

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: P886532

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMW-1000LM-2700K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886532  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-22)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/8/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMW-1000LM-2700K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE WHITE TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 752.7 lumens  
Efficiency: N/A  
Efficacy: 55.3 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 0.81 / 1.01  
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')  
CIE Type: Direct

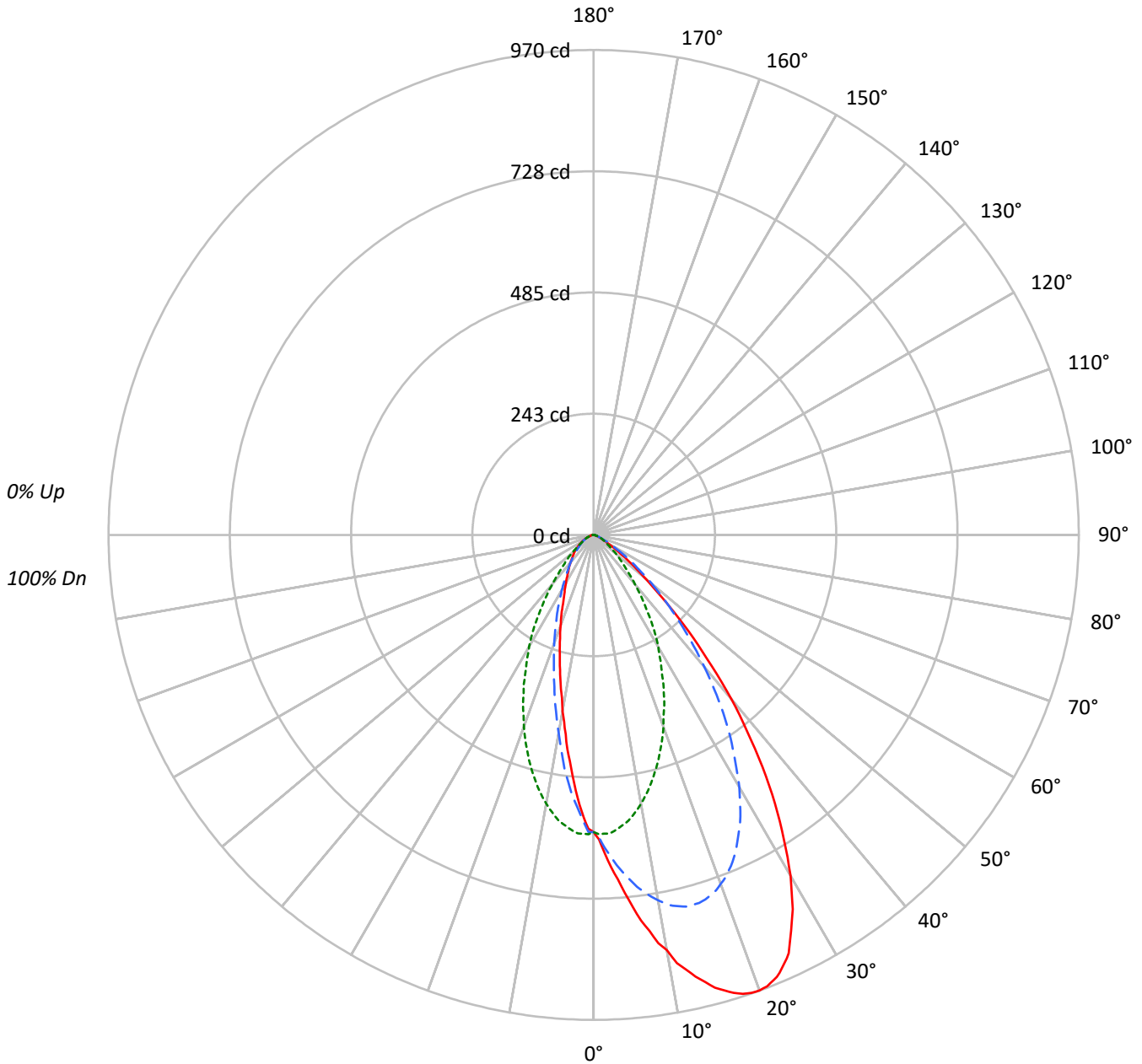
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91								
2	105	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	82								
3	99	91	85	81	97	90	84	80	87	83	79	85	81	77	82	79	76	74								
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	73	69	68								
5	87	77	70	65	85	76	70	65	74	69	64	73	68	64	71	67	63	62								
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56								
7	77	66	59	55	76	66	59	54	64	58	54	63	58	54	62	57	53	52								
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48								
9	69	58	51	46	67	57	51	46	56	50	46	55	50	46	54	49	46	44								
10	65	54	47	43	64	54	47	43	53	47	43	52	47	43	51	46	43	41								

