

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: P295659

Luminaire Tested: **14RLN-LD5-35-UNV-L92765-W2A1-U-4500K**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P295659
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1901-085-1)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14RLN-LD5-35-UNV-L92765-W2A1-U-4500K
Description: RLN LED 1x4 TUNABLE WHITE TROFFER WITH STANDARD LENS
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3230.0 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.01 / 1.18
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

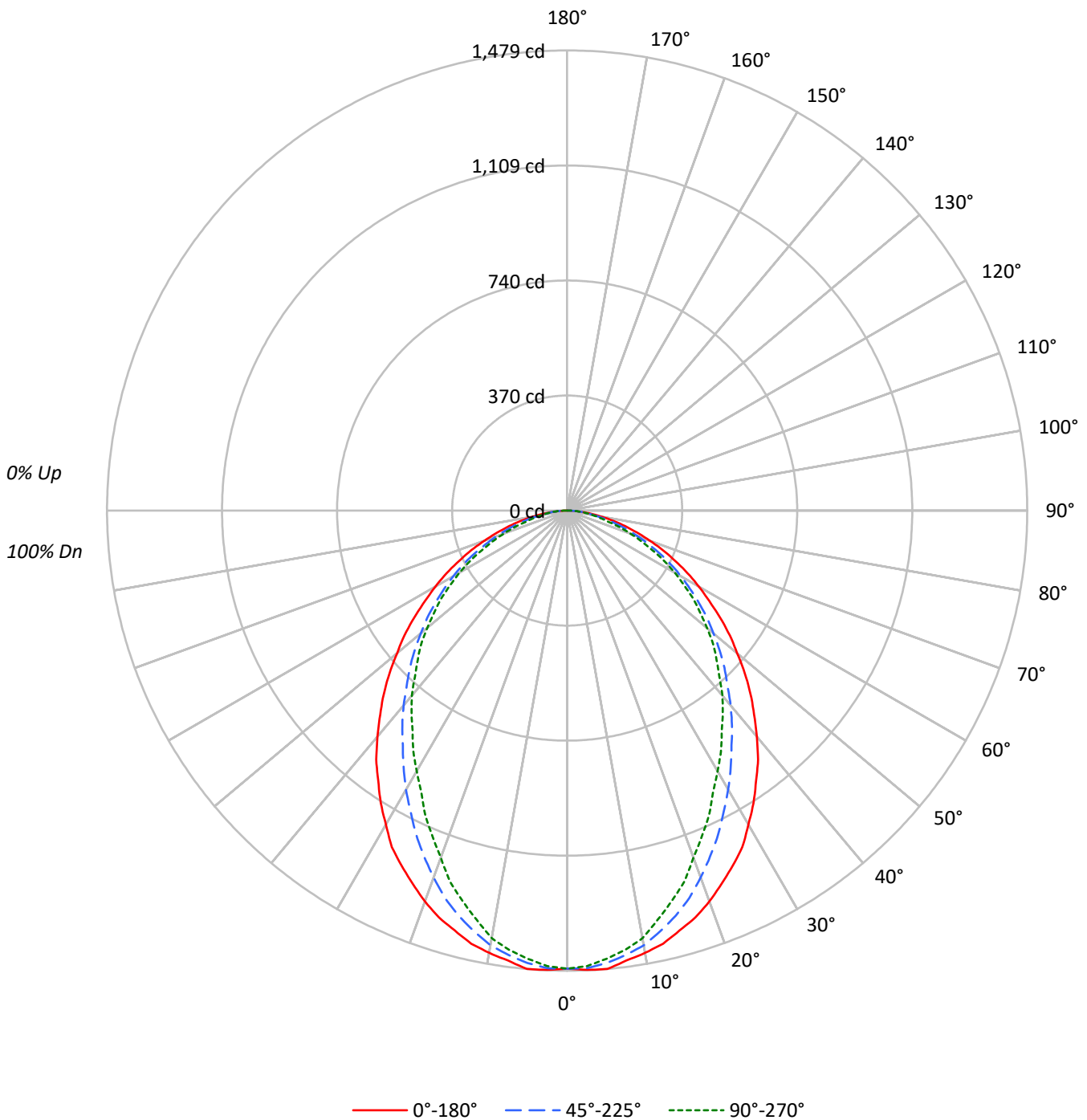
Input Watts (W): 34.224
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 110 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 | | | | | 85 | | | |
| 2 | 100 | 92 | 86 | 81 | 98 | 91 | 85 | 80 | 87 | 82 | 78 | 84 | 80 | 76 | 81 | 77 | 74 | 72 | | | | | 72 | | | |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 75 | 69 | 65 | 72 | 68 | 64 | 62 | | | | | 62 | | | |
| 4 | 85 | 73 | 65 | 58 | 82 | 72 | 64 | 58 | 69 | 63 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 54 | | | | | 54 | | | |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 57 | 51 | 63 | 55 | 50 | 61 | 54 | 49 | 59 | 53 | 49 | 47 | | | | | 47 | | | |
| 6 | 72 | 60 | 51 | 45 | 70 | 59 | 50 | 45 | 57 | 50 | 44 | 55 | 49 | 44 | 54 | 48 | 43 | 41 | | | | | 41 | | | |
| 7 | 67 | 54 | 46 | 40 | 66 | 53 | 45 | 40 | 52 | 45 | 39 | 51 | 44 | 39 | 49 | 43 | 39 | 37 | | | | | 37 | | | |
| 8 | 63 | 50 | 42 | 36 | 61 | 49 | 41 | 36 | 48 | 41 | 36 | 47 | 40 | 35 | 45 | 40 | 35 | 33 | | | | | 33 | | | |
| 9 | 59 | 46 | 38 | 33 | 57 | 45 | 38 | 32 | 44 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 | | | | | 30 | | | |
