

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: P642326

Luminaire Tested: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642326
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-131)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K
Description: ML56 RR, WW OPTIC, 6" WW INSERT WITH SPECULAR CLEAR TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 875.8 lumens
Efficiency: N/A
Efficacy: 53.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

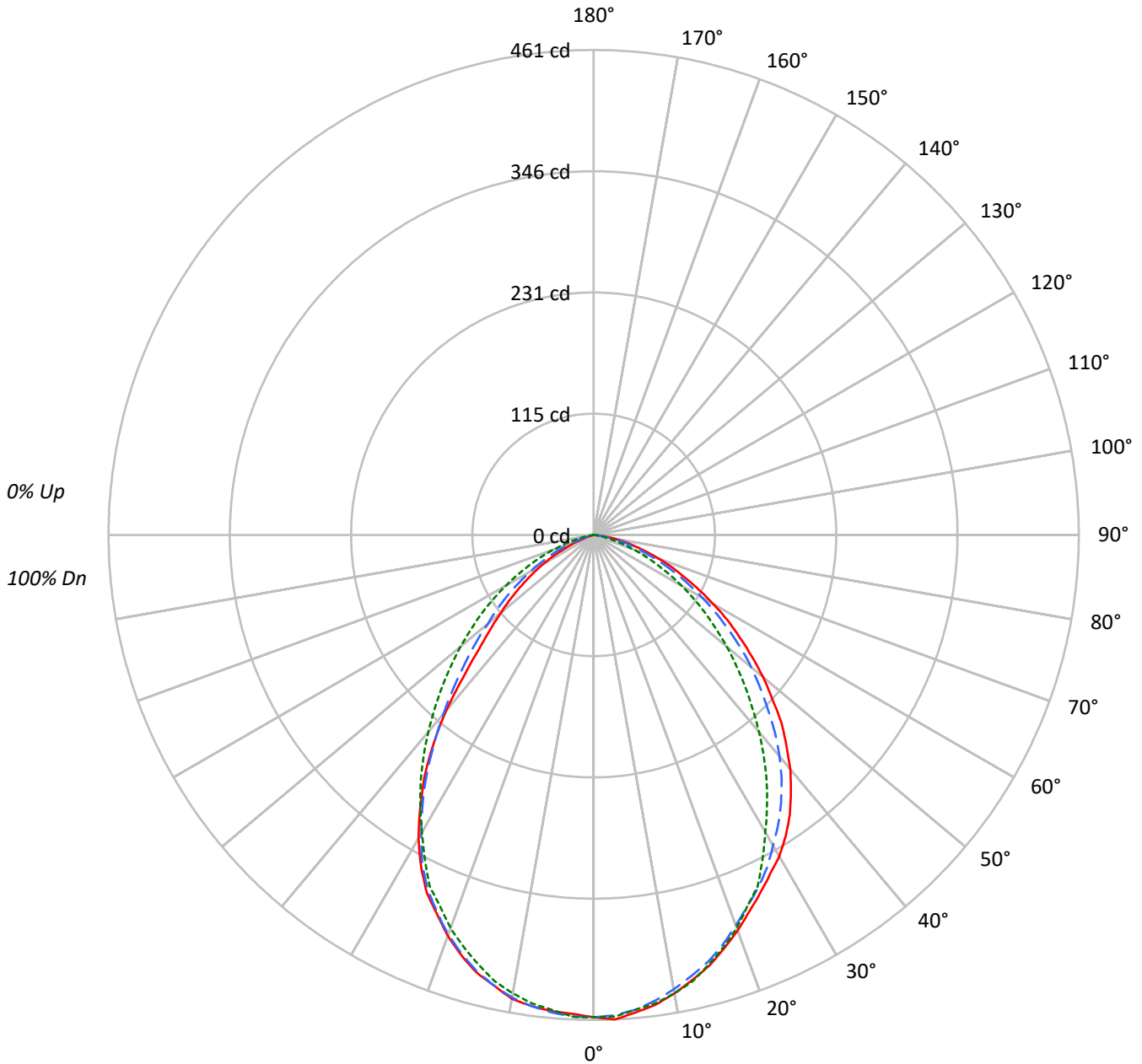
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

Luminous Intensity Polar Plot





TEST NUMBER: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	72	81	76	71	79	74	70	76	72	69	67																			
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	46																			
7	70	58	50	45	69	57	50	44	56	49	44	55	48	44	53	48	44	42																			
8	66	53	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	25130	25130	25130	25130	25130
5°	25077	24934	24934	25077	25005
10°	24632	24415	24632	24855	24927
15°	24064	23842	23990	24364	24438
20°	23347	23044	23195	23580	23656
25°	22689	22374	22290	22532	22689
30°	22326	21573	20655	20737	21073
35°	21750	20773	19180	18477	18738
40°	20796	19665	17490	15880	15601
45°	19560	18126	15769	13412	11986
50°	17910	16673	14081	11155	9799
55°	16162	14900	12377	9472	7952
60°	14341	13036	10569	7675	6085
65°	12336	11143	8561	5656	3775
70°	10579	9104	6347	3174	1475
75°	8388	6990	4194	847	0
80°	6251	5020	2084	0	0
85°	3334	2516	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19560 cd/sqm



TEST NUMBER: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	4.9
10°-20°	119.3	13.6
20°-30°	170.0	19.4
30°-40°	182.8	20.9
40°-50°	157.5	18.0
50°-60°	114.2	13.0
60°-70°	64.4	7.4
70°-80°	21.9	2.5
80°-90°	2.8	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°	332.2	37.9
0°-40°	515.0	58.8
0°-60°	786.7	89.8
0°-90°	875.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	875.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	458	458	458	458	458	
5°	456	453	453	456	454	43
15°	424	420	423	429	431	119
25°	375	370	368	372	375	173
35°	325	310	287	276	280	202
45°	252	234	203	173	155	193
55°	169	156	130	99	83	152
65°	95	86	66	44	29	95
75°	40	33	20	4	0	43
85°	5	4	0	0	0	8
