

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: P1024882

Luminaire Tested: S124DIP-B1020D1205UB40-4F0-XX-W2A-F

Issue Date: 5/6/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1024882  
REPORT IS A COMBINATION OF REPORTS P995227 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/6/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B1020D1205UB40-4F0-XX-W2A-F  
Description: Define 4 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

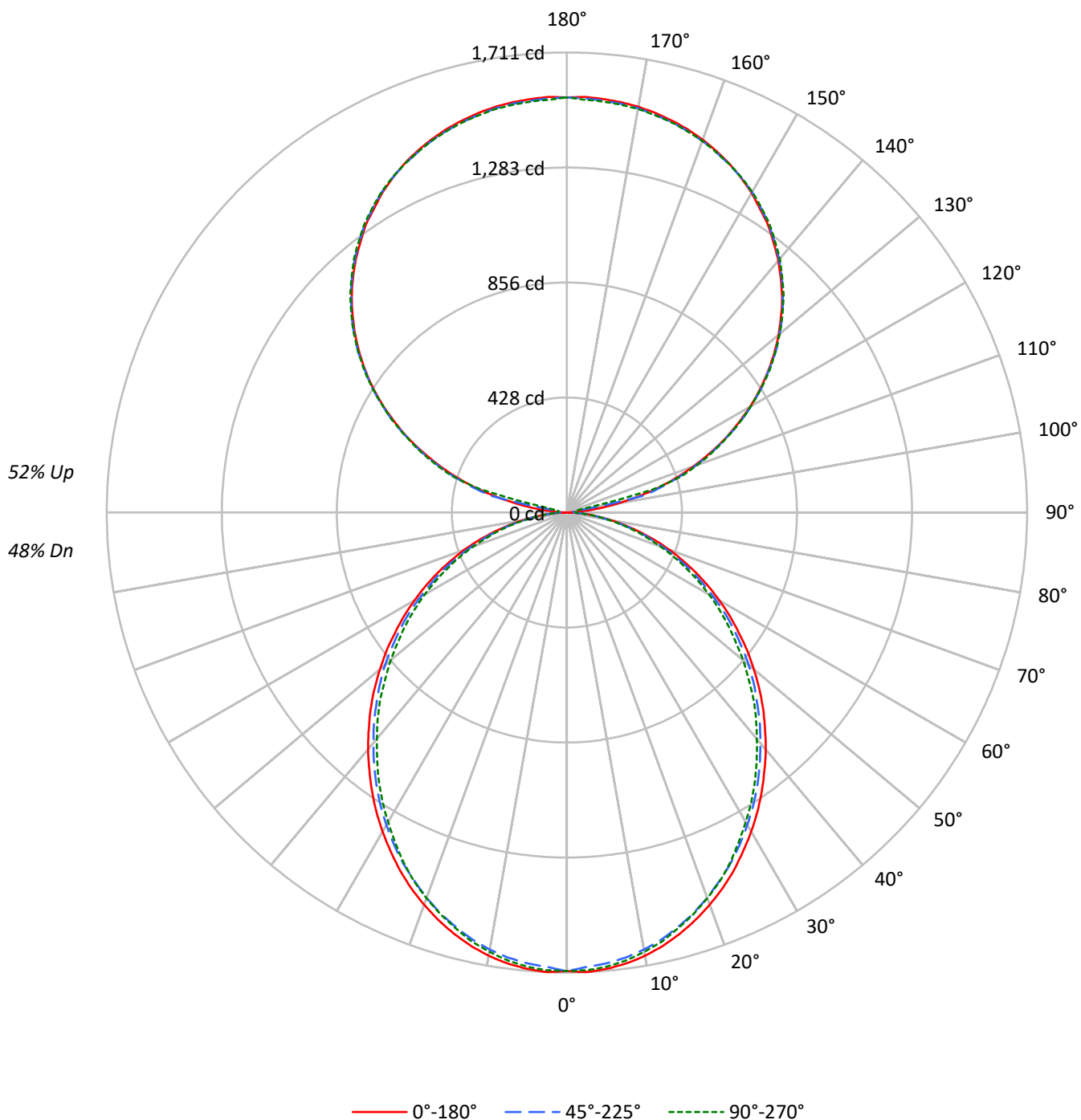
Lumens per Lamp: N/A  
Luminaire Lumens: 9157.0 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 81.8  
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   | 107 | 107 | 107 | 107 | 98 | 98 | 98 | 98 | 82 | 82 | 82 | 68 | 68 | 68 | 54 | 54 | 54 |
| 1   | 97  | 93  | 89  | 86  | 89 | 86 | 82 | 79 | 72 | 70 | 67 | 59 | 58 | 56 | 48 | 47 | 46 |
| 2   | 89  | 81  | 75  | 70  | 81 | 75 | 70 | 65 | 63 | 59 | 56 | 52 | 49 | 47 | 42 | 40 | 38 |
| 3   | 81  | 71  | 64  | 58  | 74 | 66 | 59 | 54 | 56 | 51 | 47 | 46 | 43 | 40 | 37 | 35 | 33 |
| 4   | 74  | 63  | 55  | 49  | 68 | 58 | 51 | 46 | 49 | 44 | 40 | 41 | 37 | 34 | 33 | 30 | 28 |
| 5   | 68  | 56  | 48  | 42  | 62 | 52 | 45 | 40 | 44 | 39 | 34 | 37 | 33 | 29 | 30 | 27 | 25 |
| 6   | 62  | 50  | 42  | 36  | 57 | 47 | 40 | 34 | 40 | 34 | 30 | 33 | 29 | 26 | 27 | 24 | 22 |
| 7   | 58  | 45  | 38  | 32  | 53 | 42 | 35 | 30 | 36 | 30 | 26 | 30 | 26 | 23 | 25 | 22 | 19 |
| 8   | 54  | 41  | 34  | 28  | 49 | 38 | 31 | 27 | 33 | 27 | 23 | 28 | 23 | 20 | 23 | 20 | 17 |
| 9   | 50  | 38  | 30  | 25  | 46 | 35 | 28 | 24 | 30 | 25 | 21 | 25 | 21 | 18 | 21 | 18 | 16 |
| 10  | 47  | 35  | 27  | 23  | 43 | 32 | 26 | 21 | 28 | 23 | 19 | 24 | 19 | 16 | 20 | 16 | 14 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13906 | 13906 | 13906 |
| 5°  | 13917 | 13506 | 13522 |
| 10° | 13800 | 13130 | 13039 |
| 15° | 13602 | 12685 | 12494 |
| 20° | 13349 | 12203 | 11929 |
| 25° | 13064 | 11693 | 11321 |
| 30° | 12721 | 11142 | 10654 |
| 35° | 12365 | 10579 | 10010 |
| 40° | 11995 | 9972  | 9324  |
| 45° | 11608 | 9363  | 8683  |
| 50° | 11177 | 8773  | 7973  |
| 55° | 10710 | 8084  | 7267  |
