

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: P990580

Luminaire Tested: **ML2ALSFL9FS1E-TIR1D25NFL-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: P990580
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML2ALSFL9FS1E-TIR1D25NFL-TL2SDMB-550LM-4000K
 Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
 Ballast/Driver: -

Summary

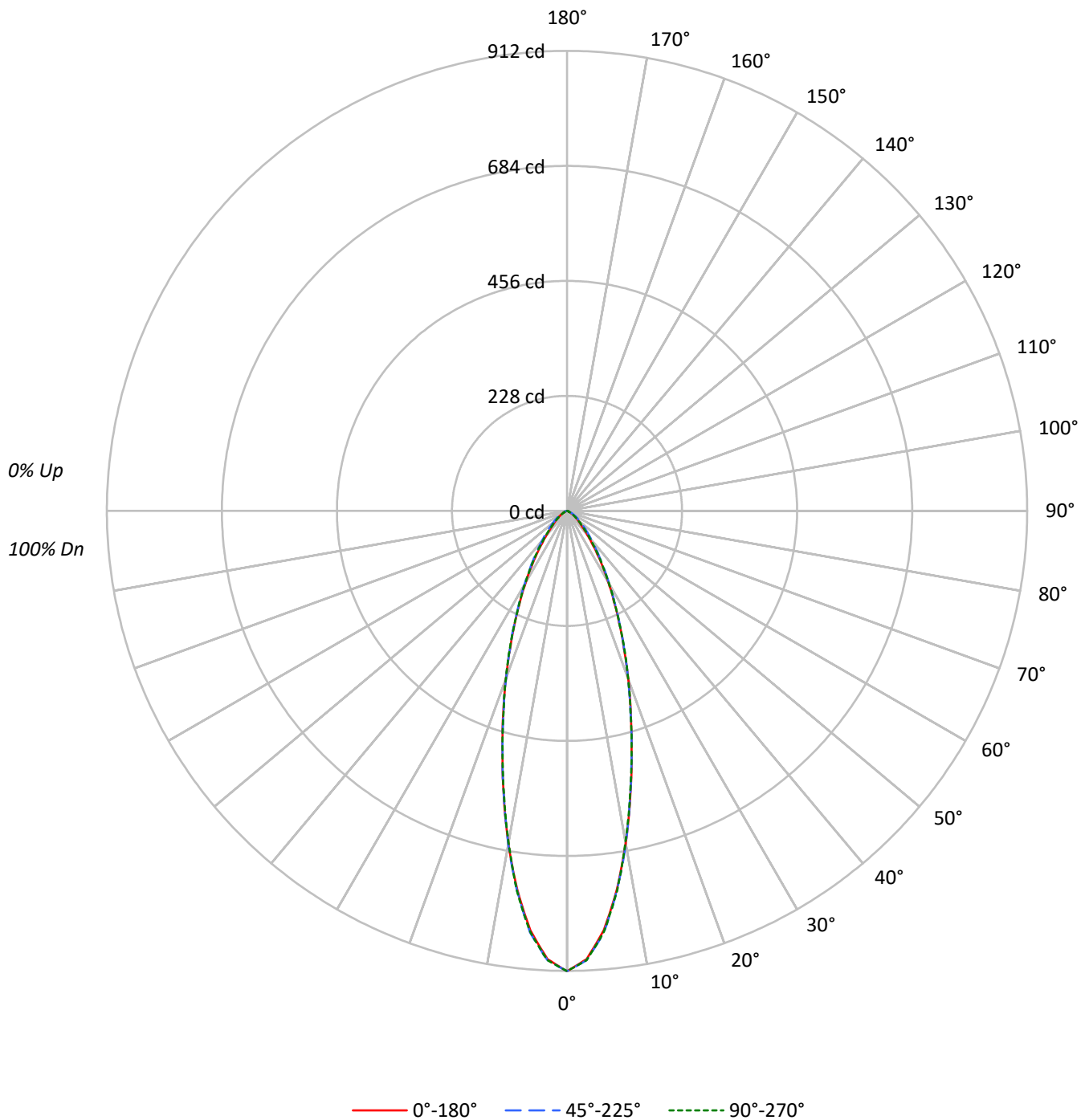
Lumens per Lamp: N/A
 Luminaire Lumens: 459.7 lumens
 Efficiency: N/A
 Efficacy: 60.5 lumens/watt
 Spacing Criteria (0/90/45): 0.52 / 0.52 / 0.59
 Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
 CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	353593	353593	353593
5°	324603	326315	325887
10°	263433	263866	262567
15°	198017	198017	198017
20°	145978	145525	145978
25°	104367	105308	104837
30°	73292	75260	74276
35°	49386	53549	51468
40°	32273	38394	35055
45°	21701	28332	23509
50°	16578	21220	16578
55°	11890	16349	11890
60°	7672	11935	7672
65°	5043	8069	5043
70°	3739	4985	3739
75°	1647	3294	1647
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	16.2
10°-20°	137.4	29.9
20°-30°	113.5	24.7
30°-40°	70.0	15.2
40°-50°	36.8	8.0
50°-60°	18.4	4.0
60°-70°	7.2	1.6
70°-80°	1.9	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°	325.4	70.8
0°-40°	395.4	86.0
0°-60°	450.6	98.0
0°-90°	459.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	459.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	834	836	839	838	838	74
15°	494	494	494	495	494	137
25°	244	246	246	245	245	113
35°	104	110	113	111	109	67
45°	40	44	52	47	43	32
55°	18	20	24	20	18	16
65°	6	7	9	7	6	6
75°	1	1	2	2	1	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°	912.5	912.5	912.5	912.5	912.5
2.5°	889.4	890.5	891.6	891.6	891.6
5°	834.5	835.6	838.9	837.8	837.8
7.5°	756.4	756.4	758.6	761.9	759.7
10°	669.5	669.5	670.6	668.4	667.3
12.5°	579.4	579.4	578.3	580.5	577.2
15°	493.6	493.6	493.6	494.7	493.6
17.5°	420.0	418.9	418.9	417.8	418.9
20°	354.0	354.0	352.9	352.9	354.0
22.5°	294.6	294.6	295.7	295.7	296.8
25°	244.1	246.3	246.3	245.2	245.2
27.5°	200.1	202.3	203.4	202.3	202.3
30°	163.8	164.9	168.2	166.0	166.0
32.5°	131.9	135.2	137.4	136.3	135.2
35°	104.4	109.9	113.2	111.0	108.8
37.5°	81.4	88.0	92.4	90.2	86.9
40°	63.8	69.3	75.9	72.6	69.3
42.5°	49.5	55.0	62.7	58.3	55.0
45°	39.6	44.0	51.7	47.3	42.9
47.5°	33.0	36.3	42.9	38.5	35.2
50°	27.5	29.7	35.2	30.8	27.5
52.5°	22.0	24.2	28.6	25.3	22.0
55°	17.6	19.8	24.2	19.8	17.6
57.5°	13.2	15.4	19.8	15.4	13.2
60°	9.9	12.1	15.4	12.1	9.9
62.5°	7.7	8.8	12.1	8.8	7.7
65°	5.5	6.6	8.8	6.6	5.5
67.5°	4.4	4.4	6.6	4.4	4.4
70°	3.3	3.3	4.4	3.3	3.3
72.5°	2.2	2.2	3.3	2.2	2.2
75°	1.1	1.1	2.2	2.2	1.1
77.5°	1.1	1.1	1.1	1.1	1.1
80°	0.0	0.0	0.0	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)