

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: P990630

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D40FL-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: P990630
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML2ALSFL9FS1E-TIR1D40FL-TL2SDSL-550LM-4000K
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR,
 METALLIC SILVER TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
 Ballast/Driver: -

Summary

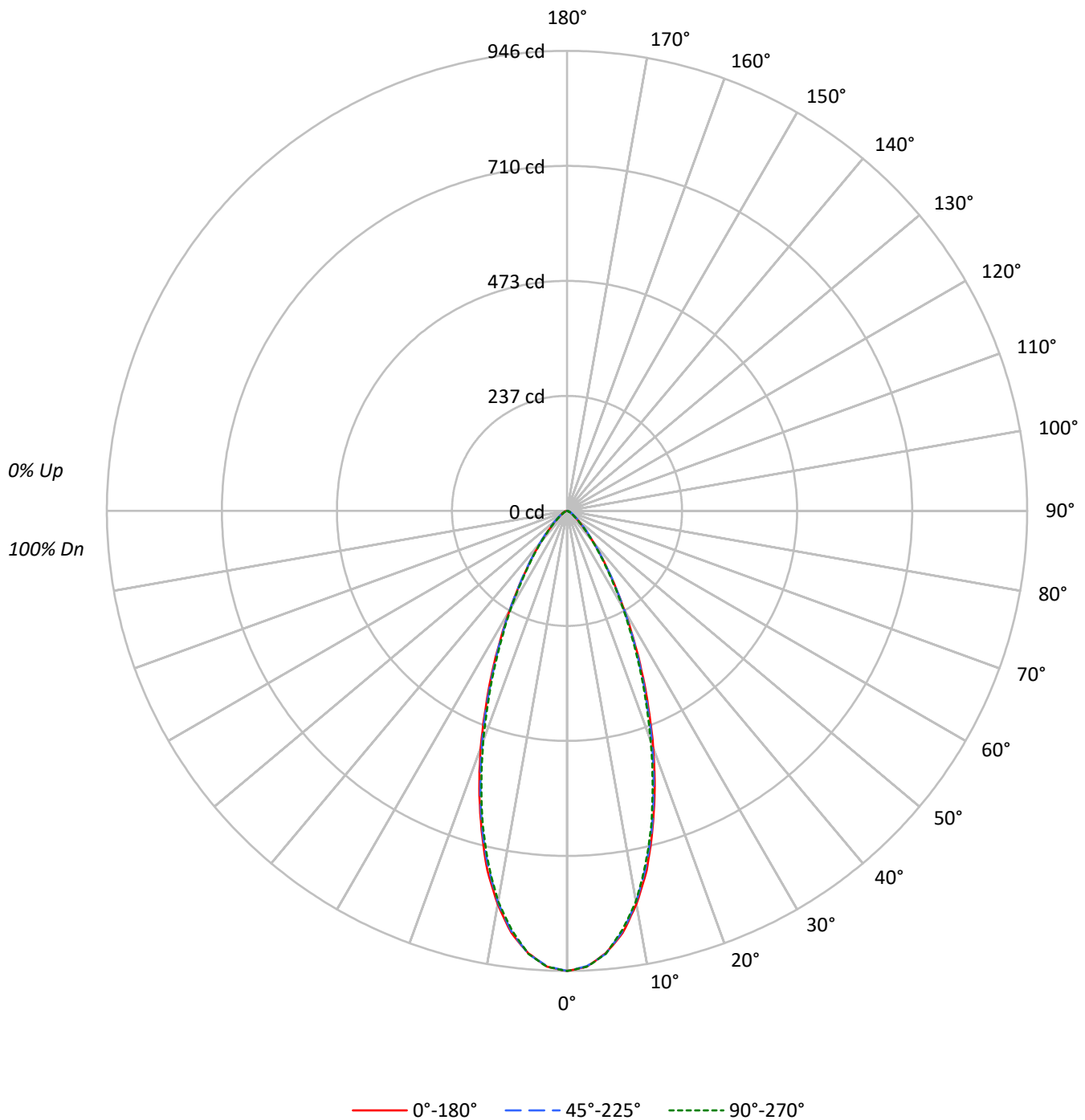
Lumens per Lamp: N/A
 Luminaire Lumens: 590.9 lumens
 Efficiency: N/A
 Efficacy: 77.7 lumens/watt
 Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

