

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: P234051

Luminaire Tested: **14GR-LD5-60-F1-UNV-L940-CD1-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234051  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33313)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-60-F1-UNV-L940-CD1-U  
Description: METALUX 1X4 GRLED TROFFER  
WITH F1 LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5180.6 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.16 / 1.24  
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')  
CIE Type: Direct

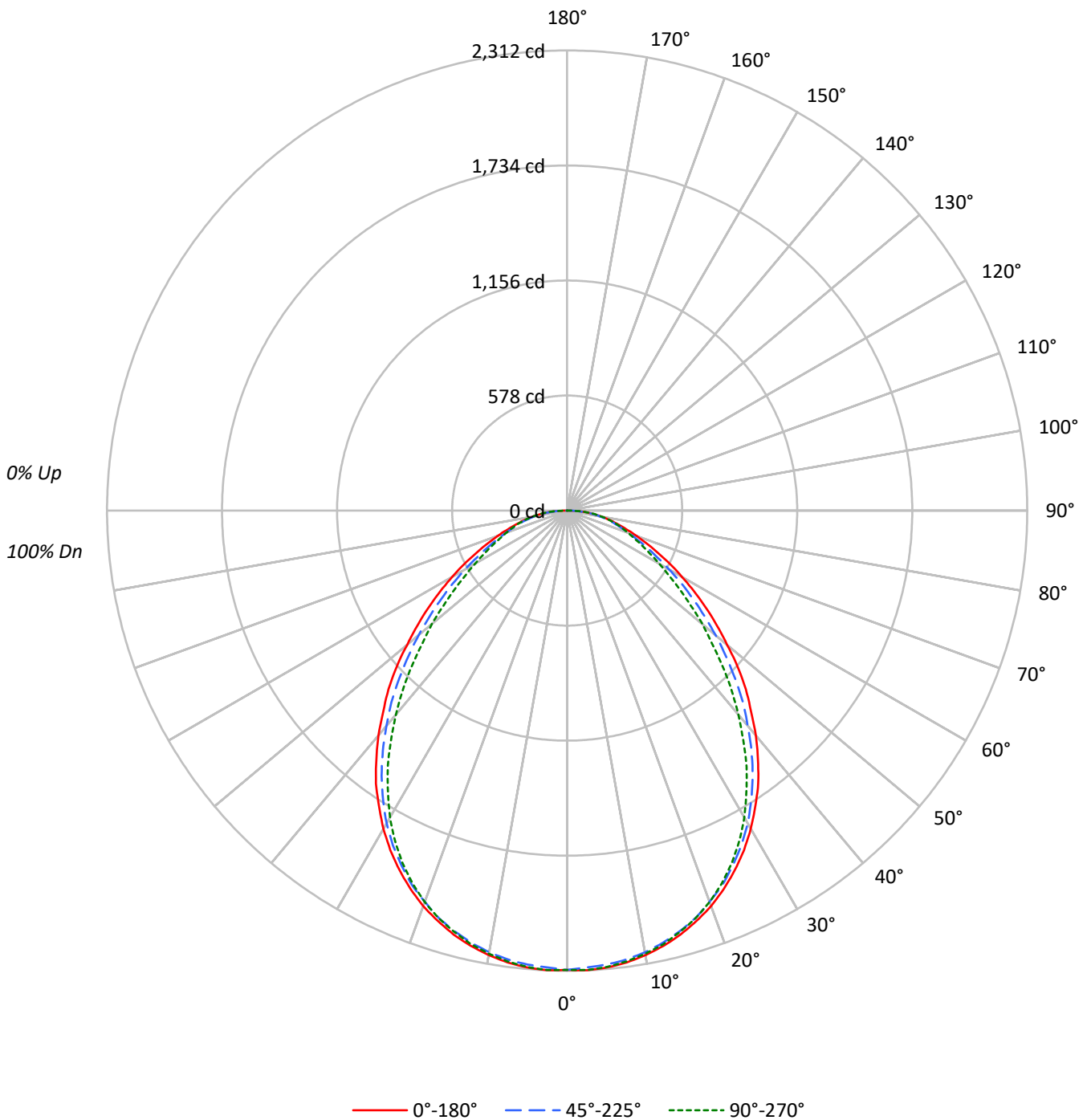
Input Watts (W): 59.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  | 95  | 92  | 90  | 91  | 89  | 88  | 85  |    |    |    |    | 85  |   |  |   |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  | 88  | 83  | 78  | 84  | 80  | 77  | 81  | 78  | 75  | 73  |    |    |    |    | 73  |   |  |   |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 65  | 63  |    |    |    |    | 63  |   |  |   |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  | 70  | 64  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 55  |    |    |    |    | 55  |   |  |   |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 64  | 57  | 51  | 62  | 55  | 51  | 60  | 54  | 50  | 48  |    |    |    |    | 48  |   |  |   |
| 6   | 73  | 60  | 52  | 46  | 71  | 60  | 52  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 55  | 49  | 45  | 43  |    |    |    |    | 43  |   |  |   |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38  |    |    |    |    | 38  |   |  |   |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 41  | 36  | 34  |    |    |    |    | 34  |   |  |   |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 38  | 33  | 43  | 37  | 33  | 31  |    |    |    |    | 31  |   |  |   |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  | 42  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 28  |    |    |    |    | 28  |   |  |   |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 7777 | 7777 | 7777 |
| 5°  | 7794 | 7745 | 7786 |
| 10° | 7759 | 7709 | 7734 |
| 15° | 7691 | 7631 | 7644 |
| 20° | 7583 | 7500 | 7504 |
| 25° | 7410 | 7319 | 7270 |
| 30° | 7182 | 7059 | 6926 |
| 35° | 6888 | 6687 | 6468 |
| 40° | 6488 | 6210 | 5884 |
| 45° | 6050 | 5685 | 5262 |
| 50° | 5501 | 5100 | 4647 |
| 55° | 5008 | 4522 | 4051 |
| 60° | 4490 | 3983 | 3597 |
| 65° | 4004 | 3548 | 3306 |
| 70° | 3641 | 3234 | 3198 |
| 75° | 3403 | 3151 | 3308 |
| 80° | 3421 | 3256 | 3444 |
| 85° | 3572 | 3336 | 3808 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 218.2  | 4.2       |
| 10°-20°   | 618.7  | 11.9      |
| 20°-30°   | 907.1  | 17.5      |
| 30°-40°   | 1012.4 | 19.5      |
| 40°-50°   | 916.6  | 17.7      |
| 50°-60°   | 692.1  | 13.4      |
| 60°-70°   | 452.4  | 8.7       |
| 70°-80°   | 265.7  | 5.1       |
| 80°-90°   | 97.3   | 1.9       |
