

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: P296039

Luminaire Tested: **24RLN-LD5-50-UNV-L92765-W2A1-U-2700K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296039
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-085-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-50-UNV-L92765-W2A1-U-2700K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (504) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3911.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.19 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

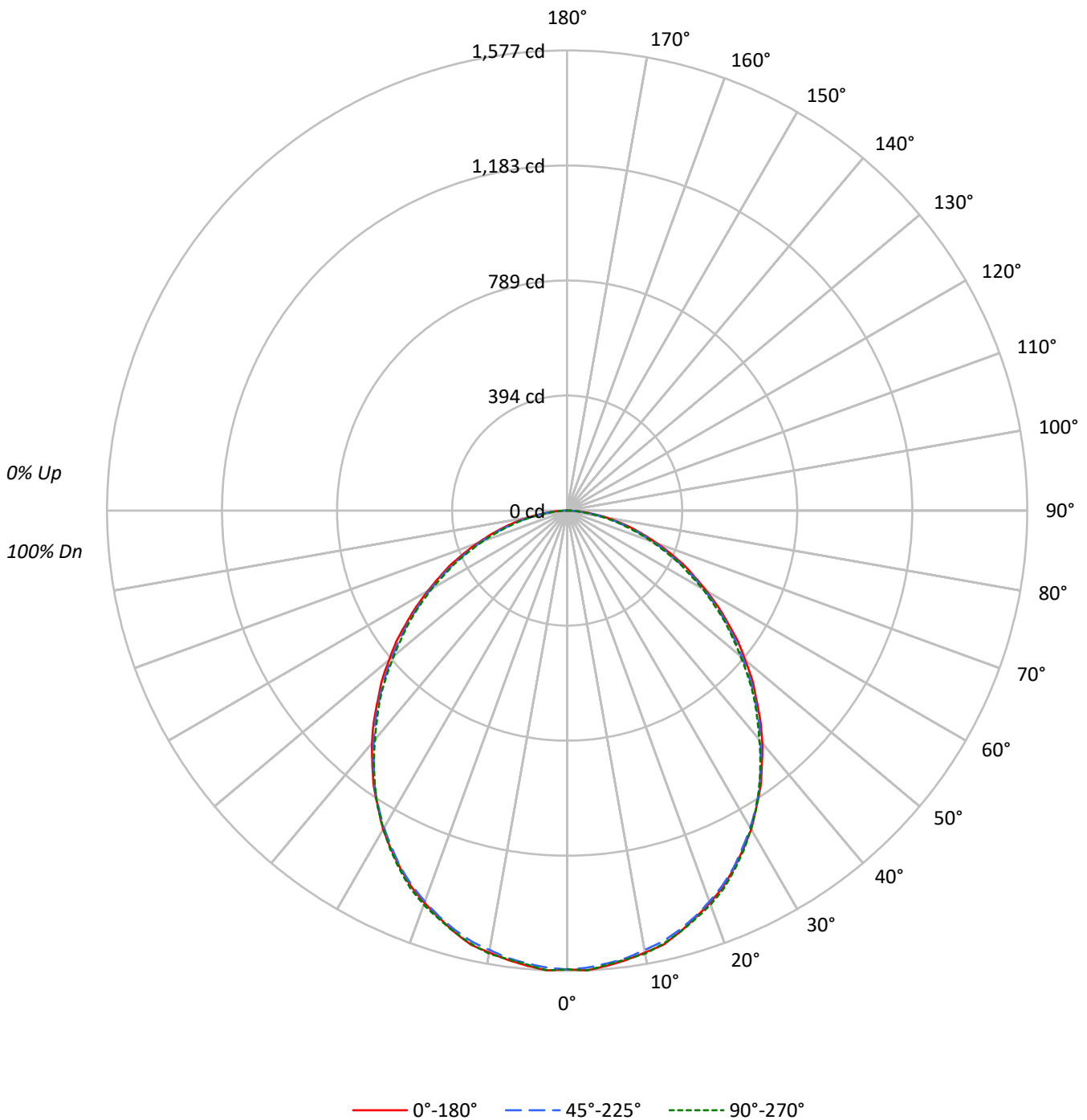
Input Watts (W): 34.875
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 72 |
| 3 | 91 | 81 | 73 | 67 | 89 | 80 | 72 | 66 | 77 | 70 | 65 | 74 | 69 | 64 | 71 | 67 | 63 | 61 |
| 4 | 84 | 72 | 64 | 57 | 82 | 71 | 63 | 57 | 68 | 62 | 56 | 66 | 60 | 55 | 64 | 59 | 55 | 52 |
| 5 | 77 | 65 | 56 | 50 | 75 | 64 | 55 | 49 | 62 | 54 | 49 | 60 | 53 | 48 | 58 | 52 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 49 | 43 | 56 | 48 | 43 | 54 | 48 | 43 | 53 | 47 | 42 | 40 |
| 7 | 66 | 53 | 45 | 39 | 65 | 52 | 44 | 39 | 51 | 44 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 |
| 8 | 62 | 49 | 40 | 35 | 60 | 48 | 40 | 35 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 34 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2115 | 2115 | 2115 |
| 5° | 2115 | 2105 | 2110 |
| 10° | 2101 | 2089 | 2106 |
| 15° | 2083 | 2072 | 2083 |
| 20° | 2049 | 2042 | 2058 |
| 25° | 2008 | 2004 | 2015 |
| 30° | 1960 | 1950 | 1956 |
| 35° | 1898 | 1890 | 1886 |
| 40° | 1828 | 1811 | 1799 |
| 45° | 1745 | 1729 | 1721 |
| 50° | 1666 | 1640 | 1622 |
| 55° | 1578 | 1554 | 1539 |
| 60° | 1484 | 1457 | 1440 |
| 65° | 1402 | 1350 | 1338 |
| 70° | 1286 | 1236 | 1211 |
| 75° | 1181 | 1108 | 1063 |
| 80° | 1036 | 968 | 909 |
| 85° | 838 | 780 | 662 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 148.3 | 3.8 |
| 10°-20° | 420.5 | 10.8 |
| 20°-30° | 622.0 | 15.9 |
| 30°-40° | 717.9 | 18.4 |
| 40°-50° | 701.2 | 17.9 |
| 50°-60° | 592.1 | 15.1 |
| 60°-70° | 421.7 | 10.8 |
| 70°-80° | 228.3 | 5.8 |
| 80°-90° | 58.9 | 1.5 |
| 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° | 1190.9 | 30.4 |
| 0°-40° | 1908.8 | 48.8 |
| 0°-60° | 3202.0 | 81.9 |
| 0°-90° | 3911.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3911.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1572 | 1572 | 1572 | 1572 | 1572 | |
