

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: P642521

Luminaire Tested: ML5615LSFL409FS1E - 596WB - 1200LM - 2700K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642521
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-35)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5615LSFL409FS1E - 596WB - 1200LM - 2700K
Description: ML56 RR, 40D TIR OPTIC, 5" SHALLOW WHITE BAFFLE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

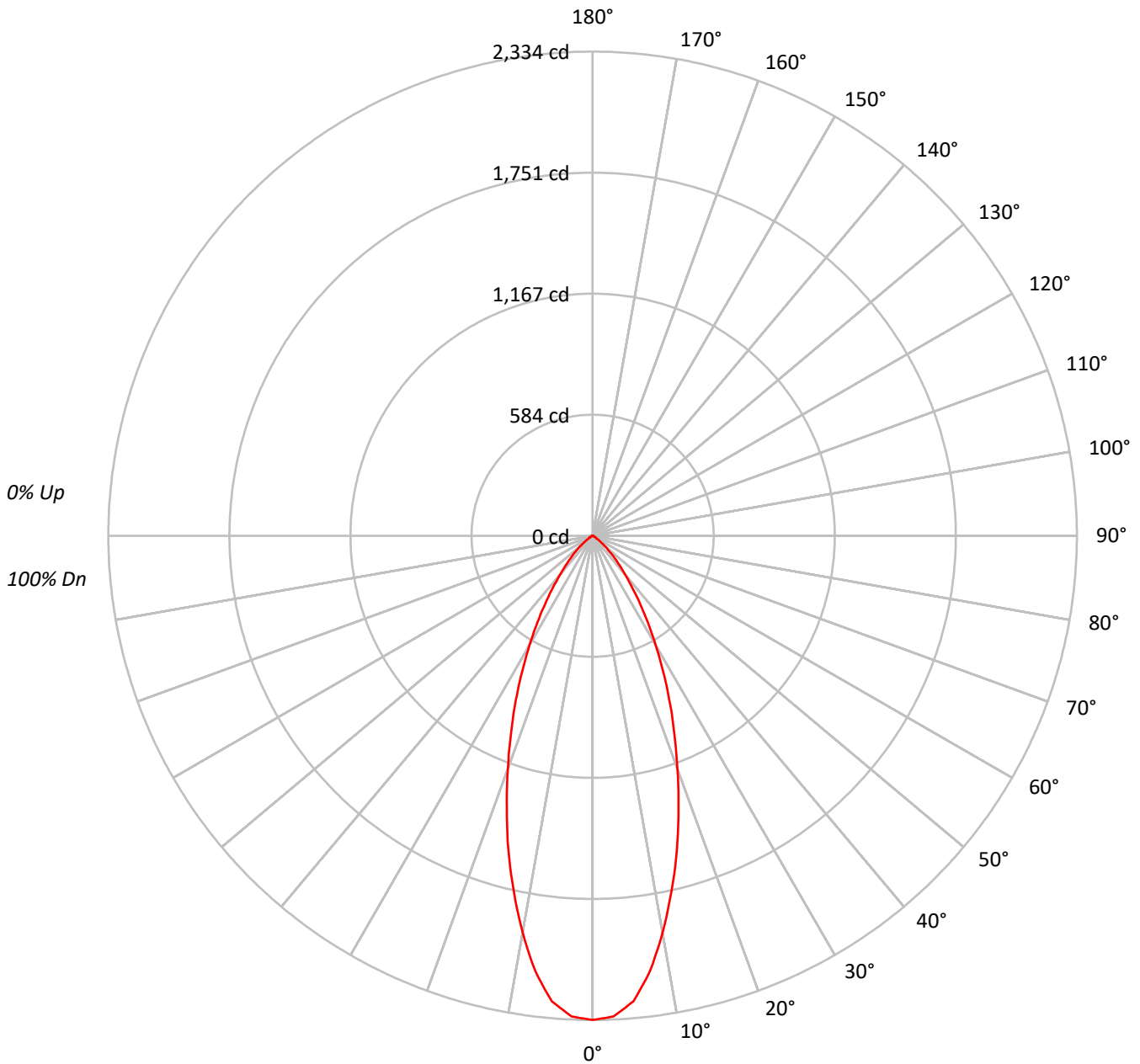
Lumens per Lamp: N/A
Luminaire Lumens: 1446.9 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.7
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

