

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: P886708

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDSL-1000LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886708
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDSL-1000LM-3000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1127.7 lumens
Efficiency: N/A
Efficacy: 81.7 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

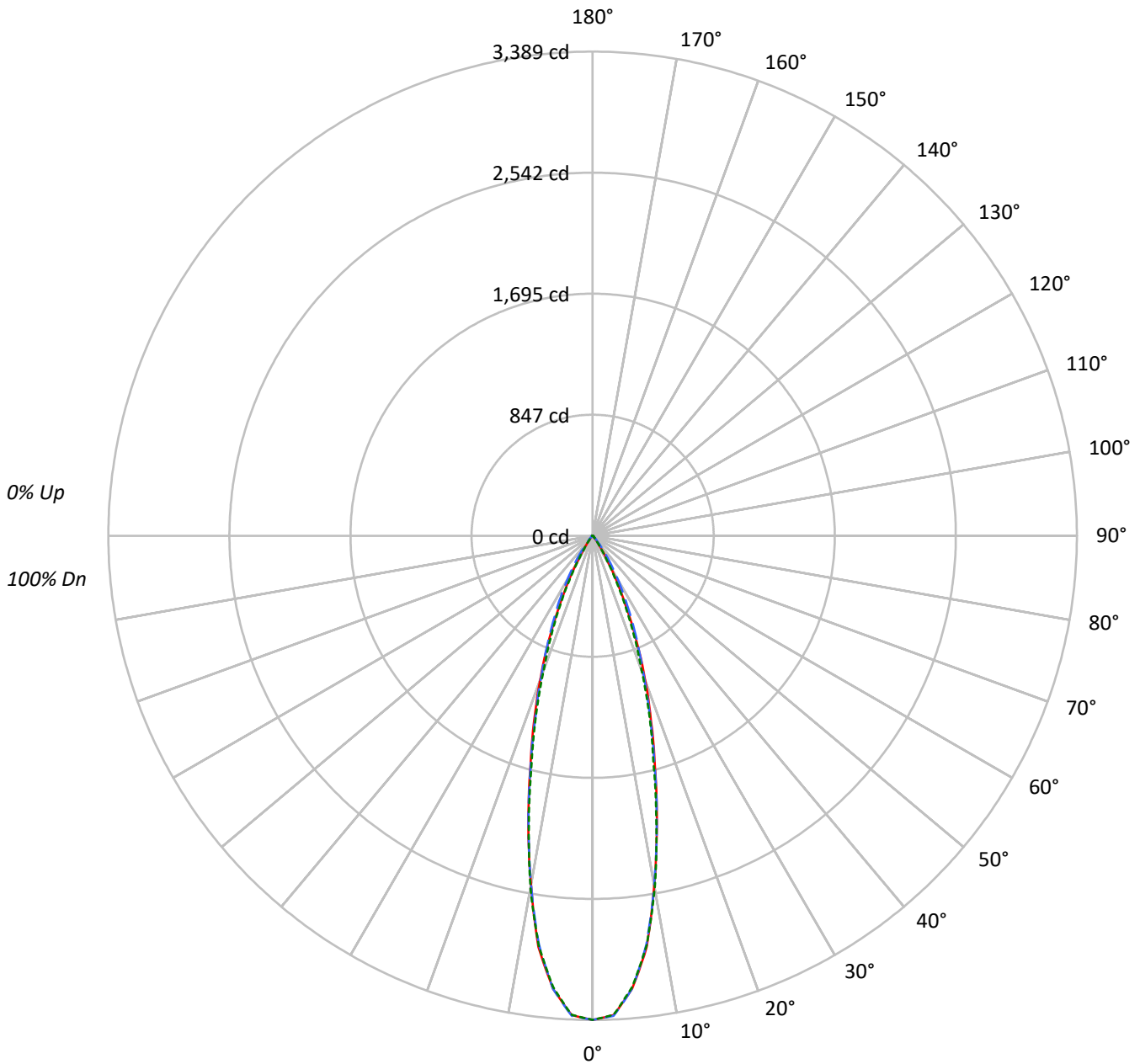
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95																			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91																			
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87																			
4	102	96	91	88	100	95	91	88	93	89	87	91	88	86	89	87	85	83																			
5	98	92	87	84	97	91	86	83	89	85	82	88	84	82	86	83	81	80																			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77																			
7	92	84	79	76	90	84	79	76	82	78	76	81	78	75	80	77	75	74																			
8	88	81	76	73	87	80	76	73	79	75	73	79	75	72	78	74	72	71																			
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68																			
10	83	75	71	68	82	75	70	67	74	70	67	73	70	67	73	69	67	66																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	583594	583594	583594
5°	550037	550037	548066
10°	434401	433858	438021
15°	300807	299148	293603
20°	196893	192531	183239
25°	108771	120762	102272
30°	46714	69563	42816
35°	15453	32651	14149
40°	4879	12095	5351
45°	3020	4798	3288
50°	2492	2786	2492
55°	2162	2492	2162
60°	2136	2136	2136
65°	1671	2119	2119
70°	1561	2065	2065
75°	1397	2063	2063
80°	992	2083	2083
85°	1976	1976	1976

