

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: P263177

Luminaire Tested: **24CZ-LD5-60-SQP-UNV-L93050-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263177
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-LD5-60-SQP-UNV-L93050-W2A1-U-3000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (336) 90 CRI LEDS TUNED AT 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3106.7 lumens
Efficiency: N/A
Efficacy: 68.6 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

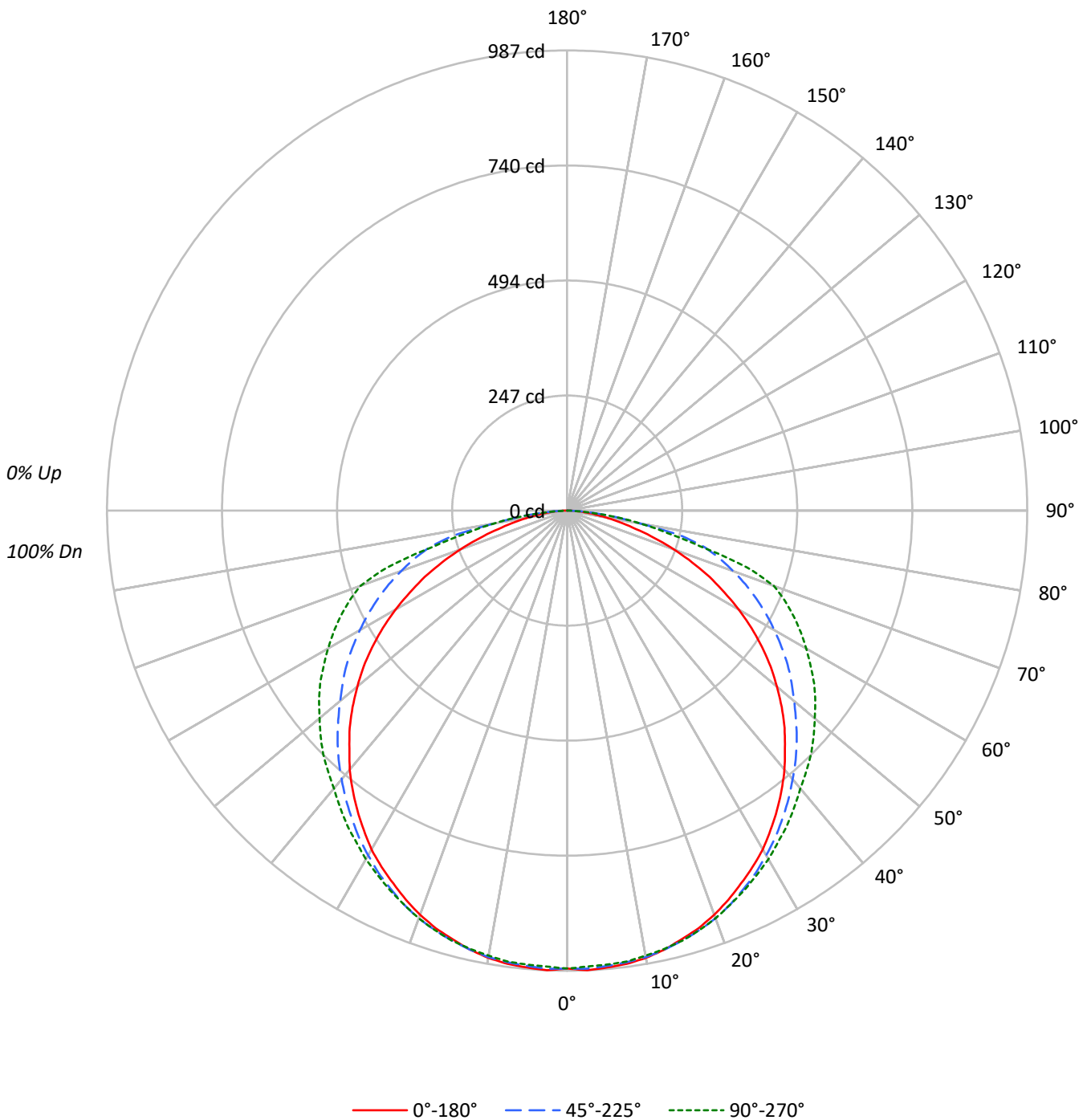
Input Watts (W): 45.286164
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1321 | 1321 | 1321 |
| 5° | 1329 | 1324 | 1320 |
| 10° | 1331 | 1329 | 1324 |
| 15° | 1326 | 1330 | 1330 |
| 20° | 1321 | 1333 | 1333 |
| 25° | 1310 | 1329 | 1334 |
| 30° | 1304 | 1326 | 1341 |
| 35° | 1289 | 1323 | 1352 |
| 40° | 1274 | 1322 | 1367 |
| 45° | 1255 | 1325 | 1408 |
| 50° | 1229 | 1330 | 1451 |
| 55° | 1197 | 1355 | 1517 |
| 60° | 1144 | 1382 | 1593 |
| 65° | 1073 | 1425 | 1706 |
| 70° | 959 | 1490 | 1856 |
| 75° | 792 | 1593 | 1535 |
| 80° | 646 | 1231 | 1244 |
| 85° | 520 | 818 | 767 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 93.3 | 3.0 |
| 10°-20° | 269.1 | 8.7 |
| 20°-30° | 411.3 | 13.2 |
| 30°-40° | 503.1 | 16.2 |
| 40°-50° | 538.3 | 17.3 |
| 50°-60° | 515.5 | 16.6 |
| 60°-70° | 436.1 | 14.0 |
| 70°-80° | 276.4 | 8.9 |
| 80°-90° | 63.6 | 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° | 773.8 | 24.9 |
| 0°-40° | 1276.9 | 41.1 |
| 0°-60° | 2330.6 | 75.0 |
| 0°-90° | 3106.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3106.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 982 | 982 | 982 | 982 | 982 | |
| 5° | 984 | 979 | 980 | 979 | 977 | 94 |
| 15° | 952 | 950 | 955 | 955 | 955 | 269 |
| 25° | 883 | 883 | 895 | 899 | 899 | 407 |
| 35° | 785 | 790 | 806 | 817 | 823 | 491 |
| 45° | 660 | 671 | 696 | 725 | 740 | 508 |
| 55° | 510 | 526 | 578 | 626 | 647 | 455 |
| 65° | 337 | 369 | 448 | 509 | 536 | 332 |
