

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: P886048

Luminaire Tested: ML104LSFLD2W1E-TIR1D55WFL-TL1SDMB-200LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P886048
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-150)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFLD2W1E-TIR1D55WFL-TL1SDMB-200LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) D2W LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 209.7 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 0.83 / 0.8
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')

CIE Type: Direct

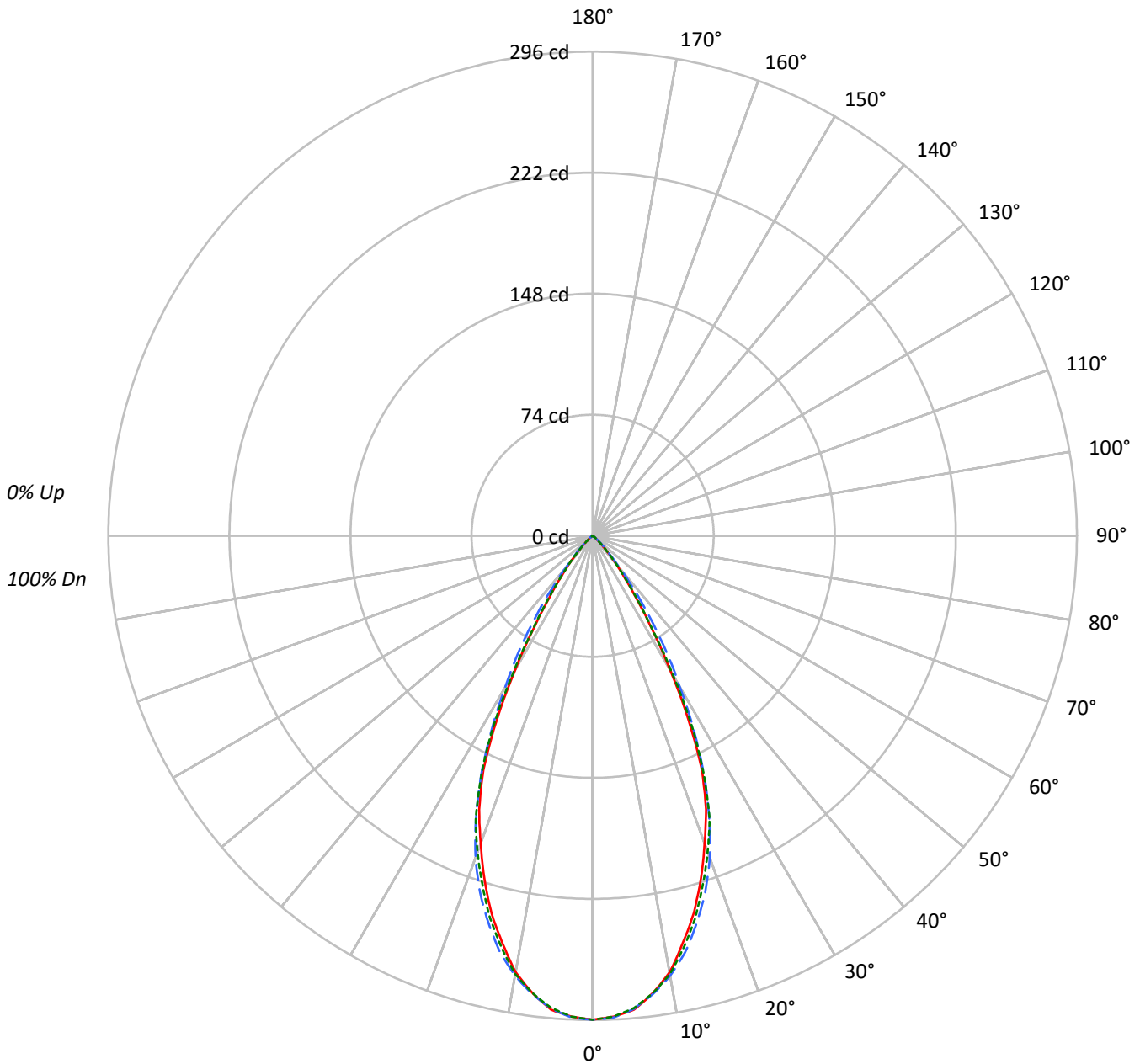
Input Watts (W): 3.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P886048

