

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: P219093

Luminaire Tested: **24GR-LD5-90-A-UNV-L930-CD1-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P219093  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33306)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-90-A-UNV-L930-CD1-U  
Description: METALUX GR 2X4 LED TROFFER WITH A LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7415.0 lumens  
Efficiency: N/A  
Efficacy: 107.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.26  
Luminous Opening: Rectangular (W 1.83' x L: 3.83' x H: 0')  
CIE Type: Direct

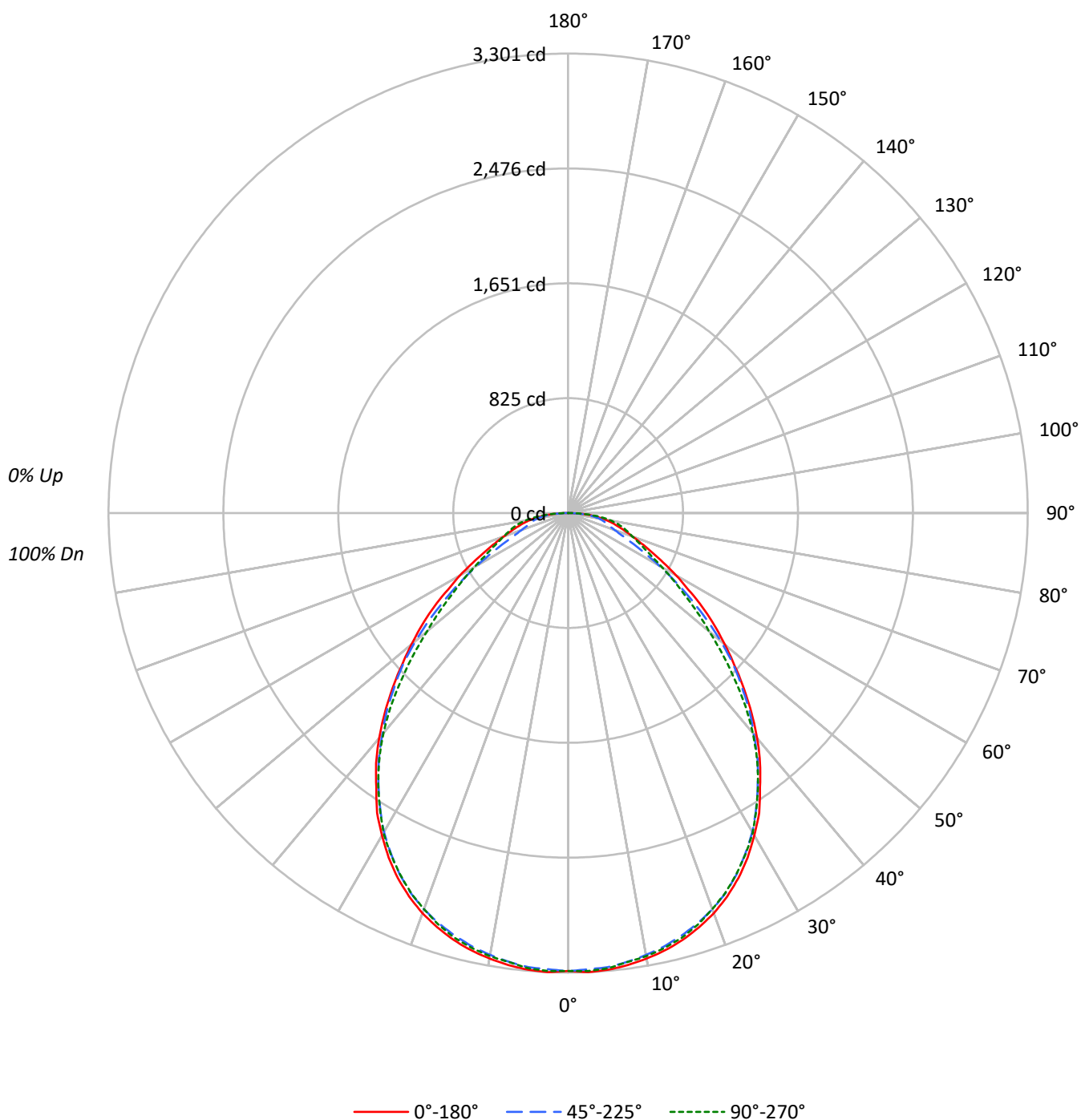
Input Watts (W): 69.117  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 110 | 105 | 101 | 98  | 107 | 103 | 99  | 96  |  | 99  | 96  | 93  |  |  | 95  | 93  | 90  |  |  | 91  |
| 2   | 101 | 93  | 87  | 82  | 98  | 91  | 86  | 81  |  | 88  | 83  | 79  |  |  | 85  | 81  | 77  |  |  | 82  |
| 3   | 93  | 83  | 75  | 69  | 90  | 81  | 74  | 69  |  | 79  | 73  | 68  |  |  | 76  | 71  | 67  |  |  | 73  |
| 4   | 86  | 74  | 66  | 60  | 83  | 73  | 65  | 60  |  | 71  | 64  | 59  |  |  | 68  | 63  | 58  |  |  | 66  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  |  | 64  | 57  | 52  |  |  | 62  | 56  | 51  |  |  | 60  |
| 6   | 73  | 61  | 53  | 46  | 72  | 60  | 52  | 46  |  | 58  | 51  | 46  |  |  | 57  | 50  | 45  |  |  | 55  |
| 7   | 68  | 56  | 47  | 42  | 67  | 55  | 47  | 41  |  | 53  | 46  | 41  |  |  | 52  | 46  | 41  |  |  | 51  |
| 8   | 64  | 51  | 43  | 37  | 62  | 50  | 43  | 37  |  | 49  | 42  | 37  |  |  | 48  | 41  | 37  |  |  | 47  |
| 9   | 60  | 47  | 39  | 34  | 58  | 46  | 39  | 34  |  | 45  | 38  | 34  |  |  | 44  | 38  | 33  |  |  | 43  |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  |  | 42  | 35  | 31  |  |  | 41  | 35  | 31  |  |  | 40  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5039 | 5039 | 5039 |
