

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: P990822

Luminaire Tested: **ML3ALSFLD2W1E-TIR4D25NFL-TL3SDSL-600LM-2700K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990822
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML3ALSFLD2W1E-TIR4D25NFL-TL3SDSL-600LM-2700K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR,
 METALLIC SILVER TRIM
 Light Source: (1) D2W LED 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

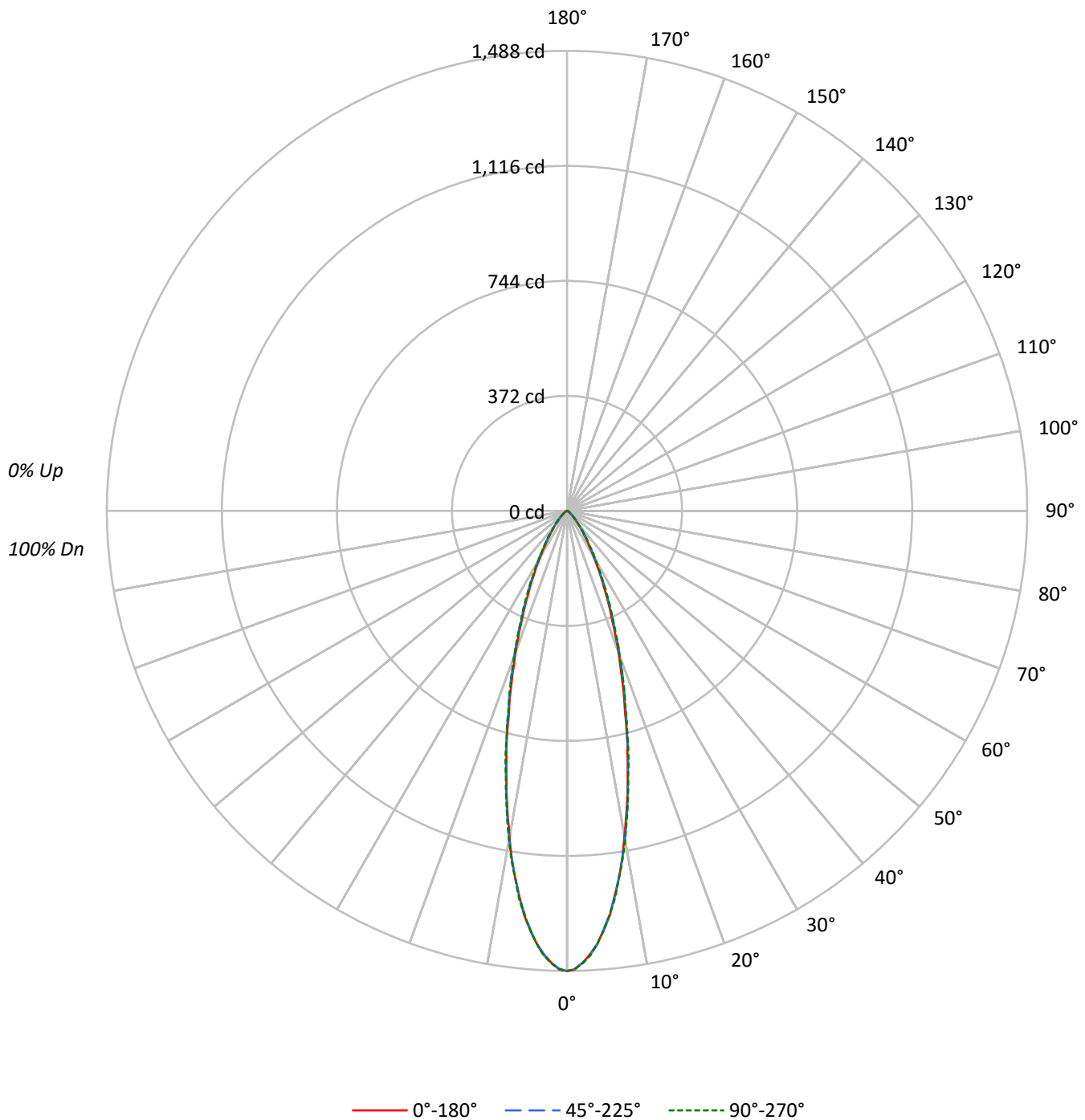
Lumens per Lamp: N/A
 Luminaire Lumens: 587.5 lumens
 Efficiency: N/A
 Efficacy: 62.5 lumens/watt
 Spacing Criteria (0/90/45): 0.5 / 0.5 / 0.54
 Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
 CIE Type: Direct

