

Light efficiency:

139 Lumen/Watt

Output: 27607 lm

Light quality:

CRI: 83.9

Peak: 17450 cd

Color temperature:

4051 K

Power: 198.1 W

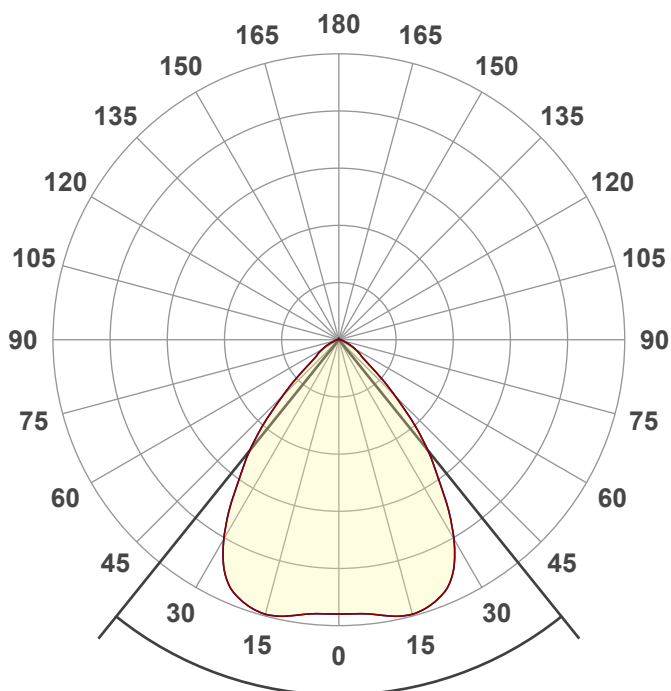
PF: 1.0

Product name:

UHBD-S1-50K200-80H (with reflector)

Date and time:

7/13/2021 11:46:27 AM



Beam angle

77.6°

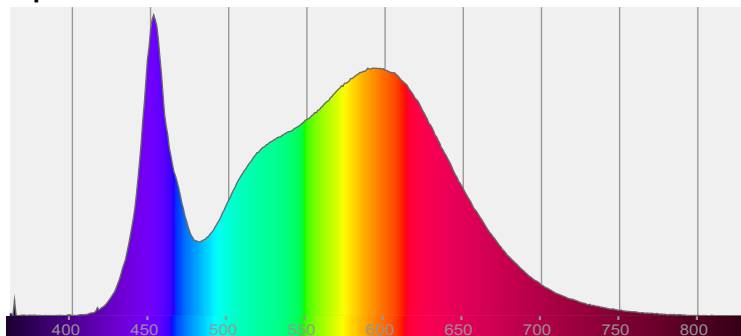


CIE 1931

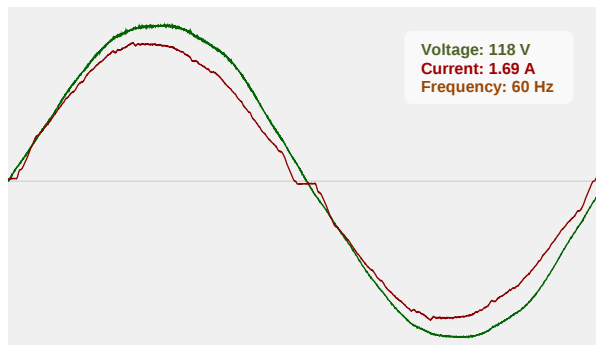
x: 0.378

y: 0.372

Spectra



Power



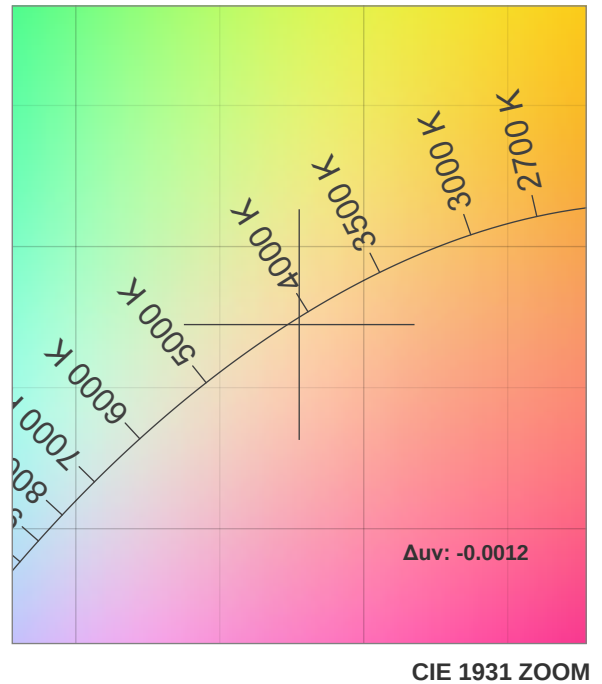
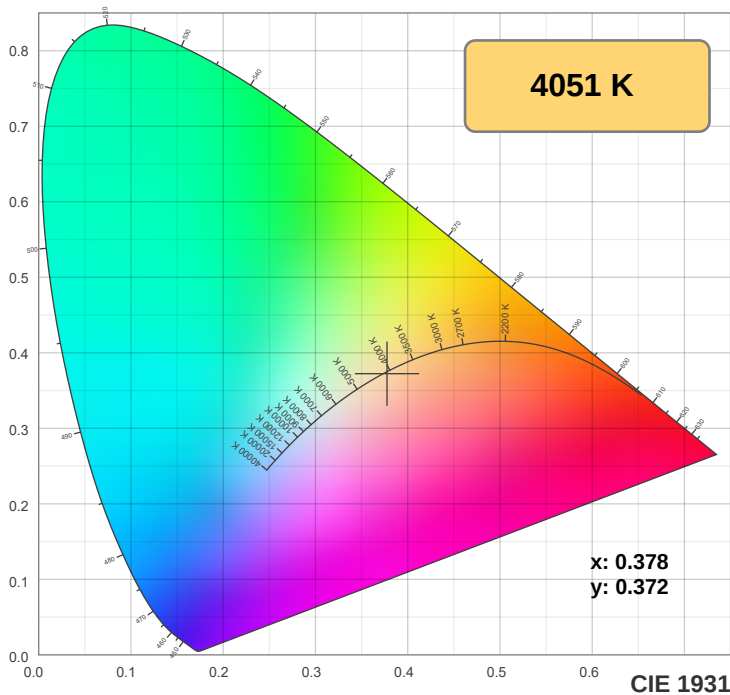
T 314.743.3067

