

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: P886706

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMW-1000LM-5000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886706
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-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1268.8 lumens
Efficiency: N/A
Efficacy: 91.9 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

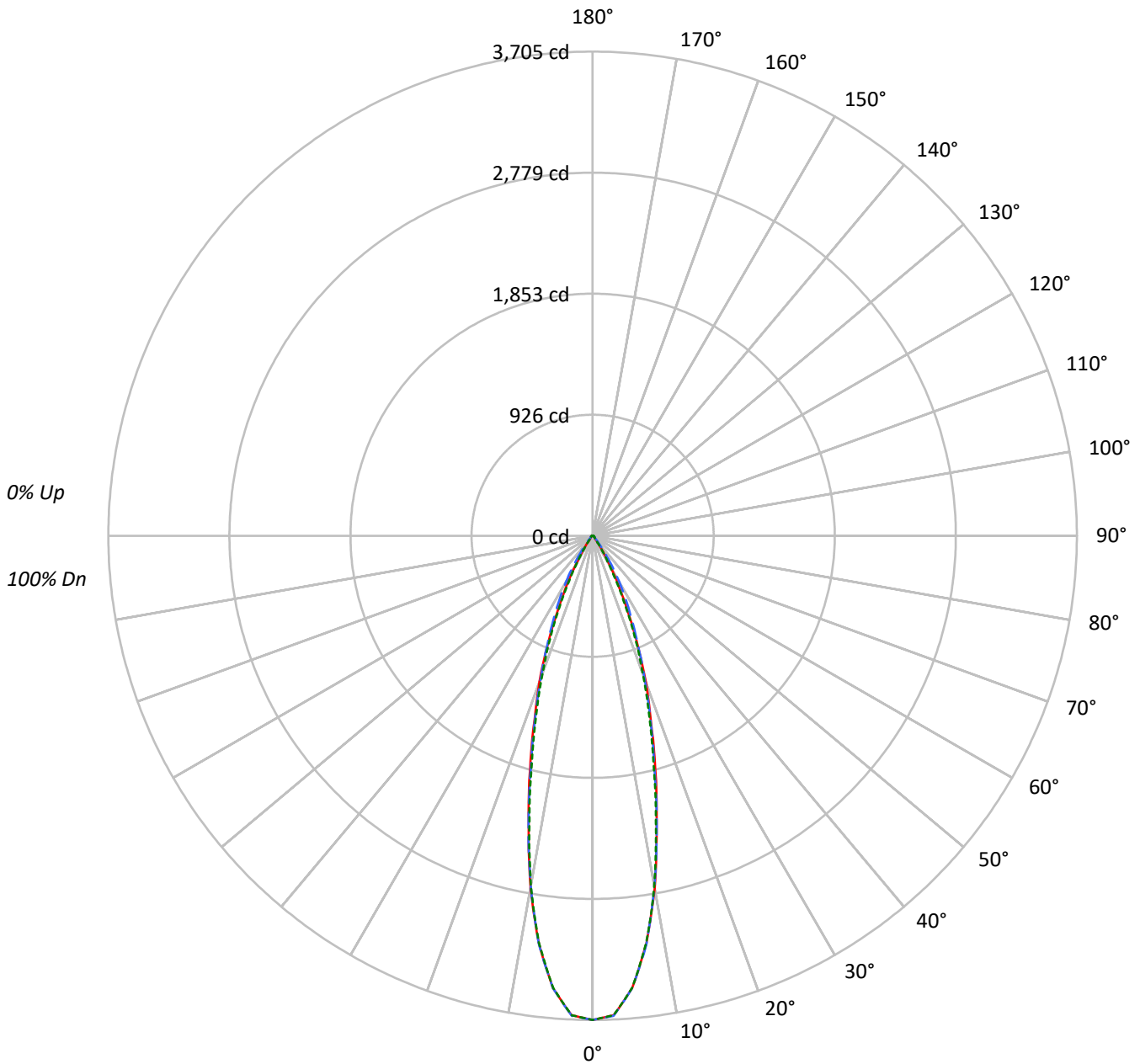
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95	95	95	95	95	95		
	2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90	90	90	90	90	90		
	3	105	100	96	92	103	98	95	91	96	93	90	94	91	89	91	89	87	86	86	86	86	86	86		
	4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	85	83	82	82	82	82	82	82		
	5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78	78	78	78	78	78		
	6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75	75	75	75	75	75		
	7	91	83	78	75	89	82	78	74	81	77	74	80	76	74	79	76	73	72	72	72	72	72	72		
	8	87	80	75	71	86	79	75	71	78	74	71	77	74	71	76	73	71	69	69	69	69	69	69		
	9	85	77	72	69	84	76	72	69	75	71	68	75	71	68	74	70	68	67	67	67	67	67	67		
	10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	71	68	65	64	64	64	64	64	64		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	638033	638033	638033
5°	600621	600621	600224
10°	478523	476494	475480
15°	330689	324485	319742
20°	217841	212948	204682
25°	118653	134501	112496
30°	52978	80640	45839
35°	18270	35805	16084
40°	6767	15625	6767
45°	5358	7063	5358
50°	4662	5600	4662
55°	4864	5225	4864
60°	4788	5201	4788
65°	4727	5175	5175
70°	4683	5237	5237
75°	4658	4658	5390
80°	4562	4562	5752
85°	4545	4545	4545

