

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: P885815

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMBB-400LM-3500K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P885815
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-123)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/18/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMBB-400LM-3500K
Description: 1IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

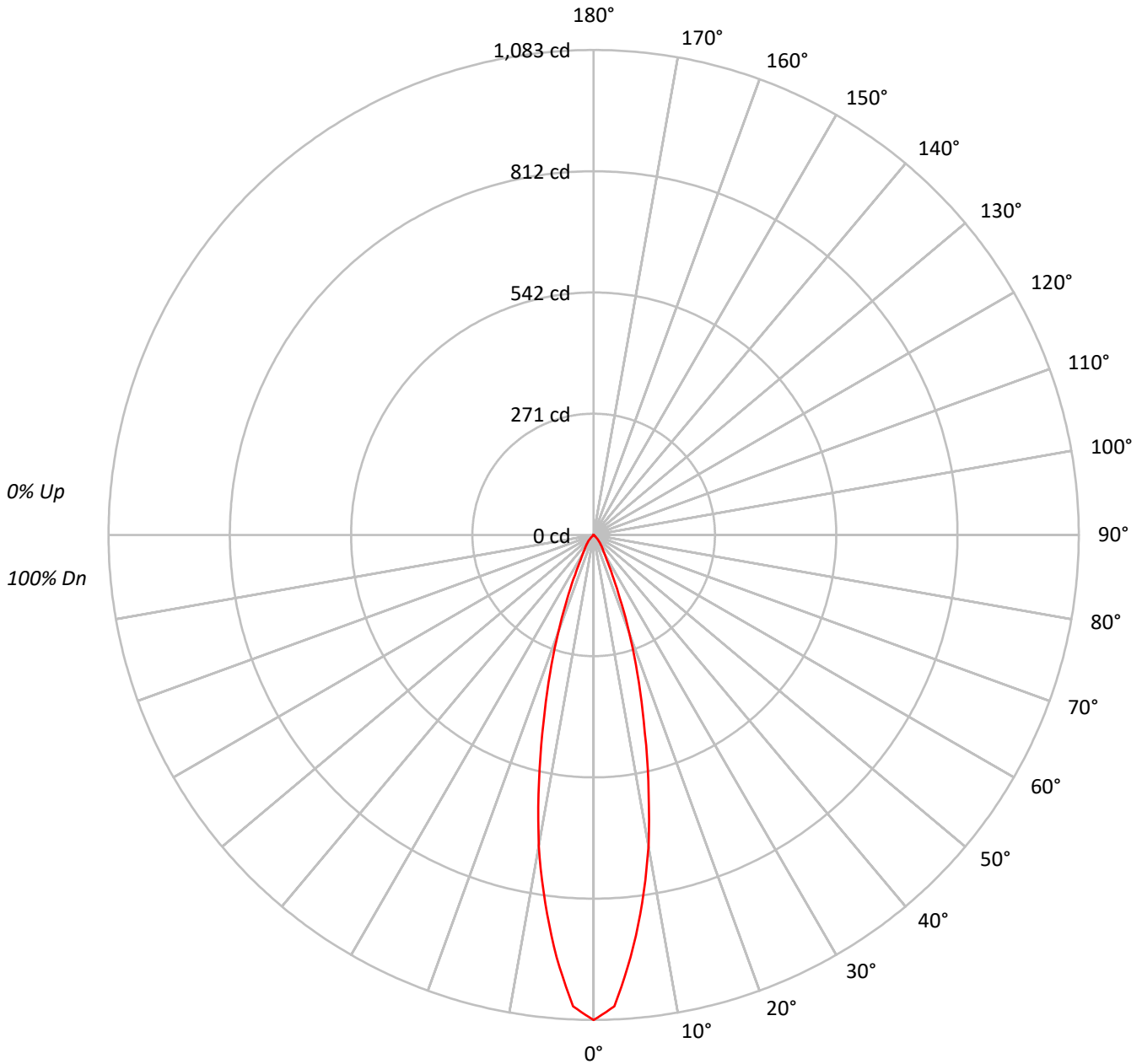
Lumens per Lamp: N/A
Luminaire Lumens: 278.9 lumens
Efficiency: N/A
Efficacy: 46.5 lumens/watt
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.45
Luminous Opening: Circular (Dia: 0.08' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P885815
CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMBB-400LM-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P885815
 CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMMB-400LM-3500K

