

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: P990590

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D25NFL-TL2SDSL-550LM-4000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990590
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDSL-550LM-4000K
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR, METALLIC SILVER TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
 Ballast/Driver: -

Summary

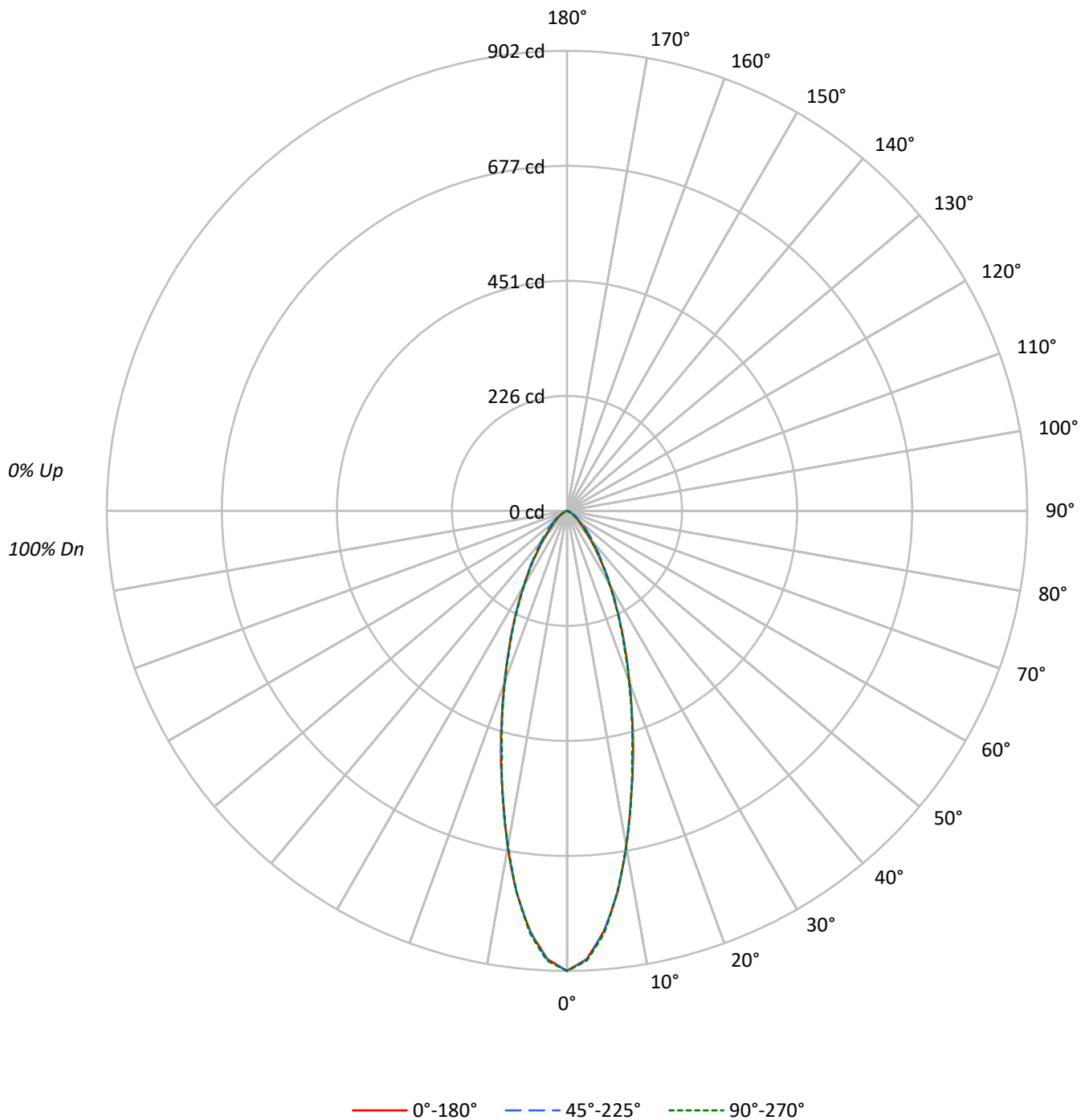
Lumens per Lamp: N/A
 Luminaire Lumens: 468.5 lumens
 Efficiency: N/A
 Efficacy: 61.6 lumens/watt
 Spacing Criteria (0/90/45): 0.54 / 0.53 / 0.6
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
 CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	349408	349408	349408
5°	321686	322114	323398
10°	263079	263079	262213
15°	200745	199421	197656
20°	147380	146927	146020
25°	107189	106719	105778
30°	75305	76245	74813
35°	51515	55158	52035
40°	34499	40063	35055
45°	24112	30140	24715
50°	17904	22546	17904
55°	13377	17092	12633
60°	9377	12787	8525
65°	6052	9077	6052
70°	4985	6231	3739
75°	3294	3294	3294
80°	2455	2455	2455
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	15.8
10°-20°	138.0	29.5
20°-30°	115.2	24.6
30°-40°	71.8	15.3
40°-50°	38.7	8.3
50°-60°	19.9	4.2
60°-70°	8.2	1.7
70°-80°	2.5	0.5
80°-90°	0.1	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°	327.2	69.9
0°-40°	399.1	85.2
0°-60°	457.7	97.7
0°-90°	468.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	468.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	827	829	828	831	831	74
15°	500	497	497	496	493	138
25°	251	251	250	247	247	115
35°	109	113	117	112	110	70
45°	44	47	55	48	45	35
55°	20	22	25	22	19	18
65°	7	8	10	8	7	7
75°	2	2	2	2	2	2
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°	901.7	901.7	901.7	901.7	901.7
2.5°	879.7	883.0	880.8	883.0	883.0
5°	827.0	829.2	828.1	831.4	831.4
7.5°	755.5	755.5	754.4	754.4	754.4
10°	668.6	668.6	668.6	668.6	666.4
12.5°	578.4	580.6	579.5	578.4	580.6
15°	500.4	497.1	497.1	496.0	492.7
17.5°	424.5	424.5	422.3	419.0	422.3
20°	357.4	358.5	356.3	356.3	354.1
22.5°	300.2	301.3	299.1	299.1	296.9
25°	250.7	250.7	249.6	247.4	247.4
27.5°	205.6	207.8	207.8	204.5	203.4
30°	168.3	170.4	170.4	168.3	167.2
32.5°	137.5	139.7	139.7	138.6	136.4
35°	108.9	113.3	116.6	112.2	110.0
37.5°	85.8	91.3	95.7	92.4	88.0
40°	68.2	72.6	79.2	74.8	69.3
42.5°	53.9	58.3	66.0	60.5	56.1
45°	44.0	47.3	55.0	48.4	45.1
47.5°	35.2	38.5	45.1	40.7	36.3
50°	29.7	31.9	37.4	33.0	29.7
52.5°	24.2	26.4	30.8	26.4	23.1
55°	19.8	22.0	25.3	22.0	18.7
57.5°	15.4	16.5	20.9	16.5	14.3
60°	12.1	13.2	16.5	13.2	11.0
62.5°	8.8	9.9	13.2	9.9	8.8
65°	6.6	7.7	9.9	7.7	6.6
67.5°	5.5	5.5	6.6	5.5	4.4
70°	4.4	4.4	5.5	4.4	3.3
72.5°	3.3	3.3	3.3	3.3	3.3
75°	2.2	2.2	2.2	2.2	2.2
77.5°	1.1	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	1.1
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)