

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P990583

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-08
 Report Number: P990583
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

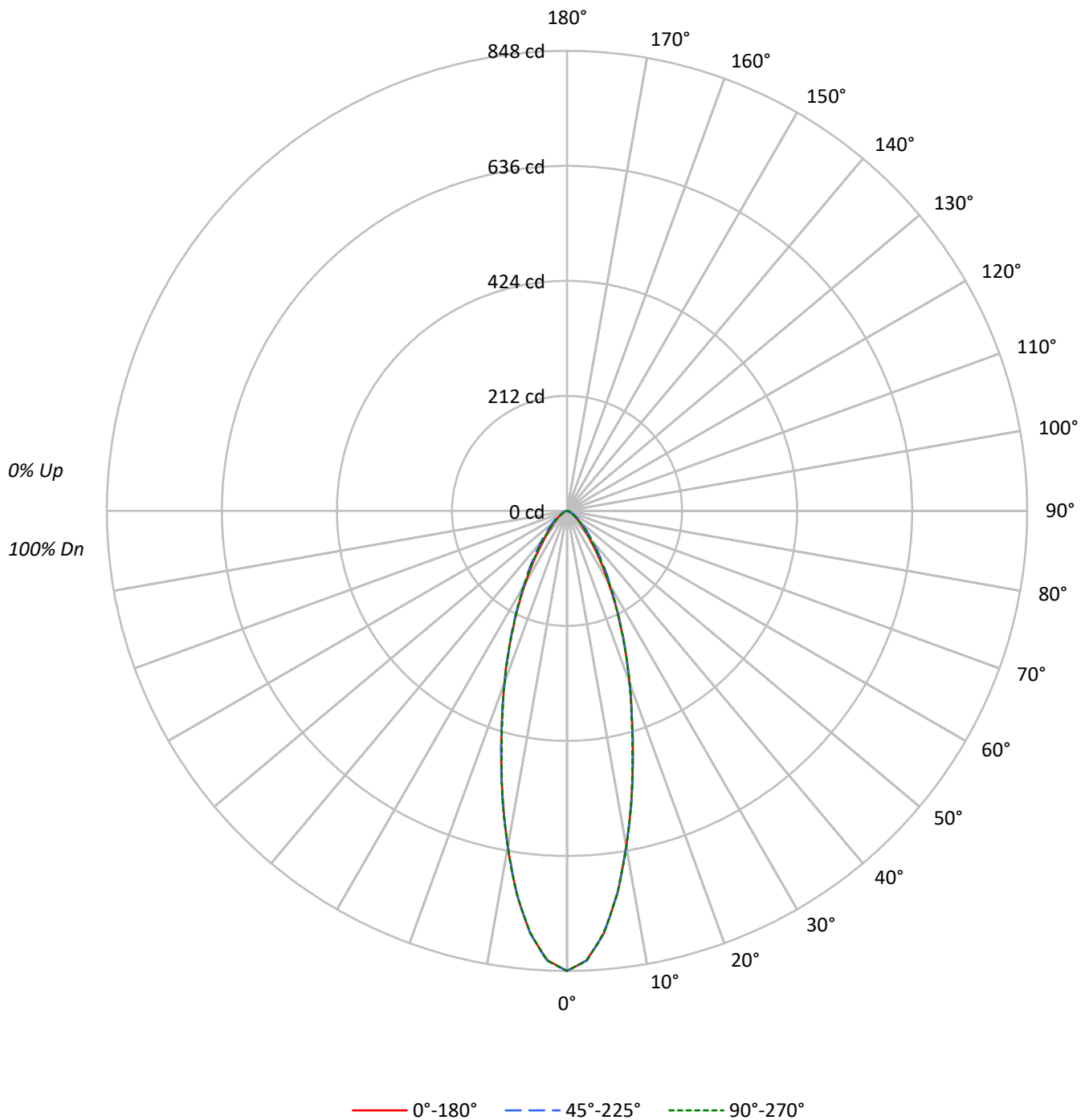
Lumens per Lamp: N/A
 Luminaire Lumens: 442.6 lumens
 Efficiency: N/A
 Efficacy: 58.2 lumens/watt
 Spacing Criteria (0/90/45): 0.53 / 0.53 / 0.6
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
 CIE Type: Direct

Input Watts (W): 7.6
 Input Voltage (V): NR
 Input Current (Ain): 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: 25 FT

Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	GONIO 1 IN0055	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

TEST NUMBER: P990583
CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K

Luminous Intensity Polar Plot



TEST NUMBER: P990583

CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	113	110	108	105	111	108	106	104	104	102	100		100	99	97		97
2	107	102	98	94	105	100	97	93	97	94	91		94	92	89		91
3	102	95	90	86	100	94	89	85	91	87	84		89	85	82		86
4	97	89	83	79	95	88	82	78	86	81	77		84	80	77		82
5	92	83	77	73	90	82	77	73	81	76	72		79	75	71		77
6	87	78	72	68	86	78	72	68	76	71	67		75	70	67		73
7	83	74	68	64	82	73	68	64	72	67	63		71	66	63		70
8	80	70	64	60	78	69	64	60	68	63	60		67	63	59		66
9	76	67	61	57	75	66	60	57	65	60	56		64	60	56		63
10	73	63	58	54	72	63	57	54	62	57	54		61	57	53		61

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	328561	328561	328561
5°	303754	303754	303326
10°	247104	247104	247537
15°	187707	188108	186463
20°	138968	138556	138968
25°	99365	100690	99792
30°	68370	71681	70249
35°	45555	51515	48535
40°	30705	37584	33335
45°	21811	27510	22961
50°	16397	20798	16397
55°	12025	16282	12025
60°	8912	12942	8912
65°	7702	9627	6693
70°	5891	7138	5891
75°	6288	6288	4641
80°	4686	4686	4686
85°	4446	4446	4446

TEST NUMBER: P990583

CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	15.7
10°-20°	129.9	29.4
20°-30°	108.1	24.4
30°-40°	66.4	15.0
40°-50°	35.7	8.1
50°-60°	19.0	4.3
60°-70°	9.0	2.0
70°-80°	4.1	0.9
80°-90°	0.8	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°	307.6	69.5
0°-40°	374.0	84.5
0°-60°	428.7	96.9
0°-90°	442.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	442.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	781	781	781	781	780	70
15°	468	468	469	468	465	130
25°	232	236	236	232	233	107
35°	96	102	109	106	103	62
45°	40	43	50	46	42	32
55°	18	20	24	21	18	16
65°	8	8	10	8	7	8
75°	4	4	4	3	3	4
85°	1	1	1	1	1	1
90°	0	0	0	0	0	

TEST NUMBER: P990583
 CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMW-550LM-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	847.9	847.9	847.9	847.9	847.9
2.5°	829.0	830.1	830.1	830.1	830.1
5°	780.9	780.9	780.9	780.9	779.8
7.5°	710.7	708.6	710.7	710.7	710.7
10°	628.0	628.0	628.0	629.1	629.1
12.5°	546.4	548.5	548.5	545.4	547.4
15°	467.9	467.9	468.9	467.9	464.8
17.5°	397.8	396.7	396.7	395.7	394.6
20°	337.0	336.0	336.0	336.0	337.0
22.5°	282.6	281.6	280.5	280.5	280.5
25°	232.4	235.5	235.5	232.4	233.4
27.5°	189.5	192.6	193.6	192.6	192.6
30°	152.8	157.0	160.2	159.1	157.0
32.5°	122.5	127.7	132.9	129.8	128.7
35°	96.3	101.5	108.9	105.7	102.6
37.5°	75.4	81.6	90.0	85.8	82.7
40°	60.7	64.9	74.3	70.1	65.9
42.5°	48.1	52.3	60.7	56.5	52.3
45°	39.8	42.9	50.2	46.1	41.9
47.5°	33.5	35.6	40.8	37.7	34.5
50°	27.2	29.3	34.5	31.4	27.2
52.5°	22.0	25.1	29.3	25.1	22.0
55°	17.8	19.9	24.1	20.9	17.8
57.5°	14.7	16.7	19.9	16.7	14.7
60°	11.5	12.6	16.7	13.6	11.5
62.5°	9.4	10.5	13.6	10.5	8.4
65°	8.4	8.4	10.5	8.4	7.3
67.5°	7.3	7.3	8.4	6.3	6.3
70°	5.2	6.3	6.3	5.2	5.2
72.5°	4.2	5.2	5.2	4.2	4.2
75°	4.2	4.2	4.2	3.1	3.1
77.5°	3.1	3.1	3.1	3.1	2.1
80°	2.1	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)