

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: P886530

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3SWMB-1000LM-4000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886530
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-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 775.8 lumens
Efficiency: N/A
Efficacy: 57.0 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

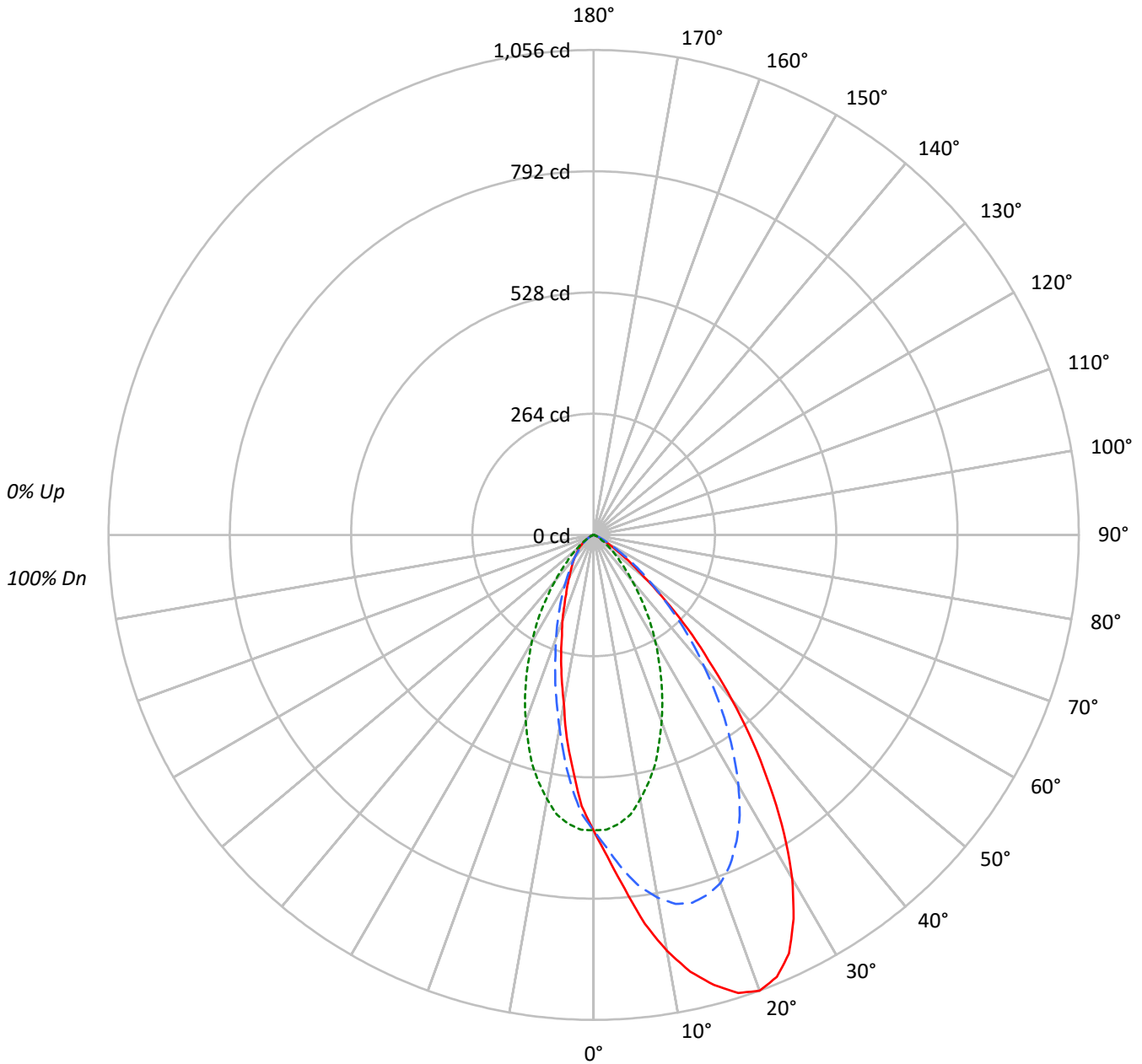
Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
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°	110808	110808	110808	110808	110808
5°	133619	126497	109139	95084	88843
10°	160784	140253	102165	74604	65125
15°	180919	147827	92162	57626	48854
20°	193521	147903	79285	43785	36234
25°	191110	139803	66186	33179	26889
30°	171860	125345	53495	24759	20960
35°	140759	105732	41145	18565	17303
40°	105149	84173	29339	14433	14433
45°	70657	63325	19801	10765	11983
50°	39252	44101	13718	8065	9672
55°	20808	27414	8437	6336	7537
60°	10368	14880	5546	4857	5201
65°	4890	7376	3668	2853	3260
70°	2518	3021	2014	1511	1007
75°	665	1331	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: 70900 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.3	7.8
10°-20°	161.9	20.9
20°-30°	208.9	26.9
30°-40°	180.9	23.3
40°-50°	107.1	13.8
50°-60°	43.2	5.6
60°-70°	12.0	1.5
70°-80°	1.6	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°	431.0	55.6
0°-40°	611.9	78.9
0°-60°	762.2	98.2
0°-90°	775.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	775.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	643	643	643	643	643	
5°	773	732	631	550	514	79
15°	1015	829	517	323	274	287
25°	1006	736	348	175	142	454
35°	670	503	196	88	82	416
45°	290	260	81	44	49	225
55°	69	91	28	21	25	69
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°	643.4	643.4	643.4	643.4	643.4	643.4	643.4	643.4	643.4
