

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: P886519

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMW-850LM-3500K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-10)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMW-850LM-3500K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 782.5 lumens
Efficiency: N/A
Efficacy: 57.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 0.81 / 0.99
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

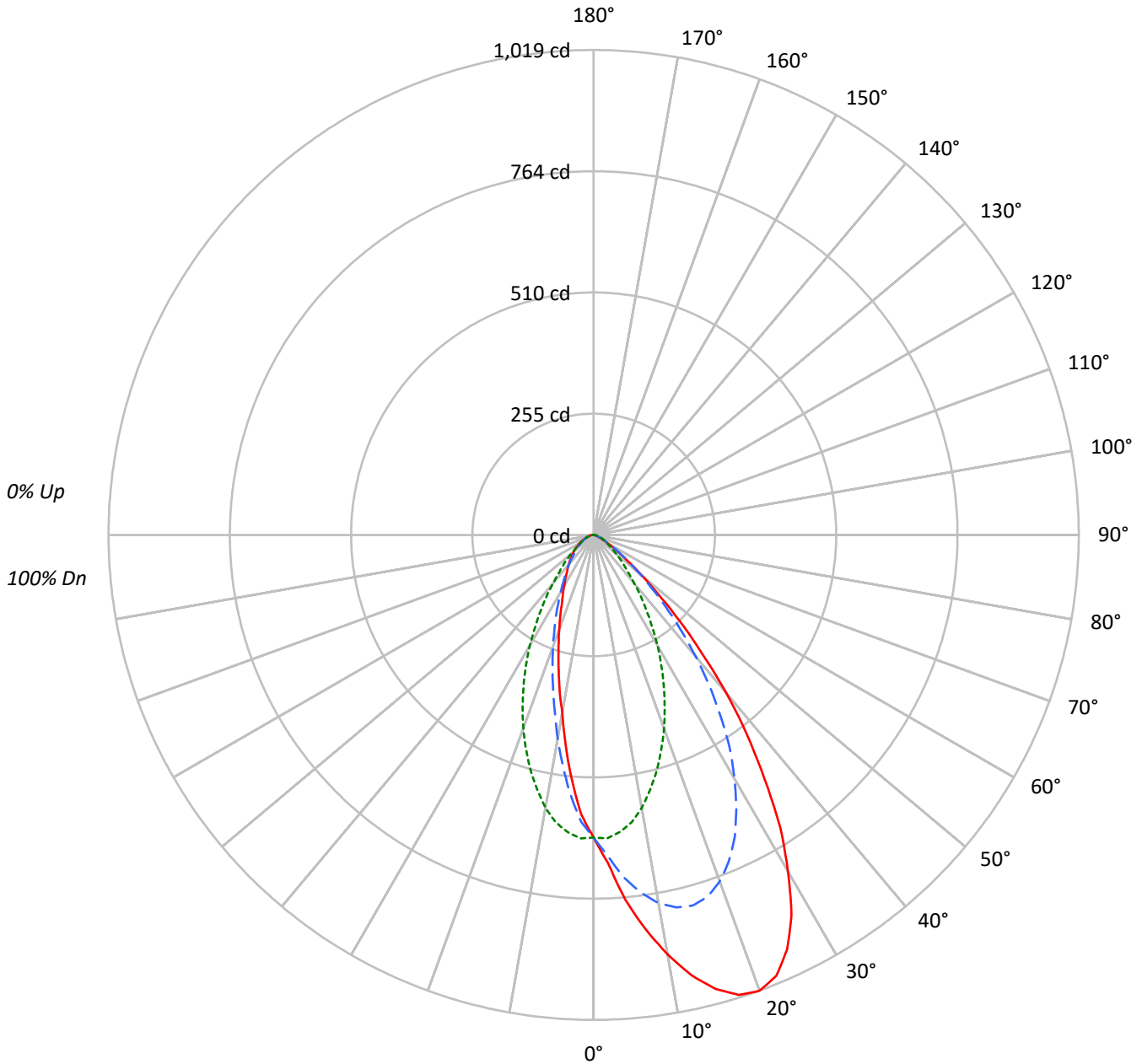
Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91								
2	105	100	95	91	103	98	93	90	95	91	88	91	88	86	89	86	84	82								
3	99	91	85	81	97	90	84	80	87	82	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	71	66	85	76	70	65	75	69	65	73	68	64	71	67	63	62								
6	82	72	65	60	80	71	64	60	69	63	59	68	63	59	66	62	58	57								
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52								
8	73	62	55	50	72	61	55	50	60	54	50	59	54	50	58	53	50	48								
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46	45								
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	139353	139353	139353	139353	139353
5°	169601	158914	137948	121065	114219
10°	199262	174924	129590	96703	84389
15°	224110	182975	116255	75006	64631
20°	237857	180721	100902	58268	49214
25°	232513	169510	84174	45148	38083
30°	206665	149707	67909	34942	31245
35°	167254	124209	51772	27840	26528
40°	123775	95264	38100	22814	23358
45°	78644	66441	28313	18669	20777
50°	44416	41943	20878	15897	18899
55°	24162	25806	15598	14107	16363
60°	13201	15328	13201	12367	14473
65°	7575	9832	11104	11104	12089
70°	5001	6540	9938	9938	9938
75°	3304	4914	8218	9065	9065
80°	2399	3031	6188	8587	9850
85°	2516	2516	7296	9812	9812

