

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: P296251

Luminaire Tested: **24RLN-LD5-45-RDP-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296251
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-LD5-45-RDP-UNV-L93050-W2A1-U-4500K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3522.0 lumens
Efficiency: N/A
Efficacy: 107.3 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

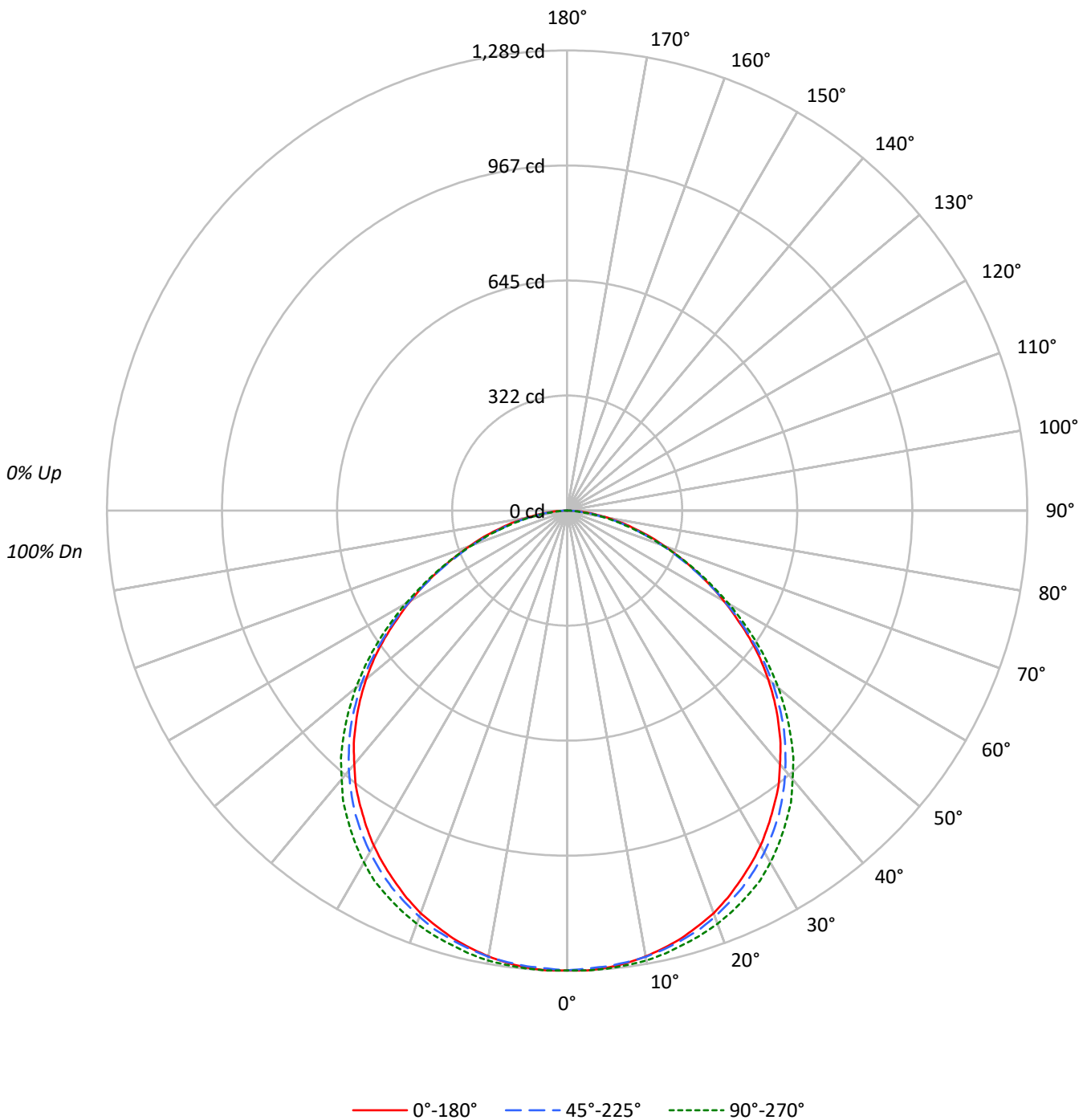
Input Watts (W): 32.829
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 1733 | 1733 | 1733 |
| 5° | 1736 | 1731 | 1740 |
| 10° | 1732 | 1734 | 1749 |
| 15° | 1727 | 1735 | 1753 |
| 20° | 1718 | 1733 | 1764 |
| 25° | 1700 | 1728 | 1769 |
| 30° | 1684 | 1717 | 1769 |
| 35° | 1659 | 1701 | 1754 |
| 40° | 1629 | 1671 | 1725 |
| 45° | 1592 | 1632 | 1683 |
| 50° | 1538 | 1575 | 1617 |
| 55° | 1464 | 1483 | 1526 |
| 60° | 1366 | 1373 | 1410 |
| 65° | 1255 | 1246 | 1276 |
| 70° | 1140 | 1109 | 1114 |
| 75° | 1014 | 959 | 951 |
| 80° | 880 | 786 | 766 |
| 85° | 722 | 557 | 434 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 122.1 | 3.5 |
| 10°-20° | 352.1 | 10.0 |
| 20°-30° | 537.5 | 15.3 |
| 30°-40° | 648.0 | 18.4 |
| 40°-50° | 660.8 | 18.8 |
| 50°-60° | 565.6 | 16.1 |
| 60°-70° | 389.6 | 11.1 |
| 70°-80° | 199.7 | 5.7 |
| 80°-90° | 46.5 | 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° | 1011.8 | 28.7 |
| 0°-40° | 1659.9 | 47.1 |
| 0°-60° | 2886.2 | 81.9 |
| 0°-90° | 3522.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3522.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1288 | 1288 | 1288 | 1288 | 1288 | |
| 5° | 1285 | 1283 | 1281 | 1285 | 1288 | 122 |
| 15° | 1240 | 1239 | 1245 | 1255 | 1259 | 350 |
| 25° | 1145 | 1149 | 1164 | 1184 | 1192 | 528 |
| 35° | 1010 | 1014 | 1036 | 1058 | 1068 | 632 |
| 45° | 836 | 838 | 858 | 879 | 884 | 644 |
| 55° | 624 | 620 | 632 | 645 | 651 | 557 |
| 65° | 394 | 385 | 392 | 394 | 401 | 392 |
| 75° | 195 | 187 | 184 | 184 | 183 | 210 |
| 85° | 47 | 41 | 36 | 32 | 28 | 54 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P296251

