

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: P731159

Luminaire Tested: **HBLED-LD5-60HE-W-UNV-L835**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P731159  
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-LD5-60HE-W-UNV-L835  
Description: 60000 LUMEN, HE HBLED WITH WIDE DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 60456.0 lumens  
Efficiency: N/A  
Efficacy: 170.3 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

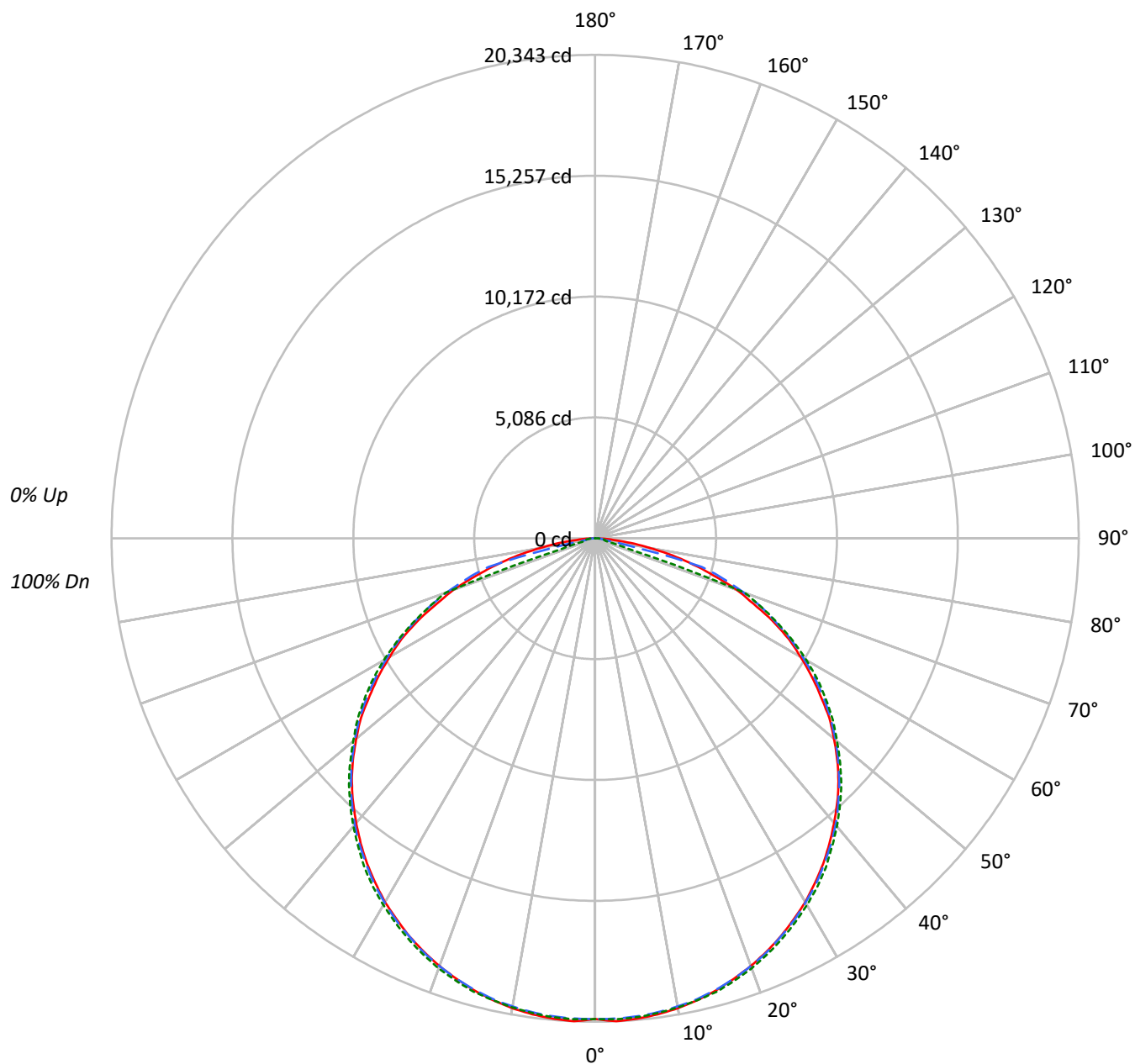
Input Watts (W): 355  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1   | 109 | 105 | 100 | 97  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 92  | 89  | 91  | 88  | 87  |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 72  |
| 3   | 90  | 80  | 72  | 65  | 88  | 78  | 71  | 64  | 75  | 69  | 63  | 72  | 67  | 62  | 70  | 65  | 61  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 67  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 59  | 52  | 46  | 57  | 51  | 46  | 56  | 50  | 45  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 41  | 54  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 40  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 49  | 41  | 36  | 47  | 40  | 35  | 46  | 40  | 35  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 33  | 28  | 40  | 33  | 28  | 39  | 33  | 28  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 25  |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 32664 | 32664 | 32664 |
| 5°  | 32898 | 32730 | 32788 |
| 10° | 32916 | 32798 | 32864 |
| 15° | 32912 | 32867 | 33017 |
| 20° | 32909 | 32917 | 33087 |
| 25° | 32925 | 32941 | 33142 |
| 30° | 32961 | 33003 | 33222 |
| 35° | 32955 | 33062 | 33337 |
| 40° | 32960 | 33169 | 33350 |
| 45° | 33052 | 33176 | 33444 |
| 50° | 32952 | 33145 | 33360 |
| 55° | 32590 | 33047 | 33402 |
| 60° | 32220 | 32744 | 33151 |
| 65° | 31508 | 32162 | 32403 |
| 70° | 29912 | 31188 | 31572 |
| 75° | 26680 | 28929 | 3486  |
| 80° | 21454 | 3604  | 3813  |
| 85° | 14276 | 4676  | 4759  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1921.4  | 3.2       |
| 10°-20°   | 5552.0  | 9.2       |
| 20°-30°   | 8530.3  | 14.1      |
| 30°-40°   | 10501.1 | 17.4      |
| 40°-50°   | 11195.2 | 18.5      |
| 50°-60°   | 10465.3 | 17.3      |
| 60°-70°   | 8284.6  | 13.7      |
| 70°-80°   | 3524.7  | 5.8       |
| 80°-90°   | 481.3   | 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°    | 16003.7 | 26.5      |
| 0°-40°    | 26504.8 | 43.8      |
| 0°-60°    | 48165.4 | 79.7      |
| 0°-90°    | 60456.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 60456.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux  |
|-----|-------|-------|-------|-------|-------|-------|
| 0°  | 20230 | 20230 | 20230 | 20230 | 20230 |       |
