

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: P886009

Luminaire Tested: ML104LSFLD2W1E-TIR1D25NFL-TL1SDSL-200LM-3000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886009  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-137)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFLD2W1E-TIR1D25NFL-TL1SDSL-200LM-3000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM  
Light Source: (1) D2W LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 183.3 lumens  
Efficiency: N/A  
Efficacy: 57.3 lumens/watt  
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.55  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

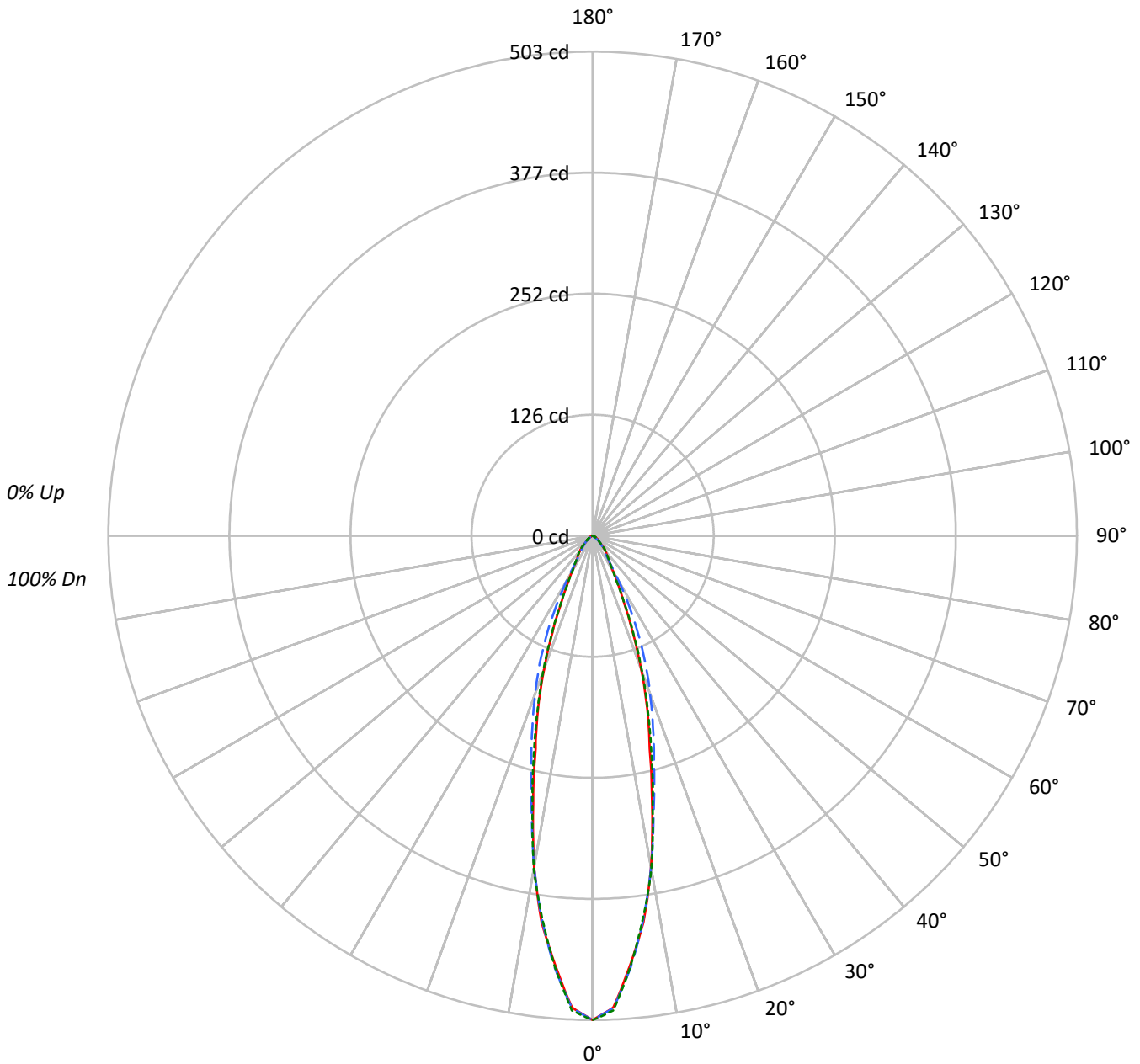
Input Watts (W): 3.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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									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	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95																			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89																			
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84																			
4	100	93	88	85	98	92	88	84	90	86	83	88	85	82	86	83	81	80																			
5	96	88	83	79	94	87	83	79	86	82	78	84	81	78	83	80	77	76																			
6	92	84	79	75	91	83	78	75	82	78	74	81	77	74	79	76	73	72																			
7	88	80	75	71	87	80	75	71	78	74	71	77	73	70	76	73	70	69																			
8	85	77	71	68	84	76	71	68	75	71	67	74	70	67	73	70	67	66																			
9	82	73	68	65	81	73	68	65	72	68	65	71	67	64	71	67	64	63																			
10	79	71	65	62	78	70	65	62	69	65	62	69	65	62	68	64	62	60																			

