

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: P219100

Luminaire Tested: **24GR-LD5-34-A-UNV-L935-CD1-U**

Issue Date: 3/12/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P219100  
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-LD5-34-A-UNV-L935-CD1-U  
Description: METALUX GR 2X4 LED TROFFER WITH A LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2974.7 lumens  
Efficiency: N/A  
Efficacy: 111.2 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

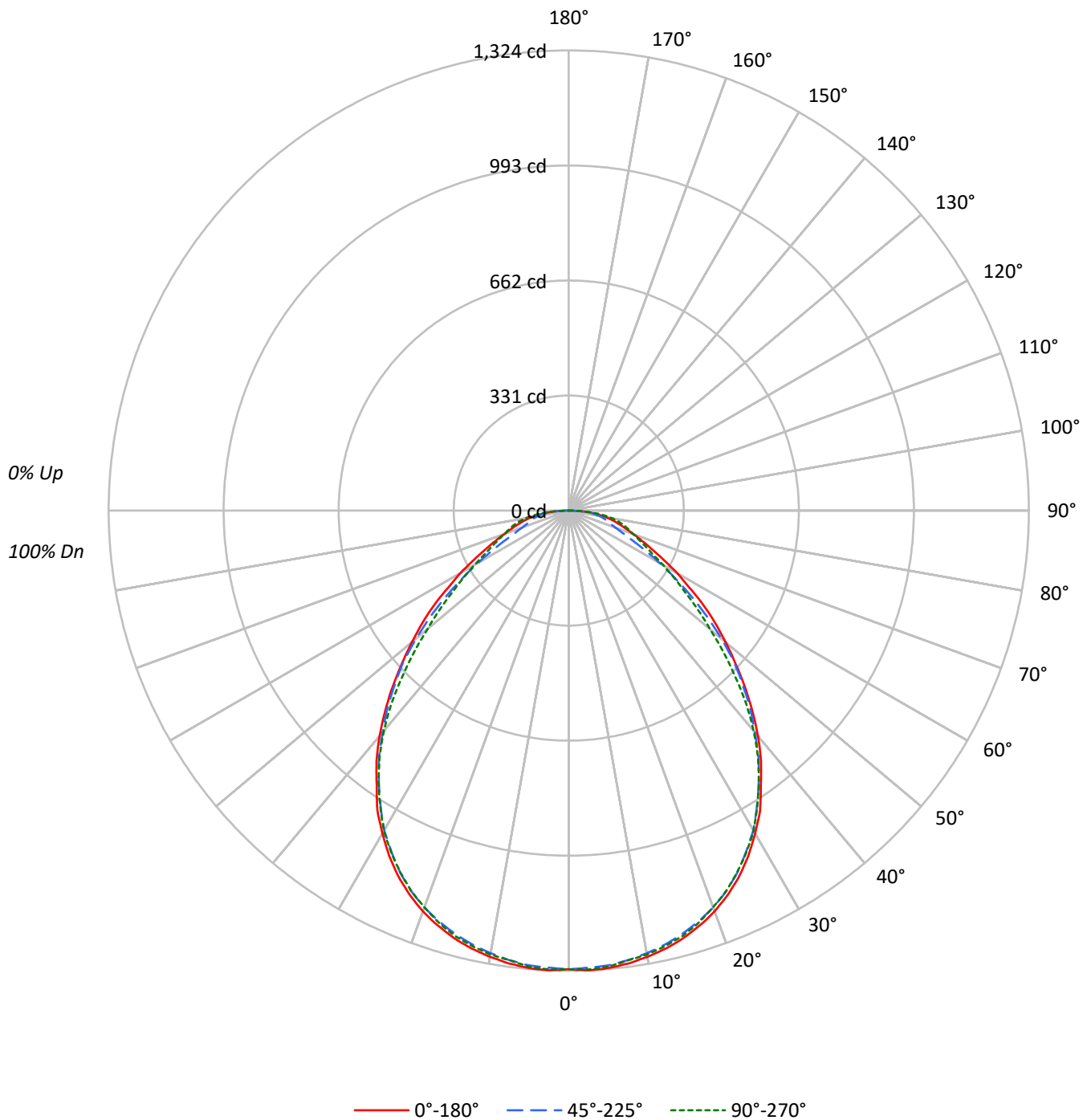
Input Watts (W): 26.756  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 2021 | 2021 | 2021 |
| 5°  | 2031 | 2020 | 2025 |
| 10° | 2028 | 2011 | 2017 |
| 15° | 2020 | 2000 | 2008 |
| 20° | 2001 | 1980 | 1980 |
| 25° | 1962 | 1941 | 1939 |
| 30° | 1897 | 1878 | 1882 |
| 35° | 1802 | 1781 | 1784 |
| 40° | 1694 | 1665 | 1655 |
| 45° | 1553 | 1532 | 1471 |
| 50° | 1404 | 1366 | 1263 |
| 55° | 1260 | 1147 | 1088 |
| 60° | 1104 | 924  | 957  |
| 65° | 963  | 726  | 881  |
| 70° | 881  | 634  | 881  |
| 75° | 881  | 675  | 971  |
| 80° | 957  | 795  | 1107 |
| 85° | 1051 | 896  | 1188 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 125.0  | 4.2       |
| 10°-20°   | 356.7  | 12.0      |
| 20°-30°   | 528.9  | 17.8      |
| 30°-40°   | 596.6  | 20.1      |
| 40°-50°   | 540.4  | 18.2      |
| 50°-60°   | 389.8  | 13.1      |
| 60°-70°   | 232.8  | 7.8       |
| 70°-80°   | 143.9  | 4.8       |
| 80°-90°   | 60.6   | 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°    | 1010.5 | 34.0      |
| 0°-40°    | 1607.2 | 54.0      |
| 0°-60°    | 2537.4 | 85.3      |
| 0°-90°    | 2974.7 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2974.7 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1320 | 1320  | 1320 | 1320  | 1320 |      |
| 5°  | 1321 | 1319  | 1314 | 1312  | 1317 | 126  |
| 15° | 1274 | 1266  | 1261 | 1261  | 1266 | 359  |
| 25° | 1161 | 1154  | 1148 | 1144  | 1148 | 533  |
| 35° | 964  | 962   | 953  | 953   | 954  | 603  |
| 45° | 717  | 712   | 707  | 690   | 679  | 552  |
| 55° | 472  | 457   | 430  | 408   | 408  | 421  |
| 65° | 266  | 234   | 200  | 228   | 243  | 267  |
