

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: P640364

Luminaire Tested: ML5609LSNFL25D2W1E - 594TBZB - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640364  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-11)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSNFL25D2W1E - 594TBZB - 900LM - 3000K  
Description: ML56 RR, 25D TIR OPTIC, 5" TUSCON BRONZE GIMBAL TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

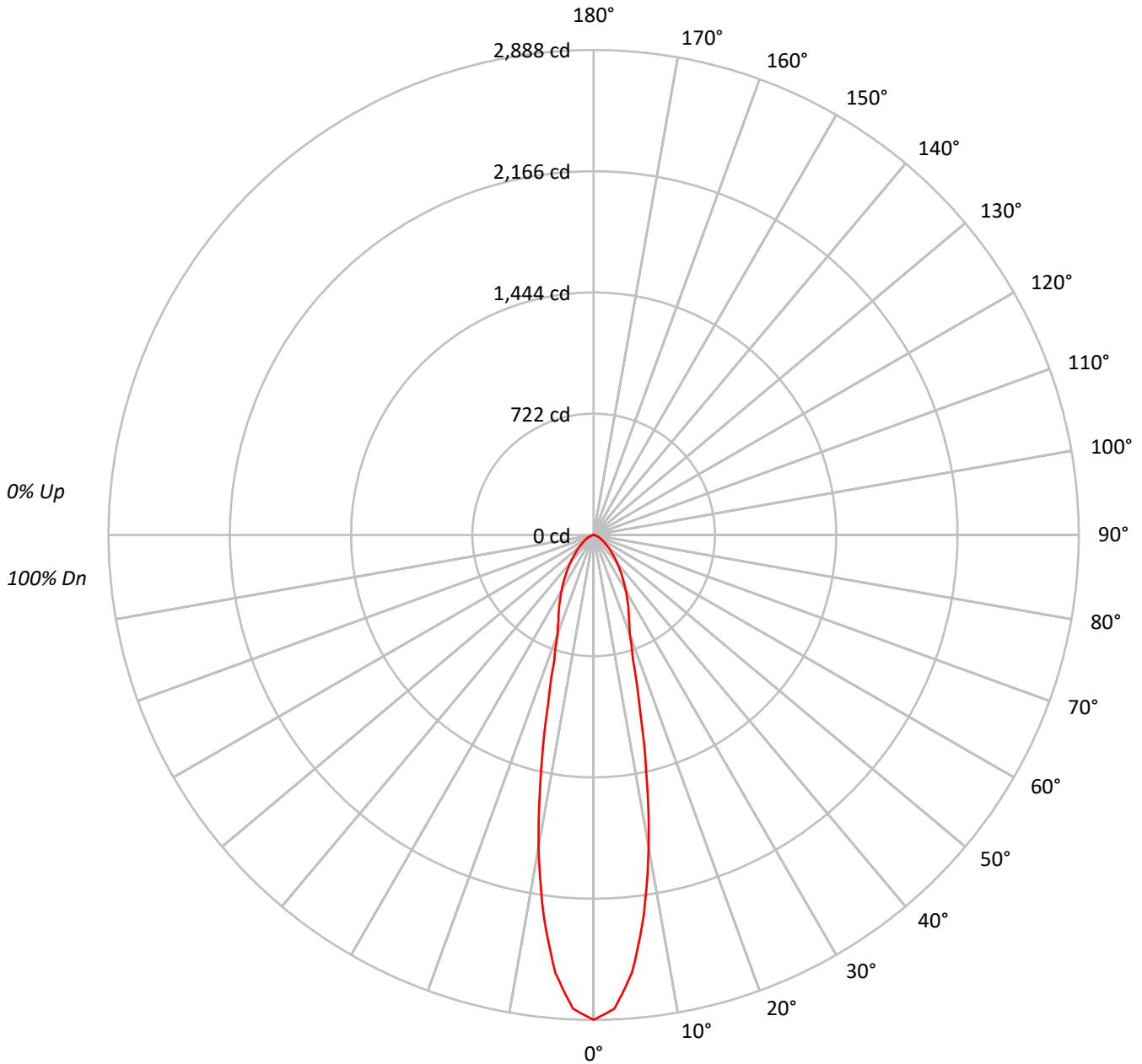
Lumens per Lamp: N/A  
Luminaire Lumens: 1179.2 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Spacing Criteria (0/90/45): 0.42 / 0.42 / 0.43  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.8  
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 | 107 | 105 | 111 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 95  | 94  | 92  | 92  | 92  | 92  |
| 2   | 107 | 102 | 97  | 94  | 105 | 100 | 96  | 93  | 97  | 93  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  | 85  | 85  | 85  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  | 90  | 86  | 83  | 88  | 84  | 81  | 85  | 83  | 80  | 78  | 78  | 78  | 78  |
| 4   | 96  | 88  | 82  | 77  | 94  | 87  | 81  | 77  | 84  | 80  | 76  | 82  | 78  | 75  | 81  | 77  | 74  | 73  | 73  | 73  | 73  |
| 5   | 91  | 82  | 76  | 72  | 89  | 81  | 76  | 71  | 79  | 74  | 71  | 78  | 73  | 70  | 76  | 72  | 69  | 68  | 68  | 68  | 68  |
| 6   | 86  | 77  | 71  | 67  | 85  | 76  | 71  | 66  | 75  | 70  | 66  | 73  | 69  | 65  | 72  | 68  | 65  | 64  | 64  | 64  | 64  |
| 7   | 82  | 73  | 67  | 62  | 81  | 72  | 66  | 62  | 71  | 66  | 62  | 70  | 65  | 62  | 69  | 64  | 61  | 60  | 60  | 60  | 60  |
| 8   | 79  | 69  | 63  | 59  | 77  | 68  | 63  | 59  | 67  | 62  | 58  | 66  | 62  | 58  | 65  | 61  | 58  | 57  | 57  | 57  | 57  |
| 9   | 75  | 66  | 60  | 56  | 74  | 65  | 59  | 56  | 64  | 59  | 55  | 63  | 59  | 55  | 62  | 58  | 55  | 54  | 54  | 54  | 54  |
| 10  | 72  | 62  | 57  | 53  | 71  | 62  | 57  | 53  | 61  | 56  | 53  | 60  | 56  | 52  | 60  | 55  | 52  | 51  | 51  | 51  | 51  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 227958 |
| 5°  | 207401 |
