

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: P392781

Luminaire Tested: **12EN-LD2-17-UNV-L83050-W2A-1-U (4000K)**

Issue Date: 3/28/2020

Test Information

Test Method: LM-79-08
Report Number: P392781
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-563-35)
Test Lab: INNOVATION CENTER
Issue Date: 3/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 12EN-LD2-17-UNV-L83050-W2A-1-U (4000K)
Description: 1X2 ENCOUNTER, 1700 LUMENS, VIVIDTUNE TUNABLE WHITE
Light Source: 2700K/6500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1872.3 lumens
Efficiency: N/A
Efficacy: 120.0 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.26 / 1.4
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

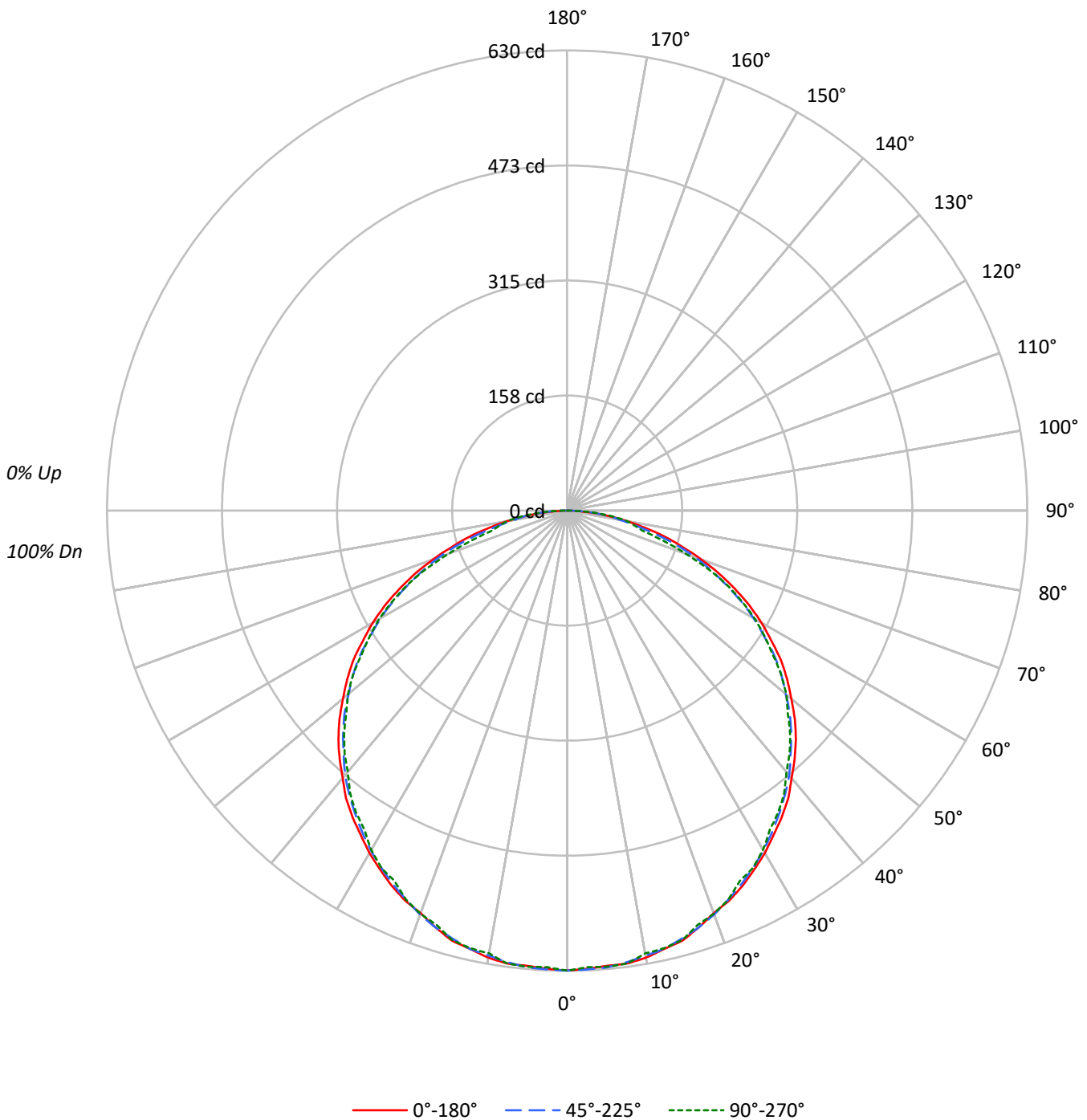
Input Watts (W): 15.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 108 | 104 | 99 | 95 | 106 | 101 | 97 | 94 | 97 | 94 | 91 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 90 | 83 | 77 | 96 | 88 | 82 | 76 | 84 | 79 | 74 | 81 | 77 | 73 | 78 | 74 | 71 | 69 |
| 3 | 90 | 79 | 70 | 64 | 87 | 77 | 69 | 63 | 74 | 67 | 62 | 71 | 66 | 61 | 69 | 64 | 60 | 58 |
| 4 | 82 | 70 | 61 | 54 | 79 | 68 | 60 | 53 | 66 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 51 | 49 |
| 5 | 75 | 62 | 53 | 46 | 73 | 61 | 52 | 46 | 59 | 51 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 42 |
| 6 | 69 | 56 | 47 | 40 | 67 | 55 | 46 | 40 | 53 | 45 | 40 | 51 | 44 | 39 | 50 | 44 | 39 | 37 |
| 7 | 64 | 50 | 42 | 35 | 62 | 50 | 41 | 35 | 48 | 40 | 35 | 47 | 40 | 35 | 45 | 39 | 34 | 32 |
| 8 | 60 | 46 | 37 | 31 | 58 | 45 | 37 | 31 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 29 |
| 9 | 56 | 42 | 34 | 28 | 54 | 42 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |
