

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: P291099

Luminaire Tested: **14GR-LD5-24-A-UNV-L92765-W2A1-U-6500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291099  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33314)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-24-A-UNV-L92765-W2A1-U-6500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 6500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2315.0 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.21 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

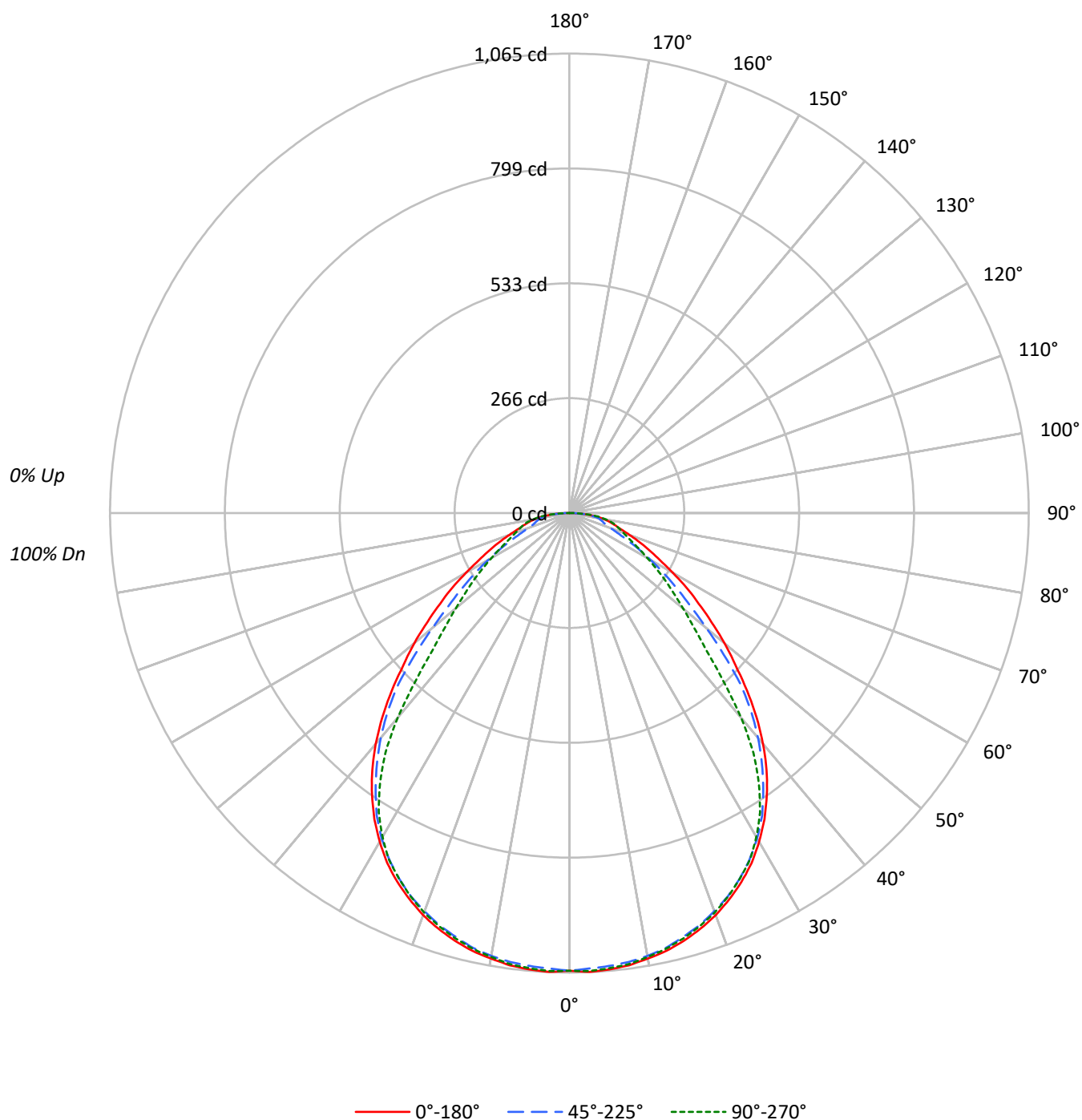
Input Watts (W): 19.065  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 106 | 102 | 98  | 107 | 103 | 100 | 97  |  | 99  | 96  | 94  |  | 95  | 93  | 91  |  | 92  | 90  | 88  |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  |  | 88  | 84  | 80  |  | 85  | 81  | 78  |  | 82  | 79  | 76  |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  |  | 79  | 74  | 69  |  | 77  | 72  | 68  |  | 74  | 70  | 66  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  |  | 72  | 65  | 60  |  | 69  | 64  | 59  |  | 67  | 62  | 58  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  |  | 65  | 58  | 53  |  | 63  | 57  | 52  |  | 61  | 56  | 52  |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 47  |  | 59  | 52  | 47  |  | 58  | 51  | 47  |  | 56  | 51  | 46  |
| 7   | 69  | 57  | 48  | 43  | 67  | 56  | 48  | 43  |  | 54  | 47  | 42  |  | 53  | 47  | 42  |  | 52  | 46  | 42  |
| 8   | 65  | 52  | 44  | 38  | 63  | 51  | 44  | 38  |  | 50  | 43  | 38  |  | 49  | 43  | 38  |  | 48  | 42  | 38  |
| 9   | 61  | 48  | 40  | 35  | 59  | 47  | 40  | 35  |  | 46  | 39  | 35  |  | 45  | 39  | 35  |  | 44  | 39  | 34  |
| 10  | 57  | 44  | 37  | 32  | 56  | 44  | 37  | 32  |  | 43  | 36  | 32  |  | 42  | 36  | 32  |  | 41  | 36  | 31  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2855 | 2855 | 2855 |
