

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: P225894

Luminaire Tested: **14GR-LD5-28-F1-UNV-L940-CD1-U**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P225894
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35602)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/12/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-28-F1-UNV-L940-CD1-U
Description: METALUX GR 1X4 LED TROFFER WITH F1 LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2451.9 lumens
Efficiency: N/A
Efficacy: 98.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.15 / 1.23
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')
CIE Type: Direct

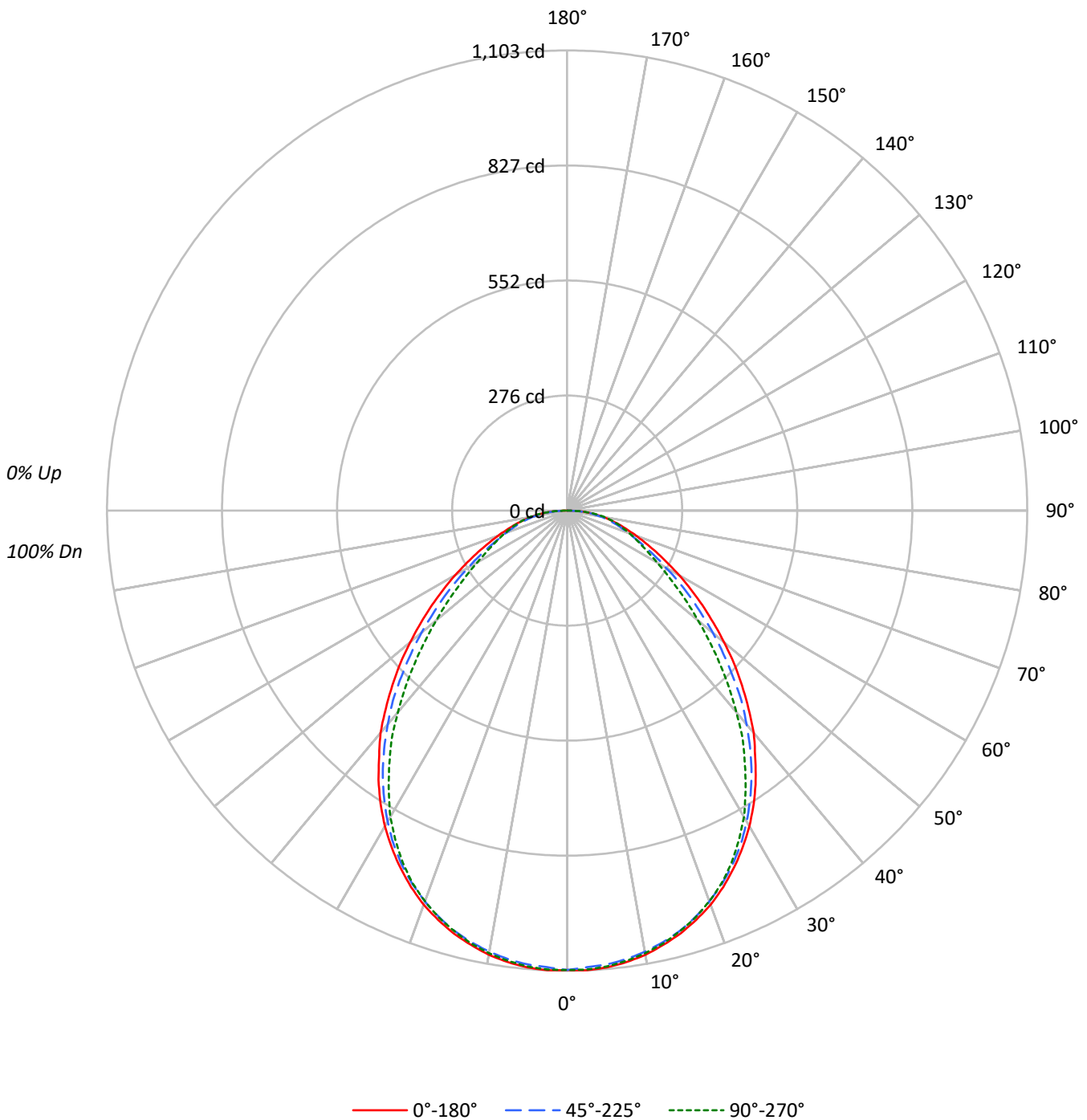
Input Watts (W): 24.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P225894

