



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
Eaton Lighting Division
(formerly Cooper Lighting)

Brand: HALO

Report Number: P328657

Luminaire Tested: **L815SQ10WW940MB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P328657
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1905-290-21)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: EATON (FORMERLY COOPER LIGHTING)
Product Line: HALO
Catalog Number: L815SQ10WW940MB
Description: Square Track 13x1, 1000lm, WW, 4000K, black finish
Light Source: (13) 4000K CCT, 92 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 967.0 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 0.56 / 0.82 / 0.73
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

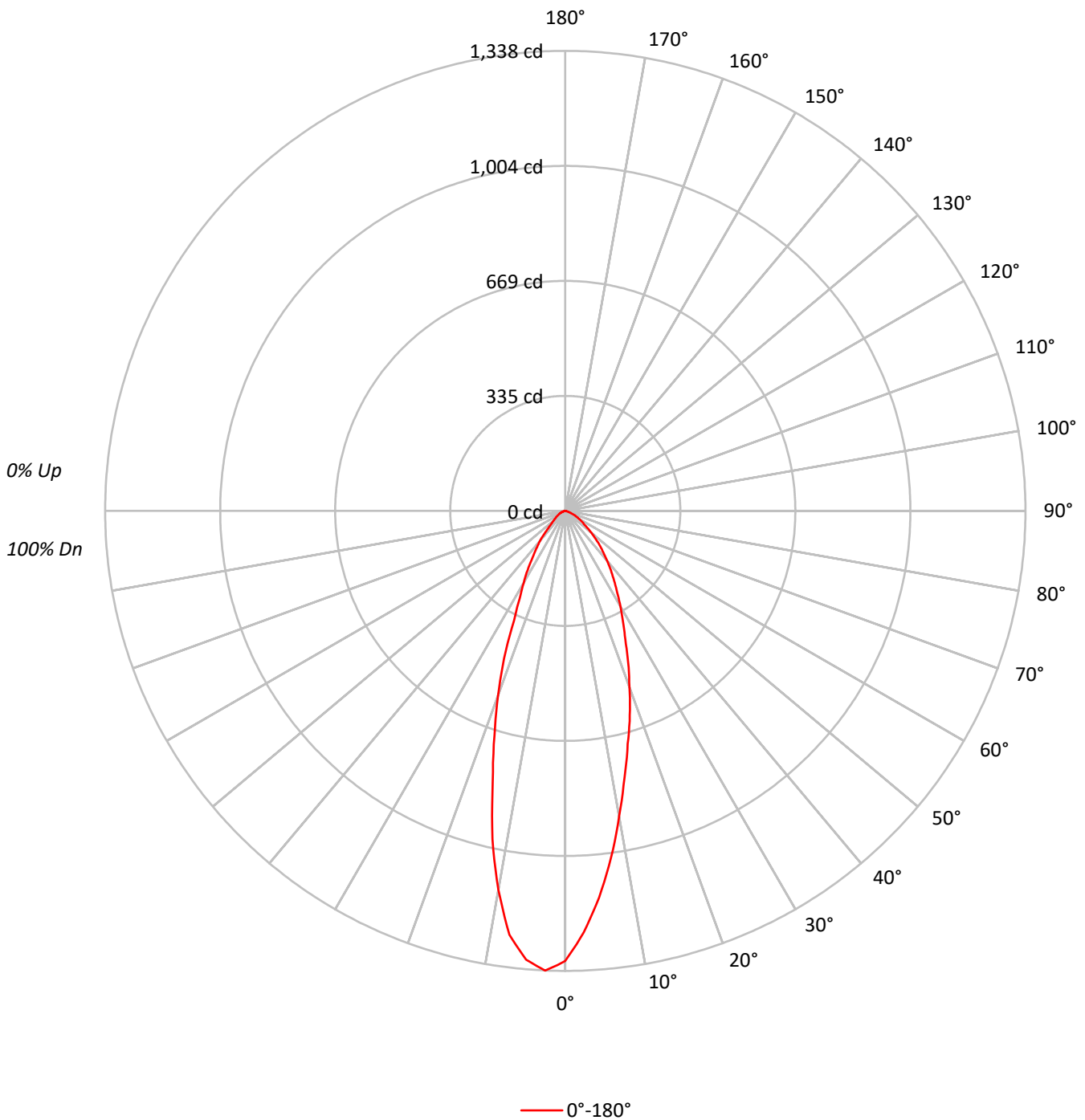
Input Watts (W): 14.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT





