

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: P640353

Luminaire Tested: ML5609LSNFL25D2W1E - 593BB - 900LM - 2700K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P640353
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-6)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5609LSNFL25D2W1E - 593BB - 900LM - 2700K
Description: ML56 RR, 25D TIR OPTIC, 5" BLACK BAFFLE TRIM
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

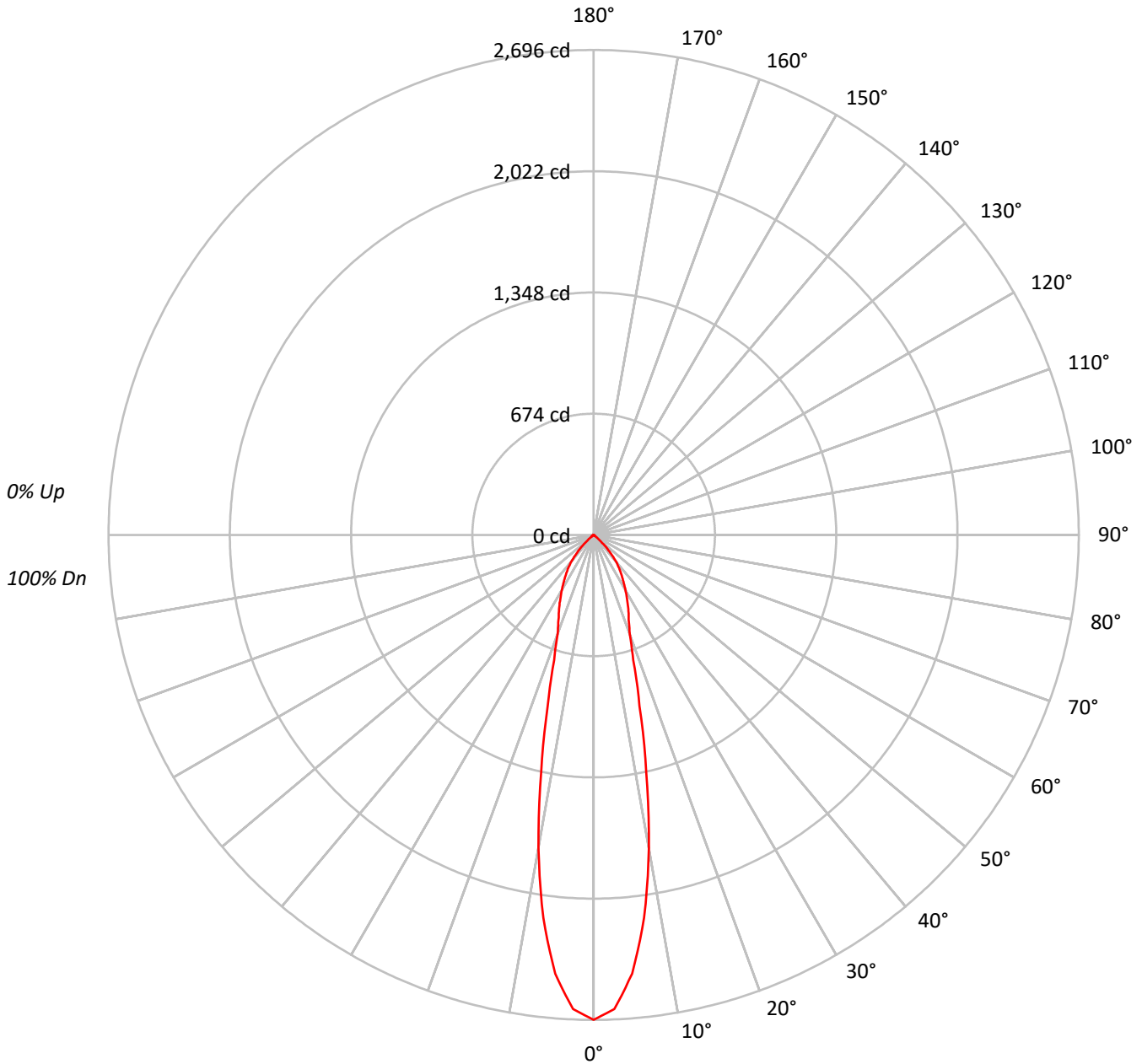
Lumens per Lamp: N/A
Luminaire Lumens: 961.3 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 0.42 / 0.42 / 0.43
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

