

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: P640884

Luminaire Tested: ML5612LSFL4097FS1E - 696WB - 900LM - 4000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P640884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-46)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5612LSFL4097FS1E - 696WB - 900LM - 4000K
Description: ML56 RR, 40D TIR OPTIC, 6" SHALLOW WHITE BAFFLE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1431.3 lumens
Efficiency: N/A
Efficacy: 107.6 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

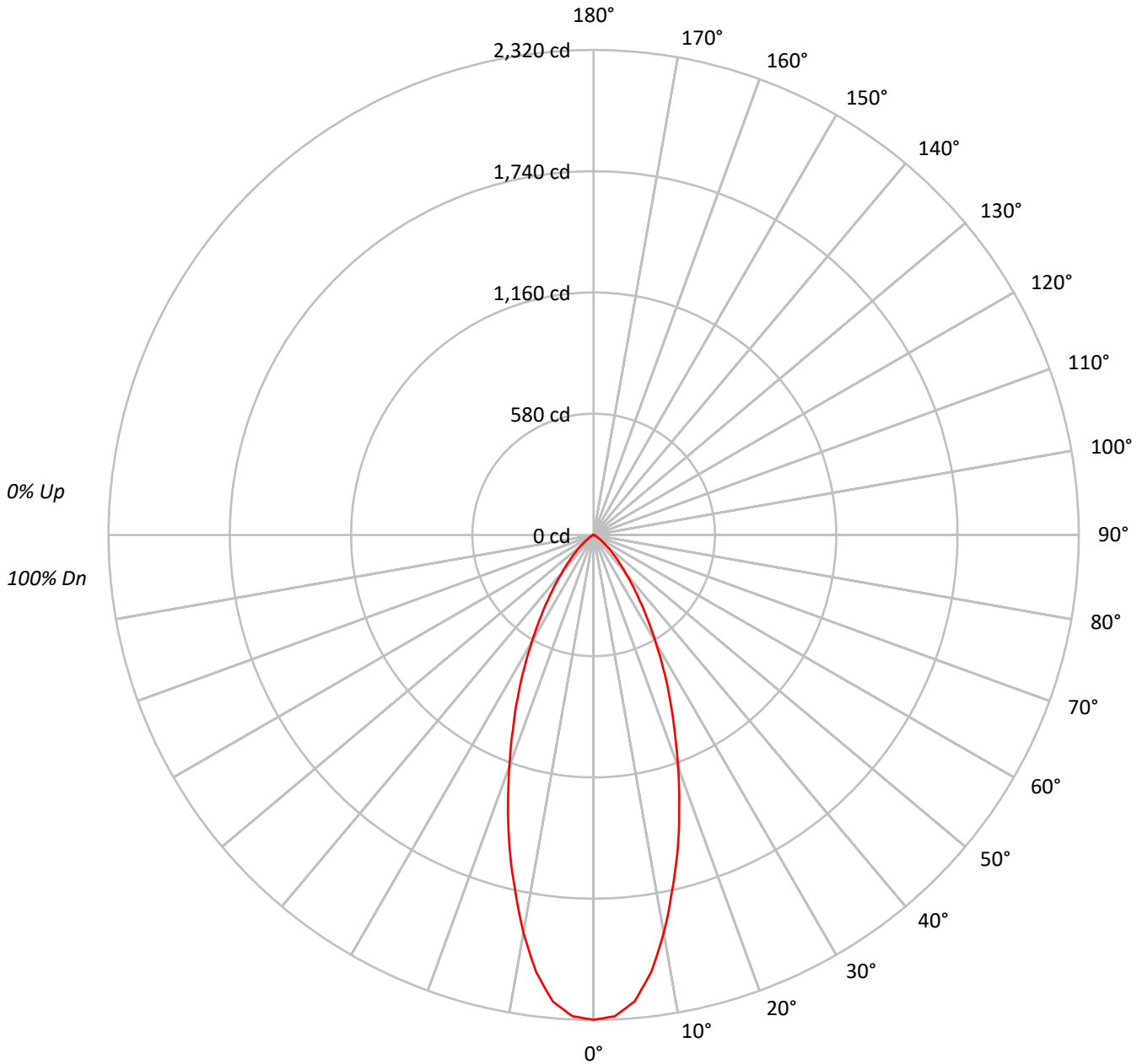
Input Watts (W): 13.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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 | 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 | 87 | 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 | 72 | 69 | 76 | 72 | 68 | 75 | 71 | 68 | 66 | | | | | | | | | | | | | | | | | | | |
| 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 | 70 | 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 | 60 | 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° | 127155 |
| 5° | 123272 |
| 10° | 107585 |
| 15° | 88230 |
| 20° | 68781 |
| 25° | 52043 |
| 30° | 37512 |
| 35° | 25719 |
| 40° | 16853 |
| 45° | 10955 |
| 50° | 6448 |
| 55° | 3555 |
| 60° | 2039 |
| 65° | 1129 |
| 70° | 593 |
| 75° | 254 |
| 80° | 379 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10955 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 203.7 | 14.2 |
| 10°-20° | 429.1 | 30.0 |
| 20°-30° | 394.4 | 27.6 |
| 30°-40° | 244.3 | 17.1 |
| 40°-50° | 111.7 | 7.8 |
| 50°-60° | 36.2 | 2.5 |
| 60°-70° | 9.4 | 0.7 |
| 70°-80° | 1.9 | 0.1 |
| 80°-90° | 0.5 | 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° | 1027.2 | 71.8 |
| 0°-40° | 1271.5 | 88.8 |
| 0°-60° | 1419.4 | 99.2 |
| 0°-90° | 1431.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1431.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2320 | |
| 5° | 2240 | 204 |
| 15° | 1555 | 429 |
| 25° | 860 | 394 |
| 35° | 384 | 244 |
| 45° | 141 | 112 |
| 55° | 37 | 36 |
| 65° | 9 | 9 |
| 75° | 1 | 2 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 2319.5 |
| 2.5° | 2304.6 |
| 5° | 2240.1 |
| 7.5° | 2107.5 |
| 10° | 1932.7 |
| 12.5° | 1736.8 |
| 15° | 1554.6 |
| 17.5° | 1361.2 |
| 20° | 1179.0 |
| 22.5° | 1010.4 |
| 25° | 860.4 |
| 27.5° | 720.3 |
| 30° | 592.6 |
| 32.5° | 481.0 |
| 35° | 384.3 |
| 37.5° | 303.7 |
| 40° | 235.5 |
| 42.5° | 183.5 |
| 45° | 141.3 |
| 47.5° | 105.4 |
| 50° | 75.6 |
| 52.5° | 53.3 |
| 55° | 37.2 |
| 57.5° | 26.0 |
| 60° | 18.6 |
| 62.5° | 13.6 |
| 65° | 8.7 |
| 67.5° | 5.0 |
| 70° | 3.7 |
| 72.5° | 2.5 |
| 75° | 1.2 |
| 77.5° | 1.2 |
| 80° | 1.2 |
| 82.5° | 1.2 |
| 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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