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	114	111	109	107	112	109	107	105	105	104	102		102	100	99		98
2	109	105	101	98	107	103	99	97	100	97	95		97	94	93		94
3	104	98	94	90	102	97	93	90	94	91	88		92	89	87		90
4	100	93	88	84	98	92	87	84	90	86	83		88	84	82		86
5	95	88	83	79	94	87	82	79	85	81	78		84	80	77		82
6	92	84	78	74	90	83	78	74	81	77	74		80	76	73		79
7	88	80	74	71	87	79	74	70	78	73	70		77	73	70		76
8	84	76	71	67	83	75	70	67	74	70	67		73	69	66		73
9	81	73	67	64	80	72	67	64	71	67	64		71	66	63		70
10	78	70	65	61	77	69	64	61	69	64	61		68	64	61		67

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	256336	256336	256336
5°	235308	234841	235619
10°	186981	188538	188835
15°	133723	134187	134668
20°	88980	91088	91088
25°	56476	58984	59668
30°	34821	37108	36929
35°	21003	22875	23064
40°	13130	14321	13714
45°	7745	9036	8403
50°	4742	5921	5225
55°	3183	3993	3453
60°	2136	2756	2446
65°	1793	2160	1793
70°	1360	1762	1360
75°	599	1198	599
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	20.5
10°-20°	207.6	35.3
20°-30°	143.4	24.4
30°-40°	69.4	11.8
40°-50°	28.4	4.8
50°-60°	11.3	1.9
60°-70°	4.9	0.8
70°-80°	1.7	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°	471.7	80.3
0°-40°	541.1	92.1
0°-60°	580.8	98.9
0°-90°	587.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	587.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1488	1488	1488	1488	1488	
5°	1361	1358	1358	1365	1363	121
15°	750	747	753	758	755	206
25°	297	301	310	312	314	139
35°	100	104	109	110	110	66
45°	32	34	37	36	34	26
55°	11	12	13	12	12	10
65°	4	4	5	5	4	4
75°	1	2	2	2	1	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°	1488.4	1488.4	1488.4	1488.4	1488.4
1°	1483.1	1478.7	1481.4	1477.8	1481.4
2°	1461.9	1461.0	1462.8	1462.8	1464.6
3°	1435.4	1434.5	1438.0	1438.0	1439.8
4°	1403.5	1399.1	1405.3	1404.4	1402.7
5°	1361.1	1357.5	1358.4	1364.6	1362.9
6°	1316.9	1309.8	1312.4	1318.6	1314.2
7°	1258.5	1260.3	1260.3	1263.8	1265.6
8°	1201.9	1201.0	1201.0	1205.4	1201.9
9°	1140.9	1140.0	1139.1	1142.6	1145.3
10°	1069.2	1076.3	1078.1	1078.1	1079.8
11°	1003.8	1007.3	1011.8	1010.0	1013.5
12°	939.2	937.5	944.5	944.5	948.1
13°	871.1	873.8	877.3	876.4	879.1
14°	809.2	812.8	813.6	815.4	822.5
15°	750.0	747.3	752.6	757.9	755.3
16°	681.0	689.8	694.3	697.8	696.9
17°	632.3	634.1	642.1	643.0	639.4
18°	578.4	587.2	593.4	591.7	591.7
19°	528.9	535.1	542.1	544.8	543.0
20°	485.5	488.2	497.0	499.7	497.0
22.5°	381.2	384.7	392.7	397.1	395.3
25°	297.2	300.7	310.4	312.2	314.0
27.5°	229.9	232.6	239.7	244.1	243.2
30°	175.1	178.6	186.6	189.3	185.7
32.5°	133.5	135.3	142.4	145.0	143.3
35°	99.9	104.4	108.8	110.5	109.7
37.5°	76.9	78.7	83.1	83.1	81.4
40°	58.4	59.3	63.7	63.7	61.0
42.5°	43.3	45.1	48.6	47.8	46.0
45°	31.8	34.5	37.1	36.3	34.5
47.5°	23.9	25.6	28.3	27.4	25.6
50°	17.7	19.5	22.1	20.3	19.5
52.5°	14.2	15.0	17.7	15.9	14.2
55°	10.6	11.5	13.3	12.4	11.5
57.5°	8.0	8.8	10.6	9.7	8.8
60°	6.2	7.1	8.0	8.0	7.1
62.5°	5.3	6.2	7.1	6.2	5.3
65°	4.4	4.4	5.3	5.3	4.4
67.5°	3.5	3.5	4.4	3.5	3.5
70°	2.7	3.5	3.5	2.7	2.7
72.5°	1.8	2.7	2.7	2.7	1.8
75°	0.9	1.8	1.8	1.8	0.9
77.5°	0.9	0.9	0.9	0.9	0.9
80°	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
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)