

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: P645603

Luminaire Tested: HLS6099401EWH

Issue Date: 3/6/2023

Test Information

Test Method: LM-79-2019
Report Number: P645603
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ETA20070011P-002 R3)
Test Lab: ETA Testing Technology Co., Ltd.
Issue Date: 3/6/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: HLS6099401EWH
Description: 6IN 900LM WET LOCATION
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

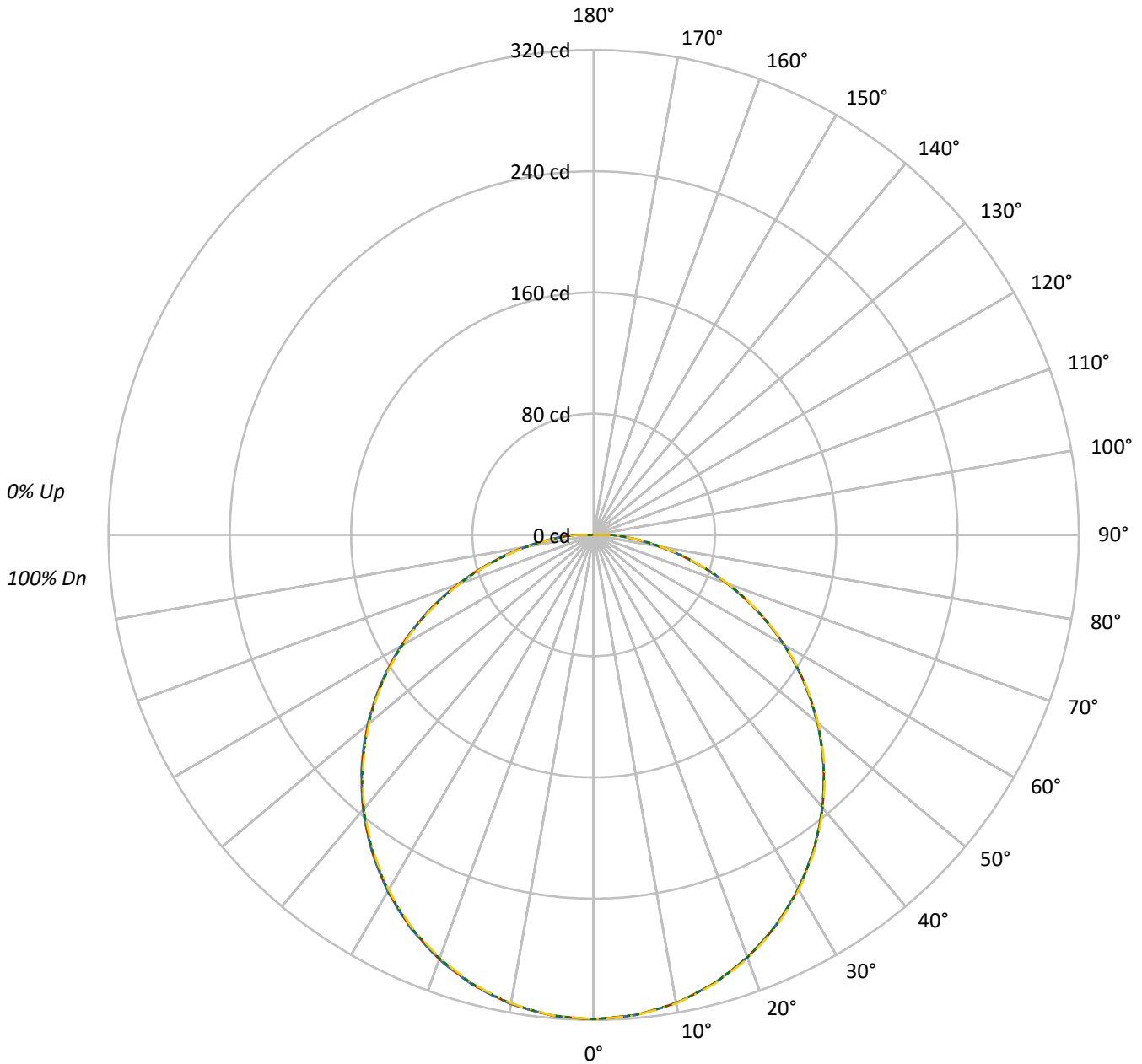
Lumens per Lamp: 972.58 (1 lamp)
Luminaire Lumens: 945.0 lumens
Efficiency: 97.2%
Efficacy: 61.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.38
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 15.4
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	103	103	103	99	99	99	99	99	99	97	
1	105	100	96	92	102	98	94	90	94	90	87	90	87	85	86	84	82	86	84	82	80	
2	95	87	80	74	93	85	79	73	82	76	72	78	74	70	75	72	68	75	72	68	66	
3	87	76	68	61	84	75	67	61	72	65	60	69	63	59	66	62	58	66	62	58	55	
4	79	67	59	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	51	44	57	49	44	55	48	43	53	47	43	53	47	43	41	
6	67	54	45	39	65	53	45	39	51	44	38	50	43	38	48	42	38	48	42	38	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	49	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°	17515	17515	17515	17515
5°	17494	17494	17516	17510
10°	17457	17457	17490	17474
15°	17389	17389	17441	17423
20°	17303	17309	17379	17344
25°	17203	17209	17287	17263
30°	17079	17085	17180	17155
35°	16952	16952	17059	17025
40°	16803	16796	16917	16882
45°	16630	16630	16761	16715
50°	16443	16434	16579	16520
55°	16200	16210	16353	16286
60°	15909	15920	16073	15997
65°	15501	15540	15696	15592
70°	14987	15051	15227	15067
75°	14382	14488	14657	14445
80°	13859	14080	14301	13954
85°	15222	15410	15725	15284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 225°
 Vertical Angle: 45°
 Luminance: 16777 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	30.2	3.2	3.1
10°-20°	86.6	9.2	8.9
20°-30°	131.4	13.9	13.5
30°-40°	158.9	16.8	16.3
40°-50°	166.0	17.6	17.1
50°-60°	152.0	16.1	15.6
60°-70°	118.9	12.6	12.2
70°-80°	72.7	7.7	7.5
80°-90°	28.4	3.0	2.9
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°	248.2	26.3	25.5
0°-40°	407.0	43.1	41.9
0°-60°	725.1	76.7	74.6
0°-90°	945.0	100.0	97.2
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°	945.0	100.0	97.2

