

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: P328453

Luminaire Tested: **L815MED10WW940MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P328453
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1905-290-14)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: L815MED10WW940MB
Description: Medium, 1000lm, WW, 4000K, black finish
Light Source: (1) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1057.0 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 0.44 / 0.77 / 0.63
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

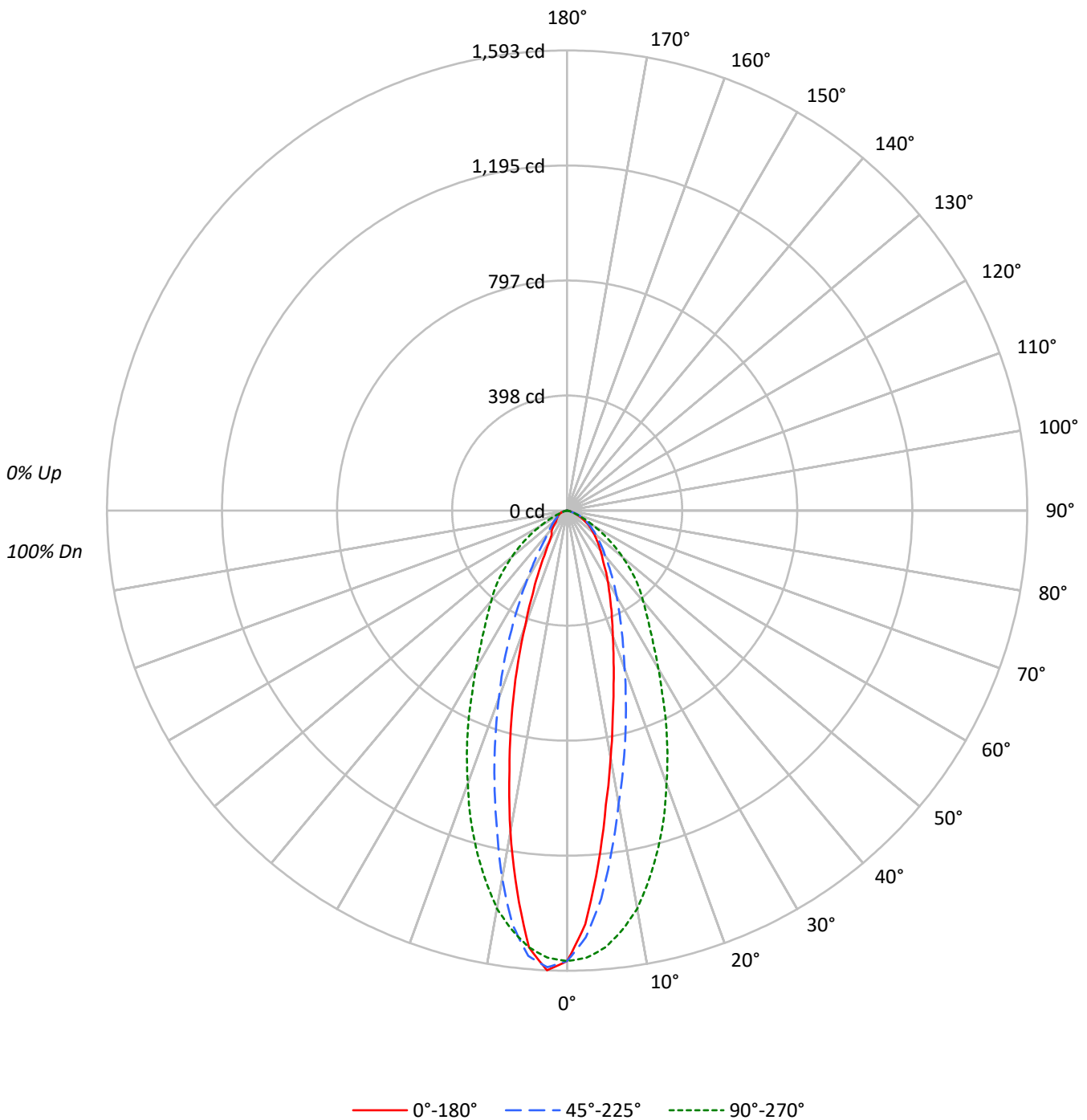
Input Watts (W): 12.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 112 | 109 | 106 | 104 | 110 | 107 | 104 | 102 | 103 | 101 | 99 | 99 | 97 | 96 | 96 | 94 | 93 | 91 |
| 2 | 106 | 100 | 95 | 91 | 103 | 98 | 94 | 90 | 95 | 91 | 88 | 92 | 89 | 86 | 89 | 86 | 84 | 82 |
| 3 | 99 | 92 | 86 | 81 | 97 | 90 | 85 | 80 | 87 | 83 | 79 | 85 | 81 | 78 | 83 | 79 | 77 | 75 |
| 4 | 93 | 85 | 78 | 73 | 91 | 83 | 77 | 73 | 81 | 76 | 72 | 79 | 75 | 71 | 77 | 73 | 70 | 68 |
| 5 | 88 | 78 | 72 | 67 | 86 | 77 | 71 | 66 | 75 | 70 | 66 | 74 | 69 | 65 | 72 | 68 | 65 | 63 |
| 6 | 83 | 73 | 66 | 61 | 81 | 72 | 66 | 61 | 71 | 65 | 61 | 69 | 64 | 60 | 68 | 63 | 60 | 58 |
| 7 | 79 | 68 | 61 | 57 | 77 | 68 | 61 | 57 | 66 | 60 | 56 | 65 | 60 | 56 | 64 | 59 | 56 | 54 |
| 8 | 75 | 64 | 57 | 53 | 73 | 63 | 57 | 53 | 62 | 57 | 53 | 61 | 56 | 52 | 60 | 56 | 52 | 51 |
| 9 | 71 | 60 | 54 | 50 | 70 | 60 | 54 | 49 | 59 | 53 | 49 | 58 | 53 | 49 | 57 | 52 | 49 | 47 |
| 10 | 68 | 57 | 51 | 47 | 66 | 57 | 51 | 46 | 56 | 50 | 46 | 55 | 50 | 46 | 54 | 49 | 46 | 45 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 192345 | 192345 | 192345 |
| 5° | 152307 | 187942 | 187880 |
| 10° | 108615 | 175185 | 141681 |
| 15° | 79236 | 154998 | 94891 |
| 20° | 60551 | 131944 | 55944 |
| 25° | 48519 | 110089 | 31357 |
| 30° | 39922 | 89786 | 17106 |
| 35° | 32751 | 75274 | 14214 |
| 40° | 28661 | 65920 | 12656 |
| 45° | 25450 | 58035 | 9751 |
| 50° | 22586 | 48011 | 9307 |
