

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: P886517

Luminaire Tested: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMW-850LM-2700K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886517
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: ML310LSFL95FS1E-TIR4D25AWW-TL3RWMW-850LM-2700K
Description: 3IN ROUND ML FLEX, SELECTABLE CCT, WITH WW TIR, MATTE WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 731.8 lumens
Efficiency: N/A
Efficacy: 53.8 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

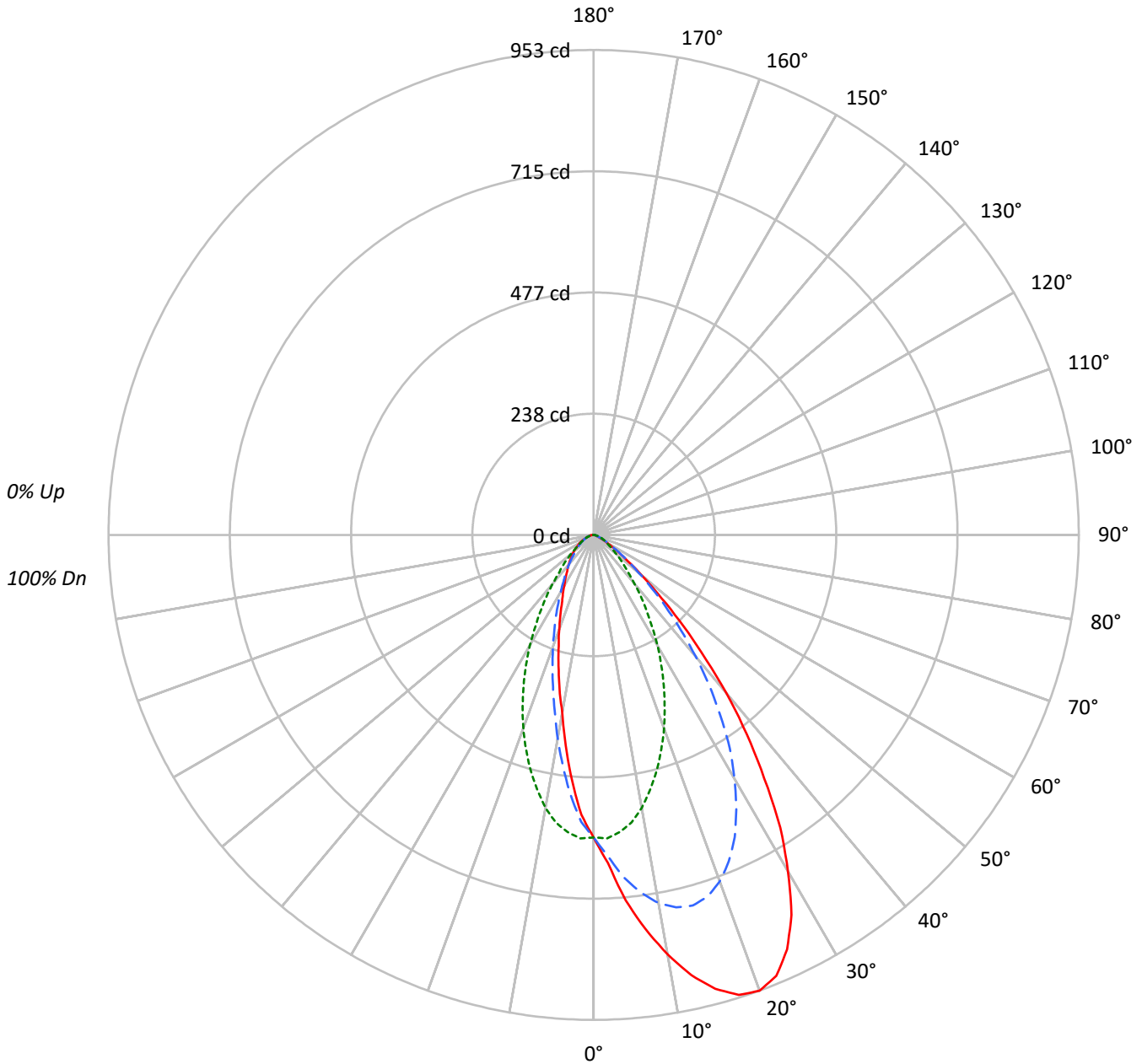
Input Watts (W): 13.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91					91			
2	105	100	95	91	103	98	93	90	95	91	88	91	88	86	89	86	84	82					82			
3	99	91	85	81	97	90	84	80	87	82	79	85	81	77	82	79	76	74					74			
4	93	84	77	72	91	83	77	72	80	75	71	78	74	70	76	73	69	68					68			
5	87	77	71	66	85	76	70	65	75	69	65	73	68	64	71	67	63	62					62			
6	82	72	65	60	80	71	64	60	69	63	59	68	63	59	66	62	58	57					57			
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52					52			
8	73	62	55	50	72	61	55	50	60	54	50	59	54	50	58	53	50	48					48			
9	69	58	51	47	68	57	51	47	56	51	46	55	50	46	55	50	46	45					45			
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41					41			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	130319	130319	130319	130319	130319
5°	158617	148624	129011	113207	106823
10°	186347	163580	121196	90446	78912
15°	209604	171113	108718	70148	60454
20°	222433	169006	94368	54488	46017
25°	217440	158525	78706	42220	35615
30°	193270	140009	63503	32663	29220
35°	156413	116165	48399	26020	24815
40°	115760	89095	35638	21326	21841
45°	73558	62130	26483	17459	19444
50°	41551	39214	19513	14874	17671
55°	22594	24143	14604	13189	15292
60°	12367	14341	12367	11578	13552
65°	7057	9210	10377	10377	11311
70°	4680	6123	9296	9296	9296
75°	3050	4660	7710	8472	8472
80°	2273	2841	5683	8082	9218
85°	2264	2264	6793	9057	9057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 73558 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	7.7
