

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: P642300

Luminaire Tested: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642300
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-116)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K
Description: ML56 RR, WW OPTIC, 5" WW INSERT WITH WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 943.7 lumens
Efficiency: N/A
Efficacy: 57.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.13 / 1.23
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

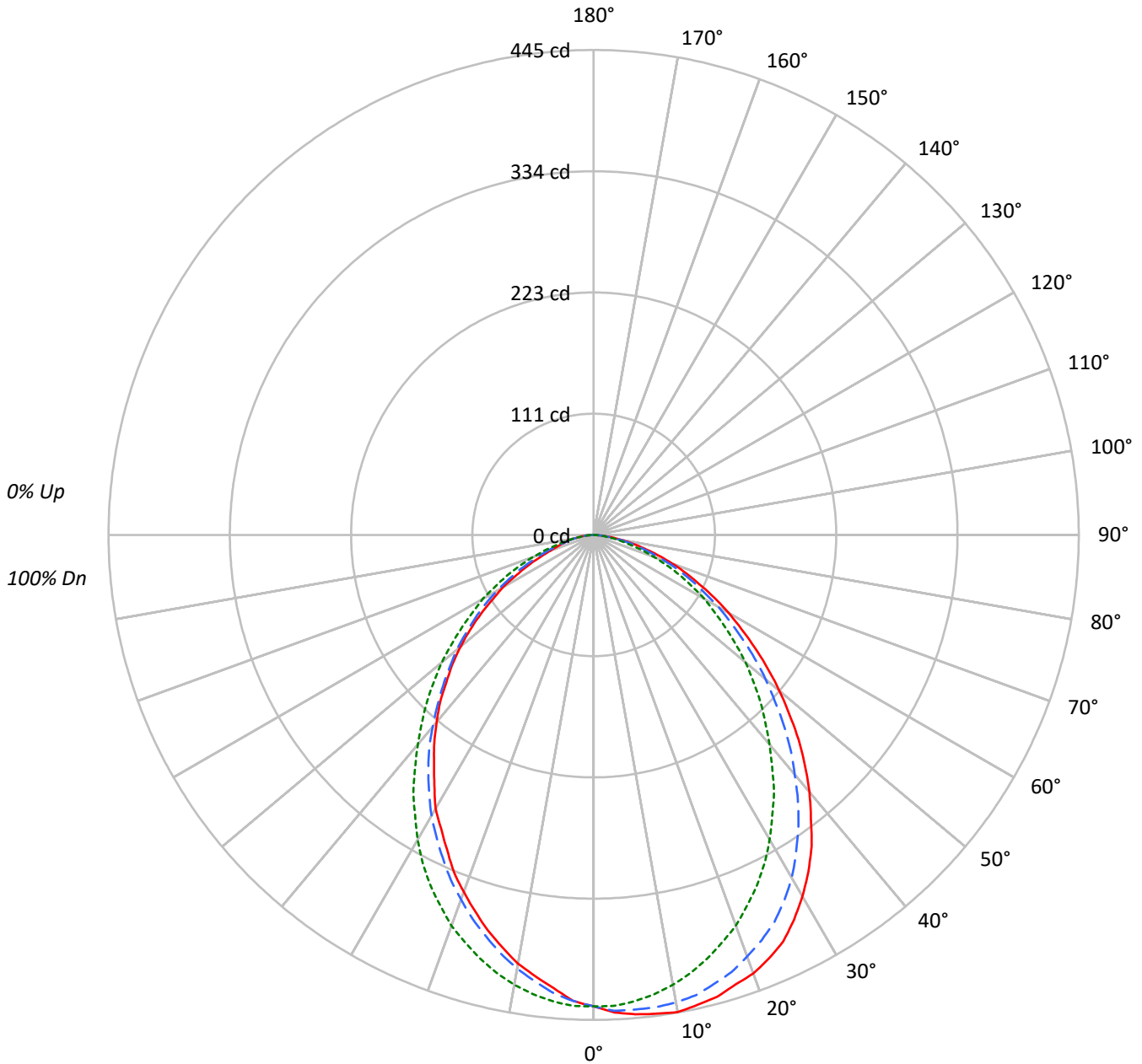
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

