

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: P886771

Luminaire Tested: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886771
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-20)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

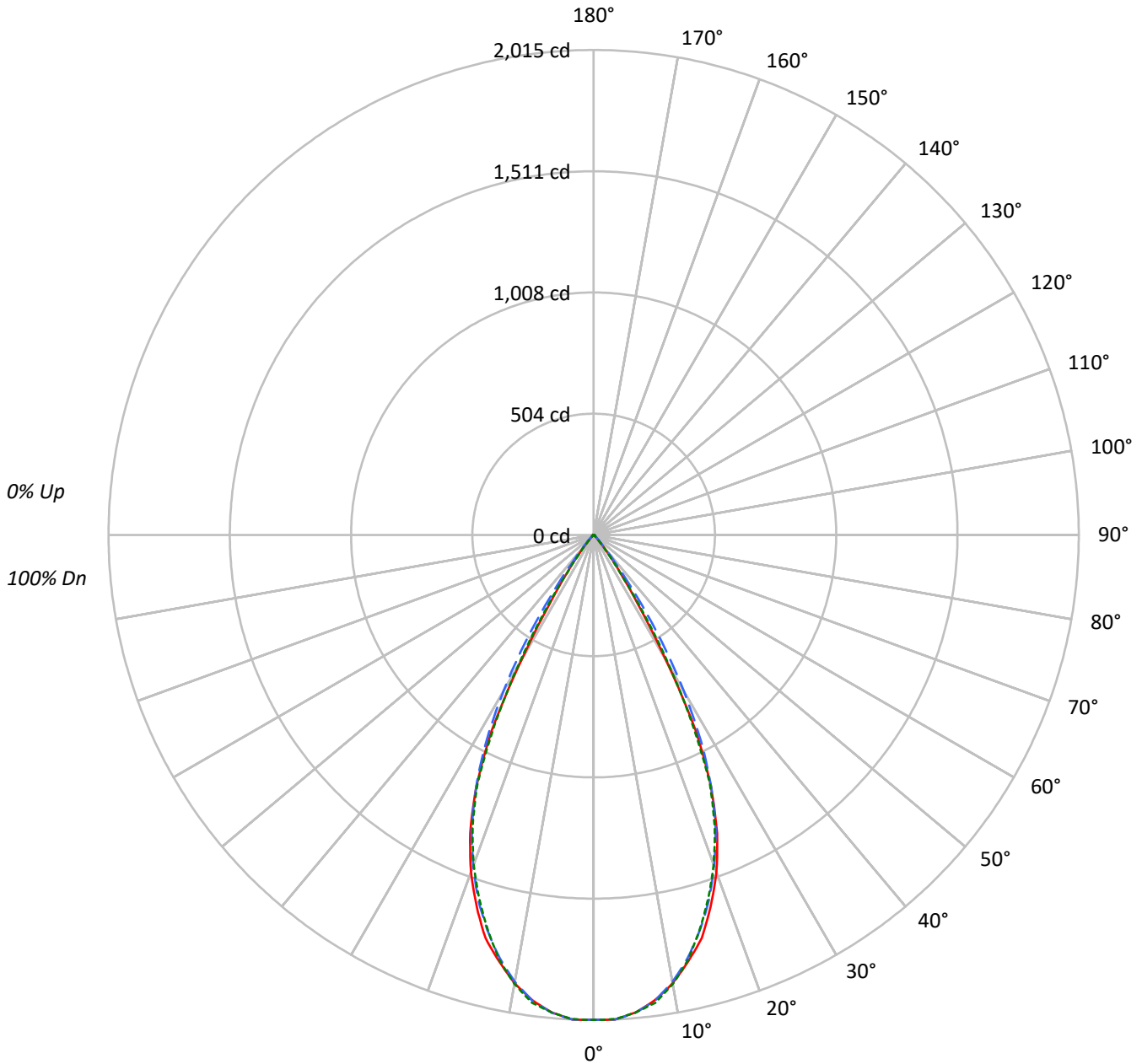
Lumens per Lamp: N/A
Luminaire Lumens: 1376.5 lumens
Efficiency: N/A
Efficacy: 99.7 lumens/watt
Spacing Criteria (0/90/45): 0.85 / 0.84 / 0.81
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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: P886771
CATALOG NUMBER: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P886771