CATALOG NUMBER: 24RLN-LD5-45-RDP-UNV-L93050-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1288.0 | 1288.0 | 1288.0 | 1288.0 | 1288.0 |
| 2.5° | 1289.3 | 1286.7 | 1284.0 | 1286.7 | 1289.3 |
| 5° | 1285.3 | 1282.7 | 1281.3 | 1285.3 | 1288.0 |
| 7.5° | 1278.7 | 1276.0 | 1276.0 | 1281.3 | 1284.0 |
| 10° | 1268.0 | 1266.6 | 1269.3 | 1274.6 | 1280.0 |
| 12.5° | 1254.6 | 1254.6 | 1258.6 | 1265.3 | 1270.6 |
| 15° | 1239.9 | 1238.6 | 1245.3 | 1254.6 | 1258.6 |
| 17.5° | 1219.9 | 1221.2 | 1230.6 | 1241.2 | 1246.6 |
| 20° | 1199.8 | 1201.2 | 1210.5 | 1225.2 | 1231.9 |
| 22.5° | 1174.4 | 1177.1 | 1187.8 | 1206.5 | 1213.2 |
| 25° | 1145.0 | 1149.1 | 1163.8 | 1183.8 | 1191.8 |
| 27.5° | 1115.7 | 1119.7 | 1135.7 | 1158.4 | 1169.1 |
| 30° | 1083.6 | 1088.9 | 1105.0 | 1129.0 | 1138.4 |
| 32.5° | 1047.5 | 1051.5 | 1071.6 | 1095.6 | 1105.0 |
| 35° | 1010.1 | 1014.1 | 1035.5 | 1058.2 | 1067.6 |
| 37.5° | 972.7 | 972.7 | 994.1 | 1020.8 | 1030.1 |
| 40° | 927.3 | 928.6 | 951.3 | 976.7 | 982.0 |
| 42.5° | 884.5 | 884.5 | 904.5 | 928.6 | 937.9 |
| 45° | 836.4 | 837.7 | 857.8 | 879.2 | 884.5 |
| 47.5° | 787.0 | 787.0 | 804.3 | 824.4 | 829.7 |
| 50° | 734.9 | 732.2 | 752.2 | 768.3 | 772.3 |
| 52.5° | 681.4 | 677.4 | 693.4 | 706.8 | 712.1 |
| 55° | 624.0 | 620.0 | 632.0 | 645.3 | 650.7 |
| 57.5° | 563.8 | 558.5 | 571.9 | 583.9 | 586.6 |
| 60° | 507.7 | 499.7 | 510.4 | 517.1 | 523.8 |
| 62.5° | 451.6 | 442.3 | 450.3 | 454.3 | 459.6 |
| 65° | 394.2 | 384.8 | 391.5 | 394.2 | 400.8 |
| 67.5° | 339.4 | 332.7 | 334.0 | 338.0 | 340.7 |
| 70° | 289.9 | 281.9 | 281.9 | 281.9 | 283.3 |
| 72.5° | 244.5 | 232.5 | 231.1 | 232.5 | 232.5 |
| 75° | 195.1 | 187.1 | 184.4 | 184.4 | 183.0 |
| 77.5° | 156.3 | 145.6 | 144.3 | 141.6 | 139.0 |
| 80° | 113.6 | 104.2 | 101.5 | 100.2 | 98.9 |
| 82.5° | 78.8 | 70.8 | 68.1 | 65.5 | 61.5 |
| 85° | 46.8 | 41.4 | 36.1 | 32.1 | 28.1 |
| 87.5° | 17.4 | 16.0 | 13.4 | 12.0 | 12.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)