

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: P291480

Luminaire Tested: **14GR-LD5-20-A19/156-UNV-L92765-W2A1-U-5500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P291480  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-20-A19/156-UNV-L92765-W2A1-U-5500K  
Description: GRLED 1x4 TUNABLE WHITE TROFFER  
WITH A19/156 LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 5500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1881.0 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

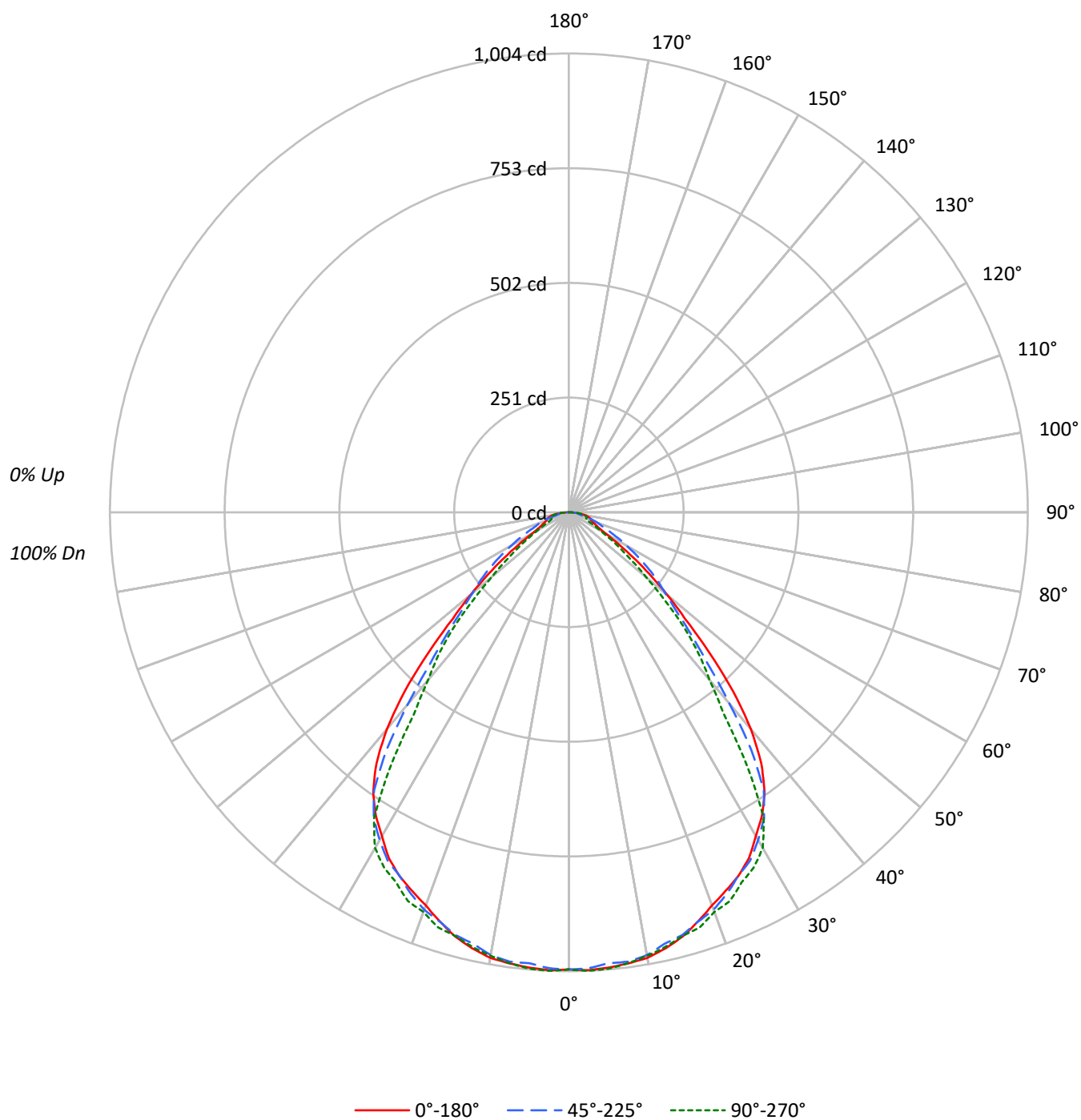
Input Watts (W): 15.996  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 111 | 107 | 104 | 100 | 108 | 105 | 102 | 99  | 101 | 98  | 96  |  | 97  | 95  | 93  |  | 93  |
| 2   | 103 | 96  | 90  | 86  | 100 | 94  | 89  | 85  | 91  | 87  | 83  |  | 88  | 84  | 81  |  | 85  |
| 3   | 95  | 87  | 80  | 74  | 93  | 85  | 79  | 74  | 82  | 77  | 73  |  | 80  | 75  | 71  |  | 77  |
| 4   | 89  | 79  | 71  | 65  | 87  | 77  | 70  | 65  | 75  | 69  | 64  |  | 73  | 68  | 63  |  | 71  |
| 5   | 83  | 71  | 64  | 58  | 81  | 70  | 63  | 58  | 68  | 62  | 57  |  | 67  | 61  | 57  |  | 65  |
| 6   | 77  | 65  | 58  | 52  | 75  | 64  | 57  | 52  | 63  | 56  | 51  |  | 61  | 55  | 51  |  | 60  |
| 7   | 72  | 60  | 52  | 47  | 70  | 59  | 52  | 47  | 58  | 51  | 46  |  | 56  | 51  | 46  |  | 55  |
| 8   | 67  | 55  | 48  | 43  | 66  | 55  | 47  | 42  | 53  | 47  | 42  |  | 52  | 46  | 42  |  | 51  |
| 9   | 63  | 51  | 44  | 39  | 62  | 51  | 44  | 39  | 50  | 43  | 39  |  | 49  | 43  | 38  |  | 48  |
| 10  | 60  | 48  | 40  | 36  | 58  | 47  | 40  | 36  | 46  | 40  | 35  |  | 45  | 39  | 35  |  | 44  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 2692 | 2692 | 2692 |
| 5°  | 2701 | 2675 | 2707 |
| 10° | 2705 | 2688 | 2693 |
| 15° | 2678 | 2668 | 2674 |