Luminous Intensity Polar Plot





TEST NUMBER: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86				86				
2	101	94	88	82	99	92	86	81	88	84	80	85	81	78	82	79	76	74				74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64				64				
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	58	55				55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49				49				
6	73	61	53	46	72	60	52	46	58	51	46	57	50	45	55	49	45	43				43				
7	68	56	47	41	67	55	47	41	53	46	41	52	45	41	51	45	40	39				39				
8	64	51	43	37	62	50	43	37	49	42	37	48	41	37	47	41	37	35				35				
9	60	47	39	34	58	46	39	34	45	38	34	44	38	33	43	37	33	32				32				
10	56	43	36	31	55	43	36	31	42	35	31	41	35	31	40	35	30	29				29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	34150	34150	34150	34150	34150
5°	34993	34637	34043	33448	33092
10°	35639	34917	33595	32392	32023
15°	35845	34864	32895	31178	30688
20°	35963	34577	32049	29907	29276
25°	35851	34144	30878	28517	27733
30°	34912	33134	29433	27109	26425
35°	33585	31551	27793	25480	24603
40°	31729	29565	25845	23681	23063
45°	29685	27497	24148	21803	21301
50°	27301	25274	22315	20104	19551
55°	24801	22943	20259	18195	17369
60°	22530	20872	18504	16120	15172
65°	19912	18511	16269	13748	12347
70°	17680	15949	13525	11102	9717
75°	14671	13298	10523	8693	8693
80°	11592	10229	8183	7501	7501
85°	6793	6793	5434	6793	6793

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 29685 cd/sqm



TEST NUMBER: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	4.3
10°-20°	113.9	12.1
20°-30°	165.3	17.5
30°-40°	184.4	19.5
40°-50°	171.0	18.1
50°-60°	134.4	14.2
60°-70°	86.0	9.1
70°-80°	39.4	4.2
80°-90°	8.5	0.9
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°	319.9	33.9
0°-40°	504.3	53.4
0°-60°	809.7	85.8
0°-90°	943.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	943.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	433	433	433	433	433	
5°	442	437	430	422	418	42
15°	439	427	402	382	376	124
25°	412	392	354	327	318	189
35°	348	327	288	264	255	217
45°	266	246	216	195	191	205
55°	180	167	147	132	126	162
65°	107	99	87	74	66	107
75°	48	44	34	28	28	52
85°	8	8	6	8	8	10
90°	0	0	0	0	0	



