LCGR-ST1-SW3B75S 60W 40K

Light efficiency:

164 Lumens/Watt

Light quality:

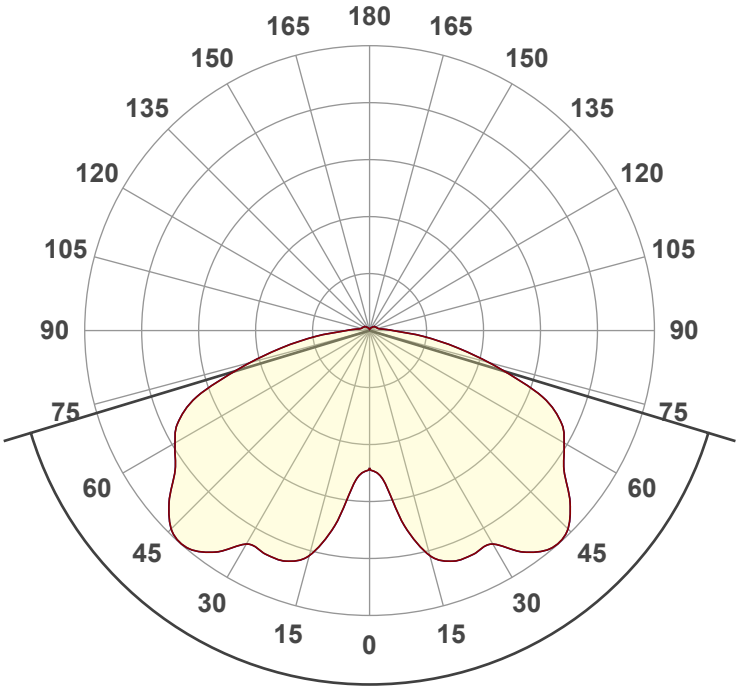
CRI: 73.7

Color temperature:

