

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: P886710

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDSL-1000LM-4000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886710
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-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

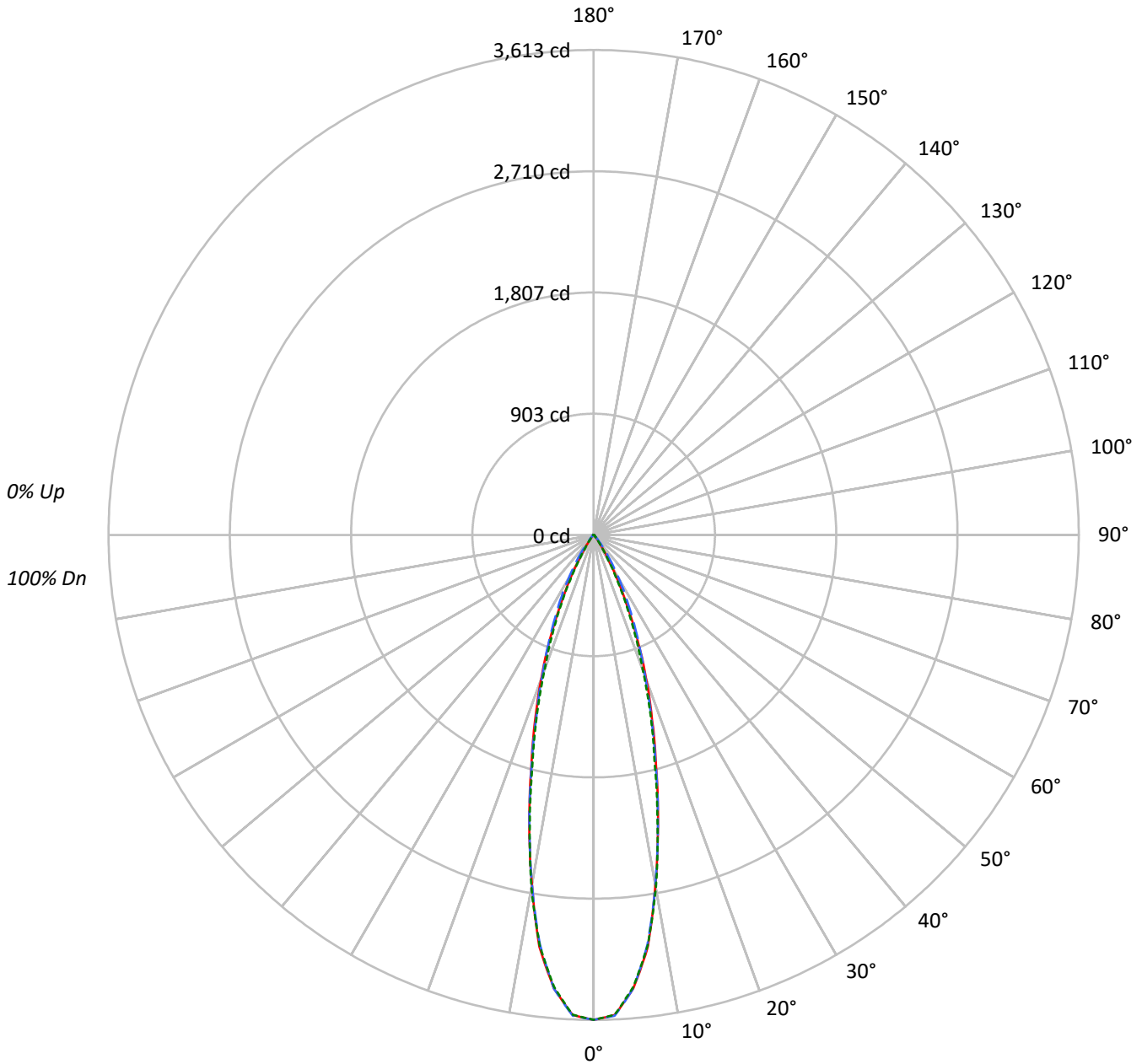
Lumens per Lamp: N/A
Luminaire Lumens: 1202.2 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 0.5 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	95	96	94	93	91					91			
3	106	101	97	93	104	99	96	93	97	94	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	95	91	88	93	89	87	91	88	86	89	87	85	83					83			
5	98	92	87	84	97	91	86	83	89	85	82	88	84	82	86	83	81	80					80			
6	95	88	83	80	94	87	83	79	86	82	79	84	81	78	83	80	78	77					77			
7	92	84	79	76	90	84	79	76	82	78	76	81	78	75	80	77	75	74					74			
8	88	81	76	73	87	80	76	73	79	75	73	79	75	72	78	74	72	71					71			
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68					68			
10	83	75	71	68	82	75	70	67	74	70	67	73	70	67	73	69	67	66					66			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	622172	622172	622172
5°	586393	586393	584302
10°	463116	462539	466981
15°	320687	318922	313002
20°	209924	205269	195353
25°	115954	128743	109037
30°	49816	74177	45640
35°	16462	34796	15075
40°	5216	12905	5710
45°	3215	5115	3483
50°	2653	2947	2653
55°	2312	2642	2312
60°	2273	2273	2273
65°	1793	2241	2241
70°	1662	2216	2216
75°	1464	2196	2196
80°	1091	2182	2182
85°	2174	2174	2174

