

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: P885925

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDSLB-400LM-3500K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885925  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-146)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDSLB-400LM-3500K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

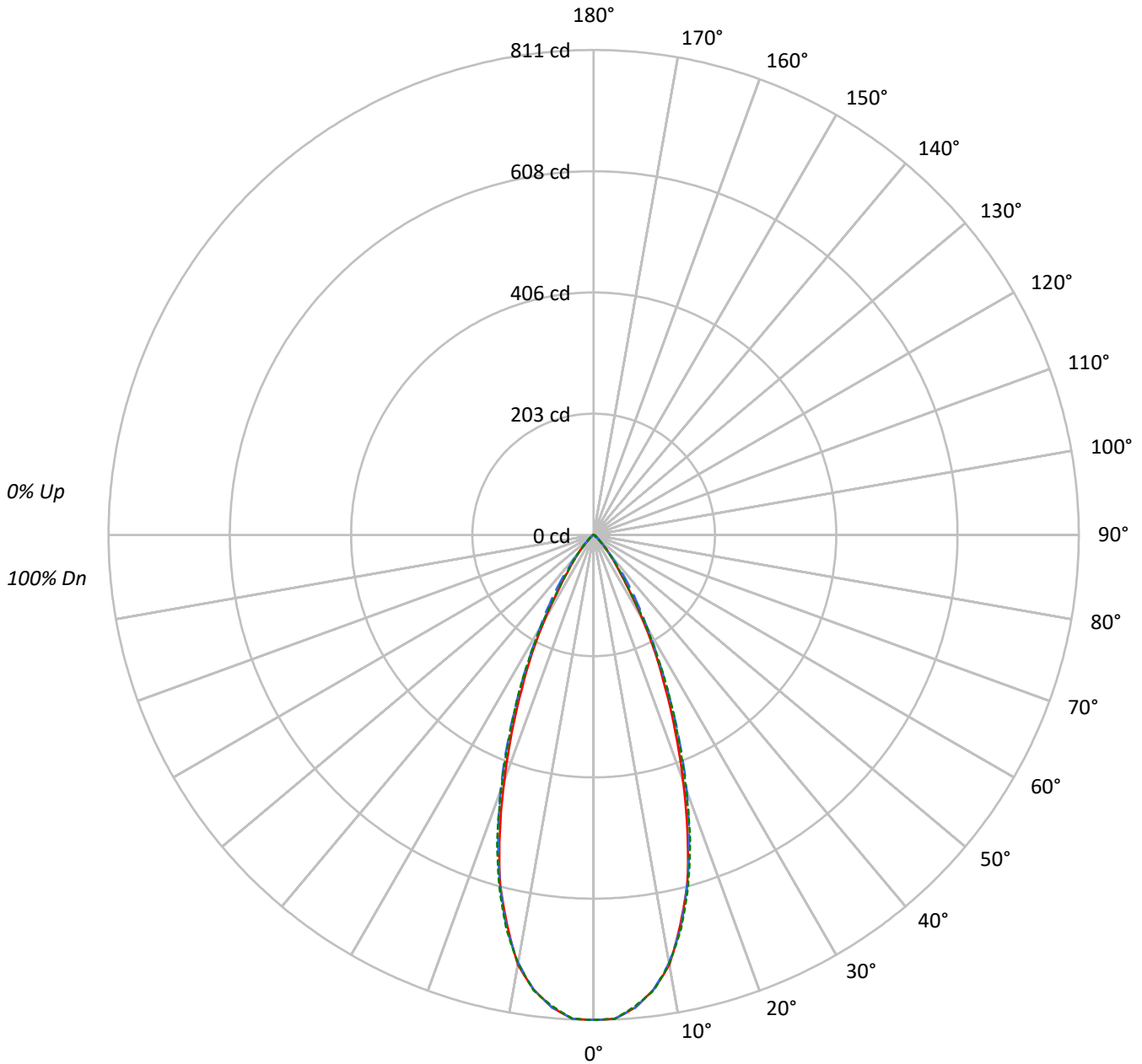
Lumens per Lamp: N/A  
Luminaire Lumens: 455.4 lumens  
Efficiency: N/A  
Efficacy: 75.9 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	112	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	90	102	97	93	90	95	91	88	92	89	87	90	88	86	84																			
4	100	93	88	84	98	92	87	84	90	86	83	88	84	82	86	83	81	79																			
5	95	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75																			
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	73	71																			
7	88	79	74	70	86	79	74	70	77	73	70	76	72	69	75	72	69	68																			
8	84	75	70	66	83	75	70	66	74	69	66	73	69	66	72	68	65	64																			
9	81	72	67	63	80	71	66	63	71	66	63	70	66	63	69	65	62	61																			
10	77	69	64	60	76	68	63	60	68	63	60	67	63	60	66	62	60	58																			

