

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: P1011436

Luminaire Tested: S123DIP-B1165D805UB35-4F0-XX-W2A-D4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011436  
REPORT IS A COMBINATION OF REPORTS P989597 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1165D805UB35-4F0-XX-W2A-D4  
Description: Define 3 Direct/Indirect Pendant with 3500K BioUP LEDs {m-DER=0.721} {m-EER=0.792}  
Light Source: -  
Ballast/Driver: -

**Summary**

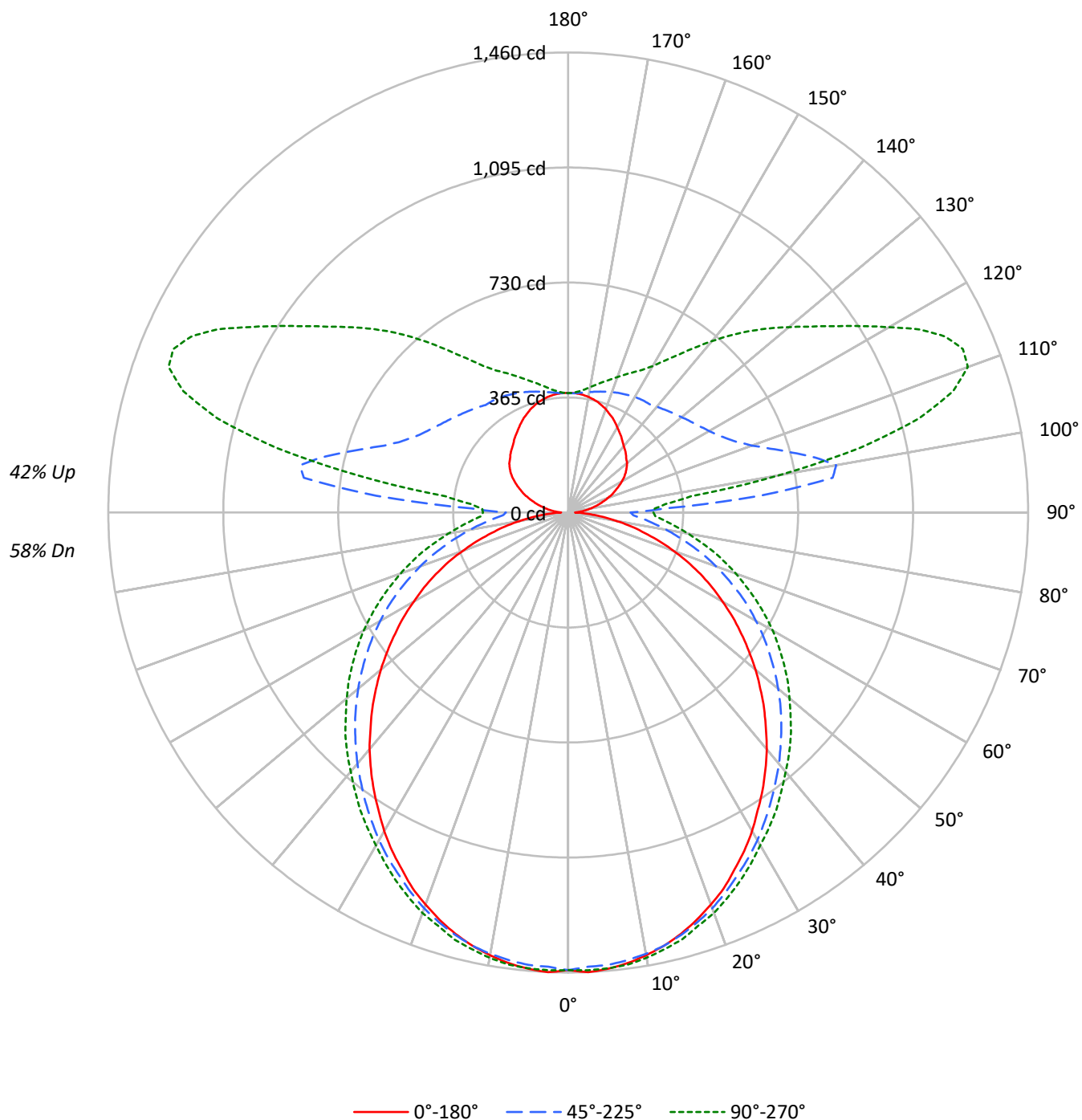
Lumens per Lamp: N/A  
Luminaire Lumens: 7739.6 lumens  
Efficiency: N/A  
Efficacy: 93.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 82.4  
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 |    |  |  | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |  |  |   |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |  |  |   |
| 0   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 63 | 63 | 63 | 58 |  |  |   |
| 1   | 98  | 93  | 89  | 85  | 91  | 87  | 83  | 80  | 75 | 72 | 70 | 64 | 62 | 60 | 54 | 52 | 51 | 46 |  |  |   |
| 2   | 89  | 81  | 74  | 69  | 83  | 75  | 69  | 64  | 65 | 61 | 57 | 56 | 52 | 49 | 47 | 44 | 42 | 38 |  |  |   |
| 3   | 81  | 71  | 63  | 57  | 75  | 66  | 59  | 53  | 57 | 52 | 47 | 49 | 45 | 41 | 41 | 38 | 35 | 31 |  |  |   |
| 4   | 74  | 62  | 54  | 48  | 68  | 58  | 51  | 45  | 50 | 45 | 40 | 43 | 39 | 35 | 37 | 33 | 30 | 27 |  |  |   |
| 5   | 68  | 55  | 47  | 41  | 63  | 52  | 44  | 38  | 45 | 39 | 34 | 39 | 34 | 30 | 33 | 29 | 26 | 23 |  |  |   |
| 6   | 62  | 50  | 41  | 35  | 58  | 47  | 39  | 33  | 41 | 34 | 30 | 35 | 30 | 26 | 30 | 26 | 23 | 20 |  |  |   |
| 7   | 58  | 45  | 37  | 31  | 53  | 42  | 34  | 29  | 37 | 31 | 26 | 32 | 27 | 23 | 27 | 23 | 20 | 18 |  |  |   |
| 8   | 54  | 41  | 33  | 27  | 50  | 38  | 31  | 26  | 33 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 18 | 16 |  |  |   |
| 9   | 50  | 37  | 29  | 24  | 46  | 35  | 28  | 23  | 31 | 25 | 21 | 27 | 22 | 18 | 23 | 19 | 16 | 14 |  |  |   |
| 10  | 47  | 34  | 27  | 22  | 43  | 32  | 25  | 21  | 28 | 23 | 19 | 25 | 20 | 17 | 21 | 17 | 15 | 13 |  |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15632 | 15632 | 15632 |
| 5°  | 15675 | 15174 | 15162 |
| 10° | 15529 | 14763 | 14650 |
