

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: P263304

Luminaire Tested: **24CZ-LD5-75-SQP-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P263304
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-LD5-75-SQP-UNV-L82765-W2A1-U-3000K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SQP LENS
Light Source: (336) 80 CRI LEDS TUNED AT 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4711.0 lumens
Efficiency: N/A
Efficacy: 81.2 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

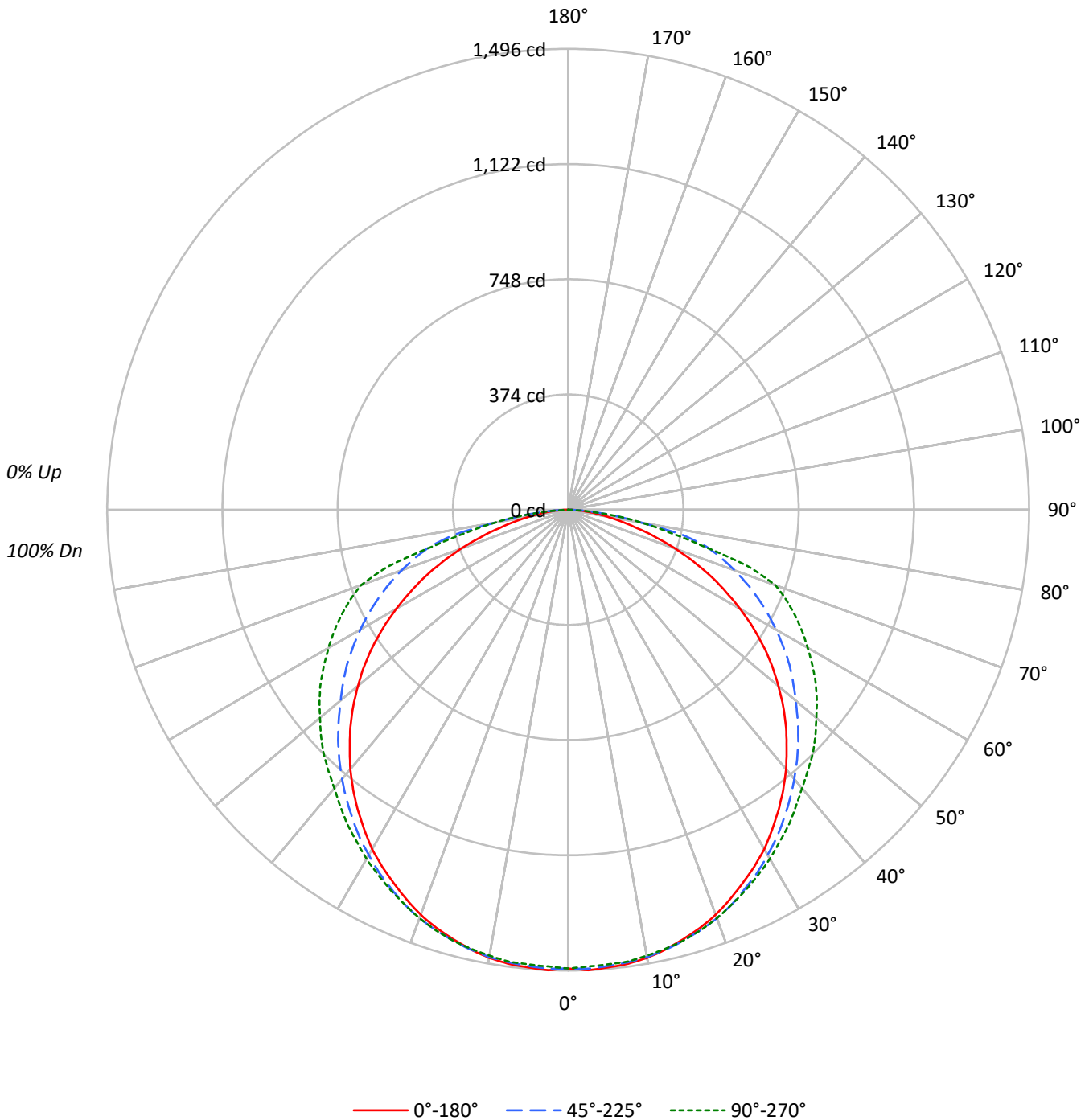
Input Watts (W): 58.032
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 2004 | 2004 | 2004 |
| 5° | 2015 | 2008 | 2001 |
| 10° | 2018 | 2015 | 2008 |
| 15° | 2010 | 2017 | 2017 |
| 20° | 2003 | 2021 | 2021 |
| 25° | 1987 | 2016 | 2023 |
| 30° | 1977 | 2011 | 2034 |
| 35° | 1954 | 2007 | 2050 |
| 40° | 1932 | 2005 | 2073 |
| 45° | 1903 | 2010 | 2135 |
| 50° | 1864 | 2017 | 2200 |
| 55° | 1815 | 2055 | 2301 |
| 60° | 1735 | 2095 | 2416 |
| 65° | 1627 | 2161 | 2588 |
| 70° | 1455 | 2259 | 2814 |
| 75° | 1202 | 2416 | 2327 |
| 80° | 980 | 1867 | 1885 |
| 85° | 789 | 1240 | 1164 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 141.4 | 3.0 |
| 10°-20° | 408.1 | 8.7 |
| 20°-30° | 623.8 | 13.2 |
| 30°-40° | 762.9 | 16.2 |
| 40°-50° | 816.3 | 17.3 |
| 50°-60° | 781.7 | 16.6 |
| 60°-70° | 661.2 | 14.0 |
| 70°-80° | 419.1 | 8.9 |
| 80°-90° | 96.4 | 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° | 1173.3 | 24.9 |
| 0°-40° | 1936.2 | 41.1 |
| 0°-60° | 3534.2 | 75.0 |
| 0°-90° | 4711.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4711.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1489 | 1489 | 1489 | 1489 | 1489 | |
| 5° | 1492 | 1484 | 1487 | 1484 | 1482 | 142 |
| 15° | 1443 | 1441 | 1448 | 1448 | 1448 | 408 |
| 25° | 1338 | 1338 | 1358 | 1363 | 1363 | 617 |
| 35° | 1190 | 1197 | 1222 | 1239 | 1248 | 744 |
| 45° | 1000 | 1017 | 1056 | 1100 | 1122 | 770 |
| 55° | 774 | 798 | 876 | 949 | 981 | 690 |
| 65° | 511 | 560 | 679 | 771 | 813 | 503 |
