

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: P258718

Luminaire Tested: **14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258718
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35112)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 80 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3178.7 lumens
Efficiency: N/A
Efficacy: 136.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

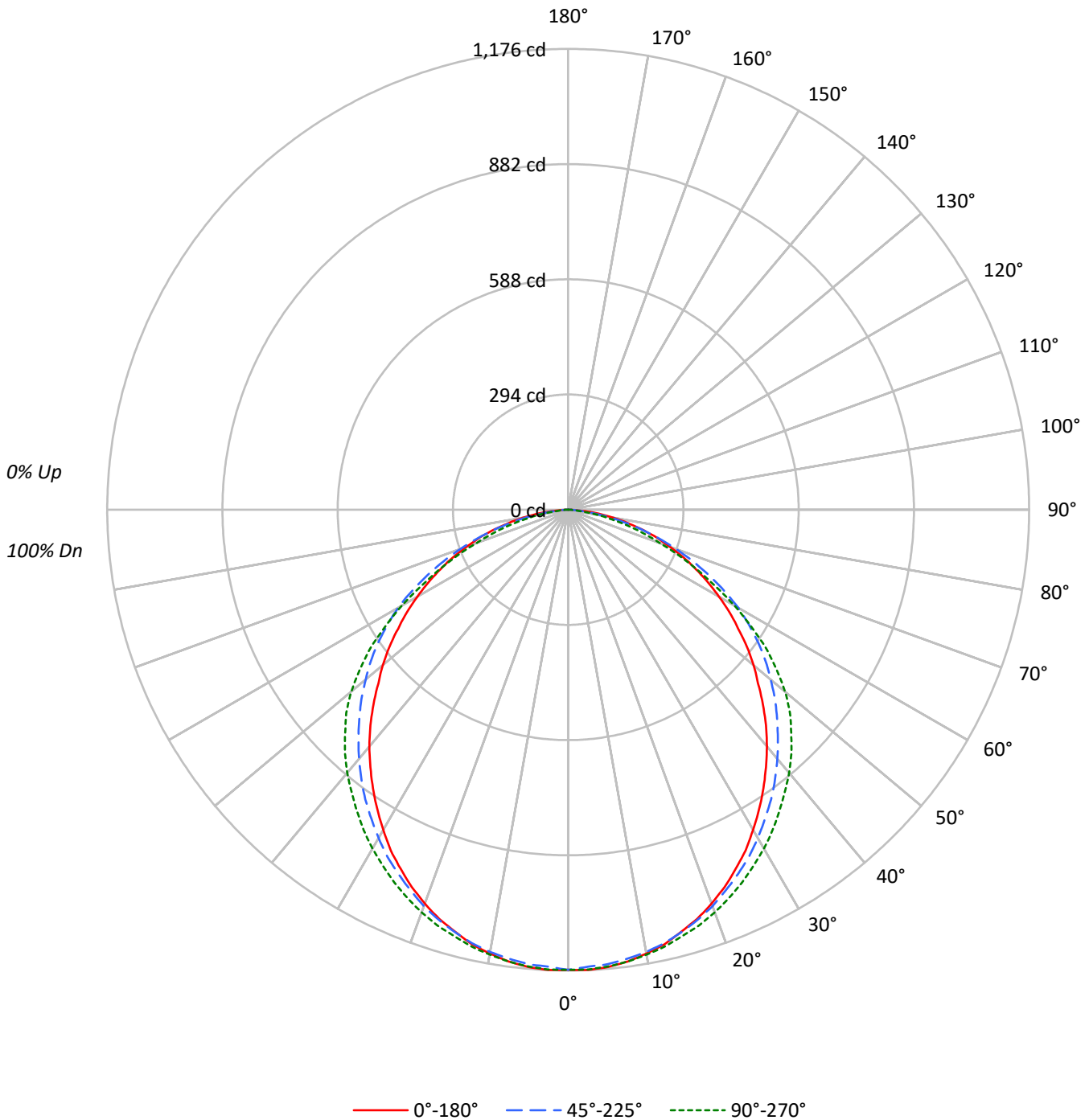
Input Watts (W): 23.25
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P258718

CATALOG NUMBER: 14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P258718

CATALOG NUMBER: 14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K

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 | 105 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 92 | 89 | 91 | 89 | 87 | 85 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 83 | 78 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 76 | 69 | 64 | 73 | 68 | 63 | 70 | 66 | 62 | 60 |
| 4 | 83 | 71 | 63 | 56 | 81 | 70 | 62 | 56 | 67 | 60 | 55 | 65 | 59 | 54 | 63 | 58 | 53 | 51 |
| 5 | 76 | 64 | 55 | 48 | 74 | 63 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 57 | 51 | 46 | 44 |
| 6 | 71 | 57 | 48 | 42 | 69 | 56 | 48 | 42 | 55 | 47 | 42 | 53 | 46 | 41 | 51 | 45 | 41 | 39 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 50 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 32 | 31 |
| 9 | 57 | 44 | 35 | 30 | 56 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 34 | 30 | 40 | 34 | 29 | 28 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3160 | 3160 | 3160 |
| 5° | 3164 | 3145 | 3160 |
| 10° | 3143 | 3131 | 3151 |
| 15° | 3105 | 3109 | 3137 |
| 20° | 3062 | 3083 | 3131 |
| 25° | 3003 | 3045 | 3116 |
| 30° | 2931 | 3006 | 3103 |
| 35° | 2852 | 2964 | 3085 |
| 40° | 2772 | 2916 | 3080 |
| 45° | 2674 | 2868 | 3062 |
| 50° | 2586 | 2822 | 3024 |
| 55° | 2485 | 2778 | 2890 |
| 60° | 2394 | 2699 | 2638 |
| 65° | 2291 | 2525 | 2318 |
| 70° | 2162 | 2296 | 1961 |
| 75° | 2018 | 1988 | 1620 |
| 80° | 1777 | 1537 | 1185 |
| 85° | 1399 | 744 | 655 |



