

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: P885858

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDSL-400LM-2700K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885858
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-2700K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 308.3 lumens
Efficiency: N/A
Efficacy: 51.4 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

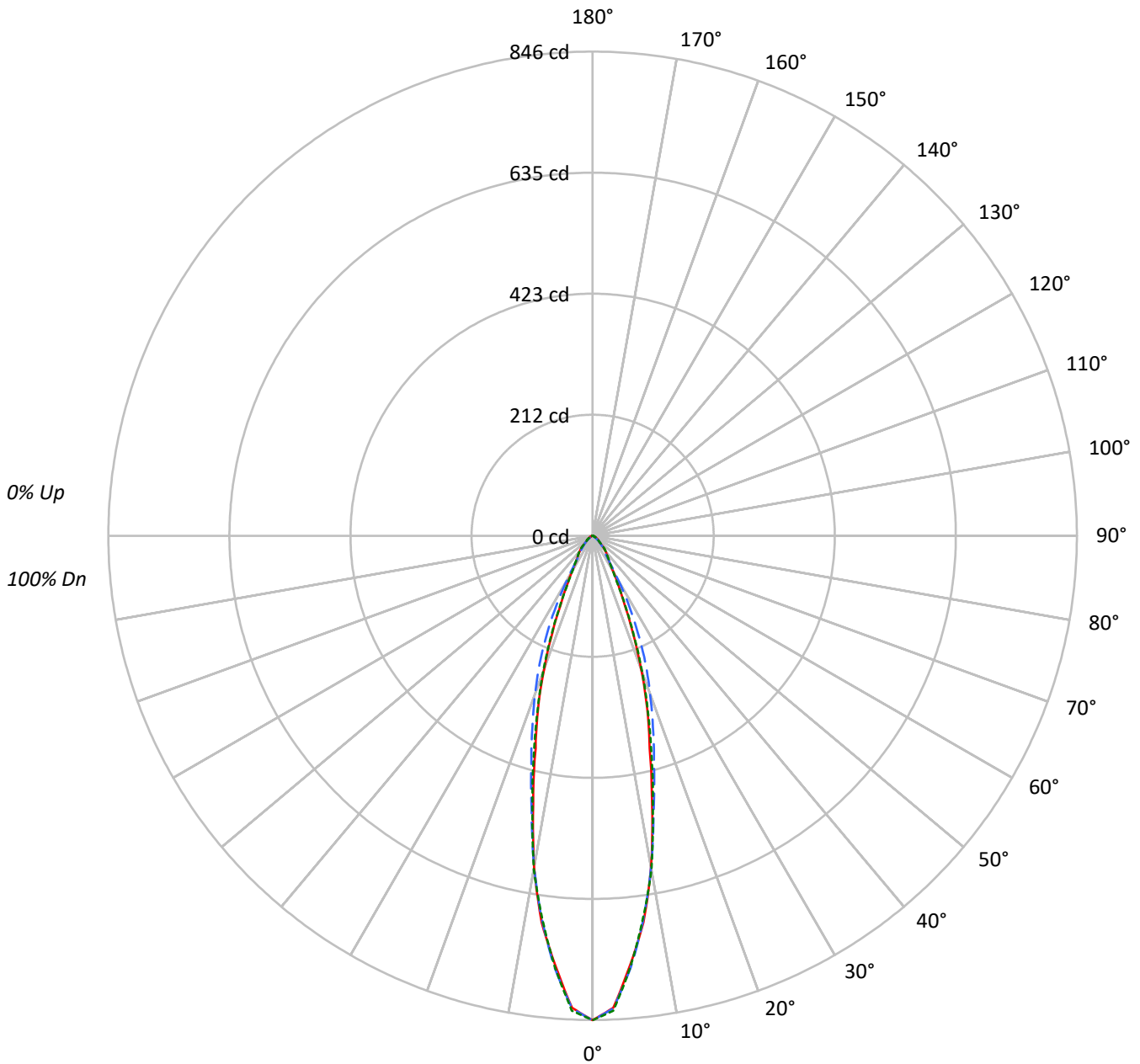
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	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	88	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	66	62	78	70	65	62	69	65	62	69	65	62	68	64	62	60

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1312089	1312089	1312089
5°	1170843	1180178	1177066
10°	926099	926099	930821
15°	618128	663060	637385
20°	407590	483631	416002
25°	224214	319988	229345
30°	127076	159472	123497
35°	87042	77581	88934
40°	70819	58679	72842
45°	48225	43841	48225
50°	33760	28937	33760
55°	27024	10809	27024
60°	21700	9300	21700
65°	14671	7335	14671
70°	9064	4532	9064
75°	5989	5989	5989
80°	8926	0	8926
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 48225 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	21.7
10°-20°	112.4	36.5
20°-30°	72.3	23.5
30°-40°	30.3	9.8
40°-50°	15.9	5.2
50°-60°	6.3	2.0
60°-70°	2.9	0.9
70°-80°	1.2	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°	251.6	81.6
0°-40°	281.9	91.4
0°-60°	304.1	98.7
0°-90°	308.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	308.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	846	846	846	846	846	
5°	752	754	758	754	756	67
15°	385	401	413	405	397	109
25°	131	145	187	149	134	64
35°	46	48	41	47	47	30
45°	22	20	20	21	22	17
55°	10	6	4	6	10	9
65°	4	3	2	3	4	4
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°	846.5	846.5	846.5	846.5	846.5
2.5°	825.5	827.5	826.5	827.5	830.5
5°	752.5	753.5	758.5	754.5	756.5
7.5°	681.4	677.4	677.4	678.4	674.4
10°	588.4	584.4	588.4	586.4	591.4
12.5°	479.3	485.3	492.3	490.3	485.3
15°	385.2	401.2	413.2	405.2	397.2
17.5°	317.2	327.2	350.2	332.2	320.2
20°	247.1	262.2	293.2	267.2	252.2
22.5°	184.1	203.1	241.1	206.1	188.1
25°	131.1	145.1	187.1	149.1	134.1
27.5°	96.1	105.1	137.1	107.1	93.1
30°	71.0	80.0	89.1	78.0	69.0
32.5°	55.0	62.0	56.0	60.0	56.0
35°	46.0	48.0	41.0	47.0	47.0
37.5°	40.0	37.0	34.0	37.0	41.0
40°	35.0	30.0	29.0	31.0	36.0
42.5°	29.0	26.0	24.0	26.0	30.0
45°	22.0	20.0	20.0	21.0	22.0
47.5°	16.0	13.0	17.0	14.0	17.0
50°	14.0	9.0	12.0	9.0	14.0
52.5°	12.0	8.0	7.0	8.0	12.0
55°	10.0	6.0	4.0	6.0	10.0
57.5°	8.0	5.0	3.0	5.0	8.0
60°	7.0	4.0	3.0	4.0	7.0
62.5°	5.0	3.0	2.0	4.0	5.0
65°	4.0	3.0	2.0	3.0	4.0
67.5°	3.0	2.0	1.0	2.0	3.0
70°	2.0	2.0	1.0	2.0	2.0
72.5°	2.0	1.0	1.0	1.0	2.0
75°	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0
80°	1.0	1.0	0.0	1.0	1.0
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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