

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: P263895

Luminaire Tested: **24CZ-LD5-45SE-RDP-UNV-L92765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263895
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-45SE-RDP-UNV-L92765-W2A1-U-3000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2567.0 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

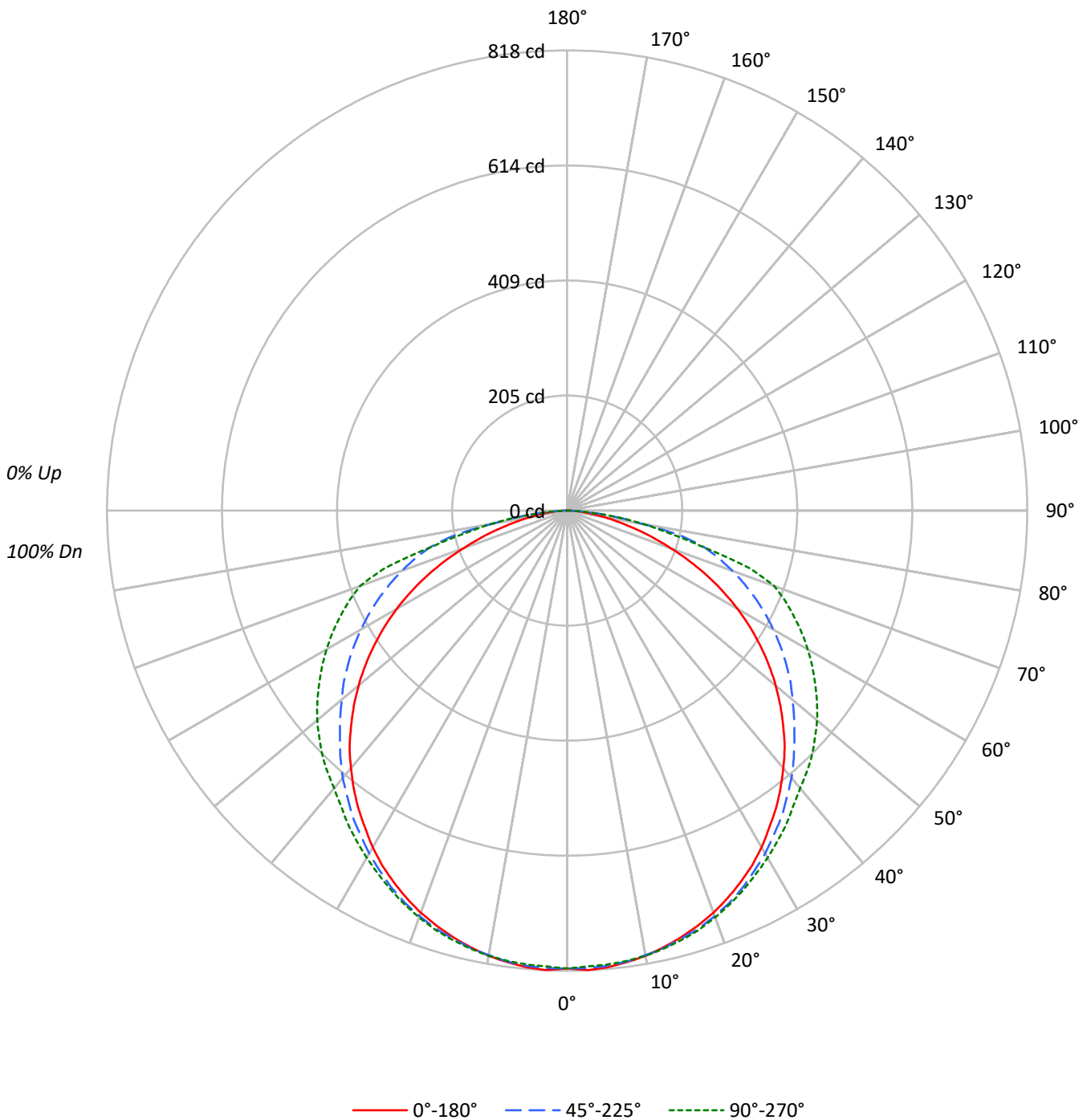
Input Watts (W): 34.596
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 103 | 98 | 94 | 105 | 101 | 97 | 93 | 96 | 93 | 90 | 92 | 90 | 87 | 89 | 87 | 84 | 82 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 80 | 75 | 83 | 78 | 73 | 80 | 75 | 71 | 77 | 73 | 70 | 67 |
| 3 | 89 | 78 | 69 | 62 | 86 | 76 | 68 | 62 | 73 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 67 | 58 | 52 | 64 | 57 | 51 | 62 | 56 | 50 | 60 | 54 | 50 | 47 |
| 5 | 74 | 61 | 51 | 45 | 72 | 60 | 51 | 44 | 57 | 50 | 44 | 55 | 49 | 43 | 54 | 48 | 43 | 41 |
| 6 | 68 | 55 | 45 | 39 | 66 | 54 | 45 | 38 | 52 | 44 | 38 | 50 | 43 | 38 | 48 | 42 | 37 | 35 |
| 7 | 63 | 49 | 40 | 34 | 61 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 41 | 32 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |
| 10 | 51 | 38 | 30 | 24 | 50 | 37 | 30 | 24 | 36 | 29 | 24 | 35 | 29 | 24 | 35 | 28 | 24 | 22 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1095 | 1095 | 1095 |
| 5° | 1101 | 1097 | 1094 |
| 10° | 1098 | 1096 | 1098 |
| 15° | 1093 | 1097 | 1100 |
| 20° | 1089 | 1098 | 1102 |
| 25° | 1082 | 1097 | 1103 |
| 30° | 1074 | 1093 | 1107 |
| 35° | 1063 | 1092 | 1117 |
| 40° | 1050 | 1090 | 1132 |
| 45° | 1034 | 1087 | 1171 |
| 50° | 1013 | 1095 | 1214 |
| 55° | 984 | 1114 | 1263 |
| 60° | 942 | 1139 | 1330 |
| 65° | 877 | 1175 | 1416 |
| 70° | 775 | 1228 | 1541 |
| 75° | 650 | 1314 | 1294 |
| 80° | 519 | 1038 | 1077 |
| 85° | 409 | 702 | 644 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 77.2 | 3.0 |
| 10°-20° | 222.1 | 8.7 |
| 20°-30° | 339.3 | 13.2 |
| 30°-40° | 414.8 | 16.2 |
| 40°-50° | 444.0 | 17.3 |
| 50°-60° | 425.9 | 16.6 |
| 60°-70° | 359.6 | 14.0 |
| 70°-80° | 229.8 | 9.0 |
| 80°-90° | 54.3 | 2.1 |
| 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° | 638.6 | 24.9 |
| 0°-40° | 1053.4 | 41.0 |
| 0°-60° | 1923.2 | 74.9 |