3868 K

Output: 9619 lm
Peak: 2213 cd

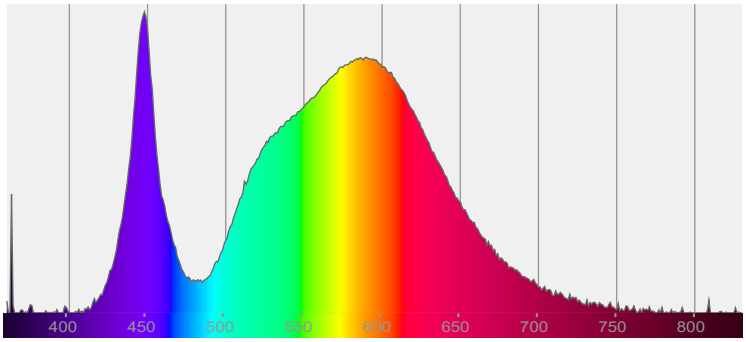
Power: 58.6 W
PF: 0.99



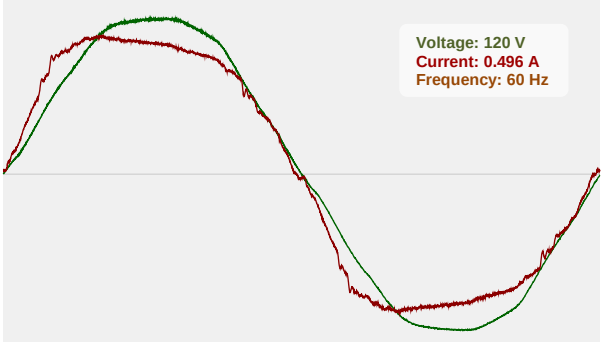
Beam angle 146.4°

CIE 1931
x: 0.387
y: 0.380

Spectra



Power

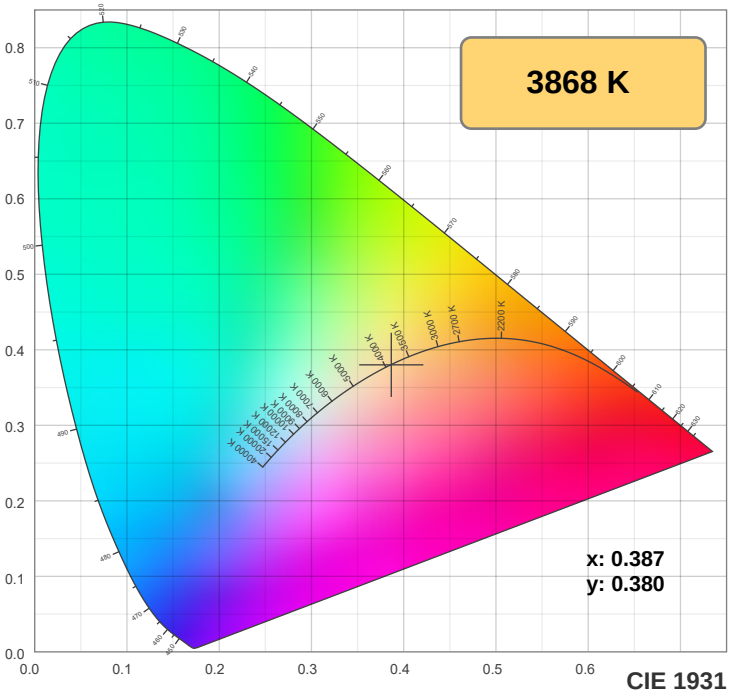


Product name:
LCGR-ST1-SW3B75S 60W 40K

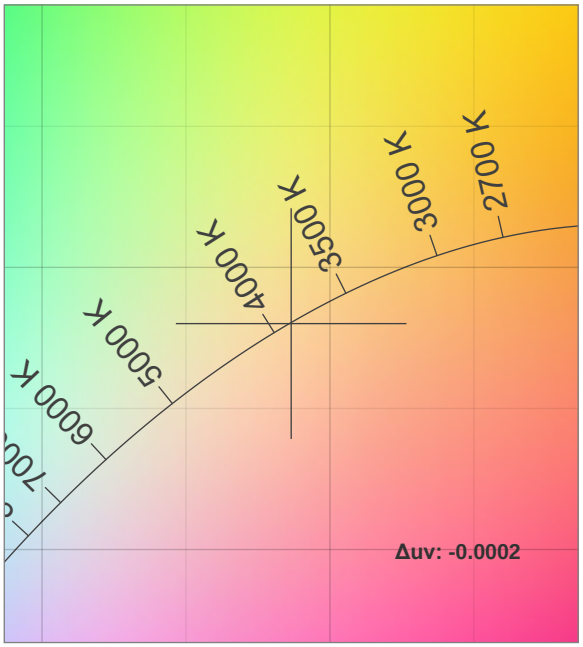
Date and time:
7/19/2024 7:15:49 AM

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Color Specifications

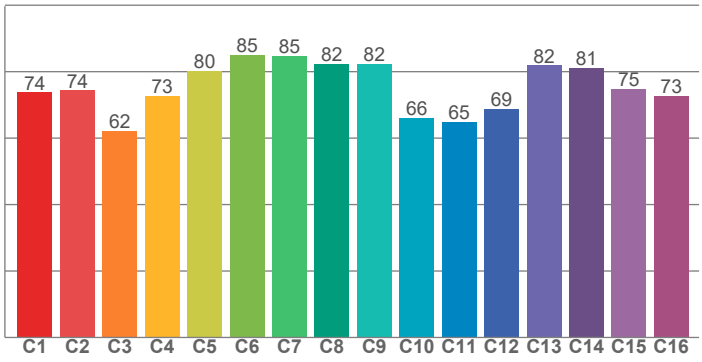


CIE 1931

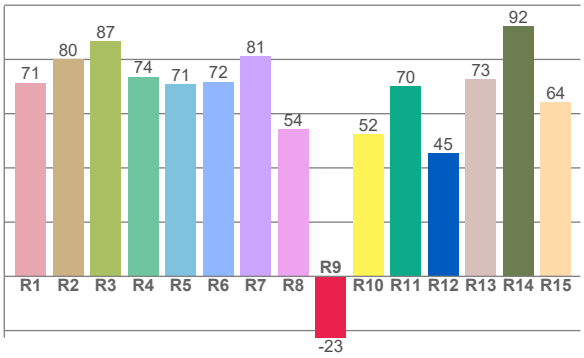


CIE 1931 ZOOM

TM30: 75.1



CRI: 73.7 (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
71.4	80.0	86.7	73.6	70.8	71.8	81.2	54.4	-22.5	52.5	70.2	45.3	72.7	92.3	64.1

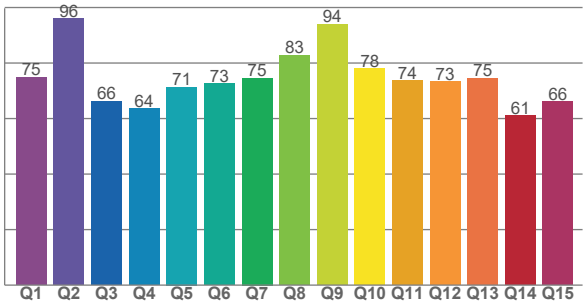
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73.8	74.4	62.2	72.8	80.3	85.1	84.8	82.3	82.3	66.0	65.0	68.9	81.9	81.2	74.9	72.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
74.9	96.0	66.2	63.5	71.4	72.5	74.6	82.8	94.0	78.1	73.7	73.4	74.5	61.0	66.1

CQS: 73.1



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
3868 K	73.7	-22.5	75.1	96.0	73.1	0.387	0.380	0.228	0.336	-0.0002