| 5°  | 2868 | 2847 | 2861 |
| 10° | 2865 | 2847 | 2855 |
| 15° | 2859 | 2834 | 2843 |
| 20° | 2839 | 2813 | 2821 |
| 25° | 2802 | 2775 | 2776 |
| 30° | 2733 | 2705 | 2693 |
| 35° | 2621 | 2574 | 2515 |
| 40° | 2453 | 2391 | 2176 |
| 45° | 2216 | 2132 | 1700 |
| 50° | 1965 | 1731 | 1438 |
| 55° | 1715 | 1420 | 1269 |
| 60° | 1488 | 1169 | 1120 |
| 65° | 1305 | 938  | 1034 |
| 70° | 1164 | 795  | 1041 |
| 75° | 1134 | 839  | 1162 |
| 80° | 1258 | 1058 | 1333 |
| 85° | 1312 | 1130 | 1559 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 100.7  | 4.3       |
| 10°-20°   | 288.3  | 12.5      |
| 20°-30°   | 431.3  | 18.6      |
| 30°-40°   | 486.9  | 21.0      |
| 40°-50°   | 413.1  | 17.8      |
| 50°-60°   | 279.5  | 12.1      |
| 60°-70°   | 166.8  | 7.2       |
| 70°-80°   | 104.5  | 4.5       |
| 80°-90°   | 44.0   | 1.9       |
| 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°    | 820.3  | 35.4      |
| 0°-40°    | 1307.2 | 56.5      |
| 0°-60°    | 1999.8 | 86.4      |
| 0°-90°    | 2315.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2315.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1061 | 1061  | 1061 | 1061  | 1061 |      |
| 5°  | 1062 | 1059  | 1054 | 1061  | 1059 | 101  |
| 15° | 1026 | 1024  | 1017 | 1024  | 1020 | 289  |
| 25° | 944  | 940   | 934  | 939   | 935  | 434  |
| 35° | 798  | 792   | 783  | 776   | 766  | 497  |
| 45° | 582  | 584   | 560  | 480   | 447  | 449  |
| 55° | 366  | 348   | 303  | 271   | 270  | 329  |
| 65° | 205  | 170   | 147  | 157   | 162  | 205  |
| 75° | 109  | 97    | 81   | 106   | 112  | 117  |
| 85° | 42   | 40    | 37   | 47    | 50   | 46   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1060.8 | 1060.8 | 1060.8 | 1060.8 | 1060.8 |
| 2.5°  | 1064.6 | 1061.4 | 1056.5 | 1063.0 | 1062.4 |
| 5°    | 1061.9 | 1058.7 | 1053.8 | 1061.4 | 1059.2 |