F 314.972.6202

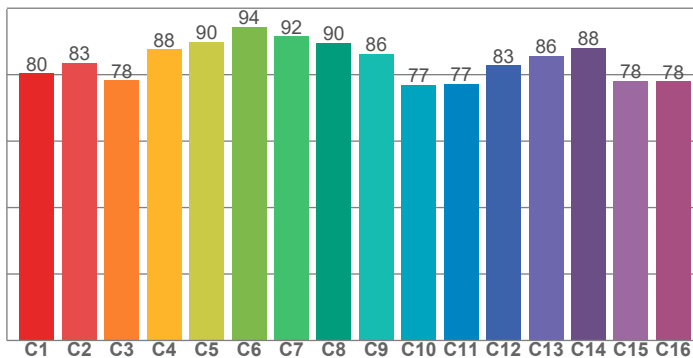
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

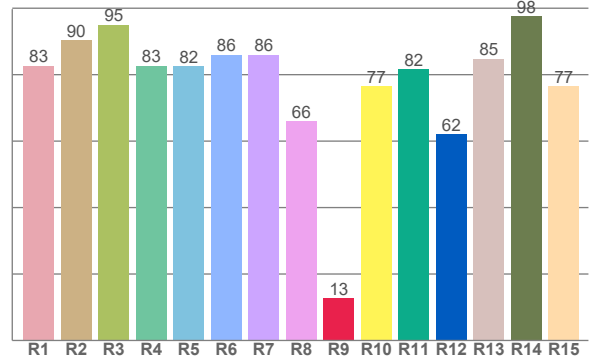
Color Specifications



TM30: 84.0



CRI: 83.9 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.7	90.4	95.0	82.6	82.5	86.0	86.1	65.9	12.7	76.6	81.7	62.0	84.8	97.5	76.5

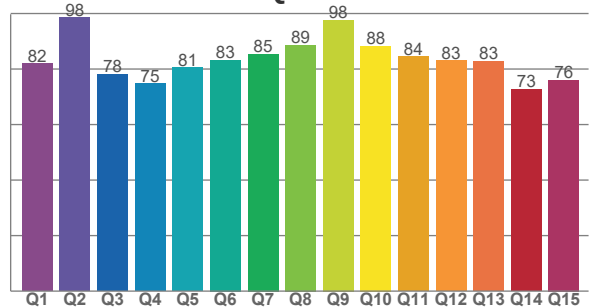
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
80.4	83.5	78.3	87.6	90.0	94.4	91.6	89.6	86.3	76.9	77.2	82.8	85.8	88.2	78.2	78.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.0	98.4	78.2	74.7	80.5	83.2	85.4	88.6	97.6	88.3	84.5	83.0	82.8	72.7	76.1

CQS: 82.2



Color parameters

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4051 K	83.9	12.7	84.0	95.7	82.2	0.378	0.372	0.225	0.333	-0.0012