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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 20 | | | | 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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1 | 113 | 110 | 107 | 105 | 111 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 95 | 94 | 94 | 94 | 94 | 92 |
| 2 | 107 | 102 | 97 | 93 | 105 | 100 | 96 | 92 | 97 | 93 | 90 | 93 | 91 | 88 | 91 | 89 | 87 | 87 | 87 | 87 | 85 |
| 3 | 101 | 94 | 89 | 84 | 99 | 93 | 88 | 84 | 90 | 86 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 80 | 80 | 80 | 78 |
| 4 | 95 | 87 | 81 | 77 | 93 | 86 | 81 | 76 | 84 | 79 | 75 | 82 | 78 | 74 | 80 | 76 | 74 | 74 | 74 | 74 | 72 |
| 5 | 90 | 81 | 75 | 70 | 89 | 80 | 74 | 70 | 78 | 73 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 68 | 68 | 68 | 67 |
| 6 | 85 | 76 | 70 | 65 | 84 | 75 | 69 | 65 | 74 | 68 | 64 | 72 | 68 | 64 | 71 | 67 | 63 | 63 | 63 | 63 | 62 |
| 7 | 81 | 71 | 65 | 60 | 80 | 71 | 65 | 60 | 69 | 64 | 60 | 68 | 63 | 60 | 67 | 63 | 59 | 59 | 59 | 59 | 58 |
| 8 | 77 | 67 | 61 | 56 | 76 | 66 | 60 | 56 | 65 | 60 | 56 | 64 | 59 | 56 | 63 | 59 | 56 | 56 | 56 | 56 | 54 |
| 9 | 73 | 63 | 57 | 53 | 72 | 63 | 57 | 53 | 62 | 56 | 53 | 61 | 56 | 52 | 60 | 56 | 52 | 52 | 52 | 52 | 51 |
| 10 | 70 | 60 | 54 | 50 | 69 | 59 | 54 | 50 | 59 | 53 | 50 | 58 | 53 | 49 | 57 | 53 | 49 | 49 | 49 | 49 | 48 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|--------|--------|--------|
| 0° | 126849 | 126849 | 126849 |
| 5° | 109751 | 123443 | 127392 |
| 10° | 88680 | 120592 | 110086 |
| 15° | 70375 | 109339 | 81648 |
| 20° | 56165 | 94887 | 58804 |
| 25° | 44082 | 76437 | 37657 |
| 30° | 35852 | 58761 | 27015 |
| 35° | 29223 | 41593 | 19608 |
| 40° | 23927 | 26949 | 14632 |
| 45° | 19358 | 17235 | 9152 |
| 50° | 14936 | 10987 | 6631 |
| 55° | 11097 | 7617 | 5540 |
| 60° | 8835 | 5716 | 4631 |
| 65° | 6900 | 3966 | 3966 |
| 70° | 4107 | 2832 | 3314 |
| 75° | 2283 | 1684 | 2096 |
| 80° | 335 | 335 | 614 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------------|--------------|--------------|
| 0°-10° | 114.9 | 11.9 |
| 10°-20° | 256.3 | 26.5 |
| 20°-30° | 249.4 | 25.8 |
| 30°-40° | 174.4 | 18.0 |
| 40°-50° | 96.6 | 10.0 |
| 50°-60° | 48.2 | 5.0 |
| 60°-70° | 21.3 | 2.2 |
| 70°-80° | 5.8 | 0.6 |
| 80°-90° | 0.1 | 0.0 |
| 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° | 620.6 | 64.2 |
| 0°-40° | 795.0 | 82.2 |
| 0°-60° | 939.8 | 97.2 |
| 0°-90° | 967.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 967.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1309 | 1309 | 1309 | 1309 | 1309 | |
| 1° | 1277 | 1288 | 1302 | 1314 | 1321 | 3 |
| 2° | 1244 | 1268 | 1294 | 1318 | 1333 | 0 |
| 3° | 1208 | 1242 | 1286 | 1316 | 1333 | 7 |
| 4° | 1168 | 1213 | 1278 | 1308 | 1321 | 0 |
| 5° | 1129 | 1184 | 1269 | 1299 | 1310 | 11 |
| 6° | 1085 | 1156 | 1264 | 1281 | 1283 | 0 |
| 7° | 1040 | 1128 | 1258 | 1262 | 1257 | 0 |
| 8° | 995 | 1097 | 1249 | 1242 | 1218 | 15 |
| 9° | 948 | 1062 | 1238 | 1221 | 1169 | 0 |
| 10° | 902 | 1028 | 1226 | 1200 | 1119 | 54 |
| 15° | 702 | 846 | 1090 | 997 | 814 | 151 |
| 25° | 412 | 544 | 715 | 524 | 352 | 192 |
| 35° | 247 | 319 | 352 | 216 | 166 | 156 |
| 45° | 141 | 172 | 126 | 84 | 67 | 109 |
| 55° | 66 | 84 | 45 | 36 | 33 | 61 |
| 65° | 30 | 26 | 17 | 16 | 17 | 29 |
| 75° | 6 | 6 | 4 | 5 | 6 | 7 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P328657

