

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: P885975

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMWB-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885975
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-151)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMWB-400LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

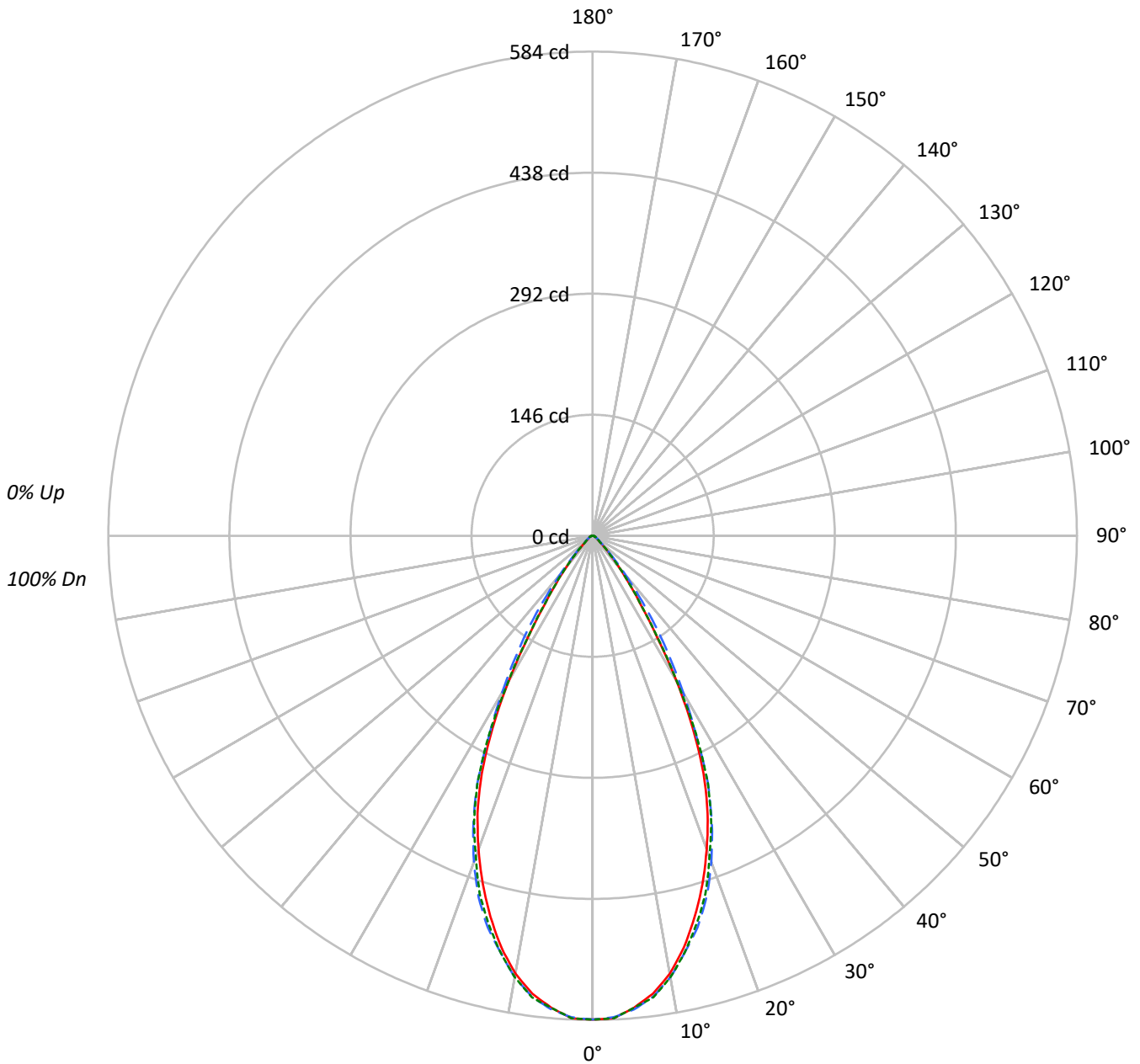
Lumens per Lamp: N/A
Luminaire Lumens: 442.5 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.83 / 0.81
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | |
| 1 | 113 | 111 | 108 | 106 | 111 | 109 | 106 | 104 | 104 | 103 | 101 | 101 | 99 | 98 | 97 | 96 | 95 | 93 | | | |
| 2 | 108 | 103 | 99 | 96 | 106 | 101 | 98 | 95 | 98 | 95 | 93 | 95 | 93 | 91 | 92 | 90 | 89 | 87 | | | |
| 3 | 103 | 96 | 91 | 87 | 101 | 95 | 90 | 87 | 92 | 88 | 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 | 69 | 75 | 71 | 68 | 67 | | | |
| 7 | 84 | 75 | 69 | 65 | 83 | 75 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 64 | 71 | 67 | 64 | 63 | | | |
| 8 | 80 | 71 | 65 | 61 | 79 | 71 | 65 | 61 | 70 | 65 | 61 | 69 | 64 | 61 | 68 | 63 | 60 | 59 | | | |
| 9 | 77 | 67 | 62 | 58 | 76 | 67 | 61 | 58 | 66 | 61 | 58 | 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° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 904434 | 904434 | 904434 |
| 5° | 889062 | 892485 | 889062 |
| 10° | 843940 | 850865 | 850865 |
| 15° | 763514 | 784696 | 777635 |
| 20° | 663426 | 690478 | 679591 |
| 25° | 541124 | 561818 | 561818 |
| 30° | 361898 | 391430 | 365836 |
| 35° | 189222 | 247502 | 191303 |
| 40° | 99956 | 122214 | 102182 |
| 45° | 50636 | 57870 | 50636 |
| 50° | 23873 | 31830 | 26525 |
| 55° | 17836 | 20808 | 17836 |
| 60° | 17050 | 17050 | 17050 |
| 65° | 16138 | 16138 | 16138 |
| 70° | 14955 | 14955 | 14955 |
| 75° | 13175 | 13175 | 13175 |
| 80° | 9819 | 9819 | 9819 |
| 85° | 19563 | 19563 | 19563 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 57870 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 53.7 | 12.1 |
| 10°-20° | 134.6 | 30.4 |
| 20°-30° | 145.2 | 32.8 |
| 30°-40° | 73.8 | 16.7 |
| 40°-50° | 20.8 | 4.7 |
| 50°-60° | 6.8 | 1.5 |
| 60°-70° | 4.2 | 1.0 |
| 70°-80° | 2.6 | 0.6 |
| 80°-90° | 0.8 | 0.2 |
| 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° | 333.5 | 75.4 |
| 0°-40° | 407.3 | 92.0 |
| 0°-60° | 434.8 | 98.3 |
