

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: P291541

Luminaire Tested: **14GR-LD5-20-FGW080-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291541  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-24)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-20-FGW080-UNV-L83050-W2A1-U-5000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1671.0 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.36  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

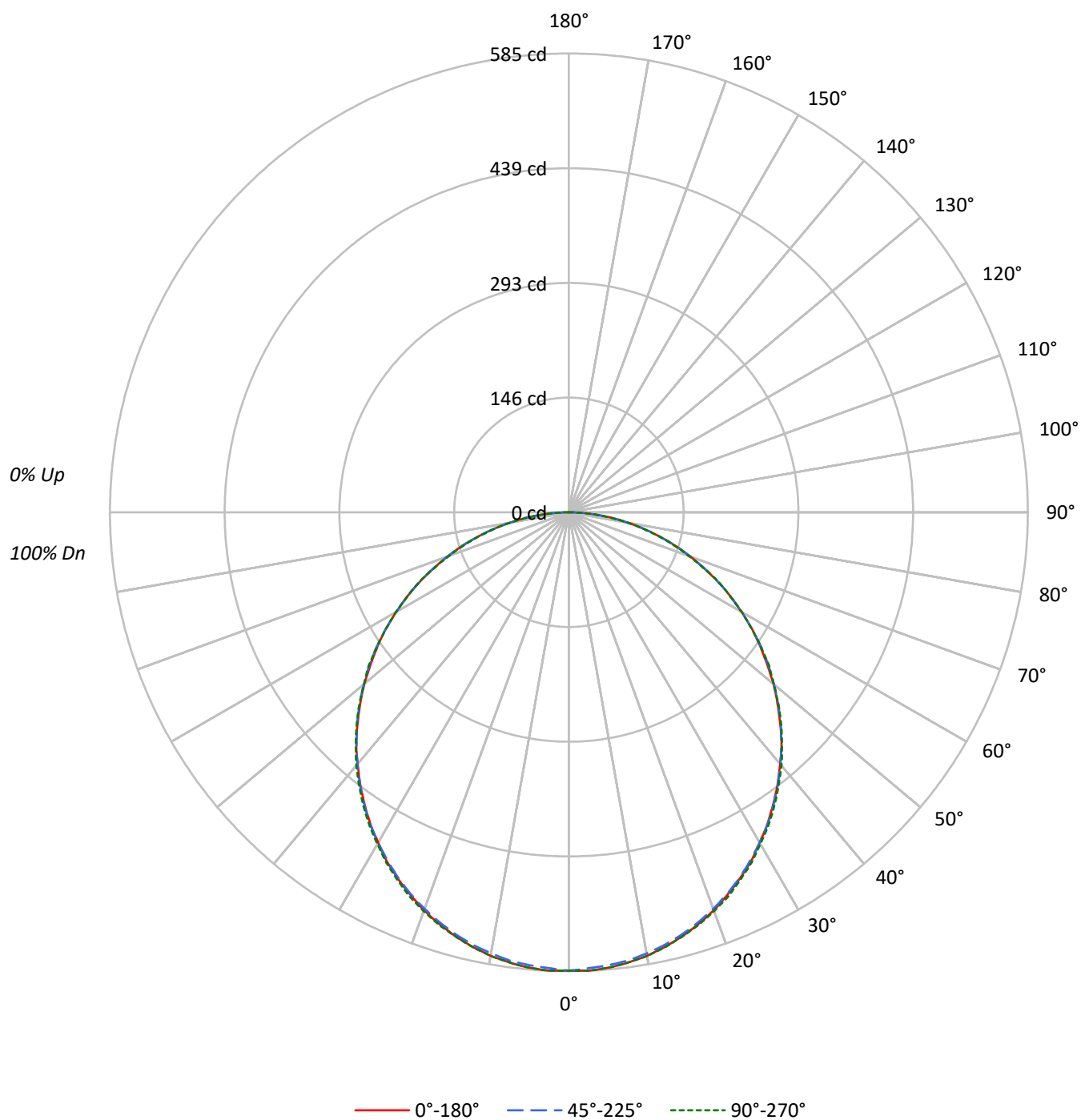
Input Watts (W): 16.275  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 93  |  | 97  | 94  | 91  |  | 93  | 90  | 88  |  | 89  | 87  | 85  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  |  | 84  | 79  | 74  |  | 81  | 77  | 73  |  | 78  | 74  | 71  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  |  | 74  | 68  | 62  |  | 71  | 66  | 61  |  | 69  | 64  | 60  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  |  | 66  | 59  | 53  |  | 64  | 57  | 52  |  | 61  | 56  | 51  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  |  | 59  | 51  | 46  |  | 57  | 50  | 45  |  | 55  | 49  | 45  |
| 6   | 70  | 56  | 47  | 40  | 68  | 55  | 47  | 40  |  | 53  | 46  | 40  |  | 52  | 45  | 40  |  | 50  | 44  | 39  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 42  | 36  |  | 48  | 41  | 35  |  | 47  | 40  | 35  |  | 46  | 39  | 35  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  |  | 44  | 37  | 32  |  | 43  | 36  | 31  |  | 42  | 36  | 31  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  |  | 41  | 34  | 28  |  | 40  | 33  | 28  |  | 39  | 33  | 28  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  |  | 38  | 31  | 26  |  | 37  | 30  | 26  |  | 36  | 30  | 26  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1573 | 1573 | 1573 |
| 5°  | 1574 | 1566 | 1574 |
| 10° | 1569 | 1560 | 1569 |
| 15° | 1558 | 1552 | 1560 |
| 20° | 1546 | 1540 | 1550 |
| 25° | 1531 | 1527 | 1535 |
| 30° | 1510 | 1510 | 1517 |
| 35° | 1491 | 1493 | 1500 |
| 40° | 1471 | 1473 | 1481 |
| 45° | 1450 | 1453 | 1456 |
| 50° | 1425 | 1429 | 1427 |
| 55° | 1396 | 1403 | 1401 |
| 60° | 1369 | 1369 | 1369 |
| 65° | 1337 | 1337 | 1344 |
| 70° | 1294 | 1294 | 1282 |
| 75° | 1250 | 1245 | 1238 |
| 80° | 1192 | 1184 | 1176 |
| 85° | 1121 | 1105 | 1071 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 55.3   | 3.3       |
| 10°-20°   | 157.7  | 9.4       |
| 20°-30°   | 237.7  | 14.2      |
| 30°-40°   | 284.8  | 17.0      |
| 40°-50°   | 294.5  | 17.6      |
| 50°-60°   | 267.0  | 16.0      |
| 60°-70°   | 207.5  | 12.4      |
| 70°-80°   | 126.8  | 7.6       |
| 80°-90°   | 39.7   | 2.4       |
