

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: P393715

Luminaire Tested: **24EN-LD2-74-UNV-L92765-W2A-1-U (3000K)**

Issue Date: 3/28/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P393715  
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-L92765-W2A-1-U (3000K)  
Description: 2X4 ENCOUNTER, 7400 LUMENS, VIVIDTUNE TUNABLE WHITE  
Light Source: 2700K/6500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5706.2 lumens  
Efficiency: N/A  
Efficacy: 104.1 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

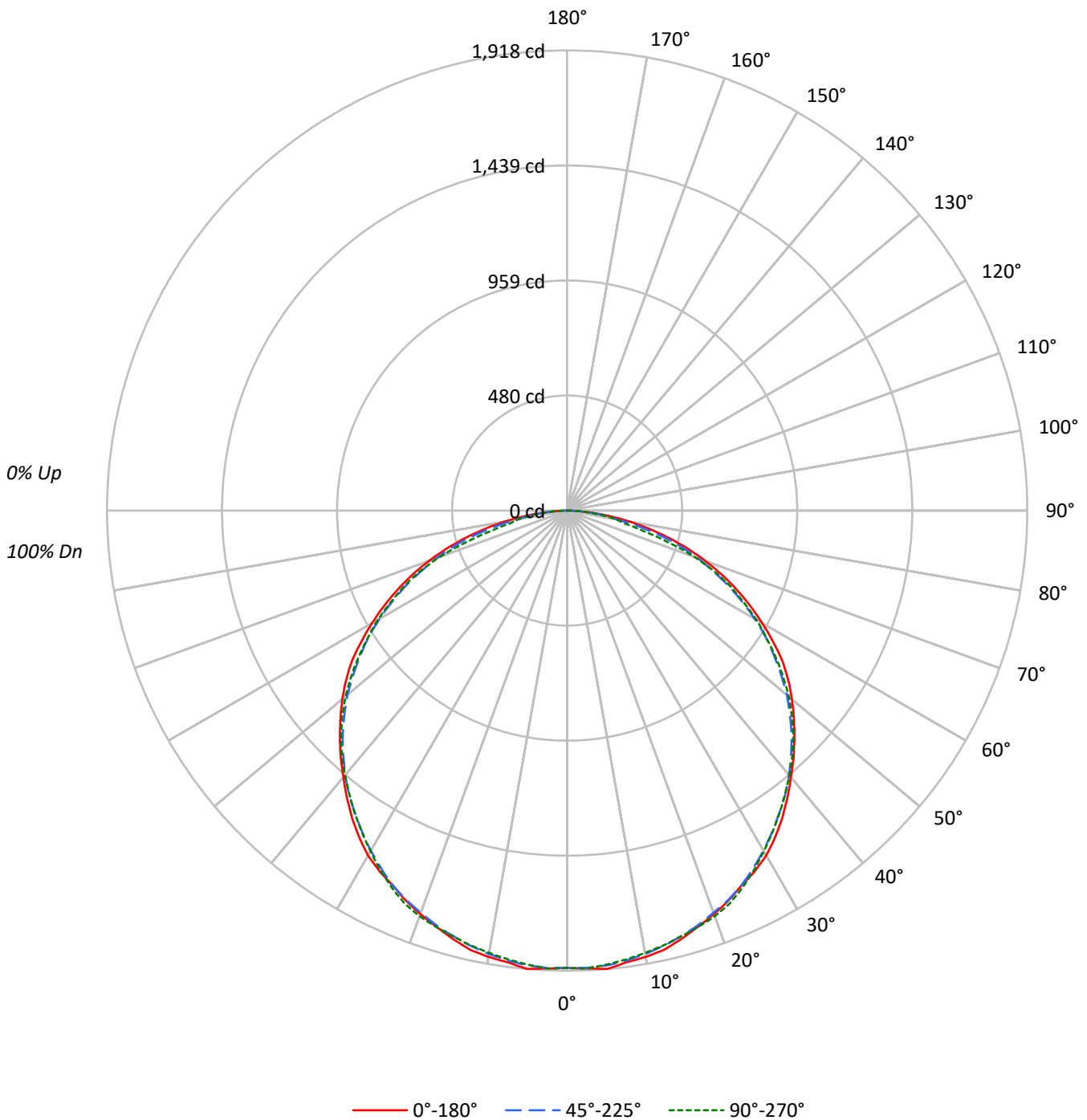
Input Watts (W): 54.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 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°  | 2565 | 2565 | 2565 |
| 5°  | 2590 | 2570 | 2565 |
| 10° | 2581 | 2564 | 2557 |
| 15° | 2573 | 2558 | 2559 |
| 20° | 2563 | 2554 | 2576 |
| 25° | 2557 | 2556 | 2572 |
| 30° | 2579 | 2543 | 2547 |
| 35° | 2567 | 2530 | 2533 |
| 40° | 2548 | 2528 | 2529 |
| 45° | 2548 | 2517 | 2535 |
| 50° | 2560 | 2502 | 2523 |
| 55° | 2571 | 2468 | 2486 |
| 60° | 2529 | 2429 | 2454 |
| 65° | 2482 | 2359 | 2398 |
| 70° | 2406 | 2275 | 2223 |
| 75° | 2274 | 2089 | 1714 |
| 80° | 2028 | 1613 | 1584 |
| 85° | 1590 | 1494 | 1374 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 180.8  | 3.2       |
| 10°-20°   | 519.3  | 9.1       |
| 20°-30°   | 793.7  | 13.9      |
| 30°-40°   | 967.7  | 17.0      |
| 40°-50°   | 1024.2 | 17.9      |
| 50°-60°   | 949.2  | 16.6      |
| 60°-70°   | 744.7  | 13.1      |
| 70°-80°   | 415.5  | 7.3       |
| 80°-90°   | 111.1  | 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°    | 1493.8 | 26.2      |
| 0°-40°    | 2461.5 | 43.1      |
| 0°-60°    | 4435.0 | 77.7      |
| 0°-90°    | 5706.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5706.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1907 | 1907  | 1907 | 1907  | 1907 |      |
| 5°  | 1918 | 1900  | 1903 | 1899  | 1899 | 182  |
| 15° | 1847 | 1840  | 1836 | 1836  | 1837 | 521  |
| 25° | 1722 | 1724  | 1722 | 1715  | 1733 | 797  |
| 35° | 1563 | 1544  | 1541 | 1546  | 1542 | 977  |
| 45° | 1339 | 1338  | 1323 | 1315  | 1332 | 1034 |
| 55° | 1096 | 1067  | 1052 | 1054  | 1060 | 975  |
