

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: 155P103

Luminaire Tested: **2P5GX-3U1-5/8S34M/I**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 155P103
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2P5GX-3U1-5/8S34M/I
Description: 2 X 2 Recessed Convertible Body Troffer with a
12 cell specular low iridescent precision cell
II parabolic louver. Lamps spaced 7/64" closer
to louver than in current production fixture.
Light Source: Three-FBO31/35K - 2800 Lumens ea. - 31 Watts
Ballast/Driver: -

Summary

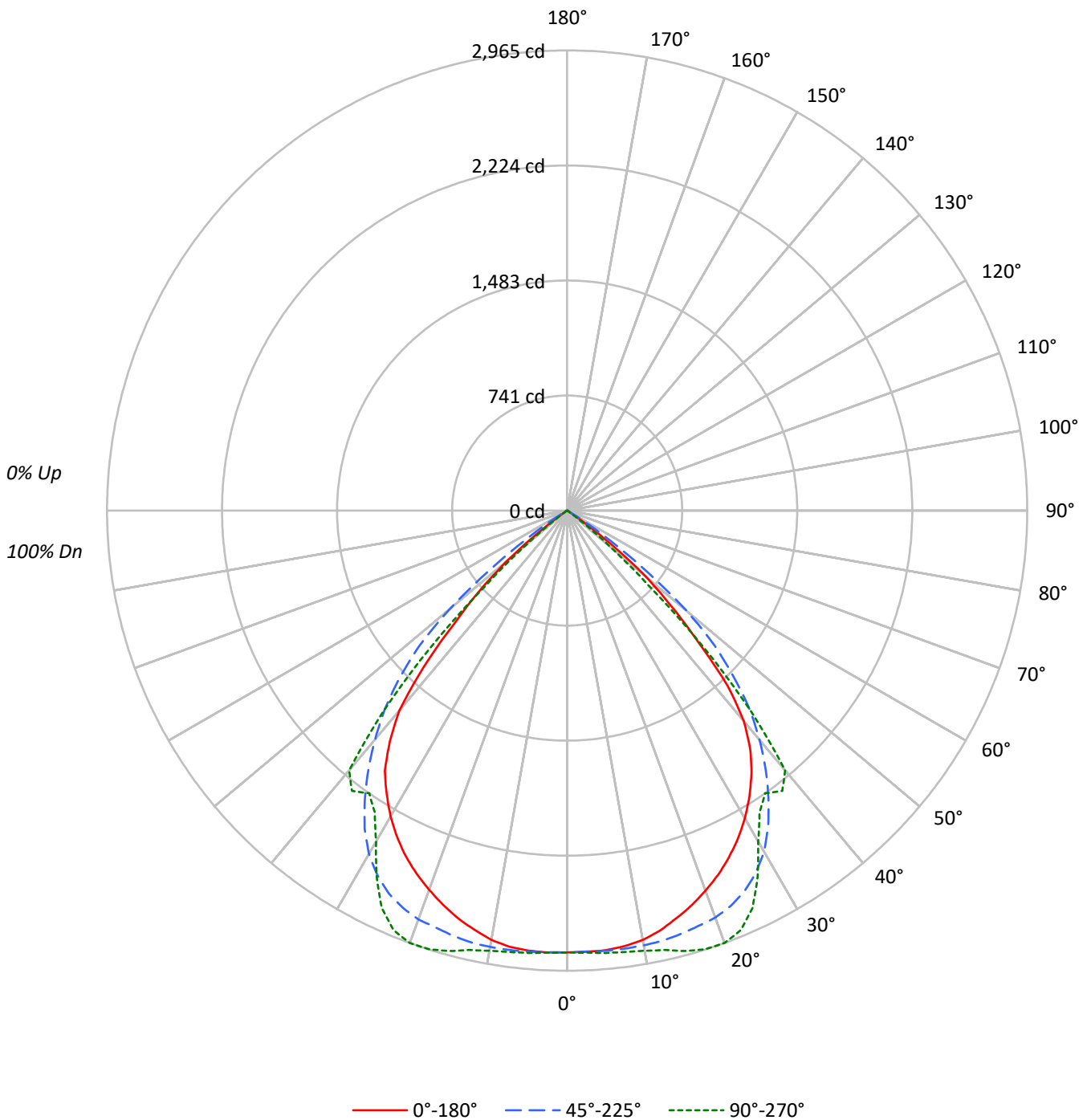
Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 4969.1 lumens
Efficiency: 59.2%
Efficacy: 47.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.29
Luminous Opening: Rectangular (W 1.74' x L: 1.76' x H: 0')
CIE Type: Direct