90°	0	0	0	0	0	



TEST NUMBER: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4
2.5°	461.0	457.0	455.7	457.0	457.0	457.0	457.0	457.0	457.0	455.7	457.0
5°	455.7	451.8	451.8	451.8	451.8	451.8	450.4	451.8	451.8	451.8	453.1
7.5°	450.4	445.2	446.5	445.2	446.5	445.2	445.2	446.5	445.2	446.5	446.5
10°	442.5	438.6	438.6	438.6	438.6	438.6	438.6	438.6	438.6	438.6	438.6
12.5°	433.3	429.3	429.3	429.3	429.3	429.3	429.3	429.3	430.6	429.3	429.3
15°	424.0	418.7	420.1	418.7	418.7	418.7	418.7	418.7	418.7	418.7	420.1
17.5°	412.1	408.2	408.2	408.2	408.2	408.2	408.2	406.9	408.2	408.2	408.2
20°	400.2	396.3	396.3	395.0	396.3	395.0	395.0	395.0	396.3	395.0	395.0
22.5°	387.0	383.1	384.4	383.1	383.1	383.1	383.1	383.1	381.8	383.1	381.8
25°	375.1	373.8	372.5	373.8	372.5	372.5	372.5	371.2	371.2	371.2	369.9
27.5°	363.3	360.6	360.6	360.6	360.6	359.3	359.3	359.3	358.0	356.7	356.7
30°	352.7	348.7	348.7	348.7	347.4	347.4	346.1	346.1	343.4	342.1	340.8
32.5°	339.5	336.8	335.5	335.5	334.2	334.2	332.9	332.9	330.2	328.9	326.3
35°	325.0	323.6	323.6	322.3	321.0	319.7	318.3	317.0	315.7	313.1	310.4
37.5°	307.8	306.5	305.1	305.1	303.8	302.5	302.5	299.9	298.5	295.9	293.3
40°	290.6	288.0	288.0	286.6	285.3	284.0	284.0	281.4	280.0	277.4	274.8
42.5°	270.8	268.2	268.2	266.8	266.8	266.8	265.5	262.9	260.2	257.6	254.9
45°	252.3	249.7	249.7	247.0	247.0	245.7	244.4	243.1	240.4	237.8	233.8
47.5°	229.8	228.5	228.5	227.2	225.9	224.6	224.6	223.2	220.6	216.6	214.0
50°	210.0	208.7	208.7	207.4	206.1	204.7	203.4	202.1	200.8	198.1	195.5
52.5°	188.9	188.9	187.6	186.3	186.3	184.9	183.6	182.3	179.6	177.0	175.7
55°	169.1	167.8	167.8	166.4	166.4	165.1	163.8	162.5	161.2	158.5	155.9
57.5°	150.6	147.9	147.9	146.6	146.6	146.6	145.3	142.7	141.3	138.7	137.4
60°	130.8	129.5	129.5	129.5	128.1	126.8	126.8	124.2	122.8	121.5	118.9
62.5°	112.3	111.0	111.0	111.0	109.6	109.6	108.3	107.0	105.7	104.4	101.7
65°	95.1	95.1	95.1	93.8	93.8	92.5	91.1	91.1	89.8	88.5	85.9
67.5°	80.6	79.3	79.3	79.3	77.9	77.9	76.6	75.3	74.0	72.7	70.0
70°	66.0	64.7	64.7	63.4	63.4	63.4	63.4	62.1	59.4	59.4	56.8
72.5°	51.5	51.5	51.5	50.2	50.2	50.2	48.9	48.9	47.6	46.2	44.9
75°	39.6	39.6	39.6	38.3	38.3	38.3	37.0	37.0	35.7	34.3	33.0
77.5°	29.1	29.1	29.1	27.7	27.7	27.7	26.4	26.4	25.1	25.1	23.8