| 15° | 15323 | 14310 | 14108 |
| 20° | 15032 | 13803 | 13526 |
| 25° | 14672 | 13234 | 12922 |
| 30° | 14306 | 12718 | 12317 |
| 35° | 13893 | 12177 | 11822 |
| 40° | 13500 | 11682 | 11301 |
| 45° | 13063 | 11204 | 10872 |
| 50° | 12632 | 10728 | 10406 |
| 55° | 12154 | 10242 | 9976  |
| 60° | 11687 | 9744  | 9537  |
| 65° | 11204 | 9214  | 9022  |
| 70° | 10484 | 8617  | 8492  |
| 75° | 9567  | 7939  | 7945  |
| 80° | 8502  | 7252  | 7320  |
| 85° | 7444  | 6697  | 6873  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle:  $45^\circ$

Luminance: 13063 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 137.8  | 1.8       |
| 10°-20°   | 392.8  | 5.1       |
| 20°-30°   | 587.3  | 7.6       |
| 30°-40°   | 701.2  | 9.1       |
| 40°-50°   | 733.7  | 9.5       |
| 50°-60°   | 688.5  | 8.9       |
| 60°-70°   | 575.1  | 7.4       |
| 70°-80°   | 411.2  | 5.3       |
| 80°-90°   | 246.8  | 3.2       |
| 90°-100°  | 369.0  | 4.8       |
| 100°-110° | 714.8  | 9.2       |
| 110°-120° | 662.2  | 8.6       |
| 120°-130° | 510.3  | 6.6       |
| 130°-140° | 388.2  | 5.0       |
| 140°-150° | 279.2  | 3.6       |
| 150°-160° | 192.0  | 2.5       |
| 160°-170° | 112.8  | 1.5       |
| 170°-180° | 36.7   | 0.5       |
| 0°-30°    | 1117.9 | 14.4      |
| 0°-40°    | 1819.1 | 23.5      |
| 0°-60°    | 3241.3 | 41.9      |
| 0°-90°    | 4474.4 | 57.8      |
| 90°-120°  | 1746.1 | 22.6      |
| 90°-150°  | 2923.7 | 37.8      |
| 90°-180°  | 3265.0 | 42.2      |
| 0°-180°   | 7739.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1452 | 1452  | 1452 | 1452  | 1452 |      |
| 5°   | 1454 | 1451  | 1441 | 1454  | 1452 | 138  |
| 15°  | 1384 | 1389  | 1388 | 1403  | 1402 | 390  |
| 25°  | 1250 | 1266  | 1270 | 1291  | 1291 | 576  |
| 35°  | 1076 | 1101  | 1122 | 1145  | 1152 | 673  |
| 45°  | 880  | 918   | 957  | 987   | 1000 | 678  |
| 55°  | 671  | 723   | 780  | 823   | 835  | 601  |
| 65°  | 464  | 525   | 595  | 642   | 658  | 458  |
| 75°  | 252  | 326   | 405  | 457   | 476  | 269  |
| 85°  | 78   | 157   | 240  | 294   | 310  | 80   |
| 90°  | 22   | 107   | 198  | 254   | 271  | 17   |
| 95°  | 44   | 164   | 611  | 338   | 310  | 41   |
| 105° | 102  | 182   | 735  | 1241  | 1153 | 107  |
