

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: 104P167

Luminaire Tested: **2P2GX-332W38P-2BC-PAF**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 104P167
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2P2GX-332W38P-2BC-PAF
Description: 2 X 4 Recessed Convertible Body Troffer with a
2" deep 24 cell white powder painted louver.
Light Source: Three-F32T8/35K - 2900 Lumens ea. - 32 Watts ea.
Ballast/Driver: Triad-Utrad B332I120RH Electronic

Summary

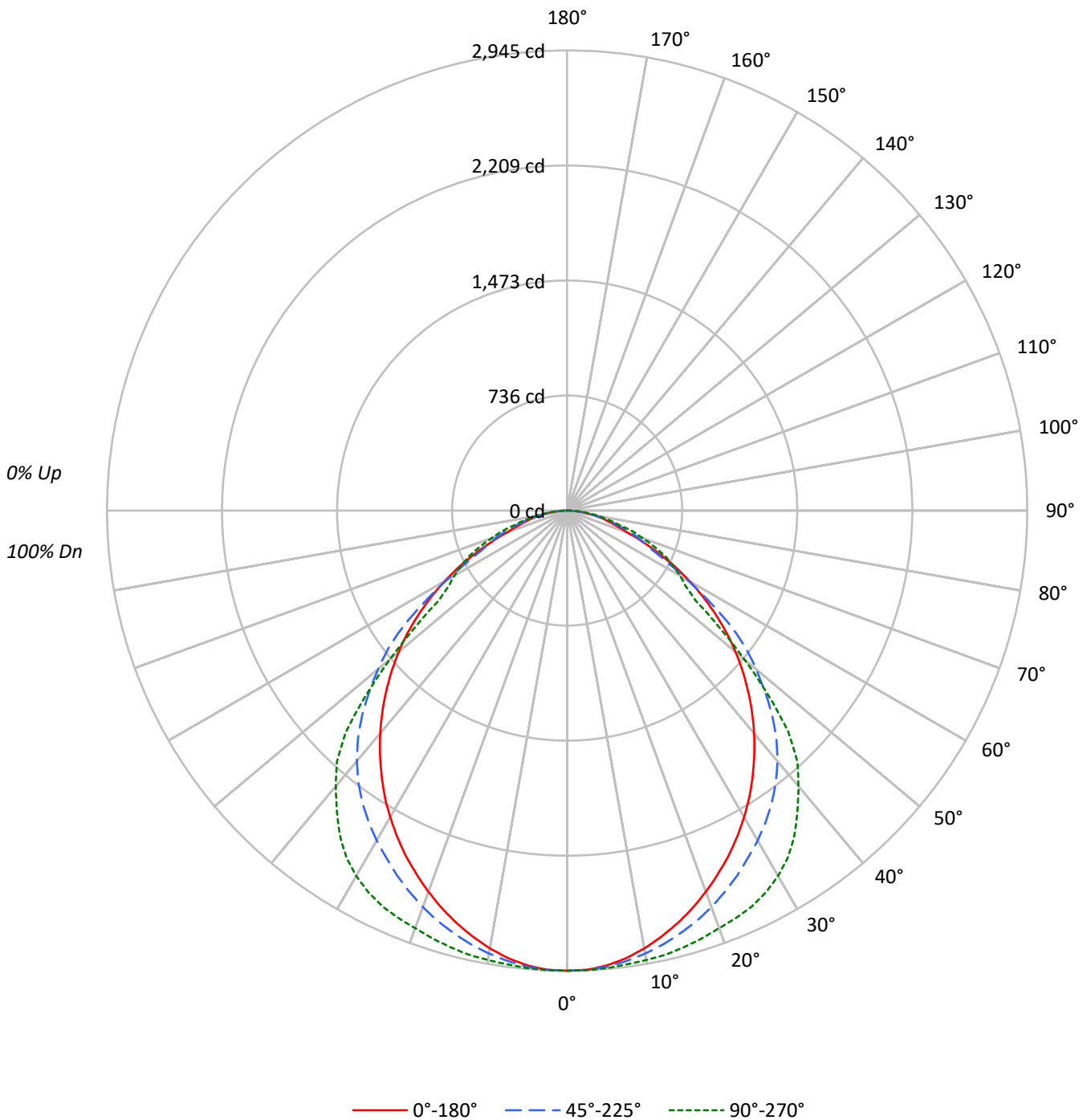
Lumens per Lamp: 2900 (3 lamps)
Luminaire Lumens: 7228.0 lumens
Efficiency: 83.1%
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.34 / 1.35
Luminous Opening: Rectangular (W 1.74' x L: 3.76' x H: 0')
CIE Type: Direct

