

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: PORTFOLIO

Report Number: P127943

Luminaire Tested: **LSM45W9030D010TEP**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P127943
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24508)
Test Lab: INNOVATION CENTER P2
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LSM45W9030D010TEP
Description: PORTFOLIO SURFACE MOUNT LED LUMINAIRE
Light Source: 90 CRI, 3000K CCT LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3686.2 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 1.45 / 1.43 / 1.73
Luminous Opening: Circular (Dia: 1.12' x H: 0')
CIE Type: Direct

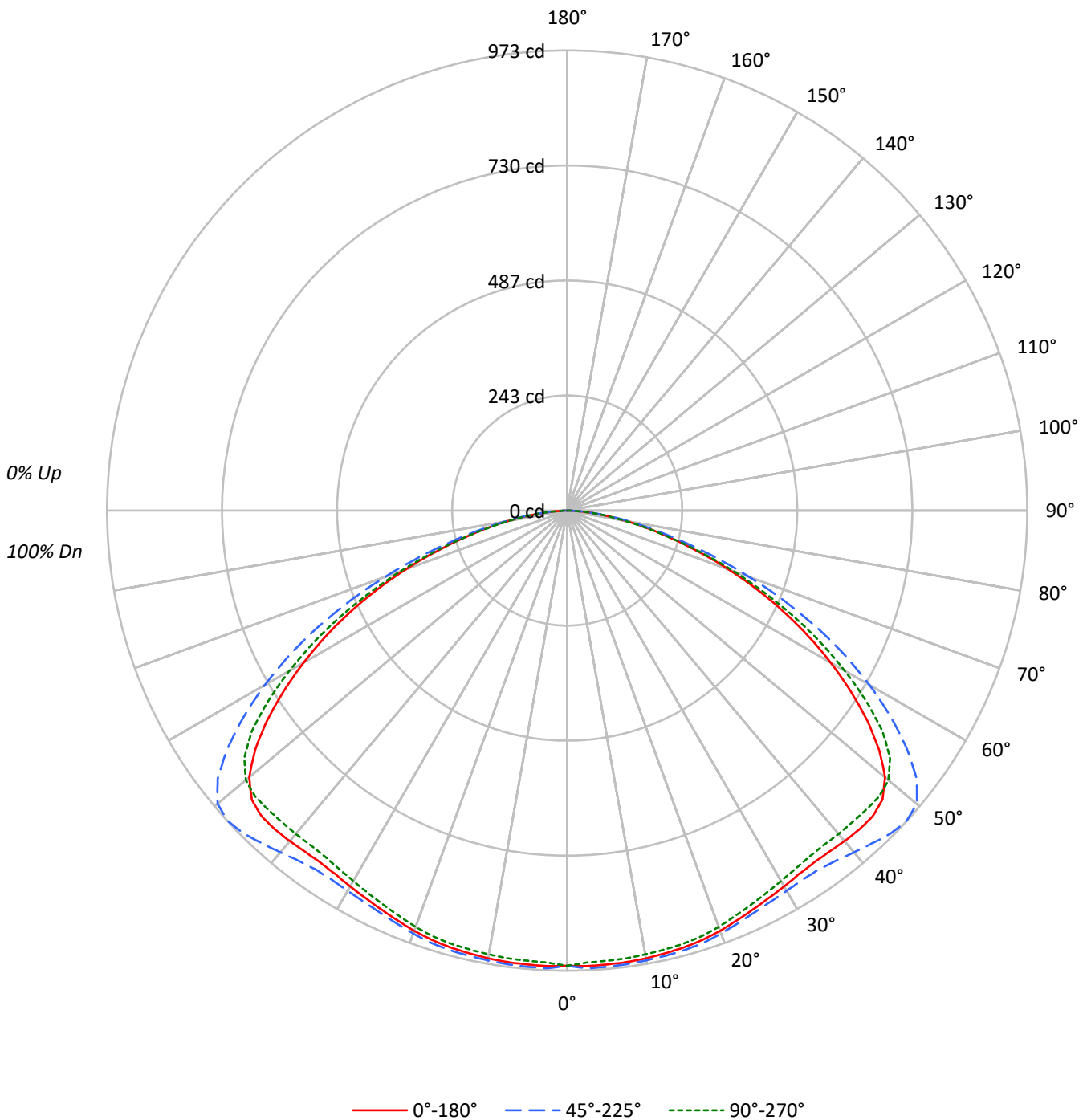
Input Watts (W): 44.68
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 108 | 103 | 99 | 95 | 106 | 101 | 97 | 93 | 97 | 93 | 90 | 93 | 90 | 88 | 89 | 87 | 85 | 83 |
| 2 | 98 | 89 | 82 | 76 | 95 | 87 | 81 | 75 | 84 | 78 | 73 | 80 | 76 | 71 | 77 | 73 | 70 | 68 |
| 3 | 88 | 77 | 69 | 62 | 86 | 76 | 68 | 61 | 73 | 66 | 60 | 70 | 64 | 59 | 67 | 62 | 58 | 56 |
| 4 | 80 | 68 | 58 | 51 | 78 | 66 | 58 | 51 | 64 | 56 | 50 | 61 | 55 | 49 | 59 | 53 | 49 | 47 |
| 5 | 73 | 60 | 50 | 43 | 71 | 59 | 50 | 43 | 57 | 49 | 43 | 54 | 48 | 42 | 53 | 47 | 42 | 39 |
| 6 | 67 | 53 | 44 | 37 | 65 | 52 | 43 | 37 | 51 | 43 | 37 | 49 | 42 | 36 | 47 | 41 | 36 | 34 |
| 7 | 62 | 48 | 39 | 32 | 60 | 47 | 38 | 32 | 46 | 38 | 32 | 44 | 37 | 32 | 43 | 36 | 31 | 29 |
| 8 | 58 | 43 | 35 | 28 | 56 | 43 | 34 | 28 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 26 |
| 9 | 54 | 40 | 31 | 25 | 52 | 39 | 31 | 25 | 38 | 30 | 25 | 37 | 30 | 25 | 36 | 29 | 25 | 23 |