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 78644 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	7.7
10°-20°	160.1	20.5
20°-30°	204.8	26.2
30°-40°	175.6	22.4
40°-50°	103.1	13.2
50°-60°	46.4	5.9
60°-70°	20.8	2.7
70°-80°	9.1	1.2
80°-90°	2.7	0.3
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°	424.8	54.3
0°-40°	600.4	76.7
0°-60°	749.9	95.8
0°-90°	782.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	782.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	636	636	636	636	636	
5°	770	722	627	550	519	77
15°	987	806	512	330	285	279
25°	961	701	348	187	157	435
35°	625	464	193	104	99	389
45°	254	214	91	60	67	200
55°	63	68	41	37	43	61
65°	15	19	21	21	23	16
75°	4	6	10	11	11	5
85°	1	1	3	4	4	1
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°	635.5	635.5	635.5	635.5	635.5	635.5	635.5	635.5	635.5	635.5	635.5
2.5°	689.9	689.9	689.9	687.9	678.2	671.4	664.6	655.9	647.1	638.4	618.0
5°	770.5	768.6	756.0	746.2	731.7	712.2	691.8	669.5	648.1	626.7	584.0
7.5°	835.6	830.8	822.0	799.7	773.5	742.4	708.4	674.3	641.3	609.2	544.1
10°	894.9	893.0	873.5	846.3	807.5	763.7	717.1	669.5	622.8	582.0	497.5
12.5°	947.4	942.5	918.2	878.4	829.8	773.5	714.2	655.9	599.5	548.0	453.8
15°	987.2	977.5	946.4	898.8	839.5	772.5	703.5	633.5	569.4	512.1	404.2
17.5°	1013.5	999.9	962.0	905.6	835.6	757.9	680.2	603.4	533.4	472.2	359.5
20°	1019.3	1004.7	962.0	895.9	817.2	731.7	649.1	567.5	492.6	432.4	316.8
22.5°	1002.8	985.3	943.5	873.5	789.0	695.7	609.2	525.7	452.8	389.6	276.0
25°	961.0	947.4	901.7	834.7	748.2	653.0	564.5	483.9	409.1	347.9	238.1
27.5°	899.8	886.2	839.5	779.3	692.8	605.4	516.0	437.3	365.3	307.0	207.0
30°	816.2	806.5	769.6	708.4	633.5	549.0	465.4	386.7	320.7	268.2	177.8
32.5°	729.7	715.2	684.1	635.5	573.3	491.7	413.0	341.1	277.9	227.4	151.6
35°	624.8	621.9	592.7	555.8	497.5	430.5	355.6	290.5	237.1	193.4	130.2
37.5°	528.6	523.7	504.3	472.2	428.5	369.2	305.1	246.8	201.1	162.3	108.8
40°	432.4	429.5	414.9	388.7	357.6	308.0	258.5	204.1	163.2	133.1	90.4
42.5°	334.3	330.4	327.5	315.8	289.6	252.6	210.9	167.1	135.1	107.9	75.8
