

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: P291094

Luminaire Tested: **14GR-LD5-24-A-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291094  
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-4000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2154.0 lumens  
Efficiency: N/A  
Efficacy: 117.0 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

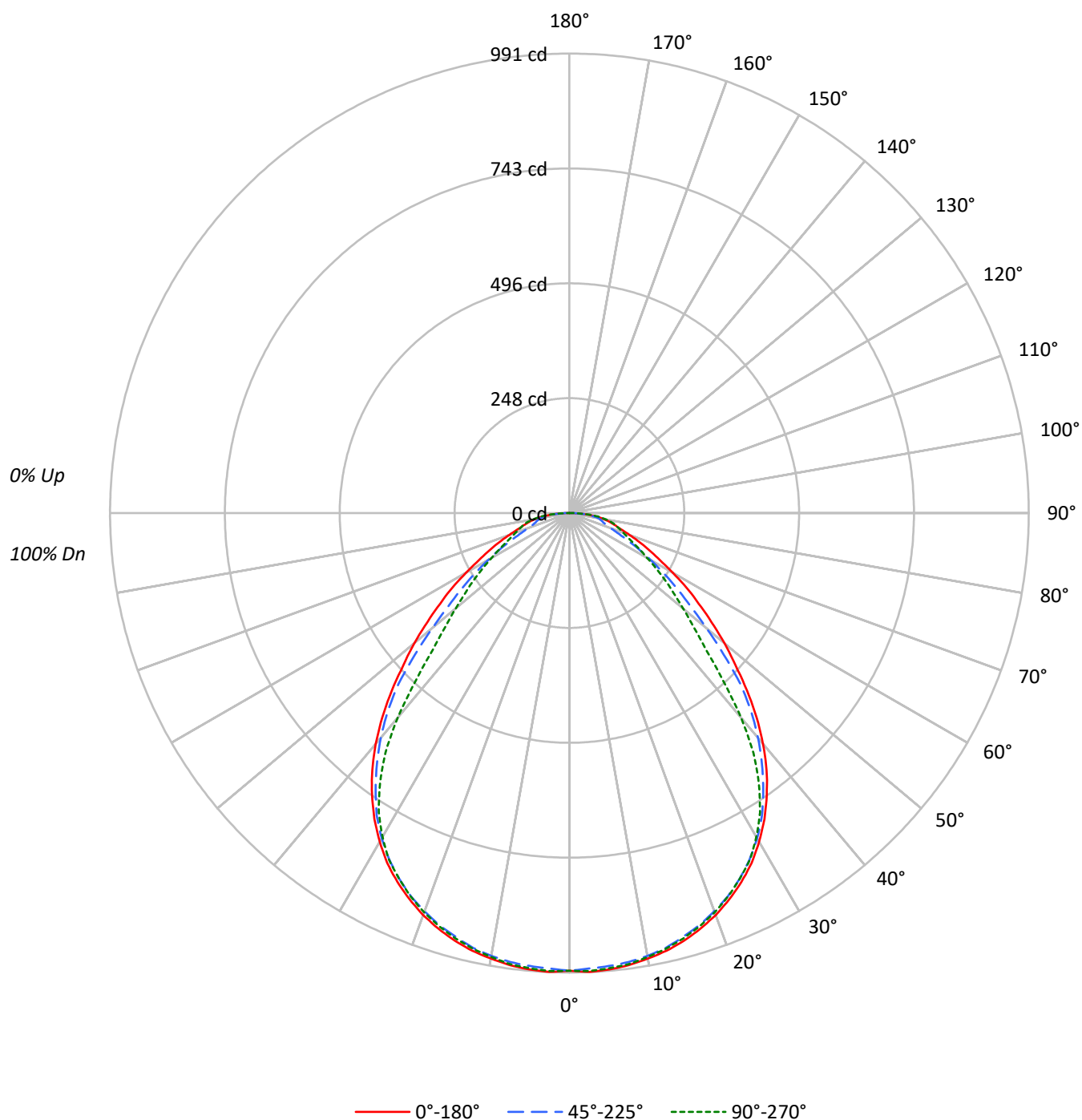
Input Watts (W): 18.414  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 30  | 10  | 0   |  |  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |  |  |
| 1   | 110 | 106 | 102 | 98  | 107 | 103 | 100 | 97  | 99  | 96  | 94  | 95  | 93  | 91  | 92  | 90  | 88  | 86  |  |  |
| 2   | 101 | 94  | 88  | 83  | 99  | 92  | 86  | 82  | 88  | 84  | 80  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |  |  |
| 3   | 93  | 84  | 76  | 71  | 91  | 82  | 75  | 70  | 79  | 74  | 69  | 77  | 72  | 68  | 74  | 70  | 66  | 64  |  |  |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 67  | 61  | 72  | 65  | 60  | 69  | 64  | 59  | 67  | 62  | 58  | 56  |  |  |
| 5   | 80  | 68  | 60  | 54  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 52  | 50  |  |  |
| 6   | 74  | 62  | 54  | 48  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 58  | 51  | 47  | 56  | 51  | 46  | 44  |  |  |
| 7   | 69  | 57  | 48  | 43  | 67  | 56  | 48  | 43  | 54  | 47  | 42  | 53  | 47  | 42  | 52  | 46  | 42  | 40  |  |  |
| 8   | 65  | 52  | 44  | 38  | 63  | 51  | 44  | 38  | 50  | 43  | 38  | 49  | 43  | 38  | 48  | 42  | 38  | 36  |  |  |
| 9   | 61  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 35  | 44  | 39  | 34  | 33  |  |  |
| 10  | 57  | 44  | 37  | 32  | 56  | 44  | 37  | 32  | 43  | 36  | 32  | 42  | 36  | 32  | 41  | 36  | 31  | 30  |  |  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2656 | 2656 | 2656 |
| 5°  | 2669 | 2649 | 2662 |
| 10° | 2666 | 2649 | 2656 |
| 15° | 2661 | 2637 | 2645 |
| 20° | 2642 | 2617 | 2625 |
| 25° | 2607 | 2582 | 2583 |
| 30° | 2543 | 2517 | 2506 |
| 35° | 2439 | 2394 | 2340 |
| 40° | 2283 | 2225 | 2024 |
| 45° | 2062 | 1984 | 1582 |
| 50° | 1828 | 1611 | 1338 |
| 55° | 1596 | 1322 | 1180 |
| 60° | 1384 | 1088 | 1042 |
| 65° | 1214 | 873  | 962  |
| 70° | 1083 | 740  | 969  |
| 75° | 1056 | 780  | 1082 |
| 80° | 1170 | 984  | 1240 |
| 85° | 1220 | 1050 | 1451 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 93.7   | 4.3       |
| 10°-20°   | 268.3  | 12.5      |
| 20°-30°   | 401.3  | 18.6      |
| 30°-40°   | 453.0  | 21.0      |
| 40°-50°   | 384.3  | 17.8      |
| 50°-60°   | 260.0  | 12.1      |
| 60°-70°   | 155.2  | 7.2       |
| 70°-80°   | 97.2   | 4.5       |
