

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: P291506

Luminaire Tested: **14GR-LD5-32-A19/156-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291506  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-32-A19/156-UNV-L92765-W2A1-U-5000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2939.0 lumens  
Efficiency: N/A  
Efficacy: 112.1 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

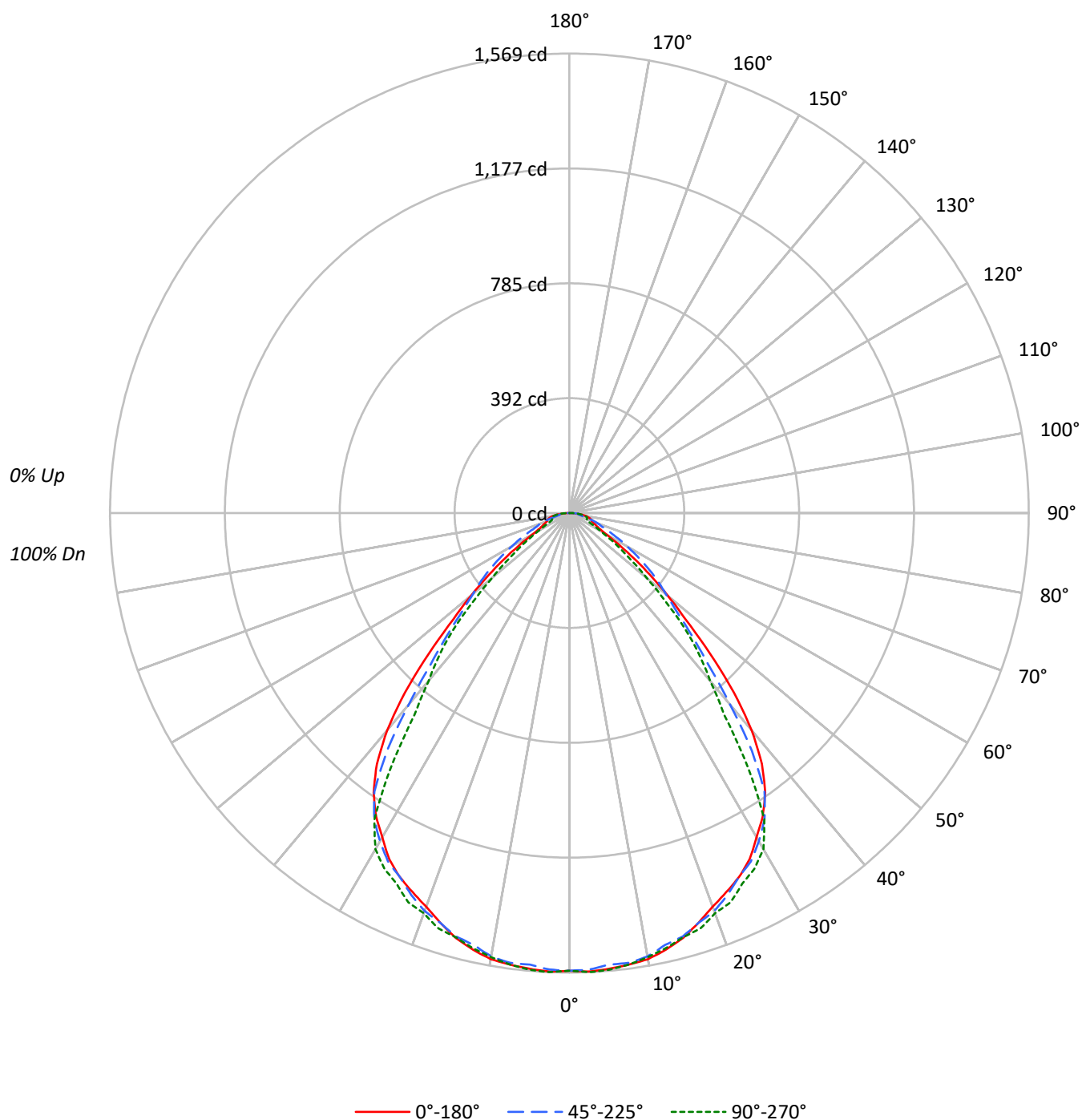
Input Watts (W): 26.226  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  |  | 50  | 30  | 10  |  |  | 50  | 30  | 10  |  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |  |     |     |     |  |  |     |     |     |  |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  |  | 106 | 106 | 106 |  |  | 102 |
| 1   | 111 | 107 | 104 | 100 | 108 | 105 | 102 | 99  |  | 101 | 98  | 96  |  |  | 97  | 95  | 93  |  |  | 93  |
| 2   | 103 | 96  | 90  | 86  | 100 | 94  | 89  | 85  |  | 91  | 87  | 83  |  |  | 88  | 84  | 81  |  |  | 85  |
| 3   | 95  | 87  | 80  | 74  | 93  | 85  | 79  | 74  |  | 82  | 77  | 73  |  |  | 80  | 75  | 71  |  |  | 77  |
| 4   | 89  | 79  | 71  | 65  | 87  | 77  | 70  | 65  |  | 75  | 69  | 64  |  |  | 73  | 68  | 63  |  |  | 71  |
| 5   | 83  | 71  | 64  | 58  | 81  | 70  | 63  | 58  |  | 68  | 62  | 57  |  |  | 67  | 61  | 57  |  |  | 65  |
| 6   | 77  | 65  | 58  | 52  | 75  | 64  | 57  | 52  |  | 63  | 56  | 51  |  |  | 61  | 55  | 51  |  |  | 60  |
| 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 47  |  | 58  | 51  | 46  |  |  | 56  | 51  | 46  |  |  | 55  |
| 8   | 67  | 55  | 48  | 43  | 66  | 55  | 47  | 42  |  | 53  | 47  | 42  |  |  | 52  | 46  | 42  |  |  | 51  |
| 9   | 63  | 51  | 44  | 39  | 62  | 51  | 44  | 39  |  | 50  | 43  | 39  |  |  | 49  | 43  | 38  |  |  | 48  |
| 10  | 60  | 48  | 40  | 36  | 58  | 47  | 40  | 36  |  | 46  | 40  | 35  |  |  | 45  | 39  | 35  |  |  | 44  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4205 | 4205 | 4205 |
