

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: P295817

Luminaire Tested: **24RLN-LD5-31-UNV-L83050-W2A1-U-5000K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295817
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-LD5-31-UNV-L83050-W2A1-U-5000K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER WITH STANDARD LENS
Light Source: (504) 80 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3286.0 lumens
Efficiency: N/A
Efficacy: 147.8 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

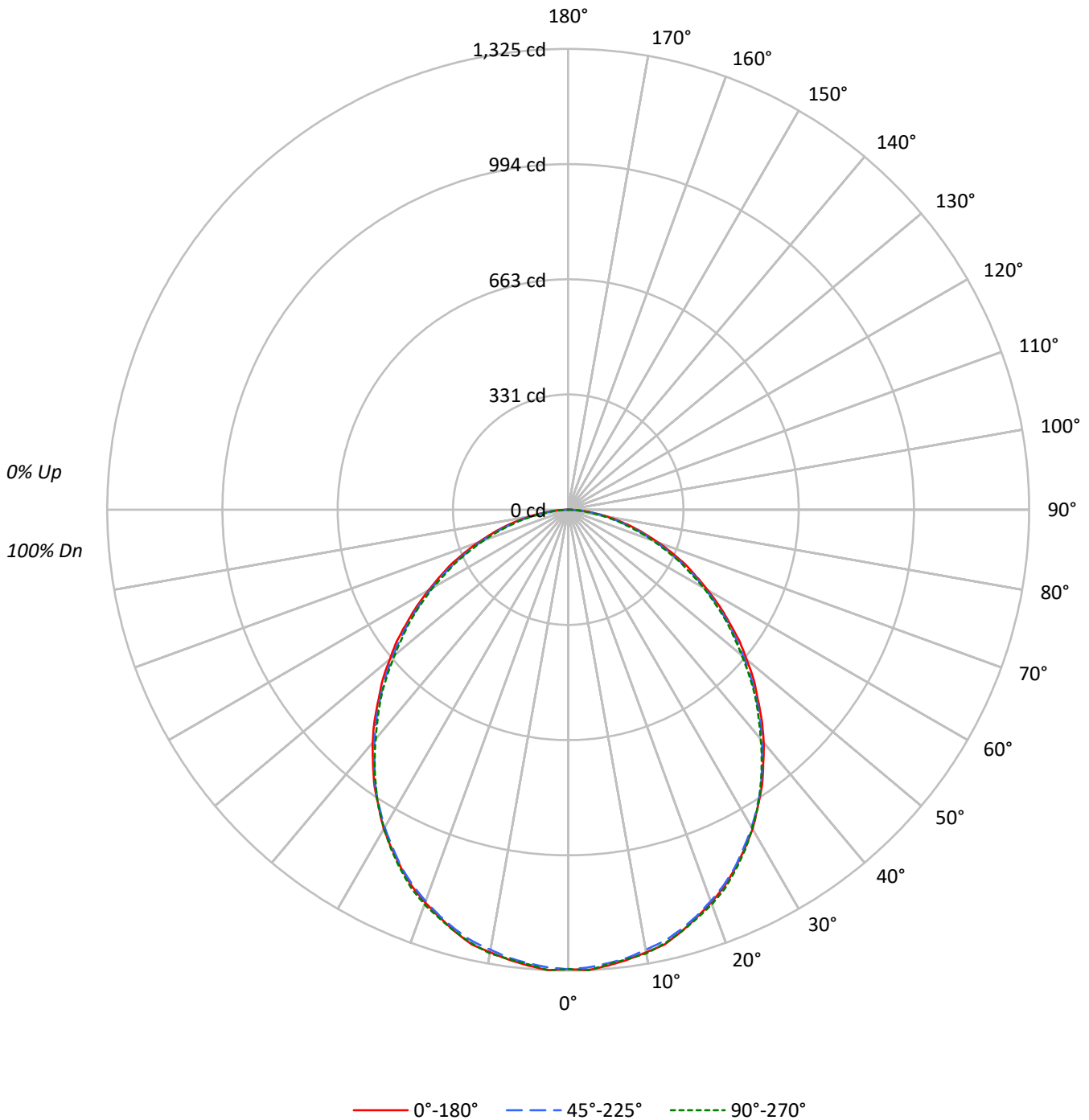
Input Watts (W): 22.227
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1777 | 1777 | 1777 |
| 5° | 1777 | 1768 | 1773 |
| 10° | 1766 | 1755 | 1770 |
| 15° | 1750 | 1741 | 1750 |
| 20° | 1721 | 1715 | 1729 |
| 25° | 1687 | 1684 | 1693 |
| 30° | 1647 | 1639 | 1644 |
| 35° | 1595 | 1588 | 1585 |
| 40° | 1536 | 1521 | 1512 |
| 45° | 1466 | 1452 | 1446 |
| 50° | 1400 | 1378 | 1362 |
| 55° | 1325 | 1305 | 1293 |
| 60° | 1247 | 1224 | 1210 |
| 65° | 1178 | 1134 | 1124 |
| 70° | 1080 | 1039 | 1018 |
| 75° | 992 | 932 | 893 |
| 80° | 871 | 813 | 764 |
| 85° | 704 | 655 | 556 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 124.6 | 3.8 |
| 10°-20° | 353.3 | 10.8 |
| 20°-30° | 522.6 | 15.9 |
| 30°-40° | 603.2 | 18.4 |
| 40°-50° | 589.1 | 17.9 |
| 50°-60° | 497.5 | 15.1 |
| 60°-70° | 354.3 | 10.8 |
| 70°-80° | 191.9 | 5.8 |
| 80°-90° | 49.5 | 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° | 1000.6 | 30.4 |
| 0°-40° | 1603.7 | 48.8 |
| 0°-60° | 2690.3 | 81.9 |
| 0°-90° | 3286.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3286.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1321 | 1321 | 1321 | 1321 | 1321 | |
| 5° | 1316 | 1316 | 1309 | 1312 | 1312 | 125 |
| 15° | 1256 | 1251 | 1250 | 1255 | 1256 | 354 |
| 25° | 1136 | 1130 | 1134 | 1138 | 1141 | 523 |
| 35° | 971 | 964 | 967 | 964 | 965 | 606 |
| 45° | 771 | 764 | 763 | 760 | 760 | 596 |
| 55° | 565 | 558 | 556 | 551 | 551 | 507 |
| 65° | 370 | 363 | 356 | 352 | 353 | 365 |
