

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: P642669

Luminaire Tested: ML5615LSFL409FS1E - 694TBZB - 900LM - 4000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642669
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-45)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5615LSFL409FS1E - 694TBZB - 900LM - 4000K
Description: ML56 RR, 40D TIR OPTIC, 6" TUSCON BRONZE GIMBAL TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1313.0 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

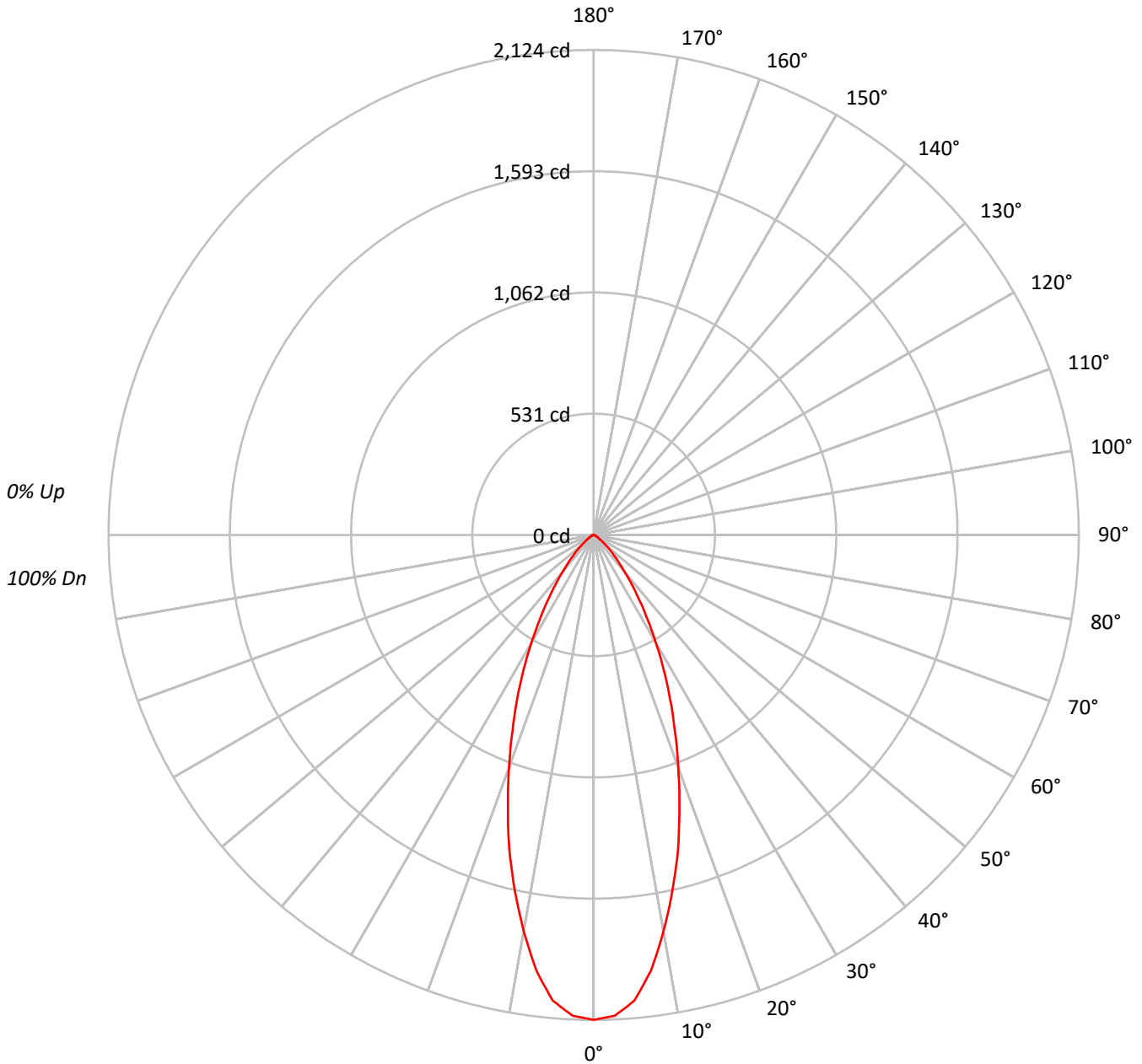
Input Watts (W): 10.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | | | | | | | | | | | | | | | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 95 | 98 | 95 | 92 | 95 | 93 | 91 | 92 | 90 | 89 | 87 | | | | | | | | | | | | | | | | | | | |
| 3 | 103 | 96 | 91 | 87 | 101 | 95 | 90 | 87 | 92 | 88 | 85 | 90 | 87 | 84 | 87 | 85 | 83 | 81 | | | | | | | | | | | | | | | | | | | |
| 4 | 97 | 90 | 85 | 80 | 96 | 89 | 84 | 80 | 87 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 77 | 76 | | | | | | | | | | | | | | | | | | | |
| 5 | 93 | 84 | 79 | 74 | 91 | 84 | 78 | 74 | 82 | 77 | 73 | 80 | 76 | 73 | 79 | 75 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 6 | 88 | 79 | 74 | 69 | 87 | 79 | 73 | 69 | 77 | 72 | 69 | 76 | 71 | 68 | 74 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 7 | 84 | 75 | 69 | 65 | 83 | 74 | 69 | 65 | 73 | 68 | 64 | 72 | 67 | 64 | 71 | 67 | 64 | 62 | | | | | | | | | | | | | | | | | | | |
| 8 | 80 | 71 | 65 | 61 | 79 | 70 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 60 | 67 | 63 | 60 | 59 | | | | | | | | | | | | | | | | | | | |
| 9 | 77 | 67 | 61 | 58 | 76 | 67 | 61 | 57 | 66 | 61 | 57 | 65 | 60 | 57 | 64 | 60 | 57 | 56 | | | | | | | | | | | | | | | | | | | |
| 10 | 73 | 64 | 58 | 54 | 72 | 63 | 58 | 54 | 63 | 58 | 54 | 62 | 57 | 54 | 61 | 57 | 54 | 53 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 116433 |