| 5°  | 4220 | 4180 | 4229 |
| 10° | 4226 | 4201 | 4208 |
| 15° | 4183 | 4168 | 4178 |
| 20° | 4096 | 4140 | 4164 |
| 25° | 4071 | 4069 | 4147 |
| 30° | 3972 | 4020 | 4118 |
| 35° | 3830 | 3815 | 3505 |
| 40° | 3401 | 3001 | 2628 |
| 45° | 2581 | 2245 | 2125 |
| 50° | 1831 | 1797 | 1442 |
| 55° | 1253 | 1534 | 991  |
| 60° | 775  | 1224 | 663  |
| 65° | 638  | 942  | 480  |
| 70° | 635  | 821  | 493  |
| 75° | 762  | 587  | 657  |
| 80° | 876  | 542  | 823  |
| 85° | 831  | 954  | 936  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 148.3  | 5.0       |
| 10°-20°   | 423.2  | 14.4      |
| 20°-30°   | 636.5  | 21.7      |
| 30°-40°   | 693.9  | 23.6      |
| 40°-50°   | 485.9  | 16.5      |
| 50°-60°   | 275.0  | 9.4       |
| 60°-70°   | 150.5  | 5.1       |
| 70°-80°   | 91.2   | 3.1       |
| 80°-90°   | 34.6   | 1.2       |
| 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°    | 1208.0 | 41.1      |
| 0°-40°    | 1901.9 | 64.7      |
| 0°-60°    | 2662.7 | 90.6      |
| 0°-90°    | 2939.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2939.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1563 | 1563  | 1563 | 1563  | 1563 |      |
| 5°  | 1562 | 1560  | 1547 | 1566  | 1566 | 149  |
| 15° | 1502 | 1498  | 1496 | 1518  | 1500 | 422  |
| 25° | 1371 | 1374  | 1370 | 1402  | 1397 | 630  |
| 35° | 1166 | 1160  | 1161 | 1102  | 1067 | 718  |
| 45° | 678  | 708   | 590  | 583   | 558  | 527  |
| 55° | 267  | 320   | 327  | 324   | 211  | 244  |
| 65° | 100  | 165   | 148  | 187   | 75   | 103  |
| 75° | 73   | 106   | 56   | 111   | 63   | 76   |
| 85° | 27   | 44    | 31   | 38    | 30   | 30   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1562.8 | 1562.8 | 1562.8 | 1562.8 | 1562.8 |
| 2.5°  | 1566.9 | 1564.9 | 1560.2 | 1569.6 | 1568.9 |
