

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: P642290

Luminaire Tested: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642290
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-129)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K
Description: ML56 RR, WW OPTIC, 5" WW INSERT WITH SPECULAR CLEAR TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 627.0 lumens
Efficiency: N/A
Efficacy: 60.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.26
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

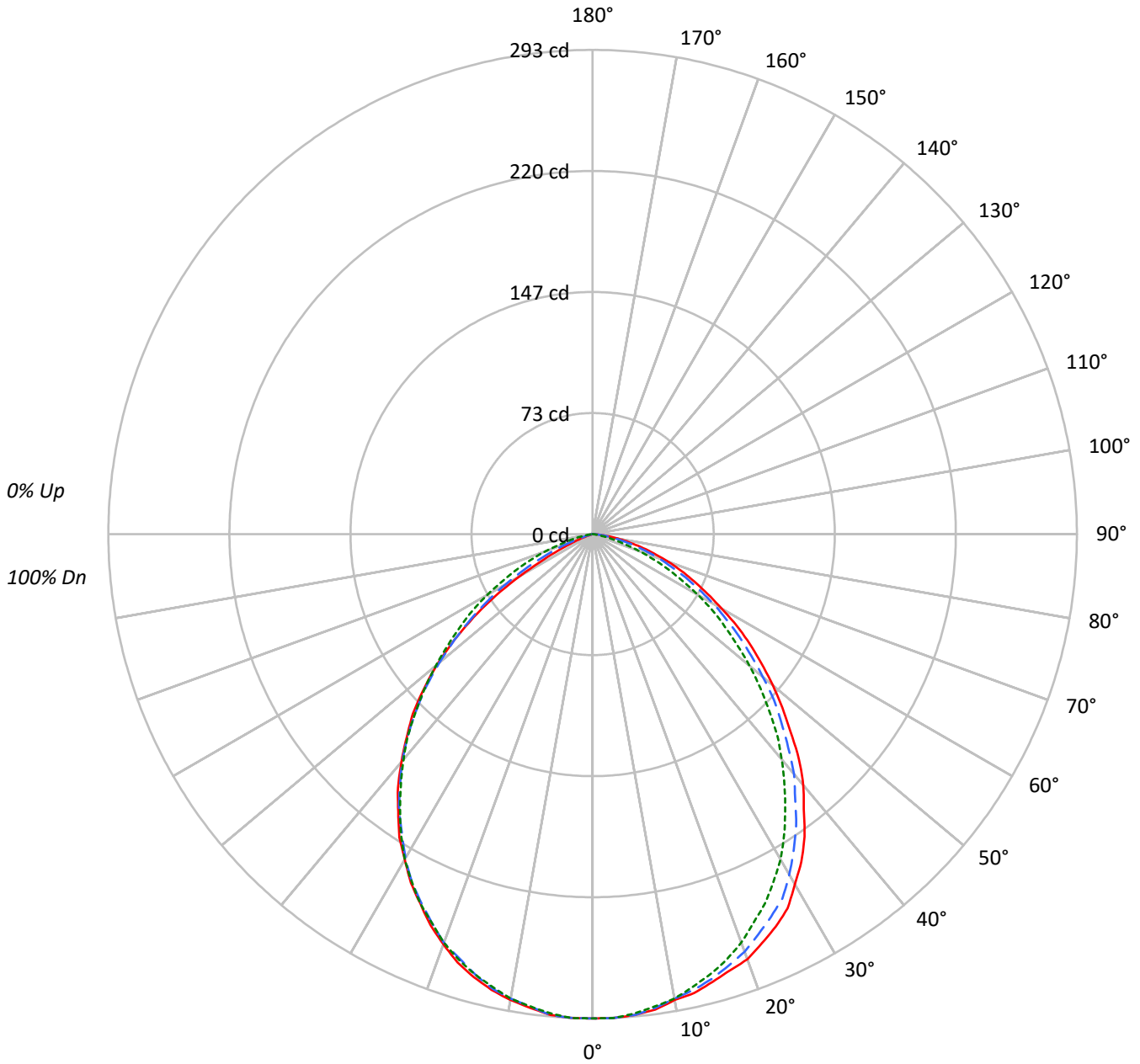
Input Watts (W): 10.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

