

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P886773

Luminaire Tested: ML310LSFLD2W1E-TIR4D25AWW-TL3RWMB-600LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886773
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-12)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFLD2W1E-TIR4D25AWW-TL3RWMB-600LM-3000K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM
Light Source: (1) D2W LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 506.4 lumens
Efficiency: N/A
Efficacy: 53.3 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.8 / 0.98
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

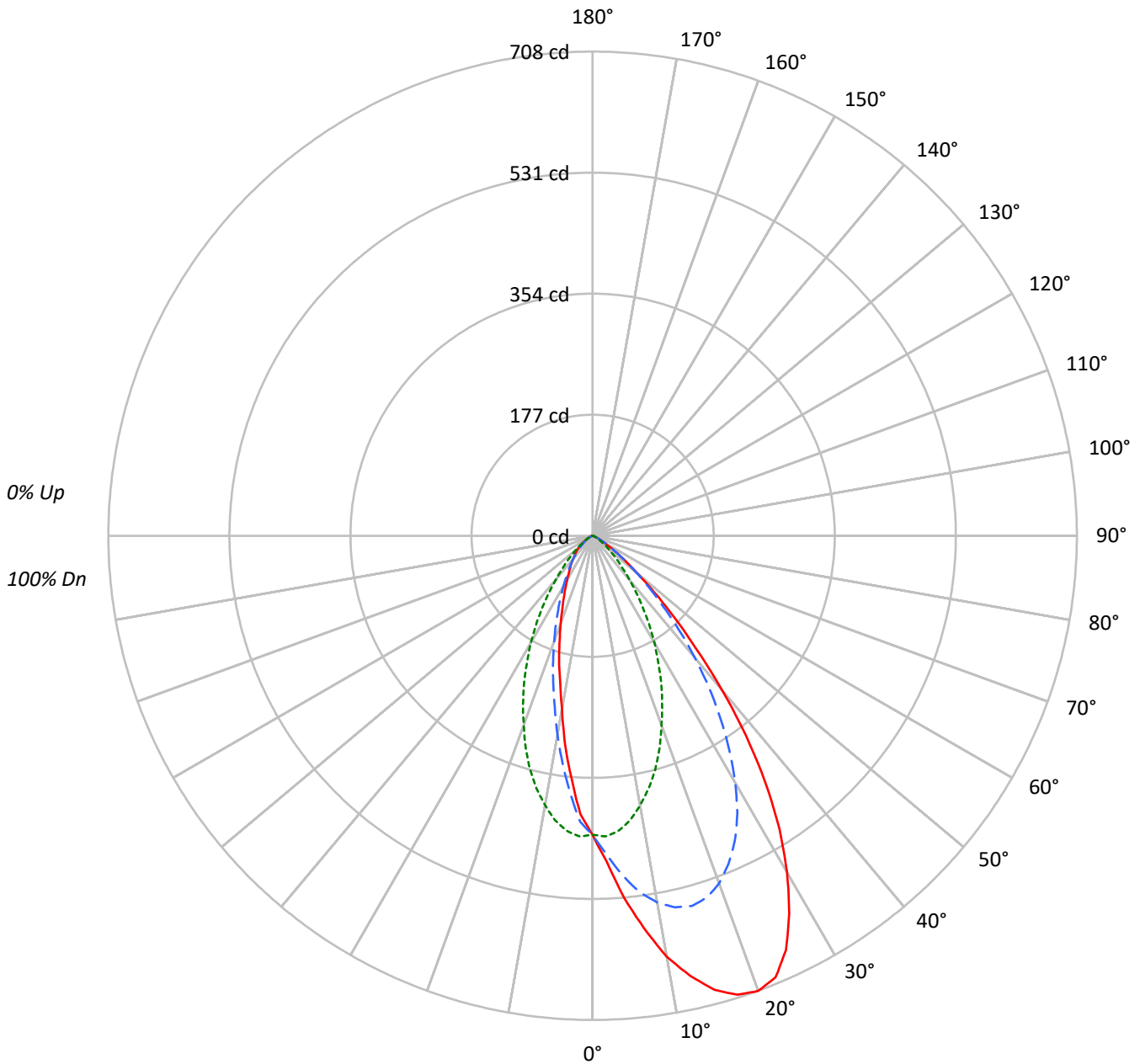
Input Watts (W): 9.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92					92			
2	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78	77					77			
4	94	86	80	75	92	85	79	75	82	78	74	80	76	73	78	75	72	70					70			
5	89	79	73	68	87	78	72	68	77	71	67	75	70	67	73	69	66	64					64			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59					59			
7	79	69	62	57	78	68	62	57	67	61	57	65	60	56	64	60	56	55					55			
8	75	64	57	53	73	63	57	53	62	57	53	61	56	52	60	56	52	51					51			
9	71	60	53	49	69	59	53	49	58	53	49	58	52	49	57	52	48	47					47			
10	67	56	50	46	66	56	50	46	55	49	45	54	49	45	53	49	45	44					44			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	95891	95891	95891	95891	95891
5°	117081	109641	95355	83161	78252
10°	139209	121218	89088	65753	57336
15°	156028	127186	80250	50488	42951
20°	165284	126244	68769	38177	31689
25°	161719	119039	57390	28792	24050
30°	143921	105586	45703	21573	18813
35°	117785	87107	34184	16276	15205
40°	83957	66453	23988	12566	12767
45°	52191	45059	16343	9210	10699
50°	28826	27888	10609	6686	8529
55°	15751	15885	6193	4893	6461
60°	7412	7850	4166	3552	4429
65°	3528	3502	2802	2127	2439
70°	1282	1507	1731	898	898
75°	593	593	593	0	0
80°	0	0	0	0	0
85°	0	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 10°
 Vertical Angle: 45°
 Luminance: 52595 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	8.2
10°-20°	110.3	21.8
20°-30°	140.6	27.8
30°-40°	118.7	23.4
40°-50°	65.0	12.8
50°-60°	23.6	4.7
60°-70°	6.1	1.2
70°-80°	0.7	0.1
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°	292.1	57.7
0°-40°	410.9	81.1
0°-60°	499.5	98.6
0°-90°	506.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	506.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	437	437	437	437	437	
5°	532	498	433	378	356	53
15°	687	560	354	222	189	194
25°	668	492	237	119	99	302
35°	440	325	128	61	57	271
45°	168	145	53	30	34	134
55°	41	42	16	13	17	39
65°	7	7	5	4	5	8
75°	1	1	1	0	0	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	112.5°
0°	437.3	437.3	437.3	437.3	437.3	437.3	437.3	437.3	437.3	437.3	437.3