Input Watts (W): 105
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 | 70 | 70 | 70 | 70 | 69 | 69 | 69 | 69 | 66 | 66 | 66 | | 63 | 63 | 63 | | 60 | 60 | 60 | 59 |
| 1 | 67 | 65 | 63 | 61 | 65 | 63 | 62 | 60 | 61 | 60 | 59 | | 59 | 58 | 57 | | 57 | 56 | 55 | 54 |
| 2 | 62 | 59 | 56 | 54 | 61 | 58 | 56 | 53 | 56 | 54 | 52 | | 54 | 53 | 51 | | 53 | 51 | 50 | 49 |
| 3 | 59 | 54 | 51 | 48 | 57 | 53 | 50 | 47 | 52 | 49 | 47 | | 50 | 48 | 46 | | 49 | 47 | 45 | 44 |
| 4 | 55 | 49 | 46 | 43 | 54 | 49 | 45 | 42 | 47 | 44 | 42 | | 46 | 43 | 41 | | 45 | 43 | 41 | 40 |
| 5 | 51 | 45 | 41 | 38 | 50 | 45 | 41 | 38 | 44 | 40 | 38 | | 43 | 40 | 37 | | 42 | 39 | 37 | 36 |
| 6 | 48 | 42 | 37 | 34 | 47 | 41 | 37 | 34 | 40 | 37 | 34 | | 39 | 36 | 34 | | 38 | 36 | 33 | 32 |
| 7 | 45 | 38 | 34 | 31 | 44 | 38 | 34 | 31 | 37 | 33 | 31 | | 36 | 33 | 31 | | 36 | 33 | 30 | 30 |
| 8 | 42 | 35 | 31 | 28 | 41 | 35 | 31 | 28 | 34 | 31 | 28 | | 34 | 30 | 28 | | 33 | 30 | 28 | 27 |
| 9 | 40 | 33 | 29 | 26 | 39 | 32 | 29 | 26 | 32 | 28 | 26 | | 31 | 28 | 26 | | 31 | 28 | 26 | 25 |
| 10 | 37 | 30 | 26 | 24 | 37 | 30 | 26 | 24 | 30 | 26 | 24 | | 29 | 26 | 24 | | 29 | 26 | 23 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 10036 | 10036 | 10036 |
| 5° | 10064 | 10124 | 10071 |
| 10° | 10055 | 10309 | 10055 |
| 15° | 9923 | 10723 | 9923 |
| 20° | 9776 | 11123 | 9754 |
| 25° | 9592 | 10988 | 9565 |
| 30° | 9322 | 10022 | 9261 |
| 35° | 8913 | 9571 | 8814 |
| 40° | 8145 | 10055 | 7750 |
| 45° | 5898 | 6162 | 5120 |
| 50° | 3620 | 1952 | 2775 |
| 55° | 762 | 129 | 270 |
| 60° | 85 | 85 | 78 |
| 65° | 67 | 67 | 58 |
| 70° | 52 | 62 | 52 |
| 75° | 41 | 41 | 41 |
| 80° | 41 | 41 | 41 |
| 85° | 40 | 40 | 40 |



TEST NUMBER: 155P103

CATALOG NUMBER: 2P5GX-3U1-5/8S34M/I

ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 45° | 90° | 135° | 180° | Flux |
|-----------|--------|-----------|--------|------|------|------|------|------|------|------|
| 0°-10° | 272.0 | 5.5 | 3.2 | 0° | 2847 | 2847 | 2847 | 2847 | 2847 | |
| 10°-20° | 800.8 | 16.1 | 9.5 | 5° | 2844 | 2847 | 2861 | 2853 | 2846 | 270 |
| 20°-30° | 1227.6 | 24.7 | 14.6 | 15° | 2719 | 2825 | 2938 | 2836 | 2719 | 767 |
| 30°-40° | 1381.6 | 27.8 | 16.4 | 25° | 2466 | 2706 | 2825 | 2721 | 2459 | 1134 |
| 40°-50° | 1052.2 | 21.2 | 12.5 | 35° | 2071 | 2261 | 2224 | 2272 | 2048 | 1286 |
| 50°-60° | 221.2 | 4.5 | 2.6 | 45° | 1183 | 1521 | 1236 | 1530 | 1027 | 924 |
| 60°-70° | 8.6 | 0.2 | 0.1 | 55° | 124 | 344 | 21 | 325 | 44 | 182 |
| 70°-80° | 3.8 | 0.1 | 0.0 | 65° | 8 | 8 | 8 | 8 | 7 | 8 |
| 80°-90° | 1.3 | 0.0 | 0.0 | 75° | 3 | 4 | 3 | 3 | 3 | 3 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 0 |
| 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° | 2300.4 | 46.3 | 27.4 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 3682.0 | 74.1 | 43.8 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 4955.4 | 99.7 | 59.0 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 4969.1 | 100.0 | 59.2 | | | | | | | |
| 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° | 4969.1 | 100.0 | 59.2 | | | | | | | |