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

TM30 Report

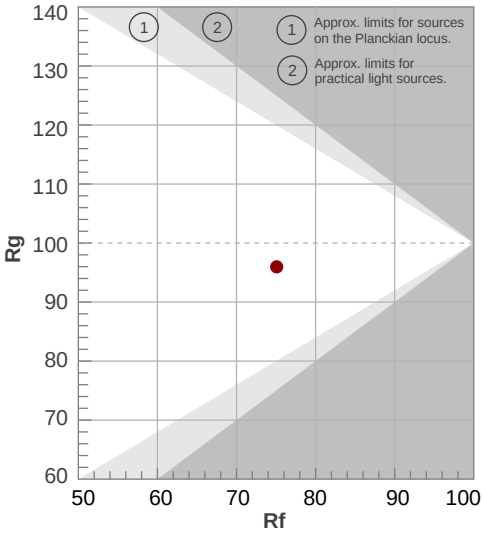
Rf 75.1

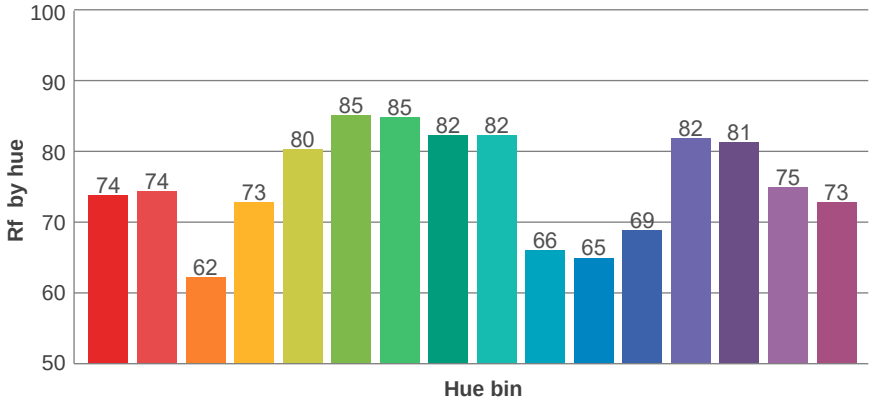
Fidelity index Rf

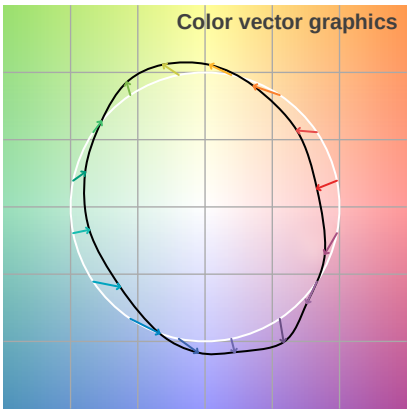
Rg 96.0

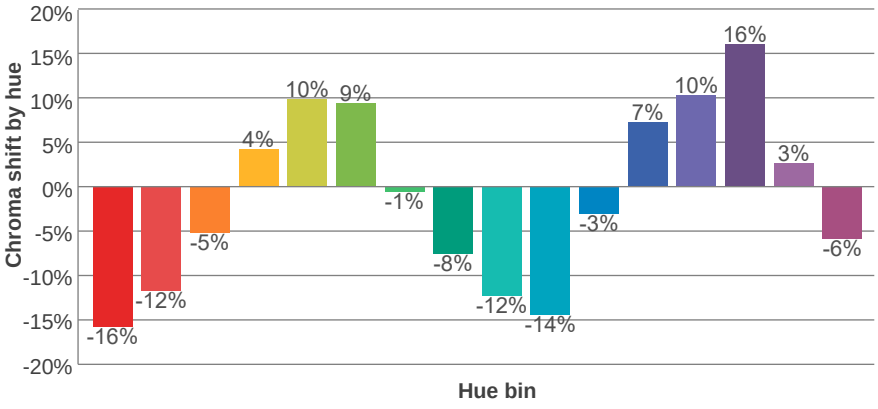
Gammut index Rg

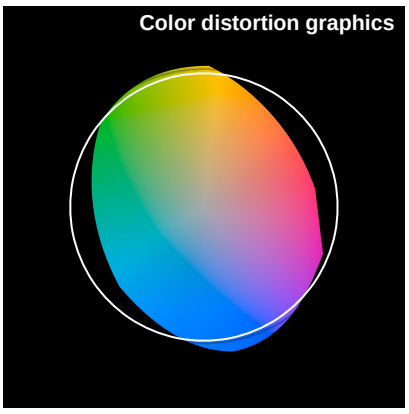
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	74	-16%	-3%
2	74	-12%	9%
3	62	-5%	20%
4	73	4%	17%
5	80	10%	10%
6	85	9%	-3%
7	85	-1%	-10%
8	82	-8%	-8%
9	82	-12%	0%
10	66	-14%	14%
11	65	-3%	24%
12	69	7%	16%
13	82	10%	1%
14	81	16%	-7%
15	75	3%	-17%
16	73	-6%	-17%

