

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: P293164

Luminaire Tested: **24GR-LD5-30-F125-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P293164  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33304)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24GR-LD5-30-F125-UNV-L83050-W2A1-U-4500K  
Description: GRLED 2x4 TUNABLE WHITE TROFFER  
WITH F125 LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3231.0 lumens  
Efficiency: N/A  
Efficacy: 153.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.27  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

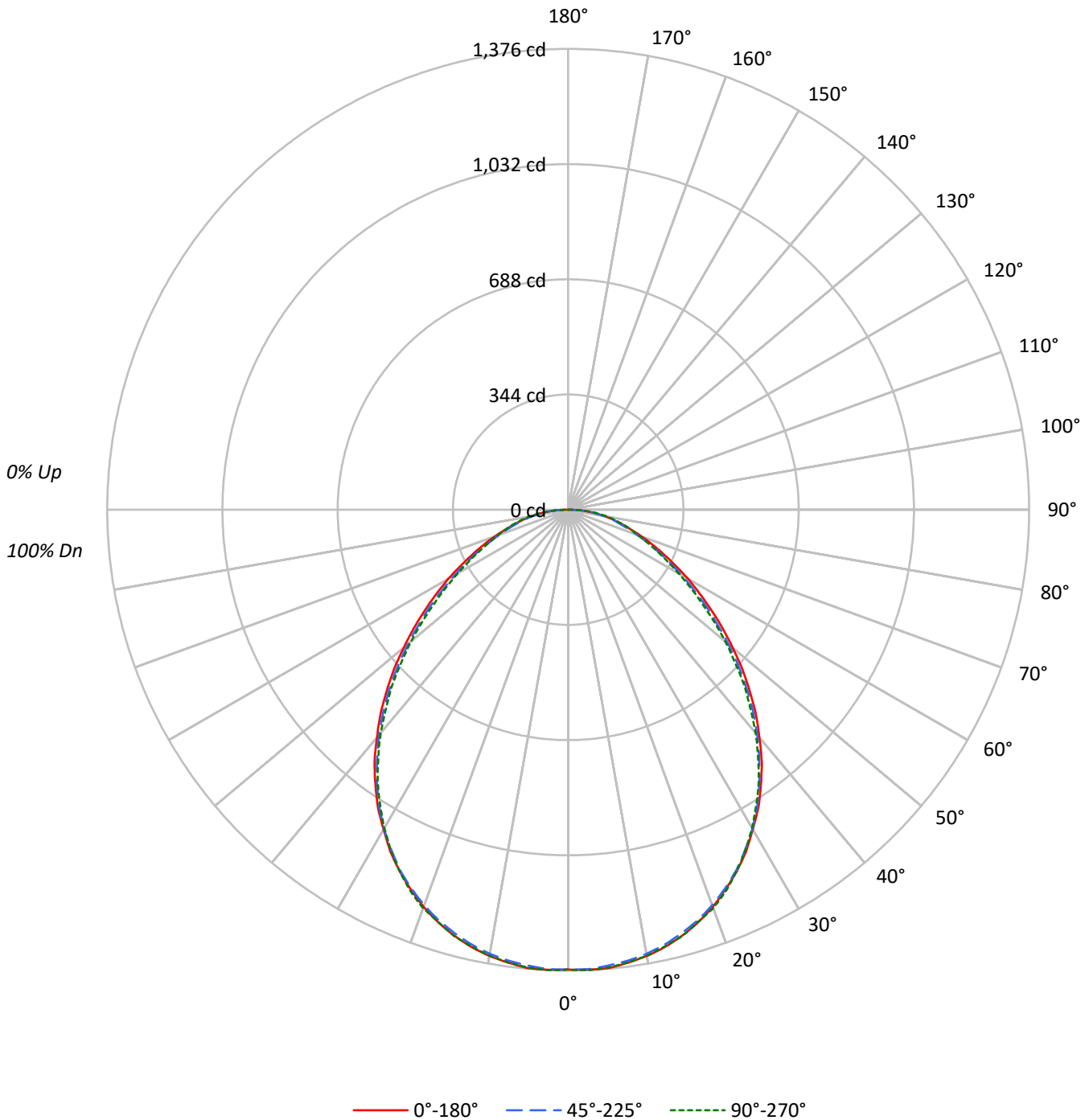
Input Watts (W): 21.018  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 109 | 105 | 101 | 97  | 107 | 103 | 99  | 96  | 98  | 95  | 93  | 95  | 92  | 90  | 91  | 89  | 87  | 85  |
| 2   | 100 | 92  | 86  | 81  | 98  | 91  | 85  | 80  | 87  | 82  | 78  | 84  | 80  | 76  | 81  | 77  | 74  | 72  |
| 3   | 92  | 82  | 74  | 68  | 90  | 80  | 73  | 68  | 78  | 71  | 66  | 75  | 70  | 65  | 72  | 68  | 64  | 62  |
| 4   | 85  | 73  | 65  | 59  | 82  | 72  | 64  | 58  | 70  | 63  | 57  | 67  | 61  | 57  | 65  | 60  | 56  | 54  |
| 5   | 78  | 66  | 57  | 51  | 76  | 65  | 57  | 51  | 63  | 56  | 50  | 61  | 55  | 50  | 59  | 54  | 49  | 47  |
| 6   | 73  | 60  | 51  | 45  | 71  | 59  | 51  | 45  | 57  | 50  | 44  | 55  | 49  | 44  | 54  | 48  | 44  | 42  |
| 7   | 67  | 54  | 46  | 40  | 66  | 54  | 46  | 40  | 52  | 45  | 40  | 51  | 44  | 39  | 49  | 44  | 39  | 37  |
| 8   | 63  | 50  | 42  | 36  | 61  | 49  | 41  | 36  | 48  | 41  | 36  | 47  | 40  | 36  | 46  | 40  | 35  | 33  |
| 9   | 59  | 46  | 38  | 33  | 58  | 45  | 38  | 33  | 44  | 37  | 32  | 43  | 37  | 32  | 42  | 36  | 32  | 30  |
| 10  | 55  | 43  | 35  | 30  | 54  | 42  | 35  | 30  | 41  | 34  | 30  | 40  | 34  | 29  | 39  | 33  | 29  | 28  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 1848 | 1848 | 1848 |
