

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: P291141

Luminaire Tested: **14GR-LD5-43-A-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291141  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33314)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-43-A-UNV-L92765-W2A1-U-5000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4077.0 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

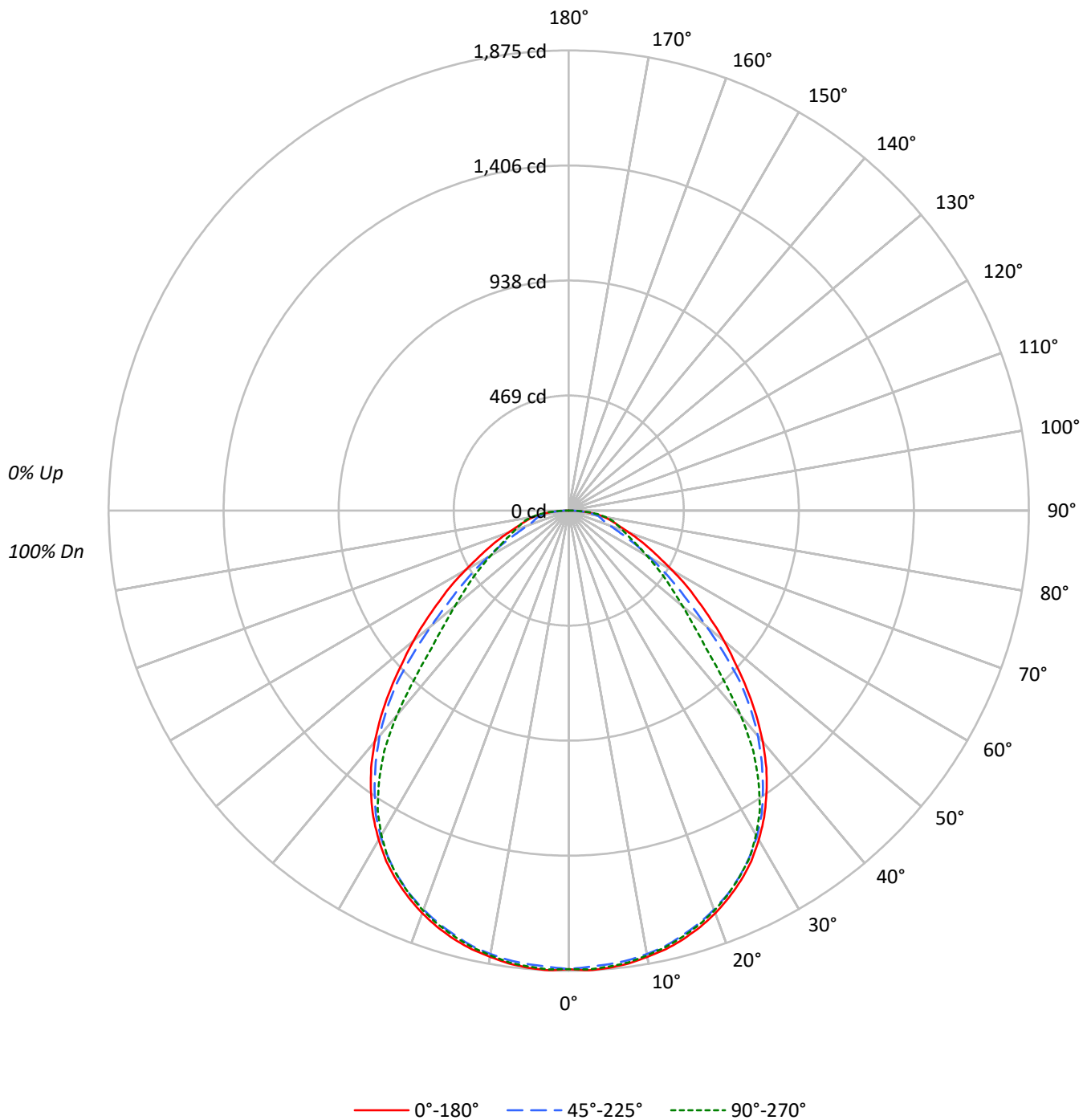
Input Watts (W): 37.386  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |  |     |     | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  | 30  | 10  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  |  | 99  | 96  | 94  |  | 95  | 93  | 91  |  | 92  | 90  | 88  |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  |  | 88  | 84  | 80  |  | 85  | 81  | 78  |  | 82  | 79  | 76  |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  |  | 79  | 74  | 69  |  | 77  | 72  | 68  |  | 74  | 70  | 66  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  |  | 72  | 65  | 60  |  | 69  | 64  | 59  |  | 67  | 62  | 58  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  |  | 65  | 58  | 53  |  | 63  | 57  | 52  |  | 61  | 56  | 52  |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 47  |  | 59  | 52  | 47  |  | 58  | 51  | 47  |  | 56  | 51  | 46  |
| 7   | 69  | 57  | 48  | 43  | 67  | 56  | 48  | 43  |  | 54  | 47  | 42  |  | 53  | 47  | 42  |  | 52  | 46  | 42  |
| 8   | 65  | 52  | 44  | 38  | 63  | 51  | 44  | 38  |  | 50  | 43  | 38  |  | 49  | 43  | 38  |  | 48  | 42  | 38  |
| 9   | 61  | 48  | 40  | 35  | 59  | 47  | 40  | 35  |  | 46  | 39  | 35  |  | 45  | 39  | 35  |  | 44  | 39  | 34  |
| 10  | 57  | 44  | 37  | 32  | 56  | 44  | 37  | 32  |  | 43  | 36  | 32  |  | 42  | 36  | 32  |  | 41  | 36  | 31  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5028 | 5028 | 5028 |
