

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: P1011340

Luminaire Tested: S123DIP-B1165D365UB30-4F0-XX-W2A-D

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1011340  
REPORT IS A COMBINATION OF REPORTS P989466 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-B1165D365UB30-4F0-XX-W2A-D  
Description: Define 3 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

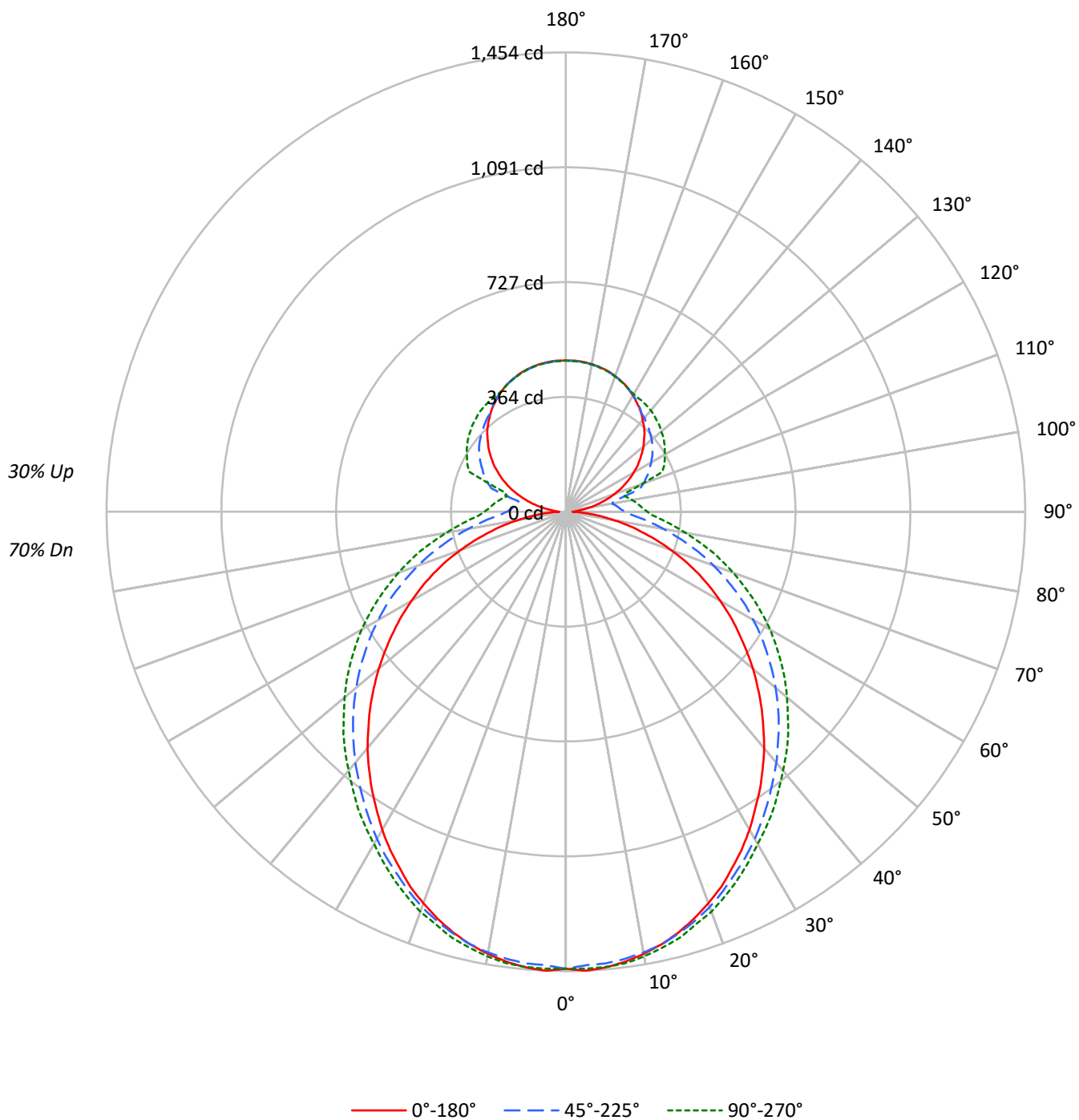
Lumens per Lamp: N/A  
Luminaire Lumens: 6320.1 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 70.6  
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 | 95 | 95 | 95 | 84 | 84 | 84 | 75 | 75 | 75 |
| 1   | 101 | 96  | 91  | 87  | 95  | 91  | 87  | 83  | 81 | 78 | 75 | 72 | 70 | 67 | 64 | 62 | 60 |
| 2   | 91  | 83  | 76  | 70  | 86  | 78  | 72  | 67  | 70 | 65 | 61 | 62 | 59 | 55 | 55 | 52 | 50 |
| 3   | 83  | 72  | 64  | 58  | 78  | 69  | 61  | 55  | 61 | 55 | 51 | 55 | 50 | 46 | 49 | 45 | 42 |
| 4   | 76  | 64  | 55  | 49  | 71  | 61  | 53  | 47  | 54 | 48 | 43 | 49 | 43 | 39 | 43 | 39 | 36 |
| 5   | 70  | 57  | 48  | 41  | 65  | 54  | 46  | 40  | 49 | 42 | 37 | 44 | 38 | 34 | 39 | 34 | 31 |
| 6   | 64  | 51  | 42  | 36  | 60  | 48  | 40  | 35  | 44 | 37 | 32 | 39 | 34 | 29 | 35 | 31 | 27 |
| 7   | 59  | 46  | 38  | 32  | 56  | 44  | 36  | 30  | 40 | 33 | 28 | 36 | 30 | 26 | 32 | 27 | 24 |
| 8   | 55  | 42  | 34  | 28  | 52  | 40  | 32  | 27  | 36 | 30 | 25 | 33 | 27 | 23 | 29 | 25 | 21 |
| 9   | 51  | 38  | 30  | 25  | 48  | 37  | 29  | 24  | 33 | 27 | 22 | 30 | 25 | 21 | 27 | 23 | 19 |
| 10  | 48  | 35  | 28  | 22  | 45  | 34  | 27  | 22  | 31 | 25 | 20 | 28 | 23 | 19 | 25 | 21 | 17 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 15566 | 15566 | 15566 |
| 5°  | 15608 | 15109 | 15097 |
| 10° | 15462 | 14700 | 14588 |
| 15° | 15258 | 14248 | 14048 |
| 20° | 14967 | 13744 | 13467 |
| 25° | 14610 | 13176 | 12866 |
| 30° | 14243 | 12663 | 12263 |
| 35° | 13834 | 12125 | 11772 |
| 40° | 13442 | 11631 | 11252 |
| 45° | 13007 | 11155 | 10825 |
| 50° | 12578 | 10683 | 10361 |
| 55° | 12102 | 10197 | 9933  |
| 60° | 11636 | 9701  | 9496  |