| 55° | 20193 | 37633 | 9139 |
| 60° | 16948 | 26470 | 9029 |
| 65° | 13280 | 17161 | 8960 |
| 70° | 9629 | 8367 | 8186 |
| 75° | 6577 | 5433 | 7530 |
| 80° | 3125 | 3836 | 6677 |
| 85° | 0 | 708 | 5661 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 129.4 | 12.2 |
| 10°-20° | 253.1 | 23.9 |
| 20°-30° | 229.0 | 21.7 |
| 30°-40° | 173.1 | 16.4 |
| 40°-50° | 126.9 | 12.0 |
| 50°-60° | 83.5 | 7.9 |
| 60°-70° | 45.4 | 4.3 |
| 70°-80° | 14.5 | 1.4 |
| 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° | 611.4 | 57.8 |
| 0°-40° | 784.5 | 74.2 |
| 0°-60° | 995.0 | 94.1 |
| 0°-90° | 1057.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1057.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1559 | 1559 | 1559 | 1559 | 1559 | |
| 5° | 1230 | 1349 | 1518 | 1548 | 1517 | 106 |
| 15° | 620 | 782 | 1214 | 971 | 743 | 175 |
| 25° | 356 | 440 | 809 | 456 | 230 | 165 |
| 35° | 218 | 264 | 500 | 165 | 94 | 139 |
| 45° | 146 | 163 | 333 | 80 | 56 | 113 |
| 55° | 94 | 102 | 175 | 45 | 42 | 83 |
| 65° | 46 | 57 | 59 | 28 | 31 | 46 |
| 75° | 14 | 9 | 11 | 14 | 16 | 15 |
| 85° | 0 | 0 | 0 | 3 | 4 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P328453

CATALOG NUMBER: L815MED10WW940MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1559.4 | 1559.4 | 1559.4 | 1559.4 | 1559.4 | 1559.4 | 1559.4 | 1559.4 | 1559.4 |
| 2.5° | 1433.8 | 1453.6 | 1478.8 | 1516.4 | 1549.5 | 1575.7 | 1582.2 | 1589.6 | 1593.0 |
| 5° | 1230.1 | 1262.8 | 1349.3 | 1445.2 | 1517.9 | 1552.5 | 1547.5 | 1533.7 | 1517.4 |
| 7.5° | 1026.9 | 1062.5 | 1185.6 | 1354.2 | 1464.5 | 1498.1 | 1446.2 | 1367.1 | 1328.5 |
| 10° | 867.2 | 914.2 | 1028.4 | 1240.0 | 1398.7 | 1420.5 | 1294.4 | 1161.4 | 1131.2 |
| 12.5° | 728.3 | 775.3 | 898.9 | 1118.4 | 1308.7 | 1311.7 | 1125.3 | 979.5 | 922.6 |
| 15° | 620.5 | 662.0 | 781.7 | 1000.2 | 1213.8 | 1186.1 | 971.0 | 801.5 | 743.1 |
| 17.5° | 533.0 | 560.7 | 673.9 | 880.1 | 1114.4 | 1061.5 | 827.7 | 644.2 | 578.5 |
| 20° | 461.3 | 485.0 | 580.9 | 775.8 | 1005.2 | 935.9 | 689.2 | 493.4 | 426.2 |
