

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: P996444

Luminaire Tested: S124DRP-B1020DB2750-4F0-XX-W2A-D\_2700K

Issue Date: 5/2/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P996444  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/2/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-B1020DB2750-4F0-XX-W2A-D\_2700K  
Description: Define 4 Direct Perimeter with 2700K BioUP LEDs {m-DER=0.473} {m-EER=0.52}  
Light Source: -  
Ballast/Driver: -

**Summary**

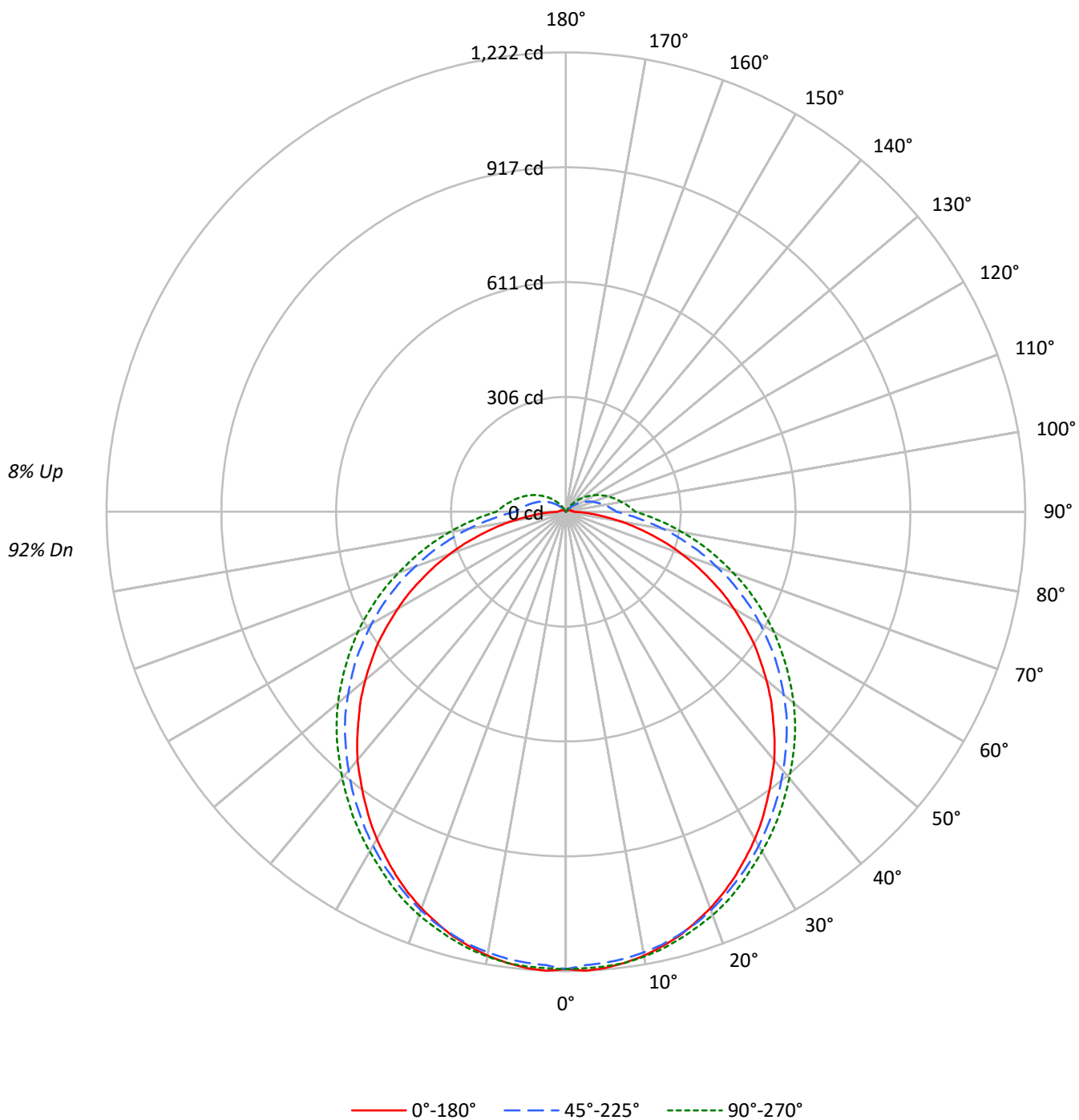
Lumens per Lamp: N/A  
Luminaire Lumens: 4148.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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 | 50 | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |
| 0   | 117 | 117 | 117 | 117 | 114 | 114 | 114 | 114 | 107 | 107 | 107 | 101 | 101 | 101 | 95 | 95 | 95 | 95 | 95 | 92 |
| 1   | 105 | 100 | 95  | 91  | 102 | 97  | 93  | 89  | 91  | 88  | 84  | 86  | 83  | 80  | 81 | 79 | 77 | 77 | 77 | 74 |
