

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: P293083

Luminaire Tested: **24GR-LD5-30-F1-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P293083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-084-12)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24GR-LD5-30-F1-UNV-L92765-W2A1-U-4000K
Description: GRLED 2x4 TUNABLE WHITE TROFFER
WITH F1 LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2692.0 lumens
Efficiency: N/A
Efficacy: 132.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.18 / 1.25
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

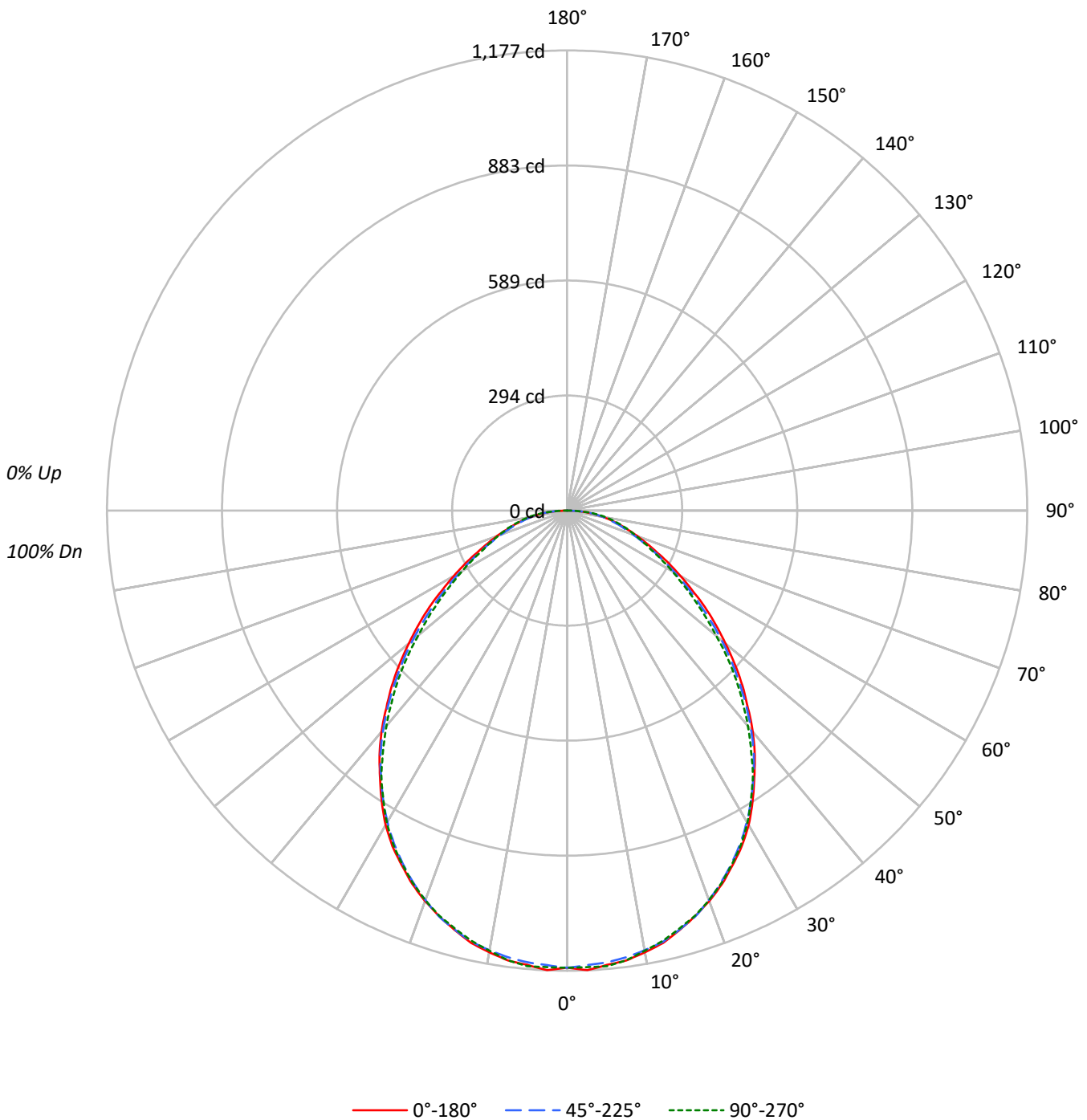
Input Watts (W): 20.274
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 93 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 78 | 75 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 90 | 81 | 73 | 68 | 78 | 72 | 67 | 75 | 70 | 65 | 72 | 68 | 64 | 62 | | | | | 62 | | | |
| 4 | 85 | 73 | 65 | 59 | 83 | 72 | 64 | 58 | 70 | 63 | 58 | 67 | 62 | 57 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 58 | 51 | 76 | 65 | 57 | 51 | 63 | 56 | 50 | 61 | 55 | 50 | 59 | 54 | 49 | 47 | | | | | 47 | | | |
| 6 | 73 | 60 | 51 | 45 | 71 | 59 | 51 | 45 | 57 | 50 | 45 | 56 | 49 | 44 | 54 | 48 | 44 | 42 | | | | | 42 | | | |
| 7 | 68 | 55 | 46 | 40 | 66 | 54 | 46 | 40 | 52 | 45 | 40 | 51 | 44 | 40 | 50 | 44 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 42 | 36 | 62 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 46 | 40 | 36 | 34 | | | | | 34 | | | |
| 9 | 59 | 46 | 38 | 33 | 58 | 46 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 42 | 37 | 32 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1573 | 1573 | 1573 |
| 5° | 1576 | 1567 | 1580 |
| 10° | 1567 | 1560 | 1562 |
| 15° | 1548 | 1546 | 1542 |
| 20° | 1522 | 1518 | 1518 |
| 25° | 1486 | 1478 | 1481 |
| 30° | 1443 | 1429 | 1433 |
| 35° | 1371 | 1364 | 1361 |
| 40° | 1298 | 1286 | 1264 |
| 45° | 1207 | 1185 | 1162 |
| 50° | 1105 | 1081 | 1040 |
| 55° | 1009 | 964 | 931 |
| 60° | 900 | 856 | 834 |
| 65° | 810 | 767 | 756 |
| 70° | 751 | 705 | 734 |
| 75° | 719 | 687 | 745 |
| 80° | 718 | 718 | 796 |
| 85° | 746 | 755 | 840 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.4 | 4.1 |
| 10°-20° | 312.5 | 11.6 |
| 20°-30° | 458.7 | 17.0 |
| 30°-40° | 518.5 | 19.3 |
| 40°-50° | 479.2 | 17.8 |
| 50°-60° | 369.2 | 13.7 |
| 60°-70° | 244.5 | 9.1 |
| 70°-80° | 145.6 | 5.4 |
| 80°-90° | 53.3 | 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° | 881.6 | 32.7 |
