

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: P296258

Luminaire Tested: **24RLN-LD5-55-RDP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P296258  
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-LD5-55-RDP-UNV-L93050-W2A1-U-3000K  
Description: RLN LED 2x4 TUNABLE WHITE TROFFER  
WITH RDP LENS  
Light Source: (504) 90 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3580.0 lumens  
Efficiency: N/A  
Efficacy: 91.4 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

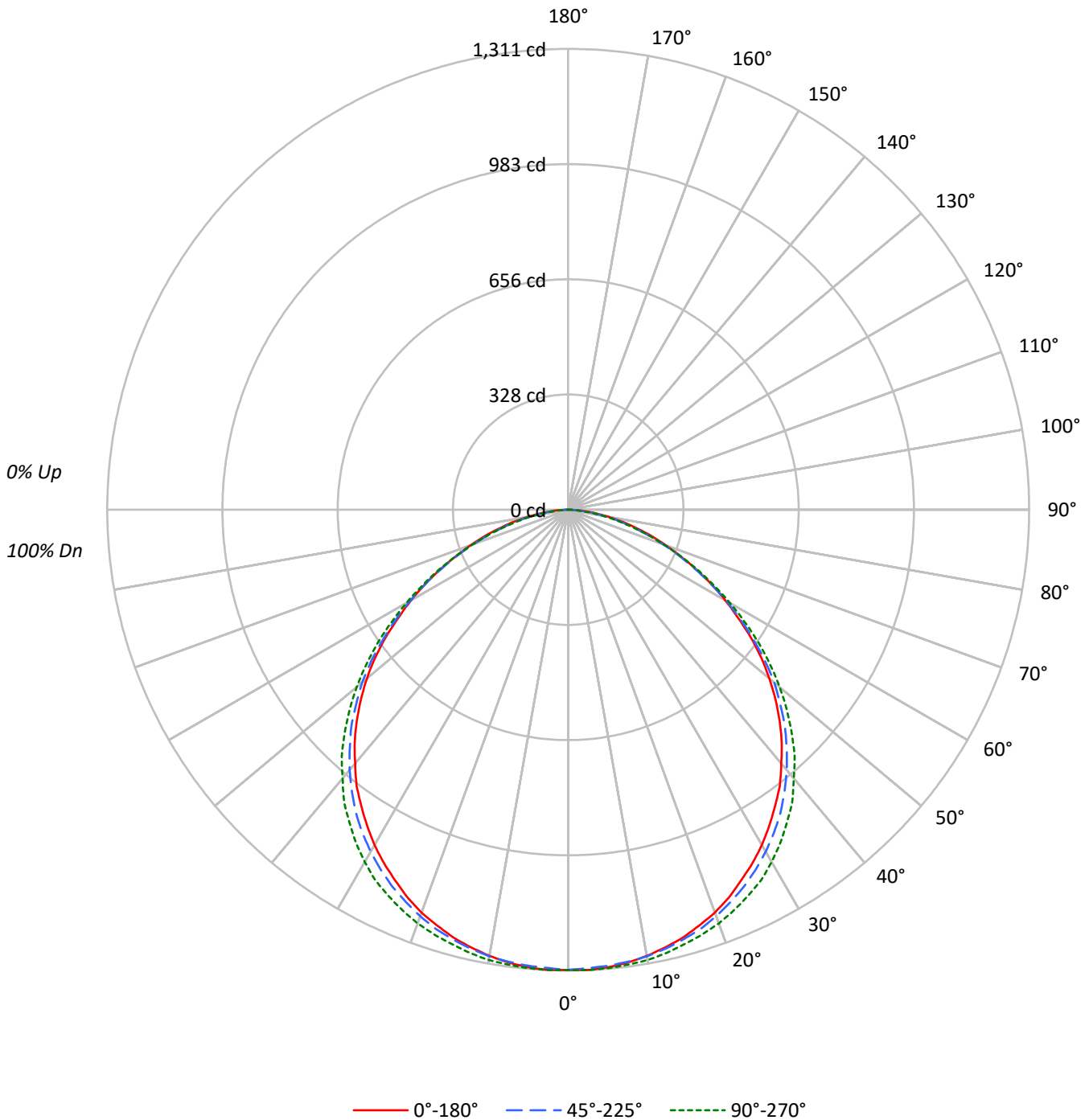
Input Watts (W): 39.153  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1762 | 1762 | 1762 |
| 5°  | 1765 | 1759 | 1768 |
| 10° | 1761 | 1763 | 1778 |
| 15° | 1756 | 1763 | 1782 |
| 20° | 1746 | 1762 | 1793 |
| 25° | 1728 | 1756 | 1798 |
| 30° | 1711 | 1745 | 1798 |
| 35° | 1686 | 1729 | 1782 |
| 40° | 1655 | 1698 | 1753 |
| 45° | 1618 | 1659 | 1711 |
| 50° | 1564 | 1600 | 1643 |
| 55° | 1488 | 1507 | 1552 |
| 60° | 1389 | 1396 | 1433 |
| 65° | 1275 | 1267 | 1297 |
| 70° | 1159 | 1127 | 1133 |
| 75° | 1031 | 974  | 967  |
| 80° | 894  | 800  | 779  |
| 85° | 733  | 567  | 440  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 124.2  | 3.5       |
| 10°-20°   | 357.9  | 10.0      |
| 20°-30°   | 546.4  | 15.3      |
| 30°-40°   | 658.7  | 18.4      |
| 40°-50°   | 671.7  | 18.8      |
| 50°-60°   | 574.9  | 16.1      |
| 60°-70°   | 396.0  | 11.1      |
| 70°-80°   | 203.0  | 5.7       |
| 80°-90°   | 47.3   | 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°    | 1028.5 | 28.7      |
| 0°-40°    | 1687.2 | 47.1      |
| 0°-60°    | 2933.8 | 81.9      |
| 0°-90°    | 3580.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3580.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1309 | 1309  | 1309 | 1309  | 1309 |      |
| 5°  | 1306 | 1304  | 1302 | 1306  | 1309 | 124  |
| 15° | 1260 | 1259  | 1266 | 1275  | 1279 | 355  |
| 25° | 1164 | 1168  | 1183 | 1203  | 1211 | 537  |
| 35° | 1027 | 1031  | 1052 | 1076  | 1085 | 642  |
| 45° | 850  | 852   | 872  | 894   | 899  | 655  |
| 55° | 634  | 630   | 642  | 656   | 661  | 566  |
| 65° | 401  | 391   | 398  | 401   | 407  | 398  |
