

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 226P110

Luminaire Tested: **RDI-SYM-132RP**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 226P110
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: RDI-SYM-132RP
Description: 1 X 4 Recessed Direct-Indirect Luminaire with one
center mounted curved acrylic diffuser with curved perf.
Light Source: One - FO32/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Motorola M1-PN-T8-F-120 Electronic - L.O.B.F. = 87.8%

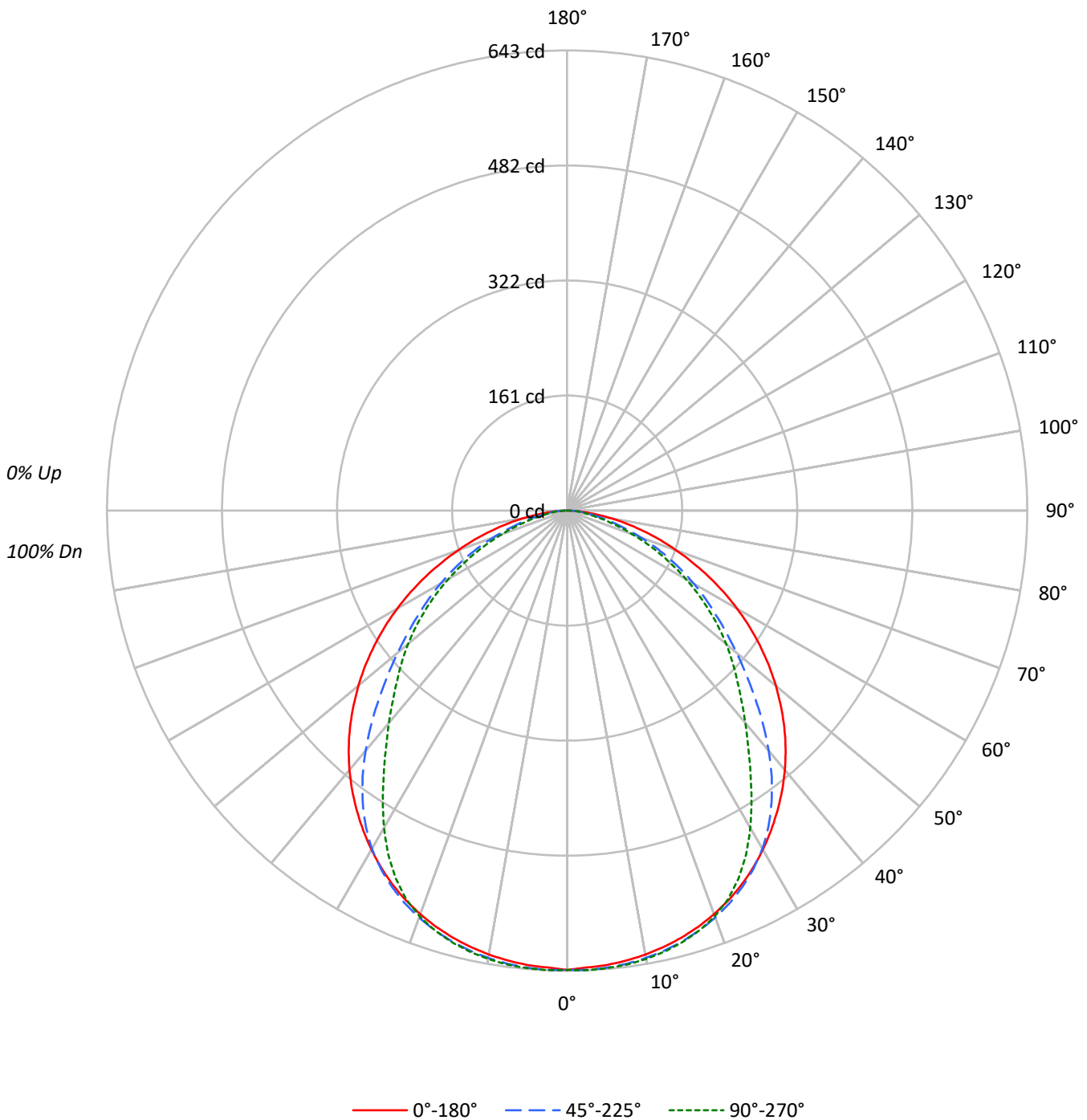
Summary

Lumens per Lamp: 2800 (1 lamp)
Luminaire Lumens: 1606.3 lumens
Efficiency: 57.4%
Efficacy: 55.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.86' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 29
Input Voltage (V): NR
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 | 68 | 68 | 68 | 68 | 67 | 67 | 67 | 67 | 64 | 64 | 64 | 61 | 61 | 61 | 59 | 59 | 59 | 57 |
| 1 | 63 | 60 | 58 | 56 | 61 | 59 | 57 | 55 | 57 | 55 | 53 | 54 | 53 | 52 | 52 | 51 | 50 | 49 |
| 2 | 58 | 53 | 49 | 46 | 56 | 52 | 49 | 46 | 50 | 47 | 45 | 48 | 46 | 44 | 46 | 45 | 43 | 42 |
| 3 | 53 | 47 | 43 | 39 | 51 | 46 | 42 | 39 | 44 | 41 | 38 | 43 | 40 | 37 | 41 | 39 | 37 | 36 |
| 4 | 48 | 42 | 37 | 33 | 47 | 41 | 37 | 33 | 40 | 36 | 33 | 38 | 35 | 32 | 37 | 34 | 32 | 31 |
| 5 | 45 | 38 | 33 | 29 | 44 | 37 | 32 | 29 | 36 | 32 | 29 | 35 | 31 | 28 | 34 | 30 | 28 | 27 |
| 6 | 41 | 34 | 29 | 25 | 40 | 33 | 29 | 25 | 32 | 28 | 25 | 31 | 28 | 25 | 31 | 27 | 25 | 24 |
| 7 | 38 | 31 | 26 | 23 | 37 | 30 | 26 | 23 | 30 | 25 | 22 | 29 | 25 | 22 | 28 | 25 | 22 | 21 |
| 8 | 36 | 28 | 24 | 20 | 35 | 28 | 23 | 20 | 27 | 23 | 20 | 26 | 23 | 20 | 26 | 22 | 20 | 19 |
| 9 | 34 | 26 | 21 | 18 | 33 | 26 | 21 | 18 | 25 | 21 | 18 | 24 | 21 | 18 | 24 | 20 | 18 | 17 |
| 10 | 31 | 24 | 20 | 17 | 31 | 24 | 19 | 17 | 23 | 19 | 17 | 23 | 19 | 16 | 22 | 19 | 16 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|------|------|------|
| 0° | 2060 | 2060 | 2060 |
| 5° | 2053 | 2065 | 2068 |
| 10° | 2053 | 2068 | 2073 |
| 15° | 2052 | 2070 | 2074 |
| 20° | 2049 | 2067 | 2060 |
| 25° | 2042 | 2053 | 2007 |
| 30° | 2027 | 2022 | 1897 |
| 35° | 2007 | 1952 | 1749 |
| 40° | 1982 | 1836 | 1623 |
| 45° | 1948 | 1687 | 1525 |
| 50° | 1900 | 1543 | 1449 |
| 55° | 1840 | 1417 | 1351 |
| 60° | 1761 | 1312 | 1232 |
| 65° | 1656 | 1187 | 1086 |
| 70° | 1523 | 1030 | 914 |
| 75° | 1371 | 851 | 730 |
| 80° | 1162 | 688 | 571 |
| 85° | 895 | 718 | 556 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|-----|-------|-----|-------|-----|------|
