

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: P730590

Luminaire Tested: **HBLED-LD5-18SE-N-CL-UNV-L840**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730590  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23768)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-18SE-N-CL-UNV-L840  
Description: 18000 LUMEN, SE HBLED WITH NARROW DISTRIBUTION AND CLEAR ACRYLIC LENS & DOOR FRAME  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16897.0 lumens  
Efficiency: N/A  
Efficacy: 147.2 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.63 / 0.78  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

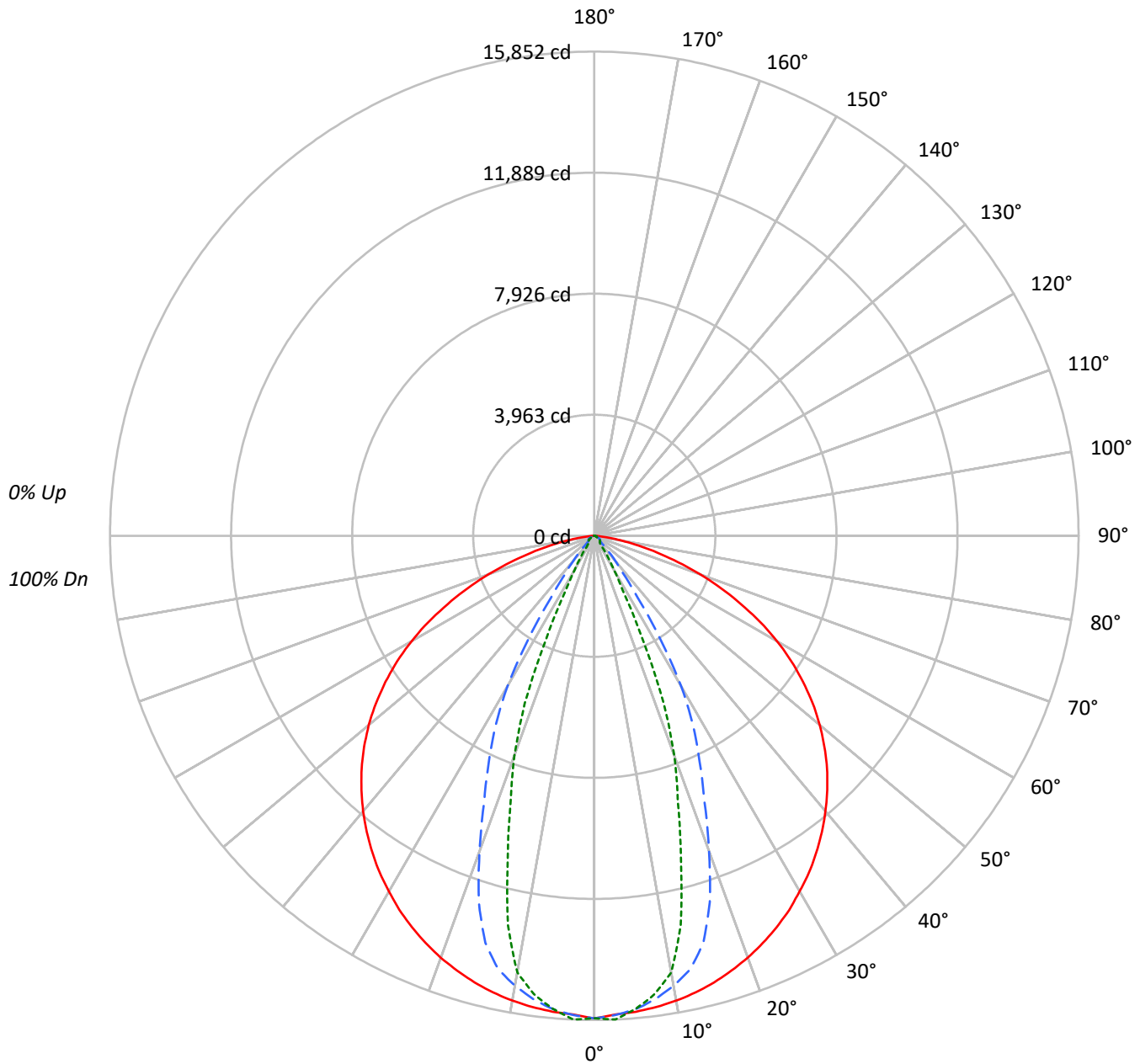
Input Watts (W): 114.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 25509 | 25509 | 25509 |
| 5°  | 25352 | 25220 | 25202 |
| 10° | 25335 | 24523 | 23799 |
| 15° | 25306 | 23060 | 18299 |
| 20° | 25257 | 18871 | 13126 |
| 25° | 25178 | 14540 | 6670  |
| 30° | 25059 | 10611 | 2427  |
| 35° | 24969 | 4873  | 845   |
| 40° | 24816 | 2212  | 583   |
| 45° | 24595 | 825   | 591   |
| 50° | 24203 | 599   | 621   |
| 55° | 23486 | 630   | 473   |
| 60° | 22319 | 674   | 418   |
| 65° | 20240 | 513   | 340   |
| 70° | 17354 | 370   | 313   |
| 75° | 13264 | 328   | 298   |
| 80° | 8299  | 309   | 324   |
| 85° | 2621  | 359   | 435   |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1470.9  | 8.7       |
| 10°-20°   | 3705.3  | 21.9      |
| 20°-30°   | 4035.2  | 23.9      |
| 30°-40°   | 3018.5  | 17.9      |
| 40°-50°   | 2170.4  | 12.8      |
| 50°-60°   | 1333.0  | 7.9       |
| 60°-70°   | 767.0   | 4.5       |
| 70°-80°   | 342.4   | 2.0       |
| 80°-90°   | 54.3    | 0.3       |
| 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°    | 9211.4  | 54.5      |
| 0°-40°    | 12230.0 | 72.4      |
| 0°-60°    | 15733.3 | 93.1      |
| 0°-90°    | 16897.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 16897.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 15799 | 15799 | 15799 | 15799 | 15799 |      |
| 5°  | 15642 | 15716 | 15561 | 15575 | 15549 | ###  |
| 15° | 15139 | 14849 | 13796 | 11848 | 10948 | 4274 |
| 25° | 14133 | 13119 | 8162  | 5236  | 3744  | 6515 |
| 35° | 12668 | 9086  | 2472  | 727   | 428   | 7924 |
| 45° | 10771 | 5105  | 361   | 268   | 259   | 8298 |
| 55° | 8343  | 1061  | 224   | 217   | 168   | 7439 |
| 65° | 5298  | 116   | 134   | 112   | 89    | 5244 |
