

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: P990819

Luminaire Tested: **ML3ALSFLD2W1E-TIR4D25NFL-TL3SDMB-600LM-3000K**

Issue Date: 5/13/2025

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P990819
 Test Lab: Cooper Lighting Solutions
 Issue Date: 5/13/2025
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML3ALSFLD2W1E-TIR4D25NFL-TL3SDMB-600LM-3000K
 Description: 3IN SQUARE ML FLEX ADJUSTABLE, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
 Light Source: (1) D2W LED 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 630.3 lumens
 Efficiency: N/A
 Efficacy: 67.1 lumens/watt
 Spacing Criteria (0/90/45): 0.49 / 0.5 / 0.54
 Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
 CIE Type: Direct

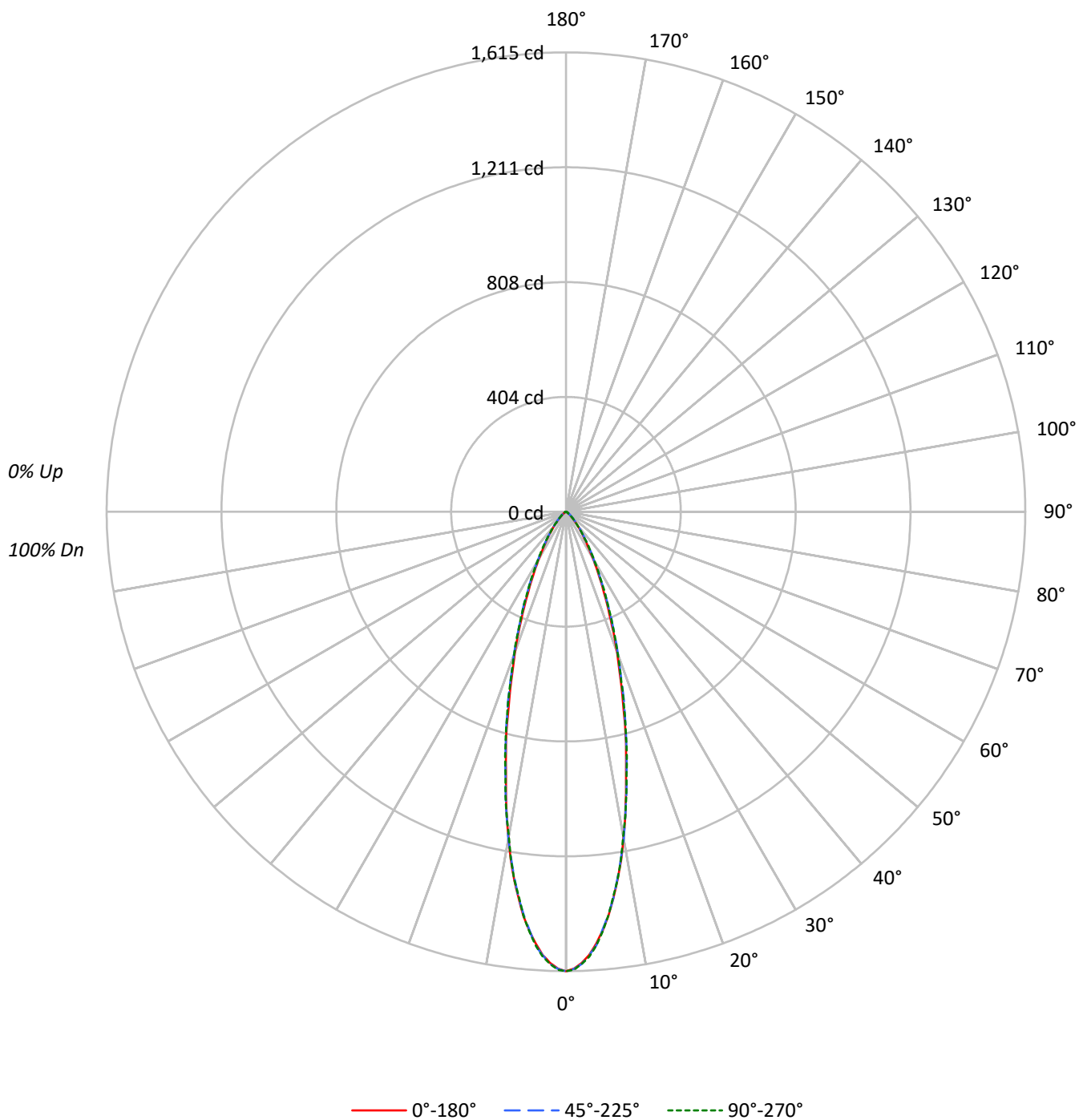
Input Watts (W): 9.4
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT

