

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: P263488

Luminaire Tested: **24CZ-LD5-50SE-SQP-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263488
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-50SE-SQP-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (168) 90 CRI LEDS TUNED AT 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3061.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

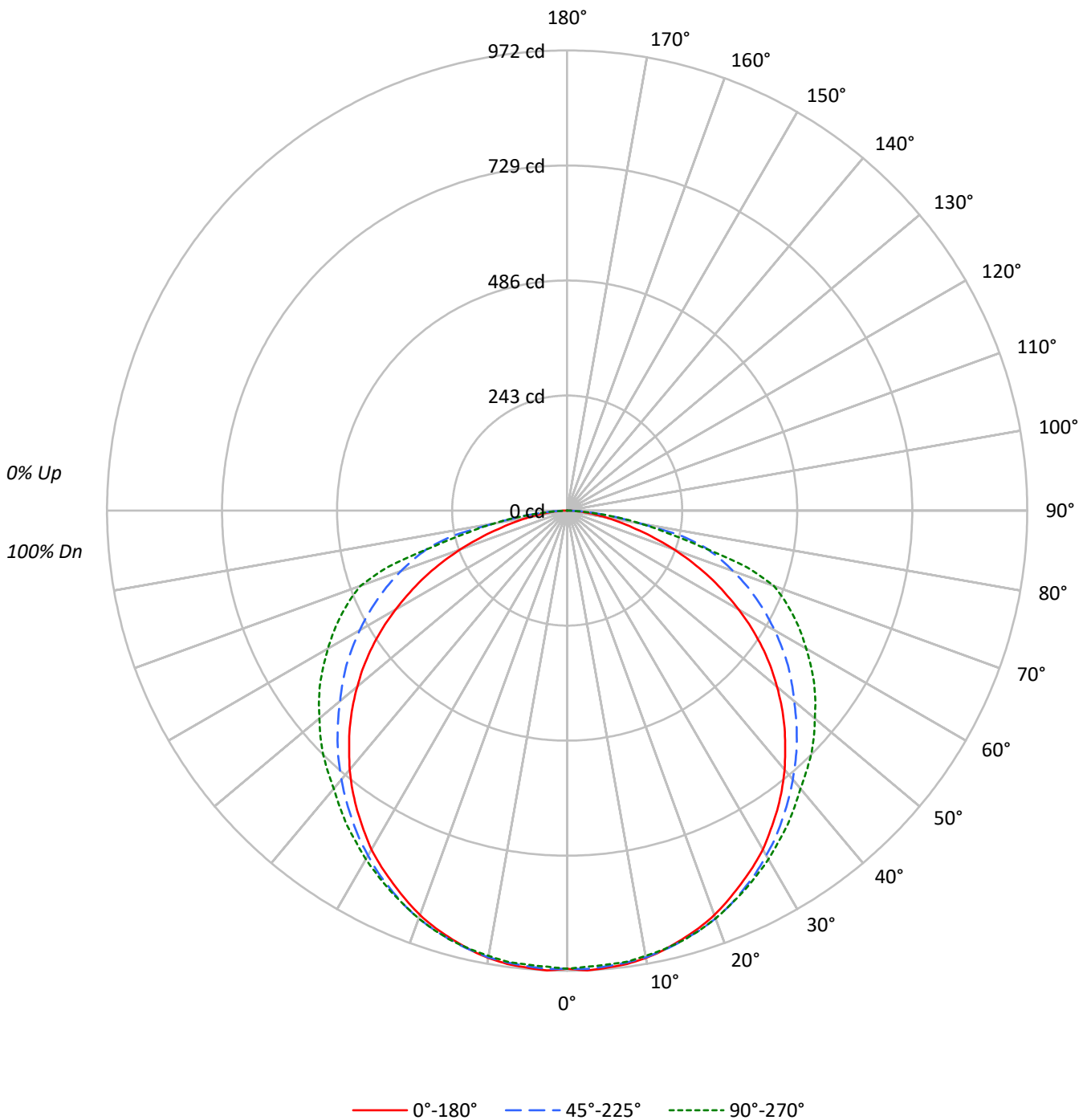
Input Watts (W): 40.641
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 63 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 79 | 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 | 62 | 49 | 40 | 34 | 47 | 39 | 34 | | 45 | 39 | 33 | | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | | 42 | 35 | 30 | | 40 | 34 | 29 | 28 |
| 9 | 55 | 41 | 33 | 27 | 54 | 41 | 33 | 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° | 1302 | 1302 | 1302 |
| 5° | 1309 | 1305 | 1301 |
| 10° | 1311 | 1309 | 1305 |
| 15° | 1306 | 1310 | 1310 |
| 20° | 1302 | 1313 | 1313 |
| 25° | 1291 | 1310 | 1314 |
| 30° | 1285 | 1307 | 1322 |
| 35° | 1270 | 1304 | 1332 |
| 40° | 1255 | 1302 | 1347 |
| 45° | 1236 | 1306 | 1387 |
| 50° | 1211 | 1311 | 1430 |
| 55° | 1179 | 1335 | 1495 |
| 60° | 1128 | 1362 | 1570 |
| 65° | 1057 | 1404 | 1681 |
| 70° | 945 | 1468 | 1828 |
| 75° | 781 | 1570 | 1512 |
| 80° | 637 | 1213 | 1225 |
| 85° | 513 | 806 | 756 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 91.9 | 3.0 |
| 10°-20° | 265.2 | 8.7 |
| 20°-30° | 405.3 | 13.2 |
| 30°-40° | 495.7 | 16.2 |
| 40°-50° | 530.4 | 17.3 |
| 50°-60° | 507.9 | 16.6 |
| 60°-70° | 429.6 | 14.0 |
| 70°-80° | 272.3 | 8.9 |
| 80°-90° | 62.6 | 2.0 |
| 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° | 762.4 | 24.9 |
| 0°-40° | 1258.1 | 41.1 |
| 0°-60° | 2296.4 | 75.0 |
| 0°-90° | 3061.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3061.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 968 | 968 | 968 | 968 | 968 | |
| 5° | 969 | 964 | 966 | 964 | 963 | 92 |
| 15° | 938 | 936 | 941 | 941 | 941 | 265 |
| 25° | 870 | 870 | 882 | 885 | 885 | 401 |