| 5°  | 5064 | 5035 | 5048 |
| 10° | 5054 | 5013 | 5028 |
| 15° | 5035 | 4984 | 5006 |
| 20° | 4987 | 4937 | 4935 |
| 25° | 4890 | 4838 | 4834 |
| 30° | 4729 | 4680 | 4690 |
| 35° | 4492 | 4440 | 4446 |
| 40° | 4223 | 4150 | 4125 |
| 45° | 3871 | 3819 | 3667 |
| 50° | 3499 | 3404 | 3147 |
| 55° | 3142 | 2860 | 2713 |
| 60° | 2751 | 2302 | 2386 |
| 65° | 2400 | 1810 | 2196 |
| 70° | 2196 | 1580 | 2196 |
| 75° | 2196 | 1681 | 2420 |
| 80° | 2385 | 1980 | 2758 |
| 85° | 2617 | 2235 | 2959 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 311.5  | 4.2       |
| 10°-20°   | 889.1  | 12.0      |
| 20°-30°   | 1318.3 | 17.8      |
| 30°-40°   | 1487.2 | 20.1      |
| 40°-50°   | 1347.0 | 18.2      |
| 50°-60°   | 971.8  | 13.1      |
| 60°-70°   | 580.3  | 7.8       |
| 70°-80°   | 358.6  | 4.8       |
| 80°-90°   | 151.1  | 2.0       |
| 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°    | 2519.0 | 34.0      |
| 0°-40°    | 4006.2 | 54.0      |
| 0°-60°    | 6325.0 | 85.3      |
| 0°-90°    | 7415.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 7415.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 3290 | 3290  | 3290 | 3290  | 3290 |      |
| 5°  | 3293 | 3289  | 3275 | 3272  | 3283 | 313  |
| 15° | 3175 | 3156  | 3143 | 3144  | 3157 | 895  |
| 25° | 2894 | 2878  | 2863 | 2852  | 2860 | 1329 |
| 35° | 2402 | 2399  | 2375 | 2376  | 2378 | 1503 |
| 45° | 1787 | 1776  | 1763 | 1720  | 1693 | 1377 |
| 55° | 1176 | 1140  | 1071 | 1018  | 1016 | 1050 |
| 65° | 662  | 583   | 500  | 567   | 606  | 666  |
| 75° | 371  | 322   | 284  | 354   | 409  | 396  |
| 85° | 149  | 131   | 127  | 166   | 168  | 156  |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 3289.9 | 3289.9 | 3289.9 | 3289.9 | 3289.9 |
| 2.5°  | 3301.4 | 3292.2 | 3280.8 | 3287.6 | 3293.4 |
| 5°    | 3293.4 | 3288.8 | 3275.1 | 3271.6 | 3283.0 |