| 75° | 191 | 184 | 179 | 175 | 172 | 202 |
| 85° | 46 | 44 | 42 | 37 | 36 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1320.9 | 1320.9 | 1320.9 | 1320.9 | 1320.9 |
| 2.5° | 1325.1 | 1319.8 | 1317.7 | 1318.8 | 1325.1 |
| 5° | 1315.6 | 1315.6 | 1309.2 | 1312.4 | 1312.4 |
| 7.5° | 1305.0 | 1306.0 | 1299.7 | 1305.0 | 1302.9 |
| 10° | 1292.3 | 1289.1 | 1284.8 | 1293.3 | 1295.4 |
| 12.5° | 1280.6 | 1273.2 | 1271.1 | 1276.4 | 1277.4 |
| 15° | 1256.2 | 1250.9 | 1249.9 | 1255.2 | 1256.2 |
| 17.5° | 1228.7 | 1229.7 | 1225.5 | 1232.9 | 1231.8 |
| 20° | 1202.1 | 1200.0 | 1197.9 | 1206.4 | 1207.4 |
| 22.5° | 1172.5 | 1166.1 | 1168.2 | 1175.6 | 1177.8 |
| 25° | 1136.4 | 1130.1 | 1134.3 | 1138.5 | 1140.7 |
| 27.5° | 1098.3 | 1095.1 | 1094.0 | 1099.3 | 1101.4 |
| 30° | 1060.1 | 1054.8 | 1054.8 | 1061.2 | 1058.0 |
| 32.5° | 1013.5 | 1009.2 | 1011.3 | 1013.5 | 1014.5 |
| 35° | 971.0 | 963.6 | 966.8 | 963.6 | 964.7 |
| 37.5° | 921.2 | 915.9 | 914.9 | 913.8 | 913.8 |
| 40° | 874.6 | 870.3 | 866.1 | 866.1 | 860.8 |
| 42.5° | 823.7 | 818.4 | 816.3 | 813.1 | 809.9 |
| 45° | 770.7 | 764.3 | 763.3 | 760.1 | 760.1 |
| 47.5° | 723.0 | 713.4 | 712.4 | 706.0 | 706.0 |
| 50° | 668.9 | 662.6 | 658.3 | 654.1 | 650.9 |
| 52.5° | 620.2 | 613.8 | 607.4 | 603.2 | 600.0 |
| 55° | 565.0 | 557.6 | 556.5 | 551.2 | 551.2 |
| 57.5° | 515.2 | 508.8 | 504.6 | 498.2 | 499.3 |
| 60° | 463.3 | 456.9 | 454.8 | 449.5 | 449.5 |
| 62.5° | 414.5 | 409.2 | 406.0 | 400.7 | 396.5 |
| 65° | 370.0 | 362.6 | 356.2 | 352.0 | 353.0 |
| 67.5° | 321.2 | 312.7 | 309.5 | 305.3 | 302.1 |
| 70° | 274.6 | 269.3 | 264.0 | 258.7 | 258.7 |
| 72.5° | 231.1 | 225.8 | 222.6 | 216.3 | 214.1 |
| 75° | 190.8 | 184.5 | 179.2 | 174.9 | 171.7 |
| 77.5° | 150.5 | 144.2 | 141.0 | 135.7 | 135.7 |
| 80° | 112.4 | 108.1 | 104.9 | 102.8 | 98.6 |
| 82.5° | 77.4 | 75.3 | 72.1 | 68.9 | 65.7 |
| 85° | 45.6 | 44.5 | 42.4 | 37.1 | 36.0 |
| 87.5° | 18.0 | 18.0 | 15.9 | 14.8 | 13.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)