

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 163P110

Luminaire Tested: **GC2048-332A-PAF**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 163P110
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: GC2048-332A-PAF
Description: 20 X 48 Recessed Convertible Body Troffer
with a .095 pattern 12 acrylic lens.
Light Source: Three - FO32T8/35K - 2850 Lumens ea. - 32 Watts ea.
Ballast/Driver: Magnetek B332I120RH Electronic - L.O.B.F. = 88.9

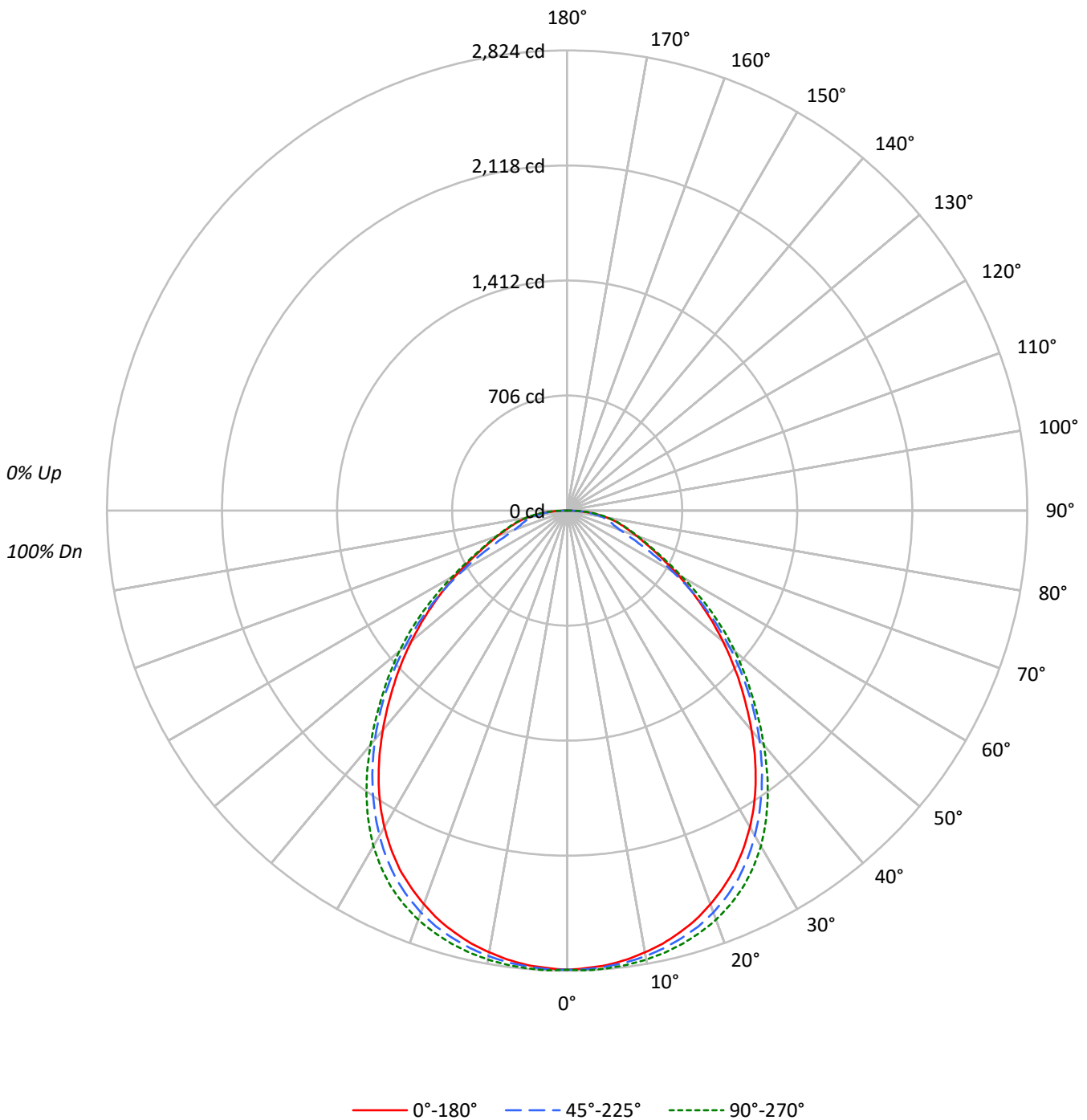
Summary

Lumens per Lamp: 2850 (3 lamps)
Luminaire Lumens: 6617.8 lumens
Efficiency: 77.4%
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.24 / 1.28
Luminous Opening: Rectangular (W 1.46' x L: 3.81' x H: 0')
CIE Type: Direct

Input Watts (W): 83.7
Input Voltage (V): NR
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 | | | | | | | | | | |
| 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 | 92 | 92 | 92 | 92 | 90 | 90 | 90 | 90 | 86 | 86 | 86 | 82 | 82 | 82 | 79 | 79 | 79 | 77 | | | | | | 77 | | | | | | | | | | | | | | |
| 1 | 85 | 81 | 78 | 75 | 83 | 80 | 77 | 74 | 76 | 74 | 72 | 73 | 71 | 70 | 71 | 69 | 68 | 66 | | | | | | 66 | | | | | | | | | | | | | | |
| 2 | 78 | 72 | 67 | 63 | 76 | 70 | 66 | 62 | 68 | 64 | 61 | 65 | 62 | 59 | 63 | 60 | 58 | 56 | | | | | | 56 | | | | | | | | | | | | | | |
| 3 | 71 | 64 | 58 | 53 | 70 | 63 | 57 | 53 | 60 | 56 | 52 | 58 | 54 | 51 | 56 | 53 | 50 | 48 | | | | | | 48 | | | | | | | | | | | | | | |
