

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: P230426

Luminaire Tested: **24CZ-LD5-75-SQP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230426
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-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SQP LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4565.5 lumens
Efficiency: N/A
Efficacy: 66.1 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

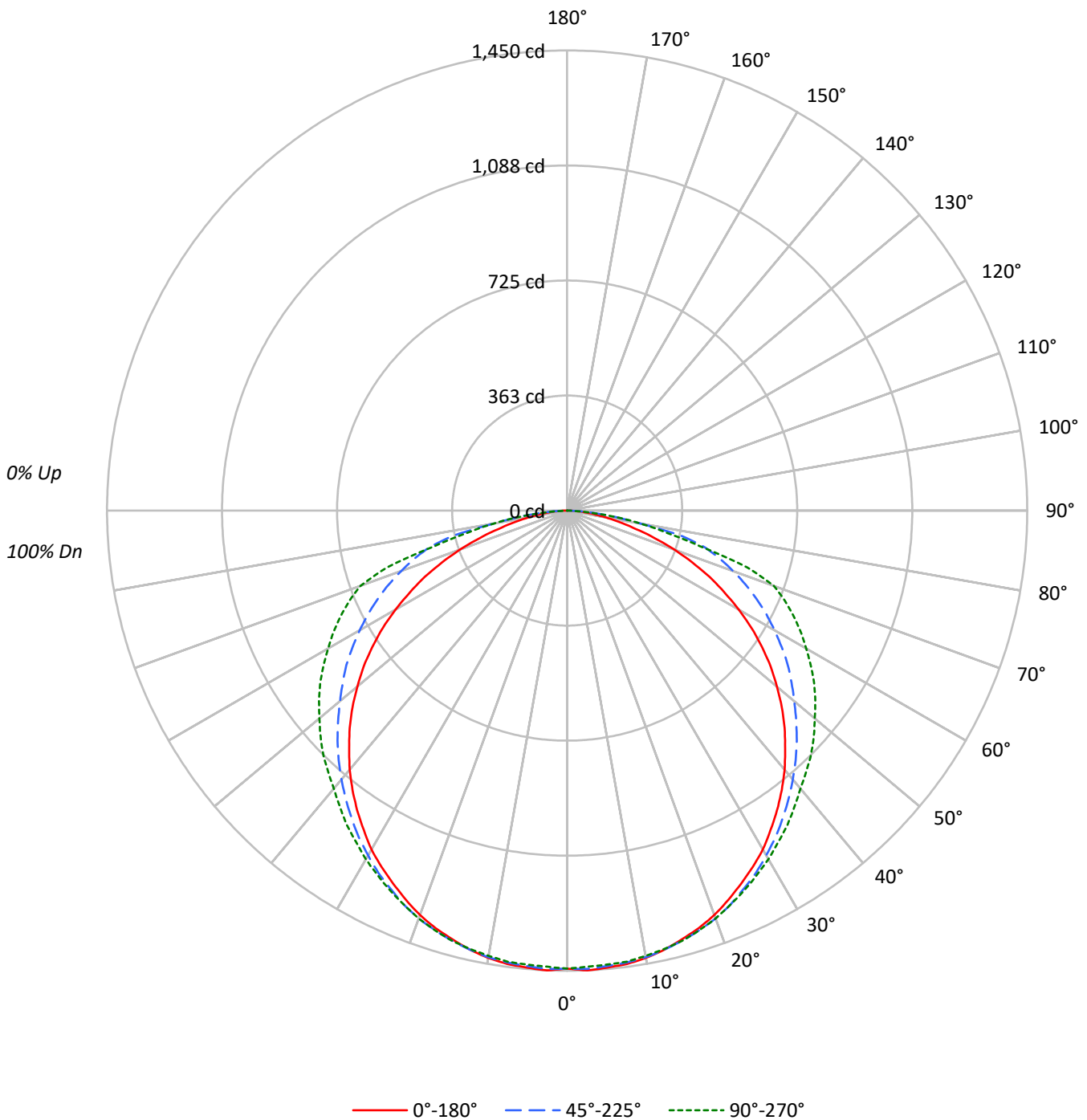
Input Watts (W): 69.06
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1942 | 1942 | 1942 |
| 5° | 1952 | 1946 | 1940 |
| 10° | 1956 | 1953 | 1946 |
| 15° | 1948 | 1954 | 1954 |
| 20° | 1942 | 1958 | 1958 |
| 25° | 1926 | 1954 | 1961 |
| 30° | 1916 | 1949 | 1971 |
| 35° | 1894 | 1944 | 1987 |
| 40° | 1872 | 1943 | 2009 |
| 45° | 1844 | 1948 | 2069 |
| 50° | 1807 | 1955 | 2133 |
| 55° | 1759 | 1992 | 2229 |
| 60° | 1682 | 2031 | 2342 |
| 65° | 1577 | 2095 | 2508 |
| 70° | 1410 | 2189 | 2727 |
| 75° | 1164 | 2341 | 2256 |
| 80° | 950 | 1809 | 1827 |
| 85° | 764 | 1201 | 1129 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.1 | 3.0 |
| 10°-20° | 395.5 | 8.7 |
| 20°-30° | 604.5 | 13.2 |
| 30°-40° | 739.3 | 16.2 |
| 40°-50° | 791.1 | 17.3 |
| 50°-60° | 757.5 | 16.6 |
| 60°-70° | 640.8 | 14.0 |
| 70°-80° | 406.2 | 8.9 |
| 80°-90° | 93.4 | 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° | 1137.1 | 24.9 |
| 0°-40° | 1876.4 | 41.1 |
| 0°-60° | 3425.0 | 75.0 |
| 0°-90° | 4565.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4565.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1443 | 1443 | 1443 | 1443 | 1443 | |
| 5° | 1446 | 1438 | 1441 | 1438 | 1436 | 138 |
| 15° | 1398 | 1396 | 1403 | 1403 | 1403 | 395 |
| 25° | 1297 | 1297 | 1316 | 1321 | 1321 | 598 |
| 35° | 1153 | 1160 | 1184 | 1200 | 1210 | 721 |
| 45° | 969 | 986 | 1024 | 1066 | 1087 | 747 |
| 55° | 750 | 774 | 849 | 920 | 950 | 669 |
| 65° | 495 | 542 | 658 | 748 | 788 | 488 |
| 75° | 224 | 316 | 450 | 448 | 434 | 244 |
| 85° | 50 | 76 | 78 | 71 | 73 | 59 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P230426

