

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: P475731

Luminaire Tested: **24GR-LD5-30-A-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475731  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-30-A-UNV-L840-CD1-U  
Description: GR 2'X4' LED TROFFER w/ A LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3033.5 lumens  
Efficiency: N/A  
Efficacy: 142.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.28  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

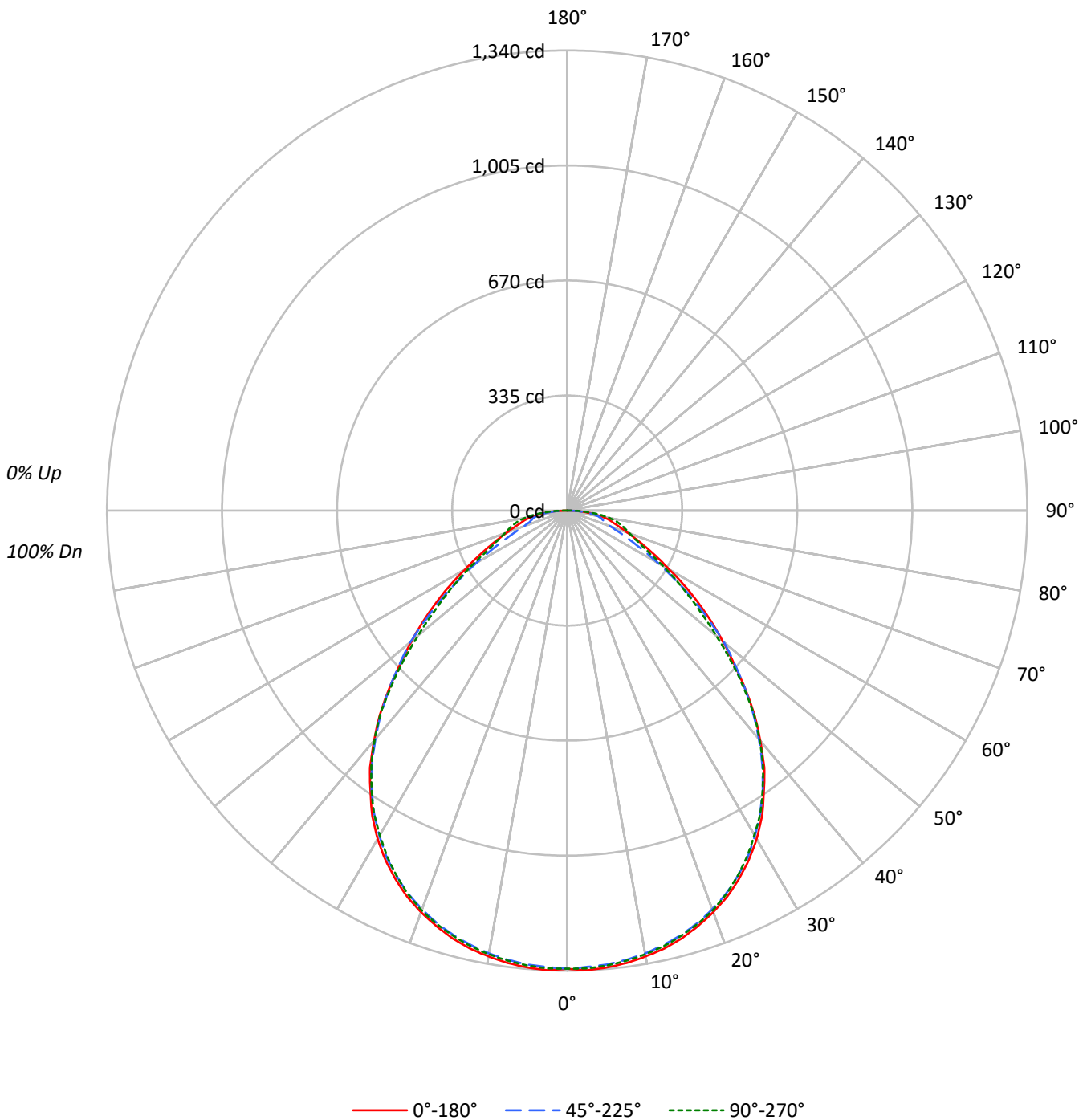
Input Watts (W): 21.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 0   |     |     |
| 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 | 105 | 102 | 98  | 107 | 103 | 100 | 96  | 99  | 96  | 93  |  | 95  | 93  | 91  |  | 92  | 90  | 88  | 86  |
| 2   | 101 | 93  | 87  | 82  | 98  | 92  | 86  | 81  | 88  | 83  | 79  |  | 85  | 81  | 77  |  | 82  | 79  | 76  | 74  |
| 3   | 93  | 83  | 76  | 70  | 90  | 82  | 75  | 69  | 79  | 73  | 68  |  | 76  | 71  | 67  |  | 74  | 69  | 66  | 64  |
| 4   | 86  | 75  | 66  | 60  | 83  | 73  | 66  | 60  | 71  | 64  | 59  |  | 69  | 63  | 58  |  | 66  | 62  | 58  | 56  |
| 5   | 79  | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  |  | 62  | 56  | 51  |  | 60  | 55  | 51  | 49  |
| 6   | 74  | 61  | 53  | 47  | 72  | 60  | 52  | 46  | 58  | 51  | 46  |  | 57  | 50  | 46  |  | 55  | 50  | 45  | 43  |
| 7   | 68  | 56  | 47  | 42  | 67  | 55  | 47  | 42  | 53  | 46  | 41  |  | 52  | 46  | 41  |  | 51  | 45  | 41  | 39  |
| 8   | 64  | 51  | 43  | 38  | 62  | 50  | 43  | 37  | 49  | 42  | 37  |  | 48  | 42  | 37  |  | 47  | 41  | 37  | 35  |
| 9   | 60  | 47  | 39  | 34  | 59  | 47  | 39  | 34  | 45  | 39  | 34  |  | 44  | 38  | 34  |  | 43  | 38  | 33  | 32  |
| 10  | 56  | 44  | 36  | 31  | 55  | 43  | 36  | 31  | 42  | 35  | 31  |  | 41  | 35  | 31  |  | 40  | 35  | 31  | 29  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1795 | 1795 | 1795 |
