

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: P885922

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDSL-400LM-5000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885922
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-143)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D40FL-TL1SDSL-400LM-5000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 526.8 lumens
Efficiency: N/A
Efficacy: 87.8 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

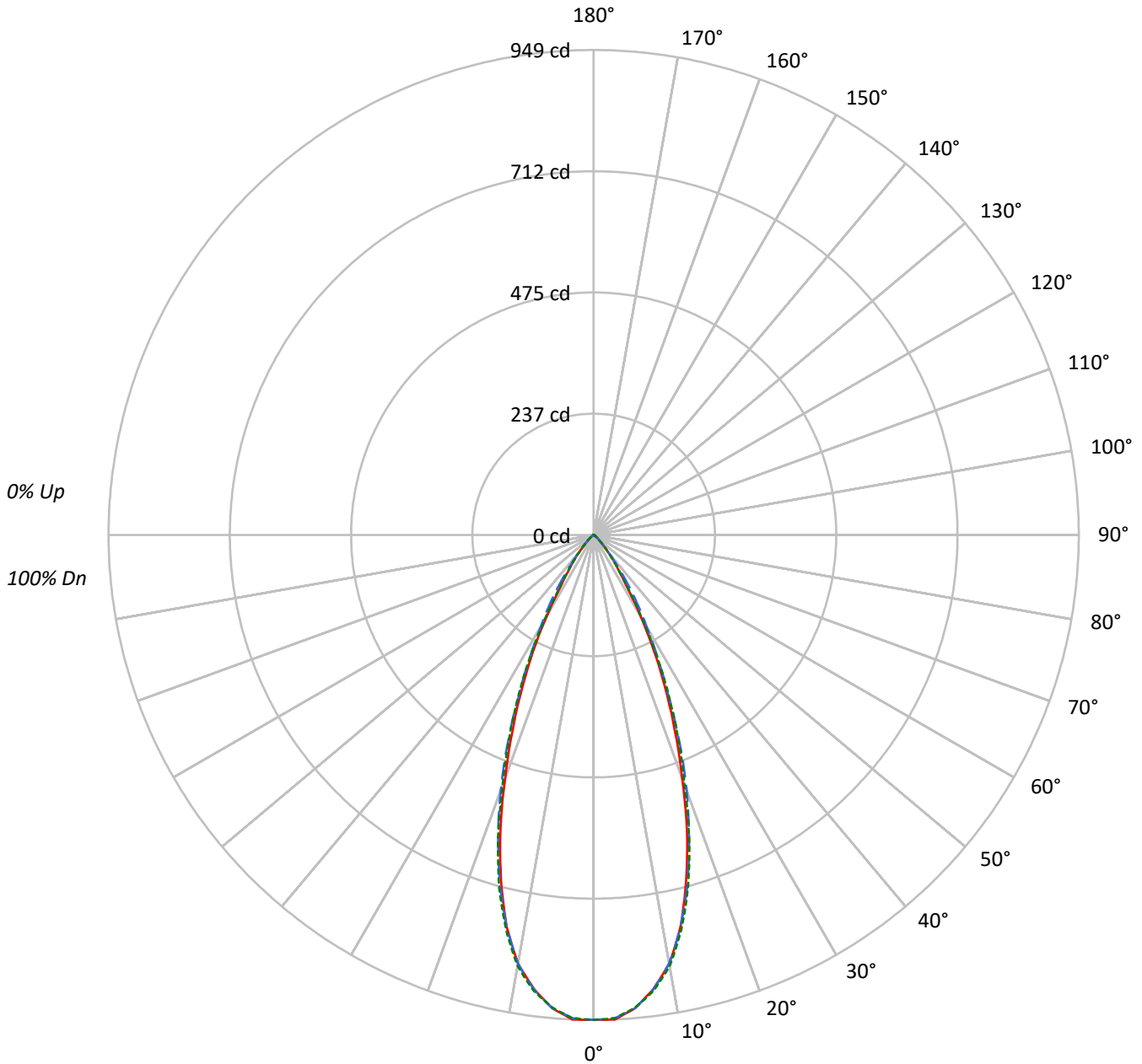
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	112	109	107	112	109	107	106	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	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80								
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75								
6	92	84	78	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71								
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	75	72	69	68								
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65								
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	61								
10	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	63	60	59								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1471275	1471275	1471275
5°	1446555	1446555	1444532
10°	1340514	1340514	1348699
15°	1122644	1137247	1145592
20°	834313	877200	857901
25°	567120	591577	596023
30°	325744	370132	342032
35°	164812	214010	169732
40°	89434	97326	89434
45°	37046	48444	39895
50°	21944	21944	21944
55°	14052	10539	14052
60°	8060	4030	8060
65°	4768	4768	9536
70°	5892	5892	5892
75°	7785	0	7785
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 48444 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	16.4
10°-20°	193.6	36.7
20°-30°	157.8	30.0
30°-40°	65.7	12.5
40°-50°	17.1	3.2
50°-60°	4.2	0.8
60°-70°	1.6	0.3
70°-80°	0.6	0.1
80°-90°	0.0	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°	437.7	83.1
0°-40°	503.3	95.5
0°-60°	524.7	99.6
0°-90°	526.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	526.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	930	930	930	931	928	86
15°	700	701	709	711	714	191
25°	332	341	346	350	348	151
35°	87	95	113	96	90	59
45°	17	20	22	20	18	16
55°	5	4	4	4	5	5
65°	1	1	1	1	3	2
75°	1	0	0	0	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°	949.2	949.2	949.2	949.2	949.2
2.5°	949.2	949.2	946.6	947.9	946.6
5°	929.7	929.7	929.7	931.0	928.4
7.5°	895.9	898.5	897.2	897.2	899.8
10°	851.7	851.7	851.7	853.0	856.9
12.5°	785.4	786.7	785.4	789.3	791.9
15°	699.6	700.9	708.7	711.3	713.9
17.5°	607.3	611.2	621.6	622.9	621.6
20°	505.8	516.2	531.8	527.9	520.1
22.5°	414.8	421.3	438.2	431.7	433.0
25°	331.6	340.7	345.9	349.8	348.5
27.5°	254.9	266.6	270.5	274.4	269.2
30°	182.0	196.4	206.8	205.5	191.1
32.5°	122.2	139.1	157.3	143.0	130.0
35°	87.1	94.9	113.1	96.2	89.7
37.5°	63.7	66.3	74.1	66.3	63.7
40°	44.2	46.8	48.1	46.8	44.2
42.5°	28.6	31.2	32.5	31.2	28.6
45°	16.9	19.5	22.1	19.5	18.2
47.5°	11.7	10.4	14.3	11.7	13.0
50°	9.1	7.8	9.1	9.1	9.1
52.5°	6.5	6.5	5.2	6.5	6.5
55°	5.2	3.9	3.9	3.9	5.2
57.5°	3.9	2.6	2.6	3.9	3.9
60°	2.6	2.6	1.3	2.6	2.6
62.5°	2.6	1.3	1.3	2.6	2.6
65°	1.3	1.3	1.3	1.3	2.6
67.5°	1.3	1.3	1.3	1.3	1.3
70°	1.3	1.3	1.3	1.3	1.3
72.5°	1.3	1.3	0.0	1.3	1.3
75°	1.3	0.0	0.0	0.0	1.3
77.5°	0.0	0.0	0.0	0.0	1.3
80°	0.0	0.0	0.0	0.0	0.0
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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