

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: P990997

Luminaire Tested: **ML4ALSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-3000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990997
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML4ALSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-3000K
 Description: 4IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
 Light Source: (1) D2W LED 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

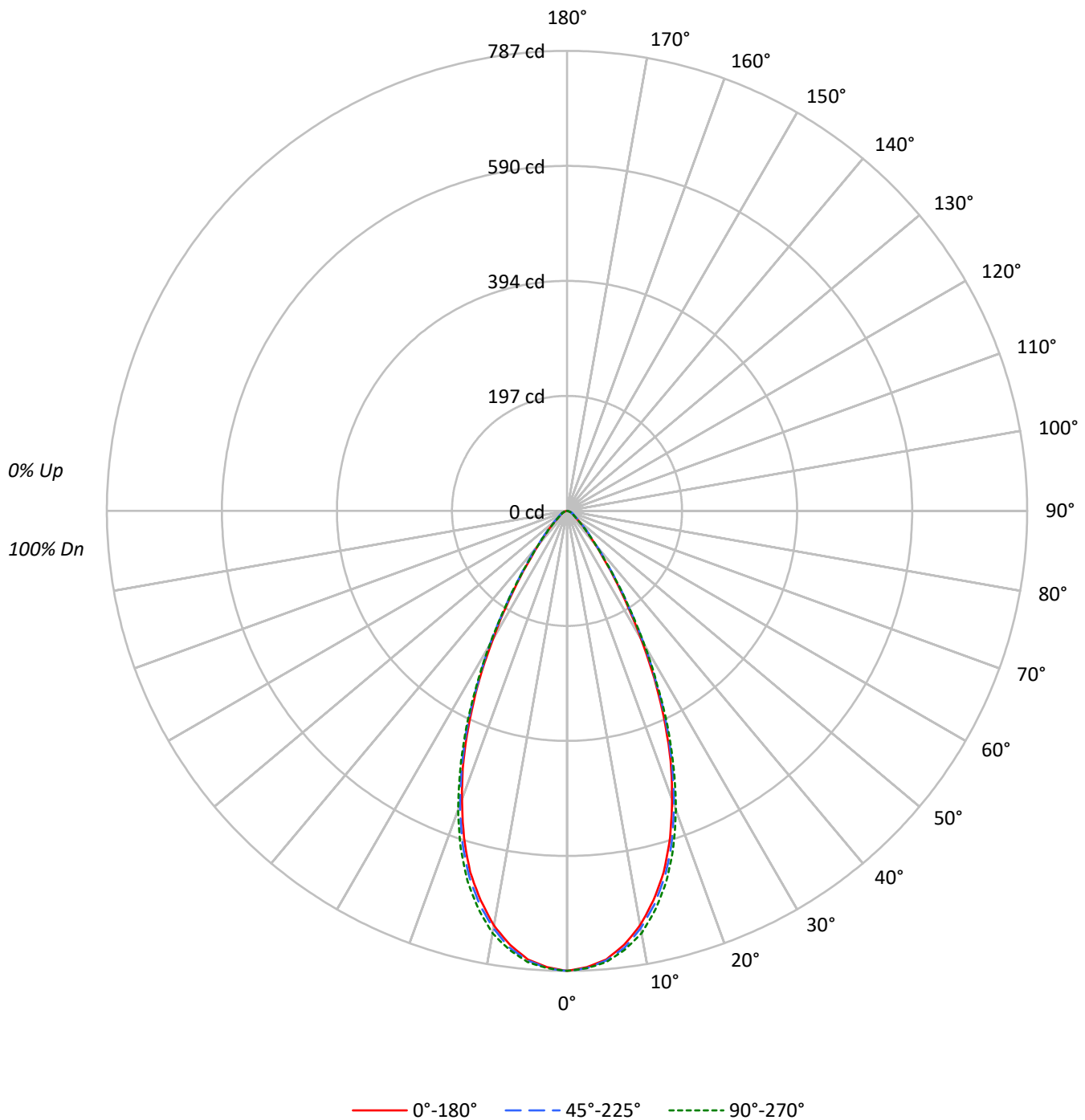
Lumens per Lamp: N/A
 Luminaire Lumens: 591.9 lumens
 Efficiency: N/A
 Efficacy: 71.3 lumens/watt
 Spacing Criteria (0/90/45): 0.79 / 0.8 / 0.78
 Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
 CIE Type: Direct

