

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: P261258

Luminaire Tested: **24CZ-LD5-30-S-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261258
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-30-S-UNV-L92765-W2A1-U-3000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED AT 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2552.0 lumens
Efficiency: N/A
Efficacy: 131.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

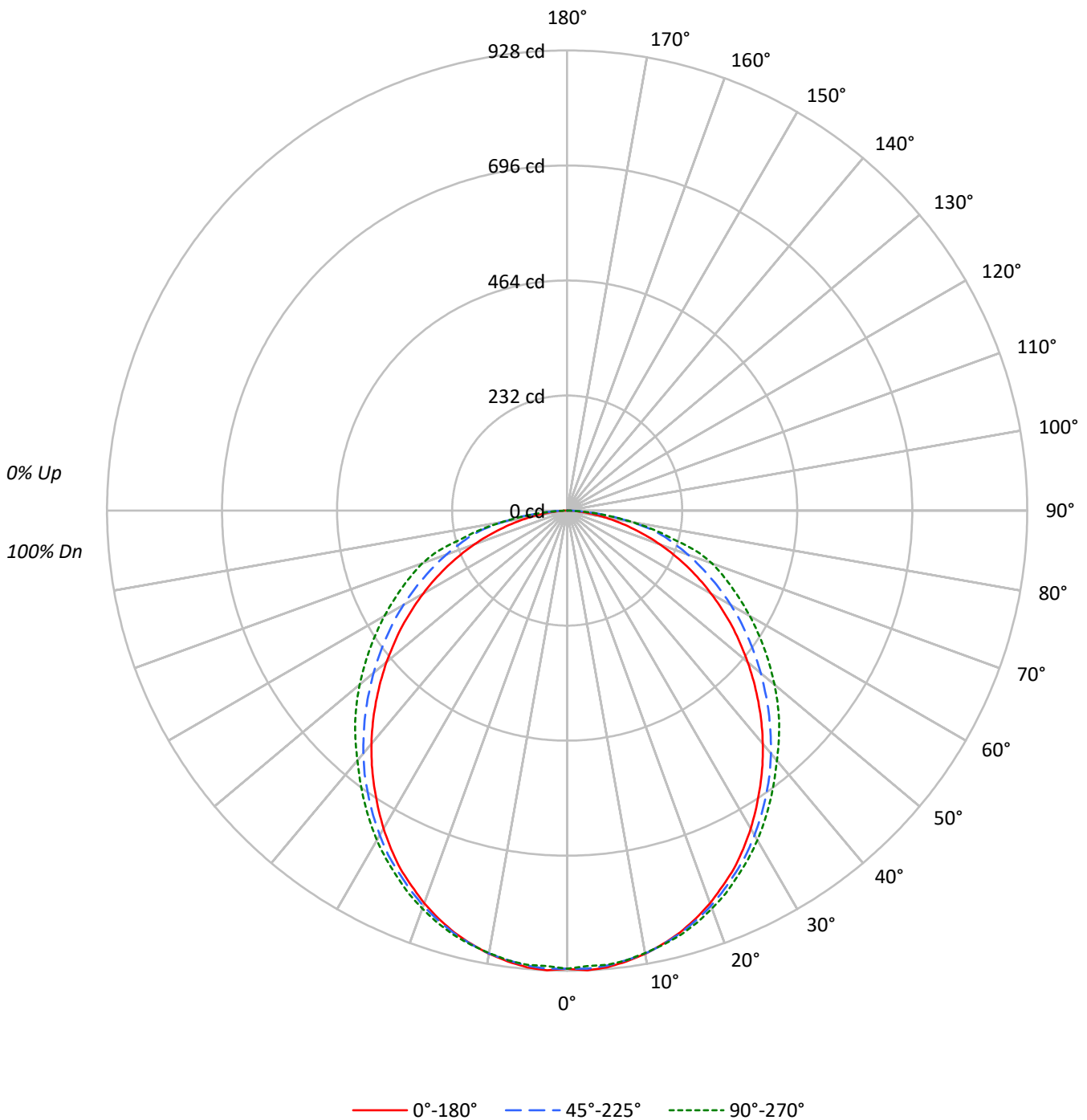
Input Watts (W): 19.437
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1243 | 1243 | 1243 |
| 5° | 1249 | 1244 | 1242 |
| 10° | 1240 | 1239 | 1238 |
| 15° | 1227 | 1229 | 1234 |
| 20° | 1206 | 1215 | 1223 |
| 25° | 1182 | 1195 | 1208 |
| 30° | 1150 | 1174 | 1193 |
| 35° | 1114 | 1149 | 1173 |
| 40° | 1078 | 1123 | 1156 |
| 45° | 1037 | 1094 | 1150 |
| 50° | 995 | 1066 | 1143 |
| 55° | 952 | 1044 | 1139 |
| 60° | 903 | 1026 | 1145 |
| 65° | 849 | 1014 | 1168 |
| 70° | 782 | 1019 | 1223 |
| 75° | 693 | 1055 | 1139 |
| 80° | 579 | 1000 | 1027 |
| 85° | 432 | 800 | 735 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 87.3 | 3.4 |
| 10°-20° | 248.4 | 9.7 |
| 20°-30° | 370.2 | 14.5 |
| 30°-40° | 435.8 | 17.1 |
| 40°-50° | 442.9 | 17.4 |
| 50°-60° | 398.2 | 15.6 |
| 60°-70° | 314.6 | 12.3 |
| 70°-80° | 199.6 | 7.8 |
| 80°-90° | 55.1 | 2.2 |
| 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° | 706.0 | 27.7 |
| 0°-40° | 1141.8 | 44.7 |
| 0°-60° | 1982.8 | 77.7 |
| 0°-90° | 2552.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2552.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 924 | 924 | 924 | 924 | 924 | |
| 5° | 925 | 917 | 921 | 920 | 920 | 88 |
| 15° | 881 | 876 | 882 | 885 | 886 | 248 |
| 25° | 796 | 796 | 805 | 810 | 814 | 366 |
| 35° | 678 | 683 | 700 | 707 | 714 | 424 |
| 45° | 545 | 553 | 575 | 592 | 605 | 421 |
| 55° | 406 | 416 | 445 | 474 | 486 | 362 |
| 65° | 267 | 280 | 318 | 353 | 367 | 264 |
