

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: P885987

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-5000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885987  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-152)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-5000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 517.9 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.84 / 0.81  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

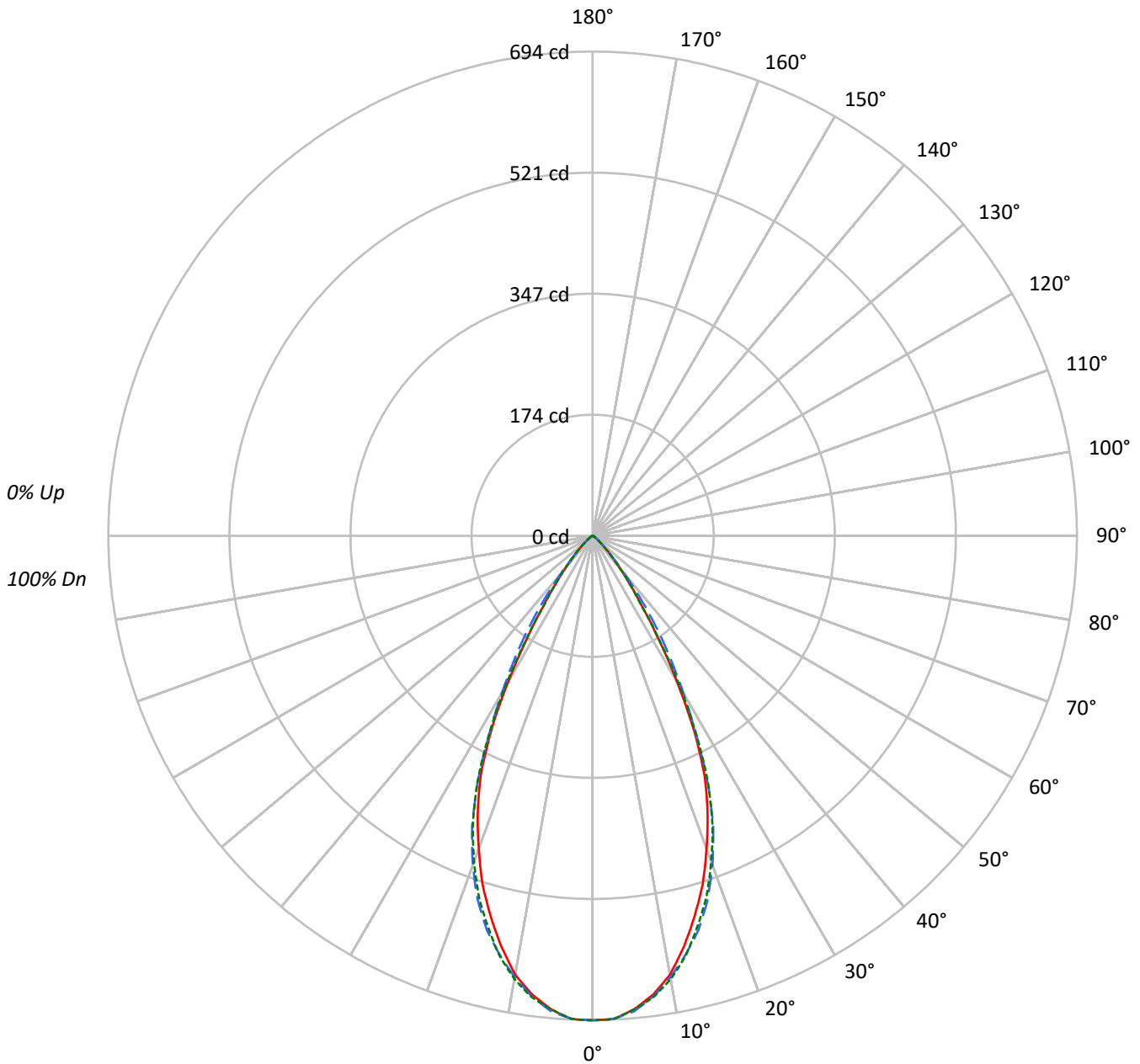
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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					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	93	96	94	91	93	91	90	88	88	88	88	88	88		
	3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	89	86	84	82	82	82	82	82	82		
	4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	79	77	77	77	77	77	77		
	5	94	86	80	76	92	85	80	76	83	78	75	81	77	74	80	76	74	72	72	72	72	72	72		
	6	89	81	75	71	88	80	75	71	78	74	70	77	73	70	76	72	69	68	68	68	68	68	68		
	7	85	76	70	66	84	76	70	66	74	69	66	73	69	66	72	68	65	64	64	64	64	64	64		
	8	81	72	66	62	80	72	66	62	70	66	62	69	65	62	69	65	62	60	60	60	60	60	60		
	9	78	68	63	59	76	68	62	59	67	62	59	66	62	58	65	61	58	57	57	57	57	57	57		
	10	74	65	59	56	73	64	59	56	64	59	55	63	58	55	62	58	55	54	54	54	54	54	54		

