

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: P886730

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1350.2 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

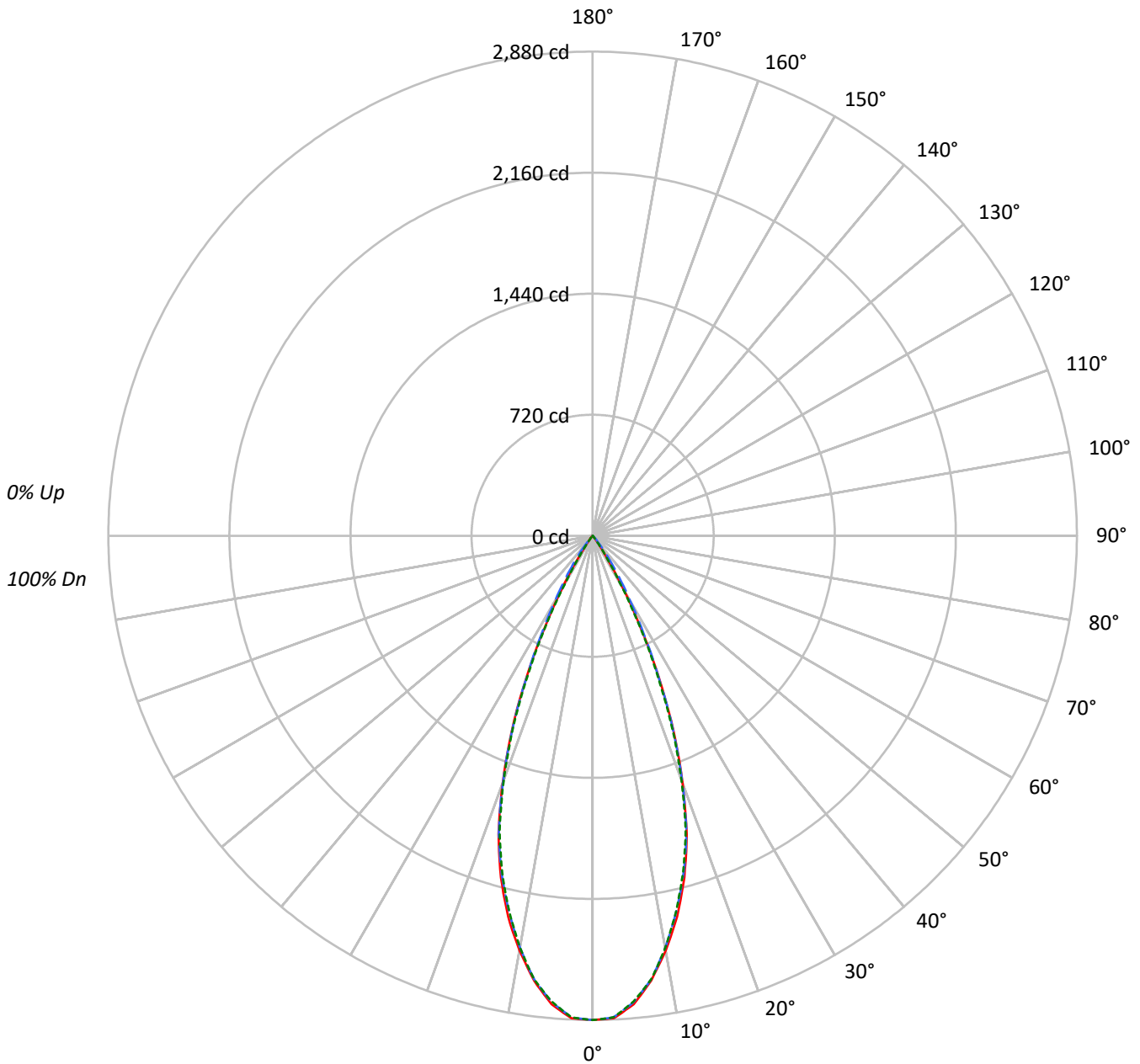
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P886730

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P886730

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-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	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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	94	96	94	93	91					91			
3	106	100	96	93	104	99	95	92	97	94	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83					83			
5	98	91	86	83	96	90	86	82	88	85	82	87	84	81	85	83	80	79					79			
6	94	87	82	79	93	86	82	78	85	81	78	84	80	77	82	79	77	76					76			
7	91	83	78	75	90	83	78	75	81	77	74	80	77	74	79	76	74	72					72			
8	87	80	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69					69			
9	84	76	72	68	83	76	71	68	75	71	68	74	71	68	74	70	68	66					66			
10	81	73	69	65	80	73	68	65	72	68	65	72	68	65	71	67	65	64					64			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	496070	496070	496070
5°	483650	481541	480971
10°	437846	435135	435135
15°	375478	371930	370164
20°	286331	285727	283087
25°	177409	176364	171746
30°	72288	88336	64154
35°	15096	38096	13708
40°	3732	11668	3732
45°	804	3239	1072
50°	295	884	295
55°	0	330	0
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: 3239 cd/sqm



TEST NUMBER: P886730

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.7	19.0
10°-20°	572.8	42.4
20°-30°	423.1	31.3
30°-40°	89.8	6.7
40°-50°	7.4	0.6
50°-60°	0.4	0.0
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°	1252.5	92.8
0°-40°	1342.3	99.4
0°-60°	1350.2	100.0
0°-90°	1350.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1350.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2880	2880	2880	2880	2880	
5°	2798	2790	2785	2784	2782	257
15°	2106	2105	2086	2079	2076	576
25°	934	939	928	927	904	421
35°	72	104	181	95	65	69
45°	3	6	13	6	4	4
55°	0	0	1	0	0	0
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: P886730

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2880.4	2880.4	2880.4	2880.4	2880.4
2.5°	2872.7	2870.5	2867.2	2867.2	2867.2
5°	2797.6	2789.8	2785.4	2784.3	2782.1
7.5°	2668.3	2659.5	2661.7	2661.7	2661.7
10°	2503.7	2492.6	2488.2	2488.2	2488.2
12.5°	2321.4	2322.5	2293.7	2293.7	2289.3
15°	2105.9	2104.8	2086.0	2079.4	2076.1
17.5°	1861.7	1860.6	1856.2	1839.6	1838.5
20°	1562.3	1567.8	1559.0	1547.9	1544.6
22.5°	1259.6	1254.0	1250.7	1250.7	1235.3
25°	933.6	939.2	928.1	927.0	903.8
27.5°	623.2	662.9	657.4	629.8	602.2
30°	363.5	408.8	444.2	379.0	322.6
32.5°	170.2	216.6	292.8	203.3	155.8
35°	71.8	103.9	181.2	95.0	65.2
37.5°	34.3	47.5	101.6	45.3	30.9
40°	16.6	23.2	51.9	23.2	16.6
42.5°	8.8	12.2	26.5	11.0	8.8
45°	3.3	5.5	13.3	5.5	4.4
47.5°	2.2	2.2	5.5	2.2	2.2
50°	1.1	1.1	3.3	1.1	1.1
52.5°	0.0	1.1	1.1	1.1	0.0
55°	0.0	0.0	1.1	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	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)