

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: 122P103

Luminaire Tested: **SN-232**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 122P103
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SN-232
Description: SN Series Commercial Narrow Striplite
Light Source: Two F032/735 - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Magnetek B2321120RH Electronic - L.O.B.F. = 87.16

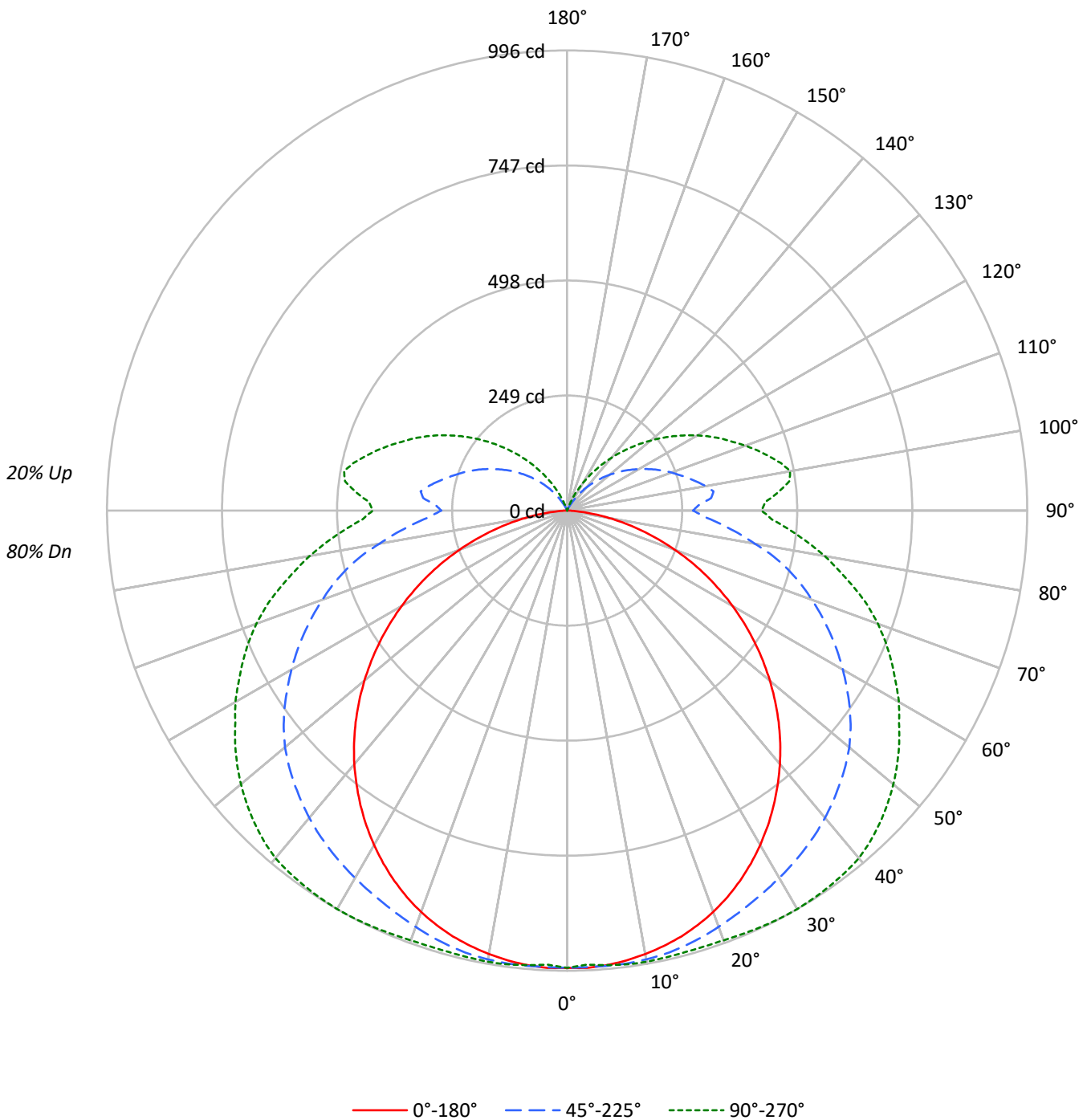
Summary

Lumens per Lamp: 2800 (2 lamps)
Luminaire Lumens: 5043.5 lumens
Efficiency: 90.1%
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.53 / 1.57
Luminous Opening: Rectangular (W 0.19' x L: 3.85' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 59.1
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 | 103 | 103 | 103 | 103 | 99 | 99 | 99 | 99 | 90 | 90 | 90 | 83 | 83 | 83 | 76 | 76 | 76 | 72 |
| 1 | 91 | 86 | 81 | 77 | 87 | 82 | 78 | 74 | 75 | 72 | 68 | 68 | 66 | 63 | 62 | 60 | 58 | 55 |
| 2 | 82 | 73 | 66 | 60 | 78 | 70 | 64 | 58 | 64 | 59 | 54 | 58 | 54 | 50 | 53 | 50 | 47 | 44 |
| 3 | 74 | 64 | 55 | 49 | 70 | 61 | 53 | 47 | 55 | 49 | 44 | 51 | 45 | 41 | 46 | 42 | 38 | 35 |
| 4 | 67 | 56 | 47 | 41 | 64 | 53 | 45 | 39 | 49 | 42 | 37 | 44 | 39 | 35 | 41 | 36 | 32 | 30 |