| 10° | 151324 |
| 15° | 85861  |
| 20° | 52773  |
| 25° | 42610  |
| 30° | 34766  |
| 35° | 28034  |
| 40° | 22207  |
| 45° | 17438  |
| 50° | 13632  |
| 55° | 10680  |
| 60° | 8510   |
| 65° | 7042   |
| 70° | 4985   |
| 75° | 2623   |
| 80° | 1955   |
| 85° | 996    |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17438 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 226.0  | 19.2      |
| 10°-20°   | 302.7  | 25.7      |
| 20°-30°   | 225.6  | 19.1      |
| 30°-40°   | 182.6  | 15.5      |
| 40°-50°   | 122.1  | 10.4      |
| 50°-60°   | 70.7   | 6.0       |
| 60°-70°   | 37.3   | 3.2       |
| 70°-80°   | 10.8   | 0.9       |
| 80°-90°   | 1.5    | 0.1       |
| 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°    | 754.3  | 64.0      |
| 0°-40°    | 936.9  | 79.5      |
| 0°-60°    | 1129.7 | 95.8      |
| 0°-90°    | 1179.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1179.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2888 |      |
| 5°  | 2617 | 226  |
| 15° | 1051 | 303  |
| 25° | 489  | 226  |
| 35° | 291  | 183  |
| 45° | 156  | 122  |
| 55° | 78   | 71   |
| 65° | 38   | 37   |
| 75° | 9    | 11   |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2887.7 |
| 2.5°  | 2824.1 |
| 5°    | 2617.3 |
| 7.5°  | 2284.3 |
| 10°   | 1887.8 |
| 12.5° | 1447.1 |
| 15°   | 1050.6 |
| 17.5° | 779.0  |
| 20°   | 628.2  |
| 22.5° | 549.5  |
| 25°   | 489.2  |
| 27.5° | 434.2  |
| 30°   | 381.4  |
| 32.5° | 335.1  |
| 35°   | 290.9  |
| 37.5° | 251.1  |
| 40°   | 215.5  |
| 42.5° | 184.3  |
| 45°   | 156.2  |
| 47.5° | 132.5  |
| 50°   | 111.0  |
| 52.5° | 92.7   |
| 55°   | 77.6   |
| 57.5° | 64.7   |
| 60°   | 53.9   |
| 62.5° | 45.3   |
| 65°   | 37.7   |
| 67.5° | 30.2   |
| 70°   | 21.6   |
| 72.5° | 14.0   |
| 75°   | 8.6    |
| 77.5° | 5.4    |
| 80°   | 4.3    |
| 82.5° | 2.2    |
| 85°   | 1.1    |
| 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

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Scaled Data Report



— 0°-180°

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Scaled Data Report



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