

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: P886313

Luminaire Tested: ML204LSFL9FS1E-TIR1D25NFL-TL2SDSL-550LM-4000K

Issue Date: 6/20/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886313  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-90)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/20/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML204LSFL9FS1E-TIR1D25NFL-TL2SDSL-550LM-4000K  
Description: 2IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

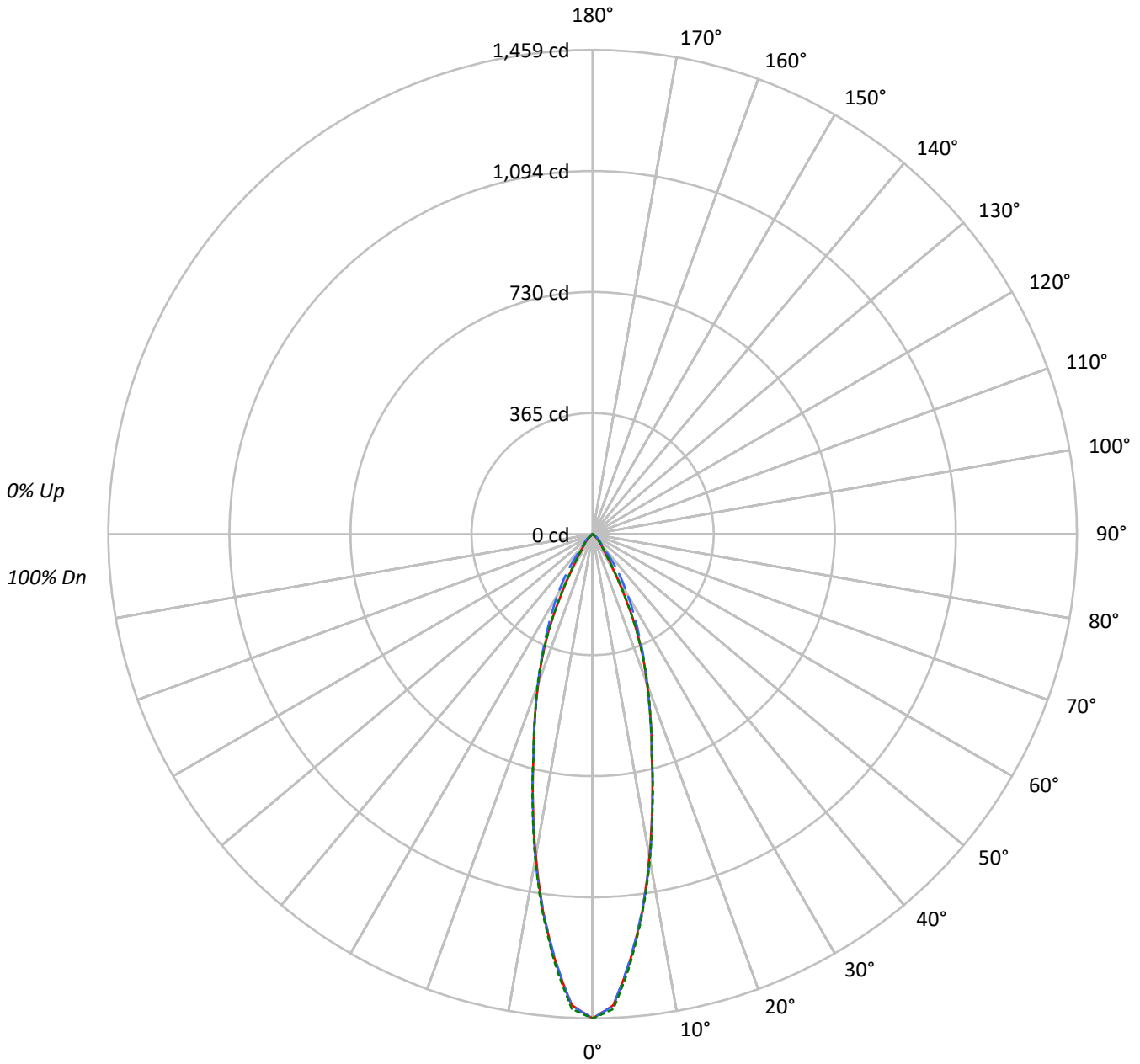
Lumens per Lamp: N/A  
Luminaire Lumens: 527.1 lumens  
Efficiency: N/A  
Efficacy: 66.7 lumens/watt  
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.54  
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|---|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|---|
| RF  | 20  |     |     |     |     |     |     |     |     | 20  |     |     |     |     |     |     |     |     | 20 |    |   |  |  |  |  |  |  | 20 |  |  |  |  |  |  |  |  |   |
| RC  | 80  |     |     |     |     |     |     |     |     | 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 | 100 |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 1   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 110 | 105 | 102 | 99  | 107 | 104 | 100 | 98  | 100 | 98  | 96  | 98  | 95  | 94  | 95  | 93  | 92  | 90  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 105 | 100 | 95  | 92  | 103 | 98  | 94  | 91  | 96  | 92  | 90  | 93  | 91  | 88  | 91  | 89  | 87  | 86  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 101 | 94  | 90  | 86  | 99  | 93  | 89  | 85  | 91  | 87  | 84  | 89  | 86  | 84  | 87  | 85  | 83  | 81  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 97  | 90  | 85  | 81  | 95  | 89  | 84  | 81  | 87  | 83  | 80  | 85  | 82  | 79  | 84  | 81  | 79  | 77  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 93  | 85  | 80  | 77  | 92  | 85  | 80  | 76  | 83  | 79  | 76  | 82  | 78  | 75  | 81  | 77  | 75  | 74  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 89  | 82  | 76  | 73  | 88  | 81  | 76  | 73  | 80  | 75  | 72  | 79  | 75  | 72  | 78  | 74  | 72  | 70  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 86  | 78  | 73  | 69  | 85  | 77  | 73  | 69  | 76  | 72  | 69  | 76  | 72  | 69  | 75  | 71  | 68  | 67  