

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: P296330

Luminaire Tested: **24RLN-LD5-55-RDP-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P296330
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-LD5-55-RDP-UNV-L92765-W2A1-U-3500K
Description: RLN LED 2x4 TUNABLE WHITE TROFFER
WITH RDP LENS
Light Source: (504) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3937.0 lumens
Efficiency: N/A
Efficacy: 102.5 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

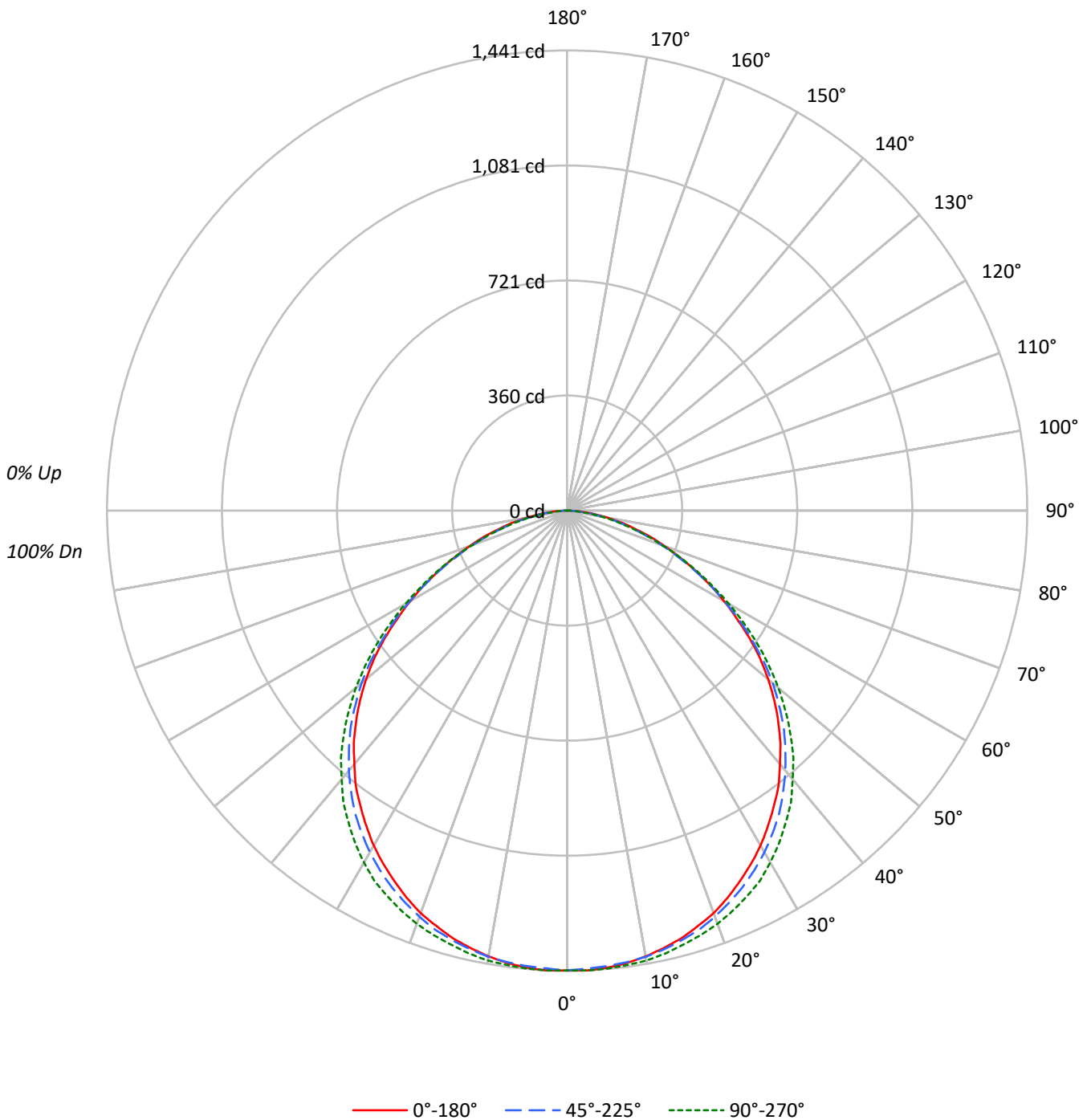
Input Watts (W): 38.409
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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° | 1937 | 1937 | 1937 |
| 5° | 1941 | 1935 | 1945 |
| 10° | 1937 | 1939 | 1955 |
| 15° | 1931 | 1939 | 1960 |
| 20° | 1920 | 1938 | 1972 |
| 25° | 1900 | 1931 | 1978 |
| 30° | 1882 | 1919 | 1977 |
| 35° | 1855 | 1901 | 1960 |
| 40° | 1821 | 1868 | 1928 |
| 45° | 1779 | 1825 | 1881 |
| 50° | 1719 | 1760 | 1807 |
| 55° | 1636 | 1657 | 1706 |
| 60° | 1527 | 1535 | 1576 |
| 65° | 1403 | 1393 | 1427 |
| 70° | 1275 | 1240 | 1245 |
| 75° | 1134 | 1071 | 1064 |
| 80° | 984 | 879 | 856 |
| 85° | 807 | 622 | 485 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 136.5 | 3.5 |
| 10°-20° | 393.6 | 10.0 |
| 20°-30° | 600.9 | 15.3 |
| 30°-40° | 724.4 | 18.4 |
| 40°-50° | 738.7 | 18.8 |
| 50°-60° | 632.2 | 16.1 |
| 60°-70° | 435.5 | 11.1 |
| 70°-80° | 223.2 | 5.7 |
| 80°-90° | 52.0 | 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° | 1131.0 | 28.7 |
| 0°-40° | 1855.4 | 47.1 |
| 0°-60° | 3226.3 | 81.9 |
| 0°-90° | 3937.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3937.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1440 | 1440 | 1440 | 1440 | 1440 | |
| 5° | 1437 | 1434 | 1432 | 1437 | 1440 | 137 |
| 15° | 1386 | 1384 | 1392 | 1402 | 1407 | 391 |
| 25° | 1280 | 1284 | 1301 | 1323 | 1332 | 590 |
| 35° | 1129 | 1134 | 1158 | 1183 | 1193 | 706 |
| 45° | 935 | 936 | 959 | 983 | 989 | 720 |
| 55° | 698 | 693 | 706 | 721 | 727 | 622 |