| 5°  | 1856 | 1846 | 1853 |
| 10° | 1849 | 1840 | 1848 |
| 15° | 1834 | 1824 | 1835 |
| 20° | 1807 | 1800 | 1813 |
| 25° | 1768 | 1763 | 1767 |
| 30° | 1712 | 1709 | 1705 |
| 35° | 1647 | 1635 | 1628 |
| 40° | 1559 | 1542 | 1529 |
| 45° | 1459 | 1432 | 1415 |
| 50° | 1340 | 1304 | 1282 |
| 55° | 1223 | 1178 | 1143 |
| 60° | 1110 | 1051 | 1023 |
| 65° | 1000 | 944  | 928  |
| 70° | 916  | 856  | 880  |
| 75° | 856  | 817  | 877  |
| 80° | 849  | 834  | 916  |
| 85° | 866  | 874  | 997  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.0  | 4.0       |
| 10°-20°   | 369.5  | 11.4      |
| 20°-30°   | 545.8  | 16.9      |
| 30°-40°   | 620.6  | 19.2      |
| 40°-50°   | 579.5  | 17.9      |
| 50°-60°   | 450.7  | 13.9      |
| 60°-70°   | 299.0  | 9.3       |
| 70°-80°   | 173.0  | 5.4       |
| 80°-90°   | 62.9   | 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°    | 1045.3 | 32.4      |
| 0°-40°    | 1665.8 | 51.6      |
| 0°-60°    | 2696.0 | 83.4      |
| 0°-90°    | 3231.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3231.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1373 | 1373  | 1373 | 1373  | 1373 |      |
| 5°  | 1374 | 1367  | 1367 | 1369  | 1372 | 130  |
| 15° | 1317 | 1310  | 1310 | 1309  | 1318 | 371  |
| 25° | 1191 | 1186  | 1188 | 1185  | 1190 | 548  |
| 35° | 1003 | 998   | 995  | 988   | 991  | 626  |
| 45° | 767  | 761   | 752  | 743   | 743  | 591  |
| 55° | 521  | 514   | 502  | 489   | 487  | 467  |
| 65° | 314  | 304   | 296  | 291   | 291  | 314  |
| 75° | 165  | 161   | 157  | 164   | 169  | 176  |
| 85° | 56   | 55    | 57   | 64    | 65   | 61   |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1373.2 | 1373.2 | 1373.2 | 1373.2 | 1373.2 |
| 2.5°  | 1375.2 | 1371.2 | 1373.2 | 1371.7 | 1376.2 |
| 5°    | 1374.2 | 1367.1 | 1366.6 | 1369.1 | 1372.2 |