TEST NUMBER: 155P103

CATALOG NUMBER: 2P5GX-3U1-5/8S34M/I

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|------|-------|------|-------|------|--------|------|--------|------|
| 0° | 2847 | 2847 | 2847 | 2847 | 2847 | 2847 | 2847 | 2847 | 2847 |
| 2.5° | 2845 | 2843 | 2844 | 2849 | 2851 | 2851 | 2847 | 2847 | 2850 |
| 5° | 2844 | 2840 | 2847 | 2857 | 2861 | 2860 | 2853 | 2847 | 2846 |
| 7.5° | 2831 | 2834 | 2847 | 2861 | 2868 | 2867 | 2856 | 2842 | 2835 |
| 10° | 2809 | 2819 | 2844 | 2870 | 2880 | 2877 | 2855 | 2830 | 2809 |
| 12.5° | 2771 | 2789 | 2839 | 2881 | 2900 | 2890 | 2851 | 2800 | 2766 |
| 15° | 2719 | 2748 | 2825 | 2908 | 2938 | 2917 | 2836 | 2761 | 2719 |
| 17.5° | 2667 | 2702 | 2807 | 2928 | 2963 | 2939 | 2817 | 2716 | 2662 |
| 20° | 2606 | 2653 | 2791 | 2938 | 2965 | 2950 | 2803 | 2668 | 2600 |
| 22.5° | 2541 | 2598 | 2756 | 2907 | 2925 | 2922 | 2769 | 2614 | 2533 |
| 25° | 2466 | 2534 | 2706 | 2833 | 2825 | 2842 | 2721 | 2551 | 2459 |
| 27.5° | 2383 | 2465 | 2632 | 2694 | 2658 | 2706 | 2649 | 2480 | 2373 |
| 30° | 2290 | 2389 | 2537 | 2512 | 2462 | 2528 | 2554 | 2403 | 2275 |
| 32.5° | 2185 | 2303 | 2411 | 2324 | 2306 | 2339 | 2428 | 2314 | 2164 |
| 35° | 2071 | 2205 | 2261 | 2195 | 2224 | 2210 | 2272 | 2206 | 2048 |
| 37.5° | 1939 | 2090 | 2102 | 2079 | 2277 | 2100 | 2104 | 2080 | 1877 |
| 40° | 1770 | 1959 | 1928 | 2033 | 2185 | 2052 | 1926 | 1934 | 1684 |
| 42.5° | 1531 | 1782 | 1744 | 1820 | 1753 | 1828 | 1741 | 1742 | 1368 |
| 45° | 1183 | 1520 | 1521 | 1374 | 1236 | 1378 | 1530 | 1469 | 1027 |
| 47.5° | 907 | 1212 | 1290 | 931 | 700 | 928 | 1294 | 1146 | 765 |
| 50° | 660 | 913 | 1005 | 500 | 356 | 497 | 991 | 842 | 506 |
| 52.5° | 360 | 609 | 659 | 239 | 111 | 236 | 636 | 546 | 227 |
| 55° | 124 | 312 | 344 | 64 | 21 | 60 | 325 | 262 | 44 |
| 57.5° | 18 | 78 | 113 | 17 | 14 | 17 | 102 | 48 | 14 |
| 60° | 12 | 15 | 21 | 13 | 12 | 13 | 18 | 14 | 11 |
| 62.5° | 9 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 9 |
| 65° | 8 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 7 |
| 67.5° | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 |
| 70° | 5 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| 72.5° | 4 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 4 |
| 75° | 3 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 |
| 77.5° | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 |
| 80° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 82.5° | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 87.5° | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 92.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 97.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 107.5° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110° | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



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CATALOG NUMBER: 2P5GX-3U1-5/8S34M/I

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)