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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 | 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 | | | | | 100 | | | |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 101 | 93 | 87 | 81 | 98 | 91 | 85 | 80 | 88 | 83 | 78 | 84 | 80 | 77 | 81 | 78 | 75 | 73 | | | | | 73 | | | |
| 3 | 92 | 83 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 69 | 65 | 63 | | | | | 63 | | | |
| 4 | 85 | 74 | 66 | 59 | 83 | 73 | 65 | 59 | 70 | 64 | 58 | 68 | 62 | 58 | 66 | 61 | 57 | 55 | | | | | 55 | | | |
| 5 | 79 | 67 | 58 | 52 | 77 | 66 | 58 | 52 | 64 | 57 | 51 | 62 | 55 | 51 | 60 | 54 | 50 | 48 | | | | | 48 | | | |
| 6 | 73 | 61 | 52 | 46 | 71 | 60 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 55 | 49 | 45 | 43 | | | | | 43 | | | |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 47 | 41 | 53 | 46 | 41 | 52 | 45 | 40 | 50 | 45 | 40 | 38 | | | | | 38 | | | |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 48 | 41 | 37 | 46 | 41 | 36 | 34 | | | | | 34 | | | |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 | | | | | 31 | | | |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 29 | | | | | 29 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3711 | 3711 | 3711 |
| 5° | 3717 | 3694 | 3709 |
| 10° | 3699 | 3674 | 3686 |
| 15° | 3662 | 3640 | 3642 |
| 20° | 3606 | 3575 | 3573 |
| 25° | 3515 | 3484 | 3464 |
| 30° | 3398 | 3350 | 3298 |
| 35° | 3242 | 3169 | 3056 |
| 40° | 3061 | 2943 | 2774 |
| 45° | 2823 | 2676 | 2460 |
| 50° | 2571 | 2391 | 2148 |
| 55° | 2323 | 2115 | 1873 |
| 60° | 2090 | 1840 | 1674 |
| 65° | 1875 | 1643 | 1570 |
| 70° | 1731 | 1528 | 1557 |
| 75° | 1669 | 1513 | 1639 |
| 80° | 1677 | 1578 | 1777 |
| 85° | 1794 | 1635 | 1860 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 104.0 | 4.2 |
| 10°-20° | 294.7 | 12.0 |
| 20°-30° | 431.3 | 17.6 |
| 30°-40° | 479.3 | 19.6 |
| 40°-50° | 430.9 | 17.6 |
| 50°-60° | 322.2 | 13.1 |
| 60°-70° | 212.2 | 8.7 |
| 70°-80° | 129.0 | 5.3 |
| 80°-90° | 48.3 | 2.0 |
| 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° | 830.0 | 33.9 |
| 0°-40° | 1309.3 | 53.4 |
| 0°-60° | 2062.4 | 84.1 |
| 0°-90° | 2451.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2451.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1101 | 1101 | 1101 | 1101 | 1101 | |
| 5° | 1099 | 1097 | 1092 | 1098 | 1097 | 104 |
| 15° | 1050 | 1047 | 1043 | 1047 | 1044 | 296 |
| 25° | 946 | 944 | 937 | 935 | 932 | 435 |
| 35° | 788 | 784 | 770 | 754 | 743 | 492 |
| 45° | 592 | 586 | 562 | 531 | 516 | 457 |
| 55° | 396 | 387 | 360 | 330 | 319 | 355 |
| 65° | 235 | 227 | 206 | 198 | 197 | 235 |
| 75° | 128 | 122 | 116 | 122 | 126 | 136 |
| 85° | 46 | 43 | 42 | 49 | 48 | 49 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P225894

CATALOG NUMBER: 14GR-LD5-28-F1-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1101.2 | 1101.2 | 1101.2 | 1101.2 | 1101.2 |
| 2.5° | 1103.0 | 1100.6 | 1095.5 | 1101.7 | 1101.2 |
| 5° | 1098.9 | 1096.6 | 1092.0 | 1097.8 | 1096.6 |
| 7.5° | 1091.5 | 1088.6 | 1084.6 | 1090.3 | 1088.6 |
| 10° | 1081.2 | 1078.4 | 1073.7 | 1080.0 | 1077.2 |
| 12.5° | 1066.3 | 1064.6 | 1060.0 | 1064.6 | 1062.9 |
| 15° | 1049.7 | 1047.4 | 1043.4 | 1046.8 | 1044.0 |
| 17.5° | 1028.5 | 1026.2 | 1021.7 | 1026.2 | 1022.8 |
| 20° | 1005.6 | 1002.8 | 997.0 | 1000.4 | 996.5 |
| 22.5° | 977.0 | 974.1 | 969.0 | 970.7 | 967.2 |
| 25° | 945.5 | 943.8 | 937.0 | 935.2 | 931.8 |
| 27.5° | 910.7 | 907.7 | 901.5 | 898.0 | 891.1 |
| 30° | 873.4 | 870.6 | 860.9 | 855.1 | 847.6 |
| 32.5° | 832.7 | 828.2 | 816.7 | 807.0 | 796.1 |
| 35° | 788.1 | 784.1 | 770.4 | 753.8 | 743.0 |
| 37.5° | 740.0 | 737.8 | 720.6 | 700.0 | 691.4 |
| 40° | 696.0 | 687.4 | 669.1 | 643.9 | 630.7 |
| 42.5° | 643.4 | 637.6 | 618.2 | 590.1 | 573.5 |
| 45° | 592.4 | 586.1 | 561.5 | 531.1 | 516.3 |
| 47.5° | 542.6 | 535.7 | 507.7 | 477.9 | 460.7 |
| 50° | 490.5 | 484.8 | 456.1 | 422.9 | 409.8 |
| 52.5° | 441.9 | 434.4 | 404.6 | 374.9 | 363.4 |
| 55° | 395.5 | 386.9 | 360.0 | 330.2 | 318.8 |
| 57.5° | 351.4 | 341.2 | 315.4 | 289.6 | 282.2 |
| 60° | 310.2 | 298.8 | 273.0 | 254.1 | 248.4 |
| 62.5° | 270.1 | 261.5 | 238.6 | 224.4 | 220.9 |
| 65° | 235.2 | 226.6 | 206.1 | 197.5 | 196.9 |
| 67.5° | 203.2 | 194.6 | 178.5 | 176.3 | 177.4 |
| 70° | 175.7 | 168.3 | 155.1 | 156.3 | 158.0 |
| 72.5° | 150.0 | 143.1 | 135.1 | 137.9 | 141.4 |
| 75° | 128.2 | 122.5 | 116.2 | 121.9 | 125.9 |
| 77.5° | 107.6 | 101.9 | 98.5 | 104.1 | 108.7 |
| 80° | 86.4 | 82.4 | 81.3 | 87.5 | 91.6 |
| 82.5° | 67.0 | 63.6 | 61.8 | 69.8 | 71.6 |
| 85° | 46.4 | 42.9 | 42.3 | 49.2 | 48.1 |
| 87.5° | 24.6 | 21.8 | 21.8 | 25.7 | 22.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)