| 20° | 2621 | 2650 | 2665 |
| 25° | 2605 | 2604 | 2654 |
| 30° | 2542 | 2573 | 2636 |
| 35° | 2451 | 2441 | 2243 |
| 40° | 2177 | 1921 | 1682 |
| 45° | 1652 | 1437 | 1360 |
| 50° | 1172 | 1150 | 923  |
| 55° | 802  | 982  | 634  |
| 60° | 496  | 783  | 424  |
| 65° | 409  | 603  | 307  |
| 70° | 407  | 525  | 315  |
| 75° | 488  | 376  | 421  |
| 80° | 561  | 347  | 527  |
| 85° | 531  | 611  | 599  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 94.9   | 5.0       |
| 10°-20°   | 270.9  | 14.4      |
| 20°-30°   | 407.4  | 21.7      |
| 30°-40°   | 444.1  | 23.6      |
| 40°-50°   | 310.9  | 16.5      |
| 50°-60°   | 176.0  | 9.4       |
| 60°-70°   | 96.3   | 5.1       |
| 70°-80°   | 58.4   | 3.1       |
| 80°-90°   | 22.1   | 1.2       |
| 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°    | 773.1  | 41.1      |
| 0°-40°    | 1217.2 | 64.7      |
| 0°-60°    | 1704.2 | 90.6      |
| 0°-90°    | 1881.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1881.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1000 | 1000  | 1000 | 1000  | 1000 |      |
| 5°  | 1000 | 998   | 990  | 1002  | 1002 | 95   |
| 15° | 961  | 958   | 958  | 971   | 960  | 270  |
| 25° | 878  | 879   | 877  | 897   | 894  | 403  |
| 35° | 746  | 743   | 743  | 705   | 683  | 460  |
| 45° | 434  | 453   | 378  | 373   | 357  | 337  |
| 55° | 171  | 204   | 209  | 208   | 135  | 156  |
| 65° | 64   | 106   | 95   | 120   | 48   | 66   |
| 75° | 47   | 68    | 36   | 71    | 40   | 49   |
| 85° | 17   | 28    | 20   | 24    | 19   | 19   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1000.2 | 1000.2 | 1000.2 | 1000.2 | 1000.2 |
| 2.5°  | 1002.8 | 1001.5 | 998.5  | 1004.5 | 1004.1 |
| 5°    | 999.8  | 998.1  | 990.3  | 1002.0 | 1002.0 |
| 7.5°  | 995.5  | 991.2  | 991.6  | 998.1  | 995.1  |
