

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: P229935

Luminaire Tested: **24RLN-LD5-80-RDP-UNV-L930-CD1-SVPD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P229935  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1707-178-7)  
Test Lab: INNOVATION CENTER-G3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24RLN-LD5-80-RDP-UNV-L930-CD1-SVPD1-U  
Description: METALUX 2X4 RLN LED TROFFER WITH SENSOR AND RDP LENS  
Light Source: (252)3000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5477.0 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.38  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

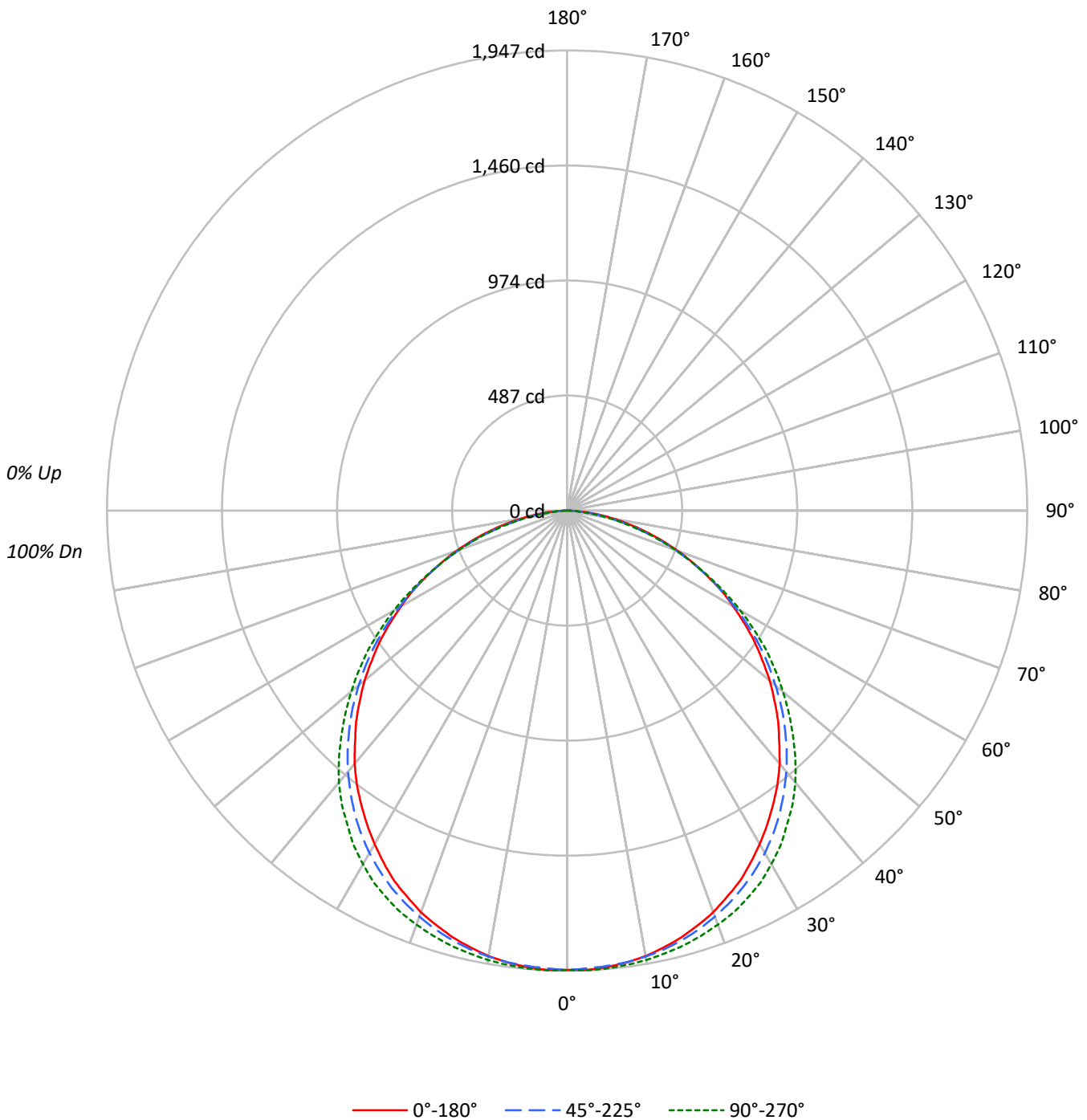
Input Watts (W): 67.45  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 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 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 98  | 95  | 92  | 94  | 91  | 89  | 90  | 88  | 86  | 84  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 99  | 91  | 84  | 79  | 97  | 89  | 83  | 78  | 86  | 80  | 76  | 82  | 78  | 74  | 79  | 76  | 73  | 70  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 91  | 80  | 72  | 66  | 88  | 78  | 71  | 65  | 76  | 69  | 64  | 73  | 67  | 63  | 70  | 66  | 62  | 59  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 83  | 71  | 62  | 56  | 81  | 70  | 61  | 55  | 67  | 60  | 54  | 65  | 59  | 54  | 63  | 57  | 53  | 51  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 76  | 63  | 54  | 48  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 58  | 52  | 47  | 56  | 51  | 46  | 44  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 70  | 57  | 48  | 42  | 68  | 56  | 48  | 42  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 38  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 65  | 52  | 43  | 37  | 64  | 51  | 43  | 37  | 49  | 42  | 36  | 48  | 41  | 36  | 47  | 41  | 36  | 34  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 61  | 47  | 39  | 33  | 59  | 47  | 38  | 33  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 