

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: P990658

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D55WFL-TL2SDSL-550LM-3000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
Report Number: P990658
Test Lab: Cooper Lighting Solutions
Issue Date: 5/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML2ALSFL9FS1E-TIR1D55WFL-TL2SDSL-550LM-3000K
Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR,
METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

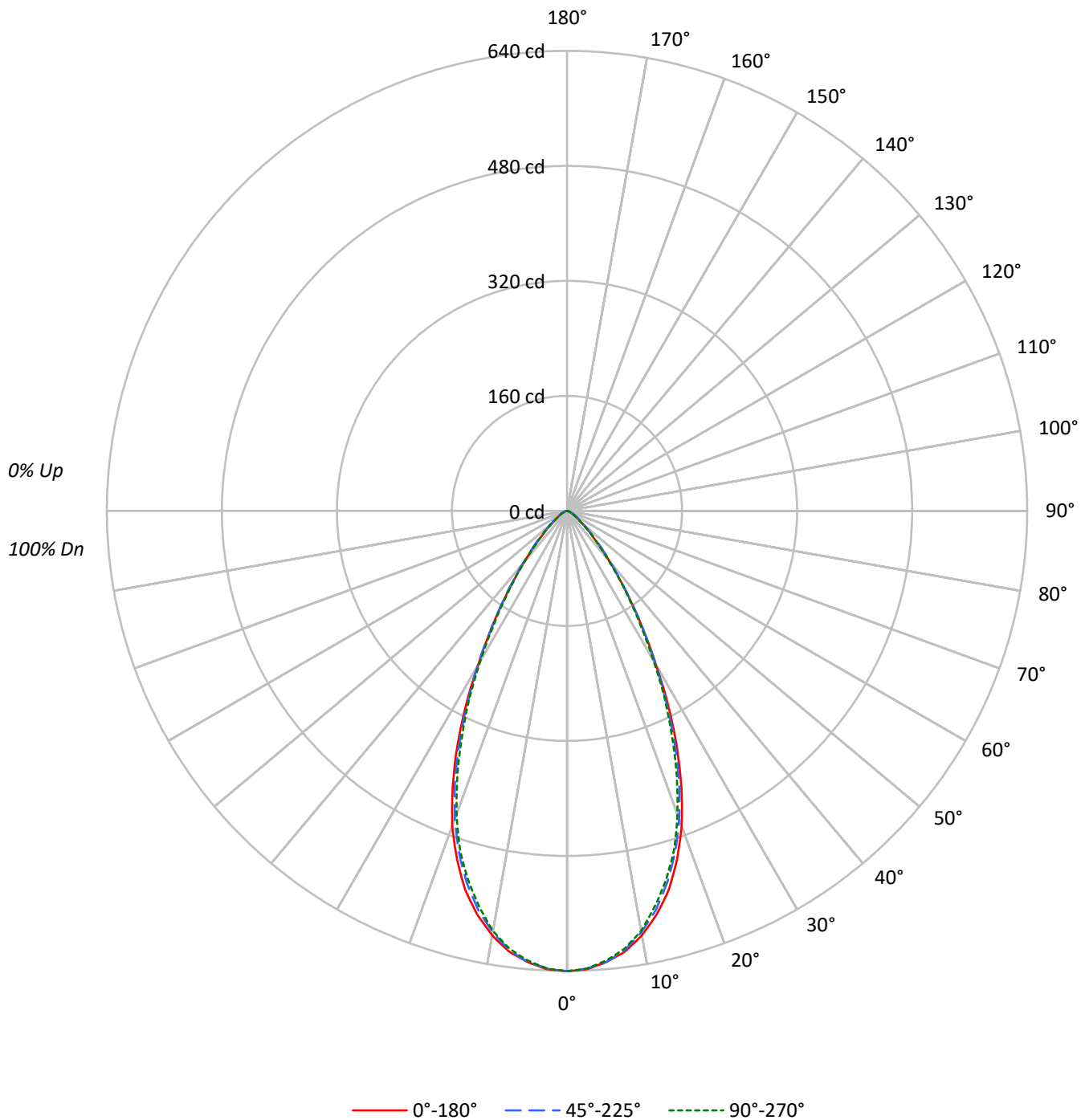
Lumens per Lamp: N/A
Luminaire Lumens: 538.5 lumens
Efficiency: N/A
Efficacy: 70.9 lumens/watt
Spacing Criteria (0/90/45): 0.84 / 0.82 / 0.82
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

