

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: P296302

Luminaire Tested: **24RLN-LD5-42-RDP-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P296302  
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-LD5-42-RDP-UNV-L92765-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: 2847.0 lumens  
Efficiency: N/A  
Efficacy: 98.8 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

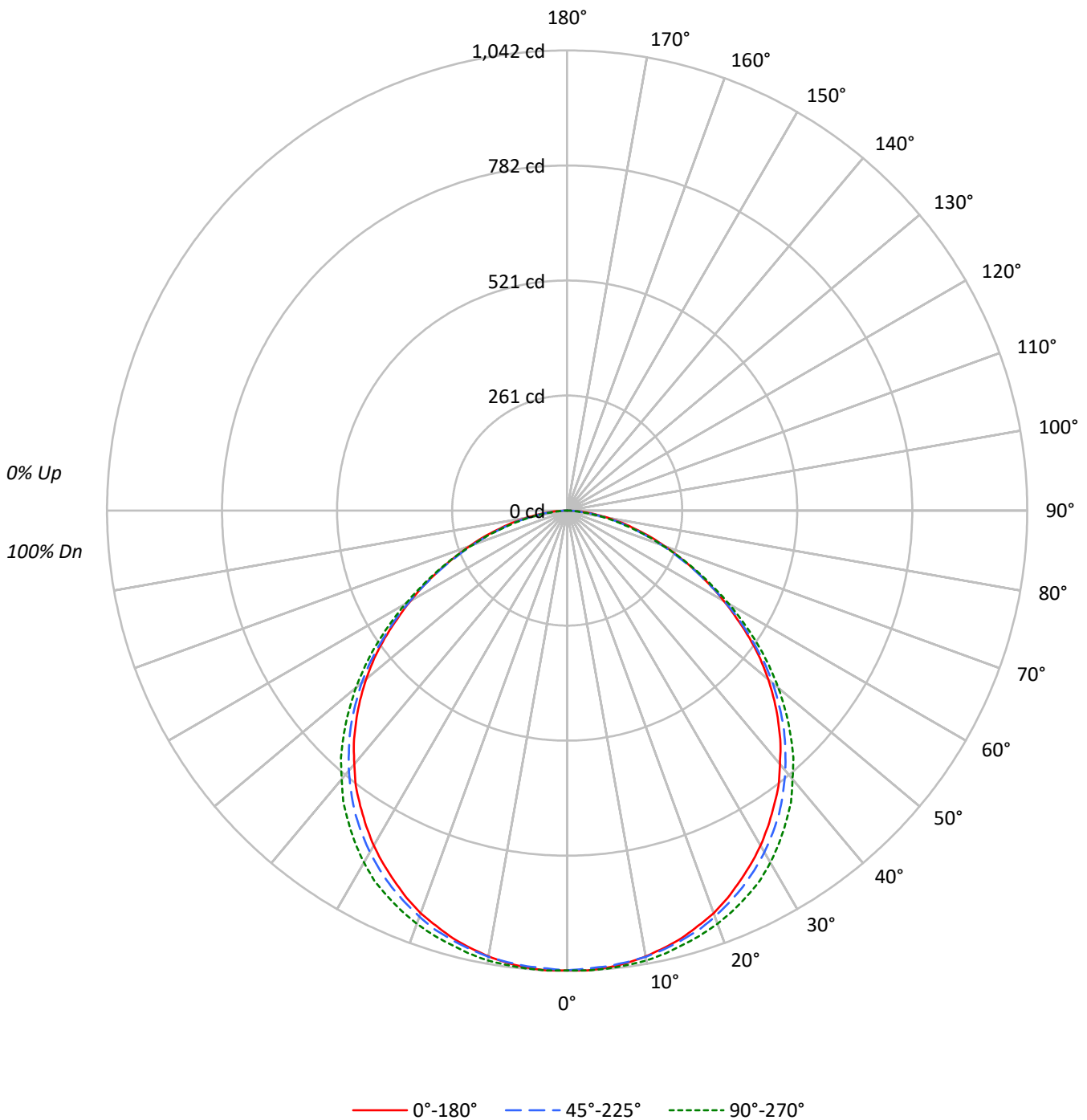
Input Watts (W): 28.83  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1401 | 1401 | 1401 |
| 5°  | 1403 | 1399 | 1406 |
| 10° | 1400 | 1402 | 1414 |
| 15° | 1396 | 1402 | 1417 |
| 20° | 1389 | 1401 | 1426 |
| 25° | 1374 | 1397 | 1430 |
| 30° | 1361 | 1388 | 1430 |
| 35° | 1341 | 1375 | 1418 |
| 40° | 1316 | 1351 | 1394 |
| 45° | 1286 | 1319 | 1361 |
| 50° | 1243 | 1273 | 1307 |
| 55° | 1183 | 1198 | 1234 |
| 60° | 1104 | 1110 | 1139 |
| 65° | 1014 | 1008 | 1032 |
| 70° | 922  | 897  | 901  |
| 75° | 820  | 775  | 769  |
| 80° | 711  | 636  | 619  |
| 85° | 584  | 451  | 350  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 98.7   | 3.5       |
| 10°-20°   | 284.7  | 10.0      |
| 20°-30°   | 434.5  | 15.3      |
| 30°-40°   | 523.8  | 18.4      |
| 40°-50°   | 534.2  | 18.8      |
| 50°-60°   | 457.2  | 16.1      |
| 60°-70°   | 314.9  | 11.1      |
| 70°-80°   | 161.4  | 5.7       |
| 80°-90°   | 37.6   | 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°    | 817.9  | 28.7      |
| 0°-40°    | 1341.7 | 47.1      |
| 0°-60°    | 2333.1 | 81.9      |
| 0°-90°    | 2847.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2847.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1041 | 1041  | 1041 | 1041  | 1041 |      |
| 5°  | 1039 | 1037  | 1036 | 1039  | 1041 | 99   |
| 15° | 1002 | 1001  | 1007 | 1014  | 1017 | 283  |
| 25° | 926  | 929   | 941  | 957   | 963  | 427  |
| 35° | 816  | 820   | 837  | 855   | 863  | 511  |
| 45° | 676  | 677   | 693  | 711   | 715  | 521  |
| 55° | 504  | 501   | 511  | 522   | 526  | 450  |
| 65° | 319  | 311   | 316  | 319   | 324  | 317  |
| 75° | 158  | 151   | 149  | 149   | 148  | 170  |
