

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: P730609

Luminaire Tested: **HBLED-LD5-18SE-N-UNV-L850**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730609  
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-LD5-18SE-N-UNV-L850  
Description: 18000 LUMEN, SE HBLED WITH NARROW DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18394.0 lumens  
Efficiency: N/A  
Efficacy: 160.2 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

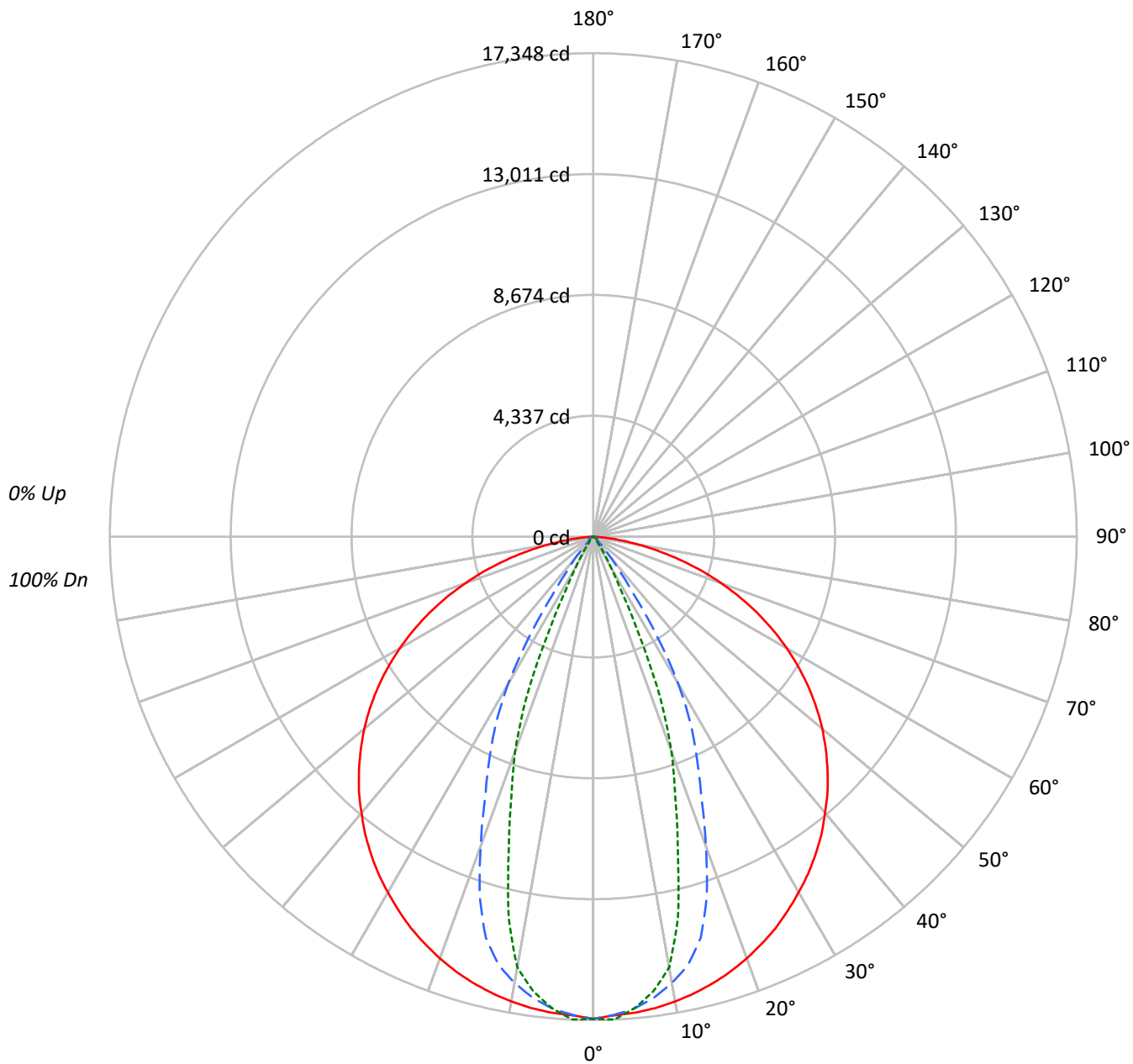
Input Watts (W): 114.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |    |    | 0 |  |  |  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |  |  |  |
| 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°  | 27942 | 27942 | 27942 |
| 5°  | 27792 | 27547 | 27535 |
| 10° | 27775 | 26664 | 25729 |
| 15° | 27736 | 24911 | 19581 |
| 20° | 27671 | 20307 | 14095 |
| 25° | 27601 | 15702 | 6943  |
| 30° | 27479 | 11412 | 2252  |
| 35° | 27414 | 5063  | 579   |
| 40° | 27270 | 2056  | 390   |
| 45° | 27148 | 577   | 415   |
| 50° | 26937 | 409   | 461   |
| 55° | 26549 | 487   | 197   |
| 60° | 25893 | 542   | 120   |
| 65° | 24828 | 346   | 142   |
| 70° | 23066 | 307   | 175   |
| 75° | 20178 | 231   | 241   |
| 80° | 15087 | 284   | 345   |
| 85° | 7473  | 365   | 458   |



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CATALOG NUMBER: HBLED-LD5-18SE-N-UNV-L850

