

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: P230017

Luminaire Tested: **24CZ-LD5-55SE-UNV-L935-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230017
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-55SE-UNV-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4771.0 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

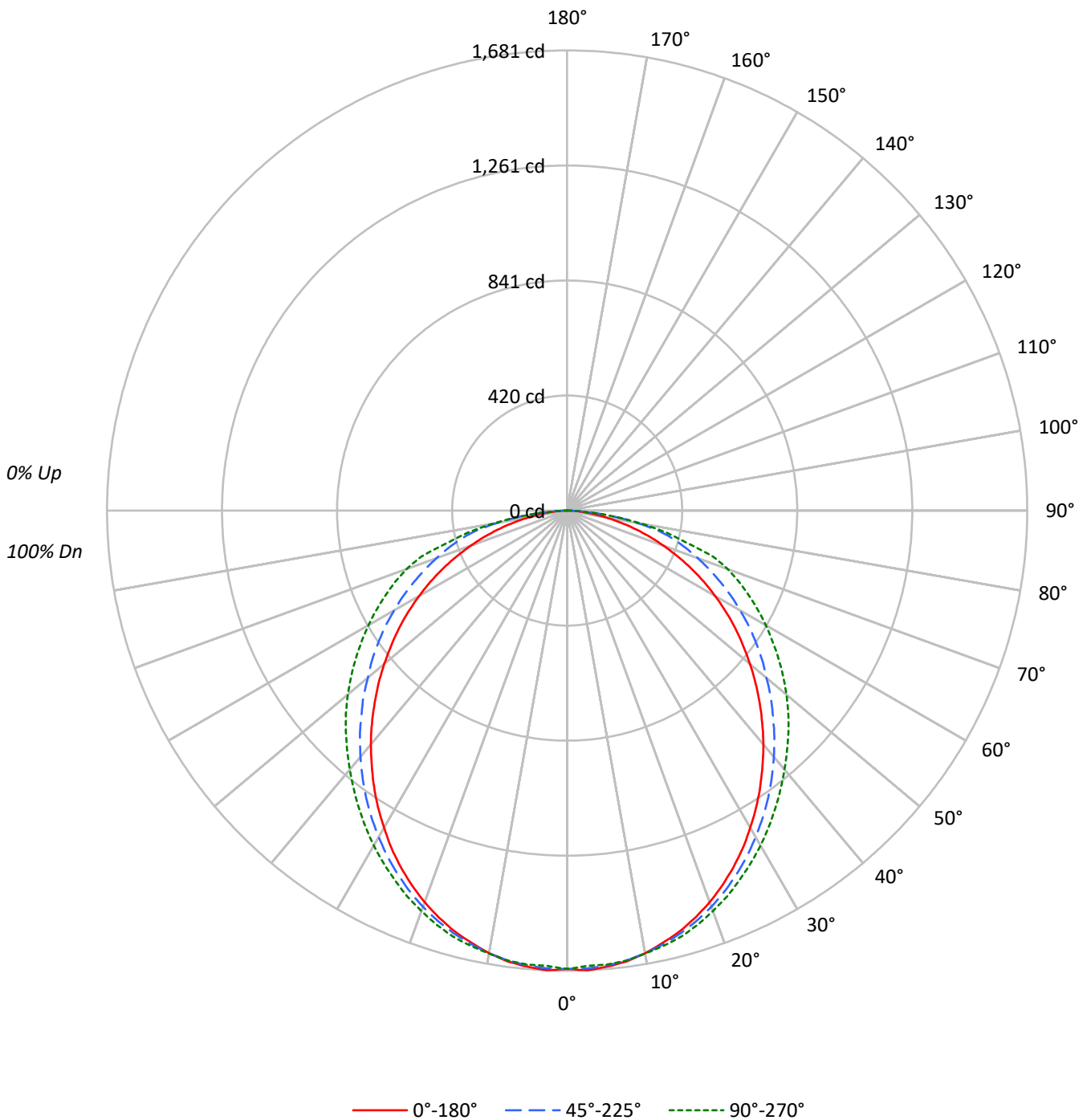
Input Watts (W): 54.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 |
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 |
| 2 | 98 | 90 | 83 | 77 | 95 | 88 | 81 | 76 | 84 | 79 | 74 | 81 | 76 | 72 | 78 | 74 | 71 |
| 3 | 89 | 78 | 70 | 63 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 65 | 61 | 68 | 64 | 60 |
| 4 | 82 | 69 | 60 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 52 | 63 | 57 | 52 | 61 | 56 | 51 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 |
| 7 | 64 | 51 | 42 | 35 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 38 | 32 | 28 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 30 | 25 | 36 | 30 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2253 | 2253 | 2253 |
| 5° | 2259 | 2253 | 2248 |
| 10° | 2243 | 2243 | 2245 |
| 15° | 2216 | 2228 | 2244 |
| 20° | 2180 | 2206 | 2229 |
| 25° | 2134 | 2175 | 2212 |
| 30° | 2079 | 2140 | 2195 |
| 35° | 2020 | 2104 | 2179 |
| 40° | 1960 | 2063 | 2169 |
| 45° | 1893 | 2023 | 2176 |
| 50° | 1826 | 1990 | 2188 |
| 55° | 1759 | 1977 | 2211 |
| 60° | 1679 | 1965 | 2255 |
| 65° | 1592 | 1966 | 2330 |
| 70° | 1472 | 1998 | 2455 |
| 75° | 1316 | 2089 | 2335 |
| 80° | 1101 | 2000 | 2139 |
| 85° | 832 | 1538 | 1462 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 158.2 | 3.3 |
| 10°-20° | 450.3 | 9.4 |
| 20°-30° | 673.2 | 14.1 |
| 30°-40° | 798.6 | 16.7 |
| 40°-50° | 822.0 | 17.2 |
| 50°-60° | 754.1 | 15.8 |
| 60°-70° | 609.7 | 12.8 |
| 70°-80° | 395.7 | 8.3 |
| 80°-90° | 109.1 | 2.3 |
| 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° | 1281.7 | 26.9 |
| 0°-40° | 2080.4 | 43.6 |
| 0°-60° | 3656.5 | 76.6 |
| 0°-90° | 4771.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4771.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1674 | 1674 | 1674 | 1674 | 1674 | |
| 5° | 1673 | 1661 | 1668 | 1666 | 1665 | 159 |
| 15° | 1591 | 1584 | 1599 | 1606 | 1611 | 448 |
| 25° | 1438 | 1439 | 1465 | 1478 | 1490 | 662 |
| 35° | 1230 | 1240 | 1281 | 1308 | 1326 | 769 |
| 45° | 995 | 1011 | 1063 | 1114 | 1144 | 768 |
| 55° | 750 | 773 | 843 | 912 | 942 | 670 |
| 65° | 500 | 529 | 618 | 699 | 732 | 494 |
| 75° | 253 | 301 | 402 | 449 | 449 | 269 |
| 85° | 54 | 92 | 100 | 96 | 95 | 66 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P230017

