

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: P263905

Luminaire Tested: **24CZ-LD5-50SE-RDP-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263905
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-LD5-50SE-RDP-UNV-L92765-W2A1-U-3500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER
WITH RDP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2975.0 lumens
Efficiency: N/A
Efficacy: 74.7 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

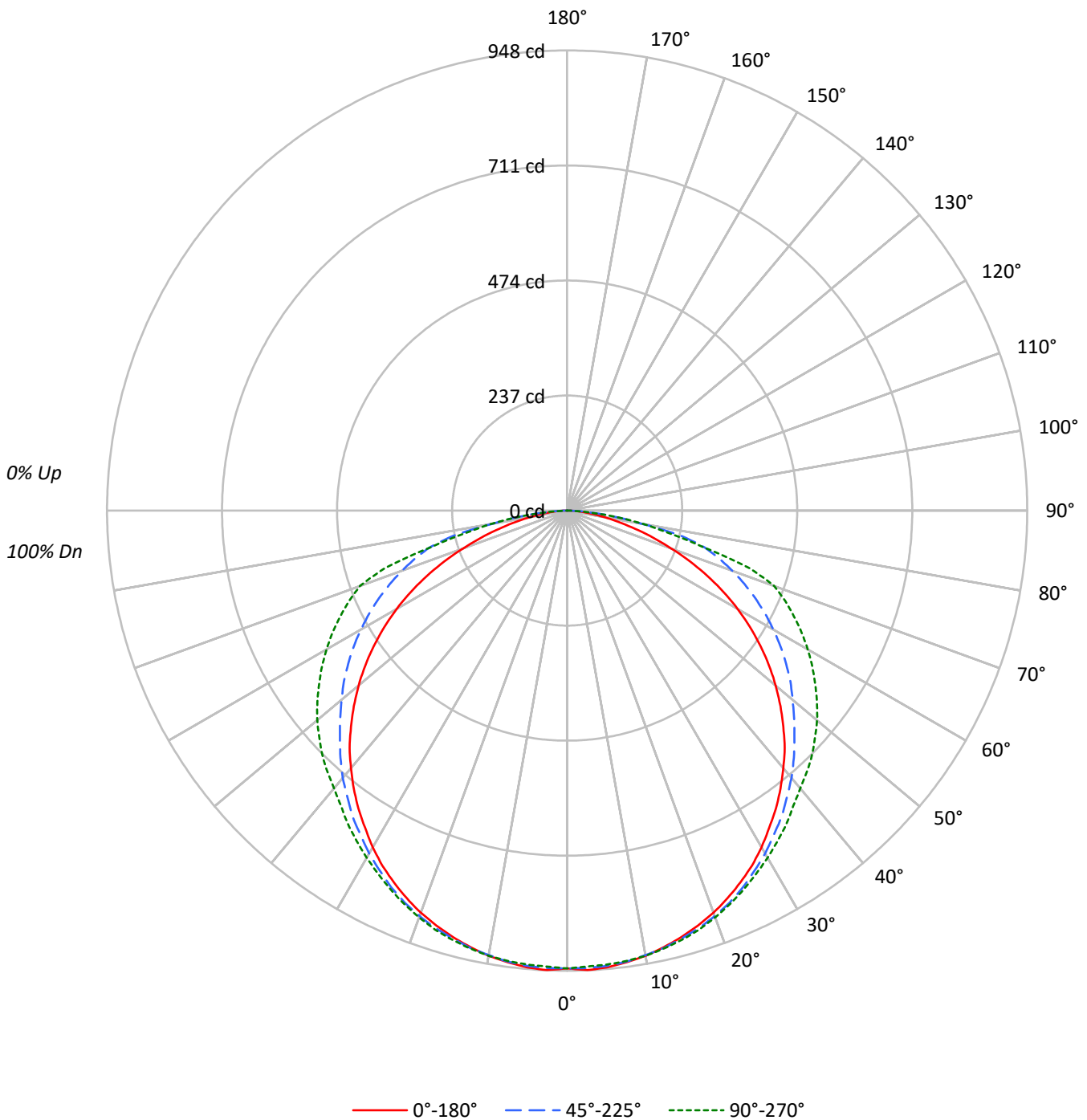
Input Watts (W): 39.804
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1269 | 1269 | 1269 |
| 5° | 1276 | 1272 | 1268 |
| 10° | 1273 | 1270 | 1273 |
| 15° | 1267 | 1271 | 1275 |
| 20° | 1262 | 1273 | 1277 |
| 25° | 1254 | 1272 | 1278 |
| 30° | 1244 | 1267 | 1283 |
| 35° | 1232 | 1265 | 1294 |
| 40° | 1217 | 1263 | 1312 |
| 45° | 1198 | 1259 | 1357 |
| 50° | 1174 | 1269 | 1407 |
| 55° | 1141 | 1292 | 1464 |
| 60° | 1092 | 1320 | 1541 |
| 65° | 1016 | 1361 | 1641 |
| 70° | 899 | 1423 | 1786 |
| 75° | 754 | 1523 | 1500 |
| 80° | 601 | 1203 | 1248 |
| 85° | 475 | 814 | 746 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 89.4 | 3.0 |
| 10°-20° | 257.4 | 8.7 |
| 20°-30° | 393.2 | 13.2 |
| 30°-40° | 480.7 | 16.2 |
| 40°-50° | 514.6 | 17.3 |
| 50°-60° | 493.6 | 16.6 |
| 60°-70° | 416.7 | 14.0 |
| 70°-80° | 266.3 | 9.0 |
| 80°-90° | 63.0 | 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° | 740.1 | 24.9 |
| 0°-40° | 1220.8 | 41.0 |
| 0°-60° | 2228.9 | 74.9 |
| 0°-90° | 2975.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2975.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 943 | 943 | 943 | 943 | 943 | |
| 5° | 945 | 939 | 942 | 940 | 939 | 90 |
| 15° | 909 | 906 | 912 | 915 | 915 | 257 |
| 25° | 845 | 844 | 857 | 860 | 861 | 389 |
| 35° | 750 | 756 | 770 | 780 | 788 | 469 |
| 45° | 630 | 640 | 662 | 693 | 713 | 486 |
| 55° | 486 | 502 | 551 | 600 | 624 | 434 |
| 65° | 319 | 350 | 428 | 488 | 516 | 315 |
