

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: P828659

Luminaire Tested: **OHBL-24SE-NL-UNV-L950-CD-UPL36**

Issue Date: 5/3/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P828659  
REPORT IS A COMBINATION OF REPORTS P826309 AND G3-2310-221-2  
Test Lab: INNOVATION CENTER  
Issue Date: 5/3/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: OHBL-24SE-NL-UNV-L950-CD-UPL36  
Description:  
Light Source: -  
Ballast/Driver: -

**Summary**

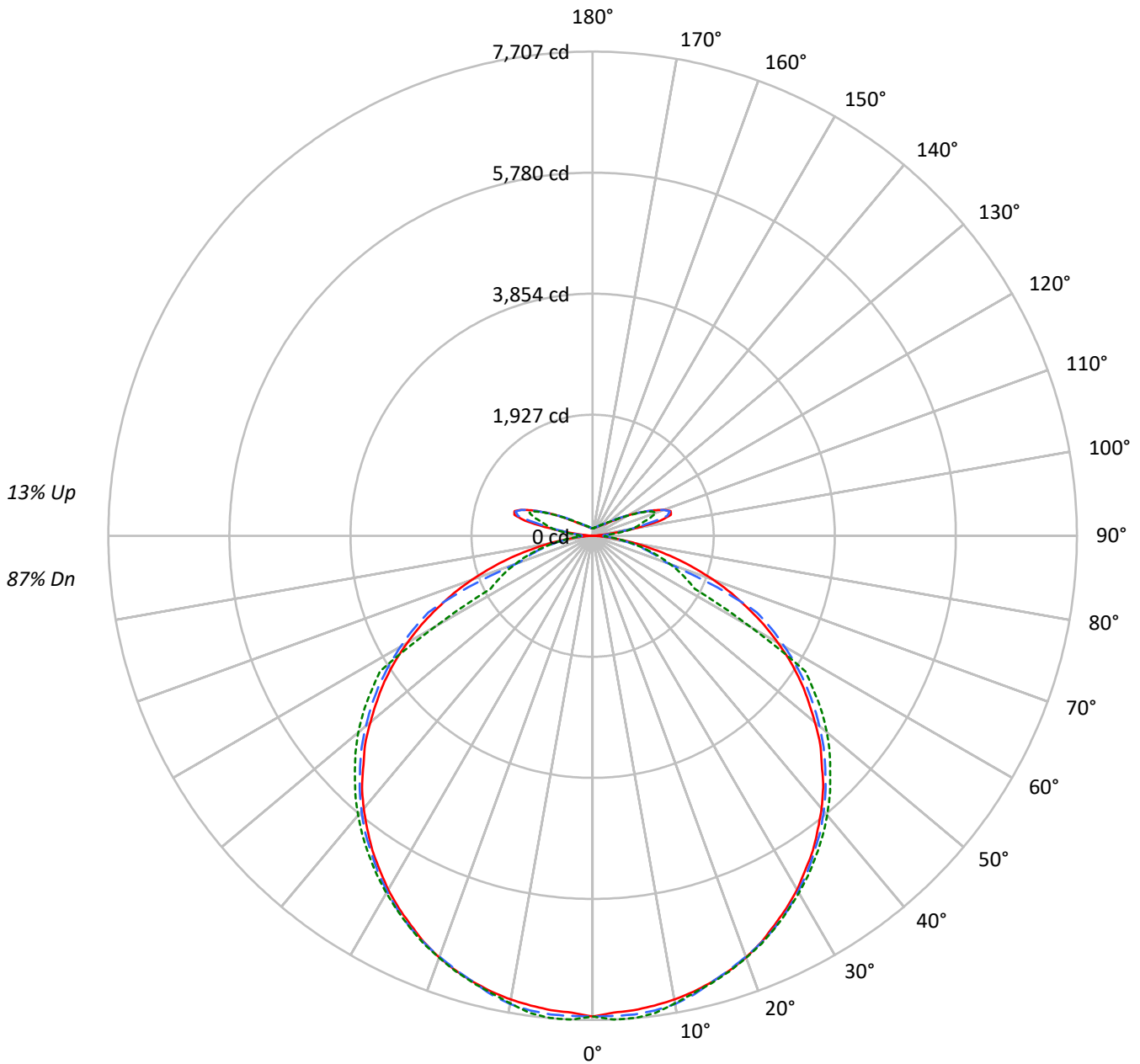
Lumens per Lamp: N/A  
Luminaire Lumens: 24595.8 lumens  
Efficiency: N/A  
Efficacy: 147.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.67' x H: 0.1')  
CIE Type: Semi-Direct

