

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: P990811

Luminaire Tested: **ML3ALSFL9FS1E-TIR4D55WFL-TL3SDSL-750LM-5000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990811
 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-5000K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR,
 METALLIC SILVER TRIM
 Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
 Ballast/Driver: -

Summary

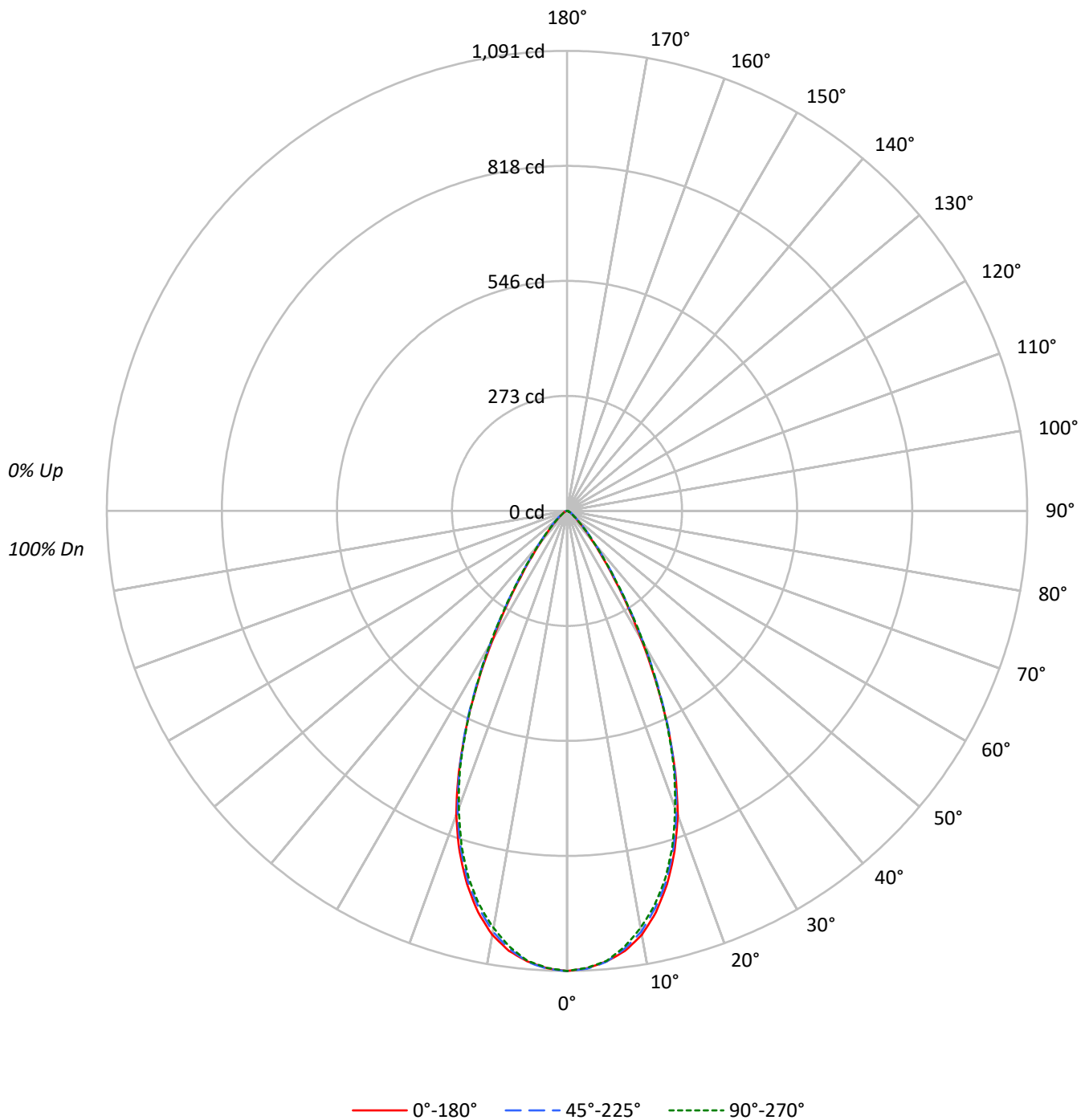
Lumens per Lamp: N/A
 Luminaire Lumens: 807.4 lumens
 Efficiency: N/A
 Efficacy: 83.2 lumens/watt
 Spacing Criteria (0/90/45): 0.81 / 0.8 / 0.78
 Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
 CIE Type: Direct