| 60° | 10231 | 7329  | 6533  |
| 65° | 9684  | 6550  | 5705  |
| 70° | 9053  | 5611  | 4818  |
| 75° | 8112  | 4522  | 3859  |
| 80° | 6914  | 3269  | 2714  |
| 85° | 5370  | 1822  | 1461  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 11608 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 160.7  | 1.8       |
| 10°-20°   | 452.8  | 4.9       |
| 20°-30°   | 666.4  | 7.3       |
| 30°-40°   | 774.7  | 8.5       |
| 40°-50°   | 774.6  | 8.5       |
| 50°-60°   | 677.5  | 7.4       |
| 60°-70°   | 503.0  | 5.5       |
| 70°-80°   | 285.4  | 3.1       |
| 80°-90°   | 84.9   | 0.9       |
| 90°-100°  | 51.2   | 0.6       |
| 100°-110° | 337.5  | 3.7       |
| 110°-120° | 644.4  | 7.0       |
| 120°-130° | 818.1  | 8.9       |
| 130°-140° | 875.1  | 9.6       |
| 140°-150° | 818.3  | 8.9       |
| 150°-160° | 659.9  | 7.2       |
| 160°-170° | 425.6  | 4.6       |
| 170°-180° | 146.7  | 1.6       |
| 0°-30°    | 1280.0 | 14.0      |
| 0°-40°    | 2054.7 | 22.4      |
| 0°-60°    | 3506.8 | 38.3      |
| 0°-90°    | 4380.2 | 47.8      |
| 90°-120°  | 1033.1 | 11.3      |
| 90°-150°  | 3544.6 | 38.7      |
| 90°-180°  | 4777.0 | 52.2      |
| 0°-180°   | 9157.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1705 | 1705  | 1705 | 1705  | 1705 |      |
| 5°   | 1704 | 1698  | 1683 | 1698  | 1696 | 162  |
| 15°  | 1622 | 1616  | 1596 | 1604  | 1600 | 457  |
| 25°  | 1469 | 1459  | 1440 | 1442  | 1436 | 676  |
| 35°  | 1264 | 1254  | 1235 | 1226  | 1219 | 790  |
| 45°  | 1032 | 1022  | 1000 | 985   | 981  | 795  |
| 55°  | 780  | 776   | 757  | 741   | 732  | 699  |
| 65°  | 529  | 522   | 508  | 495   | 488  | 523  |
| 75°  | 282  | 275   | 268  | 262   | 261  | 299  |
| 85°  | 74   | 74    | 71   | 71    | 70   | 79   |
| 90°  | 4    | 16    | 25   | 32    | 35   | 8    |
| 95°  | 64   | 24    | 25   | 32    | 34   | 78   |
| 105° | 348  | 354   | 360  | 371   | 329  | 364  |
| 115° | 649  | 652   | 651  | 654   | 654  | 639  |
| 125° | 912  | 917   | 914  | 918   | 919  | 815  |
| 135° | 1132 | 1130  | 1135 | 1137  | 1140 | 872  |
| 145° | 1305 | 1308  | 1308 | 1309  | 1312 | 815  |
| 155° | 1431 | 1432  | 1428 | 1433  | 1429 | 660  |