| 2   | 95  | 86  | 79  | 73  | 92  | 84  | 77  | 71  | 79  | 73  | 68  | 74  | 70  | 66  | 70 | 67 | 63 | 63 | 63 | 60 |
| 3   | 87  | 75  | 67  | 60  | 83  | 73  | 65  | 59  | 69  | 62  | 57  | 65  | 60  | 55  | 62 | 57 | 53 | 53 | 53 | 50 |
| 4   | 79  | 66  | 57  | 50  | 76  | 65  | 56  | 49  | 61  | 54  | 48  | 58  | 52  | 47  | 55 | 49 | 45 | 45 | 45 | 43 |
| 5   | 73  | 59  | 50  | 43  | 70  | 58  | 49  | 42  | 55  | 47  | 41  | 52  | 45  | 40  | 49 | 44 | 39 | 39 | 39 | 37 |
| 6   | 67  | 53  | 44  | 37  | 64  | 52  | 43  | 37  | 49  | 42  | 36  | 47  | 40  | 35  | 45 | 39 | 34 | 34 | 34 | 32 |
| 7   | 62  | 48  | 39  | 33  | 60  | 47  | 38  | 32  | 45  | 37  | 32  | 43  | 36  | 31  | 41 | 35 | 30 | 30 | 30 | 28 |
| 8   | 58  | 44  | 35  | 29  | 56  | 43  | 35  | 29  | 41  | 33  | 28  | 39  | 32  | 28  | 37 | 31 | 27 | 27 | 27 | 25 |
| 9   | 54  | 40  | 32  | 26  | 52  | 39  | 31  | 26  | 38  | 30  | 25  | 36  | 29  | 25  | 34 | 29 | 24 | 24 | 24 | 22 |
| 10  | 50  | 37  | 29  | 24  | 49  | 36  | 29  | 23  | 35  | 28  | 23  | 33  | 27  | 23  | 32 | 26 | 22 | 22 | 22 | 20 |

