

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: P885917

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDMWB-400LM-5000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885917
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-5000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D 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: 543.5 lumens
Efficiency: N/A
Efficacy: 90.6 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

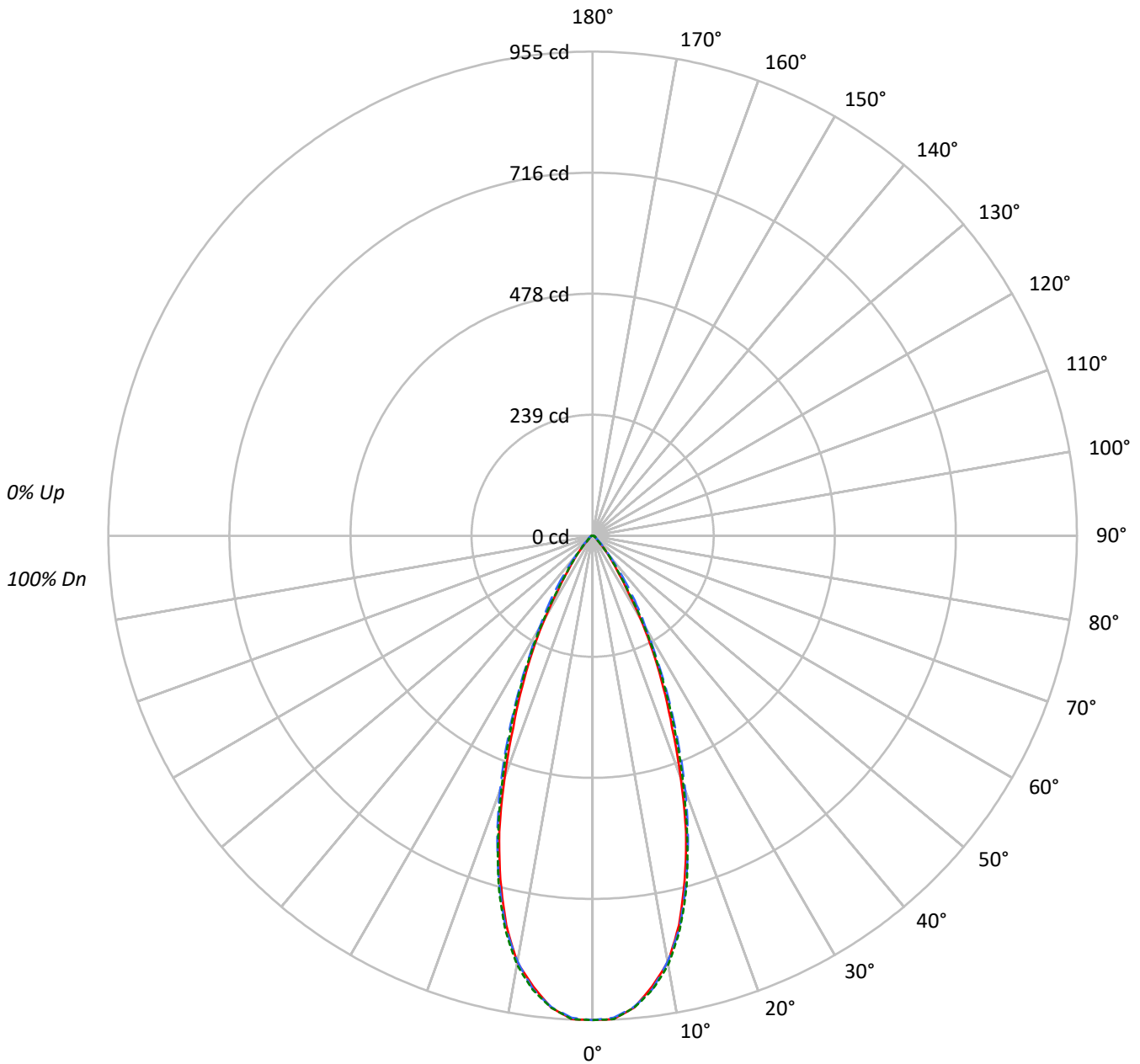
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	91	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	62	59	76	67	62	59	67	62	59	66	62	59	65	61	58	57								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1480730	1480730	1480730
5°	1454023	1452000	1454023
10°	1343977	1341931	1352161
15°	1126335	1140938	1149282
20°	836128	881159	861860
25°	562331	604575	589011
30°	335051	374606	353665
35°	162353	221390	172192
40°	89434	107847	92065
45°	39895	56993	37046
50°	25079	31348	25079
55°	21078	24592	21078
60°	20150	20150	20150
65°	19072	19072	19072
70°	17675	17675	17675
75°	15571	15571	15571
80°	11604	23208	23208
85°	23120	23120	23120

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 56993 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	15.9
10°-20°	194.3	35.8
20°-30°	158.3	29.1
30°-40°	67.7	12.5
40°-50°	19.1	3.5
50°-60°	7.8	1.4
60°-70°	5.5	1.0
70°-80°	3.2	0.6
80°-90°	1.0	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°	439.2	80.8
0°-40°	506.9	93.3
0°-60°	533.8	98.2
0°-90°	543.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	543.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	934	933	933	933	934	86
15°	702	704	711	714	716	192
25°	329	337	354	346	344	151
35°	86	96	117	103	91	60
45°	18	22	26	22	17	17
55°	8	9	9	9	8	7
65°	5	5	5	5	5	5
75°	3	3	3	3	3	3
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°	955.3	955.3	955.3	955.3	955.3
2.5°	954.0	952.7	951.4	952.7	954.0
5°	934.5	933.2	933.2	933.2	934.5
7.5°	896.8	900.7	902.0	903.3	903.3
10°	853.9	851.3	852.6	855.2	859.1
12.5°	786.4	787.7	791.6	794.2	795.5
15°	701.9	704.5	711.0	713.6	716.2
17.5°	612.2	614.8	625.2	623.9	620.0
20°	506.9	516.0	534.2	534.2	522.5
22.5°	409.4	422.4	439.3	434.1	430.2
25°	328.8	336.6	353.5	345.7	344.4
27.5°	256.1	266.5	274.2	274.2	266.5
30°	187.2	204.1	209.3	209.3	197.6
32.5°	126.1	141.7	161.2	149.5	132.6
35°	85.8	96.2	117.0	102.7	91.0
37.5°	62.4	67.6	80.6	68.9	65.0
40°	44.2	48.1	53.3	49.4	45.5
42.5°	29.9	32.5	36.4	33.8	29.9
45°	18.2	22.1	26.0	22.1	16.9
47.5°	13.0	14.3	19.5	14.3	13.0
50°	10.4	11.7	13.0	11.7	10.4
52.5°	9.1	9.1	10.4	9.1	9.1
55°	7.8	9.1	9.1	9.1	7.8
57.5°	6.5	7.8	7.8	7.8	6.5
60°	6.5	6.5	6.5	6.5	6.5
62.5°	6.5	6.5	6.5	6.5	6.5
65°	5.2	5.2	5.2	5.2	5.2
67.5°	5.2	5.2	5.2	5.2	5.2
70°	3.9	3.9	3.9	3.9	3.9
72.5°	3.9	3.9	3.9	3.9	3.9
75°	2.6	2.6	2.6	2.6	2.6
77.5°	2.6	2.6	2.6	2.6	2.6
80°	1.3	2.6	2.6	2.6	2.6
82.5°	1.3	1.3	1.3	1.3	1.3
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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