

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: P886775

Luminaire Tested: ML310LSFLD2W1E-TIR4D25AWW-TL3RWMW-600LM-3000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886775
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-10)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFLD2W1E-TIR4D25AWW-TL3RWMW-600LM-3000K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE WHITE TRIM
Light Source: (1) D2W LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 544.0 lumens
Efficiency: N/A
Efficacy: 57.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 0.81 / 0.99
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

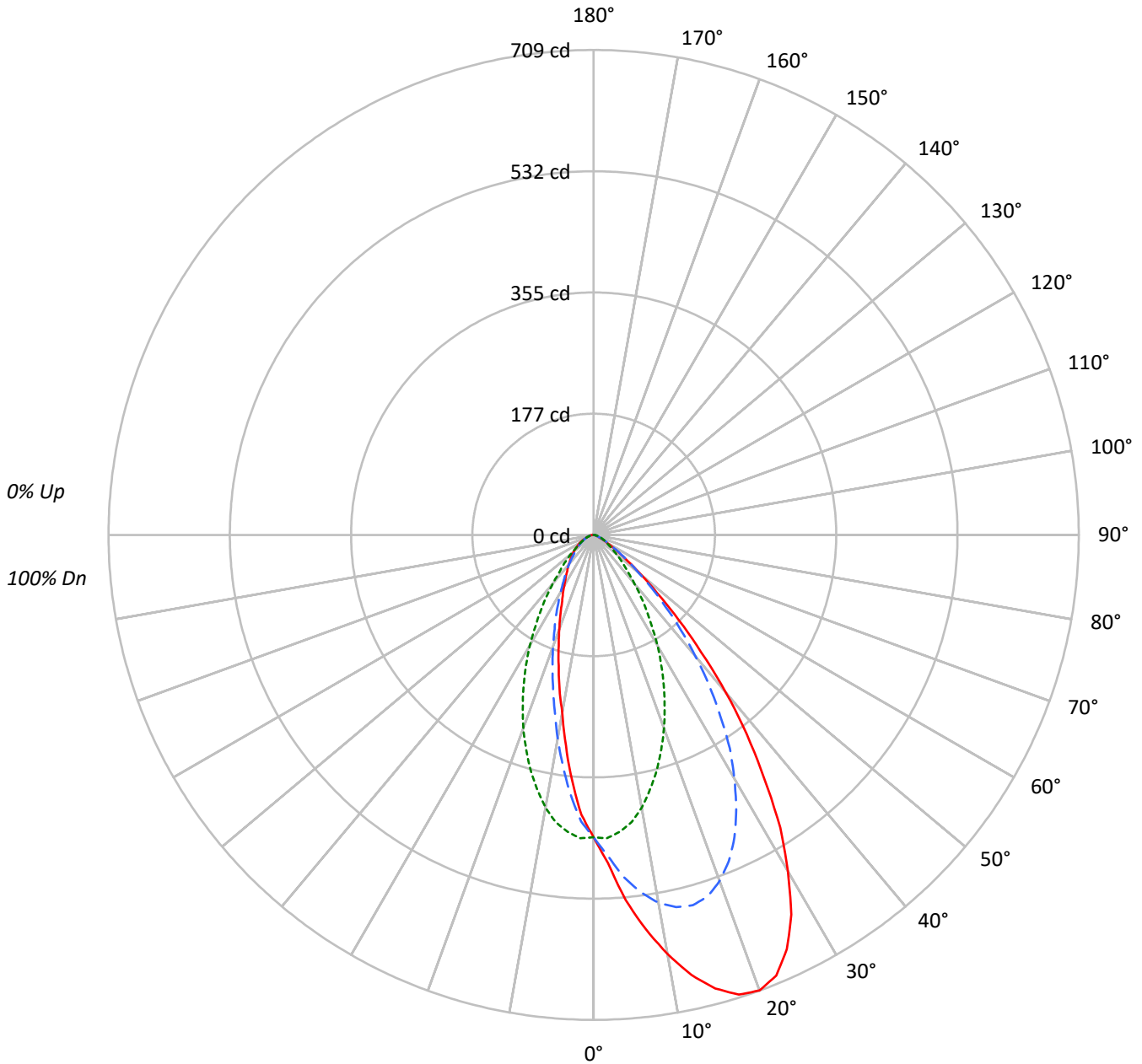
Input Watts (W): 9.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91								
2	105	100	95	91	103	98	93	90	95	91	88	91	88	86	89	86	84	82								
3	99	91	85	81	97	90	84	80	87	82	79	85	81	77	82	79	76	74								
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	73	69	68								
5	87	77	71	66	85	76	70	65	75	69	65	73	68	64	71	67	63	62								
6	82	72	65	60	80	71	64	60	69	63	59	68	63	59	66	62	58	57								
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52								
8	73	62	55	50	72	61	55	50	60	54	50	59	54	50	58	53	50	48								
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46	45								
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	96878	96878	96878	96878	96878
5°	117917	110488	95906	84173	79419
10°	138541	121619	90112	67244	58672
15°	155824	127220	80818	52146	44926
20°	165378	125649	70146	40510	34210
25°	161646	117854	58528	31381	26469
30°	143693	104092	47222	24282	21725
35°	116286	86358	35978	19354	18444
40°	86047	66238	26507	15858	16230
45°	54672	46191	19692	12994	14451
50°	30873	29150	14533	11053	13134
55°	16783	17949	10857	9825	11354
60°	9166	10679	9166	8596	10087
65°	5241	6823	7731	7731	8406
70°	3462	4552	6924	6924	6924
75°	2288	3474	5761	6270	6270
80°	1768	2147	4293	5935	6819
85°	1761	1761	5032	6793	6793