| 10 | 55 | 42 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 34 | 29 | 40 | 34 | 29 | 39 | 33 | 29 | 28 | | | | | 28 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3961 | 3961 | 3961 |
| 5° | 3995 | 3943 | 3907 |
| 10° | 3944 | 3877 | 3814 |
| 15° | 3892 | 3755 | 3618 |
| 20° | 3829 | 3594 | 3399 |
| 25° | 3739 | 3411 | 3204 |
| 30° | 3620 | 3218 | 3006 |
| 35° | 3478 | 3025 | 2846 |
| 40° | 3331 | 2871 | 2727 |
| 45° | 3172 | 2721 | 2586 |
| 50° | 2987 | 2570 | 2456 |
| 55° | 2816 | 2426 | 2323 |
| 60° | 2636 | 2276 | 2151 |
| 65° | 2441 | 2103 | 1929 |
| 70° | 2222 | 1889 | 1707 |
| 75° | 2000 | 1688 | 1390 |
| 80° | 1712 | 1375 | 1311 |
| 85° | 1389 | 1306 | 1306 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.8 | 4.3 |
| 10°-20° | 378.3 | 11.7 |
| 20°-30° | 530.9 | 16.4 |
| 30°-40° | 588.9 | 18.2 |
| 40°-50° | 565.3 | 17.5 |
| 50°-60° | 473.8 | 14.7 |
| 60°-70° | 332.6 | 10.3 |
| 70°-80° | 173.7 | 5.4 |
| 80°-90° | 48.6 | 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° | 1047.1 | 32.4 |
| 0°-40° | 1636.0 | 50.6 |
| 0°-60° | 2675.1 | 82.8 |
| 0°-90° | 3230.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3230.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1472 | 1472 | 1472 | 1472 | 1472 | |
| 5° | 1479 | 1460 | 1460 | 1450 | 1446 | 140 |
| 15° | 1397 | 1372 | 1348 | 1312 | 1299 | 394 |
| 25° | 1259 | 1214 | 1149 | 1093 | 1079 | 580 |
| 35° | 1059 | 1000 | 921 | 876 | 866 | 663 |
| 45° | 834 | 770 | 715 | 688 | 679 | 642 |
| 55° | 600 | 555 | 517 | 501 | 495 | 537 |
| 65° | 383 | 358 | 330 | 310 | 303 | 381 |
| 75° | 192 | 177 | 162 | 143 | 134 | 204 |
| 85° | 45 | 42 | 42 | 42 | 42 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P295659