TM30 Report

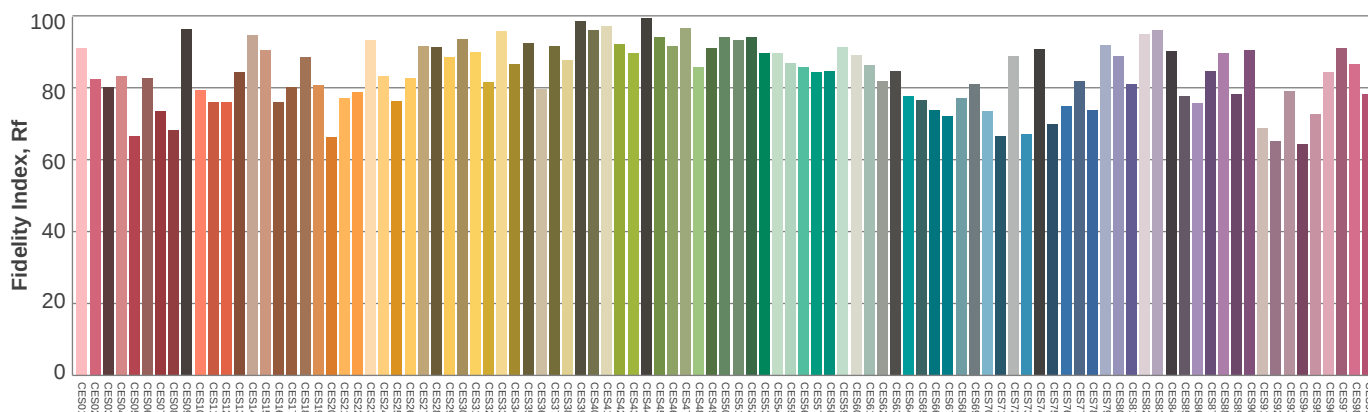
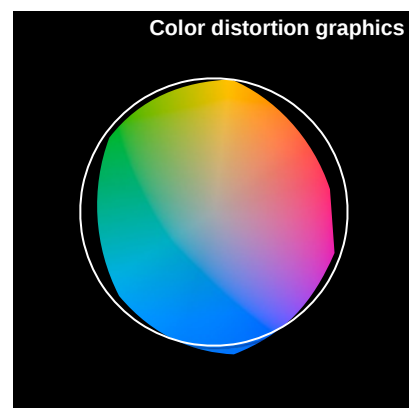
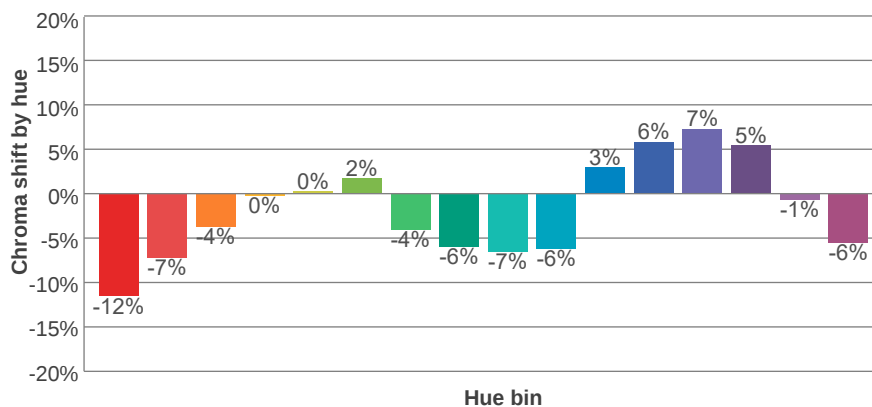
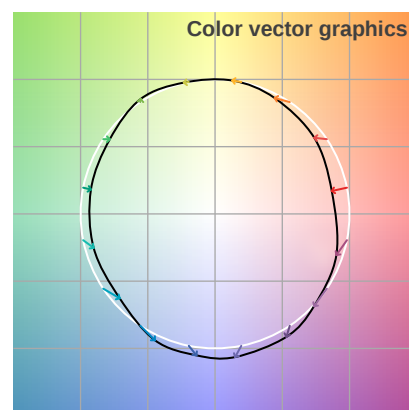
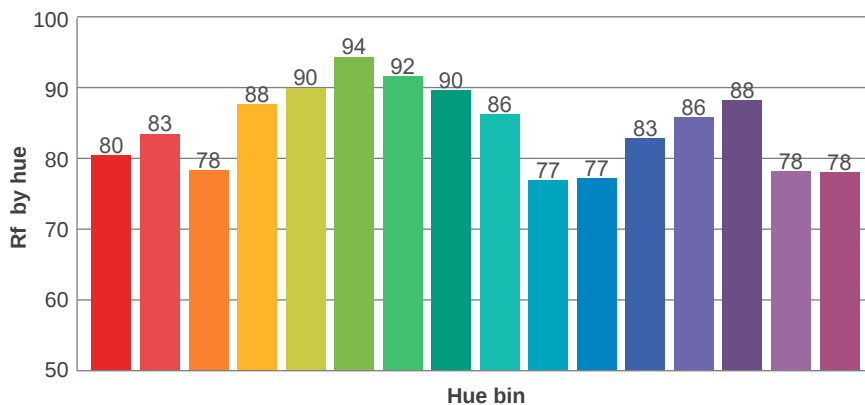
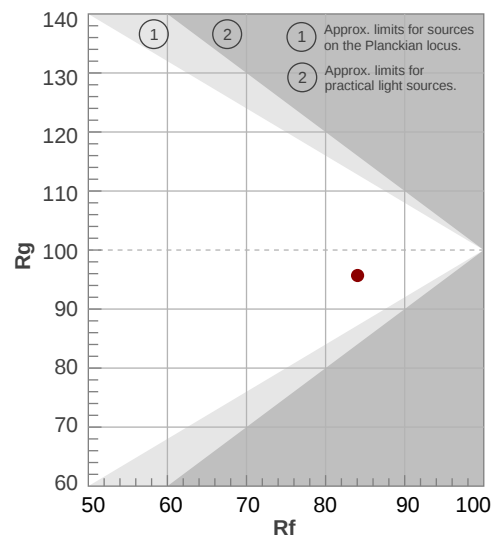
Rf 84.0

