

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: P642390

Luminaire Tested: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642390  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-25)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K  
Description: ML56 RR, 40D TIR OPTIC, 5" SPECULAR CLEAR TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

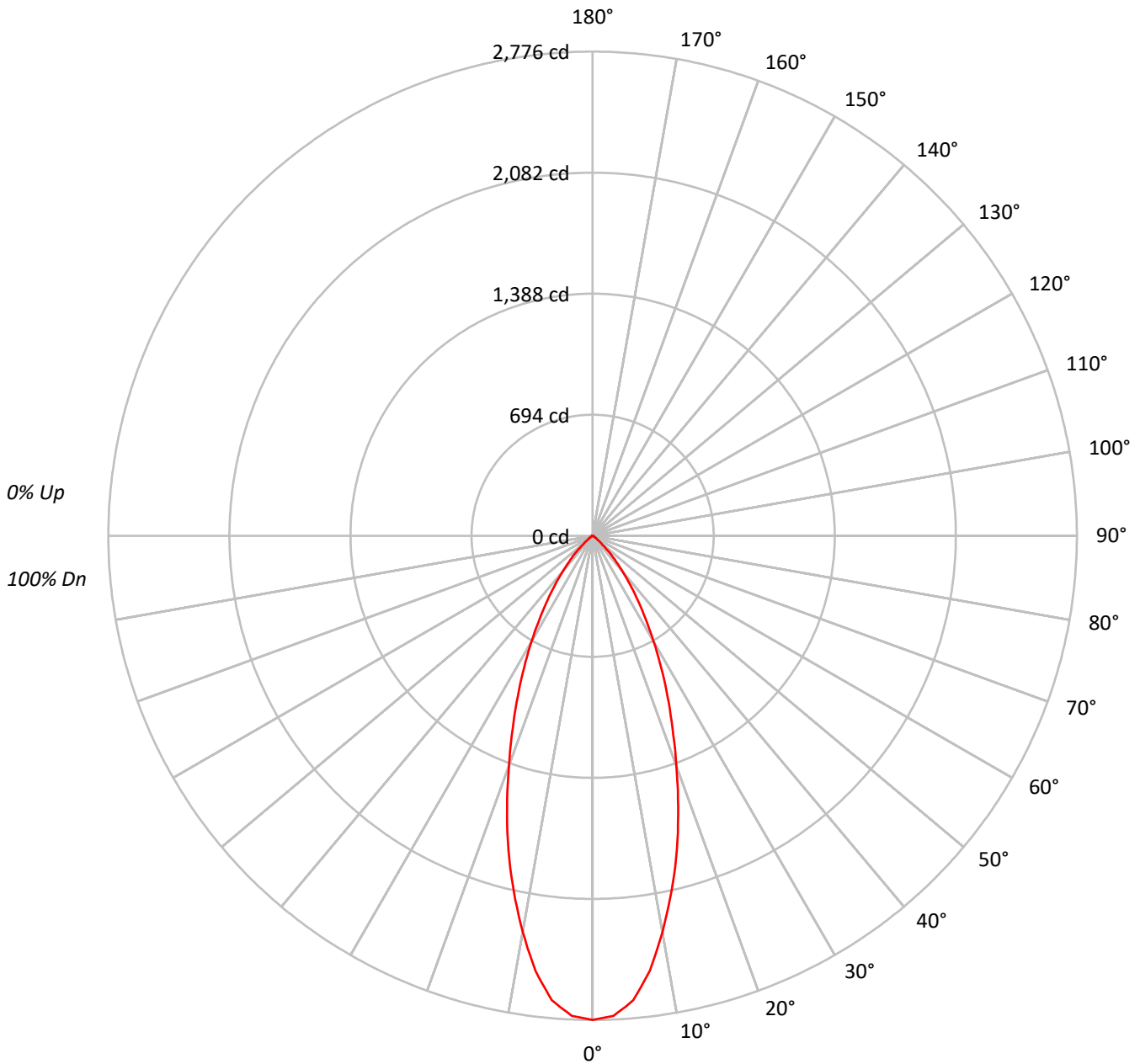
Lumens per Lamp: N/A  
Luminaire Lumens: 1641.2 lumens  
Efficiency: N/A  
Efficacy: 122.5 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 13.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P642390  
CATALOG NUMBER: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P642390