Input Watts (W): 90.6
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

TEST NUMBER: 104P167

CATALOG NUMBER: 2P2GX-332W38P-2BC-PAF

Luminous Intensity Polar Plot





TEST NUMBER: 104P167

CATALOG NUMBER: 2P2GX-332W38P-2BC-PAF

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 | 99 | 99 | 99 | 99 | 97 | 97 | 97 | 97 | 92 | 92 | 92 | | 88 | 88 | 88 | | 85 | 85 | 85 | 83 |
| 1 | 91 | 88 | 84 | 81 | 89 | 86 | 83 | 80 | 82 | 80 | 78 | | 79 | 77 | 75 | | 76 | 74 | 73 | 71 |
| 2 | 84 | 77 | 72 | 68 | 81 | 76 | 71 | 67 | 73 | 69 | 65 | | 70 | 67 | 64 | | 68 | 65 | 62 | 61 |
| 3 | 77 | 69 | 62 | 57 | 75 | 67 | 61 | 57 | 65 | 60 | 56 | | 63 | 58 | 55 | | 60 | 57 | 54 | 52 |
| 4 | 71 | 61 | 54 | 49 | 69 | 60 | 54 | 49 | 58 | 52 | 48 | | 56 | 51 | 47 | | 54 | 50 | 47 | 45 |
| 5 | 65 | 55 | 48 | 43 | 63 | 54 | 47 | 42 | 52 | 46 | 42 | | 51 | 46 | 41 | | 49 | 45 | 41 | 39 |
| 6 | 60 | 50 | 43 | 37 | 59 | 49 | 42 | 37 | 47 | 41 | 37 | | 46 | 41 | 37 | | 45 | 40 | 36 | 35 |
| 7 | 56 | 45 | 38 | 33 | 55 | 45 | 38 | 33 | 43 | 37 | 33 | | 42 | 37 | 33 | | 41 | 36 | 32 | 31 |
| 8 | 52 | 41 | 35 | 30 | 51 | 41 | 34 | 30 | 40 | 34 | 30 | | 39 | 33 | 29 | | 38 | 33 | 29 | 28 |
| 9 | 49 | 38 | 31 | 27 | 48 | 38 | 31 | 27 | 37 | 31 | 27 | | 36 | 30 | 27 | | 35 | 30 | 26 | 25 |
| 10 | 46 | 35 | 29 | 24 | 45 | 35 | 29 | 24 | 34 | 28 | 24 | | 33 | 28 | 24 | | 32 | 28 | 24 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4846 | 4846 | 4846 |
| 5° | 4826 | 4840 | 4854 |
| 10° | 4754 | 4809 | 4881 |
| 15° | 4656 | 4772 | 4927 |
| 20° | 4546 | 4728 | 4980 |
| 25° | 4430 | 4677 | 5074 |
| 30° | 4304 | 4632 | 5130 |
| 35° | 4158 | 4586 | 5094 |
| 40° | 3997 | 4498 | 4947 |
| 45° | 3814 | 4319 | 4654 |
| 50° | 3602 | 4039 | 3786 |
| 55° | 3331 | 3638 | 2883 |
| 60° | 2985 | 2926 | 2748 |
| 65° | 2527 | 2363 | 2706 |
| 70° | 1968 | 2189 | 2463 |
| 75° | 1774 | 1939 | 2130 |
| 80° | 1649 | 1763 | 1961 |
| 85° | 1473 | 1586 | 1775 |



