

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: P886529

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMB-1000LM-3500K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886529  
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-3500K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 751.5 lumens  
Efficiency: N/A  
Efficacy: 55.3 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

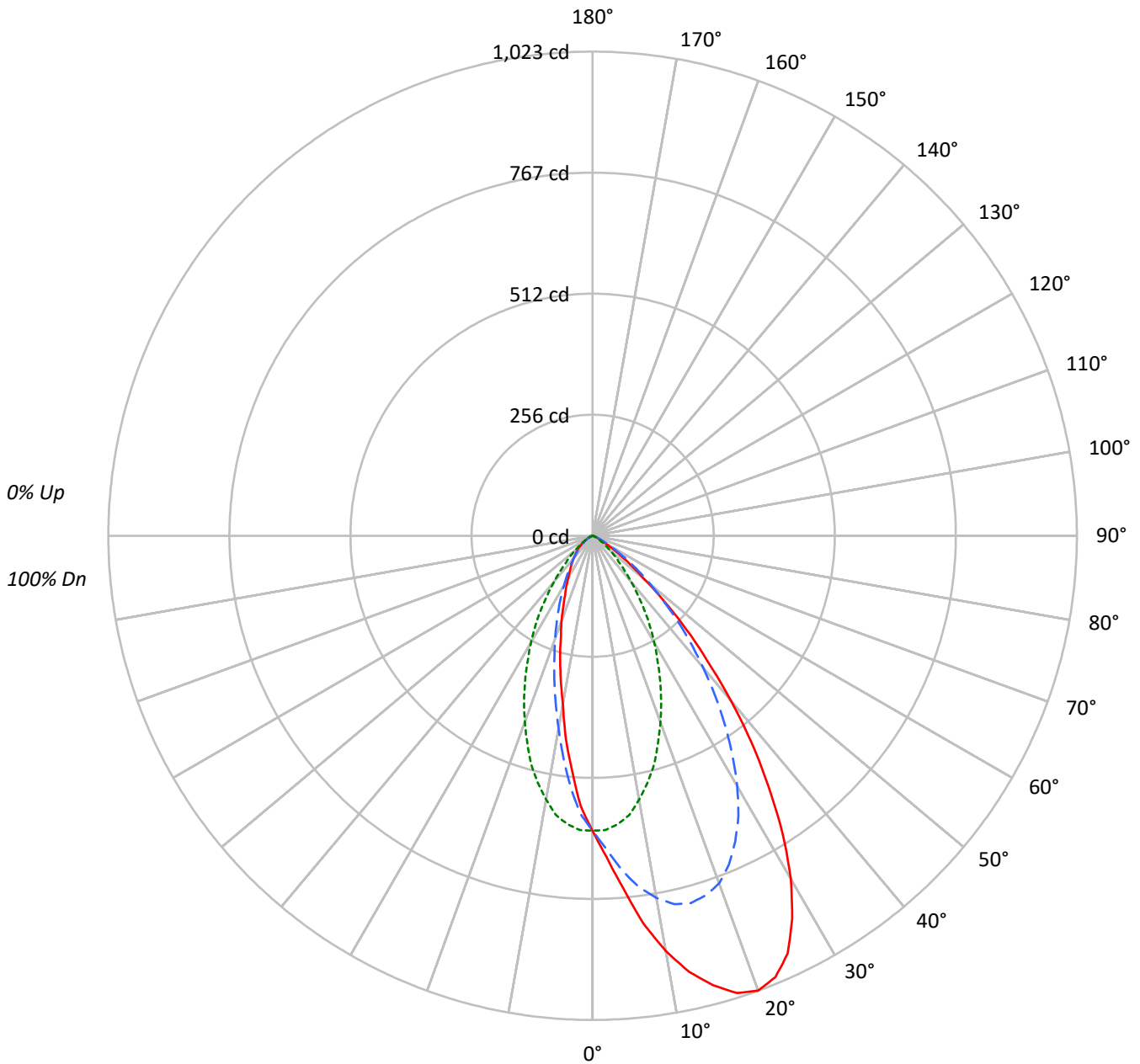
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84				
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76				
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69				
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63				
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58				
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53				
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51	49				
9	70	59	52	48	69	58	52	48	57	52	48	56	51	47	56	51	47	46				
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	107329	107329	107329	107329	107329
5°	129418	122520	105716	92093	86043
10°	155730	135846	98947	72260	63079
15°	175249	143173	89274	55807	47320
20°	187436	143248	76792	42410	35097
25°	185105	135413	64096	32153	26053
30°	166450	121407	51804	23963	20304
35°	136323	102410	39862	17997	16757
40°	101844	81520	28417	13984	13984
45°	68440	61328	19168	10424	11593
50°	38019	42708	13289	7824	9378
55°	20148	26573	8167	6125	7296
60°	10058	14398	5373	4684	5029
65°	4768	7131	3545	2771	3179
70°	2467	2921	1964	1460	957
75°	665	1264	665	665	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: 68659 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	7.8
10°-20°	156.8	20.9
20°-30°	202.3	26.9
30°-40°	175.2	23.3
40°-50°	103.8	13.8
50°-60°	41.8	5.6
60°-70°	11.6	1.6
70°-80°	1.5	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°	417.5	55.6
0°-40°	592.7	78.9
0°-60°	738.3	98.2
0°-90°	751.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	751.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	623	623	623	623	623	
5°	749	709	612	533	498	76
15°	983	803	501	313	265	278
25°	974	713	337	169	137	440
