

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: P1024818

Luminaire Tested: S124DIP-B1020D1035UB30-4F0-XX-W2A-D4

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1024818  
REPORT IS A COMBINATION OF REPORTS P995148 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DIP-B1020D1035UB30-4F0-XX-W2A-D4  
Description: Define 4 Direct/Indirect Pendant with 3000K BioUP LEDs {m-DER=0.589} {m-EER=0.647}  
Light Source: -  
Ballast/Driver: -

**Summary**

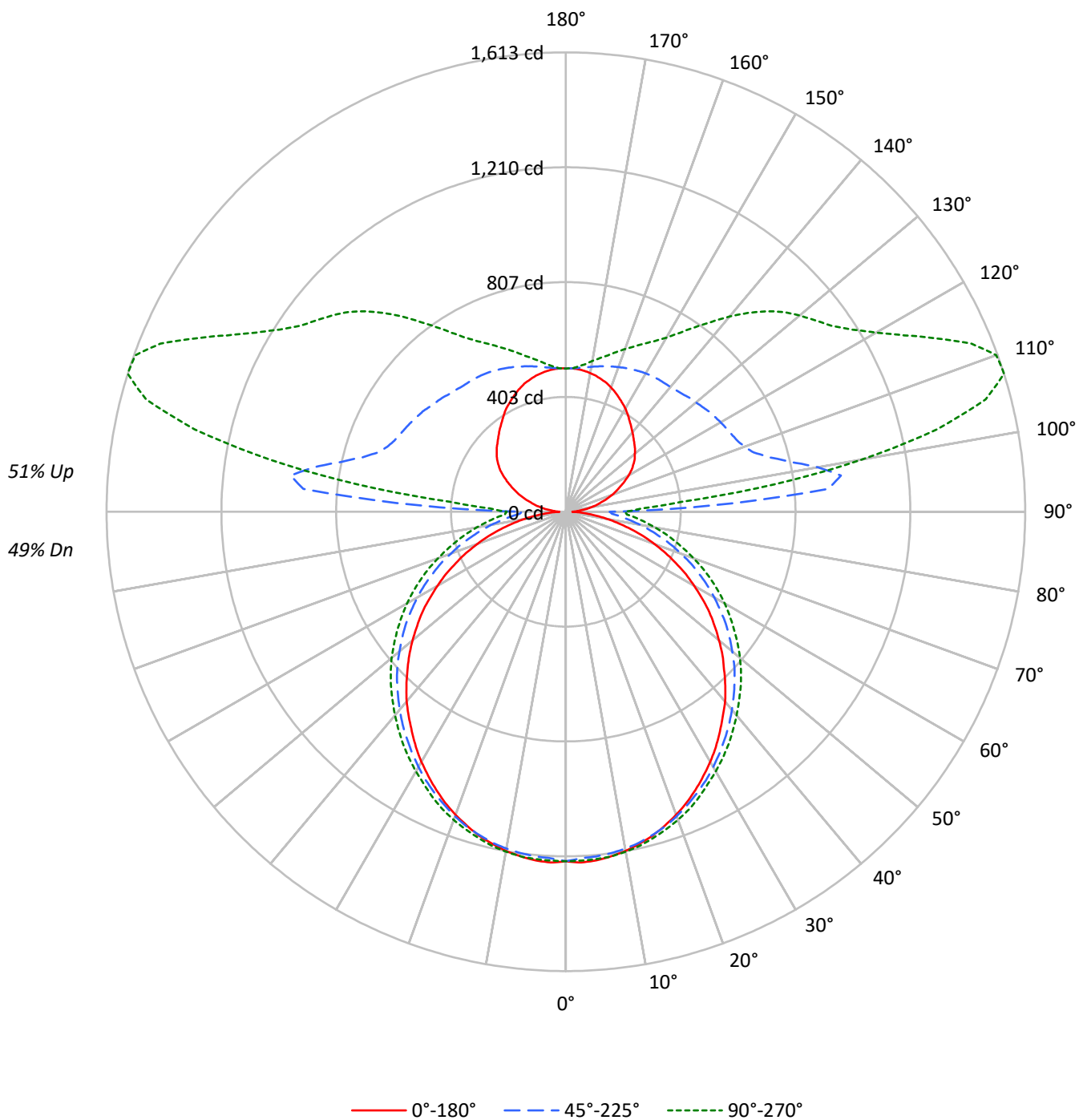
Lumens per Lamp: N/A  
Luminaire Lumens: 7857.3 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.1')  
CIE Type: General Diffuse

