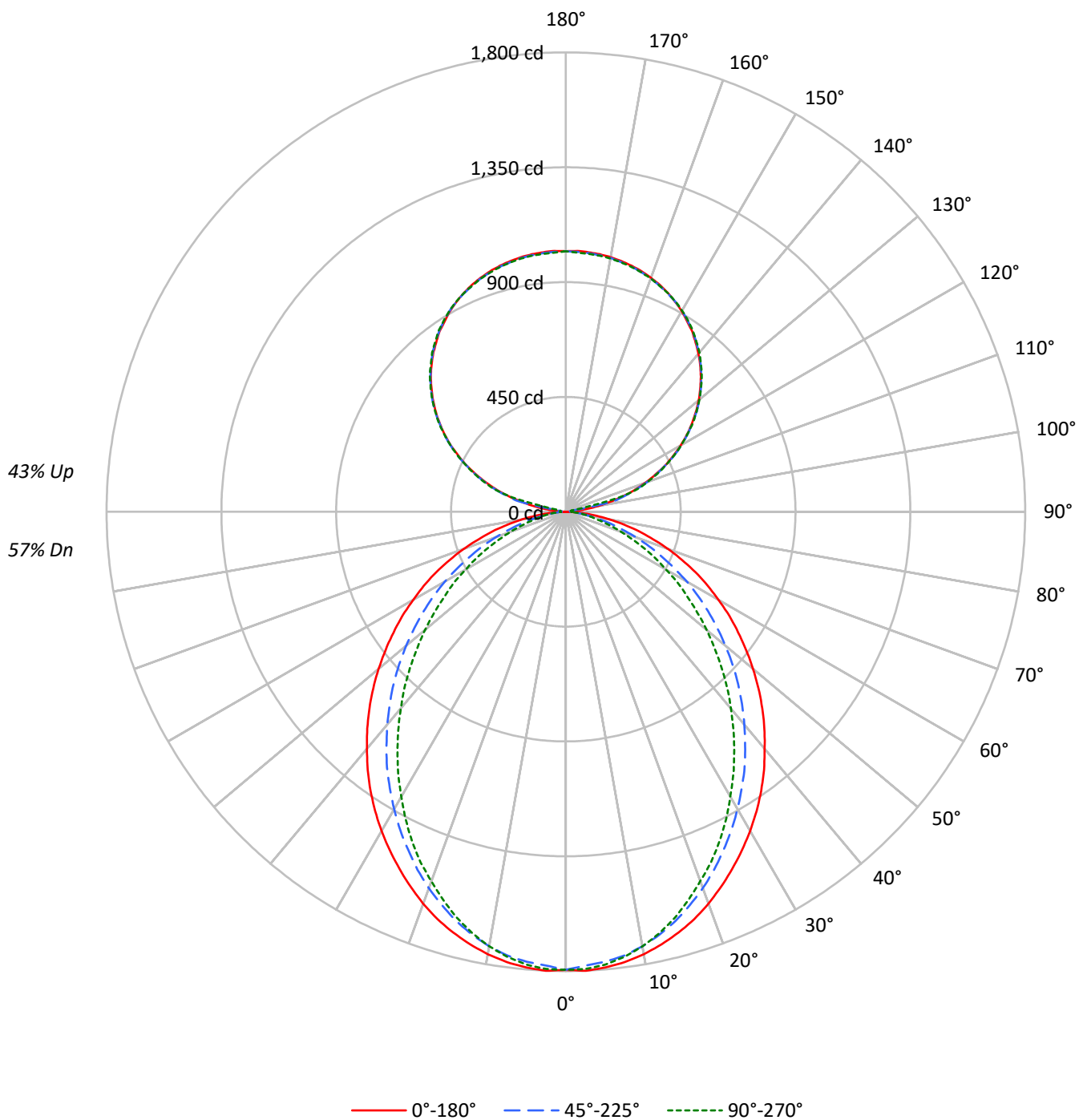
Lumens per Lamp: N/A  
Luminaire Lumens: 7308.0 lumens  
Efficiency: N/A  
Efficacy: 107.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 67.9  
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   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 |
| 1   | 100 | 95  | 92  | 88  | 93  | 89  | 86  | 83  | 77 | 74 | 72 | 66 | 64 | 62 | 56 | 54 | 53 |
| 2   | 91  | 84  | 78  | 72  | 84  | 78  | 73  | 68  | 68 | 64 | 60 | 58 | 55 | 53 | 49 | 47 | 45 |
| 3   | 83  | 74  | 67  | 61  | 77  | 69  | 63  | 57  | 60 | 55 | 51 | 52 | 48 | 45 | 44 | 41 | 39 |
| 4   | 76  | 66  | 58  | 52  | 71  | 61  | 54  | 49  | 54 | 48 | 44 | 46 | 42 | 39 | 39 | 36 | 34 |
| 5   | 70  | 59  | 50  | 44  | 65  | 55  | 48  | 42  | 48 | 42 | 38 | 42 | 37 | 34 | 36 | 32 | 30 |
| 6   | 65  | 53  | 45  | 39  | 60  | 49  | 42  | 37  | 43 | 38 | 33 | 38 | 33 | 30 | 32 | 29 | 26 |
| 7   | 60  | 48  | 40  | 34  | 56  | 45  | 38  | 33  | 39 | 34 | 29 | 34 | 30 | 26 | 30 | 26 | 23 |
| 8   | 56  | 43  | 36  | 30  | 52  | 41  | 34  | 29  | 36 | 30 | 26 | 32 | 27 | 24 | 27 | 24 | 21 |
| 9   | 52  | 40  | 32  | 27  | 48  | 37  | 31  | 26  | 33 | 28 | 24 | 29 | 25 | 21 | 25 | 22 | 19 |
| 10  | 49  | 36  | 29  | 24  | 45  | 34  | 28  | 23  | 31 | 25 | 21 | 27 | 23 | 19 | 23 | 20 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14636 | 14636 | 14636 |
| 5°  | 14637 | 14200 | 14202 |
| 10° | 14513 | 13752 | 13589 |
| 15° | 14313 | 13195 | 12865 |
| 20° | 14052 | 12559 | 12040 |
| 25° | 13726 | 11872 | 11235 |
| 30° | 13406 | 11172 | 10330 |
| 35° | 13055 | 10462 | 9446  |
| 40° | 12638 | 9698  | 8537  |
| 45° | 12245 | 8941  | 7638  |
| 50° | 11800 | 8113  | 6725  |
| 55° | 11318 | 7265  | 5782  |
| 60° | 10785 | 6364  | 4850  |
| 65° | 10268 | 5329  | 3954  |
| 70° | 9535  | 4242  | 3021  |
| 75° | 8593  | 3087  | 2113  |
| 80° | 7177  | 1894  | 1520  |
| 85° | 5399  | 1092  | 836   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 12245 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 168.8  | 2.3       |
