

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: P885969

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885969
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-148)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

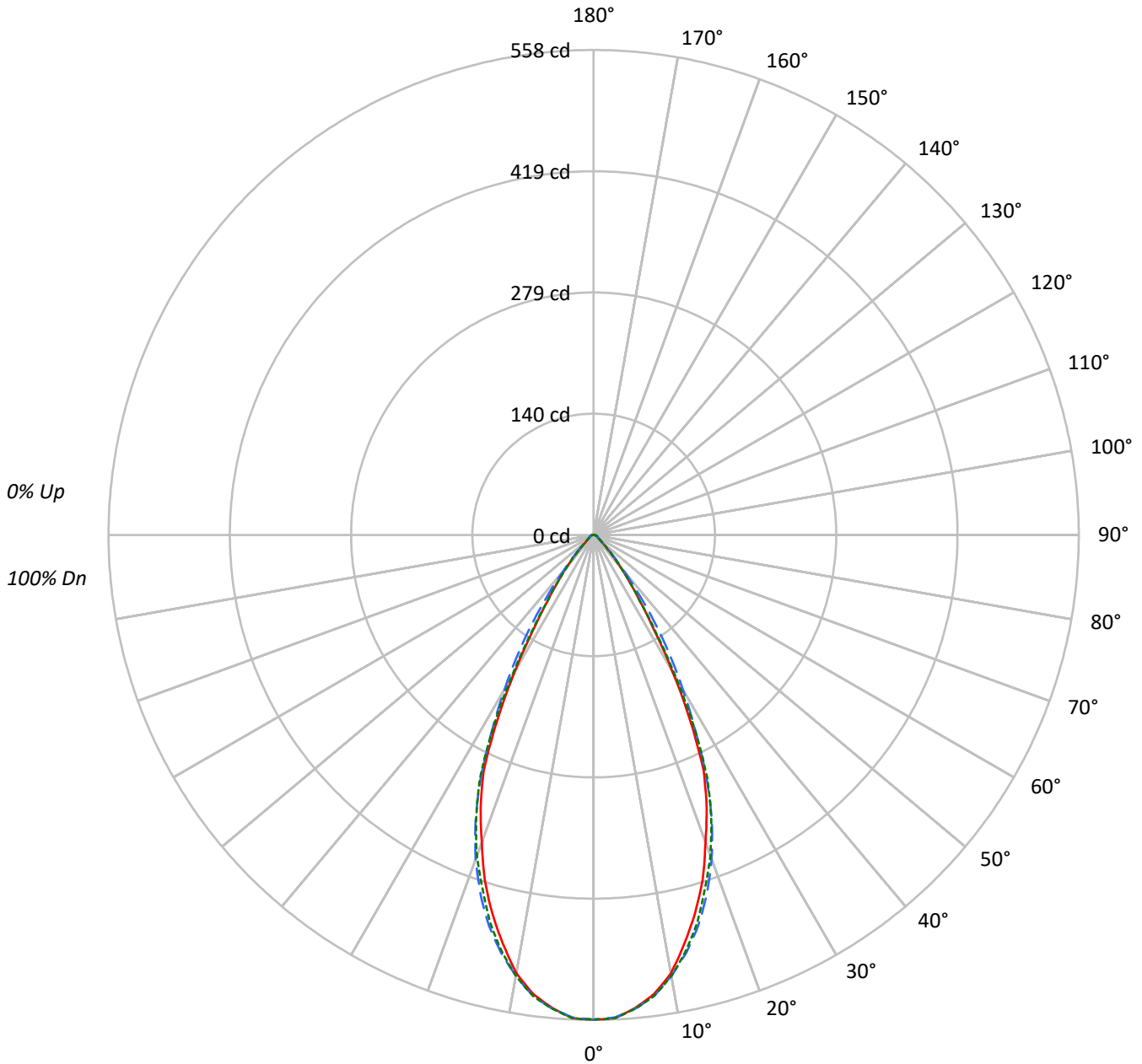
Lumens per Lamp: N/A
Luminaire Lumens: 418.2 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 0.8 / 0.83 / 0.8
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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: P885969
CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P885969