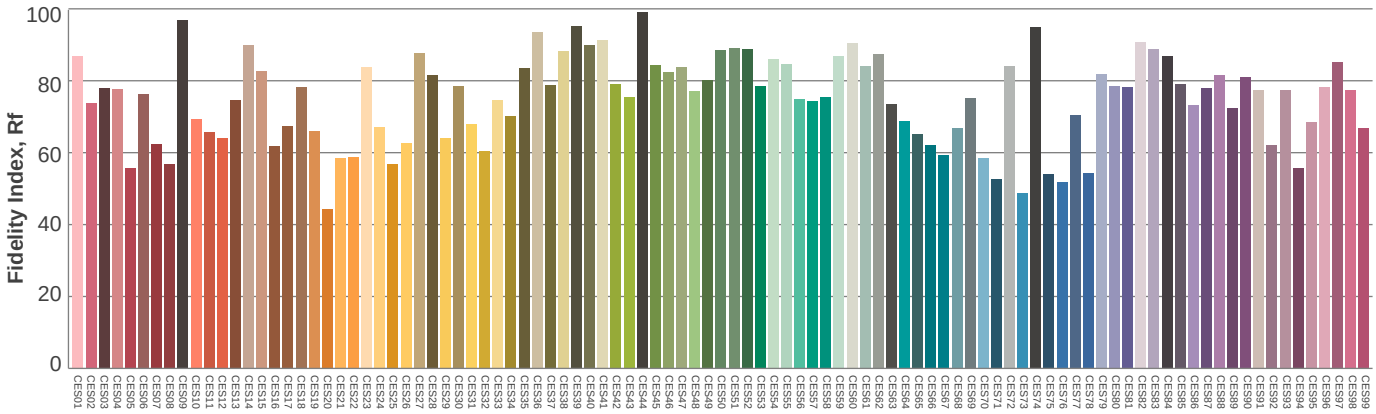






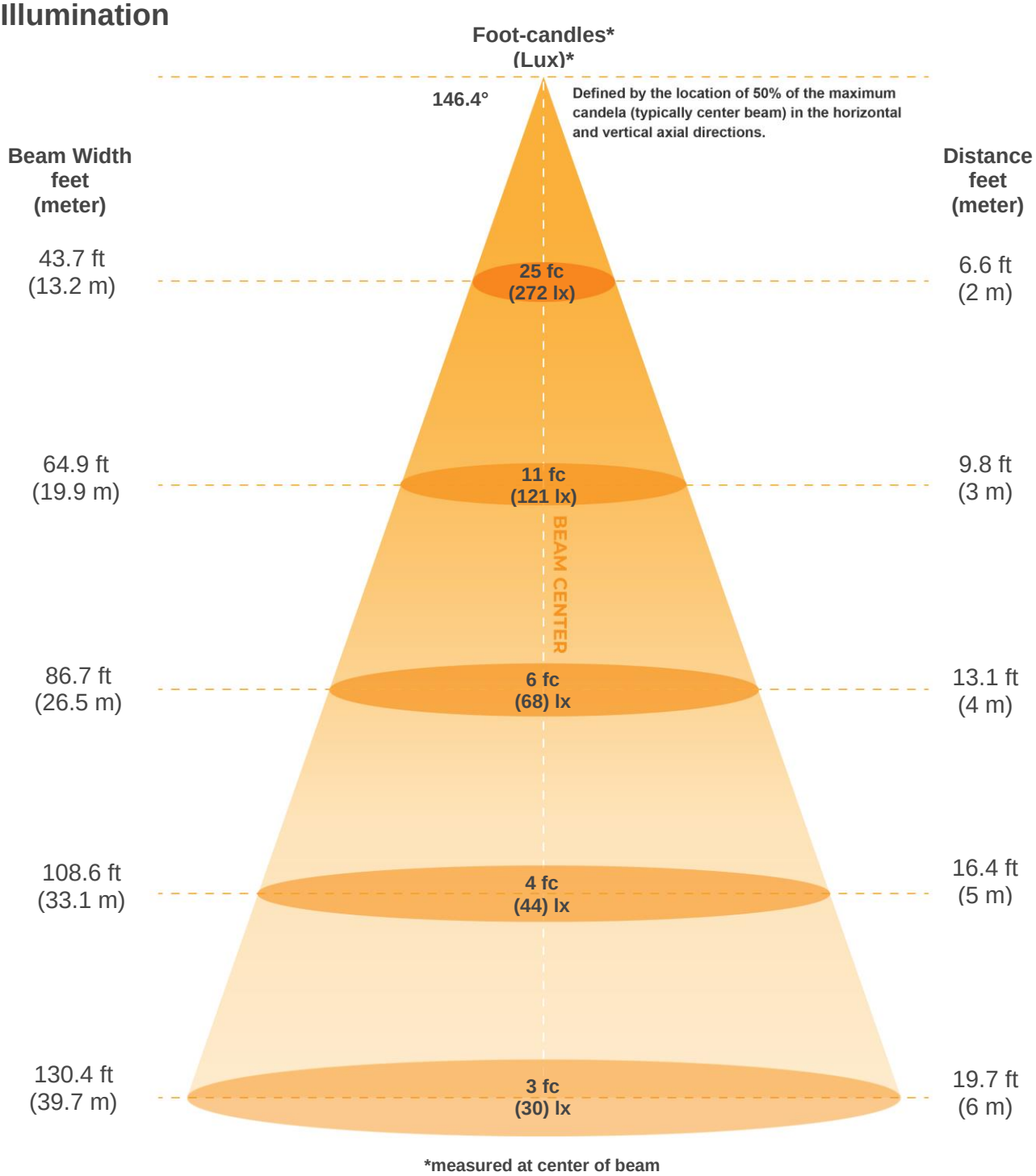






T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Illumination



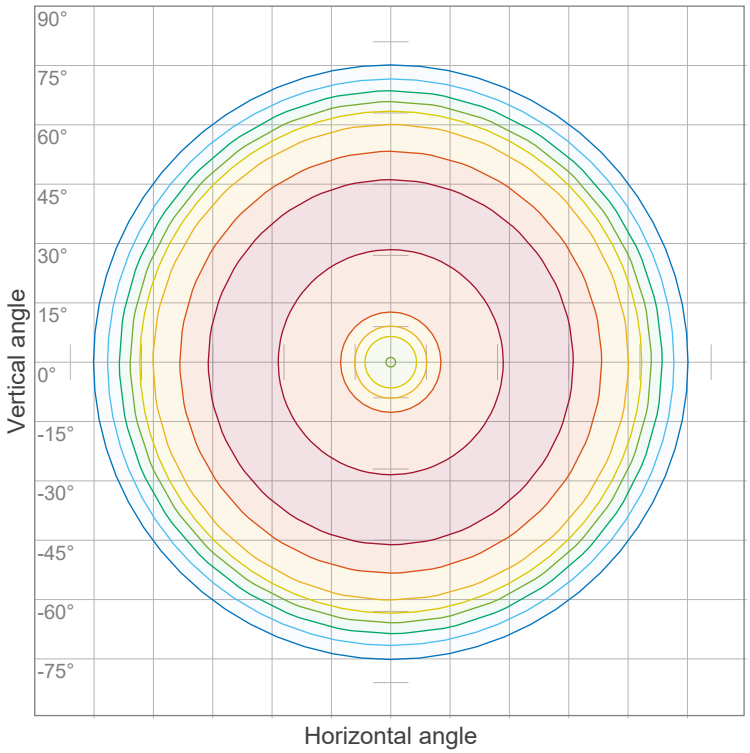
Beam intensities from 1-20m

m	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
ft	3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6
lux	1088	272	121	68	44	30	22	17	13	11	9	8	6	6	5	4	4	3	3	3