| 10°-20°   | 470.6  | 6.4       |
| 20°-30°   | 679.4  | 9.3       |
| 30°-40°   | 769.9  | 10.5      |
| 40°-50°   | 743.4  | 10.2      |
| 50°-60°   | 618.1  | 8.5       |
| 60°-70°   | 426.6  | 5.8       |
| 70°-80°   | 215.6  | 2.9       |
| 80°-90°   | 56.8   | 0.8       |
| 90°-100°  | 33.9   | 0.5       |
| 100°-110° | 223.2  | 3.1       |
| 110°-120° | 426.1  | 5.8       |
| 120°-130° | 541.0  | 7.4       |
| 130°-140° | 578.7  | 7.9       |
| 140°-150° | 541.2  | 7.4       |
| 150°-160° | 436.4  | 6.0       |
| 160°-170° | 281.4  | 3.9       |
| 170°-180° | 97.0   | 1.3       |
| 0°-30°    | 1318.7 | 18.0      |
| 0°-40°    | 2088.6 | 28.6      |
| 0°-60°    | 3450.1 | 47.2      |
| 0°-90°    | 4149.1 | 56.8      |
| 90°-120°  | 683.2  | 9.3       |
| 90°-150°  | 2344.0 | 32.1      |
| 90°-180°  | 3159.0 | 43.2      |
| 0°-180°   | 7308.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1795 | 1795  | 1795 | 1795  | 1795 |      |
| 5°   | 1792 | 1786  | 1770 | 1784  | 1781 | 170  |
| 15°  | 1707 | 1694  | 1660 | 1657  | 1648 | 481  |
| 25°  | 1543 | 1518  | 1462 | 1439  | 1425 | 711  |
| 35°  | 1334 | 1290  | 1222 | 1175  | 1150 | 834  |
| 45°  | 1088 | 1038  | 955  | 888   | 863  | 839  |
| 55°  | 824  | 770   | 680  | 609   | 583  | 738  |
| 65°  | 561  | 502   | 414  | 355   | 338  | 554  |
| 75°  | 298  | 247   | 183  | 151   | 143  | 315  |
| 85°  | 74   | 47    | 43   | 40    | 40   | 81   |
| 90°  | 2    | 11    | 17   | 21    | 23   | 7    |
| 95°  | 42   | 16    | 17   | 21    | 22   | 52   |
| 105° | 230  | 234   | 238  | 245   | 218  | 241  |
| 115° | 429  | 431   | 431  | 432   | 432  | 422  |
| 125° | 603  | 606   | 605  | 607   | 608  | 539  |
| 135° | 748  | 748   | 751  | 752   | 754  | 577  |
| 145° | 863  | 865   | 865  | 866   | 867  | 539  |
| 155° | 946  | 947   | 944  | 948   | 945  | 436  |
| 165° | 998  | 994   | 994  | 1000  | 993  | 282  |
| 175° | 1021 | 1016  | 1017 | 1024  | 1015 | 97   |
| 180° | 1021 | 1021  | 1021 | 1021  | 1021 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1794.8 | 1794.8 | 1794.8 | 1794.8 | 1794.8 |
