

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: P238654

Luminaire Tested: **14ENA-LD2-18-UNV-L835-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P238654
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-395-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14ENA-LD2-18-UNV-L835-CD1-U
Description: METALUX ENCOUNTER 1X4 LED TROFFER
AIR-VENTED OPTION
Light Source: (224)3500K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1596.2 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39
Luminous Opening: Rectangular (W 0.67' x L: 3.83' x H: 0')
CIE Type: Direct

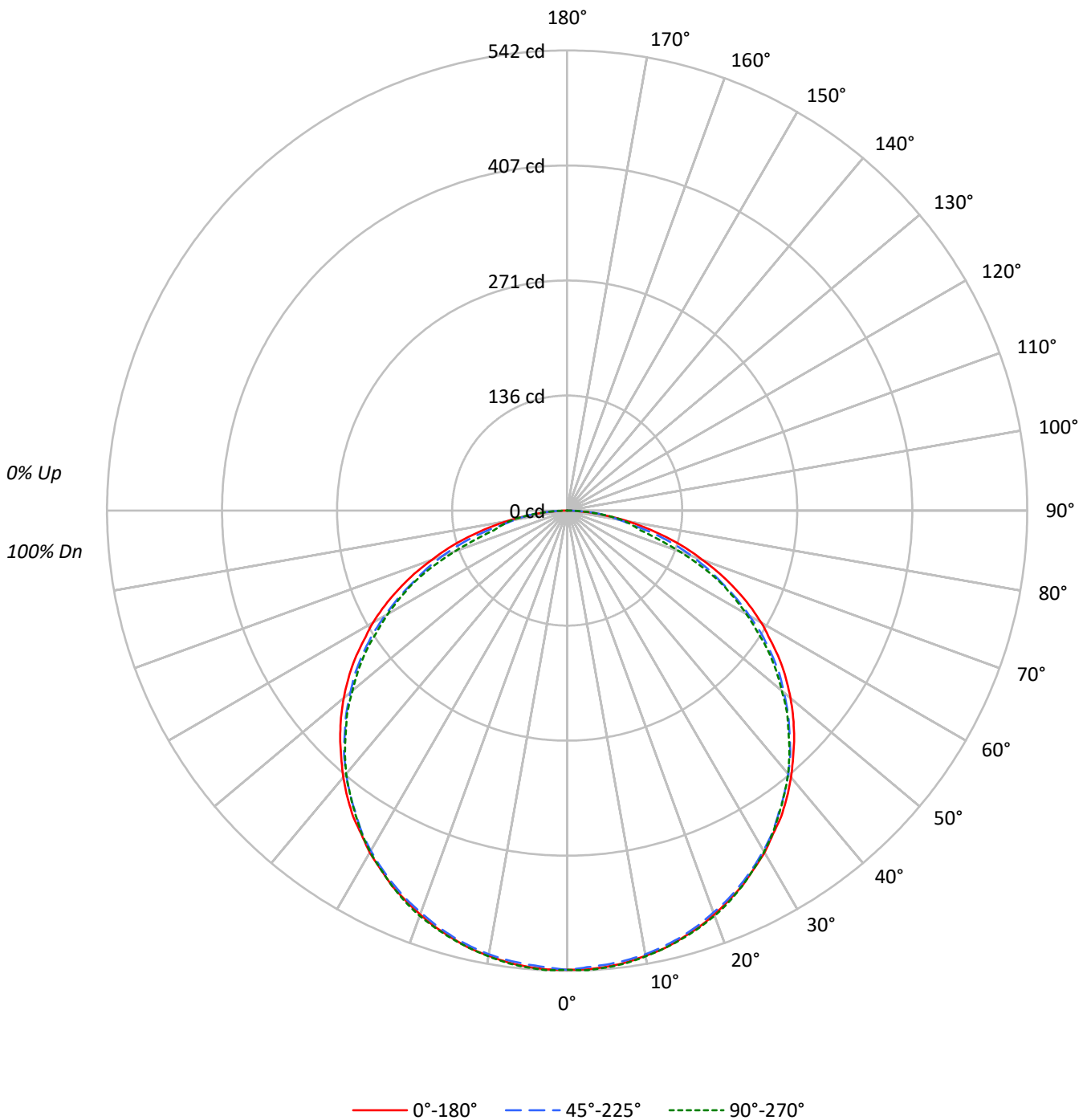
Input Watts (W): 16
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P238654

CATALOG NUMBER: 14ENA-LD2-18-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P238654

CATALOG NUMBER: 14ENA-LD2-18-UNV-L835-CD1-U

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 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 90 | 87 | 85 | 83 |
| 2 | 99 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 85 | 79 | 75 | 81 | 77 | 73 | 78 | 75 | 71 | 69 |
| 3 | 90 | 79 | 71 | 64 | 87 | 77 | 70 | 63 | 74 | 68 | 62 | 72 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 80 | 68 | 60 | 54 | 66 | 59 | 53 | 64 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 53 | 46 | 59 | 51 | 46 | 57 | 50 | 45 | 55 | 49 | 45 | 42 |
| 6 | 69 | 56 | 47 | 40 | 68 | 55 | 46 | 40 | 53 | 46 | 40 | 51 | 45 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 51 | 42 | 36 | 63 | 50 | 41 | 35 | 48 | 41 | 35 | 47 | 40 | 35 | 45 | 39 | 35 | 33 |
| 8 | 60 | 46 | 38 | 32 | 58 | 45 | 37 | 32 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 41 | 33 | 28 | 40 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 39 | 31 | 26 | 38 | 30 | 26 | 37 | 30 | 25 | 36 | 30 | 25 | 24 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2278 | 2278 | 2278 |
| 5° | 2280 | 2269 | 2284 |
| 10° | 2277 | 2270 | 2281 |
| 15° | 2274 | 2267 | 2278 |
| 20° | 2269 | 2258 | 2277 |
| 25° | 2267 | 2255 | 2267 |
| 30° | 2262 | 2249 | 2257 |
| 35° | 2261 | 2235 | 2239 |
| 40° | 2255 | 2227 | 2227 |
| 45° | 2252 | 2207 | 2197 |
| 50° | 2251 | 2184 | 2162 |
| 55° | 2243 | 2157 | 2126 |
| 60° | 2225 | 2090 | 2055 |
| 65° | 2179 | 2002 | 1976 |
| 70° | 2089 | 1922 | 1735 |
| 75° | 1964 | 1730 | 1457 |
| 80° | 1739 | 1494 | 1637 |
| 85° | 1343 | 1551 | 1469 |



