

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: P291680

Luminaire Tested: **14GR-LD5-24-FGW080-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291680  
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-LD5-24-FGW080-UNV-L92765-W2A1-U-3000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1504.0 lumens  
Efficiency: N/A  
Efficacy: 83.4 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

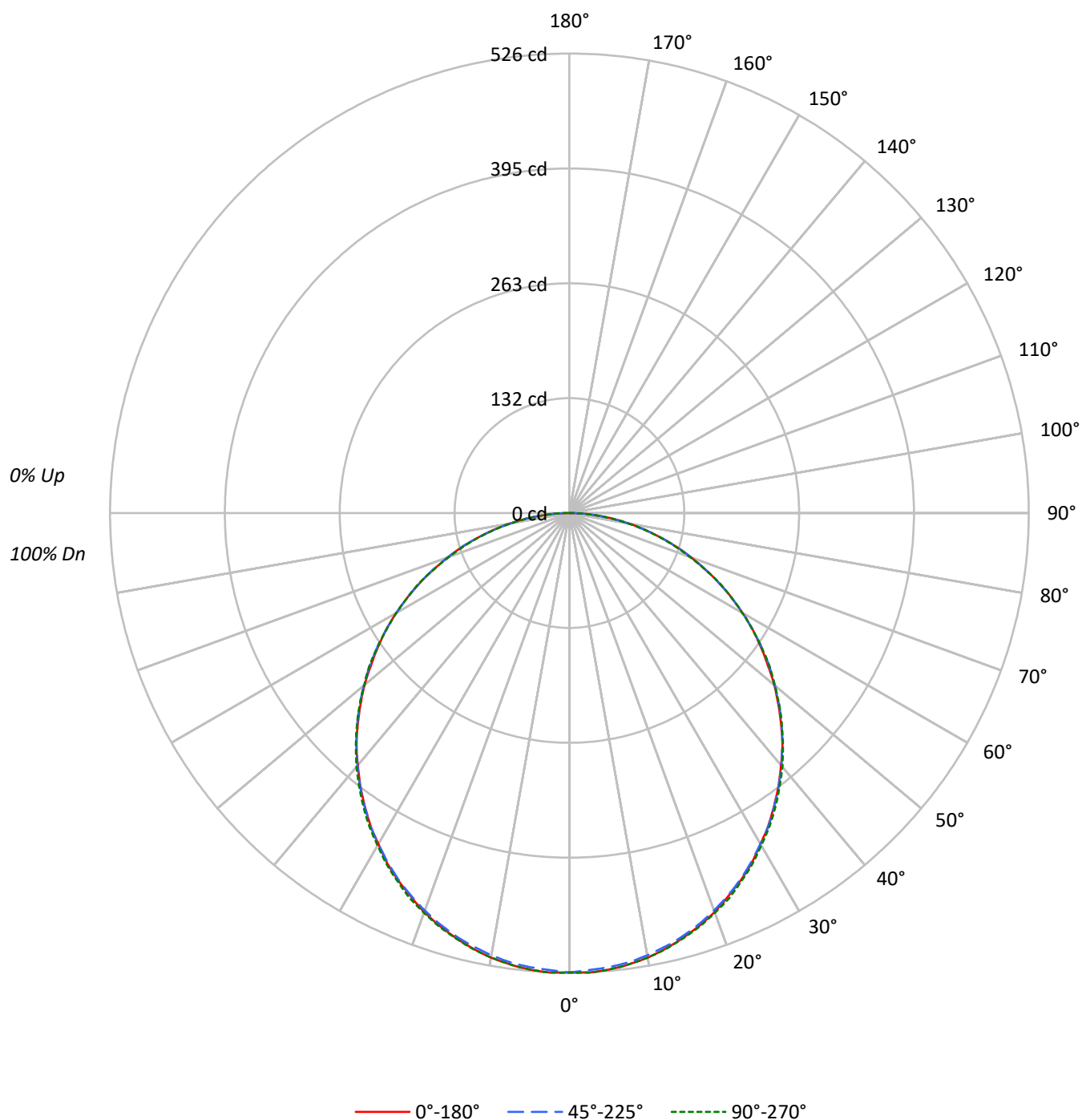
Input Watts (W): 18.042  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1415 | 1415 | 1415 |
| 5°  | 1417 | 1409 | 1417 |
| 10° | 1412 | 1405 | 1412 |
| 15° | 1402 | 1397 | 1404 |
| 20° | 1392 | 1387 | 1395 |
| 25° | 1378 | 1375 | 1382 |
| 30° | 1359 | 1359 | 1365 |
| 35° | 1343 | 1344 | 1350 |
| 40° | 1324 | 1326 | 1332 |
| 45° | 1305 | 1308 | 1310 |
| 50° | 1282 | 1286 | 1284 |
| 55° | 1256 | 1263 | 1261 |
| 60° | 1232 | 1232 | 1232 |
| 65° | 1203 | 1203 | 1209 |
| 70° | 1165 | 1165 | 1153 |
| 75° | 1125 | 1120 | 1115 |
| 80° | 1072 | 1066 | 1058 |
| 85° | 1010 | 994  | 966  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 49.7   | 3.3       |
| 10°-20°   | 142.0  | 9.4       |
| 20°-30°   | 213.9  | 14.2      |
| 30°-40°   | 256.4  | 17.0      |
| 40°-50°   | 265.1  | 17.6      |
| 50°-60°   | 240.4  | 16.0      |
| 60°-70°   | 186.8  | 12.4      |
| 70°-80°   | 114.1  | 7.6       |
| 80°-90°   | 35.7   | 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°    | 405.6  | 27.0      |
| 0°-40°    | 662.0  | 44.0      |
| 0°-60°    | 1167.4 | 77.6      |
| 0°-90°    | 1504.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1504.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 526 | 526   | 526 | 526   | 526 |      |
| 5°  | 524 | 524   | 522 | 524   | 524 | 50   |
| 15° | 503 | 503   | 502 | 504   | 504 | 142  |
| 25° | 464 | 464   | 463 | 466   | 465 | 214  |
| 35° | 409 | 409   | 409 | 411   | 411 | 256  |
| 45° | 343 | 343   | 344 | 344   | 344 | 264  |
| 55° | 268 | 269   | 269 | 269   | 269 | 240  |