CATALOG NUMBER: L815SQ10WW940MB

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1309.4 | 1309.4 | 1309.4 | 1309.4 | 1309.4 | 1309.4 | 1309.4 | 1309.4 | 1309.4 |
| 2.5° | 1227.6 | 1239.3 | 1257.1 | 1274.4 | 1290.5 | 1308.3 | 1320.5 | 1333.3 | 1338.4 |
| 5° | 1128.6 | 1150.3 | 1183.7 | 1232.1 | 1269.4 | 1290.5 | 1299.4 | 1302.7 | 1310.0 |
| 7.5° | 1018.4 | 1055.7 | 1114.1 | 1195.9 | 1254.9 | 1278.8 | 1252.7 | 1240.4 | 1243.2 |
| 10° | 901.5 | 937.1 | 1027.8 | 1136.4 | 1225.9 | 1248.8 | 1199.8 | 1140.8 | 1119.1 |
| 12.5° | 794.7 | 833.1 | 939.9 | 1066.2 | 1155.8 | 1174.2 | 1114.1 | 1018.4 | 977.8 |
| 15° | 701.7 | 742.4 | 846.4 | 992.2 | 1090.2 | 1094.6 | 996.7 | 878.7 | 814.1 |
| 17.5° | 623.8 | 652.8 | 767.4 | 903.7 | 1014.5 | 993.3 | 877.6 | 746.3 | 684.5 |
| 20° | 544.8 | 574.3 | 688.9 | 819.7 | 920.4 | 889.8 | 754.0 | 619.9 | 570.4 |
| 22.5° | 477.5 | 503.6 | 614.4 | 742.4 | 820.3 | 775.7 | 633.8 | 503.1 | 464.7 |
| 25° | 412.4 | 442.4 | 544.2 | 657.2 | 715.1 | 655.5 | 524.2 | 404.0 | 352.3 |
| 27.5° | 363.4 | 389.5 | 476.4 | 576.0 | 621.6 | 557.0 | 427.4 | 317.2 | 287.1 |
| 30° | 320.5 | 343.4 | 420.7 | 501.4 | 525.3 | 469.1 | 341.7 | 258.8 | 241.5 |
| 32.5° | 281.0 | 301.6 | 366.2 | 431.3 | 443.0 | 382.9 | 273.2 | 216.5 | 204.2 |
| 35° | 247.1 | 266.6 | 319.4 | 364.5 | 351.7 | 311.1 | 215.9 | 174.7 | 165.8 |
| 37.5° | 217.6 | 232.1 | 278.2 | 303.3 | 280.5 | 248.8 | 171.4 | 136.9 | 137.5 |
| 40° | 189.2 | 202.6 | 237.1 | 248.2 | 213.1 | 194.2 | 134.1 | 105.7 | 115.7 |
| 42.5° | 163.1 | 176.4 | 203.1 | 197.6 | 167.5 | 150.8 | 105.2 | 81.2 | 89.0 |
| 45° | 141.3 | 150.3 | 172.5 | 160.3 | 125.8 | 116.9 | 83.5 | 65.1 | 66.8 |
| 47.5° | 118.5 | 129.1 | 144.7 | 125.8 | 94.0 | 91.3 | 65.1 | 54.0 | 54.0 |
| 50° | 99.1 | 108.0 | 121.9 | 97.4 | 72.9 | 70.7 | 51.2 | 44.5 | 44.0 |
| 52.5° | 81.8 | 90.2 | 101.3 | 74.0 | 55.6 | 56.8 | 42.3 | 37.8 | 37.8 |
| 55° | 65.7 | 72.3 | 83.5 | 59.0 | 45.1 | 45.1 | 35.6 | 32.3 | 32.8 |
| 57.5° | 55.1 | 57.3 | 65.7 | 46.2 | 36.2 | 35.6 | 28.4 | 27.3 | 27.8 |
| 60° | 45.6 | 46.2 | 49.5 | 37.3 | 29.5 | 27.8 | 23.4 | 22.8 | 23.9 |
| 62.5° | 36.7 | 36.7 | 37.3 | 29.5 | 22.8 | 21.7 | 18.9 | 19.5 | 20.6 |
| 65° | 30.1 | 28.4 | 26.2 | 22.8 | 17.3 | 16.7 | 15.6 | 16.7 | 17.3 |
| 67.5° | 20.6 | 21.1 | 19.5 | 16.1 | 13.4 | 12.8 | 13.4 | 13.4 | 14.5 |
| 70° | 14.5 | 14.5 | 13.4 | 11.7 | 10.0 | 10.0 | 10.6 | 10.6 | 11.7 |
| 72.5° | 9.5 | 10.0 | 8.3 | 7.8 | 7.2 | 6.7 | 7.8 | 7.8 | 8.3 |
| 75° | 6.1 | 5.6 | 5.6 | 4.5 | 4.5 | 4.5 | 5.0 | 5.6 | 5.6 |
| 77.5° | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.8 | 3.3 | 3.3 |
| 80° | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 1.1 | 1.1 | 1.1 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)