

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: P886523

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3RWSL-850LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886523
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-11)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL95FS1E-TIR4D25AWW-TL3RWSL-850LM-3000K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, METALLIC SILVER TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3000K CCT
Ballast/Driver: -

Summary

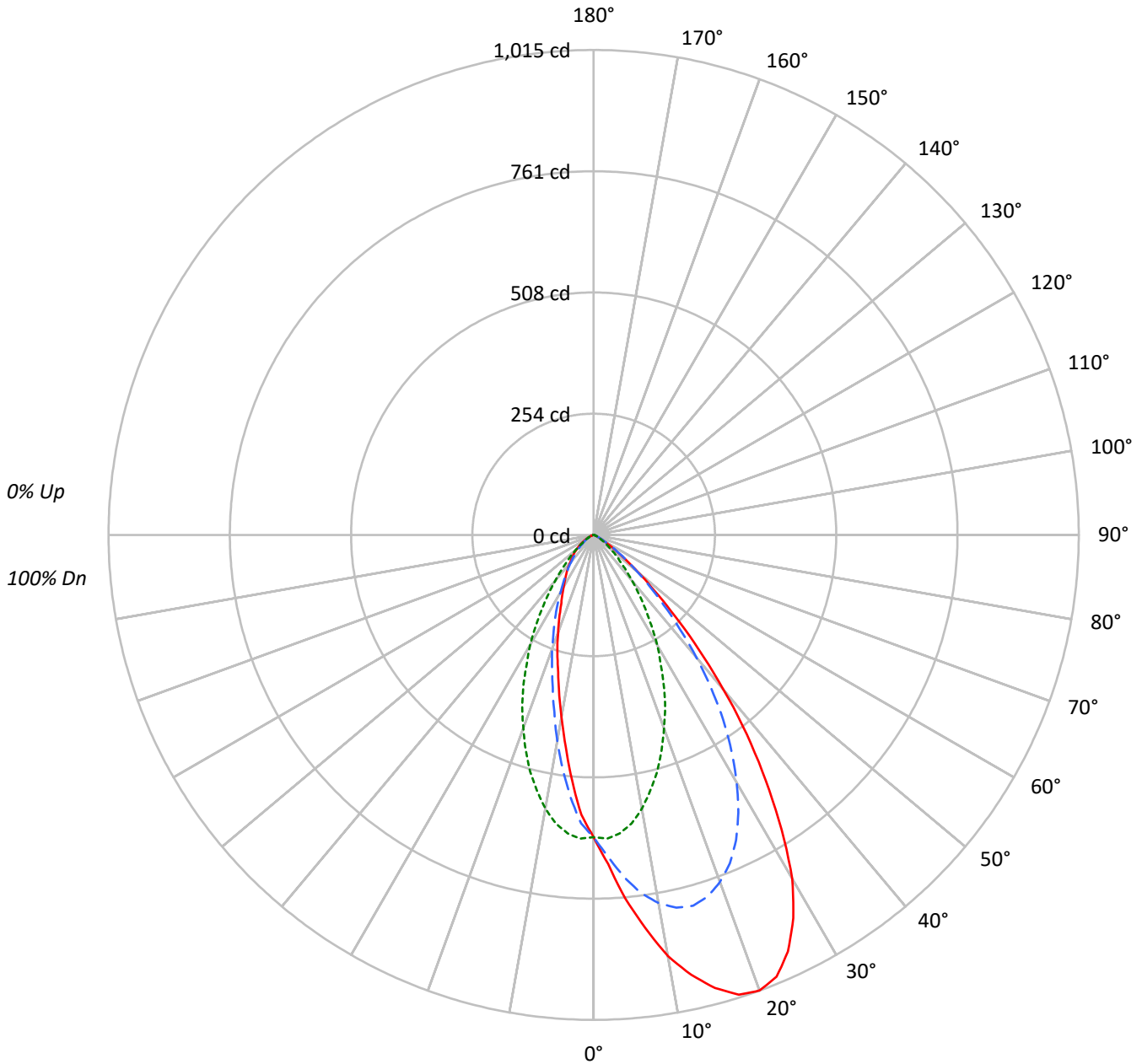
Lumens per Lamp: N/A
Luminaire Lumens: 746.2 lumens
Efficiency: N/A
Efficacy: 54.9 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 0.81 / 0.99
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	104	110	108	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	86	84					84			
3	100	93	87	83	98	91	86	82	89	84	81	86	82	79	84	81	78	76					76			
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	74	71	70					70			
5	89	79	73	68	87	78	72	67	76	71	67	75	70	66	73	69	66	64					64			
6	83	73	67	62	82	73	66	62	71	65	61	70	65	61	68	64	60	59					59			
7	79	68	62	57	77	68	61	57	66	61	56	65	60	56	64	59	56	54					54			
8	74	64	57	52	73	63	57	52	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	51	48	47					47			
10	67	56	50	45	66	55	49	45	55	49	45	54	49	45	53	48	45	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	138695	138695	138695	138695	138695
5°	168236	157880	137992	121417	113735
10°	199306	174156	129523	97660	86148
15°	222862	182373	116459	75210	65381
20°	236784	180324	100365	59085	50731
25°	232755	170574	84029	45995	38954
30°	210437	151454	67453	35043	31929
35°	168057	126351	50139	26716	26716
40°	120970	95522	35839	20753	22356
45°	74426	64363	24220	16064	18979
50°	41107	39811	16375	11872	15420
55°	20530	22862	10437	8984	12234
60°	9473	11337	7412	6622	9078
65°	4410	5370	5396	4410	5396
70°	1795	2725	3590	2436	3013
