

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: 108P153

Luminaire Tested: **2GC-432A-PAF**

Issue Date: 3/3/2020



**Test Information**

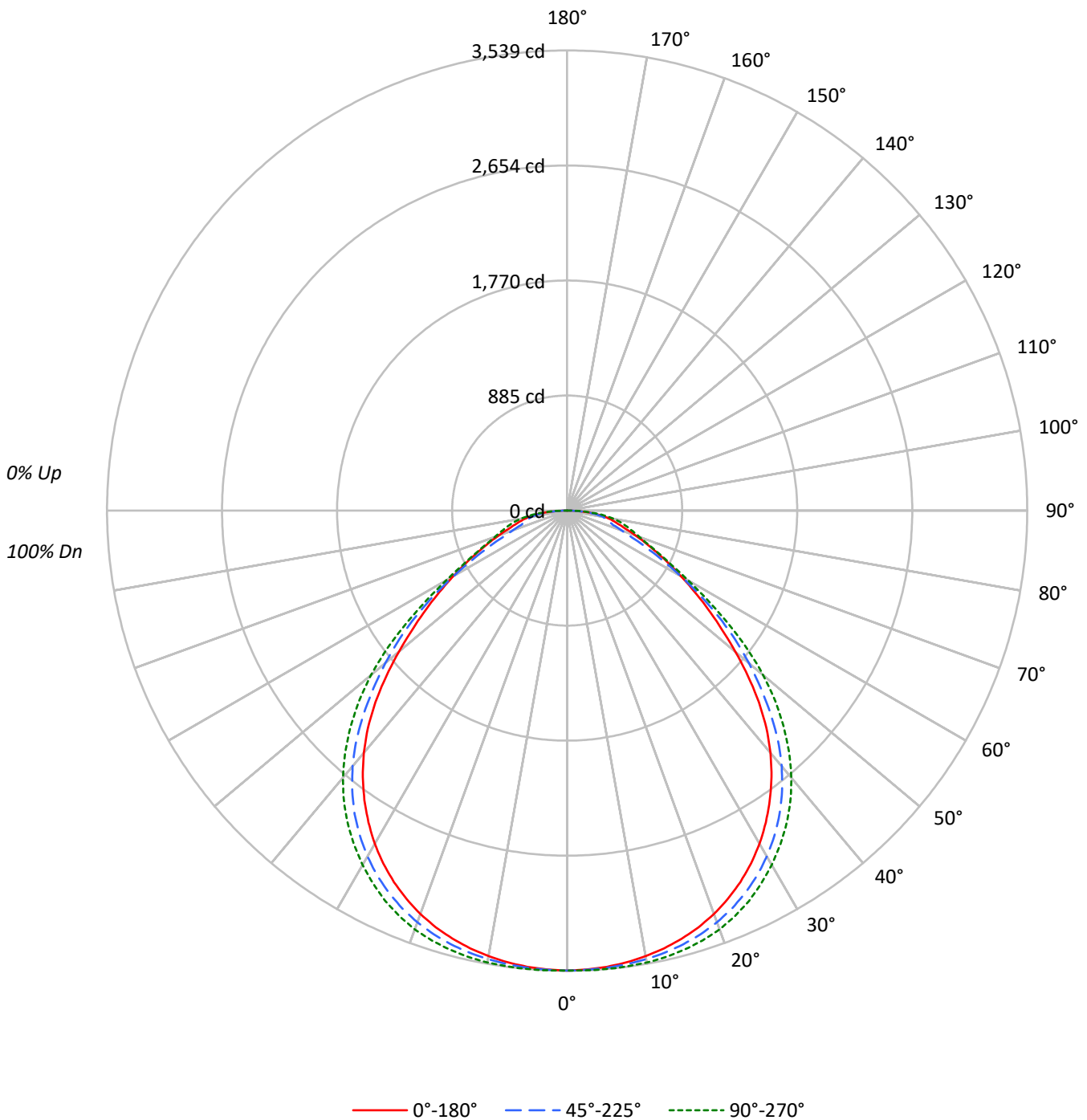
Test Method: LM-41-14  
Report Number: 108P153  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2GC-432A-PAF  
Description: 2 X 4 Prototype Recessed Convertible Body Troffer with  
a .095 pattern 12 acrylic lens.  
Light Source: Four - F032/735 - 2800 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Magnetek B432I120RH Electronic - L.O.B.F. = 89.5

