

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: P286838

Luminaire Tested: **L81111FL9035MB**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P286838  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1901-111-3)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: L81111FL9035MB  
Description: HALO, TRACK-MINI, BLACK, 38D BEAM  
Light Source: (1) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

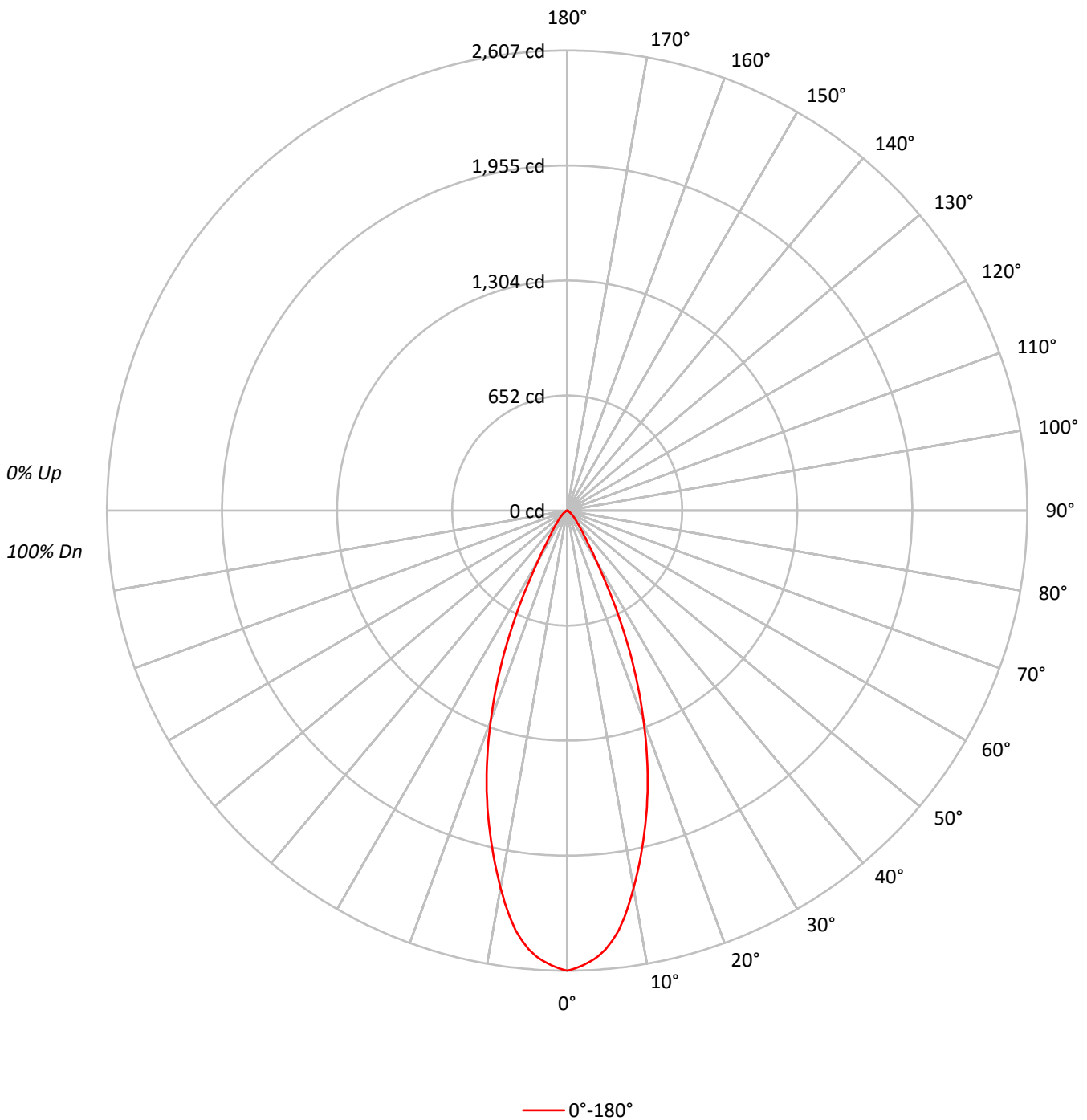
Lumens per Lamp: N/A  
Luminaire Lumens: 1227.5 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Spacing Criteria (0/90/45): 0.63 / 0.63 / 0.63  
Luminous Opening: Circular (Dia: 0.19' x H: 0')  
CIE Type: Direct

