

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: P886512

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMB-850LM-2700K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886512
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: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMB-850LM-2700K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT
Ballast/Driver: -

Summary

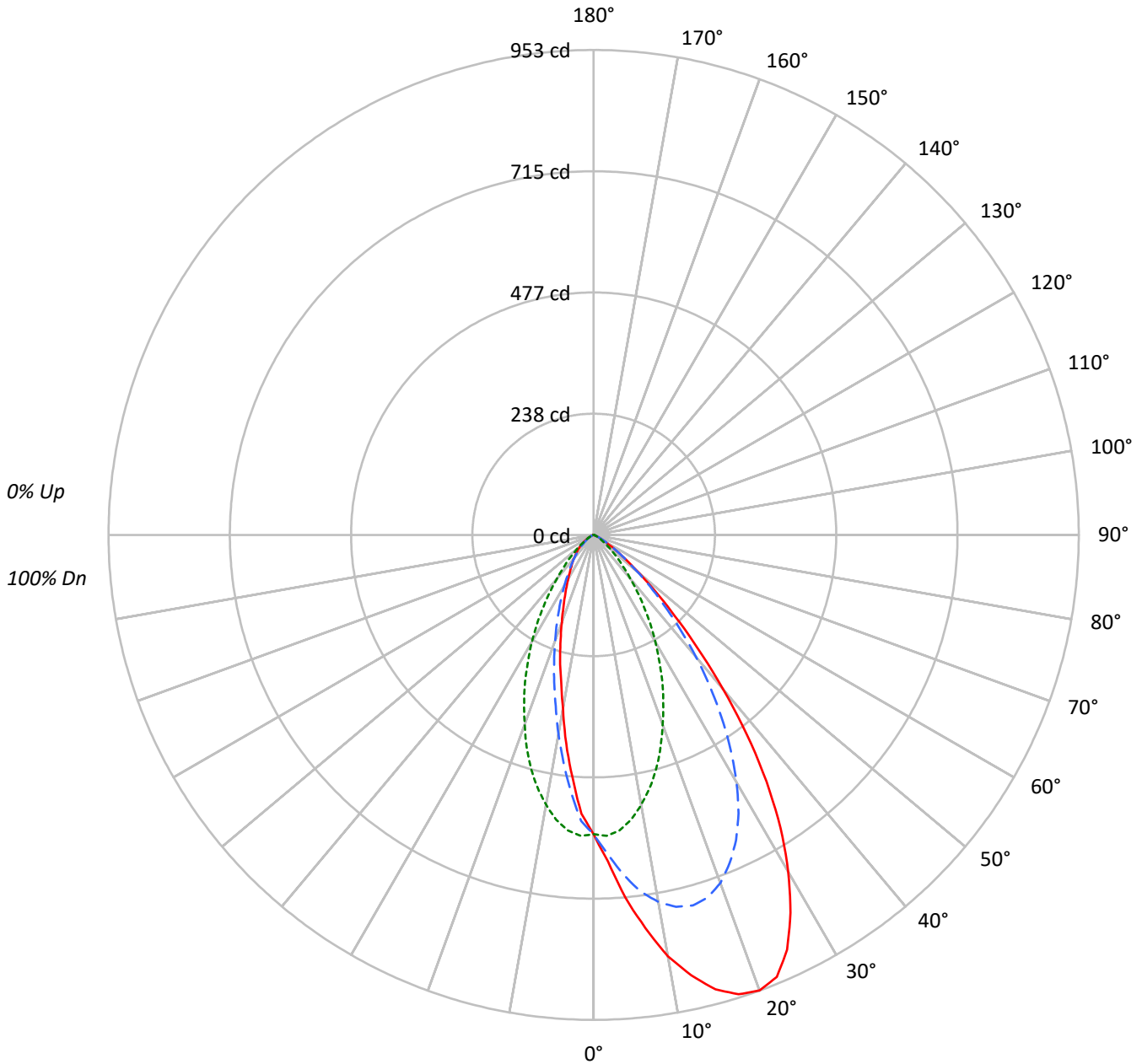
Lumens per Lamp: N/A
Luminaire Lumens: 681.1 lumens
Efficiency: N/A
Efficacy: 50.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.8 / 0.98
Luminous Opening: Circular (Dia: 0.25' x H: 0')
CIE Type: Direct