30  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 57  | 43  | 35  | 30  | 55  | 43  | 35  | 30  | 42  | 34  | 29  | 41  | 34  | 29  | 40  | 33  | 29  | 27  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 27  | 38  | 31  | 27  | 38  | 31  | 27  | 37  | 31  | 26  | 25  |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2976 | 2976 | 2976 |
| 5°  | 2981 | 2974 | 2990 |
| 10° | 2976 | 2980 | 3003 |
| 15° | 2964 | 2982 | 3020 |
| 20° | 2948 | 2980 | 3039 |
| 25° | 2923 | 2974 | 3055 |
| 30° | 2882 | 2958 | 3055 |
| 35° | 2840 | 2929 | 3032 |
| 40° | 2797 | 2883 | 3004 |
| 45° | 2735 | 2822 | 2928 |
| 50° | 2666 | 2742 | 2840 |
| 55° | 2585 | 2650 | 2744 |
| 60° | 2487 | 2518 | 2595 |
| 65° | 2371 | 2371 | 2396 |
| 70° | 2229 | 2189 | 2183 |
| 75° | 2034 | 1912 | 1906 |
| 80° | 1773 | 1591 | 1521 |
| 85° | 1404 | 1104 | 863  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 184.4  | 3.4       |
| 10°-20°   | 531.9  | 9.7       |
| 20°-30°   | 812.7  | 14.8      |
| 30°-40°   | 980.4  | 17.9      |
| 40°-50°   | 1004.9 | 18.3      |
| 50°-60°   | 885.4  | 16.2      |
| 60°-70°   | 648.0  | 11.8      |
| 70°-80°   | 348.2  | 6.4       |
| 80°-90°   | 81.1   | 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°    | 1529.0 | 27.9      |
| 0°-40°    | 2509.4 | 45.8      |
| 0°-60°    | 4399.7 | 80.3      |
| 0°-90°    | 5477.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5477.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1943 | 1943  | 1943 | 1943  | 1943 |      |
| 5°  | 1939 | 1936  | 1934 | 1940  | 1944 | 184  |
| 15° | 1869 | 1871  | 1880 | 1895  | 1904 | 527  |
| 25° | 1730 | 1734  | 1760 | 1794  | 1808 | 796  |
| 35° | 1519 | 1527  | 1566 | 1610  | 1621 | 950  |
| 45° | 1263 | 1262  | 1303 | 1340  | 1352 | 973  |
| 55° | 968  | 962   | 992  | 1015  | 1028 | 864  |
| 65° | 654  | 643   | 654  | 662   | 661  | 649  |
| 75° | 344  | 328   | 323  | 323   | 322  | 365  |
| 85° | 80   | 71    | 63   | 51    | 49   | 96   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1943.3 | 1943.3 | 1943.3 | 1943.3 | 1943.3 |