TEST NUMBER: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	438.6	438.6	438.6	438.6	438.6	438.6	437.1	437.1	437.1	437.1	437.1
5°	441.6	441.6	441.6	441.6	440.1	440.1	440.1	440.1	438.6	438.6	437.1
7.5°	443.1	443.1	443.1	441.6	441.6	441.6	440.1	440.1	440.1	438.6	437.1
10°	444.6	443.1	443.1	441.6	441.6	441.6	440.1	440.1	438.6	437.1	435.6
12.5°	441.6	441.6	441.6	441.6	440.1	440.1	438.6	437.1	435.6	434.1	432.6
15°	438.6	438.6	438.6	437.1	435.6	435.6	434.1	432.6	431.1	429.6	426.6
17.5°	432.6	434.1	432.6	432.6	431.1	431.1	429.6	428.1	425.1	423.6	420.6
20°	428.1	426.6	426.6	426.6	425.1	423.6	422.1	420.6	417.6	416.1	411.6
22.5°	420.6	420.6	419.1	417.6	416.1	416.1	414.6	411.6	410.1	407.1	402.5
25°	411.6	410.1	410.1	408.6	407.1	407.1	404.1	402.5	399.5	395.0	392.0
27.5°	398.0	398.0	398.0	396.5	395.0	393.5	392.0	389.0	387.5	381.5	378.5
30°	383.0	383.0	381.5	381.5	378.5	378.5	377.0	374.0	371.0	366.5	363.5
32.5°	366.5	366.5	366.5	363.5	362.0	360.5	359.0	357.5	353.0	348.5	345.5
35°	348.5	348.5	347.0	345.5	344.0	342.5	341.0	338.0	335.0	332.0	327.4
37.5°	327.4	328.9	327.4	325.9	324.4	322.9	321.4	319.9	315.4	312.4	307.9
40°	307.9	307.9	306.4	304.9	303.4	303.4	301.9	298.9	295.9	291.4	286.9
42.5°	286.9	286.9	285.4	283.9	283.9	282.4	279.4	277.9	274.9	271.9	267.4
45°	265.9	264.4	262.9	262.9	261.4	259.9	259.9	256.8	253.8	249.3	246.3
47.5°	243.3	243.3	241.8	241.8	240.3	238.8	238.8	235.8	231.3	228.3	225.3
50°	222.3	222.3	220.8	220.8	219.3	217.8	216.3	214.8	211.8	208.8	205.8
52.5°	201.3	201.3	201.3	198.3	196.8	196.8	196.8	193.8	192.3	189.3	186.3
55°	180.2	180.2	180.2	178.7	177.2	177.2	177.2	174.2	172.7	169.7	166.7
57.5°	160.7	160.7	160.7	159.2	159.2	157.7	156.2	154.7	153.2	151.7	148.7
60°	142.7	142.7	141.2	139.7	141.2	139.7	138.2	136.7	135.2	133.7	132.2
62.5°	124.7	124.7	124.7	123.2	121.7	121.7	121.7	120.2	117.2	115.7	114.2
65°	106.6	106.6	106.6	106.6	105.1	105.1	103.6	102.1	102.1	100.6	99.1
67.5°	91.6	91.6	90.1	90.1	88.6	88.6	88.6	87.1	85.6	85.6	84.1
70°	76.6	75.1	75.1	75.1	73.6	73.6	73.6	72.1	72.1	70.6	69.1
72.5°	61.6	61.6	61.6	61.6	60.1	60.1	58.6	58.6	57.1	57.1	55.6
75°	48.1	48.1	48.1	48.1	46.6	46.6	46.6	46.6	45.1	45.1	43.6
77.5°	36.0	36.0	36.0	36.0	36.0	36.0	34.5	34.5	34.5	33.0	33.0
80°	25.5	25.5	25.5	25.5	24.0	24.0	24.0	24.0	24.0	22.5	22.5
82.5°	16.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5
85°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
87.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	435.6	435.6	435.6	435.6	434.1	434.1	434.1	432.6	432.6	432.6	432.6
5°	437.1	437.1	434.1	434.1	434.1	434.1	432.6	432.6	431.1	429.6	428.1
7.5°	435.6	435.6	434.1	432.6	431.1	431.1	429.6	428.1	426.6	425.1	423.6
10°	434.1	432.6	431.1	429.6	428.1	426.6	425.1	423.6	420.6	419.1	417.6
12.5°	431.1	428.1	426.6	423.6	423.6	422.1	419.1	417.6	414.6	411.6	410.1
15°	425.1	422.1	419.1	416.1	416.1	413.1	410.1	408.6	405.6	402.5	399.5
17.5°	417.6	414.6	411.6	408.6	407.1	404.1	401.0	398.0	395.0	392.0	389.0
20°	410.1	405.6	402.5	398.0	396.5	395.0	390.5	387.5	384.5	381.5	377.0
22.5°	399.5	396.5	390.5	387.5	386.0	383.0	380.0	375.5	371.0	368.0	365.0
25°	387.5	384.5	380.0	375.5	372.5	371.0	366.5	362.0	359.0	354.5	351.5
27.5°	374.0	369.5	366.5	360.5	359.0	356.0	351.5	347.0	344.0	339.5	335.0
30°	359.0	354.5	350.0	345.5	342.5	341.0	336.5	332.0	327.4	322.9	319.9
32.5°	341.0	336.5	332.0	328.9	324.4	321.4	318.4	313.9	309.4	304.9	301.9
35°	322.9	318.4	313.9	309.4	306.4	306.4	300.4	295.9	291.4	288.4	283.9
37.5°	303.4	298.9	294.4	289.9	288.4	285.4	280.9	276.4	273.4	268.9	265.9
40°	283.9	277.9	274.9	270.4	268.9	265.9	262.9	258.4	255.3	250.8	247.8
42.5°	262.9	259.9	255.3	252.3	249.3	247.8	243.3	238.8	235.8	232.8	231.3
45°	243.3	238.8	234.3	231.3	229.8	226.8	225.3	220.8	217.8	216.3	213.3