| 65° | 780  | 766   | 741  | 749   | 753  | 770  |
| 75° | 437  | 420   | 402  | 352   | 330  | 461  |
| 85° | 103  | 98    | 97   | 91    | 89   | 123  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1906.7 | 1906.7 | 1906.7 | 1906.7 | 1906.7 |
| 2.5°  | 1909.8 | 1905.2 | 1907.5 | 1900.5 | 1909.8 |
| 5°    | 1917.6 | 1899.8 | 1902.9 | 1899.0 | 1899.0 |
| 7.5°  | 1899.0 | 1891.3 | 1891.3 | 1892.0 | 1886.6 |
| 10°   | 1888.9 | 1878.9 | 1876.5 | 1878.9 | 1871.9 |
| 12.5° | 1874.2 | 1859.5 | 1858.0 | 1859.5 | 1856.4 |
| 15°   | 1847.1 | 1840.2 | 1836.3 | 1835.5 | 1837.1 |
| 17.5° | 1817.7 | 1816.2 | 1812.3 | 1809.2 | 1819.3 |
| 20°   | 1789.8 | 1791.4 | 1783.6 | 1781.3 | 1799.1 |
| 22.5° | 1758.9 | 1758.9 | 1755.8 | 1748.0 | 1772.0 |
| 25°   | 1722.5 | 1724.0 | 1721.7 | 1714.8 | 1732.6 |
| 27.5° | 1694.6 | 1683.0 | 1680.7 | 1678.4 | 1687.7 |
| 30°   | 1659.8 | 1638.9 | 1636.6 | 1637.3 | 1639.7 |
| 32.5° | 1614.1 | 1593.2 | 1589.3 | 1594.0 | 1590.9 |
| 35°   | 1563.0 | 1544.4 | 1540.6 | 1546.0 | 1542.1 |
| 37.5° | 1508.1 | 1497.2 | 1492.6 | 1492.6 | 1491.0 |
| 40°   | 1450.8 | 1446.1 | 1439.2 | 1436.8 | 1439.9 |
| 42.5° | 1396.6 | 1395.8 | 1381.1 | 1378.0 | 1389.6 |
| 45°   | 1339.3 | 1337.7 | 1323.0 | 1315.3 | 1332.3 |
| 47.5° | 1282.0 | 1275.8 | 1259.5 | 1251.8 | 1271.2 |
| 50°   | 1223.2 | 1208.5 | 1195.3 | 1193.0 | 1205.4 |
| 52.5° | 1162.0 | 1138.8 | 1123.3 | 1121.7 | 1134.1 |
| 55°   | 1096.2 | 1066.8 | 1052.1 | 1054.4 | 1059.8 |
| 57.5° | 1018.0 | 995.6  | 980.9  | 980.1  | 983.2  |
| 60°   | 939.8  | 920.5  | 902.7  | 905.0  | 912.0  |
| 62.5° | 860.1  | 844.6  | 822.9  | 829.9  | 829.9  |
| 65°   | 779.6  | 765.6  | 740.9  | 748.6  | 753.3  |
| 67.5° | 697.5  | 682.0  | 658.0  | 661.9  | 666.5  |
| 70°   | 611.6  | 594.5  | 578.3  | 563.6  | 565.1  |
| 72.5° | 524.9  | 506.3  | 495.5  | 458.3  | 447.5  |
| 75°   | 437.4  | 419.6  | 401.8  | 351.5  | 329.8  |
| 77.5° | 348.4  | 338.3  | 304.2  | 250.1  | 242.3  |
| 80°   | 261.7  | 257.0  | 208.2  | 205.2  | 204.4  |
| 82.5° | 181.2  | 173.4  | 158.7  | 149.4  | 147.1  |
| 85°   | 103.0  | 97.5   | 96.8   | 90.6   | 89.0   |
| 87.5° | 36.4   | 38.7   | 39.5   | 39.5   | 39.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)