

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: P990846

Luminaire Tested: **ML3ALSFLD2W1E-TIR4D55WFL-TL3SDMB-600LM-2700K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
Report Number: P990846
Test Lab: Cooper Lighting Solutions
Issue Date: 5/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML3ALSFLD2W1E-TIR4D55WFL-TL3SDMB-600LM-2700K
Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) D2W LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

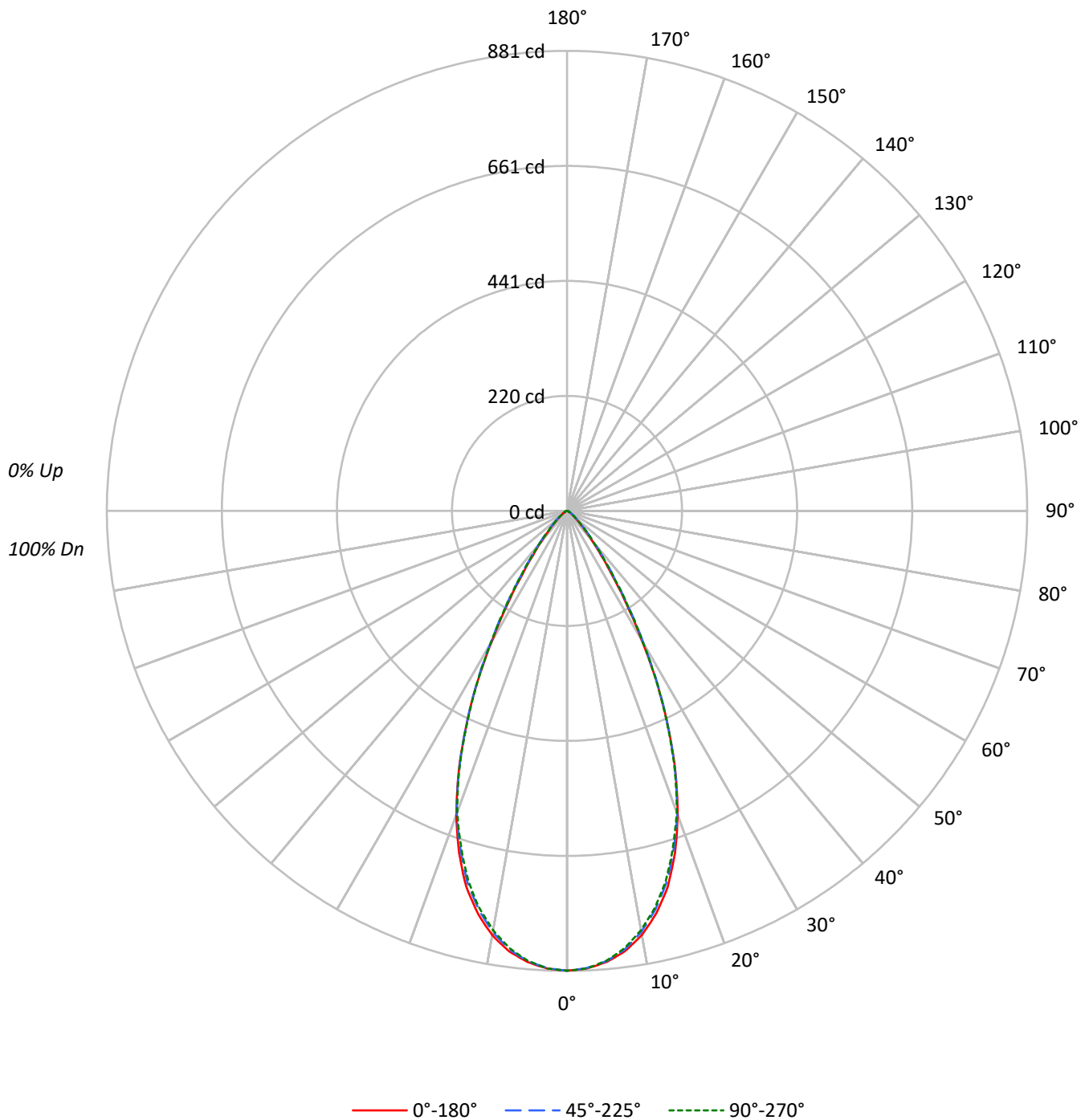
Lumens per Lamp: N/A
Luminaire Lumens: 649.9 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 0.81 / 0.81 / 0.78
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 9.4
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	107	105	105	103	101		101	100	98		98	96	95	94
2	108	103	99	96	106	102	98	95	98	95	93		95	93	91		93	91	89	87
3	103	97	92	88	101	95	91	87	93	89	86		90	87	84		88	85	83	82
4	98	91	85	81	96	89	84	81	87	83	80		85	82	79		83	80	78	76
5	93	85	79	75	92	84	79	75	82	78	74		81	77	74		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	69	66	74	69	65		73	68	65		71	68	65	63
8	81	72	66	62	80	71	66	62	70	65	61		69	64	61		68	64	61	60
9	77	68	62	58	76	67	62	58	66	61	58		66	61	58		65	61	58	56
10	74	64	59	55	73	64	59	55	63	58	55		62	58	55		62	58	55	53

