

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: P642342

Luminaire Tested: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642342
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: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K
Description: ML56 RR, WW OPTIC, 6" WW INSERT WITH WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

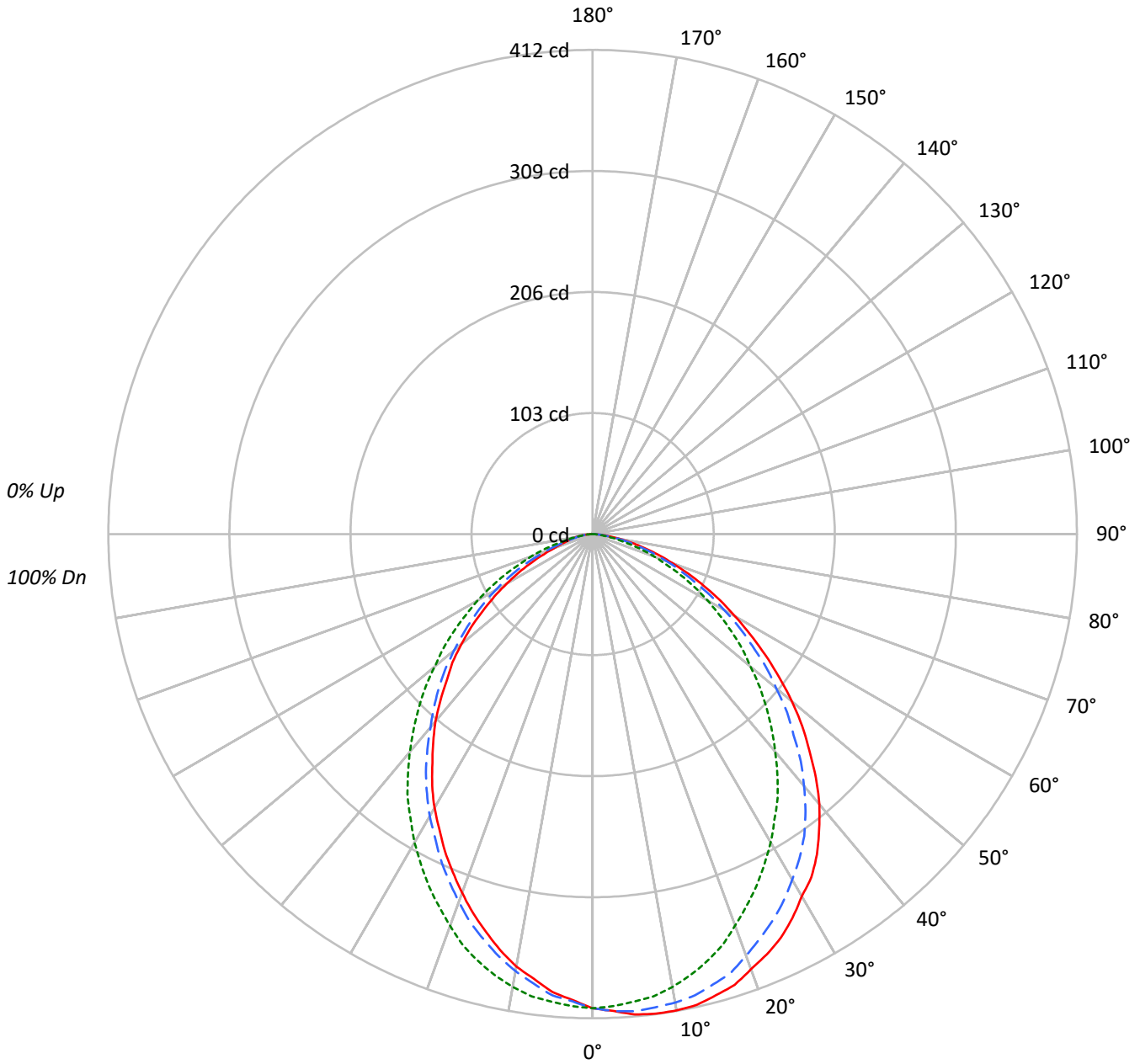
Lumens per Lamp: N/A
Luminaire Lumens: 890.6 lumens
Efficiency: N/A
Efficacy: 54.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.13 / 1.25
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 16.5
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: P642342
CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

