

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: P990807

Luminaire Tested: **ML3ALSFL9FS1E-TIR4D55WFL-TL3SDSL-750LM-2700K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990807
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML3ALSFL9FS1E-TIR4D55WFL-TL3SDSL-750LM-2700K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

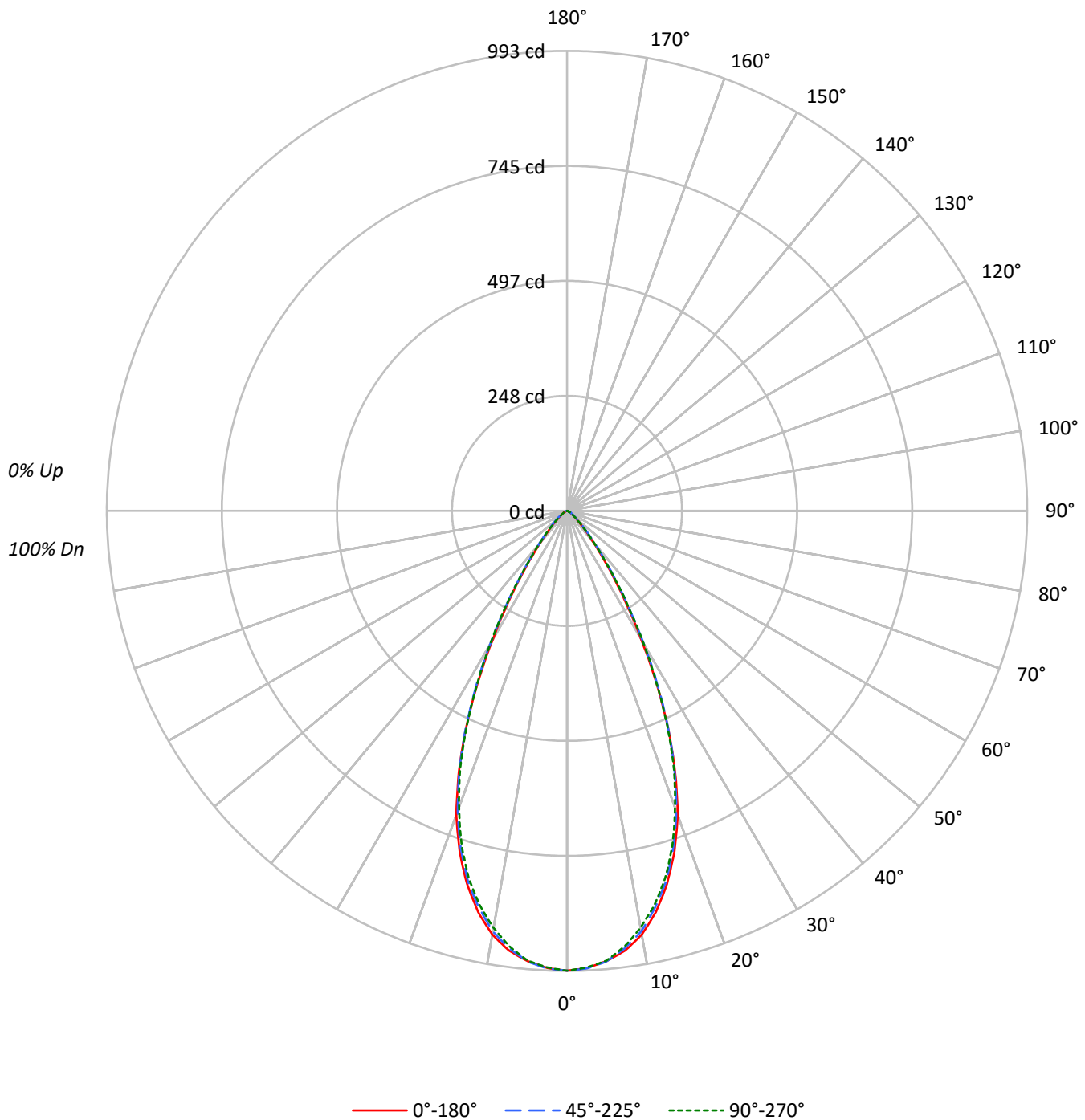
Lumens per Lamp: N/A
 Luminaire Lumens: 734.5 lumens
 Efficiency: N/A
 Efficacy: 75.7 lumens/watt
 Spacing Criteria (0/90/45): 0.81 / 0.8 / 0.78
 Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
 CIE Type: Direct

