

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: P328539

Luminaire Tested: **L815SML10WW930MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P328539  
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: L815SML10WW930MB  
Description: Small, 1000lm, WW, 3000K, black finish  
Light Source: (1) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1003.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 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

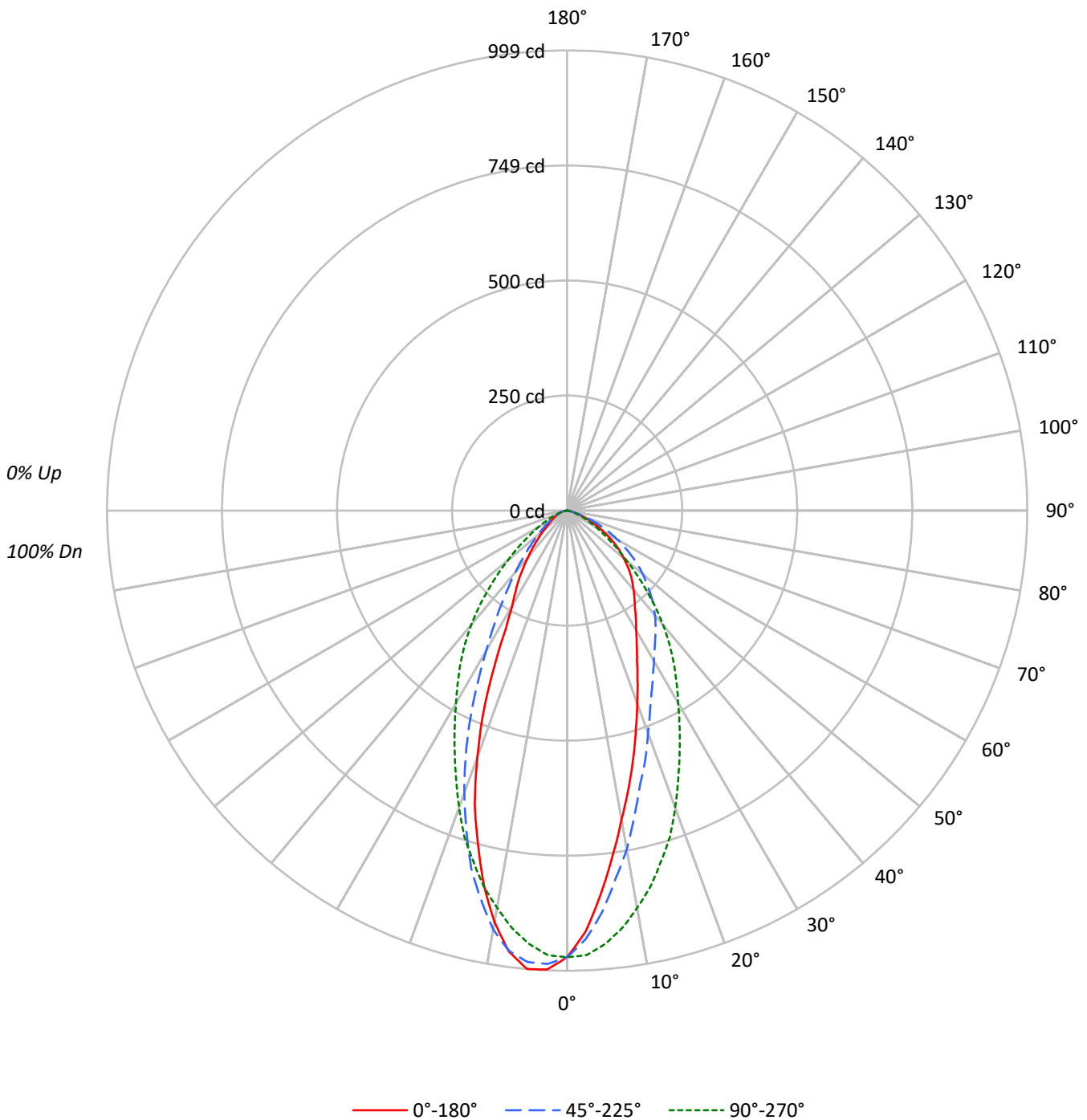
Input Watts (W): 12.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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  | 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 |    |    |    |    | 100 |   |  |   |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |    |    | 90  |   |  |   |
| 2   | 104 | 98  | 93  | 89  | 102 | 96  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 85  | 82  | 80  |    |    |    |    | 80  |   |  |   |
| 3   | 97  | 89  | 83  | 78  | 95  | 88  | 82  | 77  | 85  | 80  | 76  | 83  | 78  | 75  | 80  | 77  | 74  | 72  |    |    |    |    | 72  |   |  |   |
| 4   | 91  | 82  | 75  | 70  | 89  | 80  | 74  | 69  | 78  | 73  | 68  | 76  | 71  | 67  | 74  | 70  | 67  | 65  |    |    |    |    | 65  |   |  |   |
| 5   | 85  | 75  | 68  | 63  | 83  | 74  | 67  | 62  | 72  | 66  | 62  | 70  | 65  | 61  | 69  | 64  | 60  | 59  |    |    |    |    | 59  |   |  |   |
| 6   | 80  | 69  | 62  | 57  | 78  | 68  | 62  | 57  | 67  | 61  | 56  | 65  | 60  | 56  | 64  | 59  | 55  | 54  |    |    |    |    | 54  |   |  |   |
| 7   | 75  | 64  | 57  | 52  | 74  | 63  | 57  | 52  | 62  | 56  | 51  | 61  | 55  | 51  | 60  | 55  | 51  | 49  |    |    |    |    | 49  |   |  |   |
| 8   | 71  | 60  | 53  | 48  | 70  | 59  | 52  | 48  | 58  | 52  | 47  | 57  | 51  | 47  | 56  | 51  | 47  | 45  |    |    |    |    | 45  |   |  |   |
| 9   | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 44  | 42  |    |    |    |    | 42  |   |  |   |
| 10  | 64  | 52  | 46  | 41  | 63  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |    |    |    |    | 39  |   |  |   |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°     | 90°    | 180°   |
|-----|--------|--------|--------|
| 0°  | 212593 | 212593 | 212593 |
| 5°  | 184129 | 207880 | 219854 |
| 10° | 151545 | 195009 | 202023 |
| 15° | 125949 | 178866 | 169922 |