| 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°    | 1744.0 | 33.7      |
| 0°-40°    | 2756.5 | 53.2      |
| 0°-60°    | 4365.2 | 84.3      |
| 0°-90°    | 5180.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5180.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 2308 | 2308  | 2308 | 2308  | 2308 |      |
| 5°  | 2304 | 2300  | 2290 | 2303  | 2302 | 219  |
| 15° | 2205 | 2201  | 2188 | 2200  | 2191 | 621  |
| 25° | 1993 | 1986  | 1969 | 1965  | 1955 | 917  |
| 35° | 1674 | 1660  | 1626 | 1589  | 1572 | 1043 |
| 45° | 1270 | 1250  | 1193 | 1128  | 1104 | 975  |
| 55° | 852  | 833   | 770  | 709   | 690  | 763  |
| 65° | 502  | 486   | 445  | 420   | 415  | 504  |
| 75° | 261  | 254   | 242  | 247   | 254  | 281  |
| 85° | 92   | 89    | 86   | 97    | 98   | 98   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 2308.0 | 2308.0 | 2308.0 | 2308.0 | 2308.0 |
| 2.5°  | 2311.6 | 2308.0 | 2297.0 | 2311.6 | 2310.4 |
| 5°    | 2304.3 | 2299.5 | 2289.7 | 2303.1 | 2301.9 |
| 7.5°  | 2289.7 | 2284.8 | 2275.1 | 2287.3 | 2284.8 |
| 10°   | 2267.8 | 2262.9 | 2253.2 | 2266.6 | 2260.5 |
| 12.5° | 2239.9 | 2235.0 | 2224.0 | 2236.2 | 2231.4 |
| 15°   | 2204.6 | 2200.9 | 2187.6 | 2199.7 | 2191.2 |
| 17.5° | 2162.0 | 2155.9 | 2146.2 | 2153.5 | 2147.4 |
| 20°   | 2114.6 | 2107.3 | 2091.5 | 2098.8 | 2092.7 |
| 22.5° | 2057.5 | 2047.7 | 2036.7 | 2036.7 | 2028.2 |
| 25°   | 1993.0 | 1985.7 | 1968.7 | 1965.0 | 1955.3 |
| 27.5° | 1923.6 | 1917.6 | 1895.7 | 1889.7 | 1872.6 |
| 30°   | 1845.9 | 1837.4 | 1814.3 | 1794.8 | 1780.2 |
| 32.5° | 1759.6 | 1753.5 | 1721.8 | 1696.3 | 1675.6 |
| 35°   | 1674.4 | 1659.8 | 1625.7 | 1589.3 | 1572.3 |
| 37.5° | 1574.7 | 1563.7 | 1521.2 | 1476.2 | 1453.1 |
| 40°   | 1475.0 | 1461.7 | 1411.8 | 1361.9 | 1337.6 |
| 42.5° | 1366.8 | 1354.6 | 1307.2 | 1247.6 | 1222.1 |
| 45°   | 1269.5 | 1250.0 | 1192.9 | 1128.4 | 1104.2 |
| 47.5° | 1162.5 | 1141.8 | 1081.0 | 1012.9 | 985.0  |
| 50°   | 1049.4 | 1036.0 | 972.8  | 907.1  | 886.5  |
| 52.5° | 948.5  | 927.8  | 868.3  | 803.8  | 781.9  |
| 55°   | 852.4  | 832.9  | 769.7  | 708.9  | 689.5  |
| 57.5° | 756.4  | 734.4  | 679.7  | 625.0  | 605.5  |
| 60°   | 666.3  | 644.5  | 591.0  | 546.0  | 533.8  |
| 62.5° | 584.9  | 560.5  | 513.2  | 477.9  | 469.4  |
| 65°   | 502.2  | 486.4  | 445.0  | 419.5  | 414.7  |
| 67.5° | 432.9  | 413.4  | 380.6  | 368.4  | 366.0  |
| 70°   | 369.6  | 356.3  | 328.3  | 324.6  | 324.6  |
| 72.5° | 312.5  | 301.6  | 280.9  | 283.3  | 287.0  |
| 75°   | 261.4  | 254.1  | 242.0  | 246.8  | 254.1  |
| 77.5° | 217.7  | 210.4  | 203.0  | 210.4  | 215.3  |
| 80°   | 176.3  | 169.0  | 167.8  | 173.9  | 177.5  |
| 82.5° | 132.5  | 126.4  | 127.7  | 137.4  | 141.0  |
| 85°   | 92.4   | 88.8   | 86.3   | 97.3   | 98.5   |
| 87.5° | 47.4   | 45.0   | 43.8   | 52.3   | 49.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)