

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: P393467

Luminaire Tested: **24EN-LD2-34-UNV-L93050-W2A-1-U (3000K)**

Issue Date: 3/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P393467  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-32)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24EN-LD2-34-UNV-L93050-W2A-1-U (3000K)  
Description: 2X4 ENCOUNTER, 3400 LUMENS, VIVIDTUNE TUNABLE WHITE  
Light Source: 2700K/6500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2843.7 lumens  
Efficiency: N/A  
Efficacy: 119.5 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

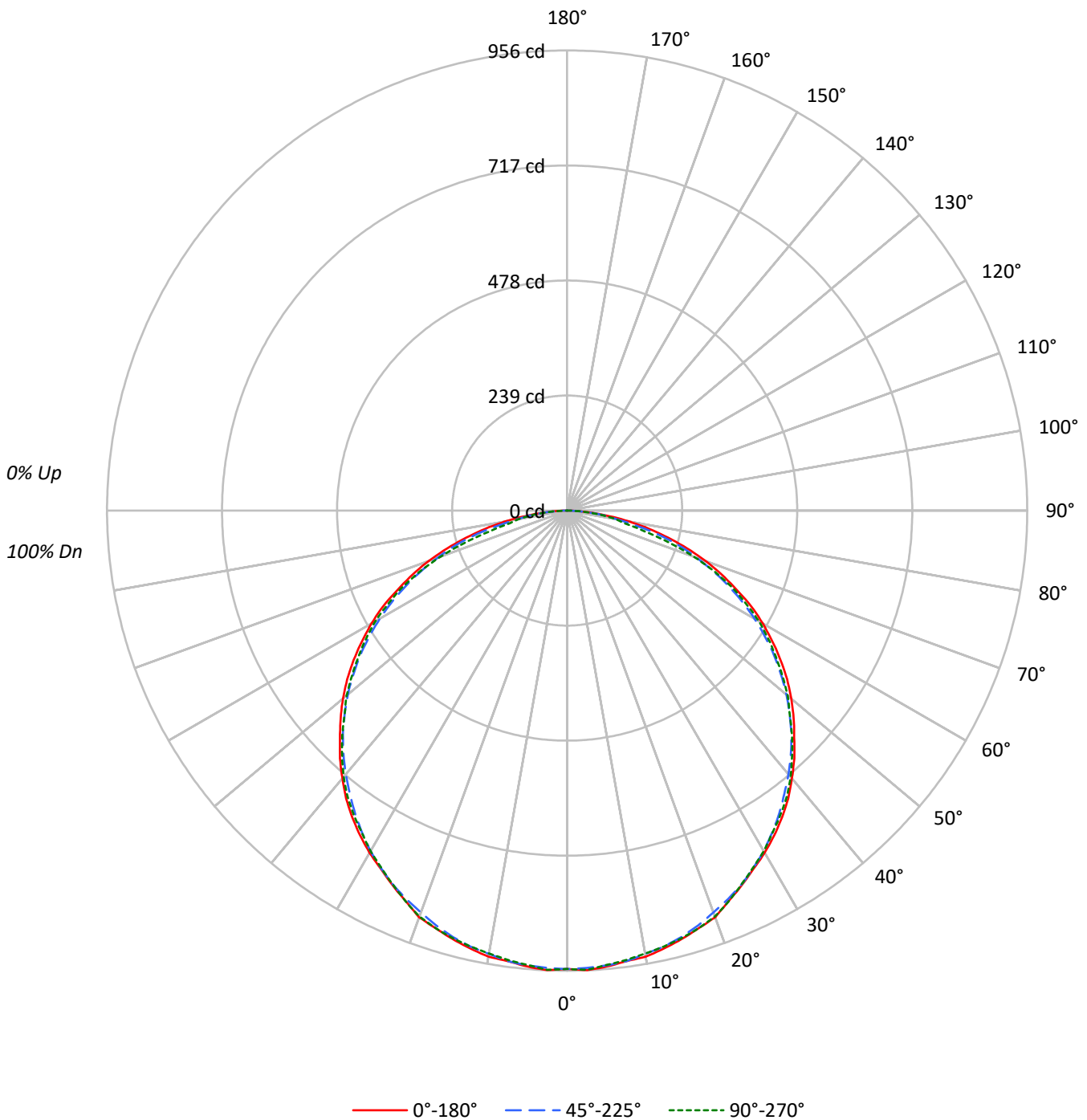
Input Watts (W): 23.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 90  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |
| 3   | 90  | 79  | 70  | 64  | 87  | 77  | 69  | 63  | 74  | 68  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 79  | 68  | 60  | 53  | 66  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 59  | 51  | 45  | 57  | 50  | 45  | 55  | 49  | 44  | 42  |
| 6   | 69  | 56  | 47  | 40  | 67  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 44  | 39  | 50  | 44  | 39  | 37  |
| 7   | 64  | 50  | 42  | 35  | 62  | 50  | 41  | 35  | 48  | 40  | 35  | 47  | 40  | 35  | 45  | 39  | 34  | 32  |
| 8   | 60  | 46  | 37  | 31  | 58  | 45  | 37  | 31  | 44  | 36  | 31  | 43  | 36  | 31  | 41  | 35  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 25  | 37  | 30  | 25  | 36  | 30  | 25  | 35  | 29  | 25  | 23  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1281 | 1281 | 1281 |
| 5°  | 1284 | 1281 | 1280 |
| 10° | 1286 | 1278 | 1276 |
| 15° | 1283 | 1277 | 1281 |
| 20° | 1287 | 1272 | 1285 |
| 25° | 1275 | 1272 | 1272 |
| 30° | 1275 | 1269 | 1269 |
| 35° | 1278 | 1262 | 1269 |
| 40° | 1276 | 1257 | 1269 |
| 45° | 1270 | 1254 | 1257 |
| 50° | 1273 | 1245 | 1252 |
| 55° | 1270 | 1232 | 1241 |
| 60° | 1263 | 1210 | 1238 |
| 65° | 1235 | 1177 | 1206 |
| 70° | 1203 | 1128 | 1102 |
| 75° | 1128 | 1042 | 867  |
| 80° | 1013 | 815  | 802  |
| 85° | 800  | 736  | 673  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.2   | 3.2       |
| 10°-20°   | 259.1  | 9.1       |
| 20°-30°   | 395.2  | 13.9      |
| 30°-40°   | 482.2  | 17.0      |
| 40°-50°   | 510.2  | 17.9      |
| 50°-60°   | 472.9  | 16.6      |
| 60°-70°   | 371.4  | 13.1      |
| 70°-80°   | 207.2  | 7.3       |
| 80°-90°   | 55.4   | 1.9       |
| 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°    | 744.5  | 26.2      |
| 0°-40°    | 1226.7 | 43.1      |
