

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: P885941

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1RDMW-400LM-4000K

Issue Date: 6/19/2024

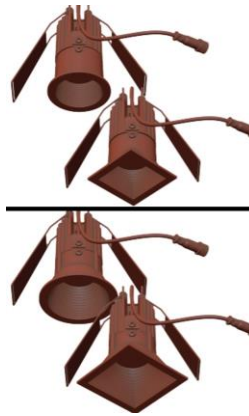
**Test Information**

Test Method: LM-79-2019  
Report Number: P885941  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-130)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1RDMW-400LM-4000K  
Description: 1IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 456.6 lumens  
Efficiency: N/A  
Efficacy: 76.1 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.81 / 0.77  
Luminous Opening: Circular (Dia: 0.08' x H: 0')  
CIE Type: Direct

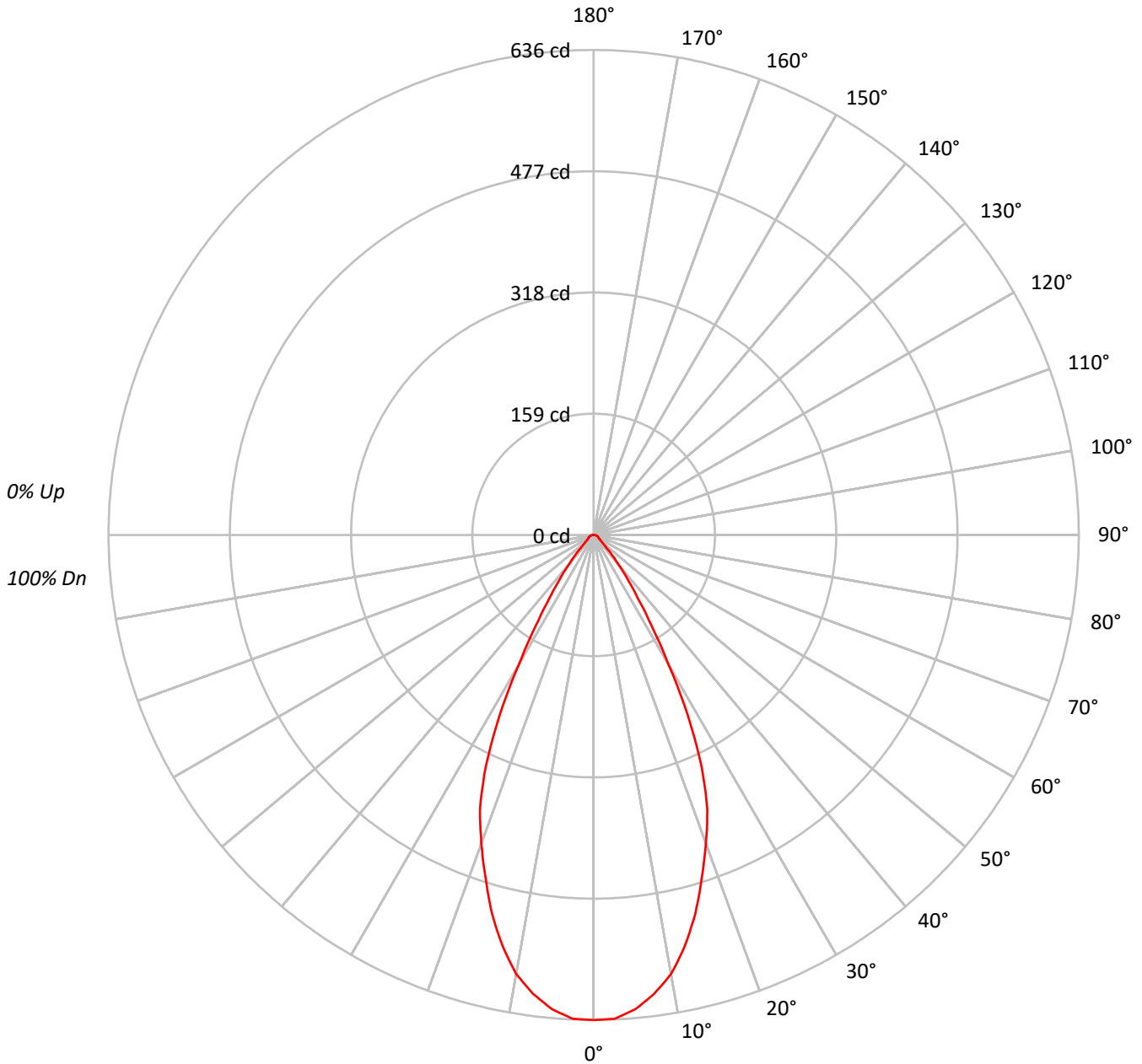
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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	108	106	104	104	102	101	101	99	98	97	96	95	93			
2	108	103	99	95	106	101	97	94	98	95	92	95	92	90	92	90	88	87			
3	102	96	91	87	100	95	90	86	92	88	85	90	86	84	87	85	82	81			
4	98	90	85	80	96	89	84	80	87	82	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	74	70	78	73	69	76	72	69	75	71	68	67			
7	84	75	70	65	83	75	69	65	73	69	65	72	68	65	71	67	64	63			
8	81	71	66	62	79	71	65	61	70	65	61	69	64	61	68	64	61	59			
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	65	60	57	56			
10	74	64	59	55	73	64	59	55	63	58	55	62	58	55	62	58	55	53			

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

	0°
0°	1255765
5°	1237383
10°	1171932
15°	1051411
20°	903926
25°	728395
30°	447794
35°	242371
40°	129587
45°	65310
50°	39607
55°	32343
60°	27630
65°	32689
70°	33467
75°	35838
80°	26140
85°	27173

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 65310 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.3	12.8
10°-20°	142.7	31.2
20°-30°	147.8	32.4
30°-40°	66.9	14.6
40°-50°	20.2	4.4
50°-60°	8.5	1.9
60°-70°	6.5	1.4
70°-80°	4.5	1.0
80°-90°	1.3	0.3
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°	348.8	76.4
0°-40°	415.7	91.0
0°-60°	444.4	97.3
0°-90°	456.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	456.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	636	
5°	625	58
15°	515	143
25°	334	148
35°	101	67
45°	23	20
55°	9	8
65°	7	6
75°	5	4
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	636.3
2.5°	635.1
5°	624.6
7.5°	607.0
10°	584.8
12.5°	552.0
15°	514.6
17.5°	471.3
20°	430.4
22.5°	389.5
25°	334.5
27.5°	267.8
30°	196.5
32.5°	140.4
35°	100.6
37.5°	72.5
40°	50.3
42.5°	35.1
45°	23.4
47.5°	16.4
50°	12.9
52.5°	10.5
55°	9.4
57.5°	8.2
60°	7.0
62.5°	7.0
65°	7.0
67.5°	5.8
70°	5.8
72.5°	4.7
75°	4.7
77.5°	3.5
80°	2.3
82.5°	2.3
85°	1.2
87.5°	0.0
90°	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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(END OF REPORT)