

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: P295658

Luminaire Tested: **14RLN-LD5-35-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P295658  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1901-085-1)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14RLN-LD5-35-UNV-L92765-W2A1-U-4000K  
Description: RLN LED 1x4 TUNABLE WHITE TROFFER  
WITH STANDARD LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3149.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.01 / 1.18  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

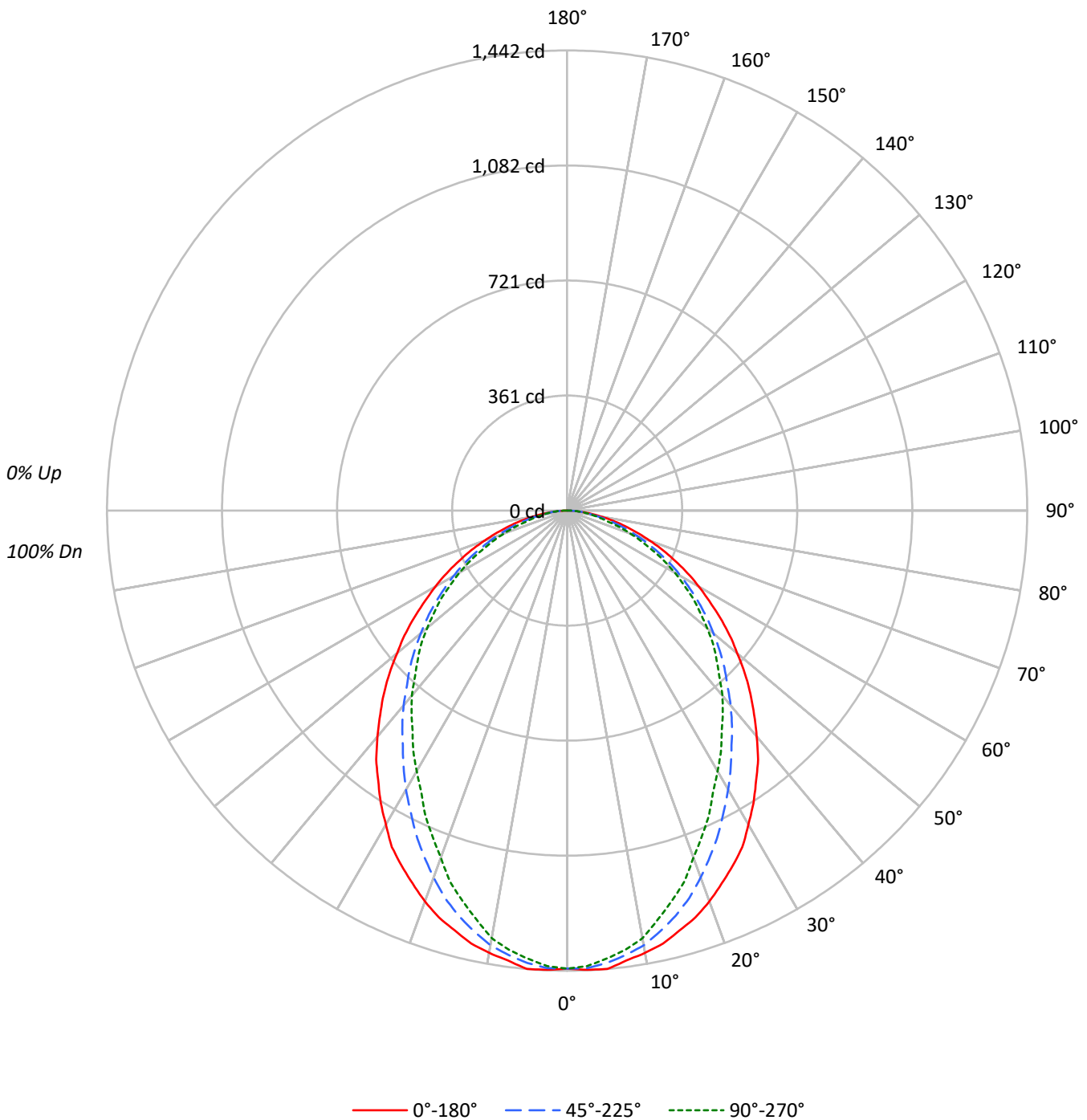
Input Watts (W): 33.945  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 110 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |    |    |    |    | 85  |   |  |   |
| 2   | 100 | 92  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 77  | 74  | 72  |    |    |    |    | 72  |   |  |   |
| 3   | 92  | 82  | 74  | 68  | 89  | 80  | 73  | 67  | 77  | 71  | 66  | 75  | 69  | 65  | 72  | 68  | 64  | 62  |    |    |    |    | 62  |   |  |   |
| 4   | 85  | 73  | 65  | 58  | 82  | 72  | 64  | 58  | 69  | 63  | 57  | 67  | 61  | 56  | 65  | 60  | 56  | 54  |    |    |    |    | 54  |   |  |   |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 47  |    |    |    |    | 47  |   |  |   |
| 6   | 72  | 60  | 51  | 45  | 70  | 59  | 50  | 45  | 57  | 50  | 44  | 55  | 49  | 44  | 54  | 48  | 43  | 41  |    |    |    |    | 41  |   |  |   |
| 7   | 67  | 54  | 46  | 40  | 66  | 53  | 45  | 40  | 52  | 45  | 39  | 51  | 44  | 39  | 49  | 43  | 39  | 37  |    |    |    |    | 37  |   |  |   |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  | 47  | 40  | 35  | 45  | 40  | 35  | 33  |    |    |    |    | 33  |   |  |   |
| 9   | 59  | 46  | 38  | 33  | 57  | 45  | 38  | 32  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |    |    |    |    | 30  |   |  |   |
