

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: P885986

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K

Issue Date: 6/19/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P885986  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-152)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 6/19/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K  
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER BAFFLED TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 465.9 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 0.81 / 0.84 / 0.81  
Luminous Opening: Rectangular (W 0.08' x L: 0.08' x H: 0')  
CIE Type: Direct

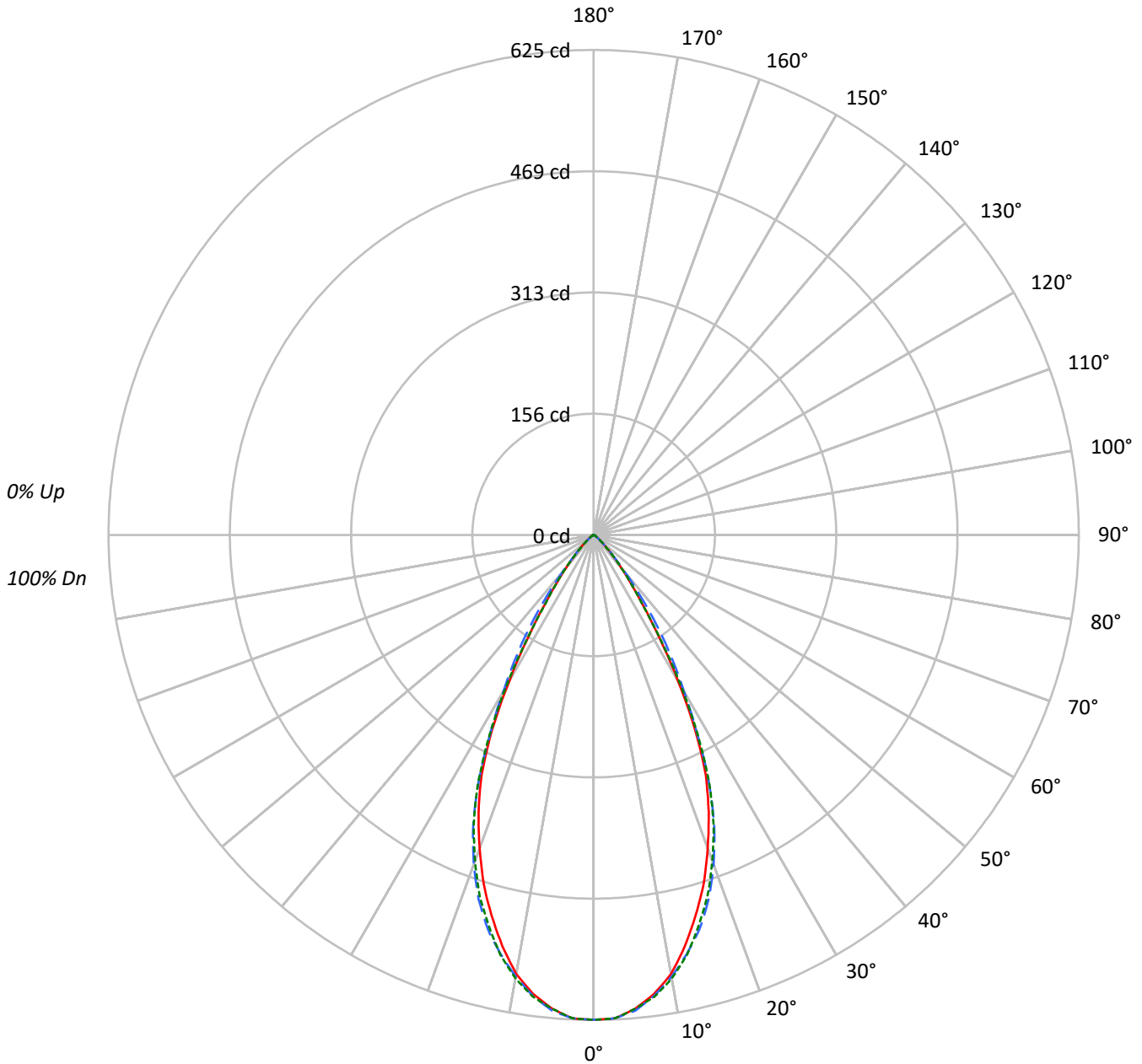
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P885986