| 10°   | 989.9  | 982.6  | 983.9  | 985.6  | 985.6  |
| 12.5° | 977.0  | 970.1  | 966.7  | 972.3  | 974.0  |
| 15°   | 961.1  | 958.5  | 957.6  | 971.4  | 959.8  |
| 17.5° | 938.7  | 944.3  | 939.1  | 950.3  | 952.0  |
| 20°   | 915.4  | 926.2  | 925.3  | 933.1  | 930.5  |
| 22.5° | 896.5  | 903.4  | 903.4  | 912.8  | 920.6  |
| 25°   | 877.5  | 879.2  | 877.1  | 897.3  | 893.9  |
| 27.5° | 853.0  | 851.7  | 858.6  | 868.9  | 875.8  |
| 30°   | 818.1  | 818.5  | 828.0  | 841.8  | 848.2  |
| 32.5° | 786.2  | 782.4  | 794.0  | 800.0  | 793.1  |
| 35°   | 746.2  | 742.8  | 743.2  | 705.3  | 682.9  |
| 37.5° | 691.5  | 694.5  | 654.9  | 585.6  | 556.3  |
| 40°   | 619.6  | 625.6  | 546.8  | 495.2  | 478.8  |
| 42.5° | 532.6  | 534.4  | 448.2  | 431.4  | 420.7  |
| 45°   | 434.0  | 453.0  | 377.6  | 372.9  | 357.4  |
| 47.5° | 344.0  | 379.3  | 316.5  | 319.5  | 282.5  |
| 50°   | 279.9  | 315.2  | 274.7  | 276.0  | 220.5  |
| 52.5° | 221.3  | 255.8  | 242.4  | 238.5  | 173.1  |
| 55°   | 170.9  | 204.5  | 209.3  | 207.5  | 135.2  |
| 57.5° | 125.7  | 161.9  | 175.7  | 182.1  | 104.2  |
| 60°   | 92.1   | 132.2  | 145.5  | 158.5  | 78.8   |
| 62.5° | 73.2   | 114.5  | 119.3  | 138.2  | 61.1   |
| 65°   | 64.2   | 105.5  | 94.7   | 119.7  | 48.2   |
| 67.5° | 57.3   | 100.3  | 77.1   | 105.9  | 42.2   |
| 70°   | 51.7   | 90.4   | 66.7   | 94.7   | 40.0   |
| 72.5° | 51.7   | 79.2   | 52.5   | 84.0   | 40.5   |
| 75°   | 46.9   | 67.6   | 36.2   | 71.0   | 40.5   |
| 77.5° | 41.8   | 57.7   | 27.1   | 57.7   | 37.9   |
| 80°   | 36.2   | 45.2   | 22.4   | 44.3   | 34.0   |
| 82.5° | 26.7   | 34.0   | 19.4   | 33.2   | 27.6   |
| 85°   | 17.2   | 28.0   | 19.8   | 24.1   | 19.4   |
| 87.5° | 8.2    | 14.2   | 12.5   | 12.1   | 9.9    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)