75°	763	1610	1610	1610	1610
80°	0	0	1137	1137	1137
85°	0	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 20°
 Vertical Angle: 45°
 Luminance: 74736 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	8.0
10°-20°	160.2	21.5
20°-30°	205.7	27.6
30°-40°	174.9	23.4
40°-50°	96.4	12.9
50°-60°	36.2	4.9
60°-70°	10.6	1.4
70°-80°	2.1	0.3
80°-90°	0.2	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°	425.7	57.1
0°-40°	600.6	80.5
0°-60°	733.2	98.3
0°-90°	746.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	746.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	632	632	632	632	632	
5°	764	717	627	552	517	77
15°	982	803	513	331	288	277
25°	962	705	347	190	161	436
35°	628	472	187	100	100	390
45°	240	208	78	52	61	192
55°	54	60	27	24	32	54
65°	8	10	10	8	10	9
75°	1	2	2	2	2	1
85°	0	0	0	0	0	0
90°	0	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°	632.5	632.5	632.5	632.5	632.5	632.5	632.5	632.5	632.5	632.5	632.5
2.5°	689.0	689.0	687.1	682.4	675.8	670.2	660.8	653.2	644.8	636.3	617.5
5°	764.3	761.5	753.0	741.7	727.6	706.9	687.1	668.3	646.6	626.9	583.6
7.5°	830.2	826.4	815.1	793.5	770.9	740.8	706.9	673.0	640.0	609.0	544.0
10°	895.1	886.7	869.7	840.5	803.8	760.5	714.4	669.2	623.1	581.7	502.6
12.5°	943.1	935.6	912.1	876.3	826.4	771.8	712.5	654.2	598.6	547.8	455.6
15°	981.7	972.3	942.2	896.1	835.8	770.9	699.3	633.5	569.5	513.0	407.6
17.5°	1009.0	994.9	958.2	900.8	831.1	755.8	681.5	603.3	535.6	472.5	361.4
20°	1014.7	1002.4	960.1	896.1	814.2	731.3	647.6	567.6	495.1	430.1	318.1
22.5°	1000.5	987.4	942.2	874.4	789.7	698.4	611.8	529.9	452.7	390.6	278.6
25°	962.0	948.8	903.6	836.8	752.1	657.9	564.7	483.8	411.3	347.3	240.0
27.5°	904.5	884.8	849.0	783.1	701.2	609.9	516.7	436.7	363.3	303.1	204.2
30°	831.1	805.7	775.6	718.2	641.0	555.3	465.9	386.9	319.1	266.4	175.1
32.5°	732.3	722.9	690.9	642.9	577.9	496.0	413.2	339.8	275.8	224.0	149.7
35°	627.8	618.4	601.5	561.9	507.3	436.7	359.6	289.0	233.4	187.3	123.3