| 5 | 62 | 49 | 41 | 34 | 58 | 47 | 39 | 33 | 43 | 37 | 31 | 40 | 34 | 29 | 36 | 31 | 27 | 25 |
| 6 | 57 | 44 | 36 | 30 | 54 | 42 | 34 | 29 | 39 | 32 | 27 | 36 | 30 | 25 | 33 | 28 | 24 | 22 |
| 7 | 52 | 40 | 31 | 26 | 50 | 38 | 30 | 25 | 35 | 28 | 24 | 32 | 27 | 22 | 30 | 25 | 21 | 19 |
| 8 | 49 | 36 | 28 | 23 | 46 | 35 | 27 | 22 | 32 | 25 | 21 | 29 | 24 | 20 | 27 | 22 | 19 | 17 |
| 9 | 45 | 33 | 25 | 20 | 43 | 32 | 24 | 20 | 29 | 23 | 19 | 27 | 22 | 18 | 25 | 20 | 17 | 15 |
| 10 | 42 | 30 | 23 | 18 | 40 | 29 | 22 | 18 | 27 | 21 | 17 | 25 | 20 | 16 | 23 | 18 | 15 | 13 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 14741 | 14741 | 14741 |
| 5° | 14766 | 14787 | 14765 |
| 10° | 14740 | 14919 | 14998 |
| 15° | 14717 | 15058 | 15254 |
| 20° | 14656 | 15199 | 15689 |
| 25° | 14538 | 15421 | 16339 |
| 30° | 14375 | 15792 | 17129 |
| 35° | 14174 | 16283 | 18032 |
| 40° | 13933 | 16879 | 19100 |
| 45° | 13637 | 17593 | 20159 |
| 50° | 13273 | 18473 | 21360 |
| 55° | 12841 | 19393 | 22787 |
| 60° | 12330 | 20528 | 24702 |
| 65° | 11687 | 22133 | 27307 |
| 70° | 10813 | 24558 | 31160 |
| 75° | 9628 | 28550 | 36987 |
| 80° | 7891 | 35400 | 48558 |
| 85° | 5178 | 56961 | 82783 |