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K

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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93	93	93	93	93	93		
	2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87	87	87	87	87	87		
	3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	87	85	83	81	81	81	81	81	81		
	4	98	90	85	80	96	89	84	80	87	82	79	85	81	78	83	80	77	76	76	76	76	76	76		
	5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71	71	71	71	71	71		
	6	88	80	74	70	87	79	73	69	77	73	69	76	72	68	75	71	68	67	67	67	67	67	67		
	7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63	63	63	63	63	63		
	8	80	71	65	61	79	71	65	61	69	64	61	68	64	61	68	63	60	59	59	59	59	59	59		
	9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56	56	56	56	56	56		
	10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53	53	53	53	53	53		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	864444	864444	864444
5°	850008	851564	851564
10°	805851	810730	810730
15°	723236	746664	739925
20°	620209	654354	647591
25°	511537	524022	529323
30°	323418	366194	338273
35°	172949	228013	174841
40°	96719	109264	92469
45°	45595	52390	47787
50°	25079	27490	27490
55°	19727	19727	19727
60°	16120	16120	16120
65°	15404	19072	15404
70°	19034	19034	19034
75°	18565	18565	18565
80°	18745	18745	18745
85°	17784	17784	17784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 52390 cd/sqm



TEST NUMBER: P885969

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.2	12.3
10°-20°	127.8	30.6
20°-30°	136.3	32.6
30°-40°	68.2	16.3
40°-50°	19.4	4.6
50°-60°	6.8	1.6
60°-70°	4.7	1.1
70°-80°	3.0	0.7
80°-90°	0.8	0.2
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°	315.3	75.4
0°-40°	383.5	91.7
0°-60°	409.7	98.0
0°-90°	418.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	418.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	546	547	547	547	547	51
15°	451	456	465	462	461	125
25°	299	302	306	310	310	131
35°	91	101	120	102	92	61
45°	21	22	24	23	22	18
55°	7	7	7	7	7	7
65°	4	5	5	5	4	5
75°	3	3	3	3	3	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P885969

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMW-400LM-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	557.7	557.7	557.7	557.7	557.7
2.5°	556.7	555.6	555.6	556.7	556.7
5°	546.3	547.3	547.3	547.3	547.3
7.5°	532.8	533.8	534.9	535.9	534.9
10°	512.0	513.1	515.1	517.2	515.1
12.5°	481.9	487.1	492.3	491.3	490.2
15°	450.7	455.9	465.3	462.2	461.1
17.5°	416.5	422.7	433.1	432.1	425.8
20°	376.0	385.3	396.7	393.6	392.6
22.5°	339.6	346.9	355.2	356.2	353.1
25°	299.1	302.2	306.4	309.5	309.5
27.5°	239.9	249.3	252.4	255.5	251.3
30°	180.7	193.2	204.6	201.5	189.0
32.5°	128.8	144.4	161.0	149.6	134.0
35°	91.4	100.7	120.5	101.8	92.4
37.5°	66.5	69.6	83.1	70.6	66.5
40°	47.8	48.8	54.0	48.8	45.7
42.5°	32.2	34.3	36.4	34.3	32.2
45°	20.8	21.8	23.9	22.8	21.8
47.5°	13.5	14.5	15.6	15.6	15.6
50°	10.4	10.4	11.4	12.5	11.4
52.5°	8.3	8.3	9.3	9.3	8.3
55°	7.3	7.3	7.3	7.3	7.3
57.5°	6.2	6.2	6.2	6.2	6.2
60°	5.2	5.2	5.2	5.2	5.2
62.5°	5.2	5.2	5.2	5.2	5.2
65°	4.2	5.2	5.2	5.2	4.2
67.5°	4.2	4.2	4.2	4.2	4.2
70°	4.2	4.2	4.2	4.2	4.2
72.5°	3.1	3.1	3.1	3.1	3.1
75°	3.1	3.1	3.1	3.1	3.1
77.5°	2.1	2.1	2.1	2.1	2.1
80°	2.1	2.1	2.1	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)