| 165° | 1509 | 1503  | 1503 | 1512  | 1502 | 426  |
| 175° | 1544 | 1537  | 1538 | 1548  | 1534 | 147  |
| 180° | 1544 | 1544  | 1544 | 1544  | 1544 |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1705.3 | 1705.3 | 1705.3 | 1705.3 | 1705.3 |
| 2.5°   | 1710.8 | 1706.7 | 1691.6 | 1705.3 | 1703.9 |
| 5°     | 1703.9 | 1698.5 | 1683.4 | 1698.5 | 1695.7 |
| 7.5°   | 1691.6 | 1686.2 | 1669.8 | 1682.1 | 1680.7 |
| 10°    | 1673.9 | 1668.4 | 1650.6 | 1661.6 | 1658.8 |
| 12.5°  | 1650.6 | 1645.2 | 1626.1 | 1638.4 | 1634.3 |
| 15°    | 1622.0 | 1616.5 | 1596.0 | 1604.2 | 1600.1 |
| 17.5°  | 1589.2 | 1582.3 | 1563.2 | 1568.7 | 1565.9 |
| 20°    | 1552.3 | 1545.4 | 1524.9 | 1529.0 | 1526.3 |
| 22.5°  | 1512.6 | 1503.1 | 1482.6 | 1490.8 | 1485.3 |
| 25°    | 1468.9 | 1459.3 | 1440.2 | 1441.6 | 1436.1 |
| 27.5°  | 1419.7 | 1410.2 | 1392.4 | 1389.7 | 1382.8 |
| 30°    | 1370.5 | 1359.6 | 1341.8 | 1336.4 | 1329.5 |
| 32.5°  | 1318.6 | 1309.0 | 1289.9 | 1283.1 | 1276.2 |
| 35°    | 1263.9 | 1254.4 | 1235.3 | 1225.7 | 1218.9 |
| 37.5°  | 1206.6 | 1198.4 | 1177.9 | 1168.3 | 1158.7 |
| 40°    | 1150.5 | 1139.6 | 1119.1 | 1105.4 | 1098.6 |
| 42.5°  | 1090.4 | 1084.9 | 1061.7 | 1045.3 | 1041.2 |
| 45°    | 1031.7 | 1022.1 | 1000.2 | 985.2  | 981.1  |
| 47.5°  | 970.2  | 963.3  | 942.8  | 926.4  | 915.5  |
| 50°    | 907.3  | 901.8  | 882.7  | 863.6  | 855.4  |
| 52.5°  | 845.8  | 839.0  | 818.5  | 802.1  | 791.2  |
| 55°    | 780.2  | 776.1  | 757.0  | 740.6  | 732.4  |
| 57.5°  | 718.7  | 714.6  | 695.5  | 679.1  | 670.9  |
| 60°    | 654.5  | 647.7  | 629.9  | 617.6  | 610.8  |
| 62.5°  | 591.7  | 586.2  | 567.1  | 556.1  | 549.3  |
| 65°    | 528.8  | 522.0  | 508.3  | 494.6  | 487.8  |
| 67.5°  | 464.6  | 459.1  | 445.5  | 431.8  | 430.4  |
| 70°    | 405.8  | 396.3  | 385.3  | 374.4  | 370.3  |
| 72.5°  | 343.0  | 333.4  | 325.2  | 317.0  | 312.9  |
| 75°    | 281.5  | 274.7  | 267.8  | 262.4  | 261.0  |
| 77.5°  | 221.4  | 218.6  | 211.8  | 210.4  | 206.3  |
| 80°    | 168.1  | 164.0  | 161.2  | 158.5  | 157.1  |
| 82.5°  | 116.1  | 114.8  | 114.8  | 113.4  | 112.0  |
| 85°    | 73.8   | 73.8   | 71.1   | 71.1   | 69.7   |