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 7063 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	307.3	24.2
10°-20°	507.2	40.0
20°-30°	308.7	24.3
30°-40°	86.9	6.8
40°-50°	20.5	1.6
50°-60°	15.0	1.2
60°-70°	12.5	1.0
70°-80°	8.0	0.6
80°-90°	2.6	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°	1123.2	88.5
0°-40°	1210.1	95.4
0°-60°	1245.7	98.2
0°-90°	1268.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1268.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3705	3705	3705	3705	3705	
5°	3474	3475	3474	3474	3472	308
15°	1855	1837	1820	1811	1793	513
25°	624	682	708	659	592	297
35°	87	122	170	109	76	66
45°	22	23	29	23	22	17
55°	16	16	17	16	16	14
65°	12	13	13	13	13	11
75°	7	7	7	8	8	7
85°	2	2	2	2	2	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3704.7	3704.7	3704.7	3704.7	3704.7
2.5°	3672.3	3671.1	3676.9	3673.5	3672.3
5°	3474.2	3475.4	3474.2	3474.2	3471.9
7.5°	3146.4	3141.7	3152.2	3142.9	3141.7
10°	2736.3	2724.7	2724.7	2715.4	2718.9
12.5°	2260.1	2269.4	2267.1	2246.2	2235.8
15°	1854.7	1837.3	1819.9	1810.7	1793.3
17.5°	1474.7	1475.9	1462.0	1440.0	1435.3
20°	1188.6	1170.0	1161.9	1146.9	1116.8
22.5°	893.2	925.6	907.1	892.0	850.3
25°	624.4	682.3	707.8	659.2	592.0
27.5°	428.6	463.4	546.8	447.2	386.9
30°	266.4	318.6	405.5	295.4	230.5
32.5°	158.7	201.6	281.5	183.0	137.9
35°	86.9	121.6	170.3	108.9	76.5
37.5°	45.2	67.2	106.6	62.6	42.9
40°	30.1	38.2	69.5	35.9	30.1
42.5°	24.3	27.8	44.0	26.6	24.3
45°	22.0	23.2	29.0	23.2	22.0
47.5°	19.7	20.9	22.0	20.9	19.7
50°	17.4	19.7	20.9	19.7	17.4
52.5°	17.4	17.4	18.5	17.4	17.4
55°	16.2	16.2	17.4	16.2	16.2
57.5°	15.1	16.2	16.2	16.2	15.1
60°	13.9	15.1	15.1	15.1	13.9
62.5°	12.7	13.9	13.9	13.9	13.9
65°	11.6	12.7	12.7	12.7	12.7
67.5°	10.4	11.6	11.6	11.6	11.6
70°	9.3	10.4	10.4	10.4	10.4
72.5°	8.1	9.3	9.3	9.3	9.3
75°	7.0	7.0	7.0	8.1	8.1
77.5°	5.8	5.8	5.8	7.0	7.0
80°	4.6	4.6	4.6	5.8	5.8
82.5°	3.5	3.5	3.5	3.5	3.5
85°	2.3	2.3	2.3	2.3	2.3
87.5°	1.2	1.2	1.2	1.2	1.2
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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