

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: P886699

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-3500K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886699
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-3500K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1102.4 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 0.5 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

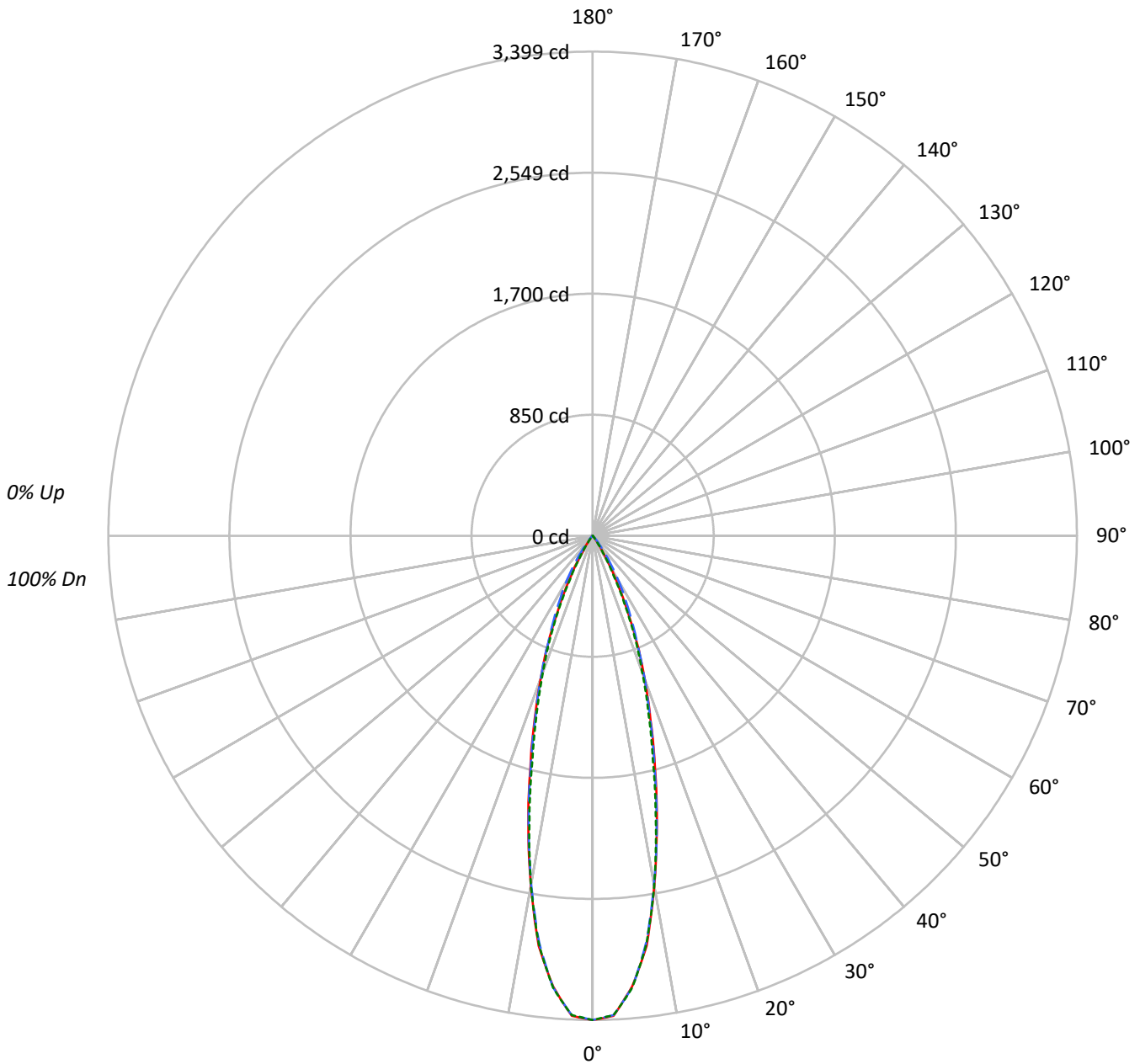
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100		
	1	115	112	110	109	112	110	108	107	106	105	104	103	102	100	99	98	98	96	96	96	96	96	96		
	2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92	92	92	92	92	92		
	3	106	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88	88	88	88	88	88		
	4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84	84	84	84	84	84		
	5	99	93	88	85	98	92	88	84	90	86	84	89	85	83	87	84	82	81	81	81	81	81	81		
	6	96	89	84	81	94	88	84	81	87	83	80	85	82	80	84	81	79	78	78	78	78	78	78		
	7	92	85	81	77	91	85	80	77	84	80	77	83	79	77	82	78	76	75	75	75	75	75	75		
	8	89	82	78	74	88	82	77	74	81	77	74	80	76	74	79	76	73	72	72	72	72	72	72		
	9	87	79	75	72	86	79	74	71	78	74	71	77	74	71	76	73	71	70	70	70	70	70	70		
	10	84	76	72	69	83	76	72	69	75	71	69	75	71	69	74	71	68	67	67	67	67	67	67		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	585436	585436	585436
5°	549207	550313	550866
10°	436167	434103	435974
15°	302001	299131	290929
20°	194730	194730	186483
25°	107346	120971	102063
30°	45321	70637	39355
35°	14171	30359	11690
40°	2878	10814	2878
45°	1047	2606	1047
50°	295	857	295
55°	0	330	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 2606 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.7	25.6
10°-20°	464.5	42.1
20°-30°	278.3	25.2
30°-40°	70.4	6.4
40°-50°	7.0	0.6
50°-60°	0.6	0.1
60°-70°	0.0	0.0
70°-80°	0.0	0.0
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°	1024.5	92.9
0°-40°	1094.9	99.3
0°-60°	1102.4	100.0
0°-90°	1102.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1102.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3399	3399	3399	3399	3399	
5°	3177	3188	3183	3183	3186	282
15°	1694	1684	1678	1666	1632	469
25°	565	613	637	596	537	266
35°	67	96	144	84	56	52
45°	4	6	11	6	4	4
55°	0	0	1	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
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°
0°	3399.3	3399.3	3399.3	3399.3	3399.3
2.5°	3373.6	3366.1	3368.3	3366.1	3367.2
5°	3176.8	3188.5	3183.2	3183.2	3186.4
7.5°	2902.8	2884.7	2881.4	2880.4	2891.1
10°	2494.1	2505.9	2482.3	2488.8	2493.0
12.5°	2083.2	2080.0	2077.9	2067.2	2052.2
15°	1693.8	1684.1	1677.7	1666.0	1631.7
17.5°	1352.5	1351.4	1337.5	1315.0	1302.2
20°	1062.5	1067.8	1062.5	1040.0	1017.5
22.5°	814.3	839.9	819.6	811.0	775.7
25°	564.9	613.1	636.6	596.0	537.1
27.5°	374.5	425.9	485.8	402.3	343.5
30°	227.9	272.8	355.2	255.7	197.9
32.5°	129.5	169.1	241.8	154.1	109.1
35°	67.4	96.3	144.4	84.5	55.6
37.5°	27.8	48.1	83.5	41.7	24.6
40°	12.8	20.3	48.1	19.3	12.8
42.5°	7.5	9.6	24.6	9.6	7.5
45°	4.3	6.4	10.7	6.4	4.3
47.5°	3.2	3.2	5.3	3.2	3.2
50°	1.1	2.1	3.2	2.1	1.1
52.5°	1.1	1.1	2.1	1.1	1.1
55°	0.0	0.0	1.1	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	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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