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

| Zone | Lumens | % Fixture | % Lamp | | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----------|--------|-----------|--------|------|-----|-------|-----|-------|-----|------|
| 0°-10° | 94.4 | 1.9 | 1.7 | 0° | 990 | 990 | 990 | 990 | 990 | |
| 10°-20° | 275.9 | 5.5 | 4.9 | 5° | 988 | 986 | 989 | 995 | 988 | 94 |
| 20°-30° | 434.9 | 8.6 | 7.8 | 15° | 954 | 962 | 976 | 993 | 989 | 269 |
| 30°-40° | 558.9 | 11.1 | 10.0 | 25° | 885 | 903 | 938 | 985 | 994 | 408 |
| 40°-50° | 632.6 | 12.5 | 11.3 | 35° | 780 | 814 | 896 | 972 | 992 | 487 |
| 50°-60° | 642.1 | 12.7 | 11.5 | 45° | 647 | 708 | 835 | 932 | 957 | 499 |
| 60°-70° | 590.8 | 11.7 | 10.6 | 55° | 494 | 592 | 747 | 846 | 878 | 442 |
| 70°-80° | 484.4 | 9.6 | 8.6 | 65° | 332 | 468 | 628 | 738 | 775 | 328 |
| 80°-90° | 335.7 | 6.7 | 6.0 | 75° | 167 | 331 | 496 | 606 | 643 | 177 |
| 90°-100° | 294.8 | 5.8 | 5.3 | 85° | 30 | 181 | 333 | 446 | 484 | 38 |
| 100°-110° | 265.1 | 5.3 | 4.7 | 90° | 1 | 123 | 272 | 383 | 421 | 2 |
| 110°-120° | 195.0 | 3.9 | 3.5 | 95° | 1 | 141 | 313 | 423 | 459 | 1 |
| 120°-130° | 128.7 | 2.6 | 2.3 | 105° | 1 | 97 | 271 | 406 | 453 | 1 |
| 130°-140° | 71.7 | 1.4 | 1.3 | 115° | 1 | 64 | 210 | 326 | 368 | 1 |
| 140°-150° | 30.5 | 0.6 | 0.5 | 125° | 1 | 35 | 150 | 246 | 281 | 1 |
| 150°-160° | 7.0 | 0.1 | 0.1 | 135° | 2 | 11 | 93 | 166 | 192 | 2 |
| 160°-170° | 0.7 | 0.0 | 0.0 | 145° | 3 | 3 | 40 | 90 | 108 | 2 |
| 170°-180° | 0.2 | 0.0 | 0.0 | 155° | 3 | 3 | 6 | 26 | 35 | 1 |
| 0°-30° | 805.3 | 16.0 | 14.4 | 165° | 4 | 3 | 2 | 1 | 0 | 1 |
| 0°-40° | 1364.2 | 27.0 | 24.4 | 175° | 4 | 4 | 2 | 1 | 0 | 0 |
| 0°-60° | 2639.0 | 52.3 | 47.1 | 180° | 2 | 2 | 2 | 2 | 2 | |
| 0°-90° | 4049.8 | 80.3 | 72.3 | | | | | | | |
| 90°-120° | 754.9 | 15.0 | 13.5 | | | | | | | |
| 90°-150° | 985.8 | 19.5 | 17.6 | | | | | | | |
| 90°-180° | 994.0 | 19.7 | 17.8 | | | | | | | |
| 0°-180° | 5043.5 | 100.0 | 90.1 | | | | | | | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-------|-------|-------|-------|-------|
| 0° | 989.7 | 989.7 | 989.7 | 989.7 | 989.7 |
| 2.5° | 991.0 | 988.8 | 989.1 | 993.1 | 983.5 |
| 5° | 987.6 | 986.1 | 989.0 | 995.4 | 987.5 |
| 7.5° | 982.1 | 982.8 | 988.7 | 997.2 | 990.8 |
| 10° | 974.6 | 978.2 | 986.4 | 997.4 | 991.6 |
| 12.5° | 965.4 | 971.4 | 982.8 | 995.5 | 990.4 |
| 15° | 954.4 | 962.2 | 976.5 | 992.6 | 989.2 |
| 17.5° | 940.7 | 950.7 | 968.5 | 989.8 | 988.9 |
| 20° | 924.6 | 936.8 | 958.9 | 987.4 | 989.8 |
| 22.5° | 905.9 | 921.1 | 948.7 | 986.3 | 992.0 |
| 25° | 884.6 | 903.2 | 938.3 | 985.1 | 994.2 |
| 27.5° | 861.3 | 883.4 | 928.3 | 983.8 | 995.8 |
| 30° | 835.8 | 861.6 | 918.2 | 981.6 | 995.9 |
| 32.5° | 808.6 | 838.5 | 907.5 | 977.7 | 994.5 |
| 35° | 779.5 | 813.9 | 895.5 | 972.4 | 991.7 |