| 65° | 441 | 430 | 438 | 441 | 448 | 438 |
| 75° | 218 | 209 | 206 | 206 | 205 | 235 |
| 85° | 52 | 46 | 40 | 36 | 31 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1439.8 | 1439.8 | 1439.8 | 1439.8 | 1439.8 |
| 2.5° | 1441.3 | 1438.3 | 1435.3 | 1438.3 | 1441.3 |
| 5° | 1436.8 | 1433.8 | 1432.3 | 1436.8 | 1439.8 |
| 7.5° | 1429.3 | 1426.3 | 1426.3 | 1432.3 | 1435.3 |
| 10° | 1417.4 | 1415.9 | 1418.9 | 1424.8 | 1430.8 |
| 12.5° | 1402.4 | 1402.4 | 1406.9 | 1414.4 | 1420.4 |
| 15° | 1386.0 | 1384.5 | 1392.0 | 1402.4 | 1406.9 |
| 17.5° | 1363.6 | 1365.1 | 1375.6 | 1387.5 | 1393.5 |
| 20° | 1341.2 | 1342.7 | 1353.2 | 1369.6 | 1377.0 |
| 22.5° | 1312.8 | 1315.8 | 1327.8 | 1348.7 | 1356.1 |
| 25° | 1280.0 | 1284.4 | 1300.9 | 1323.3 | 1332.2 |
| 27.5° | 1247.1 | 1251.6 | 1269.5 | 1294.9 | 1306.9 |
| 30° | 1211.3 | 1217.2 | 1235.2 | 1262.0 | 1272.5 |
| 32.5° | 1170.9 | 1175.4 | 1197.8 | 1224.7 | 1235.2 |
| 35° | 1129.1 | 1133.6 | 1157.5 | 1182.9 | 1193.3 |
| 37.5° | 1087.3 | 1087.3 | 1111.2 | 1141.1 | 1151.5 |
| 40° | 1036.5 | 1038.0 | 1063.4 | 1091.8 | 1097.8 |
| 42.5° | 988.7 | 988.7 | 1011.1 | 1038.0 | 1048.5 |
| 45° | 935.0 | 936.5 | 958.9 | 982.8 | 988.7 |
| 47.5° | 879.7 | 879.7 | 899.1 | 921.5 | 927.5 |
| 50° | 821.4 | 818.5 | 840.9 | 858.8 | 863.3 |
| 52.5° | 761.7 | 757.2 | 775.1 | 790.1 | 796.1 |
| 55° | 697.5 | 693.0 | 706.4 | 721.4 | 727.4 |
| 57.5° | 630.3 | 624.3 | 639.2 | 652.7 | 655.7 |
| 60° | 567.5 | 558.6 | 570.5 | 578.0 | 585.5 |
| 62.5° | 504.8 | 494.4 | 503.3 | 507.8 | 513.8 |
| 65° | 440.6 | 430.1 | 437.6 | 440.6 | 448.1 |
| 67.5° | 379.4 | 371.9 | 373.4 | 377.9 | 380.9 |
| 70° | 324.1 | 315.1 | 315.1 | 315.1 | 316.6 |
| 72.5° | 273.3 | 259.9 | 258.4 | 259.9 | 259.9 |
| 75° | 218.1 | 209.1 | 206.1 | 206.1 | 204.6 |
| 77.5° | 174.7 | 162.8 | 161.3 | 158.3 | 155.3 |
| 80° | 127.0 | 116.5 | 113.5 | 112.0 | 110.5 |
| 82.5° | 88.1 | 79.2 | 76.2 | 73.2 | 68.7 |
| 85° | 52.3 | 46.3 | 40.3 | 35.8 | 31.4 |
| 87.5° | 19.4 | 17.9 | 14.9 | 13.4 | 13.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)