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	106	104	105	103	101		101	100	98		97
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93
3	103	96	92	88	101	95	91	87	92	89	86		90	87	84		88
4	98	90	85	81	96	89	84	80	87	83	79		85	81	78		83
5	93	85	79	75	91	84	79	75	82	77	74		80	76	73		79
6	89	80	74	70	87	79	74	70	78	73	69		76	72	69		75
7	84	75	70	65	83	75	69	65	73	69	65		72	68	65		71
8	81	71	65	62	79	71	65	61	70	65	61		69	64	61		68
9	77	68	62	58	76	67	62	58	66	61	58		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°	170948	170948	170948
5°	168662	168835	168489
10°	162393	161169	159770
15°	148611	147363	146115
20°	128000	126350	124884
25°	97731	98111	97161
30°	63478	65665	65864
35°	36604	38496	38286
40°	20032	21605	20931
45°	11204	12665	11447
50°	6430	8038	6698
55°	4204	5104	4204
60°	3100	3789	3100
65°	2445	3260	2853
70°	2014	2518	2014
75°	1331	1996	1331
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	12.4
10°-20°	228.6	31.1
20°-30°	232.2	31.6
30°-40°	117.8	16.0
40°-50°	40.6	5.5
50°-60°	14.6	2.0
60°-70°	6.9	0.9
70°-80°	2.4	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°	552.2	75.2
0°-40°	670.0	91.2
0°-60°	725.2	98.7
0°-90°	734.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	734.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	976	977	977	974	975	92
15°	834	832	826	820	820	231
25°	514	516	516	514	511	232
35°	174	177	183	183	182	114
45°	46	49	52	50	47	38
55°	14	15	17	15	14	13
65°	6	7	8	7	7	6
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°	992.6	992.6	992.6	992.6	992.6
2.5°	987.6	987.6	988.6	986.6	986.6
5°	975.6	976.6	976.6	973.6	974.6
7.5°	957.6	955.6	952.6	949.6	948.6
10°	928.6	926.6	921.6	917.6	913.6
12.5°	886.5	884.5	877.5	872.5	871.5
15°	833.5	831.5	826.5	820.5	819.5
17.5°	770.5	768.5	762.5	757.5	756.5
20°	698.4	693.4	689.4	685.4	681.4
22.5°	609.4	606.4	606.4	604.4	603.4
25°	514.3	516.3	516.3	514.3	511.3
27.5°	415.3	420.3	422.3	419.3	417.3
30°	319.2	327.2	330.2	331.2	331.2
32.5°	241.1	242.2	249.2	249.2	250.2
35°	174.1	177.1	183.1	183.1	182.1
37.5°	124.1	127.1	133.1	133.1	131.1
40°	89.1	91.1	96.1	96.1	93.1
42.5°	64.0	66.0	70.0	69.0	67.0
45°	46.0	49.0	52.0	50.0	47.0
47.5°	32.0	35.0	39.0	37.0	35.0
50°	24.0	26.0	30.0	27.0	25.0
52.5°	18.0	19.0	22.0	20.0	18.0
55°	14.0	15.0	17.0	15.0	14.0
57.5°	11.0	12.0	14.0	12.0	11.0
60°	9.0	10.0	11.0	10.0	9.0
62.5°	8.0	8.0	9.0	8.0	8.0
65°	6.0	7.0	8.0	7.0	7.0
67.5°	5.0	5.0	6.0	6.0	5.0
70°	4.0	4.0	5.0	5.0	4.0
72.5°	3.0	3.0	4.0	3.0	3.0
75°	2.0	2.0	3.0	2.0	2.0
77.5°	1.0	1.0	2.0	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)