

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



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: P641069

Luminaire Tested: ML5612LSNFL2597FS1E - 691WB - 1200LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P641069  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-13)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5612LSNFL2597FS1E - 691WB - 1200LM - 4000K  
Description: ML56 RR, 25D TIR OPTIC, 6" DEADFRONT TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1629.1 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.44  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

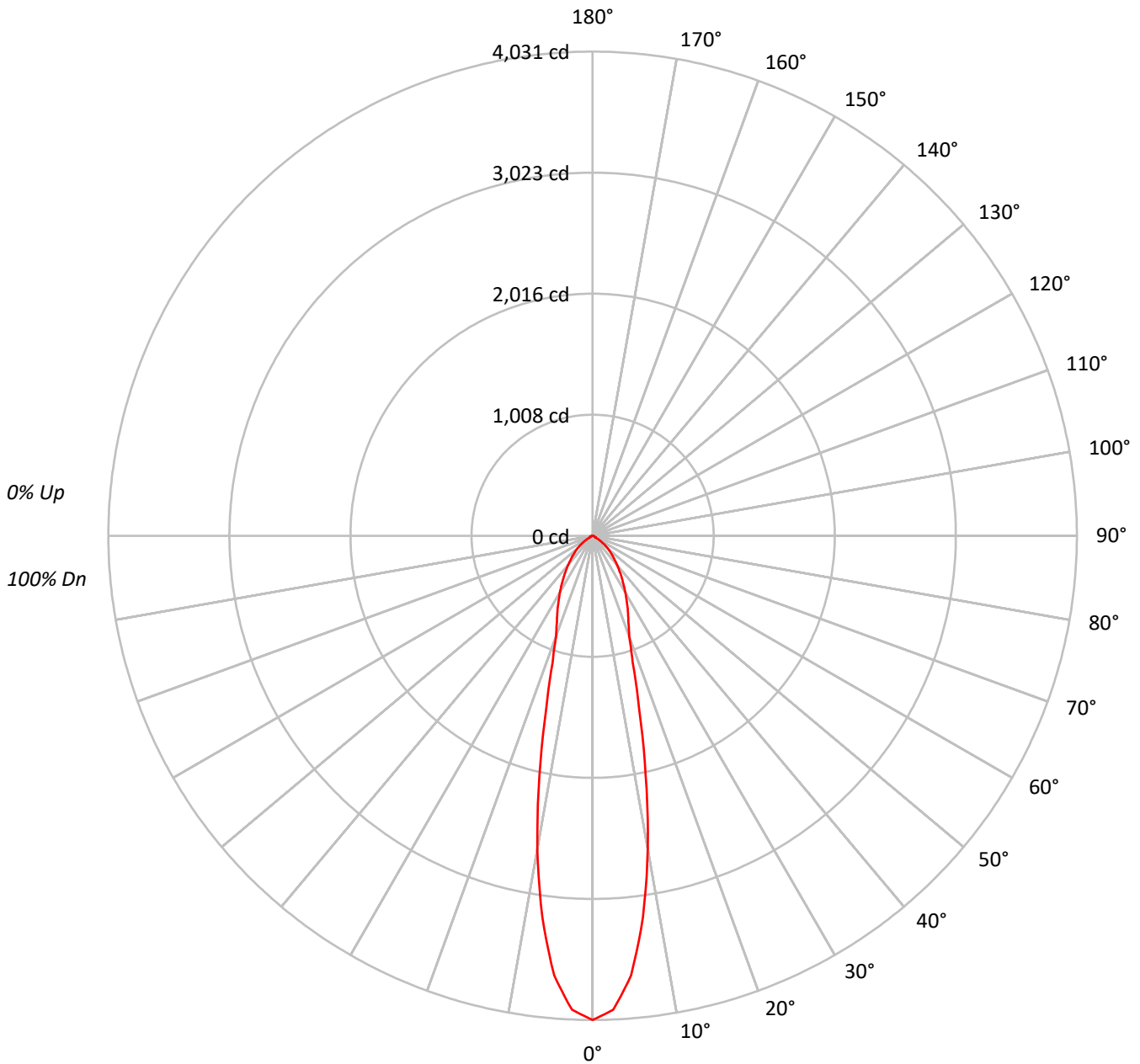
Input Watts (W): 16.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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  | 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 |
| 1   | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 95  | 93  | 93  | 93  | 93  |
| 2   | 107 | 102 | 98  | 95  | 105 | 101 | 97  | 94  | 97  | 94  | 91  | 94  | 92  | 90  | 92  | 90  | 88  | 86  | 86  | 86  | 86  |
| 3   | 102 | 95  | 90  | 86  | 100 | 94  | 89  | 85  | 91  | 87  | 84  | 89  | 85  | 83  | 86  | 84  | 81  | 80  | 80  | 80  | 80  |
| 4   | 97  | 89  | 83  | 79  | 95  | 88  | 82  | 78  | 86  | 81  | 77  | 84  | 80  | 77  | 82  | 78  | 76  | 74  | 74  | 74  | 74  |
| 5   | 92  | 83  | 77  | 73  | 90  | 82  | 77  | 73  | 81  | 76  | 72  | 79  | 75  | 71  | 77  | 74  | 71  | 69  | 69  | 69  | 69  |
| 6   | 87  | 78  | 72  | 68  | 86  | 78  | 72  | 68  | 76  | 71  | 67  | 75  | 70  | 67  | 73  | 69  | 66  | 65  | 65  | 65  | 65  |
| 7   | 83  | 74  | 68  | 64  | 82  | 73  | 68  | 64  | 72  | 67  | 63  | 71  | 66  | 63  | 70  | 66  | 63  | 61  | 61  | 61  | 61  |
| 8   | 80  | 70  | 64  | 60  | 78  | 70  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 59  | 66  | 62  | 59  | 58  | 58  | 58  | 58  |
| 9   | 76  | 67  | 61  | 57  | 75  | 66  | 61  | 57  | 65  | 60  | 57  | 64  | 60  | 56  | 63  | 59  | 56  | 55  | 55  | 55  | 55  |
| 10  | 73  | 63  | 58  | 54  | 72  | 63  | 58  | 54  | 62  | 57  | 54  | 61  | 57  | 54  | 61  | 57  | 53  | 52  | 52  | 52  | 52  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 220991 |