Luminous Intensity Polar Plot





TEST NUMBER: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

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	111	107	103	100	108	105	101	98	100	98	95	97	94	93	93	91	90	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66		
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58		
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51		
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45		
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40		
8	65	52	44	39	63	52	44	39	50	43	38	49	43	38	48	42	38	36		
9	61	48	40	35	59	48	40	35	46	40	35	45	39	35	44	39	35	33		
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	23138	23138	23138	23138	23138
5°	23147	23147	23075	23147	23147
10°	22949	22877	22877	22877	22949
15°	22924	22769	22532	22532	22687
20°	23001	22590	22102	22102	22186
25°	22829	22246	21488	21401	21488
30°	22305	21694	20719	20637	20719
35°	21538	20690	19573	19669	19765
40°	20435	19538	18343	18446	18539
45°	18901	18030	16846	16846	17170
50°	17464	16518	15204	14848	15093
55°	15979	14905	13446	12387	12111
60°	14209	13294	11604	9615	7941
65°	12646	11562	9396	6332	3792
70°	11171	9832	6924	3116	1108
75°	9150	7686	4118	885	305
80°	7046	5273	1773	0	0
85°	3532	2627	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 10°
 Vertical Angle: 45°
 Luminance: 19001 cd/sqm



TEST NUMBER: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.6	4.4
10°-20°	78.2	12.5
20°-30°	115.3	18.4
30°-40°	130.5	20.8
40°-50°	120.5	19.2
50°-60°	89.0	14.2
60°-70°	47.9	7.6
70°-80°	16.0	2.6
80°-90°	2.0	0.3
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°	221.1	35.3
0°-40°	351.5	56.1
0°-60°	561.1	89.5
0°-90°	627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	627.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	293	293	293	293	293	
5°	292	292	291	292	292	28
15°	280	279	276	276	278	79
25°	262	255	247	246	247	121
35°	224	215	203	204	205	139
45°	169	162	151	151	154	131
55°	116	108	98	90	88	104
65°	68	62	50	34	20	68
75°	30	25	14	3	1	32
85°	4	3	0	0	0	6
90°	0	0	0	0	0	



