

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: P31260

Luminaire Tested: **2GR5-214T5A-UNV-EBT1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P31260
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2GR5-214T5A-UNV-EBT1-U
Description: METALUX 2' X 2' COMMERCIAL T5 TROFFER WITH ACRYLIC PRISMATIC LENS
Light Source: (2) BIPIN T5 DOUBLE ENDED LINEAR FLUORESCENT LAMP 3500K
F14W/T5/835/ECO
Ballast/Driver: -
B228PUNV-C

Summary

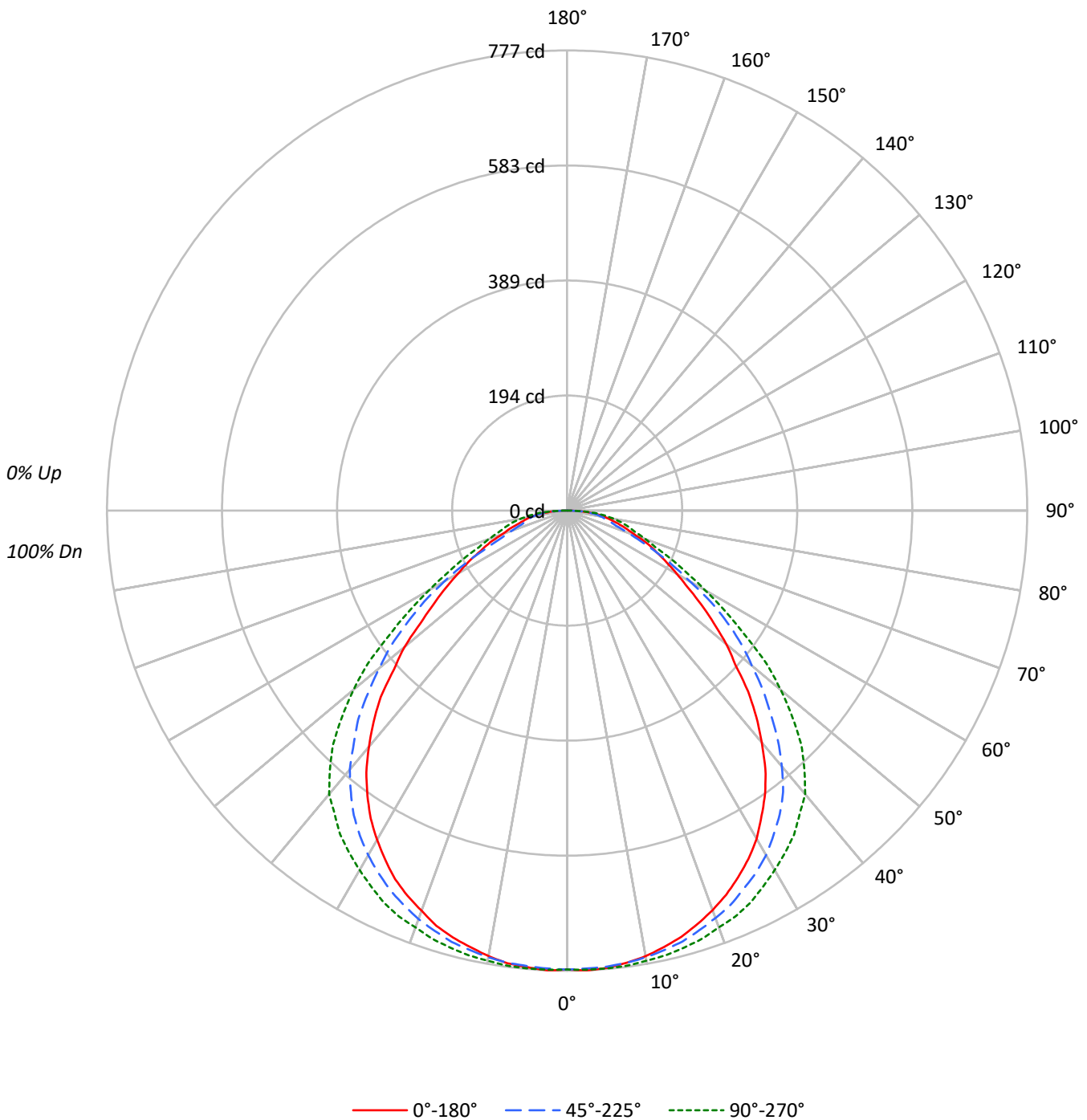
Lumens per Lamp: 1300 (2 lamps)
Luminaire Lumens: 1978.7 lumens
Efficiency: 76.1%
Efficacy: 60.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.34 / 1.36
Luminous Opening: Rectangular (W 1.77' x L: 1.77' x H: 0')
CIE Type: Direct