| 115° | 165  | 223   | 556  | 1156  | 1321 | 164  |
| 125° | 223  | 263   | 491  | 881   | 1031 | 199  |
| 135° | 259  | 307   | 453  | 704   | 814  | 200  |
| 145° | 294  | 335   | 429  | 552   | 612  | 184  |
| 155° | 332  | 358   | 415  | 472   | 492  | 153  |
| 165° | 363  | 373   | 397  | 421   | 429  | 102  |
| 175° | 378  | 378   | 381  | 386   | 386  | 36   |
| 180° | 379  | 379   | 379  | 379   | 379  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1452.3 | 1452.3 | 1452.3 | 1452.3 | 1452.3 |
| 2.5°   | 1460.3 | 1455.5 | 1442.8 | 1455.5 | 1453.9 |
| 5°     | 1453.9 | 1450.8 | 1441.3 | 1453.9 | 1452.3 |
| 7.5°   | 1442.8 | 1442.8 | 1433.4 | 1449.2 | 1447.6 |
| 10°    | 1427.0 | 1430.2 | 1422.3 | 1438.1 | 1434.9 |
| 12.5°  | 1408.0 | 1412.8 | 1408.0 | 1422.3 | 1419.1 |
| 15°    | 1384.3 | 1389.1 | 1387.5 | 1403.3 | 1401.7 |
| 17.5°  | 1355.8 | 1365.3 | 1363.7 | 1378.0 | 1374.8 |
| 20°    | 1324.2 | 1333.7 | 1336.8 | 1351.1 | 1352.7 |
| 22.5°  | 1291.0 | 1300.5 | 1305.2 | 1324.2 | 1322.6 |
| 25°    | 1249.8 | 1265.7 | 1270.4 | 1291.0 | 1291.0 |
| 27.5°  | 1210.3 | 1227.7 | 1237.2 | 1254.6 | 1256.2 |
| 30°    | 1167.6 | 1188.1 | 1200.8 | 1219.8 | 1219.8 |
| 32.5°  | 1120.1 | 1143.8 | 1161.2 | 1181.8 | 1186.6 |
| 35°    | 1075.8 | 1101.1 | 1121.7 | 1145.4 | 1151.7 |
| 37.5°  | 1028.3 | 1056.8 | 1080.6 | 1107.4 | 1112.2 |
| 40°    | 980.9  | 1009.4 | 1041.0 | 1067.9 | 1074.2 |
| 42.5°  | 928.7  | 965.1  | 998.3  | 1028.3 | 1037.8 |
| 45°    | 879.6  | 917.6  | 957.2  | 987.2  | 999.9  |
| 47.5°  | 827.4  | 870.1  | 914.4  | 947.7  | 957.2  |
| 50°    | 776.8  | 821.1  | 870.1  | 906.5  | 917.6  |
| 52.5°  | 723.0  | 770.5  | 825.8  | 863.8  | 878.0  |
| 55°    | 670.8  | 723.0  | 780.0  | 822.7  | 835.3  |
| 57.5°  | 620.2  | 674.0  | 735.7  | 778.4  | 792.6  |
| 60°    | 566.4  | 623.3  | 688.2  | 732.5  | 749.9  |
| 62.5°  | 515.8  | 574.3  | 643.9  | 688.2  | 704.0  |
| 65°    | 463.5  | 525.2  | 594.9  | 642.3  | 658.1  |
| 67.5°  | 411.3  | 476.2  | 545.8  | 598.0  | 610.7  |
| 70°    | 356.0  | 424.0  | 499.9  | 550.6  | 566.4  |
| 72.5°  | 305.3  | 373.4  | 452.5  | 504.7  | 520.5  |
| 75°    | 251.5  | 325.9  | 405.0  | 457.2  | 476.2  |
| 77.5°  | 205.7  | 280.0  | 359.1  | 414.5  | 428.7  |
