

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: P296264

Luminaire Tested: **24RLN-LD5-60-RDP-UNV-L93050-W2A1-U-3500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P296264  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059-R2)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24RLN-LD5-60-RDP-UNV-L93050-W2A1-U-3500K  
Description: RLN LED 2x4 TUNABLE WHITE TROFFER  
WITH RDP LENS  
Light Source: (504) 90 CRI LEDS TUNED TO 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4246.0 lumens  
Efficiency: N/A  
Efficacy: 96.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

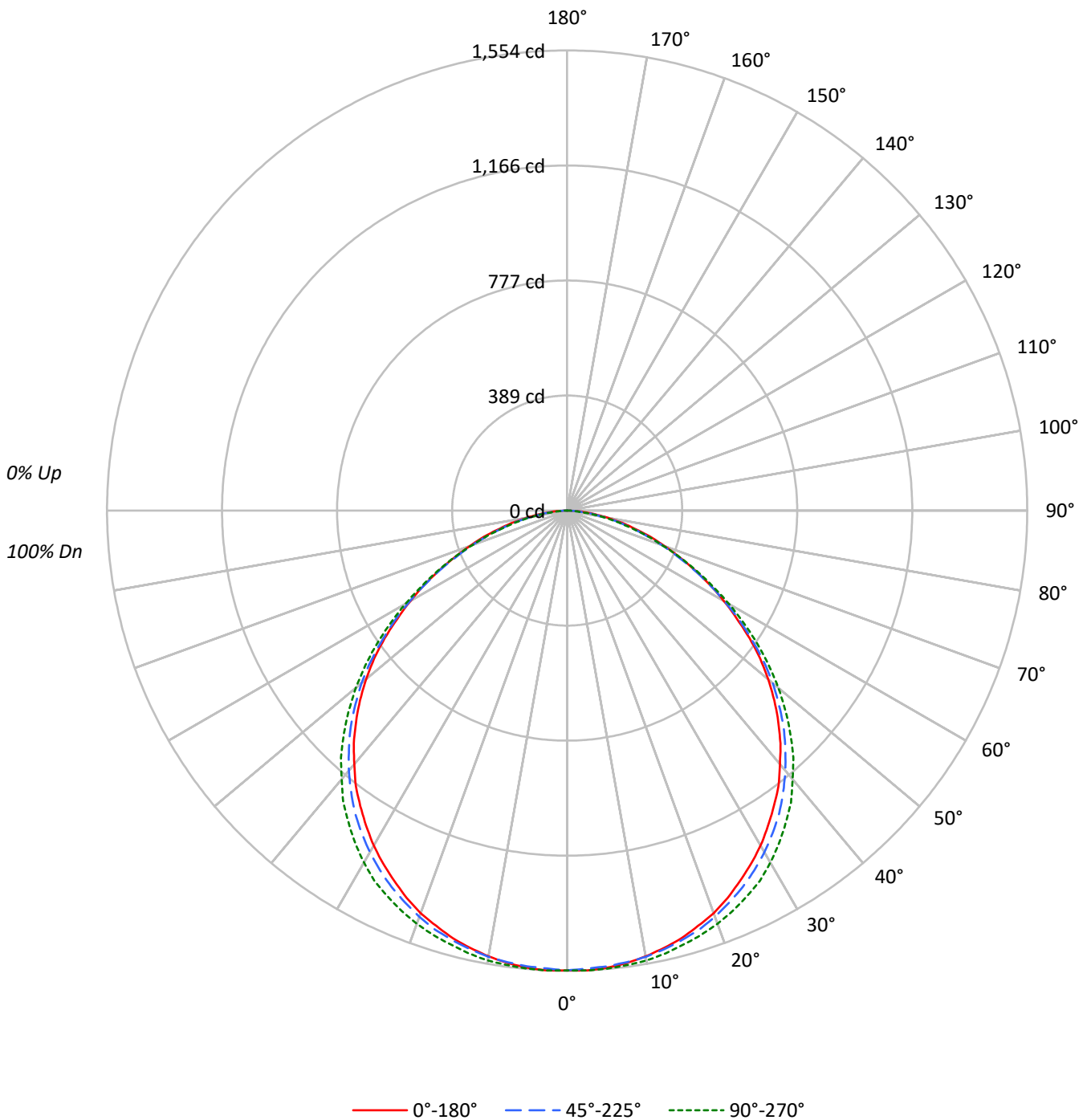
Input Watts (W): 44.082  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 105 | 101 | 97  | 107 | 102 | 99  | 95  | 98  | 95  | 92  | 94  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 85  | 80  | 97  | 90  | 84  | 79  | 86  | 81  | 77  | 83  | 79  | 75  | 80  | 77  | 73  | 71  |
| 3   | 91  | 81  | 73  | 67  | 89  | 79  | 72  | 66  | 76  | 70  | 65  | 74  | 68  | 64  | 71  | 66  | 63  | 60  |
| 4   | 83  | 72  | 63  | 57  | 81  | 70  | 62  | 56  | 68  | 61  | 55  | 66  | 60  | 55  | 63  | 58  | 54  | 52  |
| 5   | 77  | 64  | 55  | 49  | 75  | 63  | 55  | 49  | 61  | 54  | 48  | 59  | 53  | 48  | 57  | 52  | 47  | 45  |
| 6   | 71  | 58  | 49  | 43  | 69  | 57  | 49  | 43  | 55  | 48  | 42  | 53  | 47  | 42  | 52  | 46  | 41  | 39  |
| 7   | 66  | 52  | 44  | 38  | 64  | 52  | 43  | 38  | 50  | 43  | 37  | 49  | 42  | 37  | 47  | 41  | 37  | 35  |
| 8   | 61  | 48  | 39  | 34  | 60  | 47  | 39  | 34  | 46  | 39  | 33  | 45  | 38  | 33  | 43  | 37  | 33  | 31  |
| 9   | 57  | 44  | 36  | 30  | 56  | 43  | 36  | 30  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |
| 10  | 54  | 41  | 33  | 27  | 52  | 40  | 33  | 27  | 39  | 32  | 27  | 38  | 32  | 27  | 37  | 31  | 27  | 25  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2089 | 2089 | 2089 |
