

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: P229827

Luminaire Tested: **24RLN-LD5-36-RDP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229827  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24RLN-LD5-36-RDP-UNV-L940-CD1-U  
Description: METALUX 2X4 RLN LED TROFFER WITH RDP LENS  
Light Source: (252)4000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2674.0 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

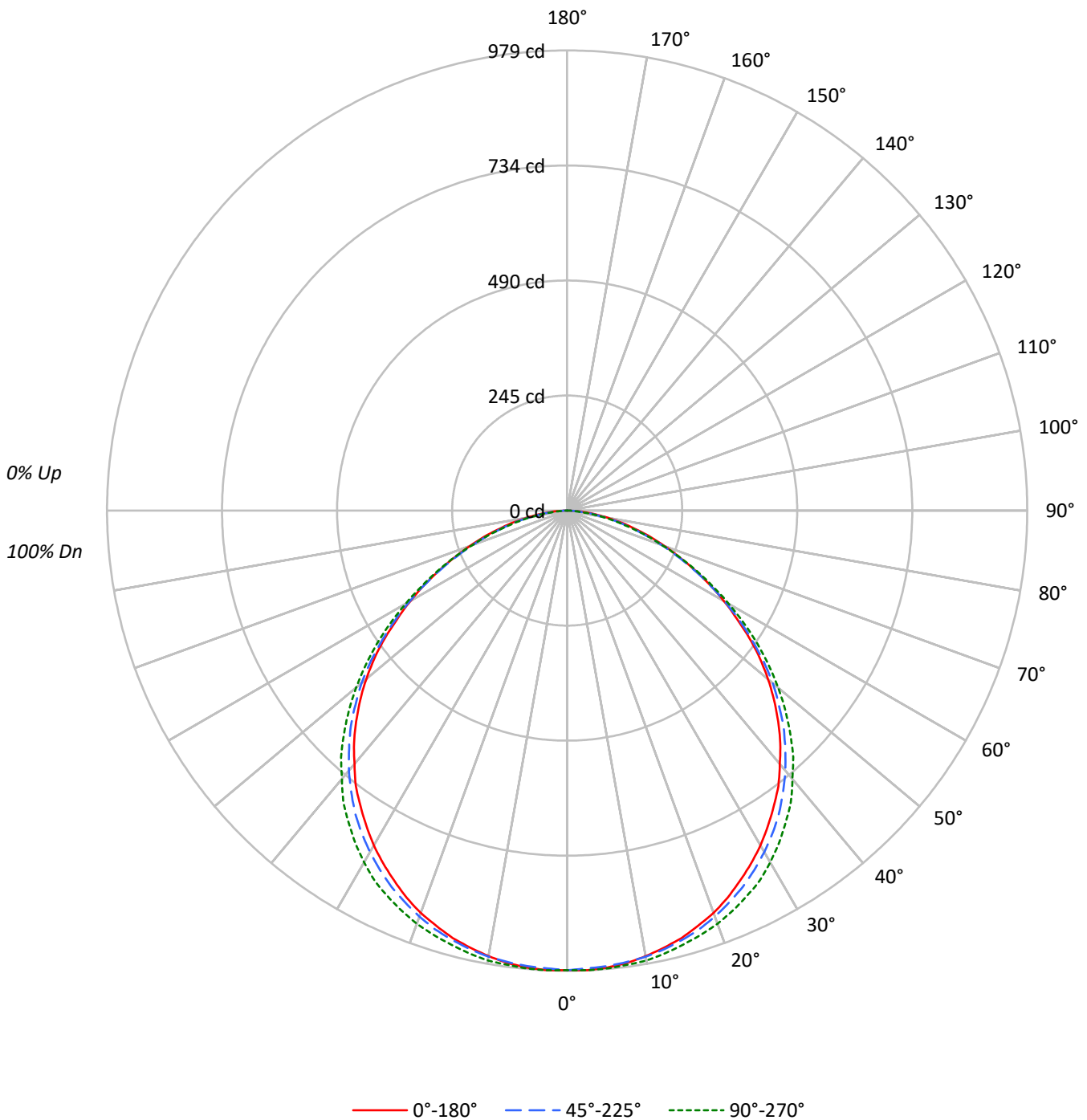
Input Watts (W): 26.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 1498 | 1498 | 1498 |
| 5°  | 1500 | 1496 | 1504 |
| 10° | 1497 | 1499 | 1511 |
| 15° | 1493 | 1499 | 1515 |
| 20° | 1485 | 1498 | 1525 |
| 25° | 1469 | 1493 | 1529 |
| 30° | 1455 | 1484 | 1529 |
| 35° | 1434 | 1470 | 1515 |
| 40° | 1408 | 1444 | 1491 |
| 45° | 1375 | 1411 | 1455 |
| 50° | 1329 | 1361 | 1397 |
| 55° | 1265 | 1281 | 1319 |
| 60° | 1181 | 1187 | 1218 |
| 65° | 1085 | 1077 | 1103 |
| 70° | 986  | 958  | 963  |
| 75° | 876  | 829  | 823  |
| 80° | 760  | 680  | 662  |
| 85° | 624  | 482  | 374  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 92.7   | 3.5       |
| 10°-20°   | 267.4  | 10.0      |
| 20°-30°   | 408.1  | 15.3      |
| 30°-40°   | 492.0  | 18.4      |
| 40°-50°   | 501.7  | 18.8      |
| 50°-60°   | 429.4  | 16.1      |
| 60°-70°   | 295.8  | 11.1      |
| 70°-80°   | 151.6  | 5.7       |
| 80°-90°   | 35.3   | 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°    | 768.2  | 28.7      |
| 0°-40°    | 1260.2 | 47.1      |
| 0°-60°    | 2191.3 | 81.9      |
| 0°-90°    | 2674.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2674.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 978 | 978   | 978 | 978   | 978 |      |
| 5°  | 976 | 974   | 973 | 976   | 978 | 93   |
| 15° | 941 | 940   | 945 | 952   | 956 | 265  |
| 25° | 869 | 872   | 884 | 899   | 905 | 401  |
| 35° | 767 | 770   | 786 | 803   | 810 | 480  |
| 45° | 635 | 636   | 651 | 668   | 672 | 489  |
| 55° | 474 | 471   | 480 | 490   | 494 | 423  |
