

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: P990624

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-3500K**

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: P990624  
 Test Lab: Cooper Lighting Solutions  
 Issue Date: 5/13/2025  
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
 Product Line: HALO  
 Catalog Number: ML2ALSFL9FS1E-TIR1D40FL-TL2SDMW-550LM-3500K  
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT  
 Ballast/Driver: -

**Summary**

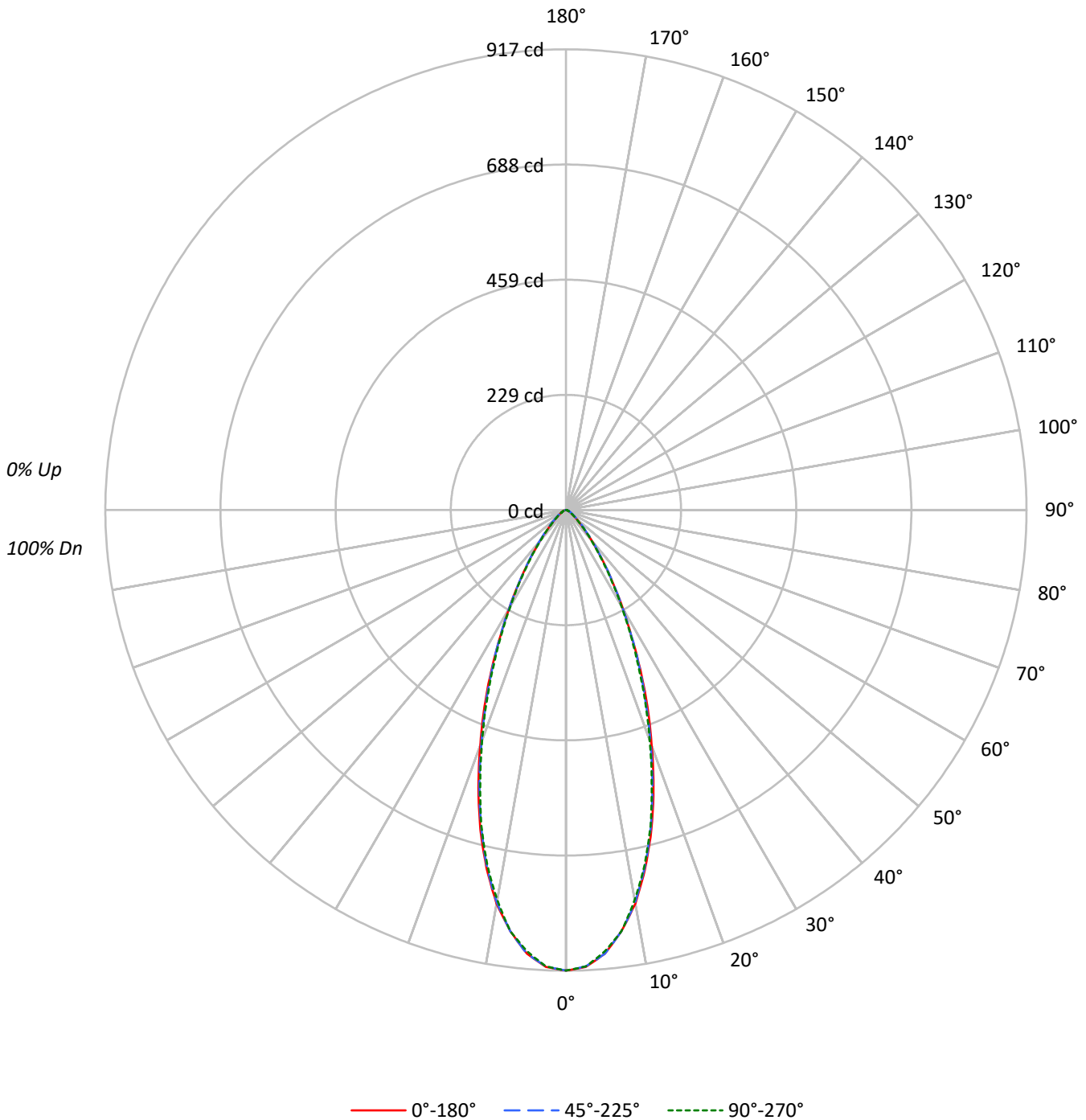
Lumens per Lamp: N/A  
 Luminaire Lumens: 573.9 lumens  
 Efficiency: N/A  
 Efficacy: 75.5 lumens/watt  
 Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69  
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
 CIE Type: Direct

