

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: P827218

Luminaire Tested: **OHBL-48SE-MCL-UNV-L840-CD-UPL24**

Issue Date: 5/3/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P827218  
REPORT IS A COMBINATION OF REPORTS P826258 AND G3-2310-221-6  
Test Lab: INNOVATION CENTER  
Issue Date: 5/3/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: OHBL-48SE-MCL-UNV-L840-CD-UPL24  
Description: 48000 LUMEN OHBL SE LED LUMINAIRE WITH 80CRI, 4000K LEDS AND MEDIUM CLEAR LENS AND 2400 LUMEN UPLIGHT MODULE  
Light Source: -  
Ballast/Driver: -

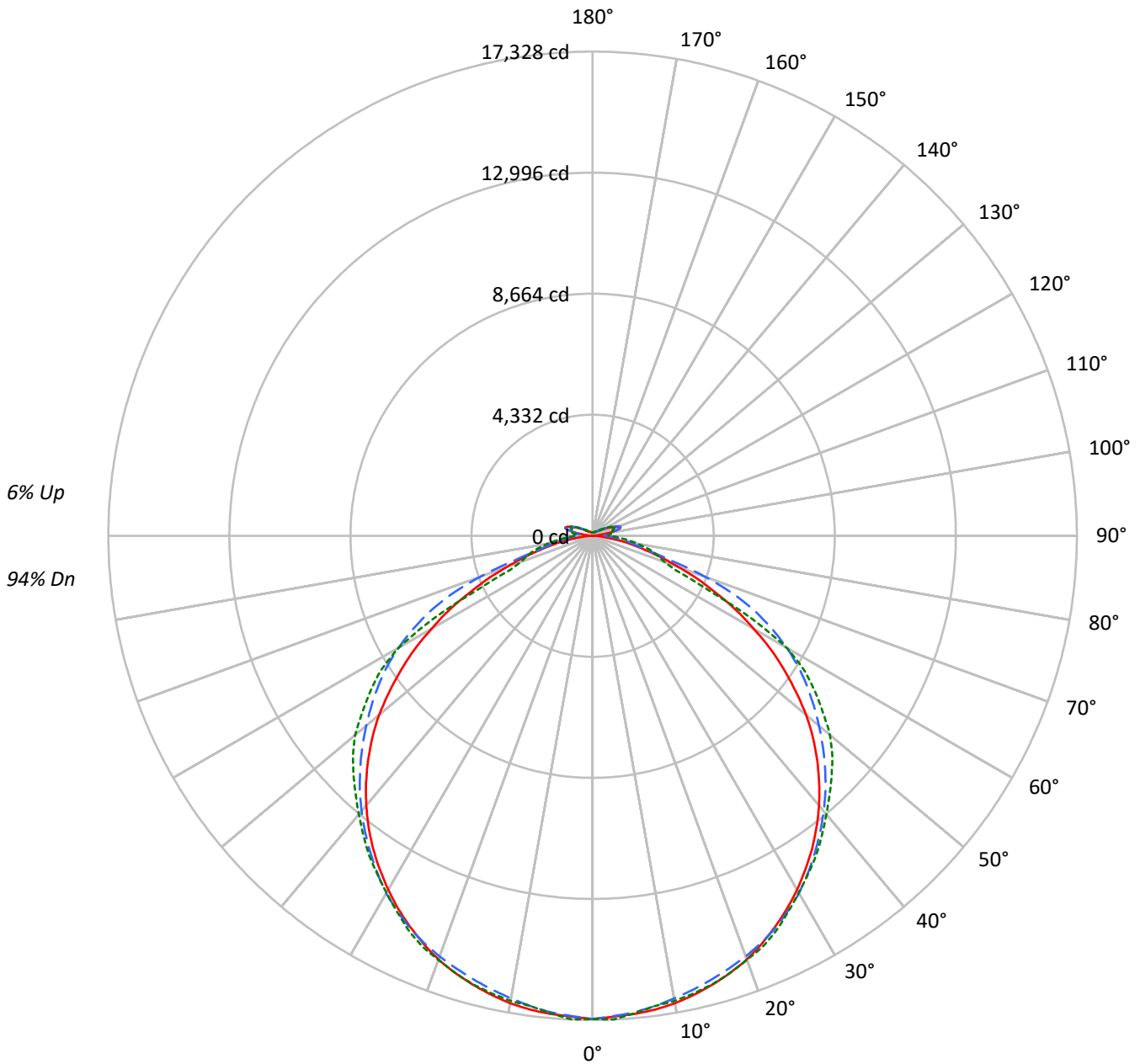
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 51298.2 lumens  
Efficiency: N/A  
Efficacy: 167.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.67' x H: 0.17')  
CIE Type: Direct  
  
