

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: P885860

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885860
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: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

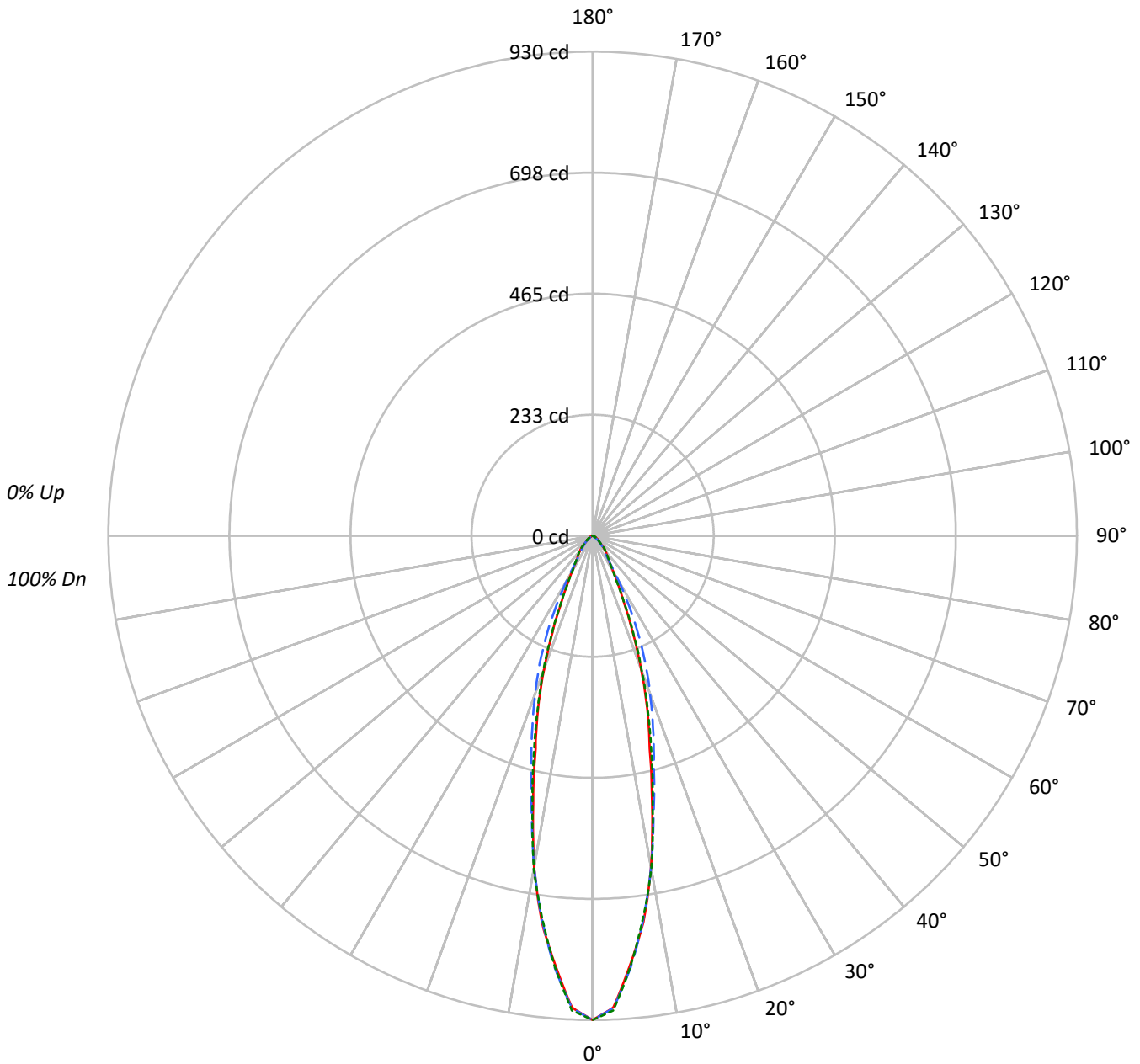
Lumens per Lamp: N/A
Luminaire Lumens: 338.8 lumens
Efficiency: N/A
Efficacy: 56.5 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.55
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

Input Watts (W): 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					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								
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°	1441670	1441670	1441670
5°	1286293	1296562	1293139
10°	1017387	1017387	1022581
15°	679267	728531	700289
20°	447837	531302	456909
25°	246277	351628	251920
30°	139784	175043	135846
35°	95746	85339	97828
40°	77901	64547	80127
45°	53048	48225	53048
50°	37136	31830	37136
55°	29726	11890	29726
60°	23870	10230	23870
65°	16138	8069	16138
70°	9970	4985	9970
75°	6588	6588	6588
80°	9819	0	9819
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 53048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	21.7
10°-20°	123.5	36.4
20°-30°	79.4	23.4
30°-40°	33.3	9.8
40°-50°	17.5	5.2
50°-60°	6.9	2.0
60°-70°	3.2	0.9
70°-80°	1.3	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°	276.4	81.6
0°-40°	309.8	91.4
0°-60°	334.2	98.7
0°-90°	338.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	338.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	930	930	930	930	930	
5°	827	828	833	829	831	74
15°	423	441	454	445	436	119
25°	144	159	206	164	147	70
35°	51	53	45	52	52	33
45°	24	22	22	23	24	19
55°	11	7	4	7	11	10
65°	4	3	2	3	4	4
75°	1	1	1	1	1	2
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°	930.1	930.1	930.1	930.1	930.1
2.5°	907.0	909.2	908.1	909.2	912.5
5°	826.7	827.8	833.3	828.9	831.1
7.5°	748.7	744.3	744.3	745.4	741.0
10°	646.4	642.0	646.4	644.2	649.7
12.5°	526.6	533.2	540.9	538.7	533.2
15°	423.3	440.8	454.0	445.2	436.4
17.5°	348.5	359.5	384.8	365.0	351.8
20°	271.5	288.0	322.1	293.5	277.0
22.5°	202.3	223.2	264.9	226.5	206.7
25°	144.0	159.4	205.6	163.8	147.3
27.5°	105.5	115.4	150.6	117.6	102.2
30°	78.1	87.9	97.8	85.7	75.9
32.5°	60.5	68.2	61.6	66.0	61.6
35°	50.6	52.8	45.1	51.7	51.7
37.5°	44.0	40.7	37.4	40.7	45.1
40°	38.5	33.0	31.9	34.1	39.6
42.5°	31.9	28.6	26.4	28.6	33.0
45°	24.2	22.0	22.0	23.1	24.2
47.5°	17.6	14.3	18.7	15.4	18.7
50°	15.4	9.9	13.2	9.9	15.4
52.5°	13.2	8.8	7.7	8.8	13.2
55°	11.0	6.6	4.4	6.6	11.0
57.5°	8.8	5.5	3.3	5.5	8.8
60°	7.7	4.4	3.3	4.4	7.7
62.5°	5.5	3.3	2.2	4.4	5.5
65°	4.4	3.3	2.2	3.3	4.4
67.5°	3.3	2.2	1.1	2.2	3.3
70°	2.2	2.2	1.1	2.2	2.2
72.5°	2.2	1.1	1.1	1.1	2.2
75°	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	0.0	1.1	1.1
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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