| 10 | 52 | 39 | 31 | 26 | 51 | 38 | 31 | 25 | 37 | 30 | 25 | 36 | 30 | 25 | 36 | 29 | 25 | 23 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 3389 | 3389 | 3389 |
| 5° | 3380 | 3391 | 3386 |
| 10° | 3397 | 3381 | 3364 |
| 15° | 3397 | 3380 | 3391 |
| 20° | 3359 | 3371 | 3365 |
| 25° | 3369 | 3352 | 3322 |
| 30° | 3364 | 3339 | 3333 |
| 35° | 3365 | 3325 | 3312 |
| 40° | 3358 | 3323 | 3281 |
| 45° | 3371 | 3302 | 3287 |
| 50° | 3355 | 3271 | 3280 |
| 55° | 3354 | 3251 | 3223 |
| 60° | 3308 | 3178 | 3200 |
| 65° | 3223 | 3056 | 3082 |
| 70° | 3065 | 2939 | 2718 |
| 75° | 2882 | 2630 | 2215 |
| 80° | 2585 | 2272 | 2585 |
| 85° | 1982 | 2359 | 2544 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.6 | 3.2 |
| 10°-20° | 171.2 | 9.1 |
| 20°-30° | 260.2 | 13.9 |
| 30°-40° | 317.3 | 16.9 |
| 40°-50° | 335.8 | 17.9 |
| 50°-60° | 310.8 | 16.6 |
| 60°-70° | 241.0 | 12.9 |
| 70°-80° | 134.7 | 7.2 |
| 80°-90° | 41.7 | 2.2 |
| 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° | 491.0 | 26.2 |
| 0°-40° | 808.3 | 43.2 |
| 0°-60° | 1454.9 | 77.7 |
| 0°-90° | 1872.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1872.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 630 | 630 | 630 | 630 | 630 | |
| 5° | 626 | 627 | 628 | 624 | 627 | 60 |
| 15° | 610 | 608 | 607 | 607 | 609 | 171 |
| 25° | 567 | 564 | 564 | 564 | 559 | 261 |
| 35° | 512 | 511 | 506 | 502 | 504 | 320 |
| 45° | 443 | 440 | 434 | 431 | 432 | 341 |
| 55° | 358 | 354 | 346 | 344 | 344 | 318 |
| 65° | 253 | 250 | 240 | 242 | 242 | 250 |
| 75° | 139 | 136 | 126 | 114 | 106 | 146 |
| 85° | 32 | 33 | 38 | 40 | 41 | 39 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 629.7 | 629.7 | 629.7 | 629.7 | 629.7 |