| 87.5°  | 35.5   | 34.2   | 32.8   | 32.8   | 32.8   |
| 90°    | 3.5    | 16.2   | 25.4   | 32.3   | 34.6   |
| 92.5°  | 17.3   | 15.0   | 24.2   | 31.2   | 31.2   |
| 95°    | 63.5   | 24.2   | 25.4   | 32.3   | 33.5   |
| 97.5°  | 121.2  | 146.6  | 25.4   | 31.2   | 32.3   |
| 100°   | 189.4  | 210.1  | 50.8   | 31.2   | 32.3   |
| 102.5° | 265.6  | 279.4  | 293.3  | 33.5   | 33.5   |
| 105°   | 347.5  | 354.5  | 360.2  | 370.6  | 329.1  |
| 107.5° | 422.6  | 426.1  | 434.1  | 439.9  | 444.5  |
| 110°   | 498.8  | 502.3  | 509.2  | 511.5  | 515.0  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 572.7  | 579.6  | 581.9  | 580.8  | 585.4  |
| 115°   | 648.9  | 652.4  | 651.2  | 653.5  | 653.5  |
| 117.5° | 717.0  | 721.6  | 725.1  | 723.9  | 723.9  |
| 120°   | 786.3  | 790.9  | 789.8  | 792.1  | 789.8  |
| 122.5° | 851.0  | 853.3  | 855.6  | 856.7  | 854.4  |
| 125°   | 912.1  | 916.8  | 914.5  | 917.9  | 919.1  |
| 127.5° | 971.0  | 972.2  | 978.0  | 976.8  | 975.6  |
| 130°   | 1027.6 | 1028.8 | 1032.2 | 1033.4 | 1033.4 |
| 132.5° | 1079.6 | 1081.9 | 1086.5 | 1087.6 | 1086.5 |
| 135°   | 1131.5 | 1130.4 | 1135.0 | 1137.3 | 1139.6 |
| 137.5° | 1177.7 | 1177.7 | 1183.5 | 1185.8 | 1184.6 |
| 140°   | 1222.7 | 1225.0 | 1227.4 | 1230.8 | 1232.0 |
| 142.5° | 1263.1 | 1267.8 | 1268.9 | 1271.2 | 1271.2 |
| 145°   | 1304.7 | 1308.2 | 1308.2 | 1309.3 | 1311.6 |
| 147.5° | 1337.0 | 1344.0 | 1342.8 | 1344.0 | 1345.1 |
| 150°   | 1372.8 | 1377.5 | 1376.3 | 1376.3 | 1377.5 |
| 152.5° | 1402.9 | 1406.3 | 1404.0 | 1406.3 | 1405.2 |
| 155°   | 1430.6 | 1431.7 | 1428.3 | 1432.9 | 1429.4 |
| 157.5° | 1454.8 | 1454.8 | 1450.2 | 1456.0 | 1450.2 |
| 160°   | 1475.6 | 1472.1 | 1471.0 | 1477.9 | 1471.0 |
| 162.5° | 1494.1 | 1489.5 | 1488.3 | 1495.2 | 1487.1 |
| 165°   | 1509.1 | 1503.3 | 1503.3 | 1512.5 | 1502.2 |
| 167.5° | 1521.8 | 1516.0 | 1514.9 | 1525.2 | 1513.7 |
| 170°   | 1532.2 | 1525.2 | 1526.4 | 1535.6 | 1524.1 |
| 172.5° | 1539.1 | 1532.2 | 1533.3 | 1542.6 | 1529.9 |
| 175°   | 1543.7 | 1536.8 | 1537.9 | 1548.3 | 1534.5 |
| 177.5° | 1547.2 | 1539.1 | 1541.4 | 1550.6 | 1536.8 |
| 180°   | 1543.7 | 1543.7 | 1543.7 | 1543.7 | 1543.7 |

(END OF REPORT)