

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: P258623

Luminaire Tested: **14CZ-LD5-35-UNV-L82765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258623
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-35-UNV-L82765-W2A1-U-2700K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS
Light Source: (168) 80 CRI LEDS TUNED AT 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3244.0 lumens
Efficiency: N/A
Efficacy: 118.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

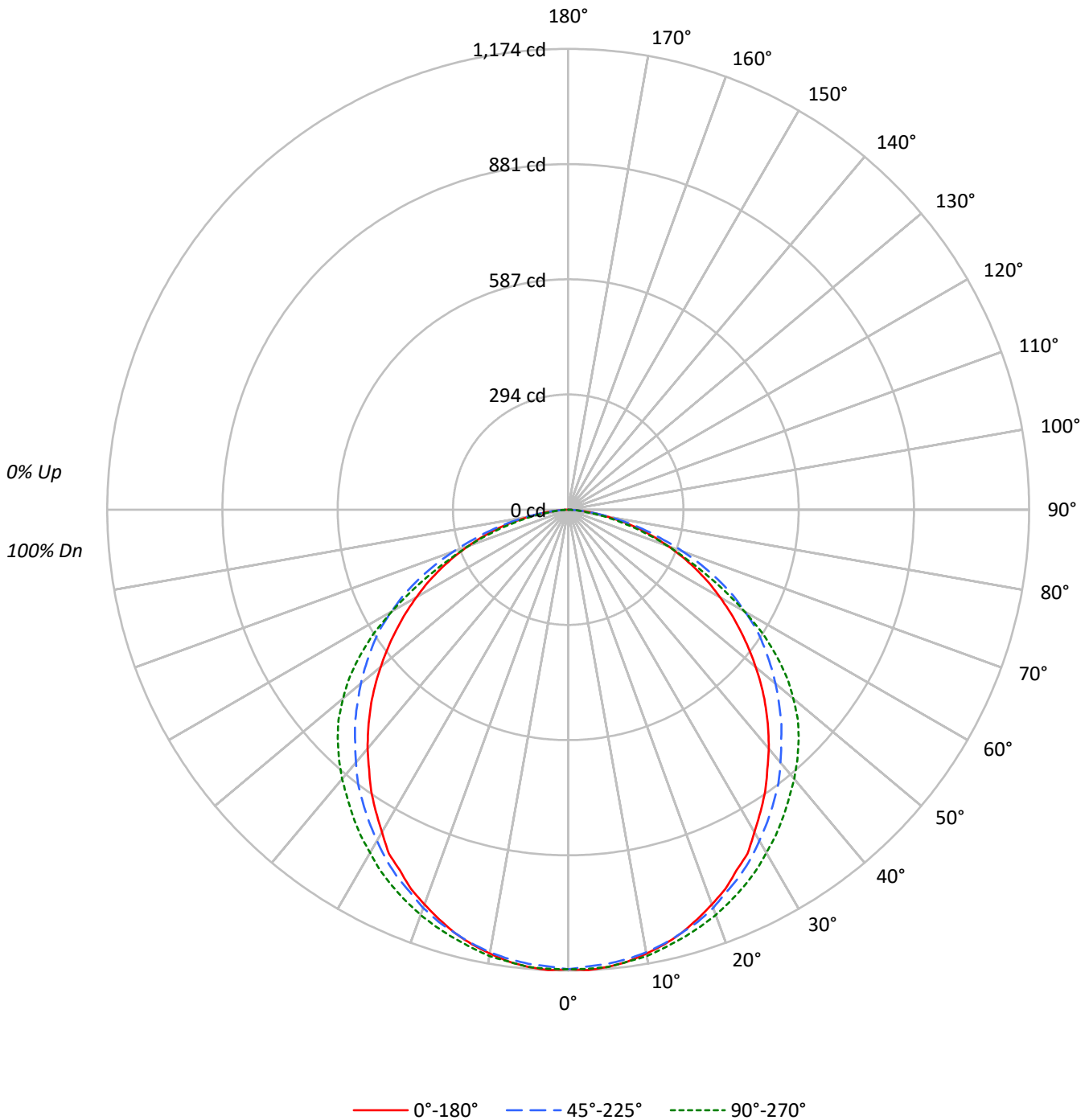
Input Watts (W): 27.435
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 104 | 100 | 96 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 79 | 97 | 89 | 83 | 78 | 86 | 80 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 90 | 80 | 72 | 66 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 66 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 46 | 56 | 51 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 38 |
| 7 | 65 | 52 | 43 | 37 | 63 | 51 | 43 | 37 | 49 | 42 | 36 | 48 | 41 | 36 | 47 | 40 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 46 | 38 | 33 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 30 | 55 | 43 | 35 | 29 | 42 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3150 | 3150 | 3150 |
| 5° | 3158 | 3136 | 3158 |
| 10° | 3138 | 3129 | 3155 |
| 15° | 3110 | 3110 | 3146 |
| 20° | 3064 | 3091 | 3146 |
| 25° | 3010 | 3063 | 3143 |
| 30° | 2947 | 3026 | 3136 |
| 35° | 2874 | 2995 | 3137 |
| 40° | 2792 | 2955 | 3146 |
| 45° | 2708 | 2922 | 3159 |
| 50° | 2611 | 2886 | 3134 |
| 55° | 2506 | 2859 | 3031 |
| 60° | 2401 | 2798 | 2789 |
| 65° | 2291 | 2678 | 2444 |
| 70° | 2127 | 2441 | 2114 |
| 75° | 1929 | 2128 | 1746 |
| 80° | 1537 | 1686 | 1289 |
| 85° | 1087 | 939 | 741 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.8 | 3.4 |
| 10°-20° | 316.4 | 9.8 |
| 20°-30° | 477.1 | 14.7 |
| 30°-40° | 571.9 | 17.6 |
| 40°-50° | 593.5 | 18.3 |
| 50°-60° | 535.3 | 16.5 |
| 60°-70° | 390.5 | 12.0 |
| 70°-80° | 204.9 | 6.3 |
| 80°-90° | 43.7 | 1.3 |
| 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° | 904.3 | 27.9 |
| 0°-40° | 1476.2 | 45.5 |
| 0°-60° | 2605.0 | 80.3 |
| 0°-90° | 3244.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3244.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1171 | 1171 | 1171 | 1171 | 1171 | |
