

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P886364

Luminaire Tested: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K

Issue Date: 6/20/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886364  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-95)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/20/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K  
Description: 2IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 706.0 lumens  
Efficiency: N/A  
Efficacy: 89.4 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.68  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

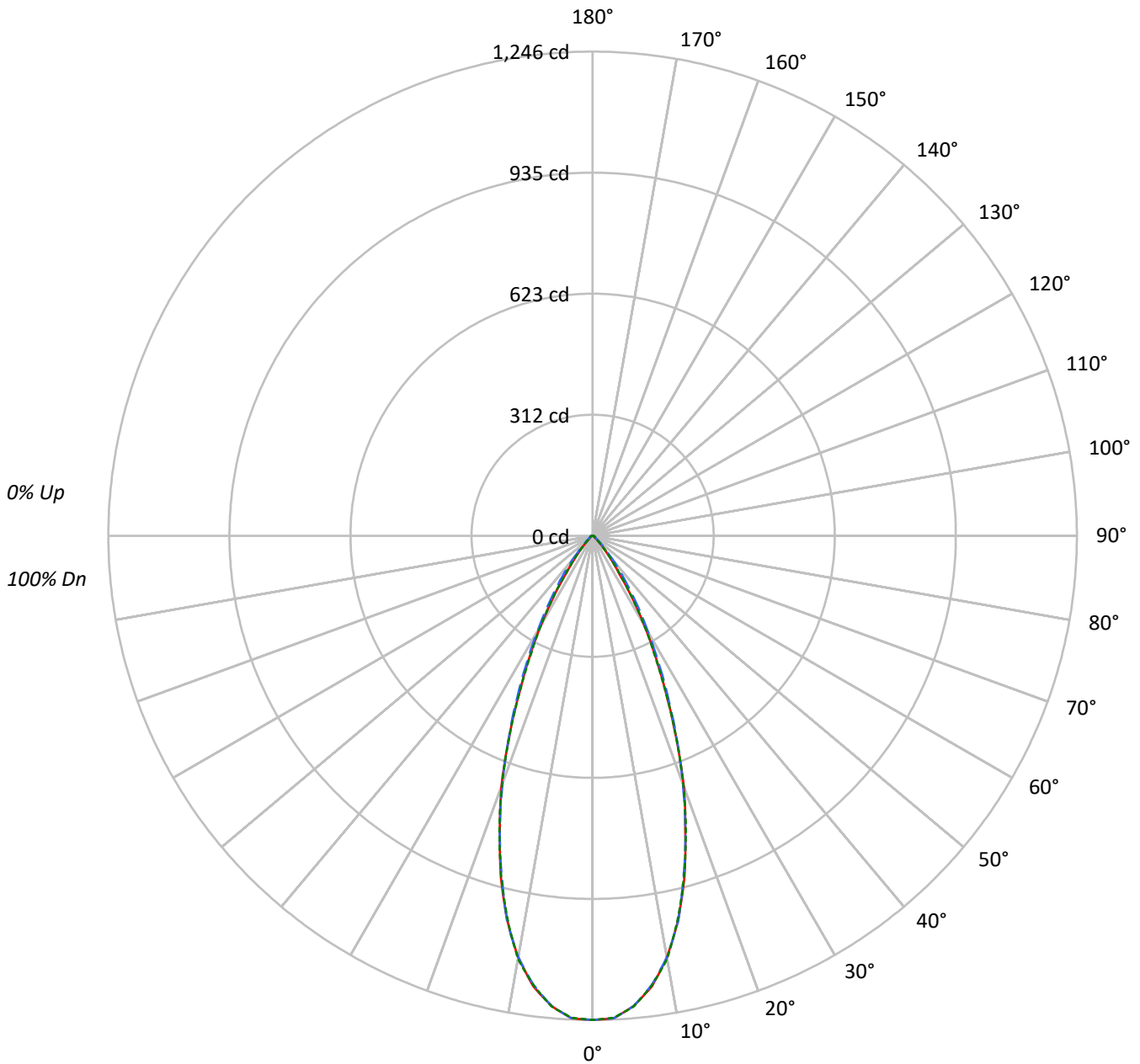
Input Watts (W): 7.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P886364