**Summary**

Lumens per Lamp: 2800 (4 lamps)  
Luminaire Lumens: 8880.7 lumens  
Efficiency: 79.3%  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.31 / 1.35  
Luminous Opening: Rectangular (W 1.79' x L: 3.81' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 110.1  
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 |    |    |  | 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   | 94 | 94 | 94 | 94 | 92 | 92 | 92 | 92 | 88 | 88 | 88 |  | 84 | 84 | 84 |  | 81 | 81 | 81 | 79 |
| 1   | 87 | 83 | 80 | 77 | 85 | 82 | 79 | 76 | 78 | 76 | 74 |  | 75 | 73 | 71 |  | 72 | 71 | 69 | 68 |
| 2   | 80 | 74 | 68 | 64 | 78 | 72 | 67 | 63 | 69 | 65 | 62 |  | 67 | 63 | 61 |  | 64 | 62 | 59 | 58 |
| 3   | 73 | 65 | 59 | 54 | 71 | 64 | 58 | 54 | 62 | 57 | 53 |  | 60 | 55 | 52 |  | 58 | 54 | 51 | 49 |
| 4   | 67 | 58 | 52 | 47 | 66 | 57 | 51 | 46 | 55 | 50 | 46 |  | 53 | 49 | 45 |  | 52 | 48 | 45 | 43 |
| 5   | 62 | 52 | 46 | 41 | 60 | 52 | 45 | 40 | 50 | 44 | 40 |  | 48 | 43 | 40 |  | 47 | 43 | 39 | 38 |
| 6   | 58 | 47 | 41 | 36 | 56 | 47 | 40 | 36 | 45 | 40 | 35 |  | 44 | 39 | 35 |  | 43 | 38 | 35 | 33 |
| 7   | 53 | 43 | 36 | 32 | 52 | 43 | 36 | 32 | 41 | 36 | 31 |  | 40 | 35 | 31 |  | 39 | 35 | 31 | 30 |
| 8   | 50 | 39 | 33 | 29 | 49 | 39 | 33 | 28 | 38 | 32 | 28 |  | 37 | 32 | 28 |  | 36 | 31 | 28 | 26 |
| 9   | 47 | 36 | 30 | 26 | 46 | 36 | 30 | 26 | 35 | 29 | 26 |  | 34 | 29 | 25 |  | 33 | 29 | 25 | 24 |
| 10  | 44 | 34 | 27 | 23 | 43 | 33 | 27 | 23 | 32 | 27 | 23 |  | 32 | 27 | 23 |  | 31 | 26 | 23 | 22 |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 5575 | 5575 | 5575 |
| 5°  | 5571 | 5582 | 5598 |
| 10° | 5568 | 5607 | 5647 |
| 15° | 5560 | 5633 | 5702 |
| 20° | 5537 | 5650 | 5747 |
| 25° | 5480 | 5640 | 5757 |
| 30° | 5384 | 5588 | 5724 |
| 35° | 5229 | 5481 | 5658 |
| 40° | 5003 | 5280 | 5517 |
| 45° | 4649 | 4936 | 5250 |
| 50° | 4141 | 4471 | 4825 |
| 55° | 3637 | 3909 | 4143 |
| 60° | 3193 | 3177 | 3382 |
| 65° | 2830 | 2494 | 2882 |
| 70° | 2585 | 2036 | 2714 |
| 75° | 2508 | 2034 | 2898 |
| 80° | 2813 | 2532 | 3285 |
| 85° | 3019 | 2929 | 3544 |