| 10  | 55  | 42  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 28  |    |    |    |    | 28  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3862 | 3862 | 3862 |
| 5°  | 3895 | 3844 | 3809 |
| 10° | 3845 | 3780 | 3718 |
| 15° | 3794 | 3661 | 3528 |
| 20° | 3733 | 3504 | 3314 |
| 25° | 3645 | 3325 | 3124 |
| 30° | 3530 | 3137 | 2930 |
| 35° | 3391 | 2949 | 2775 |
| 40° | 3247 | 2799 | 2659 |
| 45° | 3093 | 2653 | 2521 |
| 50° | 2912 | 2506 | 2394 |
| 55° | 2746 | 2365 | 2265 |
| 60° | 2570 | 2219 | 2097 |
| 65° | 2380 | 2050 | 1880 |
| 70° | 2166 | 1842 | 1664 |
| 75° | 1949 | 1646 | 1356 |
| 80° | 1669 | 1340 | 1278 |
| 85° | 1355 | 1272 | 1272 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 134.4  | 4.3       |
| 10°-20°   | 368.8  | 11.7      |
| 20°-30°   | 517.6  | 16.4      |
| 30°-40°   | 574.1  | 18.2      |
| 40°-50°   | 551.2  | 17.5      |
| 50°-60°   | 461.9  | 14.7      |
| 60°-70°   | 324.2  | 10.3      |
| 70°-80°   | 169.3  | 5.4       |
| 80°-90°   | 47.4   | 1.5       |
| 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°    | 1020.8 | 32.4      |
| 0°-40°    | 1595.0 | 50.7      |
| 0°-60°    | 2608.0 | 82.8      |
| 0°-90°    | 3149.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3149.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1435 | 1435  | 1435 | 1435  | 1435 |      |
| 5°  | 1442 | 1423  | 1423 | 1414  | 1410 | 136  |
| 15° | 1362 | 1338  | 1314 | 1280  | 1266 | 384  |
| 25° | 1228 | 1184  | 1120 | 1065  | 1052 | 565  |
| 35° | 1032 | 975   | 898  | 854   | 845  | 646  |
| 45° | 813  | 750   | 697  | 670   | 662  | 626  |
| 55° | 585  | 541   | 504  | 488   | 483  | 523  |
| 65° | 374  | 348   | 322  | 302   | 295  | 371  |
| 75° | 188  | 173   | 158  | 140   | 130  | 199  |
| 85° | 44   | 41    | 41   | 41    | 41   | 52   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1435.2 | 1435.2 | 1435.2 | 1435.2 | 1435.2 |
| 2.5°  | 1440.5 | 1432.5 | 1435.2 | 1435.2 | 1428.5 |
