

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: P258584

Luminaire Tested: **14CZ-LD5-35-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258584
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-L93050-W2A1-U-4500K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER
WITH RIBBED LENS
Light Source: (168) 90 CRI LEDS TUNED AT 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3302.0 lumens
Efficiency: N/A
Efficacy: 115.7 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

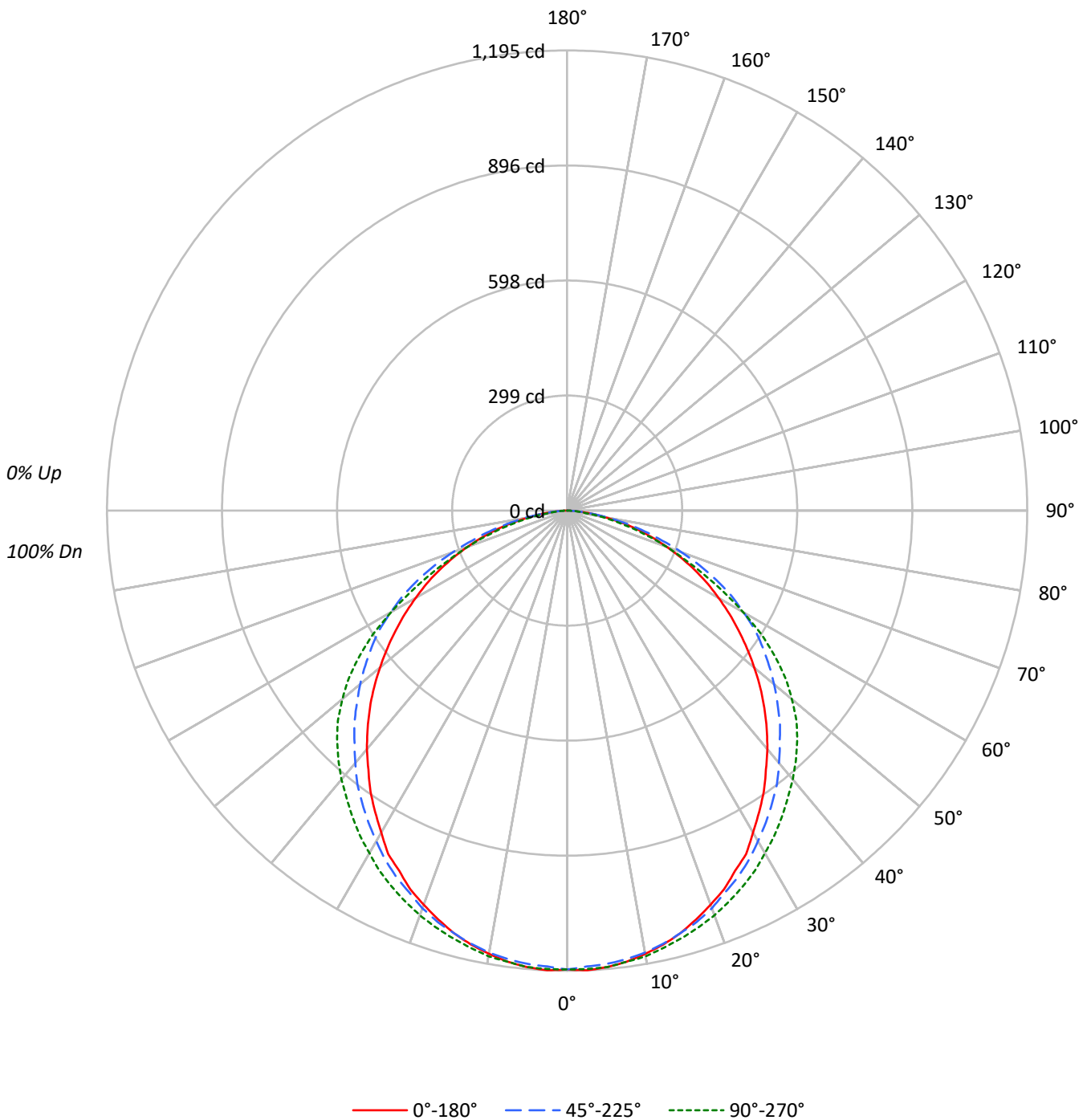
Input Watts (W): 28.551
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 3207 | 3207 | 3207 |
| 5° | 3214 | 3192 | 3214 |
| 10° | 3194 | 3185 | 3211 |
| 15° | 3166 | 3166 | 3202 |
| 20° | 3119 | 3147 | 3202 |
| 25° | 3064 | 3118 | 3200 |
| 30° | 2999 | 3081 | 3192 |
| 35° | 2925 | 3048 | 3192 |
| 40° | 2842 | 3008 | 3202 |
| 45° | 2757 | 2974 | 3215 |
| 50° | 2658 | 2937 | 3189 |
| 55° | 2551 | 2910 | 3086 |
| 60° | 2444 | 2848 | 2838 |
| 65° | 2332 | 2726 | 2488 |
| 70° | 2164 | 2485 | 2152 |
| 75° | 1963 | 2167 | 1777 |
| 80° | 1564 | 1715 | 1311 |
| 85° | 1105 | 954 | 753 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 112.8 | 3.4 |
| 10°-20° | 322.1 | 9.8 |
| 20°-30° | 485.6 | 14.7 |
| 30°-40° | 582.1 | 17.6 |
| 40°-50° | 604.1 | 18.3 |
| 50°-60° | 544.9 | 16.5 |
| 60°-70° | 397.5 | 12.0 |
| 70°-80° | 208.5 | 6.3 |
| 80°-90° | 44.5 | 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° | 920.5 | 27.9 |
| 0°-40° | 1502.6 | 45.5 |
| 0°-60° | 2651.5 | 80.3 |
| 0°-90° | 3302.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3302.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1192 | 1192 | 1192 | 1192 | 1192 | |
| 5° | 1190 | 1187 | 1182 | 1190 | 1190 | 113 |
| 15° | 1136 | 1136 | 1136 | 1149 | 1149 | 320 |
| 25° | 1032 | 1037 | 1050 | 1073 | 1078 | 476 |
| 35° | 890 | 900 | 928 | 962 | 972 | 556 |
| 45° | 724 | 739 | 781 | 829 | 845 | 558 |
| 55° | 544 | 563 | 620 | 661 | 658 | 487 |
| 65° | 366 | 387 | 428 | 412 | 391 | 362 |
