

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: P290739

Luminaire Tested: **14GR-LD5-40-F1-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P290739  
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-4500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH F1 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3706.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 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

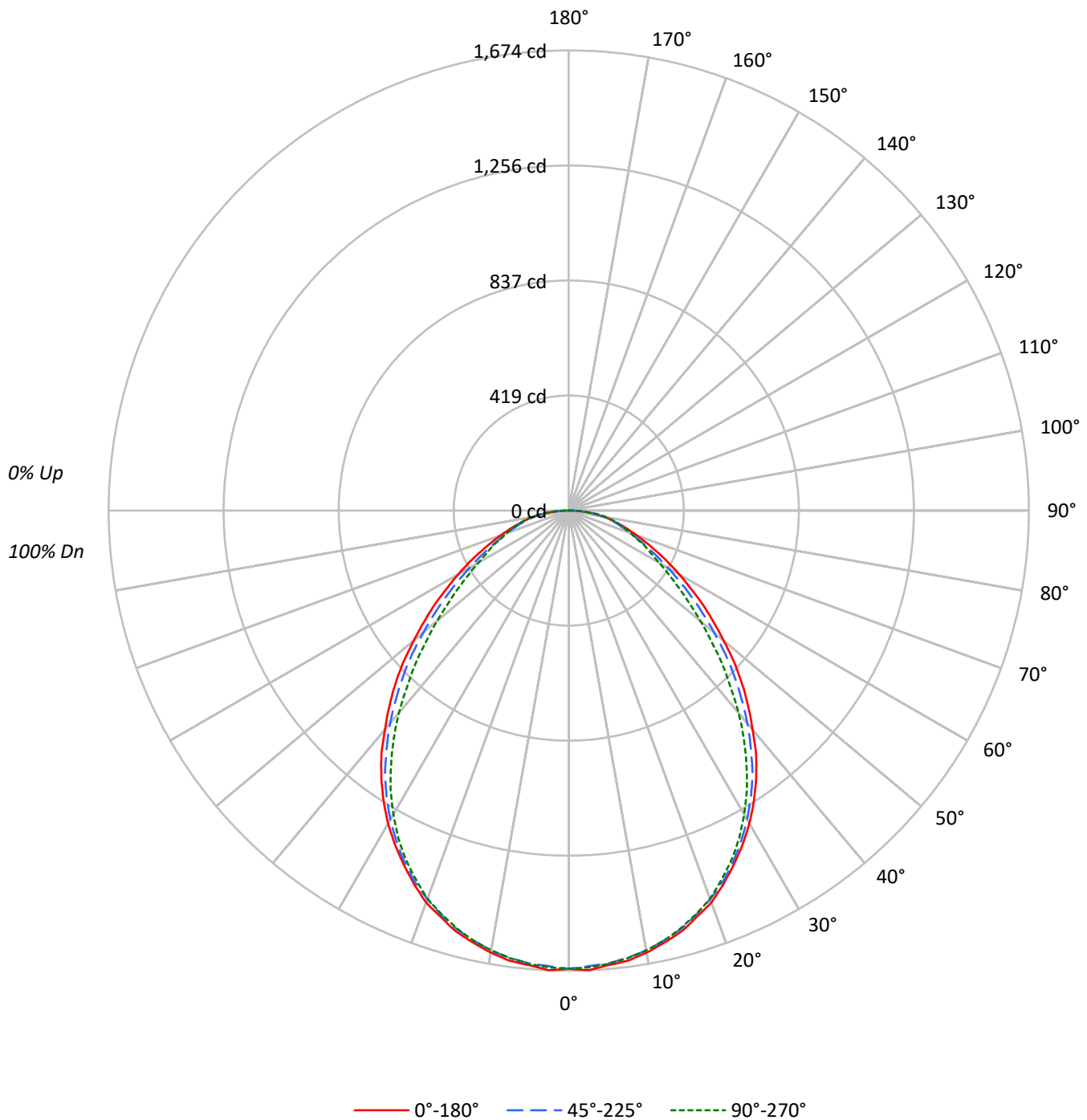
Input Watts (W): 34.317  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 105 | 101 | 98  | 107 | 103 | 99  | 96  |  | 99  | 96  | 93  |  | 95  | 92  | 90  |  | 91  | 89  | 87  |
| 2   | 101 | 93  | 87  | 81  | 98  | 91  | 85  | 80  |  | 88  | 83  | 78  |  | 84  | 80  | 77  |  | 81  | 78  | 75  |
| 3   | 92  | 83  | 75  | 69  | 90  | 81  | 74  | 68  |  | 78  | 72  | 67  |  | 75  | 70  | 66  |  | 73  | 69  | 65  |
| 4   | 85  | 74  | 66  | 59  | 83  | 73  | 65  | 59  |  | 70  | 64  | 58  |  | 68  | 62  | 57  |  | 66  | 61  | 57  |
| 5   | 79  | 67  | 58  | 52  | 77  | 66  | 58  | 52  |  | 64  | 57  | 51  |  | 62  | 55  | 51  |  | 60  | 54  | 50  |
| 6   | 73  | 61  | 52  | 46  | 71  | 60  | 52  | 46  |  | 58  | 51  | 45  |  | 56  | 50  | 45  |  | 55  | 49  | 45  |
| 7   | 68  | 55  | 47  | 41  | 66  | 54  | 47  | 41  |  | 53  | 46  | 41  |  | 52  | 45  | 40  |  | 50  | 44  | 40  |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 42  | 37  |  | 49  | 42  | 37  |  | 47  | 41  | 36  |  | 46  | 41  | 36  |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 33  |  | 45  | 38  | 33  |  | 44  | 38  | 33  |  | 43  | 37  | 33  |
| 10  | 56  | 43  | 36  | 31  | 55  | 43  | 35  | 31  |  | 42  | 35  | 30  |  | 41  | 35  | 30  |  | 40  | 34  | 30  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 4485 | 4485 | 4485 |
| 5°  | 4484 | 4468 | 4470 |
