

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: P885974

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMWB-400LM-3000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885974  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-151)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMWB-400LM-3000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

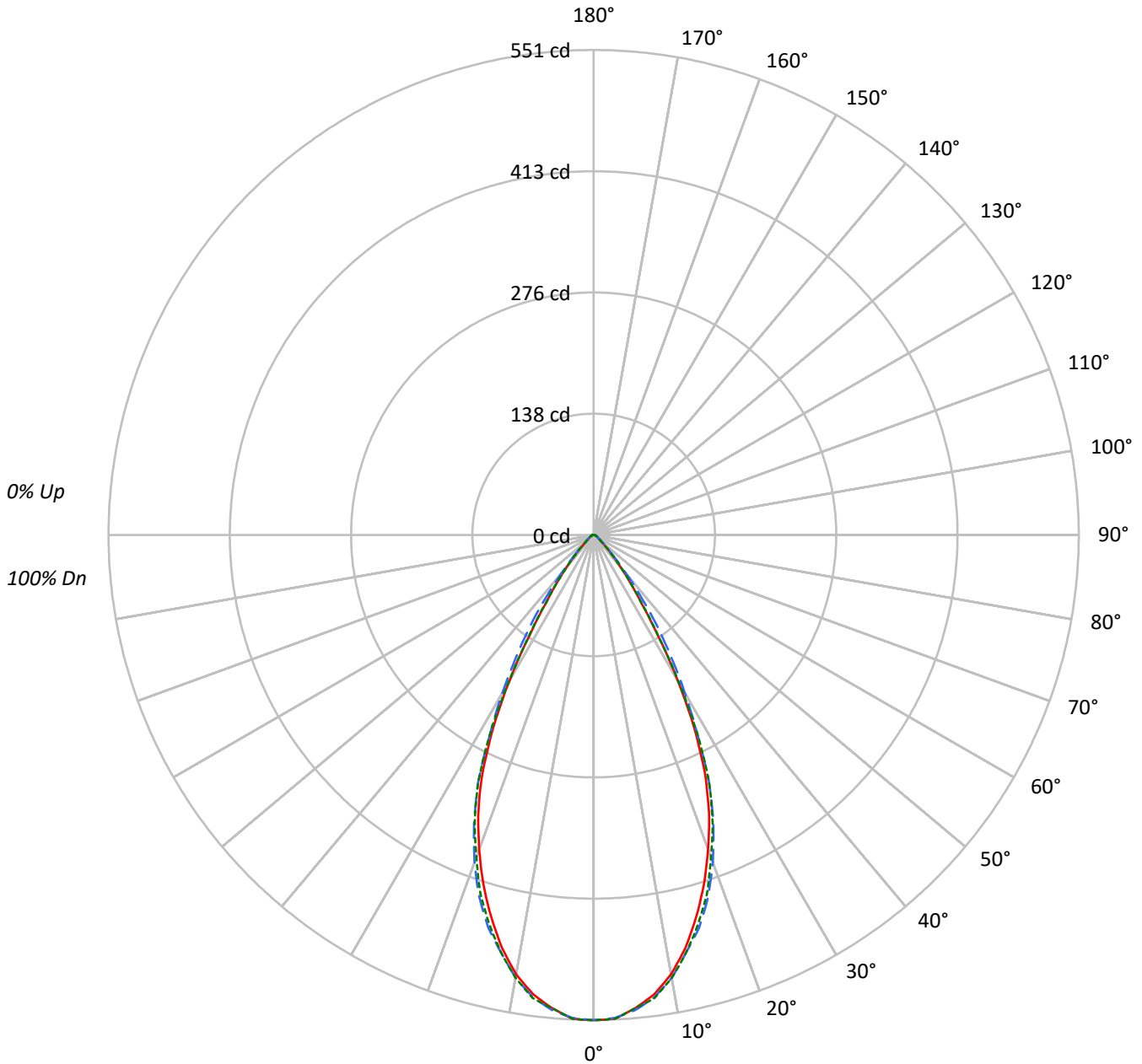
Lumens per Lamp: N/A  
Luminaire Lumens: 418.1 lumens  
Efficiency: N/A  
Efficacy: 69.7 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.83 / 0.81  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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				
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	113	111	108	106	111	109	106	104	104	103	101	101	99	98	97	96	95	93		
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	92	90	89	87		
3	103	96	91	87	101	95	90	87	92	88	85	90	87	84	88	85	83	81		
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76		
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71		
6	88	80	74	70	87	79	73	69	77	73	69	76	72	69	75	71	68	67		
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63		
8	80	71	65	61	79	71	65	61	70	65	61	69	64	61	68	63	60	59		
9	77	67	62	58	76	67	61	58	66	61	58	65	61	57	64	60	57	56		
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53		