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	320	320	320	320	320	
5°	318	318	318	318	318	30
15°	306	306	307	307	306	86
25°	284	284	286	285	284	131
35°	253	253	255	254	253	158
45°	214	214	216	216	214	165
55°	170	170	171	170	170	151
65°	120	120	121	120	120	118
75°	68	68	69	68	68	72
85°	24	24	25	24	24	28
90°	11	11	11	11	11	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	319.5	319.5	319.5	319.5	319.5	319.5	319.5	319.5	319.5	319.5	319.5
5°	317.9	317.9	318.0	317.9	317.9	318.0	318.2	318.2	318.3	318.2	318.4
10°	313.6	313.6	313.6	313.6	313.6	313.6	313.9	313.9	314.2	314.0	314.3
15°	306.4	306.4	306.4	306.5	306.4	306.4	306.9	306.8	307.3	307.1	307.6
20°	296.6	296.7	296.7	296.7	296.7	296.8	297.3	297.2	297.9	297.4	298.0
25°	284.4	284.5	284.2	284.6	284.5	284.4	285.2	285.1	285.8	285.5	286.0
30°	269.8	270.1	269.7	270.0	269.9	269.8	270.6	270.6	271.4	271.1	271.7
35°	253.3	253.5	253.1	253.4	253.3	253.1	254.1	254.0	254.9	254.5	255.0
40°	234.8	235.0	234.6	235.0	234.7	234.6	235.5	235.5	236.4	235.9	236.6
45°	214.5	214.9	214.3	214.7	214.5	214.3	215.2	215.1	216.2	215.7	216.4
50°	192.8	193.1	192.5	192.9	192.7	192.4	193.4	193.3	194.4	193.9	194.7
55°	169.5	169.8	169.3	169.6	169.6	169.3	170.2	170.0	171.1	170.6	171.3
60°	145.1	145.5	144.8	145.3	145.2	144.8	145.7	145.5	146.6	146.1	146.8
65°	119.5	120.0	119.3	119.7	119.8	119.3	120.3	119.9	121.0	120.4	121.3
70°	93.5	94.1	93.2	93.7	93.9	93.4	94.3	93.9	95.0	94.4	95.3
75°	67.9	68.4	67.5	68.0	68.4	67.8	68.6	68.3	69.2	68.7	69.4
80°	43.9	44.6	43.7	44.3	44.6	44.0	44.8	44.3	45.3	44.7	45.6
85°	24.2	24.5	24.1	24.3	24.5	24.3	24.6	24.5	25.0	24.8	25.2
90°	10.6	10.7	10.4	10.6	10.8	10.4	10.7	10.6	11.3	10.9	11.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	319.5	319.5	319.5	319.5	319.5	319.5
5°	318.2	318.2	318.1	318.1	318.0	317.9
10°	314.0	313.9	313.9	313.7	313.6	313.6
15°	307.0	307.0	307.1	306.8	306.7	306.4
20°	297.4	297.3	297.3	296.9	296.9	296.6
25°	285.3	285.4	285.4	284.9	284.9	284.4
30°	270.8	271.0	270.9	270.3	270.4	269.8
35°	254.3	254.4	254.4	253.7	253.8	253.3
40°	235.8	235.9	235.9	235.3	235.5	234.8
45°	215.6	215.6	215.7	214.9	215.3	214.5
50°	193.7	193.7	193.9	193.2	193.5	192.8
55°	170.5	170.4	170.6	169.9	170.3	169.5
60°	146.1	145.9	146.1	145.4	145.9	145.1
65°	120.5	120.2	120.6	119.7	120.4	119.5
70°	94.4	94.0	94.4	93.7	94.3	93.5
75°	68.8	68.2	68.6	67.9	68.5	67.9
80°	44.8	44.2	44.6	43.9	44.7	43.9
85°	24.9	24.3	24.4	24.1	24.5	24.2
90°	11.0	10.6	10.7	10.4	10.6	10.6

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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