fc	101.1	25.3	11.2	6.3	4	2.8	2.1	1.6	1.2	1	0.8	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3

Beam angle 50%	Field angle 10%	Cutoff Angle 2.5%	Intensity Ratio in 120° cone	Intensity Ratio in 90° cone
146.4°	**176.8°**	**237.5°**	**64.4%**	**38.1%**

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

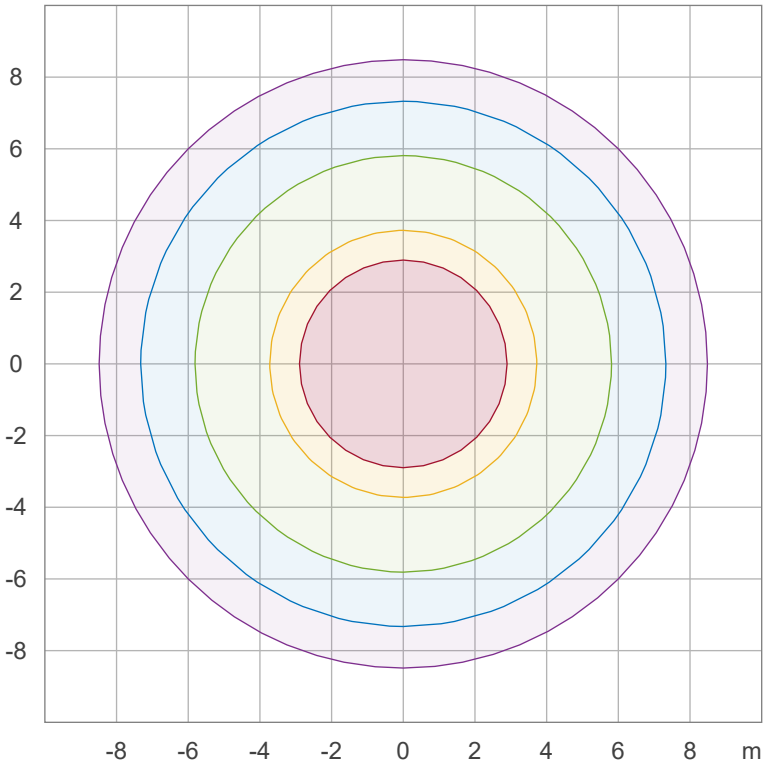
Iso-intensity Diagram (Iso-candela)