CATALOG NUMBER: 24CZ-LD5-55SE-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1674.4 | 1674.4 | 1674.4 | 1674.4 | 1674.4 |
| 2.5° | 1680.9 | 1667.8 | 1674.4 | 1672.7 | 1664.6 |
| 5° | 1672.7 | 1661.3 | 1667.8 | 1666.2 | 1664.6 |
| 7.5° | 1661.3 | 1649.9 | 1658.0 | 1656.4 | 1658.0 |
| 10° | 1641.7 | 1631.9 | 1641.7 | 1643.3 | 1643.3 |
| 12.5° | 1617.2 | 1609.0 | 1622.1 | 1625.4 | 1628.6 |
| 15° | 1591.1 | 1584.5 | 1599.2 | 1605.8 | 1610.7 |
| 17.5° | 1558.4 | 1553.5 | 1571.5 | 1579.6 | 1586.2 |
| 20° | 1522.5 | 1520.8 | 1540.4 | 1548.6 | 1556.8 |
| 22.5° | 1481.6 | 1481.6 | 1504.5 | 1514.3 | 1525.7 |
| 25° | 1437.5 | 1439.1 | 1465.3 | 1478.3 | 1489.8 |
| 27.5° | 1390.1 | 1391.8 | 1422.8 | 1439.1 | 1452.2 |
| 30° | 1337.9 | 1344.4 | 1377.1 | 1398.3 | 1413.0 |
| 32.5° | 1285.6 | 1293.8 | 1329.7 | 1354.2 | 1370.5 |
| 35° | 1230.1 | 1239.9 | 1280.7 | 1308.5 | 1326.4 |
| 37.5° | 1172.9 | 1184.3 | 1228.4 | 1259.5 | 1280.7 |
| 40° | 1115.7 | 1128.8 | 1174.5 | 1210.4 | 1235.0 |
| 42.5° | 1055.3 | 1070.0 | 1120.6 | 1163.1 | 1189.2 |
| 45° | 994.8 | 1011.2 | 1063.4 | 1114.1 | 1143.5 |
| 47.5° | 934.4 | 954.0 | 1009.5 | 1065.1 | 1096.1 |
| 50° | 872.3 | 891.9 | 950.7 | 1014.4 | 1045.5 |
| 52.5° | 810.2 | 833.1 | 898.4 | 963.8 | 994.8 |
| 55° | 749.8 | 772.7 | 842.9 | 911.5 | 942.5 |
| 57.5° | 687.7 | 710.6 | 787.4 | 859.2 | 890.3 |
| 60° | 624.0 | 650.1 | 730.2 | 803.7 | 838.0 |
| 62.5° | 561.9 | 589.7 | 674.6 | 753.1 | 785.7 |
| 65° | 499.9 | 529.3 | 617.5 | 699.2 | 731.8 |
| 67.5° | 436.2 | 470.5 | 561.9 | 645.2 | 679.6 |
| 70° | 374.1 | 411.7 | 508.0 | 591.3 | 624.0 |
| 72.5° | 313.6 | 354.5 | 454.1 | 539.1 | 558.7 |
| 75° | 253.2 | 300.6 | 401.8 | 449.2 | 449.2 |
| 77.5° | 196.0 | 248.3 | 343.0 | 361.0 | 370.8 |
| 80° | 142.1 | 199.3 | 258.1 | 279.3 | 276.1 |
| 82.5° | 94.7 | 151.9 | 184.6 | 184.6 | 179.7 |
| 85° | 53.9 | 91.5 | 99.6 | 96.4 | 94.7 |
| 87.5° | 22.9 | 34.3 | 31.0 | 24.5 | 21.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)