| 75° | 231 | 326 | 465 | 462 | 448 | 251 |
| 85° | 51 | 78 | 80 | 73 | 75 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1489.2 | 1489.2 | 1489.2 | 1489.2 | 1489.2 |
| 2.5° | 1496.5 | 1489.2 | 1491.7 | 1489.2 | 1484.4 |
| 5° | 1491.7 | 1484.4 | 1486.8 | 1484.4 | 1481.9 |
| 7.5° | 1486.8 | 1479.5 | 1481.9 | 1479.5 | 1479.5 |
| 10° | 1477.1 | 1469.8 | 1474.6 | 1472.2 | 1469.8 |
| 12.5° | 1462.5 | 1457.6 | 1462.5 | 1460.0 | 1460.0 |
| 15° | 1443.0 | 1440.6 | 1447.9 | 1447.9 | 1447.9 |
| 17.5° | 1423.5 | 1421.1 | 1430.8 | 1430.8 | 1430.8 |
| 20° | 1399.2 | 1396.8 | 1411.4 | 1411.4 | 1411.4 |
| 22.5° | 1370.0 | 1367.6 | 1387.0 | 1387.0 | 1387.0 |
| 25° | 1338.4 | 1338.4 | 1357.8 | 1362.7 | 1362.7 |
| 27.5° | 1306.7 | 1306.7 | 1328.6 | 1335.9 | 1335.9 |
| 30° | 1272.7 | 1272.7 | 1294.6 | 1304.3 | 1309.2 |
| 32.5° | 1231.3 | 1236.2 | 1260.5 | 1272.7 | 1277.5 |
| 35° | 1189.9 | 1197.2 | 1221.6 | 1238.6 | 1248.3 |
| 37.5° | 1146.1 | 1153.4 | 1182.6 | 1202.1 | 1214.3 |
| 40° | 1099.9 | 1109.6 | 1141.3 | 1165.6 | 1180.2 |
| 42.5° | 1048.8 | 1063.4 | 1099.9 | 1131.5 | 1151.0 |
| 45° | 1000.1 | 1017.2 | 1056.1 | 1099.9 | 1121.8 |
| 47.5° | 946.6 | 966.1 | 1009.9 | 1065.8 | 1087.7 |
| 50° | 890.6 | 910.1 | 963.6 | 1026.9 | 1051.2 |
| 52.5° | 834.7 | 856.6 | 919.8 | 988.0 | 1017.2 |
| 55° | 773.8 | 798.2 | 876.0 | 949.0 | 980.7 |
| 57.5° | 710.6 | 739.8 | 827.4 | 905.2 | 939.3 |
| 60° | 644.8 | 681.3 | 778.7 | 861.4 | 897.9 |
| 62.5° | 576.7 | 620.5 | 730.0 | 817.6 | 856.6 |
| 65° | 511.0 | 559.7 | 678.9 | 771.4 | 812.8 |
| 67.5° | 440.4 | 501.3 | 627.8 | 727.6 | 766.5 |
| 70° | 369.9 | 440.4 | 574.3 | 676.5 | 715.4 |
| 72.5° | 299.3 | 384.5 | 520.7 | 613.2 | 613.2 |
| 75° | 231.2 | 326.1 | 464.8 | 462.3 | 447.7 |
| 77.5° | 175.2 | 272.5 | 382.0 | 326.1 | 328.5 |
| 80° | 126.5 | 219.0 | 240.9 | 240.9 | 243.3 |
| 82.5° | 85.2 | 167.9 | 155.7 | 153.3 | 158.2 |
| 85° | 51.1 | 77.9 | 80.3 | 73.0 | 75.4 |
| 87.5° | 24.3 | 26.8 | 21.9 | 14.6 | 14.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)