| 5°  | 1804 | 1792 | 1796 |
| 10° | 1801 | 1789 | 1793 |
| 15° | 1796 | 1782 | 1786 |
| 20° | 1782 | 1769 | 1774 |
| 25° | 1757 | 1744 | 1743 |
| 30° | 1715 | 1699 | 1695 |
| 35° | 1641 | 1631 | 1631 |
| 40° | 1536 | 1527 | 1533 |
| 45° | 1394 | 1392 | 1380 |
| 50° | 1237 | 1246 | 1185 |
| 55° | 1087 | 1039 | 1015 |
| 60° | 925  | 821  | 863  |
| 65° | 808  | 638  | 762  |
| 70° | 731  | 525  | 760  |
| 75° | 731  | 560  | 849  |
| 80° | 805  | 690  | 972  |
| 85° | 831  | 775  | 1061 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 126.3  | 4.2       |
| 10°-20°   | 361.7  | 11.9      |
| 20°-30°   | 541.1  | 17.8      |
| 30°-40°   | 619.2  | 20.4      |
| 40°-50°   | 561.0  | 18.5      |
| 50°-60°   | 397.2  | 13.1      |
| 60°-70°   | 229.4  | 7.6       |
| 70°-80°   | 139.1  | 4.6       |
| 80°-90°   | 58.5   | 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°    | 1029.1 | 33.9      |
| 0°-40°    | 1648.3 | 54.3      |
| 0°-60°    | 2606.5 | 85.9      |
| 0°-90°    | 3033.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3033.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1334 | 1334  | 1334 | 1334  | 1334 |      |
| 5°  | 1336 | 1331  | 1327 | 1326  | 1330 | 127  |
| 15° | 1289 | 1284  | 1279 | 1279  | 1282 | 364  |
| 25° | 1184 | 1179  | 1175 | 1174  | 1174 | 544  |
| 35° | 999  | 995   | 993  | 991   | 993  | 623  |
| 45° | 733  | 731   | 732  | 726   | 726  | 564  |
| 55° | 463  | 448   | 443  | 430   | 432  | 415  |
| 65° | 254  | 228   | 200  | 229   | 239  | 255  |
| 75° | 141  | 126   | 108  | 139   | 163  | 151  |
| 85° | 54   | 48    | 50   | 64    | 69   | 58   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1334.2 | 1334.2 | 1334.2 | 1334.2 | 1334.2 |
| 2.5°  | 1339.9 | 1334.8 | 1330.4 | 1331.0 | 1334.2 |
| 5°    | 1335.7 | 1331.0 | 1326.8 | 1326.5 | 1329.8 |
