

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: P886531

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMB-1000LM-5000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886531
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-24)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMB-1000LM-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 814.3 lumens
Efficiency: N/A
Efficacy: 59.9 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 0.8 / 1
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

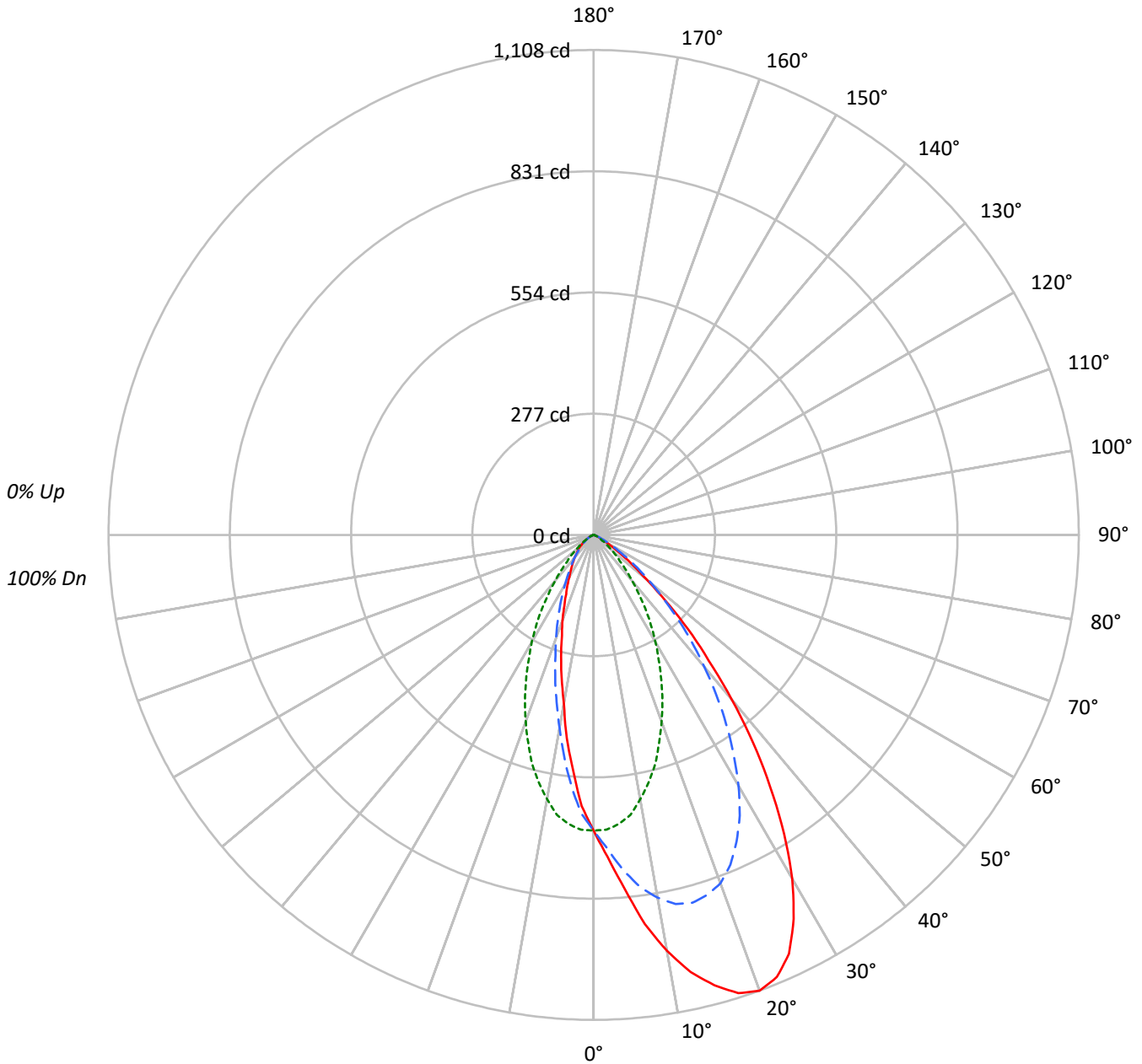
Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	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	87	85	84					84			
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76					76			
4	94	85	79	74	92	84	78	74	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	66	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	52	61	55	51	60	55	51	59	54	51	49					49			
9	70	59	52	48	69	58	52	48	57	52	48	56	51	47	56	51	47	46					46			
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	116285	116285	116285	116285	116285
5°	140223	132755	114551	99804	93234
10°	168741	147196	107219	78294	68343
15°	189887	155137	96727	60479	51279
20°	203106	155216	83207	45947	38030
25°	200573	146739	69455	34832	28219
30°	180371	131550	56140	25972	21995
35°	147718	110967	43184	19490	18165
40°	110364	88332	30778	15153	15153
45°	74140	66443	20776	11301	12568
50°	41208	46298	14388	8467	10155
55°	21829	28795	8858	6636	7897
60°	10884	15603	5821	5063	5442
65°	5135	7743	3871	3016	3423
70°	2669	3172	2115	1611	1057
75°	732	1397	732	732	0
80°	0	0	0	0	0
85°	0	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 74407 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.3	7.8
10°-20°	169.9	20.9
20°-30°	219.2	26.9
30°-40°	189.9	23.3
40°-50°	112.4	13.8
50°-60°	45.3	5.6
60°-70°	12.6	1.5
70°-80°	1.7	0.2
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°	452.4	55.6
0°-40°	642.2	78.9
0°-60°	800.0	98.2
0°-90°	814.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	814.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	675	675	675	675	675	
