

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: P234117

Luminaire Tested: **22GR-LD5-90-A-UNV-L930-CD1-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234117  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33296)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-90-A-UNV-L930-CD1-U  
Description: METALUX 2X2 GRLED TROFFER  
WITH A LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7070.1 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.22 / 1.25  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

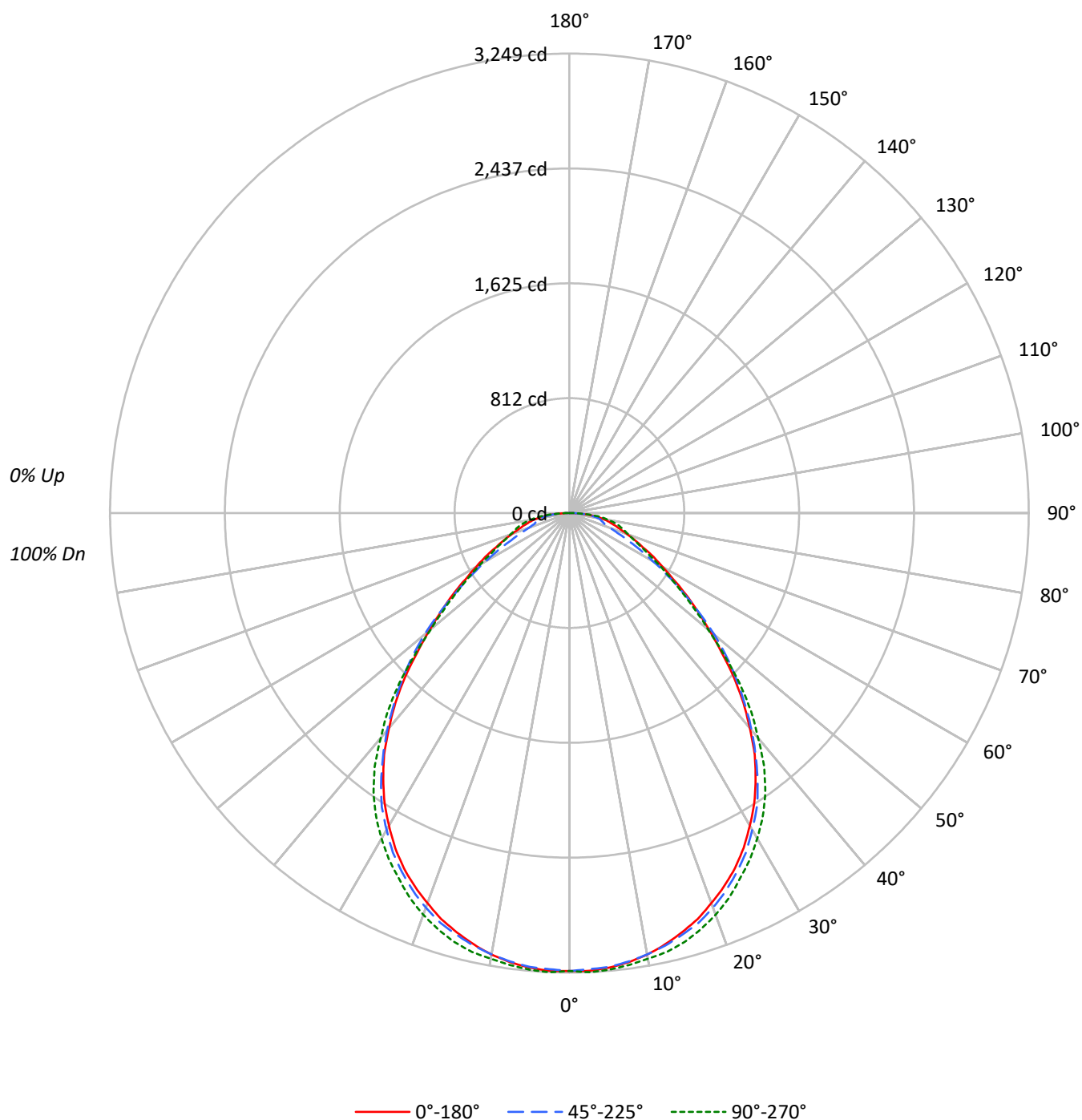
Input Watts (W): 85.94  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 50  | 30 | 10 |
| 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  | 87  | 82  | 99  | 92  | 86  | 81  | 88  | 84  | 79  | 85  | 81  | 78  | 82  | 79  | 76  | 74  |    |    |
| 3   | 93  | 84  | 76  | 70  | 91  | 82  | 75  | 70  | 79  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 66  | 64  |    |    |
| 4   | 86  | 75  | 67  | 61  | 84  | 74  | 66  | 60  | 71  | 65  | 60  | 69  | 63  | 59  | 67  | 62  | 58  | 56  |    |    |
| 5   | 80  | 68  | 59  | 53  | 78  | 67  | 59  | 53  | 65  | 58  | 53  | 63  | 57  | 52  | 61  | 56  | 51  | 49  |    |    |
| 6   | 74  | 62  | 53  | 47  | 72  | 61  | 53  | 47  | 59  | 52  | 47  | 57  | 51  | 46  | 56  | 50  | 46  | 44  |    |    |
| 7   | 69  | 56  | 48  | 42  | 67  | 55  | 48  | 42  | 54  | 47  | 42  | 53  | 46  | 42  | 51  | 46  | 41  | 39  |    |    |
| 8   | 64  | 52  | 44  | 38  | 63  | 51  | 43  | 38  | 50  | 43  | 38  | 48  | 42  | 38  | 47  | 42  | 37  | 36  |    |    |
| 9   | 60  | 48  | 40  | 35  | 59  | 47  | 40  | 35  | 46  | 39  | 34  | 45  | 39  | 34  | 44  | 38  | 34  | 32  |    |    |
| 10  | 57  | 44  | 37  | 32  | 55  | 44  | 36  | 32  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 30  |    |    |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10369 | 10369 | 10369 |
