

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: P885982

Luminaire Tested: ML104LSFL9FS1E-TIR1D55WFL-TL1SDSL-400LM-5000K

Issue Date: 6/19/2024

Test Information

Test Method: LM-79-2019
Report Number: P885982
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-5000K
Description: 1IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 516.0 lumens
Efficiency: N/A
Efficacy: 86.0 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

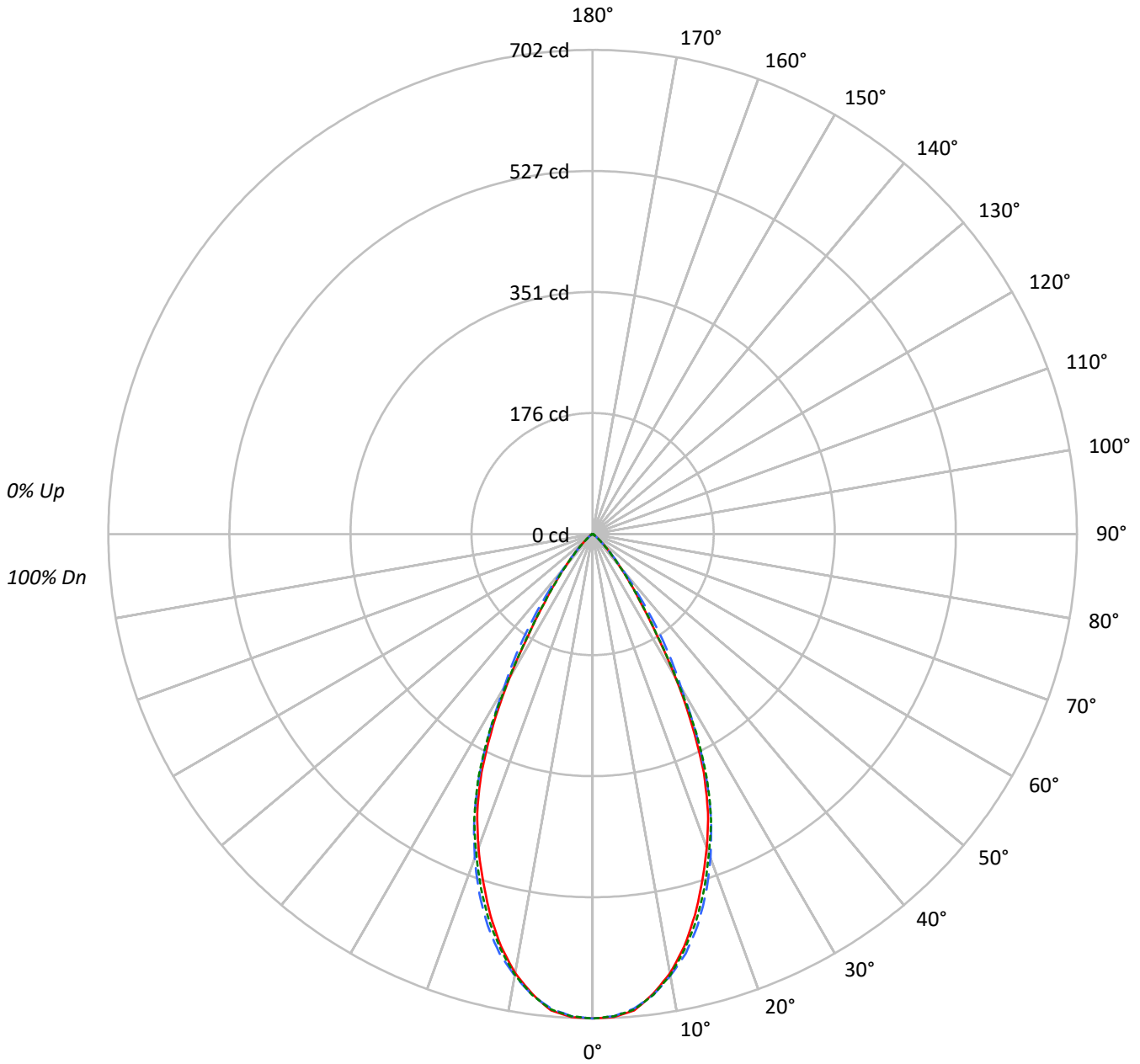
Input Watts (W): 6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					70					50					30				
RW	70	50	30	10	70	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°	1088576	1088576	1088576
5°	1078576	1074374	1076397
10°	1017229	1023368	1021322
15°	918206	943240	930723
20°	798025	823757	813035
25°	651607	667170	671617
30°	430627	458548	437607
35°	228769	285536	233689
40°	123630	134152	120999
45°	59843	59843	56993
50°	28213	21944	28213
55°	14052	10539	14052
60°	8060	4030	8060
65°	4768	4768	4768
70°	5892	5892	5892
75°	7785	0	7785
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 59843 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	12.5
10°-20°	161.5	31.3
20°-30°	173.8	33.7
30°-40°	86.8	16.8
40°-50°	22.7	4.4
50°-60°	4.6	0.9
60°-70°	1.5	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°	399.9	77.5
0°-40°	486.7	94.3
0°-60°	514.0	99.6
0°-90°	516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	693	689	690	692	692	65
15°	572	577	588	584	580	159
25°	381	386	390	394	393	169
35°	121	130	151	130	124	81
45°	27	26	27	26	26	23
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°	702.3	702.3	702.3	702.3	702.3
2.5°	701.0	699.7	699.7	701.0	699.7
5°	693.2	689.2	690.5	691.8	691.8
7.5°	672.3	672.3	673.6	674.9	673.6
10°	646.3	647.6	650.2	651.5	648.9
12.5°	612.5	615.1	622.9	620.3	616.4
15°	572.2	577.4	587.8	583.9	580.0
17.5°	528.0	535.8	546.2	543.6	538.4
20°	483.8	489.0	499.4	499.4	492.9
22.5°	437.0	442.2	448.7	451.3	448.7
25°	381.0	386.2	390.1	394.0	392.7
27.5°	312.1	321.2	323.8	327.7	325.1
30°	240.6	248.4	256.2	254.9	244.5
32.5°	171.7	180.8	204.2	187.3	173.0
35°	120.9	130.0	150.9	130.0	123.5
37.5°	88.4	87.1	102.7	88.4	87.1
40°	61.1	62.4	66.3	61.1	59.8
42.5°	41.6	40.3	42.9	41.6	40.3
45°	27.3	26.0	27.3	26.0	26.0
47.5°	16.9	15.6	15.6	15.6	16.9
50°	11.7	10.4	9.1	10.4	11.7
52.5°	7.8	6.5	6.5	6.5	7.8
55°	5.2	3.9	3.9	5.2	5.2
57.5°	3.9	2.6	2.6	2.6	3.9
60°	2.6	2.6	1.3	2.6	2.6
62.5°	2.6	1.3	1.3	1.3	2.6
65°	1.3	1.3	1.3	1.3	1.3
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	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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