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			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	81	78		83	80	78	76
5	93	85	79	75	91	84	79	75	82	77	74		80	76	73		79	75	73	71
6	89	80	74	70	87	79	74	70	78	73	69		76	72	69		75	71	68	67
7	84	75	70	65	83	75	69	65	73	69	65		72	68	65		71	67	64	63
8	81	71	65	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	57		64	60	57	56
10	74	64	59	55	73	64	58	55	63	58	55		62	58	54		61	57	54	53

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	187929	187929	187929
5°	185414	185605	185224
10°	178517	177170	175631
15°	163374	162002	160629
20°	140719	138905	137292
25°	107441	107859	106814
30°	69782	72188	72407
35°	40241	42322	42091
40°	22010	23741	22999
45°	12324	13932	12592
50°	7073	8842	7368
55°	4624	5615	4624
60°	3410	4168	3410
65°	2690	3586	3138
70°	2216	2769	2216
75°	1464	2196	1464
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	12.4
10°-20°	251.3	31.1
20°-30°	255.2	31.6
30°-40°	129.5	16.0
40°-50°	44.7	5.5
50°-60°	16.1	2.0
60°-70°	7.6	0.9
70°-80°	2.6	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°	607.0	75.2
0°-40°	736.5	91.2
0°-60°	797.2	98.7
0°-90°	807.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	807.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1091	1091	1091	1091	1091	
5°	1072	1074	1074	1070	1071	101
15°	916	914	909	902	901	254
25°	565	568	568	565	562	255
35°	191	195	201	201	200	125
45°	51	54	57	55	52	42
55°	15	16	19	16	15	15
65°	7	8	9	8	8	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°	1091.2	1091.2	1091.2	1091.2	1091.2
2.5°	1085.7	1085.7	1086.8	1084.6	1084.6
5°	1072.5	1073.6	1073.6	1070.3	1071.4
7.5°	1052.7	1050.5	1047.2	1043.9	1042.8
10°	1020.8	1018.6	1013.1	1008.7	1004.3
12.5°	974.6	972.4	964.7	959.2	958.1
15°	916.3	914.1	908.6	902.0	900.9
17.5°	847.0	844.8	838.2	832.7	831.6
20°	767.8	762.3	757.9	753.5	749.1
22.5°	669.9	666.6	666.6	664.4	663.3
25°	565.4	567.6	567.6	565.4	562.1
27.5°	456.5	462.0	464.2	460.9	458.7
30°	350.9	359.7	363.0	364.1	364.1
32.5°	265.1	266.2	273.9	273.9	275.0
35°	191.4	194.7	201.3	201.3	200.2
37.5°	136.4	139.7	146.3	146.3	144.1
40°	97.9	100.1	105.6	105.6	102.3
42.5°	70.4	72.6	77.0	75.9	73.7
45°	50.6	53.9	57.2	55.0	51.7
47.5°	35.2	38.5	42.9	40.7	38.5
50°	26.4	28.6	33.0	29.7	27.5
52.5°	19.8	20.9	24.2	22.0	19.8
55°	15.4	16.5	18.7	16.5	15.4
57.5°	12.1	13.2	15.4	13.2	12.1
60°	9.9	11.0	12.1	11.0	9.9
62.5°	8.8	8.8	9.9	8.8	8.8
65°	6.6	7.7	8.8	7.7	7.7
67.5°	5.5	5.5	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	2.2	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)