

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: P225762

Luminaire Tested: **22GR-LD5-24-A19/156-UNV-L950-CD1-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P225762  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33284)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/12/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22GR-LD5-24-A19/156-UNV-L950-CD1-U  
Description: METALUX GR 2X2 LED TROFFER WITH A19/156 LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2240.4 lumens  
Efficiency: N/A  
Efficacy: 116.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.21  
Luminous Opening: Rectangular (W 1.83' x L: 1.83' x H: 0')  
CIE Type: Direct

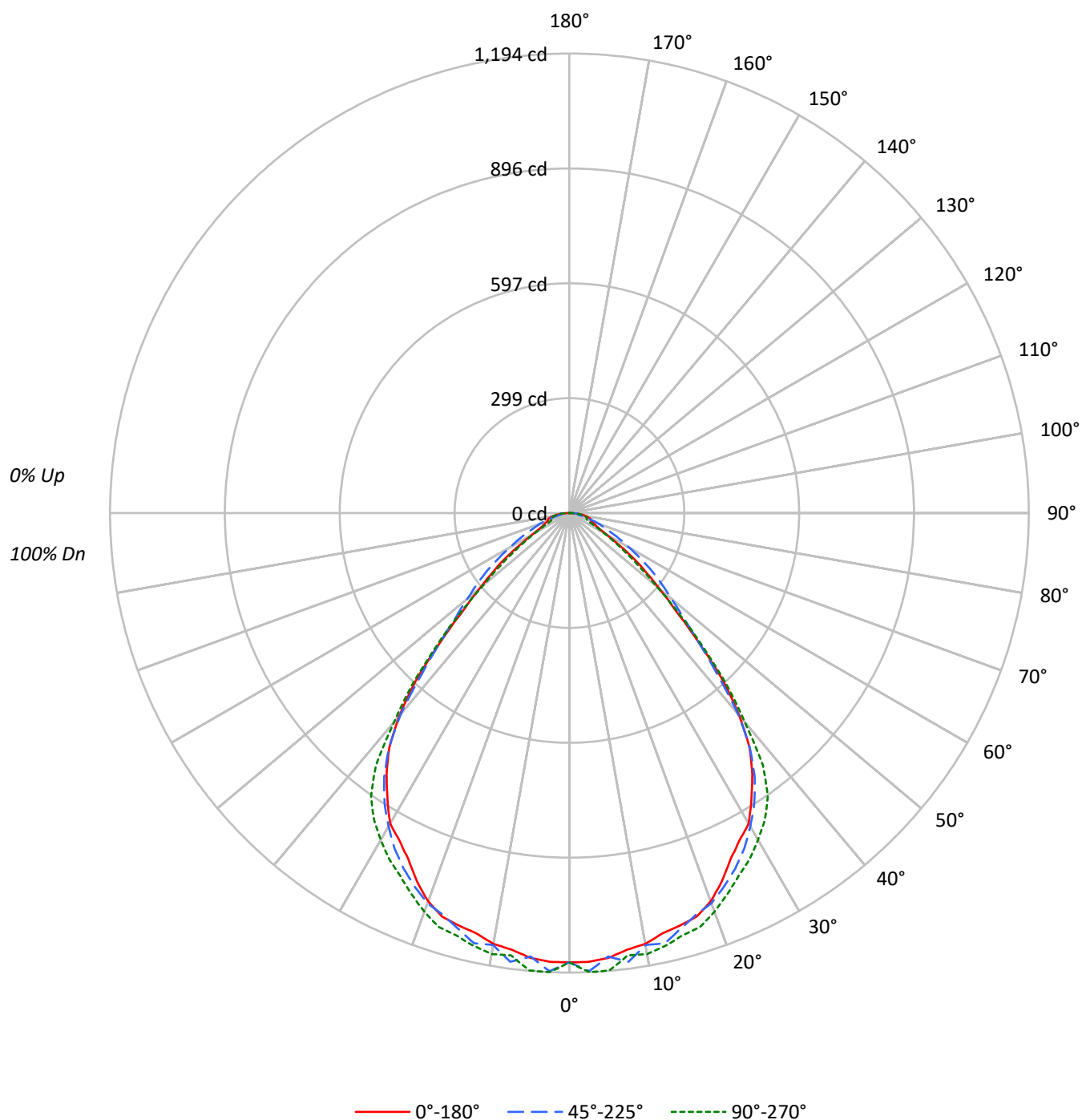
Input Watts (W): 19.219  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 111 | 107 | 103 | 100 | 108 | 105 | 102 | 99  |  | 101 | 98  | 96  |  | 97  | 95  | 93  |  | 93  | 91  | 90  |
| 2   | 103 | 96  | 90  | 85  | 100 | 94  | 89  | 85  |  | 91  | 86  | 83  |  | 88  | 84  | 81  |  | 85  | 82  | 79  |
| 3   | 95  | 86  | 79  | 74  | 93  | 85  | 79  | 73  |  | 82  | 77  | 72  |  | 79  | 75  | 71  |  | 77  | 73  | 70  |
| 4   | 88  | 78  | 71  | 65  | 86  | 77  | 70  | 64  |  | 75  | 68  | 64  |  | 72  | 67  | 63  |  | 70  | 66  | 62  |
| 5   | 82  | 71  | 63  | 58  | 80  | 70  | 63  | 57  |  | 68  | 62  | 57  |  | 66  | 61  | 56  |  | 64  | 59  | 56  |
| 6   | 77  | 65  | 57  | 51  | 75  | 64  | 57  | 51  |  | 62  | 56  | 51  |  | 61  | 55  | 50  |  | 59  | 54  | 50  |
| 7   | 72  | 60  | 52  | 46  | 70  | 59  | 51  | 46  |  | 57  | 51  | 46  |  | 56  | 50  | 46  |  | 55  | 49  | 45  |
| 8   | 67  | 55  | 47  | 42  | 66  | 54  | 47  | 42  |  | 53  | 46  | 42  |  | 52  | 46  | 41  |  | 51  | 45  | 41  |
| 9   | 63  | 51  | 43  | 38  | 62  | 50  | 43  | 38  |  | 49  | 43  | 38  |  | 48  | 42  | 38  |  | 47  | 42  | 38  |
