

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: P885870

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1RDMB-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-126)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1RDMB-400LM-3500K
Description: 1IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

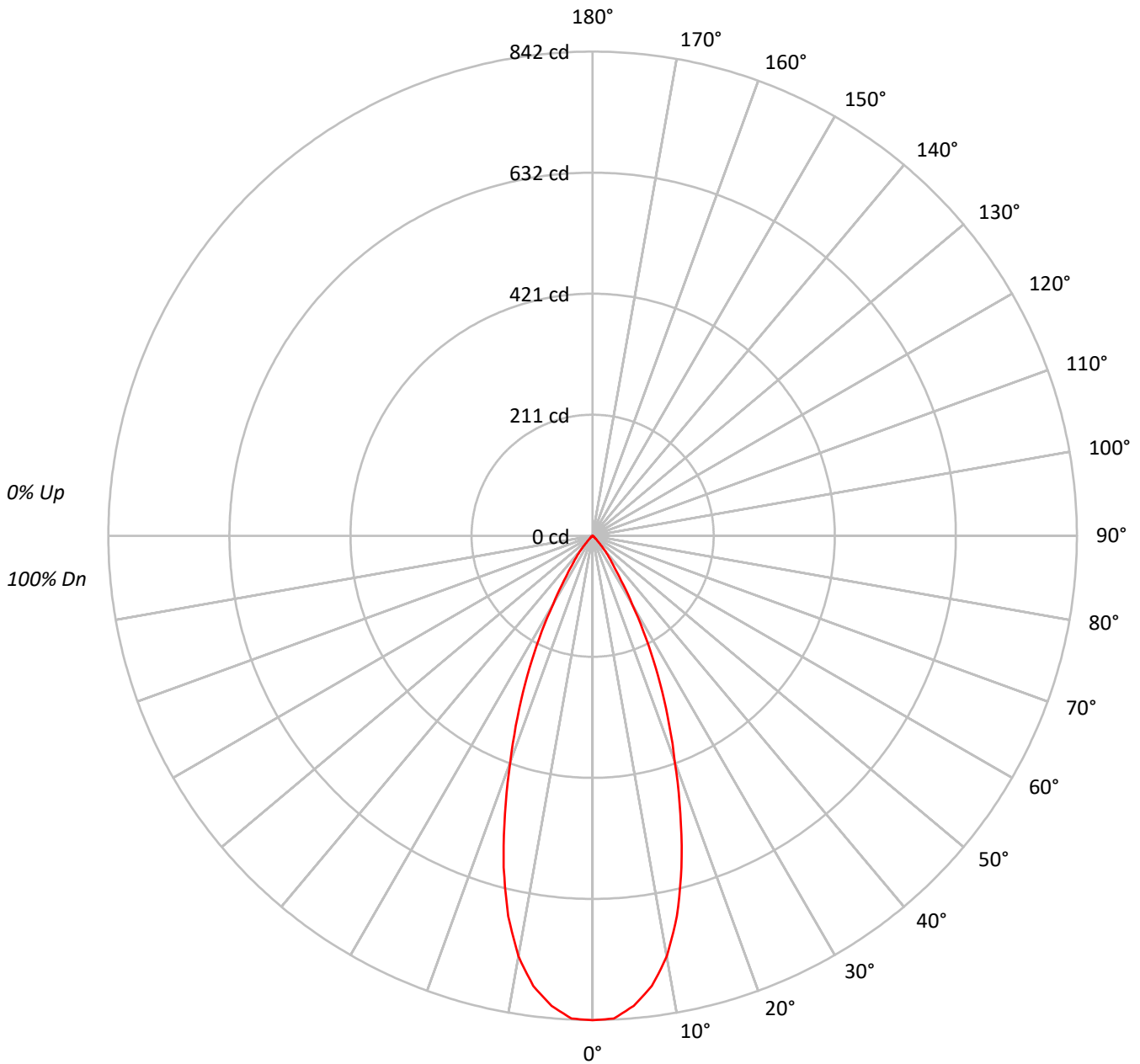
Lumens per Lamp: N/A
Luminaire Lumens: 413.6 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 0.65 / 0.65
Luminous Opening: Circular (Dia: 0.08' x H: 0')
CIE Type: Direct