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

|     | 0°   | 45°   | 90°   |
|-----|------|-------|-------|
| 0°  | 9921 | 9921  | 9921  |
| 5°  | 9970 | 9859  | 9937  |
| 10° | 9927 | 9859  | 9950  |
| 15° | 9857 | 9834  | 9926  |
| 20° | 9742 | 9789  | 9907  |
| 25° | 9610 | 9721  | 9868  |
| 30° | 9468 | 9660  | 9827  |
| 35° | 9304 | 9602  | 9832  |
| 40° | 9180 | 9572  | 9848  |
| 45° | 8987 | 9584  | 9929  |
| 50° | 8832 | 9592  | 10042 |
| 55° | 8678 | 9665  | 10169 |
| 60° | 8422 | 9732  | 10421 |
| 65° | 8148 | 9885  | 10751 |
| 70° | 7827 | 10166 | 11273 |
| 75° | 7382 | 10775 | 12363 |
| 80° | 6974 | 12346 | 14778 |
| 85° | 6755 | 17842 | 22941 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 87.5°

Luminance: 39726 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 115.3  | 2.8       |
| 10°-20°   | 330.3  | 8.0       |
| 20°-30°   | 499.4  | 12.0      |
| 30°-40°   | 604.2  | 14.6      |
| 40°-50°   | 638.7  | 15.4      |
| 50°-60°   | 601.1  | 14.5      |
| 60°-70°   | 498.8  | 12.0      |
| 70°-80°   | 350.0  | 8.4       |
| 80°-90°   | 197.3  | 4.8       |
| 90°-100°  | 117.5  | 2.8       |
| 100°-110° | 87.0   | 2.1       |
| 110°-120° | 58.4   | 1.4       |
| 120°-130° | 32.9   | 0.8       |
| 130°-140° | 14.2   | 0.3       |
| 140°-150° | 2.8    | 0.1       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 945.0  | 22.8      |
| 0°-40°    | 1549.1 | 37.3      |
| 0°-60°    | 2789.0 | 67.2      |
| 0°-90°    | 3835.2 | 92.5      |
| 90°-120°  | 262.9  | 6.3       |
| 90°-150°  | 312.8  | 7.5       |
| 90°-180°  | 313.0  | 7.5       |
| 0°-180°   | 4148.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1217 | 1217  | 1217 | 1217  | 1217 |      |
| 5°   | 1218 | 1214  | 1204 | 1215  | 1214 | 116  |
| 15°  | 1168 | 1169  | 1165 | 1177  | 1176 | 329  |
| 25°  | 1068 | 1076  | 1080 | 1095  | 1097 | 492  |
| 35°  | 935  | 951   | 965  | 984   | 988  | 585  |
| 45°  | 779  | 805   | 831  | 854   | 861  | 602  |
| 55°  | 610  | 639   | 680  | 707   | 715  | 544  |
| 65°  | 422  | 466   | 512  | 546   | 557  | 419  |
| 75°  | 234  | 285   | 342  | 380   | 392  | 249  |
| 85°  | 72   | 129   | 191  | 232   | 245  | 75   |
| 90°  | 22   | 76    | 135  | 174   | 185  | 15   |
| 95°  | 18   | 63    | 118  | 155   | 168  | 14   |
| 105° | 12   | 40    | 90   | 124   | 135  | 14   |
| 115° | 8    | 20    | 64   | 94    | 104  | 9    |
| 125° | 5    | 4     | 38   | 64    | 72   | 5    |
| 135° | 3    | 3     | 12   | 34    | 42   | 3    |
| 145° | 1    | 0     | 0    | 8     | 14   | 1    |
| 155° | 0    | 0     | 0    | 0     | 0    | 0    |
| 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 175° | 0    | 0     | 0    | 0     | 0    | 0    |
| 180° | 0    | 0     | 0    | 0     | 0    | 0    |

