

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: P886738

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

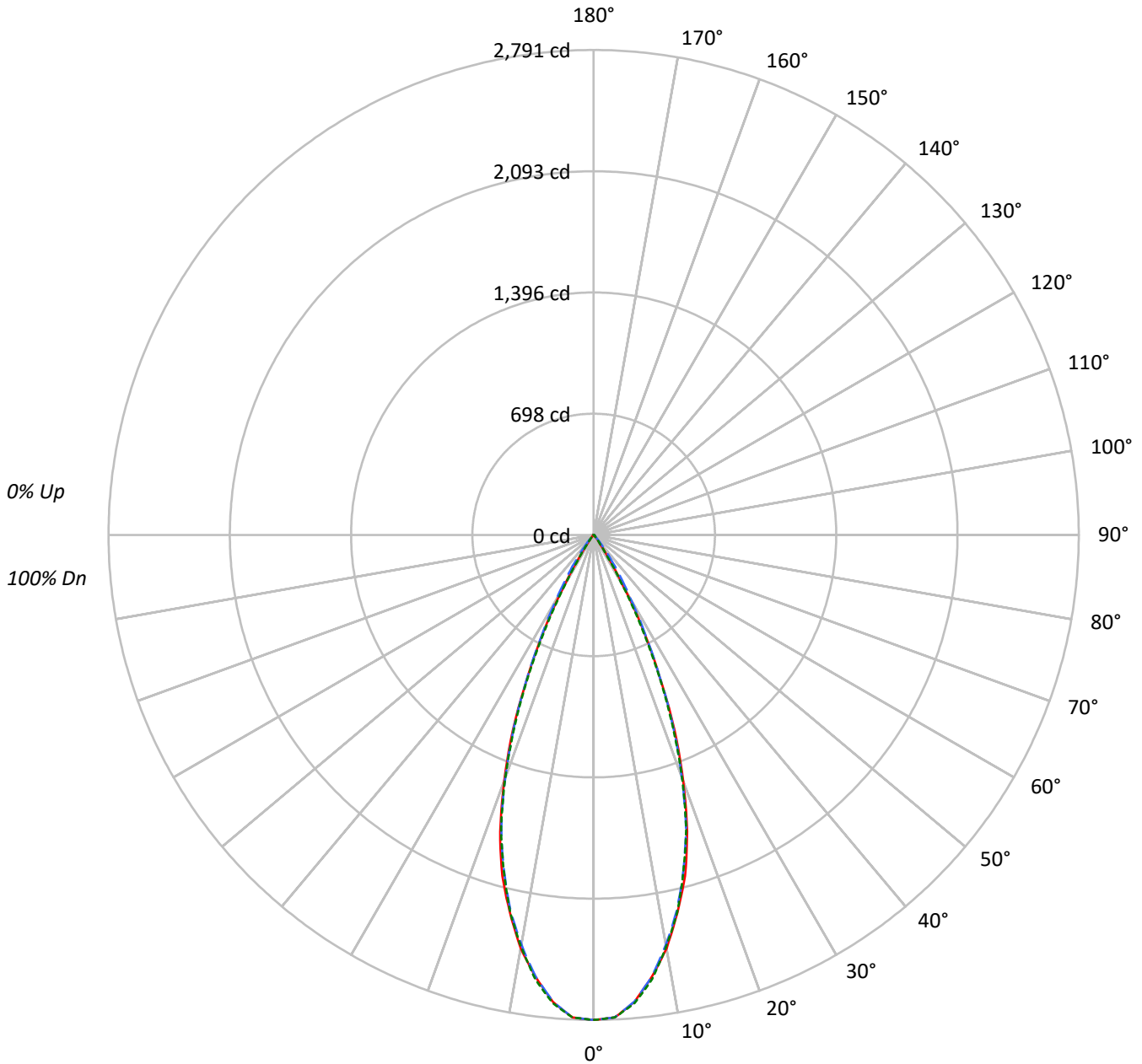
Lumens per Lamp: N/A
Luminaire Lumens: 1315.1 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): 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: P886738
CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P886738