Input Watts (W): 75.3  
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 | 99 | 99 | 99 | 99 | 83 | 83 | 83 | 69 | 69 | 69 | 55 | 55 | 55 |
| 1   | 97  | 92  | 88  | 84  | 89 | 85 | 81 | 78 | 71 | 69 | 66 | 59 | 57 | 55 | 47 | 46 | 45 |
| 2   | 88  | 80  | 73  | 68  | 80 | 73 | 68 | 63 | 62 | 58 | 54 | 51 | 48 | 45 | 41 | 39 | 37 |
| 3   | 80  | 70  | 62  | 56  | 73 | 64 | 57 | 52 | 54 | 49 | 45 | 45 | 41 | 38 | 36 | 33 | 31 |
| 4   | 73  | 61  | 53  | 47  | 66 | 57 | 49 | 44 | 48 | 42 | 38 | 40 | 35 | 32 | 32 | 29 | 26 |
| 5   | 67  | 55  | 46  | 40  | 61 | 50 | 43 | 37 | 43 | 37 | 32 | 35 | 31 | 28 | 29 | 25 | 23 |
| 6   | 61  | 49  | 40  | 34  | 56 | 45 | 38 | 32 | 38 | 32 | 28 | 32 | 27 | 24 | 26 | 23 | 20 |
| 7   | 57  | 44  | 36  | 30  | 52 | 41 | 33 | 28 | 35 | 29 | 25 | 29 | 24 | 21 | 24 | 20 | 18 |
| 8   | 52  | 40  | 32  | 26  | 48 | 37 | 30 | 25 | 32 | 26 | 22 | 26 | 22 | 19 | 22 | 18 | 16 |
| 9   | 49  | 36  | 29  | 23  | 45 | 34 | 27 | 22 | 29 | 23 | 19 | 24 | 20 | 17 | 20 | 17 | 14 |
| 10  | 46  | 33  | 26  | 21  | 42 | 31 | 24 | 20 | 27 | 21 | 17 | 22 | 18 | 15 | 19 | 15 | 13 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10007 | 10007 | 10007 |
| 5°  | 10035 | 9746  | 9764  |
| 10° | 9969  | 9555  | 9527  |
| 15° | 9876  | 9339  | 9260  |
| 20° | 9738  | 9106  | 9001  |
| 25° | 9582  | 8848  | 8722  |
| 30° | 9414  | 8593  | 8436  |
| 35° | 9223  | 8333  | 8182  |
| 40° | 9070  | 8082  | 7919  |
| 45° | 8844  | 7847  | 7686  |
| 50° | 8650  | 7580  | 7441  |
| 55° | 8452  | 7323  | 7159  |
| 60° | 8141  | 7003  | 6893  |
| 65° | 7801  | 6658  | 6574  |
| 70° | 7389  | 6263  | 6205  |
| 75° | 6813  | 5825  | 5852  |
| 80° | 6161  | 5378  | 5483  |
| 85° | 5298  | 4930  | 5186  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
Vertical Angle: 45°  
Luminance: 8844 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 116.3  | 1.5       |
| 10°-20°   | 333.2  | 4.2       |
| 20°-30°   | 503.7  | 6.4       |
| 30°-40°   | 609.4  | 7.8       |
| 40°-50°   | 644.3  | 8.2       |
| 50°-60°   | 606.3  | 7.7       |
| 60°-70°   | 503.1  | 6.4       |
| 70°-80°   | 353.1  | 4.5       |
| 80°-90°   | 201.0  | 2.6       |
| 90°-100°  | 492.2  | 6.3       |
| 100°-110° | 847.8  | 10.8      |
| 110°-120° | 736.3  | 9.4       |
| 120°-130° | 602.2  | 7.7       |
| 130°-140° | 489.2  | 6.2       |
| 140°-150° | 365.5  | 4.7       |
| 150°-160° | 254.9  | 3.2       |
| 160°-170° | 149.9  | 1.9       |
| 170°-180° | 48.8   | 0.6       |
| 0°-30°    | 953.2  | 12.1      |
| 0°-40°    | 1562.6 | 19.9      |
| 0°-60°    | 2813.2 | 35.8      |
| 0°-90°    | 3870.4 | 49.3      |
| 90°-120°  | 2076.3 | 26.4      |
| 90°-150°  | 3533.3 | 45.0      |
