

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: P296323

Luminaire Tested: **24RLN-LD5-50-RDP-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P296323  
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-LD5-50-RDP-UNV-L92765-W2A1-U-4500K  
Description: RLN LED 2x4 TUNABLE WHITE TROFFER  
WITH RDP LENS  
Light Source: (504) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3750.0 lumens  
Efficiency: N/A  
Efficacy: 105.3 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

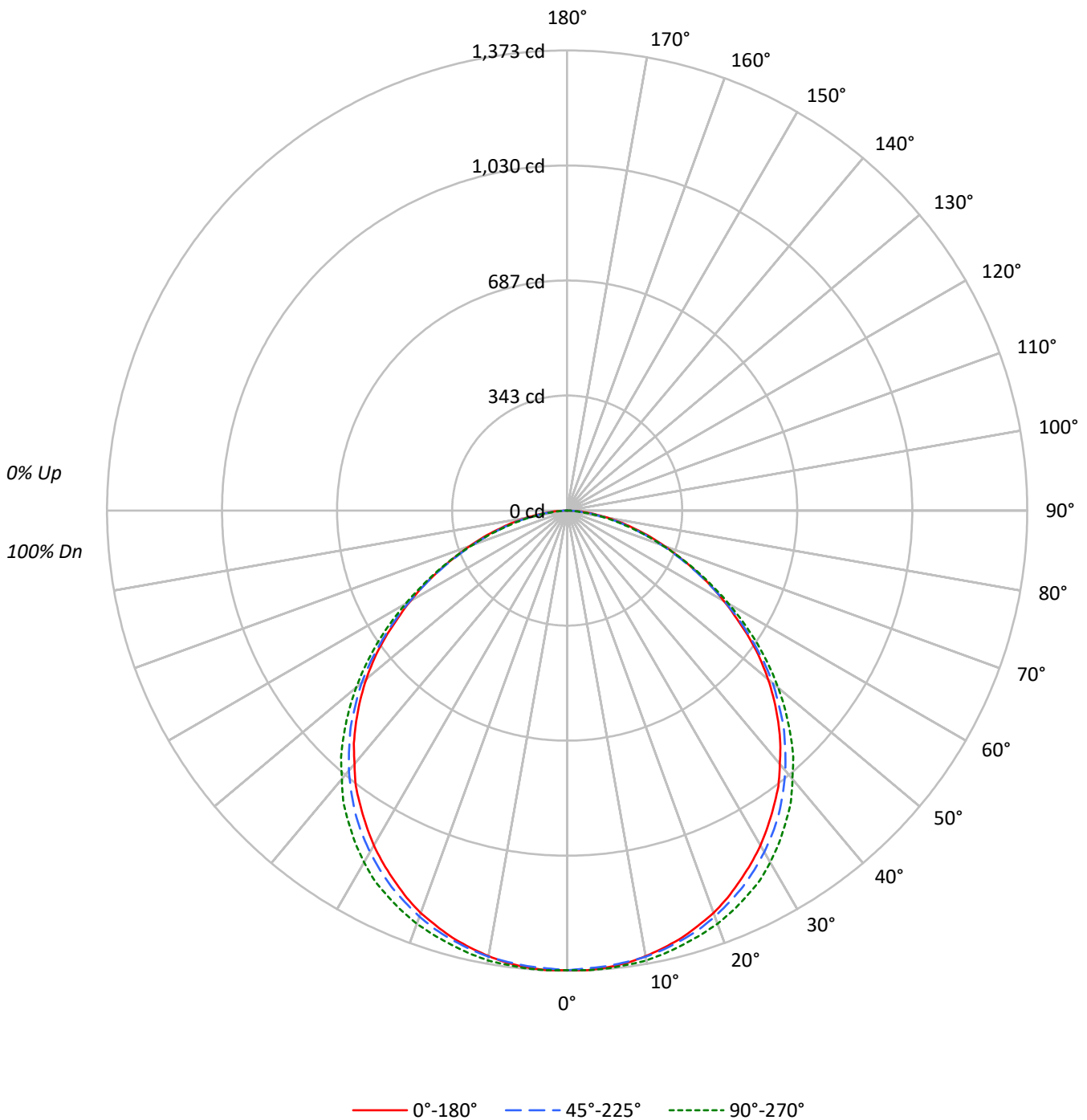
Input Watts (W): 35.619  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1845 | 1845 | 1845 |
| 5°  | 1848 | 1843 | 1852 |
| 10° | 1845 | 1846 | 1862 |
| 15° | 1839 | 1847 | 1867 |
| 20° | 1829 | 1845 | 1878 |
| 25° | 1810 | 1840 | 1884 |
| 30° | 1792 | 1828 | 1883 |
| 35° | 1767 | 1811 | 1867 |
| 40° | 1734 | 1779 | 1837 |
| 45° | 1694 | 1738 | 1792 |
| 50° | 1638 | 1676 | 1721 |
| 55° | 1559 | 1578 | 1625 |
| 60° | 1455 | 1462 | 1501 |
| 65° | 1336 | 1327 | 1359 |
| 70° | 1214 | 1181 | 1186 |
| 75° | 1080 | 1020 | 1013 |
| 80° | 937  | 838  | 816  |
| 85° | 769  | 593  | 462  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.1  | 3.5       |
| 10°-20°   | 374.9  | 10.0      |
| 20°-30°   | 572.3  | 15.3      |
| 30°-40°   | 690.0  | 18.4      |
| 40°-50°   | 703.6  | 18.8      |
| 50°-60°   | 602.2  | 16.1      |
| 60°-70°   | 414.8  | 11.1      |
| 70°-80°   | 212.6  | 5.7       |
| 80°-90°   | 49.5   | 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°    | 1077.3 | 28.7      |
| 0°-40°    | 1767.3 | 47.1      |
| 0°-60°    | 3073.1 | 81.9      |
| 0°-90°    | 3750.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3750.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1371 | 1371  | 1371 | 1371  | 1371 |      |
| 5°  | 1368 | 1366  | 1364 | 1368  | 1371 | 130  |
| 15° | 1320 | 1319  | 1326 | 1336  | 1340 | 372  |
| 25° | 1219 | 1223  | 1239 | 1260  | 1269 | 562  |
| 35° | 1076 | 1080  | 1102 | 1127  | 1137 | 673  |
| 45° | 890  | 892   | 913  | 936   | 942  | 686  |
| 55° | 664  | 660   | 673  | 687   | 693  | 593  |
| 65° | 420  | 410   | 417  | 420   | 427  | 417  |