90 %	1990.9 cd
80 %	1769.6 cd
70 %	1548.4 cd
60 %	1327.2 cd
50 %	1106.0 cd
40 %	884.8 cd
30 %	663.6 cd
20 %	442.4 cd
10 %	221.2 cd

Peak intensity: 2212.1 cd
Number of c-planes: 16

Iso-illuminance Diagram (Iso-lux)



50.0 %	91.2 lx
30.0 %	54.7 lx
10.0 %	18.2 lx
5.0 %	9.1 lx
3.0 %	5.5 lx

Peak illuminance: 182.3 lx
Mounting height: 3.0 m
Number of c-planes: 16

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Light Planning – UGR table

Uncorrected, comprehensive UGR table according to 117-1995

Reflectances											
ρ Ceiling		70	70	50	50	30	70	70	50	50	30
ρ Walls		50	30	50	30	30	50	30	50	30	30
ρ Floor		20	20	20	20	20	20	20	20	20	20
Room size H = mounting height above eye level		**Viewed Crosswise** (Viewing direction orthogonal to lamp length axis)					**Viewed Endwise** (Viewing direction parallel to lamp length axis)				
X	**Y**										
2H	2H	27.5	28.8	27.8	29.2	29.5	27.5	28.8	27.8	29.2	29.5
	3H	29.7	31.1	30.2	31.5	31.8	29.7	31.1	30.2	31.5	31.8
	4H	30.6	31.9	31.1	32.3	32.7	30.6	31.9	31.1	32.3	32.7
	6H	31.4	32.6	31.8	32.9	33.4	31.4	32.6	31.8	32.9	33.4
	8H	31.7	32.8	32.1	33.2	33.7	31.7	32.8	32.1	33.2	33.7
	12H	31.9	33.0	32.3	33.4	33.9	31.9	33.0	32.3	33.4	33.9
4H	2H	28.3	29.7	28.8	30.0	30.4	28.3	29.7	28.8	30.0	30.4
	3H	30.8	32.0	31.3	32.4	32.9	30.8	32.0	31.3	32.4	32.9
	4H	31.8	32.9	32.3	33.3	33.9	31.8	32.9	32.3	33.3	33.9
	6H	32.6	33.6	33.1	34.0	34.5	32.6	33.6	33.1	34.0	34.5
	8H	32.9	33.8	33.5	34.3	34.7	32.9	33.8	33.5	34.3	34.7
	12H	33.3	34.0	33.8	34.5	35.0	33.3	34.0	33.8	34.5	35.0
8H	4H	32.2	33.1	32.7	33.5	34.0	32.2	33.1	32.7	33.5	34.0
	6H	33.2	33.9	33.7	34.4	35.0	33.2	33.9	33.7	34.4	35.0
	8H	33.7	34.3	34.2	34.9	35.6	33.7	34.3	34.2	34.9	35.6
	12H	34.1	34.6	34.7	35.2	35.9	34.1	34.6	34.7	35.2	35.9
12H	4H	32.2	33.0	32.8	33.5	34.0	32.2	33.0	32.8	33.5	34.0
	6H	33.3	33.9	33.9	34.5	35.2	33.3	33.9	33.9	34.5	35.2
	8H	33.8	34.4	34.5	34.9	35.6	33.8	34.4	34.5	34.9	35.6

Variations with the observer position for the luminaire spacings, S:		
S = 1.0H	0.1 / -0.1	0.1 / -0.1
S = 1.5H	0.1 / -0.1	0.1 / -0.1
S = 2.0H	0.2 / -0.2	0.2 / -0.2