| 90°-180°  | 3987.0 | 50.7      |
| 0°-180°   | 7857.3 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1227 | 1227  | 1227 | 1227  | 1227 |      |
| 5°   | 1229 | 1224  | 1215 | 1226  | 1224 | 117  |
| 15°  | 1178 | 1179  | 1175 | 1187  | 1186 | 332  |
| 25°  | 1077 | 1086  | 1090 | 1105  | 1106 | 496  |
| 35°  | 943  | 959   | 973  | 992   | 996  | 590  |
| 45°  | 786  | 812   | 838  | 862   | 868  | 608  |
| 55°  | 616  | 644   | 686  | 713   | 722  | 549  |
| 65°  | 426  | 470   | 517  | 551   | 562  | 422  |
| 75°  | 236  | 287   | 345  | 383   | 396  | 251  |
| 85°  | 73   | 131   | 192  | 234   | 247  | 76   |
| 90°  | 23   | 85    | 154  | 196   | 208  | 17   |
| 95°  | 50   | 166   | 925  | 556   | 410  | 50   |
| 105° | 128  | 207   | 739  | 1521  | 1527 | 137  |
| 115° | 212  | 276   | 643  | 1206  | 1440 | 211  |
| 125° | 289  | 341   | 614  | 1010  | 1138 | 258  |
| 135° | 340  | 404   | 583  | 874   | 995  | 263  |
| 145° | 390  | 445   | 567  | 716   | 792  | 245  |
| 155° | 442  | 477   | 552  | 625   | 651  | 204  |
| 165° | 481  | 496   | 529  | 560   | 568  | 136  |
| 175° | 502  | 503   | 507  | 514   | 512  | 48   |
| 180° | 503  | 503   | 503  | 503   | 503  |      |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1227.2 | 1227.2 | 1227.2 | 1227.2 | 1227.2 |
| 2.5°   | 1232.7 | 1228.6 | 1217.6 | 1227.2 | 1225.8 |
| 5°     | 1228.6 | 1224.4 | 1214.8 | 1225.8 | 1224.4 |
| 7.5°   | 1220.3 | 1217.6 | 1209.3 | 1221.7 | 1220.3 |
| 10°    | 1209.3 | 1208.0 | 1201.1 | 1213.4 | 1212.1 |
| 12.5°  | 1194.2 | 1194.2 | 1190.1 | 1201.1 | 1201.1 |
| 15°    | 1177.7 | 1179.1 | 1175.0 | 1187.3 | 1186.0 |
| 17.5°  | 1155.7 | 1159.9 | 1158.5 | 1170.8 | 1169.5 |
| 20°    | 1132.4 | 1136.5 | 1137.9 | 1151.6 | 1151.6 |
| 22.5°  | 1106.3 | 1111.8 | 1114.5 | 1128.2 | 1131.0 |
| 25°    | 1077.4 | 1085.6 | 1089.8 | 1104.9 | 1106.3 |
| 27.5°  | 1045.8 | 1058.2 | 1063.7 | 1077.4 | 1078.8 |
| 30°    | 1014.2 | 1025.2 | 1034.8 | 1049.9 | 1052.7 |
| 32.5°  | 979.8  | 993.6  | 1004.6 | 1022.4 | 1025.2 |
| 35°    | 942.7  | 959.2  | 973.0  | 992.2  | 996.3  |
| 37.5°  | 905.6  | 924.9  | 941.4  | 960.6  | 964.7  |
| 40°    | 869.9  | 887.8  | 907.0  | 927.6  | 933.1  |
| 42.5°  | 828.7  | 849.3  | 872.6  | 896.0  | 900.1  |
| 45°    | 786.1  | 812.2  | 838.3  | 861.6  | 868.5  |
| 47.5°  | 746.2  | 772.3  | 802.6  | 825.9  | 834.2  |
| 50°    | 702.2  | 732.5  | 762.7  | 790.2  | 798.4  |
| 52.5°  | 658.3  | 688.5  | 724.2  | 751.7  | 760.0  |
| 55°    | 615.7  | 644.5  | 685.7  | 713.2  | 721.5  |
| 57.5°  | 567.6  | 603.3  | 643.1  | 676.1  | 683.0  |
| 60°    | 520.8  | 556.6  | 601.9  | 633.5  | 644.5  |
| 62.5°  | 475.5  | 515.3  | 560.7  | 592.3  | 603.3  |
