

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: P644166

Luminaire Tested: ML5615LSWW9FS1E - 692W WW - 900LM - 2700K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P644166
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-117)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5615LSWW9FS1E - 692W WW - 900LM - 2700K
Description: ML56 RR, WW OPTIC, 6" WW INSERT WITH WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

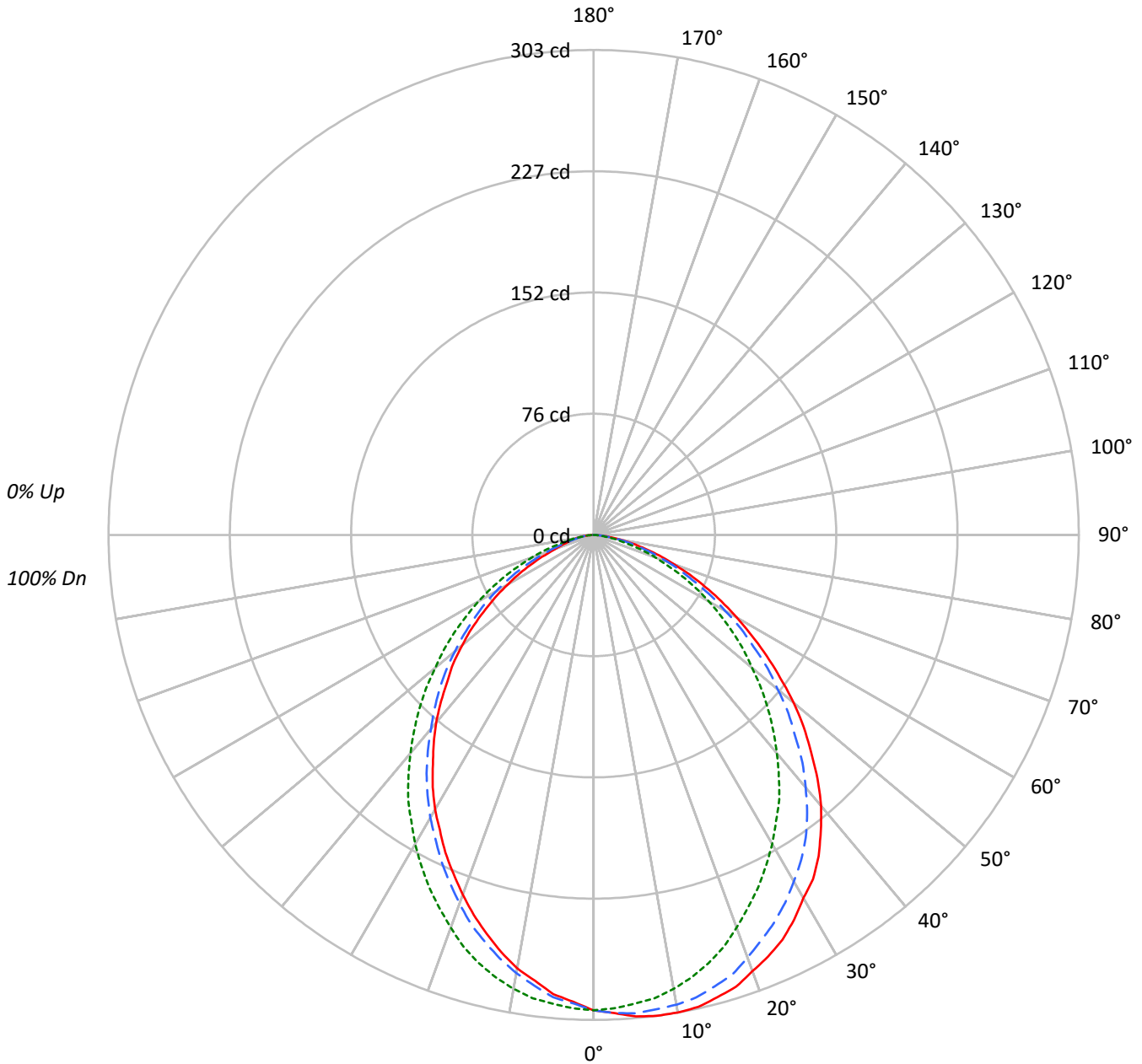
Lumens per Lamp: N/A
Luminaire Lumens: 655.6 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.13 / 1.25
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 10.5
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				
RC	80					70					50					30				
RW	70	50	30	10	70	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		
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	89	87		
2	101	94	88	82	99	92	86	81	88	84	80	85	81	78	82	79	76	74		
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64		
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55		
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49		
6	73	61	52	46	72	60	52	46	58	51	46	56	50	45	55	49	45	43		
7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	38		
8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	35		
9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31		
10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	16282	16282	16282	16282	16282
5°	16619	16509	16179	15959	15849
10°	16867	16588	16032	15475	15308
15°	16969	16572	15721	14926	14643
20°	16918	16393	15226	14293	13943
25°	16876	16150	14698	13610	13247
30°	16585	15825	14116	12913	12534
35°	16396	15459	13518	12180	11712
40°	15815	14742	12738	11307	10949
45°	14885	13800	11939	10544	10001
50°	13901	12793	11002	9637	9125
55°	12616	11660	10131	8697	8028
60°	11293	10416	9100	7675	6798
65°	9988	9080	7913	6486	5448
70°	8495	7854	6572	4969	4007
75°	6990	6354	4872	3389	3389
80°	5367	4735	3473	2841	3157
85°	3774	3145	2516	2516	2516