| 75° | 133 | 156 | 203 | 221 | 219 | 142 |
| 85° | 28 | 48 | 52 | 48 | 48 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 923.9 | 923.9 | 923.9 | 923.9 | 923.9 |
| 2.5° | 928.1 | 921.3 | 924.7 | 923.0 | 919.6 |
| 5° | 924.7 | 917.1 | 921.3 | 919.6 | 919.6 |
| 7.5° | 917.1 | 911.1 | 914.5 | 913.7 | 914.5 |
| 10° | 907.7 | 901.8 | 906.9 | 906.9 | 906.0 |
| 12.5° | 895.0 | 889.9 | 895.8 | 895.8 | 896.7 |
| 15° | 880.6 | 876.3 | 882.3 | 884.8 | 885.7 |
| 17.5° | 862.7 | 858.5 | 866.1 | 868.7 | 871.2 |
| 20° | 842.4 | 840.7 | 848.3 | 850.8 | 854.2 |
| 22.5° | 819.4 | 819.4 | 827.1 | 830.5 | 835.6 |
| 25° | 796.5 | 795.6 | 805.0 | 810.1 | 813.5 |
| 27.5° | 769.3 | 770.2 | 782.1 | 787.2 | 791.4 |
| 30° | 740.5 | 742.2 | 755.7 | 761.7 | 767.6 |
| 32.5° | 709.9 | 713.3 | 728.6 | 735.4 | 741.3 |
| 35° | 678.5 | 682.7 | 699.7 | 707.3 | 714.1 |
| 37.5° | 647.0 | 653.0 | 670.8 | 678.5 | 686.1 |
| 40° | 613.9 | 619.0 | 639.4 | 648.7 | 658.1 |
| 42.5° | 580.0 | 586.8 | 607.1 | 620.7 | 631.8 |
| 45° | 545.2 | 552.8 | 574.9 | 591.9 | 604.6 |
| 47.5° | 510.3 | 520.5 | 541.8 | 564.7 | 575.7 |
| 50° | 475.5 | 485.7 | 509.5 | 535.0 | 546.0 |
| 52.5° | 439.9 | 450.0 | 477.2 | 503.5 | 515.4 |
| 55° | 405.9 | 416.1 | 445.0 | 473.8 | 485.7 |
| 57.5° | 370.2 | 381.3 | 413.5 | 443.3 | 455.1 |
| 60° | 335.4 | 346.5 | 381.3 | 412.7 | 425.4 |
| 62.5° | 301.4 | 313.3 | 349.8 | 383.0 | 395.7 |
| 65° | 266.6 | 280.2 | 318.4 | 353.2 | 366.8 |
| 67.5° | 232.7 | 248.0 | 287.9 | 324.4 | 338.8 |
| 70° | 198.7 | 216.5 | 259.0 | 296.4 | 310.8 |
| 72.5° | 165.6 | 185.1 | 230.1 | 267.5 | 275.1 |
| 75° | 133.3 | 156.2 | 202.9 | 220.8 | 219.1 |
| 77.5° | 102.7 | 128.2 | 172.4 | 175.8 | 180.9 |
| 80° | 74.7 | 102.7 | 129.1 | 135.9 | 132.5 |
| 82.5° | 49.3 | 77.3 | 92.6 | 89.2 | 88.3 |
| 85° | 28.0 | 48.4 | 51.8 | 47.6 | 47.6 |
| 87.5° | 11.9 | 19.5 | 17.0 | 12.7 | 11.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)