| 75° | 189 | 215 | 208 | 181 | 171 | 198 |
| 85° | 36 | 44 | 31 | 26 | 24 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1191.6 | 1191.6 | 1191.6 | 1191.6 | 1191.6 |
| 2.5° | 1194.9 | 1191.6 | 1185.1 | 1191.6 | 1191.6 |
| 5° | 1190.0 | 1186.7 | 1181.8 | 1190.0 | 1190.0 |
| 7.5° | 1181.8 | 1178.6 | 1175.3 | 1183.5 | 1181.8 |
| 10° | 1168.8 | 1167.2 | 1165.6 | 1175.3 | 1175.3 |
| 12.5° | 1154.2 | 1154.2 | 1152.5 | 1163.9 | 1162.3 |
| 15° | 1136.3 | 1136.3 | 1136.3 | 1149.3 | 1149.3 |
| 17.5° | 1113.5 | 1116.7 | 1120.0 | 1134.6 | 1134.6 |
| 20° | 1089.0 | 1092.3 | 1098.8 | 1116.7 | 1118.3 |
| 22.5° | 1064.6 | 1066.3 | 1072.8 | 1093.9 | 1098.8 |
| 25° | 1032.1 | 1037.0 | 1050.0 | 1072.8 | 1077.6 |
| 27.5° | 1006.0 | 1007.6 | 1022.3 | 1048.3 | 1054.9 |
| 30° | 965.3 | 976.7 | 991.4 | 1020.7 | 1027.2 |
| 32.5° | 927.9 | 937.7 | 960.4 | 991.4 | 1001.1 |
| 35° | 890.4 | 900.2 | 927.9 | 962.1 | 971.8 |
| 37.5° | 848.1 | 862.8 | 895.3 | 929.5 | 940.9 |
| 40° | 809.0 | 822.1 | 856.3 | 898.6 | 911.6 |
| 42.5° | 766.7 | 779.7 | 817.2 | 864.4 | 879.0 |
| 45° | 724.4 | 739.1 | 781.4 | 828.6 | 844.9 |
| 47.5° | 680.4 | 696.7 | 740.7 | 792.8 | 807.4 |
| 50° | 634.9 | 652.8 | 701.6 | 755.3 | 761.8 |
| 52.5° | 589.3 | 608.8 | 660.9 | 708.1 | 714.6 |
| 55° | 543.7 | 563.2 | 620.2 | 660.9 | 657.7 |
| 57.5° | 499.8 | 520.9 | 579.5 | 600.7 | 597.4 |
| 60° | 454.2 | 477.0 | 529.1 | 538.8 | 527.4 |
| 62.5° | 411.9 | 433.0 | 481.8 | 473.7 | 459.1 |
| 65° | 366.3 | 387.4 | 428.1 | 411.9 | 390.7 |
| 67.5° | 320.7 | 346.7 | 372.8 | 345.1 | 328.8 |
| 70° | 275.1 | 304.4 | 315.8 | 288.1 | 273.5 |
| 72.5° | 231.2 | 262.1 | 258.8 | 231.2 | 221.4 |
| 75° | 188.8 | 214.9 | 208.4 | 180.7 | 170.9 |
| 77.5° | 143.3 | 172.6 | 157.9 | 135.1 | 127.0 |
| 80° | 100.9 | 127.0 | 110.7 | 91.2 | 84.6 |
| 82.5° | 66.7 | 84.6 | 68.4 | 53.7 | 48.8 |
| 85° | 35.8 | 44.0 | 30.9 | 26.0 | 24.4 |
| 87.5° | 14.7 | 13.0 | 11.4 | 11.4 | 9.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)