| 10  | 59  | 47  | 40  | 35  | 58  | 47  | 40  | 35  |  | 46  | 39  | 35  |  | 45  | 39  | 35  |  | 44  | 39  | 35  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3739 | 3739 | 3739 |
| 5°  | 3730 | 3718 | 3835 |
| 10° | 3696 | 3706 | 3783 |
| 15° | 3679 | 3707 | 3766 |
| 20° | 3659 | 3677 | 3756 |
| 25° | 3503 | 3602 | 3676 |
| 30° | 3445 | 3476 | 3625 |
| 35° | 3240 | 3281 | 3515 |
| 40° | 2871 | 2851 | 2964 |
| 45° | 2144 | 2149 | 2209 |
| 50° | 1510 | 1717 | 1462 |
| 55° | 1114 | 1450 | 999  |
| 60° | 696  | 1146 | 653  |
| 65° | 568  | 908  | 456  |
| 70° | 564  | 757  | 449  |
| 75° | 699  | 556  | 582  |
| 80° | 778  | 439  | 710  |
| 85° | 775  | 816  | 797  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 111.2  | 5.0       |
| 10°-20°   | 316.6  | 14.1      |
| 20°-30°   | 468.9  | 20.9      |
| 30°-40°   | 525.3  | 23.4      |
| 40°-50°   | 385.9  | 17.2      |
| 50°-60°   | 215.7  | 9.6       |
| 60°-70°   | 120.2  | 5.4       |
| 70°-80°   | 70.6   | 3.2       |
| 80°-90°   | 26.0   | 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°    | 896.7  | 40.0      |
| 0°-40°    | 1421.9 | 63.5      |
| 0°-60°    | 2023.6 | 90.3      |
| 0°-90°    | 2240.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2240.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1168 | 1168  | 1168 | 1168  | 1168 |      |
| 5°  | 1160 | 1182  | 1156 | 1180  | 1193 | 110  |
| 15° | 1110 | 1116  | 1118 | 1135  | 1136 | 313  |
| 25° | 991  | 999   | 1019 | 1034  | 1040 | 459  |
| 35° | 829  | 829   | 839  | 877   | 899  | 513  |
| 45° | 474  | 512   | 475  | 508   | 488  | 370  |
| 55° | 200  | 243   | 260  | 259   | 179  | 178  |
| 65° | 75   | 133   | 120  | 154   | 60   | 78   |
| 75° | 56   | 80    | 45   | 90    | 47   | 57   |
| 85° | 21   | 31    | 22   | 28    | 22   | 23   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1167.6 | 1167.6 | 1167.6 | 1167.6 | 1167.6 |
| 2.5°  | 1167.1 | 1177.6 | 1191.4 | 1193.0 | 1194.0 |