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

	0°	45°	90°	135°	180°
0°	102369	102369	102369	102369	102369
5°	124284	117291	101654	89241	83432
10°	147493	129769	95519	70564	62624
15°	167226	136603	86047	54452	46661
20°	177722	136165	74795	42300	35317
25°	175471	129095	62861	32818	27117
30°	156527	115770	51327	25117	22054
35°	128796	97932	39358	19679	18544
40°	96246	77338	28800	16142	16142
45°	62205	57553	20581	13055	14175
50°	35554	40431	15352	10717	12673
55°	19367	25657	10629	9548	10930
60°	10333	14553	8439	8439	9403
65°	5909	8517	7050	7050	7417
70°	3676	5262	5942	6395	5942
75°	1797	3327	4858	5456	4259
80°	893	1785	2678	4463	4463
85°	0	1778	3557	5335	5335

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 30°  
 Vertical Angle: 45°  
 Luminance: 64641 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.2	7.5
10°-20°	151.2	20.1
20°-30°	195.7	26.0
30°-40°	171.0	22.7
40°-50°	104.0	13.8
50°-60°	46.9	6.2
60°-70°	18.9	2.5
70°-80°	7.0	0.9
80°-90°	1.8	0.2
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°	403.1	53.6
0°-40°	574.2	76.3
0°-60°	725.1	96.3
0°-90°	752.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	752.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	594	594	594	594	594	
5°	719	678	588	516	483	73
15°	938	766	483	305	262	265
25°	923	679	331	173	143	416
35°	613	466	187	94	88	378
45°	255	236	84	54	58	201
55°	64	85	35	32	36	63
65°	14	21	17	17	18	16
75°	3	5	7	8	6	3
85°	0	1	2	3	3	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	594.4	594.4	594.4	594.4	594.4	594.4	594.4	594.4	594.4	594.4	594.4
1°	608.9	608.0	606.2	604.4	605.3	604.4	601.7	600.7	600.7	598.9	598.0
2°	638.0	634.4	630.7	632.6	628.9	623.5	616.2	609.8	603.5	598.0	584.4
3°	665.3	661.6	661.6	657.1	648.0	638.9	628.9	617.1	607.1	598.0	575.3
4°	690.7	688.9	685.3	675.3	669.8	655.3	639.8	624.4	608.9	593.5	561.7
5°	718.9	718.9	710.7	701.6	687.1	669.8	649.8	628.0	608.0	588.0	548.0
6°	748.0	748.0	737.1	723.4	706.2	681.6	658.0	634.4	606.2	581.7	532.6
7°	777.1	772.5	762.5	745.3	723.4	695.3	664.4	635.3	602.6	575.3	517.1
8°	799.8	795.2	782.5	764.3	736.2	704.4	670.7	635.3	598.9	566.2	500.8
9°	827.0	820.7	808.0	782.5	750.7	714.4	674.4	633.5	593.5	556.2	483.5
10°	843.4	843.4	828.0	800.7	763.4	720.7	677.1	632.6	588.0	546.2	466.2
11°	872.5	865.2	842.5	816.1	775.2	728.0	678.0	628.0	579.8	534.4	449.0
12°	888.9	881.6	861.6	828.9	784.3	732.5	677.1	622.6	569.8	522.6	432.6
13°	907.0	900.7	877.0	838.9	791.6	733.4	675.3	617.1	560.8	509.9	414.4
14°	921.6	916.1	890.7	848.9	797.1	735.3	671.6	609.8	548.9	496.2	394.4
15°	937.9	927.9	899.8	855.2	798.0	734.3	666.2	600.7	538.9	482.6	380.8
16°	947.9	938.8	907.9	859.8	798.9	732.5	660.7	590.7	526.2	469.0	360.8
17°	957.9	948.8	914.3	863.4	798.0	727.1	653.5	580.8	516.2	453.5	343.5
18°	965.2	955.2	919.8	863.4	795.2	720.7	642.6	568.9	500.8	439.0	328.1
19°	968.8	957.0	919.8	862.5	791.6	712.5	633.5	557.1	486.2	423.5	310.8
20°	969.7	957.0	920.7	858.9	783.4	702.5	620.7	544.4	470.8	408.1	294.5
21°	967.0	954.3	915.2	853.4	777.1	691.6	608.9	528.0	455.3	389.9	279.0
22.5°	957.0	943.4	902.5	838.9	758.9	674.4	588.0	505.3	433.5	369.0	257.2
23°	951.6	939.7	897.9	833.4	754.3	666.2	578.9	499.0	422.6	360.8	250.8
24°	937.9	927.0	885.2	820.7	739.8	653.5	562.6	483.5	409.0	344.5	236.3
25°	923.4	906.1	868.9	804.3	723.4	635.3	548.0	466.2	393.5	330.8	222.7
26°	897.0	884.3	848.0	784.3	707.1	617.1	530.8	448.1	377.2	312.6	211.8
27°	871.6	862.5	828.0	764.3	689.8	599.8	513.5	432.6	357.2	298.1	197.2
28°	848.0	838.0	799.8	740.7	668.0	581.7	491.7	415.3	343.5	284.5	186.3
29°	817.1	809.8	774.3	721.6	645.3	560.8	474.4	397.2	328.1	269.9	175.4
30°	787.1	778.9	744.3	693.4	624.4	539.9	456.2	379.9	312.6	258.1	166.3
32.5°	700.7	698.0	667.1	623.5	560.8	484.4	408.1	335.4	273.6	224.5	143.6
35°	612.6	609.8	581.7	548.9	499.9	431.7	358.1	291.7	233.6	187.2	120.9
37.5°	516.2	513.5	499.9	470.8	434.4	372.6	309.0	249.9	194.5	157.2	101.8
40°	428.1	425.3	419.0	398.1	369.9	318.1	262.7	205.4	160.9	128.1	83.6
42.5°	334.5	338.1	336.3	329.0	310.8	265.4	219.9	170.9	132.7	103.6	69.1
45°	255.4	257.2	261.7	265.4	252.7	219.9	180.0	135.4	103.6	84.5	57.3
47.5°	185.4	189.9	199.9	207.2	203.6	179.0	142.7	108.2	84.5	70.0	49.1
50°	132.7	135.4	145.4	160.9	160.9	140.9	110.9	82.7	68.2	57.3	43.6
52.5°	95.4	97.2	106.3	118.1	121.8	107.2	85.4	65.4	53.6	44.5	36.4
55°	64.5	67.3	76.3	89.1	89.1	81.8	62.7	49.1	40.9	35.4	30.0
57.5°	43.6	46.4	52.7	63.6	63.6	58.2	47.3	36.4	31.8	28.2	25.4
60°	30.0	30.9	38.2	43.6	44.5	40.0	33.6	28.2	25.4	24.5	22.7