| 75° | 145 | 206 | 293 | 299 | 288 | 156 |
| 85° | 31 | 51 | 53 | 51 | 48 | 37 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 943.1 | 943.1 | 943.1 | 943.1 | 943.1 |
| 2.5° | 947.5 | 941.6 | 943.1 | 943.1 | 940.2 |
| 5° | 944.6 | 938.7 | 941.6 | 940.2 | 938.7 |
| 7.5° | 938.7 | 934.3 | 937.2 | 937.2 | 935.8 |
| 10° | 931.4 | 927.0 | 929.9 | 931.4 | 931.4 |
| 12.5° | 921.1 | 918.2 | 922.6 | 922.6 | 924.1 |
| 15° | 909.4 | 906.5 | 912.3 | 915.3 | 915.3 |
| 17.5° | 896.2 | 894.8 | 902.1 | 903.6 | 905.0 |
| 20° | 881.6 | 880.1 | 888.9 | 888.9 | 891.8 |
| 22.5° | 864.0 | 862.6 | 874.3 | 874.3 | 877.2 |
| 25° | 845.0 | 843.5 | 856.7 | 859.6 | 861.1 |
| 27.5° | 824.5 | 823.0 | 836.2 | 840.6 | 843.5 |
| 30° | 801.0 | 801.0 | 815.7 | 821.6 | 825.9 |
| 32.5° | 774.7 | 779.1 | 792.3 | 801.0 | 806.9 |
| 35° | 749.8 | 755.7 | 770.3 | 780.5 | 787.9 |
| 37.5° | 722.0 | 727.8 | 743.9 | 757.1 | 765.9 |
| 40° | 692.7 | 700.0 | 719.0 | 733.7 | 746.9 |
| 42.5° | 663.4 | 670.7 | 691.2 | 713.2 | 730.8 |
| 45° | 629.7 | 640.0 | 661.9 | 692.7 | 713.2 |
| 47.5° | 596.0 | 606.3 | 634.1 | 672.2 | 692.7 |
| 50° | 560.9 | 572.6 | 606.3 | 650.2 | 672.2 |
| 52.5° | 524.3 | 537.4 | 579.9 | 626.8 | 648.7 |
| 55° | 486.2 | 502.3 | 550.6 | 600.4 | 623.9 |
| 57.5° | 446.7 | 464.2 | 521.3 | 574.1 | 599.0 |
| 60° | 405.7 | 427.6 | 490.6 | 546.2 | 572.6 |
| 62.5° | 363.2 | 389.5 | 459.8 | 516.9 | 544.8 |
| 65° | 319.2 | 350.0 | 427.6 | 487.7 | 515.5 |
| 67.5° | 273.9 | 314.9 | 395.4 | 458.4 | 486.2 |
| 70° | 228.5 | 276.8 | 361.7 | 426.2 | 454.0 |
| 72.5° | 186.0 | 241.6 | 328.0 | 388.1 | 393.9 |
| 75° | 145.0 | 206.5 | 292.9 | 298.7 | 288.5 |
| 77.5° | 108.4 | 171.3 | 241.6 | 215.3 | 213.8 |
| 80° | 77.6 | 137.7 | 155.2 | 159.6 | 161.1 |
| 82.5° | 51.3 | 104.0 | 101.0 | 104.0 | 102.5 |
| 85° | 30.8 | 51.3 | 52.7 | 51.3 | 48.3 |
| 87.5° | 14.6 | 19.0 | 14.6 | 13.2 | 11.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)