| 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°    | 450.6  | 27.0      |
| 0°-40°    | 735.5  | 44.0      |
| 0°-60°    | 1297.0 | 77.6      |
| 0°-90°    | 1671.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1671.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 584 | 584   | 584 | 584   | 584 |      |
| 5°  | 583 | 582   | 580 | 582   | 583 | 55   |
| 15° | 559 | 559   | 557 | 560   | 560 | 158  |
| 25° | 516 | 516   | 514 | 518   | 517 | 237  |
| 35° | 454 | 455   | 455 | 457   | 457 | 284  |
| 45° | 381 | 381   | 382 | 382   | 382 | 294  |
| 55° | 298 | 299   | 299 | 299   | 299 | 266  |
| 65° | 210 | 210   | 210 | 209   | 211 | 207  |
| 75° | 120 | 120   | 120 | 119   | 119 | 127  |
| 85° | 36  | 35    | 36  | 35    | 35  | 40   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 584.4 | 584.4 | 584.4 | 584.4 | 584.4 |
| 2.5°  | 584.9 | 584.4 | 581.7 | 584.4 | 584.9 |
| 5°    | 582.8 | 582.2 | 579.6 | 582.2 | 582.8 |
| 7.5°  | 579.0 | 579.0 | 576.4 | 579.0 | 579.0 |
| 10°   | 574.2 | 573.7 | 571.0 | 573.7 | 574.2 |
| 12.5° | 567.3 | 567.3 | 564.6 | 567.3 | 567.8 |
| 15°   | 559.3 | 559.3 | 557.1 | 559.8 | 559.8 |
| 17.5° | 550.2 | 550.7 | 548.1 | 551.3 | 551.3 |
| 20°   | 540.0 | 539.5 | 537.9 | 540.6 | 541.1 |
| 22.5° | 527.8 | 528.3 | 526.7 | 529.9 | 530.4 |
| 25°   | 515.5 | 515.5 | 514.4 | 517.6 | 517.1 |
| 27.5° | 502.1 | 502.1 | 500.5 | 503.2 | 503.7 |
| 30°   | 486.1 | 486.6 | 486.1 | 488.8 | 488.2 |
| 32.5° | 471.1 | 471.7 | 471.7 | 472.7 | 473.3 |
| 35°   | 454.0 | 454.6 | 454.6 | 456.7 | 456.7 |
| 37.5° | 437.0 | 437.0 | 437.5 | 439.1 | 439.1 |
| 40°   | 418.8 | 419.3 | 419.3 | 420.9 | 421.5 |
| 42.5° | 401.2 | 400.1 | 400.6 | 402.2 | 402.2 |
| 45°   | 380.9 | 381.4 | 381.9 | 382.5 | 382.5 |
| 47.5° | 360.6 | 361.6 | 362.2 | 362.7 | 362.2 |
| 50°   | 340.3 | 341.3 | 341.3 | 340.8 | 340.8 |
| 52.5° | 318.4 | 321.0 | 320.5 | 320.5 | 321.6 |
| 55°   | 297.5 | 298.6 | 299.1 | 299.1 | 298.6 |
| 57.5° | 276.7 | 277.8 | 276.7 | 277.2 | 276.2 |
| 60°   | 254.3 | 254.8 | 254.3 | 254.3 | 254.3 |
| 62.5° | 232.4 | 232.9 | 231.8 | 231.8 | 231.8 |
| 65°   | 209.9 | 209.9 | 209.9 | 208.9 | 211.0 |
| 67.5° | 186.4 | 187.5 | 187.5 | 188.0 | 185.9 |
| 70°   | 164.5 | 165.1 | 164.5 | 164.0 | 162.9 |
| 72.5° | 142.6 | 143.2 | 143.7 | 141.6 | 141.0 |
| 75°   | 120.2 | 120.2 | 119.7 | 119.1 | 119.1 |
| 77.5° | 98.3  | 98.3  | 98.3  | 97.2  | 97.2  |
| 80°   | 76.9  | 77.5  | 76.4  | 76.4  | 75.9  |
| 82.5° | 56.1  | 56.1  | 56.1  | 55.6  | 54.5  |
| 85°   | 36.3  | 35.3  | 35.8  | 34.7  | 34.7  |
| 87.5° | 16.6  | 16.6  | 16.6  | 15.5  | 17.6  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)