

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: P885857

Luminaire Tested: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMWB-400LM-5000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885857
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-139)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D25NFL-TL1SDMWB-400LM-5000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE BAFFLED TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

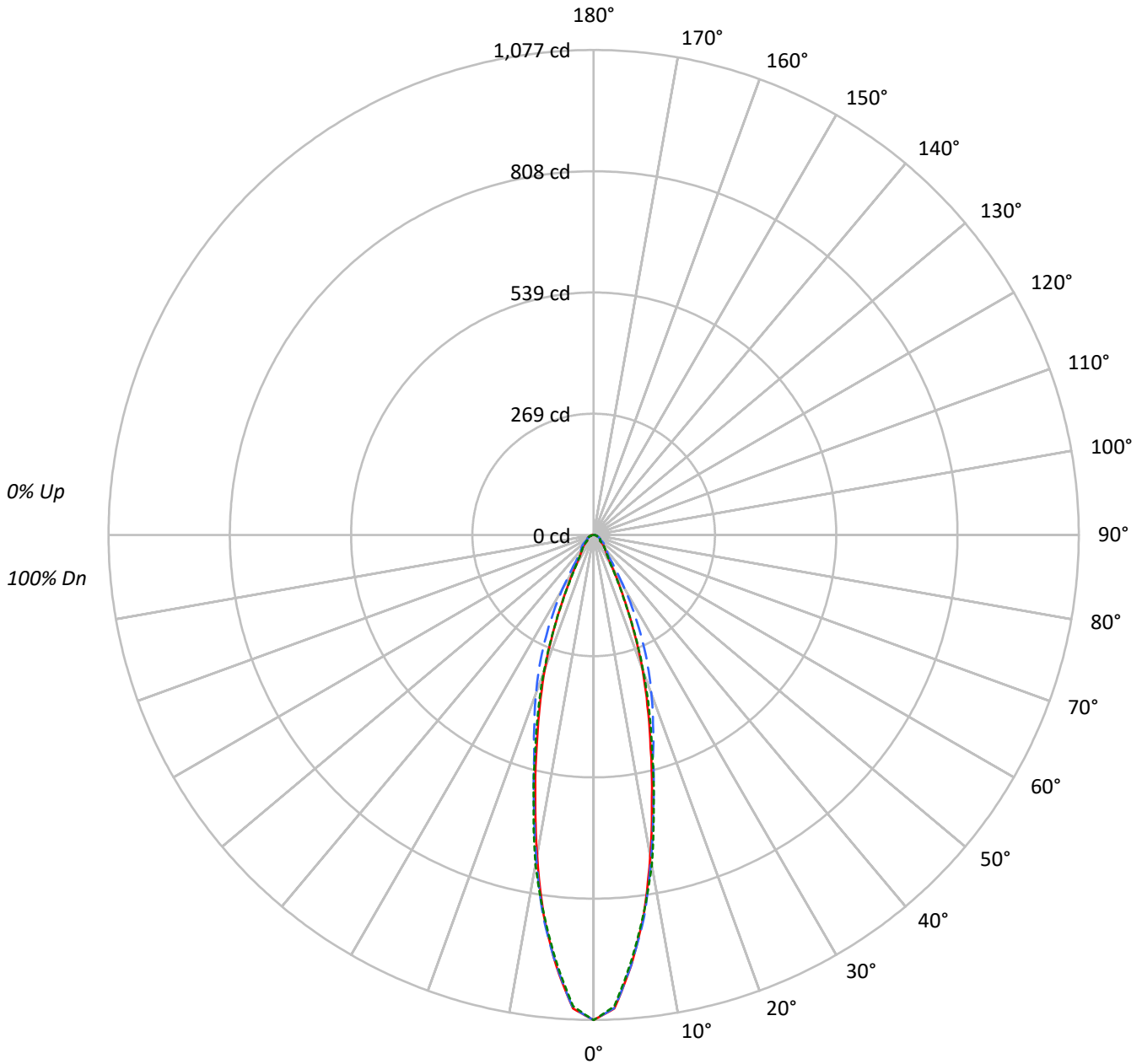
Lumens per Lamp: N/A
Luminaire Lumens: 419.5 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.47 / 0.56
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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									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	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93																			
2	108	103	99	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86																			
3	102	96	91	87	100	95	90	86	92	88	85	90	86	84	87	85	82	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76																			
5	93	85	80	75	92	84	79	75	83	78	74	81	77	74	79	76	73	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68																			
7	86	77	71	67	84	76	71	67	75	70	67	74	69	66	73	69	66	65																			
8	82	73	68	64	81	73	67	64	72	67	63	71	66	63	70	66	63	62																			
9	79	70	65	61	78	70	64	61	69	64	61	68	63	60	67	63	60	59																			
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	64	61	58	56																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1669987	1669987	1669987
5°	1492455	1490432	1480318
10°	1137320	1153689	1170058
15°	784214	817592	805075
20°	520910	617405	531632
25°	284586	431155	280140
30°	141931	244308	139605
35°	93476	110695	93476
40°	76282	89434	76282
45°	59843	79791	62693
50°	47022	68966	47022
55°	49183	45670	49183
60°	48361	48361	48361
65°	47679	47679	47679
70°	41241	41241	41241
75°	38927	38927	38927
80°	34812	34812	34812
85°	23120	23120	23120