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	100	97	100	97	95		97	95	93		94
3	104	99	94	90	102	97	93	90	95	91	88		92	89	87		90
4	100	93	88	84	98	92	87	84	90	86	83		88	85	82		86
5	96	88	83	79	94	87	82	79	86	81	78		84	80	78		83
6	92	84	79	75	90	83	78	75	82	77	74		80	76	74		79
7	88	80	75	71	87	79	74	71	78	74	70		77	73	70		76
8	85	76	71	67	84	76	71	67	75	70	67		74	70	67		73
9	81	73	68	64	80	73	68	64	72	67	64		71	67	64		70
10	78	70	65	61	78	70	65	61	69	64	61		68	64	61		67

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	278208	278208	278208
5°	255569	255068	256053
10°	203770	204102	202440
15°	144511	145527	145705
20°	96036	98107	97759
25°	60561	63260	63260
30°	37248	39316	39873
35°	22875	24262	24662
40°	13826	15108	14681
45°	8281	9450	8744
50°	5064	6323	5332
55°	3123	3963	3393
60°	2273	2928	2273
65°	1549	1915	1915
70°	1410	1410	1410
75°	599	1264	599
80°	0	0	0
85°	0	0	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	20.8
10°-20°	224.0	35.5
20°-30°	153.8	24.4
30°-40°	74.1	11.8
40°-50°	29.9	4.7
50°-60°	11.4	1.8
60°-70°	4.7	0.7
70°-80°	1.4	0.2
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°	508.7	80.7
0°-40°	582.9	92.5
0°-60°	624.1	99.0
0°-90°	630.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	630.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1478	1480	1475	1483	1481	131
15°	810	810	816	818	817	222
25°	319	324	333	336	333	149
35°	109	110	115	119	117	70
45°	34	36	39	38	36	27
55°	10	11	13	12	11	10
65°	4	5	5	5	5	4
75°	1	1	2	1	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°	1615.4	1615.4	1615.4	1615.4	1615.4
1°	1606.9	1606.9	1607.8	1606.9	1610.7
2°	1587.0	1588.0	1590.8	1590.8	1590.8
3°	1560.5	1559.6	1561.5	1564.3	1566.2
4°	1521.8	1520.8	1528.4	1526.5	1528.4
5°	1478.3	1480.1	1475.4	1483.0	1481.1
6°	1429.1	1426.2	1424.3	1430.0	1427.2
7°	1367.6	1370.4	1367.6	1374.2	1362.9
8°	1306.1	1304.2	1300.4	1302.3	1305.2
9°	1239.9	1238.0	1234.2	1234.2	1237.1
10°	1165.2	1161.4	1167.1	1162.4	1157.6
11°	1090.5	1087.6	1093.3	1089.5	1092.4
12°	1013.9	1018.6	1020.5	1019.5	1021.4
13°	938.2	946.7	946.7	948.6	945.8
14°	873.0	879.6	879.6	881.5	884.3
15°	810.5	809.6	816.2	818.1	817.2
16°	739.6	745.3	752.8	753.8	752.8
17°	678.1	683.8	696.1	695.1	692.3
18°	622.3	628.0	635.6	633.7	631.8
19°	567.5	571.3	582.6	584.5	578.8
20°	524.0	524.0	535.3	533.4	533.4
22.5°	409.5	413.3	423.7	425.6	423.7
25°	318.7	324.4	332.9	335.8	332.9
27.5°	245.9	248.7	258.2	260.1	261.0
30°	187.3	189.2	197.7	204.3	200.5
32.5°	141.9	145.6	152.3	156.1	155.1
35°	108.8	109.7	115.4	119.2	117.3
37.5°	81.3	84.2	88.0	89.8	87.0
40°	61.5	62.4	67.2	67.2	65.3
42.5°	45.4	47.3	51.1	51.1	48.2
45°	34.0	35.9	38.8	37.8	35.9
47.5°	24.6	27.4	29.3	28.4	26.5
50°	18.9	19.9	23.6	21.8	19.9
52.5°	14.2	15.1	18.0	16.1	15.1
55°	10.4	11.3	13.2	12.3	11.3
57.5°	7.6	8.5	10.4	9.5	8.5
60°	6.6	6.6	8.5	7.6	6.6
62.5°	4.7	5.7	6.6	5.7	5.7
65°	3.8	4.7	4.7	4.7	4.7
67.5°	2.8	3.8	3.8	3.8	3.8
70°	2.8	2.8	2.8	2.8	2.8
72.5°	1.9	1.9	2.8	1.9	1.9
75°	0.9	0.9	1.9	0.9	0.9
77.5°	0.0	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)