| 0°-10° | 60.9 | 3.8 | 2.2 | 0° | 642 | 642 | 642 | 642 | 642 | |
| 10°-20° | 175.6 | 10.9 | 6.3 | 5° | 637 | 639 | 641 | 642 | 642 | 61 |
| 20°-30° | 264.8 | 16.5 | 9.5 | 15° | 618 | 620 | 623 | 625 | 624 | 174 |
| 30°-40° | 305.2 | 19.0 | 10.9 | 25° | 577 | 579 | 580 | 574 | 567 | 266 |
| 40°-50° | 293.9 | 18.3 | 10.5 | 35° | 512 | 515 | 498 | 463 | 446 | 320 |
| 50°-60° | 243.9 | 15.2 | 8.7 | 45° | 429 | 427 | 372 | 342 | 336 | 331 |
| 60°-70° | 163.1 | 10.2 | 5.8 | 55° | 329 | 308 | 253 | 245 | 242 | 294 |
| 70°-80° | 78.0 | 4.9 | 2.8 | 65° | 218 | 172 | 156 | 148 | 143 | 216 |
| 80°-90° | 21.0 | 1.3 | 0.7 | 75° | 111 | 73 | 69 | 62 | 59 | 117 |
| 90°-100° | 0.0 | 0.0 | 0.0 | 85° | 24 | 19 | 20 | 17 | 15 | 28 |
| 100°-110° | 0.0 | 0.0 | 0.0 | 90° | 0 | 0 | 0 | 0 | 0 | 2 |
| 110°-120° | 0.0 | 0.0 | 0.0 | 95° | 0 | 0 | 0 | 0 | 0 | 0 |
| 120°-130° | 0.0 | 0.0 | 0.0 | 105° | 0 | 0 | 0 | 0 | 0 | 0 |
| 130°-140° | 0.0 | 0.0 | 0.0 | 115° | 0 | 0 | 0 | 0 | 0 | 0 |
| 140°-150° | 0.0 | 0.0 | 0.0 | 125° | 0 | 0 | 0 | 0 | 0 | 0 |
| 150°-160° | 0.0 | 0.0 | 0.0 | 135° | 0 | 0 | 0 | 0 | 0 | 0 |
| 160°-170° | 0.0 | 0.0 | 0.0 | 145° | 0 | 0 | 0 | 0 | 0 | 0 |
| 170°-180° | 0.0 | 0.0 | 0.0 | 155° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-30° | 501.3 | 31.2 | 17.9 | 165° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-40° | 806.4 | 50.2 | 28.8 | 175° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-60° | 1344.3 | 83.7 | 48.0 | 180° | 0 | 0 | 0 | 0 | 0 | 0 |
| 0°-90° | 1606.3 | 100.0 | 57.4 | | | | | | | |
| 90°-120° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-150° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 90°-180° | 0.0 | 0.0 | 0.0 | | | | | | | |
| 0°-180° | 1606.3 | 100.0 | 57.4 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 641.9 | 641.9 | 641.9 | 641.9 | 641.9 |
| 2.5° | 639.0 | 640.3 | 642.3 | 643.3 | 642.8 |
| 5° | 637.4 | 638.9 | 641.0 | 642.3 | 641.8 |
| 7.5° | 634.2 | 636.0 | 638.6 | 640.1 | 639.9 |
| 10° | 629.9 | 631.9 | 634.7 | 636.5 | 636.2 |
| 12.5° | 624.4 | 626.6 | 629.5 | 631.5 | 630.9 |
| 15° | 617.7 | 619.8 | 623.0 | 624.9 | 624.1 |
| 17.5° | 609.7 | 611.6 | 614.9 | 616.4 | 614.9 |
| 20° | 600.1 | 601.9 | 605.2 | 605.5 | 603.3 |
| 22.5° | 589.3 | 590.9 | 593.6 | 591.8 | 587.6 |
| 25° | 576.8 | 578.6 | 579.8 | 574.0 | 566.8 |
| 27.5° | 562.7 | 564.7 | 564.2 | 551.5 | 541.5 |
| 30° | 547.1 | 549.4 | 545.6 | 525.2 | 511.8 |
| 32.5° | 530.2 | 532.7 | 523.6 | 495.2 | 479.3 |
| 35° | 512.2 | 514.6 | 498.2 | 462.6 | 446.5 |
