

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: P990612

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K**

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: P990612
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

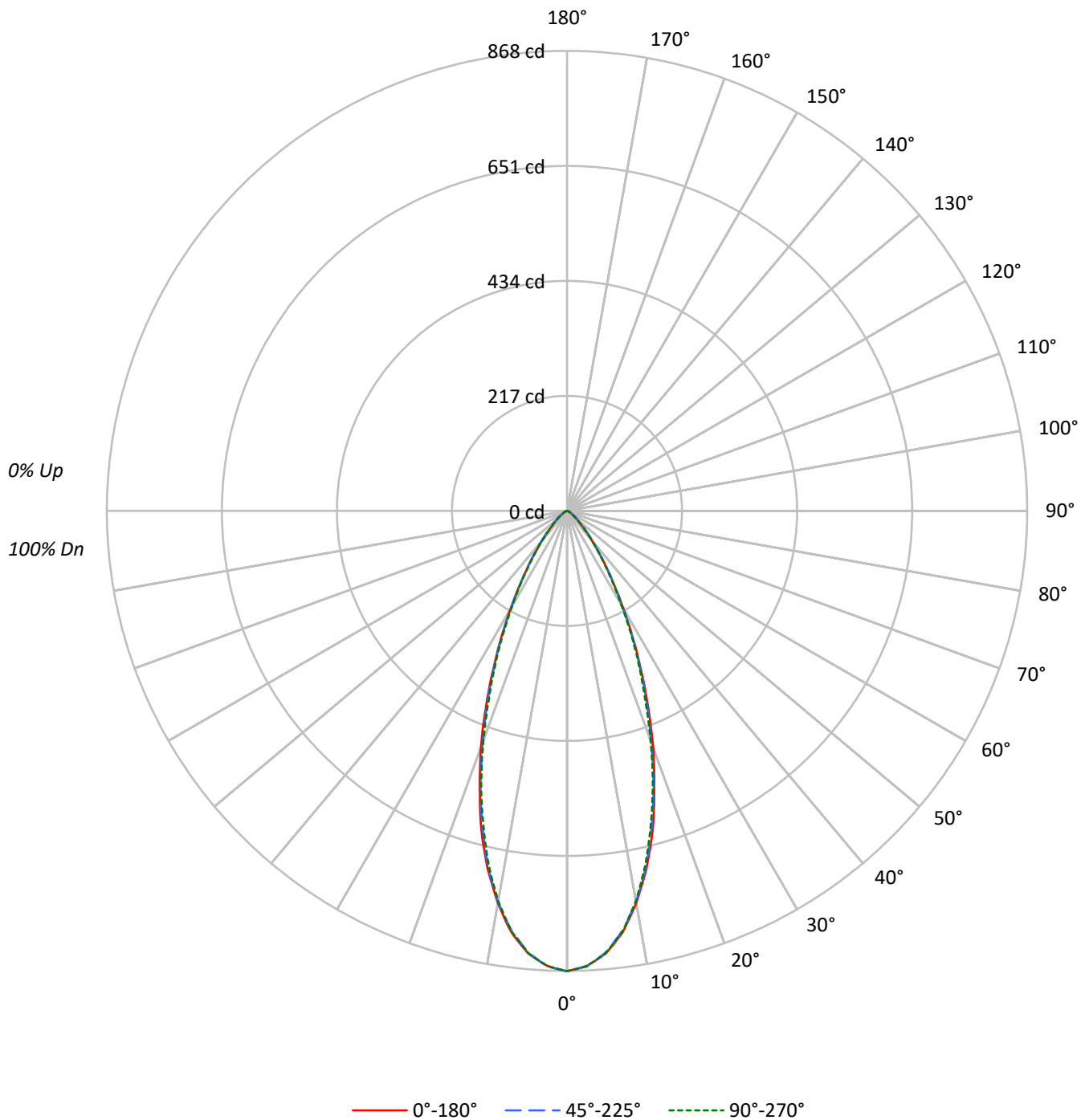
Lumens per Lamp: N/A
 Luminaire Lumens: 534.2 lumens
 Efficiency: N/A
 Efficacy: 70.3 lumens/watt
 Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
 CIE Type: Direct