| 5°  | 202256 |
| 10° | 147342 |
| 15° | 84700  |
| 20° | 51851  |
| 25° | 41954  |
| 30° | 34404  |
| 35° | 28034  |
| 40° | 22564  |
| 45° | 18041  |
| 50° | 14217  |
| 55° | 9185   |
| 60° | 3618   |
| 65° | 2724   |
| 70° | 2164   |
| 75° | 1906   |
| 80° | 1894   |
| 85° | 1887   |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18041 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 316.9  | 19.5      |
| 10°-20°   | 427.9  | 26.3      |
| 20°-30°   | 319.6  | 19.6      |
| 30°-40°   | 262.7  | 16.1      |
| 40°-50°   | 181.1  | 11.1      |
| 50°-60°   | 86.9   | 5.3       |
| 60°-70°   | 20.9   | 1.3       |
| 70°-80°   | 9.7    | 0.6       |
| 80°-90°   | 3.3    | 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°    | 1064.5 | 65.3      |
| 0°-40°    | 1327.2 | 81.5      |
| 0°-60°    | 1595.2 | 97.9      |
| 0°-90°    | 1629.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1629.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 4031 |      |
| 5°  | 3675 | 317  |
| 15° | 1492 | 428  |
| 25° | 694  | 320  |
| 35° | 419  | 263  |
| 45° | 233  | 181  |
| 55° | 96   | 87   |
| 65° | 21   | 21   |
| 75° | 9    | 10   |
| 85° | 3    | 3    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 4031.2 |
| 2.5°  | 3950.1 |
| 5°    | 3675.4 |
| 7.5°  | 3205.4 |
| 10°   | 2646.9 |
| 12.5° | 2040.4 |
| 15°   | 1492.4 |
| 17.5° | 1105.0 |
| 20°   | 888.8  |
| 22.5° | 776.2  |
| 25°   | 693.6  |
| 27.5° | 615.6  |
| 30°   | 543.5  |
| 32.5° | 477.4  |
| 35°   | 418.9  |
| 37.5° | 364.8  |
| 40°   | 315.3  |
| 42.5° | 271.7  |
| 45°   | 232.7  |
| 47.5° | 198.2  |
| 50°   | 166.7  |
| 52.5° | 135.1  |
| 55°   | 96.1   |
| 57.5° | 61.6   |
| 60°   | 33.0   |
| 62.5° | 24.0   |
| 65°   | 21.0   |
| 67.5° | 16.5   |
| 70°   | 13.5   |
| 72.5° | 10.5   |
| 75°   | 9.0    |
| 77.5° | 7.5    |
| 80°   | 6.0    |
| 82.5° | 4.5    |
| 85°   | 3.0    |
| 87.5° | 1.5    |
| 90°   | 0.0    |

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Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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