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 83  | 75  | 70  | 66  | 82  | 74  | 70  | 66  | 73  | 69  | 66  | 73  | 69  | 66  | 72  | 68  | 66  | 65  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 80  | 72  | 67  | 64  | 79  | 71  | 67  | 63  | 71  | 66  | 63  | 70  | 66  | 63  | 69  | 66  | 63  | 62  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     | 0°     | 45°    | 90°    |
|-----|--------|--------|--------|
| 0°  | 565362 | 565362 | 565362 |
| 5°  | 502212 | 500928 | 505673 |
| 10° | 387654 | 390684 | 391116 |
| 15° | 275162 | 276486 | 276486 |
| 20° | 196741 | 198597 | 199957 |
| 25° | 127968 | 139298 | 127028 |
| 30° | 59287  | 93382  | 59287  |
| 35° | 27673  | 55914  | 28194  |
| 40° | 18413  | 21802  | 17856  |
| 45° | 9700   | 16933  | 10303  |
| 50° | 3316   | 12660  | 3316   |
| 55° | 2229   | 2973   | 2229   |
| 60° | 1705   | 1705   | 1705   |
| 65° | 1009   | 1009   | 1009   |
| 70° | 1246   | 1246   | 1246   |
| 75° | 1647   | 0      | 1647   |
| 80° | 0      | 0      | 0      |
| 85° | 0      | 0      | 0      |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 16933 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 113.8  | 21.6      |
| 10°-20°   | 193.1  | 36.6      |
| 20°-30°   | 142.5  | 27.0      |
| 30°-40°   | 53.9   | 10.2      |
| 40°-50°   | 17.8   | 3.4       |
| 50°-60°   | 4.1    | 0.8       |
| 60°-70°   | 1.3    | 0.2       |
| 70°-80°   | 0.6    | 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°    | 449.4  | 85.3      |
| 0°-40°    | 503.4  | 95.5      |
| 0°-60°    | 525.3  | 99.6      |
| 0°-90°    | 527.1  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 527.1  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|-----|------|-------|------|-------|------|------|
| 0°  | 1459 | 1459  | 1459 | 1459  | 1459 |      |
| 5°  | 1291 | 1288  | 1288 | 1293  | 1300 | 114  |
| 15° | 686  | 686   | 689  | 688   | 689  | 193  |
| 25° | 299  | 317   | 326  | 315   | 297  | 134  |
| 35° | 58   | 73    | 118  | 74    | 60   | 42   |
| 45° | 18   | 23    | 31   | 23    | 19   | 14   |
| 55° | 3    | 3     | 4    | 3     | 3    | 3    |
| 65° | 1    | 1     | 1    | 1     | 1    | 1    |
| 75° | 1    | 1     | 0    | 1     | 1    | 1    |
| 85° | 0    | 0     | 0    | 0     | 0    | 0    |
