

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: P885967

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMBB-400LM-5000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885967  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-153)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDMBB-400LM-5000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

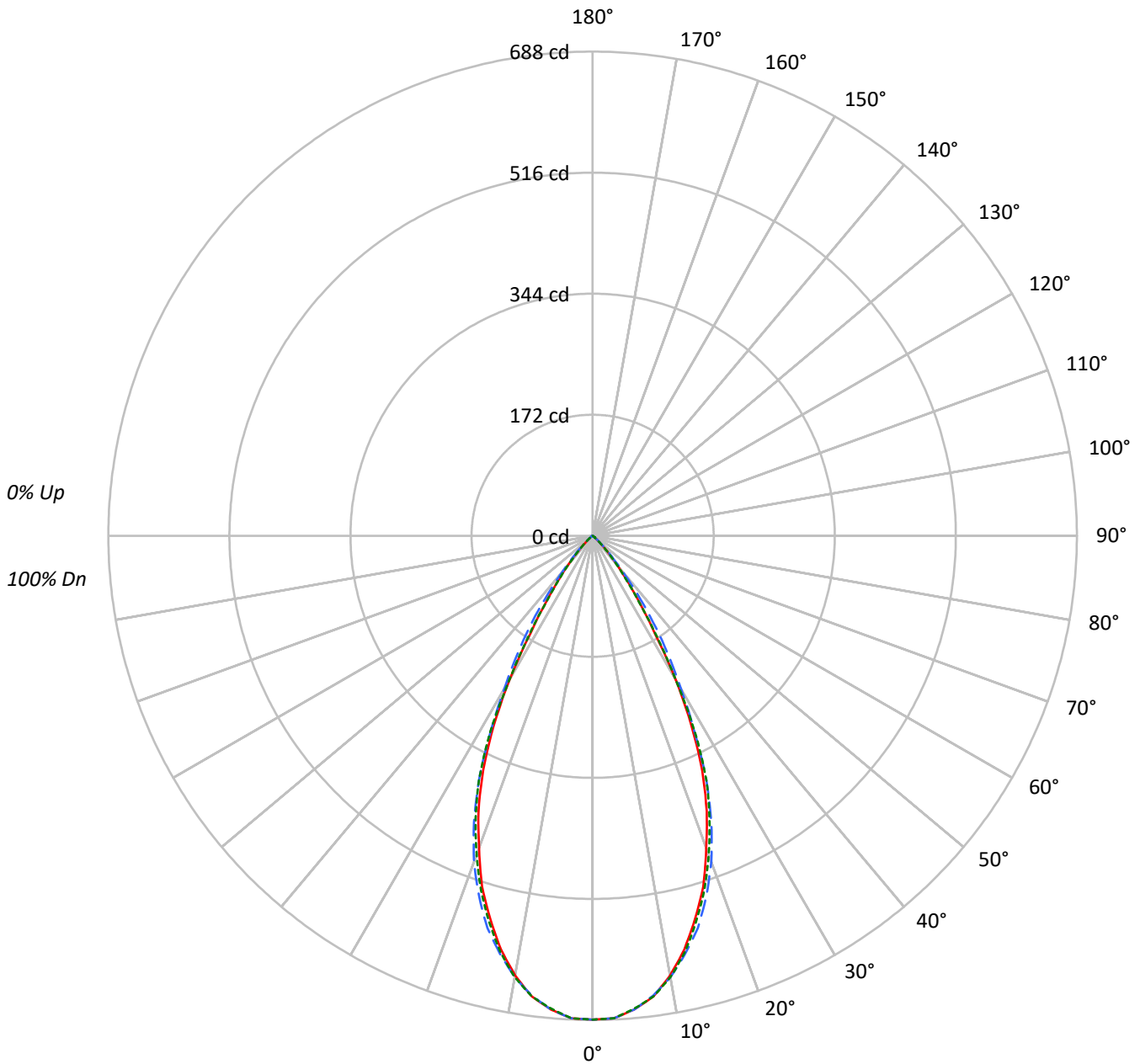
Lumens per Lamp: N/A  
Luminaire Lumens: 496.8 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.83 / 0.8  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

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				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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	114	111	109	107	111	109	107	105	105	103	102		101	100	99		98	97	96	94
2	109	104	100	97	107	102	99	96	99	96	94		96	94	92		94	92	90	88
3	104	98	93	89	102	96	92	89	94	90	87		91	88	86		89	87	84	83
4	99	92	87	83	97	91	86	82	89	84	81		87	83	80		85	82	79	78
5	94	86	81	77	93	85	80	77	84	79	76		82	78	75		81	77	75	73
6	90	82	76	72	88	81	75	72	79	75	71		78	74	71		77	73	70	69
7	86	77	71	67	84	76	71	67	75	70	67		74	70	67		73	69	66	65
8	82	73	67	64	81	72	67	63	71	67	63		70	66	63		69	66	63	61
9	78	69	64	60	77	69	63	60	68	63	60		67	63	59		66	62	59	58
10	75	66	60	57	74	65	60	57	65	60	56		64	59	56		63	59	56	55

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

	0°	45°	90°
0°	1065791	1065791	1065791
5°	1051658	1051658	1049635
10°	998342	1002435	1002435
15°	903122	926069	911467
20°	778231	812540	795385
25°	629202	653488	653488
30°	421141	449062	423468
35°	218930	282887	216470
40°	110478	131521	105217
45°	42745	51294	42745
50°	15674	15674	12539
55°	3513	7026	7026
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: 51294 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.3	12.7
10°-20°	158.5	31.9
20°-30°	169.4	34.1
30°-40°	84.4	17.0
40°-50°	19.0	3.8
50°-60°	2.3	0.5
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°	391.1	78.7
0°-40°	475.5	95.7
0°-60°	496.8	100.0
0°-90°	496.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	496.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	676	676	676	676	675	63
15°	563	568	577	573	568	156
25°	368	373	382	382	382	164
35°	116	125	150	127	114	77
45°	20	21	23	21	20	18
55°	1	3	3	3	3	2
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°	687.6	687.6	687.6	687.6	687.6
2.5°	686.3	686.3	686.3	686.3	686.3
5°	675.9	675.9	675.9	675.9	674.6
7.5°	660.3	660.3	659.0	659.0	660.3
10°	634.3	635.6	636.9	636.9	636.9
12.5°	601.8	603.1	608.3	607.0	605.7
15°	562.8	568.0	577.1	573.2	568.0
17.5°	522.5	527.7	536.8	534.2	527.7
20°	471.8	478.3	492.6	487.4	482.2
22.5°	423.7	430.2	440.6	440.6	434.1
25°	367.9	373.1	382.1	382.1	382.1
27.5°	304.2	312.0	313.3	319.8	315.9
30°	235.3	245.7	250.9	249.6	236.6
32.5°	165.1	182.0	197.6	188.5	169.0
35°	115.7	124.8	149.5	127.4	114.4
37.5°	79.3	83.2	104.0	83.2	78.0
40°	54.6	55.9	65.0	57.2	52.0
42.5°	33.8	36.4	40.3	35.1	32.5
45°	19.5	20.8	23.4	20.8	19.5
47.5°	10.4	11.7	13.0	11.7	10.4
50°	6.5	6.5	6.5	6.5	5.2
52.5°	3.9	3.9	3.9	3.9	3.9
55°	1.3	2.6	2.6	2.6	2.6
57.5°	0.0	1.3	1.3	1.3	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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