| 75° | 152 | 215 | 306 | 305 | 295 | 166 |
| 85° | 34 | 51 | 53 | 48 | 50 | 40 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24CZ-LD5-60-SQP-UNV-L93050-W2A1-U-3000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 982.1 | 982.1 | 982.1 | 982.1 | 982.1 |
| 2.5° | 986.9 | 982.1 | 983.7 | 982.1 | 978.9 |
| 5° | 983.7 | 978.9 | 980.5 | 978.9 | 977.3 |
| 7.5° | 980.5 | 975.7 | 977.3 | 975.7 | 975.7 |
| 10° | 974.1 | 969.2 | 972.5 | 970.9 | 969.2 |
| 12.5° | 964.4 | 961.2 | 964.4 | 962.8 | 962.8 |
| 15° | 951.6 | 950.0 | 954.8 | 954.8 | 954.8 |
| 17.5° | 938.8 | 937.2 | 943.6 | 943.6 | 943.6 |
| 20° | 922.7 | 921.1 | 930.7 | 930.7 | 930.7 |
| 22.5° | 903.5 | 901.8 | 914.7 | 914.7 | 914.7 |
| 25° | 882.6 | 882.6 | 895.4 | 898.6 | 898.6 |
| 27.5° | 861.7 | 861.7 | 876.2 | 881.0 | 881.0 |
| 30° | 839.3 | 839.3 | 853.7 | 860.1 | 863.3 |
| 32.5° | 812.0 | 815.2 | 831.2 | 839.3 | 842.5 |
| 35° | 784.7 | 789.5 | 805.6 | 816.8 | 823.2 |
| 37.5° | 755.8 | 760.6 | 779.9 | 792.7 | 800.8 |
| 40° | 725.3 | 731.7 | 752.6 | 768.7 | 778.3 |
| 42.5° | 691.6 | 701.3 | 725.3 | 746.2 | 759.0 |
| 45° | 659.5 | 670.8 | 696.4 | 725.3 | 739.8 |
| 47.5° | 624.2 | 637.1 | 666.0 | 702.9 | 717.3 |
| 50° | 587.3 | 600.2 | 635.5 | 677.2 | 693.2 |
| 52.5° | 550.4 | 564.9 | 606.6 | 651.5 | 670.8 |
| 55° | 510.3 | 526.3 | 577.7 | 625.8 | 646.7 |
| 57.5° | 468.6 | 487.8 | 545.6 | 597.0 | 619.4 |
| 60° | 425.2 | 449.3 | 513.5 | 568.1 | 592.1 |
| 62.5° | 380.3 | 409.2 | 481.4 | 539.2 | 564.9 |
| 65° | 337.0 | 369.1 | 447.7 | 508.7 | 536.0 |
| 67.5° | 290.5 | 330.6 | 414.0 | 479.8 | 505.5 |
| 70° | 243.9 | 290.5 | 378.7 | 446.1 | 471.8 |
| 72.5° | 197.4 | 253.5 | 343.4 | 404.4 | 404.4 |
| 75° | 152.4 | 215.0 | 306.5 | 304.9 | 295.3 |
| 77.5° | 115.5 | 179.7 | 251.9 | 215.0 | 216.6 |
| 80° | 83.4 | 144.4 | 158.9 | 158.9 | 160.5 |
| 82.5° | 56.2 | 110.7 | 102.7 | 101.1 | 104.3 |
| 85° | 33.7 | 51.4 | 53.0 | 48.1 | 49.7 |
| 87.5° | 16.0 | 17.7 | 14.4 | 9.6 | 9.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)