TEST NUMBER: P258718

CATALOG NUMBER: 14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 110.9 | 3.5 |
| 10°-20° | 316.1 | 9.9 |
| 20°-30° | 474.4 | 14.9 |
| 30°-40° | 565.5 | 17.8 |
| 40°-50° | 582.5 | 18.3 |
| 50°-60° | 519.1 | 16.3 |
| 60°-70° | 374.1 | 11.8 |
| 70°-80° | 195.6 | 6.2 |
| 80°-90° | 40.5 | 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° | 901.4 | 28.4 |
| 0°-40° | 1466.9 | 46.1 |
| 0°-60° | 2568.6 | 80.8 |
| 0°-90° | 3178.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3178.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1174 | 1174 | 1174 | 1174 | 1174 | |
| 5° | 1171 | 1169 | 1164 | 1171 | 1170 | 111 |
| 15° | 1115 | 1116 | 1116 | 1128 | 1126 | 315 |
| 25° | 1011 | 1017 | 1026 | 1045 | 1050 | 466 |
| 35° | 868 | 880 | 902 | 932 | 939 | 543 |
| 45° | 703 | 718 | 754 | 796 | 804 | 542 |
| 55° | 530 | 547 | 592 | 619 | 616 | 475 |
| 65° | 360 | 372 | 397 | 378 | 364 | 356 |
| 75° | 194 | 204 | 191 | 166 | 156 | 206 |
| 85° | 45 | 40 | 24 | 21 | 21 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P258718

CATALOG NUMBER: 14CZ-LD5-29-S-UNV-L83050-W2A1-U-5000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1174.2 | 1174.2 | 1174.2 | 1174.2 | 1174.2 |
| 2.5° | 1175.6 | 1172.8 | 1167.1 | 1174.2 | 1174.2 |
| 5° | 1171.4 | 1168.6 | 1164.3 | 1171.4 | 1170.0 |
| 7.5° | 1162.9 | 1160.1 | 1155.8 | 1164.3 | 1162.9 |
| 10° | 1150.1 | 1148.7 | 1145.9 | 1154.4 | 1153.0 |
| 12.5° | 1136.0 | 1134.6 | 1133.1 | 1141.6 | 1141.6 |
| 15° | 1114.7 | 1116.1 | 1116.1 | 1127.5 | 1126.1 |
| 17.5° | 1094.9 | 1096.3 | 1097.7 | 1111.9 | 1111.9 |
| 20° | 1069.4 | 1070.8 | 1076.5 | 1092.1 | 1093.5 |
| 22.5° | 1042.5 | 1043.9 | 1051.0 | 1069.4 | 1072.2 |
| 25° | 1011.3 | 1017.0 | 1025.5 | 1045.3 | 1049.6 |
| 27.5° | 980.2 | 984.4 | 998.6 | 1021.2 | 1024.1 |
| 30° | 943.3 | 951.8 | 967.4 | 992.9 | 998.6 |
| 32.5° | 906.5 | 916.4 | 934.8 | 963.2 | 970.3 |
| 35° | 868.3 | 879.6 | 902.3 | 932.0 | 939.1 |
| 37.5° | 828.6 | 838.5 | 866.9 | 898.0 | 907.9 |
| 40° | 789.0 | 798.9 | 830.0 | 865.4 | 876.8 |
| 42.5° | 746.5 | 760.6 | 791.8 | 831.4 | 842.8 |
| 45° | 702.6 | 718.1 | 753.5 | 796.0 | 804.5 |
| 47.5° | 657.2 | 674.2 | 715.3 | 757.8 | 767.7 |
| 50° | 617.6 | 633.1 | 674.2 | 715.3 | 722.4 |
| 52.5° | 575.1 | 589.2 | 634.6 | 668.6 | 670.0 |
| 55° | 529.7 | 546.7 | 592.1 | 619.0 | 616.1 |
| 57.5° | 488.7 | 502.8 | 546.7 | 560.9 | 552.4 |
| 60° | 444.8 | 457.5 | 501.4 | 502.8 | 490.1 |
| 62.5° | 402.3 | 415.0 | 449.0 | 439.1 | 423.5 |
| 65° | 359.8 | 372.5 | 396.6 | 378.2 | 364.0 |
| 67.5° | 318.7 | 330.0 | 344.2 | 320.1 | 305.9 |
| 70° | 274.8 | 290.4 | 291.8 | 263.5 | 249.3 |
| 72.5° | 236.5 | 245.0 | 242.2 | 215.3 | 202.5 |
| 75° | 194.1 | 204.0 | 191.2 | 165.7 | 155.8 |
| 77.5° | 154.4 | 161.5 | 144.5 | 120.4 | 113.3 |
| 80° | 114.7 | 119.0 | 99.2 | 80.7 | 76.5 |
| 82.5° | 77.9 | 77.9 | 56.7 | 43.9 | 39.7 |
| 85° | 45.3 | 39.7 | 24.1 | 21.2 | 21.2 |
| 87.5° | 15.6 | 9.9 | 9.9 | 9.9 | 9.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)