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**CANDELA DISTRIBUTION (continued):**

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
67.5°	10.0	10.9	11.8	13.6	14.5	14.5	14.5	15.5	15.5	14.5	15.5
70°	7.3	7.3	8.2	9.1	10.0	10.9	10.9	12.7	11.8	11.8	12.7
72.5°	4.5	5.5	5.5	6.4	7.3	7.3	9.1	9.1	9.1	9.1	10.0
75°	2.7	3.6	3.6	3.6	4.5	5.5	6.4	6.4	6.4	7.3	8.2
77.5°	1.8	1.8	2.7	2.7	2.7	3.6	4.5	4.5	4.5	4.5	5.5
80°	0.9	0.9	0.9	1.8	1.8	1.8	2.7	2.7	2.7	2.7	3.6
82.5°	0.9	0.9	0.9	0.9	0.9	1.8	1.8	1.8	2.7	2.7	2.7
85°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
0°	594.4	594.4	594.4
1°	594.4	593.5	588.0
2°	574.4	566.2	566.2
3°	554.4	543.5	540.8
4°	535.3	515.3	512.6
5°	516.2	490.8	482.6
6°	494.4	465.3	454.4
7°	473.5	439.9	431.7
8°	449.0	416.3	402.6
9°	424.4	391.7	378.1
10°	403.5	368.1	358.1
11°	382.6	346.3	332.6
12°	360.8	325.4	314.5
13°	343.5	305.4	295.4
14°	323.5	289.9	278.1
15°	305.4	270.8	261.7
16°	289.9	256.3	246.3
17°	271.7	241.8	231.8
18°	258.1	228.1	218.1
19°	243.6	214.5	206.3
20°	230.8	203.6	192.7
21°	218.1	189.9	182.7
22.5°	199.0	174.5	166.3
23°	192.7	167.2	160.9
24°	182.7	159.0	150.9
25°	172.7	149.1	142.7
26°	162.7	140.0	134.5
27°	153.6	132.7	128.1
28°	142.7	124.5	121.8
29°	134.5	118.1	116.3
30°	126.3	112.7	110.9
32.5°	109.1	99.1	98.2
35°	93.6	87.2	88.2
37.5°	81.8	78.2	80.0
40°	71.8	69.1	71.8
42.5°	61.8	61.8	65.4
45°	53.6	56.3	58.2
47.5°	46.4	50.9	52.7
50°	40.0	46.4	47.3
52.5°	35.4	41.8	40.9
55°	31.8	36.4	36.4
57.5°	28.2	31.8	30.9
60°	24.5	27.3	27.3





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**CANDELA DISTRIBUTION (continued):**

	135°	157.5°	180°
67.5°	14.5	16.4	14.5
70°	12.7	12.7	11.8
72.5°	10.0	10.0	9.1
75°	8.2	7.3	6.4
77.5°	6.4	5.5	5.5
80°	4.5	4.5	4.5
82.5°	3.6	3.6	3.6
85°	2.7	2.7	2.7
87.5°	1.8	1.8	1.8
90°	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

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Scaled Data Report





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

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Scaled Data Report





62.5°	20.0	21.8	26.4	30.9	31.8	28.2	24.5	22.7	20.9	20.9	20.0
65°	14.5	15.5	18.2	20.9	21.8	20.0	18.2	18.2	18.2	17.3	17.3

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Scaled Data Report





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Scaled Data Report



62.5°	20.9	22.7	22.7
65°	17.3	19.1	18.2

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Scaled Data Report



(END OF REPORT)