| 65° | 11159 | 9174  | 8984  |
| 70° | 10437 | 8581  | 8455  |
| 75° | 9529  | 7906  | 7911  |
| 80° | 8469  | 7223  | 7290  |
| 85° | 7415  | 6667  | 6844  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 13007 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 137.2  | 2.2       |
| 10°-20°   | 391.1  | 6.2       |
| 20°-30°   | 584.8  | 9.3       |
| 30°-40°   | 698.2  | 11.0      |
| 40°-50°   | 730.6  | 11.6      |
| 50°-60°   | 685.6  | 10.8      |
| 60°-70°   | 572.6  | 9.1       |
| 70°-80°   | 409.5  | 6.5       |
| 80°-90°   | 244.6  | 3.9       |
| 90°-100°  | 170.0  | 2.7       |
| 100°-110° | 194.1  | 3.1       |
| 110°-120° | 275.1  | 4.4       |
| 120°-130° | 296.7  | 4.7       |
| 130°-140° | 290.4  | 4.6       |
| 140°-150° | 257.6  | 4.1       |
| 150°-160° | 204.6  | 3.2       |
| 160°-170° | 132.0  | 2.1       |
| 170°-180° | 45.5   | 0.7       |
| 0°-30°    | 1113.0 | 17.6      |
| 0°-40°    | 1811.3 | 28.7      |
| 0°-60°    | 3227.4 | 51.1      |
| 0°-90°    | 4454.1 | 70.5      |
| 90°-120°  | 639.2  | 10.1      |
| 90°-150°  | 1484.0 | 23.5      |
| 90°-180°  | 1866.0 | 29.5      |
| 0°-180°   | 6320.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1446 | 1446  | 1446 | 1446  | 1446 |      |
| 5°   | 1448 | 1444  | 1435 | 1448  | 1446 | 137  |
| 15°  | 1378 | 1383  | 1382 | 1397  | 1396 | 388  |
| 25°  | 1244 | 1260  | 1265 | 1285  | 1285 | 574  |
| 35°  | 1071 | 1096  | 1117 | 1140  | 1147 | 670  |
| 45°  | 876  | 914   | 953  | 983   | 996  | 675  |
| 55°  | 668  | 720   | 777  | 819   | 832  | 598  |
| 65°  | 462  | 523   | 592  | 640   | 655  | 456  |
| 75°  | 250  | 324   | 403  | 455   | 474  | 268  |
| 85°  | 77   | 156   | 239  | 293   | 309  | 79   |
| 90°  | 21   | 102   | 186  | 242   | 258  | 16   |
| 95°  | 39   | 86    | 167  | 218   | 234  | 39   |
| 105° | 119  | 160   | 196  | 177   | 192  | 125  |
| 115° | 207  | 228   | 288  | 329   | 343  | 205  |
| 125° | 285  | 288   | 335  | 369   | 380  | 255  |
| 135° | 352  | 352   | 371  | 401   | 408  | 271  |
| 145° | 404  | 405   | 406  | 419   | 425  | 253  |
