

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: P886528

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMB-1000LM-3000K

Issue Date: 7/8/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P886528  
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-3000K  
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 727.7 lumens  
Efficiency: N/A  
Efficacy: 53.5 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

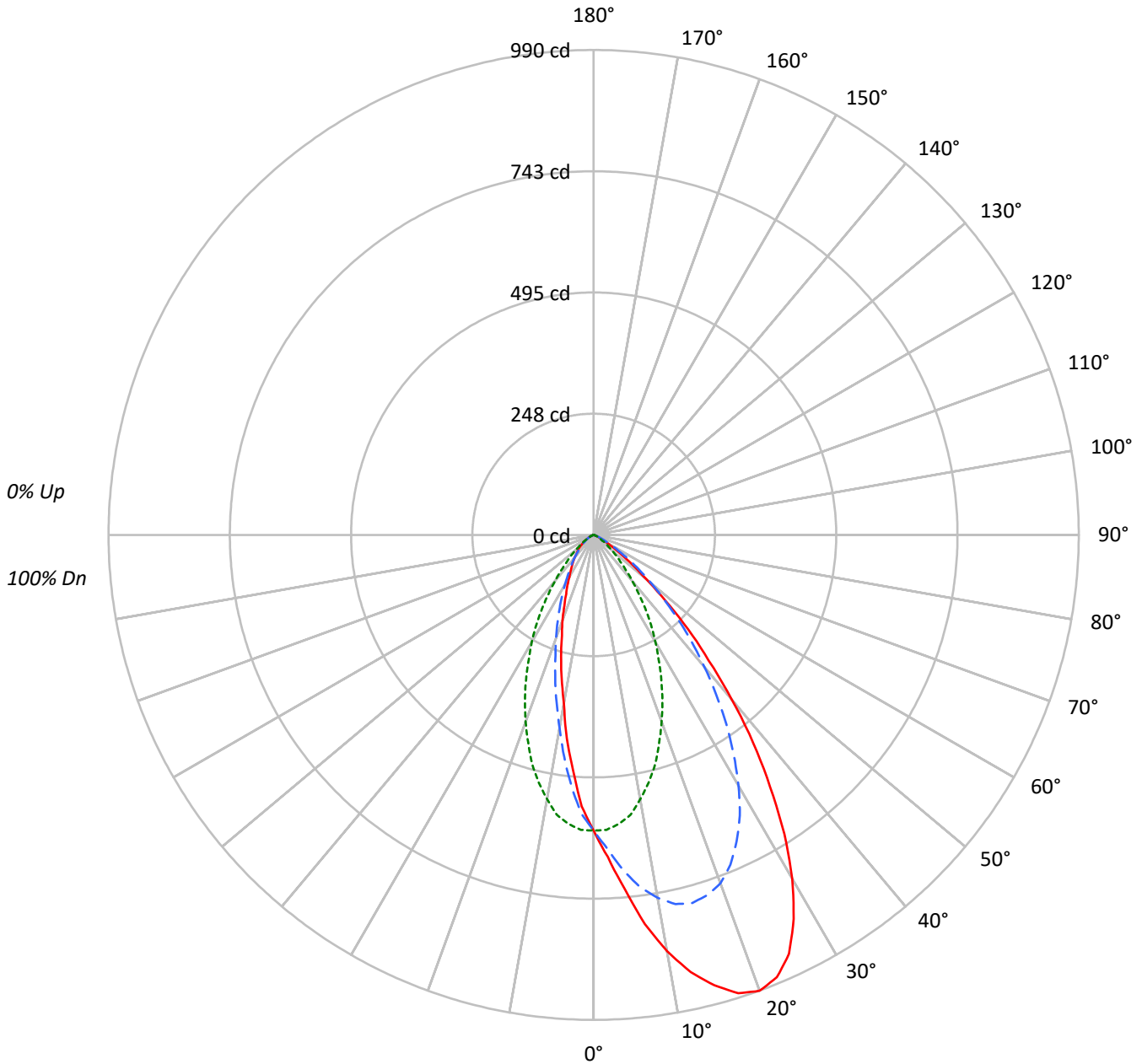
Input Watts (W): 13.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20										
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°	103936	103936	103936	103936	103936
5°	125321	118648	102380	89189	83328
10°	150816	131544	95816	69969	61085
15°	169704	138662	86457	54060	45823
20°	181516	138721	74373	41072	33998
25°	179271	131137	62082	31126	25217
30°	161200	117569	50174	23208	19668
35°	132034	99173	38601	17408	16231
40°	98629	78957	27518	13557	13557
45°	66273	59380	18584	10083	11228
50°	36840	41369	12861	7556	9083
55°	19517	25732	7927	5945	7056
60°	9713	13950	5201	4547	4857
65°	4605	6887	3464	2690	3056
70°	2367	2820	1913	1410	957
75°	599	1264	599	599	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: 66492 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.6	7.8
10°-20°	151.8	20.9
20°-30°	195.9	26.9
30°-40°	169.7	23.3
40°-50°	100.5	13.8
50°-60°	40.5	5.6
60°-70°	11.3	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°	404.3	55.6
0°-40°	574.0	78.9
0°-60°	715.0	98.2
0°-90°	727.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	727.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	604	604	604	604	604	
5°	725	686	592	516	482	74
15°	952	778	485	303	257	269
25°	943	690	327	164	133	426
35°	628	472	184	83	77	390
45°	272	244	76	41	46	211
55°	65	86	26	20	24	64
65°	11	17	8	7	8	13
