

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: P642273

Luminaire Tested: ML5612LSWW97FS1E - 592H WW - 600LM - 3500K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642273
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-130)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5612LSWW97FS1E - 592H WW - 600LM - 3500K
Description: ML56 RR, WW OPTIC, 5" WW INSERT WITH HAZE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 569.5 lumens
Efficiency: N/A
Efficacy: 55.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.25
Luminous Opening: Circular (Dia: 0.42' x H: 0')
CIE Type: Direct

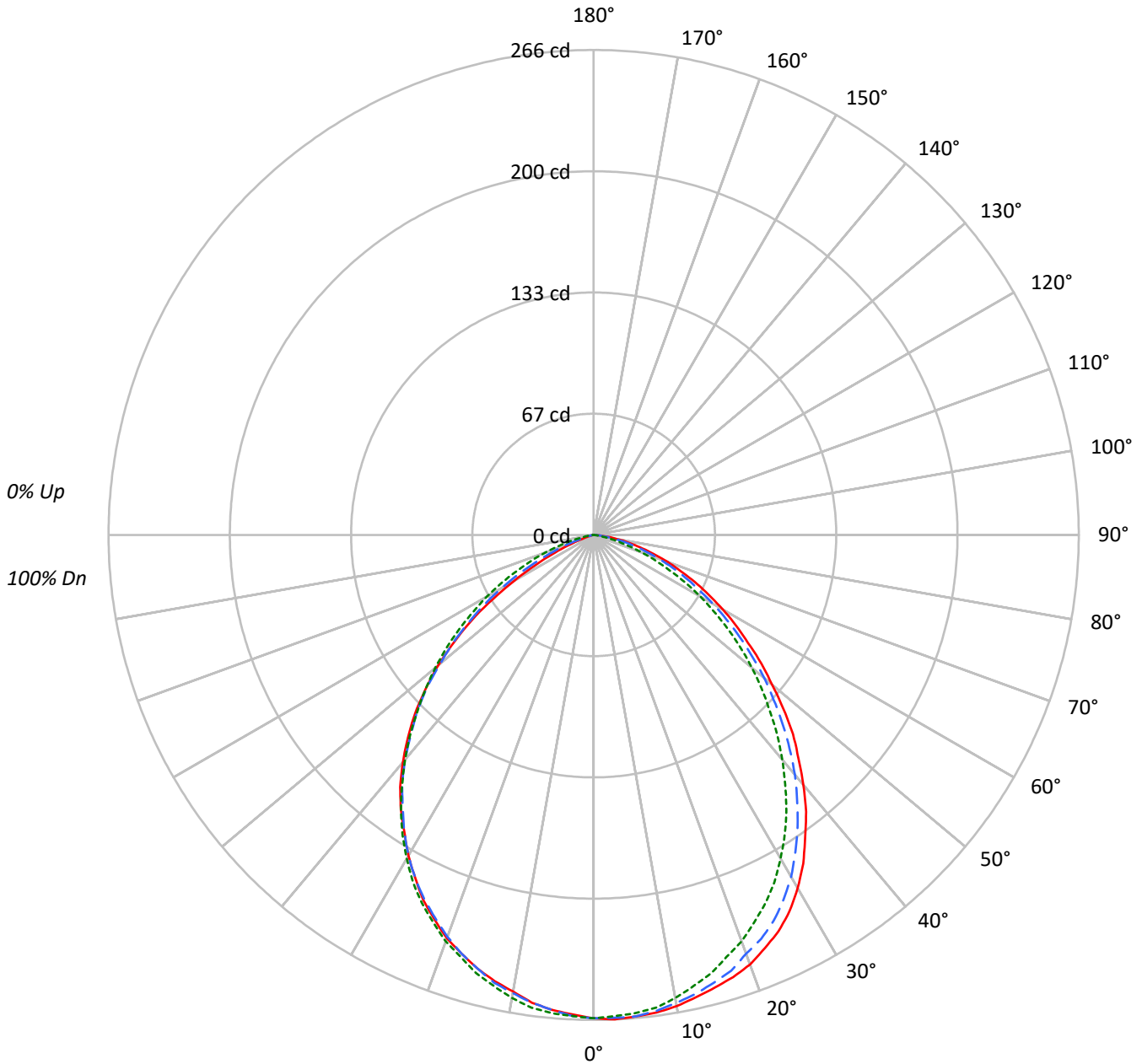
Input Watts (W): 10.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	111	107	103	100	108	105	101	98	100	98	95	96	94	92	93	91	90	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	79	84	80	78	76		
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66		
4	87	76	68	62	85	75	67	62	72	66	61	70	65	60	68	63	59	57		
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50		
6	74	62	54	48	73	61	54	48	60	53	47	58	52	47	56	51	47	45		
7	69	57	49	43	68	56	48	43	54	48	42	53	47	42	52	46	42	40		
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	35	44	39	34	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	31	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	20927	20927	20927	20927	20927
5°	21007	21007	20865	20722	20722
10°	21034	20889	20673	20457	20384
15°	21003	20783	20342	20121	20121
20°	21061	20531	19927	19700	19775
25°	20896	20347	19406	19171	19249
30°	20391	19735	18677	18513	18513
35°	19486	18792	17751	17578	17751
40°	18425	17683	16570	16570	16756
45°	17248	16355	15250	15250	15451
50°	15671	15007	13902	13460	13681
55°	14217	13474	12359	11506	11258
60°	12915	11920	10641	9220	7941
65°	11413	10404	8555	6370	4707
70°	9948	8701	6440	3531	1870
75°	7961	6863	4118	1098	549
80°	6137	4501	1637	409	409
85°	3261	2446	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17248 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.0	4.4
10°-20°	70.5	12.4
20°-30°	104.0	18.3
30°-40°	117.8	20.7
40°-50°	108.8	19.1
50°-60°	81.3	14.3
60°-70°	44.9	7.9
70°-80°	15.2	2.7
80°-90°	1.9	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°	199.6	35.0
0°-40°	317.4	55.7
0°-60°	507.5	89.1