CATALOG NUMBER: 24CZ-LD5-75-SQP-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1443.2 | 1443.2 | 1443.2 | 1443.2 | 1443.2 |
| 2.5° | 1450.3 | 1443.2 | 1445.6 | 1443.2 | 1438.5 |
| 5° | 1445.6 | 1438.5 | 1440.9 | 1438.5 | 1436.2 |
| 7.5° | 1440.9 | 1433.8 | 1436.2 | 1433.8 | 1433.8 |
| 10° | 1431.4 | 1424.4 | 1429.1 | 1426.7 | 1424.4 |
| 12.5° | 1417.3 | 1412.6 | 1417.3 | 1414.9 | 1414.9 |
| 15° | 1398.4 | 1396.1 | 1403.1 | 1403.1 | 1403.1 |
| 17.5° | 1379.6 | 1377.2 | 1386.6 | 1386.6 | 1386.6 |
| 20° | 1356.0 | 1353.6 | 1367.8 | 1367.8 | 1367.8 |
| 22.5° | 1327.7 | 1325.3 | 1344.2 | 1344.2 | 1344.2 |
| 25° | 1297.0 | 1297.0 | 1315.9 | 1320.6 | 1320.6 |
| 27.5° | 1266.4 | 1266.4 | 1287.6 | 1294.7 | 1294.7 |
| 30° | 1233.4 | 1233.4 | 1254.6 | 1264.0 | 1268.7 |
| 32.5° | 1193.3 | 1198.0 | 1221.6 | 1233.4 | 1238.1 |
| 35° | 1153.2 | 1160.3 | 1183.8 | 1200.3 | 1209.8 |
| 37.5° | 1110.7 | 1117.8 | 1146.1 | 1165.0 | 1176.8 |
| 40° | 1065.9 | 1075.4 | 1106.0 | 1129.6 | 1143.7 |
| 42.5° | 1016.4 | 1030.5 | 1065.9 | 1096.6 | 1115.4 |
| 45° | 969.2 | 985.7 | 1023.5 | 1065.9 | 1087.1 |
| 47.5° | 917.4 | 936.2 | 978.7 | 1032.9 | 1054.1 |
| 50° | 863.1 | 882.0 | 933.9 | 995.2 | 1018.8 |
| 52.5° | 808.9 | 830.1 | 891.4 | 957.4 | 985.7 |
| 55° | 749.9 | 773.5 | 849.0 | 919.7 | 950.4 |
| 57.5° | 688.6 | 716.9 | 801.8 | 877.3 | 910.3 |
| 60° | 624.9 | 660.3 | 754.6 | 834.8 | 870.2 |
| 62.5° | 558.9 | 601.3 | 707.5 | 792.4 | 830.1 |
| 65° | 495.2 | 542.4 | 657.9 | 747.6 | 787.7 |
| 67.5° | 426.8 | 485.8 | 608.4 | 705.1 | 742.8 |
| 70° | 358.5 | 426.8 | 556.5 | 655.6 | 693.3 |
| 72.5° | 290.1 | 372.6 | 504.7 | 594.3 | 594.3 |
| 75° | 224.0 | 316.0 | 450.4 | 448.1 | 433.9 |
| 77.5° | 169.8 | 264.1 | 370.2 | 316.0 | 318.4 |
| 80° | 122.6 | 212.2 | 233.5 | 233.5 | 235.8 |
| 82.5° | 82.5 | 162.7 | 150.9 | 148.6 | 153.3 |
| 85° | 49.5 | 75.5 | 77.8 | 70.7 | 73.1 |
| 87.5° | 23.6 | 25.9 | 21.2 | 14.1 | 14.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)