| 155° | 443  | 443   | 443  | 445   | 443  | 204  |
| 165° | 468  | 466   | 466  | 469   | 466  | 132  |
| 175° | 479  | 477   | 477  | 480   | 477  | 46   |
| 180° | 479  | 479   | 479  | 479   | 479  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1446.1 | 1446.1 | 1446.1 | 1446.1 | 1446.1 |
| 2.5°   | 1454.0 | 1449.2 | 1436.6 | 1449.2 | 1447.7 |
| 5°     | 1447.7 | 1444.5 | 1435.1 | 1447.7 | 1446.1 |
| 7.5°   | 1436.6 | 1436.6 | 1427.2 | 1442.9 | 1441.4 |
| 10°    | 1420.9 | 1424.0 | 1416.2 | 1431.9 | 1428.8 |
| 12.5°  | 1402.0 | 1406.7 | 1402.0 | 1416.2 | 1413.0 |
| 15°    | 1378.4 | 1383.1 | 1381.5 | 1397.3 | 1395.7 |
| 17.5°  | 1350.0 | 1359.5 | 1357.9 | 1372.1 | 1368.9 |
| 20°    | 1318.5 | 1327.9 | 1331.1 | 1345.3 | 1346.8 |
| 22.5°  | 1285.4 | 1294.9 | 1299.6 | 1318.5 | 1316.9 |
| 25°    | 1244.5 | 1260.2 | 1264.9 | 1285.4 | 1285.4 |
| 27.5°  | 1205.1 | 1222.4 | 1231.9 | 1249.2 | 1250.8 |
| 30°    | 1162.5 | 1183.0 | 1195.6 | 1214.5 | 1214.5 |
| 32.5°  | 1115.3 | 1138.9 | 1156.2 | 1176.7 | 1181.4 |
| 35°    | 1071.2 | 1096.4 | 1116.9 | 1140.5 | 1146.8 |
| 37.5°  | 1023.9 | 1052.3 | 1075.9 | 1102.7 | 1107.4 |
| 40°    | 976.7  | 1005.0 | 1036.5 | 1063.3 | 1069.6 |
| 42.5°  | 924.7  | 960.9  | 994.0  | 1023.9 | 1033.4 |
| 45°    | 875.8  | 913.7  | 953.0  | 983.0  | 995.6  |
| 47.5°  | 823.9  | 866.4  | 910.5  | 943.6  | 953.0  |
| 50°    | 773.5  | 817.6  | 866.4  | 902.6  | 913.7  |
| 52.5°  | 719.9  | 767.2  | 822.3  | 860.1  | 874.3  |
| 55°    | 667.9  | 719.9  | 776.6  | 819.1  | 831.7  |
| 57.5°  | 617.5  | 671.1  | 732.5  | 775.0  | 789.2  |
| 60°    | 563.9  | 620.7  | 685.2  | 729.3  | 746.7  |
| 62.5°  | 513.5  | 571.8  | 641.1  | 685.2  | 701.0  |
| 65°    | 461.6  | 523.0  | 592.3  | 639.6  | 655.3  |
| 67.5°  | 409.6  | 474.2  | 543.5  | 595.4  | 608.1  |
| 70°    | 354.4  | 422.2  | 497.8  | 548.2  | 563.9  |
| 72.5°  | 304.0  | 371.8  | 450.5  | 502.5  | 518.3  |
| 75°    | 250.5  | 324.5  | 403.3  | 455.3  | 474.2  |
| 77.5°  | 204.8  | 278.8  | 357.6  | 412.7  | 426.9  |
| 80°    | 156.0  | 233.1  | 315.1  | 368.6  | 384.4  |
| 82.5°  | 113.4  | 192.2  | 275.7  | 329.2  | 345.0  |
