

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: P990823

Luminaire Tested: **ML3ALSFLD2W1E-TIR4D25NFL-TL3SDSL-600LM-3000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990823
 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-3000K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR,
 METALLIC SILVER TRIM
 Light Source: (1) D2W LED 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 628.4 lumens
 Efficiency: N/A
 Efficacy: 66.8 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

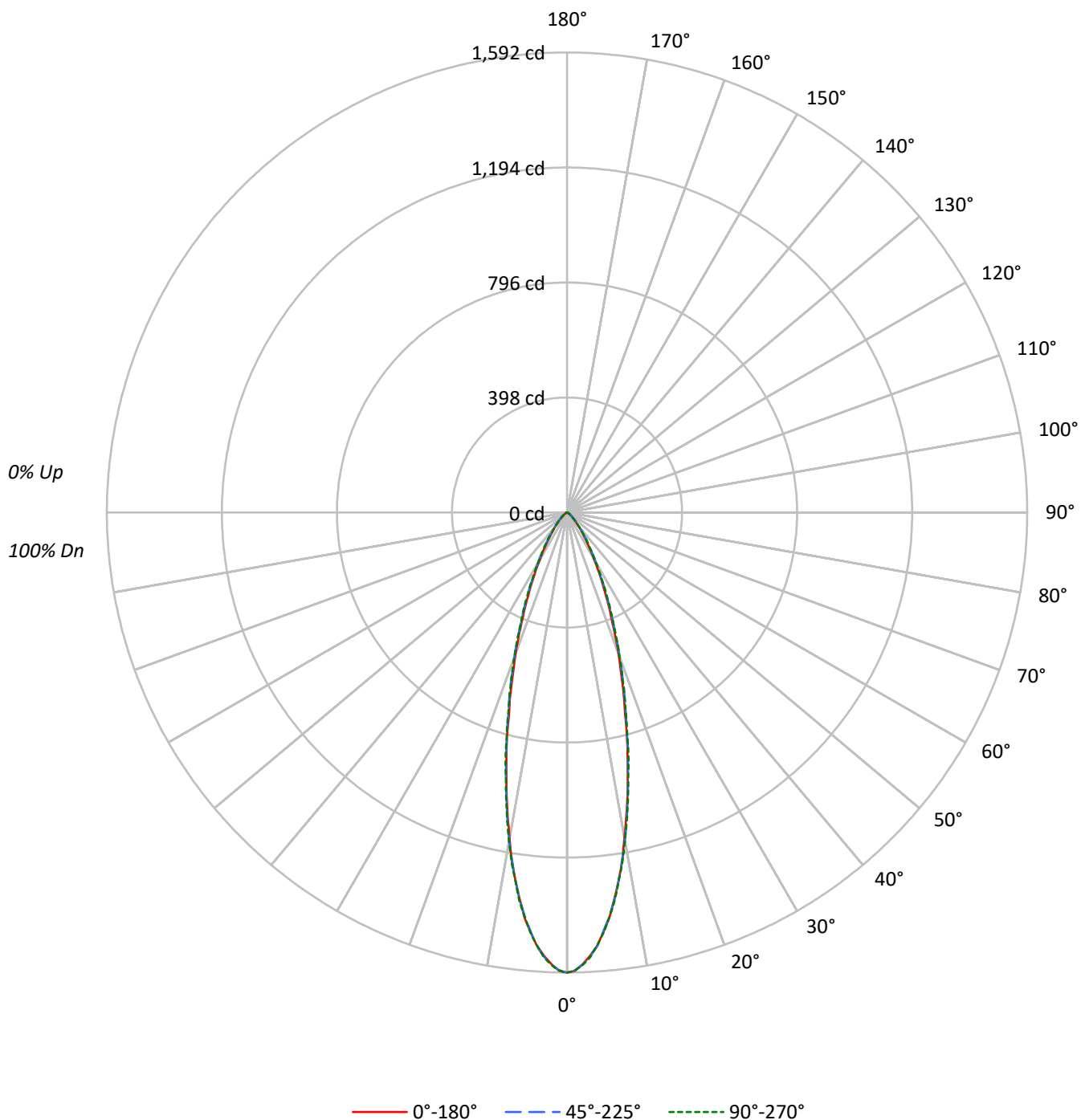
Input Watts (W): 9.4
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT

