

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: P885904

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-147)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 410.2 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.68
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

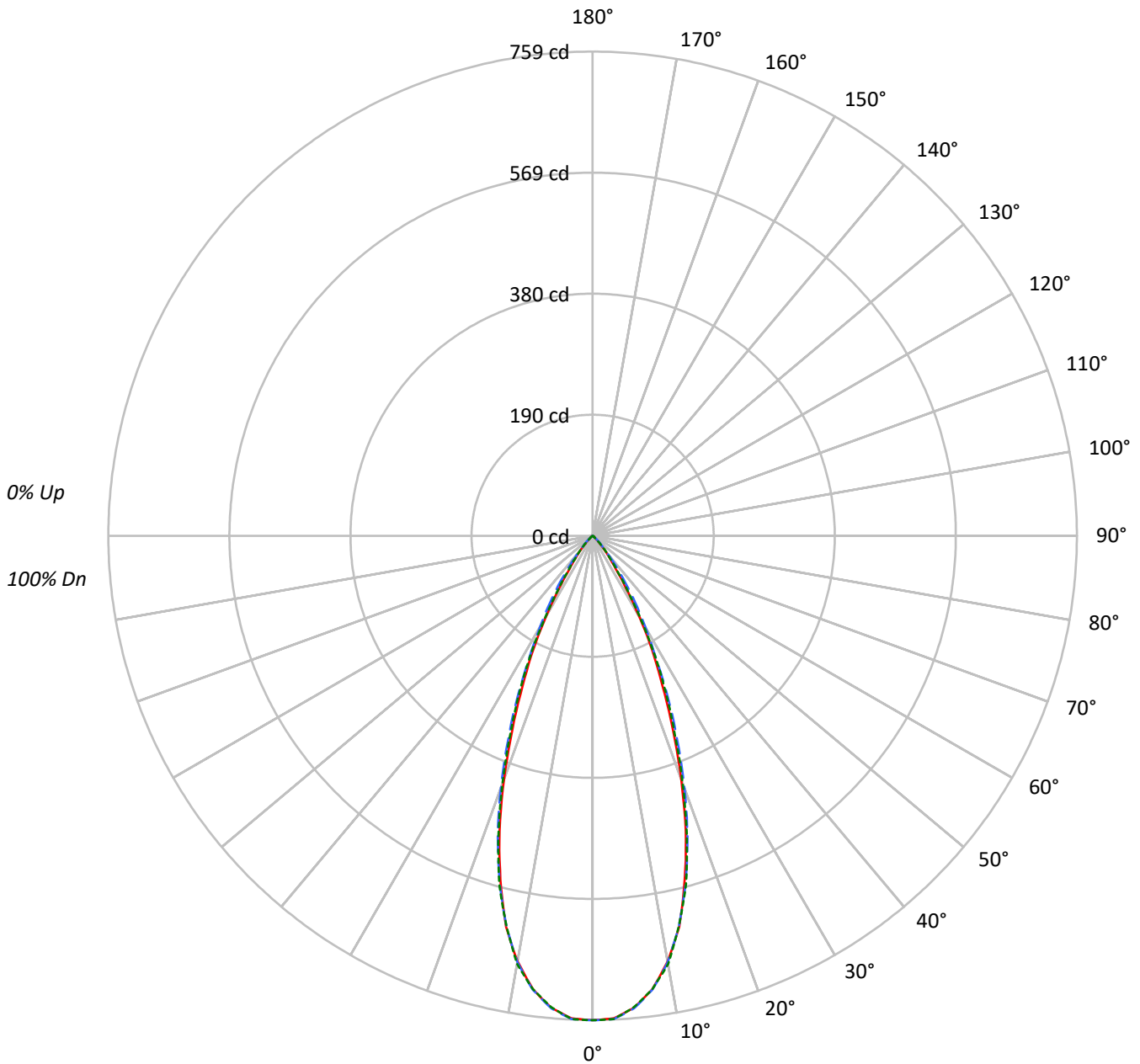
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P885904

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P885904

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K

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	50	30	10	0													
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100						100													
1	114	112	109	107	112	110	108	106	106	104	103	102	101	99	98	97	97	95						95													
2	109	105	101	98	107	103	100	97	100	98	95	97	95	93	95	93	91	90						90													
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85						85													
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80						80													
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76						76													
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72						72													
7	88	80	75	71	87	80	75	71	78	74	71	77	73	70	76	73	70	69						69													
8	85	77	71	68	84	76	71	68	75	70	67	74	70	67	73	69	67	66						66													
9	81	73	68	64	80	73	68	64	72	67	64	71	67	64	70	66	64	63						63													
10	78	70	65	61	77	69	65	61	69	64	61	68	64	61	67	64	61	60						60													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1177082	1177082	1177082
5°	1155750	1157306	1154194
10°	1066179	1067753	1072632
15°	895259	903604	906974
20°	668374	693942	680251
25°	442443	476135	463650
30°	260238	293707	269545
35°	117885	167083	127725
40°	58881	71426	63130
45°	20386	34196	20386
50°	7475	12539	7475
55°	2702	2702	2702
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: 34196 cd/sqm



TEST NUMBER: P885904

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	16.8
10°-20°	154.0	37.5
20°-30°	124.6	30.4
30°-40°	50.6	12.3
40°-50°	10.9	2.7
50°-60°	1.2	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°	347.5	84.7
0°-40°	398.1	97.1
0°-60°	410.2	100.0
0°-90°	410.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	410.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	759	759	759	759	759	
5°	743	743	744	742	742	69
15°	558	562	563	561	565	153
25°	259	267	278	271	271	120
35°	62	73	88	76	68	44
45°	9	11	16	12	9	9
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	



TEST NUMBER: P885904

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMBB-400LM-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	759.4	759.4	759.4	759.4	759.4
2.5°	757.3	757.3	758.4	757.3	758.4
5°	742.8	742.8	743.8	741.8	741.8
7.5°	716.8	716.8	717.9	717.9	716.8
10°	677.4	679.4	678.4	680.5	681.5
12.5°	627.5	626.4	625.4	627.5	625.4
15°	557.9	562.0	563.1	561.0	565.2
17.5°	485.2	488.3	494.5	494.5	490.4
20°	405.2	415.6	420.7	416.6	412.4
22.5°	328.3	336.6	345.9	342.8	336.6
25°	258.7	267.0	278.4	271.1	271.1
27.5°	201.5	208.8	213.0	215.0	210.9
30°	145.4	155.8	164.1	161.0	150.6
32.5°	96.6	108.0	123.6	114.3	101.8
35°	62.3	72.7	88.3	75.8	67.5
37.5°	42.6	47.8	59.2	49.9	45.7
40°	29.1	33.2	35.3	33.2	31.2
42.5°	17.7	20.8	22.9	21.8	18.7
45°	9.3	11.4	15.6	12.5	9.3
47.5°	4.2	6.2	9.3	6.2	4.2
50°	3.1	3.1	5.2	3.1	3.1
52.5°	2.1	2.1	2.1	2.1	2.1
55°	1.0	1.0	1.0	1.0	1.0
57.5°	0.0	0.0	1.0	1.0	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

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

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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)