CATALOG NUMBER: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K

**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 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 94  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 2   | 108 | 104 | 100 | 97  | 106 | 102 | 99  | 96  | 99  | 96  | 94  | 96  | 94  | 92  | 93  | 91  | 90  | 88  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 3   | 103 | 97  | 92  | 89  | 101 | 96  | 91  | 88  | 93  | 90  | 87  | 91  | 88  | 85  | 89  | 86  | 84  | 82  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 4   | 98  | 91  | 86  | 82  | 97  | 90  | 85  | 81  | 88  | 84  | 80  | 86  | 82  | 80  | 84  | 81  | 79  | 77  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 5   | 94  | 86  | 80  | 76  | 92  | 85  | 80  | 76  | 83  | 79  | 75  | 81  | 78  | 75  | 80  | 77  | 74  | 72  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 6   | 89  | 81  | 75  | 71  | 88  | 80  | 75  | 71  | 79  | 74  | 70  | 77  | 73  | 70  | 76  | 72  | 70  | 68  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 7   | 85  | 77  | 71  | 67  | 84  | 76  | 70  | 67  | 75  | 70  | 66  | 73  | 69  | 66  | 72  | 69  | 66  | 64  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 8   | 82  | 72  | 67  | 63  | 80  | 72  | 67  | 63  | 71  | 66  | 63  | 70  | 65  | 62  | 69  | 65  | 62  | 61  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 9   | 78  | 69  | 63  | 59  | 77  | 68  | 63  | 59  | 67  | 63  | 59  | 67  | 62  | 59  | 66  | 62  | 59  | 57  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |
| 10  | 75  | 65  | 60  | 56  | 74  | 65  | 60  | 56  | 64  | 59  | 56  | 63  | 59  | 56  | 63  | 59  | 56  | 55  |    |    |   |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |   |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 219148 |
| 5°  | 211886 |
| 10° | 184806 |
| 15° | 152427 |
| 20° | 117753 |
| 25° | 88373  |
| 30° | 63625  |
| 35° | 43414  |
| 40° | 27143  |
| 45° | 15429  |
| 50° | 5477   |
| 55° | 3165   |
| 60° | 1816   |
| 65° | 542    |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15429 cd/sqm



TEST NUMBER: P642390

CATALOG NUMBER: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 243.1  | 14.8      |
| 10°-20°   | 514.0  | 31.3      |
| 20°-30°   | 466.1  | 28.4      |
| 30°-40°   | 284.7  | 17.3      |
| 40°-50°   | 107.7  | 6.6       |
| 50°-60°   | 21.8   | 1.3       |
| 60°-70°   | 3.9    | 0.2       |
| 70°-80°   | 0.0    | 0.0       |
| 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°    | 1223.1 | 74.5      |
| 0°-40°    | 1507.8 | 91.9      |
| 0°-60°    | 1637.3 | 99.8      |
| 0°-90°    | 1641.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1641.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2776 |      |
| 5°  | 2674 | 243  |
| 15° | 1865 | 514  |
| 25° | 1015 | 466  |
| 35° | 450  | 285  |
| 45° | 138  | 108  |
| 55° | 23   | 22   |
| 65° | 3    | 4    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



TEST NUMBER: P642390

CATALOG NUMBER: ML5615LSFL409FS1E - 592SC - 1200LM - 5000K

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2776.1 |
| 2.5°  | 2754.5 |
| 5°    | 2673.9 |
| 7.5°  | 2514.2 |
| 10°   | 2305.5 |
| 12.5° | 2088.2 |
| 15°   | 1865.1 |
| 17.5° | 1630.6 |
| 20°   | 1401.7 |
| 22.5° | 1195.9 |
| 25°   | 1014.6 |
| 27.5° | 849.1  |
| 30°   | 698.0  |
| 32.5° | 564.1  |
| 35°   | 450.5  |
| 37.5° | 351.2  |
| 40°   | 263.4  |
| 42.5° | 198.6  |
| 45°   | 138.2  |
| 47.5° | 77.7   |
| 50°   | 44.6   |
| 52.5° | 31.7   |
| 55°   | 23.0   |
| 57.5° | 15.8   |
| 60°   | 11.5   |
| 62.5° | 7.2    |
| 65°   | 2.9    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 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





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

Scaled Data Report



— 0°-180°

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)