| 65° | 189 | 189   | 189 | 188   | 190 | 187  |
| 75° | 108 | 108   | 108 | 107   | 107 | 114  |
| 85° | 33  | 32    | 32  | 31    | 31  | 36   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 526.0 | 526.0 | 526.0 | 526.0 | 526.0 |
| 2.5°  | 526.5 | 526.0 | 523.6 | 526.0 | 526.5 |
| 5°    | 524.5 | 524.1 | 521.7 | 524.1 | 524.5 |
| 7.5°  | 521.2 | 521.2 | 518.8 | 521.2 | 521.2 |
| 10°   | 516.8 | 516.4 | 514.0 | 516.4 | 516.8 |
| 12.5° | 510.6 | 510.6 | 508.2 | 510.6 | 511.1 |
| 15°   | 503.4 | 503.4 | 501.5 | 503.9 | 503.9 |
| 17.5° | 495.2 | 495.7 | 493.3 | 496.2 | 496.2 |
| 20°   | 486.1 | 485.6 | 484.2 | 486.6 | 487.0 |
| 22.5° | 475.0 | 475.5 | 474.1 | 476.9 | 477.4 |
| 25°   | 464.0 | 464.0 | 463.0 | 465.9 | 465.4 |
| 27.5° | 451.9 | 451.9 | 450.5 | 452.9 | 453.4 |
| 30°   | 437.5 | 438.0 | 437.5 | 439.9 | 439.4 |
| 32.5° | 424.1 | 424.5 | 424.5 | 425.5 | 426.0 |
| 35°   | 408.7 | 409.1 | 409.1 | 411.1 | 411.1 |
| 37.5° | 393.3 | 393.3 | 393.8 | 395.2 | 395.2 |
| 40°   | 376.9 | 377.4 | 377.4 | 378.9 | 379.3 |
| 42.5° | 361.1 | 360.1 | 360.6 | 362.0 | 362.0 |
| 45°   | 342.8 | 343.3 | 343.8 | 344.2 | 344.2 |
| 47.5° | 324.5 | 325.5 | 326.0 | 326.5 | 326.0 |
| 50°   | 306.3 | 307.2 | 307.2 | 306.7 | 306.7 |
| 52.5° | 286.5 | 289.0 | 288.5 | 288.5 | 289.4 |
| 55°   | 267.8 | 268.8 | 269.2 | 269.2 | 268.8 |
| 57.5° | 249.0 | 250.0 | 249.0 | 249.5 | 248.6 |
| 60°   | 228.9 | 229.3 | 228.9 | 228.9 | 228.9 |
| 62.5° | 209.1 | 209.6 | 208.7 | 208.7 | 208.7 |
| 65°   | 188.9 | 188.9 | 188.9 | 188.0 | 189.9 |
| 67.5° | 167.8 | 168.8 | 168.8 | 169.2 | 167.3 |
| 70°   | 148.1 | 148.6 | 148.1 | 147.6 | 146.6 |
| 72.5° | 128.4 | 128.9 | 129.3 | 127.4 | 126.9 |
| 75°   | 108.2 | 108.2 | 107.7 | 107.2 | 107.2 |
| 77.5° | 88.5  | 88.5  | 88.5  | 87.5  | 87.5  |
| 80°   | 69.2  | 69.7  | 68.8  | 68.8  | 68.3  |
| 82.5° | 50.5  | 50.5  | 50.5  | 50.0  | 49.0  |
| 85°   | 32.7  | 31.7  | 32.2  | 31.3  | 31.3  |
| 87.5° | 14.9  | 14.9  | 14.9  | 13.9  | 15.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)