

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: P225845

Luminaire Tested: **14GR-LD5-24-A19/156-UNV-L950-CD1-U**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P225845
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33288)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/12/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14GR-LD5-24-A19/156-UNV-L950-CD1-U
Description: METALUX GR 1X4 LED TROFFER WITH A19/156 LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2182.2 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.23 / 1.18
Luminous Opening: Rectangular (W 0.83' x L: 3.83' x H: 0')
CIE Type: Direct

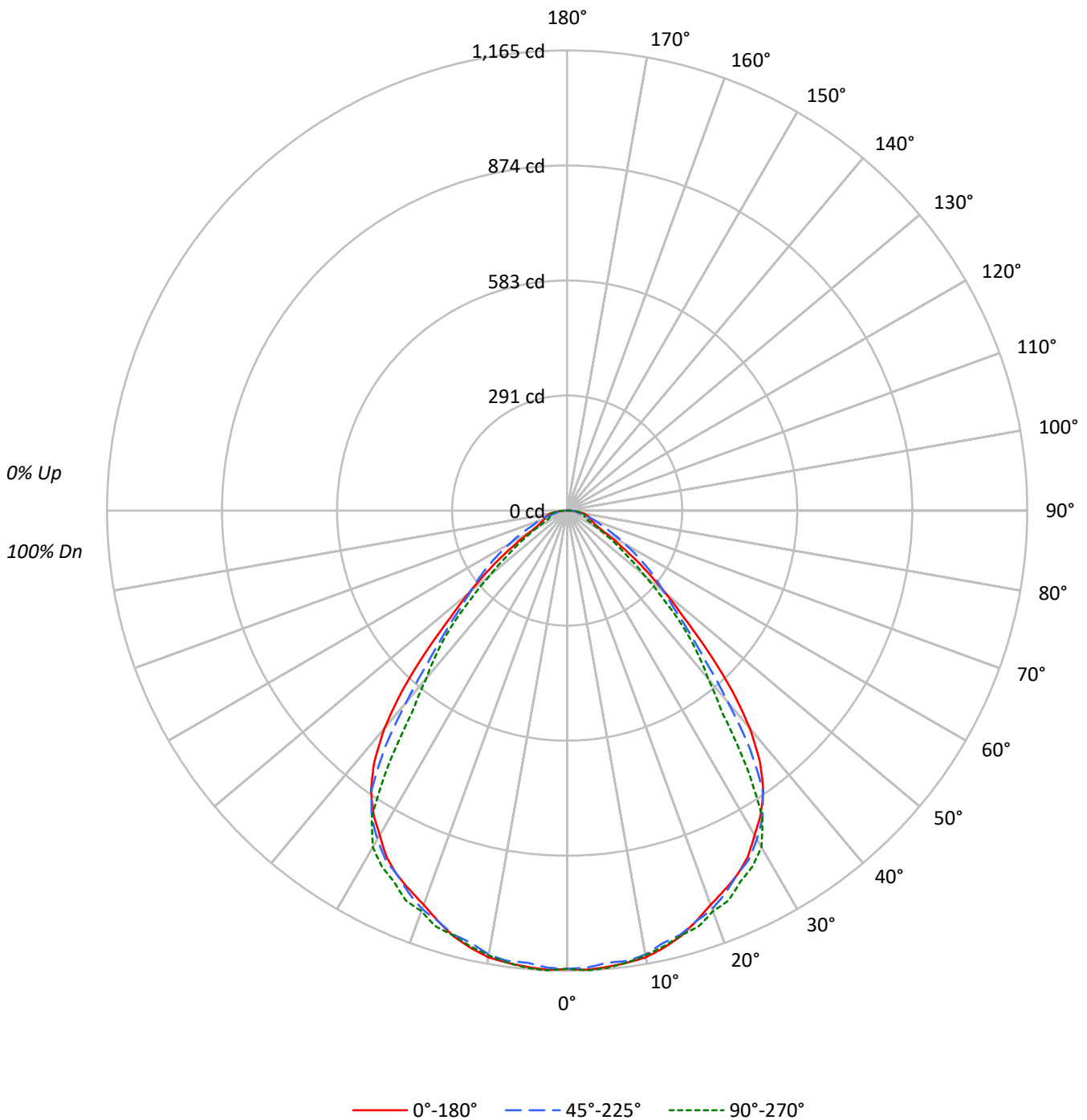
Input Watts (W): 21
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 100 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 93 | 92 | 90 | 88 |
| 2 | 103 | 96 | 90 | 86 | 100 | 94 | 89 | 85 | 91 | 87 | 83 | 88 | 84 | 81 | 85 | 82 | 79 | 77 |
| 3 | 95 | 87 | 80 | 74 | 93 | 85 | 79 | 74 | 82 | 77 | 73 | 80 | 75 | 71 | 77 | 73 | 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 | 51 | 46 | 55 | 50 | 46 | 44 |
| 8 | 67 | 55 | 48 | 43 | 66 | 55 | 47 | 42 | 53 | 47 | 42 | 52 | 46 | 42 | 51 | 46 | 42 | 40 |
| 9 | 63 | 51 | 44 | 39 | 62 | 51 | 44 | 39 | 50 | 43 | 39 | 49 | 43 | 38 | 48 | 42 | 38 | 37 |
| 10 | 60 | 48 | 40 | 36 | 58 | 47 | 40 | 36 | 46 | 40 | 35 | 45 | 39 | 35 | 44 | 39 | 35 | 34 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3910 | 3910 | 3910 |
| 5° | 3923 | 3886 | 3932 |
| 10° | 3929 | 3905 | 3912 |
| 15° | 3889 | 3875 | 3884 |
| 20° | 3808 | 3849 | 3871 |
| 25° | 3785 | 3783 | 3855 |
| 30° | 3693 | 3738 | 3829 |
| 35° | 3561 | 3547 | 3259 |
| 40° | 3162 | 2791 | 2443 |
| 45° | 2399 | 2088 | 1976 |
| 50° | 1702 | 1671 | 1341 |
| 55° | 1165 | 1426 | 922 |
| 60° | 720 | 1138 | 617 |
| 65° | 593 | 876 | 446 |
| 70° | 591 | 763 | 458 |
| 75° | 708 | 547 | 612 |
| 80° | 815 | 503 | 766 |
| 85° | 773 | 889 | 870 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.1 | 5.0 |
| 10°-20° | 314.2 | 14.4 |
| 20°-30° | 472.6 | 21.7 |
| 30°-40° | 515.2 | 23.6 |
| 40°-50° | 360.7 | 16.5 |
| 50°-60° | 204.2 | 9.4 |
| 60°-70° | 111.7 | 5.1 |
| 70°-80° | 67.7 | 3.1 |
| 80°-90° | 25.7 | 1.2 |
| 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° | 896.9 | 41.1 |
| 0°-40° | 1412.1 | 64.7 |
| 0°-60° | 1977.0 | 90.6 |