2.5°	477.2	475.8	475.1	474.4	469.0	463.6	456.9	451.5	446.1	440.0	427.1
5°	531.9	531.2	523.8	517.0	504.9	491.3	477.8	462.3	446.7	433.2	403.5
7.5°	579.2	577.9	567.7	554.9	536.6	514.3	491.3	465.7	441.3	419.7	373.1
10°	625.2	620.4	606.2	585.3	559.6	529.2	496.8	463.0	429.2	400.1	343.3
12.5°	659.0	654.2	638.7	610.3	575.8	537.3	495.4	454.2	414.3	378.5	309.5
15°	687.3	678.6	659.0	625.2	583.9	536.6	487.3	439.3	393.3	353.5	275.7
17.5°	703.6	695.5	669.8	630.6	581.9	527.8	473.1	419.0	369.0	325.1	242.6
20°	708.3	698.2	670.4	625.8	570.4	511.6	452.8	394.0	342.0	294.7	213.6
22.5°	698.8	687.3	656.3	611.0	550.8	487.3	426.5	367.0	311.6	265.6	183.8
25°	668.4	660.3	627.9	581.9	525.1	458.9	395.4	335.9	282.5	237.2	157.5
27.5°	622.5	615.0	586.6	543.4	488.6	427.8	362.3	302.8	250.7	206.8	135.2
30°	568.4	560.3	537.3	499.5	448.1	385.9	326.4	269.7	220.3	180.5	114.9
32.5°	508.2	500.1	476.5	445.4	400.1	344.7	290.6	235.9	189.9	153.4	97.3
35°	440.0	433.9	417.0	385.9	348.7	302.1	250.7	202.1	159.5	127.7	81.1
37.5°	367.7	360.9	350.8	330.5	299.4	258.2	213.6	169.0	132.5	104.1	64.9
40°	293.3	290.6	285.2	269.7	249.4	214.9	179.1	139.9	107.5	83.8	52.7
42.5°	224.4	223.7	223.0	213.6	199.4	175.0	143.3	110.8	86.5	65.6	41.9
45°	168.3	169.6	168.3	164.9	153.4	137.2	112.9	87.9	66.9	52.7	31.8
47.5°	122.3	123.7	124.4	125.7	119.6	104.1	83.8	66.9	50.7	40.6	25.7
50°	84.5	87.9	89.9	91.2	86.5	77.0	62.2	48.0	37.2	31.1	21.0
52.5°	60.8	61.5	64.9	66.2	63.5	54.1	43.3	32.4	27.7	23.0	16.2
55°	41.2	41.2	46.0	48.0	45.3	37.8	29.1	23.0	19.6	16.2	12.2
57.5°	25.7	27.0	30.4	32.4	30.4	25.0	19.6	16.2	14.2	12.8	8.8
60°	16.9	18.2	19.6	21.6	20.3	15.5	12.8	11.5	10.8	9.5	6.8
62.5°	10.8	11.5	12.8	14.2	12.2	9.5	8.8	8.1	7.4	7.4	5.4
65°	6.8	6.8	8.1	8.8	7.4	6.1	6.1	6.1	6.1	5.4	4.1
67.5°	4.1	4.1	4.7	4.7	4.1	4.1	4.1	4.1	4.1	4.1	2.7
70°	2.0	2.0	2.7	2.7	2.0	2.7	2.7	2.7	2.7	2.7	2.0
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.0	1.4	1.4
75°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	437.3	437.3	437.3
2.5°	418.4	411.6	407.5
5°	377.8	361.6	355.5
7.5°	335.9	314.9	307.5
10°	295.3	267.6	257.5
12.5°	256.1	229.8	219.0
15°	222.4	196.7	189.2
17.5°	191.9	168.3	160.2
20°	163.6	143.3	135.8
22.5°	140.6	122.3	115.6
25°	119.0	102.7	99.4
27.5°	100.7	87.9	85.8
30°	85.2	75.0	74.3
32.5°	71.6	65.6	64.9
35°	60.8	56.1	56.8
37.5°	52.0	49.3	50.7
40°	43.9	42.6	44.6
42.5°	36.5	37.2	39.2
45°	29.7	32.4	34.5
47.5°	24.3	28.4	29.7
50°	19.6	24.3	25.0
52.5°	15.5	20.3	20.3
55°	12.8	16.2	16.9
57.5°	10.1	12.8	12.8
60°	8.1	10.1	10.1
62.5°	6.1	6.8	7.4
65°	4.1	4.7	4.7
67.5°	2.7	3.4	3.4
70°	1.4	2.0	1.4
72.5°	0.7	0.7	0.7
75°	0.0	0.0	0.0
77.5°	0.0	0.0	0.0
80°	0.0	0.0	0.0
82.5°	0.0	0.0	0.0
85°	0.0	0.0	0.0
87.5°	0.0	0.0	0.0
90°	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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