Coefficients of Utilization

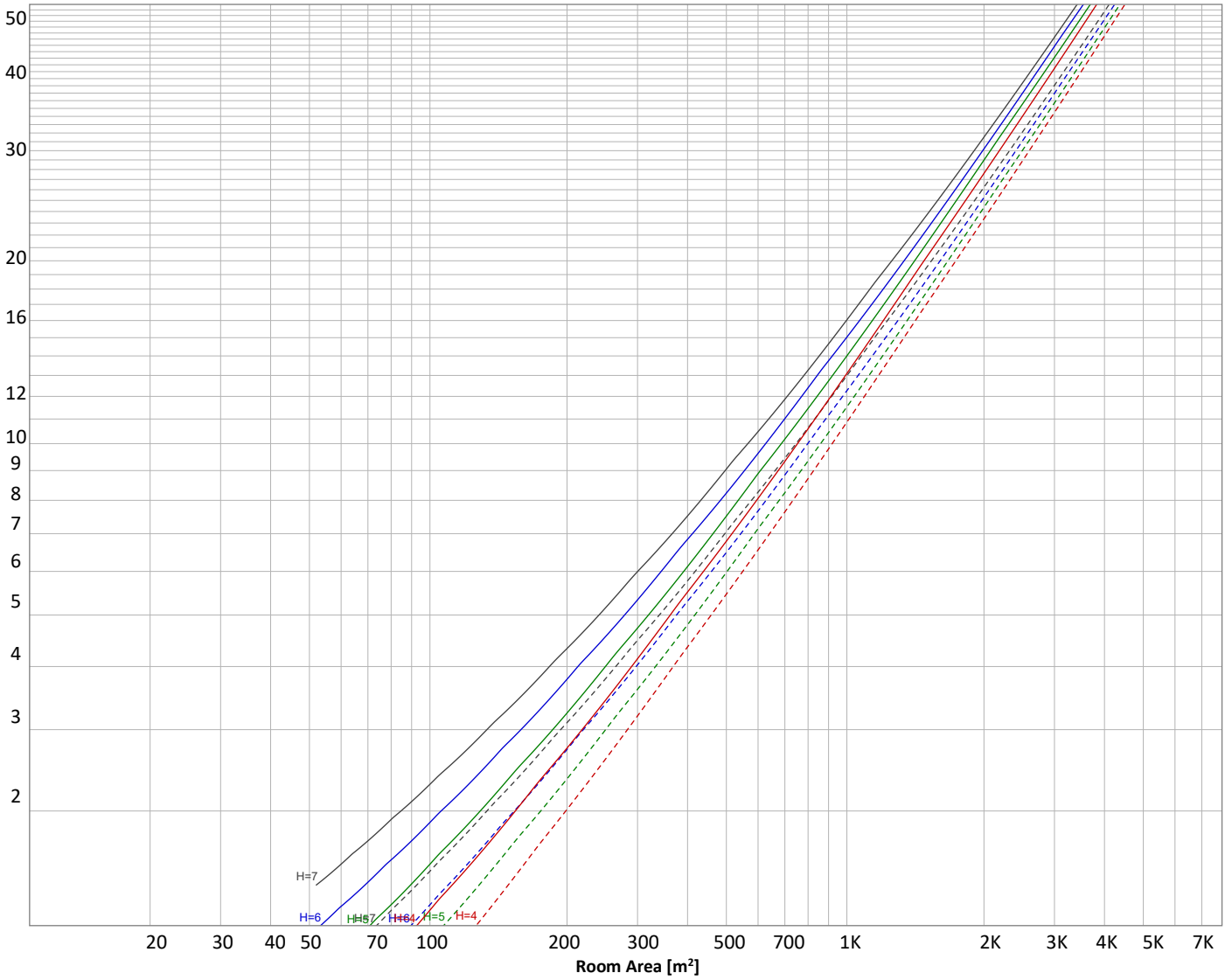
Ceiling reflectance	80			70			50			30			10			0		
Wall reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Floor reflectance	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0
RCR	(RCR: Room Cavity Ratio)			Room Values are expressed as percentage of Lumen delivered to the task surface														
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	105	100	94	90	102	97	92	88	92	88	84	87	84	81	83	80	78	75
2	94	84	76	70	91	82	75	69	78	72	66	74	69	64	70	66	62	59
3	85	72	63	56	82	71	62	55	67	59	53	63	57	52	60	55	50	48
4	77	63	53	45	74	61	52	45	58	50	44	55	48	43	53	47	42	39
5	70	55	45	38	67	54	44	37	51	43	37	49	41	36	46	40	35	33
6	64	49	39	32	61	48	39	32	46	37	31	43	36	31	41	35	30	28
7	59	44	34	28	57	43	34	27	41	33	27	39	32	26	37	31	26	24
8	54	40	30	24	52	39	30	24	37	29	23	35	28	23	34	27	23	20
9	50	36	27	21	49	35	27	21	34	26	21	32	25	20	31	25	20	18
10	47	33	24	19	46	32	24	19	31	23	18	30	23	18	29	22	18	16

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Luminaire budgetary diagram

Uncorrected, comprehensive UGR table according to 117-1995

LAMPS (number of lamps)



Conditions

			ρ(%)		
H = Room height	Flux = 9619 lm	Line type	Ceiling reflectance	Wall reflectance	Floor reflectance
H_{down} = Lamp distance from ceiling =	0.00 m				
H_{work} = Work area height from floor =	0.00 m	----------	70	50	30
E_{work} = Average lux on work area =	100 lx	————	50	30	20

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
126 lm	510 lm	890 lm	1320 lm	1672 lm	1679 lm	1595 lm	1035 lm	414 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
134 lm	72.1 lm	57.9 lm	45.9 lm	32.4 lm	19.0 lm	9.88 lm	4.30 lm	1.20 lm

