

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: HALO

Report Number: P328540

Luminaire Tested: **L815SML10WW935MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P328540
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1905-290-6)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: L815SML10WW935MB
Description: Small, 1000lm, WW, 3500K, black finish
Light Source: (1) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1058.0 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 0.85 / 0.82
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

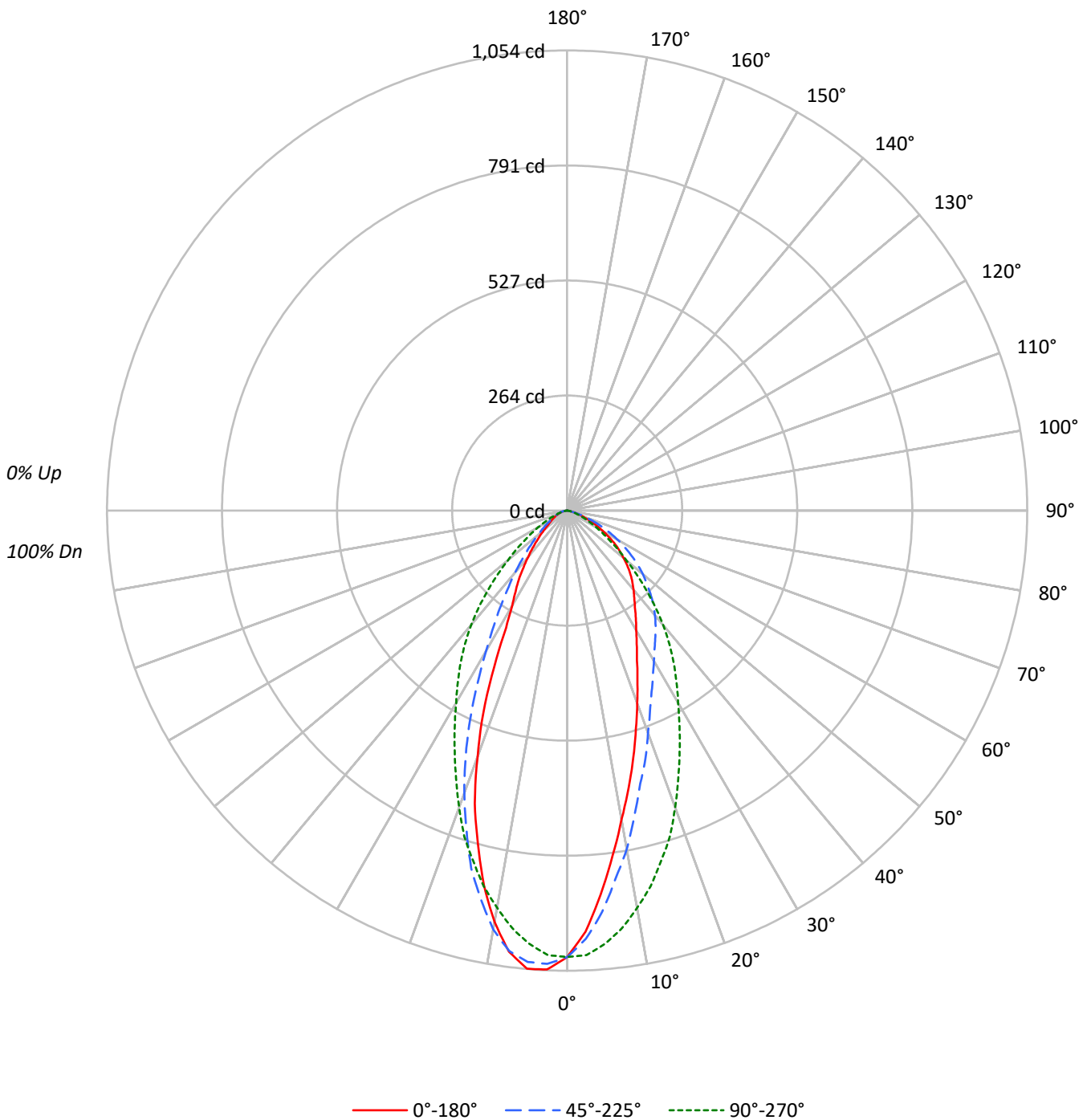
Input Watts (W): 12.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: L815SML10WW935MB