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				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	110	108	105	111	108	106	104	104	102	101		100	99	98		97	96	95		93
2	107	102	98	94	105	100	97	93	97	94	91		94	92	89		91	89	87		86
3	102	95	90	86	100	94	89	85	91	87	84		88	85	82		86	83	81		79
4	96	88	83	78	94	87	82	78	85	81	77		83	79	76		81	78	75		74
5	91	83	77	72	90	82	76	72	80	75	71		78	74	70		77	73	70		68
6	87	77	71	67	85	77	71	67	75	70	66		74	69	66		72	68	65		64
7	82	73	66	62	81	72	66	62	71	65	62		69	65	61		68	64	61		60
8	78	68	62	58	77	68	62	58	67	61	58		66	61	57		65	60	57		56
9	74	65	59	54	73	64	58	54	63	58	54		62	57	54		61	57	54		52
10	71	61	55	51	70	61	55	51	60	55	51		59	54	51		58	54	51		49

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	248116	248116	248116
5°	245018	245018	244201
10°	235890	234237	233411
15°	219118	215307	213221
20°	192411	188122	185112
25°	154349	150757	147636
30°	110474	110967	107655
35°	74221	74742	72282
40°	46588	48156	45526
45°	28113	30414	28113
50°	17663	19532	17000
55°	11282	13444	11282
60°	8912	9765	8137
65°	6693	7702	6693
70°	4758	5891	4758
75°	3144	4641	3144
80°	0	2232	2232
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.0	11.0
10°-20°	149.2	27.7
20°-30°	160.3	29.8
30°-40°	99.6	18.5
40°-50°	42.9	8.0
50°-60°	17.0	3.2
60°-70°	7.7	1.4
70°-80°	2.7	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°	368.5	68.4
0°-40°	468.1	86.9
0°-60°	528.0	98.0
0°-90°	538.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	630	630	630	629	628	59
15°	546	543	537	533	532	151
25°	361	358	353	348	345	163
35°	157	159	158	156	153	99
45°	51	53	56	52	51	42
55°	17	18	20	18	17	16
65°	7	7	8	7	7	7
75°	2	2	3	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°	640.3	640.3	640.3	640.3	640.3
2.5°	638.2	637.2	637.2	637.2	637.2
5°	629.9	629.9	629.9	628.8	627.8
7.5°	618.4	617.3	616.3	614.2	614.2
10°	599.5	599.5	595.3	593.2	593.2
12.5°	575.5	574.4	569.2	567.1	563.9
15°	546.2	543.0	536.7	532.6	531.5
17.5°	508.5	504.3	499.1	494.9	494.9
20°	466.6	463.5	456.2	449.9	448.9
22.5°	415.4	412.2	407.0	400.7	398.6
25°	361.0	357.8	352.6	348.4	345.3
27.5°	304.5	303.4	298.2	294.0	294.0
30°	246.9	250.1	248.0	242.7	240.6
32.5°	198.8	199.8	199.8	195.7	192.5
35°	156.9	159.0	158.0	155.9	152.8
37.5°	120.3	122.4	123.5	120.3	119.3
40°	92.1	94.2	95.2	92.1	90.0
42.5°	69.1	71.1	73.2	70.1	68.0
45°	51.3	53.4	55.5	52.3	51.3
47.5°	38.7	39.8	41.9	38.7	37.7
50°	29.3	30.3	32.4	29.3	28.2
52.5°	22.0	23.0	25.1	23.0	20.9
55°	16.7	17.8	19.9	17.8	16.7
57.5°	13.6	14.6	15.7	13.6	12.6
60°	11.5	11.5	12.6	11.5	10.5
62.5°	8.4	9.4	9.4	9.4	8.4
65°	7.3	7.3	8.4	7.3	7.3
67.5°	5.2	6.3	6.3	6.3	5.2
70°	4.2	5.2	5.2	5.2	4.2
72.5°	3.1	4.2	4.2	4.2	3.1
75°	2.1	2.1	3.1	2.1	2.1
77.5°	1.0	1.0	2.1	1.0	1.0
80°	0.0	1.0	1.0	1.0	1.0
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)