

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: P296395

Luminaire Tested: **22RLN-LD5-40-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296395
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1901-085-11)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22RLN-LD5-40-UNV-L83050-W2A1-U-4000K
Description: RLN LED 2x2 TUNABLE WHITE TROFFER
WITH STANDARD LENS
Light Source: (252) 80 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4204.0 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.23 / 1.3
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

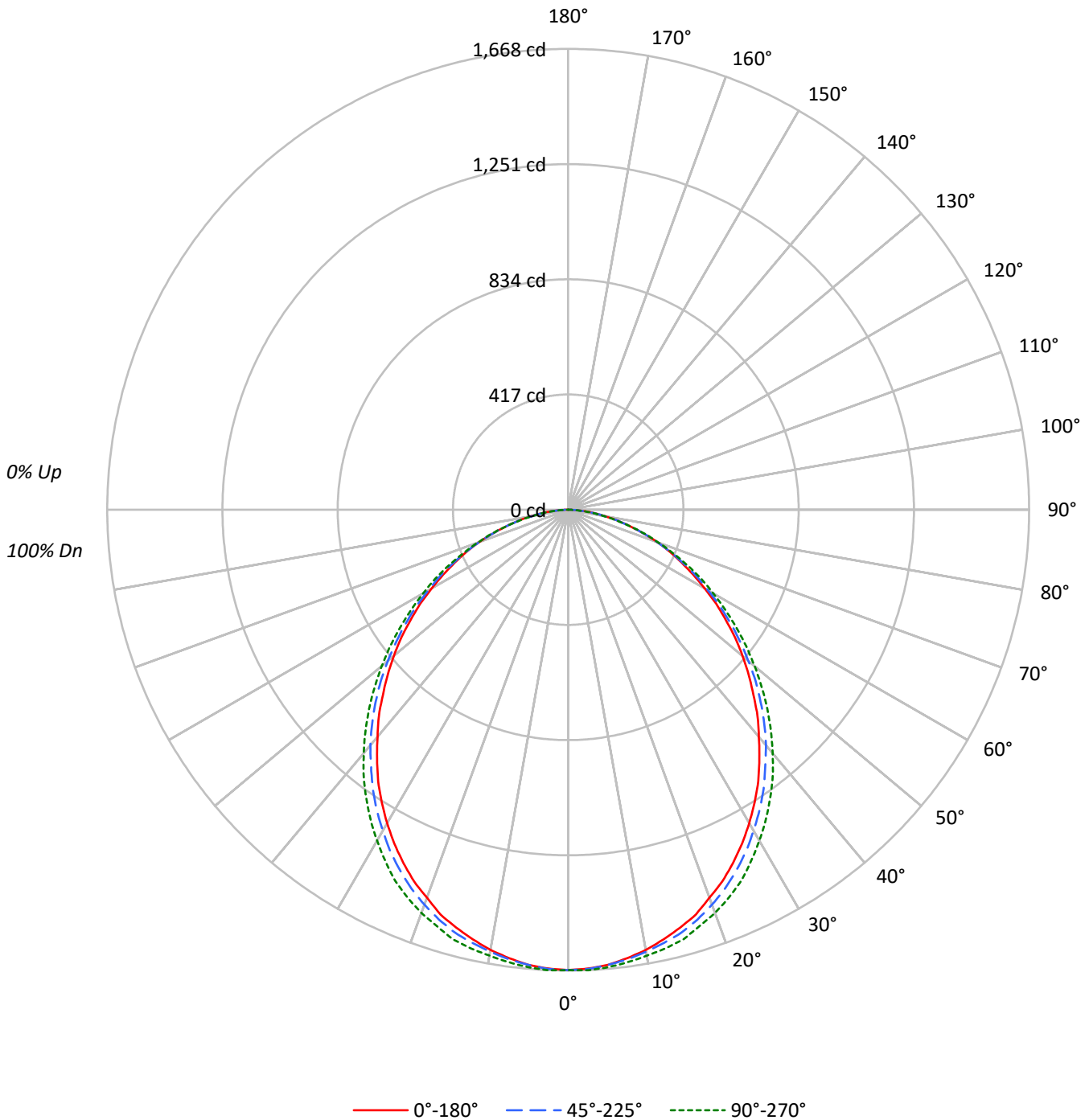
Input Watts (W): 32.829
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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 | | | | | 100 | | | |
| 1 | 109 | 105 | 101 | 97 | 107 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 77 | 74 | 71 | | | | | 71 | | | |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 77 | 70 | 65 | 74 | 68 | 64 | 71 | 67 | 63 | 61 | | | | | 61 | | | |
| 4 | 84 | 72 | 64 | 57 | 81 | 71 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 55 | 64 | 59 | 54 | 52 | | | | | 52 | | | |
| 5 | 77 | 65 | 56 | 49 | 75 | 64 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 | | | | | 46 | | | |
| 6 | 71 | 58 | 50 | 43 | 70 | 57 | 49 | 43 | 56 | 48 | 43 | 54 | 47 | 42 | 52 | 47 | 42 | 40 | | | | | 40 | | | |
| 7 | 66 | 53 | 44 | 38 | 65 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 43 | 38 | 48 | 42 | 38 | 36 | | | | | 36 | | | |
| 8 | 62 | 49 | 40 | 34 | 60 | 48 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 32 | | | | | 32 | | | |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 41 | 35 | 31 | 29 | | | | | 29 | | | |
| 10 | 54 | 41 | 33 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 | | | | | 26 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4484 | 4484 | 4484 |
| 5° | 4467 | 4467 | 4490 |
| 10° | 4422 | 4439 | 4479 |
| 15° | 4362 | 4415 | 4485 |
| 20° | 4280 | 4358 | 4448 |
| 25° | 4189 | 4276 | 4400 |
| 30° | 4071 | 4168 | 4299 |
| 35° | 3939 | 4049 | 4187 |
| 40° | 3770 | 3910 | 4042 |
| 45° | 3605 | 3749 | 3877 |
| 50° | 3449 | 3563 | 3685 |
| 55° | 3265 | 3363 | 3481 |
| 60° | 3068 | 3147 | 3260 |
| 65° | 2883 | 2936 | 3030 |
| 70° | 2688 | 2688 | 2737 |
| 75° | 2398 | 2398 | 2398 |
| 80° | 2111 | 2047 | 2047 |
| 85° | 1683 | 1618 | 1488 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 157.2 | 3.7 |
| 10°-20° | 446.8 | 10.6 |
| 20°-30° | 663.7 | 15.8 |
| 30°-40° | 770.3 | 18.3 |
| 40°-50° | 758.5 | 18.0 |
| 50°-60° | 641.9 | 15.3 |
| 60°-70° | 457.7 | 10.9 |
| 70°-80° | 246.0 | 5.9 |
| 80°-90° | 62.0 | 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° | 1267.7 | 30.2 |
| 0°-40° | 2037.9 | 48.5 |
| 0°-60° | 3438.3 | 81.8 |
| 0°-90° | 4204.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4204.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1666 | 1666 | 1666 | 1666 | 1666 | |
| 5° | 1654 | 1654 | 1654 | 1660 | 1662 | 157 |
| 15° | 1566 | 1570 | 1585 | 1599 | 1610 | 441 |
| 25° | 1411 | 1415 | 1440 | 1467 | 1482 | 649 |
| 35° | 1199 | 1201 | 1232 | 1262 | 1274 | 748 |
| 45° | 947 | 954 | 985 | 1008 | 1019 | 732 |
| 55° | 696 | 698 | 717 | 736 | 742 | 623 |
| 65° | 453 | 453 | 461 | 470 | 476 | 449 |
| 75° | 231 | 228 | 231 | 231 | 231 | 248 |
| 85° | 54 | 52 | 52 | 48 | 48 | 65 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296395