Input Watts (W): 8.3
 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	102	101		101	99	98		97
2	108	103	99	95	105	101	97	94	98	95	92		95	92	90		92
3	102	96	91	87	100	94	90	86	92	88	85		89	86	83		87
4	97	89	84	80	95	88	83	79	86	82	78		84	80	77		82
5	92	84	78	74	91	83	77	73	81	76	73		79	75	72		78
6	88	79	73	69	86	78	72	68	77	72	68		75	71	67		74
7	84	74	68	64	82	74	68	64	72	67	64		71	67	63		70
8	80	70	64	60	78	70	64	60	69	64	60		68	63	60		67
9	76	67	61	57	75	66	60	57	65	60	56		64	60	56		63
10	73	63	57	54	72	63	57	54	62	57	53		61	57	53		60

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	76222	76222	76222
5°	74889	75074	75317
10°	70826	71318	72164
15°	64147	64889	65822
20°	54144	55165	56124
25°	41986	42916	43440
30°	28301	29476	29621
35°	16758	17704	17562
40°	9548	10243	9776
45°	5768	6193	5590
50°	3632	4099	3542
55°	2618	3023	2618
60°	2151	2519	2151
65°	1994	2269	1994
70°	1756	2096	1756
75°	1385	1834	1160
80°	335	669	335
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	12.2
10°-20°	178.8	30.2
20°-30°	181.1	30.6
30°-40°	95.6	16.1
40°-50°	35.4	6.0
50°-60°	15.3	2.6
60°-70°	9.1	1.5
70°-80°	4.2	0.7
80°-90°	0.1	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°	432.3	73.0
0°-40°	527.8	89.2
0°-60°	578.5	97.7
0°-90°	591.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	591.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	787	787	787	787	787	
5°	770	771	772	774	774	72
15°	640	640	647	653	656	177
25°	393	396	402	406	406	178
35°	142	143	150	150	148	92
45°	42	43	45	43	41	34
55°	16	16	18	16	16	14
65°	9	9	10	9	9	9
75°	4	4	5	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°	786.8	786.8	786.8	786.8	786.8
2.5°	781.3	783.1	783.1	783.7	783.1
5°	770.1	771.4	772.0	774.5	774.5
7.5°	748.5	750.3	753.4	757.8	757.1
10°	720.0	721.3	725.0	730.5	733.6
12.5°	682.3	684.8	689.7	695.9	698.4
15°	639.6	639.6	647.0	652.6	656.3
17.5°	585.8	587.7	595.1	600.6	604.4
20°	525.2	531.4	535.1	541.9	544.4
22.5°	463.3	465.2	469.5	475.1	476.9
25°	392.8	395.9	401.5	406.4	406.4
27.5°	323.5	324.8	329.7	333.4	332.8
30°	253.0	256.7	263.5	262.9	264.8
32.5°	192.4	195.5	199.8	202.9	201.0
35°	141.7	142.9	149.7	149.7	148.5
37.5°	102.7	105.8	110.1	109.5	106.4
40°	75.5	77.3	81.0	80.4	77.3
42.5°	56.3	57.5	60.0	58.1	55.1
45°	42.1	43.3	45.2	42.7	40.8
47.5°	31.5	32.8	34.6	32.2	30.3
50°	24.1	25.4	27.2	24.7	23.5
52.5°	18.6	19.8	21.7	19.8	18.6
55°	15.5	16.1	17.9	16.1	15.5
57.5°	13.0	13.6	14.8	13.6	13.0
60°	11.1	11.8	13.0	11.8	11.1
62.5°	9.9	9.9	11.1	10.5	9.9
65°	8.7	8.7	9.9	9.3	8.7
67.5°	7.4	8.0	8.7	8.0	7.4
70°	6.2	6.8	7.4	6.8	6.2
72.5°	4.9	5.6	6.2	5.6	4.9
75°	3.7	4.3	4.9	4.3	3.1
77.5°	1.2	2.5	3.1	2.5	1.9
80°	0.6	0.6	1.2	0.6	0.6
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)