

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: P990799

Luminaire Tested: **ML3ALSFL9FS1E-TIR4D55WFL-TL3SDMB-750LM-3500K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990799
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML3ALSFL9FS1E-TIR4D55WFL-TL3SDMB-750LM-3500K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
 Ballast/Driver: -

Summary

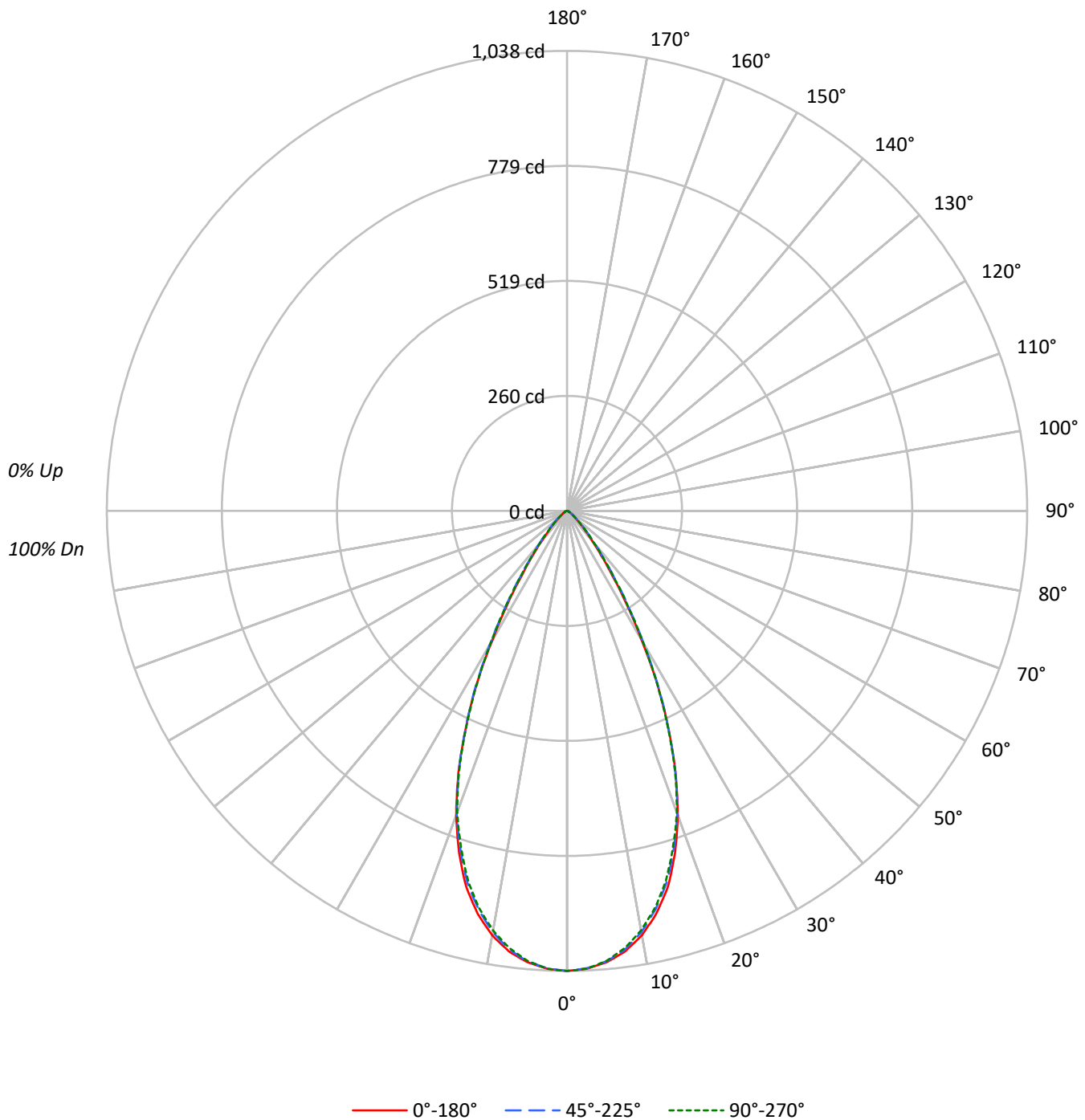
Lumens per Lamp: N/A
 Luminaire Lumens: 766.1 lumens
 Efficiency: N/A
 Efficacy: 79.0 lumens/watt
 Spacing Criteria (0/90/45): 0.81 / 0.81 / 0.78
 Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
 CIE Type: Direct

