

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: P645607

Luminaire Tested: HLS9129501EWH

Issue Date: 3/6/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P645607  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( ETA22050021P-001)  
Test Lab: ETA Testing Technology Co., Ltd.  
Issue Date: 3/6/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: HLS9129501EWH  
Description: 9IN 1200LM WET LOCATION  
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

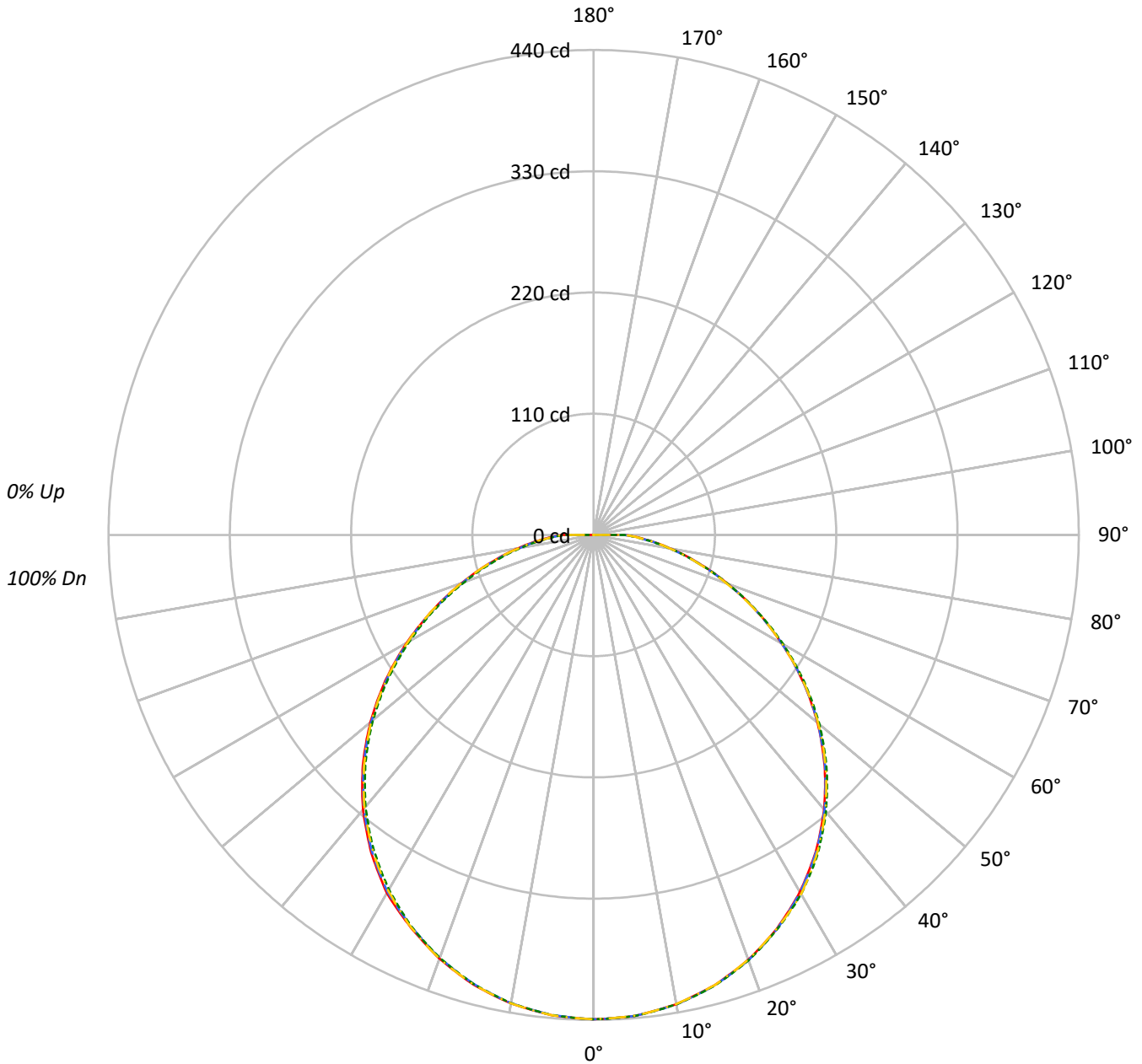
Lumens per Lamp: 1272.3 (1 lamp)  
Luminaire Lumens: 1310.0 lumens  
Efficiency: 103.0%  
Efficacy: 72.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38  
Luminous Opening: Circular (Dia: 0.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 18  
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



TEST NUMBER: P645607  
CATALOG NUMBER: HLS9129501EWH

### Luminous Intensity Polar Plot





TEST NUMBER: P645607  
 CATALOG NUMBER: HLS9129501EWH

**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	123	123	123	123	120	120	120	120	114	114	114	110	110	110	105	105	105	103																			
1	111	106	101	97	108	103	99	95	99	95	92	95	92	89	91	89	86	84																			
2	101	92	84	78	98	90	83	77	86	80	75	83	78	73	79	75	72	69																			
3	92	80	71	65	89	79	70	64	75	69	63	73	67	62	70	65	61	58																			
4	84	71	62	54	81	70	61	54	67	59	53	65	58	53	62	57	52	50																			
5	77	63	54	47	75	62	53	47	60	52	46	58	51	45	56	50	45	43																			
6	71	57	48	41	69	56	47	41	54	46	40	52	45	40	51	44	39	37																			
7	66	52	42	36	64	51	42	36	49	41	36	48	41	35	46	40	35	33																			
8	61	47	38	32	60	46	38	32	45	37	32	44	37	32	42	36	31	29																			
9	57	43	35	29	56	43	34	29	41	34	29	40	33	28	39	33	28	26																			
10	54	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24																			

