

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: P885859

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885859  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-137)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 320.1 lumens  
Efficiency: N/A  
Efficacy: 53.3 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.55  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

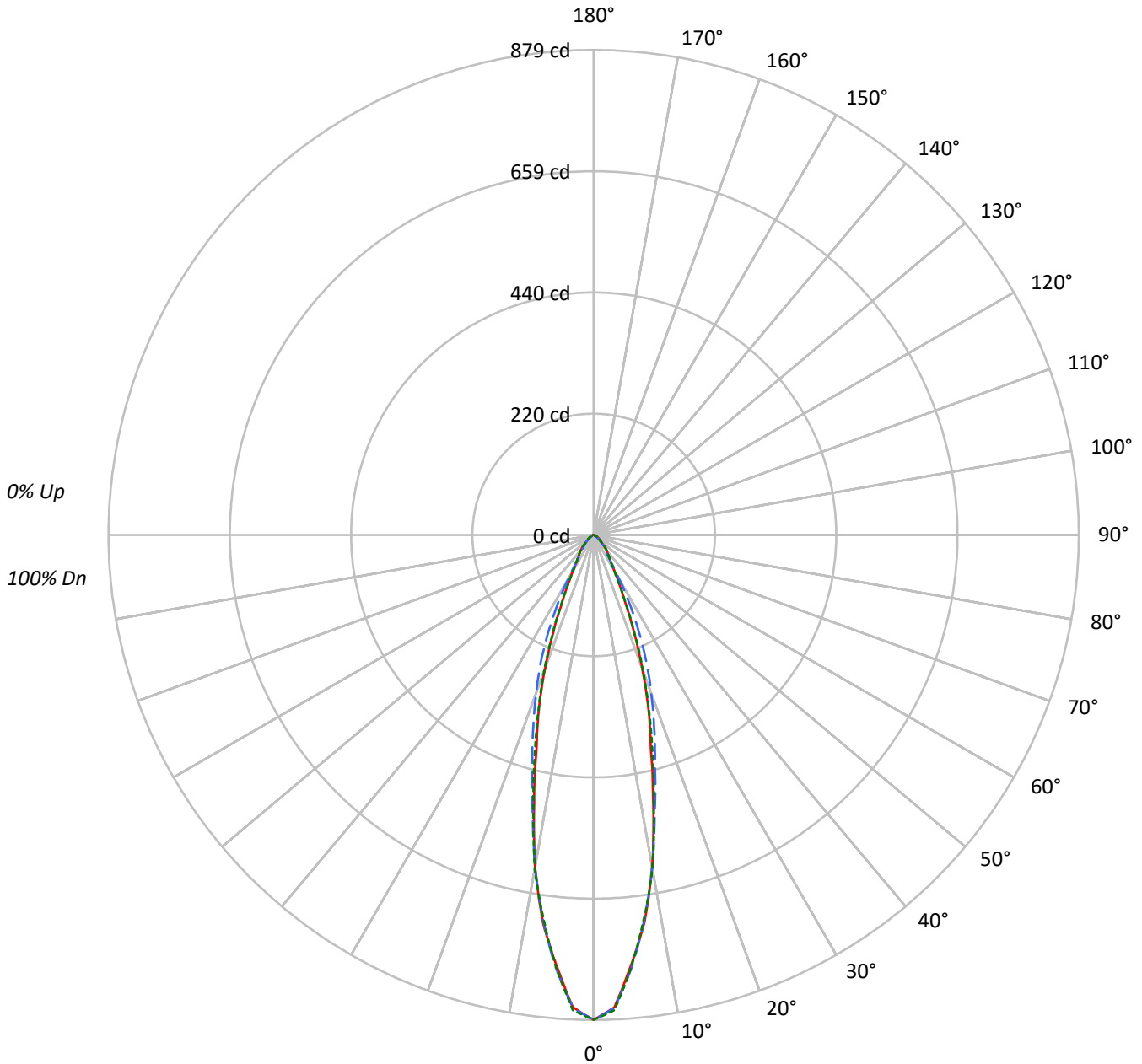
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P885859

