

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: P885920

Luminaire Tested: ML104LSFL9FS1E-TIR1D40FL-TL1SDSL-400LM-3500K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885920
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-3500K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

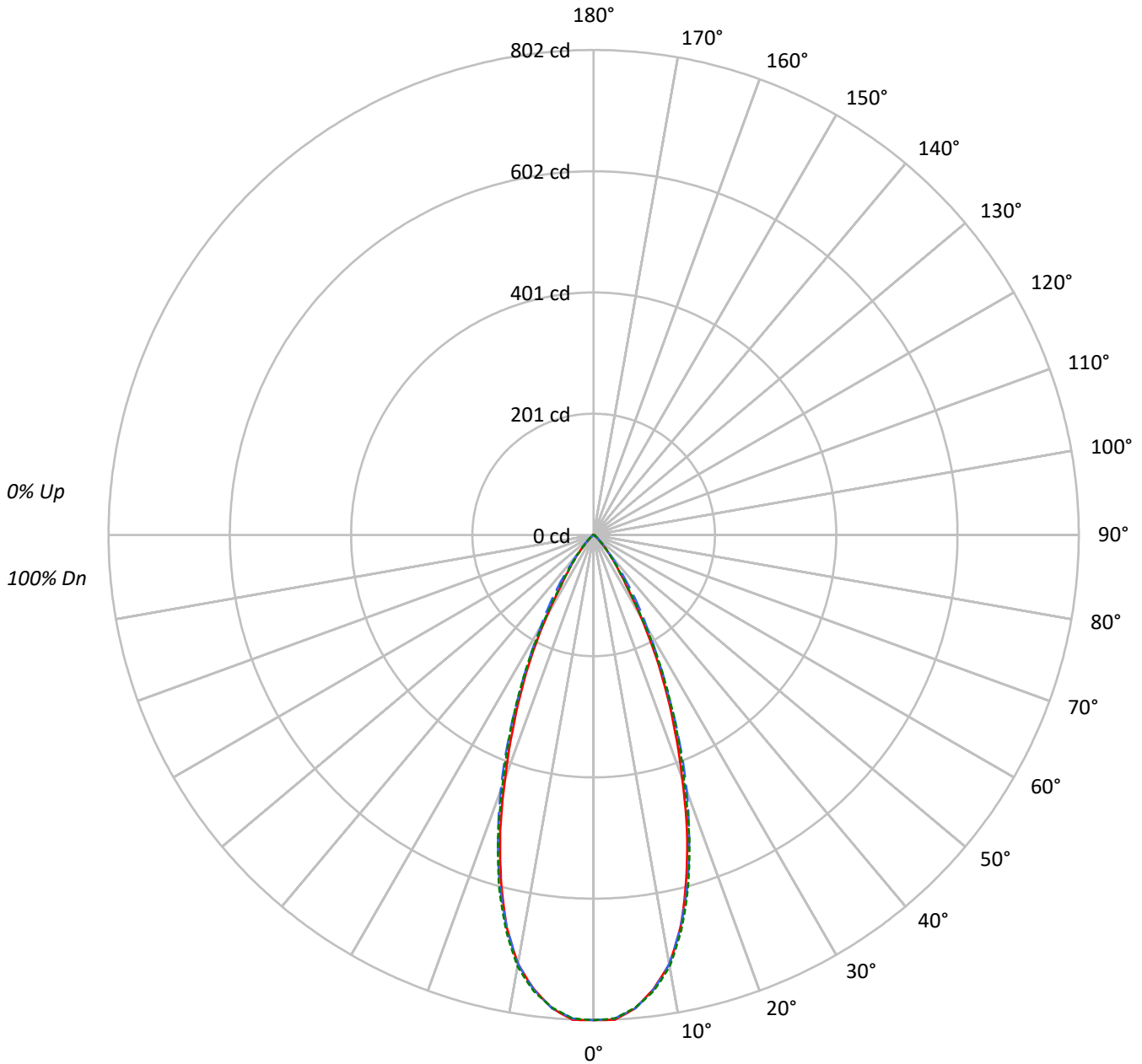
Lumens per Lamp: N/A
Luminaire Lumens: 445.4 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.69 / 0.68
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1243888	1243888	1243888
5°	1222966	1222966	1221255
10°	1133385	1133385	1140311
15°	949017	961373	968433
20°	705323	741612	725282
25°	479384	500078	503841
30°	275451	312858	289232
35°	139457	180896	143620
40°	75675	82352	75675
45°	31346	40991	33758
50°	18568	18568	18568
55°	11890	8918	11890
60°	6820	3410	6820
65°	4034	4034	8069
70°	4985	4985	4985
75°	6588	0	6588
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 40991 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	16.4
10°-20°	163.6	36.7
20°-30°	133.4	30.0
30°-40°	55.5	12.5
40°-50°	14.5	3.2
50°-60°	3.6	0.8
60°-70°	1.4	0.3
70°-80°	0.5	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°	370.0	83.1
0°-40°	425.5	95.5
0°-60°	443.6	99.6
0°-90°	445.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	445.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	786	786	786	787	785	73
15°	591	592	599	601	604	162
25°	280	288	292	296	295	128
35°	74	80	96	81	76	50
45°	14	16	19	16	15	13
55°	4	3	3	3	4	4
65°	1	1	1	1	2	1
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°	802.5	802.5	802.5	802.5	802.5
2.5°	802.5	802.5	800.3	801.4	800.3
5°	786.0	786.0	786.0	787.1	784.9
7.5°	757.5	759.6	758.6	758.6	760.7
10°	720.1	720.1	720.1	721.2	724.5
12.5°	664.0	665.1	664.0	667.3	669.5
15°	591.4	592.5	599.1	601.3	603.5
17.5°	513.4	516.7	525.5	526.6	525.5
20°	427.6	436.4	449.6	446.3	439.7
22.5°	350.7	356.2	370.5	365.0	366.1
25°	280.3	288.0	292.4	295.7	294.6
27.5°	215.5	225.4	228.7	232.0	227.6
30°	153.9	166.0	174.8	173.7	161.6
32.5°	103.3	117.6	133.0	120.9	109.9
35°	73.7	80.3	95.6	81.4	75.9
37.5°	53.9	56.1	62.7	56.1	53.9
40°	37.4	39.6	40.7	39.6	37.4
42.5°	24.2	26.4	27.5	26.4	24.2
45°	14.3	16.5	18.7	16.5	15.4
47.5°	9.9	8.8	12.1	9.9	11.0
50°	7.7	6.6	7.7	7.7	7.7
52.5°	5.5	5.5	4.4	5.5	5.5
55°	4.4	3.3	3.3	3.3	4.4
57.5°	3.3	2.2	2.2	3.3	3.3
60°	2.2	2.2	1.1	2.2	2.2
62.5°	2.2	1.1	1.1	2.2	2.2
65°	1.1	1.1	1.1	1.1	2.2
67.5°	1.1	1.1	1.1	1.1	1.1
70°	1.1	1.1	1.1	1.1	1.1
72.5°	1.1	1.1	0.0	1.1	1.1
75°	1.1	0.0	0.0	0.0	1.1
77.5°	0.0	0.0	0.0	0.0	1.1
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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