

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: P886698

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886698
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-3000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1067.6 lumens
Efficiency: N/A
Efficacy: 77.4 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')

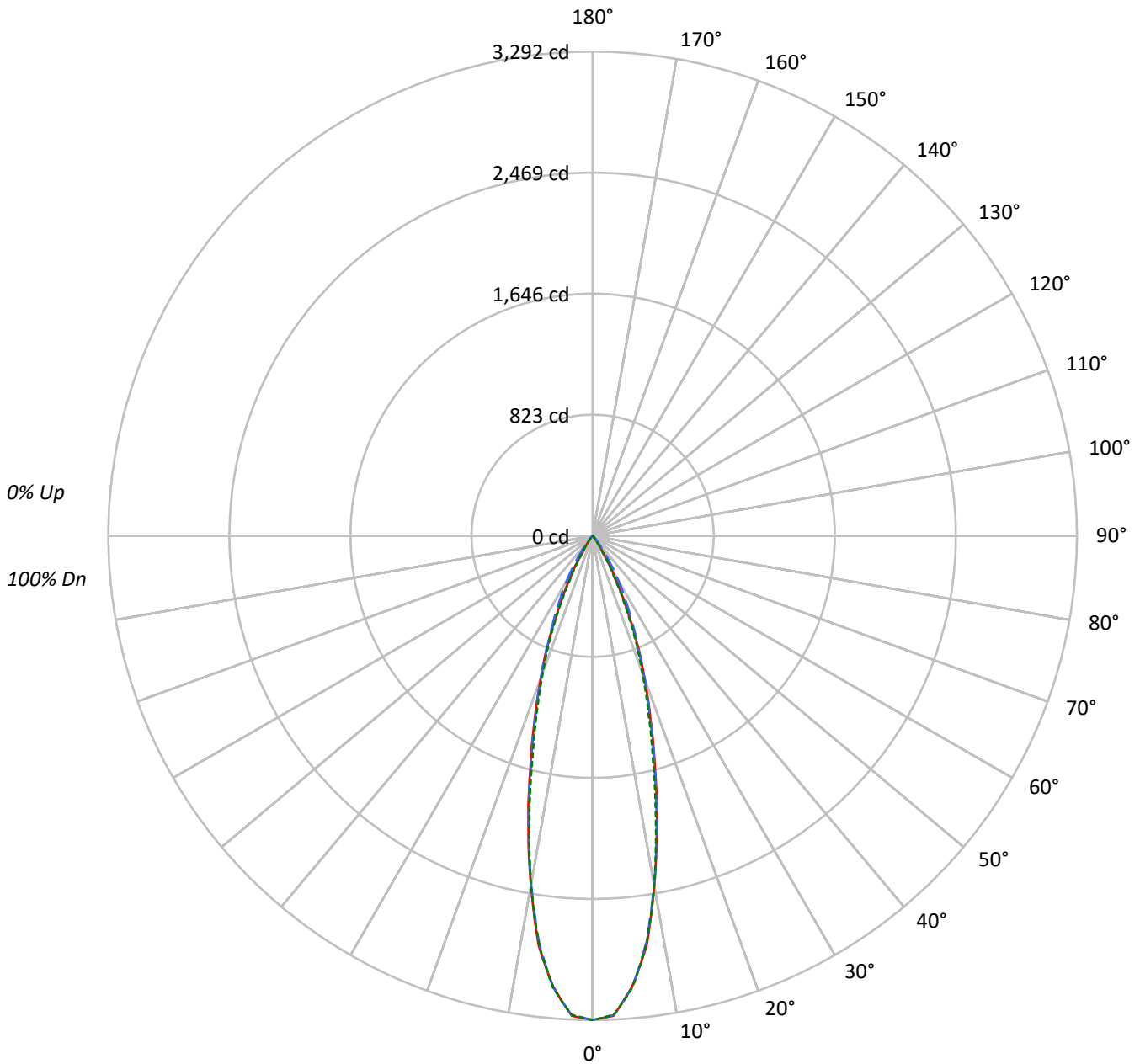
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	566957	566957	566957
5°	531867	532939	533475
10°	422404	420410	422229
15°	292462	289699	281746
20°	188590	188590	180600
25°	103964	117151	98852
30°	43890	68410	38123
35°	13729	29413	11332
40°	2788	10477	2788
45°	999	2533	999
50°	268	831	268
55°	0	300	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: 2533 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	272.8	25.6
10°-20°	449.8	42.1
20°-30°	269.5	25.2
30°-40°	68.1	6.4
40°-50°	6.8	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°	992.2	92.9
0°-40°	1060.3	99.3
0°-60°	1067.6	100.0
0°-90°	1067.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1067.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3292	3292	3292	3292	3292	
5°	3076	3088	3083	3083	3086	273
15°	1640	1631	1625	1613	1580	454
25°	547	594	616	577	520	258
35°	65	93	140	82	54	50
45°	4	6	10	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°	3292.0	3292.0	3292.0	3292.0	3292.0
2.5°	3267.2	3259.9	3262.0	3259.9	3260.9
5°	3076.5	3087.9	3082.7	3082.7	3085.8
7.5°	2811.2	2793.6	2790.5	2789.5	2799.8
10°	2415.4	2426.8	2404.0	2410.2	2414.4
12.5°	2017.5	2014.4	2012.3	2001.9	1987.4
15°	1640.3	1631.0	1624.8	1613.4	1580.2
17.5°	1309.8	1308.7	1295.3	1273.5	1261.1
20°	1029.0	1034.1	1029.0	1007.2	985.4
22.5°	788.6	813.4	793.7	785.4	751.2
25°	547.1	593.7	616.5	577.2	520.2
27.5°	362.7	412.4	470.4	389.6	332.6
30°	220.7	264.2	344.0	247.7	191.7
32.5°	125.4	163.7	234.2	149.2	105.7
35°	65.3	93.3	139.9	81.9	53.9
37.5°	26.9	46.6	80.8	40.4	23.8
40°	12.4	19.7	46.6	18.7	12.4
42.5°	7.3	9.3	23.8	9.3	7.3
45°	4.1	6.2	10.4	6.2	4.1
47.5°	3.1	3.1	5.2	3.1	3.1
50°	1.0	2.1	3.1	2.1	1.0
52.5°	1.0	1.0	2.1	1.0	1.0
55°	0.0	0.0	1.0	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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