Luminous Intensity Polar Plot





TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

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	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100		
	1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	89	87	87	87	87	87	87		
	2	101	94	88	82	99	92	86	81	88	84	80	85	81	78	82	79	76	74	74	74	74	74	74		
	3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64	64	64	64	64	64		
	4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55	55	55	55	55	55		
	5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	49	49	49	49		
	6	73	61	52	46	72	60	52	46	58	51	46	56	50	45	55	49	45	43	43	43	43	43	43		
	7	68	55	47	41	67	55	47	41	53	46	41	52	45	41	50	45	40	38	38	38	38	38	38		
	8	64	51	43	37	62	50	42	37	49	42	37	48	41	37	46	41	36	35	35	35	35	35	35		
	9	60	47	39	34	58	46	39	34	45	38	33	44	38	33	43	37	33	31	31	31	31	31	31		
	10	56	43	36	31	55	43	36	31	42	35	30	41	35	30	40	34	30	29	29	29	29	29	29		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	22120	22120	22120	22120	22120
5°	22579	22430	21979	21682	21533
10°	22912	22534	21782	21025	20797
15°	23053	22514	21357	20278	19892
20°	22985	22268	20687	19415	18942
25°	22925	21939	19967	18491	17995
30°	22529	21497	19180	17541	17028
35°	22272	21000	18364	16550	15908
40°	21483	20030	17304	15357	14878
45°	20219	18746	16219	14327	13583
50°	18882	17381	14942	13091	12400
55°	17137	15837	13763	11813	10905
60°	15339	14155	12367	10427	9232
65°	13568	12336	10753	8808	7407
70°	11540	10675	8928	6748	5450
75°	9489	8642	6608	4596	4596
80°	7293	6440	4704	3852	4293
85°	5158	4277	3397	3397	3397

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 20219 cd/sqm



TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	4.3
10°-20°	106.2	11.9
20°-30°	153.6	17.3
30°-40°	174.5	19.6
40°-50°	164.7	18.5
50°-60°	129.9	14.6
60°-70°	81.3	9.1
70°-80°	35.2	3.9
80°-90°	7.2	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°	297.7	33.4
0°-40°	472.3	53.0
0°-60°	766.9	86.1
0°-90°	890.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	890.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	404	404	404	404	404	
5°	410	408	399	394	391	39
15°	406	397	376	357	350	115
25°	379	363	330	306	298	174
35°	333	314	274	247	238	207
45°	261	242	209	185	175	201
55°	179	166	144	124	114	160
65°	105	95	83	68	57	104
75°	45	41	31	22	22	49
85°	8	7	5	5	5	10
90°	0	0	0	0	0	



TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5
2.5°	406.2	406.2	407.6	407.6	406.2	406.2	406.2	406.2	406.2	406.2	406.2
5°	410.3	410.3	410.3	410.3	408.9	408.9	408.9	408.9	408.9	407.6	407.6
7.5°	411.6	411.6	411.6	411.6	410.3	410.3	408.9	408.9	408.9	407.6	406.2
10°	411.6	411.6	411.6	410.3	410.3	408.9	410.3	408.9	407.6	406.2	404.8
12.5°	410.3	408.9	408.9	408.9	407.6	407.6	407.6	406.2	404.8	403.5	402.1
15°	406.2	406.2	406.2	404.8	404.8	403.5	403.5	402.1	400.8	398.0	396.7
17.5°	402.1	402.1	400.8	400.8	399.4	398.0	398.0	396.7	395.3	392.6	391.3
20°	394.0	394.0	394.0	392.6	391.3	391.3	389.9	388.5	385.8	383.1	381.7
22.5°	387.2	385.8	385.8	384.5	383.1	383.1	381.7	379.0	377.7	375.0	372.2
25°	379.0	377.7	377.7	376.3	375.0	373.6	373.6	370.9	368.2	365.4	362.7
27.5°	368.2	368.2	366.8	365.4	364.1	364.1	362.7	361.4	357.3	354.6	351.9
30°	355.9	357.3	355.9	354.6	353.2	353.2	351.9	349.1	346.4	342.3	339.6
32.5°	346.4	346.4	345.1	343.7	341.0	341.0	341.0	336.9	334.2	331.5	327.4
35°	332.8	332.8	332.8	330.1	328.8	327.4	326.0	323.3	320.6	317.9	313.8
37.5°	316.5	317.9	316.5	315.2	313.8	312.5	311.1	308.4	304.3	301.6	297.5
40°	300.2	300.2	298.9	297.5	296.2	294.8	293.4	290.7	288.0	283.9	279.9
42.5°	281.2	281.2	279.9	278.5	277.1	275.8	275.8	273.1	269.0	266.3	262.2
45°	260.8	260.8	260.8	259.5	258.1	256.8	255.4	254.0	251.3	247.3	241.8
47.5°	241.8	241.8	241.8	239.1	239.1	236.4	235.0	232.3	230.9	226.9	224.2
50°	221.4	220.1	220.1	218.7	217.4	216.0	216.0	211.9	210.6	207.9	203.8
52.5°	199.7	199.7	199.7	198.3	197.0	195.6	195.6	192.9	190.2	187.5	186.1
55°	179.3	179.3	179.3	178.0	176.6	176.6	175.2	172.5	171.2	168.5	165.7
57.5°	158.9	160.3	158.9	157.6	157.6	156.2	156.2	154.9	152.2	149.4	148.1
60°	139.9	139.9	139.9	138.6	137.2	137.2	137.2	135.9	133.1	131.8	129.1
62.5°	122.3	122.3	120.9	120.9	119.5	119.5	118.2	116.8	115.5	114.1	112.8
65°	104.6	103.2	103.2	103.2	101.9	101.9	101.9	100.5	97.8	96.5	95.1
67.5°	88.3	88.3	86.9	86.9	85.6	85.6	85.6	84.2	82.9	81.5	80.2
70°	72.0	72.0	72.0	72.0	70.6	70.6	70.6	69.3	67.9	67.9	66.6
72.5°	58.4	58.4	58.4	58.4	57.1	57.1	57.1	55.7	54.3	53.0	53.0
75°	44.8	46.2	44.8	44.8	44.8	44.8	43.5	43.5	42.1	40.8	40.8
77.5°	34.0	34.0	34.0	34.0	32.6	32.6	32.6	32.6	31.2	29.9	29.9
80°	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	21.7	21.7	20.4
82.5°	13.6	14.9	14.9	14.9	13.6	13.6	13.6	13.6	13.6	13.6	12.2
85°	8.2	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
87.5°	2.7	2.7	2.7	2.7	2.7	1.4	1.4	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5
2.5°	404.8	404.8	404.8	404.8	403.5	403.5	403.5	402.1	402.1	402.1	402.1
5°	406.2	404.8	404.8	403.5	403.5	403.5	402.1	402.1	400.8	399.4	399.4
7.5°	404.8	404.8	403.5	402.1	402.1	400.8	399.4	398.0	396.7	396.7	394.0
10°	403.5	402.1	400.8	399.4	398.0	398.0	395.3	394.0	392.6	391.3	389.9
12.5°	399.4	398.0	396.7	394.0	394.0	392.6	389.9	388.5	385.8	384.5	381.7
15°	394.0	392.6	391.3	388.5	387.2	385.8	383.1	380.4	377.7	376.3	373.6
17.5°	388.5	385.8	383.1	380.4	379.0	377.7	375.0	372.2	369.5	366.8	364.1
20°	379.0	376.3	373.6	369.5	368.2	366.8	362.7	360.0	357.3	354.6	351.9
22.5°	369.5	366.8	362.7	360.0	358.6	355.9	353.2	349.1	346.4	342.3	339.6
25°	360.0	355.9	351.9	349.1	346.4	345.1	341.0	338.3	332.8	330.1	327.4
27.5°	347.8	345.1	341.0	336.9	334.2	331.5	328.8	324.7	320.6	316.5	313.8
30°	335.6	331.5	327.4	324.7	320.6	319.3	315.2	311.1	307.0	303.0	300.2
32.5°	323.3	319.3	315.2	311.1	308.4	305.7	301.6	297.5	292.1	288.0	285.3
35°	309.7	305.7	300.2	296.2	293.4	290.7	286.6	282.6	278.5	274.4	270.3
37.5°	293.4	288.0	285.3	281.2	277.1	274.4	270.3	264.9	262.2	258.1	254.0
40°	275.8	271.7	267.6	263.6	259.5	258.1	252.7	248.6	245.9	241.8	237.7