Input Watts (W): 9.7
 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	114	111	108	106	111	109	107	105	105	103	101		101	100	98		98
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93
3	103	97	92	88	101	95	91	87	93	89	86		90	87	84		88
4	98	91	85	81	96	89	84	81	87	83	80		85	82	79		83
5	93	85	79	75	92	84	79	75	82	78	74		81	77	74		79
6	89	80	74	70	87	79	74	70	78	73	69		76	72	69		75
7	85	76	70	66	83	75	69	66	74	69	65		73	68	65		71
8	81	72	66	62	80	71	66	62	70	65	61		69	64	61		68
9	77	68	62	58	76	67	62	58	66	61	58		66	61	58		65
10	74	64	59	55	73	64	59	55	63	58	55		62	58	55		62

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	178784	178784	178784
5°	176753	176390	176217
10°	170053	168776	168042
15°	156653	154798	153871
20°	133901	133333	132746
25°	102785	102785	102196
30°	67157	68807	68191
35°	37466	39883	39652
40°	19919	22257	21560
45°	10911	12689	11667
50°	6136	7824	6698
55°	3753	5014	4054
60°	2859	3582	2859
65°	2119	2975	2567
70°	1561	2115	2115
75°	665	1397	1397
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.7	12.5
10°-20°	240.4	31.4
20°-30°	244.5	31.9
30°-40°	122.2	15.9
40°-50°	40.8	5.3
50°-60°	14.1	1.8
60°-70°	6.4	0.8
70°-80°	2.1	0.3
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°	580.6	75.8
0°-40°	702.7	91.7
0°-60°	757.6	98.9
0°-90°	766.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	766.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1022	1022	1020	1019	1019	96
15°	879	873	868	863	863	242
25°	541	545	541	542	538	244
35°	178	183	190	191	189	117
45°	45	48	52	51	48	37
55°	12	15	17	15	14	12
65°	5	6	7	6	6	5
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°	1038.1	1038.1	1038.1	1038.1	1038.1
2.5°	1033.9	1032.8	1032.8	1033.9	1033.9
5°	1022.4	1022.4	1020.3	1019.3	1019.3
7.5°	1002.6	1002.6	998.4	996.4	995.3
10°	972.4	970.3	965.1	962.0	960.9
12.5°	930.7	927.6	921.3	918.2	917.2
15°	878.6	873.4	868.2	863.0	863.0
17.5°	809.8	807.7	800.4	799.4	795.2
20°	730.6	731.6	727.5	721.2	724.3
22.5°	639.9	642.0	638.9	633.7	636.8
25°	540.9	545.1	540.9	542.0	537.8
27.5°	441.9	441.9	445.0	441.9	440.9
30°	337.7	341.8	346.0	346.0	342.9
32.5°	250.1	254.3	261.6	259.5	259.5
35°	178.2	183.4	189.7	190.7	188.6
37.5°	126.1	129.2	136.5	138.6	134.4
40°	88.6	91.7	99.0	98.0	95.9
42.5°	63.6	66.7	71.9	70.9	67.7
45°	44.8	47.9	52.1	51.1	47.9
47.5°	31.3	34.4	38.6	36.5	34.4
50°	22.9	25.0	29.2	27.1	25.0
52.5°	16.7	18.8	21.9	19.8	18.8
55°	12.5	14.6	16.7	14.6	13.5
57.5°	10.4	10.4	13.5	11.5	10.4
60°	8.3	8.3	10.4	9.4	8.3
62.5°	6.3	7.3	8.3	7.3	7.3
65°	5.2	6.3	7.3	6.3	6.3
67.5°	4.2	5.2	6.3	5.2	5.2
70°	3.1	4.2	4.2	4.2	4.2
72.5°	2.1	3.1	3.1	3.1	3.1
75°	1.0	2.1	2.1	2.1	2.1
77.5°	0.0	1.0	1.0	1.0	1.0
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)