Input Watts (W): 15.5  
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   | 114 | 112 | 109 | 107 | 112 | 109 | 108 | 106 | 105 | 104 | 102 |  | 102 | 101 | 99  |  | 98  | 97  | 97  | 95  |
| 2   | 109 | 105 | 101 | 98  | 107 | 103 | 100 | 97  | 100 | 97  | 95  |  | 97  | 95  | 93  |  | 94  | 93  | 91  | 90  |
| 3   | 105 | 99  | 95  | 91  | 103 | 98  | 94  | 90  | 95  | 92  | 89  |  | 93  | 90  | 88  |  | 91  | 88  | 86  | 85  |
| 4   | 100 | 94  | 89  | 85  | 99  | 93  | 88  | 85  | 91  | 87  | 84  |  | 89  | 85  | 83  |  | 87  | 84  | 82  | 80  |
| 5   | 96  | 89  | 84  | 80  | 95  | 88  | 83  | 80  | 86  | 82  | 79  |  | 85  | 81  | 78  |  | 83  | 80  | 78  | 76  |
| 6   | 92  | 85  | 79  | 76  | 91  | 84  | 79  | 75  | 82  | 78  | 75  |  | 81  | 77  | 74  |  | 80  | 76  | 74  | 73  |
| 7   | 89  | 81  | 75  | 72  | 87  | 80  | 75  | 72  | 79  | 74  | 71  |  | 78  | 74  | 71  |  | 77  | 73  | 70  | 69  |
| 8   | 85  | 77  | 72  | 68  | 84  | 76  | 72  | 68  | 75  | 71  | 68  |  | 74  | 70  | 68  |  | 74  | 70  | 67  | 66  |
| 9   | 82  | 74  | 69  | 65  | 81  | 73  | 68  | 65  | 72  | 68  | 65  |  | 71  | 67  | 65  |  | 71  | 67  | 64  | 63  |
| 10  | 79  | 71  | 66  | 62  | 78  | 70  | 65  | 62  | 69  | 65  | 62  |  | 69  | 65  | 62  |  | 68  | 64  | 62  | 61  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1016254 |
| 5°  | 976464  |
| 10° | 859461  |
| 15° | 704133  |
| 20° | 524994  |
| 25° | 330213  |
| 30° | 148681  |
| 35° | 73050   |
| 40° | 44986   |
| 45° | 30763   |
| 50° | 20681   |
| 55° | 13729   |
| 60° | 8498    |
| 65° | 5719    |
| 70° | 3533    |
| 75° | 2410    |
| 80° | 0       |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 227.9  | 18.6      |
| 10°-20°   | 477.9  | 38.9      |
| 20°-30°   | 344.8  | 28.1      |
| 30°-40°   | 106.6  | 8.7       |
| 40°-50°   | 44.3   | 3.6       |
| 50°-60°   | 18.4   | 1.5       |
| 60°-70°   | 6.3    | 0.5       |
| 70°-80°   | 1.2    | 0.1       |
| 80°-90°   | 0.0    | 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°    | 1050.6 | 85.6      |
| 0°-40°    | 1157.2 | 94.3      |
| 0°-60°    | 1219.9 | 99.4      |
| 0°-90°    | 1227.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1227.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2607 |      |
| 5°  | 2495 | 228  |
| 15° | 1745 | 478  |
| 25° | 768  | 345  |
| 35° | 154  | 107  |
| 45° | 56   | 44   |
| 55° | 20   | 18   |
| 65° | 6    | 6    |
| 75° | 2    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 2606.9 |
| 1°    | 2594.5 |
| 2°    | 2577.5 |
| 3°    | 2557.3 |
| 4°    | 2530.9 |
| 5°    | 2495.3 |
| 6°    | 2450.3 |
| 7°    | 2396.0 |
| 8°    | 2327.8 |
| 9°    | 2251.8 |
| 10°   | 2171.2 |
| 11°   | 2087.4 |
| 12°   | 2003.7 |
| 13°   | 1918.4 |
| 14°   | 1831.5 |
| 15°   | 1744.7 |
| 16°   | 1653.2 |
| 17°   | 1560.1 |
| 18°   | 1462.4 |
| 19°   | 1364.7 |
| 20°   | 1265.5 |
| 21°   | 1167.8 |
| 22°   | 1067.0 |
| 23°   | 967.7  |
| 24°   | 866.9  |
| 25°   | 767.7  |
| 26°   | 665.3  |
| 27°   | 569.2  |
| 28°   | 479.2  |
| 29°   | 398.6  |
| 30°   | 330.3  |
| 32.5° | 218.7  |
| 35°   | 153.5  |
| 37.5° | 114.8  |
| 40°   | 88.4   |
| 42.5° | 69.8   |
| 45°   | 55.8   |
| 47.5° | 45.0   |
| 50°   | 34.1   |
| 52.5° | 26.4   |
| 55°   | 20.2   |
| 57.5° | 14.0   |
| 60°   | 10.9   |
| 62.5° | 7.8    |
| 65°   | 6.2    |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°  |
|-------|-----|
| 67.5° | 4.7 |
| 70°   | 3.1 |
| 72.5° | 1.6 |
| 75°   | 1.6 |
| 77.5° | 0.0 |
| 80°   | 0.0 |
| 82.5° | 0.0 |
| 85°   | 0.0 |
| 87.5° | 0.0 |
| 90°   | 0.0 |

(END OF REPORT)