42.5°	258.1	254.0	248.6	244.5	241.8	240.5	236.4	232.3	228.2	225.5	221.4
45°	239.1	235.0	230.9	226.9	224.2	222.8	218.7	216.0	211.9	209.2	205.1
47.5°	220.1	216.0	213.3	209.2	206.5	205.1	202.4	198.3	194.3	192.9	190.2
50°	201.1	197.0	194.3	190.2	188.8	187.5	184.8	182.0	179.3	175.2	173.9
52.5°	182.0	178.0	175.2	172.5	172.5	169.8	167.1	165.7	163.0	160.3	157.6
55°	163.0	161.7	158.9	154.9	154.9	153.5	150.8	148.1	145.4	144.0	141.3
57.5°	144.0	142.6	139.9	138.6	137.2	135.9	134.5	131.8	130.4	127.7	126.3
60°	127.7	126.3	123.6	122.3	120.9	119.5	118.2	115.5	114.1	112.8	111.4
62.5°	110.0	108.7	107.3	106.0	104.6	103.2	103.2	100.5	99.2	97.8	96.5
65°	95.1	92.4	91.0	89.7	89.7	88.3	86.9	85.6	84.2	82.9	81.5
67.5°	78.8	77.4	77.4	74.7	74.7	73.4	72.0	72.0	69.3	67.9	66.6
70°	65.2	63.9	62.5	61.1	61.1	59.8	58.4	57.1	55.7	55.7	54.3
72.5°	51.6	50.3	50.3	48.9	47.5	47.5	46.2	44.8	43.5	43.5	42.1
75°	39.4	38.0	38.0	36.7	36.7	35.3	34.0	34.0	32.6	31.2	29.9
77.5°	28.5	28.5	27.2	27.2	25.8	25.8	24.5	24.5	23.1	21.7	21.7
80°	20.4	19.0	19.0	17.7	17.7	17.7	16.3	16.3	14.9	14.9	13.6
82.5°	12.2	12.2	10.9	10.9	10.9	10.9	9.5	9.5	9.5	8.2	8.2
85°	6.8	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.1
87.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5
2.5°	400.8	400.8	399.4	400.8	399.4	399.4	399.4	399.4	398.0	398.0	398.0
5°	398.0	396.7	396.7	395.3	396.7	395.3	394.0	394.0	394.0	394.0	392.6
7.5°	392.6	392.6	391.3	389.9	389.9	388.5	387.2	387.2	385.8	385.8	384.5
10°	388.5	385.8	384.5	383.1	383.1	381.7	380.4	379.0	377.7	376.3	376.3
12.5°	379.0	377.7	376.3	375.0	375.0	372.2	370.9	369.5	368.2	366.8	365.4
15°	372.2	369.5	366.8	365.4	365.4	362.7	361.4	360.0	357.3	357.3	354.6
17.5°	361.4	358.6	355.9	354.6	353.2	351.9	350.5	347.8	346.4	343.7	343.7
20°	347.8	346.4	342.3	341.0	339.6	338.3	335.6	334.2	332.8	330.1	328.8
22.5°	336.9	332.8	330.1	328.8	328.8	324.7	323.3	320.6	319.3	317.9	315.2
25°	323.3	320.6	317.9	315.2	315.2	312.5	311.1	308.4	305.7	304.3	303.0
27.5°	309.7	307.0	303.0	301.6	300.2	298.9	296.2	293.4	290.7	289.4	288.0
30°	294.8	292.1	289.4	288.0	285.3	282.6	279.9	278.5	277.1	274.4	273.1
32.5°	281.2	277.1	274.4	271.7	271.7	267.6	266.3	263.6	262.2	260.8	258.1
35°	266.3	262.2	259.5	258.1	256.8	252.7	250.0	247.3	247.3	244.5	243.2
37.5°	250.0	245.9	244.5	241.8	240.5	237.7	235.0	233.7	230.9	228.2	228.2
40°	235.0	230.9	226.9	226.9	224.2	222.8	218.7	217.4	214.6	213.3	211.9
42.5°	218.7	214.6	211.9	210.6	209.2	206.5	203.8	201.1	199.7	198.3	197.0
45°	201.1	198.3	197.0	194.3	192.9	190.2	188.8	186.1	184.8	182.0	180.7
47.5°	186.1	183.4	180.7	179.3	178.0	175.2	173.9	171.2	169.8	167.1	165.7
50°	171.2	168.5	165.7	164.4	163.0	160.3	157.6	156.2	153.5	152.2	149.4
52.5°	154.9	152.2	149.4	149.4	148.1	145.4	144.0	141.3	138.6	135.9	134.5
55°	139.9	137.2	134.5	133.1	133.1	130.4	127.7	126.3	123.6	122.3	119.5
57.5°	123.6	120.9	119.5	118.2	118.2	115.5	114.1	111.4	110.0	107.3	106.0
60°	108.7	107.3	104.6	104.6	103.2	100.5	99.2	96.5	95.1	93.7	92.4
62.5°	93.7	92.4	89.7	89.7	88.3	86.9	85.6	82.9	81.5	78.8	77.4
65°	78.8	77.4	76.1	74.7	74.7	72.0	70.6	69.3	67.9	66.6	65.2
67.5°	65.2	63.9	62.5	62.5	61.1	59.8	57.1	55.7	54.3	53.0	51.6
70°	53.0	50.3	48.9	48.9	47.5	46.2	44.8	43.5	42.1	40.8	39.4
72.5°	40.8	38.0	38.0	36.7	35.3	34.0	34.0	32.6	31.2	31.2	28.5
75°	29.9	28.5	27.2	27.2	25.8	24.5	23.1	23.1	21.7	21.7	21.7
77.5°	20.4	19.0	19.0	17.7	17.7	17.7	16.3	16.3	16.3	16.3	17.7
80°	13.6	13.6	12.2	12.2	12.2	12.2	12.2	12.2	12.2	13.6	13.6
82.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	9.5
85°	4.1	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
87.5°	1.4	1.4	2.7	1.4	2.7	1.4	2.7	2.7	2.7	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P642342