TEST NUMBER: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
2.5°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
5°	292.1	292.1	291.2	292.1	292.1	292.1	292.1	291.2	292.1	292.1	292.1
7.5°	290.2	289.2	289.2	289.2	289.2	289.2	289.2	289.2	289.2	289.2	289.2
10°	286.3	286.3	286.3	286.3	286.3	286.3	286.3	286.3	286.3	286.3	285.4
12.5°	284.4	283.4	283.4	283.4	283.4	283.4	283.4	282.5	283.4	282.5	282.5
15°	280.5	280.5	280.5	280.5	280.5	280.5	279.6	279.6	279.6	279.6	278.6
17.5°	276.7	276.7	277.6	277.6	276.7	276.7	276.7	275.7	274.7	274.7	273.8
20°	273.8	273.8	272.8	272.8	271.8	272.8	271.8	270.9	270.9	269.9	268.9
22.5°	267.9	267.9	267.9	267.9	267.9	267.0	267.0	266.0	265.0	264.1	262.1
25°	262.1	262.1	262.1	262.1	261.2	261.2	261.2	259.2	258.3	257.3	255.4
27.5°	255.4	254.4	254.4	254.4	253.4	253.4	252.5	251.5	250.5	249.6	248.6
30°	244.7	244.7	244.7	244.7	243.8	242.8	242.8	241.8	240.9	238.9	238.0
32.5°	235.1	235.1	234.1	233.1	233.1	233.1	232.2	231.2	229.3	228.3	226.4
35°	223.5	222.5	222.5	221.5	221.5	221.5	220.6	218.6	217.6	216.7	214.7
37.5°	209.9	210.9	209.9	209.9	208.9	208.0	207.0	206.0	205.1	203.1	201.2
40°	198.3	198.3	197.3	196.4	195.4	195.4	194.4	193.5	192.5	191.5	189.6
42.5°	184.8	184.8	183.8	183.8	182.8	182.8	180.9	179.9	179.0	178.0	175.1
45°	169.3	169.3	170.2	169.3	168.3	167.3	167.3	166.4	164.4	163.5	161.5
47.5°	155.7	156.7	155.7	154.8	154.8	153.8	153.8	151.9	151.9	149.9	149.0
50°	142.2	142.2	142.2	142.2	141.2	140.3	140.3	139.3	137.4	136.4	134.5
52.5°	128.7	128.7	128.7	128.7	127.7	127.7	126.7	125.8	124.8	122.9	120.9
55°	116.1	115.1	115.1	115.1	114.1	114.1	113.2	112.2	111.2	110.3	108.3
57.5°	103.5	102.5	102.5	101.6	101.6	100.6	100.6	99.6	98.7	96.7	95.8
60°	90.0	90.9	90.0	90.0	89.0	89.0	89.0	88.0	86.1	85.1	84.2
62.5°	78.4	79.3	78.4	77.4	77.4	77.4	77.4	75.5	74.5	73.5	72.5
65°	67.7	67.7	67.7	66.7	66.7	66.7	64.8	64.8	63.8	62.9	61.9
67.5°	58.0	57.1	57.1	57.1	56.1	56.1	55.1	55.1	53.2	53.2	51.3
70°	48.4	47.4	47.4	47.4	46.4	45.5	46.4	44.5	43.5	42.6	42.6
72.5°	38.7	38.7	37.7	37.7	37.7	36.8	36.8	35.8	34.8	33.9	32.9
75°	30.0	30.0	30.0	29.0	29.0	28.1	28.1	27.1	27.1	25.2	25.2
77.5°	22.2	22.2	22.2	21.3	21.3	21.3	20.3	20.3	19.3	18.4	17.4
80°	15.5	14.5	14.5	14.5	14.5	13.5	13.5	13.5	12.6	12.6	11.6
82.5°	8.7	8.7	8.7	8.7	8.7	8.7	7.7	7.7	7.7	6.8	6.8
85°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
2.5°	293.1	293.1	293.1	293.1	292.1	293.1	292.1	293.1	293.1	293.1	293.1
5°	292.1	291.2	291.2	291.2	292.1	292.1	291.2	291.2	291.2	291.2	291.2
7.5°	289.2	289.2	289.2	288.3	289.2	289.2	288.3	289.2	289.2	288.3	289.2
10°	286.3	286.3	285.4	285.4	285.4	285.4	285.4	285.4	284.4	285.4	285.4
12.5°	282.5	282.5	282.5	281.5	281.5	281.5	281.5	281.5	280.5	280.5	281.5
15°	278.6	278.6	277.6	277.6	277.6	276.7	276.7	276.7	276.7	275.7	275.7
17.5°	273.8	272.8	272.8	271.8	271.8	270.9	270.9	269.9	269.9	269.9	268.9
20°	267.9	267.0	266.0	266.0	265.0	265.0	264.1	264.1	263.1	263.1	262.1
22.5°	261.2	260.2	259.2	258.3	258.3	257.3	257.3	256.3	255.4	254.4	254.4
25°	255.4	253.4	252.5	251.5	249.6	249.6	248.6	248.6	247.6	246.7	245.7
27.5°	246.7	244.7	243.8	242.8	241.8	240.9	238.9	238.9	238.0	237.0	236.0
30°	236.0	235.1	233.1	232.2	231.2	231.2	229.3	227.3	227.3	227.3	226.4
32.5°	225.4	223.5	222.5	220.6	219.6	219.6	218.6	216.7	215.7	215.7	214.7
35°	213.8	211.8	209.9	208.9	208.0	207.0	206.0	205.1	204.1	203.1	202.2
37.5°	200.2	198.3	197.3	196.4	195.4	194.4	193.5	192.5	191.5	190.6	191.5