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|--|--|--|--|---|
| RF | 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 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 94 | | | | | | | | |
| 2 | 109 | 104 | 100 | 97 | 107 | 102 | 99 | 96 | 99 | 96 | 94 | 96 | 94 | 92 | 94 | 92 | 90 | 89 | | | | | | | | |
| 3 | 104 | 98 | 93 | 89 | 102 | 96 | 92 | 89 | 94 | 90 | 87 | 91 | 88 | 86 | 89 | 87 | 85 | 83 | | | | | | | | |
| 4 | 99 | 92 | 87 | 83 | 97 | 91 | 86 | 82 | 89 | 85 | 81 | 87 | 83 | 80 | 85 | 82 | 79 | 78 | | | | | | | | |
| 5 | 94 | 87 | 81 | 77 | 93 | 86 | 81 | 77 | 84 | 79 | 76 | 82 | 78 | 75 | 81 | 77 | 75 | 73 | | | | | | | | |
| 6 | 90 | 82 | 76 | 72 | 89 | 81 | 76 | 72 | 79 | 75 | 71 | 78 | 74 | 71 | 77 | 73 | 70 | 69 | | | | | | | | |
| 7 | 86 | 77 | 72 | 68 | 85 | 77 | 71 | 68 | 75 | 71 | 67 | 74 | 70 | 67 | 73 | 69 | 66 | 65 | | | | | | | | |
| 8 | 82 | 73 | 68 | 64 | 81 | 73 | 67 | 64 | 72 | 67 | 63 | 71 | 66 | 63 | 70 | 66 | 63 | 62 | | | | | | | | |
| 9 | 79 | 69 | 64 | 60 | 77 | 69 | 64 | 60 | 68 | 63 | 60 | 67 | 63 | 60 | 66 | 62 | 60 | 58 | | | | | | | | |
| 10 | 75 | 66 | 61 | 57 | 74 | 66 | 60 | 57 | 65 | 60 | 57 | 64 | 60 | 57 | 63 | 59 | 56 | 55 | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 458650 | 458650 | 458650 |
| 5° | 452622 | 451689 | 450911 |
| 10° | 426534 | 429997 | 428266 |
| 15° | 383201 | 393953 | 388497 |
| 20° | 329899 | 345404 | 339136 |
| 25° | 270049 | 275693 | 274838 |
| 30° | 169673 | 190435 | 175580 |
| 35° | 87042 | 115425 | 90259 |
| 40° | 43705 | 52608 | 43705 |
| 45° | 18194 | 21921 | 18194 |
| 50° | 5305 | 7958 | 6752 |
| 55° | 1621 | 2973 | 1621 |
| 60° | 0 | 0 | 0 |
| 65° | 0 | 0 | 0 |
| 70° | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 21921 cd/sqm



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 27.1 | 12.9 |
| 10°-20° | 67.5 | 32.2 |
| 20°-30° | 71.7 | 34.2 |
| 30°-40° | 34.5 | 16.5 |
| 40°-50° | 8.0 | 3.8 |
| 50°-60° | 0.9 | 0.4 |
| 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° | 166.3 | 79.3 |
| 0°-40° | 200.9 | 95.8 |
| 0°-60° | 209.7 | 100.0 |
| 0°-90° | 209.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 209.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 296 | 296 | 296 | 296 | 296 | |
| 5° | 291 | 290 | 290 | 290 | 290 | 27 |
| 15° | 239 | 242 | 246 | 244 | 242 | 66 |
| 25° | 158 | 159 | 161 | 165 | 161 | 70 |
| 35° | 46 | 50 | 61 | 51 | 48 | 31 |
| 45° | 8 | 9 | 10 | 9 | 8 | 7 |
| 55° | 1 | 1 | 1 | 1 | 1 | 1 |
| 65° | 0 | 0 | 0 | 0 | 0 | 0 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 295.9 | 295.9 | 295.9 | 295.9 | 295.9 |
| 2.5° | 294.2 | 294.2 | 294.8 | 294.8 | 294.2 |
| 5° | 290.9 | 290.3 | 290.3 | 290.3 | 289.8 |
| 7.5° | 282.0 | 282.0 | 282.6 | 283.1 | 282.0 |
| 10° | 271.0 | 271.5 | 273.2 | 272.1 | 272.1 |
| 12.5° | 254.9 | 257.1 | 261.0 | 259.9 | 257.7 |
| 15° | 238.8 | 242.1 | 245.5 | 244.4 | 242.1 |
| 17.5° | 220.0 | 223.9 | 228.8 | 226.6 | 223.9 |
| 20° | 200.0 | 203.4 | 209.4 | 207.2 | 205.6 |
| 22.5° | 181.2 | 182.9 | 186.2 | 186.2 | 186.7 |
| 25° | 157.9 | 159.0 | 161.2 | 164.6 | 160.7 |
| 27.5° | 126.9 | 130.8 | 133.5 | 134.6 | 131.9 |
| 30° | 94.8 | 100.8 | 106.4 | 104.7 | 98.1 |
| 32.5° | 67.0 | 73.7 | 83.7 | 76.5 | 68.2 |
| 35° | 46.0 | 50.4 | 61.0 | 51.0 | 47.7 |
| 37.5° | 31.6 | 34.4 | 41.6 | 34.4 | 32.7 |
| 40° | 21.6 | 23.3 | 26.0 | 23.3 | 21.6 |
| 42.5° | 13.9 | 15.0 | 16.1 | 15.0 | 13.9 |
| 45° | 8.3 | 8.9 | 10.0 | 8.9 | 8.3 |
| 47.5° | 4.4 | 5.0 | 5.5 | 5.0 | 4.4 |
| 50° | 2.2 | 2.8 | 3.3 | 2.8 | 2.8 |
| 52.5° | 1.1 | 1.7 | 1.7 | 1.7 | 1.7 |
| 55° | 0.6 | 0.6 | 1.1 | 0.6 | 0.6 |
| 57.5° | 0.0 | 0.0 | 0.6 | 0.6 | 0.0 |
| 60° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 62.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 65° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 67.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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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