Fidelity index Rf

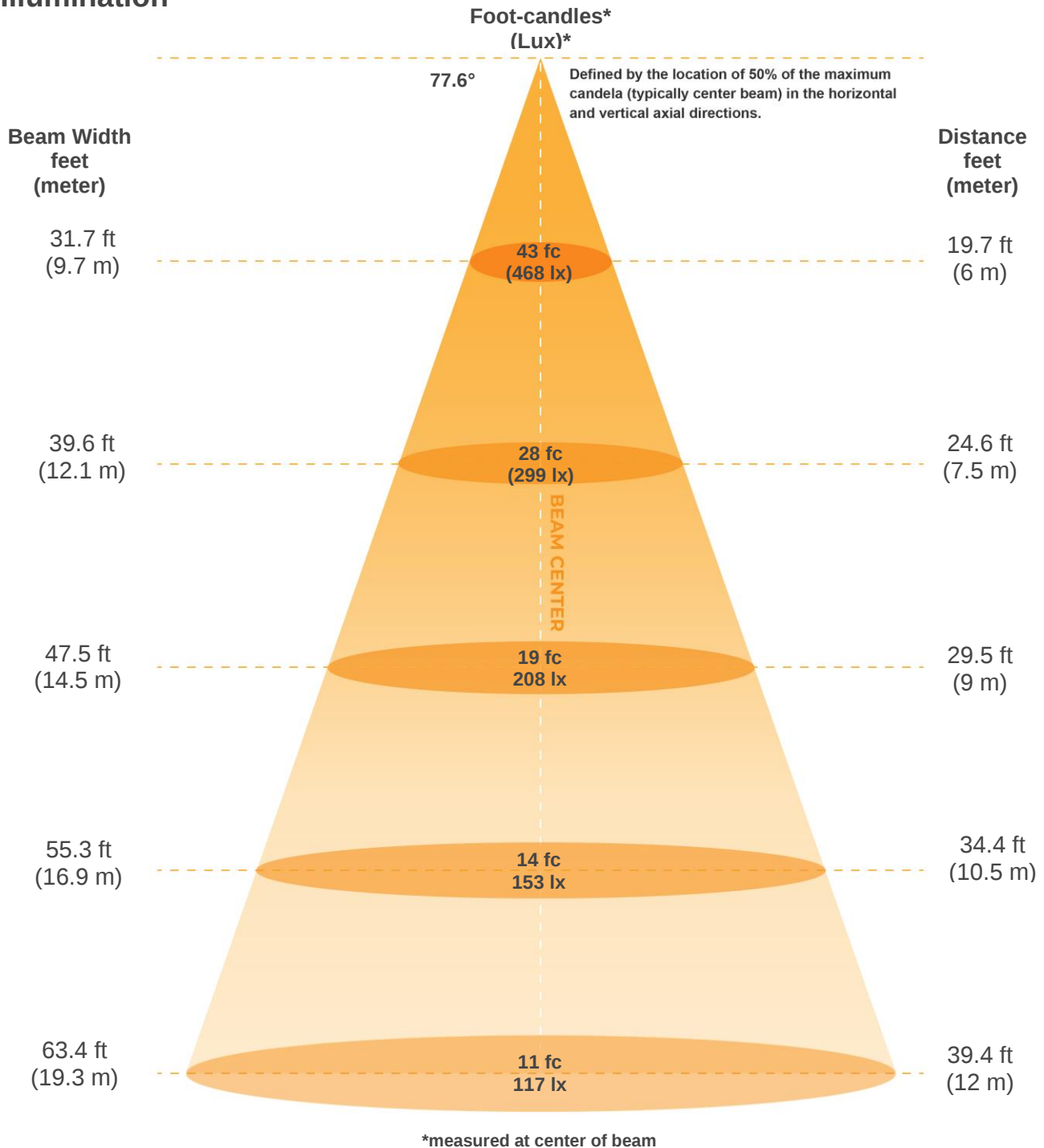
Rg 95.7

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-12%	0%
2	83	-7%	6%
3	78	-4%	11%
4	88	0%	7%
5	90	0%	4%
6	94	2%	-2%
7	92	-4%	-3%
8	90	-6%	0%
9	86	-7%	7%
10	77	-6%	13%
11	77	3%	15%
12	83	6%	7%
13	86	7%	-6%
14	88	5%	-7%
15	78	-1%	-16%
16	78	-6%	-12%



