

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: P258848

Luminaire Tested: **14CZ-LD5-35-S-UNV-L92765-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P258848
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-LD5-35-S-UNV-L92765-W2A1-U-4000K
Description: CRUZE 1x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 90 CRI LEDS TUNED AT 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3184.0 lumens
Efficiency: N/A
Efficacy: 114.9 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

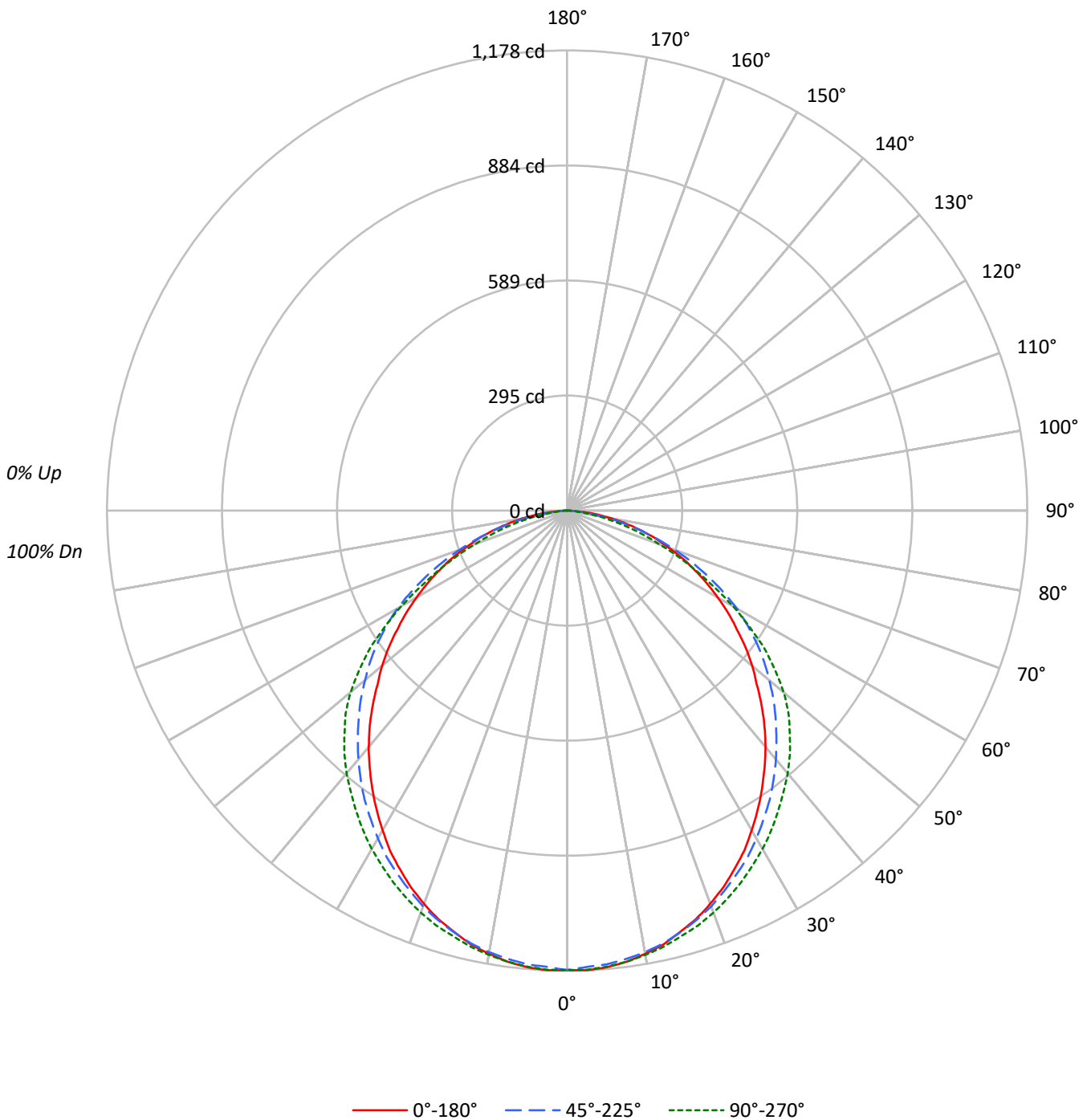
Input Watts (W): 27.714
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P258848

CATALOG NUMBER: 14CZ-LD5-35-S-UNV-L92765-W2A1-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P258848

CATALOG NUMBER: 14CZ-LD5-35-S-UNV-L92765-W2A1-U-4000K

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° | 3165 | 3165 | 3165 |
| 5° | 3169 | 3150 | 3166 |
| 10° | 3148 | 3136 | 3156 |
| 15° | 3111 | 3115 | 3142 |
| 20° | 3068 | 3088 | 3137 |
| 25° | 3008 | 3050 | 3121 |
| 30° | 2936 | 3011 | 3108 |
| 35° | 2857 | 2969 | 3090 |
| 40° | 2776 | 2921 | 3085 |
| 45° | 2678 | 2872 | 3067 |
| 50° | 2590 | 2827 | 3029 |
| 55° | 2489 | 2783 | 2896 |
| 60° | 2398 | 2703 | 2642 |
| 65° | 2295 | 2530 | 2322 |
| 70° | 2165 | 2300 | 1965 |
| 75° | 2021 | 1991 | 1623 |
| 80° | 1781 | 1539 | 1187 |
| 85° | 1402 | 744 | 658 |



