

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: P731055

Luminaire Tested: **HBLED-LD5-48HE-N-CLI-UNV-L740**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P731055  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23769)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-48HE-N-CLI-UNV-L740  
Description: 48000 LUMEN, HE HBLED WITH NARROW DISTRIBUTION AND CLEAR ACRYLIC LENS INSERT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 44643.0 lumens  
Efficiency: N/A  
Efficacy: 169.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 0.64 / 0.78  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

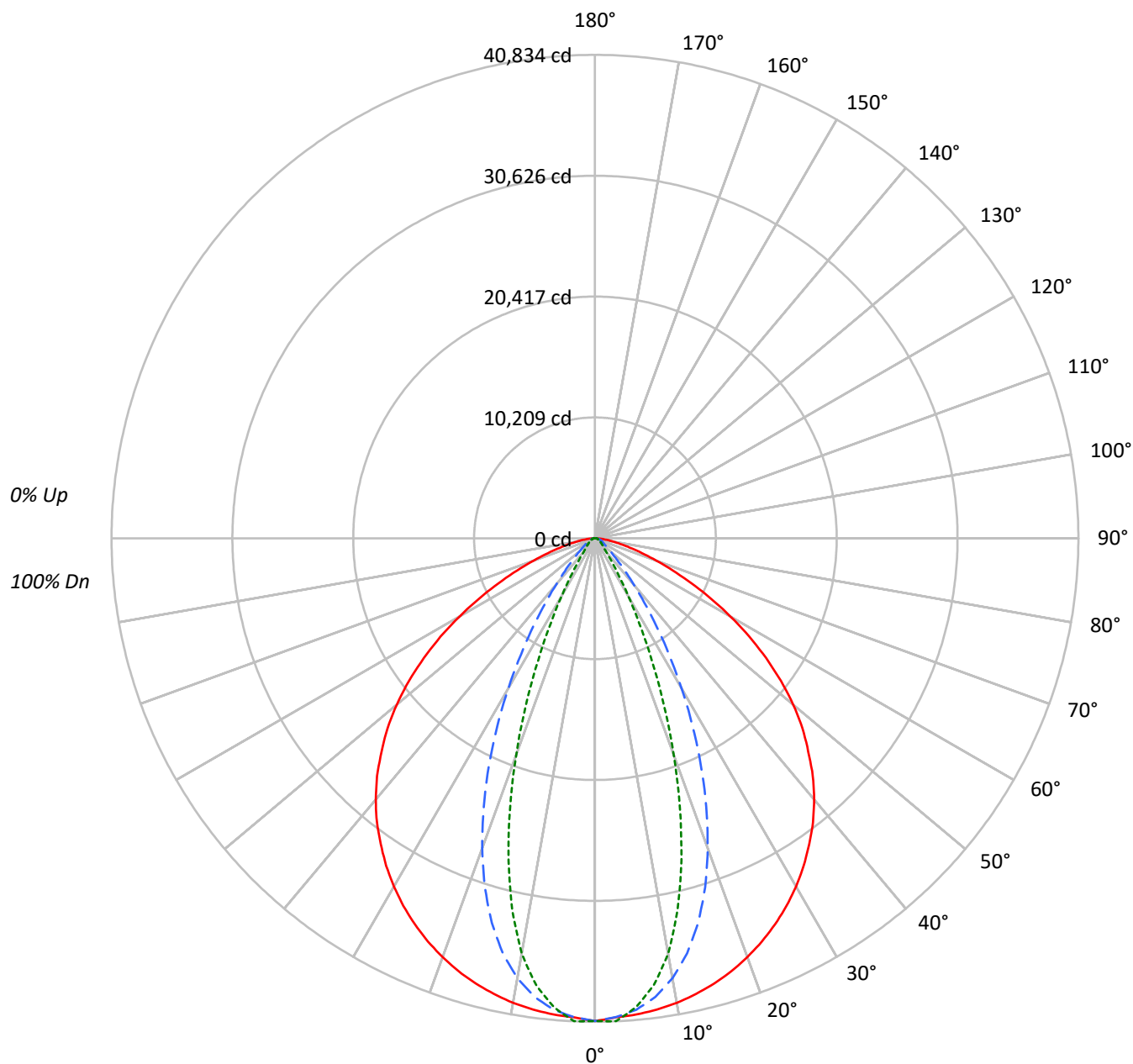
Input Watts (W): 263  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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  | 75  | 81  | 77  | 74  | 72  |    |    |
| 4   | 92  | 82  | 75  | 70  | 90  | 81  | 75  | 70  | 79  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 65  |    |    |
| 5   | 86  | 76  | 69  | 63  | 84  | 75  | 68  | 63  | 73  | 67  | 62  | 71  | 66  | 62  | 69  | 65  | 61  | 60  |    |    |
| 6   | 81  | 70  | 63  | 58  | 79  | 69  | 62  | 57  | 68  | 62  | 57  | 66  | 61  | 57  | 65  | 60  | 56  | 55  |    |    |
| 7   | 76  | 65  | 58  | 53  | 75  | 64  | 58  | 53  | 63  | 57  | 52  | 62  | 56  | 52  | 60  | 56  | 52  | 50  |    |    |
| 8   | 72  | 61  | 54  | 49  | 70  | 60  | 53  | 49  | 59  | 53  | 48  | 58  | 52  | 48  | 57  | 52  | 48  | 46  |    |    |
| 9   | 68  | 57  | 50  | 45  | 67  | 56  | 50  | 45  | 55  | 49  | 45  | 54  | 49  | 45  | 53  | 48  | 45  | 43  |    |    |
| 10  | 64  | 53  | 47  | 42  | 63  | 53  | 46  | 42  | 52  | 46  | 42  | 51  | 46  | 42  | 50  | 45  | 42  | 40  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 65840 | 65840 | 65840 |
| 5°  | 65444 | 64793 | 64452 |
| 10° | 65334 | 61859 | 58373 |
| 15° | 65071 | 56229 | 47142 |
| 20° | 64681 | 47846 | 33412 |
| 25° | 64102 | 37728 | 20188 |
| 30° | 63324 | 27229 | 10375 |