Input Watts (W): 11.8
Input Voltage (V): NR
Input Current (Ain): 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 | 112 | 109 | 107 | 105 | 105 | 104 | 102 | 102 | 100 | 99 | 98 | 97 | 96 | 94 | | | |
| 2 | 109 | 104 | 101 | 97 | 107 | 103 | 99 | 96 | 99 | 97 | 94 | 96 | 94 | 92 | 94 | 92 | 90 | 89 | | | |
| 3 | 104 | 98 | 93 | 90 | 102 | 97 | 92 | 89 | 94 | 91 | 88 | 92 | 89 | 86 | 89 | 87 | 85 | 83 | | | |
| 4 | 99 | 92 | 87 | 83 | 98 | 91 | 86 | 83 | 89 | 85 | 82 | 87 | 84 | 81 | 85 | 82 | 80 | 79 | | | |
| 5 | 95 | 87 | 82 | 78 | 93 | 86 | 81 | 78 | 85 | 80 | 77 | 83 | 79 | 76 | 81 | 78 | 76 | 74 | | | |
| 6 | 91 | 83 | 77 | 73 | 89 | 82 | 77 | 73 | 80 | 76 | 72 | 79 | 75 | 72 | 78 | 74 | 72 | 70 | | | |
| 7 | 87 | 78 | 73 | 69 | 86 | 78 | 73 | 69 | 77 | 72 | 69 | 75 | 71 | 68 | 74 | 71 | 68 | 67 | | | |
| 8 | 83 | 75 | 69 | 66 | 82 | 74 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 63 | | | |
| 9 | 80 | 71 | 66 | 62 | 79 | 71 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | 60 | | | |
| 10 | 77 | 68 | 63 | 59 | 76 | 68 | 63 | 59 | 67 | 62 | 59 | 66 | 62 | 59 | 66 | 62 | 59 | 58 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 212809 |
| 5° | 194033 |
| 10° | 141673 |
| 15° | 80475 |
| 20° | 49043 |
| 25° | 39649 |
| 30° | 32150 |
| 35° | 25856 |
| 40° | 19878 |
| 45° | 11443 |
| 50° | 2714 |
| 55° | 1239 |
| 60° | 947 |
| 65° | 374 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11443 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 211.8 | 22.0 |
| 10°-20° | 283.0 | 29.4 |
| 20°-30° | 209.3 | 21.8 |
| 30°-40° | 168.0 | 17.5 |
| 40°-50° | 77.6 | 8.1 |
| 50°-60° | 9.6 | 1.0 |
| 60°-70° | 2.2 | 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° | 704.0 | 73.2 |
| 0°-40° | 872.0 | 90.7 |
| 0°-60° | 959.1 | 99.8 |
| 0°-90° | 961.3 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 961.3 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 2696 | |
| 5° | 2449 | 212 |
| 15° | 985 | 283 |
| 25° | 455 | 209 |
| 35° | 268 | 168 |
| 45° | 102 | 78 |
| 55° | 9 | 10 |
| 65° | 2 | 2 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|--------|
| 0° | 2695.8 |
| 2.5° | 2638.5 |
| 5° | 2448.6 |
| 7.5° | 2147.2 |
| 10° | 1767.4 |
| 12.5° | 1349.4 |
| 15° | 984.7 |
| 17.5° | 729.5 |
| 20° | 583.8 |
| 22.5° | 509.4 |
| 25° | 455.2 |
| 27.5° | 401.9 |
| 30° | 352.7 |
| 32.5° | 308.5 |
| 35° | 268.3 |
| 37.5° | 232.1 |
| 40° | 192.9 |
| 42.5° | 143.7 |
| 45° | 102.5 |
| 47.5° | 56.3 |
| 50° | 22.1 |
| 52.5° | 13.1 |
| 55° | 9.0 |
| 57.5° | 7.0 |
| 60° | 6.0 |
| 62.5° | 3.0 |
| 65° | 2.0 |
| 67.5° | 1.0 |
| 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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