Input Watts (W): 13.4
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 | 108 | 106 | 111 | 109 | 106 | 104 | 105 | 103 | 101 | 101 | 100 | 98 | 97 | 96 | 95 | 94 | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 95 | 98 | 95 | 93 | 95 | 93 | 91 | 93 | 91 | 89 | 87 | | | |
| 3 | 103 | 96 | 91 | 88 | 101 | 95 | 90 | 87 | 92 | 89 | 85 | 90 | 87 | 84 | 88 | 85 | 83 | 81 | | | |
| 4 | 98 | 90 | 85 | 81 | 96 | 89 | 84 | 80 | 87 | 83 | 79 | 85 | 81 | 78 | 83 | 80 | 77 | 76 | | | |
| 5 | 93 | 85 | 79 | 75 | 91 | 84 | 78 | 74 | 82 | 77 | 74 | 80 | 76 | 73 | 79 | 75 | 72 | 71 | | | |
| 6 | 88 | 80 | 74 | 70 | 87 | 79 | 73 | 69 | 77 | 73 | 69 | 76 | 72 | 68 | 75 | 71 | 68 | 67 | | | |
| 7 | 84 | 75 | 69 | 65 | 83 | 74 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 63 | | | |
| 8 | 80 | 71 | 65 | 61 | 79 | 71 | 65 | 61 | 69 | 64 | 61 | 68 | 64 | 61 | 67 | 63 | 60 | 59 | | | |
| 9 | 77 | 67 | 62 | 58 | 76 | 67 | 61 | 58 | 66 | 61 | 57 | 65 | 61 | 57 | 64 | 60 | 57 | 56 | | | |
| 10 | 73 | 64 | 58 | 55 | 72 | 64 | 58 | 55 | 63 | 58 | 54 | 62 | 57 | 54 | 61 | 57 | 54 | 53 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 184224 |
| 5° | 178509 |
| 10° | 155724 |
| 15° | 128252 |
| 20° | 100254 |
| 25° | 76284 |
| 30° | 55376 |
| 35° | 38056 |
| 40° | 24907 |
| 45° | 16110 |
| 50° | 9174 |
| 55° | 3826 |
| 60° | 2605 |
| 65° | 1420 |
| 70° | 877 |
| 75° | 763 |
| 80° | 591 |
| 85° | 1177 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16110 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 204.8 | 14.2 |
| 10°-20° | 433.4 | 29.9 |
| 20°-30° | 401.2 | 27.7 |
| 30°-40° | 250.6 | 17.3 |
| 40°-50° | 113.2 | 7.8 |
| 50°-60° | 31.6 | 2.2 |
| 60°-70° | 8.7 | 0.6 |
| 70°-80° | 2.7 | 0.2 |
| 80°-90° | 0.9 | 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° | 1039.3 | 71.8 |
| 0°-40° | 1289.9 | 89.1 |
| 0°-60° | 1434.7 | 99.2 |
| 0°-90° | 1446.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1446.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2334 | |
| 5° | 2253 | 205 |
| 15° | 1569 | 433 |
| 25° | 876 | 401 |
| 35° | 395 | 251 |
| 45° | 144 | 113 |
| 55° | 28 | 32 |
| 65° | 8 | 9 |
| 75° | 2 | 3 |
| 85° | 1 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2333.7 |
| 2.5° | 2319.8 |
| 5° | 2252.7 |
| 7.5° | 2117.3 |
| 10° | 1942.7 |
| 12.5° | 1755.4 |
| 15° | 1569.3 |
| 17.5° | 1375.7 |
| 20° | 1193.4 |
| 22.5° | 1026.4 |
| 25° | 875.8 |
| 27.5° | 732.8 |
| 30° | 607.5 |
| 32.5° | 493.6 |
| 35° | 394.9 |
| 37.5° | 311.3 |
| 40° | 241.7 |
| 42.5° | 187.3 |
| 45° | 144.3 |
| 47.5° | 103.8 |
| 50° | 74.7 |
| 52.5° | 49.4 |
| 55° | 27.8 |
| 57.5° | 20.2 |
| 60° | 16.5 |
| 62.5° | 12.7 |
| 65° | 7.6 |
| 67.5° | 5.1 |
| 70° | 3.8 |
| 72.5° | 2.5 |
| 75° | 2.5 |
| 77.5° | 2.5 |
| 80° | 1.3 |
| 82.5° | 1.3 |
| 85° | 1.3 |
| 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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