Input Watts (W): 6
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 |
| RCR | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | |
| 1 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | |
| 2 | 110 | 105 | 102 | 99 | 108 | 104 | 101 | 98 | 101 | 98 | 96 | 98 | 96 | 94 | 95 | 93 | 92 | 90 | | |
| 3 | 105 | 100 | 95 | 92 | 103 | 98 | 94 | 91 | 96 | 93 | 90 | 93 | 91 | 88 | 91 | 89 | 87 | 86 | | |
| 4 | 101 | 94 | 90 | 86 | 99 | 93 | 89 | 86 | 91 | 88 | 85 | 89 | 86 | 84 | 88 | 85 | 83 | 81 | | |
| 5 | 97 | 90 | 85 | 81 | 95 | 89 | 84 | 81 | 87 | 83 | 80 | 86 | 82 | 79 | 84 | 81 | 79 | 77 | | |
| 6 | 93 | 85 | 80 | 77 | 92 | 85 | 80 | 76 | 83 | 79 | 76 | 82 | 78 | 75 | 81 | 77 | 75 | 74 | | |
| 7 | 89 | 81 | 76 | 73 | 88 | 81 | 76 | 73 | 80 | 75 | 72 | 79 | 75 | 72 | 77 | 74 | 72 | 70 | | |
| 8 | 86 | 78 | 73 | 69 | 85 | 77 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 74 | 71 | 68 | 67 | | |
| 9 | 83 | 74 | 69 | 66 | 82 | 74 | 69 | 66 | 73 | 69 | 66 | 72 | 68 | 66 | 72 | 68 | 65 | 64 | | |
| 10 | 80 | 71 | 66 | 63 | 79 | 71 | 66 | 63 | 70 | 66 | 63 | 70 | 66 | 63 | 69 | 65 | 63 | 61 | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 1662709 |
| 5° | 1625477 |
| 10° | 1487760 |
| 15° | 1220176 |
| 20° | 877673 |
| 25° | 584458 |
| 30° | 313342 |
| 35° | 151060 |
| 40° | 76515 |
| 45° | 21491 |
| 50° | 10132 |
| 55° | 3785 |
| 60° | 0 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 21491 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 75.9 | 18.4 |
| 10°-20° | 162.6 | 39.3 |
| 20°-30° | 122.0 | 29.5 |
| 30°-40° | 43.3 | 10.5 |
| 40°-50° | 8.7 | 2.1 |
| 50°-60° | 1.1 | 0.3 |
| 60°-70° | 0.0 | 0.0 |
| 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° | 360.5 | 87.2 |
| 0°-40° | 403.8 | 97.6 |
| 0°-60° | 413.6 | 100.0 |
| 0°-90° | 413.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 413.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-----|------|
| 0° | 842 | |
| 5° | 820 | 76 |
| 15° | 597 | 163 |
| 25° | 268 | 122 |
| 35° | 63 | 43 |
| 45° | 8 | 9 |
| 55° | 1 | 1 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|-------|
| 0° | 842.5 |
| 2.5° | 840.3 |
| 5° | 820.5 |
| 7.5° | 789.7 |
| 10° | 742.4 |
| 12.5° | 677.5 |
| 15° | 597.2 |
| 17.5° | 507.0 |
| 20° | 417.9 |
| 22.5° | 340.9 |
| 25° | 268.4 |
| 27.5° | 200.2 |
| 30° | 137.5 |
| 32.5° | 92.4 |
| 35° | 62.7 |
| 37.5° | 45.1 |
| 40° | 29.7 |
| 42.5° | 16.5 |
| 45° | 7.7 |
| 47.5° | 5.5 |
| 50° | 3.3 |
| 52.5° | 2.2 |
| 55° | 1.1 |
| 57.5° | 0.0 |
| 60° | 0.0 |
| 62.5° | 0.0 |
| 65° | 0.0 |
| 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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