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 79791 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.3	20.1
10°-20°	141.3	33.7
20°-30°	94.1	22.4
30°-40°	38.3	9.1
40°-50°	24.2	5.8
50°-60°	16.2	3.9
60°-70°	12.6	3.0
70°-80°	6.9	1.6
80°-90°	1.6	0.4
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°	319.7	76.2
0°-40°	358.1	85.4
0°-60°	398.5	95.0
0°-90°	419.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	419.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	959	957	958	955	951	84
15°	489	500	510	511	502	136
25°	166	195	252	199	164	79
35°	49	58	58	57	49	32
45°	27	31	36	32	29	21
55°	18	18	17	18	18	16
65°	13	13	13	13	13	12
75°	6	6	6	6	6	7
85°	1	1	1	1	1	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1077.4	1077.4	1077.4	1077.4	1077.4
2.5°	1052.7	1054.0	1051.5	1050.2	1047.6
5°	959.2	956.6	957.9	955.3	951.4
7.5°	851.3	848.7	856.5	851.3	848.7
10°	722.6	725.2	733.0	731.7	743.4
12.5°	597.9	605.7	612.2	613.5	616.1
15°	488.7	500.4	509.5	510.8	501.7
17.5°	396.4	417.2	438.0	423.7	409.4
20°	315.8	339.2	374.3	344.4	322.3
22.5°	236.5	263.8	313.2	271.6	240.4
25°	166.4	195.0	252.1	198.9	163.8
27.5°	114.4	133.9	192.4	137.8	110.5
30°	79.3	98.8	136.5	98.8	78.0
32.5°	58.5	76.7	88.4	74.1	59.8
35°	49.4	58.5	58.5	57.2	49.4
37.5°	42.9	46.8	49.4	46.8	42.9
40°	37.7	40.3	44.2	40.3	37.7
42.5°	33.8	36.4	40.3	36.4	33.8
45°	27.3	31.2	36.4	32.5	28.6
47.5°	19.5	24.7	33.8	26.0	19.5
50°	19.5	19.5	28.6	19.5	19.5
52.5°	18.2	18.2	22.1	18.2	18.2
55°	18.2	18.2	16.9	18.2	18.2
57.5°	16.9	16.9	16.9	16.9	16.9
60°	15.6	15.6	15.6	15.6	15.6
62.5°	14.3	14.3	14.3	14.3	14.3
65°	13.0	13.0	13.0	13.0	13.0
67.5°	10.4	11.7	10.4	11.7	11.7
70°	9.1	9.1	9.1	9.1	9.1
72.5°	7.8	7.8	7.8	7.8	7.8
75°	6.5	6.5	6.5	6.5	6.5
77.5°	5.2	5.2	5.2	5.2	5.2
80°	3.9	3.9	3.9	3.9	3.9
82.5°	2.6	2.6	2.6	2.6	2.6
85°	1.3	1.3	1.3	1.3	1.3
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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