| 75° | 2126  | 70    | 53    | 54    | 48    | 2307 |
| 85° | 142   | 14    | 19    | 25    | 24    | 282  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 15799.1 | 15799.1 | 15799.1 | 15799.1 | 15799.1 |
| 2.5°  | 15689.2 | 15791.8 | 15705.3 | 15783.0 | 15851.7 |
| 5°    | 15642.3 | 15715.9 | 15560.6 | 15575.2 | 15549.3 |
| 7.5°  | 15561.4 | 15579.2 | 15298.7 | 15190.4 | 15137.8 |
| 10°   | 15453.1 | 15405.4 | 14957.5 | 14699.7 | 14516.1 |
| 12.5° | 15316.5 | 15158.9 | 14533.0 | 13612.2 | 13063.3 |
| 15°   | 15139.4 | 14849.2 | 13795.8 | 11848.2 | 10947.5 |
| 17.5° | 14928.4 | 14525.8 | 12574.9 | 9874.6  | 9095.3  |
| 20°   | 14699.7 | 14168.5 | 10983.0 | 8396.0  | 7639.2  |
| 22.5° | 14429.6 | 13711.7 | 9413.0  | 6982.7  | 5943.9  |
| 25°   | 14132.9 | 13119.1 | 8161.5  | 5236.5  | 3744.1  |
| 27.5° | 13812.8 | 12337.3 | 7002.9  | 3211.2  | 2024.4  |
| 30°   | 13440.8 | 11385.7 | 5691.6  | 1802.1  | 1301.6  |
| 32.5° | 13077.8 | 10276.5 | 4065.8  | 1200.5  | 831.9   |
| 35°   | 12667.9 | 9085.6  | 2472.3  | 726.8   | 428.5   |
| 37.5° | 12233.7 | 8003.0  | 1547.4  | 395.3   | 295.9   |
| 40°   | 11773.8 | 6976.3  | 1049.4  | 280.6   | 276.5   |
| 42.5° | 11282.2 | 6047.3  | 657.3   | 266.8   | 275.7   |
| 45°   | 10771.3 | 5104.7  | 361.4   | 267.6   | 258.7   |
| 47.5° | 10216.7 | 4081.2  | 252.3   | 253.0   | 252.3   |
| 50°   | 9635.4  | 2927.4  | 238.5   | 249.8   | 247.4   |
| 52.5° | 9008.8  | 1817.5  | 239.3   | 244.1   | 219.1   |
| 55°   | 8343.4  | 1060.7  | 223.9   | 216.7   | 168.2   |
| 57.5° | 7644.1  | 661.3   | 219.1   | 178.7   | 151.2   |
| 60°   | 6911.6  | 349.3   | 208.6   | 160.9   | 129.3   |
| 62.5° | 6131.4  | 172.2   | 167.3   | 137.4   | 105.9   |
| 65°   | 5297.9  | 116.5   | 134.2   | 111.5   | 88.9    |
| 67.5° | 4492.7  | 105.1   | 101.1   | 91.3    | 77.6    |
| 70°   | 3676.1  | 96.2    | 78.4    | 80.0    | 66.3    |
| 72.5° | 2875.0  | 87.3    | 63.0    | 68.7    | 55.8    |
| 75°   | 2126.3  | 70.4    | 52.6    | 54.1    | 47.7    |
| 77.5° | 1479.5  | 55.0    | 41.3    | 46.1    | 44.5    |
| 80°   | 892.6   | 34.8    | 33.2    | 38.0    | 34.8    |
| 82.5° | 432.5   | 22.6    | 25.9    | 29.9    | 27.5    |
| 85°   | 141.5   | 13.7    | 19.4    | 25.0    | 23.5    |
| 87.5° | 17.8    | 8.1     | 16.1    | 21.8    | 20.2    |
| 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)