| 80°-90°   | 40.9   | 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°    | 763.3  | 35.4      |
| 0°-40°    | 1216.3 | 56.5      |
| 0°-60°    | 1860.7 | 86.4      |
| 0°-90°    | 2154.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2154.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 987 | 987   | 987 | 987   | 987 |      |
| 5°  | 988 | 985   | 981 | 988   | 986 | 94   |
| 15° | 955 | 953   | 946 | 953   | 950 | 269  |
| 25° | 878 | 875   | 870 | 874   | 870 | 404  |
| 35° | 742 | 737   | 729 | 722   | 712 | 463  |
| 45° | 542 | 544   | 521 | 447   | 416 | 417  |
| 55° | 340 | 324   | 282 | 252   | 252 | 306  |
| 65° | 191 | 158   | 137 | 146   | 151 | 191  |
| 75° | 102 | 91    | 75  | 99    | 104 | 109  |
| 85° | 40  | 38    | 34  | 44    | 47  | 43   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 987.1 | 987.1 | 987.1 | 987.1 | 987.1 |
| 2.5°  | 990.6 | 987.6 | 983.1 | 989.1 | 988.6 |
| 5°    | 988.1 | 985.1 | 980.6 | 987.6 | 985.6 |
| 7.5°  | 983.6 | 981.1 | 976.6 | 983.1 | 981.1 |
| 10°   | 975.6 | 973.6 | 969.5 | 975.1 | 972.0 |
| 12.5° | 967.0 | 965.5 | 960.5 | 965.5 | 962.5 |
| 15°   | 955.0 | 953.0 | 946.5 | 953.0 | 949.5 |
| 17.5° | 940.0 | 937.5 | 932.0 | 937.5 | 934.5 |
| 20°   | 922.5 | 919.5 | 914.0 | 919.5 | 916.5 |
| 22.5° | 901.5 | 899.0 | 894.0 | 899.0 | 895.0 |
| 25°   | 878.0 | 875.0 | 869.5 | 873.5 | 870.0 |
| 27.5° | 851.0 | 847.0 | 842.0 | 845.0 | 843.0 |
| 30°   | 818.5 | 813.5 | 810.0 | 810.0 | 806.5 |
| 32.5° | 782.9 | 779.4 | 773.4 | 769.9 | 765.4 |
| 35°   | 742.4 | 737.4 | 728.9 | 722.4 | 712.4 |
| 37.5° | 698.9 | 692.9 | 682.4 | 665.9 | 652.4 |
| 40°   | 649.9 | 642.4 | 633.4 | 600.8 | 576.3 |
| 42.5° | 597.3 | 595.8 | 580.3 | 524.8 | 490.8 |
| 45°   | 541.8 | 543.8 | 521.3 | 446.8 | 415.7 |
| 47.5° | 485.8 | 492.8 | 451.8 | 378.7 | 362.7 |
| 50°   | 436.7 | 439.2 | 384.7 | 328.7 | 319.7 |
| 52.5° | 386.2 | 382.2 | 328.2 | 289.2 | 282.7 |
| 55°   | 340.2 | 324.2 | 281.7 | 252.1 | 251.6 |
| 57.5° | 299.7 | 270.2 | 240.6 | 218.6 | 221.1 |
| 60°   | 257.1 | 224.1 | 202.1 | 190.1 | 193.6 |
| 62.5° | 219.6 | 188.1 | 168.6 | 165.1 | 171.1 |
| 65°   | 190.6 | 158.1 | 137.1 | 146.1 | 151.1 |
| 67.5° | 163.1 | 135.6 | 111.6 | 133.1 | 135.1 |
| 70°   | 137.6 | 117.6 | 94.1  | 122.6 | 123.1 |
| 72.5° | 116.6 | 104.1 | 81.5  | 111.1 | 112.6 |
| 75°   | 101.6 | 90.6  | 75.0  | 99.1  | 104.1 |
| 77.5° | 89.1  | 77.5  | 69.5  | 85.5  | 94.1  |
| 80°   | 75.5  | 62.5  | 63.5  | 71.5  | 80.0  |
| 82.5° | 58.0  | 48.5  | 50.5  | 59.0  | 65.0  |
| 85°   | 39.5  | 37.5  | 34.0  | 44.0  | 47.0  |
| 87.5° | 21.0  | 20.0  | 17.5  | 25.0  | 23.5  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)