CATALOG NUMBER: 22RLN-LD5-40-UNV-L83050-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1666.4 | 1666.4 | 1666.4 | 1666.4 | 1666.4 |
| 2.5° | 1662.2 | 1662.2 | 1664.3 | 1666.4 | 1668.5 |
| 5° | 1653.8 | 1653.8 | 1653.8 | 1660.1 | 1662.2 |
| 7.5° | 1637.0 | 1639.1 | 1641.2 | 1647.5 | 1651.7 |
| 10° | 1618.2 | 1620.3 | 1624.5 | 1634.9 | 1639.1 |
| 12.5° | 1593.0 | 1599.3 | 1605.6 | 1620.3 | 1626.5 |
| 15° | 1565.8 | 1570.0 | 1584.6 | 1599.3 | 1609.8 |
| 17.5° | 1536.4 | 1538.5 | 1555.3 | 1576.2 | 1580.4 |
| 20° | 1494.5 | 1500.8 | 1521.7 | 1542.7 | 1553.2 |
| 22.5° | 1456.8 | 1461.0 | 1484.0 | 1511.3 | 1519.6 |
| 25° | 1410.7 | 1414.8 | 1440.0 | 1467.2 | 1481.9 |
| 27.5° | 1362.4 | 1366.6 | 1393.9 | 1423.2 | 1433.7 |
| 30° | 1310.0 | 1314.2 | 1341.5 | 1372.9 | 1383.4 |
| 32.5° | 1255.5 | 1259.7 | 1289.1 | 1316.3 | 1331.0 |
| 35° | 1199.0 | 1201.0 | 1232.5 | 1261.8 | 1274.4 |
| 37.5° | 1136.1 | 1142.4 | 1171.7 | 1201.0 | 1215.7 |
| 40° | 1073.2 | 1079.5 | 1113.0 | 1140.3 | 1150.7 |
| 42.5° | 1014.5 | 1022.9 | 1050.1 | 1075.3 | 1085.8 |
| 45° | 947.4 | 953.7 | 985.2 | 1008.2 | 1018.7 |
| 47.5° | 886.6 | 892.9 | 920.2 | 943.2 | 949.5 |
| 50° | 823.8 | 827.9 | 851.0 | 872.0 | 880.3 |
| 52.5° | 760.9 | 763.0 | 783.9 | 804.9 | 811.2 |
| 55° | 695.9 | 698.0 | 716.9 | 735.7 | 742.0 |
| 57.5° | 635.1 | 635.1 | 651.9 | 666.5 | 672.8 |
| 60° | 570.1 | 570.1 | 584.8 | 599.5 | 605.8 |
| 62.5° | 509.3 | 509.3 | 524.0 | 534.5 | 542.9 |
| 65° | 452.8 | 452.8 | 461.1 | 469.5 | 475.8 |
| 67.5° | 398.3 | 392.0 | 400.3 | 410.8 | 408.7 |
| 70° | 341.7 | 335.4 | 341.7 | 345.9 | 347.9 |
| 72.5° | 285.1 | 280.9 | 285.1 | 287.2 | 291.4 |
| 75° | 230.6 | 228.5 | 230.6 | 230.6 | 230.6 |
| 77.5° | 184.5 | 178.2 | 182.4 | 180.3 | 178.2 |
| 80° | 136.2 | 134.1 | 132.1 | 130.0 | 132.1 |
| 82.5° | 94.3 | 92.2 | 92.2 | 88.0 | 88.0 |
| 85° | 54.5 | 52.4 | 52.4 | 48.2 | 48.2 |
| 87.5° | 21.0 | 21.0 | 18.9 | 18.9 | 18.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)