| 85° | 38   | 34    | 29   | 26    | 23   | 44   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1041.2 | 1041.2 | 1041.2 | 1041.2 | 1041.2 |
| 2.5°  | 1042.2 | 1040.1 | 1037.9 | 1040.1 | 1042.2 |
| 5°    | 1039.0 | 1036.8 | 1035.8 | 1039.0 | 1041.2 |
| 7.5°  | 1033.6 | 1031.4 | 1031.4 | 1035.8 | 1037.9 |
| 10°   | 1025.0 | 1023.9 | 1026.0 | 1030.4 | 1034.7 |
| 12.5° | 1014.2 | 1014.2 | 1017.4 | 1022.8 | 1027.1 |
| 15°   | 1002.3 | 1001.2 | 1006.6 | 1014.2 | 1017.4 |
| 17.5° | 986.1  | 987.2  | 994.7  | 1003.4 | 1007.7 |
| 20°   | 969.9  | 971.0  | 978.5  | 990.4  | 995.8  |
| 22.5° | 949.4  | 951.5  | 960.2  | 975.3  | 980.7  |
| 25°   | 925.6  | 928.8  | 940.7  | 956.9  | 963.4  |
| 27.5° | 901.8  | 905.1  | 918.0  | 936.4  | 945.0  |
| 30°   | 875.9  | 880.2  | 893.2  | 912.6  | 920.2  |
| 32.5° | 846.8  | 850.0  | 866.2  | 885.6  | 893.2  |
| 35°   | 816.5  | 819.8  | 837.0  | 855.4  | 863.0  |
| 37.5° | 786.3  | 786.3  | 803.5  | 825.2  | 832.7  |
| 40°   | 749.5  | 750.6  | 769.0  | 789.5  | 793.8  |
| 42.5° | 715.0  | 715.0  | 731.2  | 750.6  | 758.2  |
| 45°   | 676.1  | 677.2  | 693.4  | 710.7  | 715.0  |
| 47.5° | 636.1  | 636.1  | 650.2  | 666.4  | 670.7  |
| 50°   | 594.0  | 591.9  | 608.1  | 621.0  | 624.3  |
| 52.5° | 550.8  | 547.6  | 560.5  | 571.3  | 575.7  |
| 55°   | 504.4  | 501.1  | 510.9  | 521.7  | 526.0  |
| 57.5° | 455.8  | 451.5  | 462.3  | 472.0  | 474.1  |
| 60°   | 410.4  | 403.9  | 412.6  | 418.0  | 423.4  |
| 62.5° | 365.1  | 357.5  | 364.0  | 367.2  | 371.5  |
| 65°   | 318.6  | 311.1  | 316.5  | 318.6  | 324.0  |
| 67.5° | 274.3  | 268.9  | 270.0  | 273.3  | 275.4  |
| 70°   | 234.4  | 227.9  | 227.9  | 227.9  | 229.0  |
| 72.5° | 197.6  | 187.9  | 186.8  | 187.9  | 187.9  |
| 75°   | 157.7  | 151.2  | 149.0  | 149.0  | 148.0  |
| 77.5° | 126.4  | 117.7  | 116.6  | 114.5  | 112.3  |
| 80°   | 91.8   | 84.2   | 82.1   | 81.0   | 79.9   |
| 82.5° | 63.7   | 57.2   | 55.1   | 52.9   | 49.7   |
| 85°   | 37.8   | 33.5   | 29.2   | 25.9   | 22.7   |
| 87.5° | 14.0   | 13.0   | 10.8   | 9.7    | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)