| 20° | 103772 | 159987 | 132802 |
| 25° | 86836  | 139774 | 90465  |
| 30° | 75860  | 122019 | 60288  |
| 35° | 68717  | 107934 | 49175  |
| 40° | 64263  | 92717  | 37671  |
| 45° | 60099  | 74705  | 29057  |
| 50° | 54617  | 57312  | 22208  |
| 55° | 48667  | 42895  | 17510  |
| 60° | 39821  | 31971  | 15350  |
| 65° | 30405  | 23349  | 13750  |
| 70° | 21542  | 15580  | 12374  |
| 75° | 13302  | 10336  | 11522  |
| 80° | 4546   | 7198   | 9976   |
| 85° | 0      | 1761   | 7296   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 85.8   | 8.5       |
| 10°-20°   | 198.9  | 19.8      |
| 20°-30°   | 216.2  | 21.6      |
| 30°-40°   | 188.8  | 18.8      |
| 40°-50°   | 147.3  | 14.7      |
| 50°-60°   | 96.4   | 9.6       |
| 60°-70°   | 50.9   | 5.1       |
| 70°-80°   | 16.6   | 1.7       |
| 80°-90°   | 2.2    | 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°    | 500.9  | 49.9      |
| 0°-40°    | 689.6  | 68.8      |
| 0°-60°    | 933.4  | 93.1      |
| 0°-90°    | 1003.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1003.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0°  | 970 | 970 | 970 | 970  | 970  |      |
| 5°  | 836 | 874 | 944 | 984  | 999  | 75   |
| 15° | 555 | 613 | 788 | 804  | 748  | 155  |
| 25° | 359 | 434 | 578 | 497  | 374  | 167  |
| 35° | 257 | 334 | 403 | 249  | 184  | 162  |
| 45° | 194 | 256 | 241 | 122  | 94   | 149  |
| 55° | 127 | 171 | 112 | 59   | 46   | 113  |
| 65° | 59  | 84  | 45  | 30   | 26   | 60   |
| 75° | 16  | 15  | 12  | 15   | 14   | 18   |
| 85° | 0   | 0   | 1   | 3    | 3    | 1    |
| 90° | 0   | 0   | 0   | 0    | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0°    | 969.5 | 969.5 | 969.5 | 969.5 | 969.5 | 969.5  | 969.5 | 969.5  | 969.5 |
| 2.5°  | 915.1 | 922.3 | 930.9 | 948.7 | 965.9 | 976.6  | 985.2 | 992.3  | 997.3 |
| 5°    | 836.5 | 857.2 | 874.4 | 908.7 | 944.4 | 970.2  | 983.8 | 992.3  | 998.8 |
| 7.5°  | 756.4 | 771.4 | 805.7 | 862.9 | 914.4 | 948.7  | 964.5 | 969.5  | 965.9 |
| 10°   | 680.6 | 697.8 | 745.7 | 808.6 | 875.8 | 913.0  | 923.7 | 918.0  | 907.3 |
| 12.5° | 616.3 | 632.7 | 676.3 | 758.6 | 835.8 | 873.7  | 865.1 | 843.6  | 834.3 |
| 15°   | 554.8 | 567.0 | 613.4 | 704.9 | 787.9 | 817.2  | 804.3 | 768.6  | 748.5 |
| 17.5° | 496.2 | 509.0 | 564.8 | 654.9 | 742.1 | 761.4  | 727.1 | 683.5  | 667.0 |
| 20°   | 444.7 | 460.4 | 513.3 | 607.7 | 685.6 | 697.1  | 652.7 | 604.8  | 569.1 |
