

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: P886705

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMW-1000LM-4000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886705
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-13)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMW-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1208.8 lumens
Efficiency: N/A
Efficacy: 87.6 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

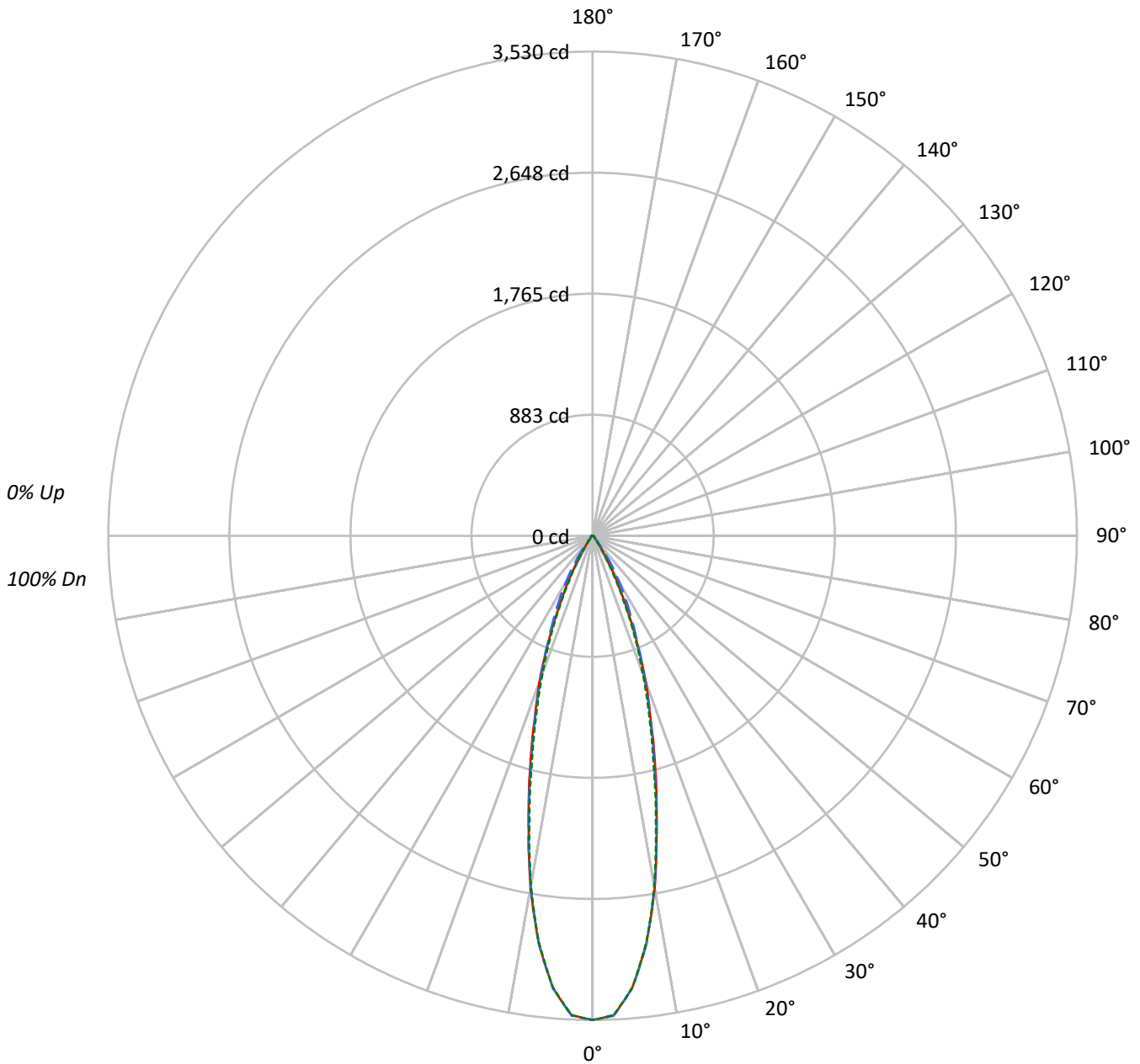
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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								
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95								
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90								
3	105	100	96	92	103	98	95	91	96	93	90	94	91	89	91	89	87	86								
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	85	83	82								
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78								
6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75								
7	91	83	78	75	89	82	78	74	81	77	74	80	76	74	79	76	73	72								
8	87	80	75	71	86	79	75	71	78	74	71	77	74	71	76	73	71	69								
9	85	77	72	69	84	76	72	69	75	71	68	75	71	68	74	70	68	67								
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	71	68	66	64								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	607929	607929	607929
5°	572286	572286	571906
10°	455946	454005	453043
15°	315088	309187	304658
20°	207560	202904	195023
25°	113047	128154	107175
30°	50492	76822	43691
35°	17408	34123	15327
40°	6452	14883	6452
45°	5115	6722	5115
50°	4448	5332	4448
55°	4654	4984	4654
60°	4547	4926	4547
65°	4483	4931	4931
70°	4431	4985	4985
75°	4392	4392	5124
80°	4364	4364	5455
85°	4347	4347	4347

