

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P730665

Luminaire Tested: **HBLED-LD5-24HE-N-CL-WG-UNV-L740**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730665  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33344)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-24HE-N-CL-WG-UNV-L740  
Description: 24000 LUMEN, HE HBLED WITH NARROW DISTRIBUTION AND CLEAR ACRYLIC LENS, WIREGUARD & DOOR FRAME  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22835.0 lumens  
Efficiency: N/A  
Efficacy: 159.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.81 / 0.91  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

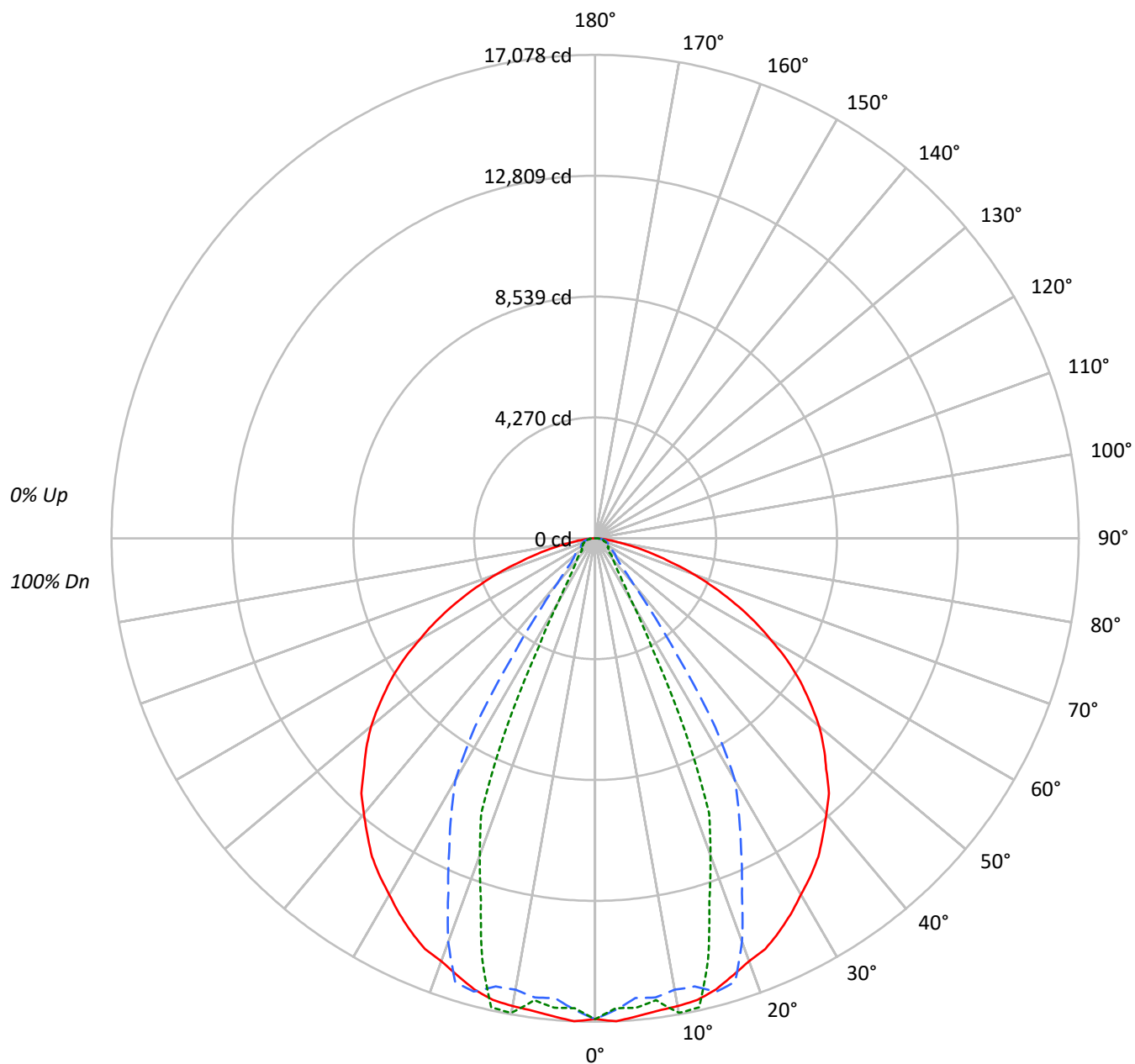
Input Watts (W): 143  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 111 | 108 | 104 | 101 | 109 | 105 | 103 | 100 | 101 | 99  | 97  | 98  | 96  | 94  | 94  | 92  | 91  | 89  |    |    |
| 2   | 104 | 97  | 92  | 88  | 101 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 84  | 81  | 79  |    |    |
| 3   | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 77  | 74  | 79  | 76  | 73  | 71  |    |    |
| 4   | 90  | 81  | 74  | 68  | 88  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 64  |    |    |
| 5   | 85  | 74  | 67  | 62  | 83  | 73  | 66  | 61  | 71  | 65  | 61  | 69  | 64  | 60  | 68  | 63  | 59  | 58  |    |    |
| 6   | 79  | 68  | 61  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 55  | 64  | 59  | 55  | 63  | 58  | 54  | 53  |    |    |
| 7   | 75  | 63  | 56  | 51  | 73  | 63  | 56  | 51  | 61  | 55  | 50  | 60  | 54  | 50  | 59  | 54  | 50  | 48  |    |    |
| 8   | 70  | 59  | 52  | 47  | 69  | 58  | 51  | 47  | 57  | 51  | 46  | 56  | 50  | 46  | 55  | 50  | 46  | 44  |    |    |
| 9   | 66  | 55  | 48  | 43  | 65  | 54  | 48  | 43  | 53  | 47  | 43  | 52  | 47  | 43  | 52  | 46  | 43  | 41  |    |    |
| 10  | 63  | 52  | 45  | 40  | 62  | 51  | 45  | 40  | 50  | 44  | 40  | 49  | 44  | 40  | 48  | 43  | 40  | 38  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 27425 | 27425 | 27425 |