Input Watts (W): 306.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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   | 118 | 118 | 118 | 118 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 97 | 97 | 97 | 94 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 108 | 103 | 99  | 95  | 104 | 100 | 97  | 93  | 95  | 92  | 89  | 90  | 88  | 85  | 86 | 84 | 82 | 80 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 98  | 90  | 84  | 78  | 95  | 88  | 82  | 77  | 83  | 78  | 74  | 79  | 75  | 72  | 75 | 72 | 69 | 67 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 90  | 79  | 71  | 65  | 87  | 77  | 70  | 64  | 74  | 67  | 62  | 70  | 65  | 60  | 67 | 62 | 59 | 56 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 82  | 70  | 62  | 55  | 79  | 69  | 61  | 54  | 65  | 59  | 53  | 62  | 57  | 52  | 60 | 55 | 51 | 48 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 75  | 63  | 54  | 47  | 73  | 61  | 53  | 47  | 59  | 51  | 46  | 56  | 50  | 45  | 54 | 48 | 44 | 42 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 57  | 48  | 41  | 67  | 55  | 47  | 41  | 53  | 46  | 40  | 51  | 44  | 39  | 49 | 43 | 39 | 36 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 65  | 51  | 43  | 36  | 62  | 50  | 42  | 36  | 48  | 41  | 35  | 46  | 40  | 35  | 44 | 39 | 34 | 32 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 60  | 47  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 42  | 36  | 31  | 41 | 35 | 31 | 29 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 56  | 43  | 35  | 29  | 54  | 42  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 37 | 32 | 28 | 26 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 52  | 39  | 32  | 26  | 51  | 39  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 25  | 35 | 29 | 25 | 23 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 29536 | 29536 | 29536 |
| 5°  | 29201 | 29094 | 29292 |
| 10° | 28952 | 28640 | 29089 |
| 15° | 28626 | 28298 | 29020 |
| 20° | 28298 | 28077 | 28891 |
| 25° | 27806 | 27855 | 28771 |
| 30° | 27278 | 27511 | 28368 |
| 35° | 26671 | 26974 | 28221 |
| 40° | 25923 | 26419 | 27978 |
| 45° | 24944 | 25778 | 27987 |
| 50° | 23675 | 25049 | 27989 |
| 55° | 21780 | 24329 | 27206 |
| 60° | 19373 | 23283 | 25457 |
| 65° | 16325 | 21363 | 16388 |
| 70° | 12832 | 16643 | 12140 |
| 75° | 9276  | 9851  | 12724 |
| 80° | 6073  | 8152  | 12828 |
| 85° | 3041  | 7402  | 13489 |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 1630.6  | 3.2       |
| 10°-20°   | 4675.7  | 9.1       |
| 20°-30°   | 7141.3  | 13.9      |
| 30°-40°   | 8664.9  | 16.9      |
| 40°-50°   | 9081.6  | 17.7      |
| 50°-60°   | 8229.3  | 16.0      |
| 60°-70°   | 5517.4  | 10.8      |
| 70°-80°   | 2477.6  | 4.8       |
| 80°-90°   | 905.2   | 1.8       |
| 90°-100°  | 502.5   | 1.0       |
| 100°-110° | 932.6   | 1.8       |
| 110°-120° | 754.5   | 1.5       |
| 120°-130° | 366.5   | 0.7       |
| 130°-140° | 190.0   | 0.4       |
| 140°-150° | 112.4   | 0.2       |
| 150°-160° | 68.1    | 0.1       |
| 160°-170° | 36.8    | 0.1       |
| 170°-180° | 11.3    | 0.0       |
| 0°-30°    | 13447.6 | 26.2      |
| 0°-40°    | 22112.5 | 43.1      |
| 0°-60°    | 39423.3 | 76.9      |
| 0°-90°    | 48323.6 | 94.2      |
| 90°-120°  | 2189.5  | 4.3       |
| 90°-150°  | 2858.4  | 5.6       |
| 90°-180°  | 2975.0  | 5.8       |
| 0°-180°   | 51298.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux |
|------|-------|-------|-------|-------|-------|------|
| 0°   | 17293 | 17293 | 17293 | 17293 | 17293 |      |
| 5°   | 17181 | 17241 | 17120 | 17173 | 17151 | ###  |
| 15°  | 16623 | 16558 | 16440 | 16586 | 16606 | 4693 |
| 25°  | 15443 | 15375 | 15483 | 15625 | 15580 | 7118 |
| 35°  | 13687 | 13720 | 13860 | 14008 | 13952 | 8555 |
| 45°  | 11360 | 11545 | 11760 | 12060 | 12097 | 8751 |
| 55°  | 8359  | 8762  | 9359  | 9734  | 9712  | 7461 |
| 65°  | 4906  | 5674  | 6441  | 5436  | 4438  | 4888 |
| 75°  | 1930  | 2800  | 2060  | 2108  | 2245  | 2110 |
| 85°  | 333   | 638   | 818   | 988   | 1035  | 406  |
| 90°  | 8     | 246   | 470   | 592   | 624   | 24   |
| 95°  | 56    | 244   | 462   | 581   | 621   | 168  |
| 105° | 1013  | 1050  | 986   | 774   | 732   | 963  |
| 115° | 712   | 729   | 772   | 790   | 788   | 717  |
| 125° | 356   | 376   | 408   | 414   | 414   | 334  |
| 135° | 222   | 229   | 238   | 253   | 258   | 176  |
| 145° | 168   | 174   | 177   | 180   | 184   | 107  |
| 155° | 141   | 146   | 148   | 148   | 146   | 66   |
| 165° | 128   | 128   | 130   | 130   | 130   | 36   |
| 175° | 118   | 118   | 116   | 114   | 114   | 11   |
| 180° | 115   | 115   | 115   | 115   | 115   |      |