| 7.5°  | 1328.6 | 1324.4 | 1319.6 | 1319.6 | 1322.3 |
| 10°   | 1318.4 | 1314.2 | 1309.5 | 1309.2 | 1312.1 |
| 12.5° | 1306.5 | 1301.1 | 1296.0 | 1296.0 | 1299.3 |
| 15°   | 1289.4 | 1284.4 | 1279.3 | 1279.3 | 1282.3 |
| 17.5° | 1268.5 | 1264.1 | 1259.9 | 1260.2 | 1262.6 |
| 20°   | 1244.6 | 1240.2 | 1235.7 | 1236.3 | 1239.0 |
| 22.5° | 1217.2 | 1211.8 | 1208.2 | 1207.9 | 1209.7 |
| 25°   | 1183.7 | 1178.9 | 1175.0 | 1174.1 | 1174.1 |
| 27.5° | 1146.4 | 1141.3 | 1138.6 | 1134.4 | 1135.6 |
| 30°   | 1103.7 | 1098.3 | 1093.5 | 1091.1 | 1090.8 |
| 32.5° | 1055.6 | 1050.2 | 1046.0 | 1045.7 | 1046.9 |
| 35°   | 999.1  | 994.6  | 992.8  | 991.4  | 992.8  |
| 37.5° | 943.3  | 934.9  | 933.4  | 933.1  | 937.0  |
| 40°   | 874.3  | 871.3  | 869.2  | 867.7  | 872.8  |
| 42.5° | 808.0  | 802.0  | 802.6  | 796.9  | 805.9  |
| 45°   | 732.7  | 731.2  | 731.5  | 726.1  | 725.5  |
| 47.5° | 658.0  | 657.7  | 662.2  | 647.3  | 646.4  |
| 50°   | 590.8  | 587.8  | 595.3  | 572.3  | 566.0  |
| 52.5° | 526.6  | 518.2  | 515.8  | 494.9  | 494.9  |
| 55°   | 463.3  | 447.7  | 443.0  | 429.8  | 432.5  |
| 57.5° | 403.2  | 381.1  | 371.3  | 371.0  | 375.5  |
| 60°   | 343.8  | 318.7  | 305.0  | 315.7  | 320.8  |
| 62.5° | 296.6  | 269.1  | 248.2  | 268.5  | 273.3  |
| 65°   | 253.9  | 227.6  | 200.4  | 229.4  | 239.3  |
| 67.5° | 217.1  | 195.3  | 161.3  | 199.2  | 212.4  |
| 70°   | 185.8  | 166.4  | 133.5  | 175.6  | 193.3  |
| 72.5° | 161.0  | 144.9  | 116.2  | 156.8  | 178.0  |
| 75°   | 140.7  | 126.0  | 107.8  | 138.6  | 163.4  |
| 77.5° | 124.6  | 107.2  | 101.0  | 121.3  | 146.7  |
| 80°   | 103.9  | 88.1   | 89.0   | 104.2  | 125.4  |
| 82.5° | 80.0   | 68.1   | 71.7   | 86.3   | 98.6   |
| 85°   | 53.8   | 48.4   | 50.2   | 64.2   | 68.7   |
| 87.5° | 26.6   | 25.7   | 27.5   | 37.6   | 37.6   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)