

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: P885900

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMB-400LM-3500K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885900  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-144)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDMB-400LM-3500K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

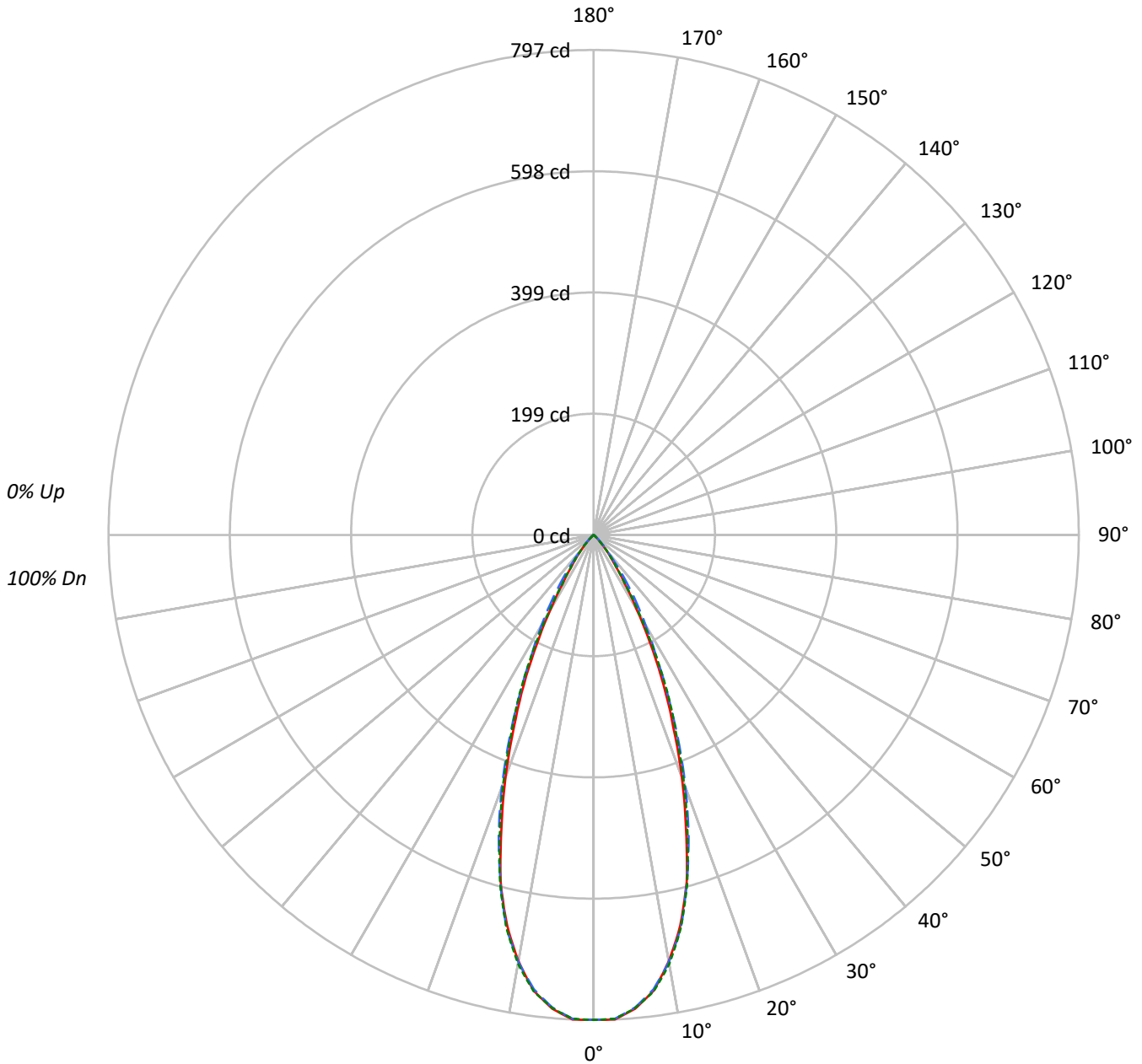
Lumens per Lamp: N/A  
Luminaire Lumens: 425.8 lumens  
Efficiency: N/A  
Efficacy: 71.0 lumens/watt  
Spacing Criteria (0/90/45): 0.67 / 0.68 / 0.68  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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				
RW	70	50	30	10	70	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	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95		
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90		
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	87	85		
4	100	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81		
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	77		
6	92	85	79	76	91	84	79	75	82	78	75	81	77	74	80	77	74	73		
7	89	81	75	72	87	80	75	71	79	74	71	78	74	71	77	73	70	69		
8	85	77	72	68	84	76	71	68	75	71	68	74	70	67	73	70	67	66		
9	82	73	68	65	81	73	68	65	72	68	64	71	67	64	70	67	64	63		
10	79	70	65	62	78	70	65	62	69	65	62	68	64	61	68	64	61	60		

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

	0°	45°	90°
0°	1235518	1235518	1235518
5°	1216276	1212853	1214564
10°	1119535	1121266	1126460
15°	947412	949177	952707
20°	698230	727261	714560
25°	464334	486909	492553
30°	253794	303014	269545
35°	120724	168408	126968
40°	57869	71224	62321
45°	19290	31346	16879
50°	5305	10610	5305
55°	2973	2973	2973
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 31346 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	17.0
10°-20°	161.6	38.0
20°-30°	129.3	30.4
30°-40°	50.8	11.9
40°-50°	10.5	2.5
50°-60°	1.1	0.3
60°-70°	0.0	0.0
70°-80°	0.0	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°	363.3	85.3
0°-40°	414.2	97.3
0°-60°	425.8	100.0
0°-90°	425.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	425.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	797	797	797	797	797	
5°	782	780	780	781	781	72
15°	590	588	592	593	594	160
25°	272	274	285	289	288	123
35°	64	73	89	75	67	44
45°	9	11	14	11	8	8
55°	1	1	1	1	1	1
65°	0	0	0	0	0	0
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°	797.1	797.1	797.1	797.1	797.1
2.5°	797.1	794.9	796.0	797.1	796.0
5°	781.7	779.5	779.5	780.6	780.6
7.5°	755.3	754.2	753.1	754.2	756.4
10°	711.3	713.5	712.4	715.7	715.7
12.5°	657.4	656.3	661.8	661.8	661.8
15°	590.4	588.2	591.5	592.6	593.7
17.5°	503.5	511.2	518.9	515.6	512.3
20°	423.3	429.9	440.9	436.5	433.2
22.5°	341.9	350.7	360.6	358.4	354.0
25°	271.5	273.7	284.7	289.1	288.0
27.5°	201.2	214.4	218.8	225.4	216.6
30°	141.8	157.2	169.3	166.0	150.6
32.5°	95.6	107.7	127.5	114.3	97.8
35°	63.8	72.6	89.0	74.8	67.1
37.5°	44.0	48.4	57.2	50.6	45.1
40°	28.6	33.0	35.2	34.1	30.8
42.5°	16.5	20.9	23.1	20.9	17.6
45°	8.8	11.0	14.3	11.0	7.7
47.5°	4.4	5.5	8.8	5.5	4.4
50°	2.2	3.3	4.4	3.3	2.2
52.5°	1.1	2.2	2.2	2.2	1.1
55°	1.1	1.1	1.1	1.1	1.1
57.5°	0.0	0.0	1.1	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
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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(END OF REPORT)