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5115 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.8	24.9
10°-20°	494.3	41.1
20°-30°	296.4	24.7
30°-40°	80.3	6.7
40°-50°	14.3	1.2
50°-60°	7.2	0.6
60°-70°	5.3	0.4
70°-80°	3.3	0.3
80°-90°	1.2	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°	1090.5	90.7
0°-40°	1170.9	97.4
0°-60°	1192.3	99.2
0°-90°	1202.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1202.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3613	3613	3613	3613	3613	
5°	3392	3395	3392	3388	3380	301
15°	1799	1794	1789	1767	1756	500
25°	610	651	678	618	574	287
35°	78	109	166	99	72	60
45°	13	14	21	15	14	11
55°	8	8	9	8	8	7
65°	4	6	6	6	6	5
75°	2	3	3	3	3	3
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°	3612.6	3612.6	3612.6	3612.6	3612.6
2.5°	3580.6	3582.8	3585.0	3580.6	3578.4
5°	3391.9	3395.2	3391.9	3387.5	3379.8
7.5°	3094.0	3074.1	3074.1	3053.2	3081.9
10°	2648.2	2661.5	2644.9	2648.2	2670.3
12.5°	2214.6	2199.1	2211.3	2190.3	2198.0
15°	1798.6	1794.2	1788.7	1766.6	1755.5
17.5°	1451.0	1427.8	1422.3	1404.7	1404.7
20°	1145.4	1147.6	1120.0	1101.2	1065.9
22.5°	866.2	892.7	880.5	848.5	807.7
25°	610.2	651.0	677.5	617.9	573.8
27.5°	409.4	451.3	517.5	441.4	376.3
30°	250.5	293.5	373.0	282.5	229.5
32.5°	146.8	188.7	256.0	173.2	129.1
35°	78.3	109.2	165.5	99.3	71.7
37.5°	39.7	59.6	97.1	56.3	41.9
40°	23.2	30.9	57.4	33.1	25.4
42.5°	16.6	18.8	35.3	21.0	18.8
45°	13.2	14.3	21.0	15.4	14.3
47.5°	11.0	12.1	14.3	12.1	12.1
50°	9.9	9.9	11.0	9.9	9.9
52.5°	7.7	8.8	9.9	8.8	8.8
55°	7.7	7.7	8.8	7.7	7.7
57.5°	6.6	6.6	7.7	6.6	6.6
60°	6.6	6.6	6.6	6.6	6.6
62.5°	5.5	5.5	6.6	5.5	5.5
65°	4.4	5.5	5.5	5.5	5.5
67.5°	4.4	4.4	5.5	5.5	4.4
70°	3.3	4.4	4.4	4.4	4.4
72.5°	3.3	3.3	4.4	4.4	3.3
75°	2.2	3.3	3.3	3.3	3.3
77.5°	2.2	2.2	2.2	3.3	2.2
80°	1.1	2.2	2.2	2.2	2.2
82.5°	1.1	1.1	1.1	2.2	2.2
85°	1.1	1.1	1.1	1.1	1.1
87.5°	0.0	0.0	1.1	1.1	1.1
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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