40°	187.7	185.7	183.8	182.8	181.9	181.9	180.9	179.9	179.0	178.0	178.0
42.5°	174.1	172.2	171.2	170.2	169.3	168.3	167.3	166.4	165.4	165.4	164.4
45°	159.6	158.6	156.7	155.7	154.8	154.8	152.8	151.9	151.9	150.9	150.9
47.5°	147.0	145.1	143.2	142.2	141.2	140.3	139.3	138.3	137.4	137.4	137.4
50°	132.5	131.6	129.6	128.7	127.7	127.7	126.7	125.8	124.8	123.8	123.8
52.5°	119.0	118.0	118.0	116.1	115.1	115.1	113.2	113.2	111.2	110.3	109.3
55°	107.4	105.4	104.5	102.5	102.5	101.6	100.6	99.6	98.7	97.7	96.7
57.5°	93.8	92.9	91.9	90.9	90.9	90.0	89.0	88.0	86.1	86.1	84.2
60°	83.2	81.3	80.3	79.3	78.4	78.4	77.4	76.4	74.5	73.5	72.5
62.5°	71.6	69.6	69.6	68.7	66.7	66.7	65.8	63.8	62.9	60.9	60.0
65°	60.9	60.0	58.0	57.1	57.1	56.1	54.2	53.2	52.2	50.3	48.4
67.5°	50.3	49.3	48.4	46.4	46.4	45.5	43.5	42.6	40.6	39.7	37.7
70°	40.6	39.7	38.7	36.8	36.8	35.8	34.8	32.9	31.0	30.0	28.1
72.5°	31.9	31.0	30.0	28.1	28.1	27.1	25.2	24.2	22.2	20.3	19.3
75°	24.2	23.2	21.3	20.3	19.3	19.3	17.4	16.4	15.5	13.5	12.6
77.5°	16.4	15.5	14.5	13.5	13.5	12.6	11.6	10.6	9.7	8.7	6.8
80°	10.6	9.7	8.7	8.7	7.7	7.7	6.8	5.8	4.8	3.9	2.9
82.5°	5.8	5.8	4.8	3.9	3.9	3.9	2.9	2.9	1.9	1.0	1.0
85°	1.9	1.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
2.5°	293.1	293.1	293.1	293.1	293.1	293.1	292.1	293.1	293.1	293.1	292.1
5°	292.1	291.2	291.2	292.1	291.2	291.2	292.1	292.1	292.1	291.2	291.2
7.5°	288.3	289.2	288.3	288.3	289.2	289.2	289.2	289.2	288.3	288.3	289.2
10°	285.4	285.4	284.4	285.4	284.4	285.4	285.4	285.4	285.4	285.4	285.4
12.5°	280.5	280.5	280.5	281.5	280.5	280.5	281.5	281.5	281.5	281.5	281.5
15°	274.7	274.7	275.7	274.7	275.7	275.7	275.7	275.7	275.7	275.7	276.7
17.5°	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	269.9	269.9
20°	262.1	262.1	262.1	262.1	262.1	261.2	262.1	262.1	263.1	263.1	263.1
22.5°	253.4	253.4	253.4	253.4	253.4	253.4	253.4	253.4	254.4	255.4	254.4
25°	244.7	244.7	244.7	244.7	244.7	244.7	244.7	245.7	245.7	245.7	246.7
27.5°	236.0	236.0	236.0	235.1	236.0	235.1	236.0	236.0	237.0	236.0	237.0
30°	226.4	225.4	225.4	225.4	225.4	226.4	225.4	225.4	226.4	227.3	226.4
32.5°	213.8	213.8	213.8	214.7	214.7	214.7	215.7	214.7	214.7	215.7	215.7
35°	202.2	202.2	202.2	203.1	203.1	203.1	203.1	204.1	204.1	204.1	205.1
37.5°	189.6	190.6	189.6	190.6	190.6	191.5	191.5	191.5	191.5	192.5	192.5
40°	178.0	177.0	178.0	178.0	178.0	178.0	178.0	178.0	179.0	179.9	179.9
42.5°	164.4	164.4	164.4	164.4	164.4	164.4	165.4	165.4	165.4	166.4	166.4
45°	150.9	149.9	149.9	149.9	149.9	150.9	149.9	150.9	150.9	151.9	151.9
47.5°	136.4	136.4	136.4	136.4	136.4	136.4	136.4	136.4	136.4	137.4	136.4
50°	123.8	122.9	121.9	121.9	120.9	121.9	120.9	120.9	120.9	121.9	120.9
52.5°	109.3	108.3	107.4	107.4	107.4	106.4	105.4	105.4	105.4	104.5	104.5
55°	96.7	95.8	93.8	94.8	92.9	91.9	91.9	90.9	90.0	90.0	89.0
57.5°	83.2	82.2	81.3	80.3	80.3	78.4	77.4	76.4	75.5	74.5	72.5
60°	71.6	69.6	67.7	67.7	66.7	65.8	63.8	61.9	60.9	59.0	58.0
62.5°	59.0	57.1	55.1	54.2	53.2	52.2	50.3	48.4	46.4	45.5	43.5
65°	47.4	45.5	43.5	42.6	41.6	39.7	37.7	35.8	33.9	31.9	31.0
67.5°	35.8	33.9	32.9	31.0	30.0	28.1	26.1	25.2	23.2	21.3	18.4
70°	26.1	24.2	22.2	21.3	20.3	18.4	17.4	15.5	13.5	12.6	10.6
72.5°	17.4	15.5	14.5	13.5	12.6	11.6	9.7	8.7	6.8	5.8	4.8
75°	10.6	9.7	8.7	7.7	6.8	5.8	4.8	3.9	2.9	1.9	1.0
77.5°	5.8	4.8	3.9	3.9	2.9	1.9	1.9	1.0	1.0	1.0	1.0
80°	2.9	1.9	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	1.0
82.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P642290