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 | 115 | 113 | 111 | 109 | 112 | 110 | 109 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 99 | 99 | 98 | 96 | | | | | | | | | | | | | | | | | | | |
| 2 | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 | 102 | 100 | 98 | 99 | 97 | 96 | 96 | 95 | 94 | 92 | | | | | | | | | | | | | | | | | | | |
| 3 | 107 | 102 | 98 | 95 | 105 | 100 | 97 | 94 | 98 | 95 | 93 | 96 | 93 | 91 | 93 | 92 | 90 | 89 | | | | | | | | | | | | | | | | | | | |
| 4 | 103 | 97 | 93 | 90 | 101 | 96 | 92 | 89 | 94 | 91 | 88 | 92 | 90 | 87 | 91 | 88 | 86 | 85 | | | | | | | | | | | | | | | | | | | |
| 5 | 100 | 93 | 89 | 86 | 98 | 92 | 88 | 85 | 91 | 87 | 84 | 89 | 86 | 84 | 88 | 85 | 83 | 82 | | | | | | | | | | | | | | | | | | | |
| 6 | 96 | 90 | 85 | 82 | 95 | 89 | 85 | 82 | 88 | 84 | 81 | 86 | 83 | 81 | 85 | 82 | 80 | 79 | | | | | | | | | | | | | | | | | | | |
| 7 | 93 | 86 | 82 | 79 | 92 | 86 | 81 | 78 | 85 | 81 | 78 | 83 | 80 | 78 | 82 | 80 | 77 | 76 | | | | | | | | | | | | | | | | | | | |
| 8 | 90 | 83 | 79 | 76 | 89 | 83 | 78 | 76 | 82 | 78 | 75 | 81 | 77 | 75 | 80 | 77 | 75 | 74 | | | | | | | | | | | | | | | | | | | |
| 9 | 88 | 80 | 76 | 73 | 87 | 80 | 76 | 73 | 79 | 75 | 73 | 78 | 75 | 72 | 78 | 75 | 72 | 71 | | | | | | | | | | | | | | | | | | | |
| 10 | 85 | 78 | 73 | 71 | 84 | 77 | 73 | 71 | 77 | 73 | 70 | 76 | 73 | 70 | 75 | 72 | 70 | 69 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 2138135 |
| 5° | 1876083 |
| 10° | 1412811 |
| 15° | 880807 |
| 20° | 482836 |
| 25° | 213183 |
| 30° | 107790 |
| 35° | 71555 |
| 40° | 48176 |
| 45° | 15351 |
| 50° | 6755 |
| 55° | 3785 |
| 60° | 4342 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15351 cd/sqm



TEST NUMBER: P885815

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMBB-400LM-3500K

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 82.8 | 29.7 |
| 10°-20° | 119.6 | 42.9 |
| 20°-30° | 50.1 | 18.0 |
| 30°-40° | 19.2 | 6.9 |
| 40°-50° | 5.9 | 2.1 |
| 50°-60° | 1.1 | 0.4 |
| 60°-70° | 0.1 | 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° | 252.6 | 90.6 |
| 0°-40° | 271.7 | 97.5 |
| 0°-60° | 278.7 | 100.0 |
| 0°-90° | 278.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 278.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1083 | |
| 5° | 947 | 83 |
| 15° | 431 | 120 |
| 25° | 98 | 50 |
| 35° | 30 | 19 |
| 45° | 6 | 6 |
| 55° | 1 | 1 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



TEST NUMBER: P885815

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDMMB-400LM-3500K

CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1083.4 |
| 2.5° | 1053.7 |
| 5° | 947.0 |
| 7.5° | 829.3 |
| 10° | 705.0 |
| 12.5° | 563.1 |
| 15° | 431.1 |
| 17.5° | 323.4 |
| 20° | 229.9 |
| 22.5° | 152.9 |
| 25° | 97.9 |
| 27.5° | 64.9 |
| 30° | 47.3 |
| 32.5° | 37.4 |
| 35° | 29.7 |
| 37.5° | 24.2 |
| 40° | 18.7 |
| 42.5° | 13.2 |
| 45° | 5.5 |
| 47.5° | 2.2 |
| 50° | 2.2 |
| 52.5° | 1.1 |
| 55° | 1.1 |
| 57.5° | 1.1 |
| 60° | 1.1 |
| 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

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)