

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: P886540

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWSL-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886540
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-23)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL95FS1E-TIR4D25AWW-TL3SWSL-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, METALLIC SILVER TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 4000K CCT
Ballast/Driver: -

Summary

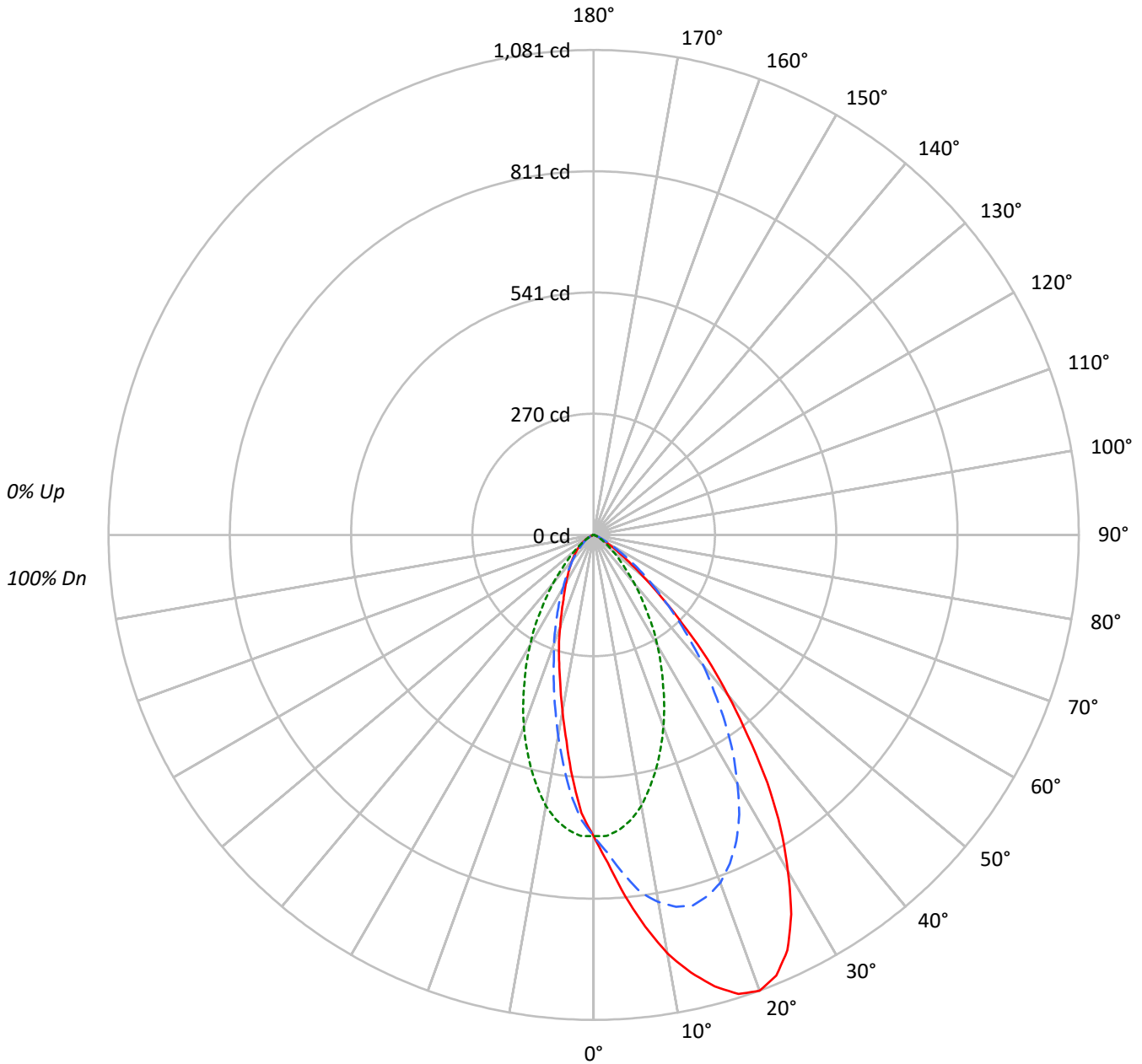
Lumens per Lamp: N/A
Luminaire Lumens: 806.1 lumens
Efficiency: N/A
Efficacy: 59.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 0.81 / 0.99
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{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	107	105	103	103	101	99	100	98	96	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	95	92	89	92	90	87	90	87	85	83					83			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	73	82	77	73	80	75	72	78	74	71	69					69			
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63					63			
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	60	58					58			
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53					53			
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49					49			
9	70	59	52	48	68	58	52	48	57	52	48	56	51	47	55	51	47	46					46			
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	42					42			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	115648	115648	115648	115648	115648
5°	139860	131009	113997	100288	93874
10°	165698	145325	107236	79518	69689
15°	185751	152463	96103	61031	52794
20°	198121	151202	83335	47267	39917
25°	194150	143052	69417	36238	30138
30°	172257	127334	56279	27145	24341
35°	141810	107204	42827	20898	20036
40°	104474	85522	31587	16255	16929
45°	67953	63813	21263	12227	14175
50°	38448	44637	14522	9136	11575
55°	20478	28315	9638	7236	9338
60°	9679	15224	6579	5546	6923
65°	4890	7784	4890	3668	4075
70°	3021	3525	3021	2014	2014
75°	1331	1331	1331	1331	665
80°	0	992	992	0	0
85°	0	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 71631 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	7.8
10°-20°	168.5	20.9
20°-30°	216.3	26.8
30°-40°	186.6	23.2
40°-50°	110.6	13.7
50°-60°	45.2	5.6
60°-70°	13.5	1.7
70°-80°	2.4	0.3
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°	447.8	55.5
0°-40°	634.4	78.7