| 65°    | 426.0  | 470.0  | 516.7  | 551.1  | 562.1  |
| 67.5°  | 379.3  | 426.0  | 475.5  | 509.8  | 520.8  |
| 70°    | 331.2  | 377.9  | 430.1  | 467.2  | 476.9  |
| 72.5°  | 284.5  | 332.6  | 388.9  | 424.6  | 435.6  |
| 75°    | 236.4  | 287.2  | 344.9  | 383.4  | 395.8  |
| 77.5°  | 191.0  | 244.6  | 305.1  | 343.6  | 357.3  |
| 80°    | 149.8  | 204.8  | 265.2  | 306.5  | 317.4  |
| 82.5°  | 108.6  | 166.3  | 226.7  | 269.4  | 281.7  |
| 85°    | 72.8   | 130.6  | 192.4  | 233.6  | 247.4  |
| 87.5°  | 45.3   | 101.7  | 162.2  | 202.0  | 214.4  |
| 90°    | 23.0   | 84.9   | 153.8  | 195.7  | 207.7  |
| 92.5°  | 34.4   | 144.9  | 515.2  | 294.2  | 267.2  |
| 95°    | 50.5   | 166.0  | 925.1  | 555.5  | 410.2  |
| 97.5°  | 70.9   | 170.0  | 974.5  | 962.8  | 740.0  |
| 100°   | 90.2   | 179.3  | 899.0  | 1268.2 | 1057.5 |
| 102.5° | 110.0  | 191.6  | 808.2  | 1455.7 | 1335.3 |
| 105°   | 128.0  | 207.4  | 739.1  | 1521.1 | 1526.6 |
| 107.5° | 150.8  | 225.0  | 691.6  | 1492.0 | 1613.3 |
| 110°   | 172.1  | 241.2  | 667.4  | 1404.6 | 1608.4 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5°  | 90°    |
|--------|-------|-------|-------|--------|--------|
| 112.5° | 192.4 | 258.8 | 651.7 | 1299.6 | 1541.9 |
| 115°   | 211.8 | 276.0 | 642.8 | 1205.8 | 1439.7 |
| 117.5° | 233.5 | 293.2 | 634.9 | 1129.3 | 1341.0 |
| 120°   | 254.0 | 308.5 | 628.0 | 1075.0 | 1257.5 |
| 122.5° | 273.8 | 324.6 | 620.2 | 1038.2 | 1190.0 |
| 125°   | 289.2 | 341.2 | 613.7 | 1010.0 | 1138.3 |
| 127.5° | 305.0 | 359.0 | 604.8 | 981.4  | 1103.8 |
| 130°   | 316.4 | 374.8 | 597.0 | 950.4  | 1071.8 |
| 132.5° | 329.3 | 389.7 | 590.5 | 914.8  | 1038.2 |
| 135°   | 339.7 | 404.0 | 582.7 | 873.5  | 995.4  |
| 137.5° | 351.6 | 415.0 | 577.2 | 831.0  | 946.7  |
| 140°   | 364.4 | 426.4 | 572.0 | 789.6  | 895.3  |
| 142.5° | 377.0 | 436.8 | 569.3 | 751.9  | 840.9  |
| 145°   | 389.8 | 444.8 | 567.3 | 715.8  | 791.5  |
| 147.5° | 404.7 | 453.6 | 564.4 | 684.8  | 745.2  |
| 150°   | 418.5 | 462.0 | 561.4 | 661.2  | 705.7  |
| 152.5° | 429.9 | 470.0 | 556.4 | 642.4  | 676.0  |
| 155°   | 441.8 | 476.9 | 551.5 | 624.7  | 651.3  |
| 157.5° | 453.7 | 483.3 | 546.6 | 607.8  | 628.6  |
| 160°   | 464.5 | 488.8 | 540.6 | 591.0  | 607.8  |
| 162.5° | 474.4 | 493.2 | 534.7 | 574.8  | 588.1  |
| 165°   | 481.3 | 496.2 | 528.8 | 559.9  | 568.3  |
| 167.5° | 489.2 | 498.6 | 522.8 | 547.0  | 552.5  |
| 170°   | 494.2 | 500.6 | 516.9 | 534.2  | 537.7  |
| 172.5° | 499.1 | 502.1 | 511.0 | 522.8  | 522.8  |
| 175°   | 502.1 | 503.1 | 507.0 | 513.9  | 512.0  |
| 177.5° | 504.1 | 503.1 | 504.1 | 507.5  | 504.1  |
| 180°   | 503.1 | 503.1 | 503.1 | 503.1  | 503.1  |

(END OF REPORT)