

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P476196

Luminaire Tested: **14GR-LD5-20-F1-UNV-L850-CD1-U**

Issue Date: 02/10/2021



Test Information

Test Method: LM-79-08
Report Number: P476196
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-20-F1-UNV-L850-CD1-U
Description: GR 1'X4' LED TROFFER w/ F1 LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

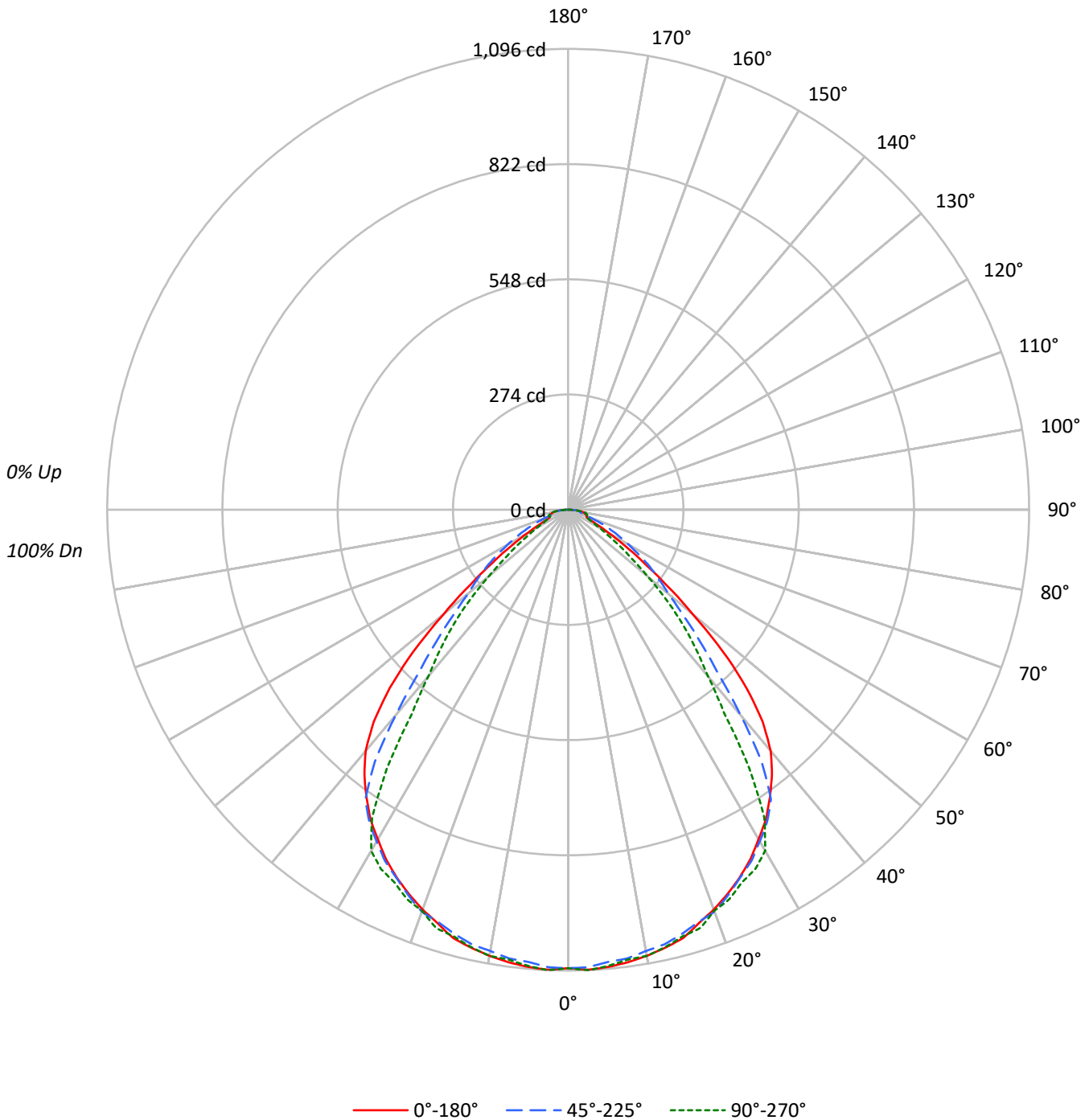
Lumens per Lamp: N/A
Luminaire Lumens: 2096.5 lumens
Efficiency: N/A
Efficacy: 131.0 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.24 / 1.2
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 16
Input Voltage (V): 120
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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 |
| 2 | 103 | 96 | 91 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 |
| 3 | 95 | 87 | 80 | 75 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 74 | 70 | 68 |
| 4 | 89 | 79 | 71 | 65 | 87 | 77 | 70 | 65 | 75 | 69 | 64 | 73 | 68 | 63 | 71 | 66 | 63 | 61 |
| 5 | 82 | 71 | 64 | 58 | 81 | 70 | 63 | 58 | 68 | 62 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 6 | 77 | 65 | 57 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 49 |
| 7 | 72 | 60 | 52 | 47 | 70 | 59 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 44 |
| 8 | 67 | 55 | 48 | 42 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 |
| 9 | 63 | 51 | 44 | 39 | 62 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 38 | 36 |
| 10 | 59 | 47 | 40 | 35 | 58 | 47 | 40 | 35 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 33 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2934 | 2934 | 2934 |
| 5° | 2948 | 2917 | 2942 |
| 10° | 2944 | 2912 | 2944 |
| 15° | 2939 | 2910 | 2926 |
| 20° | 2897 | 2914 | 2907 |
| 25° | 2864 | 2868 | 2903 |
| 30° | 2812 | 2830 | 2910 |
| 35° | 2745 | 2760 | 2467 |
| 40° | 2630 | 2239 | 1814 |
| 45° | 2282 | 1688 | 1465 |
| 50° | 1621 | 1297 | 1027 |
| 55° | 1030 | 1112 | 688 |
| 60° | 607 | 891 | 455 |
| 65° | 358 | 695 | 351 |
| 70° | 369 | 471 | 360 |
| 75° | 451 | 366 | 476 |
| 80° | 583 | 454 | 637 |
| 85° | 618 | 618 | 618 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 103.4 | 4.9 |
| 10°-20° | 296.0 | 14.1 |
| 20°-30° | 447.7 | 21.4 |
| 30°-40° | 498.6 | 23.8 |
| 40°-50° | 364.9 | 17.4 |
| 50°-60° | 201.1 | 9.6 |
| 60°-70° | 102.8 | 4.9 |
| 70°-80° | 58.5 | 2.8 |
| 80°-90° | 23.3 | 1.1 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 847.2 | 40.4 |
| 0°-40° | 1345.7 | 64.2 |
| 0°-60° | 1911.8 | 91.2 |
| 0°-90° | 2096.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2096.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1090 | 1090 | 1090 | 1090 | 1090 | |
| 5° | 1092 | 1092 | 1080 | 1087 | 1089 | 104 |
| 15° | 1055 | 1043 | 1044 | 1057 | 1050 | 297 |
| 25° | 965 | 962 | 966 | 982 | 978 | 444 |
| 35° | 836 | 837 | 840 | 783 | 751 | 521 |
| 45° | 600 | 553 | 444 | 404 | 385 | 451 |
| 55° | 220 | 258 | 237 | 203 | 147 | 205 |
| 65° | 56 | 134 | 109 | 104 | 55 | 65 |
| 75° | 43 | 75 | 35 | 67 | 46 | 46 |
| 85° | 20 | 25 | 20 | 27 | 20 | 21 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476196