| 35° | 773 | 778 | 794 | 805 | 811 | 484 |
| 45° | 650 | 661 | 686 | 715 | 729 | 501 |
| 55° | 503 | 519 | 569 | 617 | 637 | 448 |
| 65° | 332 | 364 | 441 | 501 | 528 | 327 |
| 75° | 150 | 212 | 302 | 300 | 291 | 163 |
| 85° | 33 | 51 | 52 | 47 | 49 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 967.6 | 967.6 | 967.6 | 967.6 | 967.6 |
| 2.5° | 972.4 | 967.6 | 969.2 | 967.6 | 964.5 |
| 5° | 969.2 | 964.5 | 966.1 | 964.5 | 962.9 |
| 7.5° | 966.1 | 961.3 | 962.9 | 961.3 | 961.3 |
| 10° | 959.7 | 955.0 | 958.2 | 956.6 | 955.0 |
| 12.5° | 950.2 | 947.1 | 950.2 | 948.7 | 948.7 |
| 15° | 937.6 | 936.0 | 940.8 | 940.8 | 940.8 |
| 17.5° | 924.9 | 923.4 | 929.7 | 929.7 | 929.7 |
| 20° | 909.1 | 907.6 | 917.0 | 917.0 | 917.0 |
| 22.5° | 890.2 | 888.6 | 901.2 | 901.2 | 901.2 |
| 25° | 869.6 | 869.6 | 882.3 | 885.4 | 885.4 |
| 27.5° | 849.1 | 849.1 | 863.3 | 868.0 | 868.0 |
| 30° | 826.9 | 826.9 | 841.2 | 847.5 | 850.6 |
| 32.5° | 800.0 | 803.2 | 819.0 | 826.9 | 830.1 |
| 35° | 773.2 | 777.9 | 793.7 | 804.8 | 811.1 |
| 37.5° | 744.7 | 749.4 | 768.4 | 781.1 | 789.0 |
| 40° | 714.7 | 721.0 | 741.5 | 757.4 | 766.8 |
| 42.5° | 681.5 | 690.9 | 714.7 | 735.2 | 747.9 |
| 45° | 649.8 | 660.9 | 686.2 | 714.7 | 728.9 |
| 47.5° | 615.1 | 627.7 | 656.2 | 692.5 | 706.8 |
| 50° | 578.7 | 591.3 | 626.1 | 667.2 | 683.0 |
| 52.5° | 542.3 | 556.6 | 597.7 | 641.9 | 660.9 |
| 55° | 502.8 | 518.6 | 569.2 | 616.6 | 637.2 |
| 57.5° | 461.7 | 480.7 | 537.6 | 588.2 | 610.3 |
| 60° | 419.0 | 442.7 | 506.0 | 559.7 | 583.4 |
| 62.5° | 374.7 | 403.2 | 474.3 | 531.3 | 556.6 |
| 65° | 332.0 | 363.7 | 441.1 | 501.2 | 528.1 |
| 67.5° | 286.2 | 325.7 | 407.9 | 472.8 | 498.0 |
| 70° | 240.3 | 286.2 | 373.1 | 439.5 | 464.8 |
| 72.5° | 194.5 | 249.8 | 338.4 | 398.4 | 398.4 |
| 75° | 150.2 | 211.9 | 302.0 | 300.4 | 290.9 |
| 77.5° | 113.8 | 177.1 | 248.2 | 211.9 | 213.4 |
| 80° | 82.2 | 142.3 | 156.5 | 156.5 | 158.1 |
| 82.5° | 55.3 | 109.1 | 101.2 | 99.6 | 102.8 |
| 85° | 33.2 | 50.6 | 52.2 | 47.4 | 49.0 |
| 87.5° | 15.8 | 17.4 | 14.2 | 9.5 | 9.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)