

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: P296104

Luminaire Tested: **24RLN-LD5-42-RDP-UNV-L83050-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P36059-R2)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24RLN-LD5-42-RDP-UNV-L83050-W2A1-U-3500K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 80 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3494.0 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

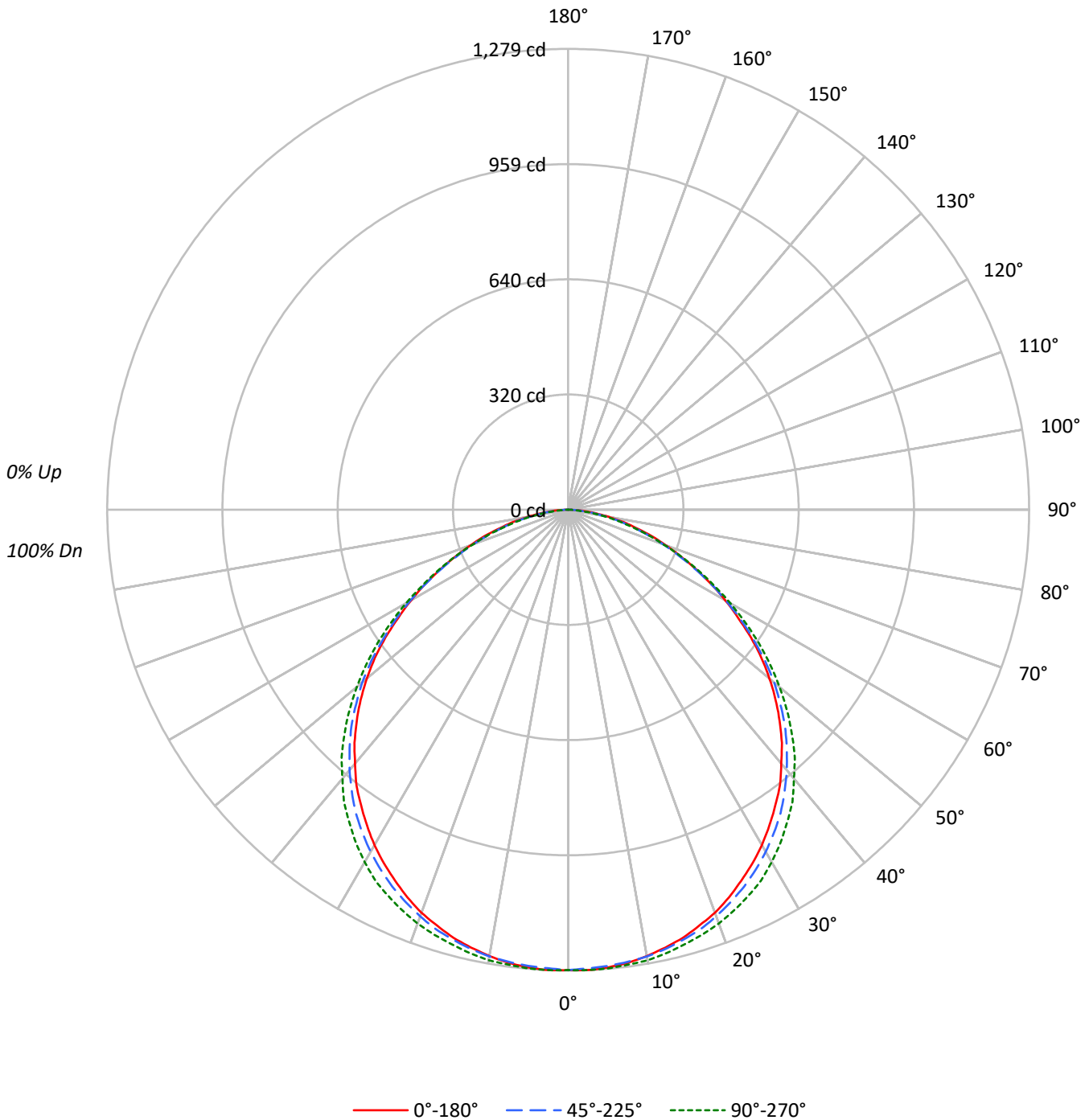
Input Watts (W): 29.109
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 74 | 68 | 64 | 71 | 66 | 63 | 60 |
| 4 | 83 | 72 | 63 | 57 | 81 | 70 | 62 | 56 | 68 | 61 | 55 | 66 | 60 | 55 | 63 | 58 | 54 | 52 |
| 5 | 77 | 64 | 55 | 49 | 75 | 63 | 55 | 49 | 61 | 54 | 48 | 59 | 53 | 48 | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 49 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 42 | 53 | 47 | 42 | 52 | 46 | 41 | 39 |
| 7 | 66 | 52 | 44 | 38 | 64 | 52 | 43 | 38 | 50 | 43 | 37 | 49 | 42 | 37 | 47 | 41 | 37 | 35 |
| 8 | 61 | 48 | 39 | 34 | 60 | 47 | 39 | 34 | 46 | 39 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 31 |
| 9 | 57 | 44 | 36 | 30 | 56 | 43 | 36 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |
| 10 | 54 | 41 | 33 | 27 | 52 | 40 | 33 | 27 | 39 | 32 | 27 | 38 | 32 | 27 | 37 | 31 | 27 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 1719 | 1719 | 1719 |
| 5° | 1722 | 1717 | 1726 |
| 10° | 1719 | 1720 | 1735 |
| 15° | 1713 | 1721 | 1739 |
| 20° | 1704 | 1719 | 1750 |
| 25° | 1686 | 1714 | 1755 |
| 30° | 1670 | 1703 | 1755 |
| 35° | 1646 | 1687 | 1740 |
| 40° | 1616 | 1658 | 1711 |
| 45° | 1579 | 1619 | 1670 |
| 50° | 1526 | 1562 | 1604 |
| 55° | 1452 | 1471 | 1514 |
| 60° | 1355 | 1362 | 1398 |
| 65° | 1245 | 1237 | 1266 |
| 70° | 1131 | 1100 | 1105 |
| 75° | 1006 | 951 | 944 |
| 80° | 873 | 780 | 760 |
| 85° | 716 | 553 | 429 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 121.2 | 3.5 |
| 10°-20° | 349.3 | 10.0 |
| 20°-30° | 533.3 | 15.3 |
| 30°-40° | 642.9 | 18.4 |
| 40°-50° | 655.6 | 18.8 |
| 50°-60° | 561.1 | 16.1 |
| 60°-70° | 386.5 | 11.1 |
| 70°-80° | 198.1 | 5.7 |
| 80°-90° | 46.1 | 1.3 |
| 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° | 1003.8 | 28.7 |
| 0°-40° | 1646.7 | 47.1 |
| 0°-60° | 2863.3 | 81.9 |
| 0°-90° | 3494.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3494.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1278 | 1278 | 1278 | 1278 | 1278 | |