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

	0°	45°	90°
0°	1076486	1076486	1076486
5°	1060371	1064416	1060371
10°	1005110	1011249	1015341
15°	905850	939228	930883
20°	787303	828045	819468
25°	649554	667341	669564
30°	432954	463201	449241
35°	233878	295376	228959
40°	123630	142043	126260
45°	59843	62693	59843
50°	28213	25079	28213
55°	17565	10539	17565
60°	12090	4030	12090
65°	9536	4768	9536
70°	5892	0	5892
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 62693 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	12.3
10°-20°	160.7	31.0
20°-30°	173.8	33.6
30°-40°	88.9	17.2
40°-50°	23.4	4.5
50°-60°	5.1	1.0
60°-70°	1.7	0.3
70°-80°	0.3	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°	398.4	76.9
0°-40°	487.3	94.1
0°-60°	515.8	99.6
0°-90°	517.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	517.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	682	683	684	683	682	64
15°	564	572	585	581	580	157
25°	380	384	390	394	392	169
35°	124	131	156	135	121	82
45°	27	26	29	26	27	23
55°	6	5	4	5	6	6
65°	3	1	1	1	3	2
75°	0	0	0	0	0	1
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°	694.5	694.5	694.5	694.5	694.5
2.5°	693.2	693.2	693.2	693.2	693.2
5°	681.5	682.8	684.1	682.8	681.5
7.5°	663.3	663.3	665.9	667.2	667.2
10°	638.6	639.9	642.5	645.1	645.1
12.5°	603.5	610.0	615.2	613.9	616.5
15°	564.5	572.3	585.3	581.4	580.1
17.5°	524.1	533.2	547.5	543.6	542.3
20°	477.3	487.7	502.0	498.1	496.8
22.5°	430.5	439.6	451.3	451.3	448.7
25°	379.8	383.7	390.2	394.1	391.5
27.5°	314.7	323.8	321.2	327.7	322.5
30°	241.9	252.3	258.8	257.5	251.0
32.5°	175.6	188.6	205.5	193.8	179.5
35°	123.6	131.4	156.1	135.3	121.0
37.5°	87.1	91.0	109.2	89.7	87.1
40°	61.1	62.4	70.2	62.4	62.4
42.5°	41.6	41.6	44.2	41.6	41.6
45°	27.3	26.0	28.6	26.0	27.3
47.5°	18.2	16.9	16.9	16.9	16.9
50°	11.7	11.7	10.4	10.4	11.7
52.5°	9.1	7.8	6.5	7.8	7.8
55°	6.5	5.2	3.9	5.2	6.5
57.5°	3.9	3.9	2.6	3.9	3.9
60°	3.9	2.6	1.3	2.6	3.9
62.5°	2.6	2.6	1.3	2.6	2.6
65°	2.6	1.3	1.3	1.3	2.6
67.5°	1.3	1.3	1.3	1.3	1.3
70°	1.3	1.3	0.0	1.3	1.3
72.5°	1.3	1.3	0.0	0.0	1.3
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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