CATALOG NUMBER: ML5612LSWW97FS1E - 592SC WW - 600LM - 5000K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
2.5°	293.1	293.1	293.1	293.1	293.1	293.1	293.1	293.1
5°	292.1	292.1	291.2	292.1	291.2	291.2	291.2	292.1
7.5°	289.2	289.2	289.2	289.2	289.2	289.2	289.2	289.2
10°	285.4	285.4	285.4	286.3	286.3	286.3	285.4	286.3
12.5°	281.5	281.5	281.5	282.5	281.5	282.5	281.5	282.5
15°	276.7	276.7	277.6	277.6	276.7	276.7	277.6	277.6
17.5°	269.9	270.9	270.9	270.9	270.9	270.9	270.9	271.8
20°	264.1	264.1	263.1	264.1	264.1	265.0	265.0	264.1
22.5°	254.4	256.3	256.3	256.3	256.3	256.3	256.3	256.3
25°	246.7	246.7	246.7	247.6	246.7	246.7	247.6	246.7
27.5°	237.0	238.0	237.0	238.0	238.0	238.0	238.0	238.0
30°	227.3	227.3	227.3	227.3	227.3	228.3	227.3	227.3
32.5°	215.7	216.7	216.7	216.7	217.6	216.7	216.7	217.6
35°	205.1	205.1	205.1	206.0	205.1	206.0	206.0	205.1
37.5°	192.5	193.5	192.5	193.5	193.5	193.5	193.5	193.5
40°	180.9	179.9	180.9	179.9	180.9	180.9	180.9	179.9
42.5°	166.4	167.3	167.3	167.3	167.3	167.3	167.3	166.4
45°	151.9	152.8	152.8	152.8	152.8	152.8	153.8	153.8
47.5°	136.4	138.3	138.3	138.3	137.4	139.3	138.3	138.3
50°	120.9	120.9	121.9	121.9	122.9	122.9	122.9	122.9
52.5°	105.4	104.5	105.4	105.4	106.4	105.4	106.4	105.4
55°	88.0	88.0	88.0	87.1	88.0	88.0	88.0	88.0
57.5°	72.5	71.6	70.6	69.6	69.6	69.6	68.7	69.6
60°	56.1	54.2	55.1	53.2	52.2	51.3	51.3	50.3
62.5°	41.6	39.7	38.7	37.7	35.8	33.9	33.9	32.9
65°	28.1	26.1	25.2	23.2	22.2	21.3	20.3	20.3
67.5°	17.4	15.5	15.5	14.5	13.5	12.6	11.6	11.6
70°	9.7	8.7	7.7	6.8	6.8	5.8	4.8	4.8
72.5°	3.9	2.9	2.9	1.9	1.9	1.9	1.9	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)