

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: P393703

Luminaire Tested: **24EN-LD2-74-UNV-L82765-W2A-1-U (5000K)**

Issue Date: 3/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P393703  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-563-40)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24EN-LD2-74-UNV-L82765-W2A-1-U (5000K)  
Description: 2X4 ENCOUNTER, 7400 LUMENS, VIVIDTUNE TUNABLE WHITE  
Light Source: 3000K/5000K CCT, CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7078.1 lumens  
Efficiency: N/A  
Efficacy: 129.2 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.28 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

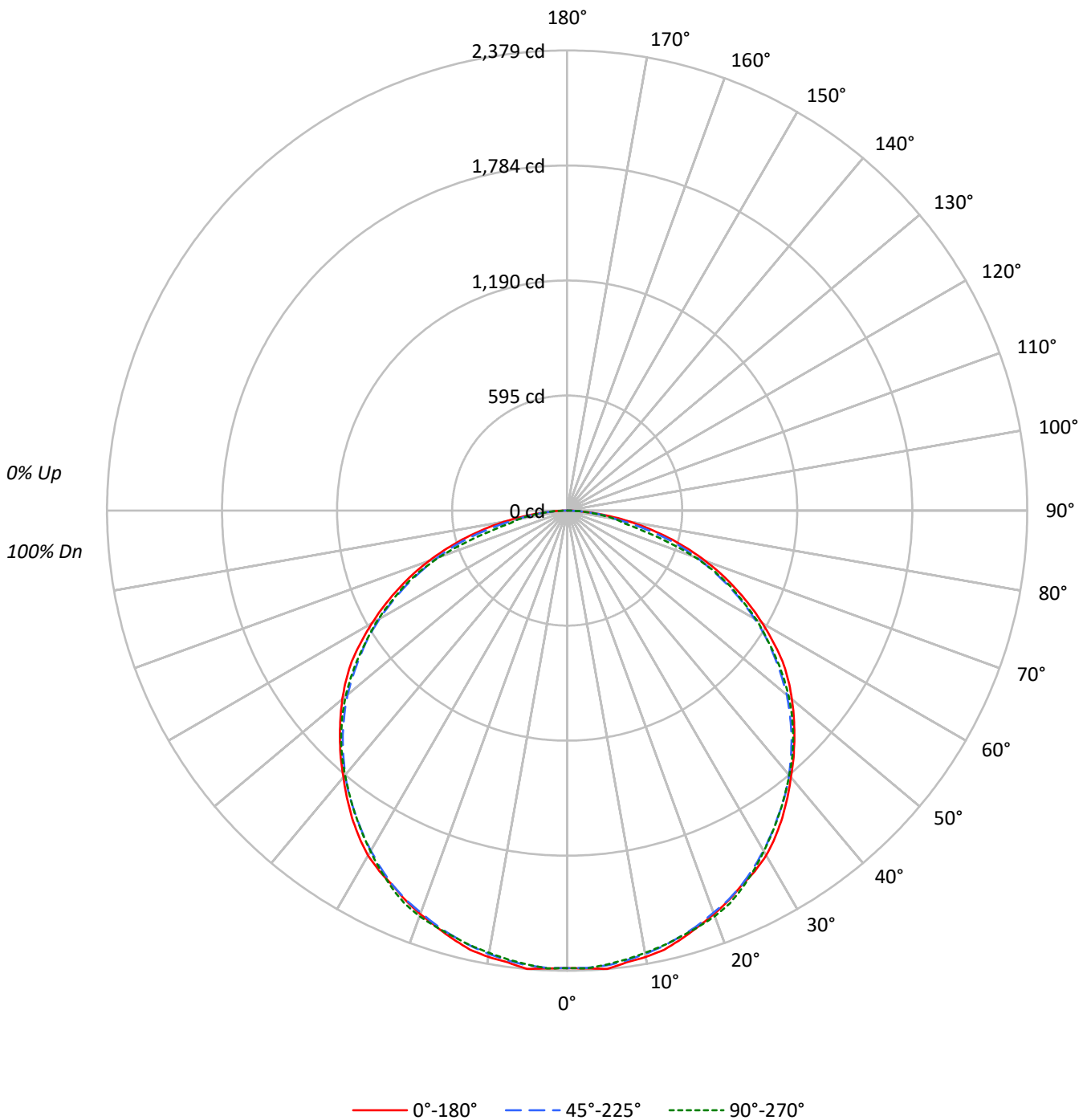
Input Watts (W): 54.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3182 | 3182 | 3182 |
| 5°  | 3213 | 3188 | 3182 |
| 10° | 3201 | 3180 | 3172 |
| 15° | 3192 | 3173 | 3174 |
| 20° | 3179 | 3168 | 3195 |
| 25° | 3172 | 3170 | 3191 |
| 30° | 3199 | 3154 | 3160 |
| 35° | 3185 | 3139 | 3142 |
| 40° | 3161 | 3135 | 3137 |
| 45° | 3161 | 3123 | 3145 |
| 50° | 3176 | 3104 | 3130 |
| 55° | 3190 | 3061 | 3084 |
| 60° | 3137 | 3013 | 3044 |
| 65° | 3079 | 2926 | 2975 |
| 70° | 2984 | 2822 | 2758 |
| 75° | 2821 | 2591 | 2127 |
| 80° | 2515 | 2001 | 1964 |
| 85° | 1971 | 1853 | 1704 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 224.2  | 3.2       |
| 10°-20°   | 644.1  | 9.1       |
| 20°-30°   | 984.6  | 13.9      |
| 30°-40°   | 1200.4 | 17.0      |
| 40°-50°   | 1270.5 | 17.9      |
| 50°-60°   | 1177.5 | 16.6      |
| 60°-70°   | 923.7  | 13.1      |
| 70°-80°   | 515.3  | 7.3       |
| 80°-90°   | 137.8  | 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°    | 1852.9 | 26.2      |
| 0°-40°    | 3053.3 | 43.1      |
| 0°-60°    | 5501.2 | 77.7      |
| 0°-90°    | 7078.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7078.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2365 | 2365  | 2365 | 2365  | 2365 |      |
| 5°  | 2379 | 2356  | 2360 | 2356  | 2356 | 225  |
| 15° | 2291 | 2283  | 2278 | 2277  | 2279 | 647  |
| 25° | 2137 | 2138  | 2136 | 2127  | 2149 | 988  |
| 35° | 1939 | 1916  | 1911 | 1918  | 1913 | 1212 |
| 45° | 1661 | 1659  | 1641 | 1632  | 1653 | 1283 |
| 55° | 1360 | 1323  | 1305 | 1308  | 1315 | 1209 |