Luminous Intensity Polar Plot





TEST NUMBER: P328540

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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 | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98 | 98 | 96 | 95 | 95 | 93 | 92 | 90 |
| 2 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 88 | 93 | 89 | 86 | 90 | 87 | 84 | 87 | 85 | 82 | 80 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 83 | 78 | 75 | 80 | 77 | 74 | 72 |
| 4 | 91 | 82 | 75 | 70 | 89 | 80 | 74 | 69 | 78 | 73 | 68 | 76 | 71 | 67 | 74 | 70 | 67 | 65 |
| 5 | 85 | 75 | 68 | 63 | 84 | 74 | 67 | 62 | 72 | 66 | 62 | 70 | 65 | 61 | 69 | 64 | 60 | 59 |
| 6 | 80 | 69 | 62 | 57 | 78 | 68 | 62 | 57 | 67 | 61 | 56 | 65 | 60 | 56 | 64 | 59 | 55 | 54 |
| 7 | 75 | 64 | 57 | 52 | 74 | 63 | 57 | 52 | 62 | 56 | 51 | 61 | 55 | 51 | 60 | 55 | 51 | 49 |
| 8 | 71 | 60 | 53 | 48 | 70 | 59 | 52 | 48 | 58 | 52 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 45 |
| 9 | 67 | 56 | 49 | 44 | 66 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 42 |
| 10 | 64 | 52 | 46 | 41 | 63 | 52 | 45 | 41 | 51 | 45 | 41 | 50 | 45 | 41 | 49 | 44 | 41 | 39 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 224236 | 224236 | 224236 |
| 5° | 194232 | 219282 | 231895 |
| 10° | 159872 | 205696 | 213089 |
| 15° | 132850 | 188673 | 179252 |
| 20° | 109466 | 168761 | 140082 |
| 25° | 91602 | 147444 | 95425 |
| 30° | 80012 | 128703 | 63579 |
| 35° | 72464 | 113850 | 51879 |
| 40° | 67784 | 97783 | 39732 |
| 45° | 63386 | 78799 | 30639 |
| 50° | 57619 | 60450 | 23402 |
| 55° | 51305 | 45265 | 18465 |
| 60° | 42014 | 33725 | 16227 |
| 65° | 32066 | 24646 | 14476 |
| 70° | 22696 | 16413 | 13079 |
| 75° | 14064 | 10845 | 12115 |
| 80° | 4799 | 7577 | 10481 |
| 85° | 0 | 2013 | 7548 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.5 | 8.6 |
| 10°-20° | 209.8 | 19.8 |
| 20°-30° | 228.1 | 21.6 |
| 30°-40° | 199.1 | 18.8 |
| 40°-50° | 155.4 | 14.7 |
| 50°-60° | 101.7 | 9.6 |
| 60°-70° | 53.6 | 5.1 |
| 70°-80° | 17.5 | 1.7 |
| 80°-90° | 2.3 | 0.2 |
| 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° | 528.4 | 49.9 |
| 0°-40° | 727.5 | 68.8 |
| 0°-60° | 984.5 | 93.1 |
| 0°-90° | 1058.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1058.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1023 | 1023 | 1023 | 1023 | 1023 | |
| 5° | 882 | 922 | 996 | 1038 | 1054 | 79 |
| 15° | 585 | 647 | 831 | 848 | 790 | 163 |
| 25° | 379 | 458 | 609 | 524 | 394 | 176 |
| 35° | 271 | 352 | 425 | 262 | 194 | 171 |
| 45° | 204 | 270 | 254 | 128 | 99 | 157 |
| 55° | 134 | 180 | 118 | 62 | 48 | 119 |
| 65° | 62 | 88 | 48 | 32 | 28 | 63 |
| 75° | 17 | 16 | 13 | 16 | 14 | 19 |
| 85° | 0 | 0 | 1 | 3 | 3 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P328540

