

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: P885850

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMW-400LM-3500K

Issue Date: 6/19/2024

Test Information

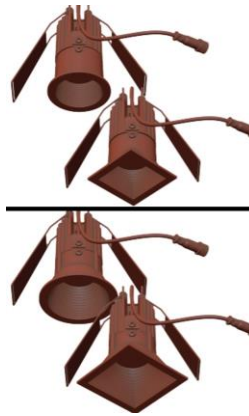
Test Method: LM-79-2019
Report Number: P885850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-136)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMW-400LM-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 353.6 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 0.45 / 0.46 / 0.55
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')

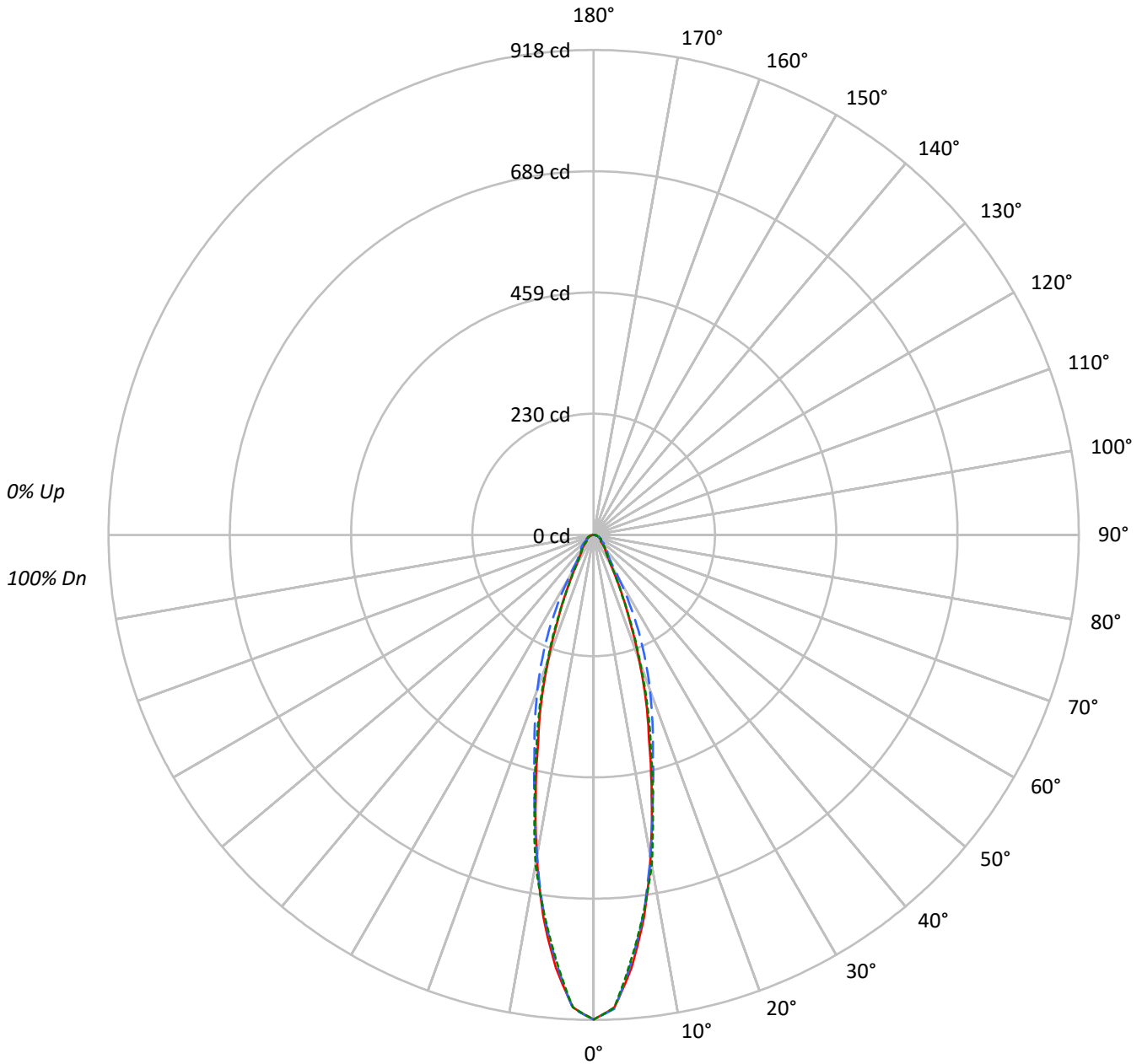
CIE Type: Direct

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				
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	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92		
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86		
3	102	95	90	86	100	94	89	85	91	87	84	89	86	83	87	84	82	80		
4	97	90	84	80	95	88	83	79	86	82	78	84	80	77	82	79	77	75		
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71		
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67		
7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64		
8	82	73	67	63	80	72	67	63	71	66	63	70	66	62	69	65	62	61		
9	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	59	58		
10	76	67	61	58	75	66	61	57	65	61	57	65	60	57	64	60	57	56		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1422140	1422140	1422140
5°	1278980	1265288	1258442
10°	974261	970799	996611
15°	649901	693870	670923
20°	412703	512332	421775
25°	225240	343419	219597
30°	115979	172895	115979
35°	78906	91394	80987
40°	66570	77699	68796
45°	50417	69707	52828
50°	42441	60767	42441
55°	44589	44589	44589
60°	47740	44330	47740
65°	44379	44379	44379
70°	44866	44866	44866
75°	39526	39526	39526
80°	39275	39275	39275
85°	39126	19563	39126

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 69707 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	20.3
