

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: P730534

Luminaire Tested: **HBLED-LD5-18HE-N-UNV-L750**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730534  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23767)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-18HE-N-UNV-L750  
Description: 18000 LUMEN, HE HBLED WITH NARROW DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19691.0 lumens  
Efficiency: N/A  
Efficacy: 178.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.62 / 0.77  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

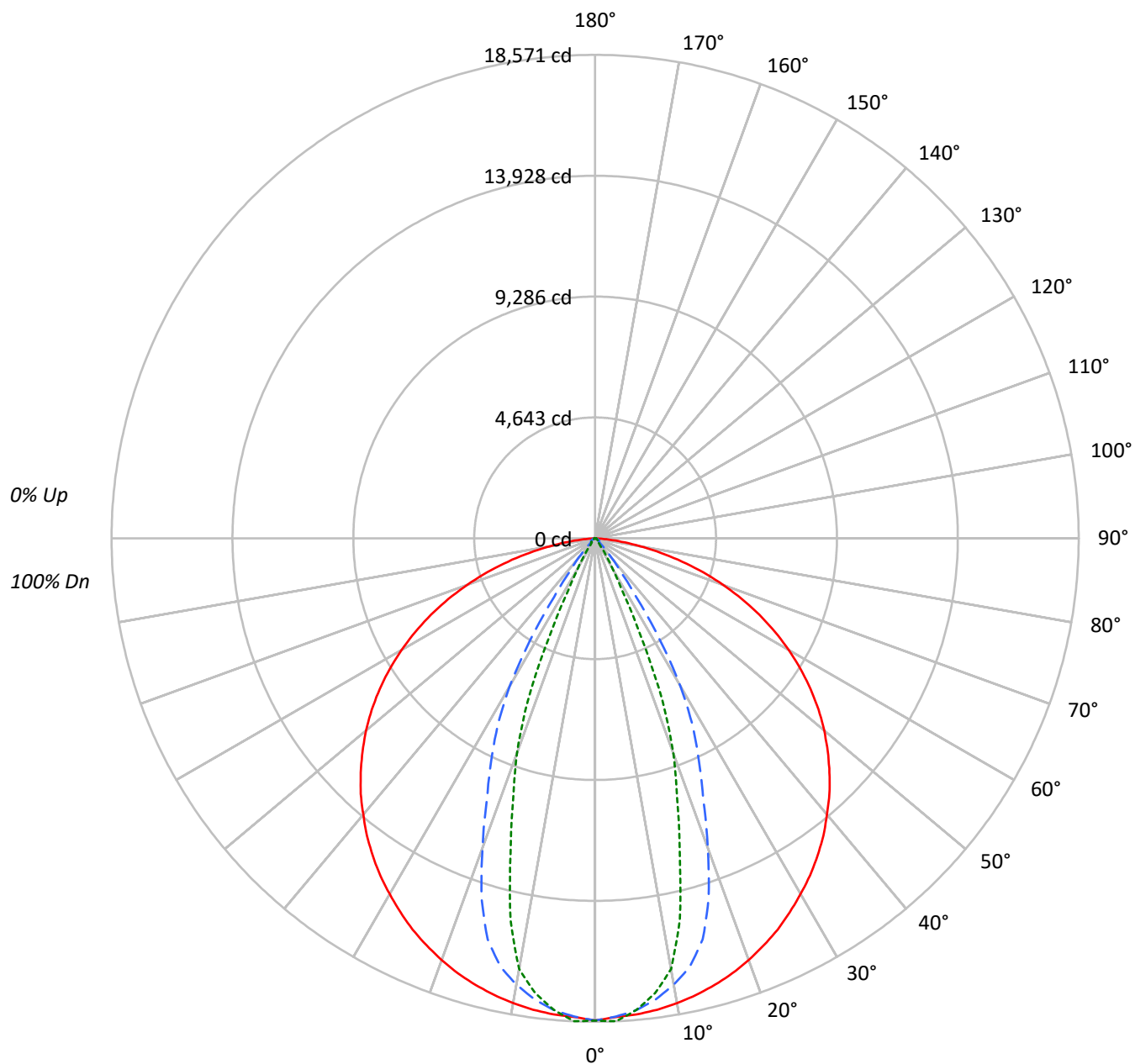
Input Watts (W): 110.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |     |     |    | 0  |
| 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   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |
| 2   | 105 | 98  | 93  | 89  | 102 | 97  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 85  | 82  | 81  |    |    |
| 3   | 98  | 90  | 84  | 79  | 96  | 88  | 83  | 78  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 77  | 74  | 73  |    |    |
| 4   | 92  | 82  | 76  | 70  | 90  | 81  | 75  | 70  | 79  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 66  |    |    |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 68  | 63  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |    |    |
| 6   | 81  | 70  | 63  | 58  | 79  | 70  | 63  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |    |    |
| 7   | 76  | 66  | 58  | 54  | 75  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 52  | 51  |    |    |
| 8   | 72  | 61  | 54  | 49  | 71  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 49  | 47  |    |    |
| 9   | 68  | 57  | 51  | 46  | 67  | 57  | 50  | 46  | 56  | 50  | 46  | 55  | 49  | 46  | 54  | 49  | 45  | 44  |    |    |
| 10  | 65  | 54  | 47  | 43  | 64  | 53  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 43  | 51  | 46  | 42  | 41  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 29912 | 29912 | 29912 |
| 5°  | 29752 | 29489 | 29477 |
| 10° | 29734 | 28544 | 27543 |
| 15° | 29692 | 26667 | 20962 |
| 20° | 29622 | 21739 | 15088 |
| 25° | 29547 | 16809 | 7433  |
| 30° | 29417 | 12216 | 2410  |
| 35° | 29347 | 5420  | 620   |
| 40° | 29193 | 2201  | 418   |
| 45° | 29063 | 618   | 445   |
| 50° | 28836 | 438   | 494   |
| 55° | 28421 | 521   | 211   |
| 60° | 27719 | 581   | 128   |
| 65° | 26579 | 370   | 152   |
| 70° | 24692 | 329   | 187   |
| 75° | 21601 | 248   | 258   |
| 80° | 16151 | 303   | 369   |
| 85° | 8001  | 391   | 489   |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1719.3  | 8.7       |
| 10°-20°   | 4299.0  | 21.8      |
| 20°-30°   | 4656.5  | 23.6      |
| 30°-40°   | 3448.3  | 17.5      |
| 40°-50°   | 2483.7  | 12.6      |
| 50°-60°   | 1537.9  | 7.8       |
| 60°-70°   | 945.8   | 4.8       |
| 70°-80°   | 498.6   | 2.5       |
| 80°-90°   | 102.0   | 0.5       |
| 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°    | 10674.7 | 54.2      |