47.5°	222.3	219.3	216.3	211.8	210.3	208.8	205.8	204.3	201.3	198.3	195.3
50°	202.8	199.8	196.8	193.8	192.3	192.3	187.8	184.8	183.2	181.7	178.7
52.5°	183.2	180.2	177.2	174.2	174.2	172.7	169.7	168.2	166.7	163.7	160.7
55°	165.2	162.2	159.2	157.7	156.2	156.2	153.2	151.7	148.7	147.2	145.7
57.5°	147.2	144.2	142.7	141.2	139.7	139.7	136.7	135.2	133.7	130.7	130.7
60°	130.7	127.7	126.2	124.7	123.2	121.7	121.7	118.7	117.2	117.2	114.2
62.5°	112.7	111.2	109.6	108.1	106.6	106.6	105.1	103.6	102.1	100.6	99.1
65°	97.6	96.1	94.6	93.1	91.6	91.6	90.1	88.6	87.1	87.1	84.1
67.5°	82.6	81.1	79.6	78.1	78.1	76.6	75.1	75.1	73.6	72.1	70.6
70°	67.6	67.6	66.1	64.6	64.6	63.1	61.6	61.6	60.1	58.6	57.1
72.5°	55.6	54.1	52.6	52.6	51.1	51.1	49.6	49.6	48.1	46.6	45.1
75°	42.1	40.6	40.6	40.6	39.1	39.1	39.1	37.6	36.0	34.5	34.5
77.5°	31.5	31.5	30.0	28.5	28.5	28.5	27.0	27.0	27.0	25.5	25.5
80°	22.5	21.0	21.0	19.5	19.5	19.5	19.5	18.0	18.0	18.0	16.5
82.5°	13.5	13.5	13.5	12.0	12.0	12.0	12.0	12.0	10.5	10.5	10.5
85°	7.5	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
87.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0
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: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	431.1	431.1	429.6	429.6	429.6	429.6	429.6	428.1	428.1	428.1	428.1
5°	428.1	426.6	425.1	425.1	425.1	423.6	423.6	422.1	422.1	420.6	420.6
7.5°	422.1	420.6	419.1	419.1	417.6	417.6	414.6	414.6	413.1	411.6	411.6
10°	414.6	413.1	411.6	410.1	410.1	407.1	407.1	405.6	404.1	402.5	402.5
12.5°	407.1	405.6	402.5	401.0	401.0	399.5	396.5	395.0	393.5	392.0	390.5
15°	396.5	395.0	392.0	390.5	389.0	387.5	386.0	384.5	381.5	380.0	380.0
17.5°	386.0	384.5	380.0	378.5	378.5	375.5	374.0	371.0	369.5	368.0	366.5
20°	374.0	371.0	368.0	366.5	365.0	362.0	360.5	359.0	356.0	354.5	353.0
22.5°	360.5	357.5	354.5	353.0	351.5	348.5	347.0	344.0	342.5	341.0	339.5
25°	347.0	344.0	341.0	339.5	336.5	335.0	332.0	328.9	327.4	325.9	324.4
27.5°	332.0	328.9	324.4	322.9	321.4	319.9	316.9	313.9	312.4	309.4	309.4
30°	315.4	312.4	309.4	307.9	306.4	303.4	301.9	298.9	297.4	294.4	294.4
32.5°	298.9	294.4	291.4	289.9	288.4	286.9	283.9	282.4	280.9	279.4	277.9
35°	280.9	277.9	274.9	273.4	271.9	268.9	267.4	265.9	264.4	261.4	261.4
37.5°	262.9	259.9	256.8	255.3	255.3	252.3	250.8	247.8	247.8	244.8	244.8
40°	244.8	241.8	238.8	238.8	237.3	234.3	232.8	231.3	229.8	228.3	228.3
42.5°	228.3	223.8	222.3	222.3	219.3	217.8	216.3	214.8	211.8	211.8	211.8
45°	210.3	207.3	205.8	204.3	202.8	201.3	199.8	196.8	195.3	193.8	193.8
47.5°	193.8	190.8	189.3	187.8	186.3	184.8	183.2	181.7	178.7	178.7	177.2
50°	177.2	174.2	172.7	171.2	169.7	168.2	166.7	165.2	163.7	162.2	160.7
52.5°	159.2	157.7	156.2	154.7	154.7	151.7	150.2	148.7	147.2	147.2	144.2
55°	144.2	142.7	141.2	139.7	138.2	136.7	135.2	133.7	132.2	130.7	129.2
57.5°	127.7	126.2	124.7	124.7	123.2	121.7	120.2	118.7	117.2	115.7	114.2
60°	112.7	111.2	109.6	109.6	108.1	106.6	105.1	105.1	102.1	100.6	99.1
62.5°	97.6	96.1	94.6	94.6	93.1	93.1	91.6	90.1	87.1	87.1	85.6
65°	84.1	82.6	81.1	79.6	79.6	78.1	76.6	75.1	73.6	73.6	72.1
67.5°	70.6	69.1	67.6	67.6	66.1	64.6	63.1	61.6	60.1	60.1	58.6
70°	57.1	55.6	54.1	54.1	52.6	51.1	51.1	49.6	48.1	46.6	46.6
72.5°	43.6	43.6	42.1	42.1	40.6	40.6	39.1	37.6	37.6	36.0	34.5
75°	33.0	33.0	31.5	31.5	30.0	30.0	28.5	28.5	28.5	27.0	28.5
77.5°	24.0	24.0	22.5	22.5	22.5	21.0	21.0	21.0	22.5	22.5	22.5
80°	16.5	16.5	16.5	16.5	15.0	15.0	16.5	16.5	16.5	16.5	16.5
82.5°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	12.0	12.0	12.0
85°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	7.5	7.5	7.5	7.5
87.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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: P642300

