

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: P291087

Luminaire Tested: **14GR-LD5-20-A-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291087  
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-LD5-20-A-UNV-L92765-W2A1-U-5000K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1926.0 lumens  
Efficiency: N/A  
Efficacy: 121.1 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

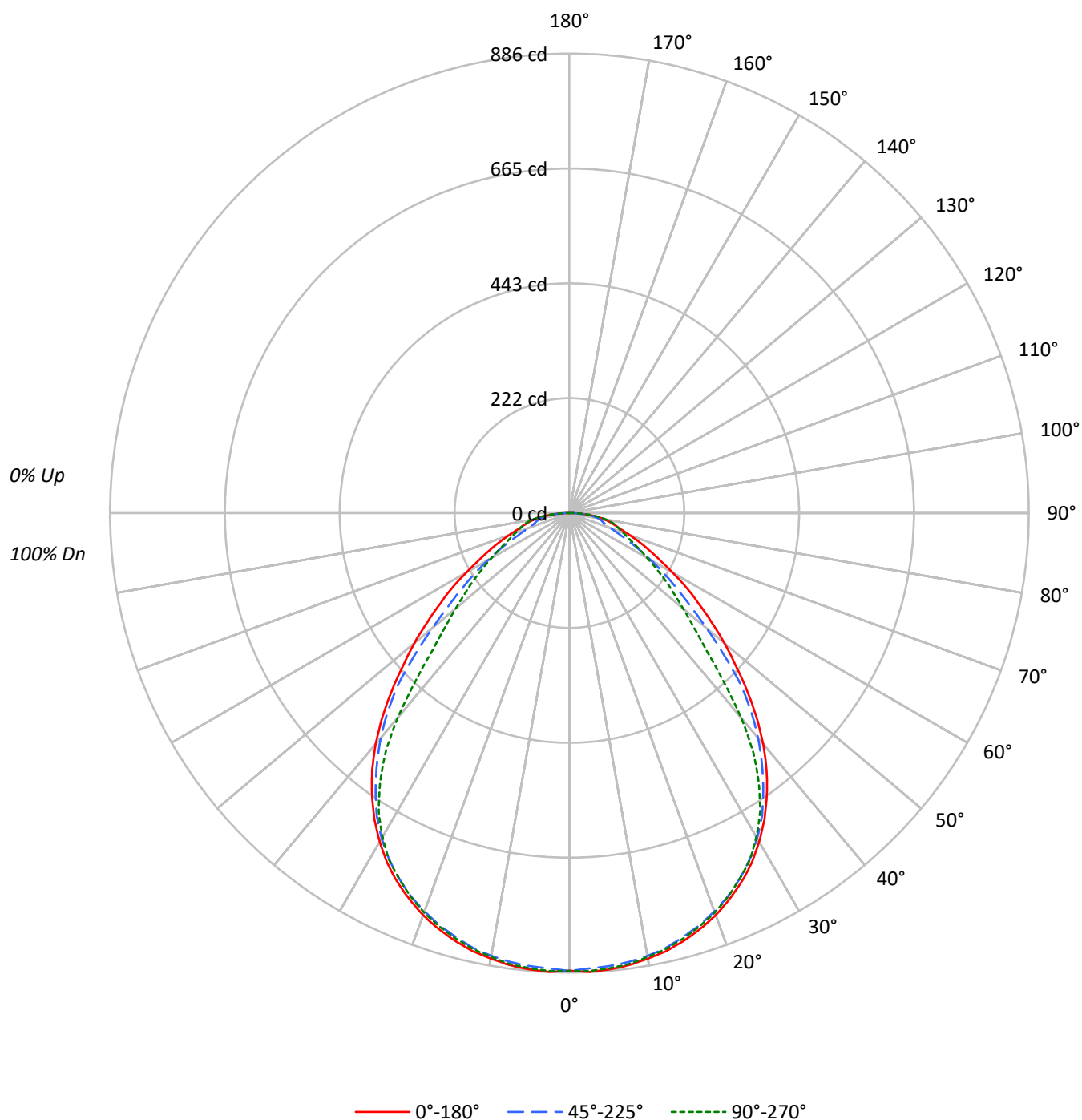
Input Watts (W): 15.903  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 2375 | 2375 | 2375 |
| 5°  | 2387 | 2368 | 2380 |
| 10° | 2384 | 2369 | 2375 |
| 15° | 2379 | 2358 | 2365 |
| 20° | 2362 | 2340 | 2347 |
| 25° | 2331 | 2309 | 2310 |
| 30° | 2274 | 2250 | 2241 |
| 35° | 2181 | 2141 | 2093 |
| 40° | 2041 | 1989 | 1810 |
| 45° | 1844 | 1774 | 1415 |
| 50° | 1635 | 1440 | 1196 |
| 55° | 1427 | 1181 | 1056 |
| 60° | 1237 | 973  | 932  |
| 65° | 1085 | 781  | 860  |
| 70° | 968  | 662  | 865  |
| 75° | 944  | 698  | 967  |
| 80° | 1046 | 880  | 1110 |
| 85° | 1090 | 939  | 1297 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.7   | 4.3       |
| 10°-20°   | 239.9  | 12.5      |
| 20°-30°   | 358.8  | 18.6      |
| 30°-40°   | 405.1  | 21.0      |
| 40°-50°   | 343.6  | 17.8      |
| 50°-60°   | 232.5  | 12.1      |
| 60°-70°   | 138.8  | 7.2       |
| 70°-80°   | 86.9   | 4.5       |
| 80°-90°   | 36.6   | 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°    | 682.5  | 35.4      |
| 0°-40°    | 1087.6 | 56.5      |
| 0°-60°    | 1663.7 | 86.4      |
| 0°-90°    | 1926.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1926.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 883 | 883   | 883 | 883   | 883 |      |
| 5°  | 884 | 881   | 877 | 883   | 881 | 84   |
| 15° | 854 | 852   | 846 | 852   | 849 | 241  |
| 25° | 785 | 782   | 778 | 781   | 778 | 361  |
| 35° | 664 | 659   | 652 | 646   | 637 | 414  |
| 45° | 484 | 486   | 466 | 400   | 372 | 373  |
| 55° | 304 | 290   | 252 | 226   | 225 | 274  |