37.5°	526.2	516.7	501.7	477.2	430.1	375.6	306.8	245.7	195.8	154.4	102.6
40°	422.6	418.9	406.6	388.7	355.8	311.6	256.0	203.3	159.1	125.2	82.8
42.5°	325.7	323.8	315.3	305.0	284.3	248.5	210.8	163.8	126.1	99.8	65.9
45°	240.0	235.3	241.0	232.5	220.3	194.8	161.9	127.1	96.9	78.1	51.8
47.5°	171.3	172.2	175.1	177.0	167.5	146.8	121.4	93.2	75.3	64.0	42.4
50°	120.5	119.5	126.1	131.8	123.3	110.1	87.5	71.5	57.4	48.0	33.9
52.5°	82.8	83.8	91.3	95.1	93.2	78.1	62.1	49.9	42.4	35.8	26.4
55°	53.7	56.5	62.1	66.8	65.9	53.7	43.3	35.8	32.0	27.3	20.7
57.5°	34.8	35.8	41.4	45.2	44.2	35.8	29.2	26.4	23.5	20.7	15.1
60°	21.6	22.6	26.4	30.1	28.2	23.5	19.8	18.8	17.9	16.9	13.2
62.5°	13.2	14.1	16.9	19.8	17.9	15.1	13.2	14.1	14.1	13.2	10.4
65°	8.5	8.5	10.4	12.2	11.3	9.4	9.4	10.4	11.3	10.4	8.5
67.5°	4.7	5.6	6.6	7.5	6.6	6.6	7.5	8.5	8.5	8.5	6.6
70°	2.8	3.8	3.8	3.8	3.8	4.7	4.7	5.6	6.6	5.6	4.7
72.5°	1.9	1.9	1.9	2.8	2.8	2.8	2.8	3.8	3.8	3.8	3.8
75°	0.9	0.9	0.9	0.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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°	632.5	632.5	632.5
2.5°	604.3	594.9	586.4
5°	551.6	529.0	516.7
7.5°	494.2	459.3	447.1
10°	438.6	396.3	386.9
12.5°	380.3	345.4	334.1
15°	331.3	298.4	288.0
17.5°	289.0	258.8	252.3
20°	253.2	225.9	217.4
22.5°	218.4	193.9	187.3
25°	190.1	168.5	161.0
27.5°	162.8	145.0	142.1
30°	138.4	127.1	126.1
32.5°	117.7	110.1	112.0
35°	99.8	96.9	99.8
37.5°	86.6	85.7	88.5
40°	72.5	74.4	78.1
42.5°	61.2	65.9	69.7
45°	51.8	58.4	61.2
47.5°	42.4	50.8	53.7
50°	34.8	44.2	45.2
52.5°	28.2	36.7	38.6
55°	23.5	30.1	32.0
57.5°	19.8	24.5	25.4
60°	15.1	18.8	20.7
62.5°	11.3	15.1	15.1
65°	8.5	10.4	10.4
67.5°	5.6	7.5	7.5
70°	3.8	4.7	4.7
72.5°	2.8	2.8	2.8
75°	1.9	1.9	1.9
77.5°	0.9	0.9	0.9
80°	0.9	0.9	0.9
82.5°	0.9	0.9	0.9
85°	0.0	0.0	0.0
87.5°	0.0	0.0	0.0
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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