

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: P885908

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K

Issue Date: 6/19/2024

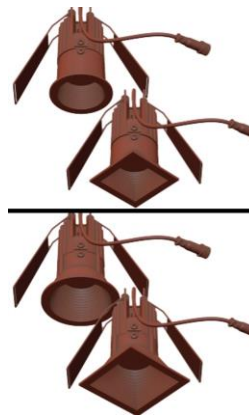
Test Information

Test Method: LM-79-2019
Report Number: P885908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-142)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 416.4 lumens
Efficiency: N/A
Efficacy: 69.4 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

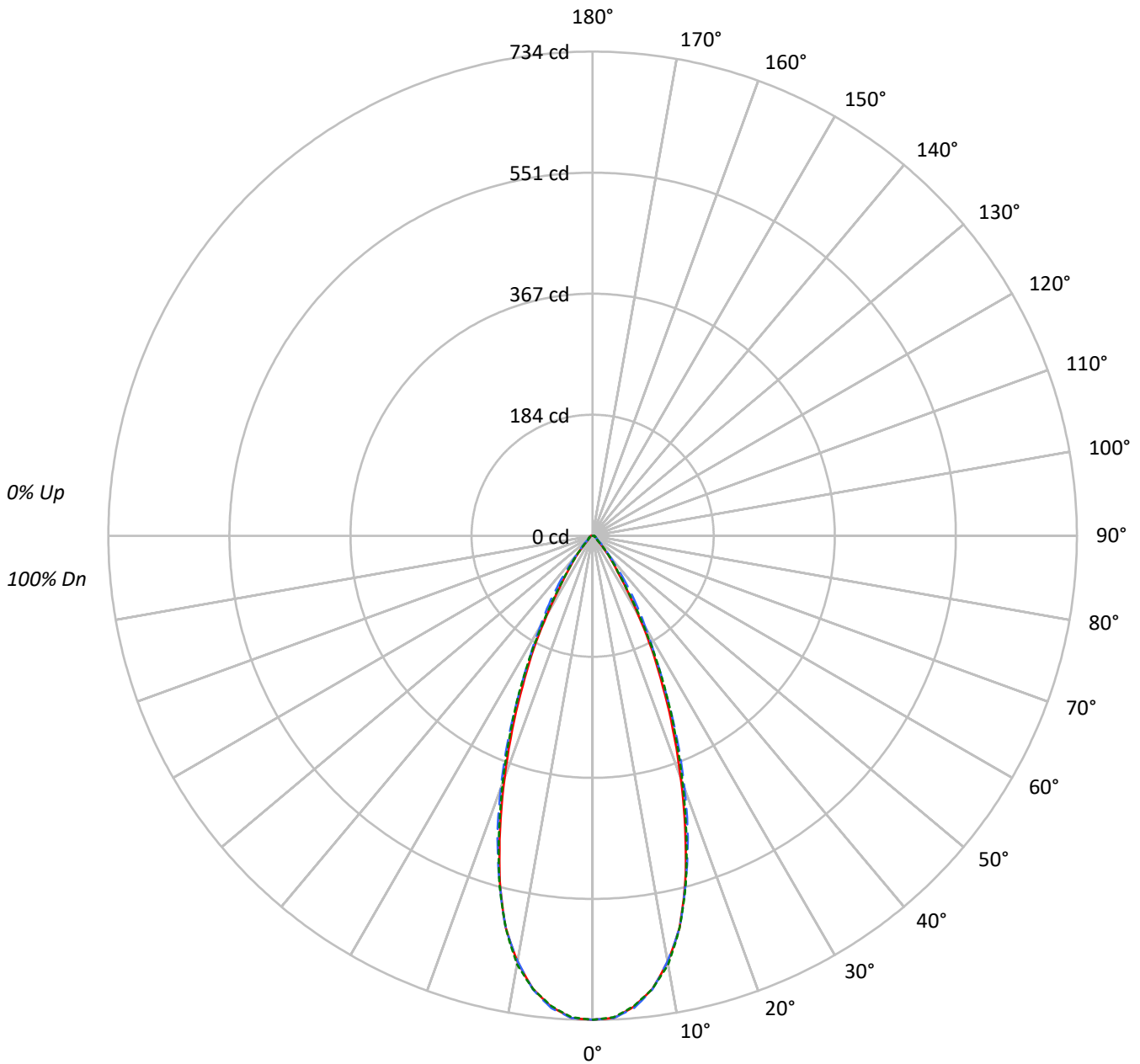
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P885908

