

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: P730790

Luminaire Tested: **HBLED-LD5-24SE-W-UNV-L735**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730790  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2304-003-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-24SE-W-UNV-L735  
Description: 24000 LUMEN, SE HBLED WITH WIDE DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24839.0 lumens  
Efficiency: N/A  
Efficacy: 165.6 lumens/watt  
Spacing Criteria (0/90/45): 1.3 / 1.31 / 1.43  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

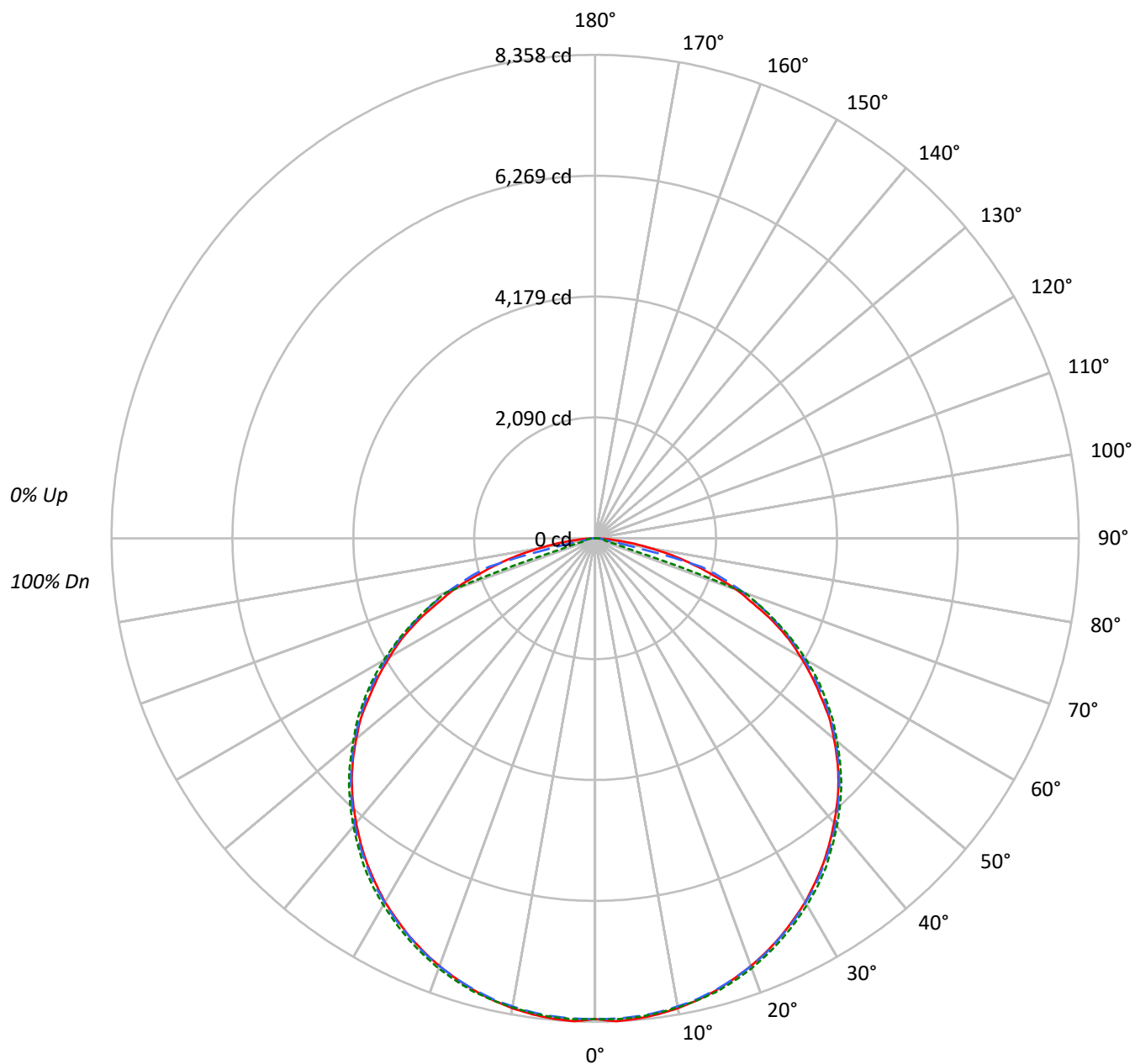
Input Watts (W): 150  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 109 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 88  | 87  | 85  |    |    |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  | 70  |    |    |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 64  | 75  | 69  | 63  | 72  | 67  | 62  | 70  | 65  | 61  | 59  |    |    |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 50  |    |    |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  | 43  |    |    |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  | 37  |    |    |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |    |    |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |    |    |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |    |    |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 25  | 24  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13420 | 13420 | 13420 |
| 5°  | 13516 | 13447 | 13471 |
| 10° | 13524 | 13476 | 13503 |
| 15° | 13522 | 13504 | 13566 |
| 20° | 13521 | 13524 | 13594 |
| 25° | 13528 | 13534 | 13617 |
| 30° | 13542 | 13560 | 13649 |
| 35° | 13540 | 13584 | 13697 |
| 40° | 13542 | 13628 | 13702 |
| 45° | 13580 | 13631 | 13741 |
| 50° | 13539 | 13618 | 13706 |
| 55° | 13390 | 13578 | 13724 |
| 60° | 13238 | 13453 | 13620 |
| 65° | 12945 | 13214 | 13313 |
| 70° | 12290 | 12814 | 12972 |
| 75° | 10962 | 11886 | 1432  |
| 80° | 8815  | 1480  | 1567  |
| 85° | 5865  | 1921  | 1954  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 789.4   | 3.2       |
| 10°-20°   | 2281.1  | 9.2       |
| 20°-30°   | 3504.8  | 14.1      |
| 30°-40°   | 4314.5  | 17.4      |
| 40°-50°   | 4599.7  | 18.5      |
| 50°-60°   | 4299.8  | 17.3      |
| 60°-70°   | 3403.8  | 13.7      |
| 70°-80°   | 1448.2  | 5.8       |
| 80°-90°   | 197.8   | 0.8       |
| 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°    | 6575.3  | 26.5      |
| 0°-40°    | 10889.8 | 43.8      |
| 0°-60°    | 19789.3 | 79.7      |
