

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: P645609

Luminaire Tested: HLSMS9129401EWH

Issue Date: 3/6/2023

Test Information

Test Method: LM-79-2019
Report Number: P645609
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ETA22050021P-002 R2)
Test Lab: ETA Testing Technology Co., Ltd.
Issue Date: 3/6/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLSMS9129401EWH
Description: 9IN 1200LM WET LOCATION, WITH MOTION SENSOR
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

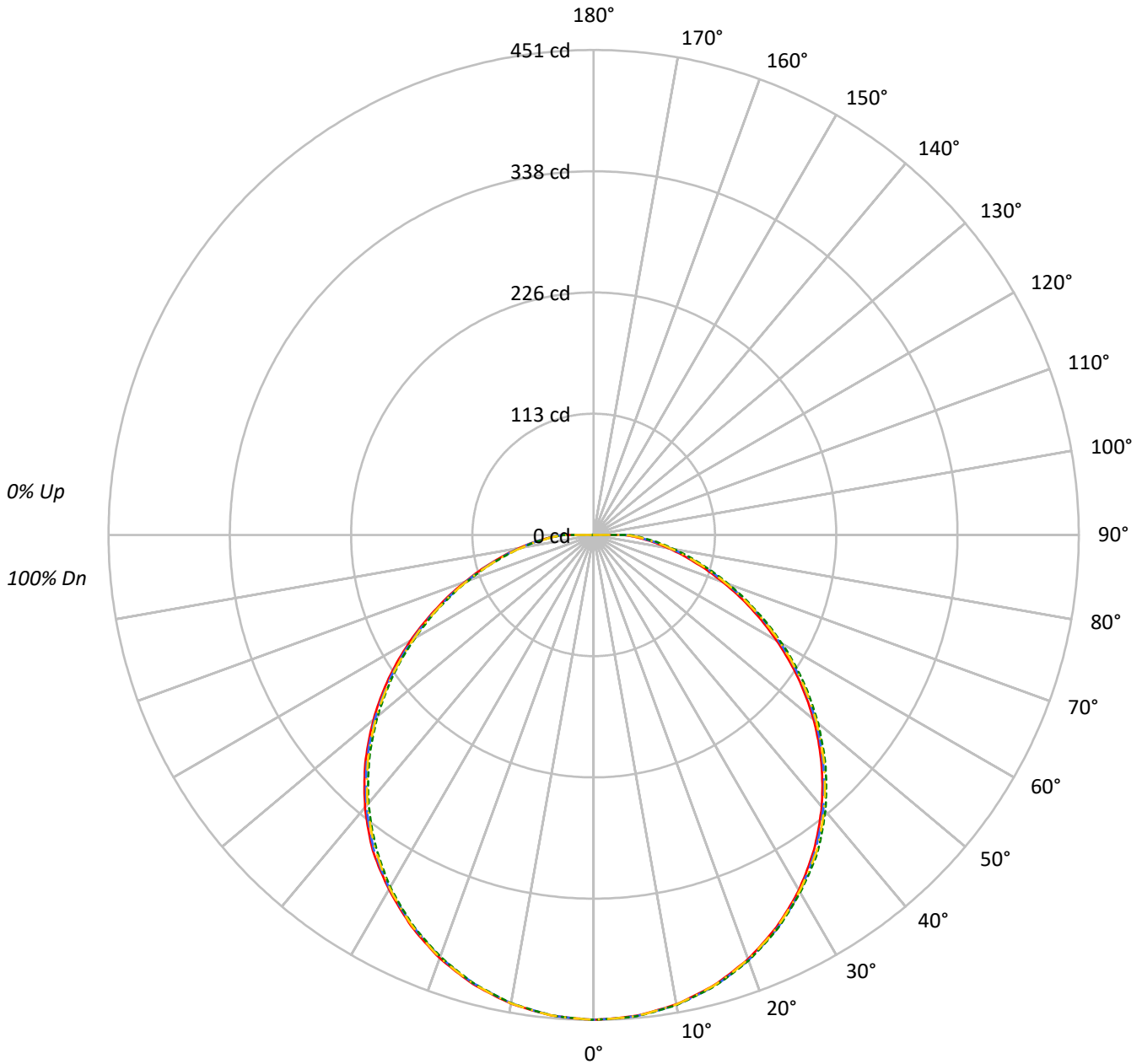
Lumens per Lamp: 1300.1 (1 lamp)
Luminaire Lumens: 1330.0 lumens
Efficiency: 102.3%
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.37
Luminous Opening: Circular (Dia: 0.75' x H: 0')
CIE Type: Direct