Illumination



Beam intensities from 1-20m

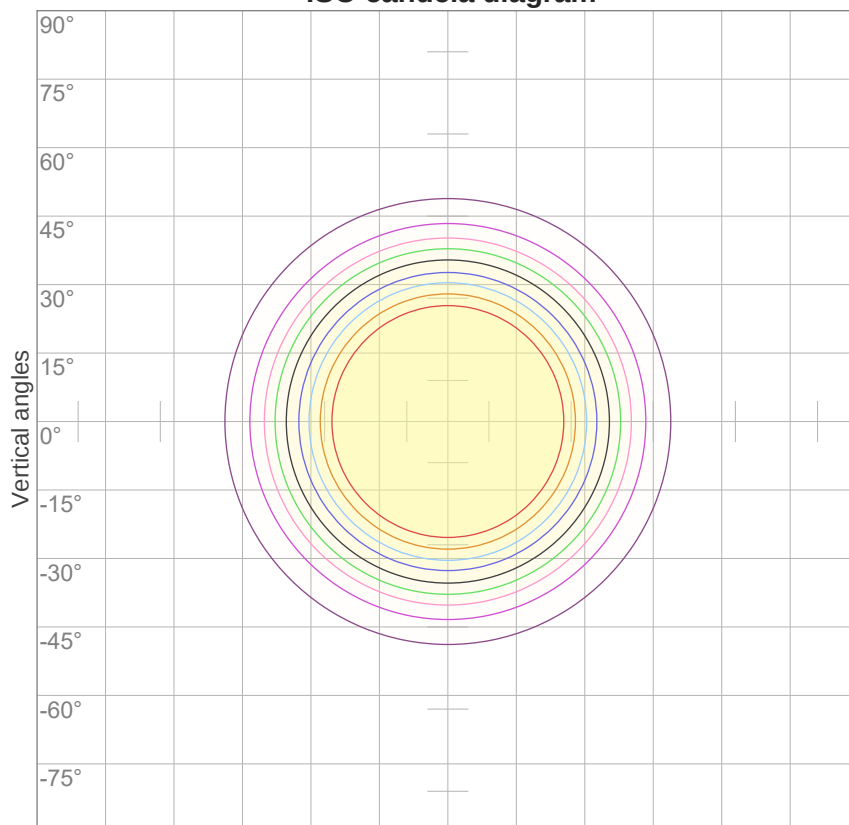
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
16845lx	4211lx	1872lx	1053lx	674lx	468lx	344lx	263lx	208lx	168lx	139lx	117lx	100lx	86lx	75lx	66lx	58lx	52lx	47lx	42lx
1564.9f	391.2fc	173.9fc	97.8fcd	62.6fcd	43.5fcd	31.9fcd	24.5fcd	19.3fcd	15.6fcd	12.9fcd	10.9fcd	9.3fcd	8fcd	7fcd	6.1fcd	5.4fcd	4.8fcd	4.3fcd	3.9fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
77.6°	107.4°	139.9°	94.6%	83.8%



ISO Diagrams

ISO candela diagram



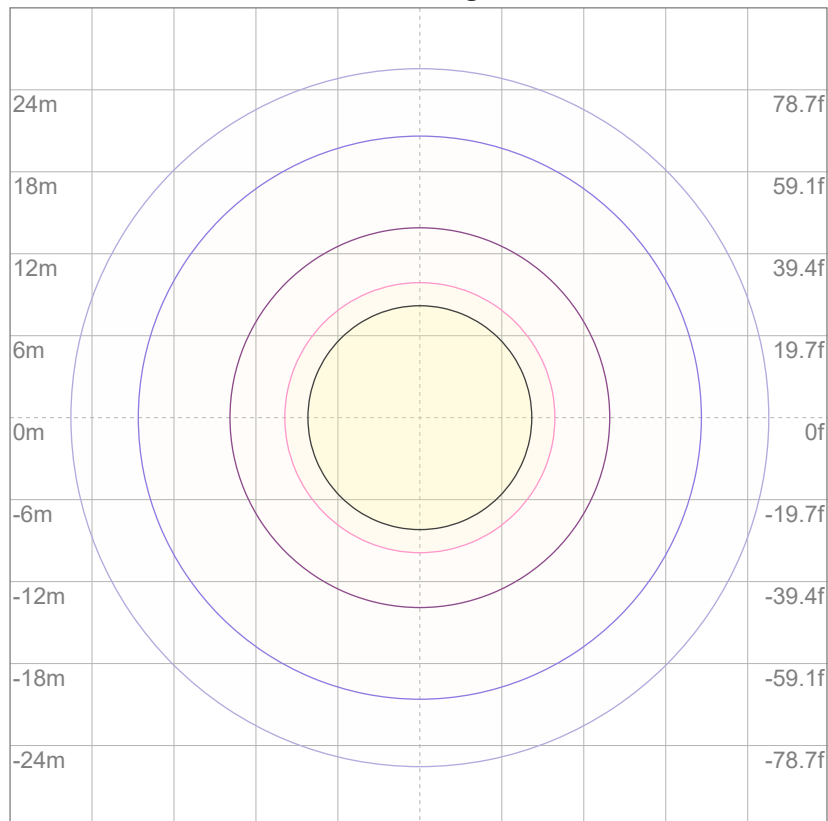
10%	1684 cd
20%	3369 cd
30%	5053 cd
40%	6738 cd
50%	8422 cd
60%	10107 cd
70%	11791 cd
80%	13476 cd
90%	15160 cd

Conditions:

Number of c-planes: 16

Candela at center: 16845 cd

ISO lux diagram



3%	5.05 lx
5%	8.42 lx
10%	16.8 lx
30%	50.5 lx
50%	84.2 lx

Conditions:

Number of c-planes: 16

Lux at center: 168 lx

Lux distribution on a surface when lamp is mounted at 10 meters from the surface.