| 0°-90°    | 24839.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 24839.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 8312 | 8312  | 8312 | 8312  | 8312 |      |
| 5°  | 8340 | 8303  | 8297 | 8264  | 8312 | 793  |
| 15° | 8090 | 8075  | 8078 | 8056  | 8116 | 2284 |
| 25° | 7593 | 7584  | 7597 | 7593  | 7643 | 3501 |
| 35° | 6869 | 6858  | 6892 | 6916  | 6949 | 4298 |
| 45° | 5947 | 5914  | 5970 | 5994  | 6018 | 4583 |
| 55° | 4757 | 4772  | 4823 | 4840  | 4875 | 4260 |
| 65° | 3388 | 3418  | 3459 | 3485  | 3485 | 3333 |
| 75° | 1757 | 1833  | 1905 | 311   | 230  | 1859 |
| 85° | 317  | 94    | 104  | 107   | 106  | 413  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 8311.8 | 8311.8 | 8311.8 | 8311.8 | 8311.8 |
| 2.5°  | 8358.1 | 8319.2 | 8311.8 | 8278.5 | 8322.9 |
| 5°    | 8339.6 | 8302.6 | 8297.0 | 8263.7 | 8311.8 |
| 7.5°  | 8300.7 | 8271.1 | 8267.4 | 8232.2 | 8280.4 |
| 10°   | 8248.9 | 8221.1 | 8219.3 | 8187.8 | 8235.9 |
| 12.5° | 8178.5 | 8154.5 | 8161.9 | 8130.4 | 8178.5 |
| 15°   | 8089.6 | 8074.8 | 8078.5 | 8056.3 | 8115.6 |
| 17.5° | 7982.3 | 7974.8 | 7982.3 | 7965.6 | 8019.3 |
| 20°   | 7869.3 | 7860.0 | 7871.2 | 7861.9 | 7911.9 |
| 22.5° | 7737.8 | 7726.7 | 7749.0 | 7736.0 | 7782.3 |
| 25°   | 7593.4 | 7584.2 | 7597.1 | 7593.4 | 7643.4 |
| 27.5° | 7428.6 | 7419.4 | 7447.1 | 7449.0 | 7487.9 |
| 30°   | 7263.8 | 7250.9 | 7273.1 | 7282.3 | 7321.2 |
| 32.5° | 7067.6 | 7063.9 | 7097.2 | 7104.6 | 7145.3 |
| 35°   | 6869.4 | 6858.3 | 6891.7 | 6915.7 | 6949.1 |
| 37.5° | 6652.8 | 6651.0 | 6686.1 | 6706.5 | 6723.2 |
| 40°   | 6425.1 | 6415.8 | 6465.8 | 6486.2 | 6501.0 |
| 42.5° | 6193.6 | 6173.2 | 6221.4 | 6247.3 | 6264.0 |
| 45°   | 5947.3 | 5914.0 | 5969.6 | 5993.6 | 6017.7 |
| 47.5° | 5677.0 | 5647.4 | 5701.1 | 5727.0 | 5743.7 |
| 50°   | 5390.0 | 5362.2 | 5421.5 | 5443.7 | 5456.7 |
| 52.5° | 5101.2 | 5073.4 | 5136.3 | 5154.9 | 5186.3 |
| 55°   | 4756.8 | 4771.6 | 4823.4 | 4840.1 | 4875.3 |
| 57.5° | 4438.3 | 4451.3 | 4501.2 | 4521.6 | 4562.3 |
| 60°   | 4099.4 | 4119.8 | 4166.1 | 4186.5 | 4217.9 |
| 62.5° | 3771.7 | 3773.6 | 3829.1 | 3838.4 | 3862.4 |
| 65°   | 3388.4 | 3418.1 | 3458.8 | 3484.7 | 3484.7 |
| 67.5° | 2960.7 | 3032.9 | 3103.3 | 3097.7 | 3112.5 |
| 70°   | 2603.4 | 2631.1 | 2714.4 | 2727.4 | 2747.8 |
| 72.5° | 2155.3 | 2227.5 | 2320.1 | 1733.1 | 588.8  |
| 75°   | 1757.2 | 1833.1 | 1905.3 | 311.1  | 229.6  |
| 77.5° | 1364.6 | 1423.9 | 633.2  | 177.8  | 174.1  |
| 80°   | 948.0  | 1042.5 | 159.2  | 162.9  | 168.5  |
| 82.5° | 624.0  | 509.2  | 131.5  | 144.4  | 146.3  |
| 85°   | 316.6  | 94.4   | 103.7  | 107.4  | 105.5  |
| 87.5° | 103.7  | 57.4   | 59.3   | 61.1   | 63.0   |
| 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)