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°	274213	274213	274213
5°	251697	251213	252025
10°	200027	201671	202003
15°	143031	143548	144047
20°	95193	97448	97448
25°	60409	63108	63811
30°	37248	39694	39515
35°	22475	24473	24662
40°	14029	15310	14681
45°	8305	9669	8987
50°	5064	6350	5573
55°	3423	4264	3693
60°	2273	2928	2618
65°	1915	2323	1915
70°	1410	1913	1410
75°	599	1264	599
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.1	20.5
10°-20°	222.1	35.3
20°-30°	153.4	24.4
30°-40°	74.2	11.8
40°-50°	30.4	4.8
50°-60°	12.1	1.9
60°-70°	5.3	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°	504.6	80.3
0°-40°	578.8	92.1
0°-60°	621.3	98.9
0°-90°	628.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	628.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1592	1592	1592	1592	1592	
5°	1456	1452	1453	1460	1458	129
15°	802	799	805	811	808	220
25°	318	322	332	334	336	149
35°	107	112	116	118	117	70
45°	34	37	40	39	37	28
55°	11	12	14	13	12	11
65°	5	5	6	6	5	5
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°	1592.2	1592.2	1592.2	1592.2	1592.2
1°	1586.5	1581.8	1584.6	1580.8	1584.6
2°	1563.8	1562.9	1564.7	1564.7	1566.6
3°	1535.4	1534.5	1538.3	1538.3	1540.1
4°	1501.4	1496.6	1503.3	1502.3	1500.4
5°	1455.9	1452.2	1453.1	1459.7	1457.8
6°	1408.6	1401.1	1403.9	1410.5	1405.8
7°	1346.2	1348.1	1348.1	1351.9	1353.8
8°	1285.7	1284.7	1284.7	1289.4	1285.7
9°	1220.4	1219.4	1218.5	1222.3	1225.1
10°	1143.8	1151.3	1153.2	1153.2	1155.1
11°	1073.8	1077.5	1082.3	1080.4	1084.2
12°	1004.7	1002.8	1010.4	1010.4	1014.2
13°	931.8	934.7	938.5	937.5	940.4
14°	865.6	869.4	870.4	872.2	879.8
15°	802.2	799.4	805.1	810.8	807.9
16°	728.4	737.9	742.6	746.4	745.5
17°	676.4	678.3	686.8	687.8	684.0
18°	618.7	628.2	634.8	632.9	632.9
19°	565.7	572.4	579.9	582.8	580.9
20°	519.4	522.2	531.7	534.5	531.7
22.5°	407.7	411.5	420.0	424.8	422.9
25°	317.9	321.7	332.1	334.0	335.8
27.5°	246.0	248.8	256.4	261.1	260.2
30°	187.3	191.1	199.6	202.5	198.7
32.5°	142.9	144.7	152.3	155.1	153.3
35°	106.9	111.6	116.4	118.3	117.3
37.5°	82.3	84.2	88.9	88.9	87.0
40°	62.4	63.4	68.1	68.1	65.3
42.5°	46.4	48.2	52.0	51.1	49.2
45°	34.1	36.9	39.7	38.8	36.9
47.5°	25.5	27.4	30.3	29.3	27.4
50°	18.9	20.8	23.7	21.8	20.8
52.5°	15.1	16.1	18.9	17.0	15.1
55°	11.4	12.3	14.2	13.2	12.3
57.5°	8.5	9.5	11.4	10.4	9.5
60°	6.6	7.6	8.5	8.5	7.6
62.5°	5.7	6.6	7.6	6.6	5.7
65°	4.7	4.7	5.7	5.7	4.7
67.5°	3.8	3.8	4.7	3.8	3.8
70°	2.8	3.8	3.8	2.8	2.8
72.5°	1.9	2.8	2.8	2.8	1.9
75°	0.9	1.9	1.9	1.9	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)