

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: P990686

Luminaire Tested: **ML2ALSFLD2W1E-TIR1D40FL-TL2SDMW-400LM-2700K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
Report Number: P990686
Test Lab: Cooper Lighting Solutions
Issue Date: 5/13/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML2ALSFLD2W1E-TIR1D40FL-TL2SDMW-400LM-2700K
Description: 2IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM
Light Source: (1) D2W LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

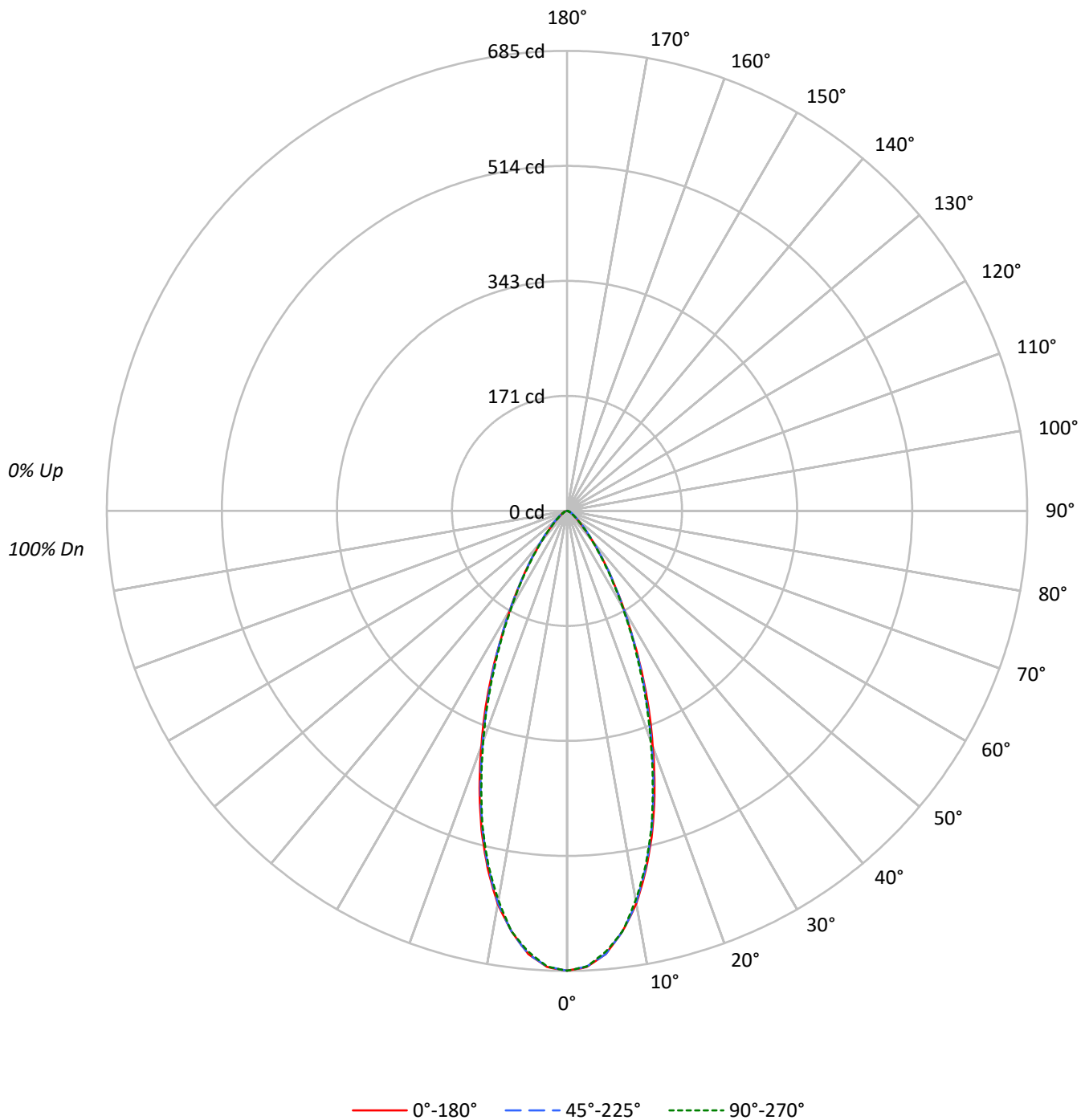
Lumens per Lamp: N/A
Luminaire Lumens: 428.6 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.69
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