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

	0°	45°	90°
0°	1257218	1257218	1257218
5°	1234636	1234636	1231213
10°	1148652	1143458	1145190
15°	970038	970038	977099
20°	719674	750519	743261
25°	485028	513076	514957
30°	293170	318585	312679
35°	145512	191303	151756
40°	80127	86804	82352
45°	33758	43403	36169
50°	21220	18568	21220
55°	14863	8918	14863
60°	10230	3410	10230
65°	8069	4034	8069
70°	4985	0	4985
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 43403 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.6	16.2
10°-20°	165.7	36.4
20°-30°	136.3	29.9
30°-40°	58.6	12.9
40°-50°	15.5	3.4
50°-60°	4.1	0.9
60°-70°	1.5	0.3
70°-80°	0.2	0.0
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°	375.6	82.5
0°-40°	434.2	95.3
0°-60°	453.8	99.6
0°-90°	455.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	455.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	794	792	794	791	791	74
15°	604	604	604	607	609	164
25°	284	290	300	301	301	131
35°	77	85	101	88	80	53
45°	15	18	20	18	16	15
55°	6	4	3	4	6	5
65°	2	1	1	1	2	2
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	811.1	811.1	811.1	811.1	811.1
2.5°	810.0	811.1	810.0	810.0	810.0
5°	793.5	792.4	793.5	791.3	791.3
7.5°	767.1	766.0	767.1	767.1	768.2
10°	729.8	724.3	726.5	729.8	727.6
12.5°	668.2	672.6	672.6	674.8	674.8
15°	604.5	604.5	604.5	606.7	608.9
17.5°	522.0	524.2	530.8	533.0	536.3
20°	436.3	444.0	455.0	452.8	450.6
22.5°	357.2	361.6	375.9	373.7	370.4
25°	283.6	290.1	300.0	301.1	301.1
27.5°	223.1	229.7	233.0	238.5	233.0
30°	163.8	175.8	178.0	182.4	174.7
32.5°	111.0	122.0	137.4	129.7	115.4
35°	76.9	84.6	101.1	87.9	80.2
37.5°	55.0	58.2	68.1	60.4	57.2
40°	39.6	41.8	42.9	42.9	40.7
42.5°	26.4	27.5	28.6	28.6	27.5
45°	15.4	17.6	19.8	17.6	16.5
47.5°	11.0	11.0	12.1	11.0	11.0
50°	8.8	7.7	7.7	7.7	8.8
52.5°	6.6	5.5	4.4	5.5	6.6
55°	5.5	4.4	3.3	4.4	5.5
57.5°	4.4	3.3	2.2	3.3	4.4
60°	3.3	2.2	1.1	2.2	3.3
62.5°	2.2	2.2	1.1	2.2	2.2
65°	2.2	1.1	1.1	1.1	2.2
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	0.0	1.1	1.1
72.5°	1.1	0.0	0.0	0.0	1.1
75°	0.0	0.0	0.0	0.0	0.0
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



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Scaled Data Report







— 0°-180°    - - 45°-225°    - - - - 90°-270°

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