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6722 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.8	24.2
10°-20°	483.3	40.0
20°-30°	294.1	24.3
30°-40°	82.8	6.8
40°-50°	19.6	1.6
50°-60°	14.3	1.2
60°-70°	11.8	1.0
70°-80°	7.6	0.6
80°-90°	2.5	0.2
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°	1070.2	88.5
0°-40°	1153.0	95.4
0°-60°	1186.9	98.2
0°-90°	1208.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1208.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3530	3530	3530	3530	3530	
5°	3310	3311	3310	3310	3308	293
15°	1767	1751	1734	1725	1709	489
25°	595	650	674	628	564	283
35°	83	116	162	104	73	63
45°	21	22	28	22	21	16
55°	16	16	17	16	16	14
65°	11	12	12	12	12	11
75°	7	7	7	8	8	7
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3529.9	3529.9	3529.9	3529.9	3529.9
2.5°	3499.0	3497.9	3503.4	3500.1	3499.0
5°	3310.3	3311.4	3310.3	3310.3	3308.1
7.5°	2997.9	2993.5	3003.4	2994.6	2993.5
10°	2607.2	2596.1	2596.1	2587.3	2590.6
12.5°	2153.5	2162.3	2160.1	2140.2	2130.3
15°	1767.2	1750.6	1734.1	1725.2	1708.7
17.5°	1405.1	1406.2	1393.0	1372.0	1367.6
20°	1132.5	1114.8	1107.1	1092.8	1064.1
22.5°	851.0	881.9	864.3	849.9	810.2
25°	594.9	650.1	674.4	628.1	564.0
27.5°	408.4	441.5	521.0	426.1	368.7
30°	253.9	303.5	386.3	281.5	219.7
32.5°	151.2	192.1	268.2	174.4	131.4
35°	82.8	115.9	162.3	103.8	72.9
37.5°	43.0	64.0	101.5	59.6	40.8
40°	28.7	36.4	66.2	34.2	28.7
42.5°	23.2	26.5	41.9	25.4	23.2
45°	21.0	22.1	27.6	22.1	21.0
47.5°	18.8	19.9	21.0	19.9	18.8
50°	16.6	18.8	19.9	18.8	16.6
52.5°	16.6	16.6	17.7	16.6	16.6
55°	15.5	15.5	16.6	15.5	15.5
57.5°	14.3	15.5	15.5	15.5	14.3
60°	13.2	14.3	14.3	14.3	13.2
62.5°	12.1	13.2	13.2	13.2	13.2
65°	11.0	12.1	12.1	12.1	12.1
67.5°	9.9	11.0	11.0	11.0	11.0
70°	8.8	9.9	9.9	9.9	9.9
72.5°	7.7	8.8	8.8	8.8	8.8
75°	6.6	6.6	6.6	7.7	7.7
77.5°	5.5	5.5	5.5	6.6	6.6
80°	4.4	4.4	4.4	5.5	5.5
82.5°	3.3	3.3	3.3	3.3	3.3
85°	2.2	2.2	2.2	2.2	2.2
87.5°	1.1	1.1	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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