

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: P990614

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D40FL-TL2SDMB-550LM-3500K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
Report Number: P990614
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-3500K
Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

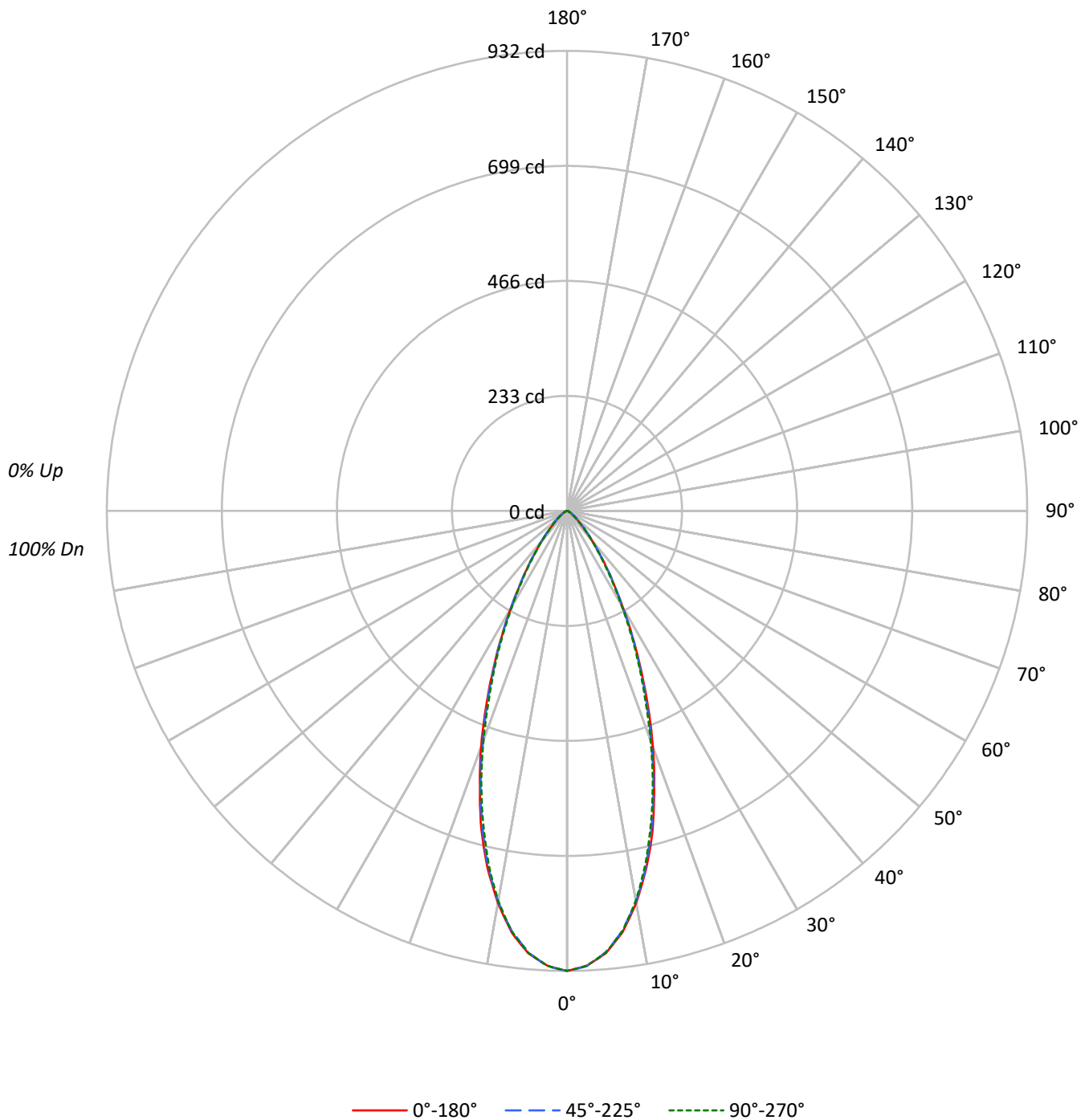
Lumens per Lamp: N/A
Luminaire Lumens: 573.2 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	361111	361111	361111
5°	349965	349109	349537
10°	317261	316395	315569
15°	268743	265734	263167
20°	209854	205401	204081
25°	151014	149175	146909
30°	101346	101346	98483
35°	64997	65517	62963
40°	39658	41277	39102
45°	23509	25866	24112
50°	14890	16819	14227
55°	9458	11620	9458
60°	6665	8292	6665
65°	4951	5868	4951
70°	3626	4872	3626
75°	1647	3144	3144
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	14.4
10°-20°	182.4	31.8
20°-30°	160.3	28.0
30°-40°	87.9	15.3
40°-50°	36.7	6.4
50°-60°	14.5	2.5
60°-70°	6.4	1.1
70°-80°	2.1	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
0°-30°	425.5	74.2
0°-40°	513.4	89.6
0°-60°	564.7	98.5
0°-90°	573.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	573.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	900	899	898	898	899	83
15°	670	668	662	658	656	184
25°	353	355	349	344	344	162
35°	137	138	138	136	133	88
45°	43	45	47	45	44	36
55°	14	15	17	15	14	13
65°	5	6	6	6	5	6
75°	1	2	2	2	2	1
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°	931.9	931.9	931.9	931.9	931.9
2.5°	922.2	923.3	923.3	923.3	922.2
5°	899.7	898.6	897.5	897.5	898.6
7.5°	861.0	861.0	857.8	858.9	858.9
10°	806.3	809.5	804.1	804.1	802.0
12.5°	741.9	742.9	738.6	736.5	733.3
15°	669.9	667.8	662.4	658.1	656.0
17.5°	587.3	586.2	583.0	577.6	577.6
20°	508.9	504.6	498.1	497.1	494.9
22.5°	428.4	426.2	421.9	415.5	413.3
25°	353.2	355.4	348.9	343.6	343.6
27.5°	286.7	287.7	285.6	280.2	279.1
30°	226.5	228.7	226.5	223.3	220.1
32.5°	177.1	178.2	178.2	176.1	172.8
35°	137.4	138.5	138.5	136.3	133.1
37.5°	103.1	105.2	106.3	104.1	102.0
40°	78.4	79.4	81.6	78.4	77.3
42.5°	59.0	60.1	62.3	60.1	58.0
45°	42.9	45.1	47.2	45.1	44.0
47.5°	33.3	34.4	36.5	34.4	32.2
50°	24.7	25.8	27.9	25.8	23.6
52.5°	19.3	20.4	22.5	20.4	18.3
55°	14.0	15.0	17.2	15.0	14.0
57.5°	10.7	11.8	12.9	11.8	10.7
60°	8.6	9.7	10.7	9.7	8.6
62.5°	7.5	7.5	8.6	7.5	7.5
65°	5.4	6.4	6.4	6.4	5.4
67.5°	4.3	5.4	5.4	5.4	5.4
70°	3.2	4.3	4.3	4.3	3.2
72.5°	2.1	3.2	3.2	3.2	3.2
75°	1.1	2.1	2.1	2.1	2.1
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)