Input Watts (W): 166.8  
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   | 116 | 116 | 116 | 116 | 112 | 112 | 112 | 112 | 104 | 104 | 104 | 97 | 97 | 97 | 90 | 90 | 90 | 87 |    |    | 87 |
| 1   | 106 | 102 | 98  | 94  | 102 | 98  | 95  | 91  | 92  | 89  | 86  | 86 | 83 | 81 | 80 | 78 | 77 | 74 |    |    | 74 |
| 2   | 97  | 89  | 83  | 77  | 93  | 86  | 80  | 75  | 80  | 76  | 71  | 75 | 71 | 68 | 70 | 67 | 65 | 62 |    |    | 62 |
| 3   | 88  | 78  | 71  | 64  | 85  | 76  | 69  | 63  | 71  | 65  | 60  | 67 | 62 | 57 | 62 | 58 | 55 | 52 |    |    | 52 |
| 4   | 81  | 69  | 61  | 54  | 78  | 67  | 59  | 53  | 63  | 56  | 51  | 59 | 54 | 49 | 56 | 51 | 47 | 45 |    |    | 45 |
| 5   | 74  | 62  | 53  | 47  | 71  | 60  | 52  | 46  | 56  | 50  | 44  | 53 | 47 | 43 | 50 | 45 | 41 | 39 |    |    | 39 |
| 6   | 69  | 56  | 47  | 41  | 66  | 54  | 46  | 40  | 51  | 44  | 39  | 48 | 42 | 37 | 45 | 40 | 36 | 34 |    |    | 34 |
| 7   | 64  | 50  | 42  | 36  | 61  | 49  | 41  | 35  | 46  | 39  | 34  | 44 | 38 | 33 | 41 | 36 | 32 | 30 |    |    | 30 |
| 8   | 59  | 46  | 38  | 32  | 57  | 45  | 37  | 31  | 42  | 35  | 30  | 40 | 34 | 30 | 38 | 33 | 29 | 27 |    |    | 27 |
| 9   | 55  | 42  | 34  | 29  | 53  | 41  | 33  | 28  | 39  | 32  | 27  | 37 | 31 | 27 | 35 | 30 | 26 | 24 |    |    | 24 |
| 10  | 52  | 39  | 31  | 26  | 50  | 38  | 30  | 25  | 36  | 29  | 25  | 34 | 28 | 24 | 32 | 27 | 23 | 22 |    |    | 22 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 13068 | 13068 | 13068 |
| 5°  | 12928 | 13044 | 13182 |
| 10° | 12863 | 12983 | 13046 |
| 15° | 12792 | 12786 | 12932 |
| 20° | 12702 | 12678 | 12868 |
| 25° | 12540 | 12597 | 12809 |
| 30° | 12401 | 12457 | 12753 |
| 35° | 12234 | 12292 | 12703 |
| 40° | 12032 | 12135 | 12665 |
| 45° | 11751 | 11915 | 12586 |
| 50° | 11449 | 11668 | 12536 |
| 55° | 11084 | 11354 | 12324 |
| 60° | 10536 | 10890 | 9520  |
| 65° | 9749  | 10294 | 6341  |
| 70° | 8737  | 5292  | 6063  |
| 75° | 7253  | 4783  | 5653  |
| 80° | 5094  | 4001  | 4949  |
| 85° | 2044  | 3206  | 4283  |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 726.9   | 3.0       |
| 10°-20°   | 2081.3  | 8.5       |
| 20°-30°   | 3166.8  | 12.9      |
| 30°-40°   | 3850.4  | 15.7      |
| 40°-50°   | 4048.5  | 16.5      |
| 50°-60°   | 3696.8  | 15.0      |
| 60°-70°   | 2369.8  | 9.6       |
| 70°-80°   | 1119.5  | 4.6       |
| 80°-90°   | 317.1   | 1.3       |
| 90°-100°  | 321.4   | 1.3       |
| 100°-110° | 1105.9  | 4.5       |
| 110°-120° | 902.9   | 3.7       |
| 120°-130° | 424.4   | 1.7       |
| 130°-140° | 214.9   | 0.9       |
| 140°-150° | 125.6   | 0.5       |
| 150°-160° | 73.7    | 0.3       |
| 160°-170° | 38.3    | 0.2       |
| 170°-180° | 11.7    | 0.0       |
| 0°-30°    | 5975.0  | 24.3      |
| 0°-40°    | 9825.4  | 39.9      |
| 0°-60°    | 17570.7 | 71.4      |
