

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: P290736

Luminaire Tested: **14GR-LD5-40-F1-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P290736  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-7)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-40-F1-UNV-L92765-W2A1-U-3000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3333.0 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.15 / 1.23  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

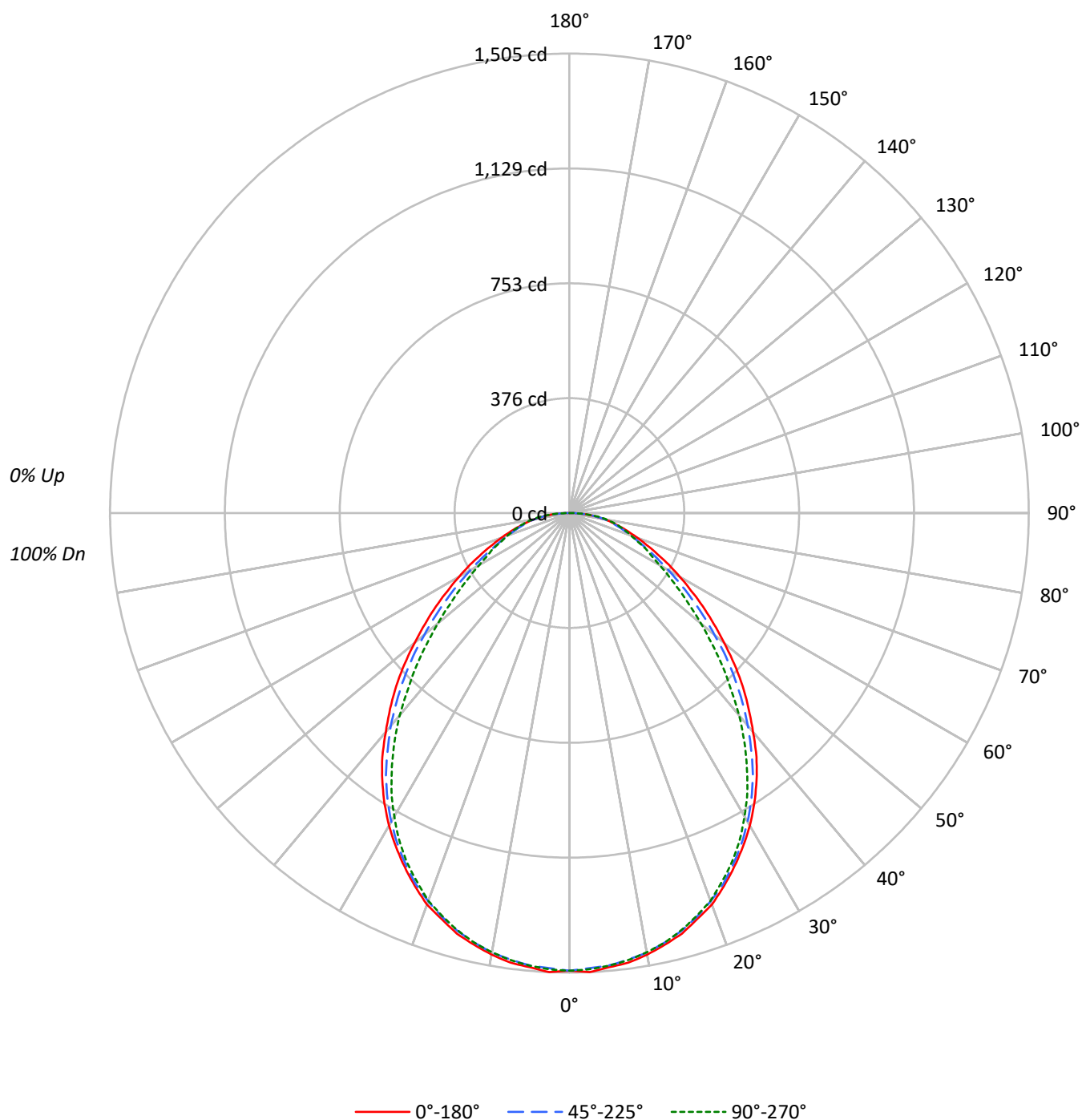
Input Watts (W): 33.387  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 96  | 93  |  | 95  | 92  | 90  |  | 91  |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  | 88  | 83  | 78  |  | 84  | 80  | 77  |  | 81  |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  | 78  | 72  | 67  |  | 75  | 70  | 66  |  | 73  |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  | 70  | 64  | 58  |  | 68  | 62  | 57  |  | 66  |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  | 64  | 57  | 51  |  | 62  | 55  | 51  |  | 60  |
| 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  | 58  | 51  | 45  |  | 56  | 50  | 45  |  | 55  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  | 53  | 46  | 41  |  | 52  | 45  | 40  |  | 50  |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  |  | 47  | 41  | 36  |  | 46  |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 33  | 45  | 38  | 33  |  | 44  | 38  | 33  |  | 43  |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4034 | 4034 | 4034 |
| 5°  | 4032 | 4018 | 4020 |
| 10° | 4012 | 3994 | 3991 |
| 15° | 3972 | 3948 | 3942 |
| 20° | 3907 | 3875 | 3870 |
| 25° | 3795 | 3770 | 3743 |
| 30° | 3672 | 3627 | 3566 |
| 35° | 3511 | 3443 | 3330 |
| 40° | 3288 | 3196 | 3038 |
| 45° | 3053 | 2916 | 2704 |
| 50° | 2770 | 2597 | 2354 |
| 55° | 2505 | 2294 | 2057 |
| 60° | 2249 | 2011 | 1834 |
| 65° | 2019 | 1795 | 1756 |
| 70° | 1863 | 1671 | 1689 |
| 75° | 1779 | 1676 | 1772 |
| 80° | 1799 | 1788 | 1929 |
| 85° | 1865 | 1840 | 2053 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 141.5  | 4.2       |
| 10°-20°   | 400.0  | 12.0      |
| 20°-30°   | 584.2  | 17.5      |
| 30°-40°   | 651.0  | 19.5      |
| 40°-50°   | 586.5  | 17.6      |
| 50°-60°   | 438.4  | 13.2      |
| 60°-70°   | 289.2  | 8.7       |
| 70°-80°   | 176.6  | 5.3       |
| 80°-90°   | 65.5   | 2.0       |
| 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°    | 1125.7 | 33.8      |
| 0°-40°    | 1776.7 | 53.3      |
| 0°-60°    | 2801.7 | 84.1      |
| 0°-90°    | 3333.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3333.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1499 | 1499  | 1499 | 1499  | 1499 |      |
