

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: P885836

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSL B-400LM-4000K

Issue Date: 7/18/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885836  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-122)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/18/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSL B-400LM-4000K  
Description: 1IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

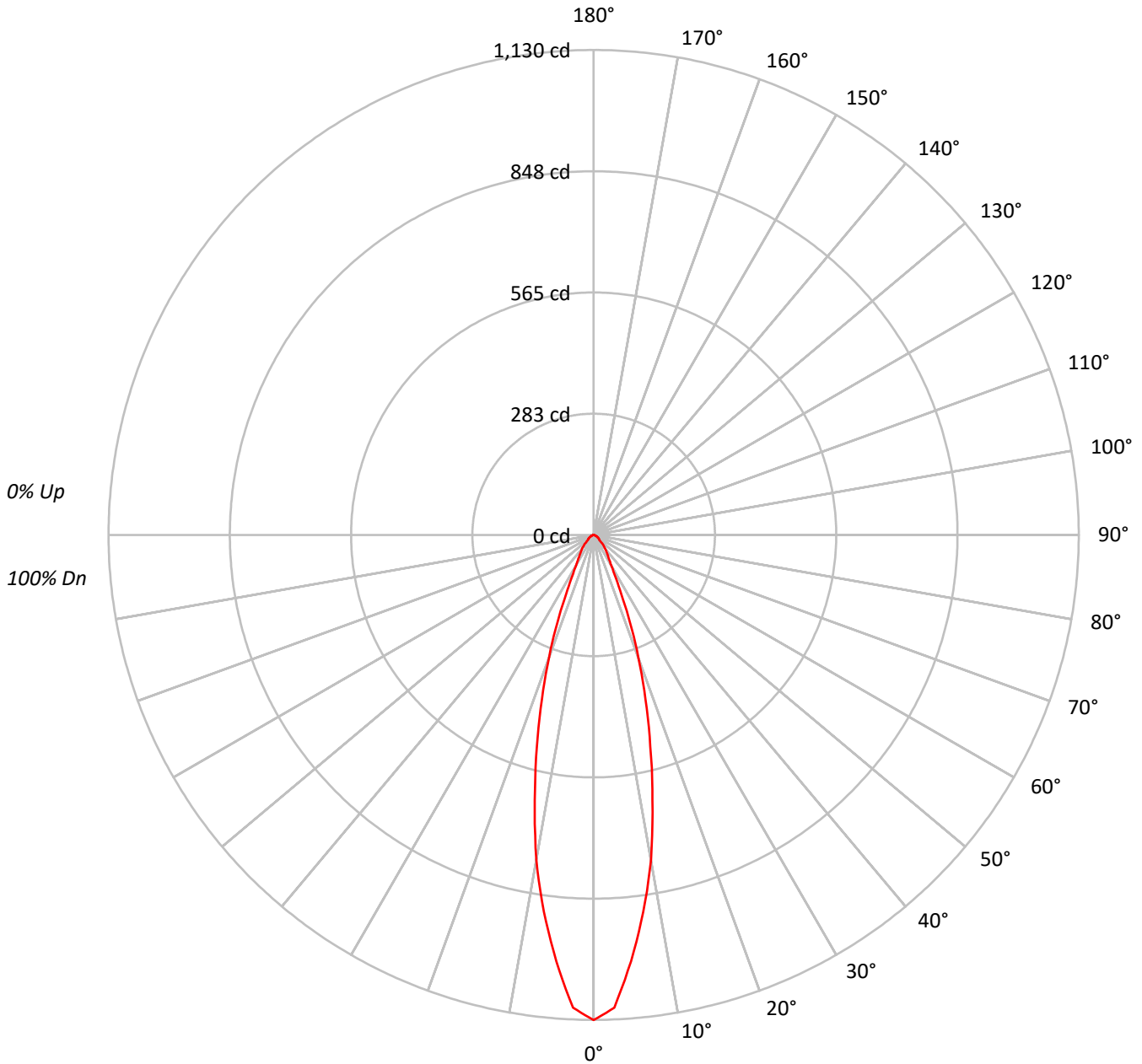
Lumens per Lamp: N/A  
Luminaire Lumens: 382.0 lumens  
Efficiency: N/A  
Efficacy: 63.7 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.49  
Luminous Opening: Circular (Dia: 0.08' x H: 0')  
CIE Type: Direct

Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P885836  
CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSL B-400LM-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P885836

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSLb-400LM-4000K

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

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

	0°
0°	2231089
5°	1975335
10°	1540866
15°	1042625
20°	639091
25°	328812
30°	184131
35°	135400
40°	108461
45°	78427
50°	54037
55°	48171
60°	41444
65°	32689
70°	20196
75°	9150
80°	13638
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 78427 cd/sqm



TEST NUMBER: P885836

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSLb-400LM-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.1	23.1
10°-20°	140.7	36.8
20°-30°	74.6	19.5
30°-40°	36.0	9.4
40°-50°	21.3	5.6
50°-60°	12.5	3.3
60°-70°	6.6	1.7
70°-80°	1.9	0.5
80°-90°	0.2	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°	303.4	79.4
0°-40°	339.4	88.9
0°-60°	373.3	97.7
0°-90°	382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	382.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1130	
5°	997	88
15°	510	141
25°	151	75
35°	56	36
45°	28	21
55°	14	13
65°	7	7
75°	1	2
85°	0	0
90°	0	



TEST NUMBER: P885836

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D25NFL-TL1RDSL B-400LM-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1130.5
2.5°	1102.4
5°	997.1
7.5°	885.9
10°	768.9
12.5°	633.1
15°	510.3
17.5°	400.2
20°	304.3
22.5°	221.2
25°	151.0
27.5°	106.5
30°	80.8
32.5°	66.7
35°	56.2
37.5°	48.0
40°	42.1
42.5°	35.1
45°	28.1
47.5°	18.7
50°	17.6
52.5°	15.2
55°	14.0
57.5°	12.9
60°	10.5
62.5°	8.2
65°	7.0
67.5°	4.7
70°	3.5
72.5°	2.3
75°	1.2
77.5°	1.2
80°	1.2
82.5°	0.0
85°	0.0
87.5°	0.0
90°	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





Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

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)