| 5°    | 1562.2 | 1559.5 | 1547.4 | 1565.5 | 1565.5 |
| 7.5°  | 1555.4 | 1548.7 | 1549.4 | 1559.5 | 1554.8 |
| 10°   | 1546.7 | 1535.3 | 1537.3 | 1540.0 | 1540.0 |
| 12.5° | 1526.5 | 1515.8 | 1510.4 | 1519.1 | 1521.8 |
| 15°   | 1501.6 | 1497.6 | 1496.2 | 1517.8 | 1499.6 |
| 17.5° | 1466.6 | 1475.4 | 1467.3 | 1484.8 | 1487.5 |
| 20°   | 1430.3 | 1447.1 | 1445.8 | 1457.9 | 1453.9 |
| 22.5° | 1400.7 | 1411.5 | 1411.5 | 1426.3 | 1438.4 |
| 25°   | 1371.1 | 1373.8 | 1370.4 | 1402.1 | 1396.7 |
| 27.5° | 1332.8 | 1330.7 | 1341.5 | 1357.7 | 1368.4 |
| 30°   | 1278.3 | 1278.9 | 1293.7 | 1315.3 | 1325.4 |
| 32.5° | 1228.5 | 1222.4 | 1240.6 | 1250.0 | 1239.2 |
| 35°   | 1165.9 | 1160.5 | 1161.2 | 1102.0 | 1067.0 |
| 37.5° | 1080.5 | 1085.2 | 1023.3 | 915.0  | 869.2  |
| 40°   | 968.1  | 977.5  | 854.4  | 773.7  | 748.1  |
| 42.5° | 832.2  | 834.9  | 700.4  | 674.1  | 657.3  |
| 45°   | 678.2  | 707.8  | 590.0  | 582.6  | 558.4  |
| 47.5° | 537.5  | 592.7  | 494.5  | 499.2  | 441.3  |
| 50°   | 437.3  | 492.5  | 429.2  | 431.2  | 344.5  |
| 52.5° | 345.8  | 399.6  | 378.8  | 372.7  | 270.5  |
| 55°   | 267.1  | 319.6  | 327.0  | 324.3  | 211.2  |
| 57.5° | 196.4  | 253.0  | 274.5  | 284.6  | 162.8  |
| 60°   | 144.0  | 206.5  | 227.4  | 247.6  | 123.1  |
| 62.5° | 114.4  | 179.0  | 186.4  | 216.0  | 95.5   |
| 65°   | 100.2  | 164.8  | 148.0  | 187.0  | 75.4   |
| 67.5° | 89.5   | 156.8  | 120.4  | 165.5  | 65.9   |
| 70°   | 80.7   | 141.3  | 104.3  | 148.0  | 62.6   |
| 72.5° | 80.7   | 123.8  | 82.1   | 131.2  | 63.2   |
| 75°   | 73.3   | 105.6  | 56.5   | 111.0  | 63.2   |
| 77.5° | 65.3   | 90.2   | 42.4   | 90.2   | 59.2   |
| 80°   | 56.5   | 70.6   | 35.0   | 69.3   | 53.1   |
| 82.5° | 41.7   | 53.1   | 30.3   | 51.8   | 43.1   |
| 85°   | 26.9   | 43.7   | 30.9   | 37.7   | 30.3   |
| 87.5° | 12.8   | 22.2   | 19.5   | 18.8   | 15.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)