| 22.5° | 405.9 | 423.2 | 506.3 | 679.3 | 906.8 | 824.2 | 572.0 | 366.9 | 311.0 |
| 25° | 356.5 | 372.8 | 440.0 | 593.3 | 808.9 | 726.8 | 455.9 | 265.0 | 230.4 |
| 27.5° | 315.9 | 329.3 | 389.1 | 522.6 | 712.5 | 638.8 | 358.0 | 191.8 | 160.2 |
| 30° | 280.3 | 290.2 | 342.1 | 450.9 | 630.4 | 559.2 | 278.4 | 139.9 | 120.1 |
| 32.5° | 249.2 | 255.6 | 301.6 | 393.1 | 558.7 | 492.0 | 215.6 | 115.2 | 99.4 |
| 35° | 217.5 | 226.4 | 264.5 | 344.6 | 499.9 | 433.6 | 164.6 | 99.9 | 94.4 |
| 37.5° | 197.8 | 202.7 | 232.9 | 301.6 | 450.4 | 375.3 | 126.6 | 89.5 | 88.0 |
| 40° | 178.0 | 181.9 | 205.2 | 263.5 | 409.4 | 318.9 | 104.8 | 80.1 | 78.6 |
| 42.5° | 162.2 | 164.6 | 183.4 | 233.9 | 371.8 | 261.1 | 91.0 | 71.7 | 67.2 |
| 45° | 145.9 | 147.8 | 162.7 | 206.7 | 332.7 | 211.6 | 80.1 | 64.3 | 55.9 |
| 47.5° | 131.5 | 133.0 | 144.4 | 184.9 | 291.7 | 169.1 | 70.7 | 56.4 | 51.4 |
| 50° | 117.7 | 118.7 | 129.5 | 165.6 | 250.2 | 133.5 | 60.8 | 49.9 | 48.5 |
| 52.5° | 105.3 | 106.3 | 114.7 | 149.8 | 212.1 | 106.3 | 51.9 | 44.5 | 46.0 |
| 55° | 93.9 | 92.5 | 101.9 | 135.5 | 175.0 | 82.1 | 45.0 | 40.5 | 42.5 |
| 57.5° | 81.1 | 80.6 | 89.5 | 122.1 | 139.4 | 62.8 | 40.0 | 37.1 | 39.6 |
| 60° | 68.7 | 68.7 | 78.1 | 108.3 | 107.3 | 49.9 | 35.6 | 34.6 | 36.6 |
| 62.5° | 57.8 | 57.4 | 67.2 | 94.9 | 82.6 | 39.6 | 31.6 | 32.1 | 33.6 |
| 65° | 45.5 | 48.0 | 57.4 | 76.6 | 58.8 | 32.1 | 27.7 | 28.7 | 30.7 |
| 67.5° | 35.6 | 38.6 | 47.0 | 51.9 | 39.6 | 25.7 | 24.2 | 25.2 | 27.2 |
| 70° | 26.7 | 30.2 | 35.1 | 28.7 | 23.2 | 20.3 | 20.8 | 21.8 | 22.7 |
| 72.5° | 19.8 | 22.7 | 18.8 | 15.3 | 15.8 | 16.3 | 17.3 | 18.8 | 19.8 |
| 75° | 13.8 | 13.3 | 9.4 | 9.4 | 11.4 | 12.9 | 13.8 | 14.8 | 15.8 |
| 77.5° | 7.4 | 6.9 | 5.4 | 6.4 | 8.4 | 9.9 | 10.9 | 11.9 | 12.4 |
| 80° | 4.4 | 3.5 | 3.0 | 4.0 | 5.4 | 6.9 | 7.9 | 8.9 | 9.4 |
| 82.5° | 2.0 | 1.5 | 1.0 | 1.5 | 3.0 | 4.0 | 5.4 | 6.4 | 6.9 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.5 | 3.0 | 4.0 | 4.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 1.0 | 1.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)