0°-90°	569.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	569.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	265	265	265	265	265	
5°	265	265	263	262	262	25
15°	257	254	249	246	246	73
25°	240	234	223	220	221	110
35°	202	195	184	182	184	126
45°	154	146	137	137	138	119
55°	103	98	90	84	82	93
65°	61	56	46	34	25	61
75°	26	22	14	4	2	29
85°	4	3	0	0	0	5
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°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1
2.5°	266.0	266.0	266.0	266.0	265.1	265.1	266.0	265.1	265.1	265.1	265.1
5°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1
7.5°	264.2	264.2	264.2	264.2	264.2	264.2	264.2	264.2	263.3	263.3	263.3
10°	262.4	262.4	262.4	262.4	262.4	262.4	262.4	261.5	261.5	261.5	260.6
12.5°	259.7	260.6	259.7	260.6	259.7	259.7	258.8	258.8	258.8	257.9	257.9
15°	257.0	257.0	257.0	257.0	257.0	256.1	256.1	255.2	255.2	255.2	254.3
17.5°	254.3	253.4	253.4	253.4	252.5	252.5	252.5	252.5	251.6	250.7	250.7
20°	250.7	249.8	249.8	249.8	248.9	248.9	248.0	248.0	246.2	246.2	244.4
22.5°	245.3	245.3	245.3	244.4	244.4	243.5	243.5	242.6	241.7	240.8	239.9
25°	239.9	239.9	239.0	239.0	238.1	238.1	238.1	236.3	235.4	234.5	233.6
27.5°	232.7	232.7	231.8	231.8	230.9	230.0	230.0	228.2	228.2	226.4	225.5
30°	223.7	223.7	223.7	221.9	221.9	221.9	221.0	220.1	218.3	217.4	216.5
32.5°	213.8	212.9	212.9	212.9	212.0	211.1	211.1	209.3	208.4	207.5	205.8
35°	202.2	202.2	202.2	202.2	201.3	200.4	200.4	198.6	197.7	195.9	195.0
37.5°	191.4	191.4	190.5	190.5	188.7	189.6	188.7	187.8	186.9	184.2	183.3
40°	178.8	178.8	178.8	177.9	177.0	177.0	176.1	175.2	173.4	172.5	171.6
42.5°	166.2	166.2	166.2	165.3	164.4	164.4	164.4	162.6	161.7	160.8	159.0
45°	154.5	153.6	153.6	152.7	152.7	151.8	150.9	150.0	149.1	148.2	146.5
47.5°	141.1	141.1	140.2	140.2	139.3	139.3	138.4	137.5	136.6	135.7	133.9
50°	127.6	128.5	128.5	127.6	127.6	126.7	125.8	125.8	124.9	124.0	122.2
52.5°	115.9	115.9	115.9	115.0	115.0	114.1	114.1	113.2	112.3	110.5	109.6
55°	103.3	104.2	103.3	103.3	103.3	102.4	102.4	101.5	100.6	98.8	97.9
57.5°	92.5	92.5	91.6	91.6	90.7	90.7	90.7	89.8	88.9	88.1	86.3
60°	81.8	80.9	80.9	80.9	80.0	80.0	80.0	78.2	77.3	76.4	75.5
62.5°	71.0	71.0	71.0	70.1	70.1	69.2	68.3	68.3	67.4	66.5	64.7
65°	61.1	61.1	60.2	60.2	60.2	59.3	59.3	58.4	57.5	56.6	55.7
67.5°	51.2	51.2	51.2	50.3	50.3	50.3	49.4	48.5	48.5	47.6	46.7