| 5°  | 10372 | 10356 | 10419 |
| 10° | 10310 | 10304 | 10406 |
| 15° | 10179 | 10233 | 10413 |
| 20° | 10003 | 10121 | 10300 |
| 25° | 9790  | 9901  | 10081 |
| 30° | 9436  | 9564  | 9825  |
| 35° | 8973  | 9076  | 9442  |
| 40° | 8295  | 8385  | 8680  |
| 45° | 7451  | 7585  | 7705  |
| 50° | 6442  | 6672  | 6377  |
| 55° | 5622  | 5475  | 5401  |
| 60° | 4868  | 4384  | 4679  |
| 65° | 4351  | 3441  | 4202  |
| 70° | 4037  | 2850  | 4144  |
| 75° | 4031  | 3013  | 4600  |
| 80° | 4459  | 3794  | 5188  |
| 85° | 4656  | 4108  | 5864  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 306.4  | 4.3       |
| 10°-20°   | 872.7  | 12.3      |
| 20°-30°   | 1290.7 | 18.3      |
| 30°-40°   | 1456.4 | 20.6      |
| 40°-50°   | 1283.9 | 18.2      |
| 50°-60°   | 880.8  | 12.5      |
| 60°-70°   | 519.7  | 7.4       |
| 70°-80°   | 324.3  | 4.6       |
| 80°-90°   | 135.2  | 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°    | 2469.7 | 34.9      |
| 0°-40°    | 3926.2 | 55.5      |
| 0°-60°    | 6090.9 | 86.1      |
| 0°-90°    | 7070.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7070.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3238 | 3238  | 3238 | 3238  | 3238 |      |
| 5°  | 3226 | 3220  | 3221 | 3233  | 3241 | 306  |
| 15° | 3070 | 3073  | 3086 | 3124  | 3141 | 865  |
| 25° | 2771 | 2780  | 2802 | 2838  | 2853 | 1272 |
| 35° | 2295 | 2315  | 2321 | 2377  | 2415 | 1430 |
| 45° | 1645 | 1653  | 1675 | 1685  | 1701 | 1264 |
| 55° | 1007 | 982   | 981  | 948   | 967  | 903  |
| 65° | 574  | 505   | 454  | 525   | 554  | 578  |
| 75° | 326  | 293   | 244  | 340   | 372  | 349  |
| 85° | 127  | 118   | 112  | 146   | 160  | 137  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3237.9 | 3237.9 | 3237.9 | 3237.9 | 3237.9 |
| 2.5°  | 3239.5 | 3231.3 | 3228.0 | 3241.1 | 3249.4 |
| 5°    | 3226.4 | 3219.7 | 3221.4 | 3232.9 | 3241.1 |