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P885859

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-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								
1	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95								
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89								
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84								
4	100	93	88	85	98	92	88	84	90	86	83	88	85	82	86	83	81	80								
5	96	88	83	79	94	88	83	79	86	82	78	84	81	78	83	80	77	76								
6	92	84	79	75	91	83	78	75	82	78	74	81	77	74	79	76	73	72								
7	88	80	75	71	87	80	75	71	78	74	71	77	73	70	76	73	70	69								
8	85	77	71	68	84	76	71	68	75	71	67	74	70	67	73	70	67	66								
9	82	73	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63								
10	79	71	66	62	78	70	65	62	69	65	62	69	65	62	68	64	62	60								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1362309	1362309	1362309
5°	1215498	1225300	1222033
10°	961512	961512	966392
15°	641878	688575	661776
20°	423260	502106	431837
25°	232766	332302	238067
30°	132088	165557	128329
35°	90448	80609	92340
40°	73652	60904	75675
45°	50198	45595	50198
50°	34965	30142	34965
55°	28105	11350	28105
60°	22630	9610	22630
65°	15404	7702	15404
70°	9517	4532	9517
75°	5989	5989	5989
80°	8926	0	8926
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 50198 cd/sqm



TEST NUMBER: P885859

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.5	21.7
10°-20°	116.7	36.5
20°-30°	75.1	23.5
30°-40°	31.5	9.8
40°-50°	16.5	5.2
50°-60°	6.5	2.0
60°-70°	3.0	0.9
70°-80°	1.2	0.4
80°-90°	0.1	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°	261.2	81.6
0°-40°	292.7	91.5
0°-60°	315.8	98.7
0°-90°	320.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	320.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	879	879	879	879	879	
5°	781	782	788	783	785	70
15°	400	417	429	421	412	113
25°	136	151	194	155	139	66
35°	48	50	43	49	49	31
45°	23	21	21	22	23	18
55°	10	6	4	6	10	9
65°	4	3	2	3	4	4
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P885859

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	878.9	878.9	878.9	878.9	878.9
2.5°	857.1	859.2	858.1	859.2	862.3
5°	781.2	782.3	787.5	783.3	785.4
7.5°	707.5	703.3	703.3	704.4	700.2
10°	610.9	606.7	610.9	608.8	614.0
12.5°	497.6	503.9	511.1	509.1	503.9
15°	400.0	416.6	429.1	420.7	412.4
17.5°	329.3	339.7	363.6	344.9	332.4
20°	256.6	272.2	304.4	277.4	261.8
22.5°	191.2	210.9	250.4	214.0	195.3
25°	136.1	150.6	194.3	154.8	139.2
27.5°	99.7	109.1	142.3	111.2	96.6
30°	73.8	83.1	92.5	81.0	71.7
32.5°	57.1	64.4	58.2	62.3	58.2
35°	47.8	49.9	42.6	48.8	48.8
37.5°	41.6	38.4	35.3	38.4	42.6
40°	36.4	31.2	30.1	32.2	37.4
42.5°	30.1	27.0	24.9	27.0	31.2
45°	22.9	20.8	20.8	21.8	22.9
47.5°	16.6	13.5	17.7	14.5	17.7
50°	14.5	9.3	12.5	9.3	14.5
52.5°	12.5	8.3	7.3	8.3	12.5
55°	10.4	6.2	4.2	6.2	10.4
57.5°	8.3	5.2	3.1	5.2	8.3
60°	7.3	4.2	3.1	4.2	7.3
62.5°	5.2	3.1	2.1	4.2	5.2
65°	4.2	3.1	2.1	3.1	4.2
67.5°	3.1	2.1	1.0	2.1	3.1
70°	2.1	2.1	1.0	2.1	2.1
72.5°	2.1	1.0	1.0	1.0	2.1
75°	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	0.0	1.0	1.0
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)