| 75° | 198  | 190   | 187  | 187   | 186  | 214  |
| 85° | 48   | 42    | 37   | 33    | 28   | 55   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1309.2 | 1309.2 | 1309.2 | 1309.2 | 1309.2 |
| 2.5°  | 1310.6 | 1307.9 | 1305.1 | 1307.9 | 1310.6 |
| 5°    | 1306.5 | 1303.8 | 1302.4 | 1306.5 | 1309.2 |
| 7.5°  | 1299.7 | 1297.0 | 1297.0 | 1302.4 | 1305.1 |
| 10°   | 1288.8 | 1287.5 | 1290.2 | 1295.6 | 1301.1 |
| 12.5° | 1275.3 | 1275.3 | 1279.3 | 1286.1 | 1291.6 |
| 15°   | 1260.3 | 1259.0 | 1265.8 | 1275.3 | 1279.3 |
| 17.5° | 1240.0 | 1241.3 | 1250.8 | 1261.7 | 1267.1 |
| 20°   | 1219.6 | 1220.9 | 1230.4 | 1245.4 | 1252.2 |
| 22.5° | 1193.8 | 1196.5 | 1207.4 | 1226.4 | 1233.2 |
| 25°   | 1163.9 | 1168.0 | 1182.9 | 1203.3 | 1211.4 |
| 27.5° | 1134.0 | 1138.1 | 1154.4 | 1177.5 | 1188.3 |
| 30°   | 1101.4 | 1106.9 | 1123.2 | 1147.6 | 1157.1 |
| 32.5° | 1064.8 | 1068.8 | 1089.2 | 1113.7 | 1123.2 |
| 35°   | 1026.7 | 1030.8 | 1052.5 | 1075.6 | 1085.1 |
| 37.5° | 988.7  | 988.7  | 1010.4 | 1037.6 | 1047.1 |
| 40°   | 942.5  | 943.9  | 967.0  | 992.8  | 998.2  |
| 42.5° | 899.1  | 899.1  | 919.4  | 943.9  | 953.4  |
| 45°   | 850.2  | 851.5  | 871.9  | 893.6  | 899.1  |
| 47.5° | 799.9  | 799.9  | 817.6  | 838.0  | 843.4  |
| 50°   | 747.0  | 744.2  | 764.6  | 780.9  | 785.0  |
| 52.5° | 692.6  | 688.6  | 704.9  | 718.4  | 723.9  |
| 55°   | 634.2  | 630.2  | 642.4  | 656.0  | 661.4  |
| 57.5° | 573.1  | 567.7  | 581.3  | 593.5  | 596.2  |
| 60°   | 516.1  | 507.9  | 518.8  | 525.6  | 532.4  |
| 62.5° | 459.0  | 449.5  | 457.7  | 461.8  | 467.2  |
| 65°   | 400.6  | 391.1  | 397.9  | 400.6  | 407.4  |
| 67.5° | 345.0  | 338.2  | 339.5  | 343.6  | 346.3  |
| 70°   | 294.7  | 286.6  | 286.6  | 286.6  | 287.9  |
| 72.5° | 248.5  | 236.3  | 235.0  | 236.3  | 236.3  |
| 75°   | 198.3  | 190.1  | 187.4  | 187.4  | 186.1  |
| 77.5° | 158.9  | 148.0  | 146.7  | 144.0  | 141.2  |
| 80°   | 115.4  | 105.9  | 103.2  | 101.9  | 100.5  |
| 82.5° | 80.1   | 72.0   | 69.3   | 66.5   | 62.5   |
| 85°   | 47.5   | 42.1   | 36.7   | 32.6   | 28.5   |
| 87.5° | 17.7   | 16.3   | 13.6   | 12.2   | 12.2   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)