

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: P294354

Luminaire Tested: **24GR-LD5-34-FGW080-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P294354  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-25)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-34-FGW080-UNV-L92765-W2A1-U-5000K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH FGW080 LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2814.0 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.25 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

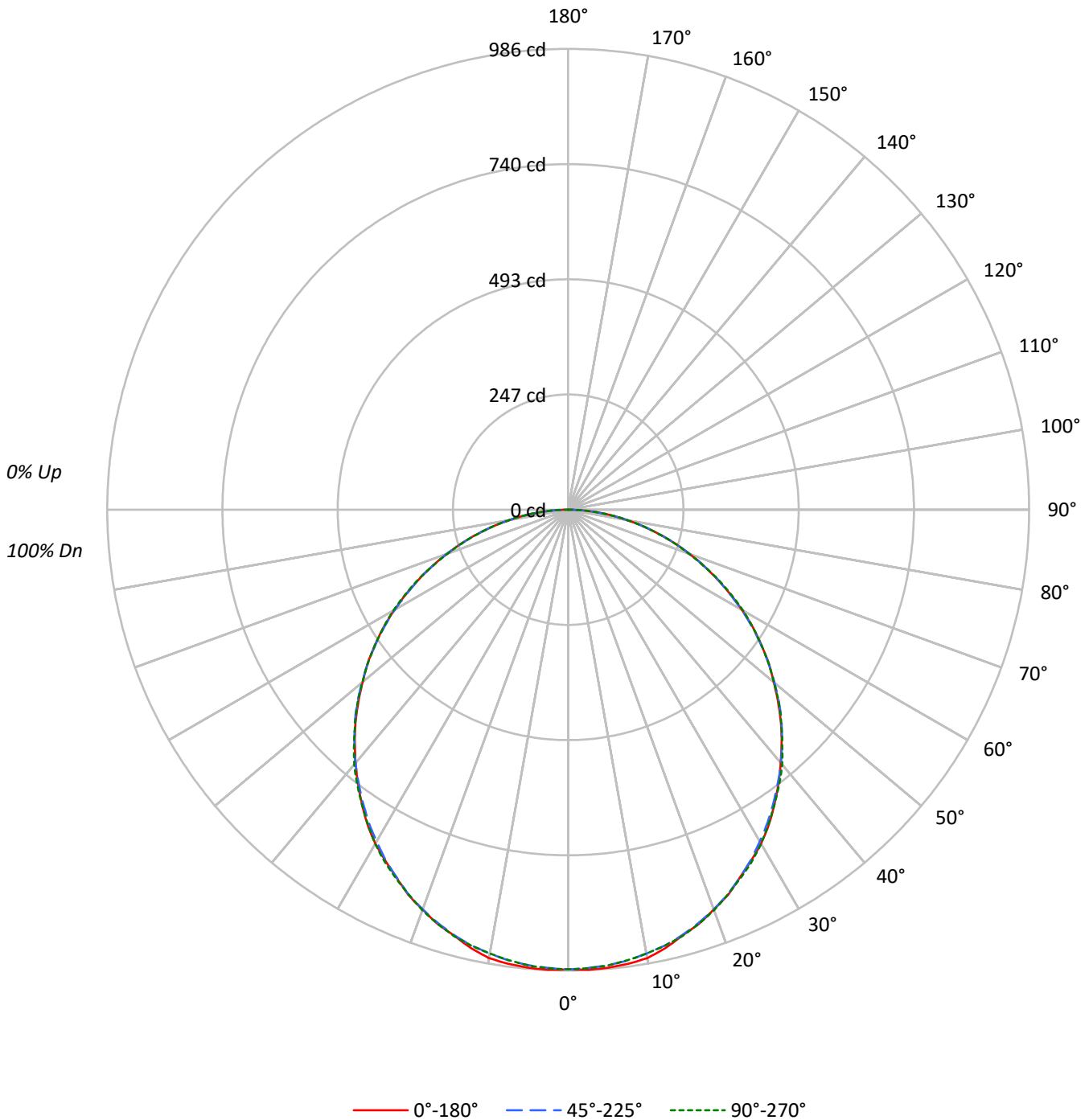
Input Watts (W): 23.529  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 108 | 103 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 89  | 87  | 85  | 83  |
| 2   | 98  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 84  | 79  | 74  | 81  | 77  | 73  | 78  | 74  | 71  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  | 71  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 43  |
| 6   | 70  | 56  | 47  | 41  | 68  | 55  | 47  | 40  | 53  | 46  | 40  | 52  | 45  | 40  | 50  | 44  | 39  | 37  |
| 7   | 65  | 51  | 42  | 36  | 63  | 50  | 42  | 36  | 48  | 41  | 35  | 47  | 40  | 35  | 46  | 40  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 46  | 37  | 32  | 44  | 37  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |
| 9   | 56  | 43  | 34  | 29  | 55  | 42  | 34  | 29  | 41  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 26  |
| 10  | 53  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 36  | 30  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1323 | 1323 | 1323 |
| 5°  | 1328 | 1321 | 1322 |
| 10° | 1331 | 1317 | 1317 |
| 15° | 1314 | 1313 | 1316 |
| 20° | 1304 | 1303 | 1306 |
| 25° | 1290 | 1289 | 1293 |
| 30° | 1282 | 1273 | 1283 |
| 35° | 1263 | 1257 | 1263 |
| 40° | 1242 | 1244 | 1251 |
| 45° | 1225 | 1229 | 1226 |
| 50° | 1202 | 1206 | 1203 |
| 55° | 1183 | 1180 | 1183 |
| 60° | 1156 | 1152 | 1163 |
| 65° | 1120 | 1124 | 1128 |
| 70° | 1083 | 1089 | 1081 |
| 75° | 1045 | 1045 | 1045 |
| 80° | 987  | 987  | 997  |
| 85° | 912  | 922  | 891  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.0   | 3.3       |
| 10°-20°   | 265.9  | 9.4       |
| 20°-30°   | 400.6  | 14.2      |
| 30°-40°   | 479.9  | 17.1      |
| 40°-50°   | 496.7  | 17.7      |
| 50°-60°   | 450.4  | 16.0      |
| 60°-70°   | 349.2  | 12.4      |
| 70°-80°   | 212.3  | 7.5       |
| 80°-90°   | 66.1   | 2.3       |
| 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°    | 759.5  | 27.0      |