| 0°-40° | 1400.1 | 52.0 |
| 0°-60° | 2248.6 | 83.5 |
| 0°-90° | 2692.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2692.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1169 | 1169 | 1169 | 1169 | 1169 | |
| 5° | 1167 | 1167 | 1160 | 1160 | 1170 | 111 |
| 15° | 1111 | 1109 | 1110 | 1109 | 1107 | 313 |
| 25° | 1001 | 998 | 996 | 994 | 998 | 461 |
| 35° | 834 | 833 | 831 | 827 | 828 | 522 |
| 45° | 634 | 630 | 623 | 612 | 611 | 488 |
| 55° | 430 | 421 | 411 | 400 | 397 | 384 |
| 65° | 254 | 250 | 241 | 239 | 238 | 255 |
| 75° | 138 | 135 | 132 | 138 | 143 | 147 |
| 85° | 48 | 46 | 49 | 54 | 54 | 51 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1169.3 | 1169.3 | 1169.3 | 1169.3 | 1169.3 |
| 2.5° | 1176.6 | 1170.5 | 1163.8 | 1163.8 | 1168.8 |
| 5° | 1166.6 | 1166.6 | 1159.9 | 1160.5 | 1169.9 |
| 7.5° | 1160.5 | 1157.1 | 1152.7 | 1152.7 | 1159.9 |
| 10° | 1147.1 | 1144.4 | 1142.1 | 1141.0 | 1143.2 |
| 12.5° | 1132.7 | 1128.3 | 1129.9 | 1128.3 | 1127.7 |
| 15° | 1111.0 | 1108.8 | 1109.9 | 1109.4 | 1107.2 |
| 17.5° | 1087.7 | 1086.6 | 1088.8 | 1084.9 | 1086.6 |
| 20° | 1062.7 | 1059.4 | 1060.5 | 1058.3 | 1060.5 |
| 22.5° | 1034.4 | 1032.2 | 1029.4 | 1026.6 | 1031.1 |
| 25° | 1001.1 | 998.3 | 995.6 | 994.4 | 997.8 |
| 27.5° | 967.8 | 963.3 | 959.5 | 958.3 | 963.3 |
| 30° | 928.9 | 923.9 | 919.5 | 918.4 | 922.3 |
| 32.5° | 882.8 | 881.7 | 876.2 | 874.0 | 875.6 |
| 35° | 834.5 | 833.4 | 830.6 | 826.8 | 828.4 |
| 37.5° | 788.4 | 787.9 | 784.0 | 777.3 | 772.9 |
| 40° | 739.0 | 735.1 | 732.4 | 722.9 | 719.6 |
| 42.5° | 684.6 | 683.5 | 678.5 | 668.0 | 664.1 |
| 45° | 634.1 | 629.6 | 623.0 | 611.9 | 610.8 |
| 47.5° | 581.9 | 575.8 | 569.7 | 555.8 | 555.2 |
| 50° | 528.0 | 523.6 | 516.4 | 502.5 | 496.9 |
| 52.5° | 478.1 | 472.0 | 462.0 | 448.6 | 445.9 |
| 55° | 430.3 | 421.4 | 410.9 | 399.8 | 397.0 |
| 57.5° | 379.2 | 375.3 | 362.6 | 353.7 | 350.4 |
| 60° | 334.3 | 330.9 | 318.2 | 309.8 | 309.8 |
| 62.5° | 293.7 | 288.7 | 277.6 | 272.1 | 272.1 |
| 65° | 254.3 | 250.4 | 241.0 | 238.8 | 237.6 |
| 67.5° | 220.4 | 215.4 | 208.8 | 208.2 | 211.0 |
| 70° | 191.0 | 184.9 | 179.3 | 184.9 | 186.6 |
| 72.5° | 163.2 | 159.4 | 154.4 | 161.6 | 164.9 |
| 75° | 138.3 | 134.9 | 132.1 | 138.3 | 143.3 |
| 77.5° | 115.5 | 112.2 | 112.2 | 118.8 | 123.3 |
| 80° | 92.7 | 90.5 | 92.7 | 98.3 | 102.7 |
| 82.5° | 71.1 | 69.4 | 72.2 | 77.7 | 80.5 |
| 85° | 48.3 | 45.5 | 48.9 | 53.9 | 54.4 |
| 87.5° | 22.8 | 22.2 | 24.4 | 27.8 | 27.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)