| 0°-90° | 2567.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2567.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 814 | 814 | 814 | 814 | 814 | |
| 5° | 815 | 810 | 812 | 811 | 810 | 77 |
| 15° | 785 | 782 | 787 | 790 | 790 | 222 |
| 25° | 729 | 728 | 739 | 742 | 743 | 336 |
| 35° | 647 | 652 | 665 | 674 | 680 | 405 |
| 45° | 543 | 552 | 571 | 598 | 615 | 419 |
| 55° | 420 | 433 | 475 | 518 | 538 | 374 |
| 65° | 276 | 302 | 369 | 421 | 445 | 272 |
| 75° | 125 | 178 | 253 | 258 | 249 | 135 |
| 85° | 26 | 44 | 46 | 44 | 42 | 32 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 813.8 | 813.8 | 813.8 | 813.8 | 813.8 |
| 2.5° | 817.6 | 812.5 | 813.8 | 813.8 | 811.2 |
| 5° | 815.0 | 810.0 | 812.5 | 811.2 | 810.0 |
| 7.5° | 810.0 | 806.2 | 808.7 | 808.7 | 807.4 |
| 10° | 803.7 | 799.9 | 802.4 | 803.7 | 803.7 |
| 12.5° | 794.8 | 792.3 | 796.1 | 796.1 | 797.3 |
| 15° | 784.7 | 782.2 | 787.2 | 789.8 | 789.8 |
| 17.5° | 773.3 | 772.1 | 778.4 | 779.6 | 780.9 |
| 20° | 760.7 | 759.4 | 767.0 | 767.0 | 769.5 |
| 22.5° | 745.5 | 744.3 | 754.4 | 754.4 | 756.9 |
| 25° | 729.1 | 727.8 | 739.2 | 741.7 | 743.0 |
| 27.5° | 711.4 | 710.1 | 721.5 | 725.3 | 727.8 |
| 30° | 691.2 | 691.2 | 703.8 | 708.9 | 712.7 |
| 32.5° | 668.4 | 672.2 | 683.6 | 691.2 | 696.2 |
| 35° | 647.0 | 652.0 | 664.7 | 673.5 | 679.8 |
| 37.5° | 623.0 | 628.0 | 641.9 | 653.3 | 660.9 |
| 40° | 597.7 | 604.0 | 620.4 | 633.1 | 644.4 |
| 42.5° | 572.4 | 578.7 | 596.4 | 615.4 | 630.5 |
| 45° | 543.3 | 552.2 | 571.1 | 597.7 | 615.4 |
| 47.5° | 514.3 | 523.1 | 547.1 | 580.0 | 597.7 |
| 50° | 484.0 | 494.1 | 523.1 | 561.0 | 580.0 |
| 52.5° | 452.4 | 463.7 | 500.4 | 540.8 | 559.8 |
| 55° | 419.5 | 433.4 | 475.1 | 518.1 | 538.3 |
| 57.5° | 385.4 | 400.6 | 449.8 | 495.3 | 516.8 |
| 60° | 350.0 | 369.0 | 423.3 | 471.3 | 494.1 |
| 62.5° | 313.4 | 336.1 | 396.8 | 446.1 | 470.1 |
| 65° | 275.5 | 302.0 | 369.0 | 420.8 | 444.8 |
| 67.5° | 236.3 | 271.7 | 341.2 | 395.5 | 419.5 |
| 70° | 197.1 | 238.8 | 312.1 | 367.7 | 391.7 |
| 72.5° | 160.5 | 208.5 | 283.0 | 334.9 | 339.9 |
| 75° | 125.1 | 178.2 | 252.7 | 257.8 | 248.9 |
| 77.5° | 93.5 | 147.8 | 208.5 | 185.7 | 184.5 |
| 80° | 67.0 | 118.8 | 133.9 | 137.7 | 139.0 |
| 82.5° | 44.2 | 89.7 | 87.2 | 89.7 | 88.5 |
| 85° | 26.5 | 44.2 | 45.5 | 44.2 | 41.7 |
| 87.5° | 12.6 | 16.4 | 12.6 | 11.4 | 10.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)