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: P990612
CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K

Luminous Intensity Polar Plot



TEST NUMBER: P990612

CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K

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	114	111	108	106	111	109	106	104	105	103	101		101	100	98		97
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93
3	103	96	92	88	101	95	91	87	92	89	86		90	87	84		88
4	98	90	85	81	96	89	84	80	87	83	79		85	82	79		83
5	93	85	79	75	92	84	79	75	82	78	74		81	77	73		79
6	89	80	74	70	87	79	74	70	78	73	69		76	72	69		75
7	85	76	70	66	83	75	70	66	74	69	65		73	68	65		72
8	81	72	66	62	80	71	66	62	70	65	62		69	65	61		68
9	77	68	62	59	76	68	62	59	67	62	58		66	61	58		65
10	74	65	59	56	73	64	59	56	64	59	55		63	58	55		62

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	336543	336543	336543
5°	326159	325381	325770
10°	295659	294872	294085
15°	250490	247642	245235
20°	195586	191463	190225
25°	140752	139042	136904
30°	94456	94456	91771
35°	60598	61071	58705
40°	36927	38444	36421
45°	21920	24112	22468
50°	13865	15674	13263
55°	8783	10809	8783
60°	6200	7750	6200
65°	4585	5501	4585
70°	3399	4532	3399
75°	1497	2994	2994
80°	0	0	0
85°	0	0	0

TEST NUMBER: P990612

CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	14.4
10°-20°	170.0	31.8
20°-30°	149.4	28.0
30°-40°	81.9	15.3
40°-50°	34.2	6.4
50°-60°	13.5	2.5
60°-70°	6.0	1.1
70°-80°	2.0	0.4
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°	396.6	74.2
0°-40°	478.5	89.6
0°-60°	526.2	98.5
0°-90°	534.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	534.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	868	868	868	868	868	
5°	838	838	836	836	838	77
15°	624	622	617	613	611	171
25°	329	331	325	320	320	151
35°	128	129	129	127	124	82
45°	40	42	44	42	41	33
55°	13	14	16	14	13	13
65°	5	6	6	6	5	5
75°	1	2	2	2	2	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	

TEST NUMBER: P990612
 CATALOG NUMBER: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	868.5	868.5	868.5	868.5	868.5
2.5°	859.5	860.5	860.5	860.5	859.5
5°	838.5	837.5	836.5	836.5	837.5
7.5°	802.5	802.5	799.4	800.4	800.4
10°	751.4	754.4	749.4	749.4	747.4
12.5°	691.4	692.4	688.4	686.4	683.4
15°	624.4	622.3	617.3	613.3	611.3
17.5°	547.3	546.3	543.3	538.3	538.3
20°	474.3	470.3	464.3	463.3	461.3
22.5°	399.2	397.2	393.2	387.2	385.2
25°	329.2	331.2	325.2	320.2	320.2
27.5°	267.2	268.2	266.1	261.1	260.1
30°	211.1	213.1	211.1	208.1	205.1
32.5°	165.1	166.1	166.1	164.1	161.1
35°	128.1	129.1	129.1	127.1	124.1
37.5°	96.1	98.1	99.1	97.1	95.1
40°	73.0	74.0	76.0	73.0	72.0
42.5°	55.0	56.0	58.0	56.0	54.0
45°	40.0	42.0	44.0	42.0	41.0
47.5°	31.0	32.0	34.0	32.0	30.0
50°	23.0	24.0	26.0	24.0	22.0
52.5°	18.0	19.0	21.0	19.0	17.0
55°	13.0	14.0	16.0	14.0	13.0
57.5°	10.0	11.0	12.0	11.0	10.0
60°	8.0	9.0	10.0	9.0	8.0
62.5°	7.0	7.0	8.0	7.0	7.0
65°	5.0	6.0	6.0	6.0	5.0
67.5°	4.0	5.0	5.0	5.0	5.0
70°	3.0	4.0	4.0	4.0	3.0
72.5°	2.0	3.0	3.0	3.0	3.0
75°	1.0	2.0	2.0	2.0	2.0
77.5°	0.0	1.0	1.0	1.0	1.0
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

(END OF REPORT)