TEST NUMBER: P258848

CATALOG NUMBER: 14CZ-LD5-35-S-UNV-L92765-W2A1-U-4000K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 111.1 | 3.5 |
| 10°-20° | 316.6 | 9.9 |
| 20°-30° | 475.1 | 14.9 |
| 30°-40° | 566.5 | 17.8 |
| 40°-50° | 583.5 | 18.3 |
| 50°-60° | 520.0 | 16.3 |
| 60°-70° | 374.7 | 11.8 |
| 70°-80° | 195.9 | 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° | 902.9 | 28.4 |
| 0°-40° | 1469.4 | 46.1 |
| 0°-60° | 2572.9 | 80.8 |
| 0°-90° | 3184.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3184.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1176 | 1176 | 1176 | 1176 | 1176 | |
| 5° | 1173 | 1170 | 1166 | 1173 | 1172 | 111 |
| 15° | 1117 | 1118 | 1118 | 1129 | 1128 | 315 |
| 25° | 1013 | 1019 | 1027 | 1047 | 1051 | 467 |
| 35° | 870 | 881 | 904 | 934 | 941 | 544 |
| 45° | 704 | 719 | 755 | 797 | 806 | 543 |
| 55° | 531 | 548 | 593 | 620 | 617 | 476 |
| 65° | 360 | 373 | 397 | 379 | 365 | 357 |
| 75° | 194 | 204 | 192 | 166 | 156 | 206 |
| 85° | 45 | 40 | 24 | 21 | 21 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P258848

CATALOG NUMBER: 14CZ-LD5-35-S-UNV-L92765-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1176.2 | 1176.2 | 1176.2 | 1176.2 | 1176.2 |
| 2.5° | 1177.6 | 1174.8 | 1169.1 | 1176.2 | 1176.2 |
| 5° | 1173.3 | 1170.5 | 1166.2 | 1173.3 | 1171.9 |
| 7.5° | 1164.8 | 1162.0 | 1157.7 | 1166.2 | 1164.8 |
| 10° | 1152.1 | 1150.6 | 1147.8 | 1156.3 | 1154.9 |
| 12.5° | 1137.9 | 1136.4 | 1135.0 | 1143.5 | 1143.5 |
| 15° | 1116.6 | 1118.0 | 1118.0 | 1129.4 | 1127.9 |
| 17.5° | 1096.7 | 1098.1 | 1099.6 | 1113.7 | 1113.7 |
| 20° | 1071.2 | 1072.6 | 1078.3 | 1093.9 | 1095.3 |
| 22.5° | 1044.2 | 1045.6 | 1052.7 | 1071.2 | 1074.0 |
| 25° | 1013.0 | 1018.7 | 1027.2 | 1047.1 | 1051.3 |
| 27.5° | 981.8 | 986.1 | 1000.2 | 1022.9 | 1025.8 |
| 30° | 944.9 | 953.4 | 969.0 | 994.6 | 1000.2 |
| 32.5° | 908.0 | 918.0 | 936.4 | 964.8 | 971.9 |
| 35° | 869.7 | 881.1 | 903.8 | 933.6 | 940.7 |
| 37.5° | 830.0 | 839.9 | 868.3 | 899.5 | 909.4 |
| 40° | 790.3 | 800.2 | 831.4 | 866.9 | 878.2 |
| 42.5° | 747.7 | 761.9 | 793.1 | 832.8 | 844.2 |
| 45° | 703.7 | 719.3 | 754.8 | 797.4 | 805.9 |
| 47.5° | 658.3 | 675.3 | 716.5 | 759.0 | 769.0 |
| 50° | 618.6 | 634.2 | 675.3 | 716.5 | 723.6 |
| 52.5° | 576.0 | 590.2 | 635.6 | 669.7 | 671.1 |
| 55° | 530.6 | 547.7 | 593.1 | 620.0 | 617.2 |
| 57.5° | 489.5 | 503.7 | 547.7 | 561.8 | 553.3 |
| 60° | 445.5 | 458.3 | 502.2 | 503.7 | 490.9 |
| 62.5° | 402.9 | 415.7 | 449.8 | 439.8 | 424.2 |
| 65° | 360.4 | 373.1 | 397.3 | 378.8 | 364.6 |
| 67.5° | 319.2 | 330.6 | 344.8 | 320.6 | 306.5 |
| 70° | 275.2 | 290.9 | 292.3 | 263.9 | 249.7 |
| 72.5° | 236.9 | 245.4 | 242.6 | 215.7 | 202.9 |
| 75° | 194.4 | 204.3 | 191.5 | 166.0 | 156.1 |
| 77.5° | 154.6 | 161.7 | 144.7 | 120.6 | 113.5 |
| 80° | 114.9 | 119.2 | 99.3 | 80.9 | 76.6 |
| 82.5° | 78.0 | 78.0 | 56.8 | 44.0 | 39.7 |
| 85° | 45.4 | 39.7 | 24.1 | 21.3 | 21.3 |
| 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)