

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: P642393

Luminaire Tested: ML5615LSFL409FS1E - 592SC - 1500LM - 3500K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642393
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 - 1500LM - 3500K
Description: ML56 RR, 40D TIR OPTIC, 5" SPECULAR CLEAR TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

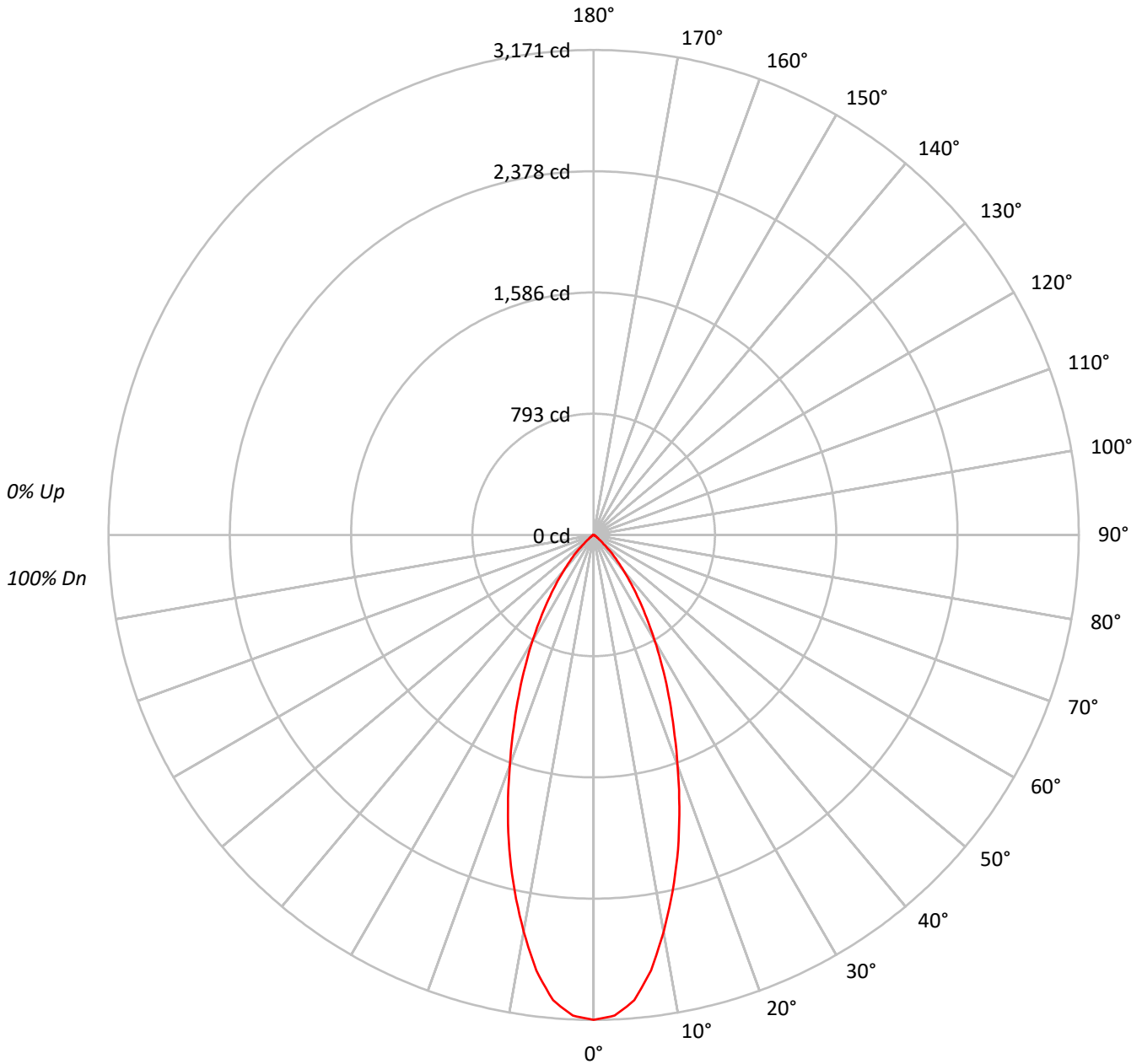
Lumens per Lamp: N/A
Luminaire Lumens: 1874.5 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

Input Watts (W): 17.1
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 | | | | | 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 | | | | |
| 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° | 250314 |
| 5° | 242022 |
| 10° | 211082 |
| 15° | 174100 |
| 20° | 134495 |
| 25° | 100942 |
| 30° | 72667 |
| 35° | 49582 |
| 40° | 30997 |
| 45° | 17617 |
| 50° | 6263 |
| 55° | 3620 |
| 60° | 2084 |
| 65° | 616 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17617 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 277.7 | 14.8 |
| 10°-20° | 587.0 | 31.3 |
| 20°-30° | 532.3 | 28.4 |
| 30°-40° | 325.2 | 17.3 |
| 40°-50° | 123.0 | 6.6 |
| 50°-60° | 25.0 | 1.3 |
| 60°-70° | 4.4 | 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° | 1397.0 | 74.5 |
| 0°-40° | 1722.2 | 91.9 |
| 0°-60° | 1870.1 | 99.8 |
| 0°-90° | 1874.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1874.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 3171 | |
| 5° | 3054 | 278 |
| 15° | 2130 | 587 |
| 25° | 1159 | 532 |
| 35° | 514 | 325 |
| 45° | 158 | 123 |
| 55° | 26 | 25 |
| 65° | 3 | 4 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 3170.9 |
| 2.5° | 3146.2 |
| 5° | 3054.2 |
| 7.5° | 2871.7 |
| 10° | 2633.3 |
| 12.5° | 2385.1 |
| 15° | 2130.3 |
| 17.5° | 1862.4 |
| 20° | 1601.0 |
| 22.5° | 1366.0 |
| 25° | 1158.9 |
| 27.5° | 969.8 |
| 30° | 797.2 |
| 32.5° | 644.4 |
| 35° | 514.5 |
| 37.5° | 401.1 |
| 40° | 300.8 |
| 42.5° | 226.8 |
| 45° | 157.8 |
| 47.5° | 88.8 |
| 50° | 51.0 |
| 52.5° | 36.2 |
| 55° | 26.3 |
| 57.5° | 18.1 |
| 60° | 13.2 |
| 62.5° | 8.2 |
| 65° | 3.3 |
| 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

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— 0°-180°

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