70°	43.1	42.2	42.2	42.2	41.3	41.3	41.3	40.4	39.5	38.6	37.7
72.5°	34.1	34.1	34.1	34.1	33.2	33.2	32.3	32.3	31.4	30.5	29.6
75°	26.1	26.1	26.1	26.1	25.2	25.2	25.2	24.3	24.3	23.4	22.5
77.5°	19.8	19.8	19.8	18.9	18.9	18.0	18.0	18.0	17.1	17.1	16.2
80°	13.5	13.5	12.6	12.6	12.6	12.6	12.6	11.7	10.8	10.8	9.9
82.5°	8.1	8.1	8.1	7.2	7.2	7.2	7.2	7.2	6.3	6.3	5.4
85°	3.6	3.6	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	2.7
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1
2.5°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	264.2	264.2	264.2	264.2
5°	264.2	264.2	264.2	264.2	264.2	263.3	264.2	263.3	263.3	263.3	263.3
7.5°	262.4	262.4	262.4	262.4	261.5	262.4	261.5	261.5	261.5	261.5	260.6
10°	260.6	259.7	259.7	259.7	259.7	258.8	258.8	257.9	257.9	257.9	257.0
12.5°	257.9	257.0	257.0	256.1	256.1	256.1	255.2	255.2	254.3	253.4	253.4
15°	253.4	253.4	252.5	251.6	251.6	250.7	250.7	249.8	249.8	248.9	248.0
17.5°	249.8	248.9	248.0	247.1	246.2	246.2	245.3	244.4	244.4	242.6	242.6
20°	243.5	242.6	241.7	240.8	240.8	240.8	239.0	239.0	238.1	237.2	236.3
22.5°	238.1	237.2	235.4	234.5	234.5	233.6	232.7	231.8	230.9	230.0	229.1
25°	231.8	230.9	229.1	228.2	227.3	226.4	225.5	224.6	223.7	222.8	221.9
27.5°	223.7	221.9	221.9	220.1	219.2	218.3	217.4	216.5	215.6	214.7	213.8
30°	214.7	213.8	212.0	210.2	209.3	209.3	207.5	206.7	206.7	204.9	204.0
32.5°	204.9	203.1	201.3	200.4	199.5	198.6	197.7	196.8	195.9	195.0	194.1
35°	194.1	191.4	190.5	188.7	188.7	187.8	186.9	185.1	185.1	184.2	182.4
37.5°	182.4	180.6	179.7	177.9	177.0	176.1	175.2	174.3	173.4	172.5	171.6
40°	169.8	168.0	167.1	166.2	165.3	164.4	163.5	162.6	161.7	160.8	159.9
42.5°	157.2	156.3	154.5	152.7	152.7	151.8	150.9	150.0	149.1	149.1	148.2
45°	144.7	143.8	142.0	141.1	140.2	140.2	138.4	138.4	137.5	136.6	136.6
47.5°	133.0	131.2	129.4	129.4	127.6	128.5	126.7	126.7	124.9	124.9	124.0
50°	120.4	119.5	117.7	116.8	116.8	115.9	115.0	115.0	114.1	113.2	112.3
52.5°	108.7	106.9	106.0	105.1	104.2	104.2	103.3	103.3	101.5	101.5	100.6
55°	97.0	96.1	94.3	93.4	93.4	93.4	91.6	90.7	90.7	89.8	88.9
57.5°	85.4	84.5	83.6	82.7	81.8	81.8	80.9	80.0	79.1	78.2	76.4
60°	74.6	73.7	72.8	71.9	71.0	71.0	70.1	69.2	68.3	67.4	66.5
62.5°	63.8	63.8	62.0	61.1	60.2	60.2	59.3	58.4	57.5	56.6	55.7
65°	54.8	53.9	52.1	51.2	51.2	51.2	49.4	48.5	47.6	45.8	44.9