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

	0°	45°	90°
0°	779813	779813	779813
5°	695815	701416	699549
10°	550403	550403	553236
15°	367475	394113	378868
20°	242310	287342	247259
25°	133229	190180	136307
30°	75530	94681	73382
35°	51847	46170	52982
40°	42087	34803	43301
45°	28716	26085	28716
50°	20015	17121	20015
55°	15944	6486	15944
60°	13020	5580	13020
65°	8802	4401	8802
70°	5438	2719	5438
75°	3593	3593	3593
80°	5356	0	5356
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 28716 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.8	21.7
10°-20°	66.8	36.4
20°-30°	43.0	23.4
30°-40°	18.0	9.8
40°-50°	9.5	5.2
50°-60°	3.8	2.0
60°-70°	1.7	0.9
70°-80°	0.7	0.4
80°-90°	0.1	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°	149.5	81.6
0°-40°	167.6	91.4
0°-60°	180.8	98.6
0°-90°	183.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	183.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	447	448	451	448	450	40
15°	229	238	246	241	236	65
25°	78	86	111	89	80	38
35°	27	28	24	28	28	18
45°	13	12	12	12	13	10
55°	6	4	2	4	6	5
65°	2	2	1	2	2	2
75°	1	1	1	1	1	1
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°	503.1	503.1	503.1	503.1	503.1
2.5°	490.6	491.8	491.2	491.8	493.6
5°	447.2	447.8	450.8	448.4	449.6
7.5°	405.0	402.6	402.6	403.2	400.8
10°	349.7	347.3	349.7	348.5	351.5
12.5°	284.9	288.4	292.6	291.4	288.4
15°	229.0	238.5	245.6	240.9	236.1
17.5°	188.5	194.5	208.1	197.4	190.3
20°	146.9	155.8	174.2	158.8	149.9
22.5°	109.4	120.7	143.3	122.5	111.8
25°	77.9	86.2	111.2	88.6	79.7
27.5°	57.1	62.4	81.5	63.6	55.3
30°	42.2	47.6	52.9	46.4	41.0
32.5°	32.7	36.9	33.3	35.7	33.3
35°	27.4	28.5	24.4	28.0	28.0
37.5°	23.8	22.0	20.2	22.0	24.4
40°	20.8	17.8	17.2	18.4	21.4
42.5°	17.2	15.5	14.3	15.5	17.8
45°	13.1	11.9	11.9	12.5	13.1
47.5°	9.5	7.7	10.1	8.3	10.1
50°	8.3	5.4	7.1	5.4	8.3
52.5°	7.1	4.8	4.2	4.8	7.1
55°	5.9	3.6	2.4	3.6	5.9
57.5°	4.8	3.0	1.8	3.0	4.8
60°	4.2	2.4	1.8	2.4	4.2
62.5°	3.0	1.8	1.2	2.4	3.0
65°	2.4	1.8	1.2	1.8	2.4
67.5°	1.8	1.2	0.6	1.2	1.8
70°	1.2	1.2	0.6	1.2	1.2
72.5°	1.2	0.6	0.6	0.6	1.2
75°	0.6	0.6	0.6	0.6	0.6
77.5°	0.6	0.6	0.6	0.6	0.6
80°	0.6	0.6	0.0	0.6	0.6
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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