| 10° | 4461 | 4441 | 4438 |
| 15° | 4416 | 4390 | 4383 |
| 20° | 4345 | 4308 | 4303 |
| 25° | 4220 | 4192 | 4162 |
| 30° | 4083 | 4033 | 3965 |
| 35° | 3904 | 3829 | 3703 |
| 40° | 3655 | 3554 | 3378 |
| 45° | 3395 | 3242 | 3006 |
| 50° | 3080 | 2888 | 2617 |
| 55° | 2786 | 2551 | 2288 |
| 60° | 2501 | 2236 | 2039 |
| 65° | 2245 | 1996 | 1953 |
| 70° | 2072 | 1858 | 1878 |
| 75° | 1979 | 1863 | 1969 |
| 80° | 2001 | 1988 | 2146 |
| 85° | 2072 | 2047 | 2282 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 157.3  | 4.2       |
| 10°-20°   | 444.8  | 12.0      |
| 20°-30°   | 649.6  | 17.5      |
| 30°-40°   | 723.8  | 19.5      |
| 40°-50°   | 652.2  | 17.6      |
| 50°-60°   | 487.5  | 13.2      |
| 60°-70°   | 321.6  | 8.7       |
| 70°-80°   | 196.3  | 5.3       |
| 80°-90°   | 72.8   | 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°    | 1251.7 | 33.8      |
| 0°-40°    | 1975.6 | 53.3      |
| 0°-60°    | 3115.3 | 84.1      |
| 0°-90°    | 3706.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3706.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1667 | 1667  | 1667 | 1667  | 1667 |      |
| 5°  | 1660 | 1658  | 1654 | 1662  | 1655 | 158  |
| 15° | 1585 | 1579  | 1576 | 1585  | 1573 | 446  |
| 25° | 1421 | 1416  | 1412 | 1414  | 1402 | 654  |
| 35° | 1188 | 1178  | 1166 | 1145  | 1127 | 741  |
| 45° | 892  | 883   | 852  | 813   | 790  | 687  |
| 55° | 594  | 584   | 544  | 499   | 488  | 532  |
| 65° | 352  | 342   | 314  | 301   | 307  | 353  |
| 75° | 190  | 187   | 179  | 185   | 189  | 203  |
| 85° | 67   | 65    | 66   | 73    | 74   | 71   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1666.7 | 1666.7 | 1666.7 | 1666.7 | 1666.7 |
| 2.5°  | 1673.5 | 1665.8 | 1659.0 | 1669.2 | 1663.3 |
| 5°    | 1659.9 | 1658.2 | 1653.9 | 1662.4 | 1654.8 |