| 80°    | 156.6  | 234.1  | 316.4  | 370.2  | 386.0  |
| 82.5°  | 113.9  | 193.0  | 276.9  | 330.7  | 346.5  |
| 85°    | 77.5   | 156.6  | 240.5  | 294.3  | 310.1  |
| 87.5°  | 47.5   | 126.6  | 207.3  | 261.0  | 276.9  |
| 90°    | 22.1   | 107.3  | 198.0  | 254.0  | 270.6  |
| 92.5°  | 30.5   | 133.0  | 308.8  | 267.0  | 273.2  |
| 95°    | 43.5   | 163.8  | 611.4  | 338.4  | 310.5  |
| 97.5°  | 57.2   | 169.8  | 846.6  | 528.2  | 392.9  |
| 100°   | 71.0   | 171.9  | 863.9  | 881.4  | 680.2  |
| 102.5° | 85.6   | 175.5  | 804.5  | 1106.9 | 949.9  |
| 105°   | 101.7  | 182.1  | 735.3  | 1241.4 | 1152.8 |
| 107.5° | 116.9  | 191.1  | 672.9  | 1293.5 | 1281.2 |
| 110°   | 133.7  | 200.6  | 621.3  | 1286.0 | 1349.9 |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 150.6 | 210.6 | 582.6 | 1231.5 | 1356.6 |
| 115°   | 165.1 | 222.8 | 555.5 | 1156.0 | 1321.0 |
| 117.5° | 181.2 | 232.6 | 533.0 | 1076.0 | 1257.8 |
| 120°   | 196.5 | 242.4 | 516.6 | 999.8  | 1176.1 |
| 122.5° | 211.1 | 253.0 | 503.3 | 937.7  | 1100.7 |
| 125°   | 223.3 | 262.7 | 490.8 | 881.4  | 1030.6 |
| 127.5° | 234.0 | 275.0 | 480.6 | 833.7  | 968.9  |
| 130°   | 244.0 | 287.3 | 470.4 | 788.9  | 915.0  |
| 132.5° | 250.2 | 298.4 | 461.8 | 746.4  | 864.8  |
| 135°   | 259.4 | 307.2 | 453.1 | 704.4  | 813.9  |
| 137.5° | 267.8 | 315.7 | 445.3 | 662.7  | 762.2  |
| 140°   | 274.6 | 323.3 | 438.1 | 623.3  | 709.8  |
| 142.5° | 283.8 | 328.6 | 430.3 | 585.1  | 658.9  |
| 145°   | 293.8 | 334.8 | 428.7 | 551.5  | 611.8  |
| 147.5° | 302.2 | 341.3 | 426.4 | 523.6  | 571.7  |
| 150°   | 312.1 | 346.7 | 423.4 | 501.2  | 536.2  |
| 152.5° | 322.1 | 352.4 | 419.5 | 485.8  | 510.0  |
| 155°   | 332.1 | 358.2 | 414.9 | 471.7  | 491.6  |
| 157.5° | 339.8 | 363.2 | 411.1 | 457.8  | 474.0  |
| 160°   | 349.0 | 367.4 | 406.5 | 445.2  | 457.1  |
| 162.5° | 355.9 | 370.4 | 401.9 | 433.3  | 441.8  |
| 165°   | 362.8 | 373.1 | 397.3 | 421.4  | 428.7  |
| 167.5° | 368.1 | 375.4 | 392.7 | 411.0  | 415.7  |
| 170°   | 372.7 | 376.6 | 388.1 | 401.8  | 404.2  |
| 172.5° | 375.8 | 377.7 | 384.2 | 393.8  | 393.4  |
| 175°   | 378.1 | 378.5 | 381.2 | 386.5  | 385.8  |
| 177.5° | 379.6 | 378.9 | 378.9 | 381.9  | 380.4  |
| 180°   | 378.9 | 378.9 | 378.9 | 378.9  | 378.9  |

(END OF REPORT)