

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: P886518

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMW-850LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886518
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-3000K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 757.8 lumens
Efficiency: N/A
Efficacy: 55.7 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

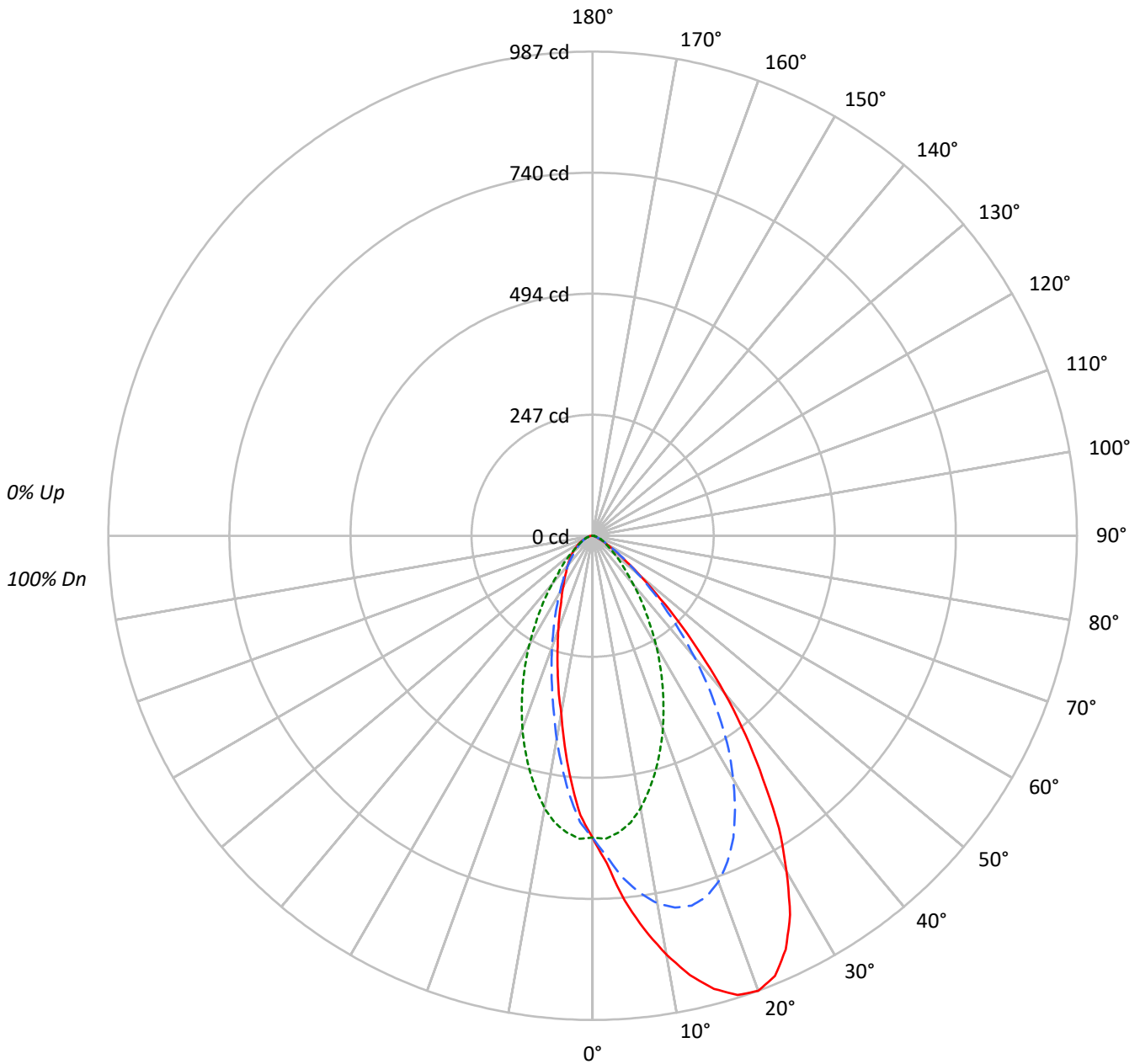
Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	134945	134945	134945	134945	134945
5°	164252	153907	133590	117235	110609
10°	192982	169402	125515	93652	81717
15°	217050	177197	112577	72622	62588
20°	230343	175015	97705	56425	47651
25°	225182	164163	81513	43720	36873
30°	200132	144984	65757	33828	30258
35°	161981	120288	50139	26957	25698
40°	119853	92259	36898	22099	22614
45°	76163	64348	27445	18079	20126
50°	43018	40596	20230	15420	18285
55°	23397	25003	15101	13686	15827
60°	12806	14867	12806	11973	14034
65°	7316	9521	10740	10740	11726
70°	4809	6347	9681	9681	9681
75°	3219	4745	7964	8811	8811
80°	2399	2968	5935	8334	9471
85°	2264	2264	7045	9561	9561