CATALOG NUMBER: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P886364

CATALOG NUMBER: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K

**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 | 100 | 100 | 100 | 100 |  |   |
|     | 1  | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 94  | 94  | 94  | 94  | 94  | 94  |  |   |
|     | 2  | 109 | 104 | 100 | 97  | 107 | 102 | 99  | 96  | 99  | 96  | 94  | 96  | 94  | 92  | 94  | 92  | 90  | 88  | 88  | 88  | 88  | 88  | 88  |  |   |
|     | 3  | 104 | 98  | 93  | 90  | 102 | 96  | 92  | 89  | 94  | 90  | 87  | 91  | 89  | 86  | 89  | 87  | 85  | 83  | 83  | 83  | 83  | 83  | 83  |  |   |
|     | 4  | 99  | 92  | 87  | 83  | 97  | 91  | 86  | 83  | 89  | 85  | 82  | 87  | 84  | 81  | 85  | 82  | 80  | 78  | 78  | 78  | 78  | 78  | 78  |  |   |
|     | 5  | 95  | 87  | 82  | 78  | 93  | 86  | 81  | 77  | 84  | 80  | 77  | 83  | 79  | 76  | 81  | 78  | 75  | 74  | 74  | 74  | 74  | 74  | 74  |  |   |
|     | 6  | 91  | 83  | 77  | 73  | 89  | 82  | 77  | 73  | 80  | 76  | 72  | 79  | 75  | 72  | 78  | 74  | 71  | 70  | 70  | 70  | 70  | 70  | 70  |  |   |
|     | 7  | 87  | 78  | 73  | 69  | 86  | 78  | 73  | 69  | 76  | 72  | 68  | 75  | 71  | 68  | 74  | 71  | 68  | 66  | 66  | 66  | 66  | 66  | 66  |  |   |
|     | 8  | 83  | 75  | 69  | 65  | 82  | 74  | 69  | 65  | 73  | 68  | 65  | 72  | 68  | 65  | 71  | 67  | 64  | 63  | 63  | 63  | 63  | 63  | 63  |  |   |
|     | 9  | 80  | 71  | 66  | 62  | 79  | 71  | 65  | 62  | 70  | 65  | 62  | 69  | 65  | 62  | 68  | 64  | 61  | 60  | 60  | 60  | 60  | 60  | 60  |  |   |
|     | 10 | 77  | 68  | 63  | 59  | 76  | 67  | 62  | 59  | 67  | 62  | 59  | 66  | 62  | 59  | 65  | 61  | 58  | 57  | 57  | 57  | 57  | 57  | 57  |  |   |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 120707 | 120707 | 120707 |
| 5°  | 118124 | 118124 | 118231 |
| 10° | 108404 | 108295 | 108748 |
| 15° | 91427  | 90725  | 91076  |
| 20° | 70753  | 69917  | 70278  |
| 25° | 47545  | 49031  | 47545  |
| 30° | 29744  | 31691  | 29621  |
| 35° | 14286  | 18958  | 15244  |
| 40° | 7196   | 9990   | 7196   |
| 45° | 2863   | 4932   | 3178   |
| 50° | 1582   | 2622   | 1748   |
| 55° | 1182   | 1571   | 1368   |
| 60° | 1124   | 1356   | 1124   |
| 65° | 1054   | 1330   | 1054   |
| 70° | 991    | 1303   | 991    |
| 75° | 1310   | 1310   | 1310   |
| 80° | 1283   | 1283   | 1283   |
| 85° | 1334   | 1334   | 1334   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 4932 cd/sqm