TEST NUMBER: P238654

CATALOG NUMBER: 14ENA-LD2-18-UNV-L835-CD1-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 51.2 | 3.2 |
| 10°-20° | 147.1 | 9.2 |
| 20°-30° | 224.2 | 14.0 |
| 30°-40° | 273.1 | 17.1 |
| 40°-50° | 287.1 | 18.0 |
| 50°-60° | 263.6 | 16.5 |
| 60°-70° | 202.5 | 12.7 |
| 70°-80° | 113.0 | 7.1 |
| 80°-90° | 34.3 | 2.1 |
| 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° | 422.6 | 26.5 |
| 0°-40° | 695.7 | 43.6 |
| 0°-60° | 1246.4 | 78.1 |
| 0°-90° | 1596.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1596.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 541 | 541 | 541 | 541 | 541 | |
| 5° | 539 | 539 | 537 | 539 | 540 | 51 |
| 15° | 522 | 522 | 520 | 522 | 522 | 147 |
| 25° | 488 | 486 | 485 | 487 | 488 | 225 |
| 35° | 440 | 438 | 435 | 436 | 436 | 275 |
| 45° | 378 | 376 | 370 | 369 | 369 | 292 |
| 55° | 306 | 303 | 294 | 289 | 290 | 272 |
| 65° | 219 | 213 | 201 | 198 | 198 | 216 |
| 75° | 121 | 115 | 106 | 92 | 90 | 128 |
| 85° | 28 | 29 | 32 | 31 | 30 | 34 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P238654

CATALOG NUMBER: 14ENA-LD2-18-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 540.9 | 540.9 | 540.9 | 540.9 | 540.9 |
| 2.5° | 540.9 | 540.9 | 538.4 | 540.9 | 541.8 |
| 5° | 539.3 | 539.3 | 536.7 | 539.3 | 540.1 |
| 7.5° | 536.7 | 536.7 | 534.2 | 535.9 | 537.6 |
| 10° | 532.5 | 532.5 | 530.8 | 532.5 | 533.3 |
| 12.5° | 528.3 | 527.4 | 525.8 | 527.4 | 528.3 |
| 15° | 521.5 | 521.5 | 519.8 | 521.5 | 522.4 |
| 17.5° | 514.8 | 513.9 | 512.3 | 514.8 | 515.6 |
| 20° | 506.3 | 505.5 | 503.8 | 506.3 | 508.0 |
| 22.5° | 497.1 | 496.2 | 495.4 | 497.9 | 498.7 |
| 25° | 487.8 | 486.1 | 485.2 | 486.9 | 487.8 |
| 27.5° | 476.0 | 475.1 | 474.3 | 475.1 | 476.0 |
| 30° | 465.0 | 463.3 | 462.5 | 462.5 | 464.1 |
| 32.5° | 451.5 | 450.6 | 449.8 | 450.6 | 450.6 |
| 35° | 439.7 | 438.0 | 434.6 | 435.5 | 435.5 |
| 37.5° | 425.3 | 422.8 | 420.3 | 420.3 | 420.3 |
| 40° | 410.1 | 408.5 | 405.1 | 404.2 | 405.1 |
| 42.5° | 394.1 | 392.4 | 389.0 | 386.5 | 387.4 |
| 45° | 378.1 | 375.5 | 370.5 | 368.8 | 368.8 |
| 47.5° | 361.2 | 358.7 | 352.8 | 350.2 | 351.1 |
| 50° | 343.5 | 340.1 | 333.3 | 330.0 | 330.0 |
| 52.5° | 324.9 | 321.5 | 314.8 | 310.6 | 310.6 |
| 55° | 305.5 | 303.0 | 293.7 | 288.6 | 289.5 |
| 57.5° | 283.6 | 281.0 | 271.7 | 265.8 | 265.8 |
| 60° | 264.1 | 259.1 | 248.1 | 243.9 | 243.9 |
| 62.5° | 242.2 | 236.3 | 225.3 | 220.3 | 221.1 |
| 65° | 218.6 | 212.7 | 200.9 | 198.3 | 198.3 |
| 67.5° | 194.9 | 189.9 | 178.9 | 174.7 | 170.5 |
| 70° | 169.6 | 164.6 | 156.1 | 146.0 | 140.9 |
| 72.5° | 146.0 | 140.1 | 132.5 | 117.3 | 112.2 |
| 75° | 120.7 | 114.8 | 106.3 | 92.0 | 89.5 |
| 77.5° | 96.2 | 91.1 | 79.3 | 76.0 | 77.6 |
| 80° | 71.7 | 70.0 | 61.6 | 65.0 | 67.5 |
| 82.5° | 48.1 | 47.3 | 48.9 | 50.6 | 50.6 |
| 85° | 27.8 | 28.7 | 32.1 | 31.2 | 30.4 |
| 87.5° | 11.8 | 14.3 | 13.5 | 13.5 | 13.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)