CATALOG NUMBER: ML5612LSWW97FS1E - 692W WW - 1200LM - 3000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	403.5	403.5	403.5	403.5	403.5	403.5	403.5	403.5
2.5°	396.7	398.0	398.0	396.7	398.0	396.7	396.7	396.7
5°	392.6	391.3	391.3	391.3	389.9	391.3	391.3	391.3
7.5°	384.5	384.5	383.1	383.1	381.7	381.7	383.1	381.7
10°	375.0	373.6	375.0	373.6	373.6	373.6	372.2	373.6
12.5°	365.4	364.1	364.1	362.7	362.7	362.7	362.7	362.7
15°	354.6	353.2	353.2	351.9	351.9	350.5	351.9	350.5
17.5°	342.3	342.3	339.6	339.6	339.6	339.6	339.6	338.3
20°	327.4	327.4	326.0	327.4	324.7	324.7	324.7	324.7
22.5°	315.2	313.8	312.5	312.5	312.5	311.1	311.1	311.1
25°	300.2	300.2	298.9	298.9	297.5	297.5	297.5	297.5
27.5°	286.6	285.3	285.3	285.3	283.9	282.6	282.6	282.6
30°	271.7	271.7	270.3	270.3	269.0	269.0	269.0	269.0
32.5°	256.8	256.8	255.4	254.0	254.0	254.0	252.7	254.0
35°	241.8	240.5	240.5	239.1	239.1	239.1	237.7	237.7
37.5°	226.9	225.5	224.2	225.5	224.2	222.8	222.8	222.8
40°	210.6	209.2	209.2	207.9	207.9	207.9	206.5	207.9
42.5°	195.6	195.6	194.3	192.9	192.9	192.9	191.6	191.6
45°	180.7	178.0	179.3	178.0	178.0	176.6	176.6	175.2
47.5°	164.4	163.0	163.0	163.0	161.7	161.7	161.7	161.7
50°	148.1	146.7	148.1	146.7	146.7	145.4	145.4	145.4
52.5°	133.1	131.8	131.8	131.8	131.8	130.4	130.4	130.4
55°	118.2	116.8	116.8	116.8	115.5	115.5	114.1	114.1
57.5°	104.6	103.2	101.9	100.5	100.5	100.5	99.2	99.2
60°	89.7	88.3	86.9	86.9	85.6	85.6	85.6	84.2
62.5°	76.1	74.7	73.4	73.4	72.0	70.6	70.6	70.6
65°	62.5	61.1	61.1	59.8	58.4	58.4	57.1	57.1
67.5°	50.3	48.9	48.9	47.5	46.2	44.8	44.8	44.8
70°	39.4	38.0	36.7	36.7	36.7	35.3	34.0	34.0
72.5°	28.5	27.2	27.2	27.2	27.2	27.2	27.2	27.2
75°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	21.7
77.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
80°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
82.5°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
85°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.4
90°	0.0	0.0	0.0	0.0	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°

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



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)