| 2.5°   | 1800.3 | 1794.8 | 1779.7 | 1794.8 | 1793.4 |
| 5°     | 1792.0 | 1786.5 | 1770.0 | 1783.8 | 1781.0 |
| 7.5°   | 1779.7 | 1774.2 | 1753.5 | 1763.2 | 1759.0 |
| 10°    | 1760.4 | 1753.5 | 1728.8 | 1734.3 | 1728.8 |
| 12.5°  | 1735.7 | 1727.4 | 1697.2 | 1699.9 | 1691.7 |
| 15°    | 1706.8 | 1694.4 | 1660.1 | 1657.3 | 1647.7 |
| 17.5°  | 1673.8 | 1656.0 | 1616.1 | 1609.2 | 1595.5 |
| 20°    | 1634.0 | 1616.1 | 1569.4 | 1558.4 | 1540.5 |
| 22.5°  | 1590.0 | 1569.4 | 1518.5 | 1500.7 | 1486.9 |
| 25°    | 1543.3 | 1518.5 | 1462.2 | 1438.8 | 1425.1 |
| 27.5°  | 1495.2 | 1464.9 | 1405.9 | 1378.4 | 1359.1 |
| 30°    | 1444.3 | 1410.0 | 1345.4 | 1311.0 | 1289.0 |
| 32.5°  | 1390.7 | 1350.9 | 1283.5 | 1242.3 | 1221.7 |
| 35°    | 1334.4 | 1290.4 | 1221.7 | 1175.0 | 1150.2 |
| 37.5°  | 1275.3 | 1230.0 | 1154.4 | 1103.5 | 1078.8 |
| 40°    | 1212.1 | 1166.7 | 1088.4 | 1030.7 | 1005.9 |
| 42.5°  | 1151.6 | 1103.5 | 1021.1 | 962.0  | 935.9  |
| 45°    | 1088.4 | 1037.6 | 955.1  | 887.8  | 863.0  |
| 47.5°  | 1023.8 | 971.6  | 886.4  | 816.3  | 788.8  |
| 50°    | 957.9  | 904.3  | 816.3  | 747.6  | 721.5  |
| 52.5°  | 890.5  | 838.3  | 747.6  | 677.5  | 650.0  |
| 55°    | 824.5  | 769.6  | 680.3  | 608.8  | 582.7  |
| 57.5°  | 760.0  | 702.2  | 614.3  | 541.5  | 522.2  |
| 60°    | 689.9  | 634.9  | 547.0  | 475.5  | 453.5  |
| 62.5°  | 626.7  | 568.9  | 478.2  | 413.6  | 397.2  |
| 65°    | 560.7  | 501.6  | 413.6  | 354.6  | 338.1  |
| 67.5°  | 492.0  | 435.6  | 353.2  | 301.0  | 281.7  |
| 70°    | 427.4  | 369.7  | 291.3  | 246.0  | 232.2  |
| 72.5°  | 358.7  | 307.8  | 235.0  | 197.9  | 185.5  |
| 75°    | 298.2  | 247.4  | 182.8  | 151.2  | 142.9  |
| 77.5°  | 235.0  | 191.0  | 136.1  | 114.1  | 111.3  |
| 80°    | 174.5  | 134.7  | 93.4   | 89.3   | 88.0   |
| 82.5°  | 122.3  | 86.6   | 67.3   | 64.6   | 63.2   |
| 85°    | 74.2   | 46.7   | 42.6   | 39.9   | 39.9   |
| 87.5°  | 31.6   | 20.6   | 19.2   | 17.9   | 19.2   |
| 90°    | 2.3    | 10.7   | 16.8   | 21.4   | 22.9   |