| 75° | 208  | 199   | 196  | 196   | 195  | 224  |
| 85° | 50   | 44    | 38   | 34    | 30   | 58   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1371.4 | 1371.4 | 1371.4 | 1371.4 | 1371.4 |
| 2.5°  | 1372.8 | 1370.0 | 1367.1 | 1370.0 | 1372.8 |
| 5°    | 1368.5 | 1365.7 | 1364.3 | 1368.5 | 1371.4 |
| 7.5°  | 1361.4 | 1358.6 | 1358.6 | 1364.3 | 1367.1 |
| 10°   | 1350.1 | 1348.6 | 1351.5 | 1357.2 | 1362.9 |
| 12.5° | 1335.8 | 1335.8 | 1340.1 | 1347.2 | 1352.9 |
| 15°   | 1320.2 | 1318.8 | 1325.9 | 1335.8 | 1340.1 |
| 17.5° | 1298.8 | 1300.3 | 1310.2 | 1321.6 | 1327.3 |
| 20°   | 1277.5 | 1278.9 | 1288.9 | 1304.5 | 1311.6 |
| 22.5° | 1250.5 | 1253.3 | 1264.7 | 1284.6 | 1291.7 |
| 25°   | 1219.2 | 1223.4 | 1239.1 | 1260.4 | 1269.0 |
| 27.5° | 1187.9 | 1192.1 | 1209.2 | 1233.4 | 1244.8 |
| 30°   | 1153.7 | 1159.4 | 1176.5 | 1202.1 | 1212.1 |
| 32.5° | 1115.3 | 1119.6 | 1140.9 | 1166.5 | 1176.5 |
| 35°   | 1075.5 | 1079.8 | 1102.5 | 1126.7 | 1136.7 |
| 37.5° | 1035.7 | 1035.7 | 1058.4 | 1086.9 | 1096.8 |
| 40°   | 987.3  | 988.7  | 1012.9 | 1039.9 | 1045.6 |
| 42.5° | 941.8  | 941.8  | 963.1  | 988.7  | 998.7  |
| 45°   | 890.5  | 892.0  | 913.3  | 936.1  | 941.8  |
| 47.5° | 837.9  | 837.9  | 856.4  | 877.7  | 883.4  |
| 50°   | 782.4  | 779.6  | 800.9  | 818.0  | 822.3  |
| 52.5° | 725.5  | 721.3  | 738.3  | 752.6  | 758.2  |
| 55°   | 664.4  | 660.1  | 672.9  | 687.1  | 692.8  |
| 57.5° | 600.3  | 594.6  | 608.9  | 621.7  | 624.5  |
| 60°   | 540.6  | 532.1  | 543.4  | 550.5  | 557.7  |
| 62.5° | 480.8  | 470.9  | 479.4  | 483.7  | 489.4  |
| 65°   | 419.7  | 409.7  | 416.8  | 419.7  | 426.8  |
| 67.5° | 361.3  | 354.2  | 355.7  | 359.9  | 362.8  |
| 70°   | 308.7  | 300.2  | 300.2  | 300.2  | 301.6  |
| 72.5° | 260.3  | 247.5  | 246.1  | 247.5  | 247.5  |
| 75°   | 207.7  | 199.2  | 196.3  | 196.3  | 194.9  |
| 77.5° | 166.4  | 155.1  | 153.6  | 150.8  | 148.0  |
| 80°   | 120.9  | 111.0  | 108.1  | 106.7  | 105.3  |
| 82.5° | 83.9   | 75.4   | 72.6   | 69.7   | 65.4   |
| 85°   | 49.8   | 44.1   | 38.4   | 34.1   | 29.9   |
| 87.5° | 18.5   | 17.1   | 14.2   | 12.8   | 12.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)