| 4 | 66 | 57 | 51 | 46 | 64 | 56 | 50 | 46 | 54 | 49 | 45 | 52 | 48 | 44 | 51 | 47 | 44 | 42 | | | | | | 42 | | | | | | | | | | | | | | |
| 5 | 61 | 51 | 45 | 40 | 59 | 51 | 44 | 40 | 49 | 44 | 39 | 47 | 43 | 39 | 46 | 42 | 39 | 37 | | | | | | 37 | | | | | | | | | | | | | | |
| 6 | 56 | 47 | 40 | 35 | 55 | 46 | 40 | 35 | 45 | 39 | 35 | 43 | 38 | 35 | 42 | 38 | 34 | 33 | | | | | | 33 | | | | | | | | | | | | | | |
| 7 | 52 | 42 | 36 | 31 | 51 | 42 | 36 | 31 | 41 | 35 | 31 | 40 | 35 | 31 | 39 | 34 | 31 | 29 | | | | | | 29 | | | | | | | | | | | | | | |
| 8 | 49 | 39 | 33 | 28 | 48 | 38 | 32 | 28 | 37 | 32 | 28 | 36 | 32 | 28 | 36 | 31 | 28 | 26 | | | | | | 26 | | | | | | | | | | | | | | |
| 9 | 46 | 36 | 30 | 26 | 45 | 35 | 30 | 26 | 35 | 29 | 25 | 34 | 29 | 25 | 33 | 28 | 25 | 24 | | | | | | 24 | | | | | | | | | | | | | | |
| 10 | 43 | 33 | 27 | 23 | 42 | 33 | 27 | 23 | 32 | 27 | 23 | 31 | 27 | 23 | 31 | 26 | 23 | 22 | | | | | | 22 | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 5463 | 5463 | 5463 |
| 5° | 5449 | 5465 | 5488 |
| 10° | 5420 | 5465 | 5508 |
| 15° | 5377 | 5451 | 5519 |
| 20° | 5304 | 5414 | 5513 |
| 25° | 5198 | 5324 | 5459 |
| 30° | 5023 | 5158 | 5323 |
| 35° | 4774 | 4927 | 5081 |
| 40° | 4454 | 4646 | 4750 |
| 45° | 4113 | 4310 | 4398 |
| 50° | 3764 | 3921 | 4057 |
| 55° | 3394 | 3464 | 3644 |
| 60° | 3024 | 2893 | 3164 |
| 65° | 2711 | 2294 | 2789 |
| 70° | 2562 | 1950 | 2619 |
| 75° | 2599 | 2060 | 2659 |
| 80° | 2758 | 2378 | 2869 |
| 85° | 3047 | 2669 | 3203 |