| 2.5°  | 1945.6 | 1942.2 | 1938.8 | 1942.2 | 1946.8 |
| 5°    | 1938.8 | 1936.5 | 1934.2 | 1939.9 | 1944.5 |
| 7.5°  | 1928.5 | 1926.2 | 1927.3 | 1935.3 | 1938.8 |
| 10°   | 1913.6 | 1913.6 | 1915.9 | 1925.1 | 1930.8 |
| 12.5° | 1893.1 | 1894.2 | 1901.1 | 1912.5 | 1918.2 |
| 15°   | 1869.1 | 1871.4 | 1880.5 | 1895.4 | 1904.5 |
| 17.5° | 1839.4 | 1845.1 | 1857.7 | 1876.0 | 1886.2 |
| 20°   | 1808.6 | 1812.0 | 1828.0 | 1854.3 | 1864.5 |
| 22.5° | 1768.6 | 1775.5 | 1796.0 | 1826.9 | 1840.6 |
| 25°   | 1729.8 | 1734.4 | 1759.5 | 1793.8 | 1807.5 |
| 27.5° | 1680.7 | 1687.6 | 1718.4 | 1758.4 | 1773.2 |
| 30°   | 1629.3 | 1637.3 | 1672.7 | 1711.5 | 1727.5 |
| 32.5° | 1575.7 | 1585.9 | 1622.5 | 1663.6 | 1680.7 |
| 35°   | 1518.6 | 1526.6 | 1566.5 | 1609.9 | 1621.3 |
| 37.5° | 1461.5 | 1463.8 | 1506.0 | 1548.3 | 1566.5 |
| 40°   | 1398.7 | 1401.0 | 1442.1 | 1482.0 | 1502.6 |
| 42.5° | 1327.9 | 1334.8 | 1374.7 | 1413.5 | 1429.5 |
| 45°   | 1262.8 | 1261.7 | 1302.8 | 1340.5 | 1351.9 |
| 47.5° | 1189.7 | 1192.0 | 1229.7 | 1266.2 | 1273.1 |
| 50°   | 1119.0 | 1117.8 | 1150.9 | 1182.9 | 1192.0 |
| 52.5° | 1041.3 | 1040.2 | 1073.3 | 1099.5 | 1111.0 |
| 55°   | 968.2  | 962.5  | 992.2  | 1015.1 | 1027.6 |
| 57.5° | 889.5  | 881.5  | 907.7  | 930.6  | 936.3  |
| 60°   | 811.8  | 802.7  | 822.1  | 839.2  | 847.2  |
| 62.5° | 737.6  | 726.2  | 738.7  | 753.6  | 754.7  |
| 65°   | 654.2  | 642.8  | 654.2  | 662.2  | 661.1  |
| 67.5° | 575.5  | 562.9  | 568.6  | 572.0  | 570.9  |
| 70°   | 497.8  | 480.7  | 488.7  | 486.4  | 487.5  |
| 72.5° | 420.2  | 406.5  | 405.3  | 401.9  | 405.3  |
| 75°   | 343.7  | 327.7  | 323.1  | 323.1  | 322.0  |
| 77.5° | 270.6  | 254.6  | 250.1  | 247.8  | 244.3  |
| 80°   | 201.0  | 188.4  | 180.4  | 179.3  | 172.4  |
| 82.5° | 141.6  | 125.6  | 123.3  | 113.0  | 106.2  |
| 85°   | 79.9   | 70.8   | 62.8   | 51.4   | 49.1   |
| 87.5° | 29.7   | 26.3   | 20.6   | 19.4   | 18.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)