TEST NUMBER: P886364

CATALOG NUMBER: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 112.3  | 15.9      |
| 10°-20°   | 249.4  | 35.3      |
| 20°-30°   | 208.1  | 29.5      |
| 30°-40°   | 93.7   | 13.3      |
| 40°-50°   | 24.7   | 3.5       |
| 50°-60°   | 8.0    | 1.1       |
| 60°-70°   | 5.3    | 0.8       |
| 70°-80°   | 3.3    | 0.5       |
| 80°-90°   | 1.1    | 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°    | 569.9  | 80.7      |
| 0°-40°    | 663.5  | 94.0      |
| 0°-60°    | 696.2  | 98.6      |
| 0°-90°    | 706.0  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 706.0  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1246 | 1246  | 1246 | 1246  | 1246 |      |
| 5°  | 1215 | 1216  | 1215 | 1215  | 1216 | 112  |
| 15° | 912  | 908   | 905  | 906   | 908  | 250  |
| 25° | 445  | 453   | 459  | 454   | 445  | 206  |
| 35° | 121  | 140   | 160  | 143   | 129  | 84   |
| 45° | 21   | 28    | 36   | 28    | 23   | 20   |
| 55° | 7    | 8     | 9    | 8     | 8    | 7    |
| 65° | 5    | 6     | 6    | 6     | 5    | 5    |
| 75° | 4    | 4     | 4    | 4     | 4    | 3    |
| 85° | 1    | 1     | 1    | 1     | 1    | 1    |
| 90° | 0    | 0     | 0    | 0     | 0    |      |



TEST NUMBER: P886364

CATALOG NUMBER: ML204LSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-5000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1246.0 | 1246.0 | 1246.0 | 1246.0 | 1246.0 |
| 2.5°  | 1242.6 | 1242.6 | 1242.6 | 1243.7 | 1241.4 |
| 5°    | 1214.7 | 1215.8 | 1214.7 | 1214.7 | 1215.8 |
| 7.5°  | 1169.4 | 1169.4 | 1165.9 | 1167.1 | 1167.1 |
| 10°   | 1102.0 | 1099.7 | 1100.9 | 1099.7 | 1105.5 |
| 12.5° | 1014.9 | 1016.1 | 1016.1 | 1018.4 | 1011.5 |
| 15°   | 911.6  | 908.1  | 904.6  | 905.8  | 908.1  |
| 17.5° | 793.1  | 793.1  | 794.3  | 792.0  | 797.8  |
| 20°   | 686.3  | 681.7  | 678.2  | 673.5  | 681.7  |
| 22.5° | 560.9  | 563.2  | 564.4  | 560.9  | 562.1  |
| 25°   | 444.8  | 452.9  | 458.7  | 454.1  | 444.8  |
| 27.5° | 350.7  | 350.7  | 365.8  | 355.3  | 344.9  |
| 30°   | 265.9  | 272.9  | 283.3  | 272.9  | 264.8  |
| 32.5° | 189.3  | 203.2  | 217.2  | 204.4  | 190.4  |
| 35°   | 120.8  | 140.5  | 160.3  | 142.8  | 128.9  |
| 37.5° | 82.4   | 94.1   | 116.1  | 95.2   | 85.9   |
| 40°   | 56.9   | 62.7   | 79.0   | 63.9   | 56.9   |
| 42.5° | 37.2   | 43.0   | 53.4   | 43.0   | 37.2   |
| 45°   | 20.9   | 27.9   | 36.0   | 27.9   | 23.2   |
| 47.5° | 12.8   | 16.3   | 25.5   | 17.4   | 15.1   |
| 50°   | 10.5   | 12.8   | 17.4   | 11.6   | 11.6   |
| 52.5° | 9.3    | 10.5   | 11.6   | 10.5   | 9.3    |
| 55°   | 7.0    | 8.1    | 9.3    | 8.1    | 8.1    |
| 57.5° | 7.0    | 7.0    | 8.1    | 7.0    | 7.0    |
| 60°   | 5.8    | 7.0    | 7.0    | 7.0    | 5.8    |
| 62.5° | 5.8    | 5.8    | 5.8    | 5.8    | 5.8    |
| 65°   | 4.6    | 5.8    | 5.8    | 5.8    | 4.6    |
| 67.5° | 4.6    | 4.6    | 4.6    | 4.6    | 4.6    |
| 70°   | 3.5    | 4.6    | 4.6    | 4.6    | 3.5    |
| 72.5° | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 75°   | 3.5    | 3.5    | 3.5    | 3.5    | 3.5    |
| 77.5° | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    |
| 80°   | 2.3    | 2.3    | 2.3    | 2.3    | 2.3    |
| 82.5° | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 85°   | 1.2    | 1.2    | 1.2    | 1.2    | 1.2    |
| 87.5° | 0.0    | 1.2    | 0.0    | 1.2    | 0.0    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report







— 0°-180°    - - 45°-225°    - - - 90°-270°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)