| 7.5°  | 3203.3 | 3198.4 | 3198.4 | 3214.8 | 3223.1 |
| 10°   | 3170.4 | 3168.7 | 3168.7 | 3188.5 | 3200.0 |
| 12.5° | 3124.4 | 3126.0 | 3132.6 | 3158.9 | 3178.6 |
| 15°   | 3070.1 | 3073.4 | 3086.5 | 3124.4 | 3140.8 |
| 17.5° | 3010.8 | 3010.8 | 3037.1 | 3066.7 | 3086.5 |
| 20°   | 2935.1 | 2940.1 | 2969.7 | 3002.6 | 3022.4 |
| 22.5° | 2857.8 | 2866.1 | 2890.7 | 2928.5 | 2946.7 |
| 25°   | 2770.6 | 2780.5 | 2801.9 | 2838.1 | 2852.9 |
| 27.5° | 2668.6 | 2681.7 | 2704.8 | 2731.1 | 2762.4 |
| 30°   | 2551.8 | 2571.5 | 2586.4 | 2622.5 | 2657.0 |
| 32.5° | 2433.4 | 2451.4 | 2467.9 | 2505.8 | 2545.2 |
| 35°   | 2295.1 | 2314.9 | 2321.4 | 2377.4 | 2415.2 |
| 37.5° | 2153.6 | 2161.8 | 2165.1 | 2221.1 | 2262.2 |
| 40°   | 1984.2 | 2000.6 | 2005.6 | 2050.0 | 2076.3 |
| 42.5° | 1821.3 | 1827.9 | 1837.8 | 1870.7 | 1901.9 |
| 45°   | 1645.2 | 1653.4 | 1674.8 | 1684.8 | 1701.2 |
| 47.5° | 1461.0 | 1485.7 | 1510.4 | 1479.1 | 1480.8 |
| 50°   | 1293.1 | 1312.9 | 1339.2 | 1280.0 | 1280.0 |
| 52.5° | 1143.5 | 1153.3 | 1155.0 | 1105.6 | 1115.4 |
| 55°   | 1006.9 | 982.2  | 980.6  | 947.7  | 967.4  |
| 57.5° | 870.3  | 837.5  | 825.9  | 816.1  | 839.1  |
| 60°   | 760.1  | 700.9  | 684.5  | 699.2  | 730.5  |
| 62.5° | 669.6  | 593.9  | 562.7  | 600.5  | 628.4  |
| 65°   | 574.2  | 505.1  | 454.1  | 524.8  | 554.5  |
| 67.5° | 500.1  | 434.4  | 368.5  | 468.9  | 490.3  |
| 70°   | 431.1  | 380.1  | 304.4  | 426.2  | 442.6  |
| 72.5° | 375.2  | 335.6  | 263.2  | 385.0  | 404.8  |
| 75°   | 325.8  | 292.8  | 243.5  | 340.5  | 371.8  |
| 77.5° | 286.3  | 250.1  | 227.1  | 294.5  | 332.3  |
| 80°   | 241.8  | 205.7  | 205.7  | 246.8  | 281.3  |
| 82.5° | 190.8  | 161.2  | 166.1  | 200.7  | 225.4  |
| 85°   | 126.7  | 118.5  | 111.8  | 146.5  | 159.6  |
| 87.5° | 64.1   | 65.8   | 59.2   | 75.7   | 77.3   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)