10°-20°	118.0	33.4
20°-30°	74.5	21.1
30°-40°	31.5	8.9
40°-50°	21.1	6.0
50°-60°	15.1	4.3
60°-70°	12.2	3.5
70°-80°	7.2	2.0
80°-90°	2.3	0.7
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°	264.2	74.7
0°-40°	295.8	83.6
0°-60°	331.9	93.9
0°-90°	353.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	353.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	918	918	918	918	918	
5°	822	815	813	807	809	72
15°	405	417	432	424	418	114
25°	132	150	201	152	128	63
35°	42	49	48	48	43	27
45°	23	27	32	27	24	18
55°	16	16	16	16	16	15
65°	12	12	12	12	12	12
75°	7	7	7	7	7	7
85°	2	2	1	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	917.5	917.5	917.5	917.5	917.5
2.5°	895.5	895.5	897.7	895.5	895.5
5°	822.0	815.4	813.2	806.6	808.8
7.5°	729.8	727.6	723.2	723.2	721.0
10°	619.0	621.2	616.8	623.4	633.2
12.5°	507.0	508.1	516.9	521.3	515.8
15°	405.0	417.0	432.4	423.6	418.1
17.5°	329.2	341.3	368.8	346.8	338.0
20°	250.2	273.3	310.6	278.8	255.7
22.5°	182.2	210.7	254.6	212.9	189.9
25°	131.7	150.4	200.8	152.5	128.4
27.5°	92.2	107.6	146.0	108.7	91.1
30°	64.8	81.2	96.6	79.0	64.8
32.5°	50.5	63.7	61.5	61.5	49.4
35°	41.7	49.4	48.3	48.3	42.8
37.5°	36.2	39.5	42.8	40.6	37.3
40°	32.9	35.1	38.4	35.1	34.0
42.5°	28.5	31.8	35.1	31.8	29.6
45°	23.0	27.4	31.8	27.4	24.1
47.5°	18.7	20.9	29.6	21.9	18.7
50°	17.6	17.6	25.2	17.6	17.6
52.5°	17.6	17.6	19.8	17.6	17.6
55°	16.5	16.5	16.5	16.5	16.5
57.5°	15.4	15.4	15.4	15.4	15.4
60°	15.4	15.4	14.3	15.4	15.4
62.5°	13.2	14.3	13.2	14.3	13.2
65°	12.1	12.1	12.1	12.1	12.1
67.5°	11.0	11.0	11.0	11.0	11.0
70°	9.9	9.9	9.9	9.9	9.9
72.5°	7.7	7.7	7.7	8.8	7.7
75°	6.6	6.6	6.6	6.6	6.6
77.5°	5.5	5.5	5.5	5.5	5.5
80°	4.4	4.4	4.4	4.4	4.4
82.5°	3.3	3.3	3.3	3.3	3.3
85°	2.2	2.2	1.1	2.2	2.2
87.5°	1.1	1.1	1.1	1.1	1.1
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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