

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: P230523

Luminaire Tested: **24CZ-LD5-55SE-RDP-UNV-L950-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230523
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25696)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-55SE-RDP-UNV-L950-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RDP LENS
Light Source: (84) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3502.6 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

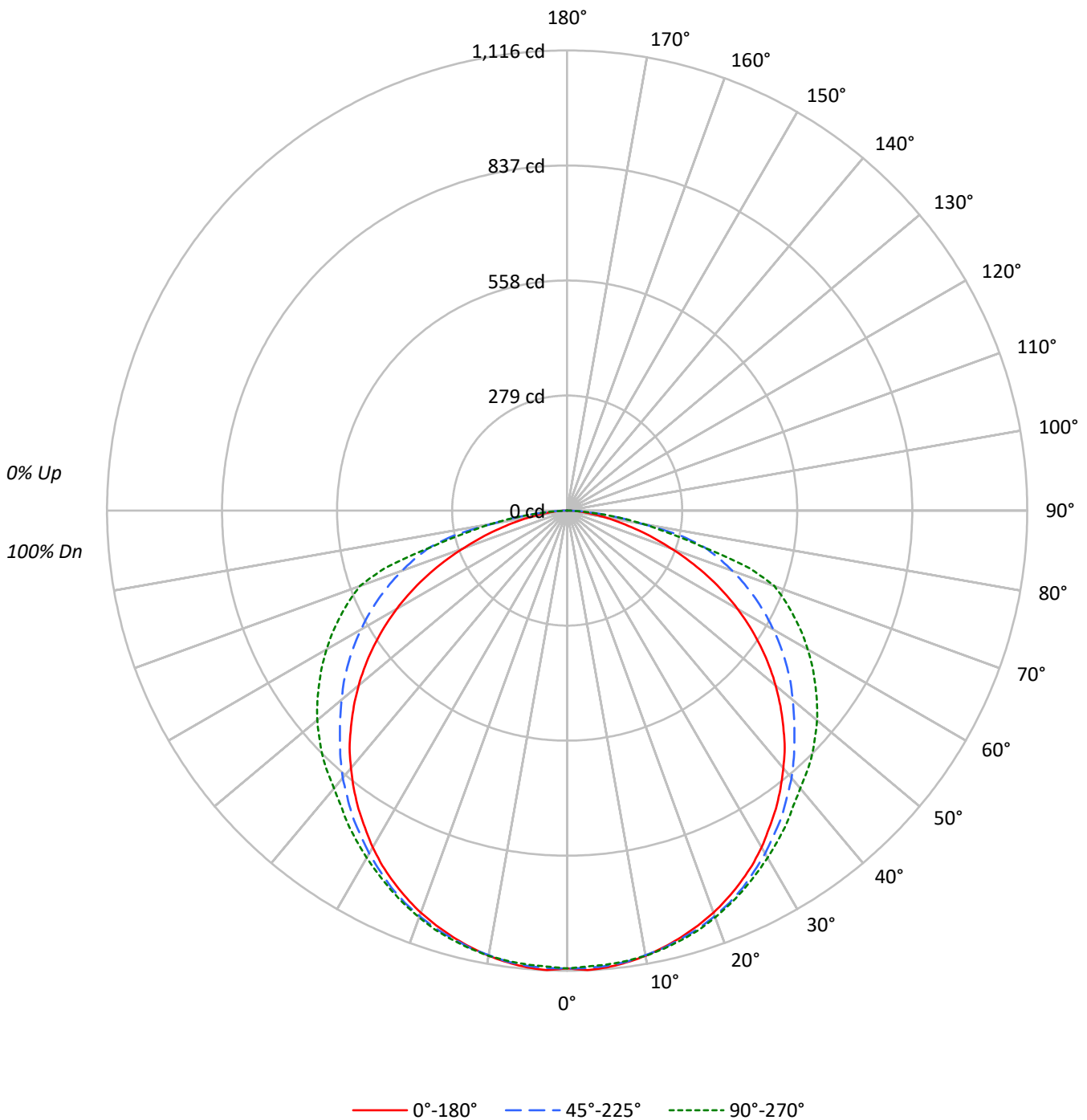
Input Watts (W): 54.69
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P230523

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Luminous Intensity Polar Plot





