

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: P261148

Luminaire Tested: **24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P261148
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 80 CRI LEDS TUNED AT 6500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4342.0 lumens
Efficiency: N/A
Efficacy: 146.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

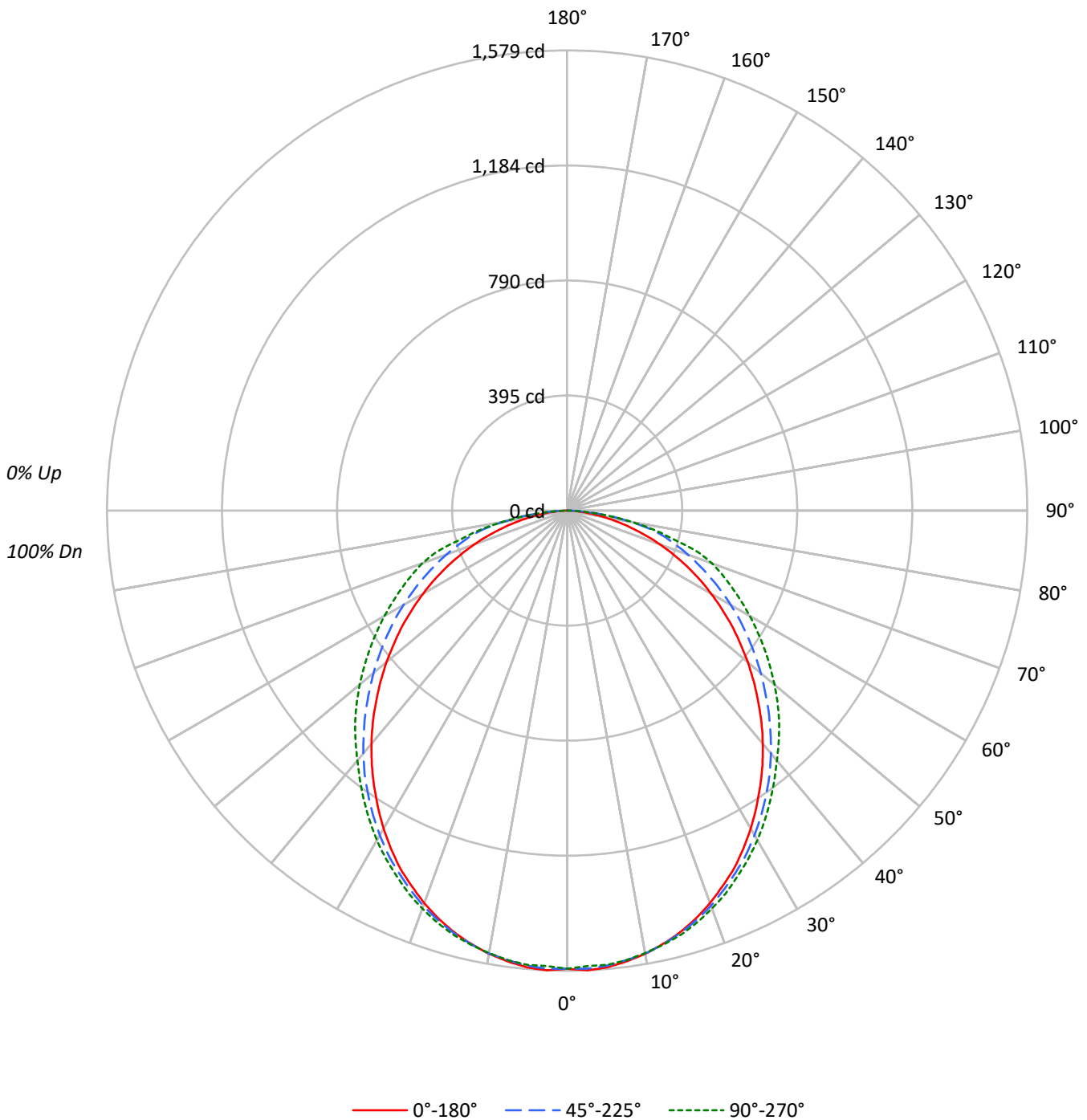
Input Watts (W): 29.574
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P261148

CATALOG NUMBER: 24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P261148

CATALOG NUMBER: 24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K

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 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 64 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 69 | 60 | 54 | 66 | 59 | 53 | 64 | 58 | 52 | 62 | 56 | 52 | 50 |
| 5 | 76 | 63 | 53 | 47 | 73 | 61 | 53 | 47 | 59 | 52 | 46 | 57 | 51 | 45 | 55 | 50 | 45 | 43 |
| 6 | 70 | 56 | 47 | 41 | 68 | 55 | 47 | 41 | 54 | 46 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 38 |
| 7 | 65 | 51 | 42 | 36 | 63 | 50 | 42 | 36 | 49 | 41 | 36 | 47 | 41 | 35 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 29 | 27 |
| 10 | 53 | 40 | 32 | 26 | 52 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2115 | 2115 | 2115 |
| 5° | 2125 | 2117 | 2113 |
| 10° | 2110 | 2108 | 2106 |
| 15° | 2087 | 2091 | 2099 |
| 20° | 2052 | 2067 | 2081 |
| 25° | 2012 | 2033 | 2055 |
| 30° | 1957 | 1998 | 2029 |
| 35° | 1896 | 1955 | 1996 |
| 40° | 1835 | 1911 | 1967 |
| 45° | 1765 | 1861 | 1957 |
| 50° | 1694 | 1814 | 1945 |
| 55° | 1620 | 1776 | 1939 |
| 60° | 1536 | 1746 | 1948 |
| 65° | 1444 | 1725 | 1987 |
| 70° | 1330 | 1733 | 2080 |
| 75° | 1179 | 1795 | 1938 |
| 80° | 985 | 1702 | 1746 |
| 85° | 736 | 1360 | 1249 |