| 10 | 50 | 36 | 28 | 23 | 49 | 36 | 28 | 23 | 35 | 28 | 22 | 34 | 27 | 22 | 33 | 27 | 22 | 20 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 10423 | 10423 | 10423 |
| 5° | 10473 | 10525 | 10386 |
| 10° | 10571 | 10619 | 10478 |
| 15° | 10719 | 10784 | 10629 |
| 20° | 10900 | 10968 | 10796 |
| 25° | 11118 | 11200 | 10990 |
| 30° | 11474 | 11607 | 11307 |
| 35° | 12018 | 12250 | 11806 |
| 40° | 12896 | 13334 | 12618 |
| 45° | 13996 | 14796 | 13694 |
| 50° | 14784 | 16258 | 14938 |
| 55° | 14626 | 16550 | 15370 |
| 60° | 13947 | 15992 | 14686 |
| 65° | 12932 | 14859 | 13506 |
| 70° | 11471 | 12940 | 11825 |
| 75° | 9619 | 10560 | 9732 |
| 80° | 7851 | 8381 | 7683 |
| 85° | 5628 | 5964 | 5504 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 91.7 | 2.5 |
| 10°-20° | 270.1 | 7.3 |
| 20°-30° | 430.1 | 11.7 |
| 30°-40° | 574.9 | 15.6 |
| 40°-50° | 720.1 | 19.5 |
| 50°-60° | 739.3 | 20.1 |
| 60°-70° | 540.3 | 14.7 |
| 70°-80° | 262.3 | 7.1 |
| 80°-90° | 57.4 | 1.6 |
| 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° | 791.8 | 21.5 |
| 0°-40° | 1366.8 | 37.1 |
| 0°-60° | 2826.2 | 76.7 |
| 0°-90° | 3686.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3686.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 962 | 962 | 962 | 962 | 962 | |
| 5° | 964 | 960 | 968 | 957 | 956 | 92 |
| 15° | 956 | 954 | 962 | 951 | 948 | 271 |
| 25° | 930 | 929 | 937 | 925 | 920 | 431 |
| 35° | 909 | 914 | 927 | 907 | 893 | 572 |
| 45° | 914 | 938 | 966 | 928 | 894 | 702 |
| 55° | 775 | 817 | 877 | 853 | 814 | 688 |
| 65° | 505 | 537 | 580 | 558 | 527 | 499 |
| 75° | 230 | 242 | 252 | 242 | 233 | 248 |
| 85° | 45 | 47 | 48 | 46 | 44 | 56 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 962.5 | 962.5 | 962.5 | 962.5 | 962.5 |
| 2.5° | 964.1 | 960.9 | 968.9 | 957.1 | 956.6 |