| 0°-90°    | 21377.1 | 86.9      |
| 90°-120°  | 2330.2  | 9.5       |
| 90°-150°  | 3095.0  | 12.6      |
| 90°-180°  | 3219.0  | 13.1      |
| 0°-180°   | 24595.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 7651 | 7651  | 7651 | 7651  | 7651 |      |
| 5°   | 7580 | 7610  | 7648 | 7690  | 7706 | 721  |
| 15°  | 7350 | 7405  | 7349 | 7360  | 7365 | 2075 |
| 25°  | 6840 | 6851  | 6875 | 6886  | 6880 | 3156 |
| 35°  | 6114 | 6078  | 6147 | 6223  | 6205 | 3821 |
| 45°  | 5157 | 5147  | 5234 | 5358  | 5349 | 3986 |
| 55°  | 4041 | 4010  | 4146 | 4284  | 4295 | 3604 |
| 65°  | 2723 | 2723  | 2881 | 1653  | 1658 | 2699 |
| 75°  | 1345 | 1371  | 890  | 937   | 941  | 1418 |
| 85°  | 176  | 223   | 278  | 301   | 285  | 260  |
| 90°  | 7    | 118   | 178  | 209   | 207  | 13   |
| 95°  | 58   | 147   | 232  | 302   | 316  | 203  |
| 105° | 1291 | 1296  | 1226 | 918   | 830  | 1227 |
| 115° | 902  | 893   | 904  | 906   | 889  | 910  |
| 125° | 441  | 456   | 467  | 459   | 450  | 415  |
| 135° | 261  | 267   | 274  | 276   | 277  | 206  |
| 145° | 190  | 194   | 198  | 201   | 202  | 121  |
| 155° | 153  | 156   | 158  | 160   | 160  | 72   |
| 165° | 131  | 133   | 134  | 135   | 136  | 38   |
| 175° | 120  | 120   | 121  | 121   | 122  | 12   |
| 180° | 118  | 118   | 118  | 118   | 118  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 0°     | 7651.1 | 7651.1 | 7651.1 | 7651.1 | 7651.1 |
| 2.5°   | 7597.4 | 7622.9 | 7651.1 | 7687.4 | 7707.4 |
| 5°     | 7579.9 | 7609.5 | 7648.4 | 7690.1 | 7706.1 |
| 7.5°   | 7542.3 | 7583.9 | 7621.6 | 7651.1 | 7660.5 |
| 10°    | 7495.3 | 7545.0 | 7566.5 | 7563.8 | 7557.1 |
| 12.5°  | 7432.2 | 7484.7 | 7478.0 | 7447.0 | 7452.4 |
| 15°    | 7350.4 | 7405.3 | 7349.1 | 7359.8 | 7365.2 |
| 17.5°  | 7253.7 | 7307.4 | 7241.6 | 7263.1 | 7264.5 |
| 20°    | 7141.0 | 7181.2 | 7130.1 | 7147.6 | 7147.6 |
| 22.5°  | 7005.4 | 7033.5 | 7012.1 | 7024.2 | 7026.8 |
| 25°    | 6840.2 | 6850.9 | 6875.0 | 6885.8 | 6880.4 |
| 27.5°  | 6681.9 | 6668.4 | 6715.4 | 6740.9 | 6727.3 |
| 30°    | 6505.9 | 6484.4 | 6539.4 | 6581.1 | 6565.0 |
| 32.5°  | 6304.5 | 6291.1 | 6354.2 | 6403.9 | 6394.5 |
| 35°    | 6113.9 | 6077.7 | 6147.4 | 6222.6 | 6205.1 |
| 37.5°  | 5888.3 | 5866.8 | 5946.0 | 6025.3 | 6015.9 |
| 40°    | 5668.2 | 5631.9 | 5721.9 | 5815.8 | 5806.4 |
| 42.5°  | 5431.9 | 5388.8 | 5486.9 | 5599.7 | 5589.0 |
| 45°    | 5156.6 | 5147.2 | 5234.5 | 5358.0 | 5348.6 |
| 47.5°  | 4912.4 | 4865.3 | 4987.5 | 5107.0 | 5117.8 |
| 50°    | 4616.9 | 4599.5 | 4711.0 | 4856.0 | 4866.6 |
| 52.5°  | 4328.4 | 4316.3 | 4432.9 | 4579.4 | 4598.1 |
| 55°    | 4041.0 | 4010.1 | 4145.7 | 4284.0 | 4294.8 |
| 57.5°  | 3733.7 | 3701.4 | 3839.7 | 3990.1 | 4012.8 |
| 60°    | 3404.7 | 3373.8 | 3525.4 | 3665.1 | 2914.6 |
| 62.5°  | 3075.7 | 3054.3 | 3212.8 | 2275.6 | 1834.0 |
| 65°    | 2722.7 | 2722.7 | 2881.0 | 1652.6 | 1658.0 |