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°	603.5	603.5	603.5	603.5	603.5	603.5	603.5	603.5	603.5
2.5°	658.1	649.6	641.1	620.4	602.5	583.7	569.6	558.3	554.5
5°	724.9	718.3	686.3	640.2	592.2	548.9	515.9	493.3	482.0
7.5°	801.2	777.7	724.9	649.6	576.2	509.3	458.5	426.5	419.0
10°	862.4	834.1	752.2	649.6	547.9	467.9	400.1	364.4	349.3
12.5°	914.2	876.5	772.0	640.2	517.8	422.7	349.3	309.7	300.3
15°	951.8	907.6	777.7	622.3	484.9	374.7	303.2	267.4	257.0
17.5°	981.0	923.6	771.1	598.8	444.4	331.4	258.9	227.8	215.6
20°	990.4	925.5	756.9	565.8	405.8	290.0	224.1	193.9	185.5
22.5°	977.3	909.5	728.7	532.9	366.2	251.4	192.1	164.8	156.3
25°	943.4	872.7	690.1	489.6	326.7	216.5	163.8	138.4	132.7
27.5°	884.0	818.1	645.9	446.3	287.2	185.5	138.4	118.6	115.8
30°	810.6	751.3	591.2	401.1	252.3	158.2	116.7	102.6	98.9
32.5°	724.0	676.0	531.9	357.8	217.5	134.6	98.9	88.5	87.6
35°	628.0	594.1	471.7	307.9	183.6	112.0	82.8	76.3	77.2
37.5°	534.8	506.5	410.5	261.7	150.6	91.3	71.6	66.8	67.8
40°	438.7	422.7	351.2	216.5	122.4	74.4	60.3	58.4	60.3
42.5°	347.4	343.6	295.6	179.8	97.9	60.3	50.8	49.9	52.7
45°	272.1	273.0	243.8	144.0	76.3	47.1	41.4	44.2	46.1
47.5°	197.7	209.9	193.0	111.1	62.1	38.6	33.9	38.6	40.5
50°	137.5	155.3	154.4	85.7	48.0	32.0	28.2	33.9	33.9
52.5°	99.8	111.1	117.7	64.0	35.8	25.4	23.5	29.2	28.2
55°	65.0	79.1	85.7	46.1	26.4	18.8	19.8	24.5	23.5
57.5°	43.3	55.5	59.3	32.0	18.8	14.1	16.0	19.8	18.8
60°	28.2	37.7	40.5	22.6	15.1	11.3	13.2	15.1	14.1
62.5°	17.9	25.4	26.4	15.1	11.3	9.4	9.4	11.3	10.4
65°	11.3	16.0	16.9	11.3	8.5	6.6	6.6	8.5	7.5
67.5°	7.5	10.4	10.4	7.5	6.6	4.7	4.7	5.6	4.7
70°	4.7	5.6	5.6	5.6	3.8	3.8	2.8	2.8	1.9
72.5°	2.8	2.8	2.8	2.8	1.9	1.9	1.9	0.9	0.9
75°	0.9	0.9	1.9	0.9	0.9	0.9	0.9	0.0	0.0
77.5°	0.0	0.9	0.9	0.9	0.9	0.9	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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