| 37.5° | 748.7 | 788.3 | 882.8 | 965.4 | 987.9 |
| 40° | 716.6 | 761.9 | 868.1 | 957.5 | 982.3 |
| 42.5° | 682.9 | 734.9 | 852.4 | 947.4 | 971.2 |
| 45° | 647.4 | 707.7 | 835.2 | 932.2 | 957.0 |
| 47.5° | 610.7 | 679.6 | 817.4 | 914.3 | 940.5 |
| 50° | 572.8 | 651.4 | 797.2 | 893.9 | 921.8 |
| 52.5° | 534.2 | 621.7 | 773.5 | 871.3 | 900.7 |
| 55° | 494.5 | 591.7 | 746.8 | 846.4 | 877.5 |
| 57.5° | 454.5 | 561.8 | 718.2 | 819.5 | 851.8 |
| 60° | 413.9 | 530.5 | 689.1 | 792.9 | 829.2 |
| 62.5° | 372.7 | 499.2 | 659.4 | 766.1 | 801.7 |
| 65° | 331.6 | 468.2 | 628.0 | 737.8 | 774.8 |
| 67.5° | 289.8 | 435.0 | 596.2 | 708.8 | 746.5 |
| 70° | 248.3 | 400.6 | 563.9 | 678.2 | 715.5 |
| 72.5° | 207.3 | 366.2 | 531.2 | 644.4 | 682.0 |
| 75° | 167.3 | 330.8 | 496.1 | 606.2 | 642.7 |
| 77.5° | 128.4 | 295.3 | 456.9 | 564.6 | 603.4 |
| 80° | 92.0 | 261.4 | 412.7 | 526.1 | 566.1 |
| 82.5° | 58.6 | 223.7 | 372.7 | 485.9 | 525.0 |
| 85° | 30.3 | 180.9 | 333.3 | 446.4 | 484.4 |
| 87.5° | 9.5 | 145.1 | 296.5 | 406.1 | 443.8 |
| 90° | 1.4 | 122.6 | 272.1 | 382.8 | 420.8 |
| 92.5° | 1.2 | 138.0 | 285.6 | 392.4 | 429.5 |
| 95° | 1.1 | 140.8 | 313.1 | 422.6 | 459.0 |
| 97.5° | 1.1 | 128.8 | 319.7 | 444.5 | 484.8 |
| 100° | 1.1 | 116.9 | 304.5 | 444.4 | 490.5 |
| 102.5° | 1.0 | 106.3 | 287.9 | 426.4 | 474.0 |
| 105° | 0.9 | 96.7 | 271.1 | 406.2 | 452.6 |
| 107.5° | 0.9 | 87.8 | 255.5 | 386.4 | 432.1 |
| 110° | 0.9 | 79.6 | 240.5 | 365.0 | 410.5 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|--------|-----|-------|-------|-------|-------|
| 112.5° | 0.9 | 71.5 | 225.1 | 345.8 | 388.4 |
| 115° | 1.0 | 63.9 | 209.9 | 326.3 | 368.4 |
| 117.5° | 1.0 | 56.5 | 194.6 | 306.2 | 347.3 |
| 120° | 1.2 | 49.1 | 179.5 | 286.1 | 325.3 |
| 122.5° | 1.4 | 42.0 | 164.7 | 265.8 | 303.0 |
| 125° | 1.4 | 34.9 | 149.9 | 245.5 | 280.7 |
| 127.5° | 1.5 | 28.2 | 135.3 | 225.3 | 258.2 |
| 130° | 1.7 | 21.8 | 121.0 | 205.2 | 235.7 |
| 132.5° | 1.8 | 15.7 | 106.9 | 185.3 | 213.6 |
| 135° | 2.1 | 10.7 | 93.0 | 165.7 | 191.6 |
| 137.5° | 2.2 | 6.9 | 79.5 | 146.2 | 170.0 |
| 140° | 2.4 | 4.7 | 66.3 | 127.3 | 149.1 |
| 142.5° | 2.5 | 3.2 | 53.5 | 108.6 | 128.4 |
| 145° | 2.7 | 2.6 | 40.5 | 90.5 | 108.1 |
| 147.5° | 2.8 | 2.4 | 28.6 | 73.1 | 88.6 |
| 150° | 2.9 | 2.5 | 18.1 | 56.2 | 69.8 |
| 152.5° | 3.0 | 2.6 | 10.4 | 40.4 | 51.9 |
| 155° | 3.2 | 2.8 | 5.7 | 26.0 | 35.2 |
| 157.5° | 3.3 | 2.9 | 3.0 | 13.4 | 20.2 |
| 160° | 3.5 | 3.0 | 2.1 | 5.8 | 9.0 |
| 162.5° | 3.6 | 3.1 | 1.9 | 1.7 | 3.0 |
| 165° | 3.7 | 3.1 | 2.0 | 0.6 | 0.0 |
| 167.5° | 3.7 | 3.3 | 2.1 | 0.6 | 0.0 |
| 170° | 3.8 | 3.3 | 2.2 | 0.7 | 0.0 |
| 172.5° | 3.9 | 3.5 | 2.3 | 0.8 | 0.0 |
| 175° | 4.1 | 3.5 | 2.4 | 0.9 | 0.0 |
| 177.5° | 4.1 | 3.6 | 2.5 | 1.0 | 0.0 |
| 180° | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |

(END OF REPORT)