Input Watts (W): 6.1
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	108	106	104	104	103	101		101	99	98		97
2	108	103	99	95	106	101	97	94	98	95	92		95	92	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	84	78	74	82	77	73		80	76	73		79
6	88	80	74	69	87	79	73	69	77	72	69		76	72	68		75
7	84	75	69	65	83	74	69	65	73	68	65		72	68	64		71
8	80	71	65	61	79	71	65	61	69	64	61		68	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		62

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	265282	265282	265282
5°	257582	257582	256338
10°	233725	233096	231522
15°	197134	195530	194888
20°	153731	151422	150102
25°	111721	110695	108301
30°	75708	75708	73515
35°	48913	49292	47400
40°	29997	31211	29187
45°	18468	20221	18029
50°	12057	13504	11575
55°	8107	9728	8107
60°	6200	7440	6200
65°	5135	5868	5135
70°	4532	5438	4532
75°	3593	3593	3593
80°	1785	1785	1785
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	14.2
10°-20°	134.1	31.3
20°-30°	118.3	27.6
30°-40°	65.8	15.3
40°-50°	28.3	6.6
50°-60°	12.1	2.8
60°-70°	6.2	1.4
70°-80°	2.6	0.6
80°-90°	0.3	0.1
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°	313.3	73.1
0°-40°	379.1	88.4
0°-60°	419.5	97.9
0°-90°	428.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	428.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	662	661	662	661	659	61
15°	491	491	487	484	486	135
25°	261	260	259	253	253	120
35°	103	103	104	101	100	66
45°	34	35	37	34	33	27
55°	12	13	14	13	12	11
65°	6	6	6	6	6	6
75°	2	2	2	2	2	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°	684.6	684.6	684.6	684.6	684.6
2.5°	679.8	679.0	679.0	678.2	679.0
5°	662.2	661.4	662.2	661.4	659.0
7.5°	631.7	633.3	631.7	630.9	631.7
10°	594.0	593.2	592.4	590.8	588.4
12.5°	545.1	544.3	542.7	539.5	540.3
15°	491.4	490.6	487.4	484.2	485.8
17.5°	432.9	431.3	428.1	426.5	424.1
20°	372.8	372.8	367.2	364.8	364.0
22.5°	316.7	314.3	310.2	307.8	307.8
25°	261.3	259.7	258.9	253.3	253.3
27.5°	210.0	212.4	210.8	206.0	206.0
30°	169.2	168.3	169.2	165.9	164.3
32.5°	132.3	133.9	133.1	131.5	129.9
35°	103.4	102.6	104.2	101.0	100.2
37.5°	77.8	78.6	80.2	77.8	76.2
40°	59.3	60.9	61.7	60.1	57.7
42.5°	44.9	46.5	47.3	45.7	44.1
45°	33.7	35.3	36.9	34.5	32.9
47.5°	25.7	27.3	28.9	26.5	24.9
50°	20.0	20.8	22.4	20.0	19.2
52.5°	15.2	16.0	17.6	16.0	15.2
55°	12.0	12.8	14.4	12.8	12.0
57.5°	10.4	10.4	11.2	10.4	9.6
60°	8.0	8.8	9.6	8.8	8.0
62.5°	6.4	7.2	8.0	7.2	6.4
65°	5.6	6.4	6.4	6.4	5.6
67.5°	4.8	4.8	5.6	4.8	4.8
70°	4.0	4.0	4.8	4.0	4.0
72.5°	3.2	3.2	4.0	3.2	3.2
75°	2.4	2.4	2.4	2.4	2.4
77.5°	1.6	1.6	1.6	1.6	1.6
80°	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8
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)