| 5°  | 20298 | 20208 | 20194 | 20113 | 20230 | ###   |
| 15° | 19690 | 19654 | 19662 | 19608 | 19753 | 5559  |
| 25° | 18482 | 18459 | 18491 | 18482 | 18603 | 8521  |
| 35° | 16720 | 16693 | 16774 | 16832 | 16913 | 10462 |
| 45° | 14475 | 14394 | 14529 | 14588 | 14647 | 11154 |
| 55° | 11578 | 11614 | 11740 | 11780 | 11866 | 10367 |
| 65° | 8247  | 8319  | 8418  | 8482  | 8482  | 8113  |
| 75° | 4277  | 4462  | 4637  | 757   | 559   | 4525  |
| 85° | 771   | 230   | 252   | 261   | 257   | ###   |
| 90° | 0     | 0     | 0     | 0     | 0     |       |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 20230.3 | 20230.3 | 20230.3 | 20230.3 | 20230.3 |
| 2.5°  | 20343.0 | 20248.3 | 20230.3 | 20149.2 | 20257.3 |
| 5°    | 20297.9 | 20207.8 | 20194.3 | 20113.1 | 20230.3 |
| 7.5°  | 20203.3 | 20131.2 | 20122.1 | 20036.5 | 20153.7 |
| 10°   | 20077.1 | 20009.5 | 20005.0 | 19928.4 | 20045.5 |
| 12.5° | 19905.8 | 19847.2 | 19865.3 | 19788.7 | 19905.8 |
| 15°   | 19689.5 | 19653.5 | 19662.5 | 19608.4 | 19752.6 |
| 17.5° | 19428.1 | 19410.1 | 19428.1 | 19387.6 | 19518.3 |
| 20°   | 19153.2 | 19130.7 | 19157.7 | 19135.2 | 19256.9 |
| 22.5° | 18833.2 | 18806.2 | 18860.3 | 18828.7 | 18941.4 |
| 25°   | 18481.7 | 18459.2 | 18490.7 | 18481.7 | 18603.4 |
| 27.5° | 18080.6 | 18058.1 | 18125.7 | 18130.2 | 18224.9 |
| 30°   | 17679.5 | 17648.0 | 17702.1 | 17724.6 | 17819.3 |
| 32.5° | 17201.8 | 17192.8 | 17274.0 | 17292.0 | 17391.1 |
| 35°   | 16719.6 | 16692.6 | 16773.7 | 16832.3 | 16913.4 |
| 37.5° | 16192.4 | 16187.9 | 16273.5 | 16323.0 | 16363.6 |
| 40°   | 15638.0 | 15615.5 | 15737.2 | 15786.8 | 15822.8 |
| 42.5° | 15074.7 | 15025.1 | 15142.3 | 15205.4 | 15246.0 |
| 45°   | 14475.3 | 14394.2 | 14529.4 | 14588.0 | 14646.6 |
| 47.5° | 13817.4 | 13745.3 | 13875.9 | 13939.0 | 13979.6 |
| 50°   | 13118.8 | 13051.2 | 13195.4 | 13249.5 | 13281.1 |
| 52.5° | 12415.8 | 12348.2 | 12501.4 | 12546.5 | 12623.1 |
| 55°   | 11577.6 | 11613.6 | 11739.8 | 11780.4 | 11866.0 |
| 57.5° | 10802.4 | 10834.0 | 10955.6 | 11005.2 | 11104.4 |
| 60°   | 9977.7  | 10027.3 | 10139.9 | 10189.5 | 10266.1 |
| 62.5° | 9180.0  | 9184.5  | 9319.7  | 9342.3  | 9400.9  |
| 65°   | 8247.2  | 8319.3  | 8418.4  | 8481.5  | 8481.5  |
| 67.5° | 7206.1  | 7381.9  | 7553.1  | 7539.6  | 7575.7  |
| 70°   | 6336.3  | 6403.9  | 6606.7  | 6638.3  | 6687.9  |
| 72.5° | 5245.7  | 5421.5  | 5646.8  | 4218.2  | 1433.1  |
| 75°   | 4276.8  | 4461.6  | 4637.3  | 757.1   | 558.8   |
| 77.5° | 3321.4  | 3465.6  | 1541.3  | 432.6   | 423.6   |
| 80°   | 2307.4  | 2537.2  | 387.6   | 396.6   | 410.1   |
| 82.5° | 1518.7  | 1239.3  | 320.0   | 351.5   | 356.0   |
| 85°   | 770.6   | 229.8   | 252.4   | 261.4   | 256.9   |
| 87.5° | 252.4   | 139.7   | 144.2   | 148.7   | 153.2   |
| 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)