Input Watts (W): 13.6
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				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°	128981	128981	128981	128981	128981
5°	157495	147479	128263	111864	105261
10°	187238	163045	119837	88464	77131
15°	209876	171091	107946	67901	57776
20°	222316	169823	92501	51338	42634
25°	217537	160134	77206	38712	32324
30°	193574	142022	61452	28992	25320
35°	158420	117182	45990	21897	20452
40°	112926	89396	32260	16917	17175
45°	70209	60611	21987	12404	14389
50°	38754	37525	14260	9006	11462
55°	21218	21371	8334	6614	8678
60°	9955	10569	5570	4780	5964
65°	4722	4722	3788	2854	3321
70°	1731	2020	2308	1154	1154
75°	763	763	763	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: 70767 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	8.2
10°-20°	148.3	21.8
20°-30°	189.1	27.8
30°-40°	159.7	23.4
40°-50°	87.5	12.8
50°-60°	31.8	4.7
60°-70°	8.3	1.2
70°-80°	1.0	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°	393.0	57.7
0°-40°	552.7	81.1
0°-60°	671.9	98.6
0°-90°	681.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	681.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	588	588	588	588	588	
5°	716	670	583	508	478	72
15°	924	754	476	299	254	261
25°	899	662	319	160	134	406
35°	592	438	172	82	76	364
45°	226	195	71	40	46	180
55°	56	56	22	17	23	53
65°	9	9	7	6	6	10
75°	1	1	1	0	0	1
85°	0	0	0	0	0	0
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°	588.2	588.2	588.2	588.2	588.2	588.2	588.2	588.2	588.2	588.2	588.2
2.5°	641.8	640.0	639.1	638.2	630.9	623.6	614.5	607.3	600.0	591.8	574.5
5°	715.5	714.5	704.5	695.5	679.1	660.9	642.7	621.8	600.9	582.7	542.7
7.5°	779.1	777.3	763.6	746.4	721.8	691.8	660.9	626.4	593.6	564.5	501.8
10°	840.9	834.5	815.5	787.3	752.7	711.8	668.2	622.7	577.3	538.2	461.8
12.5°	886.4	880.0	859.1	820.9	774.5	722.7	666.4	610.9	557.3	509.1	416.4
15°	924.5	912.7	886.4	840.9	785.5	721.8	655.5	590.9	529.1	475.5	370.9
17.5°	946.4	935.5	900.9	848.2	782.7	710.0	636.4	563.6	496.4	437.3	326.4
20°	952.7	939.1	901.8	841.8	767.3	688.2	609.1	530.0	460.0	396.4	287.3
22.5°	940.0	924.5	882.7	821.8	740.9	655.5	573.6	493.6	419.1	357.3	247.3
25°	899.1	888.2	844.5	782.7	706.4	617.3	531.8	451.8	380.0	319.1	211.8
27.5°	837.3	827.3	789.1	730.9	657.3	575.5	487.3	407.3	337.3	278.2	181.8
30°	764.5	753.6	722.7	671.8	602.7	519.1	439.1	362.7	296.4	242.7	154.5
32.5°	683.6	672.7	640.9	599.1	538.2	463.6	390.9	317.3	255.5	206.4	130.9
35°	591.8	583.6	560.9	519.1	469.1	406.4	337.3	271.8	214.5	171.8	109.1
37.5°	494.5	485.5	471.8	444.5	402.7	347.3	287.3	227.3	178.2	140.0	87.3
40°	394.5	390.9	383.6	362.7	335.5	289.1	240.9	188.2	144.5	112.7	70.9
42.5°	301.8	300.9	300.0	287.3	268.2	235.5	192.7	149.1	116.4	88.2	56.4
45°	226.4	228.2	226.4	221.8	206.4	184.5	151.8	118.2	90.0	70.9	42.7
47.5°	164.5	166.4	167.3	169.1	160.9	140.0	112.7	90.0	68.2	54.5	34.5
50°	113.6	118.2	120.9	122.7	116.4	103.6	83.6	64.5	50.0	41.8	28.2
52.5°	81.8	82.7	87.3	89.1	85.5	72.7	58.2	43.6	37.3	30.9	21.8
55°	55.5	55.5	61.8	64.5	60.9	50.9	39.1	30.9	26.4	21.8	16.4
57.5°	34.5	36.4	40.9	43.6	40.9	33.6	26.4	21.8	19.1	17.3	11.8
60°	22.7	24.5	26.4	29.1	27.3	20.9	17.3	15.5	14.5	12.7	9.1
62.5°	14.5	15.5	17.3	19.1	16.4	12.7	11.8	10.9	10.0	10.0	7.3
65°	9.1	9.1	10.9	11.8	10.0	8.2	8.2	8.2	8.2	7.3	5.5
67.5°	5.5	5.5	6.4	6.4	5.5	5.5	5.5	5.5	5.5	5.5	3.6
70°	2.7	2.7	3.6	3.6	2.7	3.6	3.6	3.6	3.6	3.6	2.7
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.7	1.8	1.8
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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°	588.2	588.2	588.2
2.5°	562.7	553.6	548.2
5°	508.2	486.4	478.2
7.5°	451.8	423.6	413.6
10°	397.3	360.0	346.4
12.5°	344.5	309.1	294.5
15°	299.1	264.5	254.5
17.5°	258.2	226.4	215.5
20°	220.0	192.7	182.7
22.5°	189.1	164.5	155.5
25°	160.0	138.2	133.6
27.5°	135.5	118.2	115.5
30°	114.5	100.9	100.0
32.5°	96.4	88.2	87.3
35°	81.8	75.5	76.4
37.5°	70.0	66.4	68.2
40°	59.1	57.3	60.0
42.5°	49.1	50.0	52.7
45°	40.0	43.6	46.4
47.5°	32.7	38.2	40.0
50°	26.4	32.7	33.6
52.5°	20.9	27.3	27.3
55°	17.3	21.8	22.7
57.5°	13.6	17.3	17.3
60°	10.9	13.6	13.6
62.5°	8.2	9.1	10.0
65°	5.5	6.4	6.4
67.5°	3.6	4.5	4.5
70°	1.8	2.7	1.8
72.5°	0.9	0.9	0.9
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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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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