| 5°  | 1493 | 1491  | 1488 | 1495  | 1488 | 142  |
| 15° | 1426 | 1420  | 1417 | 1426  | 1415 | 401  |
| 25° | 1278 | 1274  | 1270 | 1272  | 1261 | 588  |
| 35° | 1069 | 1060  | 1048 | 1030  | 1014 | 666  |
| 45° | 802  | 794   | 766  | 731   | 710  | 617  |
| 55° | 534  | 526   | 489  | 448   | 438  | 478  |
| 65° | 317  | 307   | 282  | 270   | 276  | 318  |
| 75° | 171  | 168   | 161  | 166   | 170  | 183  |
| 85° | 60   | 58    | 60   | 66    | 66   | 64   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1498.9 | 1498.9 | 1498.9 | 1498.9 | 1498.9 |
| 2.5°  | 1505.0 | 1498.2 | 1492.1 | 1501.2 | 1495.9 |
| 5°    | 1492.8 | 1491.3 | 1487.5 | 1495.1 | 1488.2 |
| 7.5°  | 1485.2 | 1479.8 | 1475.3 | 1484.4 | 1476.8 |
| 10°   | 1468.4 | 1465.3 | 1461.5 | 1469.1 | 1460.7 |
| 12.5° | 1447.7 | 1444.7 | 1440.9 | 1450.0 | 1440.9 |
| 15°   | 1425.6 | 1420.2 | 1417.2 | 1425.6 | 1414.9 |
| 17.5° | 1393.5 | 1391.2 | 1386.6 | 1395.0 | 1384.3 |
| 20°   | 1364.5 | 1356.1 | 1353.0 | 1359.1 | 1351.5 |
| 22.5° | 1322.5 | 1316.3 | 1315.6 | 1319.4 | 1306.4 |
| 25°   | 1278.1 | 1273.6 | 1269.7 | 1272.0 | 1260.6 |
| 27.5° | 1231.5 | 1225.4 | 1220.8 | 1220.1 | 1207.9 |
| 30°   | 1181.9 | 1174.2 | 1167.4 | 1161.3 | 1147.5 |
| 32.5° | 1127.6 | 1118.5 | 1109.3 | 1099.4 | 1084.9 |
| 35°   | 1068.8 | 1059.6 | 1048.2 | 1029.8 | 1013.8 |
| 37.5° | 1006.9 | 996.2  | 977.9  | 956.5  | 940.5  |
| 40°   | 935.9  | 930.5  | 909.9  | 882.4  | 864.8  |
| 42.5° | 869.4  | 863.3  | 837.3  | 806.8  | 783.1  |
| 45°   | 802.2  | 793.8  | 766.3  | 731.1  | 710.5  |
| 47.5° | 733.4  | 725.0  | 694.5  | 650.9  | 632.6  |
| 50°   | 661.6  | 657.0  | 620.4  | 580.6  | 562.3  |
| 52.5° | 595.9  | 590.6  | 553.1  | 513.4  | 496.6  |
| 55°   | 534.0  | 525.6  | 488.9  | 448.5  | 438.5  |
| 57.5° | 472.1  | 463.0  | 428.6  | 394.2  | 387.3  |
| 60°   | 417.9  | 406.4  | 373.6  | 346.8  | 340.7  |
| 62.5° | 366.7  | 353.7  | 326.2  | 305.6  | 302.5  |
| 65°   | 317.1  | 307.1  | 281.9  | 270.4  | 275.8  |
| 67.5° | 274.3  | 264.3  | 246.0  | 241.4  | 239.9  |
| 70°   | 236.8  | 227.7  | 212.4  | 213.9  | 214.7  |
| 72.5° | 202.5  | 197.1  | 185.6  | 189.5  | 192.5  |
| 75°   | 171.1  | 168.1  | 161.2  | 166.5  | 170.4  |
| 77.5° | 142.9  | 140.6  | 137.5  | 142.1  | 148.2  |
| 80°   | 116.1  | 114.6  | 115.4  | 118.4  | 124.5  |
| 82.5° | 89.4   | 86.3   | 88.6   | 94.7   | 98.6   |
| 85°   | 60.4   | 58.1   | 59.6   | 65.7   | 66.5   |
| 87.5° | 28.3   | 28.3   | 27.5   | 32.1   | 32.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)