0°-60°	790.2	98.0
0°-90°	806.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	672	672	672	672	672	
5°	809	758	659	580	543	81
15°	1042	855	539	342	296	295
25°	1022	753	365	191	159	461
35°	674	510	204	99	95	416
45°	279	262	87	50	58	222
55°	68	94	32	24	31	66
65°	12	19	12	9	10	14
75°	2	2	2	2	1	3
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°	112.5°	135°	157.5°	180°
0°	671.5	671.5	671.5	671.5	671.5	671.5	671.5	671.5	671.5
2.5°	731.7	725.7	709.6	689.5	671.5	649.4	635.3	627.3	620.3
5°	809.0	796.9	757.8	710.6	659.4	613.2	580.1	555.0	543.0
7.5°	880.2	857.1	803.9	719.6	640.3	574.1	515.9	479.8	463.7
10°	947.5	914.3	831.0	718.6	613.2	524.9	454.7	408.5	398.5
12.5°	998.7	962.5	849.1	707.6	577.1	478.8	395.4	357.3	342.3
15°	1041.8	990.6	855.1	689.5	539.0	424.6	342.3	305.1	296.1
17.5°	1072.9	1005.7	844.1	662.4	496.8	376.4	295.1	265.0	256.9
20°	1081.0	1007.7	825.0	626.3	454.7	330.2	257.9	225.8	217.8
22.5°	1062.9	987.6	792.9	584.1	410.5	287.1	221.8	193.7	185.7
25°	1021.7	943.5	752.8	538.0	365.3	247.9	190.7	164.6	158.6
27.5°	953.5	887.2	702.6	488.8	324.2	210.8	162.6	141.5	140.5
30°	866.2	807.0	640.3	440.6	283.0	180.7	136.5	123.5	122.4
32.5°	775.8	728.7	578.1	390.4	245.9	154.6	116.4	108.4	108.4
35°	674.5	642.4	509.9	337.2	203.7	128.5	99.4	94.3	95.3
37.5°	564.1	545.0	441.6	287.1	170.6	105.4	84.3	81.3	84.3
40°	464.7	457.7	380.4	238.9	140.5	87.3	72.3	71.3	75.3
42.5°	375.4	368.3	317.2	198.7	110.4	70.3	59.2	63.2	66.2
45°	279.0	294.1	262.0	156.6	87.3	55.2	50.2	56.2	58.2
47.5°	203.7	221.8	208.8	120.4	71.3	46.2	41.2	49.2	50.2
50°	143.5	163.6	166.6	94.3	54.2	37.1	34.1	42.2	43.2
52.5°	99.4	116.4	129.5	71.3	41.2	29.1	29.1	36.1	36.1
55°	68.2	84.3	94.3	50.2	32.1	22.1	24.1	30.1	31.1
57.5°	44.2	57.2	66.2	37.1	23.1	17.1	20.1	24.1	25.1
60°	28.1	38.1	44.2	26.1	19.1	15.1	16.1	19.1	20.1
62.5°	19.1	26.1	28.1	19.1	14.1	12.0	12.0	15.1	15.1
65°	12.0	17.1	19.1	15.1	12.0	9.0	9.0	11.0	10.0
67.5°	8.0	10.0	12.0	11.0	9.0	7.0	6.0	7.0	6.0
70°	6.0	6.0	7.0	8.0	6.0	5.0	4.0	5.0	4.0
72.5°	4.0	3.0	4.0	5.0	4.0	4.0	3.0	2.0	2.0
75°	2.0	2.0	2.0	3.0	2.0	2.0	2.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
80°	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	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
90°	0.0	0.0	0.0	0.0	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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