10°-20°	149.8	20.5
20°-30°	191.6	26.2
30°-40°	164.2	22.4
40°-50°	96.4	13.2
50°-60°	43.4	5.9
60°-70°	19.5	2.7
70°-80°	8.5	1.2
80°-90°	2.5	0.3
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°	397.3	54.3
0°-40°	561.5	76.7
0°-60°	701.3	95.8
0°-90°	731.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	731.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	594	594	594	594	594	
5°	721	675	586	514	485	72
15°	923	754	479	309	266	261
25°	899	655	325	174	147	407
35°	584	434	181	97	93	364
45°	237	200	85	56	63	187
55°	59	63	38	34	40	57
65°	14	18	20	20	22	15
75°	4	6	9	10	10	4
85°	1	1	3	4	4	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°	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3
2.5°	645.2	645.2	645.2	643.4	634.3	627.9	621.6	613.4	605.2	597.0	577.9
5°	720.6	718.8	707.0	697.9	684.3	666.1	647.0	626.1	606.1	586.1	546.1
7.5°	781.5	776.9	768.8	747.9	723.3	694.3	662.5	630.6	599.7	569.8	508.9
10°	836.9	835.1	816.9	791.5	755.1	714.2	670.6	626.1	582.5	544.3	465.3
12.5°	886.0	881.5	858.7	821.5	776.0	723.3	667.9	613.4	560.7	512.5	424.4
15°	923.3	914.2	885.1	840.6	785.1	722.4	657.9	592.5	532.5	478.9	378.0
17.5°	947.8	935.1	899.6	846.9	781.5	708.8	636.1	564.3	498.9	441.6	336.2
20°	953.2	939.6	899.6	837.8	764.2	684.3	607.0	530.7	460.7	404.4	296.2
22.5°	937.8	921.4	882.4	816.9	737.9	650.6	569.8	491.6	423.5	364.4	258.1
25°	898.7	886.0	843.3	780.6	699.7	610.7	528.0	452.5	382.6	325.3	222.6
27.5°	841.5	828.7	785.1	728.8	647.9	566.1	482.5	408.9	341.7	287.2	193.6
30°	763.3	754.2	719.7	662.5	592.5	513.4	435.3	361.7	299.9	250.8	166.3
32.5°	682.4	668.8	639.7	594.3	536.1	459.8	386.2	319.0	259.9	212.6	141.8
35°	584.3	581.6	554.3	519.8	465.3	402.6	332.6	271.7	221.7	180.8	121.8
37.5°	494.3	489.8	471.6	441.6	400.7	345.3	285.3	230.8	188.1	151.8	101.8
40°	404.4	401.7	388.0	363.5	334.4	288.1	241.7	190.8	152.7	124.5	84.5
42.5°	312.6	309.0	306.2	295.3	270.8	236.3	197.2	156.3	126.3	100.9	70.9
45°	237.2	235.4	233.5	224.5	212.6	188.1	156.3	124.5	102.7	85.4	60.0