| 65° | 299 | 292   | 297 | 299   | 304 | 297  |
| 75° | 148 | 142   | 140 | 140   | 139 | 160  |
| 85° | 36  | 31    | 27  | 24    | 21  | 41   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 977.9 | 977.9 | 977.9 | 977.9 | 977.9 |
| 2.5°  | 978.9 | 976.9 | 974.8 | 976.9 | 978.9 |
| 5°    | 975.9 | 973.8 | 972.8 | 975.9 | 977.9 |
| 7.5°  | 970.8 | 968.8 | 968.8 | 972.8 | 974.8 |
| 10°   | 962.7 | 961.7 | 963.7 | 967.7 | 971.8 |
| 12.5° | 952.5 | 952.5 | 955.6 | 960.6 | 964.7 |
| 15°   | 941.4 | 940.4 | 945.4 | 952.5 | 955.6 |
| 17.5° | 926.2 | 927.2 | 934.3 | 942.4 | 946.4 |
| 20°   | 910.9 | 912.0 | 919.1 | 930.2 | 935.3 |
| 22.5° | 891.7 | 893.7 | 901.8 | 916.0 | 921.1 |
| 25°   | 869.4 | 872.4 | 883.6 | 898.8 | 904.9 |
| 27.5° | 847.0 | 850.1 | 862.2 | 879.5 | 887.6 |
| 30°   | 822.7 | 826.7 | 838.9 | 857.2 | 864.3 |
| 32.5° | 795.3 | 798.3 | 813.6 | 831.8 | 838.9 |
| 35°   | 766.9 | 769.9 | 786.2 | 803.4 | 810.5 |
| 37.5° | 738.5 | 738.5 | 754.7 | 775.0 | 782.1 |
| 40°   | 704.0 | 705.0 | 722.3 | 741.5 | 745.6 |
| 42.5° | 671.5 | 671.5 | 686.8 | 705.0 | 712.1 |
| 45°   | 635.0 | 636.0 | 651.3 | 667.5 | 671.5 |
| 47.5° | 597.5 | 597.5 | 610.7 | 625.9 | 629.9 |
| 50°   | 557.9 | 555.9 | 571.1 | 583.3 | 586.3 |
| 52.5° | 517.3 | 514.3 | 526.5 | 536.6 | 540.7 |
| 55°   | 473.7 | 470.7 | 479.8 | 490.0 | 494.0 |
| 57.5° | 428.1 | 424.0 | 434.2 | 443.3 | 445.3 |
| 60°   | 385.5 | 379.4 | 387.5 | 392.6 | 397.6 |
| 62.5° | 342.9 | 335.8 | 341.9 | 344.9 | 349.0 |
| 65°   | 299.3 | 292.2 | 297.2 | 299.3 | 304.3 |
| 67.5° | 257.7 | 252.6 | 253.6 | 256.6 | 258.7 |
| 70°   | 220.1 | 214.0 | 214.0 | 214.0 | 215.1 |
| 72.5° | 185.6 | 176.5 | 175.5 | 176.5 | 176.5 |
| 75°   | 148.1 | 142.0 | 140.0 | 140.0 | 139.0 |
| 77.5° | 118.7 | 110.6 | 109.6 | 107.5 | 105.5 |
| 80°   | 86.2  | 79.1  | 77.1  | 76.1  | 75.1  |
| 82.5° | 59.9  | 53.8  | 51.7  | 49.7  | 46.7  |
| 85°   | 35.5  | 31.4  | 27.4  | 24.3  | 21.3  |
| 87.5° | 13.2  | 12.2  | 10.1  | 9.1   | 9.1   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)