80°	19.8	19.8	19.8	18.5	18.5	18.5	18.5	17.2	17.2	15.9	15.9
82.5°	11.9	11.9	11.9	11.9	10.6	10.6	10.6	10.6	10.6	9.2	9.2
85°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.0	4.0
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
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: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4
2.5°	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	458.4	457.0
5°	453.1	453.1	453.1	453.1	453.1	453.1	454.4	453.1	454.4	453.1	454.4
7.5°	446.5	446.5	447.8	447.8	446.5	447.8	447.8	447.8	447.8	449.1	449.1
10°	438.6	439.9	439.9	441.2	441.2	441.2	441.2	442.5	442.5	442.5	442.5
12.5°	430.6	430.6	430.6	430.6	432.0	430.6	432.0	432.0	433.3	434.6	433.3
15°	418.7	420.1	420.1	420.1	420.1	420.1	421.4	422.7	422.7	422.7	424.0
17.5°	408.2	408.2	408.2	409.5	408.2	409.5	409.5	409.5	410.8	410.8	412.1
20°	395.0	393.6	396.3	395.0	395.0	396.3	396.3	396.3	397.6	397.6	397.6
22.5°	380.4	381.8	380.4	380.4	381.8	381.8	381.8	380.4	381.8	381.8	383.1
25°	368.5	368.5	368.5	368.5	368.5	368.5	368.5	367.2	368.5	368.5	368.5
27.5°	355.3	352.7	352.7	351.4	351.4	350.1	348.7	348.7	348.7	347.4	348.7
30°	339.5	336.8	335.5	334.2	332.9	332.9	330.2	328.9	327.6	326.3	325.0
32.5°	323.6	321.0	319.7	318.3	315.7	314.4	311.7	310.4	309.1	306.5	303.8
35°	309.1	305.1	302.5	299.9	298.5	297.2	294.6	291.9	289.3	286.6	284.0
37.5°	289.3	286.6	284.0	281.4	280.0	278.7	276.1	270.8	268.2	265.5	262.9
40°	272.1	268.2	265.5	261.5	260.2	257.6	254.9	251.0	247.0	244.4	241.7
42.5°	251.0	248.3	245.7	241.7	240.4	237.8	233.8	231.2	228.5	223.2	220.6
45°	231.2	228.5	225.9	221.9	219.3	218.0	215.3	211.4	207.4	203.4	200.8
47.5°	211.4	208.7	204.7	202.1	199.5	198.1	195.5	191.5	187.6	183.6	181.0
50°	191.5	188.9	186.3	181.0	181.0	178.3	175.7	171.7	169.1	165.1	161.2
52.5°	173.0	169.1	166.4	162.5	162.5	161.2	157.2	153.2	150.6	146.6	144.0
55°	153.2	150.6	147.9	145.3	142.7	141.3	140.0	136.1	132.1	129.5	125.5
57.5°	134.7	130.8	129.5	126.8	125.5	124.2	121.5	117.6	114.9	112.3	109.6
60°	117.6	114.9	111.0	109.6	108.3	107.0	104.4	101.7	99.1	96.4	93.8
62.5°	100.4	97.8	95.1	92.5	91.1	89.8	88.5	85.9	83.2	80.6	77.9
65°	83.2	81.9	79.3	77.9	76.6	75.3	72.7	70.0	68.7	66.0	63.4
67.5°	68.7	67.4	64.7	63.4	62.1	62.1	58.1	56.8	54.2	52.8	50.2