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14885 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.9	4.3
10°-20°	78.1	11.9
20°-30°	113.1	17.3
30°-40°	128.5	19.6
40°-50°	121.3	18.5
50°-60°	95.6	14.6
60°-70°	59.9	9.1
70°-80°	25.9	3.9
80°-90°	5.3	0.8
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°	219.2	33.4
0°-40°	347.6	53.0
0°-60°	564.5	86.1
0°-90°	655.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	655.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	297	297	297	297	297	
5°	302	300	294	290	288	29
15°	299	292	277	263	258	84
25°	279	267	243	225	219	128
35°	245	231	202	182	175	153
45°	192	178	154	136	129	148
55°	132	122	106	91	84	118
65°	77	70	61	50	42	77
75°	33	30	23	16	16	36
85°	6	5	4	4	4	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	297	297	297	297	297	297	297	297	297	297	297
2.5°	299	299	300	300	299	299	299	299	299	299	299
5°	302	302	302	302	301	301	301	301	301	300	300
7.5°	303	303	303	303	302	302	301	301	301	300	299
10°	303	303	303	302	302	301	302	301	300	299	298
12.5°	302	301	301	301	300	300	300	299	298	297	296
15°	299	299	299	298	298	297	297	296	295	293	292
17.5°	296	296	295	295	294	293	293	292	291	289	288
20°	290	290	290	289	288	288	287	286	284	282	281
22.5°	285	284	284	283	282	282	281	279	278	276	274
25°	279	278	278	277	276	275	275	273	271	269	267
27.5°	271	271	270	269	268	268	267	266	263	261	259
30°	262	263	262	261	260	260	259	257	255	252	250
32.5°	255	255	254	253	251	251	251	248	246	244	241
35°	245	245	245	243	242	241	240	238	236	234	231
37.5°	233	234	233	232	231	230	229	227	224	222	219
40°	221	221	220	219	218	217	216	214	212	209	206
42.5°	207	207	206	205	204	203	203	201	198	196	193
45°	192	192	192	191	190	189	188	187	185	182	178
47.5°	178	178	178	176	176	174	173	171	170	167	165
50°	163	162	162	161	160	159	159	156	155	153	150
52.5°	147	147	147	146	145	144	144	142	140	138	137
55°	132	132	132	131	130	130	129	127	126	124	122
57.5°	117	118	117	116	116	115	115	114	112	110	109
60°	103	103	103	102	101	101	101	100	98	97	95
62.5°	90	90	89	89	88	88	87	86	85	84	83
65°	77	76	76	76	75	75	75	74	72	71	70
67.5°	65	65	64	64	63	63	63	62	61	60	59
70°	53	53	53	53	52	52	52	51	50	50	49
72.5°	43	43	43	43	42	42	42	41	40	39	39
75°	33	34	33	33	33	33	32	32	31	30	30
77.5°	25	25	25	25	24	24	24	24	23	22	22
80°	17	17	17	17	17	17	17	17	16	16	15
82.5°	10	11	11	11	10	10	10	10	10	10	9
85°	6	5	5	5	5	5	5	5	5	5	5
87.5°	2	2	2	2	2	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P644166