| 5° | 963.5 | 960.3 | 968.3 | 956.6 | 955.5 |
| 7.5° | 963.0 | 960.3 | 967.8 | 956.1 | 955.0 |
| 10° | 961.4 | 958.2 | 965.7 | 954.5 | 952.9 |
| 12.5° | 958.7 | 956.1 | 964.1 | 952.3 | 950.7 |
| 15° | 956.1 | 953.9 | 961.9 | 950.7 | 948.1 |
| 17.5° | 951.8 | 949.7 | 958.2 | 946.5 | 943.8 |
| 20° | 945.9 | 943.8 | 951.8 | 940.6 | 936.9 |
| 22.5° | 937.9 | 935.8 | 944.3 | 932.6 | 927.8 |
| 25° | 930.5 | 929.4 | 937.4 | 925.1 | 919.8 |
| 27.5° | 923.5 | 923.5 | 932.1 | 918.7 | 911.8 |
| 30° | 917.6 | 918.7 | 928.3 | 913.4 | 904.3 |
| 32.5° | 911.8 | 915.0 | 925.7 | 908.6 | 897.9 |
| 35° | 909.1 | 913.9 | 926.7 | 907.0 | 893.1 |
| 37.5° | 909.6 | 918.2 | 933.1 | 909.1 | 891.5 |
| 40° | 912.3 | 925.1 | 943.3 | 914.4 | 892.6 |
| 42.5° | 914.4 | 932.1 | 954.5 | 920.8 | 893.1 |
| 45° | 913.9 | 937.9 | 966.2 | 927.8 | 894.2 |
| 47.5° | 904.3 | 935.3 | 972.6 | 933.1 | 894.7 |
| 50° | 877.6 | 915.0 | 965.1 | 928.9 | 886.7 |
| 52.5° | 831.8 | 873.4 | 931.5 | 902.2 | 860.6 |
| 55° | 774.7 | 816.8 | 876.6 | 852.6 | 814.1 |
| 57.5° | 710.6 | 753.3 | 810.9 | 787.5 | 749.6 |
| 60° | 644.0 | 684.0 | 738.4 | 714.9 | 678.1 |
| 62.5° | 575.1 | 611.9 | 661.6 | 639.2 | 604.5 |
| 65° | 504.7 | 537.3 | 579.9 | 558.1 | 527.1 |
| 67.5° | 433.2 | 460.4 | 494.6 | 475.4 | 449.2 |
| 70° | 362.3 | 383.6 | 408.7 | 393.2 | 373.5 |
| 72.5° | 292.9 | 312.6 | 327.6 | 314.2 | 300.4 |
| 75° | 229.9 | 242.2 | 252.4 | 242.2 | 232.6 |
| 77.5° | 176.1 | 183.0 | 188.3 | 180.3 | 172.9 |
| 80° | 125.9 | 132.3 | 134.4 | 128.6 | 123.2 |
| 82.5° | 82.2 | 86.4 | 88.0 | 83.8 | 80.6 |
| 85° | 45.3 | 46.9 | 48.0 | 45.9 | 44.3 |
| 87.5° | 14.4 | 14.9 | 16.0 | 14.4 | 13.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)