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 1216.6 | 1216.6 | 1216.6 | 1216.6 | 1216.6 |
| 2.5°   | 1222.1 | 1218.0 | 1207.1 | 1216.6 | 1215.3 |
| 5°     | 1218.0 | 1213.9 | 1204.4 | 1215.3 | 1213.9 |
| 7.5°   | 1209.8 | 1207.1 | 1198.9 | 1211.2 | 1209.8 |
| 10°    | 1198.9 | 1197.6 | 1190.7 | 1203.0 | 1201.6 |
| 12.5°  | 1183.9 | 1183.9 | 1179.8 | 1190.7 | 1190.7 |
| 15°    | 1167.6 | 1168.9 | 1164.9 | 1177.1 | 1175.8 |
| 17.5°  | 1145.8 | 1149.9 | 1148.5 | 1160.8 | 1159.4 |
| 20°    | 1122.6 | 1126.7 | 1128.1 | 1141.7 | 1141.7 |
| 22.5°  | 1096.7 | 1102.2 | 1104.9 | 1118.5 | 1121.3 |
| 25°    | 1068.1 | 1076.3 | 1080.4 | 1095.4 | 1096.7 |
| 27.5°  | 1036.8 | 1049.1 | 1054.5 | 1068.1 | 1069.5 |
| 30°    | 1005.5 | 1016.4 | 1025.9 | 1040.9 | 1043.6 |
| 32.5°  | 971.4  | 985.0  | 995.9  | 1013.6 | 1016.4 |
| 35°    | 934.6  | 951.0  | 964.6  | 983.7  | 987.7  |
| 37.5°  | 897.8  | 916.9  | 933.3  | 952.3  | 956.4  |
| 40°    | 862.4  | 880.1  | 899.2  | 919.6  | 925.1  |
| 42.5°  | 821.5  | 842.0  | 865.1  | 888.3  | 892.4  |
| 45°    | 779.3  | 805.2  | 831.1  | 854.2  | 861.0  |
| 47.5°  | 739.8  | 765.7  | 795.6  | 818.8  | 827.0  |
| 50°    | 696.2  | 726.2  | 756.1  | 783.4  | 791.6  |
| 52.5°  | 652.6  | 682.6  | 718.0  | 745.2  | 753.4  |
| 55°    | 610.4  | 639.0  | 679.8  | 707.1  | 715.3  |
| 57.5°  | 562.7  | 598.1  | 637.6  | 670.3  | 677.1  |
| 60°    | 516.4  | 551.8  | 596.7  | 628.1  | 639.0  |
| 62.5°  | 471.4  | 510.9  | 555.9  | 587.2  | 598.1  |
| 65°    | 422.3  | 465.9  | 512.3  | 546.3  | 557.2  |
| 67.5°  | 376.0  | 422.3  | 471.4  | 505.5  | 516.4  |
| 70°    | 328.3  | 374.7  | 426.4  | 463.2  | 472.8  |
| 72.5°  | 282.0  | 329.7  | 385.6  | 421.0  | 431.9  |
| 75°    | 234.3  | 284.7  | 342.0  | 380.1  | 392.4  |
| 77.5°  | 189.4  | 242.5  | 302.5  | 340.6  | 354.2  |
| 80°    | 148.5  | 203.0  | 262.9  | 303.8  | 314.7  |
| 82.5°  | 107.6  | 164.9  | 224.8  | 267.0  | 279.3  |
| 85°    | 72.2   | 129.4  | 190.7  | 231.6  | 245.2  |
| 87.5°  | 45.0   | 100.8  | 160.8  | 200.3  | 212.5  |
| 90°    | 21.8   | 76.3   | 134.9  | 174.4  | 185.3  |
| 92.5°  | 20.4   | 68.1   | 126.7  | 164.9  | 175.8  |
| 95°    | 17.7   | 62.7   | 118.5  | 155.3  | 167.6  |
| 97.5°  | 16.3   | 55.9   | 111.7  | 147.1  | 159.4  |
| 100°   | 15.0   | 50.4   | 103.5  | 140.3  | 149.9  |
| 102.5° | 15.0   | 45.0   | 96.7   | 132.2  | 143.1  |
| 105°   | 12.3   | 39.5   | 89.9   | 124.0  | 134.9  |
| 107.5° | 12.3   | 35.4   | 83.1   | 117.2  | 126.7  |
| 110°   | 10.9   | 30.0   | 77.7   | 109.0  | 119.9  |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°   |
|--------|-----|-------|------|-------|-------|
| 112.5° | 9.5 | 25.9  | 70.8 | 100.8 | 111.7 |
| 115°   | 8.2 | 20.4  | 64.0 | 94.0  | 103.5 |
| 117.5° | 8.2 | 16.3  | 57.2 | 85.8  | 96.7  |
| 120°   | 6.8 | 10.9  | 50.4 | 77.7  | 88.6  |
| 122.5° | 6.8 | 6.8   | 43.6 | 70.8  | 80.4  |
| 125°   | 5.4 | 4.1   | 38.1 | 64.0  | 72.2  |
| 127.5° | 5.4 | 4.1   | 31.3 | 55.9  | 65.4  |
| 130°   | 4.1 | 2.7   | 24.5 | 49.0  | 57.2  |
| 132.5° | 4.1 | 2.7   | 19.1 | 42.2  | 50.4  |
| 135°   | 2.7 | 2.7   | 12.3 | 34.1  | 42.2  |
| 137.5° | 2.7 | 1.4   | 6.8  | 27.2  | 34.1  |
| 140°   | 2.7 | 1.4   | 2.7  | 20.4  | 27.2  |
| 142.5° | 1.4 | 1.4   | 0.0  | 15.0  | 20.4  |
| 145°   | 1.4 | 0.0   | 0.0  | 8.2   | 13.6  |
| 147.5° | 1.4 | 0.0   | 0.0  | 1.4   | 6.8   |
| 150°   | 1.4 | 0.0   | 0.0  | 0.0   | 0.0   |
| 152.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 155°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 157.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 160°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 162.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 165°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 167.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 170°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 172.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 175°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 177.5° | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |
| 180°   | 0.0 | 0.0   | 0.0  | 0.0   | 0.0   |

(END OF REPORT)