| 5°  | 5052 | 5014 | 5039 |
| 10° | 5046 | 5014 | 5028 |
| 15° | 5036 | 4991 | 5007 |
| 20° | 5000 | 4954 | 4968 |
| 25° | 4934 | 4886 | 4889 |
| 30° | 4814 | 4764 | 4743 |
| 35° | 4616 | 4532 | 4430 |
| 40° | 4321 | 4211 | 3832 |
| 45° | 3903 | 3755 | 2995 |
| 50° | 3461 | 3049 | 2533 |
| 55° | 3021 | 2501 | 2235 |
| 60° | 2619 | 2059 | 1972 |
| 65° | 2297 | 1652 | 1821 |
| 70° | 2049 | 1400 | 1832 |
| 75° | 1998 | 1476 | 2048 |
| 80° | 2216 | 1864 | 2348 |
| 85° | 2309 | 1988 | 2748 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 177.3  | 4.3       |
| 10°-20°   | 507.8  | 12.5      |
| 20°-30°   | 759.6  | 18.6      |
| 30°-40°   | 857.5  | 21.0      |
| 40°-50°   | 727.4  | 17.8      |
| 50°-60°   | 492.2  | 12.1      |
| 60°-70°   | 293.8  | 7.2       |
| 70°-80°   | 184.0  | 4.5       |
| 80°-90°   | 77.4   | 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°    | 1444.7 | 35.4      |
| 0°-40°    | 2302.2 | 56.5      |
| 0°-60°    | 3521.8 | 86.4      |
| 0°-90°    | 4077.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 4077.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1868 | 1868  | 1868 | 1868  | 1868 |      |
| 5°  | 1870 | 1864  | 1856 | 1869  | 1865 | 178  |
| 15° | 1808 | 1804  | 1792 | 1804  | 1797 | 510  |
| 25° | 1662 | 1656  | 1646 | 1653  | 1647 | 764  |
| 35° | 1405 | 1396  | 1380 | 1367  | 1348 | 876  |
| 45° | 1026 | 1029  | 987  | 846   | 787  | 790  |
| 55° | 644  | 614   | 533  | 477   | 476  | 580  |
| 65° | 361  | 299   | 260  | 276   | 286  | 361  |
| 75° | 192  | 171   | 142  | 188   | 197  | 207  |
| 85° | 75   | 71    | 64   | 83    | 89   | 81   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1868.3 | 1868.3 | 1868.3 | 1868.3 | 1868.3 |
| 2.5°  | 1874.9 | 1869.2 | 1860.7 | 1872.0 | 1871.1 |
| 5°    | 1870.2 | 1864.5 | 1856.0 | 1869.2 | 1865.4 |