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

	0°	45°	90°
0°	854679	854679	854679
5°	840050	843318	840050
10°	797509	804120	804120
15°	721471	741529	734790
20°	626807	652539	642312
25°	511366	531034	531034
30°	342032	369774	345611
35°	178815	233878	180707
40°	94493	115536	96719
45°	47787	54582	47787
50°	22426	30142	25079
55°	16755	19727	16755
60°	16120	16120	16120
65°	15404	15404	15404
70°	14049	14049	14049
75°	12576	12576	12576
80°	8926	8926	8926
85°	17784	17784	17784

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 54582 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.7	12.1
10°-20°	127.2	30.4
20°-30°	137.2	32.8
30°-40°	69.8	16.7
40°-50°	19.6	4.7
50°-60°	6.4	1.5
60°-70°	4.0	1.0
70°-80°	2.5	0.6
80°-90°	0.7	0.2
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°	315.1	75.4
0°-40°	384.9	92.1
0°-60°	410.9	98.3
0°-90°	418.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	418.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	540	542	542	542	540	51
15°	450	455	462	461	458	125
25°	299	303	310	310	310	133
35°	94	104	124	106	96	64
45°	22	23	25	23	22	18
55°	6	6	7	7	6	6
65°	4	4	4	4	4	4
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	551.4	551.4	551.4	551.4	551.4
2.5°	550.3	549.3	549.3	550.3	550.3
5°	539.9	542.0	542.0	542.0	539.9
7.5°	526.4	527.5	529.6	529.6	530.6
10°	506.7	508.8	510.9	510.9	510.9
12.5°	480.8	482.8	485.9	487.0	485.9
15°	449.6	454.8	462.1	461.0	457.9
17.5°	416.4	422.6	431.9	428.8	427.8
20°	380.0	387.3	395.6	392.5	389.4
22.5°	342.7	348.9	355.1	355.1	353.0
25°	299.0	303.2	310.5	310.5	310.5
27.5°	247.1	252.3	254.4	258.5	255.4
30°	191.1	198.3	206.6	204.6	193.1
32.5°	136.0	147.4	162.0	151.6	138.1
35°	94.5	103.8	123.6	105.9	95.5
37.5°	67.5	70.6	86.2	70.6	68.5
40°	46.7	48.8	57.1	48.8	47.8
42.5°	32.2	34.3	37.4	34.3	31.2
45°	21.8	22.8	24.9	22.8	21.8
47.5°	13.5	14.5	16.6	15.6	14.5
50°	9.3	10.4	12.5	11.4	10.4
52.5°	7.3	8.3	9.3	8.3	8.3
55°	6.2	6.2	7.3	7.3	6.2
57.5°	5.2	5.2	6.2	5.2	5.2
60°	5.2	5.2	5.2	5.2	5.2
62.5°	4.2	4.2	4.2	4.2	4.2
65°	4.2	4.2	4.2	4.2	4.2
67.5°	3.1	4.2	3.1	4.2	3.1
70°	3.1	3.1	3.1	3.1	3.1
72.5°	3.1	3.1	3.1	3.1	3.1
75°	2.1	2.1	2.1	2.1	2.1
77.5°	2.1	2.1	2.1	2.1	2.1
80°	1.0	1.0	1.0	2.1	1.0
82.5°	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
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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