

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: P885913

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-2700K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885913
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-145)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-2700K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 418.2 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

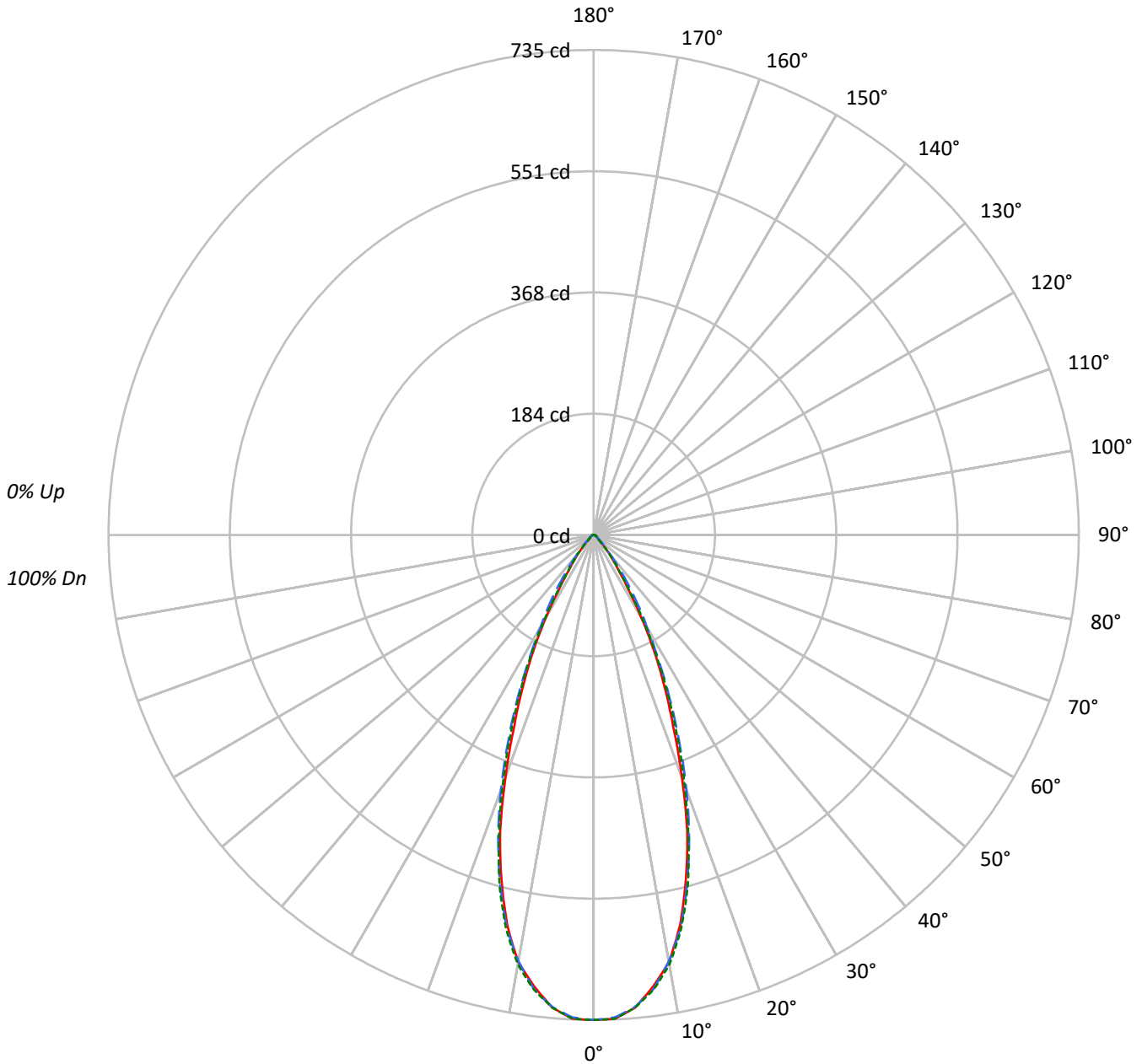
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	111	109	107	105	105	103	102	101	100	99	98	97	96	94								
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88								
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	84	83								
4	99	92	87	83	97	91	86	82	89	85	81	87	83	81	85	82	80	78								
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74								
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	78	74	71	70								
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66								
8	83	74	69	65	82	74	69	65	73	68	65	72	68	65	71	67	64	63								
9	80	71	66	62	79	70	65	62	70	65	62	69	64	61	68	64	61	60								
10	77	68	63	59	76	67	62	59	67	62	59	66	62	59	65	61	58	57								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1139417	1139417	1139417
5°	1118874	1117318	1118874
10°	1034228	1032654	1040524
15°	866696	877929	884347
20°	643467	678106	663261
25°	432694	465189	453217
30°	257732	288159	272050
35°	124887	170300	132455
40°	68796	82959	70819
45°	30689	43841	28497
50°	19291	24114	19291
55°	16214	18917	16214
60°	15500	15500	15500
65°	14671	14671	14671
70°	13596	13596	13596
75°	11978	11978	11978
80°	8926	17852	17852
85°	17784	17784	17784