| 7.5°  | 1861.6 | 1856.9 | 1848.4 | 1860.7 | 1856.9 |
| 10°   | 1846.5 | 1842.7 | 1835.1 | 1845.5 | 1839.9 |
| 12.5° | 1830.4 | 1827.5 | 1818.1 | 1827.5 | 1821.9 |
| 15°   | 1807.7 | 1803.9 | 1791.6 | 1803.9 | 1797.2 |
| 17.5° | 1779.3 | 1774.5 | 1764.1 | 1774.5 | 1768.8 |
| 20°   | 1746.1 | 1740.4 | 1730.0 | 1740.4 | 1734.7 |
| 22.5° | 1706.3 | 1701.6 | 1692.1 | 1701.6 | 1694.0 |
| 25°   | 1661.8 | 1656.2 | 1645.7 | 1653.3 | 1646.7 |
| 27.5° | 1610.7 | 1603.1 | 1593.7 | 1599.3 | 1595.6 |
| 30°   | 1549.2 | 1539.7 | 1533.1 | 1533.1 | 1526.4 |
| 32.5° | 1481.9 | 1475.3 | 1463.9 | 1457.3 | 1448.8 |
| 35°   | 1405.2 | 1395.8 | 1379.7 | 1367.3 | 1348.4 |
| 37.5° | 1322.8 | 1311.5 | 1291.6 | 1260.3 | 1234.8 |
| 40°   | 1230.0 | 1215.8 | 1198.8 | 1137.2 | 1090.8 |
| 42.5° | 1130.6 | 1127.8 | 1098.4 | 993.3  | 928.9  |
| 45°   | 1025.5 | 1029.3 | 986.7  | 845.6  | 786.9  |
| 47.5° | 919.5  | 932.7  | 855.1  | 716.8  | 686.5  |
| 50°   | 826.7  | 831.4  | 728.2  | 622.1  | 605.1  |
| 52.5° | 731.0  | 723.4  | 621.2  | 547.3  | 535.0  |
| 55°   | 643.9  | 613.6  | 533.1  | 477.2  | 476.3  |
| 57.5° | 567.2  | 511.3  | 455.5  | 413.8  | 418.5  |
| 60°   | 486.7  | 424.2  | 382.6  | 359.8  | 366.5  |
| 62.5° | 415.7  | 356.0  | 319.1  | 312.5  | 323.8  |
| 65°   | 360.8  | 299.2  | 259.5  | 276.5  | 286.0  |
| 67.5° | 308.7  | 256.6  | 211.2  | 251.9  | 255.7  |
| 70°   | 260.4  | 222.5  | 178.0  | 232.0  | 232.9  |
| 72.5° | 220.6  | 197.0  | 154.3  | 210.2  | 213.1  |
| 75°   | 192.2  | 171.4  | 142.0  | 187.5  | 197.0  |
| 77.5° | 168.6  | 146.8  | 131.6  | 161.9  | 178.0  |
| 80°   | 143.0  | 118.4  | 120.3  | 135.4  | 151.5  |
| 82.5° | 109.8  | 91.9   | 95.6   | 111.7  | 123.1  |
| 85°   | 74.8   | 71.0   | 64.4   | 83.3   | 89.0   |
| 87.5° | 39.8   | 37.9   | 33.1   | 47.3   | 44.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)