| 37.5° | 493.4 | 494.9 | 469.5 | 429.4 | 415.5 |
| 40° | 473.2 | 473.7 | 438.3 | 398.2 | 387.3 |
| 42.5° | 451.9 | 451.0 | 405.1 | 369.4 | 360.7 |
| 45° | 429.2 | 426.7 | 371.7 | 342.2 | 336.0 |
| 47.5° | 405.3 | 400.4 | 339.4 | 316.9 | 313.3 |
| 50° | 380.6 | 371.6 | 309.0 | 293.5 | 290.2 |
| 52.5° | 355.3 | 340.7 | 280.2 | 269.5 | 266.3 |
| 55° | 328.9 | 307.7 | 253.3 | 245.2 | 241.5 |
| 57.5° | 301.9 | 274.5 | 228.8 | 220.5 | 216.7 |
| 60° | 274.3 | 239.7 | 204.4 | 195.9 | 191.9 |
| 62.5° | 246.1 | 205.0 | 180.3 | 171.6 | 167.1 |
| 65° | 218.1 | 172.1 | 156.3 | 147.5 | 143.0 |
| 67.5° | 189.6 | 142.5 | 132.6 | 124.0 | 119.6 |
| 70° | 162.3 | 116.2 | 109.8 | 101.7 | 97.4 |
| 72.5° | 136.3 | 93.9 | 88.3 | 81.1 | 77.3 |
| 75° | 110.6 | 73.3 | 68.6 | 62.5 | 58.9 |
| 77.5° | 85.7 | 55.3 | 51.3 | 46.1 | 43.1 |
| 80° | 62.9 | 40.0 | 37.2 | 33.3 | 30.9 |
| 82.5° | 39.8 | 28.0 | 26.7 | 25.0 | 23.3 |
| 85° | 24.3 | 19.4 | 19.5 | 16.9 | 15.1 |
| 87.5° | 12.9 | 13.0 | 11.3 | 8.8 | 7.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 92.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 95° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 97.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 100° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 102.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 105° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 107.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 110° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-----|-------|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 142.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 145° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 147.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 150° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 152.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 155° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 157.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 160° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 162.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 165° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 167.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 170° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 172.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 175° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 177.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 180° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)