

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: P885980

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-149)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 436.3 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.83 / 0.8
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

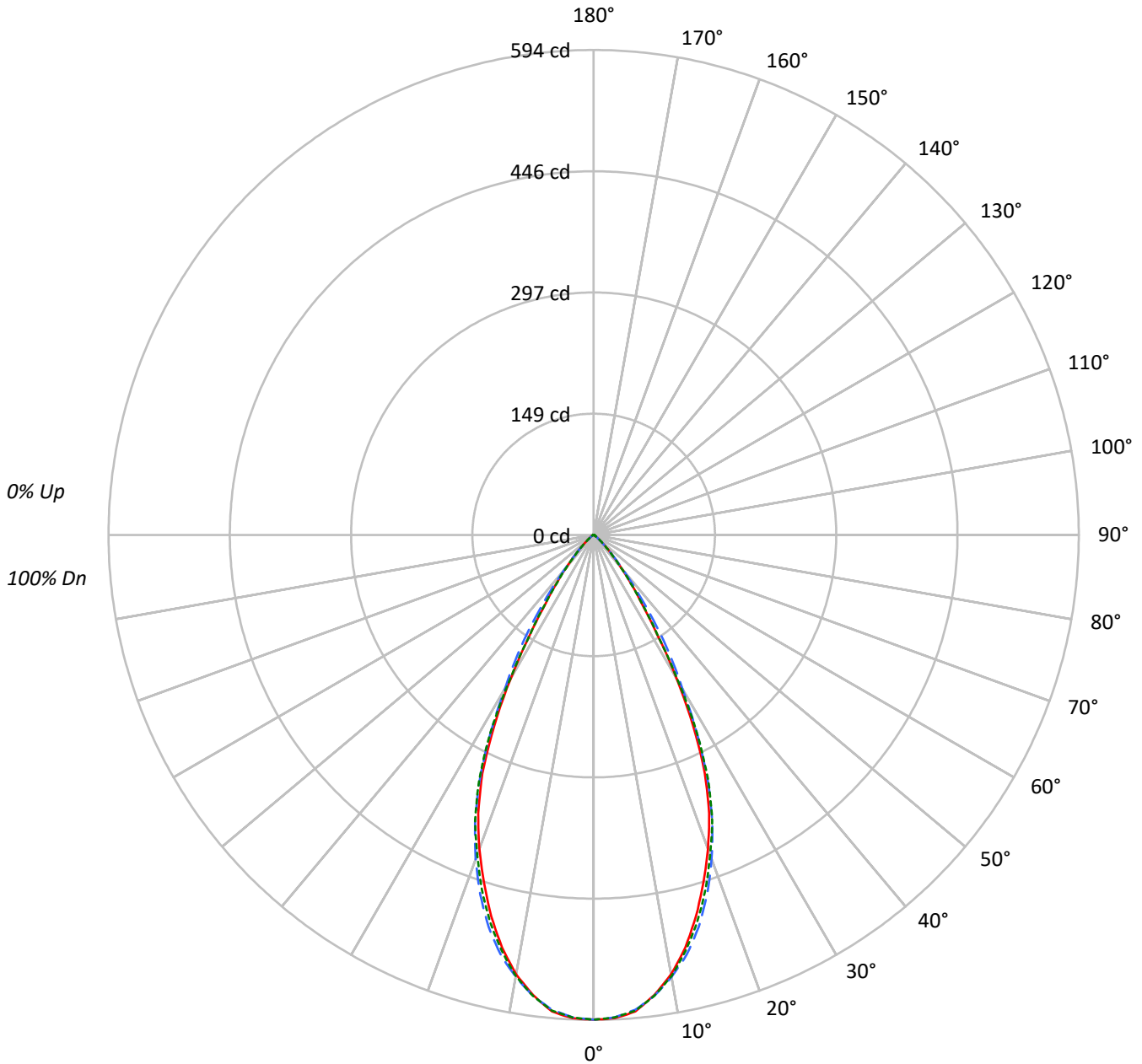
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P885980

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P885980

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K

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	100	100	100	100		
	1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94	94	94	94	94		
	2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88	88	88	88	88	88		
	3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82	82	82	82	82	82		
	4	98	91	86	82	97	90	85	81	88	84	81	86	82	80	84	81	79	77	77	77	77	77	77		
	5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72	72	72	72	72	72		
	6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68	68	68	68	68	68		
	7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64	64	64	64	64	64		
	8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61	61	61	61	61	61		
	9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	61	58	57	57	57	57	57	57		
	10	74	65	60	56	73	65	59	56	64	59	56	63	59	56	62	58	55	54	54	54	54	54	54		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	920245	920245	920245
5°	911779	908356	910068
10°	859994	865188	863457
15°	776351	797533	786942
20°	674643	696416	687344
25°	550873	564042	567804
30°	364046	387672	369953
35°	193385	241258	197548
40°	104610	113513	102384
45°	50636	50636	48225
50°	23873	18568	23873
55°	11890	8918	11890
60°	6820	3410	6820
65°	4034	4034	4034
70°	4985	4985	4985
75°	6588	0	6588
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 50636 cd/sqm



TEST NUMBER: P885980

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	12.5
10°-20°	136.5	31.3
20°-30°	146.9	33.7
30°-40°	73.4	16.8
40°-50°	19.2	4.4
50°-60°	3.9	0.9
60°-70°	1.3	0.3
70°-80°	0.4	0.1
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°	338.1	77.5
0°-40°	411.5	94.3
0°-60°	434.6	99.6
0°-90°	436.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	436.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	586	583	584	585	585	55
15°	484	488	497	494	490	134
25°	322	326	330	333	332	143
35°	102	110	128	110	104	69
45°	23	22	23	22	22	20
55°	4	3	3	4	4	5
65°	1	1	1	1	1	1
75°	1	0	0	0	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P885980

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	593.7	593.7	593.7	593.7	593.7
2.5°	592.6	591.5	591.5	592.6	591.5
5°	586.0	582.7	583.8	584.9	584.9
7.5°	568.4	568.4	569.5	570.6	569.5
10°	546.4	547.5	549.7	550.8	548.6
12.5°	517.8	520.0	526.6	524.4	521.1
15°	483.8	488.2	497.0	493.7	490.4
17.5°	446.4	453.0	461.8	459.6	455.2
20°	409.0	413.4	422.2	422.2	416.7
22.5°	369.4	373.8	379.3	381.5	379.3
25°	322.1	326.5	329.8	333.1	332.0
27.5°	263.9	271.6	273.8	277.1	274.9
30°	203.4	210.0	216.6	215.5	206.7
32.5°	145.1	152.8	172.6	158.3	146.2
35°	102.2	109.9	127.5	109.9	104.4
37.5°	74.8	73.7	86.9	74.8	73.7
40°	51.7	52.8	56.1	51.7	50.6
42.5°	35.2	34.1	36.3	35.2	34.1
45°	23.1	22.0	23.1	22.0	22.0
47.5°	14.3	13.2	13.2	13.2	14.3
50°	9.9	8.8	7.7	8.8	9.9
52.5°	6.6	5.5	5.5	5.5	6.6
55°	4.4	3.3	3.3	4.4	4.4
57.5°	3.3	2.2	2.2	2.2	3.3
60°	2.2	2.2	1.1	2.2	2.2
62.5°	2.2	1.1	1.1	1.1	2.2
65°	1.1	1.1	1.1	1.1	1.1
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1
72.5°	1.1	1.1	0.0	1.1	1.1
75°	1.1	0.0	0.0	0.0	1.1
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)