70°	55.5	54.2	51.5	50.2	48.9	47.6	46.2	44.9	42.3	39.6	38.3
72.5°	43.6	40.9	39.6	38.3	37.0	37.0	34.3	33.0	30.4	29.1	26.4
75°	31.7	30.4	29.1	27.7	27.7	26.4	25.1	23.8	21.1	19.8	18.5
77.5°	22.5	21.1	19.8	18.5	18.5	17.2	15.9	14.5	13.2	11.9	10.6
80°	14.5	13.2	13.2	11.9	10.6	10.6	9.2	7.9	6.6	6.6	5.3
82.5°	7.9	7.9	6.6	6.6	5.3	5.3	4.0	4.0	2.6	2.6	1.3
85°	4.0	2.6	2.6	2.6	2.6	1.3	1.3	1.3	0.0	0.0	0.0
87.5°	1.3	1.3	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: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4
2.5°	457.0	457.0	457.0	457.0	457.0	457.0	457.0	457.0	458.4	457.0	457.0
5°	454.4	454.4	455.7	454.4	455.7	455.7	454.4	454.4	455.7	457.0	455.7
7.5°	449.1	449.1	450.4	450.4	450.4	450.4	450.4	451.8	451.8	453.1	453.1
10°	443.8	443.8	443.8	443.8	445.2	445.2	446.5	446.5	446.5	446.5	446.5
12.5°	434.6	435.9	435.9	435.9	435.9	437.2	437.2	438.6	438.6	438.6	439.9
15°	424.0	425.3	426.7	426.7	425.3	426.7	428.0	428.0	429.3	429.3	429.3
17.5°	412.1	413.5	413.5	414.8	413.5	416.1	416.1	417.4	417.4	418.7	418.7
20°	398.9	400.2	400.2	400.2	401.6	401.6	402.9	402.9	404.2	404.2	404.2
22.5°	383.1	384.4	384.4	384.4	384.4	385.7	385.7	387.0	388.4	389.7	388.4
25°	368.5	369.9	371.2	369.9	371.2	371.2	371.2	372.5	372.5	373.8	372.5
27.5°	348.7	348.7	348.7	350.1	351.4	351.4	351.4	352.7	352.7	352.7	354.0
30°	325.0	323.6	325.0	325.0	325.0	325.0	327.6	327.6	327.6	328.9	330.2
32.5°	302.5	302.5	302.5	301.2	301.2	301.2	301.2	302.5	302.5	303.8	305.1
35°	281.4	280.0	277.4	277.4	277.4	276.1	274.8	274.8	276.1	276.1	276.1
37.5°	258.9	257.6	256.3	253.6	253.6	251.0	249.7	248.3	248.3	247.0	247.0
40°	237.8	235.1	232.5	232.5	229.8	228.5	225.9	224.6	221.9	219.3	219.3
42.5°	216.6	214.0	211.4	210.0	207.4	206.1	202.1	199.5	196.8	195.5	192.9
45°	196.8	194.2	190.2	188.9	186.3	183.6	181.0	177.0	173.0	170.4	169.1
47.5°	177.0	174.4	170.4	167.8	166.4	162.5	159.8	155.9	151.9	147.9	144.0
50°	158.5	154.6	150.6	147.9	146.6	142.7	140.0	136.1	130.8	129.5	125.5
52.5°	140.0	136.1	132.1	130.8	129.5	125.5	121.5	117.6	114.9	111.0	108.3
55°	121.5	118.9	114.9	113.6	112.3	108.3	104.4	101.7	99.1	95.1	92.5
57.5°	105.7	103.0	99.1	97.8	96.4	92.5	89.8	85.9	83.2	80.6	77.9
60°	91.1	87.2	84.5	83.2	81.9	77.9	75.3	72.7	70.0	67.4	63.4
62.5°	75.3	72.7	70.0	68.7	66.0	64.7	60.8	59.4	55.5	54.2	51.5
