

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: P476269

Luminaire Tested: **14GR-LD5-24-A19/156-UNV-L850-CD1-U**

Issue Date: 02/10/2021



Test Information

Test Method: LM-79-08
Report Number: P476269
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-24-A19/156-UNV-L850-CD1-U
Description: GR 1'X4' LED TROFFER w/ A19/156 LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

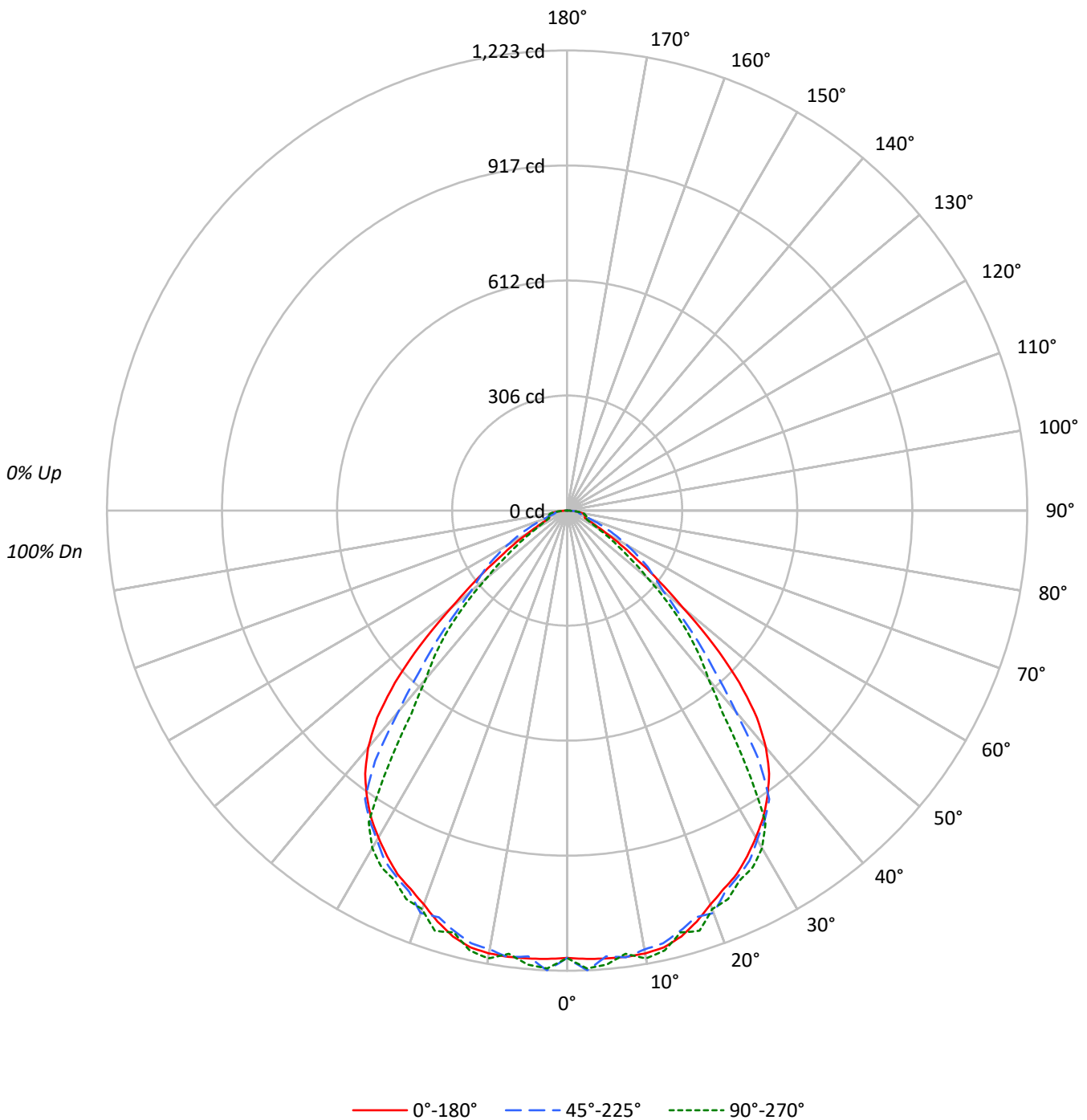
Lumens per Lamp: N/A
Luminaire Lumens: 2320.2 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.27 / 1.2
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 18.5
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 | 101 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 78 |
| 3 | 96 | 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 | 83 | 71 | 64 | 58 | 81 | 70 | 63 | 58 | 68 | 62 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 6 | 77 | 65 | 58 | 52 | 75 | 64 | 57 | 52 | 63 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 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 | 51 | 43 | 39 | 49 | 43 | 38 | 48 | 43 | 38 | 48 | 42 | 38 | 36 |
| 10 | 60 | 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° | 3200 | 3200 | 3200 |
| 5° | 3228 | 3212 | 3271 |
| 10° | 3266 | 3236 | 3302 |
| 15° | 3265 | 3225 | 3235 |
| 20° | 3189 | 3259 | 3228 |
| 25° | 3166 | 3188 | 3220 |
| 30° | 3117 | 3140 | 3219 |
| 35° | 3048 | 3076 | 2729 |
| 40° | 2888 | 2449 | 2052 |
| 45° | 2464 | 1867 | 1701 |
| 50° | 1683 | 1398 | 1175 |
| 55° | 1060 | 1225 | 781 |
| 60° | 640 | 981 | 503 |
| 65° | 402 | 758 | 387 |
| 70° | 401 | 507 | 411 |
| 75° | 505 | 404 | 530 |
| 80° | 659 | 490 | 696 |
| 85° | 636 | 676 | 676 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 114.7 | 4.9 |
| 10°-20° | 328.8 | 14.2 |
| 20°-30° | 496.3 | 21.4 |
| 30°-40° | 553.5 | 23.9 |
| 40°-50° | 402.5 | 17.3 |
| 50°-60° | 220.7 | 9.5 |
| 60°-70° | 112.2 | 4.8 |
| 70°-80° | 66.0 | 2.8 |
| 80°-90° | 25.5 | 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° | 939.8 | 40.5 |
| 0°-40° | 1493.3 | 64.4 |
| 0°-60° | 2116.5 | 91.2 |
| 0°-90° | 2320.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2320.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1189 | 1189 | 1189 | 1189 | 1189 | |
| 5° | 1195 | 1221 | 1189 | 1211 | 1211 | 114 |
| 15° | 1172 | 1167 | 1158 | 1182 | 1161 | 329 |
| 25° | 1066 | 1066 | 1074 | 1094 | 1085 | 490 |
| 35° | 928 | 927 | 936 | 873 | 831 | 578 |
| 45° | 647 | 598 | 491 | 456 | 447 | 486 |
| 55° | 226 | 279 | 261 | 233 | 166 | 213 |
| 65° | 63 | 135 | 119 | 123 | 61 | 70 |
| 75° | 49 | 86 | 39 | 78 | 51 | 51 |
| 85° | 21 | 27 | 22 | 28 | 22 | 23 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P476269