CATALOG NUMBER: ML5612LSWW97FS1E - 592W WW - 1200LM - 5000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	426.6	426.6	426.6	426.6	426.6	426.6	426.6	428.1
5°	419.1	419.1	419.1	419.1	419.1	419.1	419.1	417.6
7.5°	411.6	410.1	410.1	410.1	410.1	408.6	408.6	408.6
10°	401.0	401.0	399.5	399.5	399.5	399.5	398.0	399.5
12.5°	390.5	389.0	389.0	389.0	387.5	387.5	387.5	387.5
15°	378.5	377.0	377.0	377.0	375.5	375.5	375.5	375.5
17.5°	365.0	365.0	363.5	363.5	362.0	362.0	362.0	362.0
20°	351.5	351.5	351.5	350.0	350.0	350.0	348.5	348.5
22.5°	338.0	336.5	335.0	336.5	335.0	333.5	335.0	335.0
25°	322.9	321.4	319.9	319.9	319.9	319.9	318.4	318.4
27.5°	307.9	304.9	304.9	304.9	304.9	303.4	303.4	303.4
30°	292.9	291.4	291.4	289.9	288.4	288.4	288.4	289.9
32.5°	276.4	274.9	273.4	273.4	273.4	273.4	271.9	271.9
35°	259.9	259.9	258.4	258.4	258.4	256.8	256.8	255.3
37.5°	243.3	243.3	241.8	241.8	241.8	240.3	240.3	240.3
40°	226.8	225.3	225.3	226.8	225.3	225.3	223.8	223.8
42.5°	210.3	210.3	208.8	208.8	208.8	208.8	207.3	208.8
45°	192.3	192.3	192.3	192.3	192.3	192.3	190.8	190.8
47.5°	177.2	175.7	175.7	175.7	175.7	175.7	175.7	175.7
50°	160.7	159.2	159.2	159.2	159.2	159.2	159.2	159.2
52.5°	144.2	142.7	142.7	142.7	142.7	142.7	142.7	142.7
55°	129.2	127.7	127.7	126.2	127.7	126.2	126.2	126.2
57.5°	114.2	112.7	111.2	112.7	111.2	111.2	111.2	109.6
60°	99.1	97.6	97.6	97.6	96.1	94.6	94.6	96.1
62.5°	84.1	84.1	82.6	82.6	81.1	79.6	79.6	79.6
65°	70.6	69.1	69.1	67.6	67.6	66.1	66.1	66.1
67.5°	57.1	57.1	55.6	55.6	54.1	54.1	54.1	52.6
70°	45.1	45.1	43.6	43.6	43.6	42.1	42.1	42.1
72.5°	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
75°	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5
77.5°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	24.0
80°	16.5	16.5	18.0	16.5	18.0	16.5	16.5	16.5
82.5°	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
85°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
87.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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)