

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: P35074

Luminaire Tested: **14ENA-LD2-43HP-UNV-L835-CD1-U**

Test Date: 10/09/16

Test Information

Test Method: LM-79-08
Report Number: P35074
Test Lab: INNOVATION CENTER-P3
Test Date: 10/09/16
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14ENA-LD2-43HP-UNV-L835-CD1-U
Description: ENCOUNTER AIR 1X4 LED TROFFER
Light Source: (392) EATON 3500K LEDS
EL232N098E835
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 800 mA
OT50W/PRG1400C/UNV/DIM/L

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4012.9 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.38 / 1.42
Luminous Opening: Rectangular (W 0.79' x L: 3.83' x H: 0')
CIE Type: Direct

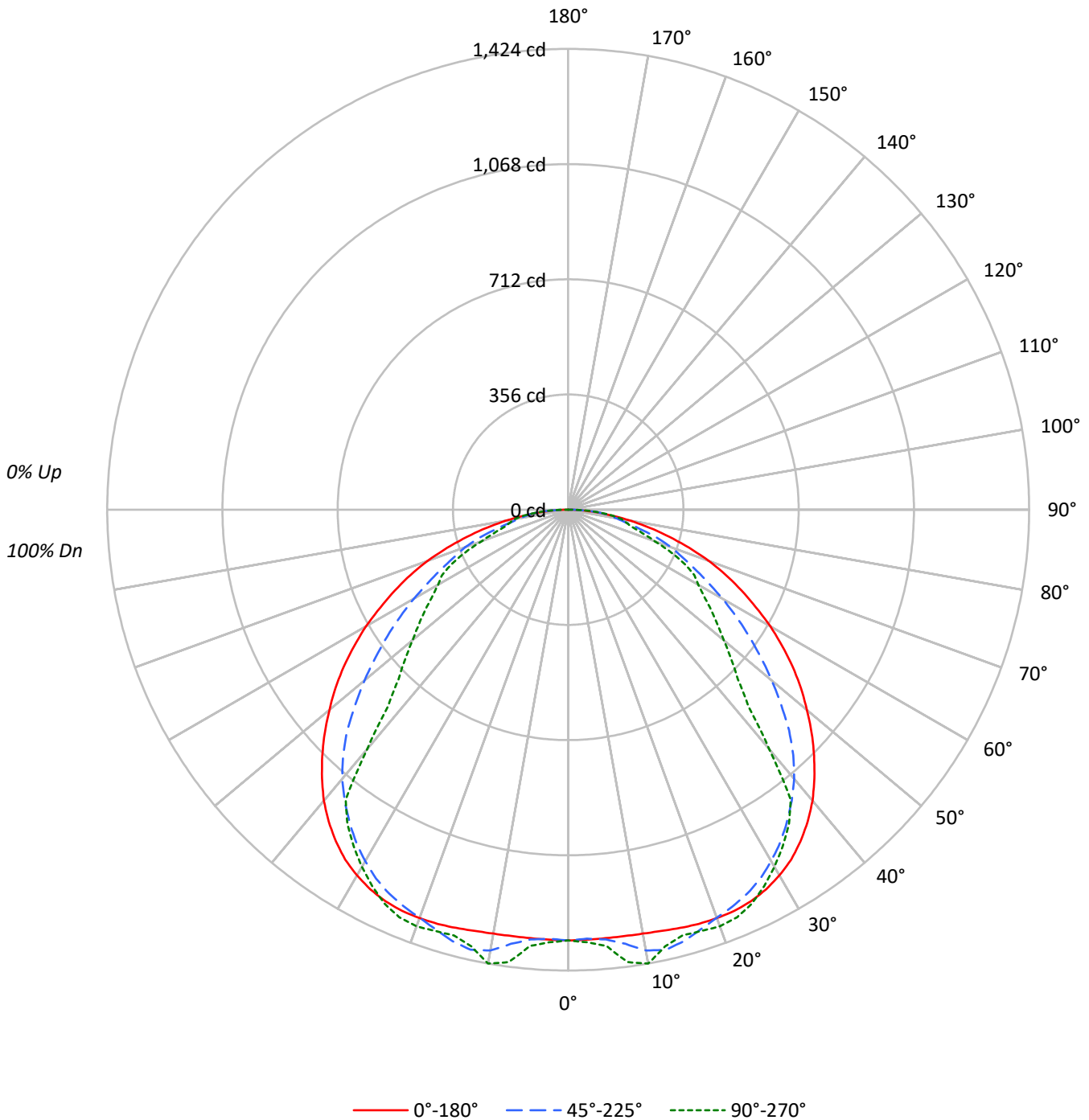
Input Watts (W): 35.3
Input Voltage (V): 120.0
Input Current (Ain): 0.296
Voltage Rise (V): NR
Power Factor: 0.9993
Total Harmonic Distortion (THDi): 8.20%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 5 HR
Ambient Temperature (°C): 24.5
Test Distance: 25 FT