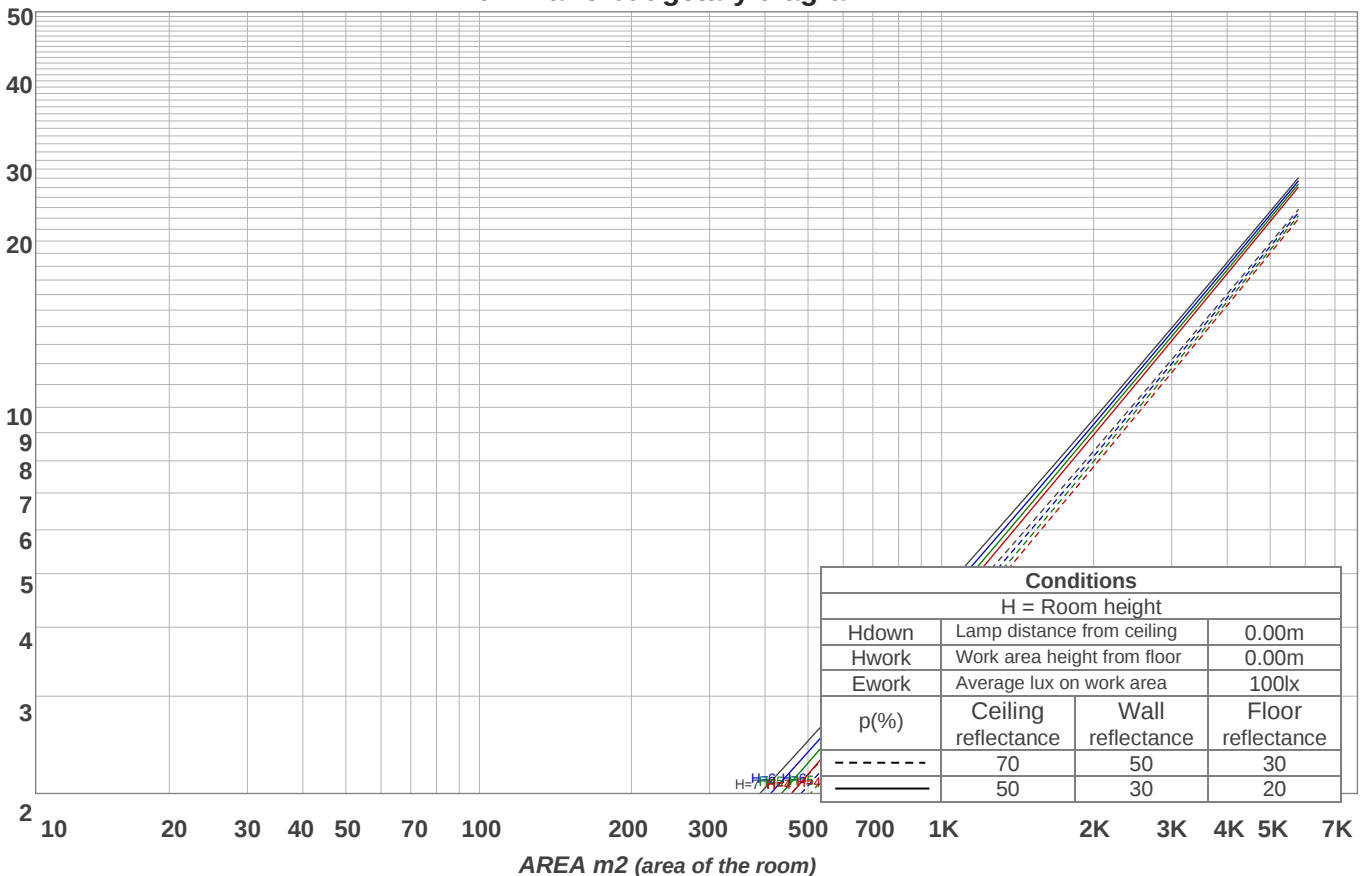
Light Planning

Coefficients of Utilization

Ceiling reflectance	80				70				50			30			10			0
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface																	
0	119	119	119	119	116	116	116	116	110	110	110	106	106	106	101	101	101	99
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	94	93	92	90
2	105	99	94	90	102	97	93	89	94	90	87	90	87	85	87	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	77	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	68	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	69	65	61	60
6	81	70	63	58	79	69	62	58	67	62	57	66	61	57	64	60	56	54
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	52	48	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	63	52	46	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39

LAMPS (number of lamps)

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
1623 lm	4917 lm	7371 lm	6873 lm	3830 lm	1512 lm	771 lm	289 lm	116 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
46.5 lm	40.7 lm	47.4 lm	47.5 lm	40.4 lm	33.7 lm	26.0 lm	16.4 lm	5.50 lm