| 7.5°  | 1651.4 | 1645.4 | 1640.3 | 1650.5 | 1642.0 |
| 10°   | 1632.7 | 1629.3 | 1625.1 | 1633.6 | 1624.2 |
| 12.5° | 1609.8 | 1606.4 | 1602.1 | 1612.3 | 1602.1 |
| 15°   | 1585.1 | 1579.2 | 1575.8 | 1585.1 | 1573.2 |
| 17.5° | 1549.5 | 1546.9 | 1541.8 | 1551.2 | 1539.3 |
| 20°   | 1517.2 | 1507.8 | 1504.4 | 1511.2 | 1502.7 |
| 22.5° | 1470.5 | 1463.7 | 1462.8 | 1467.1 | 1452.6 |
| 25°   | 1421.2 | 1416.1 | 1411.8 | 1414.4 | 1401.6 |
| 27.5° | 1369.4 | 1362.6 | 1357.5 | 1356.6 | 1343.0 |
| 30°   | 1314.1 | 1305.7 | 1298.0 | 1291.2 | 1275.9 |
| 32.5° | 1253.8 | 1243.6 | 1233.4 | 1222.4 | 1206.3 |
| 35°   | 1188.4 | 1178.2 | 1165.5 | 1145.1 | 1127.3 |
| 37.5° | 1119.6 | 1107.7 | 1087.3 | 1063.6 | 1045.7 |
| 40°   | 1040.6 | 1034.7 | 1011.7 | 981.2  | 961.6  |
| 42.5° | 966.7  | 959.9  | 931.0  | 897.1  | 870.7  |
| 45°   | 892.0  | 882.6  | 852.0  | 813.0  | 790.0  |
| 47.5° | 815.5  | 806.2  | 772.2  | 723.8  | 703.4  |
| 50°   | 735.7  | 730.6  | 689.8  | 645.6  | 625.2  |
| 52.5° | 662.6  | 656.6  | 615.0  | 570.9  | 552.2  |
| 55°   | 593.8  | 584.4  | 543.7  | 498.6  | 487.6  |
| 57.5° | 525.0  | 514.8  | 476.6  | 438.3  | 430.7  |
| 60°   | 464.7  | 451.9  | 415.4  | 385.7  | 378.9  |
| 62.5° | 407.8  | 393.3  | 362.7  | 339.8  | 336.4  |
| 65°   | 352.5  | 341.5  | 313.5  | 300.7  | 306.7  |
| 67.5° | 305.0  | 293.9  | 273.5  | 268.4  | 266.7  |
| 70°   | 263.3  | 253.1  | 236.2  | 237.9  | 238.7  |
| 72.5° | 225.1  | 219.2  | 206.4  | 210.7  | 214.1  |
| 75°   | 190.3  | 186.9  | 179.2  | 185.2  | 189.4  |
| 77.5° | 158.9  | 156.3  | 152.9  | 158.0  | 164.8  |
| 80°   | 129.1  | 127.4  | 128.3  | 131.7  | 138.5  |
| 82.5° | 99.4   | 96.0   | 98.5   | 105.3  | 109.6  |
| 85°   | 67.1   | 64.6   | 66.3   | 73.1   | 73.9   |
| 87.5° | 31.4   | 31.4   | 30.6   | 35.7   | 35.7   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)