

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: P642482

Luminaire Tested: ML5615LSFL409FS1E - 594SNB - 1500LM - 3000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642482
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-33)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5615LSFL409FS1E - 594SNB - 1500LM - 3000K
Description: ML56 RR, 40D TIR OPTIC, 5" SATIN NICKLE GIMBAL TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1836.1 lumens
Efficiency: N/A
Efficacy: 107.4 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

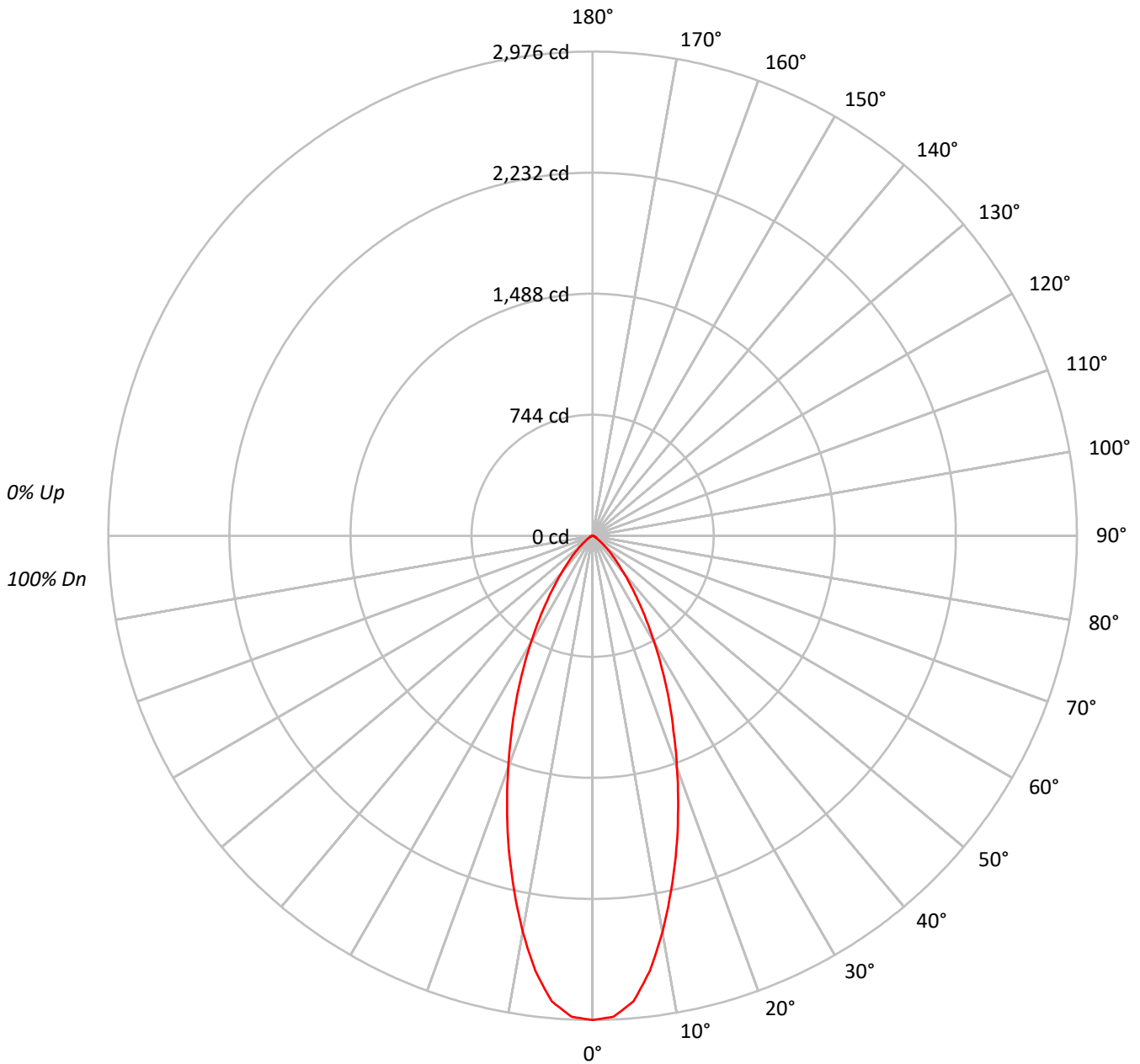
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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 | 113 | 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 | 90 | 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 | 84 | 80 | 96 | 89 | 84 | 80 | 87 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 77 | 76 | | | |
| 5 | 93 | 84 | 79 | 74 | 91 | 83 | 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° | 234960 |
| 5° | 227624 |
| 10° | 198096 |
| 15° | 162642 |
| 20° | 127304 |
| 25° | 96352 |
| 30° | 69213 |
| 35° | 46980 |
| 40° | 30307 |
| 45° | 19626 |
| 50° | 11385 |
| 55° | 6386 |
| 60° | 4294 |
| 65° | 2989 |
| 70° | 2216 |
| 75° | 1952 |
| 80° | 1455 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19626 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 260.9 | 14.2 |
| 10°-20° | 550.3 | 30.0 |
| 20°-30° | 506.5 | 27.6 |
| 30°-40° | 309.7 | 16.9 |
| 40°-50° | 138.4 | 7.5 |
| 50°-60° | 45.9 | 2.5 |
| 60°-70° | 17.2 | 0.9 |
| 70°-80° | 6.3 | 0.3 |
| 80°-90° | 0.9 | 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° | 1317.7 | 71.8 |
| 0°-40° | 1627.4 | 88.6 |
| 0°-60° | 1811.7 | 98.7 |
| 0°-90° | 1836.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1836.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2976 | |
| 5° | 2872 | 261 |
| 15° | 1990 | 550 |
| 25° | 1106 | 507 |
| 35° | 488 | 310 |
| 45° | 176 | 138 |
| 55° | 46 | 46 |
| 65° | 16 | 17 |
| 75° | 6 | 6 |
| 85° | 0 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2976.4 |
| 2.5° | 2958.8 |
| 5° | 2872.5 |
| 7.5° | 2696.7 |
| 10° | 2471.3 |
| 12.5° | 2229.9 |
| 15° | 1990.1 |
| 17.5° | 1747.2 |
| 20° | 1515.4 |
| 22.5° | 1298.0 |
| 25° | 1106.2 |
| 27.5° | 923.9 |
| 30° | 759.3 |
| 32.5° | 612.2 |
| 35° | 487.5 |
| 37.5° | 382.0 |
| 40° | 294.1 |
| 42.5° | 227.0 |
| 45° | 175.8 |
| 47.5° | 129.5 |
| 50° | 92.7 |
| 52.5° | 65.5 |
| 55° | 46.4 |
| 57.5° | 35.2 |
| 60° | 27.2 |
| 62.5° | 22.4 |
| 65° | 16.0 |
| 67.5° | 12.8 |
| 70° | 9.6 |
| 72.5° | 8.0 |
| 75° | 6.4 |
| 77.5° | 3.2 |
| 80° | 3.2 |
| 82.5° | 1.6 |
| 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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