CATALOG NUMBER: ML5615LSWW9FS1E - 692W WW - 900LM - 2700K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	297	297	297	297	297	297	297	297	297	297	297
2.5°	298	298	298	298	297	297	297	296	296	296	296
5°	299	298	298	297	297	297	296	296	295	294	294
7.5°	298	298	297	296	296	295	294	293	292	292	290
10°	297	296	295	294	293	293	291	290	289	288	287
12.5°	294	293	292	290	290	289	287	286	284	283	281
15°	290	289	288	286	285	284	282	280	278	277	275
17.5°	286	284	282	280	279	278	276	274	272	270	268
20°	279	277	275	272	271	270	267	265	263	261	259
22.5°	272	270	267	265	264	262	260	257	255	252	250
25°	265	262	259	257	255	254	251	249	245	243	241
27.5°	256	254	251	248	246	244	242	239	236	233	231
30°	247	244	241	239	236	235	232	229	226	223	221
32.5°	238	235	232	229	227	225	222	219	215	212	210
35°	228	225	221	218	216	214	211	208	205	202	199
37.5°	216	212	210	207	204	202	199	195	193	190	187
40°	203	200	197	194	191	190	186	183	181	178	175
42.5°	190	187	183	180	178	177	174	171	168	166	163
45°	176	173	170	167	165	164	161	159	156	154	151
47.5°	162	159	157	154	152	151	149	146	143	142	140
50°	148	145	143	140	139	138	136	134	132	129	128
52.5°	134	131	129	127	127	125	123	122	120	118	116
55°	120	119	117	114	114	113	111	109	107	106	104
57.5°	106	105	103	102	101	100	99	97	96	94	93
60°	94	93	91	90	89	88	87	85	84	83	82
62.5°	81	80	79	78	77	76	76	74	73	72	71
65°	70	68	67	66	66	65	64	63	62	61	60
67.5°	58	57	57	55	55	54	53	53	51	50	49
70°	48	47	46	45	45	44	43	42	41	41	40
72.5°	38	37	37	36	35	35	34	33	32	32	31
75°	29	28	28	27	27	26	25	25	24	23	22
77.5°	21	21	20	20	19	19	18	18	17	16	16
80°	15	14	14	13	13	13	12	12	11	11	10
82.5°	9	9	8	8	8	8	7	7	7	6	6
85°	5	4	4	4	4	4	4	4	4	4	3
87.5°	1	1	1	1	1	1	1	1	1	1	1
90°	0	0	0	0	0	0	0	0	0	0	0