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1606.0  | 8.7       |
| 10°-20°   | 4015.8  | 21.8      |
| 20°-30°   | 4349.8  | 23.6      |
| 30°-40°   | 3221.2  | 17.5      |
| 40°-50°   | 2320.1  | 12.6      |
| 50°-60°   | 1436.6  | 7.8       |
| 60°-70°   | 883.5   | 4.8       |
| 70°-80°   | 465.7   | 2.5       |
| 80°-90°   | 95.3    | 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°    | 9971.6  | 54.2      |
| 0°-40°    | 13192.8 | 71.7      |
| 0°-60°    | 16949.4 | 92.1      |
| 0°-90°    | 18394.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 18394.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|-----|-------|-------|-------|-------|-------|------|
| 0°  | 17306 | 17306 | 17306 | 17306 | 17306 |      |
| 5°  | 17148 | 17211 | 16996 | 17009 | 16989 | ###  |
| 15° | 16593 | 16208 | 14903 | 12673 | 11714 | 4684 |
| 25° | 15493 | 14192 | 8814  | 5545  | 3897  | 7139 |
| 35° | 13908 | 9805  | 2569  | 604   | 294   | 8701 |
| 45° | 11890 | 5524  | 253   | 183   | 182   | 9169 |
| 55° | 9431  | 1138  | 173   | 156   | 70    | 8419 |
| 65° | 6499  | 120   | 90    | 58    | 37    | 6412 |
| 75° | 3235  | 28    | 37    | 49    | 39    | 3416 |
| 85° | 403   | 11    | 20    | 30    | 25    | 610  |
| 90° | 0     | 0     | 0     | 0     | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 17305.9 | 17305.9 | 17305.9 | 17305.9 | 17305.9 |
| 2.5°  | 17194.8 | 17304.3 | 17175.0 | 17271.4 | 17347.9 |
| 5°    | 17147.8 | 17211.2 | 16996.4 | 17008.7 | 16989.0 |
| 7.5°  | 17065.5 | 17050.7 | 16689.3 | 16531.2 | 16462.1 |
| 10°   | 16941.2 | 16843.2 | 16263.7 | 15933.6 | 15693.1 |
| 12.5° | 16780.7 | 16561.7 | 15732.7 | 14683.0 | 14031.0 |
| 15°   | 16593.0 | 16207.7 | 14902.8 | 12673.4 | 11714.3 |
| 17.5° | 16369.0 | 15823.2 | 13546.0 | 10621.8 | 9765.6  |
| 20°   | 16104.7 | 15394.3 | 11818.8 | 9037.0  | 8203.1  |
| 22.5° | 15810.0 | 14872.3 | 10141.1 | 7510.7  | 6321.0  |
| 25°   | 15493.1 | 14191.5 | 8813.9  | 5544.7  | 3897.3  |
| 27.5° | 15126.7 | 13316.4 | 7569.1  | 3265.9  | 1989.0  |
| 30°   | 14739.0 | 12262.5 | 6121.0  | 1756.8  | 1207.8  |
| 32.5° | 14347.9 | 11068.0 | 4331.2  | 1097.4  | 684.9   |
| 35°   | 13908.3 | 9805.1  | 2568.6  | 604.3   | 293.9   |
| 37.5° | 13449.7 | 8647.6  | 1518.1  | 275.0   | 188.5   |
| 40°   | 12938.5 | 7589.7  | 975.5   | 182.7   | 185.2   |
| 42.5° | 12444.6 | 6603.5  | 549.1   | 180.3   | 183.6   |
| 45°   | 11889.6 | 5524.1  | 252.7   | 182.7   | 181.9   |
| 47.5° | 11315.8 | 4405.3  | 163.8   | 184.4   | 184.4   |
| 50°   | 10723.9 | 3149.9  | 163.0   | 188.5   | 183.6   |
| 52.5° | 10099.0 | 1965.2  | 169.6   | 187.7   | 150.7   |
| 55°   | 9431.4  | 1137.8  | 172.9   | 156.4   | 70.0    |
| 57.5° | 8739.8  | 670.9   | 174.5   | 89.7    | 39.5    |
| 60°   | 8018.6  | 371.3   | 167.9   | 66.7    | 37.1    |
| 62.5° | 7275.2  | 177.0   | 132.5   | 62.6    | 36.2    |
| 65°   | 6498.8  | 120.2   | 90.5    | 57.6    | 37.1    |
| 67.5° | 5692.9  | 93.0    | 71.6    | 54.3    | 37.9    |
| 70°   | 4886.1  | 69.1    | 65.1    | 54.3    | 37.1    |
| 72.5° | 4066.1  | 46.9    | 54.3    | 55.1    | 37.1    |
| 75°   | 3234.6  | 28.0    | 37.1    | 48.6    | 38.7    |
| 77.5° | 2410.5  | 17.3    | 28.8    | 50.2    | 46.9    |
| 80°   | 1622.6  | 14.8    | 30.5    | 46.9    | 37.1    |
| 82.5° | 952.6   | 13.2    | 29.7    | 36.2    | 29.7    |
| 85°   | 403.4   | 10.7    | 19.7    | 29.7    | 24.7    |
| 87.5° | 75.7    | 9.1     | 15.7    | 23.9    | 21.4    |
| 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)