

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: P885924

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDSLB-400LM-3000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885924  
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-3000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

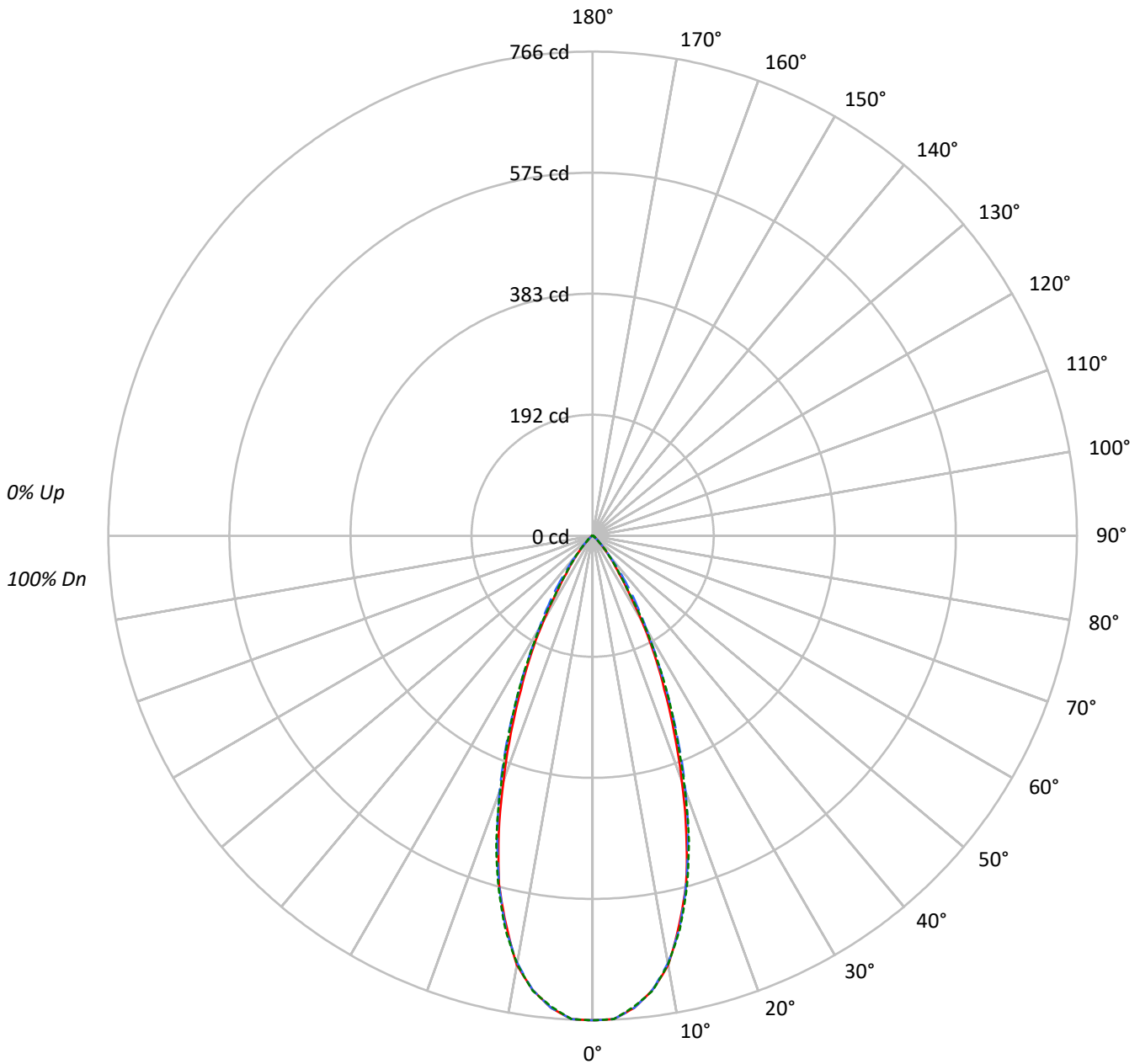
Lumens per Lamp: N/A  
Luminaire Lumens: 430.3 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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					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	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°	1188087	1188087	1188087
5°	1166797	1166797	1163530
10°	1085381	1080501	1082233
15°	916602	916602	923341
20°	680086	709282	702354
25°	458348	484857	486738
30°	277062	301224	295497
35°	137564	180896	143430
40°	75675	81948	77699
45°	31785	40991	34196
50°	20015	17603	20015
55°	14052	8377	14052
60°	9610	3100	9610
65°	7702	3668	7702
70°	4532	0	4532
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 40991 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.6	16.2
10°-20°	156.6	36.4
20°-30°	128.8	29.9
30°-40°	55.4	12.9
40°-50°	14.6	3.4
50°-60°	3.8	0.9
60°-70°	1.4	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°	355.0	82.5
0°-40°	410.4	95.4
0°-60°	428.8	99.6
0°-90°	430.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	430.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	766	766	766	766	766	
5°	750	749	750	748	748	70
15°	571	571	571	573	575	155
25°	268	274	284	285	285	124
35°	73	80	96	83	76	50
45°	14	17	19	17	16	14
55°	5	4	3	4	5	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°	766.5	766.5	766.5	766.5	766.5
2.5°	765.4	766.5	765.4	765.4	765.4
5°	749.9	748.8	749.9	747.8	747.8
7.5°	724.9	723.9	724.9	724.9	726.0
10°	689.6	684.4	686.5	689.6	687.6
12.5°	631.5	635.6	635.6	637.7	637.7
15°	571.2	571.2	571.2	573.3	575.4
17.5°	493.3	495.4	501.6	503.7	506.8
20°	412.3	419.6	430.0	427.9	425.8
22.5°	337.5	341.7	355.2	353.1	350.0
25°	268.0	274.2	283.5	284.6	284.6
27.5°	210.8	217.1	220.2	225.4	220.2
30°	154.8	166.2	168.3	172.4	165.1
32.5°	104.9	115.3	129.8	122.6	109.1
35°	72.7	80.0	95.6	83.1	75.8
37.5°	51.9	55.0	64.4	57.1	54.0
40°	37.4	39.5	40.5	40.5	38.4
42.5°	24.9	26.0	27.0	27.0	26.0
45°	14.5	16.6	18.7	16.6	15.6
47.5°	10.4	10.4	11.4	10.4	10.4
50°	8.3	7.3	7.3	7.3	8.3
52.5°	6.2	5.2	4.2	5.2	6.2
55°	5.2	4.2	3.1	4.2	5.2
57.5°	4.2	3.1	2.1	3.1	4.2
60°	3.1	2.1	1.0	2.1	3.1
62.5°	2.1	2.1	1.0	2.1	2.1
65°	2.1	1.0	1.0	1.0	2.1
67.5°	1.0	1.0	1.0	1.0	1.0
70°	1.0	1.0	0.0	1.0	1.0
72.5°	1.0	0.0	0.0	0.0	1.0
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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