| 90° | 0    | 0     | 0    | 0     | 0    | 0    |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 22.5°  | 45°    | 67.5°  | 90°    |
|-------|--------|--------|--------|--------|--------|
| 0°    | 1459.0 | 1459.0 | 1459.0 | 1459.0 | 1459.0 |
| 2.5°  | 1421.5 | 1421.5 | 1422.6 | 1425.9 | 1432.5 |
| 5°    | 1291.1 | 1287.8 | 1287.8 | 1293.3 | 1300.0 |
| 7.5°  | 1145.3 | 1144.2 | 1143.1 | 1143.1 | 1150.9 |
| 10°   | 985.2  | 990.7  | 992.9  | 983.0  | 994.0  |
| 12.5° | 829.5  | 820.6  | 832.8  | 826.2  | 835.0  |
| 15°   | 685.9  | 685.9  | 689.2  | 688.1  | 689.2  |
| 17.5° | 578.7  | 579.9  | 574.3  | 576.5  | 575.4  |
| 20°   | 477.1  | 480.4  | 481.6  | 482.7  | 484.9  |
| 22.5° | 392.1  | 396.5  | 399.8  | 397.6  | 388.8  |
| 25°   | 299.3  | 317.0  | 325.8  | 314.8  | 297.1  |
| 27.5° | 201.0  | 234.2  | 265.1  | 237.5  | 207.6  |
| 30°   | 132.5  | 161.3  | 208.7  | 160.1  | 132.5  |
| 32.5° | 86.1   | 106.0  | 163.5  | 104.9  | 85.0   |
| 35°   | 58.5   | 72.9   | 118.2  | 74.0   | 59.6   |
| 37.5° | 45.3   | 51.9   | 70.7   | 51.9   | 45.3   |
| 40°   | 36.4   | 37.6   | 43.1   | 38.7   | 35.3   |
| 42.5° | 28.7   | 29.8   | 35.3   | 29.8   | 27.6   |
| 45°   | 17.7   | 23.2   | 30.9   | 23.2   | 18.8   |
| 47.5° | 7.7    | 13.3   | 25.4   | 13.3   | 7.7    |
| 50°   | 5.5    | 5.5    | 21.0   | 5.5    | 5.5    |
| 52.5° | 4.4    | 4.4    | 13.3   | 4.4    | 4.4    |
| 55°   | 3.3    | 3.3    | 4.4    | 3.3    | 3.3    |
| 57.5° | 3.3    | 2.2    | 2.2    | 2.2    | 3.3    |
| 60°   | 2.2    | 2.2    | 2.2    | 2.2    | 2.2    |
| 62.5° | 2.2    | 1.1    | 1.1    | 1.1    | 2.2    |
| 65°   | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    |
| 67.5° | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    |
| 70°   | 1.1    | 1.1    | 1.1    | 1.1    | 1.1    |
| 72.5° | 1.1    | 1.1    | 0.0    | 1.1    | 1.1    |
| 75°   | 1.1    | 1.1    | 0.0    | 1.1    | 1.1    |
| 77.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 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  
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Scaled Data Report







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

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Scaled Data Report



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