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	114	111	108	106	111	109	106	104	105	103	101		101	99	98		97	96	95	93
2	108	103	99	96	106	101	98	95	98	95	93		95	93	91		92	90	89	87
3	103	96	91	87	101	95	90	87	92	88	85		90	87	84		88	85	83	81
4	98	90	85	80	96	89	84	80	87	82	79		85	81	78		83	80	77	76
5	93	85	79	75	91	84	78	74	82	77	74		80	76	73		79	75	72	71
6	88	80	74	70	87	79	73	69	77	73	69		76	72	69		75	71	68	67
7	84	75	69	65	83	75	69	65	73	68	65		72	68	64		71	67	64	63
8	81	71	66	62	79	71	65	61	70	65	61		69	64	61		68	64	61	59
9	77	68	62	58	76	67	62	58	66	61	58		65	61	58		65	60	57	56
10	74	64	59	55	73	64	59	55	63	58	55		62	58	55		62	58	55	53

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	91644	91644	91644
5°	88785	88892	88892
10°	80722	80398	80181
15°	68069	67627	67076
20°	53412	52732	51825
25°	38684	38096	37390
30°	26209	26209	25594
35°	16782	17042	16261
40°	10572	10850	10155
45°	6480	6932	6330
50°	4145	4642	3979
55°	2787	3158	2601
60°	2131	2344	1918
65°	1765	2017	1513
70°	1246	1558	1246
75°	823	1235	823
80°	0	614	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	14.2
10°-20°	185.5	31.4
20°-30°	163.9	27.7
30°-40°	91.3	15.4
40°-50°	39.3	6.7
50°-60°	16.4	2.8
60°-70°	7.7	1.3
70°-80°	2.6	0.4
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°	433.5	73.4
0°-40°	524.7	88.8
0°-60°	580.5	98.2
0°-90°	590.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	590.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	913	914	914	913	914	84
15°	679	676	674	670	669	187
25°	362	362	356	353	350	166
35°	142	143	144	141	138	92
45°	47	50	51	48	46	39
55°	16	18	19	18	15	16
65°	8	8	9	8	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°	946.0	946.0	946.0	946.0	946.0
2.5°	938.3	938.3	937.2	939.4	938.3
5°	913.0	914.1	914.1	913.0	914.1
7.5°	875.6	874.5	872.3	871.2	869.0
10°	820.6	819.5	817.3	817.3	815.1
12.5°	756.8	754.6	749.1	745.8	744.7
15°	678.7	676.5	674.3	669.9	668.8
17.5°	599.5	596.2	591.8	588.5	585.2
20°	518.1	515.9	511.5	504.9	502.7
22.5°	436.7	434.5	430.1	424.6	422.4
25°	361.9	361.9	356.4	353.1	349.8
27.5°	293.7	295.9	290.4	287.1	283.8
30°	234.3	235.4	234.3	229.9	228.8
32.5°	184.8	185.9	184.8	180.4	178.2
35°	141.9	143.0	144.1	140.8	137.5
37.5°	110.0	111.1	111.1	107.8	105.6
40°	83.6	84.7	85.8	82.5	80.3
42.5°	63.8	64.9	66.0	62.7	60.5
45°	47.3	49.5	50.6	48.4	46.2
47.5°	36.3	37.4	39.6	36.3	34.1
50°	27.5	28.6	30.8	28.6	26.4
52.5°	20.9	23.1	24.2	22.0	19.8
55°	16.5	17.6	18.7	17.6	15.4
57.5°	13.2	14.3	15.4	13.2	12.1
60°	11.0	11.0	12.1	11.0	9.9
62.5°	8.8	8.8	9.9	8.8	8.8
65°	7.7	7.7	8.8	7.7	6.6
67.5°	5.5	6.6	6.6	6.6	5.5
70°	4.4	4.4	5.5	5.5	4.4
72.5°	3.3	3.3	4.4	3.3	3.3
75°	2.2	2.2	3.3	2.2	2.2
77.5°	1.1	1.1	1.1	1.1	1.1
80°	0.0	0.0	1.1	1.1	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)