

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: P645608

Luminaire Tested: HLSMS9129301EWH

Issue Date: 3/6/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P645608  
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: HLSMS9129301EWH  
Description: 9IN 1200LM WET LOCATION, WITH MOTION SENSOR  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

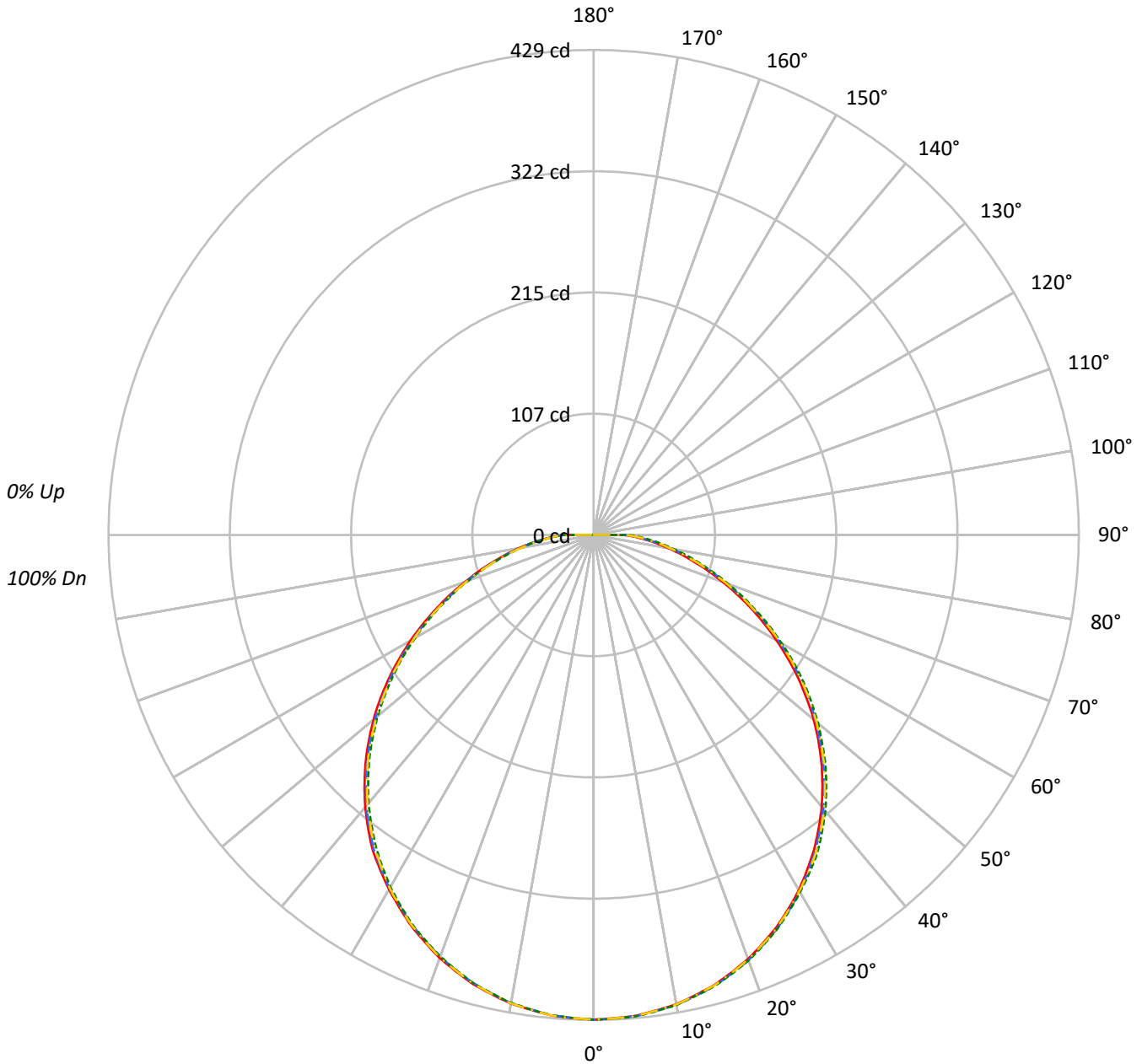
Lumens per Lamp: 1300.1 (1 lamp)  
Luminaire Lumens: 1265.0 lumens  
Efficiency: 97.3%  
Efficacy: 71.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.37  
Luminous Opening: Circular (Dia: 0.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.7  
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					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	116	116	116	116	113	113	113	113	108	108	108	104	104	104	99	99	99	99	99	99	97	
1	105	100	95	91	102	98	93	90	93	90	87	90	87	84	86	84	82	86	84	82	80	
2	95	87	80	74	92	85	78	73	81	76	71	78	73	69	75	71	68	75	71	68	66	
3	87	76	68	61	84	74	67	60	71	65	59	69	63	58	66	61	57	66	61	57	55	
4	79	67	58	52	77	66	58	51	63	56	51	61	55	50	59	54	49	59	54	49	47	
5	73	60	51	44	71	59	50	44	57	49	44	55	48	43	53	47	43	53	47	43	41	
6	67	54	45	39	65	53	45	38	51	44	38	50	43	38	48	42	37	48	42	37	35	
7	62	49	40	34	61	48	40	34	47	39	34	45	38	33	44	38	33	44	38	33	31	
8	58	45	36	30	56	44	36	30	43	35	30	41	35	30	40	34	30	40	34	30	28	
9	54	41	33	27	53	40	33	27	39	32	27	38	32	27	37	31	27	37	31	27	25	
10	51	38	30	25	50	37	30	25	36	29	25	35	29	24	34	29	24	34	29	24	23	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	10448	10448	10448	10448
5°	10443	10456	10436	10431
10°	10428	10445	10416	10401
15°	10397	10423	10380	10354
20°	10351	10387	10327	10288
25°	10288	10337	10261	10213
30°	10210	10272	10184	10117
35°	10107	10247	10134	9997
40°	9981	10136	10000	9850
45°	9817	9992	9837	9669
50°	9624	9817	9635	9446
55°	9379	9613	9392	9184
60°	9098	9371	9107	8888
65°	8844	9138	8815	8613
70°	8620	8997	8605	8392
75°	8632	9150	8632	8406
80°	9331	10060	9317	9050
85°	12580	13894	12524	12077