| 5°  | 2093 | 2086 | 2097 |
| 10° | 2088 | 2091 | 2108 |
| 15° | 2082 | 2091 | 2114 |
| 20° | 2071 | 2090 | 2126 |
| 25° | 2049 | 2083 | 2133 |
| 30° | 2030 | 2070 | 2132 |
| 35° | 2000 | 2050 | 2114 |
| 40° | 1963 | 2014 | 2079 |
| 45° | 1919 | 1968 | 2029 |
| 50° | 1854 | 1898 | 1949 |
| 55° | 1765 | 1787 | 1840 |
| 60° | 1647 | 1656 | 1699 |
| 65° | 1513 | 1503 | 1538 |
| 70° | 1375 | 1337 | 1343 |
| 75° | 1223 | 1156 | 1147 |
| 80° | 1061 | 948  | 924  |
| 85° | 871  | 672  | 522  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 147.3  | 3.5       |
| 10°-20°   | 424.5  | 10.0      |
| 20°-30°   | 648.0  | 15.3      |
| 30°-40°   | 781.2  | 18.4      |
| 40°-50°   | 796.7  | 18.8      |
| 50°-60°   | 681.8  | 16.1      |
| 60°-70°   | 469.7  | 11.1      |
| 70°-80°   | 240.8  | 5.7       |
| 80°-90°   | 56.0   | 1.3       |
| 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°    | 1219.8 | 28.7      |
| 0°-40°    | 2001.0 | 47.1      |
| 0°-60°    | 3479.5 | 81.9      |
| 0°-90°    | 4246.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4246.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1553 | 1553  | 1553 | 1553  | 1553 |      |
| 5°  | 1550 | 1546  | 1545 | 1550  | 1553 | 147  |
| 15° | 1495 | 1493  | 1501 | 1512  | 1517 | 422  |
| 25° | 1380 | 1385  | 1403 | 1427  | 1437 | 637  |
| 35° | 1218 | 1223  | 1248 | 1276  | 1287 | 762  |
| 45° | 1008 | 1010  | 1034 | 1060  | 1066 | 777  |
| 55° | 752  | 747   | 762  | 778   | 784  | 671  |
| 65° | 475  | 464   | 472  | 475   | 483  | 472  |
| 75° | 235  | 226   | 222  | 222   | 221  | 254  |
| 85° | 56   | 50    | 44   | 39    | 34   | 65   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1552.8 | 1552.8 | 1552.8 | 1552.8 | 1552.8 |
| 2.5°  | 1554.4 | 1551.2 | 1547.9 | 1551.2 | 1554.4 |
| 5°    | 1549.6 | 1546.3 | 1544.7 | 1549.6 | 1552.8 |