| 0°-60°    | 2209.8 | 77.7      |
| 0°-90°    | 2843.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2843.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 952 | 952   | 952 | 952   | 952 |      |
| 5°  | 951 | 950   | 948 | 948   | 948 | 90   |
| 15° | 921 | 919   | 917 | 915   | 920 | 260  |
| 25° | 859 | 857   | 857 | 855   | 857 | 396  |
| 35° | 778 | 772   | 768 | 767   | 772 | 487  |
| 45° | 667 | 665   | 659 | 659   | 661 | 516  |
| 55° | 542 | 532   | 525 | 524   | 529 | 484  |
| 65° | 388 | 380   | 370 | 372   | 379 | 385  |
| 75° | 217 | 209   | 200 | 175   | 167 | 230  |
| 85° | 52  | 48    | 48  | 44    | 44  | 61   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 952.4 | 952.4 | 952.4 | 952.4 | 952.4 |
| 2.5°  | 955.7 | 952.4 | 950.8 | 952.4 | 954.9 |
| 5°    | 950.8 | 949.9 | 948.3 | 947.5 | 947.5 |
| 7.5°  | 944.2 | 945.8 | 944.2 | 941.7 | 941.7 |
| 10°   | 940.9 | 939.3 | 935.1 | 934.3 | 934.3 |
| 12.5° | 931.9 | 929.4 | 927.7 | 924.5 | 927.7 |
| 15°   | 921.2 | 918.7 | 917.1 | 914.6 | 919.5 |
| 17.5° | 909.7 | 903.9 | 903.9 | 903.9 | 909.7 |
| 20°   | 899.0 | 890.8 | 888.3 | 889.9 | 897.3 |
| 22.5° | 877.6 | 874.3 | 873.5 | 875.2 | 878.4 |
| 25°   | 858.7 | 857.1 | 857.1 | 855.4 | 857.1 |
| 27.5° | 839.0 | 839.0 | 837.4 | 835.7 | 836.5 |
| 30°   | 820.9 | 818.5 | 816.8 | 815.2 | 816.8 |
| 32.5° | 800.4 | 796.3 | 793.0 | 792.2 | 793.8 |
| 35°   | 778.2 | 772.4 | 768.3 | 766.7 | 772.4 |
| 37.5° | 754.4 | 746.1 | 741.2 | 741.2 | 749.4 |
| 40°   | 726.4 | 717.4 | 715.7 | 714.9 | 722.3 |
| 42.5° | 698.5 | 691.9 | 687.8 | 688.6 | 691.9 |
| 45°   | 667.3 | 664.8 | 659.0 | 659.0 | 660.7 |
| 47.5° | 638.5 | 635.2 | 627.0 | 628.6 | 627.0 |
| 50°   | 608.1 | 602.3 | 594.9 | 592.5 | 598.2 |
| 52.5° | 576.0 | 569.5 | 560.4 | 558.8 | 563.7 |
| 55°   | 541.5 | 532.5 | 525.1 | 524.3 | 529.2 |
| 57.5° | 505.4 | 496.3 | 487.3 | 487.3 | 495.5 |
| 60°   | 469.2 | 460.2 | 449.5 | 449.5 | 460.2 |
| 62.5° | 431.4 | 421.6 | 410.1 | 412.5 | 419.1 |
| 65°   | 387.9 | 380.5 | 369.8 | 372.2 | 378.8 |
| 67.5° | 347.6 | 339.4 | 327.9 | 331.2 | 331.2 |
| 70°   | 305.7 | 295.0 | 286.8 | 281.9 | 280.2 |
| 72.5° | 261.3 | 252.3 | 246.5 | 228.4 | 223.5 |
| 75°   | 216.9 | 208.7 | 200.5 | 175.0 | 166.8 |
| 77.5° | 174.2 | 168.5 | 152.0 | 124.9 | 121.6 |
| 80°   | 130.7 | 128.2 | 105.2 | 103.5 | 103.5 |
| 82.5° | 88.7  | 87.1  | 78.9  | 74.8  | 74.0  |
| 85°   | 51.8  | 47.7  | 47.7  | 44.4  | 43.6  |
| 87.5° | 18.1  | 18.9  | 20.5  | 19.7  | 18.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)