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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 | 104 | 100 | 96 | 106 | 102 | 98 | 94 | 97 | 94 | 91 | 93 | 91 | 88 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 84 | 78 | 96 | 89 | 83 | 77 | 85 | 80 | 75 | 82 | 78 | 74 | 79 | 75 | 72 | 70 |
| 3 | 90 | 80 | 72 | 65 | 88 | 78 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 62 | 70 | 65 | 61 | 59 |
| 4 | 83 | 71 | 62 | 55 | 81 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 59 | 54 | 63 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 48 | 60 | 53 | 47 | 58 | 52 | 47 | 56 | 51 | 46 | 44 |
| 6 | 70 | 57 | 48 | 42 | 68 | 56 | 48 | 42 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 41 | 38 |
| 7 | 65 | 52 | 43 | 37 | 64 | 51 | 43 | 37 | 49 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 34 |
| 8 | 61 | 47 | 39 | 33 | 59 | 47 | 39 | 33 | 45 | 38 | 33 | 44 | 37 | 32 | 43 | 37 | 32 | 30 |
| 9 | 57 | 43 | 35 | 30 | 55 | 43 | 35 | 30 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 34 | 29 | 27 |
| 10 | 53 | 40 | 32 | 27 | 52 | 40 | 32 | 27 | 39 | 32 | 27 | 38 | 31 | 27 | 37 | 31 | 26 | 25 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 4721 | 4721 | 4721 |
| 5° | 4732 | 4746 | 4817 |
| 10° | 4790 | 4981 | 5129 |
| 15° | 4913 | 5067 | 5001 |
| 20° | 5069 | 5065 | 5171 |
| 25° | 5225 | 5123 | 5256 |
| 30° | 5345 | 5136 | 5218 |
| 35° | 5417 | 5101 | 5144 |
| 40° | 5436 | 5028 | 4477 |
| 45° | 5387 | 4841 | 3722 |
| 50° | 5314 | 4530 | 3460 |
| 55° | 5238 | 4217 | 3327 |
| 60° | 5115 | 3902 | 3292 |
| 65° | 4960 | 3609 | 3332 |
| 70° | 4791 | 3505 | 2956 |
| 75° | 4426 | 3138 | 2755 |
| 80° | 3963 | 3023 | 3411 |
| 85° | 3337 | 3785 | 3948 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.4 | 3.2 |
| 10°-20° | 386.5 | 9.6 |
| 20°-30° | 609.9 | 15.2 |
| 30°-40° | 745.6 | 18.6 |
| 40°-50° | 720.5 | 18.0 |
| 50°-60° | 608.5 | 15.2 |
| 60°-70° | 454.1 | 11.3 |
| 70°-80° | 263.0 | 6.6 |
| 80°-90° | 95.4 | 2.4 |
| 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° | 1125.8 | 28.1 |
| 0°-40° | 1871.4 | 46.6 |
| 0°-60° | 3200.4 | 79.8 |
| 0°-90° | 4012.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4012.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 1331 | 1331 | 1331 | 1331 | 1331 | |
| 5° | 1329 | 1332 | 1333 | 1346 | 1353 | 127 |
| 15° | 1338 | 1361 | 1380 | 1364 | 1362 | 379 |
| 25° | 1335 | 1319 | 1309 | 1335 | 1343 | 616 |
| 35° | 1251 | 1202 | 1178 | 1191 | 1188 | 782 |
| 45° | 1074 | 1006 | 965 | 843 | 742 | 828 |
| 55° | 847 | 774 | 682 | 570 | 538 | 756 |
| 65° | 591 | 521 | 430 | 399 | 397 | 585 |
| 75° | 323 | 277 | 229 | 203 | 201 | 343 |
| 85° | 82 | 80 | 93 | 96 | 97 | 95 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P35074