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 54672 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	7.6
10°-20°	111.3	20.5
20°-30°	142.4	26.2
30°-40°	122.1	22.4
40°-50°	71.7	13.2
50°-60°	32.2	5.9
60°-70°	14.5	2.7
70°-80°	6.3	1.2
80°-90°	1.9	0.4
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°	295.4	54.3
0°-40°	417.4	76.7
0°-60°	521.4	95.8
0°-90°	544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	544.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	442	442	442	442	442	
5°	536	502	436	382	361	54
15°	686	560	356	230	198	194
25°	668	487	242	130	109	302
35°	434	323	134	72	69	270
45°	176	149	64	42	47	139
55°	44	47	28	26	30	43
65°	10	13	15	15	16	11
75°	3	4	7	7	7	3
85°	1	1	2	3	3	1
90°	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°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	479.7	479.7	479.7	478.3	471.6	466.8	462.1	456.0	449.9	443.9	429.7
5°	535.7	534.4	525.6	518.8	508.7	495.2	481.0	465.5	450.6	435.7	406.0
7.5°	581.0	577.6	571.5	556.0	537.8	516.1	492.5	468.8	445.9	423.6	378.3
10°	622.2	620.9	607.3	588.4	561.4	531.0	498.6	465.5	433.0	404.7	345.9
12.5°	658.7	655.3	638.4	610.7	576.9	537.8	496.5	456.0	416.8	381.0	315.5
15°	686.4	679.6	658.0	624.9	583.7	537.1	489.1	440.5	395.9	356.0	281.0
17.5°	704.6	695.2	668.8	629.6	581.0	526.9	472.9	419.5	370.9	328.3	250.0
20°	708.7	698.5	668.8	622.9	568.2	508.7	451.3	394.5	342.5	300.6	220.2
22.5°	697.2	685.0	656.0	607.3	548.6	483.7	423.6	365.5	314.8	270.9	191.9
25°	668.1	658.7	626.9	580.3	520.2	454.0	392.5	336.4	284.4	241.9	165.5
27.5°	625.6	616.1	583.7	541.8	481.7	420.9	358.7	304.0	254.0	213.5	143.9
30°	567.5	560.7	535.1	492.5	440.5	381.7	323.6	268.9	222.9	186.5	123.6
32.5°	507.4	497.2	475.6	441.8	398.6	341.8	287.1	237.1	193.2	158.1	105.4
35°	434.4	432.4	412.1	386.4	345.9	299.3	247.3	202.0	164.8	134.4	90.5
37.5°	367.5	364.1	350.6	328.3	297.9	256.7	212.1	171.6	139.8	112.8	75.7
40°	300.6	298.6	288.5	270.2	248.6	214.2	179.7	141.9	113.5	92.6	62.8
42.5°	232.4	229.7	227.7	219.6	201.3	175.6	146.6	116.2	93.9	75.0	52.7