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 85°  
 Luminance: 13894 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	40.6	3.2	3.1
10°-20°	116.2	9.2	8.9
20°-30°	176.1	13.9	13.5
30°-40°	212.7	16.8	16.4
40°-50°	220.0	17.4	16.9
50°-60°	197.7	15.6	15.2
60°-70°	152.5	12.1	11.7
70°-80°	98.6	7.8	7.6
80°-90°	50.6	4.0	3.9
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°	332.9	26.3	25.6
0°-40°	545.6	43.1	42.0
0°-60°	963.3	76.1	74.1
0°-90°	1265.0	100.0	97.3
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°	1265.0	100.0	97.3

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	429	429	429	429	429	
5°	427	428	427	426	427	41
15°	412	413	412	410	412	116
25°	383	384	382	380	383	176
35°	340	344	341	336	340	213
45°	285	290	286	281	285	220
55°	221	226	221	216	221	197
65°	153	158	153	149	153	152
75°	92	97	92	89	92	98
85°	45	50	45	43	45	50
90°	26	31	26	26	26	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8	428.8
5°	427.0	427.3	427.3	427.3	427.5	427.3	427.2	426.9	426.7	426.6	426.5
10°	421.5	422.0	422.0	422.2	422.2	422.0	421.7	421.4	421.0	420.7	420.5
15°	412.2	412.9	413.1	413.3	413.2	412.9	412.5	411.9	411.5	410.9	410.6
20°	399.2	400.1	400.3	400.7	400.6	400.0	399.7	398.8	398.3	397.5	397.2
25°	382.7	383.8	384.1	384.5	384.5	383.7	383.4	382.2	381.7	380.6	380.4
30°	362.9	364.2	364.4	365.2	365.1	364.1	363.8	362.4	362.0	360.5	361.0
35°	339.8	343.5	341.6	344.5	344.5	341.3	342.9	339.2	340.7	337.2	339.1
40°	313.8	317.4	315.8	318.6	318.7	315.5	317.0	313.2	314.4	310.9	312.6
45°	284.9	288.7	287.2	289.9	290.0	286.9	288.3	284.4	285.5	282.0	283.5
50°	253.9	257.6	256.3	258.9	259.0	256.1	257.1	253.6	254.2	250.9	252.0
55°	220.8	224.5	223.7	226.1	226.3	223.4	224.2	220.8	221.1	217.9	218.8
60°	186.7	190.4	190.0	192.1	192.3	189.7	190.2	187.0	186.9	183.9	184.5
65°	153.4	156.3	156.8	158.3	158.5	156.7	156.3	153.8	152.9	150.8	150.7
70°	121.0	123.8	124.6	126.1	126.3	124.5	124.0	121.6	120.8	118.7	118.9
75°	91.7	94.3	95.2	96.8	97.2	95.4	94.7	92.3	91.7	89.9	90.3
80°	66.5	68.4	69.3	71.0	71.7	70.0	69.0	66.8	66.4	65.1	65.6
85°	45.0	46.3	47.1	48.7	49.7	48.1	47.0	44.8	44.8	43.9	44.5
90°	26.3	27.8	28.6	30.1	31.2	30.1	28.7	26.9	26.4	26.5	27.1



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	428.8	428.8	428.8	428.8	428.8	428.8
5°	426.4	426.5	426.6	426.7	426.9	427.0
10°	420.3	420.4	420.6	420.8	421.2	421.5
15°	410.3	410.5	410.9	411.0	411.8	412.2
20°	396.8	396.8	397.4	397.7	398.7	399.2
25°	379.8	379.9	380.7	380.9	382.2	382.7
30°	359.6	359.6	360.8	360.8	362.6	362.9
35°	336.2	336.1	339.3	337.5	341.3	339.8
40°	309.9	309.7	312.8	311.0	314.9	313.8
45°	280.7	280.6	283.5	282.2	285.9	284.9
50°	249.6	249.2	252.0	250.8	254.5	253.9
55°	216.6	216.2	218.7	217.7	221.2	220.8
60°	182.7	182.4	184.5	183.7	186.7	186.7
65°	149.8	149.4	150.8	150.5	152.6	153.4
70°	118.2	117.8	118.9	118.4	120.1	121.0
75°	89.8	89.3	90.1	89.5	90.8	91.7
80°	65.2	64.5	65.2	64.4	65.7	66.5
85°	44.1	43.2	43.7	43.1	44.4	45.0
90°	26.8	25.9	26.0	26.0	26.7	26.3

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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