CATALOG NUMBER: 14GR-LD5-20-F1-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1090.3 | 1090.3 | 1090.3 | 1090.3 | 1090.3 |
| 2.5° | 1095.0 | 1095.0 | 1089.1 | 1096.2 | 1096.2 |
| 5° | 1091.5 | 1091.5 | 1079.7 | 1086.8 | 1089.1 |
| 7.5° | 1085.6 | 1085.6 | 1076.2 | 1082.1 | 1079.7 |
| 10° | 1077.4 | 1071.5 | 1065.7 | 1082.1 | 1077.4 |
| 12.5° | 1066.8 | 1055.1 | 1058.6 | 1057.4 | 1065.7 |
| 15° | 1055.1 | 1043.4 | 1044.5 | 1057.4 | 1050.4 |
| 17.5° | 1031.6 | 1032.8 | 1028.1 | 1037.5 | 1043.4 |
| 20° | 1011.7 | 1015.2 | 1017.5 | 1023.4 | 1015.2 |
| 22.5° | 989.4 | 990.5 | 992.9 | 1001.1 | 1002.3 |
| 25° | 964.7 | 962.4 | 965.9 | 982.3 | 977.6 |
| 27.5° | 937.7 | 936.6 | 942.4 | 956.5 | 963.5 |
| 30° | 904.9 | 909.6 | 910.7 | 936.6 | 936.6 |
| 32.5° | 874.4 | 874.4 | 880.2 | 893.1 | 867.3 |
| 35° | 835.6 | 836.8 | 840.3 | 782.8 | 751.1 |
| 37.5° | 795.7 | 792.2 | 755.8 | 651.4 | 609.1 |
| 40° | 748.8 | 740.6 | 637.3 | 543.4 | 516.4 |
| 42.5° | 684.2 | 659.6 | 525.8 | 469.5 | 449.5 |
| 45° | 599.7 | 552.8 | 443.6 | 403.7 | 385.0 |
| 47.5° | 498.8 | 455.4 | 368.5 | 341.5 | 315.7 |
| 50° | 387.3 | 377.9 | 309.8 | 286.4 | 245.3 |
| 52.5° | 294.6 | 313.4 | 272.3 | 241.8 | 189.0 |
| 55° | 219.5 | 258.2 | 237.1 | 203.0 | 146.7 |
| 57.5° | 160.8 | 214.8 | 199.5 | 172.5 | 110.3 |
| 60° | 112.7 | 181.9 | 165.5 | 145.5 | 84.5 |
| 62.5° | 79.8 | 157.3 | 136.1 | 124.4 | 64.5 |
| 65° | 56.3 | 133.8 | 109.1 | 104.5 | 55.2 |
| 67.5° | 46.9 | 112.7 | 83.3 | 92.7 | 46.9 |
| 70° | 46.9 | 93.9 | 59.9 | 82.2 | 45.8 |
| 72.5° | 46.9 | 82.2 | 44.6 | 75.1 | 48.1 |
| 75° | 43.4 | 75.1 | 35.2 | 66.9 | 45.8 |
| 77.5° | 39.9 | 63.4 | 30.5 | 57.5 | 44.6 |
| 80° | 37.6 | 45.8 | 29.3 | 46.9 | 41.1 |
| 82.5° | 30.5 | 32.9 | 27.0 | 36.4 | 31.7 |
| 85° | 20.0 | 24.6 | 20.0 | 27.0 | 20.0 |
| 87.5° | 9.4 | 12.9 | 9.4 | 11.7 | 8.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)