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K

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	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	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	94					94			
2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89					89			
3	104	98	94	90	102	97	93	89	94	91	88	92	89	87	90	87	85	84					84			
4	100	93	88	84	98	92	87	83	90	86	82	88	84	81	86	83	81	79					79			
5	95	88	82	78	94	87	82	78	85	81	77	83	80	77	82	79	76	75					75			
6	91	83	78	74	90	82	77	73	81	76	73	79	76	72	78	75	72	71					71			
7	87	79	73	69	86	78	73	69	77	72	69	76	72	69	75	71	68	67					67			
8	83	75	69	66	82	74	69	66	73	69	65	72	68	65	71	68	65	64					64			
9	80	71	66	62	79	71	66	62	70	65	62	69	65	62	68	64	62	60					60			
10	77	68	63	59	76	67	62	59	67	62	59	66	62	59	65	61	59	57					57			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	347046	347046	347046
5°	344361	344568	344361
10°	330715	329700	331327
15°	309294	303499	302893
20°	273117	268022	266959
25°	218873	219538	216896
30°	118683	148632	124211
35°	40935	65050	39947
40°	10432	16929	9128
45°	2533	6211	2825
50°	1876	2492	2170
55°	2102	2102	2102
60°	1998	1998	1998
65°	1426	1875	1875
70°	1762	1762	1762
75°	1530	2329	2329
80°	1190	2281	2281
85°	2371	2371	2371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6211 cd/sqm



TEST NUMBER: P886771

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.0	13.6
10°-20°	475.4	34.5
20°-30°	511.3	37.1
30°-40°	171.6	12.5
40°-50°	16.5	1.2
50°-60°	6.2	0.5
60°-70°	4.6	0.3
70°-80°	3.0	0.2
80°-90°	1.0	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°	1173.7	85.3
0°-40°	1345.2	97.7
0°-60°	1367.9	99.4
0°-90°	1376.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1376.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2015	2015	2015	2015	2015	
5°	1992	1992	1993	1993	1992	187
15°	1735	1717	1702	1703	1699	480
25°	1152	1168	1155	1161	1141	504
35°	195	200	309	206	190	144
45°	10	13	26	14	12	12
55°	7	7	7	7	7	6
65°	4	5	5	5	5	4
75°	2	2	4	4	4	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P886771

CATALOG NUMBER: ML310LSFL9FS1E-TIR4D55WFL-TL3SDSL-1000LM-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2015.1	2015.1	2015.1	2015.1	2015.1
2.5°	2015.1	2013.9	2015.1	2015.1	2013.9
5°	1991.9	1991.9	1993.1	1993.1	1991.9
7.5°	1950.2	1950.2	1951.4	1958.3	1960.6
10°	1891.1	1887.6	1885.3	1889.9	1894.6
12.5°	1814.6	1812.3	1801.9	1800.7	1808.8
15°	1734.7	1717.3	1702.2	1703.4	1698.8
17.5°	1617.6	1610.7	1592.1	1592.1	1582.9
20°	1490.2	1475.1	1462.4	1463.5	1456.6
22.5°	1340.7	1340.7	1324.5	1333.7	1314.0
25°	1151.8	1168.0	1155.3	1161.1	1141.4
27.5°	921.2	949.0	965.3	952.5	893.4
30°	596.8	696.4	747.4	684.8	624.6
32.5°	338.4	402.1	527.2	418.3	388.2
35°	194.7	200.5	309.4	206.3	190.0
37.5°	100.8	106.6	155.3	103.1	96.2
40°	46.4	53.3	75.3	53.3	40.6
42.5°	18.5	29.0	42.9	23.2	18.5
45°	10.4	12.7	25.5	13.9	11.6
47.5°	9.3	9.3	15.1	10.4	9.3
50°	7.0	8.1	9.3	8.1	8.1
52.5°	7.0	7.0	8.1	7.0	7.0
55°	7.0	7.0	7.0	7.0	7.0
57.5°	5.8	5.8	7.0	7.0	5.8
60°	5.8	5.8	5.8	5.8	5.8
62.5°	4.6	4.6	5.8	5.8	5.8
65°	3.5	4.6	4.6	4.6	4.6
67.5°	3.5	3.5	4.6	4.6	4.6
70°	3.5	3.5	3.5	3.5	3.5
72.5°	2.3	3.5	3.5	3.5	3.5
75°	2.3	2.3	3.5	3.5	3.5
77.5°	1.2	2.3	2.3	2.3	2.3
80°	1.2	1.2	2.3	2.3	2.3
82.5°	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	1.2
87.5°	0.0	0.0	0.0	1.2	1.2
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)