| 67.5°  | 2392.5 | 2371.0 | 2148.1 | 1484.8 | 1484.8 |
| 70°    | 2038.0 | 2046.1 | 1237.7 | 1300.9 | 1302.3 |
| 72.5°  | 1682.2 | 1711.8 | 1068.7 | 1119.6 | 1122.3 |
| 75°    | 1345.2 | 1370.8 | 890.1  | 937.1  | 941.1  |
| 77.5°  | 988.1  | 759.9  | 715.6  | 751.9  | 753.2  |
| 80°    | 694.1  | 479.3  | 547.8  | 582.6  | 578.6  |
| 82.5°  | 405.3  | 335.6  | 401.4  | 427.0  | 425.6  |
| 85°    | 175.8  | 222.8  | 277.9  | 300.7  | 284.6  |
| 87.5°  | 56.3   | 138.3  | 173.1  | 186.7  | 185.2  |
| 90°    | 7.0    | 117.8  | 178.3  | 208.8  | 207.2  |
| 92.5°  | 21.7   | 111.1  | 174.4  | 217.8  | 224.3  |
| 95°    | 57.9   | 146.8  | 232.1  | 302.1  | 316.0  |
| 97.5°  | 327.9  | 377.7  | 366.6  | 456.5  | 480.1  |
| 100°   | 700.9  | 739.2  | 597.2  | 627.0  | 645.8  |
| 102.5° | 1100.5 | 1127.3 | 901.9  | 768.1  | 743.4  |
| 105°   | 1290.9 | 1296.3 | 1226.5 | 917.9  | 829.6  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|--------|--------|--------|--------|--------|--------|
| 112.5° | 1060.1 | 1065.4 | 1059.9 | 1052.4 | 1015.1 |
| 115°   | 902.2  | 892.7  | 903.7  | 905.8  | 889.0  |
| 117.5° | 766.0  | 757.3  | 764.2  | 760.8  | 751.2  |
| 120°   | 644.3  | 644.3  | 653.0  | 640.8  | 633.8  |
| 122.5° | 533.8  | 546.0  | 552.1  | 543.4  | 532.1  |
| 125°   | 440.8  | 456.5  | 466.9  | 459.1  | 450.4  |
| 127.5° | 378.2  | 383.4  | 395.6  | 391.2  | 391.2  |
| 130°   | 325.2  | 332.1  | 341.7  | 343.4  | 341.7  |
| 132.5° | 288.7  | 295.6  | 304.3  | 306.9  | 309.5  |
| 135°   | 260.8  | 266.9  | 273.9  | 276.5  | 277.4  |
| 137.5° | 238.2  | 243.4  | 248.7  | 253.0  | 253.9  |
| 140°   | 219.1  | 224.3  | 229.5  | 233.0  | 233.0  |
| 142.5° | 203.5  | 208.7  | 213.0  | 215.6  | 215.6  |
| 145°   | 189.5  | 193.9  | 198.2  | 200.8  | 201.7  |
| 147.5° | 179.1  | 182.6  | 186.9  | 187.8  | 188.7  |
| 150°   | 169.5  | 172.2  | 175.6  | 177.4  | 178.2  |
| 152.5° | 160.8  | 163.5  | 166.9  | 167.8  | 168.7  |
| 155°   | 153.0  | 155.6  | 158.2  | 160.0  | 160.0  |
| 157.5° | 146.1  | 148.7  | 151.3  | 152.2  | 152.2  |
| 160°   | 140.8  | 142.6  | 145.2  | 145.2  | 146.1  |
| 162.5° | 135.6  | 137.4  | 139.1  | 140.0  | 140.8  |
| 165°   | 131.3  | 133.0  | 133.9  | 134.8  | 135.6  |
| 167.5° | 127.8  | 128.7  | 129.5  | 130.4  | 130.4  |
| 170°   | 124.3  | 125.2  | 126.1  | 126.1  | 126.9  |
| 172.5° | 121.7  | 122.6  | 123.5  | 123.5  | 123.5  |
| 175°   | 120.0  | 120.0  | 120.9  | 120.9  | 121.7  |
| 177.5° | 118.2  | 119.1  | 119.1  | 119.1  | 120.0  |
| 180°   | 118.2  | 118.2  | 118.2  | 118.2  | 118.2  |



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







|        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|
| 107.5° | 1303.0 | 1312.3 | 1286.4 | 1128.5 | 969.1  |
| 110°   | 1204.4 | 1219.7 | 1203.7 | 1148.9 | 1070.7 |



(END OF REPORT)