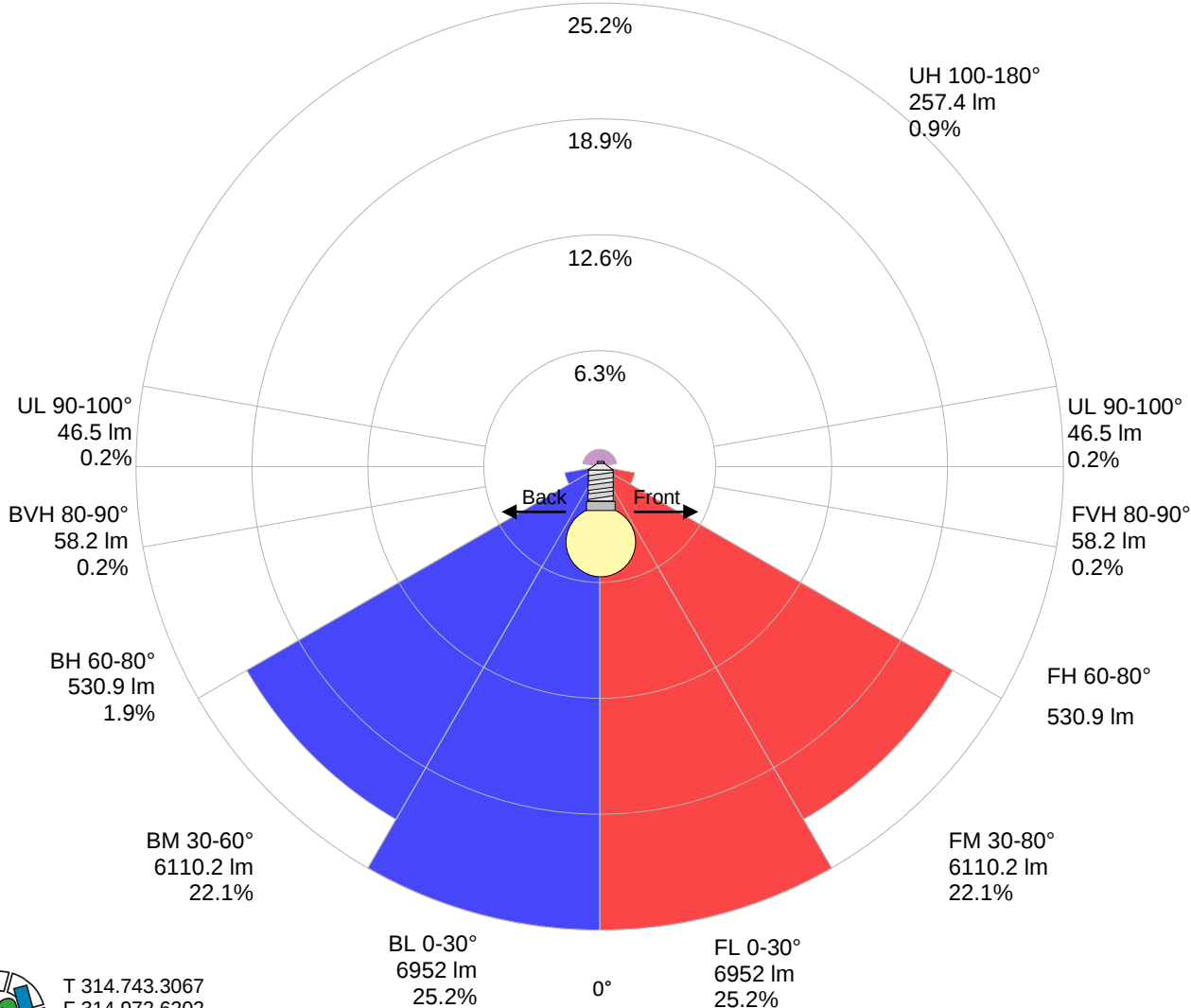


Road Report

LCS table

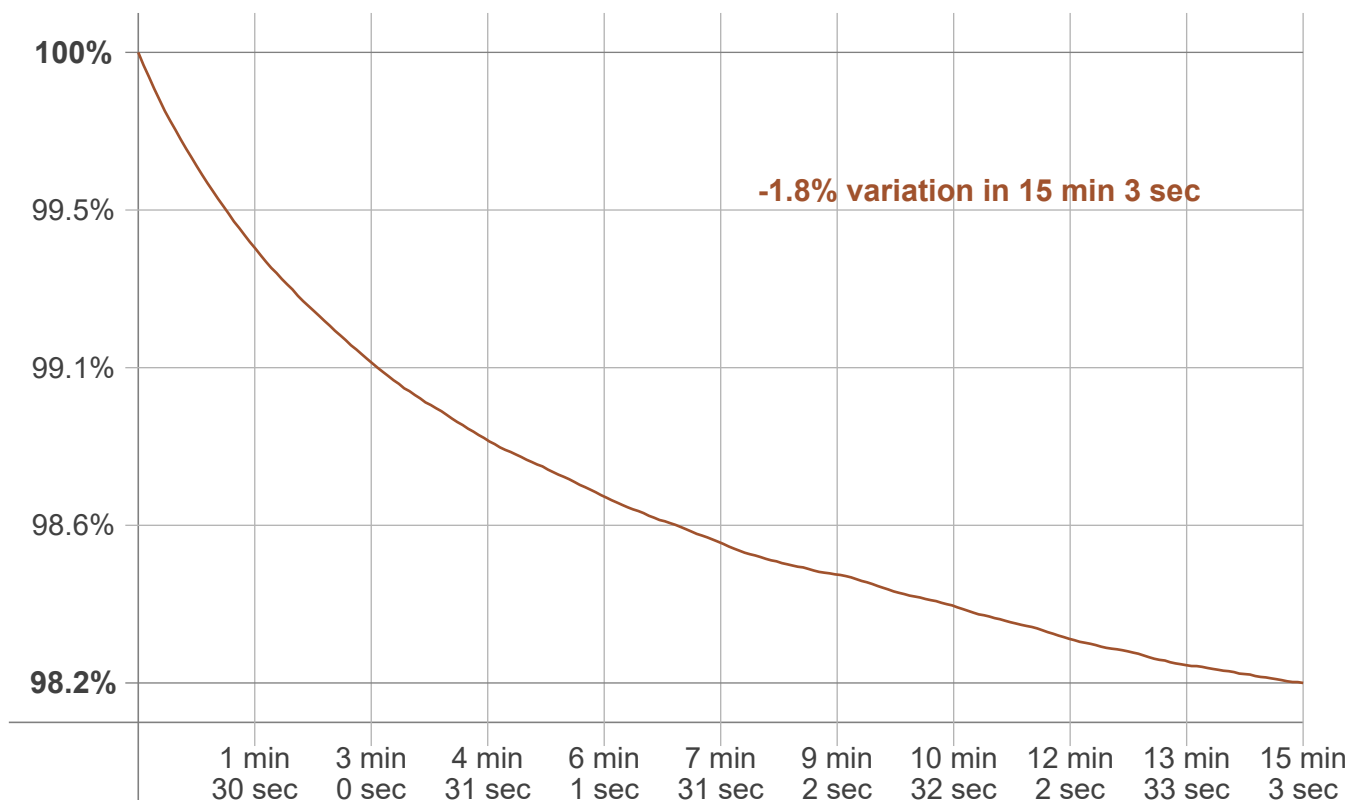
BUG rating:	B5 U3 G1	
Forward light	Lumens	Lumens %
Low(0-30):	6952	25.2%
Medium(30-60):	6110.2	22.1%
High(60-80):	530.9	1.9%
Very high(80-90):	58.2	0.2%
Back light		
Low(0-30):	6952	25.2%
Medium(30-60):	6110.2	22.1%
High(60-80):	530.9	1.9%
Very high(80-90):	58.2	0.2%
Uplight		
Low(90-100):	46.5	0.2%
High(100-180):	257.4	0.9%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 15 min 3 sec
Warmup variation	-1.8%