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

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### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	113	111	108	106	111	108	106	104	104	103	101		101	99	98		97	96	95	93
2	108	103	99	95	106	101	97	94	98	95	92		95	92	90		92	90	88	87
3	102	96	91	87	100	95	90	86	92	88	85		90	86	84		87	85	82	81
4	97	90	84	80	96	89	84	80	87	82	79		85	81	78		83	80	77	75
5	93	84	79	74	91	83	78	74	82	77	73		80	76	73		79	75	72	71
6	88	80	74	69	87	79	73	69	77	72	69		76	72	68		75	71	68	66
7	84	75	69	65	83	74	69	65	73	68	65		72	68	64		71	67	64	63
8	80	71	65	61	79	71	65	61	69	64	61		68	64	61		68	63	60	59
9	77	68	62	58	76	67	62	58	66	61	58		65	61	57		64	60	57	56
10	74	64	59	55	73	64	58	55	63	58	55		62	58	54		62	57	54	53

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	355221	355221	355221
5°	344869	344869	343197
10°	312972	312106	310021
15°	263969	261803	260960
20°	205813	202720	200947
25°	149603	148234	145028
30°	101346	101346	98438
35°	65517	65990	63483
40°	40164	41833	39102
45°	24715	27072	24112
50°	16156	18146	15553
55°	10877	13039	10877
60°	8292	9997	8292
65°	6877	7885	6877
70°	6118	7251	6118
75°	4791	4791	4791
80°	2455	2455	2455
85°	0	0	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.6	14.2
10°-20°	179.6	31.3
20°-30°	158.4	27.6
30°-40°	88.0	15.3
40°-50°	37.9	6.6
50°-60°	16.3	2.8
60°-70°	8.2	1.4
70°-80°	3.5	0.6
80°-90°	0.4	0.1
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
<b>0°-30°</b>	<b>419.5</b>	<b>73.1</b>
<b>0°-40°</b>	<b>507.6</b>	<b>88.4</b>
<b>0°-60°</b>	<b>561.8</b>	<b>97.9</b>
<b>0°-90°</b>	<b>573.9</b>	<b>100.0</b>
90°-120°	0.0	0.0
90°-150°	0.0	0.0
<b>90°-180°</b>	<b>0.0</b>	<b>0.0</b>
<b>0°-180°</b>	<b>573.9</b>	<b>100.0</b>

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	887	886	887	886	882	82
15°	658	657	653	648	650	181
25°	350	348	347	339	339	160
35°	138	137	140	135	134	88
45°	45	47	49	46	44	37
55°	16	17	19	17	16	15
65°	8	9	9	9	8	8
75°	3	3	3	3	3	3
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°	916.7	916.7	916.7	916.7	916.7
2.5°	910.2	909.2	909.2	908.1	909.2
5°	886.6	885.6	886.6	885.6	882.3
7.5°	845.8	848.0	845.8	844.8	845.8
10°	795.4	794.3	793.2	791.1	787.9
12.5°	729.9	728.8	726.7	722.4	723.5
15°	658.0	656.9	652.6	648.3	650.5
17.5°	579.6	577.5	573.2	571.1	567.8
20°	499.1	499.1	491.6	488.4	487.3
22.5°	424.0	420.8	415.4	412.2	412.2
25°	349.9	347.8	346.7	339.2	339.2
27.5°	281.2	284.5	282.3	275.9	275.9
30°	226.5	225.4	226.5	222.2	220.0
32.5°	177.1	179.3	178.2	176.0	173.9
35°	138.5	137.4	139.5	135.2	134.2
37.5°	104.1	105.2	107.3	104.1	102.0
40°	79.4	81.6	82.7	80.5	77.3
42.5°	60.1	62.3	63.3	61.2	59.0
45°	45.1	47.2	49.4	46.2	44.0
47.5°	34.3	36.5	38.6	35.4	33.3
50°	26.8	27.9	30.1	26.8	25.8
52.5°	20.4	21.5	23.6	21.5	20.4
55°	16.1	17.2	19.3	17.2	16.1
57.5°	14.0	14.0	15.0	14.0	12.9
60°	10.7	11.8	12.9	11.8	10.7
62.5°	8.6	9.7	10.7	9.7	8.6
65°	7.5	8.6	8.6	8.6	7.5
67.5°	6.4	6.4	7.5	6.4	6.4
70°	5.4	5.4	6.4	5.4	5.4
72.5°	4.3	4.3	5.4	4.3	4.3
75°	3.2	3.2	3.2	3.2	3.2
77.5°	2.1	2.1	2.1	2.1	2.1
80°	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1
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)