CATALOG NUMBER: L815SML10WW935MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1022.6 | 1022.6 | 1022.6 | 1022.6 | 1022.6 | 1022.6 | 1022.6 | 1022.6 | 1022.6 |
| 2.5° | 965.3 | 972.9 | 981.9 | 1000.8 | 1018.9 | 1030.2 | 1039.2 | 1046.8 | 1052.0 |
| 5° | 882.4 | 904.2 | 922.3 | 958.5 | 996.2 | 1023.4 | 1037.7 | 1046.8 | 1053.5 |
| 7.5° | 797.9 | 813.7 | 849.9 | 910.3 | 964.6 | 1000.8 | 1017.3 | 1022.6 | 1018.9 |
| 10° | 718.0 | 736.1 | 786.6 | 852.9 | 923.8 | 963.0 | 974.4 | 968.3 | 957.0 |
| 12.5° | 650.1 | 667.4 | 713.4 | 800.2 | 881.6 | 921.6 | 912.5 | 889.9 | 880.1 |
| 15° | 585.2 | 598.0 | 647.1 | 743.6 | 831.1 | 862.0 | 848.4 | 810.7 | 789.6 |
| 17.5° | 523.4 | 537.0 | 595.8 | 690.8 | 782.8 | 803.2 | 767.0 | 721.0 | 703.6 |
| 20° | 469.1 | 485.7 | 541.5 | 641.0 | 723.2 | 735.3 | 688.5 | 638.0 | 600.3 |
| 22.5° | 420.8 | 438.2 | 495.5 | 593.5 | 664.4 | 662.1 | 607.1 | 543.7 | 502.3 |
| 25° | 378.6 | 398.2 | 457.8 | 550.5 | 609.4 | 594.3 | 524.1 | 444.9 | 394.4 |
| 27.5° | 344.6 | 364.3 | 425.3 | 512.8 | 557.3 | 528.7 | 442.7 | 348.4 | 302.4 |
| 30° | 316.0 | 335.6 | 397.4 | 480.4 | 508.3 | 463.8 | 371.0 | 282.1 | 251.1 |
| 32.5° | 292.6 | 309.2 | 372.6 | 454.8 | 466.1 | 405.0 | 311.5 | 233.8 | 219.5 |
| 35° | 270.7 | 288.8 | 352.2 | 429.9 | 425.3 | 350.7 | 262.4 | 199.1 | 193.8 |
| 37.5° | 252.6 | 270.7 | 332.6 | 402.7 | 383.9 | 300.2 | 220.2 | 170.4 | 163.7 |
| 40° | 236.8 | 254.1 | 313.0 | 369.5 | 341.6 | 252.6 | 185.5 | 146.3 | 138.8 |
| 42.5° | 221.0 | 237.6 | 291.9 | 337.9 | 297.9 | 210.4 | 153.8 | 124.4 | 117.6 |
| 45° | 204.4 | 220.2 | 270.0 | 300.2 | 254.1 | 173.5 | 128.2 | 106.3 | 98.8 |
| 47.5° | 187.0 | 204.4 | 246.6 | 265.5 | 214.9 | 141.0 | 106.3 | 90.5 | 82.2 |
| 50° | 168.9 | 185.5 | 226.2 | 233.0 | 177.2 | 114.6 | 88.2 | 74.7 | 68.6 |
| 52.5° | 151.6 | 166.7 | 202.9 | 201.4 | 147.8 | 93.5 | 73.9 | 64.1 | 56.6 |
| 55° | 134.2 | 147.1 | 180.2 | 171.9 | 118.4 | 76.2 | 61.8 | 54.3 | 48.3 |
| 57.5° | 113.9 | 128.2 | 156.1 | 147.8 | 95.8 | 61.8 | 51.3 | 46.0 | 43.0 |
| 60° | 95.8 | 107.8 | 132.7 | 122.9 | 76.9 | 50.5 | 43.0 | 39.2 | 37.0 |
| 62.5° | 79.9 | 90.5 | 110.9 | 100.3 | 60.3 | 42.2 | 37.0 | 34.7 | 33.2 |
| 65° | 61.8 | 73.2 | 88.2 | 78.4 | 47.5 | 33.9 | 31.7 | 30.2 | 27.9 |
| 67.5° | 47.5 | 57.3 | 67.1 | 57.3 | 34.7 | 28.7 | 27.1 | 25.6 | 24.1 |
| 70° | 35.4 | 43.0 | 47.5 | 38.5 | 25.6 | 23.4 | 23.4 | 21.9 | 20.4 |
| 72.5° | 25.6 | 30.2 | 29.4 | 22.6 | 18.1 | 18.9 | 19.6 | 18.9 | 17.3 |
| 75° | 16.6 | 17.3 | 15.8 | 12.8 | 12.8 | 15.1 | 15.8 | 15.1 | 14.3 |
| 77.5° | 9.8 | 9.0 | 8.3 | 7.5 | 9.0 | 11.3 | 12.8 | 12.1 | 11.3 |
| 80° | 3.8 | 4.5 | 4.5 | 4.5 | 6.0 | 8.3 | 9.8 | 9.0 | 8.3 |
| 82.5° | 1.5 | 1.5 | 1.5 | 2.3 | 3.8 | 5.3 | 6.8 | 6.0 | 6.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 2.3 | 3.0 | 3.0 | 3.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)