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 4798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	281.2	24.9
10°-20°	463.7	41.1
20°-30°	278.0	24.7
30°-40°	75.3	6.7
40°-50°	13.4	1.2
50°-60°	6.7	0.6
60°-70°	5.0	0.4
70°-80°	3.1	0.3
80°-90°	1.1	0.1
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°	1022.9	90.7
0°-40°	1098.3	97.4
0°-60°	1118.4	99.2
0°-90°	1127.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1127.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3389	3389	3389	3389	3389	
5°	3182	3185	3182	3178	3170	282
15°	1687	1683	1678	1657	1647	469
25°	572	611	636	580	538	269
35°	74	102	155	93	67	57
45°	12	14	20	14	14	10
55°	7	7	8	7	7	6
65°	4	5	5	5	5	4
75°	2	3	3	3	3	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3388.6	3388.6	3388.6	3388.6	3388.6
2.5°	3358.6	3360.7	3362.8	3358.6	3356.5
5°	3181.6	3184.7	3181.6	3177.5	3170.2
7.5°	2902.2	2883.5	2883.5	2863.9	2890.8
10°	2484.0	2496.4	2480.9	2484.0	2504.7
12.5°	2077.3	2062.8	2074.2	2054.5	2061.7
15°	1687.1	1682.9	1677.8	1657.1	1646.7
17.5°	1361.0	1339.3	1334.1	1317.6	1317.6
20°	1074.3	1076.4	1050.5	1032.9	999.8
22.5°	812.5	837.3	825.9	795.9	757.6
25°	572.4	610.7	635.5	579.6	538.2
27.5°	384.0	423.3	485.4	414.0	352.9
30°	234.9	275.3	349.8	265.0	215.3
32.5°	137.7	177.0	240.1	162.5	121.1
35°	73.5	102.5	155.3	93.2	67.3
37.5°	37.3	55.9	91.1	52.8	39.3
40°	21.7	29.0	53.8	31.1	23.8
42.5°	15.5	17.6	33.1	19.7	17.6
45°	12.4	13.5	19.7	14.5	13.5
47.5°	10.4	11.4	13.5	11.4	11.4
50°	9.3	9.3	10.4	9.3	9.3
52.5°	7.2	8.3	9.3	8.3	8.3
55°	7.2	7.2	8.3	7.2	7.2
57.5°	6.2	6.2	7.2	6.2	6.2
60°	6.2	6.2	6.2	6.2	6.2
62.5°	5.2	5.2	6.2	5.2	5.2
65°	4.1	5.2	5.2	5.2	5.2
67.5°	4.1	4.1	5.2	5.2	4.1
70°	3.1	4.1	4.1	4.1	4.1
72.5°	3.1	3.1	4.1	4.1	3.1
75°	2.1	3.1	3.1	3.1	3.1
77.5°	2.1	2.1	2.1	3.1	2.1
80°	1.0	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.0	2.1	2.1
85°	1.0	1.0	1.0	1.0	1.0
87.5°	0.0	0.0	1.0	1.0	1.0
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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