| 5°  | 27470 | 26424 | 26981 |
| 10° | 27510 | 26551 | 27914 |
| 15° | 27572 | 27715 | 25759 |
| 20° | 27311 | 26068 | 20446 |
| 25° | 27350 | 21732 | 13356 |
| 30° | 27105 | 18410 | 4798  |
| 35° | 27076 | 9973  | 2699  |
| 40° | 26770 | 4348  | 2114  |
| 45° | 26356 | 2687  | 1657  |
| 50° | 25945 | 2341  | 1564  |
| 55° | 24926 | 2030  | 1530  |
| 60° | 23126 | 1819  | 1645  |
| 65° | 20787 | 2056  | 1798  |
| 70° | 17434 | 2210  | 1853  |
| 75° | 13032 | 2521  | 2007  |
| 80° | 8185  | 2927  | 2288  |
| 85° | 5450  | 3668  | 3351  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1574.4  | 6.9       |
| 10°-20°   | 4445.6  | 19.5      |
| 20°-30°   | 5443.8  | 23.8      |
| 30°-40°   | 4275.0  | 18.7      |
| 40°-50°   | 3170.2  | 13.9      |
| 50°-60°   | 1929.9  | 8.5       |
| 60°-70°   | 1156.1  | 5.1       |
| 70°-80°   | 634.3   | 2.8       |
| 80°-90°   | 205.7   | 0.9       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-30°    | 11463.8 | 50.2      |
| 0°-40°    | 15738.8 | 68.9      |
| 0°-60°    | 20838.9 | 91.3      |
| 0°-90°    | 22835.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 22835.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 16986 | 16986 | 16986 | 16986 | 16986 |      |
| 5°  | 16949 | 16488 | 16304 | 16483 | 16647 | ###  |
| 15° | 16495 | 16042 | 16581 | 15911 | 15411 | 4644 |
| 25° | 15352 | 15400 | 12198 | 9568  | 7497  | 7067 |
| 35° | 13737 | 12496 | 5060  | 1693  | 1369  | 8572 |
| 45° | 11543 | 8288  | 1177  | 892   | 726   | 8926 |
| 55° | 8855  | 2284  | 721   | 610   | 544   | 7880 |
| 65° | 5441  | 673   | 538   | 506   | 470   | 5376 |
| 75° | 2089  | 425   | 404   | 351   | 322   | 2262 |
| 85° | 294   | 231   | 198   | 182   | 181   | 359  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 16985.8 | 16985.8 | 16985.8 | 16985.8 | 16985.8 |
| 2.5°  | 17078.5 | 16848.4 | 16672.2 | 16573.7 | 16613.7 |
| 5°    | 16949.1 | 16487.8 | 16303.5 | 16483.3 | 16647.0 |
| 7.5°  | 16836.9 | 16151.3 | 16359.6 | 16375.7 | 16461.5 |