65°	60.8	58.1	55.5	55.5	54.2	50.2	48.9	46.2	43.6	40.9	39.6
67.5°	48.9	46.2	43.6	42.3	40.9	38.3	37.0	34.3	31.7	30.4	27.7
70°	37.0	34.3	31.7	30.4	29.1	27.7	25.1	22.5	19.8	18.5	15.9
72.5°	25.1	22.5	21.1	21.1	19.8	17.2	14.5	13.2	10.6	9.2	7.9
75°	15.9	13.2	11.9	10.6	10.6	9.2	6.6	5.3	4.0	2.6	1.3
77.5°	9.2	7.9	6.6	5.3	5.3	4.0	2.6	1.3	1.3	0.0	0.0
80°	4.0	2.6	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.3	1.3	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: P642326

CATALOG NUMBER: ML5612LSWW97FS1E - 692SC WW - 1200LM - 2700K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	458.4	458.4	458.4	458.4	458.4	458.4	458.4	458.4
2.5°	457.0	457.0	457.0	457.0	455.7	455.7	455.7	455.7
5°	455.7	455.7	455.7	455.7	454.4	454.4	455.7	454.4
7.5°	453.1	453.1	451.8	451.8	451.8	451.8	451.8	451.8
10°	447.8	447.8	447.8	446.5	447.8	447.8	446.5	447.8
12.5°	439.9	439.9	439.9	439.9	438.6	438.6	439.9	438.6
15°	430.6	430.6	430.6	430.6	430.6	429.3	430.6	430.6
17.5°	420.1	420.1	418.7	418.7	418.7	420.1	420.1	418.7
20°	405.5	405.5	405.5	405.5	405.5	405.5	405.5	405.5
22.5°	389.7	389.7	389.7	389.7	389.7	389.7	389.7	389.7
25°	373.8	373.8	373.8	373.8	373.8	373.8	373.8	375.1
27.5°	354.0	354.0	354.0	354.0	354.0	352.7	352.7	355.3
30°	330.2	331.6	331.6	331.6	331.6	331.6	331.6	332.9
32.5°	306.5	306.5	306.5	307.8	306.5	307.8	306.5	306.5
35°	278.7	278.7	278.7	278.7	278.7	280.0	280.0	280.0
37.5°	247.0	248.3	248.3	249.7	249.7	249.7	251.0	249.7
40°	218.0	218.0	218.0	216.6	218.0	216.6	218.0	218.0
42.5°	190.2	187.6	187.6	186.3	186.3	184.9	183.6	183.6
45°	165.1	161.2	161.2	159.8	158.5	155.9	154.6	154.6
47.5°	141.3	140.0	138.7	137.4	136.1	133.4	132.1	133.4
50°	121.5	120.2	118.9	118.9	117.6	116.2	114.9	114.9
52.5°	105.7	103.0	101.7	101.7	100.4	99.1	99.1	99.1
55°	89.8	87.2	87.2	87.2	85.9	84.5	84.5	83.2
57.5°	75.3	72.7	72.7	71.3	70.0	70.0	70.0	68.7
60°	62.1	59.4	58.1	58.1	56.8	55.5	55.5	55.5
62.5°	48.9	47.6	44.9	44.9	43.6	42.3	40.9	42.3
65°	37.0	34.3	33.0	33.0	31.7	30.4	29.1	29.1
67.5°	25.1	23.8	22.5	22.5	19.8	19.8	18.5	18.5
70°	14.5	13.2	13.2	11.9	10.6	10.6	9.2	9.2
72.5°	6.6	5.3	5.3	4.0	4.0	2.6	2.6	2.6
75°	1.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	1.3	1.3	0.0	0.0
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)