Warmup conditions

Stable period:	15 min
Stable change max:	2.0%
Minimum time:	15 min

Color temperature change

CCT start	CCT change	CCT end
3998 K	+53 K	4051 K

Output change

Output start	Output change	Output end
28093 lm	-486 lm	27607 lm

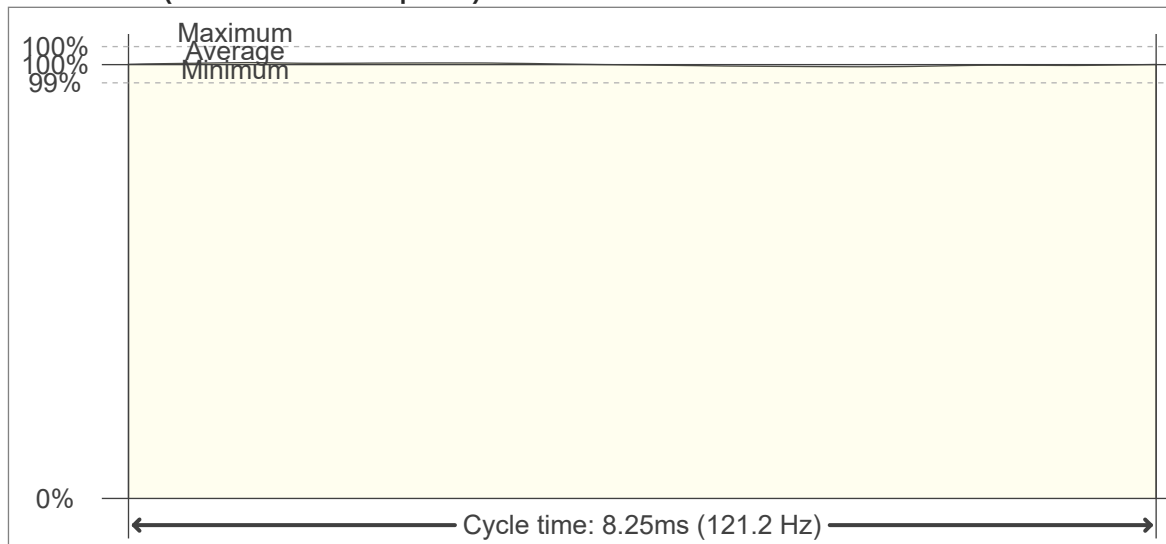


Flicker Specifications

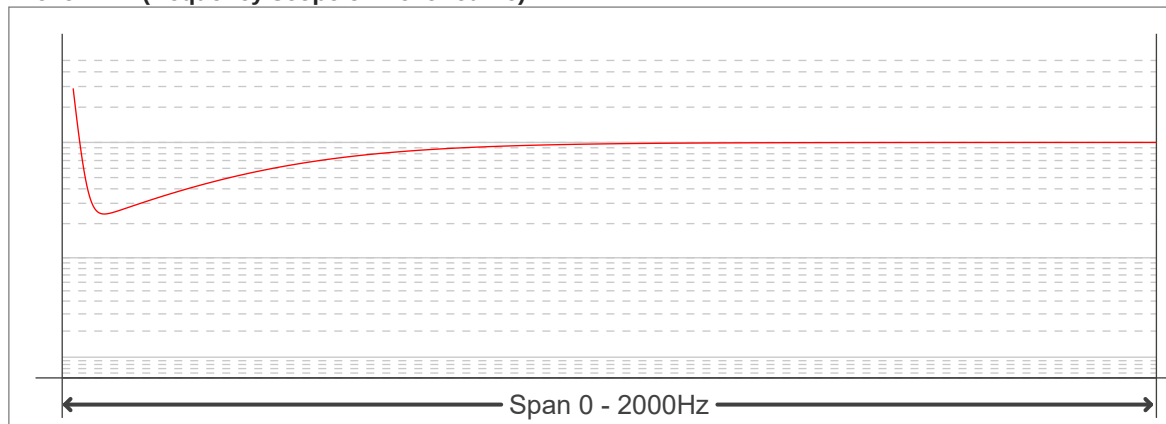
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	121.21 Hz
Flicker index:	0
Flicker percentage:	0.73 %
SVM: (Visual flicker)	0.02

Flicker conditions:

Sample rate:	20000 samples/second
--------------	----------------------