TEST NUMBER: P827218

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**CANDELA DISTRIBUTION (FULL):**

|        | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|--------|---------|---------|---------|---------|---------|
| 0°     | 17293.1 | 17293.1 | 17293.1 | 17293.1 | 17293.1 |
| 2.5°   | 17223.1 | 17295.6 | 17205.6 | 17303.1 | 17328.1 |
| 5°     | 17180.6 | 17240.6 | 17120.5 | 17173.1 | 17150.6 |
| 7.5°   | 17103.0 | 17123.0 | 16980.5 | 17023.0 | 16978.0 |
| 10°    | 16988.0 | 16978.0 | 16810.5 | 16893.0 | 16903.0 |
| 12.5°  | 16818.0 | 16788.0 | 16638.0 | 16763.0 | 16765.5 |
| 15°    | 16623.0 | 16557.9 | 16440.4 | 16585.5 | 16605.5 |
| 17.5°  | 16397.9 | 16312.9 | 16235.4 | 16422.9 | 16392.9 |
| 20°    | 16135.4 | 16035.4 | 16020.4 | 16225.4 | 16150.4 |
| 22.5°  | 15810.3 | 15732.8 | 15767.8 | 15962.8 | 15915.3 |
| 25°    | 15442.7 | 15375.2 | 15482.8 | 15625.3 | 15580.3 |
| 27.5°  | 15055.2 | 15015.2 | 15137.7 | 15247.7 | 15160.2 |
| 30°    | 14630.1 | 14607.6 | 14770.1 | 14860.1 | 14750.1 |
| 32.5°  | 14167.5 | 14175.0 | 14330.1 | 14452.6 | 14350.1 |
| 35°    | 13687.4 | 13719.9 | 13860.0 | 14007.5 | 13952.5 |
| 37.5°  | 13159.8 | 13232.4 | 13372.4 | 13539.9 | 13482.4 |
| 40°    | 12602.2 | 12707.3 | 12862.3 | 13064.8 | 13012.3 |
| 42.5°  | 11999.6 | 12132.2 | 12332.2 | 12557.2 | 12552.2 |
| 45°    | 11359.5 | 11544.6 | 11759.6 | 12059.6 | 12097.2 |
| 47.5°  | 10694.4 | 10901.9 | 11174.5 | 11574.6 | 11632.1 |
| 50°    | 9971.8  | 10231.8 | 10571.9 | 11052.0 | 11087.0 |
| 52.5°  | 9166.6  | 9521.7  | 9971.8  | 10431.9 | 10389.3 |
| 55°    | 8359.0  | 8761.6  | 9359.2  | 9734.2  | 9711.7  |
| 57.5°  | 7553.8  | 8006.4  | 8731.6  | 8999.1  | 8996.6  |
| 60°    | 6653.7  | 7226.3  | 8018.9  | 8221.5  | 8021.4  |
| 62.5°  | 5821.0  | 6436.1  | 7258.8  | 7111.3  | 6426.1  |
| 65°    | 4905.9  | 5673.5  | 6441.1  | 5436.0  | 4438.3  |
| 67.5°  | 4093.2  | 4893.4  | 5471.0  | 3723.2  | 3188.1  |
| 70°    | 3275.6  | 4158.2  | 4265.8  | 2763.0  | 2725.5  |
| 72.5°  | 2550.5  | 3490.6  | 2943.0  | 2365.4  | 2485.4  |
| 75°    | 1930.3  | 2800.5  | 2060.4  | 2107.9  | 2245.4  |
| 77.5°  | 1407.8  | 2150.4  | 1602.8  | 1847.8  | 1960.3  |
| 80°    | 967.7   | 1522.8  | 1307.7  | 1552.8  | 1630.3  |
| 82.5°  | 607.6   | 1005.2  | 1047.7  | 1250.2  | 1330.2  |
| 85°    | 332.6   | 637.6   | 817.6   | 987.7   | 1035.2  |