| 65° | 170 | 141   | 123 | 131   | 135 | 170  |
| 75° | 91  | 81    | 67  | 89    | 93  | 98   |
| 85° | 35  | 34    | 30  | 39    | 42  | 38   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 882.6 | 882.6 | 882.6 | 882.6 | 882.6 |
| 2.5°  | 885.7 | 883.0 | 879.0 | 884.4 | 883.9 |
| 5°    | 883.5 | 880.8 | 876.8 | 883.0 | 881.2 |
| 7.5°  | 879.4 | 877.2 | 873.2 | 879.0 | 877.2 |
| 10°   | 872.3 | 870.5 | 866.9 | 871.8 | 869.2 |
| 12.5° | 864.7 | 863.3 | 858.9 | 863.3 | 860.7 |
| 15°   | 853.9 | 852.2 | 846.3 | 852.2 | 849.0 |
| 17.5° | 840.5 | 838.3 | 833.4 | 838.3 | 835.6 |
| 20°   | 824.9 | 822.2 | 817.3 | 822.2 | 819.5 |
| 22.5° | 806.1 | 803.8 | 799.4 | 803.8 | 800.3 |
| 25°   | 785.1 | 782.4 | 777.5 | 781.0 | 777.9 |
| 27.5° | 760.9 | 757.3 | 752.9 | 755.5 | 753.7 |
| 30°   | 731.8 | 727.4 | 724.2 | 724.2 | 721.1 |
| 32.5° | 700.1 | 696.9 | 691.6 | 688.4 | 684.4 |
| 35°   | 663.8 | 659.4 | 651.8 | 645.9 | 637.0 |
| 37.5° | 624.9 | 619.5 | 610.2 | 595.4 | 583.3 |
| 40°   | 581.1 | 574.4 | 566.3 | 537.2 | 515.3 |
| 42.5° | 534.1 | 532.8 | 518.9 | 469.2 | 438.8 |
| 45°   | 484.5 | 486.2 | 466.1 | 399.5 | 371.7 |
| 47.5° | 434.4 | 440.6 | 403.9 | 338.6 | 324.3 |
| 50°   | 390.5 | 392.8 | 344.0 | 293.9 | 285.8 |
| 52.5° | 345.3 | 341.8 | 293.4 | 258.6 | 252.7 |
| 55°   | 304.2 | 289.9 | 251.8 | 225.5 | 225.0 |
| 57.5° | 267.9 | 241.6 | 215.2 | 195.5 | 197.7 |
| 60°   | 229.9 | 200.4 | 180.7 | 170.0 | 173.1 |
| 62.5° | 196.4 | 168.2 | 150.7 | 147.6 | 153.0 |
| 65°   | 170.4 | 141.4 | 122.6 | 130.6 | 135.1 |
| 67.5° | 145.8 | 121.2 | 99.8  | 119.0 | 120.8 |
| 70°   | 123.0 | 105.1 | 84.1  | 109.6 | 110.0 |
| 72.5° | 104.2 | 93.0  | 72.9  | 99.3  | 100.6 |
| 75°   | 90.8  | 81.0  | 67.1  | 88.6  | 93.0  |
| 77.5° | 79.6  | 69.3  | 62.2  | 76.5  | 84.1  |
| 80°   | 67.5  | 55.9  | 56.8  | 64.0  | 71.6  |
| 82.5° | 51.9  | 43.4  | 45.2  | 52.8  | 58.2  |
| 85°   | 35.3  | 33.5  | 30.4  | 39.4  | 42.0  |
| 87.5° | 18.8  | 17.9  | 15.7  | 22.4  | 21.0  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)