| 0°-90° | 442.5 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 442.5 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 584 | 584 | 584 | 584 | 584 | |
| 5° | 571 | 574 | 574 | 574 | 571 | 53 |
| 15° | 476 | 481 | 489 | 488 | 485 | 132 |
| 25° | 316 | 321 | 328 | 328 | 328 | 141 |
| 35° | 100 | 110 | 131 | 112 | 101 | 67 |
| 45° | 23 | 24 | 26 | 24 | 23 | 19 |
| 55° | 7 | 7 | 8 | 8 | 7 | 6 |
| 65° | 4 | 4 | 4 | 4 | 4 | 4 |
| 75° | 2 | 2 | 2 | 2 | 2 | 3 |
| 85° | 1 | 1 | 1 | 1 | 1 | 1 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 583.5 | 583.5 | 583.5 | 583.5 | 583.5 |
| 2.5° | 582.4 | 581.3 | 581.3 | 582.4 | 582.4 |
| 5° | 571.4 | 573.6 | 573.6 | 573.6 | 571.4 |
| 7.5° | 557.1 | 558.2 | 560.4 | 560.4 | 561.5 |
| 10° | 536.2 | 538.4 | 540.6 | 540.6 | 540.6 |
| 12.5° | 508.7 | 510.9 | 514.2 | 515.3 | 514.2 |
| 15° | 475.8 | 481.3 | 489.0 | 487.9 | 484.6 |
| 17.5° | 440.6 | 447.2 | 457.1 | 453.8 | 452.7 |
| 20° | 402.2 | 409.8 | 418.6 | 415.3 | 412.0 |
| 22.5° | 362.6 | 369.2 | 375.8 | 375.8 | 373.6 |
| 25° | 316.4 | 320.8 | 328.5 | 328.5 | 328.5 |
| 27.5° | 261.5 | 267.0 | 269.2 | 273.6 | 270.3 |
| 30° | 202.2 | 209.9 | 218.7 | 216.5 | 204.4 |
| 32.5° | 143.9 | 156.0 | 171.4 | 160.4 | 146.1 |
| 35° | 100.0 | 109.9 | 130.8 | 112.1 | 101.1 |
| 37.5° | 71.4 | 74.7 | 91.2 | 74.7 | 72.5 |
| 40° | 49.4 | 51.6 | 60.4 | 51.6 | 50.5 |
| 42.5° | 34.1 | 36.3 | 39.6 | 36.3 | 33.0 |
| 45° | 23.1 | 24.2 | 26.4 | 24.2 | 23.1 |
| 47.5° | 14.3 | 15.4 | 17.6 | 16.5 | 15.4 |
| 50° | 9.9 | 11.0 | 13.2 | 12.1 | 11.0 |
| 52.5° | 7.7 | 8.8 | 9.9 | 8.8 | 8.8 |
| 55° | 6.6 | 6.6 | 7.7 | 7.7 | 6.6 |
| 57.5° | 5.5 | 5.5 | 6.6 | 5.5 | 5.5 |
| 60° | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| 62.5° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 65° | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 67.5° | 3.3 | 4.4 | 3.3 | 4.4 | 3.3 |
| 70° | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 72.5° | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| 75° | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 77.5° | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| 80° | 1.1 | 1.1 | 1.1 | 2.2 | 1.1 |
| 82.5° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| 85° | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 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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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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