35°	648	487	190	86	80	403
45°	281	252	79	43	48	218
55°	67	88	27	20	24	66
65°	12	18	9	7	8	14
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°	623.2	623.2	623.2	623.2	623.2	623.2	623.2	623.2	623.2
2.5°	679.5	670.8	662.0	640.7	622.2	602.7	588.2	576.5	572.6
5°	748.6	741.8	708.7	661.1	611.5	566.8	532.7	509.4	497.7
7.5°	827.3	803.0	748.6	670.8	595.0	525.9	473.4	440.4	432.6
10°	890.5	861.3	776.8	670.8	565.8	483.2	413.2	376.2	360.7
12.5°	944.0	905.1	797.2	661.1	534.7	436.5	360.7	319.8	310.1
15°	982.9	937.2	803.0	642.6	500.7	386.9	313.0	276.1	265.4
17.5°	1013.0	953.7	796.2	618.3	458.9	342.2	267.3	235.3	222.6
20°	1022.7	955.6	781.6	584.3	419.0	299.4	231.4	200.3	191.5
22.5°	1009.1	939.1	752.5	550.2	378.2	259.6	198.3	170.1	161.4
25°	974.1	901.2	712.6	505.5	337.3	223.6	169.2	142.9	137.1
27.5°	912.9	844.8	666.9	460.8	296.5	191.5	142.9	122.5	119.6
30°	837.0	775.8	610.5	414.1	260.5	163.3	120.5	106.0	102.1
32.5°	747.6	698.0	549.3	369.4	224.6	139.0	102.1	91.4	90.4
35°	648.4	613.4	487.1	317.9	189.6	115.7	85.6	78.7	79.7
37.5°	552.2	523.0	423.9	270.3	155.5	94.3	73.9	69.0	70.0
40°	453.0	436.5	362.6	223.6	126.4	76.8	62.2	60.3	62.2
42.5°	358.7	354.8	305.3	185.7	101.1	62.2	52.5	51.5	54.4
45°	281.0	281.9	251.8	148.7	78.7	48.6	42.8	45.7	47.6
47.5°	204.2	216.8	199.3	114.7	64.2	39.9	35.0	39.9	41.8
50°	141.9	160.4	159.4	88.5	49.6	33.1	29.2	35.0	35.0
52.5°	103.0	114.7	121.5	66.1	36.9	26.2	24.3	30.1	29.2
55°	67.1	81.7	88.5	47.6	27.2	19.4	20.4	25.3	24.3
57.5°	44.7	57.4	61.2	33.1	19.4	14.6	16.5	20.4	19.4
60°	29.2	38.9	41.8	23.3	15.6	11.7	13.6	15.6	14.6
62.5°	18.5	26.2	27.2	15.6	11.7	9.7	9.7	11.7	10.7
65°	11.7	16.5	17.5	11.7	8.7	6.8	6.8	8.7	7.8
67.5°	7.8	10.7	10.7	7.8	6.8	4.9	4.9	5.8	4.9
70°	4.9	5.8	5.8	5.8	3.9	3.9	2.9	2.9	1.9
72.5°	2.9	2.9	2.9	2.9	1.9	1.9	1.9	1.0	1.0
75°	1.0	1.0	1.9	1.0	1.0	1.0	1.0	0.0	0.0
77.5°	0.0	1.0	1.0	1.0	1.0	1.0	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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Scaled Data Report







— 0°-180°    - - 45°-225°    - - - - 90°-270°

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