

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: P886029

Luminaire Tested: ML104LSFLD2W1E-TIR1D40FL-TL1SDMW-200LM-4000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886029  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-142)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFLD2W1E-TIR1D40FL-TL1SDMW-200LM-4000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
Light Source: (1) D2W LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 247.6 lumens  
Efficiency: N/A  
Efficacy: 77.4 lumens/watt  
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.68  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

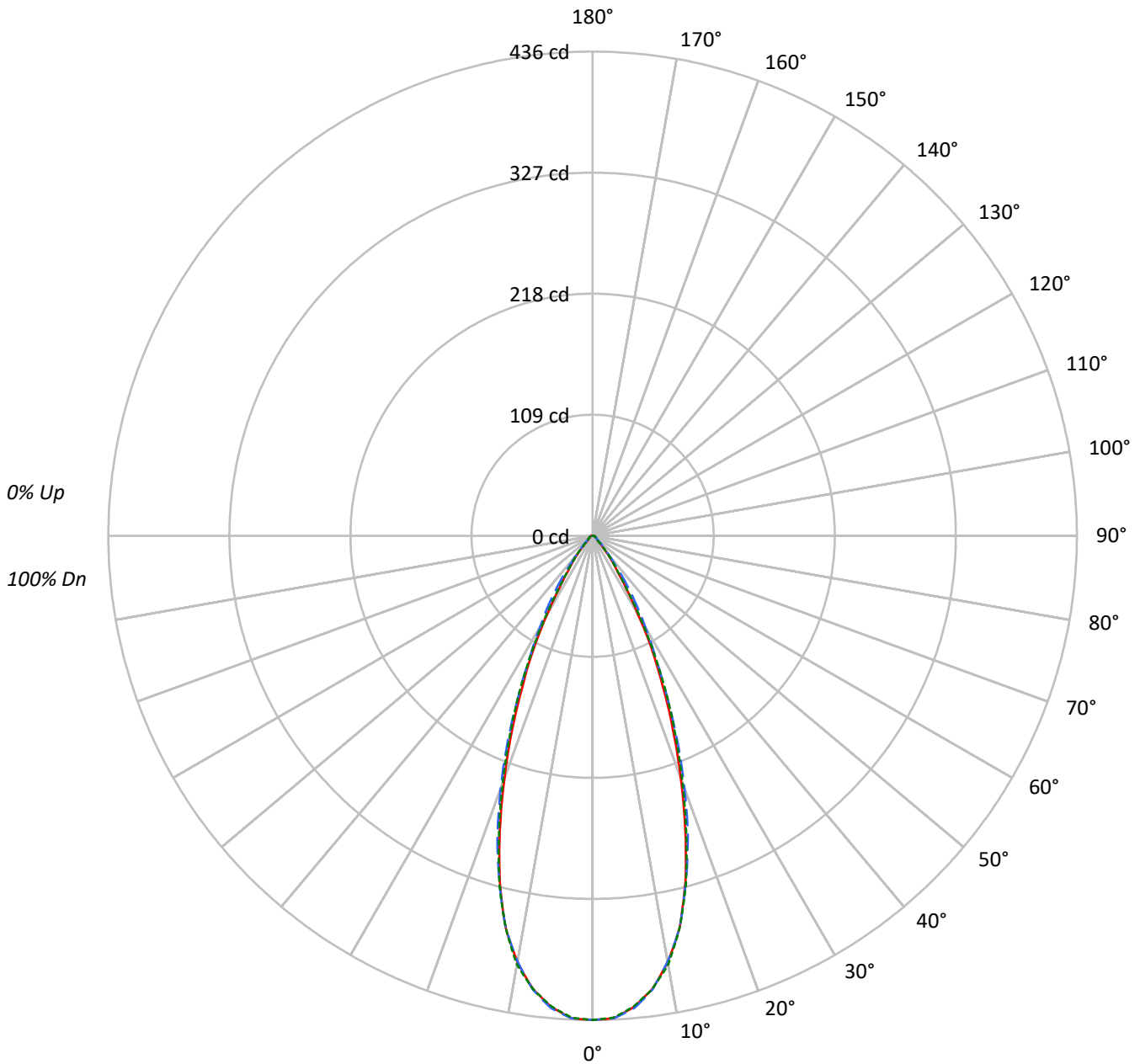
Input Watts (W): 3.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	100	100	100	100	100		
	1	114	111	109	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94	94	94	94	94	94		
	2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88	88	88	88	88	88		
	3	103	97	93	89	102	96	92	88	93	90	87	91	88	85	89	86	84	83	83	83	83	83	83		
	4	99	92	87	83	97	91	86	82	89	84	81	87	83	80	85	82	79	78	78	78	78	78	78		
	5	94	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74	74	74	74	74	74		
	6	90	82	77	73	89	81	76	72	80	75	72	79	75	71	77	74	71	70	70	70	70	70	70		
	7	87	78	73	69	85	77	72	68	76	71	68	75	71	68	74	70	67	66	66	66	66	66	66		
	8	83	74	69	65	82	74	69	65	73	68	65	72	67	64	71	67	64	63	63	63	63	63	63		
	9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60	60	60	60	60	60		
	10	76	68	62	59	76	67	62	59	66	62	59	66	61	58	65	61	58	57	57	57	57	57	57		

