

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: P476186

Luminaire Tested: **14GR-LD5-60-F1-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P476186
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-60-F1-UNV-L835-CD1-U
Description: GR 1'X4' LED TROFFER w/ F1 LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6147.0 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.24 / 1.2
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

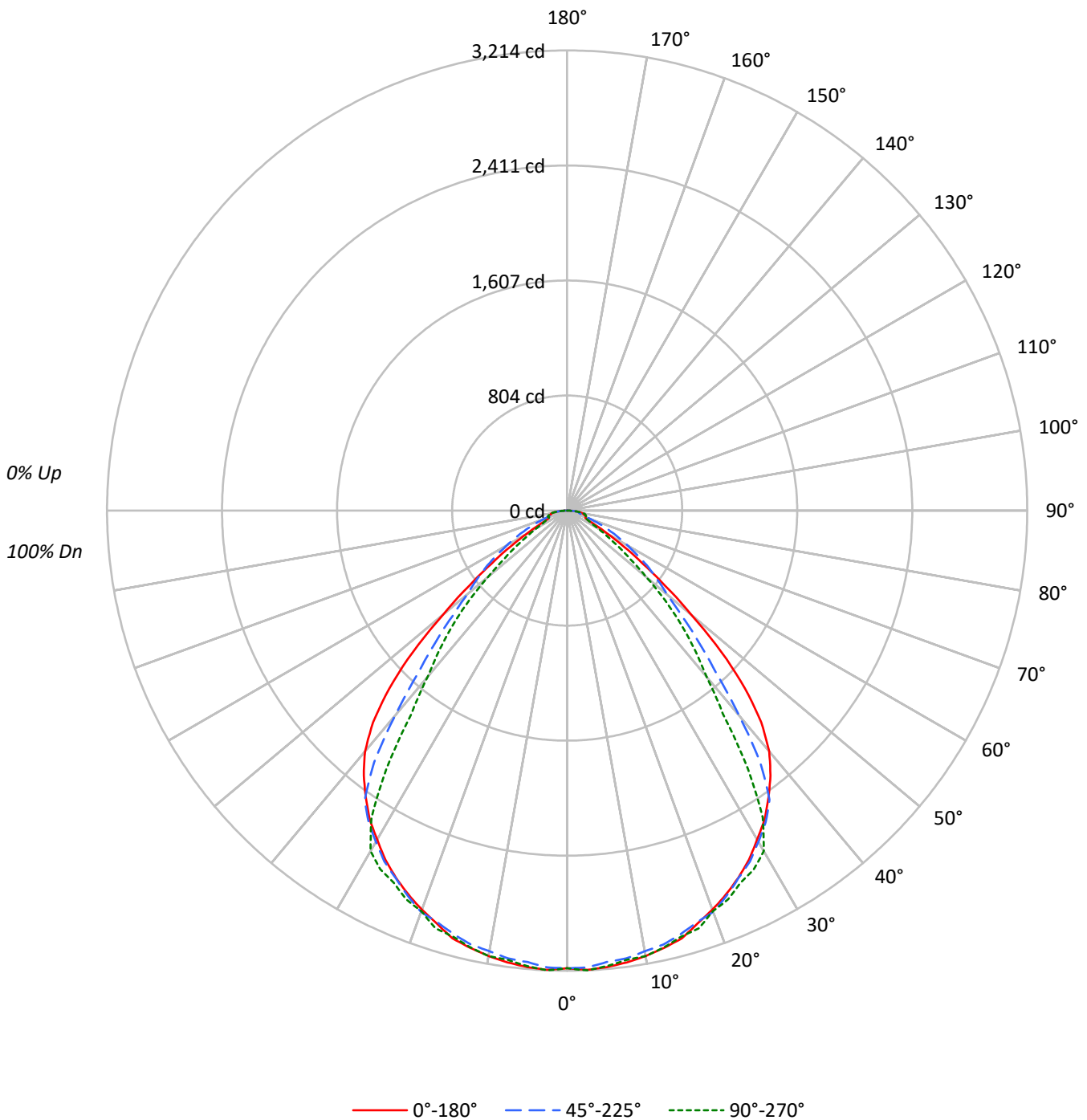
Input Watts (W): 52.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 | |
| RCR | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 | | | | 88 |
| 2 | 103 | 96 | 91 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 | | | | 77 |
| 3 | 95 | 87 | 80 | 75 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 74 | 70 | 68 | | | | 68 |
| 4 | 89 | 79 | 71 | 65 | 87 | 77 | 70 | 65 | 75 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 63 | 61 | | | | 61 |
| 5 | 82 | 71 | 64 | 58 | 81 | 70 | 63 | 58 | 68 | 62 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 | | | | 54 |
| 6 | 77 | 65 | 57 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 49 | | | | 49 |
| 7 | 72 | 60 | 52 | 47 | 70 | 59 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 | | | | 44 |
| 8 | 67 | 55 | 48 | 42 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 | | | | 40 |
| 9 | 63 | 51 | 44 | 39 | 62 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 | | | | 36 |
| 10 | 59 | 47 | 40 | 35 | 58 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 | | | | 33 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 8603 | 8603 | 8603 |
| 5° | 8645 | 8552 | 8626 |
| 10° | 8632 | 8538 | 8632 |
| 15° | 8618 | 8532 | 8580 |
| 20° | 8495 | 8544 | 8524 |
| 25° | 8399 | 8409 | 8511 |
| 30° | 8244 | 8298 | 8533 |
| 35° | 8049 | 8094 | 7235 |
| 40° | 7712 | 6564 | 5319 |
| 45° | 6692 | 4950 | 4295 |
| 50° | 4754 | 3803 | 3011 |
| 55° | 3019 | 3261 | 2018 |
| 60° | 1778 | 2611 | 1334 |
| 65° | 1052 | 2038 | 1030 |
| 70° | 1083 | 1381 | 1056 |
| 75° | 1324 | 1073 | 1395 |
| 80° | 1706 | 1333 | 1866 |
| 85° | 1806 | 1806 | 1806 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 303.2 | 4.9 |
| 10°-20° | 868.0 | 14.1 |
| 20°-30° | 1312.7 | 21.4 |
| 30°-40° | 1461.9 | 23.8 |
| 40°-50° | 1070.0 | 17.4 |
| 50°-60° | 589.8 | 9.6 |
| 60°-70° | 301.6 | 4.9 |
| 70°-80° | 171.6 | 2.8 |
| 80°-90° | 68.3 | 1.1 |
| 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° | 2483.9 | 40.4 |
| 0°-40° | 3945.8 | 64.2 |
| 0°-60° | 5605.6 | 91.2 |
| 0°-90° | 6147.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6147.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 3197 | 3197 | 3197 | 3197 | 3197 | |
| 5° | 3200 | 3200 | 3166 | 3187 | 3193 | 304 |
| 15° | 3094 | 3059 | 3063 | 3100 | 3080 | 869 |
| 25° | 2829 | 2822 | 2832 | 2880 | 2866 | 1302 |
| 35° | 2450 | 2454 | 2464 | 2295 | 2202 | 1529 |
| 45° | 1758 | 1621 | 1301 | 1184 | 1129 | 1323 |
| 55° | 644 | 757 | 695 | 595 | 430 | 601 |
| 65° | 165 | 392 | 320 | 306 | 162 | 190 |
| 75° | 127 | 220 | 103 | 196 | 134 | 134 |
| 85° | 58 | 72 | 58 | 79 | 58 | 63 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476186