TEST NUMBER: 104P167

CATALOG NUMBER: 2P2GX-332W38P-2BC-PAF

ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|------|-------|------|-------|------|------|
| 0°-10° | 278.1 | 3.8 | 3.2 | 0° | 2945 | 2945 | 2945 | 2945 | 2945 | |
| 10°-20° | 791.9 | 11.0 | 9.1 | 5° | 2922 | 2924 | 2930 | 2935 | 2939 | 276 |
| 20°-30° | 1196.1 | 16.5 | 13.7 | 15° | 2733 | 2750 | 2801 | 2866 | 2892 | 770 |
| 30°-40° | 1428.8 | 19.8 | 16.4 | 25° | 2440 | 2475 | 2576 | 2716 | 2795 | 1123 |
| 40°-50° | 1401.3 | 19.4 | 16.1 | 35° | 2070 | 2128 | 2283 | 2443 | 2536 | 1294 |
| 50°-60° | 1050.4 | 14.5 | 12.1 | 45° | 1639 | 1711 | 1856 | 1949 | 2000 | 1263 |
| 60°-70° | 654.7 | 9.1 | 7.5 | 55° | 1161 | 1250 | 1268 | 1062 | 1005 | 1036 |
| 70°-80° | 331.1 | 4.6 | 3.8 | 65° | 649 | 695 | 607 | 650 | 695 | 644 |
| 80°-90° | 95.6 | 1.3 | 1.1 | 75° | 279 | 286 | 305 | 324 | 335 | 299 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 78 | 80 | 84 | 90 | 94 | 83 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 5 |
| 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° | 2266.1 | 31.4 | 26.0 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 3694.9 | 51.1 | 42.5 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 6146.6 | 85.0 | 70.7 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 7228.0 | 100.0 | 83.1 | | | | | | | |
| 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° | 7228.0 | 100.0 | 83.1 | | | | | | | |



TEST NUMBER: 104P167

CATALOG NUMBER: 2P2GX-332W38P-2BC-PAF

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|------|-------|------|-------|------|
| 0° | 2945 | 2945 | 2945 | 2945 | 2945 |
| 2.5° | 2941 | 2939 | 2941 | 2944 | 2944 |
| 5° | 2922 | 2924 | 2930 | 2935 | 2939 |
| 7.5° | 2889 | 2895 | 2908 | 2923 | 2929 |
| 10° | 2845 | 2855 | 2878 | 2907 | 2921 |
| 12.5° | 2792 | 2805 | 2843 | 2889 | 2911 |
| 15° | 2733 | 2750 | 2801 | 2866 | 2892 |
| 17.5° | 2668 | 2687 | 2754 | 2832 | 2870 |
| 20° | 2596 | 2621 | 2700 | 2795 | 2844 |
| 22.5° | 2519 | 2551 | 2640 | 2754 | 2822 |
| 25° | 2440 | 2475 | 2576 | 2716 | 2795 |
| 27.5° | 2355 | 2396 | 2506 | 2668 | 2754 |
| 30° | 2265 | 2312 | 2438 | 2607 | 2700 |
| 32.5° | 2172 | 2223 | 2364 | 2534 | 2630 |
| 35° | 2070 | 2128 | 2283 | 2443 | 2536 |
| 37.5° | 1968 | 2030 | 2194 | 2335 | 2422 |
| 40° | 1861 | 1927 | 2094 | 2211 | 2303 |
| 42.5° | 1752 | 1821 | 1982 | 2083 | 2181 |
| 45° | 1639 | 1711 | 1856 | 1949 | 2000 |
| 47.5° | 1524 | 1602 | 1718 | 1761 | 1743 |
| 50° | 1407 | 1490 | 1578 | 1521 | 1479 |
| 52.5° | 1287 | 1373 | 1437 | 1284 | 1228 |
| 55° | 1161 | 1250 | 1268 | 1062 | 1005 |
| 57.5° | 1035 | 1119 | 1072 | 877 | 897 |
| 60° | 907 | 981 | 889 | 790 | 835 |
| 62.5° | 777 | 837 | 728 | 722 | 763 |
| 65° | 649 | 695 | 607 | 650 | 695 |
| 67.5° | 523 | 561 | 533 | 575 | 602 |
| 70° | 409 | 437 | 455 | 484 | 512 |
| 72.5° | 336 | 347 | 379 | 414 | 434 |
| 75° | 279 | 286 | 305 | 324 | 335 |
| 77.5° | 226 | 231 | 242 | 260 | 270 |
| 80° | 174 | 178 | 186 | 200 | 207 |
| 82.5° | 124 | 128 | 134 | 143 | 149 |
| 85° | 78 | 80 | 84 | 90 | 94 |
| 87.5° | 35 | 34 | 36 | 39 | 42 |
| 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 |



TEST NUMBER: 104P167

CATALOG NUMBER: 2P2GX-332W38P-2BC-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)