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	151659	151659	151659
5°	149939	149645	149490
10°	144258	143174	142562
15°	132885	131316	130532
20°	113594	113099	112623
25°	87203	87203	86690
30°	56975	58367	57850
35°	31789	33828	33639
40°	16907	18885	18278
45°	9255	10765	9913
50°	5225	6645	5680
55°	3183	4234	3453
60°	2446	3031	2446
65°	1793	2527	2160
70°	1360	1762	1762
75°	599	1198	1198
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	12.5
10°-20°	203.9	31.4
20°-30°	207.4	31.9
30°-40°	103.7	16.0
40°-50°	34.6	5.3
50°-60°	11.9	1.8
60°-70°	5.4	0.8
70°-80°	1.8	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°	492.5	75.8
0°-40°	596.2	91.7
0°-60°	642.7	98.9
0°-90°	649.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	649.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	867	867	866	865	865	81
15°	745	741	736	732	732	206
25°	459	462	459	460	456	207
35°	151	156	161	162	160	100
45°	38	41	44	43	41	32
55°	11	12	14	12	12	10
65°	4	5	6	5	5	4
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°	880.6	880.6	880.6	880.6	880.6
2.5°	877.1	876.2	876.2	877.1	877.1
5°	867.3	867.3	865.6	864.7	864.7
7.5°	850.5	850.5	847.0	845.2	844.4
10°	824.9	823.1	818.7	816.1	815.2
12.5°	789.5	786.9	781.6	778.9	778.0
15°	745.3	740.9	736.5	732.1	732.1
17.5°	687.0	685.2	679.0	678.1	674.6
20°	619.8	620.7	617.1	611.8	614.5
22.5°	542.9	544.6	542.0	537.6	540.2
25°	458.9	462.4	458.9	459.8	456.2
27.5°	374.9	374.9	377.5	374.9	374.0
30°	286.5	290.0	293.5	293.5	290.9
32.5°	212.2	215.7	221.9	220.2	220.2
35°	151.2	155.6	160.9	161.8	160.0
37.5°	107.0	109.6	115.8	117.6	114.1
40°	75.2	77.8	84.0	83.1	81.3
42.5°	53.9	56.6	61.0	60.1	57.5
45°	38.0	40.7	44.2	43.3	40.7
47.5°	26.5	29.2	32.7	30.9	29.2
50°	19.5	21.2	24.8	23.0	21.2
52.5°	14.1	15.9	18.6	16.8	15.9
55°	10.6	12.4	14.1	12.4	11.5
57.5°	8.8	8.8	11.5	9.7	8.8
60°	7.1	7.1	8.8	8.0	7.1
62.5°	5.3	6.2	7.1	6.2	6.2
65°	4.4	5.3	6.2	5.3	5.3
67.5°	3.5	4.4	5.3	4.4	4.4
70°	2.7	3.5	3.5	3.5	3.5
72.5°	1.8	2.7	2.7	2.7	2.7
75°	0.9	1.8	1.8	1.8	1.8
77.5°	0.0	0.9	0.9	0.9	0.9
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)