| 0°-40°    | 14123.0 | 71.7      |
| 0°-60°    | 18144.6 | 92.1      |
| 0°-90°    | 19691.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 19691.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 18526 | 18526 | 18526 | 18526 | 18526 |      |
| 5°  | 18357 | 18425 | 18195 | 18208 | 18187 | ###  |
| 15° | 17763 | 17350 | 15954 | 13567 | 12540 | 5014 |
| 25° | 16586 | 15192 | 9435  | 5936  | 4172  | 7642 |
| 35° | 14889 | 10496 | 2750  | 647   | 315   | 9315 |
| 45° | 12728 | 5914  | 271   | 196   | 195   | 9816 |
| 55° | 10096 | 1218  | 185   | 167   | 75    | 9013 |
| 65° | 6957  | 129   | 97    | 62    | 40    | 6864 |
| 75° | 3463  | 30    | 40    | 52    | 41    | 3657 |
| 85° | 432   | 12    | 21    | 32    | 26    | 653  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 18526.2 | 18526.2 | 18526.2 | 18526.2 | 18526.2 |
| 2.5°  | 18407.2 | 18524.5 | 18386.1 | 18489.2 | 18571.1 |
| 5°    | 18357.0 | 18424.8 | 18194.8 | 18208.0 | 18186.9 |
| 7.5°  | 18268.8 | 18253.0 | 17866.1 | 17696.9 | 17622.9 |
| 10°   | 18135.8 | 18030.9 | 17410.5 | 17057.1 | 16799.7 |
| 12.5° | 17963.9 | 17729.5 | 16842.0 | 15718.3 | 15020.3 |
| 15°   | 17763.0 | 17350.5 | 15953.6 | 13567.1 | 12540.3 |
| 17.5° | 17523.2 | 16938.9 | 14501.2 | 11370.7 | 10454.2 |
| 20°   | 17240.3 | 16479.8 | 12652.2 | 9674.2  | 8781.5  |
| 22.5° | 16924.8 | 15921.0 | 10856.1 | 8040.3  | 6766.8  |
| 25°   | 16585.5 | 15192.2 | 9435.4  | 5935.7  | 4172.1  |
| 27.5° | 16193.4 | 14255.3 | 8102.9  | 3496.2  | 2129.3  |
| 30°   | 15778.3 | 13127.2 | 6552.6  | 1880.7  | 1292.9  |
| 32.5° | 15359.6 | 11848.4 | 4636.6  | 1174.8  | 733.2   |
| 35°   | 14889.0 | 10496.5 | 2749.7  | 646.9   | 314.7   |
| 37.5° | 14398.1 | 9257.4  | 1625.1  | 294.4   | 201.8   |
| 40°   | 13850.8 | 8124.9  | 1044.3  | 195.6   | 198.3   |
| 42.5° | 13322.1 | 7069.1  | 587.9   | 193.0   | 196.6   |
| 45°   | 12728.0 | 5913.6  | 270.6   | 195.6   | 194.8   |
| 47.5° | 12113.7 | 4715.9  | 175.3   | 197.4   | 197.4   |
| 50°   | 11480.1 | 3372.0  | 174.5   | 201.8   | 196.6   |
| 52.5° | 10811.2 | 2103.7  | 181.6   | 201.0   | 161.3   |
| 55°   | 10096.4 | 1218.0  | 185.1   | 167.4   | 74.9    |
| 57.5° | 9356.1  | 718.3   | 186.8   | 96.1    | 42.3    |
| 60°   | 8584.0  | 397.4   | 179.8   | 71.4    | 39.7    |
| 62.5° | 7788.2  | 189.5   | 141.9   | 67.0    | 38.7    |
| 65°   | 6957.1  | 128.7   | 96.9    | 61.7    | 39.7    |
| 67.5° | 6094.3  | 99.6    | 76.6    | 58.2    | 40.5    |
| 70°   | 5230.6  | 74.0    | 69.7    | 58.2    | 39.7    |
| 72.5° | 4352.9  | 50.2    | 58.2    | 59.0    | 39.7    |
| 75°   | 3462.7  | 30.0    | 39.7    | 52.0    | 41.4    |
| 77.5° | 2580.5  | 18.5    | 30.8    | 53.7    | 50.2    |
| 80°   | 1737.0  | 15.8    | 32.6    | 50.2    | 39.7    |
| 82.5° | 1019.7  | 14.1    | 31.8    | 38.7    | 31.8    |
| 85°   | 431.9   | 11.5    | 21.1    | 31.8    | 26.4    |
| 87.5° | 81.1    | 9.7     | 16.8    | 25.5    | 22.9    |
| 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)