| 5°    | 1160.2 | 1181.9 | 1156.5 | 1180.3 | 1193.0 |
| 7.5°  | 1144.4 | 1157.6 | 1176.1 | 1152.3 | 1159.2 |
| 10°   | 1136.5 | 1139.7 | 1139.7 | 1169.3 | 1163.4 |
| 12.5° | 1118.6 | 1139.7 | 1145.0 | 1139.1 | 1151.8 |
| 15°   | 1109.6 | 1116.5 | 1118.0 | 1135.0 | 1136.0 |
| 17.5° | 1099.6 | 1098.0 | 1094.3 | 1106.4 | 1128.0 |
| 20°   | 1073.7 | 1067.9 | 1079.0 | 1093.7 | 1102.2 |
| 22.5° | 1035.7 | 1037.2 | 1050.4 | 1062.6 | 1072.1 |
| 25°   | 991.4  | 999.3  | 1019.3 | 1033.6 | 1040.4 |
| 27.5° | 958.0  | 969.7  | 983.4  | 1000.3 | 1014.0 |
| 30°   | 931.7  | 930.7  | 940.1  | 964.4  | 980.3  |
| 32.5° | 880.5  | 884.2  | 894.2  | 923.3  | 945.4  |
| 35°   | 828.7  | 829.3  | 839.3  | 877.3  | 899.0  |
| 37.5° | 769.1  | 764.9  | 770.7  | 811.9  | 826.1  |
| 40°   | 686.8  | 687.8  | 682.0  | 711.1  | 708.9  |
| 42.5° | 590.7  | 599.1  | 569.0  | 607.1  | 604.4  |
| 45°   | 473.5  | 512.1  | 474.6  | 508.3  | 487.8  |
| 47.5° | 373.7  | 430.7  | 399.6  | 424.4  | 385.8  |
| 50°   | 303.0  | 361.6  | 344.7  | 355.8  | 293.5  |
| 52.5° | 248.6  | 296.1  | 301.4  | 304.0  | 229.1  |
| 55°   | 199.6  | 242.8  | 259.7  | 259.2  | 178.9  |
| 57.5° | 147.2  | 197.4  | 216.9  | 224.9  | 135.7  |
| 60°   | 108.7  | 164.2  | 178.9  | 196.4  | 101.9  |
| 62.5° | 87.6   | 144.1  | 147.8  | 172.1  | 77.6   |
| 65°   | 75.0   | 133.0  | 119.8  | 153.6  | 60.2   |
| 67.5° | 66.5   | 124.0  | 97.6   | 137.2  | 51.2   |
| 70°   | 60.2   | 110.3  | 80.8   | 123.0  | 48.0   |
| 72.5° | 58.6   | 94.0   | 62.2   | 109.8  | 47.5   |
| 75°   | 56.5   | 79.7   | 44.9   | 90.3   | 47.0   |
| 77.5° | 48.6   | 68.1   | 32.2   | 69.7   | 43.8   |
| 80°   | 42.2   | 54.3   | 23.8   | 52.2   | 38.5   |
| 82.5° | 32.8   | 41.1   | 21.1   | 39.6   | 31.1   |
| 85°   | 21.1   | 31.1   | 22.2   | 28.5   | 21.7   |
| 87.5° | 10.0   | 17.4   | 15.8   | 15.3   | 11.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)