5°	811	768	663	577	539	82
15°	1065	870	542	339	288	301
25°	1056	772	366	183	148	477
35°	703	528	205	93	86	436
45°	304	273	85	46	52	236
55°	73	96	30	22	26	72
65°	13	19	10	7	8	15
75°	1	2	1	1	0	2
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°	675.2	675.2	675.2	675.2	675.2	675.2	675.2	675.2	675.2
2.5°	736.3	726.9	717.4	694.2	674.2	653.1	637.3	624.7	620.5
5°	811.1	803.8	767.9	716.3	662.6	614.1	577.3	552.0	539.3
7.5°	896.5	870.1	811.1	726.9	644.7	569.9	513.0	477.2	468.8
10°	964.9	933.3	841.7	726.9	613.1	523.5	447.7	407.7	390.8
12.5°	1022.9	980.7	863.8	716.3	579.4	473.0	390.8	346.6	336.0
15°	1065.0	1015.5	870.1	696.3	542.5	419.3	339.2	299.2	287.6
17.5°	1097.7	1033.4	862.7	670.0	497.2	370.8	289.7	254.9	241.2
20°	1108.2	1035.5	846.9	633.1	454.0	324.5	250.7	217.0	207.5
22.5°	1093.4	1017.6	815.3	596.2	409.8	281.3	214.9	184.3	174.9
25°	1055.5	976.5	772.2	547.8	365.5	242.3	183.3	154.9	148.5
27.5°	989.2	915.4	722.6	499.3	321.3	207.5	154.9	132.7	129.6
30°	907.0	840.6	661.5	448.8	282.3	177.0	130.6	114.8	110.6
32.5°	810.1	756.4	595.2	400.3	243.3	150.6	110.6	99.0	98.0
35°	702.6	664.7	527.8	344.5	205.4	125.4	92.7	85.3	86.4
37.5°	598.3	566.7	459.3	292.8	168.5	102.2	80.1	74.8	75.8
40°	490.9	473.0	392.9	242.3	136.9	83.2	67.4	65.3	67.4
42.5°	388.7	384.5	330.8	201.2	109.6	67.4	56.9	55.8	59.0
45°	304.4	305.5	272.8	161.2	85.3	52.7	46.4	49.5	51.6
47.5°	221.2	234.9	215.9	124.3	69.5	43.2	37.9	43.2	45.3
50°	153.8	173.8	172.8	95.9	53.7	35.8	31.6	37.9	37.9
52.5°	111.7	124.3	131.7	71.6	40.0	28.4	26.3	32.7	31.6
55°	72.7	88.5	95.9	51.6	29.5	21.1	22.1	27.4	26.3
57.5°	48.5	62.2	66.4	35.8	21.1	15.8	17.9	22.1	21.1
60°	31.6	42.1	45.3	25.3	16.9	12.6	14.7	16.9	15.8
62.5°	20.0	28.4	29.5	16.9	12.6	10.5	10.5	12.6	11.6
65°	12.6	17.9	19.0	12.6	9.5	7.4	7.4	9.5	8.4
67.5°	8.4	11.6	11.6	8.4	7.4	5.3	5.3	6.3	5.3
70°	5.3	6.3	6.3	6.3	4.2	4.2	3.2	3.2	2.1
72.5°	3.2	3.2	3.2	3.2	2.1	2.1	2.1	1.1	1.1
75°	1.1	1.1	2.1	1.1	1.1	1.1	1.1	0.0	0.0
77.5°	0.0	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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