CATALOG NUMBER: 14GR-LD5-24-A19/156-UNV-L850-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1189.0 | 1189.0 | 1189.0 | 1189.0 | 1189.0 |
| 2.5° | 1192.7 | 1217.0 | 1223.0 | 1223.0 | 1218.2 |
| 5° | 1195.1 | 1220.6 | 1189.0 | 1210.9 | 1210.9 |
| 7.5° | 1196.3 | 1200.0 | 1197.5 | 1202.4 | 1187.8 |
| 10° | 1195.1 | 1186.6 | 1184.2 | 1214.5 | 1208.5 |
| 12.5° | 1189.0 | 1156.2 | 1178.1 | 1168.4 | 1197.5 |
| 15° | 1172.0 | 1167.2 | 1157.5 | 1181.8 | 1161.1 |
| 17.5° | 1145.3 | 1147.7 | 1133.2 | 1145.3 | 1170.8 |
| 20° | 1113.7 | 1124.7 | 1138.0 | 1141.7 | 1127.1 |
| 22.5° | 1088.2 | 1091.9 | 1096.7 | 1108.9 | 1117.4 |
| 25° | 1066.4 | 1066.4 | 1073.7 | 1094.3 | 1084.6 |
| 27.5° | 1036.0 | 1038.4 | 1049.4 | 1055.4 | 1068.8 |
| 30° | 1003.2 | 1005.6 | 1010.5 | 1038.4 | 1036.0 |
| 32.5° | 969.2 | 971.6 | 976.5 | 994.7 | 981.4 |
| 35° | 927.9 | 926.7 | 936.4 | 873.3 | 830.8 |
| 37.5° | 881.8 | 880.5 | 838.0 | 719.0 | 678.9 |
| 40° | 822.2 | 817.4 | 697.2 | 603.6 | 584.2 |
| 42.5° | 746.9 | 726.3 | 583.0 | 528.3 | 518.6 |
| 45° | 647.4 | 597.6 | 490.7 | 455.5 | 447.0 |
| 47.5° | 529.5 | 491.9 | 399.6 | 383.8 | 363.1 |
| 50° | 402.0 | 404.4 | 334.0 | 323.1 | 280.6 |
| 52.5° | 307.3 | 336.4 | 293.9 | 273.3 | 217.4 |
| 55° | 225.9 | 279.3 | 261.1 | 233.2 | 166.4 |
| 57.5° | 167.6 | 232.0 | 221.0 | 200.4 | 127.5 |
| 60° | 119.0 | 193.1 | 182.2 | 172.5 | 93.5 |
| 62.5° | 86.2 | 161.5 | 149.4 | 145.7 | 71.7 |
| 65° | 63.2 | 134.8 | 119.0 | 122.7 | 60.7 |
| 67.5° | 51.0 | 113.0 | 89.9 | 106.9 | 52.2 |
| 70° | 51.0 | 100.8 | 64.4 | 94.7 | 52.2 |
| 72.5° | 51.0 | 94.7 | 51.0 | 86.2 | 54.7 |
| 75° | 48.6 | 86.2 | 38.9 | 77.7 | 51.0 |
| 77.5° | 44.9 | 70.4 | 32.8 | 66.8 | 48.6 |
| 80° | 42.5 | 52.2 | 31.6 | 52.2 | 44.9 |
| 82.5° | 32.8 | 36.4 | 29.1 | 38.9 | 35.2 |
| 85° | 20.6 | 26.7 | 21.9 | 27.9 | 21.9 |
| 87.5° | 9.7 | 14.6 | 9.7 | 14.6 | 9.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)