

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: P990615

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-4000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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**Test Information**

Test Method: LM-79-08  
 Report Number: P990615  
 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-4000K  
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM  
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
 Ballast/Driver: -

**Summary**

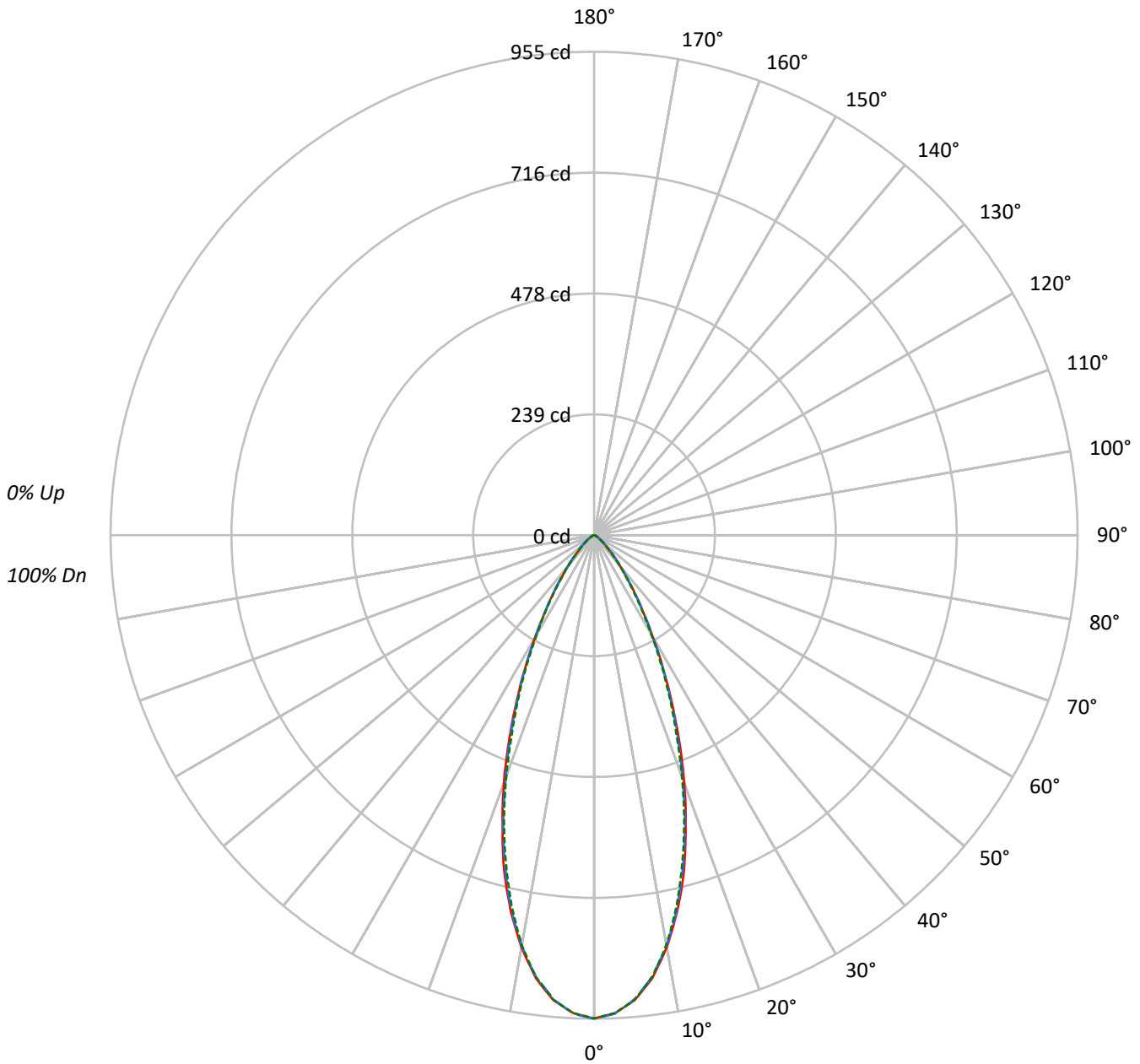
Lumens per Lamp: N/A  
 Luminaire Lumens: 587.3 lumens  
 Efficiency: N/A  
 Efficacy: 77.3 lumens/watt  
 Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69  
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')  
 CIE Type: Direct

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

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### Luminous Intensity Polar Plot