| 7.5°  | 1541.5 | 1538.3 | 1538.3 | 1544.7 | 1547.9 |
| 10°   | 1528.6 | 1527.0 | 1530.2 | 1536.7 | 1543.1 |
| 12.5° | 1512.5 | 1512.5 | 1517.3 | 1525.4 | 1531.8 |
| 15°   | 1494.8 | 1493.2 | 1501.2 | 1512.5 | 1517.3 |
| 17.5° | 1470.6 | 1472.2 | 1483.5 | 1496.4 | 1502.8 |
| 20°   | 1446.5 | 1448.1 | 1459.4 | 1477.1 | 1485.1 |
| 22.5° | 1415.9 | 1419.1 | 1432.0 | 1454.5 | 1462.6 |
| 25°   | 1380.4 | 1385.3 | 1403.0 | 1427.1 | 1436.8 |
| 27.5° | 1345.0 | 1349.8 | 1369.2 | 1396.5 | 1409.4 |
| 30°   | 1306.3 | 1312.8 | 1332.1 | 1361.1 | 1372.4 |
| 32.5° | 1262.8 | 1267.7 | 1291.8 | 1320.8 | 1332.1 |
| 35°   | 1217.7 | 1222.6 | 1248.3 | 1275.7 | 1287.0 |
| 37.5° | 1172.6 | 1172.6 | 1198.4 | 1230.6 | 1241.9 |
| 40°   | 1117.9 | 1119.5 | 1146.9 | 1177.5 | 1183.9 |
| 42.5° | 1066.3 | 1066.3 | 1090.5 | 1119.5 | 1130.8 |
| 45°   | 1008.3 | 1010.0 | 1034.1 | 1059.9 | 1066.3 |
| 47.5° | 948.7  | 948.7  | 969.7  | 993.8  | 1000.3 |
| 50°   | 885.9  | 882.7  | 906.9  | 926.2  | 931.0  |
| 52.5° | 821.5  | 816.7  | 836.0  | 852.1  | 858.5  |
| 55°   | 752.2  | 747.4  | 761.9  | 778.0  | 784.4  |
| 57.5° | 679.7  | 673.3  | 689.4  | 703.9  | 707.1  |
| 60°   | 612.1  | 602.4  | 615.3  | 623.4  | 631.4  |
| 62.5° | 544.4  | 533.2  | 542.8  | 547.7  | 554.1  |
| 65°   | 475.2  | 463.9  | 472.0  | 475.2  | 483.2  |
| 67.5° | 409.1  | 401.1  | 402.7  | 407.5  | 410.7  |
| 70°   | 349.5  | 339.9  | 339.9  | 339.9  | 341.5  |
| 72.5° | 294.8  | 280.3  | 278.7  | 280.3  | 280.3  |
| 75°   | 235.2  | 225.5  | 222.3  | 222.3  | 220.7  |
| 77.5° | 188.5  | 175.6  | 174.0  | 170.7  | 167.5  |
| 80°   | 136.9  | 125.6  | 122.4  | 120.8  | 119.2  |
| 82.5° | 95.0   | 85.4   | 82.1   | 78.9   | 74.1   |
| 85°   | 56.4   | 49.9   | 43.5   | 38.7   | 33.8   |
| 87.5° | 20.9   | 19.3   | 16.1   | 14.5   | 14.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)