| 5°    | 1441.8 | 1423.2 | 1423.2 | 1413.9 | 1409.9 |
| 7.5°  | 1421.9 | 1407.3 | 1404.6 | 1392.6 | 1388.6 |
| 10°   | 1407.3 | 1392.6 | 1383.3 | 1367.4 | 1360.7 |
| 12.5° | 1390.0 | 1367.4 | 1350.1 | 1323.5 | 1312.8 |
| 15°   | 1362.0 | 1338.1 | 1314.1 | 1279.6 | 1266.3 |
| 17.5° | 1336.8 | 1308.8 | 1272.9 | 1234.3 | 1219.7 |
| 20°   | 1303.5 | 1270.3 | 1223.7 | 1170.5 | 1157.2 |
| 22.5° | 1264.9 | 1226.4 | 1171.8 | 1114.6 | 1104.0 |
| 25°   | 1227.7 | 1183.8 | 1120.0 | 1065.4 | 1052.1 |
| 27.5° | 1189.1 | 1135.9 | 1062.8 | 1004.2 | 990.9  |
| 30°   | 1135.9 | 1081.4 | 1009.6 | 952.4  | 943.0  |
| 32.5° | 1086.7 | 1032.2 | 953.7  | 907.1  | 896.5  |
| 35°   | 1032.2 | 975.0  | 897.8  | 853.9  | 844.6  |
| 37.5° | 983.0  | 916.4  | 848.6  | 806.0  | 800.7  |
| 40°   | 924.4  | 864.6  | 796.7  | 764.8  | 756.8  |
| 42.5° | 867.2  | 807.4  | 743.5  | 715.6  | 706.3  |
| 45°   | 812.7  | 750.2  | 697.0  | 670.4  | 662.4  |
| 47.5° | 755.5  | 698.3  | 647.8  | 626.5  | 621.2  |
| 50°   | 695.6  | 645.1  | 598.5  | 578.6  | 571.9  |
| 52.5° | 642.4  | 590.6  | 552.0  | 533.4  | 525.4  |
| 55°   | 585.2  | 541.4  | 504.1  | 488.2  | 482.8  |
| 57.5° | 528.1  | 492.1  | 456.2  | 441.6  | 433.6  |
| 60°   | 477.5  | 441.6  | 412.3  | 395.0  | 389.7  |
| 62.5° | 425.6  | 395.0  | 367.1  | 351.1  | 344.5  |
| 65°   | 373.8  | 348.5  | 321.9  | 301.9  | 295.3  |
| 67.5° | 325.9  | 297.9  | 276.7  | 259.4  | 252.7  |
| 70°   | 275.3  | 255.4  | 234.1  | 218.1  | 211.5  |
| 72.5° | 228.8  | 214.1  | 195.5  | 178.2  | 171.6  |
| 75°   | 187.5  | 172.9  | 158.3  | 139.7  | 130.4  |
| 77.5° | 146.3  | 137.0  | 122.4  | 106.4  | 106.4  |
| 80°   | 107.7  | 102.4  | 86.5   | 83.8   | 82.5   |
| 82.5° | 74.5   | 71.8   | 62.5   | 61.2   | 61.2   |
| 85°   | 43.9   | 41.2   | 41.2   | 41.2   | 41.2   |
| 87.5° | 18.6   | 20.0   | 21.3   | 21.3   | 22.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)