Input Watts (W): 33
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 | 91 | 91 | 91 | 91 | 88 | 88 | 88 | 88 | 85 | 85 | 85 | 81 | 81 | 81 | 78 | 78 | 78 | 76 |
| 1 | 83 | 80 | 77 | 74 | 81 | 78 | 75 | 73 | 75 | 73 | 71 | 72 | 70 | 68 | 69 | 68 | 66 | 65 |
| 2 | 76 | 70 | 66 | 61 | 74 | 69 | 65 | 61 | 66 | 63 | 59 | 64 | 61 | 58 | 62 | 59 | 57 | 55 |
| 3 | 70 | 62 | 57 | 52 | 68 | 61 | 56 | 51 | 59 | 54 | 51 | 57 | 53 | 50 | 55 | 52 | 49 | 47 |
| 4 | 64 | 56 | 49 | 45 | 63 | 55 | 49 | 44 | 53 | 48 | 44 | 51 | 47 | 43 | 49 | 46 | 42 | 41 |
| 5 | 59 | 50 | 44 | 39 | 58 | 49 | 43 | 38 | 48 | 42 | 38 | 46 | 41 | 38 | 45 | 41 | 37 | 36 |
| 6 | 55 | 45 | 39 | 34 | 54 | 45 | 38 | 34 | 43 | 38 | 34 | 42 | 37 | 33 | 41 | 36 | 33 | 31 |
| 7 | 51 | 41 | 35 | 30 | 50 | 41 | 34 | 30 | 39 | 34 | 30 | 38 | 33 | 30 | 37 | 33 | 29 | 28 |
| 8 | 48 | 38 | 31 | 27 | 46 | 37 | 31 | 27 | 36 | 31 | 27 | 35 | 30 | 27 | 34 | 30 | 26 | 25 |
| 9 | 45 | 35 | 29 | 24 | 43 | 34 | 28 | 24 | 33 | 28 | 24 | 32 | 28 | 24 | 32 | 27 | 24 | 23 |
| 10 | 42 | 32 | 26 | 22 | 41 | 32 | 26 | 22 | 31 | 26 | 22 | 30 | 25 | 22 | 29 | 25 | 22 | 21 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|------|------|------|
| 0° | 2660 | 2660 | 2660 |
| 5° | 2670 | 2674 | 2667 |
| 10° | 2663 | 2691 | 2663 |
| 15° | 2647 | 2715 | 2651 |
| 20° | 2623 | 2736 | 2626 |
| 25° | 2587 | 2769 | 2602 |
| 30° | 2537 | 2778 | 2545 |
| 35° | 2443 | 2799 | 2464 |
| 40° | 2290 | 2801 | 2335 |
| 45° | 2097 | 2714 | 2160 |
| 50° | 1874 | 2515 | 1917 |
| 55° | 1652 | 2190 | 1646 |
| 60° | 1469 | 1847 | 1455 |
| 65° | 1356 | 1568 | 1308 |
| 70° | 1244 | 1405 | 1164 |
| 75° | 1220 | 1432 | 1114 |
| 80° | 1305 | 1581 | 1226 |
| 85° | 1497 | 1851 | 1300 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 45° | 90° | 135° | 180° | Flux |
|-----------|--------|-----------|--------|-----|-----|-----|-----|------|------|------|
| 0°-10° | 73.7 | 3.7 | 2.8 | 0° | 775 | 775 | 775 | 775 | 775 | |
| 10°-20° | 212.8 | 10.8 | 8.2 | 5° | 775 | 773 | 776 | 772 | 774 | 74 |
| 20°-30° | 325.7 | 16.5 | 12.5 | 15° | 745 | 753 | 764 | 754 | 746 | 210 |
| 30°-40° | 390.5 | 19.7 | 15.0 | 25° | 683 | 705 | 731 | 707 | 687 | 315 |
| 40°-50° | 379.6 | 19.2 | 14.6 | 35° | 583 | 626 | 668 | 628 | 588 | 363 |
| 50°-60° | 289.9 | 14.7 | 11.2 | 45° | 432 | 486 | 559 | 499 | 445 | 331 |
| 60°-70° | 171.0 | 8.6 | 6.6 | 55° | 276 | 331 | 366 | 329 | 275 | 248 |
| 70°-80° | 96.0 | 4.9 | 3.7 | 65° | 167 | 167 | 193 | 150 | 161 | 166 |
| 80°-90° | 39.6 | 2.0 | 1.5 | 75° | 92 | 76 | 108 | 73 | 84 | 98 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 38 | 35 | 47 | 35 | 33 | 40 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | |
| 110°-120° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 120°-130° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 130°-140° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 140°-150° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 150°-160° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 160°-170° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 170°-180° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 0°-30° | 612.2 | 30.9 | 23.5 | | | | | | | |
| 0°-40° | 1002.6 | 50.7 | 38.6 | | | | | | | |
| 0°-60° | 1672.2 | 84.5 | 64.3 | | | | | | | |
| 0°-90° | 1978.7 | 100.0 | 76.1 | | | | | | | |
| 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° | 1978.7 | 100.0 | 76.1 | | | | | | | |