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43841 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	15.9
10°-20°	149.5	35.8
20°-30°	121.8	29.1
30°-40°	52.1	12.5
40°-50°	14.7	3.5
50°-60°	6.0	1.4
60°-70°	4.2	1.0
70°-80°	2.5	0.6
80°-90°	0.8	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°	337.9	80.8
0°-40°	390.0	93.3
0°-60°	410.7	98.2
0°-90°	418.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	418.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	735	735	735	735	735	
5°	719	718	718	718	719	67
15°	540	542	547	549	551	148
25°	253	259	272	266	265	116
35°	66	74	90	79	70	46
45°	14	17	20	17	13	13
55°	6	7	7	7	6	5
65°	4	4	4	4	4	4
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°	735.1	735.1	735.1	735.1	735.1
2.5°	734.1	733.1	732.1	733.1	734.1
5°	719.1	718.1	718.1	718.1	719.1
7.5°	690.1	693.1	694.1	695.1	695.1
10°	657.1	655.1	656.1	658.1	661.1
12.5°	605.1	606.1	609.1	611.1	612.1
15°	540.1	542.1	547.1	549.1	551.1
17.5°	471.1	473.1	481.1	480.1	477.1
20°	390.1	397.1	411.1	411.1	402.1
22.5°	315.0	325.0	338.1	334.1	331.0
25°	253.0	259.0	272.0	266.0	265.0
27.5°	197.0	205.0	211.0	211.0	205.0
30°	144.0	157.0	161.0	161.0	152.0
32.5°	97.0	109.0	124.0	115.0	102.0
35°	66.0	74.0	90.0	79.0	70.0
37.5°	48.0	52.0	62.0	53.0	50.0
40°	34.0	37.0	41.0	38.0	35.0
42.5°	23.0	25.0	28.0	26.0	23.0
45°	14.0	17.0	20.0	17.0	13.0
47.5°	10.0	11.0	15.0	11.0	10.0
50°	8.0	9.0	10.0	9.0	8.0
52.5°	7.0	7.0	8.0	7.0	7.0
55°	6.0	7.0	7.0	7.0	6.0
57.5°	5.0	6.0	6.0	6.0	5.0
60°	5.0	5.0	5.0	5.0	5.0
62.5°	5.0	5.0	5.0	5.0	5.0
65°	4.0	4.0	4.0	4.0	4.0
67.5°	4.0	4.0	4.0	4.0	4.0
70°	3.0	3.0	3.0	3.0	3.0
72.5°	3.0	3.0	3.0	3.0	3.0
75°	2.0	2.0	2.0	2.0	2.0
77.5°	2.0	2.0	2.0	2.0	2.0
80°	1.0	2.0	2.0	2.0	2.0
82.5°	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
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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