| 0°-90° | 2182.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2182.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1160 | 1160 | 1160 | 1160 | 1160 | |
| 5° | 1160 | 1158 | 1149 | 1162 | 1162 | 110 |
| 15° | 1115 | 1112 | 1111 | 1127 | 1114 | 314 |
| 25° | 1018 | 1020 | 1018 | 1041 | 1037 | 468 |
| 35° | 866 | 862 | 862 | 818 | 792 | 533 |
| 45° | 504 | 526 | 438 | 433 | 415 | 391 |
| 55° | 198 | 237 | 243 | 241 | 157 | 181 |
| 65° | 74 | 122 | 110 | 139 | 56 | 76 |
| 75° | 54 | 78 | 42 | 82 | 47 | 56 |
| 85° | 20 | 32 | 23 | 28 | 22 | 22 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1160.4 | 1160.4 | 1160.4 | 1160.4 | 1160.4 |
| 2.5° | 1163.4 | 1161.9 | 1158.4 | 1165.4 | 1164.9 |
| 5° | 1159.9 | 1157.9 | 1148.9 | 1162.4 | 1162.4 |
| 7.5° | 1154.9 | 1149.9 | 1150.4 | 1157.9 | 1154.4 |
| 10° | 1148.4 | 1140.0 | 1141.4 | 1143.4 | 1143.4 |
| 12.5° | 1133.4 | 1125.4 | 1121.4 | 1127.9 | 1129.9 |
| 15° | 1114.9 | 1111.9 | 1110.9 | 1126.9 | 1113.5 |
| 17.5° | 1089.0 | 1095.5 | 1089.5 | 1102.5 | 1104.5 |
| 20° | 1062.0 | 1074.4 | 1073.4 | 1082.4 | 1079.4 |
| 22.5° | 1040.0 | 1048.0 | 1048.0 | 1059.0 | 1068.0 |
| 25° | 1018.0 | 1020.0 | 1017.6 | 1041.0 | 1037.0 |
| 27.5° | 989.5 | 988.1 | 996.1 | 1008.0 | 1016.0 |
| 30° | 949.1 | 949.6 | 960.6 | 976.6 | 984.1 |
| 32.5° | 912.1 | 907.6 | 921.1 | 928.1 | 920.1 |
| 35° | 865.7 | 861.7 | 862.2 | 818.2 | 792.2 |
| 37.5° | 802.3 | 805.7 | 759.8 | 679.3 | 645.4 |
| 40° | 718.8 | 725.8 | 634.4 | 574.5 | 555.5 |
| 42.5° | 617.9 | 619.9 | 520.0 | 500.5 | 488.0 |
| 45° | 503.5 | 525.5 | 438.1 | 432.6 | 414.6 |
| 47.5° | 399.1 | 440.1 | 367.2 | 370.6 | 327.7 |
| 50° | 324.7 | 365.6 | 318.7 | 320.2 | 255.8 |
| 52.5° | 256.7 | 296.8 | 281.2 | 276.7 | 200.8 |
| 55° | 198.3 | 237.2 | 242.8 | 240.8 | 156.9 |
| 57.5° | 145.9 | 187.8 | 203.8 | 211.3 | 120.8 |
| 60° | 106.9 | 153.3 | 168.8 | 183.8 | 91.5 |
| 62.5° | 84.9 | 132.9 | 138.4 | 160.3 | 70.9 |
| 65° | 74.4 | 122.4 | 109.9 | 138.9 | 56.0 |
| 67.5° | 66.4 | 116.4 | 89.5 | 122.8 | 49.0 |
| 70° | 60.0 | 104.9 | 77.4 | 109.9 | 46.5 |
| 72.5° | 60.0 | 91.9 | 61.0 | 97.4 | 47.0 |
| 75° | 54.4 | 78.4 | 42.0 | 82.4 | 47.0 |
| 77.5° | 48.4 | 67.0 | 31.5 | 67.0 | 44.0 |
| 80° | 42.0 | 52.4 | 25.9 | 51.4 | 39.5 |
| 82.5° | 30.9 | 39.5 | 22.5 | 38.5 | 31.9 |
| 85° | 20.0 | 32.5 | 23.0 | 27.9 | 22.5 |
| 87.5° | 9.5 | 16.5 | 14.5 | 14.0 | 11.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)