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CATALOG NUMBER: ML5615LSWW9FS1E - 692W WW - 900LM - 2700K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	297	297	297	297	297	297	297	297	297	297	297
2.5°	295	295	294	295	294	294	294	294	293	293	293
5°	293	292	292	291	292	291	290	290	290	290	289
7.5°	289	289	288	287	287	286	285	285	284	284	283
10°	286	284	283	282	282	281	280	279	278	277	277
12.5°	279	278	277	276	276	274	273	272	271	270	269
15°	274	272	270	269	269	267	266	265	263	263	261
17.5°	266	264	262	261	260	259	258	256	255	253	253
20°	256	255	252	251	250	249	247	246	245	243	242
22.5°	248	245	243	242	242	239	238	236	235	234	232
25°	238	236	234	232	232	230	229	227	225	224	223
27.5°	228	226	223	222	221	220	218	216	214	213	212
30°	217	215	213	212	210	208	206	205	204	202	201
32.5°	207	204	202	200	200	197	196	194	193	192	190
35°	196	193	191	190	189	186	184	182	182	180	179
37.5°	184	181	180	178	177	175	173	172	170	168	168
40°	173	170	167	167	165	164	161	160	158	157	156
42.5°	161	158	156	155	154	152	150	148	147	146	145
45°	148	146	145	143	142	140	139	137	136	134	133
47.5°	137	135	133	132	131	129	128	126	125	123	122
50°	126	124	122	121	120	118	116	115	113	112	110
52.5°	114	112	110	110	109	107	106	104	102	100	99
55°	103	101	99	98	98	96	94	93	91	90	88
57.5°	91	89	88	87	87	85	84	82	81	79	78
60°	80	79	77	77	76	74	73	71	70	69	68
62.5°	69	68	66	66	65	64	63	61	60	58	57
65°	58	57	56	55	55	53	52	51	50	49	48
67.5°	48	47	46	46	45	44	42	41	40	39	38
70°	39	37	36	36	35	34	33	32	31	30	29
72.5°	30	28	28	27	26	25	25	24	23	23	21
75°	22	21	20	20	19	18	17	17	16	16	16
77.5°	15	14	14	13	13	13	12	12	12	12	13
80°	10	10	9	9	9	9	9	9	9	10	10
82.5°	6	6	6	6	6	6	6	6	6	6	7
85°	3	4	4	4	4	4	4	4	4	4	4
87.5°	1	1	2	1	2	1	2	2	2	2	2
90°	0	0	0	0	0	0	0	0	0	0	0



TEST NUMBER: P644166

CATALOG NUMBER: ML5615LSWW9FS1E - 692W WW - 900LM - 2700K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	297	297	297	297	297	297	297	297
2.5°	292	293	293	292	293	292	292	292
5°	289	288	288	288	287	288	288	288
7.5°	283	283	282	282	281	281	282	281
10°	276	275	276	275	275	275	274	275
12.5°	269	268	268	267	267	267	267	267
15°	261	260	260	259	259	258	259	258
17.5°	252	252	250	250	250	250	250	249
20°	241	241	240	241	239	239	239	239
22.5°	232	231	230	230	230	229	229	229
25°	221	221	220	220	219	219	219	219
27.5°	211	210	210	210	209	208	208	208
30°	200	200	199	199	198	198	198	198
32.5°	189	189	188	187	187	187	186	187
35°	178	177	177	176	176	176	175	175
37.5°	167	166	165	166	165	164	164	164
40°	155	154	154	153	153	153	152	153
42.5°	144	144	143	142	142	142	141	141
45°	133	131	132	131	131	130	130	129
47.5°	121	120	120	120	119	119	119	119
50°	109	108	109	108	108	107	107	107
52.5°	98	97	97	97	97	96	96	96
55°	87	86	86	86	85	85	84	84
57.5°	77	76	75	74	74	74	73	73
60°	66	65	64	64	63	63	63	62
62.5°	56	55	54	54	53	52	52	52
65°	46	45	45	44	43	43	42	42
67.5°	37	36	36	35	34	33	33	33
70°	29	28	27	27	27	26	25	25
72.5°	21	20	20	20	20	20	20	20
75°	16	16	16	16	16	16	16	16
77.5°	13	13	13	13	13	13	13	13
80°	10	10	10	10	10	10	10	10
82.5°	7	7	7	7	7	7	7	7
85°	4	4	4	4	4	4	4	4
87.5°	2	2	2	2	2	2	2	1
90°	0	0	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



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°

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