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P885986

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K

**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	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	93	96	94	91	93	91	90	88								
3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	88	86	84	82								
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	79	77								
5	94	86	80	76	92	85	80	76	83	78	75	81	77	74	80	76	74	72								
6	89	81	75	71	88	80	75	71	78	74	70	77	73	70	76	72	69	68								
7	85	76	70	66	84	76	70	66	74	69	66	73	69	66	72	68	65	64								
8	81	72	66	62	80	72	66	62	70	66	62	69	65	62	69	65	62	60								
9	78	68	63	59	76	68	62	59	67	62	59	66	62	58	65	61	58	57								
10	74	65	59	56	73	64	59	56	64	59	55	63	58	55	62	58	55	54								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	968450	968450	968450
5°	953945	957524	953945
10°	904221	909730	913350
15°	814864	844872	837330
20°	708292	744911	737323
25°	584394	600299	602351
30°	389461	416666	404138
35°	210415	265668	205874
40°	111287	127879	113715
45°	53925	56336	53925
50°	25320	22667	25320
55°	15944	9458	15944
60°	10850	3720	10850
65°	8436	4401	8436
70°	5438	0	5438
75°	0	0	0
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 56336 cd/sqm



TEST NUMBER: P885986

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.5	12.3
10°-20°	144.6	31.0
20°-30°	156.4	33.6
30°-40°	80.0	17.2
40°-50°	21.1	4.5
50°-60°	4.6	1.0
60°-70°	1.6	0.3
70°-80°	0.3	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°	358.4	76.9
0°-40°	438.4	94.1
0°-60°	464.1	99.6
0°-90°	465.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	465.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	625	625	625	625	625	
5°	613	614	615	614	613	57
15°	508	515	526	523	522	141
25°	342	345	351	354	352	152
35°	111	118	140	122	109	74
45°	25	23	26	23	25	21
55°	6	5	4	5	6	5
65°	2	1	1	1	2	2
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P885986

CATALOG NUMBER: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSLB-400LM-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	624.8	624.8	624.8	624.8	624.8
2.5°	623.6	623.6	623.6	623.6	623.6
5°	613.1	614.3	615.4	614.3	613.1
7.5°	596.7	596.7	599.1	600.2	600.2
10°	574.5	575.7	578.0	580.3	580.3
12.5°	542.9	548.8	553.4	552.3	554.6
15°	507.8	514.8	526.5	523.0	521.8
17.5°	471.5	479.7	492.6	489.1	487.9
20°	429.4	438.8	451.6	448.1	447.0
22.5°	387.3	395.5	406.0	406.0	403.7
25°	341.7	345.2	351.0	354.5	352.2
27.5°	283.2	291.3	289.0	294.9	290.2
30°	217.6	227.0	232.8	231.7	225.8
32.5°	158.0	169.7	184.9	174.3	161.5
35°	111.2	118.2	140.4	121.7	108.8
37.5°	78.4	81.9	98.3	80.7	78.4
40°	55.0	56.2	63.2	56.2	56.2
42.5°	37.4	37.4	39.8	37.4	37.4
45°	24.6	23.4	25.7	23.4	24.6
47.5°	16.4	15.2	15.2	15.2	15.2
50°	10.5	10.5	9.4	9.4	10.5
52.5°	8.2	7.0	5.9	7.0	7.0
55°	5.9	4.7	3.5	4.7	5.9
57.5°	3.5	3.5	2.3	3.5	3.5
60°	3.5	2.3	1.2	2.3	3.5
62.5°	2.3	2.3	1.2	2.3	2.3
65°	2.3	1.2	1.2	1.2	2.3
67.5°	1.2	1.2	1.2	1.2	1.2
70°	1.2	1.2	0.0	1.2	1.2
72.5°	1.2	1.2	0.0	0.0	1.2
75°	0.0	0.0	0.0	0.0	0.0
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report







— 0°-180°    - - 45°-225°    - - - - 90°-270°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)