| 5° | 1275 | 1272 | 1271 | 1275 | 1278 | 121 |
| 15° | 1230 | 1229 | 1235 | 1245 | 1249 | 347 |
| 25° | 1136 | 1140 | 1154 | 1174 | 1182 | 524 |
| 35° | 1002 | 1006 | 1027 | 1050 | 1059 | 627 |
| 45° | 830 | 831 | 851 | 872 | 878 | 639 |
| 55° | 619 | 615 | 627 | 640 | 646 | 552 |
| 65° | 391 | 382 | 388 | 391 | 398 | 389 |
| 75° | 194 | 186 | 183 | 183 | 182 | 209 |
| 85° | 46 | 41 | 36 | 32 | 28 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1277.8 | 1277.8 | 1277.8 | 1277.8 | 1277.8 |
| 2.5° | 1279.1 | 1276.4 | 1273.8 | 1276.4 | 1279.1 |
| 5° | 1275.1 | 1272.5 | 1271.1 | 1275.1 | 1277.8 |
| 7.5° | 1268.5 | 1265.8 | 1265.8 | 1271.1 | 1273.8 |
| 10° | 1257.9 | 1256.6 | 1259.2 | 1264.5 | 1269.8 |
| 12.5° | 1244.6 | 1244.6 | 1248.6 | 1255.2 | 1260.5 |
| 15° | 1230.1 | 1228.7 | 1235.4 | 1244.6 | 1248.6 |
| 17.5° | 1210.2 | 1211.5 | 1220.8 | 1231.4 | 1236.7 |
| 20° | 1190.3 | 1191.6 | 1200.9 | 1215.5 | 1222.1 |
| 22.5° | 1165.1 | 1167.8 | 1178.4 | 1196.9 | 1203.5 |
| 25° | 1135.9 | 1139.9 | 1154.5 | 1174.4 | 1182.3 |
| 27.5° | 1106.8 | 1110.8 | 1126.7 | 1149.2 | 1159.8 |
| 30° | 1075.0 | 1080.3 | 1096.2 | 1120.0 | 1129.3 |
| 32.5° | 1039.2 | 1043.2 | 1063.0 | 1086.9 | 1096.2 |
| 35° | 1002.1 | 1006.0 | 1027.3 | 1049.8 | 1059.1 |
| 37.5° | 965.0 | 965.0 | 986.2 | 1012.7 | 1022.0 |
| 40° | 919.9 | 921.2 | 943.7 | 968.9 | 974.2 |
| 42.5° | 877.5 | 877.5 | 897.4 | 921.2 | 930.5 |
| 45° | 829.8 | 831.1 | 851.0 | 872.2 | 877.5 |
| 47.5° | 780.7 | 780.7 | 797.9 | 817.8 | 823.1 |
| 50° | 729.0 | 726.4 | 746.2 | 762.2 | 766.1 |
| 52.5° | 676.0 | 672.0 | 687.9 | 701.2 | 706.5 |
| 55° | 619.0 | 615.0 | 627.0 | 640.2 | 645.5 |
| 57.5° | 559.4 | 554.1 | 567.3 | 579.2 | 581.9 |
| 60° | 503.7 | 495.7 | 506.3 | 513.0 | 519.6 |
| 62.5° | 448.0 | 438.7 | 446.7 | 450.7 | 456.0 |
| 65° | 391.0 | 381.7 | 388.4 | 391.0 | 397.6 |
| 67.5° | 336.7 | 330.0 | 331.4 | 335.3 | 338.0 |
| 70° | 287.6 | 279.7 | 279.7 | 279.7 | 281.0 |
| 72.5° | 242.6 | 230.6 | 229.3 | 230.6 | 230.6 |
| 75° | 193.5 | 185.6 | 182.9 | 182.9 | 181.6 |
| 77.5° | 155.1 | 144.5 | 143.2 | 140.5 | 137.9 |
| 80° | 112.7 | 103.4 | 100.7 | 99.4 | 98.1 |
| 82.5° | 78.2 | 70.3 | 67.6 | 64.9 | 61.0 |
| 85° | 46.4 | 41.1 | 35.8 | 31.8 | 27.8 |
| 87.5° | 17.2 | 15.9 | 13.3 | 11.9 | 11.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)