TEST NUMBER: 163P110

CATALOG NUMBER: GC2048-332A-PAF

ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|------|-------|------|-------|------|------|
| 0°-10° | 266.9 | 4.0 | 3.1 | 0° | 2818 | 2818 | 2818 | 2818 | 2818 | |
| 10°-20° | 765.5 | 11.6 | 9.0 | 5° | 2800 | 2800 | 2808 | 2812 | 2820 | 266 |
| 20°-30° | 1143.4 | 17.3 | 13.4 | 15° | 2679 | 2689 | 2716 | 2736 | 2750 | 755 |
| 30°-40° | 1298.7 | 19.6 | 15.2 | 25° | 2430 | 2445 | 2489 | 2530 | 2552 | 1116 |
| 40°-50° | 1204.7 | 18.2 | 14.1 | 35° | 2017 | 2036 | 2082 | 2129 | 2147 | 1258 |
| 50°-60° | 917.7 | 13.9 | 10.7 | 45° | 1500 | 1530 | 1572 | 1598 | 1604 | 1157 |
| 60°-70° | 554.9 | 8.4 | 6.5 | 55° | 1004 | 996 | 1025 | 1045 | 1078 | 900 |
| 70°-80° | 330.9 | 5.0 | 3.9 | 65° | 591 | 541 | 500 | 550 | 608 | 594 |
| 80°-90° | 135.2 | 2.0 | 1.6 | 75° | 347 | 310 | 275 | 312 | 355 | 368 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 137 | 130 | 120 | 128 | 144 | 133 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 10 |
| 110°-120° | 0.0 | 0.0 | 0.0 | 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 120°-130° | 0.0 | 0.0 | 0.0 | 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 130°-140° | 0.0 | 0.0 | 0.0 | 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 150°-160° | 0.0 | 0.0 | 0.0 | 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 160°-170° | 0.0 | 0.0 | 0.0 | 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 170°-180° | 0.0 | 0.0 | 0.0 | 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-30° | 2175.8 | 32.9 | 25.4 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 3474.5 | 52.5 | 40.6 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 5596.8 | 84.6 | 65.5 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 6617.8 | 100.0 | 77.4 | | | | | | | |
| 90°-120° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-150° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-180° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 0°-180° | 6617.8 | 100.0 | 77.4 | | | | | | | |



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CATALOG NUMBER: GC2048-332A-PAF