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

	0°	90°	180°	270°
0°	10708	10708	10708	10708
5°	10710	10712	10698	10695
10°	10695	10700	10680	10673
15°	10670	10682	10652	10637
20°	10636	10651	10607	10589
25°	10587	10605	10557	10527
30°	10522	10590	10556	10452
35°	10443	10529	10461	10354
40°	10340	10426	10350	10235
45°	10206	10296	10203	10082
50°	10045	10128	10018	9901
55°	9838	9919	9800	9664
60°	9595	9673	9536	9390
65°	9380	9414	9259	9120
70°	9197	9204	9054	8862
75°	9225	9188	9075	8783
80°	9892	9766	9723	9303
85°	13167	12887	13027	12188

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 85°  
 Luminance: 13251 cd/sqm



TEST NUMBER: P645607  
 CATALOG NUMBER: HLS9129501EWH

**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	41.6	3.2	3.3
10°-20°	119.3	9.1	9.4
20°-30°	181.3	13.8	14.3
30°-40°	219.7	16.8	17.3
40°-50°	228.2	17.4	17.9
50°-60°	206.3	15.7	16.2
60°-70°	159.9	12.2	12.6
70°-80°	102.7	7.8	8.1
80°-90°	51.1	3.9	4.0
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°	342.2	26.1	26.9
0°-40°	561.9	42.9	44.2
0°-60°	996.4	76.1	78.3
0°-90°	1310.0	100.0	103.0
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°	1310.0	100.0	103.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	440	440	440	440	440	
5°	438	438	437	437	438	42
15°	423	424	422	422	423	119
25°	394	394	393	392	394	181
35°	351	354	352	348	351	220
45°	296	299	296	293	296	228
55°	232	234	231	228	232	207
65°	163	163	161	158	163	161
75°	98	98	96	93	98	104
85°	47	46	47	44	47	53
90°	28	27	28	26	28	



TEST NUMBER: P645607  
 CATALOG NUMBER: HLS9129501EWH

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	439.5	439.5	439.5	439.5	439.5	439.5	439.5	439.5	439.5	439.5	439.5
5°	437.9	437.9	437.9	438.1	438.0	437.9	437.8	437.7	437.4	437.2	437.2
10°	432.3	432.5	432.5	432.8	432.5	432.3	432.2	431.9	431.7	431.4	431.4
15°	423.0	423.4	423.4	423.7	423.5	423.1	423.0	422.6	422.3	421.7	421.6
20°	410.2	410.7	410.6	411.1	410.8	410.2	410.1	409.4	409.1	408.3	408.4
25°	393.8	394.7	394.3	395.0	394.5	393.7	393.8	392.9	392.7	391.6	391.7
30°	374.0	376.9	374.5	377.8	376.4	373.8	376.4	373.0	375.2	371.6	374.0
35°	351.1	354.2	351.7	354.4	354.0	350.8	353.0	349.8	351.7	348.3	350.6
40°	325.1	328.1	325.7	328.2	327.8	324.8	326.8	323.6	325.4	322.0	324.1
45°	296.2	299.1	296.8	299.1	298.8	295.7	297.7	294.5	296.1	292.9	294.8
50°	265.0	267.7	265.4	267.5	267.2	264.2	265.9	263.0	264.3	261.4	263.1
55°	231.6	233.9	231.9	233.7	233.5	230.9	232.1	229.5	230.7	227.9	229.4
60°	196.9	198.9	197.0	198.5	198.5	196.1	197.1	194.7	195.7	193.2	194.6
65°	162.7	163.8	162.5	163.1	163.3	161.7	161.9	160.3	160.6	159.2	159.5
70°	129.1	129.9	128.5	129.0	129.2	127.7	128.0	126.8	127.1	125.6	125.9
75°	98.0	98.7	97.1	97.4	97.6	96.4	96.9	95.8	96.4	95.0	95.1
80°	70.5	70.8	69.4	69.4	69.6	68.8	69.4	68.7	69.3	67.8	67.7
85°	47.1	47.4	46.0	45.9	46.1	45.4	46.3	45.9	46.6	44.9	44.9
90°	28.0	28.4	27.6	26.9	27.3	27.1	27.8	27.8	27.8	26.7	26.5



TEST NUMBER: P645607  
 CATALOG NUMBER: HLS9129501EWH

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	439.5	439.5	439.5	439.5	439.5	439.5
5°	437.3	437.3	437.3	437.5	437.8	437.9
10°	431.3	431.4	431.6	431.7	432.2	432.3
15°	421.6	421.7	422.0	422.1	422.9	423.0
20°	408.1	408.4	408.9	409.1	410.0	410.2
25°	391.3	391.6	392.4	392.6	393.7	393.8
30°	371.2	371.5	374.7	372.6	376.3	374.0
35°	347.8	348.1	351.4	349.5	353.1	351.1
40°	321.5	321.8	324.9	323.3	326.9	325.1
45°	292.3	292.6	295.8	294.4	298.0	296.2
50°	260.9	261.2	264.1	263.1	266.4	265.0
55°	227.4	227.5	230.4	229.6	232.9	231.6
60°	192.7	192.7	195.3	194.9	198.0	196.9
65°	158.4	158.2	160.2	160.7	163.0	162.7
70°	124.8	124.4	126.3	127.1	129.4	129.1
75°	93.9	93.3	95.3	96.0	98.1	98.0
80°	66.8	66.3	67.8	68.4	70.4	70.5
85°	44.0	43.6	44.9	45.1	46.8	47.1
90°	26.1	25.8	26.4	26.6	27.7	28.0

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°    - · - 135°-315°

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



(END OF REPORT)