| 92.5°  | 11.5   | 9.9    | 16.0   | 20.6   | 20.6   |
| 95°    | 42.0   | 16.0   | 16.8   | 21.4   | 22.1   |
| 97.5°  | 80.2   | 97.0   | 16.8   | 20.6   | 21.4   |
| 100°   | 125.2  | 139.0  | 33.6   | 20.6   | 21.4   |
| 102.5° | 175.6  | 184.8  | 193.9  | 22.1   | 22.1   |
| 105°   | 229.8  | 234.4  | 238.2  | 245.1  | 217.6  |
| 107.5° | 279.5  | 281.7  | 287.1  | 290.9  | 294.0  |
| 110°   | 329.9  | 332.1  | 336.7  | 338.2  | 340.5  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 378.7  | 383.3  | 384.8  | 384.1  | 387.1  |
| 115°   | 429.1  | 431.4  | 430.6  | 432.2  | 432.2  |
| 117.5° | 474.2  | 477.2  | 479.5  | 478.7  | 478.7  |
| 120°   | 520.0  | 523.0  | 522.3  | 523.8  | 522.3  |
| 122.5° | 562.7  | 564.3  | 565.8  | 566.5  | 565.0  |
| 125°   | 603.2  | 606.3  | 604.7  | 607.0  | 607.8  |
| 127.5° | 642.1  | 642.9  | 646.7  | 646.0  | 645.2  |
| 130°   | 679.6  | 680.3  | 682.6  | 683.4  | 683.4  |
| 132.5° | 713.9  | 715.4  | 718.5  | 719.3  | 718.5  |
| 135°   | 748.3  | 747.5  | 750.6  | 752.1  | 753.6  |
| 137.5° | 778.8  | 778.8  | 782.6  | 784.2  | 783.4  |
| 140°   | 808.6  | 810.1  | 811.6  | 813.9  | 814.7  |
| 142.5° | 835.3  | 838.4  | 839.1  | 840.7  | 840.7  |
| 145°   | 862.8  | 865.1  | 865.1  | 865.9  | 867.4  |
| 147.5° | 884.2  | 888.8  | 888.0  | 888.8  | 889.5  |
| 150°   | 907.9  | 910.9  | 910.1  | 910.1  | 910.9  |
| 152.5° | 927.7  | 930.0  | 928.5  | 930.0  | 929.2  |
| 155°   | 946.0  | 946.8  | 944.5  | 947.6  | 945.3  |
| 157.5° | 962.1  | 962.1  | 959.0  | 962.8  | 959.0  |
| 160°   | 975.8  | 973.5  | 972.8  | 977.3  | 972.8  |
| 162.5° | 988.0  | 985.0  | 984.2  | 988.8  | 983.4  |
| 165°   | 998.0  | 994.1  | 994.1  | 1000.2 | 993.4  |
| 167.5° | 1006.3 | 1002.5 | 1001.8 | 1008.6 | 1001.0 |
| 170°   | 1013.2 | 1008.6 | 1009.4 | 1015.5 | 1007.9 |
| 172.5° | 1017.8 | 1013.2 | 1014.0 | 1020.1 | 1011.7 |
| 175°   | 1020.9 | 1016.3 | 1017.0 | 1023.9 | 1014.7 |
| 177.5° | 1023.1 | 1017.8 | 1019.3 | 1025.4 | 1016.3 |
| 180°   | 1020.9 | 1020.9 | 1020.9 | 1020.9 | 1020.9 |

(END OF REPORT)