| 0°-40°    | 1239.3 | 44.0      |
| 0°-60°    | 2186.4 | 77.7      |
| 0°-90°    | 2814.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2814.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 984 | 984   | 984 | 984   | 984 |      |
| 5°  | 984 | 978   | 978 | 977   | 979 | 94   |
| 15° | 943 | 944   | 942 | 939   | 944 | 267  |
| 25° | 869 | 869   | 868 | 871   | 871 | 401  |
| 35° | 769 | 764   | 765 | 768   | 769 | 481  |
| 45° | 644 | 645   | 646 | 643   | 644 | 496  |
| 55° | 504 | 502   | 503 | 505   | 504 | 451  |
| 65° | 352 | 354   | 353 | 352   | 354 | 349  |
| 75° | 201 | 200   | 201 | 200   | 201 | 212  |
| 85° | 59  | 58    | 60  | 59    | 58  | 66   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 983.5 | 983.5 | 983.5 | 983.5 | 983.5 |
| 2.5°  | 985.5 | 981.5 | 981.5 | 980.2 | 982.2 |
| 5°    | 983.5 | 977.6 | 978.2 | 976.9 | 978.9 |
| 7.5°  | 980.2 | 972.2 | 972.9 | 971.6 | 972.2 |
| 10°   | 974.2 | 964.9 | 964.3 | 963.6 | 964.3 |
| 12.5° | 961.0 | 955.7 | 955.0 | 953.7 | 955.7 |
| 15°   | 943.0 | 943.7 | 942.4 | 939.1 | 944.4 |
| 17.5° | 929.1 | 928.4 | 927.1 | 923.8 | 929.1 |
| 20°   | 910.5 | 911.2 | 909.9 | 908.5 | 911.9 |
| 22.5° | 892.6 | 890.6 | 891.3 | 890.6 | 891.3 |
| 25°   | 868.7 | 868.7 | 868.1 | 870.7 | 870.7 |
| 27.5° | 846.8 | 844.2 | 845.5 | 848.1 | 849.5 |
| 30°   | 824.9 | 818.3 | 819.6 | 822.3 | 825.6 |
| 32.5° | 799.0 | 792.4 | 793.7 | 796.4 | 797.7 |
| 35°   | 769.2 | 763.9 | 765.2 | 768.5 | 769.2 |
| 37.5° | 738.6 | 735.3 | 736.6 | 739.3 | 741.3 |
| 40°   | 707.4 | 706.1 | 708.1 | 707.4 | 712.1 |
| 42.5° | 675.6 | 674.9 | 676.9 | 676.9 | 677.6 |
| 45°   | 643.7 | 645.1 | 645.7 | 643.1 | 644.4 |
| 47.5° | 608.6 | 609.2 | 611.9 | 610.6 | 611.2 |
| 50°   | 574.1 | 573.4 | 576.0 | 576.7 | 574.7 |
| 52.5° | 540.9 | 537.6 | 540.2 | 541.5 | 540.2 |
| 55°   | 504.4 | 501.7 | 503.0 | 505.0 | 504.4 |
| 57.5° | 468.5 | 465.9 | 466.5 | 469.9 | 468.5 |
| 60°   | 429.4 | 428.7 | 428.1 | 430.7 | 432.0 |
| 62.5° | 390.9 | 390.2 | 388.9 | 391.6 | 392.9 |
| 65°   | 351.7 | 353.7 | 353.1 | 351.7 | 354.4 |
| 67.5° | 314.6 | 316.6 | 314.6 | 313.2 | 313.2 |
| 70°   | 275.4 | 277.4 | 276.7 | 275.4 | 274.7 |
| 72.5° | 238.9 | 238.9 | 237.6 | 236.9 | 237.6 |
| 75°   | 201.1 | 200.4 | 201.1 | 200.4 | 201.1 |
| 77.5° | 163.9 | 164.6 | 164.6 | 164.6 | 163.9 |
| 80°   | 127.4 | 127.4 | 127.4 | 128.1 | 128.7 |
| 82.5° | 93.6  | 91.6  | 93.6  | 92.2  | 92.9  |
| 85°   | 59.1  | 58.4  | 59.7  | 59.1  | 57.7  |
| 87.5° | 26.5  | 27.2  | 27.2  | 27.9  | 27.9  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)