45°	253.6	251.7	249.7	240.0	227.4	201.1	167.1	133.1	109.8	91.3	64.1
47.5°	181.7	184.6	183.6	184.6	176.8	153.5	128.3	104.9	89.4	75.8	56.4
50°	130.2	129.2	136.0	138.9	131.2	114.7	96.2	81.6	70.0	61.2	47.6
52.5°	91.3	93.3	101.1	103.0	97.2	86.5	72.9	62.2	55.4	49.6	40.8
55°	63.2	64.1	71.9	75.8	70.9	64.1	54.4	47.6	44.7	40.8	34.0
57.5°	42.8	45.7	50.5	53.4	51.5	44.7	39.8	37.9	36.0	35.0	30.1
60°	30.1	31.1	36.0	38.9	36.9	33.0	31.1	30.1	30.1	30.1	27.2
62.5°	20.4	21.4	25.3	27.2	26.2	24.3	23.3	25.3	25.3	25.3	23.3
65°	14.6	14.6	17.5	19.4	19.4	18.5	19.4	20.4	21.4	21.4	20.4
67.5°	9.7	10.7	11.7	13.6	13.6	14.6	15.5	17.5	18.5	18.5	18.5
70°	7.8	7.8	8.7	9.7	9.7	10.7	12.6	13.6	14.6	15.5	15.5
72.5°	5.8	5.8	5.8	6.8	7.8	7.8	9.7	10.7	11.7	12.6	12.6
75°	3.9	3.9	3.9	4.9	5.8	5.8	6.8	7.8	8.7	9.7	10.7
77.5°	2.9	2.9	2.9	2.9	3.9	3.9	4.9	5.8	6.8	6.8	7.8
80°	1.9	1.9	1.9	1.9	1.9	2.9	2.9	3.9	4.9	4.9	5.8
82.5°	1.0	1.0	1.0	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.9
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	1.9	2.9	3.9
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9
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°	635.5	635.5	635.5
2.5°	603.4	594.7	588.8
5°	550.0	525.7	518.9
7.5°	491.7	457.7	447.0
10°	434.3	394.5	379.0
12.5°	378.0	339.1	331.3
15°	330.4	294.4	284.7
17.5°	286.6	255.6	244.9
20°	249.7	219.6	210.9
22.5°	214.7	189.5	182.7
25°	186.6	164.2	157.4
27.5°	160.3	140.9	139.9
30°	138.0	125.3	123.4
32.5°	119.5	110.8	110.8
35°	104.0	98.1	99.1
37.5°	91.3	87.5	89.4
40°	79.7	79.7	81.6
42.5°	70.0	71.9	73.8
45°	60.2	66.1	67.0
47.5°	52.5	59.3	61.2
50°	46.6	53.4	55.4
52.5°	41.8	47.6	49.6
55°	36.9	42.8	42.8
57.5°	32.1	36.9	37.9
60°	28.2	32.1	33.0
62.5°	24.3	27.2	28.2
65°	21.4	23.3	23.3
67.5°	18.5	19.4	19.4
70°	15.5	16.5	15.5
72.5°	13.6	13.6	12.6
75°	10.7	10.7	10.7
77.5°	8.7	8.7	8.7
80°	6.8	7.8	7.8
82.5°	5.8	5.8	5.8
85°	3.9	3.9	3.9
87.5°	1.9	1.9	1.9
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

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°

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