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

| Zone      | Lumens | % Fixture | % Lamp |      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----------|--------|-----------|--------|------|------|-------|------|-------|------|------|
| 0°-10°    | 336.2  | 3.8       | 3.0    | 0°   | 3538 | 3538  | 3538 | 3538  | 3538 |      |
| 10°-20°   | 975.0  | 11.0      | 8.7    | 5°   | 3522 | 3522  | 3529 | 3540  | 3539 | 335  |
| 20°-30°   | 1490.8 | 16.8      | 13.3   | 15°  | 3408 | 3420  | 3453 | 3487  | 3495 | 962  |
| 30°-40°   | 1771.3 | 19.9      | 15.8   | 25°  | 3152 | 3183  | 3244 | 3297  | 3311 | 1451 |
| 40°-50°   | 1700.5 | 19.1      | 15.2   | 35°  | 2718 | 2764  | 2849 | 2916  | 2941 | 1696 |
| 50°-60°   | 1261.3 | 14.2      | 11.3   | 45°  | 2086 | 2126  | 2215 | 2296  | 2356 | 1600 |
| 60°-70°   | 731.9  | 8.2       | 6.5    | 55°  | 1324 | 1336  | 1423 | 1468  | 1508 | 1191 |
| 70°-80°   | 431.7  | 4.9       | 3.9    | 65°  | 759  | 690   | 669  | 760   | 773  | 761  |
| 80°-90°   | 182.0  | 2.0       | 1.6    | 75°  | 412  | 388   | 334  | 450   | 476  | 445  |
| 90°-100°  | 0.0    | 0.0       | 0.0    | 85°  | 167  | 161   | 162  | 194   | 196  | 166  |
| 100°-110° | 0.0    | 0.0       | 0.0    | 90°  | 0    | 0     | 0    | 0     | 0    | 12   |
| 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°    | 2802.0 | 31.6      | 25.0   | 165° | 0    | 0     | 0    | 0     | 0    | 0    |
| 0°-40°    | 4573.3 | 51.5      | 40.8   | 175° | 0    | 0     | 0    | 0     | 0    | 0    |
| 0°-60°    | 7535.1 | 84.8      | 67.3   | 180° | 0    | 0     | 0    | 0     | 0    | 0    |
| 0°-90°    | 8880.7 | 100.0     | 79.3   |      |      |       |      |       |      |      |
| 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°   | 8880.7 | 100.0     | 79.3   |      |      |       |      |       |      |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°   | 22.5° | 45°  | 67.5° | 90°  |
|--------|------|-------|------|-------|------|
| 0°     | 3538 | 3538  | 3538 | 3538  | 3538 |
| 2.5°   | 3533 | 3532  | 3535 | 3542  | 3539 |
| 5°     | 3522 | 3522  | 3529 | 3540  | 3539 |
| 7.5°   | 3504 | 3506  | 3519 | 3536  | 3536 |
| 10°    | 3480 | 3484  | 3504 | 3526  | 3529 |
| 12.5°  | 3448 | 3455  | 3482 | 3510  | 3516 |
| 15°    | 3408 | 3420  | 3453 | 3487  | 3495 |
| 17.5°  | 3360 | 3375  | 3416 | 3456  | 3466 |
| 20°    | 3302 | 3321  | 3369 | 3415  | 3427 |
| 22.5°  | 3232 | 3257  | 3312 | 3362  | 3375 |
| 25°    | 3152 | 3183  | 3244 | 3297  | 3311 |
| 27.5°  | 3061 | 3096  | 3164 | 3218  | 3233 |
| 30°    | 2959 | 2997  | 3071 | 3128  | 3146 |
| 32.5°  | 2844 | 2887  | 2967 | 3028  | 3049 |
| 35°    | 2718 | 2764  | 2849 | 2916  | 2941 |
| 37.5°  | 2582 | 2628  | 2716 | 2791  | 2820 |
| 40°    | 2432 | 2476  | 2567 | 2646  | 2682 |
| 42.5°  | 2268 | 2311  | 2400 | 2481  | 2529 |
| 45°    | 2086 | 2126  | 2215 | 2296  | 2356 |
| 47.5°  | 1889 | 1932  | 2019 | 2101  | 2171 |
| 50°    | 1689 | 1735  | 1824 | 1897  | 1968 |
| 52.5°  | 1499 | 1536  | 1627 | 1686  | 1746 |
| 55°    | 1324 | 1336  | 1423 | 1468  | 1508 |
| 57.5°  | 1162 | 1141  | 1211 | 1253  | 1277 |
| 60°    | 1013 | 964   | 1008 | 1057  | 1073 |
| 62.5°  | 878  | 815   | 825  | 893   | 906  |
| 65°    | 759  | 690   | 669  | 760   | 773  |
| 67.5°  | 655  | 590   | 540  | 658   | 668  |
| 70°    | 561  | 509   | 442  | 579   | 589  |
| 72.5°  | 477  | 444   | 373  | 512   | 529  |
| 75°    | 412  | 388   | 334  | 450   | 476  |
| 77.5°  | 362  | 335   | 310  | 390   | 423  |
| 80°    | 310  | 281   | 279  | 332   | 362  |
| 82.5°  | 244  | 223   | 229  | 269   | 286  |
| 85°    | 167  | 161   | 162  | 194   | 196  |
| 87.5°  | 88   | 89    | 87   | 105   | 103  |
| 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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**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)