| 35° | 62181 | 17801 | 5182  |
| 40° | 60706 | 10693 | 3024  |
| 45° | 58184 | 6385  | 2261  |
| 50° | 54878 | 4176  | 1899  |
| 55° | 49667 | 3168  | 1657  |
| 60° | 42682 | 2698  | 1512  |
| 65° | 34332 | 2462  | 1428  |
| 70° | 25864 | 2637  | 1420  |
| 75° | 19026 | 2506  | 1460  |
| 80° | 13919 | 2496  | 1598  |
| 85° | 10426 | 3025  | 2067  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 3755.4  | 8.4       |
| 10°-20°   | 9342.7  | 20.9      |
| 20°-30°   | 10348.5 | 23.2      |
| 30°-40°   | 8291.0  | 18.6      |
| 40°-50°   | 5918.7  | 13.3      |
| 50°-60°   | 3801.6  | 8.5       |
| 60°-70°   | 2060.2  | 4.6       |
| 70°-80°   | 880.6   | 2.0       |
| 80°-90°   | 244.2   | 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°    | 23446.7 | 52.5      |
| 0°-40°    | 31737.6 | 71.1      |
| 0°-60°    | 41458.0 | 92.9      |
| 0°-90°    | 44643.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 44643.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux  |
|-----|-------|-------|-------|-------|-------|-------|
| 0°  | 40778 | 40778 | 40778 | 40778 | 40778 |       |
| 5°  | 40379 | 40529 | 39977 | 39850 | 39767 | ###   |
| 15° | 38929 | 37711 | 33639 | 29728 | 28203 | 10984 |
| 25° | 35982 | 31727 | 21177 | 13798 | 11332 | 16576 |
| 35° | 31547 | 22818 | 9031  | 3643  | 2629  | 19724 |
| 45° | 25482 | 13172 | 2796  | 1190  | 990   | 19641 |
| 55° | 17644 | 5889  | 1125  | 692   | 588   | 15724 |
| 65° | 8986  | 2418  | 644   | 445   | 374   | 8999  |
| 75° | 3050  | 885   | 402   | 279   | 234   | 3389  |
| 85° | 563   | 234   | 163   | 135   | 112   | 687   |
| 90° | 0     | 0     | 0     | 0     | 0     |       |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 40778.1 | 40778.1 | 40778.1 | 40778.1 | 40778.1 |
| 2.5°  | 40509.7 | 40763.2 | 40490.2 | 40659.9 | 40833.9 |
| 5°    | 40378.6 | 40529.1 | 39976.9 | 39850.2 | 39766.6 |
| 7.5°  | 40150.9 | 40108.0 | 39070.7 | 38398.4 | 38074.0 |
| 10°   | 39850.2 | 39502.3 | 37730.3 | 36252.8 | 35604.1 |