| 10°   | 16779.8 | 16119.2 | 16194.7 | 16550.8 | 17025.8 |
| 12.5° | 16704.3 | 16193.7 | 16219.9 | 16705.3 | 16973.2 |
| 15°   | 16494.8 | 16042.5 | 16580.6 | 15910.9 | 15410.6 |
| 17.5° | 16189.1 | 15689.9 | 16429.4 | 14095.3 | 13415.3 |
| 20°   | 15894.8 | 15306.5 | 15171.4 | 12555.6 | 11899.7 |
| 22.5° | 15704.9 | 15248.1 | 13552.8 | 11187.6 | 10509.9 |
| 25°   | 15352.3 | 15400.3 | 12198.5 | 9567.8  | 7497.0  |
| 27.5° | 14964.2 | 15042.0 | 11001.1 | 6380.9  | 4295.1  |
| 30°   | 14538.3 | 14627.7 | 9874.6  | 3770.8  | 2573.4  |
| 32.5° | 14152.6 | 13648.9 | 7886.2  | 2352.5  | 1789.2  |
| 35°   | 13737.0 | 12496.1 | 5059.8  | 1693.1  | 1369.2  |
| 37.5° | 13213.9 | 11284.9 | 3203.0  | 1339.3  | 1149.4  |
| 40°   | 12701.1 | 10197.4 | 2062.9  | 1143.6  | 1002.8  |
| 42.5° | 12221.4 | 9301.1  | 1500.8  | 999.4   | 905.5   |
| 45°   | 11542.6 | 8288.0  | 1176.8  | 891.7   | 725.8   |
| 47.5° | 10955.3 | 7099.8  | 1029.1  | 754.4   | 626.2   |
| 50°   | 10329.1 | 5428.5  | 931.8   | 670.8   | 622.8   |
| 52.5° | 9586.1  | 3551.0  | 860.8   | 642.2   | 581.5   |
| 55°   | 8854.7  | 2283.8  | 721.2   | 610.1   | 543.7   |
| 57.5° | 8064.8  | 1448.1  | 636.5   | 591.8   | 567.8   |
| 60°   | 7161.6  | 976.5   | 563.3   | 560.9   | 509.4   |
| 62.5° | 6325.9  | 802.5   | 543.7   | 538.1   | 482.0   |
| 65°   | 5441.0  | 673.1   | 538.1   | 506.0   | 470.5   |
| 67.5° | 4557.2  | 577.0   | 486.6   | 462.4   | 431.5   |
| 70°   | 3693.0  | 527.8   | 468.2   | 457.9   | 392.6   |
| 72.5° | 2804.6  | 435.0   | 415.6   | 388.1   | 326.3   |
| 75°   | 2089.1  | 424.7   | 404.1   | 351.4   | 321.7   |
| 77.5° | 1413.8  | 391.5   | 367.5   | 314.8   | 290.8   |
| 80°   | 880.3   | 359.5   | 314.8   | 275.9   | 246.1   |
| 82.5° | 523.1   | 299.9   | 258.7   | 227.8   | 208.3   |
| 85°   | 294.2   | 231.3   | 198.0   | 182.0   | 180.9   |
| 87.5° | 63.0    | 83.6    | 66.4    | 63.0    | 44.6    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180°    - - 45°-225°    - - - 90°-270°







(END OF REPORT)