| 22.5° | 398.9 | 415.4 | 469.7 | 562.7 | 629.9 | 627.7  | 575.5 | 515.5  | 476.2 |
| 25°   | 358.9 | 377.5 | 434.0 | 521.9 | 577.7 | 563.4  | 496.9 | 421.8  | 373.9 |
| 27.5° | 326.7 | 345.3 | 403.2 | 486.2 | 528.3 | 501.2  | 419.7 | 330.3  | 286.7 |
| 30°   | 299.6 | 318.2 | 376.8 | 455.4 | 481.9 | 439.7  | 351.8 | 267.4  | 238.1 |
| 32.5° | 277.4 | 293.1 | 353.2 | 431.1 | 441.8 | 383.9  | 295.3 | 221.6  | 208.0 |
| 35°   | 256.7 | 273.8 | 333.9 | 407.5 | 403.2 | 332.4  | 248.8 | 188.7  | 183.7 |
| 37.5° | 239.5 | 256.7 | 315.3 | 381.8 | 363.9 | 284.5  | 208.8 | 161.6  | 155.1 |
| 40°   | 224.5 | 240.9 | 296.7 | 350.3 | 323.9 | 239.5  | 175.9 | 138.7  | 131.6 |
| 42.5° | 209.5 | 225.2 | 276.7 | 320.3 | 282.4 | 199.5  | 145.8 | 118.0  | 111.5 |
| 45°   | 193.8 | 208.8 | 256.0 | 284.5 | 240.9 | 164.4  | 121.5 | 100.8  | 93.7  |
| 47.5° | 177.3 | 193.8 | 233.8 | 251.7 | 203.8 | 133.7  | 100.8 | 85.8   | 77.9  |
| 50°   | 160.1 | 175.9 | 214.5 | 220.9 | 168.0 | 108.7  | 83.6  | 70.8   | 65.1  |
| 52.5° | 143.7 | 158.0 | 192.3 | 190.9 | 140.1 | 88.7   | 70.1  | 60.8   | 53.6  |
| 55°   | 127.3 | 139.4 | 170.9 | 163.0 | 112.2 | 72.2   | 58.6  | 51.5   | 45.8  |
| 57.5° | 108.0 | 121.5 | 148.0 | 140.1 | 90.8  | 58.6   | 48.6  | 43.6   | 40.8  |
| 60°   | 90.8  | 102.2 | 125.8 | 116.5 | 72.9  | 47.9   | 40.8  | 37.2   | 35.0  |
| 62.5° | 75.8  | 85.8  | 105.1 | 95.1  | 57.2  | 40.0   | 35.0  | 32.9   | 31.5  |
| 65°   | 58.6  | 69.3  | 83.6  | 74.4  | 45.0  | 32.2   | 30.0  | 28.6   | 26.5  |
| 67.5° | 45.0  | 54.3  | 63.6  | 54.3  | 32.9  | 27.2   | 25.7  | 24.3   | 22.9  |
| 70°   | 33.6  | 40.8  | 45.0  | 36.5  | 24.3  | 22.2   | 22.2  | 20.7   | 19.3  |
| 72.5° | 24.3  | 28.6  | 27.9  | 21.4  | 17.2  | 17.9   | 18.6  | 17.9   | 16.4  |
| 75°   | 15.7  | 16.4  | 15.0  | 12.2  | 12.2  | 14.3   | 15.0  | 14.3   | 13.6  |
| 77.5° | 9.3   | 8.6   | 7.9   | 7.1   | 8.6   | 10.7   | 12.2  | 11.4   | 10.7  |
| 80°   | 3.6   | 4.3   | 4.3   | 4.3   | 5.7   | 7.9    | 9.3   | 8.6    | 7.9   |
| 82.5° | 1.4   | 1.4   | 1.4   | 2.1   | 3.6   | 5.0    | 6.4   | 5.7    | 5.7   |
| 85°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.7   | 2.1    | 2.9   | 2.9    | 2.9   |
| 87.5° | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    | 0.7   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    | 0.0   | 0.0    | 0.0   |

(END OF REPORT)