| 87.5°  | 137.5   | 385.1   | 625.1   | 762.6   | 802.6   |
| 90°    | 7.5     | 246.5   | 469.6   | 592.1   | 624.1   |
| 92.5°  | 19.5    | 207.5   | 417.1   | 529.6   | 560.1   |
| 95°    | 55.5    | 243.5   | 462.1   | 580.6   | 620.6   |
| 97.5°  | 274.0   | 396.0   | 555.5   | 671.6   | 714.6   |
| 100°   | 559.5   | 673.5   | 675.5   | 745.0   | 761.5   |
| 102.5° | 863.0   | 918.0   | 788.0   | 759.0   | 758.5   |
| 105°   | 1013.0  | 1049.5  | 986.5   | 773.5   | 732.0   |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|--------|-------|-------|-------|-------|-------|
| 112.5° | 825.5 | 855.0 | 889.0 | 888.5 | 861.5 |
| 115°   | 712.0 | 729.0 | 771.5 | 789.5 | 788.5 |
| 117.5° | 612.0 | 618.0 | 659.5 | 673.5 | 679.5 |
| 120°   | 510.0 | 523.5 | 565.0 | 572.5 | 569.0 |
| 122.5° | 431.0 | 443.0 | 476.5 | 487.0 | 483.5 |
| 125°   | 355.5 | 376.0 | 408.0 | 414.5 | 414.0 |
| 127.5° | 306.0 | 319.0 | 349.0 | 357.5 | 359.0 |
| 130°   | 269.0 | 279.5 | 302.0 | 313.0 | 314.0 |
| 132.5° | 243.5 | 253.0 | 267.5 | 281.5 | 280.5 |
| 135°   | 222.5 | 229.0 | 238.5 | 253.0 | 257.5 |
| 137.5° | 208.0 | 211.0 | 217.0 | 232.5 | 235.0 |
| 140°   | 193.0 | 197.0 | 199.5 | 211.5 | 215.0 |
| 142.5° | 177.5 | 184.0 | 185.5 | 195.0 | 197.5 |
| 145°   | 167.5 | 174.0 | 177.0 | 180.5 | 184.0 |
| 147.5° | 161.0 | 165.0 | 167.0 | 169.0 | 171.5 |
| 150°   | 154.0 | 156.0 | 159.0 | 160.0 | 161.0 |
| 152.5° | 147.0 | 149.0 | 152.0 | 153.0 | 153.0 |
| 155°   | 141.0 | 145.5 | 147.5 | 148.5 | 146.0 |
| 157.5° | 136.0 | 140.5 | 142.5 | 143.5 | 143.5 |
| 160°   | 132.0 | 135.5 | 137.5 | 138.5 | 138.5 |
| 162.5° | 130.5 | 131.5 | 132.5 | 133.5 | 133.5 |
| 165°   | 127.5 | 128.5 | 129.5 | 129.5 | 129.5 |
| 167.5° | 124.5 | 127.0 | 125.5 | 126.5 | 126.5 |
| 170°   | 121.5 | 122.5 | 122.5 | 121.0 | 121.0 |
| 172.5° | 119.5 | 120.5 | 120.5 | 118.0 | 119.0 |
| 175°   | 117.5 | 118.5 | 116.0 | 114.5 | 114.5 |
| 177.5° | 120.0 | 117.5 | 115.0 | 112.5 | 110.0 |
| 180°   | 115.0 | 115.0 | 115.0 | 115.0 | 115.0 |



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







|        |        |        |        |       |       |
|--------|--------|--------|--------|-------|-------|
| 107.5° | 1019.5 | 1058.5 | 1055.5 | 876.5 | 759.5 |
| 110°   | 944.0  | 978.0  | 995.5  | 941.0 | 848.0 |



(END OF REPORT)