67.5°	45.8	44.0	43.1	43.1	42.2	41.3	40.4	39.5	37.7	36.8	35.0
70°	36.8	35.9	35.0	34.1	33.2	32.3	31.4	30.5	28.8	27.9	27.0
72.5°	28.8	27.9	27.0	26.1	25.2	25.2	23.4	22.5	21.6	19.8	18.9
75°	21.6	20.7	19.8	18.9	18.0	17.1	17.1	15.3	14.4	13.5	11.7
77.5°	15.3	14.4	13.5	12.6	12.6	11.7	10.8	9.9	9.0	8.1	7.2
80°	9.9	9.0	8.1	8.1	7.2	7.2	6.3	5.4	4.5	3.6	3.6
82.5°	5.4	4.5	4.5	3.6	3.6	3.6	2.7	1.8	1.8	1.8	0.9
85°	1.8	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1
2.5°	264.2	264.2	264.2	264.2	264.2	264.2	264.2	264.2	264.2	263.3	263.3
5°	262.4	262.4	262.4	262.4	262.4	262.4	261.5	261.5	261.5	261.5	261.5
7.5°	260.6	260.6	260.6	259.7	259.7	259.7	259.7	258.8	258.8	258.8	258.8
10°	257.0	257.0	257.0	256.1	256.1	256.1	256.1	256.1	255.2	255.2	255.2
12.5°	252.5	252.5	252.5	252.5	252.5	251.6	251.6	251.6	251.6	250.7	251.6
15°	248.0	248.0	247.1	247.1	247.1	246.2	246.2	246.2	246.2	246.2	246.2
17.5°	242.6	241.7	241.7	240.8	240.8	240.8	240.8	240.8	240.8	240.8	240.8
20°	236.3	235.4	235.4	235.4	235.4	234.5	234.5	233.6	234.5	234.5	234.5
22.5°	229.1	228.2	228.2	228.2	227.3	227.3	227.3	227.3	227.3	227.3	227.3
25°	221.9	221.0	220.1	220.1	220.1	219.2	219.2	220.1	220.1	220.1	220.1
27.5°	212.9	212.9	212.0	212.0	212.0	211.1	211.1	211.1	212.0	212.0	212.0
30°	203.1	203.1	203.1	203.1	202.2	202.2	203.1	202.2	203.1	202.2	203.1
32.5°	194.1	194.1	193.2	192.3	192.3	193.2	192.3	192.3	193.2	193.2	193.2
35°	182.4	182.4	182.4	182.4	182.4	182.4	182.4	182.4	182.4	183.3	184.2
37.5°	171.6	171.6	171.6	171.6	171.6	171.6	171.6	172.5	172.5	172.5	172.5
40°	159.9	159.9	159.9	159.9	159.9	159.9	159.9	159.9	160.8	160.8	161.7
42.5°	147.4	148.2	148.2	148.2	147.4	147.4	148.2	148.2	148.2	149.1	149.1
45°	135.7	135.7	135.7	135.7	136.6	135.7	135.7	135.7	136.6	136.6	136.6
47.5°	124.0	123.1	123.1	124.0	123.1	123.1	123.1	123.1	124.0	124.0	123.1
50°	112.3	111.4	111.4	111.4	110.5	110.5	111.4	109.6	109.6	109.6	110.5
52.5°	100.6	99.7	98.8	98.8	98.8	97.9	97.0	97.0	97.0	96.1	96.1
55°	88.1	87.2	86.3	86.3	86.3	85.4	85.4	83.6	83.6	82.7	82.7
57.5°	76.4	75.5	74.6	74.6	73.7	72.8	72.8	71.0	71.0	70.1	68.3
60°	64.7	63.8	62.9	62.9	62.9	61.1	60.2	58.4	58.4	56.6	55.7
62.5°	53.9	53.0	52.1	51.2	51.2	49.4	48.5	46.7	45.8	44.9	43.1
65°	44.0	42.2	41.3	40.4	40.4	38.6	37.7	35.9	34.1	33.2	31.4
67.5°	34.1	33.2	31.4	30.5	30.5	28.8	27.0	26.1	24.3	22.5	21.6