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20				
RC	80					70					50					30				
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	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95		
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91		
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86		
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82		
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78		
6	94	86	81	78	92	86	81	78	84	80	77	83	79	77	82	79	76	75		
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72		
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69		
9	84	76	71	68	83	75	71	68	74	70	67	74	70	67	73	69	67	66		
10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	480691	480691	480691
5°	466224	465861	467659
10°	422526	418714	420533
15°	362248	355972	356150
20°	275903	272109	272677
25°	169713	170302	166558
30°	69026	84677	63040
35°	14822	37466	14149
40°	4901	12118	5126
45°	2265	4287	2265
50°	1661	2224	1661
55°	1561	1862	1561
60°	1412	1791	1412
65°	1263	1671	1671
70°	1561	1561	1561
75°	1397	1397	1397
80°	992	992	2083
85°	1976	1976	1976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 4287 cd/sqm



TEST NUMBER: P886738

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.9	18.9
10°-20°	550.3	41.8
20°-30°	406.4	30.9
30°-40°	87.4	6.6
40°-50°	11.2	0.9
50°-60°	5.0	0.4
60°-70°	3.8	0.3
70°-80°	2.4	0.2
80°-90°	0.7	0.1
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°	1204.6	91.6
0°-40°	1292.0	98.2
0°-60°	1308.2	99.5
0°-90°	1315.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1315.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2791	2791	2791	2791	2791	
5°	2697	2695	2695	2694	2705	248
15°	2032	2013	1996	2003	1998	555
25°	893	904	896	892	876	407
35°	70	102	178	90	67	68
45°	9	10	18	10	9	8
55°	5	5	6	5	5	5
65°	3	4	4	4	4	3
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P886738

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2791.1	2791.1	2791.1	2791.1	2791.1
2.5°	2779.7	2778.7	2779.7	2780.7	2779.7
5°	2696.8	2694.7	2694.7	2693.7	2705.1
7.5°	2564.2	2565.2	2563.2	2570.4	2577.7
10°	2416.1	2397.4	2394.3	2407.8	2404.7
12.5°	2225.4	2226.5	2210.9	2215.1	2222.3
15°	2031.7	2013.0	1996.5	2002.7	1997.5
17.5°	1789.2	1779.9	1766.5	1767.5	1770.6
20°	1505.4	1507.4	1484.7	1492.9	1487.8
22.5°	1216.3	1201.8	1196.6	1187.3	1182.1
25°	893.1	904.5	896.2	892.0	876.5
27.5°	621.6	623.7	634.1	612.3	579.1
30°	347.1	386.4	425.8	366.8	317.0
32.5°	166.8	207.2	283.9	191.7	147.1
35°	70.5	101.5	178.2	90.1	67.3
37.5°	37.3	48.7	99.5	45.6	35.2
40°	21.8	26.9	53.9	26.9	22.8
42.5°	12.4	16.6	30.0	16.6	13.5
45°	9.3	10.4	17.6	10.4	9.3
47.5°	7.3	8.3	10.4	8.3	7.3
50°	6.2	6.2	8.3	6.2	6.2
52.5°	5.2	6.2	6.2	6.2	6.2
55°	5.2	5.2	6.2	5.2	5.2
57.5°	5.2	5.2	5.2	5.2	5.2
60°	4.1	4.1	5.2	5.2	4.1
62.5°	4.1	4.1	4.1	4.1	4.1
65°	3.1	4.1	4.1	4.1	4.1
67.5°	3.1	3.1	4.1	3.1	3.1
70°	3.1	3.1	3.1	3.1	3.1
72.5°	2.1	2.1	3.1	3.1	3.1
75°	2.1	2.1	2.1	2.1	2.1
77.5°	1.0	2.1	2.1	2.1	2.1
80°	1.0	1.0	1.0	2.1	2.1
82.5°	1.0	1.0	1.0	1.0	1.0
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)