| 75° | 149  | 129   | 114  | 142   | 164  | 159  |
| 85° | 60   | 52    | 51   | 67    | 68   | 62   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1319.8 | 1319.8 | 1319.8 | 1319.8 | 1319.8 |
| 2.5°  | 1324.4 | 1320.7 | 1316.1 | 1318.9 | 1321.2 |
| 5°    | 1321.2 | 1319.4 | 1313.8 | 1312.5 | 1317.1 |
| 7.5°  | 1314.3 | 1309.7 | 1304.7 | 1307.0 | 1305.1 |
| 10°   | 1303.7 | 1299.6 | 1293.2 | 1293.6 | 1296.8 |
| 12.5° | 1290.8 | 1285.8 | 1278.9 | 1280.8 | 1283.5 |
| 15°   | 1273.8 | 1266.1 | 1261.0 | 1261.4 | 1266.5 |
| 17.5° | 1252.2 | 1246.3 | 1239.8 | 1241.3 | 1243.6 |
| 20°   | 1227.4 | 1224.3 | 1215.0 | 1212.3 | 1214.6 |
| 22.5° | 1196.2 | 1190.2 | 1185.2 | 1183.8 | 1184.2 |
| 25°   | 1160.8 | 1154.4 | 1148.4 | 1144.3 | 1147.5 |
| 27.5° | 1119.4 | 1113.9 | 1106.1 | 1104.7 | 1107.5 |
| 30°   | 1072.5 | 1068.4 | 1061.6 | 1059.7 | 1063.9 |
| 32.5° | 1024.8 | 1017.9 | 1008.3 | 1008.3 | 1009.1 |
| 35°   | 963.6  | 962.3  | 952.6  | 953.1  | 954.0  |
| 37.5° | 908.5  | 902.1  | 896.6  | 891.1  | 893.8  |
| 40°   | 847.4  | 840.1  | 832.7  | 829.0  | 827.6  |
| 42.5° | 781.7  | 776.1  | 773.0  | 759.6  | 756.4  |
| 45°   | 716.9  | 712.3  | 707.2  | 689.8  | 679.2  |
| 47.5° | 650.7  | 649.8  | 645.7  | 614.9  | 604.3  |
| 50°   | 589.1  | 587.8  | 573.1  | 540.4  | 529.9  |
| 52.5° | 530.7  | 521.6  | 502.3  | 470.1  | 468.3  |
| 55°   | 471.9  | 457.2  | 429.7  | 408.5  | 407.6  |
| 57.5° | 409.9  | 392.4  | 364.4  | 352.9  | 358.9  |
| 60°   | 360.3  | 333.6  | 301.5  | 302.9  | 312.5  |
| 62.5° | 308.8  | 279.0  | 247.3  | 261.0  | 272.5  |
| 65°   | 265.6  | 233.9  | 200.3  | 227.5  | 243.1  |
| 67.5° | 228.0  | 198.6  | 166.3  | 202.6  | 217.9  |
| 70°   | 196.7  | 172.8  | 141.5  | 179.7  | 196.7  |
| 72.5° | 171.9  | 149.8  | 125.5  | 161.3  | 181.0  |
| 75°   | 148.9  | 129.1  | 114.0  | 142.0  | 164.0  |
| 77.5° | 129.1  | 109.8  | 102.9  | 125.5  | 147.0  |
| 80°   | 108.5  | 91.0   | 90.1   | 109.4  | 125.5  |
| 82.5° | 84.6   | 72.6   | 72.6   | 91.5   | 101.1  |
| 85°   | 59.8   | 52.4   | 51.0   | 66.6   | 67.6   |
| 87.5° | 30.8   | 29.4   | 26.7   | 34.9   | 34.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)