Input Watts (W): 17.8
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: 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									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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	104	104	104	102																			
1	110	105	100	96	107	103	98	94	98	95	91	94	91	88	90	88	86	84																			
2	100	91	84	78	97	89	82	77	85	80	75	82	77	73	79	75	71	69																			
3	91	80	71	64	88	78	70	64	75	68	62	72	66	61	70	65	60	58																			
4	83	71	61	54	81	69	61	54	67	59	53	64	58	52	62	56	52	49																			
5	77	63	54	47	74	62	53	46	60	52	46	58	51	45	56	50	45	43																			
6	71	57	47	41	69	56	47	40	54	46	40	52	45	40	50	44	39	37																			
7	66	51	42	36	64	51	42	36	49	41	35	47	40	35	46	40	35	33																			
8	61	47	38	32	59	46	38	32	45	37	32	44	37	31	42	36	31	29																			
9	57	43	35	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26																			
10	53	40	32	26	52	39	31	26	38	31	26	37	30	26	36	30	26	24																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	10986	10986	10986	10986
5°	10981	10994	10974	10969
10°	10965	10982	10950	10935
15°	10932	10957	10912	10887
20°	10882	10921	10859	10817
25°	10815	10869	10788	10737
30°	10733	10801	10708	10637
35°	10624	10773	10654	10511
40°	10493	10655	10515	10356
45°	10320	10506	10344	10168
50°	10117	10321	10128	9931
55°	9859	10106	9876	9660
60°	9566	9853	9575	9341
65°	9299	9605	9270	9057
70°	9061	9460	9047	8819
75°	9075	9621	9075	8830
80°	9808	10579	9794	9513
85°	13223	14621	13167	12692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 85°
 Luminance: 14621 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	42.7	3.2	3.3
10°-20°	122.2	9.2	9.4
20°-30°	185.2	13.9	14.2
30°-40°	223.6	16.8	17.2
40°-50°	231.3	17.4	17.8
50°-60°	207.9	15.6	16.0
60°-70°	160.3	12.1	12.3
70°-80°	103.7	7.8	8.0
80°-90°	53.2	4.0	4.1
90°-100°	0.0	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	350.0	26.3	26.9
0°-40°	573.6	43.1	44.1
0°-60°	1012.8	76.1	77.9
0°-90°	1330.0	100.0	102.3
90°-120°	0.0	0.0	0.0
90°-150°	0.0	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	1330.0	100.0	102.3

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	451	451	451	451	451	
5°	449	450	449	448	449	43
15°	433	434	433	432	433	122
25°	402	404	401	399	402	185
35°	357	362	358	353	357	223
45°	300	305	300	295	300	231
55°	232	238	232	227	232	208
65°	161	167	161	157	161	160
75°	96	102	96	94	96	103
85°	47	52	47	45	47	52
90°	28	33	28	27	28	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9	450.9
5°	449.0	449.3	449.3	449.3	449.5	449.3	449.2	448.9	448.7	448.6	448.5
10°	443.2	443.7	443.7	443.9	443.9	443.7	443.4	443.0	442.6	442.3	442.1
15°	433.4	434.1	434.3	434.5	434.4	434.1	433.7	433.1	432.6	432.0	431.7
20°	419.7	420.7	420.9	421.3	421.2	420.6	420.2	419.3	418.8	417.9	417.6
25°	402.3	403.5	403.8	404.3	404.3	403.4	403.1	401.8	401.3	400.1	399.9
30°	381.5	383.0	383.2	384.0	383.9	382.9	382.5	381.0	380.6	379.0	379.5
35°	357.2	361.2	359.1	362.2	362.2	358.8	360.6	356.6	358.2	354.5	356.5
40°	329.9	333.7	332.0	334.9	335.0	331.7	333.3	329.3	330.6	326.9	328.7
45°	299.5	303.5	301.9	304.8	304.9	301.6	303.1	299.0	300.2	296.5	298.1
50°	266.9	270.8	269.4	272.2	272.3	269.2	270.3	266.6	267.2	263.8	265.0
55°	232.1	236.0	235.2	237.7	237.9	234.9	235.7	232.1	232.5	229.1	230.1
60°	196.3	200.2	199.8	201.9	202.2	199.4	200.0	196.6	196.5	193.3	194.0
65°	161.3	164.3	164.9	166.4	166.6	164.8	164.3	161.7	160.8	158.5	158.4
70°	127.2	130.2	131.0	132.6	132.8	130.9	130.4	127.9	127.0	124.8	125.0
75°	96.4	99.1	100.1	101.8	102.2	100.3	99.6	97.1	96.4	94.6	95.0
80°	69.9	72.0	72.9	74.7	75.4	73.6	72.6	70.2	69.8	68.4	68.9
85°	47.3	48.6	49.5	51.2	52.3	50.6	49.4	47.1	47.1	46.1	46.8
90°	27.7	29.3	30.1	31.7	32.8	31.7	30.2	28.3	27.8	27.9	28.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	450.9	450.9	450.9	450.9	450.9	450.9
5°	448.4	448.5	448.6	448.7	448.9	449.0
10°	441.9	442.0	442.2	442.4	442.8	443.2
15°	431.4	431.6	432.0	432.1	432.9	433.4
20°	417.2	417.2	417.8	418.2	419.2	419.7
25°	399.3	399.4	400.2	400.5	401.8	402.3
30°	378.1	378.1	379.3	379.3	381.2	381.5
35°	353.5	353.4	356.7	354.8	358.8	357.2
40°	325.8	325.6	328.9	327.0	331.1	329.9
45°	295.2	295.1	298.1	296.7	300.6	299.5
50°	262.5	262.0	265.0	263.7	267.6	266.9
55°	227.8	227.4	230.0	228.9	232.6	232.1
60°	192.1	191.7	194.0	193.1	196.3	196.3
65°	157.5	157.1	158.5	158.2	160.4	161.3
70°	124.2	123.8	125.0	124.5	126.2	127.2
75°	94.5	93.8	94.8	94.2	95.5	96.4
80°	68.5	67.8	68.5	67.7	69.1	69.9
85°	46.3	45.4	45.9	45.3	46.7	47.3
90°	28.2	27.2	27.3	27.3	28.1	27.7

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

Scaled Data Report



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— 0°-180° - - 45°-225° - - - - 90°-270° - · - · 135°-315°

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