CATALOG NUMBER: 14ENA-LD2-43HP-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|------|-------|------|-------|------|
| 0° | 1331 | 1331 | 1331 | 1331 | 1331 |
| 2.5° | 1330 | 1331 | 1327 | 1334 | 1338 |
| 5° | 1329 | 1332 | 1333 | 1346 | 1353 |
| 7.5° | 1329 | 1337 | 1353 | 1390 | 1410 |
| 10° | 1330 | 1347 | 1383 | 1421 | 1424 |
| 12.5° | 1333 | 1357 | 1393 | 1390 | 1382 |
| 15° | 1338 | 1361 | 1380 | 1364 | 1362 |
| 17.5° | 1342 | 1357 | 1360 | 1356 | 1365 |
| 20° | 1343 | 1349 | 1342 | 1356 | 1370 |
| 22.5° | 1342 | 1336 | 1327 | 1351 | 1363 |
| 25° | 1335 | 1319 | 1309 | 1335 | 1343 |
| 27.5° | 1323 | 1298 | 1285 | 1306 | 1311 |
| 30° | 1305 | 1272 | 1254 | 1271 | 1274 |
| 32.5° | 1282 | 1240 | 1219 | 1234 | 1233 |
| 35° | 1251 | 1202 | 1178 | 1191 | 1188 |
| 37.5° | 1215 | 1160 | 1134 | 1139 | 1129 |
| 40° | 1174 | 1111 | 1086 | 1047 | 967 |
| 42.5° | 1126 | 1061 | 1029 | 944 | 823 |
| 45° | 1074 | 1006 | 965 | 843 | 742 |
| 47.5° | 1020 | 950 | 892 | 765 | 682 |
| 50° | 963 | 895 | 821 | 690 | 627 |
| 52.5° | 906 | 834 | 750 | 628 | 581 |
| 55° | 847 | 774 | 682 | 570 | 538 |
| 57.5° | 784 | 712 | 615 | 517 | 497 |
| 60° | 721 | 649 | 550 | 468 | 464 |
| 62.5° | 654 | 582 | 486 | 434 | 440 |
| 65° | 591 | 521 | 430 | 399 | 397 |
| 67.5° | 527 | 456 | 379 | 347 | 344 |
| 70° | 462 | 396 | 338 | 296 | 285 |
| 72.5° | 392 | 333 | 286 | 244 | 240 |
| 75° | 323 | 277 | 229 | 203 | 201 |
| 77.5° | 257 | 223 | 182 | 178 | 184 |
| 80° | 194 | 178 | 148 | 159 | 167 |
| 82.5° | 132 | 120 | 126 | 135 | 136 |
| 85° | 82 | 80 | 93 | 96 | 97 |
| 87.5° | 38 | 46 | 51 | 53 | 53 |
| 90° | 0 | 0 | 0 | 0 | 0 |

(END OF REPORT)