47.5°	169.9	172.7	171.7	172.7	165.4	143.6	119.9	98.1	83.6	70.9	52.7
50°	121.8	120.9	127.2	129.9	122.7	107.2	90.0	76.3	65.4	57.2	44.5
52.5°	85.4	87.2	94.5	96.3	90.9	80.9	68.2	58.2	51.8	46.3	38.2
55°	59.1	60.0	67.2	70.9	66.3	60.0	50.9	44.5	41.8	38.2	31.8
57.5°	40.0	42.7	47.3	50.0	48.2	41.8	37.3	35.4	33.6	32.7	28.2
60°	28.2	29.1	33.6	36.3	34.5	30.9	29.1	28.2	28.2	28.2	25.4
62.5°	19.1	20.0	23.6	25.4	24.5	22.7	21.8	23.6	23.6	23.6	21.8
65°	13.6	13.6	16.4	18.2	18.2	17.3	18.2	19.1	20.0	20.0	19.1
67.5°	9.1	10.0	10.9	12.7	12.7	13.6	14.5	16.4	17.3	17.3	17.3
70°	7.3	7.3	8.2	9.1	9.1	10.0	11.8	12.7	13.6	14.5	14.5
72.5°	5.5	5.5	5.5	6.4	7.3	7.3	9.1	10.0	10.9	11.8	11.8
75°	3.6	3.6	3.6	4.5	5.5	5.5	6.4	7.3	8.2	9.1	10.0
77.5°	2.7	2.7	2.7	2.7	3.6	3.6	4.5	5.5	6.4	6.4	7.3
80°	1.8	1.8	1.8	1.8	1.8	2.7	2.7	3.6	4.5	4.5	5.5
82.5°	0.9	0.9	0.9	1.8	1.8	1.8	2.7	2.7	3.6	3.6	4.5
85°	0.9	0.9	0.9	0.9	0.9	0.9	1.8	1.8	1.8	2.7	3.6
87.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	1.8
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°	594.3	594.3	594.3
2.5°	564.3	556.1	550.7
5°	514.3	491.6	485.3
7.5°	459.8	428.0	418.0
10°	406.2	368.9	354.4
12.5°	353.5	317.1	309.9
15°	309.0	275.3	266.3
17.5°	268.1	239.0	229.0
20°	233.5	205.4	197.2
22.5°	200.8	177.2	170.8
25°	174.5	153.6	147.2
27.5°	149.9	131.8	130.9
30°	129.0	117.2	115.4
32.5°	111.8	103.6	103.6
35°	97.2	91.8	92.7
37.5°	85.4	81.8	83.6
40°	74.5	74.5	76.3
42.5°	65.4	67.2	69.1
45°	56.3	61.8	62.7
47.5°	49.1	55.4	57.2
50°	43.6	50.0	51.8
52.5°	39.1	44.5	46.3
55°	34.5	40.0	40.0
57.5°	30.0	34.5	35.4
60°	26.4	30.0	30.9
62.5°	22.7	25.4	26.4
65°	20.0	21.8	21.8
67.5°	17.3	18.2	18.2
70°	14.5	15.4	14.5
72.5°	12.7	12.7	11.8
75°	10.0	10.0	10.0
77.5°	8.2	8.2	8.2
80°	6.4	7.3	7.3
82.5°	5.5	5.5	5.5
85°	3.6	3.6	3.6
87.5°	1.8	1.8	1.8
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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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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