| 5° | 1566 | 1566 | 1558 | 1562 | 1562 | 149 |
| 15° | 1495 | 1489 | 1488 | 1494 | 1495 | 421 |
| 25° | 1353 | 1345 | 1350 | 1355 | 1358 | 623 |
| 35° | 1156 | 1147 | 1151 | 1147 | 1148 | 721 |
| 45° | 917 | 910 | 908 | 905 | 905 | 709 |
| 55° | 672 | 664 | 662 | 656 | 656 | 603 |
| 65° | 440 | 432 | 424 | 419 | 420 | 434 |
| 75° | 227 | 220 | 213 | 208 | 204 | 240 |
| 85° | 54 | 53 | 50 | 44 | 43 | 64 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CATALOG NUMBER: 24RLN-LD5-50-UNV-L92765-W2A1-U-2700K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1572.1 | 1572.1 | 1572.1 | 1572.1 | 1572.1 |
| 2.5° | 1577.2 | 1570.8 | 1568.3 | 1569.6 | 1577.2 |
| 5° | 1565.8 | 1565.8 | 1558.2 | 1562.0 | 1562.0 |
| 7.5° | 1553.2 | 1554.4 | 1546.9 | 1553.2 | 1550.7 |
| 10° | 1538.0 | 1534.3 | 1529.2 | 1539.3 | 1541.8 |
| 12.5° | 1524.2 | 1515.3 | 1512.8 | 1519.1 | 1520.4 |
| 15° | 1495.1 | 1488.8 | 1487.6 | 1493.9 | 1495.1 |
| 17.5° | 1462.3 | 1463.6 | 1458.6 | 1467.4 | 1466.1 |
| 20° | 1430.8 | 1428.3 | 1425.8 | 1435.8 | 1437.1 |
| 22.5° | 1395.5 | 1387.9 | 1390.4 | 1399.3 | 1401.8 |
| 25° | 1352.6 | 1345.0 | 1350.0 | 1355.1 | 1357.6 |
| 27.5° | 1307.1 | 1303.4 | 1302.1 | 1308.4 | 1310.9 |
| 30° | 1261.7 | 1255.4 | 1255.4 | 1263.0 | 1259.2 |
| 32.5° | 1206.2 | 1201.2 | 1203.7 | 1206.2 | 1207.5 |
| 35° | 1155.7 | 1146.9 | 1150.7 | 1146.9 | 1148.2 |
| 37.5° | 1096.4 | 1090.1 | 1088.9 | 1087.6 | 1087.6 |
| 40° | 1040.9 | 1035.9 | 1030.8 | 1030.8 | 1024.5 |
| 42.5° | 980.4 | 974.1 | 971.5 | 967.7 | 964.0 |
| 45° | 917.3 | 909.7 | 908.4 | 904.7 | 904.7 |
| 47.5° | 860.5 | 849.1 | 847.9 | 840.3 | 840.3 |
| 50° | 796.1 | 788.6 | 783.5 | 778.5 | 774.7 |
| 52.5° | 738.1 | 730.5 | 723.0 | 717.9 | 714.1 |
| 55° | 672.5 | 663.7 | 662.4 | 656.1 | 656.1 |
| 57.5° | 613.2 | 605.6 | 600.6 | 593.0 | 594.3 |
| 60° | 551.4 | 543.8 | 541.3 | 535.0 | 535.0 |
| 62.5° | 493.3 | 487.0 | 483.2 | 476.9 | 471.9 |
| 65° | 440.3 | 431.5 | 423.9 | 418.9 | 420.2 |
| 67.5° | 382.3 | 372.2 | 368.4 | 363.4 | 359.6 |
| 70° | 326.8 | 320.5 | 314.2 | 307.9 | 307.9 |
| 72.5° | 275.1 | 268.7 | 265.0 | 257.4 | 254.9 |
| 75° | 227.1 | 219.5 | 213.2 | 208.2 | 204.4 |
| 77.5° | 179.2 | 171.6 | 167.8 | 161.5 | 161.5 |
| 80° | 133.7 | 128.7 | 124.9 | 122.4 | 117.3 |
| 82.5° | 92.1 | 89.6 | 85.8 | 82.0 | 78.2 |
| 85° | 54.3 | 53.0 | 50.5 | 44.2 | 42.9 |
| 87.5° | 21.4 | 21.4 | 18.9 | 17.7 | 16.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)