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

	0°	45°	90°
0°	675962	675962	675962
5°	662829	664696	661896
10°	613517	612573	617137
15°	517675	519600	520563
20°	382187	398847	390105
25°	254999	267313	268339
30°	146764	169137	155176
35°	71904	100098	75310
40°	39659	46943	42087
45°	16879	26085	16879
50°	12780	14227	12780
55°	11350	11350	11350
60°	11160	11160	11160
65°	11003	11003	11003
70°	10877	10877	10877
75°	10780	10780	10780
80°	10711	10711	10711
85°	10671	10671	10671

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 26085 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.6	16.0
10°-20°	88.5	35.8
20°-30°	71.5	28.9
30°-40°	30.0	12.1
40°-50°	8.6	3.5
50°-60°	3.8	1.5
60°-70°	3.0	1.2
70°-80°	2.1	0.8
80°-90°	0.6	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°	199.5	80.6
0°-40°	229.5	92.7
0°-60°	241.9	97.7
0°-90°	247.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	247.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	436	436	436	436	436	
5°	426	426	427	427	425	40
15°	323	321	324	323	324	88
25°	149	154	156	157	157	69
35°	38	42	53	43	40	26
45°	8	10	12	10	8	7
55°	4	4	4	4	4	4
65°	3	3	3	3	3	3
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°	436.1	436.1	436.1	436.1	436.1
2.5°	434.9	434.9	434.9	435.5	434.3
5°	426.0	426.0	427.2	426.6	425.4
7.5°	411.7	411.7	412.3	412.3	411.7
10°	389.8	390.3	389.2	390.9	392.1
12.5°	361.8	361.2	361.8	362.4	361.8
15°	322.6	321.4	323.8	322.6	324.4
17.5°	277.5	281.6	285.2	282.8	280.4
20°	231.7	235.3	241.8	238.8	236.5
22.5°	188.9	193.7	199.0	197.8	194.9
25°	149.1	153.9	156.3	156.9	156.9
27.5°	115.3	119.4	121.2	123.6	120.0
30°	82.0	87.9	94.5	93.9	86.7
32.5°	55.8	61.8	73.1	65.9	58.2
35°	38.0	42.2	52.9	43.4	39.8
37.5°	27.9	30.3	35.1	30.9	29.1
40°	19.6	21.4	23.2	22.6	20.8
42.5°	13.1	14.9	16.6	15.4	13.1
45°	7.7	9.5	11.9	10.1	7.7
47.5°	5.9	6.5	8.9	6.5	5.9
50°	5.3	5.3	5.9	5.3	5.3
52.5°	4.8	4.8	4.8	4.8	4.8
55°	4.2	4.2	4.2	4.2	4.2
57.5°	3.6	3.6	3.6	3.6	3.6
60°	3.6	3.6	3.6	3.6	3.6
62.5°	3.0	3.0	3.0	3.0	3.0
65°	3.0	3.0	3.0	3.0	3.0
67.5°	2.4	3.0	3.0	3.0	3.0
70°	2.4	2.4	2.4	2.4	2.4
72.5°	2.4	2.4	2.4	2.4	2.4
75°	1.8	1.8	1.8	1.8	1.8
77.5°	1.8	1.8	1.8	1.8	1.8
80°	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	0.6	1.2	1.2
85°	0.6	0.6	0.6	0.6	0.6
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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