TEST NUMBER: P31260

CATALOG NUMBER: 2GR5-214T5A-UNV-EBT1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-----|-------|-----|-------|-----|--------|------|--------|------|
| 0° | 775 | 775 | 775 | 775 | 775 | 775 | 775 | 775 | 775 |
| 2.5° | 777 | 775 | 774 | 775 | 776 | 775 | 774 | 775 | 777 |
| 5° | 775 | 773 | 773 | 775 | 776 | 774 | 772 | 773 | 774 |
| 7.5° | 770 | 770 | 770 | 773 | 775 | 773 | 770 | 770 | 771 |
| 10° | 764 | 764 | 766 | 770 | 772 | 770 | 766 | 764 | 764 |
| 12.5° | 755 | 757 | 760 | 765 | 769 | 766 | 760 | 757 | 755 |
| 15° | 745 | 747 | 753 | 760 | 764 | 761 | 754 | 748 | 746 |
| 17.5° | 732 | 735 | 743 | 753 | 758 | 754 | 744 | 737 | 735 |
| 20° | 718 | 721 | 732 | 745 | 749 | 745 | 734 | 724 | 719 |
| 22.5° | 702 | 709 | 721 | 735 | 742 | 736 | 721 | 709 | 704 |
| 25° | 683 | 691 | 705 | 722 | 731 | 723 | 707 | 693 | 687 |
| 27.5° | 663 | 671 | 690 | 708 | 716 | 708 | 690 | 673 | 665 |
| 30° | 640 | 649 | 672 | 693 | 701 | 692 | 672 | 651 | 642 |
| 32.5° | 611 | 625 | 649 | 675 | 685 | 675 | 651 | 627 | 617 |
| 35° | 583 | 595 | 626 | 653 | 668 | 655 | 628 | 598 | 588 |
| 37.5° | 550 | 562 | 599 | 629 | 645 | 632 | 600 | 569 | 557 |
| 40° | 511 | 528 | 564 | 599 | 625 | 607 | 571 | 532 | 521 |
| 42.5° | 473 | 487 | 527 | 565 | 593 | 578 | 533 | 499 | 484 |
| 45° | 432 | 449 | 486 | 528 | 559 | 539 | 499 | 460 | 445 |
| 47.5° | 385 | 408 | 448 | 485 | 516 | 497 | 456 | 420 | 396 |
| 50° | 351 | 372 | 407 | 446 | 471 | 451 | 414 | 372 | 359 |
| 52.5° | 312 | 328 | 371 | 402 | 424 | 405 | 375 | 333 | 312 |
| 55° | 276 | 292 | 331 | 355 | 366 | 353 | 329 | 293 | 275 |
| 57.5° | 241 | 252 | 289 | 307 | 317 | 306 | 286 | 252 | 243 |
| 60° | 214 | 217 | 239 | 262 | 269 | 254 | 240 | 214 | 212 |
| 62.5° | 189 | 185 | 202 | 222 | 228 | 214 | 195 | 181 | 188 |
| 65° | 167 | 159 | 167 | 186 | 193 | 180 | 150 | 153 | 161 |
| 67.5° | 148 | 136 | 133 | 160 | 161 | 153 | 119 | 129 | 141 |
| 70° | 124 | 117 | 108 | 137 | 140 | 130 | 99 | 111 | 116 |
| 72.5° | 107 | 101 | 88 | 121 | 121 | 115 | 83 | 96 | 101 |
| 75° | 92 | 88 | 76 | 104 | 108 | 99 | 73 | 81 | 84 |
| 77.5° | 78 | 74 | 66 | 89 | 95 | 87 | 66 | 68 | 73 |
| 80° | 66 | 61 | 59 | 73 | 80 | 72 | 60 | 56 | 62 |
| 82.5° | 54 | 48 | 49 | 59 | 64 | 60 | 49 | 44 | 49 |
| 85° | 38 | 34 | 35 | 44 | 47 | 45 | 35 | 32 | 33 |
| 87.5° | 21 | 19 | 18 | 25 | 24 | 25 | 18 | 19 | 19 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)