| 12.5° | 39420.7 | 38703.4 | 35915.5 | 33320.9 | 32221.3 |
| 15°   | 38928.9 | 37711.1 | 33638.8 | 29727.8 | 28202.8 |
| 17.5° | 38340.3 | 36551.2 | 30917.5 | 25874.6 | 23862.1 |
| 20°   | 37644.5 | 35150.9 | 27846.3 | 21780.9 | 19446.1 |
| 22.5° | 36867.1 | 33535.8 | 24557.9 | 17699.9 | 15195.8 |
| 25°   | 35982.1 | 31727.2 | 21177.4 | 13797.5 | 11331.8 |
| 27.5° | 35026.4 | 29719.2 | 17816.1 | 10309.5 | 8060.6  |
| 30°   | 33965.3 | 27545.6 | 14605.0 | 7433.6  | 5565.0  |
| 32.5° | 32807.6 | 25234.6 | 11621.9 | 5227.7  | 3805.9  |
| 35°   | 31547.0 | 22818.3 | 9031.4  | 3642.6  | 2628.9  |
| 37.5° | 30256.0 | 20352.5 | 6821.4  | 2575.1  | 1885.8  |
| 40°   | 28802.0 | 17895.4 | 5073.2  | 1885.8  | 1434.6  |
| 42.5° | 27240.6 | 15485.6 | 3754.4  | 1451.8  | 1161.9  |
| 45°   | 25481.5 | 13172.4 | 2796.5  | 1190.0  | 990.2   |
| 47.5° | 23776.2 | 11016.2 | 2124.2  | 1013.7  | 861.2   |
| 50°   | 21847.5 | 9070.3  | 1662.4  | 885.0   | 755.9   |
| 52.5° | 19800.6 | 7358.4  | 1348.8  | 779.7   | 665.8   |
| 55°   | 17644.1 | 5889.2  | 1125.3  | 691.6   | 588.5   |
| 57.5° | 15459.9 | 4664.9  | 962.2   | 616.3   | 524.1   |
| 60°   | 13217.6 | 3730.7  | 835.5   | 551.9   | 468.1   |
| 62.5° | 11029.0 | 2983.4  | 730.2   | 496.1   | 418.9   |
| 65°   | 8986.4  | 2418.3  | 644.3   | 444.6   | 373.7   |
| 67.5° | 7098.4  | 1911.6  | 601.4   | 399.4   | 337.3   |
| 70°   | 5478.9  | 1488.4  | 558.5   | 356.5   | 300.7   |
| 72.5° | 4151.6  | 1142.7  | 494.1   | 317.9   | 266.4   |
| 75°   | 3049.8  | 885.0   | 401.7   | 279.2   | 234.1   |
| 77.5° | 2182.2  | 680.9   | 326.5   | 242.6   | 202.0   |
| 80°   | 1497.0  | 507.0   | 268.4   | 208.3   | 171.9   |
| 82.5° | 973.1   | 358.8   | 216.9   | 171.9   | 141.7   |
| 85°   | 562.8   | 234.1   | 163.3   | 135.3   | 111.6   |
| 87.5° | 242.6   | 128.8   | 111.6   | 101.0   | 85.9    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



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







(END OF REPORT)