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 76163 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	7.7
10°-20°	155.1	20.5
20°-30°	198.4	26.2
30°-40°	170.0	22.4
40°-50°	99.9	13.2
50°-60°	44.9	5.9
60°-70°	20.2	2.7
70°-80°	8.8	1.2
80°-90°	2.6	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°	411.4	54.3
0°-40°	581.4	76.7
0°-60°	726.2	95.8
0°-90°	757.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	757.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	615	615	615	615	615	
5°	746	699	607	533	502	75
15°	956	781	496	320	276	270
25°	931	678	337	181	152	421
35°	605	449	187	101	96	377
45°	246	208	88	58	65	194
55°	61	65	40	36	41	59
65°	14	18	21	21	23	15
75°	4	6	9	10	10	4
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°	615.4	615.4	615.4	615.4	615.4	615.4	615.4	615.4	615.4	615.4	615.4
2.5°	668.1	668.1	668.1	666.2	656.8	650.2	643.6	635.2	626.7	618.2	598.5
5°	746.2	744.3	732.1	722.7	708.6	689.8	670.0	648.4	627.7	606.9	565.5
7.5°	809.3	804.6	796.1	774.4	749.0	718.9	686.0	653.1	621.1	590.0	527.0
10°	866.7	864.8	846.0	819.6	782.0	739.6	694.5	648.4	603.2	563.7	481.8
12.5°	917.5	912.8	889.3	850.7	803.6	749.0	691.6	635.2	580.6	530.7	439.4
15°	956.1	946.7	916.5	870.4	813.0	748.1	681.3	613.5	551.4	495.9	391.5
17.5°	981.5	968.3	931.6	877.0	809.3	734.0	658.7	584.4	516.6	457.3	348.2
20°	987.1	973.0	931.6	867.6	791.4	708.6	628.6	549.5	477.1	418.7	306.8
22.5°	971.1	954.2	913.7	846.0	764.1	673.8	590.0	509.1	438.5	377.3	267.2
25°	930.7	917.5	873.3	808.3	724.6	632.4	546.7	468.6	396.2	336.9	230.5
27.5°	871.4	858.2	813.0	754.7	670.9	586.2	499.7	423.5	353.8	297.4	200.4
30°	790.4	781.0	745.3	686.0	613.5	531.7	450.7	374.5	310.5	259.7	172.2
32.5°	706.7	692.6	662.5	615.4	555.2	476.1	399.9	330.3	269.1	220.2	146.8
35°	605.1	602.2	574.0	538.3	481.8	416.9	344.4	281.4	229.6	187.3	126.1
37.5°	511.9	507.2	488.4	457.3	415.0	357.6	295.5	239.0	194.8	157.1	105.4
40°	418.7	415.9	401.8	376.4	346.3	298.3	250.3	197.6	158.1	128.9	87.5
42.5°	323.7	319.9	317.1	305.8	280.4	244.7	204.2	161.9	130.8	104.5	73.4
45°	245.6	243.7	241.8	232.4	220.2	194.8	161.9	128.9	106.3	88.5	62.1
47.5°	176.0	178.8	177.9	178.8	171.3	148.7	124.2	101.6	86.6	73.4	54.6
50°	126.1	125.2	131.7	134.6	127.0	111.0	93.2	79.0	67.8	59.3	46.1
52.5°	88.5	90.3	97.9	99.7	94.1	83.7	70.6	60.2	53.6	48.0	39.5
55°	61.2	62.1	69.6	73.4	68.7	62.1	52.7	46.1	43.3	39.5	32.9
57.5°	41.4	44.2	48.9	51.8	49.9	43.3	38.6	36.7	34.8	33.9	29.2
60°	29.2	30.1	34.8	37.6	35.8	32.0	30.1	29.2	29.2	29.2	26.3
62.5°	19.8	20.7	24.5	26.3	25.4	23.5	22.6	24.5	24.5	24.5	22.6
65°	14.1	14.1	16.9	18.8	18.8	17.9	18.8	19.8	20.7	20.7	19.8
67.5°	9.4	10.4	11.3	13.2	13.2	14.1	15.1	16.9	17.9	17.9	17.9
70°	7.5	7.5	8.5	9.4	9.4	10.4	12.2	13.2	14.1	15.1	15.1
72.5°	5.6	5.6	5.6	6.6	7.5	7.5	9.4	10.4	11.3	12.2	12.2
75°	3.8	3.8	3.8	4.7	5.6	5.6	6.6	7.5	8.5	9.4	10.4
77.5°	2.8	2.8	2.8	2.8	3.8	3.8	4.7	5.6	6.6	6.6	7.5
80°	1.9	1.9	1.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7	5.6
82.5°	0.9	0.9	0.9	1.9	1.9	1.9	2.8	2.8	3.8	3.8	4.7
85°	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9	1.9	2.8	3.8
87.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	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°	615.4	615.4	615.4
2.5°	584.4	575.9	570.2
5°	532.6	509.1	502.5
7.5°	476.1	443.2	432.9
10°	420.6	382.0	367.0
12.5°	366.1	328.4	320.9
15°	319.9	285.1	275.7
17.5°	277.6	247.5	237.1
20°	241.8	212.7	204.2
22.5°	208.0	183.5	176.9
25°	180.7	159.0	152.4
27.5°	155.3	136.4	135.5
30°	133.6	121.4	119.5
32.5°	115.7	107.3	107.3
35°	100.7	95.0	96.0
37.5°	88.5	84.7	86.6
40°	77.2	77.2	79.0
42.5°	67.8	69.6	71.5
45°	58.3	64.0	64.9
47.5°	50.8	57.4	59.3
50°	45.2	51.8	53.6
52.5°	40.5	46.1	48.0
55°	35.8	41.4	41.4
57.5°	31.1	35.8	36.7
60°	27.3	31.1	32.0
62.5°	23.5	26.3	27.3
65°	20.7	22.6	22.6
67.5°	17.9	18.8	18.8
70°	15.1	16.0	15.1
72.5°	13.2	13.2	12.2
75°	10.4	10.4	10.4
77.5°	8.5	8.5	8.5
80°	6.6	7.5	7.5
82.5°	5.6	5.6	5.6
85°	3.8	3.8	3.8
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



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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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Scaled Data Report



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