

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: P886740

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886740
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-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1402.0 lumens
Efficiency: N/A
Efficacy: 101.6 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

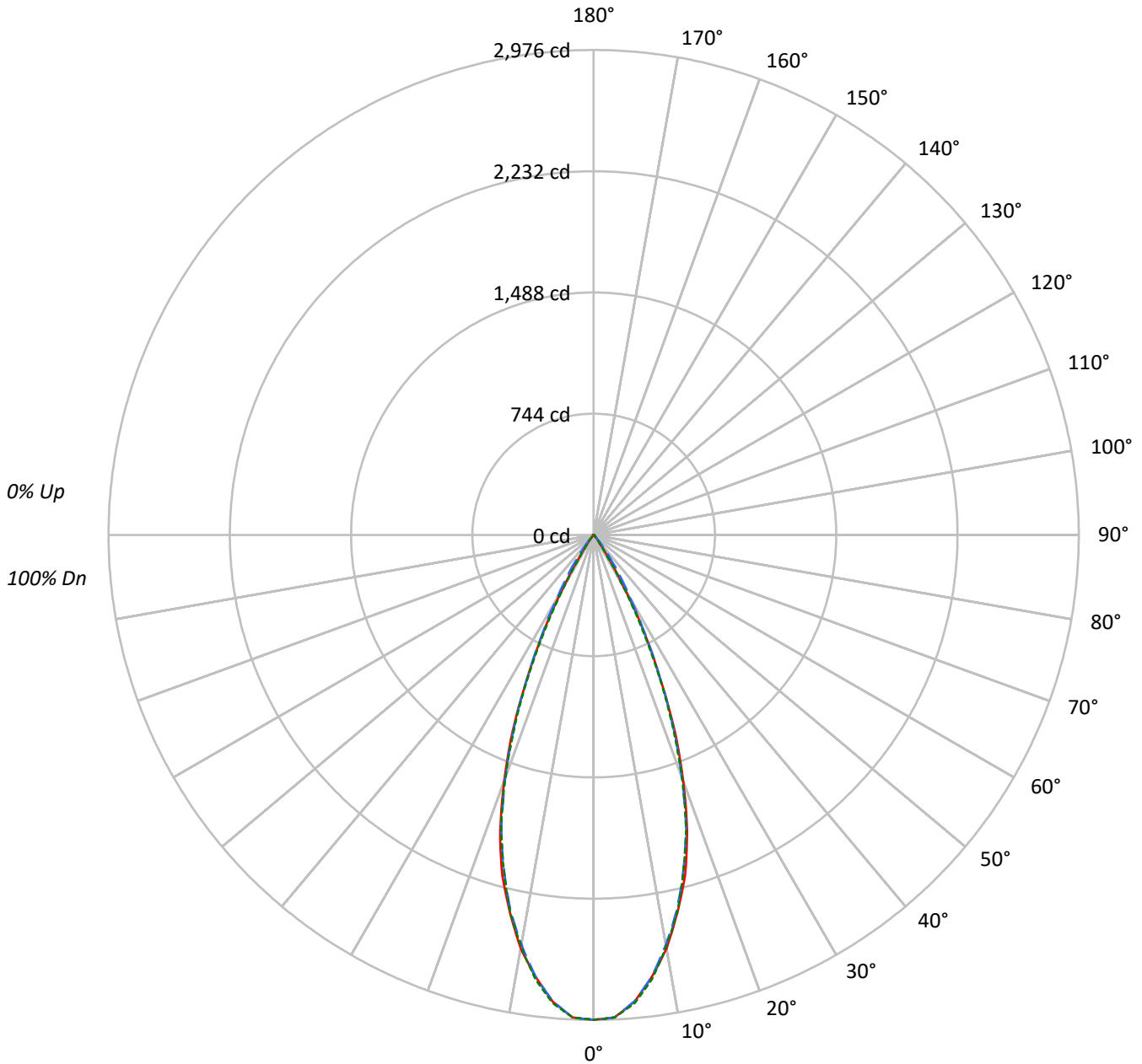
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P886740

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P886740

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-4000K

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	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°	512466	512466	512466
5°	497049	496668	498570
10°	450454	446397	448321
15°	386193	379489	379686
20°	294139	290088	290693
25°	180924	181551	177561
30°	73580	90285	67217
35°	15789	39947	15096
40°	5216	12905	5463
45°	2411	4579	2411
50°	1768	2358	1768
55°	1651	1982	1651
60°	1516	1894	1516
65°	1345	1793	1793
70°	1662	1662	1662
75°	1464	1464	1464
80°	1091	1091	2182
85°	2174	2174	2174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 4579 cd/sqm



TEST NUMBER: P886740

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.3	18.9
10°-20°	586.6	41.8
20°-30°	433.3	30.9
30°-40°	93.2	6.6
40°-50°	11.9	0.9
50°-60°	5.3	0.4
60°-70°	4.1	0.3
70°-80°	2.5	0.2
80°-90°	0.8	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°	1284.2	91.6
0°-40°	1377.4	98.2
0°-60°	1394.6	99.5
0°-90°	1402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1402.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2976	2976	2976	2976	2976	
5°	2875	2873	2873	2872	2884	265
15°	2166	2146	2128	2135	2130	591
25°	952	964	955	951	934	434
35°	75	108	190	96	72	73
45°	10	11	19	11	10	9
55°	6	6	7	6	6	5
65°	3	4	4	4	4	4
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P886740

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2975.6	2975.6	2975.6	2975.6	2975.6
2.5°	2963.4	2962.3	2963.4	2964.5	2963.4
5°	2875.1	2872.9	2872.9	2871.8	2883.9
7.5°	2733.7	2734.8	2732.6	2740.3	2748.1
10°	2575.8	2555.9	2552.6	2566.9	2563.6
12.5°	2372.5	2373.6	2357.1	2361.5	2369.2
15°	2166.0	2146.1	2128.4	2135.0	2129.5
17.5°	1907.5	1897.6	1883.2	1884.3	1887.6
20°	1604.9	1607.1	1582.8	1591.6	1586.1
22.5°	1296.7	1281.2	1275.7	1265.8	1260.3
25°	952.1	964.2	955.4	951.0	934.4
27.5°	662.7	664.9	676.0	652.8	617.4
30°	370.0	412.0	454.0	391.0	338.0
32.5°	177.8	220.9	302.6	204.3	156.8
35°	75.1	108.2	190.0	96.1	71.8
37.5°	39.8	51.9	106.0	48.6	37.6
40°	23.2	28.7	57.4	28.7	24.3
42.5°	13.3	17.7	32.0	17.7	14.4
45°	9.9	11.0	18.8	11.0	9.9
47.5°	7.7	8.8	11.0	8.8	7.7
50°	6.6	6.6	8.8	6.6	6.6
52.5°	5.5	6.6	6.6	6.6	6.6
55°	5.5	5.5	6.6	5.5	5.5
57.5°	5.5	5.5	5.5	5.5	5.5
60°	4.4	4.4	5.5	5.5	4.4
62.5°	4.4	4.4	4.4	4.4	4.4
65°	3.3	4.4	4.4	4.4	4.4
67.5°	3.3	3.3	4.4	3.3	3.3
70°	3.3	3.3	3.3	3.3	3.3
72.5°	2.2	2.2	3.3	3.3	3.3
75°	2.2	2.2	2.2	2.2	2.2
77.5°	1.1	2.2	2.2	2.2	2.2
80°	1.1	1.1	1.1	2.2	2.2
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

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)