| 2.5° | 627.7 | 627.7 | 628.7 | 631.7 | 625.6 |
| 5° | 625.6 | 626.7 | 627.7 | 623.6 | 626.7 |
| 7.5° | 625.6 | 623.6 | 623.6 | 623.6 | 625.6 |
| 10° | 621.6 | 616.6 | 618.6 | 620.6 | 615.6 |
| 12.5° | 614.6 | 614.6 | 614.6 | 610.6 | 613.6 |
| 15° | 609.6 | 607.6 | 606.6 | 606.6 | 608.6 |
| 17.5° | 598.5 | 596.5 | 598.5 | 598.5 | 594.5 |
| 20° | 586.5 | 589.5 | 588.5 | 585.5 | 587.5 |
| 22.5° | 578.4 | 578.4 | 576.4 | 575.4 | 576.4 |
| 25° | 567.4 | 564.4 | 564.4 | 564.4 | 559.4 |
| 27.5° | 554.3 | 553.3 | 551.3 | 547.3 | 551.3 |
| 30° | 541.3 | 539.3 | 537.3 | 535.3 | 536.3 |
| 32.5° | 526.2 | 524.2 | 522.2 | 522.2 | 517.2 |
| 35° | 512.2 | 511.2 | 506.1 | 502.1 | 504.1 |
| 37.5° | 497.1 | 493.1 | 490.1 | 487.1 | 488.1 |
| 40° | 478.0 | 476.0 | 473.0 | 470.0 | 467.0 |
| 42.5° | 461.0 | 459.9 | 452.9 | 449.9 | 450.9 |
| 45° | 442.9 | 439.9 | 433.8 | 430.8 | 431.8 |
| 47.5° | 422.8 | 419.8 | 413.8 | 411.7 | 409.7 |
| 50° | 400.7 | 399.7 | 390.7 | 387.6 | 391.7 |
| 52.5° | 379.6 | 376.6 | 369.6 | 366.6 | 369.6 |
| 55° | 357.5 | 353.5 | 346.5 | 343.5 | 343.5 |
| 57.5° | 331.4 | 329.4 | 319.4 | 317.3 | 320.4 |
| 60° | 307.3 | 303.3 | 295.2 | 293.2 | 297.3 |
| 62.5° | 281.2 | 277.2 | 268.1 | 269.1 | 270.1 |
| 65° | 253.1 | 250.1 | 240.0 | 242.0 | 242.0 |
| 67.5° | 225.0 | 220.9 | 212.9 | 209.9 | 208.9 |
| 70° | 194.8 | 191.8 | 186.8 | 176.7 | 172.7 |
| 72.5° | 165.7 | 163.7 | 157.7 | 141.6 | 138.6 |
| 75° | 138.6 | 135.6 | 126.5 | 113.5 | 106.5 |
| 77.5° | 109.5 | 109.5 | 96.4 | 92.4 | 94.4 |
| 80° | 83.4 | 82.3 | 73.3 | 80.3 | 83.4 |
| 82.5° | 57.2 | 55.2 | 59.3 | 62.3 | 63.3 |
| 85° | 32.1 | 33.1 | 38.2 | 40.2 | 41.2 |
| 87.5° | 13.1 | 16.1 | 17.1 | 19.1 | 20.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)