TEST NUMBER: P261148

CATALOG NUMBER: 24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 148.6 | 3.4 |
| 10°-20° | 422.7 | 9.7 |
| 20°-30° | 629.9 | 14.5 |
| 30°-40° | 741.5 | 17.1 |
| 40°-50° | 753.5 | 17.4 |
| 50°-60° | 677.4 | 15.6 |
| 60°-70° | 535.2 | 12.3 |
| 70°-80° | 339.5 | 7.8 |
| 80°-90° | 93.7 | 2.2 |
| 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° | 1201.2 | 27.7 |
| 0°-40° | 1942.6 | 44.7 |
| 0°-60° | 3373.6 | 77.7 |
| 0°-90° | 4342.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4342.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1572 | 1572 | 1572 | 1572 | 1572 | |
| 5° | 1573 | 1560 | 1568 | 1565 | 1565 | 149 |
| 15° | 1498 | 1491 | 1501 | 1505 | 1507 | 422 |
| 25° | 1355 | 1354 | 1370 | 1378 | 1384 | 623 |
| 35° | 1154 | 1162 | 1190 | 1204 | 1215 | 722 |
| 45° | 928 | 940 | 978 | 1007 | 1029 | 716 |
| 55° | 691 | 708 | 757 | 806 | 826 | 617 |
| 65° | 454 | 477 | 542 | 601 | 624 | 449 |
| 75° | 227 | 266 | 345 | 376 | 373 | 241 |
| 85° | 48 | 82 | 88 | 81 | 81 | 59 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P261148

CATALOG NUMBER: 24CZ-LD5-40-S-UNV-L82765-W2A1-U-6500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1571.9 | 1571.9 | 1571.9 | 1571.9 | 1571.9 |
| 2.5° | 1579.1 | 1567.5 | 1573.3 | 1570.4 | 1564.7 |
| 5° | 1573.3 | 1560.3 | 1567.5 | 1564.7 | 1564.7 |
| 7.5° | 1560.3 | 1550.2 | 1556.0 | 1554.5 | 1556.0 |
| 10° | 1544.4 | 1534.3 | 1543.0 | 1543.0 | 1541.5 |
| 12.5° | 1522.8 | 1514.1 | 1524.2 | 1524.2 | 1525.7 |
| 15° | 1498.2 | 1491.0 | 1501.1 | 1505.4 | 1506.9 |
| 17.5° | 1467.9 | 1460.6 | 1473.6 | 1478.0 | 1482.3 |
| 20° | 1433.2 | 1430.3 | 1443.3 | 1447.6 | 1453.4 |
| 22.5° | 1394.2 | 1394.2 | 1407.2 | 1413.0 | 1421.6 |
| 25° | 1355.2 | 1353.7 | 1369.6 | 1378.3 | 1384.1 |
| 27.5° | 1308.9 | 1310.4 | 1330.6 | 1339.3 | 1346.5 |
| 30° | 1259.8 | 1262.7 | 1285.8 | 1295.9 | 1306.1 |
| 32.5° | 1207.8 | 1213.6 | 1239.6 | 1251.2 | 1261.3 |
| 35° | 1154.4 | 1161.6 | 1190.5 | 1203.5 | 1215.0 |
| 37.5° | 1100.9 | 1111.0 | 1141.3 | 1154.4 | 1167.4 |
| 40° | 1044.6 | 1053.2 | 1087.9 | 1103.8 | 1119.7 |
| 42.5° | 986.8 | 998.3 | 1033.0 | 1056.1 | 1074.9 |
| 45° | 927.5 | 940.5 | 978.1 | 1007.0 | 1028.7 |
| 47.5° | 868.3 | 885.6 | 921.7 | 960.8 | 979.5 |
| 50° | 809.1 | 826.4 | 866.8 | 910.2 | 929.0 |
| 52.5° | 748.4 | 765.7 | 811.9 | 856.7 | 877.0 |
| 55° | 690.6 | 707.9 | 757.0 | 806.2 | 826.4 |
| 57.5° | 629.9 | 648.7 | 703.6 | 754.2 | 774.4 |
| 60° | 570.7 | 589.5 | 648.7 | 702.1 | 723.8 |
| 62.5° | 512.9 | 533.1 | 595.2 | 651.6 | 673.3 |
| 65° | 453.7 | 476.8 | 541.8 | 601.0 | 624.1 |
| 67.5° | 395.9 | 421.9 | 489.8 | 551.9 | 576.5 |
| 70° | 338.1 | 368.4 | 440.6 | 504.2 | 528.8 |
| 72.5° | 281.7 | 315.0 | 391.5 | 455.1 | 468.1 |
| 75° | 226.8 | 265.8 | 345.3 | 375.6 | 372.7 |
| 77.5° | 174.8 | 218.2 | 293.3 | 299.1 | 307.7 |
| 80° | 127.1 | 174.8 | 219.6 | 231.2 | 225.4 |
| 82.5° | 83.8 | 131.5 | 157.5 | 151.7 | 150.3 |
| 85° | 47.7 | 82.4 | 88.1 | 80.9 | 80.9 |
| 87.5° | 20.2 | 33.2 | 28.9 | 21.7 | 20.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)