45°	176.3	175.0	173.6	166.9	158.1	139.8	116.2	92.6	76.3	63.5	44.6
47.5°	126.3	128.4	127.7	128.4	123.0	106.7	89.2	73.0	62.2	52.7	39.2
50°	90.5	89.9	94.6	96.6	91.2	79.7	66.9	56.7	48.6	42.6	33.1
52.5°	63.5	64.9	70.3	71.6	67.6	60.1	50.7	43.2	38.5	34.5	28.4
55°	43.9	44.6	50.0	52.7	49.3	44.6	37.8	33.1	31.1	28.4	23.6
57.5°	29.7	31.8	35.1	37.2	35.8	31.1	27.7	26.3	25.0	24.3	20.9
60°	20.9	21.6	25.0	27.0	25.7	23.0	21.6	20.9	20.9	20.9	18.9
62.5°	14.2	14.9	17.6	18.9	18.2	16.9	16.2	17.6	17.6	17.6	16.2
65°	10.1	10.1	12.2	13.5	13.5	12.8	13.5	14.2	14.9	14.9	14.2
67.5°	6.8	7.4	8.1	9.5	9.5	10.1	10.8	12.2	12.8	12.8	12.8
70°	5.4	5.4	6.1	6.8	6.8	7.4	8.8	9.5	10.1	10.8	10.8
72.5°	4.1	4.1	4.1	4.7	5.4	5.4	6.8	7.4	8.1	8.8	8.8
75°	2.7	2.7	2.7	3.4	4.1	4.1	4.7	5.4	6.1	6.8	7.4
77.5°	2.0	2.0	2.0	2.0	2.7	2.7	3.4	4.1	4.7	4.7	5.4
80°	1.4	1.4	1.4	1.4	1.4	2.0	2.0	2.7	3.4	3.4	4.1
82.5°	0.7	0.7	0.7	1.4	1.4	1.4	2.0	2.0	2.7	2.7	3.4
85°	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4	1.4	2.0	2.7
87.5°	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	1.4
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°	441.8	441.8	441.8
2.5°	419.5	413.5	409.4
5°	382.4	365.5	360.8
7.5°	341.8	318.2	310.8
10°	302.0	274.3	263.5
12.5°	262.8	235.8	230.4
15°	229.7	204.7	197.9
17.5°	199.3	177.7	170.2
20°	173.6	152.7	146.6
22.5°	149.3	131.7	127.0
25°	129.7	114.2	109.4
27.5°	111.5	98.0	97.3
30°	95.9	87.1	85.8
32.5°	83.1	77.0	77.0
35°	72.3	68.2	68.9
37.5°	63.5	60.8	62.2
40°	55.4	55.4	56.7
42.5°	48.6	50.0	51.3
45°	41.9	45.9	46.6
47.5°	36.5	41.2	42.6
50°	32.4	37.2	38.5
52.5°	29.0	33.1	34.5
55°	25.7	29.7	29.7
57.5°	22.3	25.7	26.3
60°	19.6	22.3	23.0
62.5°	16.9	18.9	19.6
65°	14.9	16.2	16.2
67.5°	12.8	13.5	13.5
70°	10.8	11.5	10.8
72.5°	9.5	9.5	8.8
75°	7.4	7.4	7.4
77.5°	6.1	6.1	6.1
80°	4.7	5.4	5.4
82.5°	4.1	4.1	4.1
85°	2.7	2.7	2.7
87.5°	1.4	1.4	1.4
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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Scaled Data Report



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