

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: P885981

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-4000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885981
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-149)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 6/19/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-4000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

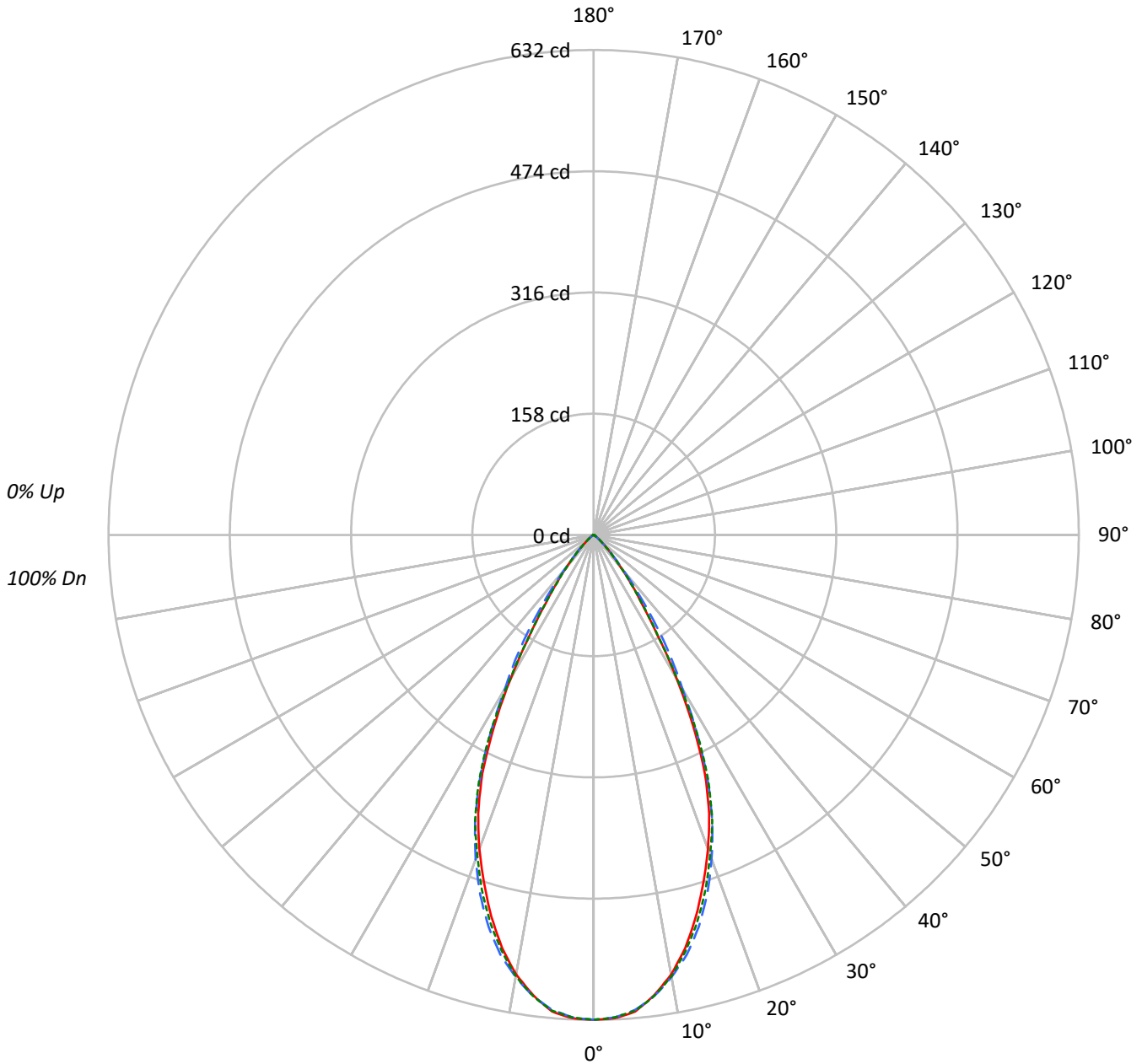
Lumens per Lamp: N/A
Luminaire Lumens: 464.3 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.83 / 0.8
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')
CIE Type: Direct

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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88																			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82																			
4	98	91	86	82	97	90	85	81	88	84	81	86	82	80	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68																			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64																			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	61	58	57																			
10	74	65	60	56	73	65	59	56	64	59	56	63	59	56	62	58	55	54																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	979300	979300	979300
5°	970282	966548	968415
10°	915239	920748	918859
15°	826097	848563	837330
20°	717859	741117	731385
25°	586275	600299	604233
30°	387314	412550	393578
35°	205874	256774	210226
40°	111287	120797	108859
45°	53925	53925	51294
50°	25320	19773	25320
55°	12701	9458	12701
60°	7130	3720	7130
65°	4401	4401	4401
70°	5438	5438	5438
75°	7187	0	7187
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 53925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.1	12.5
10°-20°	145.3	31.3
20°-30°	156.4	33.7
30°-40°	78.1	16.8
40°-50°	20.5	4.4
50°-60°	4.1	0.9
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°	359.8	77.5
0°-40°	437.9	94.3
0°-60°	462.5	99.6
0°-90°	464.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	464.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	632	632	632	632	632	
5°	624	620	621	622	622	58
15°	515	520	529	525	522	143
25°	343	348	351	354	353	152
35°	109	117	136	117	111	73
45°	25	23	25	23	23	21
55°	5	4	4	5	5	5
65°	1	1	1	1	1	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°	631.8	631.8	631.8	631.8	631.8
2.5°	630.6	629.4	629.4	630.6	629.4
5°	623.6	620.1	621.2	622.4	622.4
7.5°	604.9	604.9	606.0	607.2	606.0
10°	581.5	582.6	585.0	586.1	583.8
12.5°	551.0	553.4	560.4	558.1	554.6
15°	514.8	519.5	528.8	525.3	521.8
17.5°	475.0	482.0	491.4	489.0	484.4
20°	435.2	439.9	449.3	449.3	443.4
22.5°	393.1	397.8	403.6	406.0	403.6
25°	342.8	347.5	351.0	354.5	353.3
27.5°	280.8	289.0	291.3	294.8	292.5
30°	216.4	223.5	230.5	229.3	219.9
32.5°	154.4	162.6	183.7	168.5	155.6
35°	108.8	117.0	135.7	117.0	111.1
37.5°	79.6	78.4	92.4	79.6	78.4
40°	55.0	56.2	59.7	55.0	53.8
42.5°	37.4	36.3	38.6	37.4	36.3
45°	24.6	23.4	24.6	23.4	23.4
47.5°	15.2	14.0	14.0	14.0	15.2
50°	10.5	9.4	8.2	9.4	10.5
52.5°	7.0	5.8	5.8	5.8	7.0
55°	4.7	3.5	3.5	4.7	4.7
57.5°	3.5	2.3	2.3	2.3	3.5
60°	2.3	2.3	1.2	2.3	2.3
62.5°	2.3	1.2	1.2	1.2	2.3
65°	1.2	1.2	1.2	1.2	1.2
67.5°	1.2	1.2	1.2	1.2	1.2
70°	1.2	1.2	1.2	1.2	1.2
72.5°	1.2	1.2	0.0	1.2	1.2
75°	1.2	0.0	0.0	0.0	1.2
77.5°	0.0	0.0	0.0	0.0	0.0
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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