| 65° | 967  | 950   | 919  | 929   | 934  | 956  |
| 75° | 543  | 520   | 498  | 436   | 409  | 572  |
| 85° | 128  | 121   | 120  | 112   | 110  | 152  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2365.2 | 2365.2 | 2365.2 | 2365.2 | 2365.2 |
| 2.5°  | 2369.0 | 2363.2 | 2366.1 | 2357.5 | 2369.0 |
| 5°    | 2378.6 | 2356.5 | 2360.4 | 2355.6 | 2355.6 |
| 7.5°  | 2355.6 | 2345.9 | 2345.9 | 2346.9 | 2340.2 |
| 10°   | 2343.1 | 2330.6 | 2327.7 | 2330.6 | 2321.9 |
| 12.5° | 2324.8 | 2306.6 | 2304.7 | 2306.6 | 2302.7 |
| 15°   | 2291.2 | 2282.6 | 2277.8 | 2276.8 | 2278.7 |
| 17.5° | 2254.7 | 2252.8 | 2248.0 | 2244.2 | 2256.6 |
| 20°   | 2220.2 | 2222.1 | 2212.5 | 2209.6 | 2231.7 |
| 22.5° | 2181.7 | 2181.7 | 2177.9 | 2168.3 | 2198.1 |
| 25°   | 2136.6 | 2138.5 | 2135.6 | 2127.0 | 2149.1 |
| 27.5° | 2102.0 | 2087.6 | 2084.8 | 2081.9 | 2093.4 |
| 30°   | 2058.8 | 2032.9 | 2030.0 | 2031.0 | 2033.9 |
| 32.5° | 2002.2 | 1976.2 | 1971.4 | 1977.2 | 1973.4 |
| 35°   | 1938.8 | 1915.7 | 1910.9 | 1917.7 | 1912.9 |
| 37.5° | 1870.6 | 1857.2 | 1851.4 | 1851.4 | 1849.5 |
| 40°   | 1799.6 | 1793.8 | 1785.1 | 1782.3 | 1786.1 |
| 42.5° | 1732.3 | 1731.4 | 1713.1 | 1709.3 | 1723.7 |
| 45°   | 1661.3 | 1659.4 | 1641.1 | 1631.5 | 1652.6 |
| 47.5° | 1590.2 | 1582.5 | 1562.4 | 1552.8 | 1576.8 |
| 50°   | 1517.2 | 1499.0 | 1482.7 | 1479.8 | 1495.1 |
| 52.5° | 1441.4 | 1412.6 | 1393.4 | 1391.4 | 1406.8 |
| 55°   | 1359.7 | 1323.3 | 1305.0 | 1307.9 | 1314.6 |
| 57.5° | 1262.8 | 1234.9 | 1216.7 | 1215.7 | 1219.5 |
| 60°   | 1165.8 | 1141.8 | 1119.7 | 1122.6 | 1131.2 |
| 62.5° | 1066.9 | 1047.7 | 1020.8 | 1029.4 | 1029.4 |
| 65°   | 967.0  | 949.7  | 919.0  | 928.6  | 934.3  |
| 67.5° | 865.2  | 846.0  | 816.2  | 821.0  | 826.8  |
| 70°   | 758.6  | 737.5  | 717.3  | 699.1  | 701.0  |
| 72.5° | 651.1  | 628.0  | 614.6  | 568.5  | 555.0  |
| 75°   | 542.6  | 520.5  | 498.4  | 436.0  | 409.1  |
| 77.5° | 432.1  | 419.6  | 377.4  | 310.2  | 300.6  |
| 80°   | 324.6  | 318.8  | 258.3  | 254.5  | 253.5  |
| 82.5° | 224.7  | 215.1  | 196.9  | 185.3  | 182.5  |
| 85°   | 127.7  | 121.0  | 120.0  | 112.4  | 110.4  |
| 87.5° | 45.1   | 48.0   | 49.0   | 49.0   | 49.0   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)