CATALOG NUMBER: 14RLN-LD5-35-UNV-L92765-W2A1-U-4500K

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 1472.1 | 1472.1 | 1472.1 | 1472.1 | 1472.1 |
| 2.5° | 1477.6 | 1469.4 | 1472.1 | 1472.1 | 1465.3 |
| 5° | 1478.9 | 1459.8 | 1459.8 | 1450.3 | 1446.2 |
| 7.5° | 1458.5 | 1443.5 | 1440.7 | 1428.4 | 1424.4 |
| 10° | 1443.5 | 1428.4 | 1418.9 | 1402.5 | 1395.7 |
| 12.5° | 1425.7 | 1402.5 | 1384.8 | 1357.5 | 1346.6 |
| 15° | 1397.1 | 1372.5 | 1348.0 | 1312.5 | 1298.8 |
| 17.5° | 1371.1 | 1342.5 | 1305.7 | 1266.1 | 1251.1 |
| 20° | 1337.0 | 1302.9 | 1255.2 | 1200.6 | 1187.0 |
| 22.5° | 1297.5 | 1257.9 | 1202.0 | 1143.3 | 1132.4 |
| 25° | 1259.3 | 1214.2 | 1148.8 | 1092.8 | 1079.2 |
| 27.5° | 1219.7 | 1165.1 | 1090.1 | 1030.1 | 1016.4 |
| 30° | 1165.1 | 1109.2 | 1035.5 | 976.9 | 967.3 |
| 32.5° | 1114.7 | 1058.7 | 978.2 | 930.5 | 919.6 |
| 35° | 1058.7 | 1000.0 | 920.9 | 875.9 | 866.3 |
| 37.5° | 1008.2 | 940.0 | 870.4 | 826.8 | 821.3 |
| 40° | 948.2 | 886.8 | 817.2 | 784.5 | 776.3 |
| 42.5° | 889.5 | 828.1 | 762.7 | 734.0 | 724.5 |
| 45° | 833.6 | 769.5 | 714.9 | 687.6 | 679.4 |
| 47.5° | 774.9 | 716.3 | 664.4 | 642.6 | 637.1 |
| 50° | 713.5 | 661.7 | 613.9 | 593.5 | 586.7 |
| 52.5° | 659.0 | 605.8 | 566.2 | 547.1 | 538.9 |
| 55° | 600.3 | 555.3 | 517.1 | 500.7 | 495.2 |
| 57.5° | 541.6 | 504.8 | 468.0 | 453.0 | 444.8 |
| 60° | 489.8 | 453.0 | 422.9 | 405.2 | 399.7 |
| 62.5° | 436.6 | 405.2 | 376.6 | 360.2 | 353.4 |
| 65° | 383.4 | 357.5 | 330.2 | 309.7 | 302.9 |
| 67.5° | 334.3 | 305.6 | 283.8 | 266.0 | 259.2 |
| 70° | 282.4 | 262.0 | 240.1 | 223.7 | 216.9 |
| 72.5° | 234.7 | 219.7 | 200.6 | 182.8 | 176.0 |
| 75° | 192.4 | 177.4 | 162.4 | 143.3 | 133.7 |
| 77.5° | 150.1 | 140.5 | 125.5 | 109.1 | 109.1 |
| 80° | 110.5 | 105.1 | 88.7 | 86.0 | 84.6 |
| 82.5° | 76.4 | 73.7 | 64.1 | 62.8 | 62.8 |
| 85° | 45.0 | 42.3 | 42.3 | 42.3 | 42.3 |
| 87.5° | 19.1 | 20.5 | 21.8 | 21.8 | 23.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)