TEST NUMBER: P230523

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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 | 62 | 58 | 56 |
| 4 | 81 | 68 | 59 | 52 | 78 | 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 | 61 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 38 | 33 | 44 | 38 | 33 | 31 |
| 8 | 59 | 45 | 36 | 30 | 57 | 44 | 36 | 30 | 43 | 35 | 30 | 42 | 35 | 30 | 40 | 34 | 29 | 27 |
| 9 | 55 | 41 | 33 | 27 | 53 | 41 | 32 | 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° | 1494 | 1494 | 1494 |
| 5° | 1502 | 1497 | 1493 |
| 10° | 1498 | 1496 | 1498 |
| 15° | 1491 | 1496 | 1501 |
| 20° | 1486 | 1498 | 1503 |
| 25° | 1477 | 1497 | 1505 |
| 30° | 1465 | 1492 | 1511 |
| 35° | 1450 | 1490 | 1524 |
| 40° | 1432 | 1487 | 1544 |
| 45° | 1411 | 1483 | 1598 |
| 50° | 1382 | 1494 | 1657 |
| 55° | 1343 | 1521 | 1723 |
| 60° | 1285 | 1554 | 1814 |
| 65° | 1197 | 1603 | 1932 |
| 70° | 1058 | 1675 | 2103 |
| 75° | 887 | 1792 | 1766 |
| 80° | 708 | 1416 | 1470 |
| 85° | 559 | 959 | 878 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 105.3 | 3.0 |
| 10°-20° | 303.1 | 8.7 |
| 20°-30° | 462.9 | 13.2 |
| 30°-40° | 566.0 | 16.2 |
| 40°-50° | 605.8 | 17.3 |
| 50°-60° | 581.1 | 16.6 |
| 60°-70° | 490.6 | 14.0 |
| 70°-80° | 313.6 | 9.0 |
| 80°-90° | 74.1 | 2.1 |
| 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° | 871.3 | 24.9 |
| 0°-40° | 1437.3 | 41.0 |
| 0°-60° | 2624.2 | 74.9 |
| 0°-90° | 3502.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3502.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1110 | 1110 | 1110 | 1110 | 1110 | |
| 5° | 1112 | 1105 | 1109 | 1107 | 1105 | 106 |
| 15° | 1071 | 1067 | 1074 | 1078 | 1078 | 302 |
| 25° | 995 | 993 | 1009 | 1012 | 1014 | 458 |
| 35° | 883 | 890 | 907 | 919 | 928 | 552 |
| 45° | 741 | 753 | 779 | 816 | 840 | 572 |
| 55° | 572 | 591 | 648 | 707 | 734 | 511 |
| 65° | 376 | 412 | 503 | 574 | 607 | 371 |
| 75° | 171 | 243 | 345 | 352 | 340 | 184 |
| 85° | 36 | 60 | 62 | 60 | 57 | 43 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P230523

CATALOG NUMBER: 24CZ-LD5-55SE-RDP-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1110.3 | 1110.3 | 1110.3 | 1110.3 | 1110.3 |
| 2.5° | 1115.5 | 1108.6 | 1110.3 | 1110.3 | 1106.9 |
| 5° | 1112.1 | 1105.2 | 1108.6 | 1106.9 | 1105.2 |
| 7.5° | 1105.2 | 1100.0 | 1103.4 | 1103.4 | 1101.7 |
| 10° | 1096.5 | 1091.4 | 1094.8 | 1096.5 | 1096.5 |
| 12.5° | 1084.5 | 1081.0 | 1086.2 | 1086.2 | 1087.9 |
| 15° | 1070.7 | 1067.2 | 1074.1 | 1077.6 | 1077.6 |
| 17.5° | 1055.2 | 1053.4 | 1062.1 | 1063.8 | 1065.5 |
| 20° | 1037.9 | 1036.2 | 1046.5 | 1046.5 | 1050.0 |
| 22.5° | 1017.2 | 1015.5 | 1029.3 | 1029.3 | 1032.8 |
| 25° | 994.8 | 993.1 | 1008.6 | 1012.1 | 1013.8 |
| 27.5° | 970.7 | 969.0 | 984.5 | 989.7 | 993.1 |
| 30° | 943.1 | 943.1 | 960.3 | 967.2 | 972.4 |
| 32.5° | 912.1 | 917.2 | 932.8 | 943.1 | 950.0 |
| 35° | 882.8 | 889.7 | 906.9 | 919.0 | 927.6 |
| 37.5° | 850.0 | 856.9 | 875.9 | 891.4 | 901.7 |
| 40° | 815.5 | 824.1 | 846.5 | 863.8 | 879.3 |
| 42.5° | 781.0 | 789.7 | 813.8 | 839.7 | 860.3 |
| 45° | 741.4 | 753.4 | 779.3 | 815.5 | 839.7 |
| 47.5° | 701.7 | 713.8 | 746.5 | 791.4 | 815.5 |
| 50° | 660.3 | 674.1 | 713.8 | 765.5 | 791.4 |
| 52.5° | 617.2 | 632.8 | 682.8 | 737.9 | 763.8 |
| 55° | 572.4 | 591.4 | 648.3 | 706.9 | 734.5 |
| 57.5° | 525.9 | 546.5 | 613.8 | 675.9 | 705.2 |
| 60° | 477.6 | 503.4 | 577.6 | 643.1 | 674.1 |
| 62.5° | 427.6 | 458.6 | 541.4 | 608.6 | 641.4 |
| 65° | 375.9 | 412.1 | 503.4 | 574.1 | 606.9 |
| 67.5° | 322.4 | 370.7 | 465.5 | 539.7 | 572.4 |
| 70° | 269.0 | 325.9 | 425.9 | 501.7 | 534.5 |
| 72.5° | 219.0 | 284.5 | 386.2 | 456.9 | 463.8 |
| 75° | 170.7 | 243.1 | 344.8 | 351.7 | 339.7 |
| 77.5° | 127.6 | 201.7 | 284.5 | 253.4 | 251.7 |
| 80° | 91.4 | 162.1 | 182.8 | 187.9 | 189.7 |
| 82.5° | 60.3 | 122.4 | 119.0 | 122.4 | 120.7 |
| 85° | 36.2 | 60.3 | 62.1 | 60.3 | 56.9 |
| 87.5° | 17.2 | 22.4 | 17.2 | 15.5 | 13.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)