CATALOG NUMBER: 14GR-LD5-60-F1-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 3196.9 | 3196.9 | 3196.9 | 3196.9 | 3196.9 |
| 2.5° | 3210.6 | 3210.6 | 3193.4 | 3214.1 | 3214.1 |
| 5° | 3200.3 | 3200.3 | 3165.9 | 3186.6 | 3193.4 |
| 7.5° | 3183.1 | 3183.1 | 3155.6 | 3172.8 | 3165.9 |
| 10° | 3159.0 | 3141.8 | 3124.6 | 3172.8 | 3159.0 |
| 12.5° | 3128.1 | 3093.6 | 3104.0 | 3100.5 | 3124.6 |
| 15° | 3093.6 | 3059.2 | 3062.7 | 3100.5 | 3079.9 |
| 17.5° | 3024.8 | 3028.3 | 3014.5 | 3042.0 | 3059.2 |
| 20° | 2966.3 | 2976.6 | 2983.5 | 3000.7 | 2976.6 |
| 22.5° | 2900.9 | 2904.4 | 2911.3 | 2935.4 | 2938.8 |
| 25° | 2828.7 | 2821.8 | 2832.1 | 2880.3 | 2866.5 |
| 27.5° | 2749.5 | 2746.1 | 2763.3 | 2804.6 | 2825.2 |
| 30° | 2653.2 | 2666.9 | 2670.4 | 2746.1 | 2746.1 |
| 32.5° | 2563.7 | 2563.7 | 2580.9 | 2618.8 | 2543.1 |
| 35° | 2450.1 | 2453.6 | 2463.9 | 2295.3 | 2202.4 |
| 37.5° | 2333.1 | 2322.8 | 2216.1 | 1909.9 | 1786.0 |
| 40° | 2195.5 | 2171.4 | 1868.6 | 1593.3 | 1514.1 |
| 42.5° | 2006.2 | 1934.0 | 1541.7 | 1376.5 | 1318.0 |
| 45° | 1758.5 | 1620.8 | 1300.8 | 1183.8 | 1128.7 |
| 47.5° | 1462.5 | 1335.2 | 1080.5 | 1001.4 | 925.7 |
| 50° | 1135.6 | 1108.1 | 908.5 | 839.7 | 719.2 |
| 52.5° | 863.7 | 918.8 | 798.4 | 708.9 | 554.0 |
| 55° | 643.5 | 757.1 | 695.1 | 595.3 | 430.2 |
| 57.5° | 471.4 | 629.7 | 585.0 | 505.9 | 323.5 |
| 60° | 330.4 | 533.4 | 485.2 | 426.7 | 247.8 |
| 62.5° | 234.0 | 461.1 | 399.2 | 364.8 | 189.3 |
| 65° | 165.2 | 392.3 | 320.0 | 306.3 | 161.7 |
| 67.5° | 137.6 | 330.4 | 244.3 | 271.9 | 137.6 |
| 70° | 137.6 | 275.3 | 175.5 | 240.9 | 134.2 |
| 72.5° | 137.6 | 240.9 | 130.8 | 220.2 | 141.1 |
| 75° | 127.3 | 220.2 | 103.2 | 196.1 | 134.2 |
| 77.5° | 117.0 | 185.8 | 89.5 | 168.6 | 130.8 |
| 80° | 110.1 | 134.2 | 86.0 | 137.6 | 120.4 |
| 82.5° | 89.5 | 96.4 | 79.1 | 106.7 | 92.9 |
| 85° | 58.5 | 72.3 | 58.5 | 79.1 | 58.5 |
| 87.5° | 27.5 | 37.9 | 27.5 | 34.4 | 24.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)