70°	25.2	24.3	22.5	21.6	20.7	19.8	18.0	17.1	15.3	14.4	12.6
72.5°	17.1	16.2	14.4	14.4	13.5	11.7	10.8	9.9	8.1	7.2	6.3
75°	10.8	9.9	9.0	8.1	7.2	6.3	5.4	4.5	3.6	2.7	2.7
77.5°	6.3	5.4	4.5	3.6	3.6	2.7	1.8	1.8	1.8	0.9	0.9
80°	2.7	1.8	1.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.9	0.9
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: P642273

CATALOG NUMBER: ML5612LSWW97FS1E - 592H WW - 600LM - 3500K

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	265.1	265.1	265.1	265.1	265.1	265.1	265.1	265.1
2.5°	264.2	263.3	264.2	264.2	263.3	263.3	263.3	263.3
5°	261.5	261.5	261.5	261.5	261.5	261.5	261.5	261.5
7.5°	259.7	258.8	258.8	258.8	258.8	258.8	258.8	258.8
10°	255.2	255.2	255.2	255.2	255.2	255.2	255.2	254.3
12.5°	250.7	250.7	250.7	250.7	250.7	250.7	250.7	250.7
15°	246.2	246.2	246.2	246.2	246.2	246.2	246.2	246.2
17.5°	240.8	240.8	240.8	240.8	240.8	239.9	240.8	240.8
20°	234.5	234.5	234.5	234.5	234.5	234.5	234.5	235.4
22.5°	227.3	227.3	227.3	227.3	227.3	227.3	227.3	228.2
25°	220.1	220.1	220.1	220.1	220.1	220.1	220.1	221.0
27.5°	212.0	212.0	212.0	212.0	212.0	212.0	212.0	212.0
30°	203.1	203.1	204.0	203.1	203.1	203.1	204.0	203.1
32.5°	194.1	194.1	194.1	194.1	194.1	194.1	194.1	193.2
35°	184.2	183.3	184.2	184.2	184.2	184.2	184.2	184.2
37.5°	173.4	173.4	173.4	173.4	173.4	173.4	174.3	174.3
40°	162.6	161.7	161.7	162.6	162.6	162.6	161.7	162.6
42.5°	149.1	150.0	150.0	150.0	150.9	150.0	150.9	150.9
45°	136.6	137.5	137.5	137.5	137.5	137.5	138.4	138.4
47.5°	124.0	124.0	124.0	124.0	124.9	124.9	124.9	124.9
50°	110.5	110.5	110.5	110.5	111.4	110.5	111.4	111.4
52.5°	96.1	96.1	96.1	96.1	96.1	96.1	97.0	96.1
55°	81.8	81.8	81.8	81.8	80.9	80.9	80.9	81.8
57.5°	68.3	67.4	66.5	67.4	65.6	65.6	65.6	65.6
60°	53.9	53.0	53.0	52.1	51.2	50.3	51.2	50.3
62.5°	41.3	40.4	40.4	38.6	37.7	37.7	36.8	36.8
65°	30.5	28.8	27.9	27.9	27.0	26.1	25.2	25.2
67.5°	19.8	18.9	18.0	18.0	17.1	16.2	16.2	15.3
70°	11.7	10.8	9.9	10.8	9.0	8.1	8.1	8.1
72.5°	5.4	4.5	4.5	4.5	3.6	3.6	3.6	3.6
75°	2.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	0.9	0.9	1.8	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
82.5°	0.9	0.0	0.0	0.0	0.9	0.9	0.0	0.9
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
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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)