| 7.5°  | 1057.1 | 1054.4 | 1049.5 | 1056.5 | 1054.4 |
| 10°   | 1048.5 | 1046.3 | 1042.0 | 1047.9 | 1044.7 |
| 12.5° | 1039.3 | 1037.7 | 1032.3 | 1037.7 | 1034.5 |
| 15°   | 1026.4 | 1024.3 | 1017.3 | 1024.3 | 1020.5 |
| 17.5° | 1010.3 | 1007.6 | 1001.7 | 1007.6 | 1004.4 |
| 20°   | 991.5  | 988.2  | 982.3  | 988.2  | 985.0  |
| 22.5° | 968.9  | 966.2  | 960.8  | 966.2  | 961.9  |
| 25°   | 943.6  | 940.4  | 934.5  | 938.8  | 935.0  |
| 27.5° | 914.6  | 910.3  | 904.9  | 908.1  | 906.0  |
| 30°   | 879.6  | 874.3  | 870.5  | 870.5  | 866.7  |
| 32.5° | 841.5  | 837.7  | 831.2  | 827.5  | 822.6  |
| 35°   | 797.9  | 792.5  | 783.4  | 776.4  | 765.7  |
| 37.5° | 751.1  | 744.7  | 733.4  | 715.6  | 701.1  |
| 40°   | 698.4  | 690.4  | 680.7  | 645.7  | 619.4  |
| 42.5° | 642.0  | 640.4  | 623.7  | 564.0  | 527.5  |
| 45°   | 582.3  | 584.5  | 560.3  | 480.1  | 446.8  |
| 47.5° | 522.1  | 529.6  | 485.5  | 407.0  | 389.8  |
| 50°   | 469.4  | 472.1  | 413.5  | 353.3  | 343.6  |
| 52.5° | 415.1  | 410.8  | 352.7  | 310.8  | 303.8  |
| 55°   | 365.6  | 348.4  | 302.7  | 271.0  | 270.5  |
| 57.5° | 322.1  | 290.3  | 258.6  | 235.0  | 237.7  |
| 60°   | 276.4  | 240.9  | 217.2  | 204.3  | 208.1  |
| 62.5° | 236.0  | 202.2  | 181.2  | 177.4  | 183.9  |
| 65°   | 204.9  | 169.9  | 147.3  | 157.0  | 162.4  |
| 67.5° | 175.3  | 145.7  | 119.9  | 143.0  | 145.2  |
| 70°   | 147.9  | 126.4  | 101.1  | 131.7  | 132.3  |
| 72.5° | 125.3  | 111.8  | 87.6   | 119.4  | 121.0  |
| 75°   | 109.1  | 97.3   | 80.7   | 106.5  | 111.8  |
| 77.5° | 95.7   | 83.3   | 74.7   | 91.9   | 101.1  |
| 80°   | 81.2   | 67.2   | 68.3   | 76.9   | 86.0   |
| 82.5° | 62.4   | 52.2   | 54.3   | 63.4   | 69.9   |
| 85°   | 42.5   | 40.3   | 36.6   | 47.3   | 50.5   |
| 87.5° | 22.6   | 21.5   | 18.8   | 26.9   | 25.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)