| 5° | 112684 |
| 10° | 98100 |
| 15° | 80982 |
| 20° | 63145 |
| 25° | 47864 |
| 30° | 34404 |
| 35° | 23436 |
| 40° | 15136 |
| 45° | 9699 |
| 50° | 5723 |
| 55° | 3154 |
| 60° | 2116 |
| 65° | 1479 |
| 70° | 1090 |
| 75° | 720 |
| 80° | 347 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9699 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 186.0 | 14.2 |
| 10°-20° | 393.4 | 30.0 |
| 20°-30° | 362.6 | 27.6 |
| 30°-40° | 222.2 | 16.9 |
| 40°-50° | 99.4 | 7.6 |
| 50°-60° | 32.8 | 2.5 |
| 60°-70° | 12.2 | 0.9 |
| 70°-80° | 4.0 | 0.3 |
| 80°-90° | 0.4 | 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° | 942.0 | 71.7 |
| 0°-40° | 1164.2 | 88.7 |
| 0°-60° | 1296.3 | 98.7 |
| 0°-90° | 1313.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1313.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2124 | |
| 5° | 2048 | 186 |
| 15° | 1427 | 393 |
| 25° | 791 | 363 |
| 35° | 350 | 222 |
| 45° | 125 | 99 |
| 55° | 33 | 33 |
| 65° | 11 | 12 |
| 75° | 3 | 4 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 2123.9 |
| 2.5° | 2108.0 |
| 5° | 2047.7 |
| 7.5° | 1923.8 |
| 10° | 1762.3 |
| 12.5° | 1594.1 |
| 15° | 1426.9 |
| 17.5° | 1247.3 |
| 20° | 1082.4 |
| 22.5° | 928.9 |
| 25° | 791.3 |
| 27.5° | 662.9 |
| 30° | 543.5 |
| 32.5° | 438.9 |
| 35° | 350.2 |
| 37.5° | 274.0 |
| 40° | 211.5 |
| 42.5° | 163.7 |
| 45° | 125.1 |
| 47.5° | 93.2 |
| 50° | 67.1 |
| 52.5° | 46.6 |
| 55° | 33.0 |
| 57.5° | 25.0 |
| 60° | 19.3 |
| 62.5° | 15.9 |
| 65° | 11.4 |
| 67.5° | 9.1 |
| 70° | 6.8 |
| 72.5° | 5.7 |
| 75° | 3.4 |
| 77.5° | 2.3 |
| 80° | 1.1 |
| 82.5° | 1.1 |
| 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

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— 0°-180°

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Scaled Data Report



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