| 7.5°  | 3276.2 | 3264.7 | 3252.1 | 3257.9 | 3253.3 |
| 10°   | 3249.8 | 3239.6 | 3223.5 | 3224.6 | 3232.7 |
| 12.5° | 3217.8 | 3205.2 | 3188.0 | 3192.6 | 3199.5 |
| 15°   | 3175.4 | 3155.9 | 3143.3 | 3144.5 | 3157.1 |
| 17.5° | 3121.6 | 3106.7 | 3090.7 | 3094.0 | 3099.8 |
| 20°   | 3059.7 | 3051.7 | 3028.8 | 3021.9 | 3027.6 |
| 22.5° | 2981.8 | 2966.9 | 2954.3 | 2950.9 | 2952.0 |
| 25°   | 2893.6 | 2877.5 | 2862.7 | 2852.4 | 2860.4 |
| 27.5° | 2790.5 | 2776.8 | 2757.2 | 2753.8 | 2760.7 |
| 30°   | 2673.7 | 2663.4 | 2646.1 | 2641.5 | 2651.9 |
| 32.5° | 2554.5 | 2537.3 | 2513.3 | 2513.3 | 2515.6 |
| 35°   | 2402.2 | 2398.7 | 2374.6 | 2375.8 | 2378.1 |
| 37.5° | 2264.7 | 2248.7 | 2234.9 | 2221.1 | 2228.0 |
| 40°   | 2112.3 | 2094.0 | 2075.7 | 2066.6 | 2063.1 |
| 42.5° | 1948.6 | 1934.8 | 1926.8 | 1893.5 | 1885.5 |
| 45°   | 1787.0 | 1775.5 | 1763.0 | 1719.5 | 1693.1 |
| 47.5° | 1622.0 | 1619.7 | 1609.5 | 1532.7 | 1506.3 |
| 50°   | 1468.5 | 1465.1 | 1428.4 | 1347.1 | 1320.8 |
| 52.5° | 1323.1 | 1300.2 | 1252.1 | 1171.9 | 1167.3 |
| 55°   | 1176.5 | 1139.8 | 1071.1 | 1018.4 | 1016.1 |
| 57.5° | 1021.8 | 978.3  | 908.4  | 879.8  | 894.6  |
| 60°   | 898.1  | 831.6  | 751.4  | 754.9  | 778.9  |
| 62.5° | 769.8  | 695.4  | 616.3  | 650.7  | 679.3  |
| 65°   | 662.2  | 583.1  | 499.5  | 567.0  | 606.0  |
| 67.5° | 568.2  | 494.9  | 414.7  | 505.2  | 543.0  |
| 70°   | 490.3  | 430.7  | 352.8  | 447.9  | 490.3  |
| 72.5° | 428.4  | 373.4  | 312.7  | 402.0  | 451.3  |
| 75°   | 371.1  | 321.9  | 284.1  | 354.0  | 408.9  |
| 77.5° | 321.9  | 273.8  | 256.6  | 312.7  | 366.5  |
| 80°   | 270.4  | 226.8  | 224.5  | 272.6  | 312.7  |
| 82.5° | 210.7  | 181.0  | 181.0  | 228.0  | 252.0  |
| 85°   | 148.9  | 130.6  | 127.2  | 166.1  | 168.4  |
| 87.5° | 76.8   | 73.3   | 66.4   | 87.1   | 87.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)