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|------|-------|------|
| 0° | 2818 | 2818 | 2818 | 2818 | 2818 |
| 2.5° | 2810 | 2810 | 2817 | 2817 | 2824 |
| 5° | 2800 | 2800 | 2808 | 2812 | 2820 |
| 7.5° | 2780 | 2781 | 2796 | 2802 | 2811 |
| 10° | 2753 | 2759 | 2776 | 2786 | 2798 |
| 12.5° | 2721 | 2727 | 2750 | 2766 | 2778 |
| 15° | 2679 | 2689 | 2716 | 2736 | 2750 |
| 17.5° | 2631 | 2642 | 2676 | 2700 | 2715 |
| 20° | 2571 | 2586 | 2624 | 2655 | 2672 |
| 22.5° | 2504 | 2522 | 2562 | 2599 | 2617 |
| 25° | 2430 | 2445 | 2489 | 2530 | 2552 |
| 27.5° | 2342 | 2360 | 2402 | 2447 | 2471 |
| 30° | 2244 | 2261 | 2304 | 2352 | 2378 |
| 32.5° | 2136 | 2153 | 2197 | 2245 | 2268 |
| 35° | 2017 | 2036 | 2082 | 2129 | 2147 |
| 37.5° | 1891 | 1914 | 1961 | 2002 | 2015 |
| 40° | 1760 | 1789 | 1836 | 1870 | 1877 |
| 42.5° | 1629 | 1661 | 1705 | 1734 | 1740 |
| 45° | 1500 | 1530 | 1572 | 1598 | 1604 |
| 47.5° | 1373 | 1398 | 1436 | 1461 | 1475 |
| 50° | 1248 | 1263 | 1300 | 1325 | 1345 |
| 52.5° | 1125 | 1128 | 1163 | 1187 | 1213 |
| 55° | 1004 | 996 | 1025 | 1045 | 1078 |
| 57.5° | 889 | 868 | 885 | 903 | 943 |
| 60° | 780 | 747 | 746 | 768 | 816 |
| 62.5° | 679 | 637 | 616 | 649 | 703 |
| 65° | 591 | 541 | 500 | 550 | 608 |
| 67.5° | 516 | 463 | 408 | 470 | 528 |
| 70° | 452 | 403 | 344 | 408 | 462 |
| 72.5° | 396 | 353 | 302 | 357 | 406 |
| 75° | 347 | 310 | 275 | 312 | 355 |
| 77.5° | 300 | 268 | 248 | 269 | 308 |
| 80° | 247 | 226 | 213 | 225 | 257 |
| 82.5° | 193 | 181 | 168 | 178 | 204 |
| 85° | 137 | 130 | 120 | 128 | 144 |
| 87.5° | 73 | 71 | 66 | 70 | 82 |
| 90° | 0 | 0 | 0 | 0 | 0 |
| 92.5° | 0 | 0 | 0 | 0 | 0 |
| 95° | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: GC2048-332A-PAF

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|----|-------|-----|-------|-----|
| 112.5° | 0 | 0 | 0 | 0 | 0 |
| 115° | 0 | 0 | 0 | 0 | 0 |
| 117.5° | 0 | 0 | 0 | 0 | 0 |
| 120° | 0 | 0 | 0 | 0 | 0 |
| 122.5° | 0 | 0 | 0 | 0 | 0 |
| 125° | 0 | 0 | 0 | 0 | 0 |
| 127.5° | 0 | 0 | 0 | 0 | 0 |
| 130° | 0 | 0 | 0 | 0 | 0 |
| 132.5° | 0 | 0 | 0 | 0 | 0 |
| 135° | 0 | 0 | 0 | 0 | 0 |
| 137.5° | 0 | 0 | 0 | 0 | 0 |
| 140° | 0 | 0 | 0 | 0 | 0 |
| 142.5° | 0 | 0 | 0 | 0 | 0 |
| 145° | 0 | 0 | 0 | 0 | 0 |
| 147.5° | 0 | 0 | 0 | 0 | 0 |
| 150° | 0 | 0 | 0 | 0 | 0 |
| 152.5° | 0 | 0 | 0 | 0 | 0 |
| 155° | 0 | 0 | 0 | 0 | 0 |
| 157.5° | 0 | 0 | 0 | 0 | 0 |
| 160° | 0 | 0 | 0 | 0 | 0 |
| 162.5° | 0 | 0 | 0 | 0 | 0 |
| 165° | 0 | 0 | 0 | 0 | 0 |
| 167.5° | 0 | 0 | 0 | 0 | 0 |
| 170° | 0 | 0 | 0 | 0 | 0 |
| 172.5° | 0 | 0 | 0 | 0 | 0 |
| 175° | 0 | 0 | 0 | 0 | 0 |
| 177.5° | 0 | 0 | 0 | 0 | 0 |
| 180° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)