| 85°    | 77.2   | 156.0  | 239.4  | 293.0  | 308.8  |
| 87.5°  | 47.3   | 126.0  | 206.4  | 259.9  | 275.7  |
| 90°    | 20.9   | 101.6  | 186.5  | 241.6  | 258.0  |
| 92.5°  | 27.1   | 92.6   | 174.6  | 229.1  | 243.7  |
| 95°    | 39.0   | 85.9   | 167.0  | 218.3  | 234.0  |
| 97.5°  | 55.3   | 102.0  | 157.9  | 208.0  | 224.1  |
| 100°   | 74.3   | 131.8  | 148.7  | 197.3  | 213.4  |
| 102.5° | 96.2   | 144.9  | 153.9  | 186.3  | 202.8  |
| 105°   | 118.6  | 160.3  | 196.0  | 177.2  | 192.0  |
| 107.5° | 140.8  | 177.1  | 247.0  | 234.8  | 202.4  |
| 110°   | 163.1  | 194.3  | 261.2  | 290.4  | 252.2  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 185.9 | 210.4 | 274.2 | 316.7 | 330.2 |
| 115°   | 206.7 | 227.7 | 287.6 | 329.0 | 343.0 |
| 117.5° | 228.7 | 243.8 | 299.1 | 339.7 | 352.7 |
| 120°   | 247.4 | 258.5 | 311.5 | 350.6 | 361.6 |
| 122.5° | 268.0 | 273.7 | 323.9 | 360.3 | 371.7 |
| 125°   | 284.9 | 287.7 | 334.9 | 368.7 | 380.4 |
| 127.5° | 303.4 | 304.7 | 345.8 | 378.4 | 388.8 |
| 130°   | 320.4 | 321.8 | 354.7 | 386.0 | 394.7 |
| 132.5° | 335.3 | 338.1 | 362.8 | 392.5 | 402.6 |
| 135°   | 352.0 | 352.5 | 371.3 | 400.7 | 407.5 |
| 137.5° | 366.2 | 367.5 | 379.2 | 406.2 | 413.4 |
| 140°   | 378.9 | 381.0 | 386.8 | 411.8 | 419.0 |
| 142.5° | 392.0 | 392.5 | 393.6 | 415.2 | 422.0 |
| 145°   | 404.1 | 405.0 | 405.7 | 419.0 | 425.3 |
| 147.5° | 414.2 | 416.0 | 416.7 | 422.1 | 426.7 |
| 150°   | 424.9 | 426.0 | 426.7 | 427.4 | 429.5 |
| 152.5° | 434.5 | 434.9 | 435.2 | 436.6 | 434.9 |
| 155°   | 443.4 | 442.7 | 443.0 | 444.8 | 442.7 |
| 157.5° | 450.5 | 450.5 | 450.2 | 452.3 | 449.4 |
| 160°   | 456.9 | 456.6 | 456.2 | 458.3 | 455.8 |
| 162.5° | 463.0 | 461.9 | 461.5 | 464.0 | 461.9 |
| 165°   | 467.6 | 466.5 | 466.2 | 469.0 | 466.5 |
| 167.5° | 471.5 | 470.1 | 470.1 | 472.9 | 470.1 |
| 170°   | 474.7 | 473.3 | 473.3 | 476.1 | 473.3 |
| 172.5° | 476.8 | 475.0 | 475.4 | 478.2 | 475.0 |
| 175°   | 478.6 | 476.8 | 477.2 | 479.7 | 476.8 |
| 177.5° | 479.3 | 477.5 | 477.9 | 480.7 | 477.2 |
| 180°   | 478.6 | 478.6 | 478.6 | 478.6 | 478.6 |

(END OF REPORT)