

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: P990848

Luminaire Tested: **ML3ALSFLD2W1E-TIR4D55WFL-TL3SDMW-600LM-2700K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
Report Number: P990848
Test Lab: Cooper Lighting Solutions
Issue Date: 5/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML3ALSFLD2W1E-TIR4D55WFL-TL3SDMW-600LM-2700K
Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) D2W LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

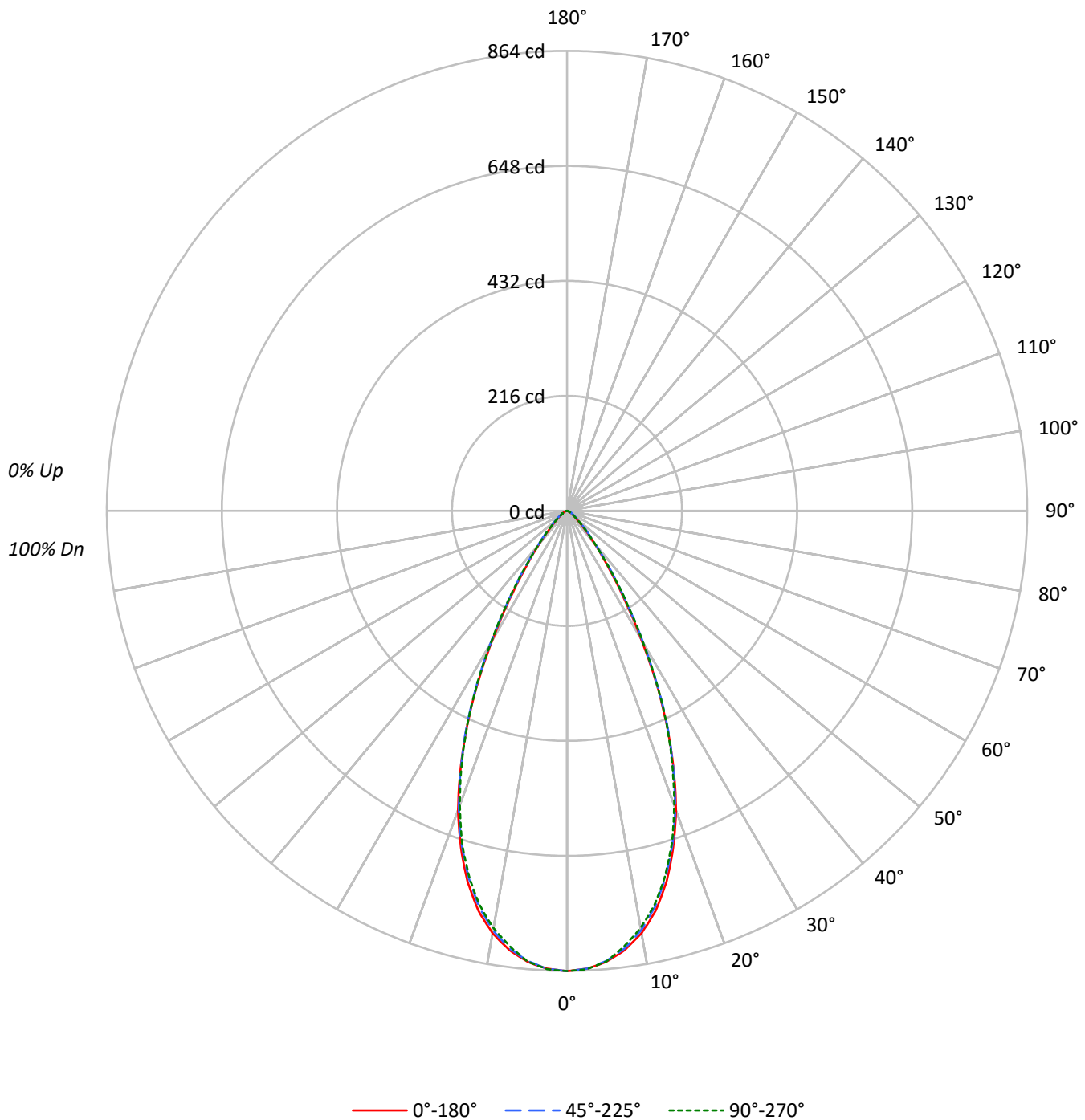
Lumens per Lamp: N/A
Luminaire Lumens: 644.4 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 0.8 / 0.8 / 0.78
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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
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	109	106	104	104	103	101		101	99	98		97
2	108	103	99	95	106	101	98	94	98	95	92		95	93	90		92
3	102	96	91	87	100	95	90	86	92	88	85		90	86	84		87
4	97	90	84	80	96	89	84	80	87	82	79		85	81	78		83
5	93	84	79	74	91	83	78	74	82	77	73		80	76	73		78
6	88	79	73	69	87	79	73	69	77	72	69		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	61	57	75	67	61	57	66	61	57		65	60	57		64
10	73	64	58	54	72	63	58	54	62	57	54		62	57	54		61