— 0°-180°    - - - 45°-225°    ····· 90°-270°



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

RF	20				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	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
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94	94	94	94
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87	87	87	87
3	103	96	92	88	101	95	91	87	92	89	86	90	87	84	88	85	83	81	81	81	81
4	98	90	85	81	96	89	84	80	87	83	79	85	82	79	83	80	78	76	76	76	76
5	93	85	79	75	92	84	79	75	82	78	74	81	77	73	79	76	73	71	71	71	71
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	69	67	67	67	67
7	85	76	70	66	83	75	70	66	74	69	65	73	68	65	72	68	65	63	63	63	63
8	81	72	66	62	80	71	66	62	70	65	62	69	65	61	68	64	61	60	60	60	60
9	77	68	62	59	76	68	62	59	67	62	58	66	61	58	65	61	58	57	57	57	57
10	74	65	59	56	73	64	59	55	64	59	55	63	58	55	62	58	55	54	54	54	54

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

	0°	45°	90°
0°	369946	369946	369946
5°	358522	357667	358095
10°	325052	324186	323320
15°	275362	272273	269626
20°	215009	210473	209112
25°	154733	152852	150501
30°	103852	103852	100899
35°	66605	67126	64524
40°	40619	42289	40063
45°	24112	26524	24715
50°	15252	17241	14589
55°	9661	11890	9661
60°	6820	8525	6820
65°	5043	6052	5043
70°	3739	4985	3739
75°	1647	3294	3294
80°	0	0	0
85°	0	0	0

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.8	14.4
10°-20°	186.9	31.8
20°-30°	164.2	28.0
30°-40°	90.0	15.3
40°-50°	37.6	6.4
50°-60°	14.9	2.5
60°-70°	6.6	1.1
70°-80°	2.2	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
<b>0°-30°</b>	<b>436.0</b>	<b>74.2</b>
<b>0°-40°</b>	<b>526.0</b>	<b>89.6</b>
<b>0°-60°</b>	<b>578.5</b>	<b>98.5</b>
<b>0°-90°</b>	<b>587.3</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>587.3</b>	<b>100.0</b>

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	955	955	955	955	955	
5°	922	921	920	920	921	85
15°	686	684	679	674	672	188
25°	362	364	358	352	352	166
35°	141	142	142	140	136	90
45°	44	46	48	46	45	36
55°	14	15	18	15	14	14
65°	6	7	7	7	6	6
75°	1	2	2	2	2	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.7	954.7	954.7	954.7	954.7
2.5°	944.8	945.9	945.9	945.9	944.8
5°	921.7	920.6	919.5	919.5	920.6
7.5°	882.2	882.2	878.9	880.0	880.0
10°	826.1	829.4	823.9	823.9	821.7
12.5°	760.1	761.2	756.8	754.6	751.3
15°	686.4	684.2	678.7	674.3	672.1
17.5°	601.7	600.6	597.3	591.8	591.8
20°	521.4	517.0	510.4	509.3	507.1
22.5°	438.9	436.7	432.3	425.7	423.5
25°	361.9	364.1	357.5	352.0	352.0
27.5°	293.7	294.8	292.6	287.1	286.0
30°	232.1	234.3	232.1	228.8	225.5
32.5°	181.5	182.6	182.6	180.4	177.1
35°	140.8	141.9	141.9	139.7	136.4
37.5°	105.6	107.8	108.9	106.7	104.5
40°	80.3	81.4	83.6	80.3	79.2
42.5°	60.5	61.6	63.8	61.6	59.4
45°	44.0	46.2	48.4	46.2	45.1
47.5°	34.1	35.2	37.4	35.2	33.0
50°	25.3	26.4	28.6	26.4	24.2
52.5°	19.8	20.9	23.1	20.9	18.7
55°	14.3	15.4	17.6	15.4	14.3
57.5°	11.0	12.1	13.2	12.1	11.0
60°	8.8	9.9	11.0	9.9	8.8
62.5°	7.7	7.7	8.8	7.7	7.7
65°	5.5	6.6	6.6	6.6	5.5
67.5°	4.4	5.5	5.5	5.5	5.5
70°	3.3	4.4	4.4	4.4	3.3
72.5°	2.2	3.3	3.3	3.3	3.3
75°	1.1	2.2	2.2	2.2	2.2
77.5°	0.0	1.1	1.1	1.1	1.1
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)