2.5°	701.6	692.6	683.5	661.4	642.4	622.3	607.2	595.2	591.2
5°	772.9	765.8	731.7	682.5	631.3	585.2	550.0	525.9	513.9
7.5°	854.2	829.1	772.9	692.6	614.3	543.0	488.8	454.7	446.6
10°	919.4	889.3	802.0	692.6	584.2	498.8	426.6	388.4	372.4
12.5°	974.6	934.4	823.0	682.5	552.0	450.7	372.4	330.2	320.2
15°	1014.7	967.6	829.1	663.4	516.9	399.5	323.2	285.1	274.0
17.5°	1045.9	984.6	822.0	638.4	473.7	353.3	276.0	242.9	229.8
20°	1055.9	986.6	807.0	603.2	432.6	309.1	238.9	206.8	197.7
22.5°	1041.8	969.6	776.9	568.1	390.4	268.0	204.8	175.6	166.6
25°	1005.7	930.4	735.7	521.9	348.3	230.9	174.6	147.5	141.5
27.5°	942.5	872.2	688.5	475.8	306.1	197.7	147.5	126.5	123.5
30°	864.2	801.0	630.3	427.6	269.0	168.6	124.5	109.4	105.4
32.5°	771.8	720.7	567.1	381.4	231.9	143.5	105.4	94.3	93.3
35°	669.5	633.3	502.9	328.2	195.7	119.4	88.3	81.3	82.3
37.5°	570.1	540.0	437.6	279.0	160.6	97.4	76.3	71.3	72.3
40°	467.7	450.7	374.4	230.9	130.5	79.3	64.2	62.2	64.2
42.5°	370.4	366.4	315.2	191.7	104.4	64.2	54.2	53.2	56.2
45°	290.1	291.1	260.0	153.6	81.3	50.2	44.2	47.2	49.2
47.5°	210.8	223.8	205.8	118.4	66.2	41.2	36.1	41.2	43.2
50°	146.5	165.6	164.6	91.3	51.2	34.1	30.1	36.1	36.1
52.5°	106.4	118.4	125.5	68.3	38.1	27.1	25.1	31.1	30.1
55°	69.3	84.3	91.3	49.2	28.1	20.1	21.1	26.1	25.1
57.5°	46.2	59.2	63.2	34.1	20.1	15.1	17.1	21.1	20.1
60°	30.1	40.1	43.2	24.1	16.1	12.0	14.1	16.1	15.1
62.5°	19.1	27.1	28.1	16.1	12.0	10.0	10.0	12.0	11.0
65°	12.0	17.1	18.1	12.0	9.0	7.0	7.0	9.0	8.0
67.5°	8.0	11.0	11.0	8.0	7.0	5.0	5.0	6.0	5.0
70°	5.0	6.0	6.0	6.0	4.0	4.0	3.0	3.0	2.0
72.5°	3.0	3.0	3.0	3.0	2.0	2.0	2.0	1.0	1.0
75°	1.0	1.0	2.0	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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— 0°-180° - - 45°-225° - - - - 90°-270°

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