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P885908

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K

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	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	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94
2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88
3	103	97	93	89	102	96	92	88	93	90	87	91	88	86	89	86	84	83
4	99	92	87	83	97	91	86	82	89	84	81	87	83	80	85	82	79	78
5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74
6	90	82	77	73	89	81	76	72	80	75	72	79	75	71	77	74	71	70
7	87	78	73	69	85	77	72	68	76	72	68	75	71	68	74	70	67	66
8	83	74	69	65	82	74	69	65	73	68	65	72	67	64	71	67	64	63
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60
10	76	68	62	59	76	67	62	59	66	62	59	66	61	58	65	61	58	57

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1137247	1137247	1137247
5°	1115140	1118252	1113584
10°	1032182	1030608	1038477
15°	871028	874238	875842
20°	643137	671179	656333
25°	429103	449626	451336
30°	246993	284400	261132
35°	121102	168408	126779
40°	66772	78913	70819
45°	28497	43841	28497
50°	21703	24114	21703
55°	18917	18917	18917
60°	18600	18600	18600
65°	18338	18338	18338
70°	18128	18128	18128
75°	17966	17966	17966
80°	17852	17852	17852
85°	17784	17784	17784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43841 cd/sqm



TEST NUMBER: P885908

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	16.0
10°-20°	148.9	35.8
20°-30°	120.2	28.9
30°-40°	50.4	12.1
40°-50°	14.5	3.5
50°-60°	6.4	1.5
60°-70°	4.9	1.2
70°-80°	3.4	0.8
80°-90°	1.0	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°	335.7	80.6
0°-40°	386.1	92.7
0°-60°	407.0	97.7
0°-90°	416.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	416.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	717	717	719	718	716	67
15°	543	541	545	543	546	148
25°	251	259	263	264	264	115
35°	64	71	89	73	67	44
45°	13	16	20	17	13	13
55°	7	7	7	7	7	6
65°	5	5	5	5	5	5
75°	3	3	3	3	3	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P885908

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D40FL-TL1SDMW-400LM-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.7	733.7	733.7	733.7	733.7
2.5°	731.7	731.7	731.7	732.7	730.7
5°	716.7	716.7	718.7	717.7	715.7
7.5°	692.8	692.8	693.8	693.8	692.8
10°	655.8	656.8	654.8	657.8	659.8
12.5°	608.8	607.8	608.8	609.8	608.8
15°	542.8	540.8	544.8	542.8	545.8
17.5°	466.8	473.8	479.8	475.8	471.8
20°	389.9	395.9	406.9	401.9	397.9
22.5°	317.9	325.9	334.9	332.9	327.9
25°	250.9	258.9	262.9	263.9	263.9
27.5°	193.9	200.9	203.9	207.9	201.9
30°	138.0	147.9	158.9	157.9	145.9
32.5°	94.0	104.0	123.0	111.0	98.0
35°	64.0	71.0	89.0	73.0	67.0
37.5°	47.0	51.0	59.0	52.0	49.0
40°	33.0	36.0	39.0	38.0	35.0
42.5°	22.0	25.0	28.0	26.0	22.0
45°	13.0	16.0	20.0	17.0	13.0
47.5°	10.0	11.0	15.0	11.0	10.0
50°	9.0	9.0	10.0	9.0	9.0
52.5°	8.0	8.0	8.0	8.0	8.0
55°	7.0	7.0	7.0	7.0	7.0
57.5°	6.0	6.0	6.0	6.0	6.0
60°	6.0	6.0	6.0	6.0	6.0
62.5°	5.0	5.0	5.0	5.0	5.0
65°	5.0	5.0	5.0	5.0	5.0
67.5°	4.0	5.0	5.0	5.0	5.0
70°	4.0	4.0	4.0	4.0	4.0
72.5°	4.0	4.0	4.0	4.0	4.0
75°	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	3.0	3.0
80°	2.0	2.0	2.0	2.0	2.0
82.5°	2.0	2.0	1.0	2.0	2.0
85°	1.0	1.0	1.0	1.0	1.0
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)