| 7.5°  | 1364.6 | 1357.0 | 1358.5 | 1358.5 | 1363.6 |
| 10°   | 1353.0 | 1345.4 | 1346.4 | 1346.9 | 1352.5 |
| 12.5° | 1337.3 | 1329.7 | 1330.2 | 1329.7 | 1335.3 |
| 15°   | 1316.6 | 1310.0 | 1309.5 | 1309.0 | 1317.6 |
| 17.5° | 1291.4 | 1282.3 | 1285.3 | 1285.8 | 1290.3 |
| 20°   | 1262.1 | 1255.0 | 1257.0 | 1256.5 | 1266.1 |
| 22.5° | 1227.2 | 1222.2 | 1223.7 | 1222.7 | 1231.8 |
| 25°   | 1190.9 | 1185.8 | 1187.8 | 1185.3 | 1190.4 |
| 27.5° | 1150.0 | 1146.4 | 1144.4 | 1142.9 | 1146.4 |
| 30°   | 1102.0 | 1100.0 | 1100.0 | 1093.4 | 1097.4 |
| 32.5° | 1056.5 | 1050.0 | 1050.0 | 1047.4 | 1044.9 |
| 35°   | 1003.0 | 997.9  | 995.4  | 988.3  | 991.4  |
| 37.5° | 949.5  | 937.8  | 936.8  | 931.3  | 931.3  |
| 40°   | 887.8  | 881.3  | 877.7  | 871.7  | 870.7  |
| 42.5° | 829.3  | 822.7  | 816.6  | 806.5  | 804.5  |
| 45°   | 766.6  | 760.6  | 752.5  | 742.9  | 743.4  |
| 47.5° | 704.5  | 695.9  | 688.4  | 676.7  | 675.2  |
| 50°   | 640.4  | 634.3  | 623.2  | 613.1  | 612.6  |
| 52.5° | 580.3  | 570.7  | 560.6  | 548.5  | 548.5  |
| 55°   | 521.2  | 513.6  | 502.0  | 488.9  | 487.4  |
| 57.5° | 464.6  | 457.6  | 444.4  | 434.8  | 432.3  |
| 60°   | 412.6  | 402.5  | 390.4  | 382.3  | 380.3  |
| 62.5° | 360.6  | 351.5  | 342.4  | 334.3  | 333.8  |
| 65°   | 314.1  | 304.5  | 296.5  | 290.9  | 291.4  |
| 67.5° | 272.2  | 264.1  | 255.0  | 253.5  | 254.0  |
| 70°   | 232.8  | 224.2  | 217.7  | 221.2  | 223.7  |
| 72.5° | 195.4  | 190.9  | 186.4  | 191.4  | 194.9  |
| 75°   | 164.6  | 160.6  | 157.1  | 164.1  | 168.7  |
| 77.5° | 136.4  | 133.3  | 132.8  | 138.9  | 142.9  |
| 80°   | 109.6  | 106.1  | 107.6  | 114.6  | 118.2  |
| 82.5° | 83.3   | 80.8   | 81.3   | 89.9   | 92.4   |
| 85°   | 56.1   | 55.0   | 56.6   | 64.1   | 64.6   |
| 87.5° | 29.8   | 29.8   | 30.8   | 35.4   | 33.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)