| 5° | 1169 | 1166 | 1161 | 1169 | 1169 | 111 |
| 15° | 1116 | 1116 | 1116 | 1129 | 1129 | 314 |
| 25° | 1014 | 1019 | 1032 | 1054 | 1059 | 468 |
| 35° | 875 | 884 | 912 | 945 | 955 | 546 |
| 45° | 712 | 726 | 768 | 814 | 830 | 549 |
| 55° | 534 | 553 | 609 | 649 | 646 | 478 |
| 65° | 360 | 381 | 421 | 405 | 384 | 356 |
| 75° | 186 | 211 | 205 | 178 | 168 | 195 |
| 85° | 35 | 43 | 30 | 26 | 24 | 45 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1170.7 | 1170.7 | 1170.7 | 1170.7 | 1170.7 |
| 2.5° | 1173.9 | 1170.7 | 1164.3 | 1170.7 | 1170.7 |
| 5° | 1169.1 | 1165.9 | 1161.1 | 1169.1 | 1169.1 |
| 7.5° | 1161.1 | 1157.9 | 1154.7 | 1162.7 | 1161.1 |
| 10° | 1148.3 | 1146.7 | 1145.1 | 1154.7 | 1154.7 |
| 12.5° | 1133.9 | 1133.9 | 1132.3 | 1143.5 | 1141.9 |
| 15° | 1116.3 | 1116.3 | 1116.3 | 1129.1 | 1129.1 |
| 17.5° | 1093.9 | 1097.1 | 1100.3 | 1114.7 | 1114.7 |
| 20° | 1069.9 | 1073.1 | 1079.5 | 1097.1 | 1098.7 |
| 22.5° | 1045.9 | 1047.5 | 1053.9 | 1074.7 | 1079.5 |
| 25° | 1013.9 | 1018.7 | 1031.5 | 1053.9 | 1058.7 |
| 27.5° | 988.4 | 989.9 | 1004.3 | 1029.9 | 1036.3 |
| 30° | 948.4 | 959.6 | 974.0 | 1002.7 | 1009.1 |
| 32.5° | 911.6 | 921.2 | 943.6 | 974.0 | 983.6 |
| 35° | 874.8 | 884.4 | 911.6 | 945.2 | 954.8 |
| 37.5° | 833.2 | 847.6 | 879.6 | 913.2 | 924.4 |
| 40° | 794.8 | 807.6 | 841.2 | 882.8 | 895.6 |
| 42.5° | 753.3 | 766.1 | 802.8 | 849.2 | 863.6 |
| 45° | 711.7 | 726.1 | 767.7 | 814.0 | 830.0 |
| 47.5° | 668.5 | 684.5 | 727.7 | 778.8 | 793.2 |
| 50° | 623.7 | 641.3 | 689.3 | 742.1 | 748.5 |
| 52.5° | 578.9 | 598.1 | 649.3 | 695.7 | 702.1 |
| 55° | 534.2 | 553.3 | 609.3 | 649.3 | 646.1 |
| 57.5° | 491.0 | 511.8 | 569.3 | 590.1 | 586.9 |
| 60° | 446.2 | 468.6 | 519.8 | 529.4 | 518.2 |
| 62.5° | 404.6 | 425.4 | 473.4 | 465.4 | 451.0 |
| 65° | 359.8 | 380.6 | 420.6 | 404.6 | 383.8 |
| 67.5° | 315.1 | 340.6 | 366.2 | 339.0 | 323.1 |
| 70° | 270.3 | 299.1 | 310.3 | 283.1 | 268.7 |
| 72.5° | 227.1 | 257.5 | 254.3 | 227.1 | 217.5 |
| 75° | 185.5 | 211.1 | 204.7 | 177.5 | 167.9 |
| 77.5° | 140.7 | 169.5 | 155.1 | 132.7 | 124.7 |
| 80° | 99.2 | 124.7 | 108.8 | 89.6 | 83.2 |
| 82.5° | 65.6 | 83.2 | 67.2 | 52.8 | 48.0 |
| 85° | 35.2 | 43.2 | 30.4 | 25.6 | 24.0 |
| 87.5° | 14.4 | 12.8 | 11.2 | 11.2 | 9.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)