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	148869	148869	148869
5°	146983	146689	146845
10°	140813	139886	139099
15°	128589	127162	126699
20°	109654	108847	107876
25°	84144	84638	84144
30°	55543	57114	56776
35°	31957	33828	33828
40°	18278	19469	18683
45°	10108	11618	10765
50°	6162	7582	6618
55°	4234	5315	4234
60°	3341	3961	3341
65°	2893	3586	2893
70°	2669	3122	2669
75°	1797	2329	1797
80°	893	893	893
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.5	12.3
10°-20°	197.8	30.7
20°-30°	200.2	31.1
30°-40°	103.3	16.0
40°-50°	37.4	5.8
50°-60°	14.8	2.3
60°-70°	7.8	1.2
70°-80°	3.4	0.5
80°-90°	0.3	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°	477.5	74.1
0°-40°	580.8	90.1
0°-60°	633.0	98.2
0°-90°	644.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	644.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	850	850	848	848	849	80
15°	721	719	713	712	711	199
25°	443	443	445	443	443	200
35°	152	156	161	162	161	100
45°	42	45	48	47	44	35
55°	14	15	18	16	14	13
65°	7	7	9	8	7	7
75°	3	4	4	4	3	3
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°	864.4	864.4	864.4	864.4	864.4
2.5°	860.8	861.7	860.8	860.8	861.7
5°	850.2	850.2	848.5	848.5	849.4
7.5°	831.7	830.8	829.0	827.3	824.6
10°	805.2	803.4	799.9	797.2	795.4
12.5°	768.9	765.4	761.9	758.3	758.3
15°	721.2	719.4	713.2	712.4	710.6
17.5°	662.9	662.9	657.6	654.9	654.9
20°	598.3	598.3	593.9	593.0	588.6
22.5°	522.3	523.2	520.6	519.7	517.0
25°	442.8	442.8	445.4	442.8	442.8
27.5°	360.6	361.5	364.1	362.4	364.1
30°	279.3	281.1	287.2	286.4	285.5
32.5°	209.5	213.0	216.5	217.4	217.4
35°	152.0	155.6	160.9	161.7	160.9
37.5°	111.4	113.1	118.4	117.5	114.9
40°	81.3	82.2	86.6	86.6	83.1
42.5°	59.2	61.0	63.6	62.8	60.1
45°	41.5	45.1	47.7	46.8	44.2
47.5°	30.0	33.6	36.2	34.5	32.7
50°	23.0	24.7	28.3	25.6	24.7
52.5°	17.7	19.4	22.1	20.3	18.6
55°	14.1	15.0	17.7	15.9	14.1
57.5°	11.5	12.4	14.1	12.4	11.5
60°	9.7	10.6	11.5	10.6	9.7
62.5°	8.0	8.8	9.7	8.8	8.8
65°	7.1	7.1	8.8	8.0	7.1
67.5°	6.2	6.2	7.1	7.1	6.2
70°	5.3	5.3	6.2	5.3	5.3
72.5°	3.5	4.4	5.3	4.4	3.5
75°	2.7	3.5	3.5	3.5	2.7
77.5°	0.9	1.8	2.7	1.8	1.8
80°	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	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)