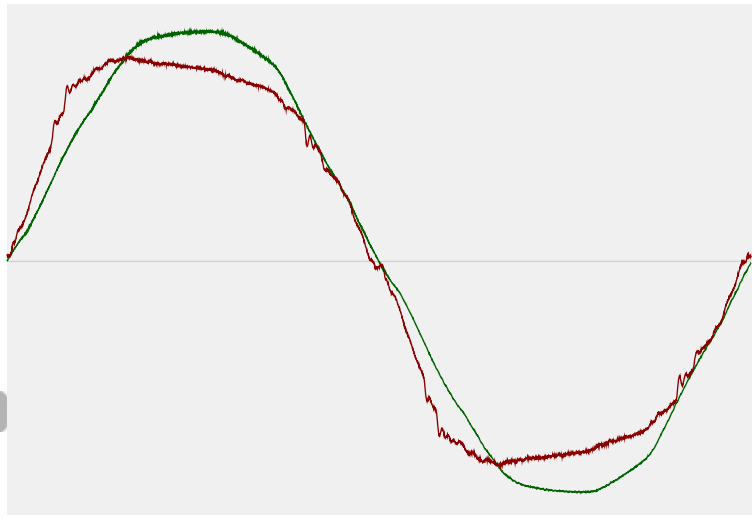
T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Power Details

Input Power

Power feed to light source	58.6 W
Frequency of input power	60 Hz
RMS Input voltage feed, V_{RMS}	120 V
RMS Input current feed, I_{RMS}	0.496 A
Volt-Ampere or apparent power = V_{RMS}*I_{RMS}	59.43 VA
Displacement factor of AC power feed	0.99
Power factor of AC current feed	0.99
Total harmonic distortion of the current	12.77%
Total harmonic distortion of the voltage	2.86%

Input Power Curve



Efficiency

Radiated power efficiency 47.5%

Lumen efficiency 164 lm/W

Stabilization Details

Warmup Conditions

Stable period	n/a
Stable change max	n/a%
Minimum time	n/a

Color Temperature Change

CCT start	n/a K
CCT shift	n/a K
CCT end	3868 K

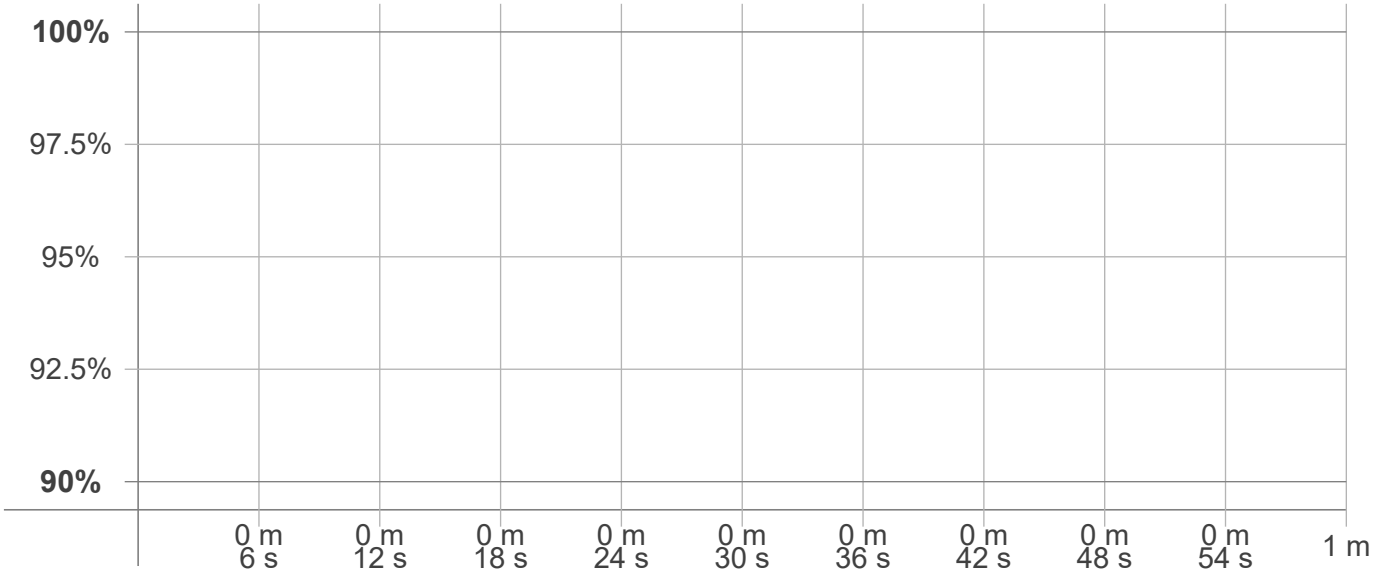
Warmup Result

Total warmup time	n/a
Warmup variation	n/a%

Output Change

Output start	n/a lm
Output change	n/a lm
Output end	9619 lm

Stabilization Curve



Flicker /TLA details

T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/

Flicker Meter Type	Viso Systems LabFlicker
Frequency of input power	60 Hz
Flicker/TLA sample rate	20000 samples/s

Measurement time

PstLM	180 sec
All other indices	1.2 sec

Flicker indices according to Illuminating Engineering Society (IES)

Flicker frequency	120.48 Hz
Percent Flicker	71 %
Flicker index	0.22

Flicker indices per California Energy Commission (CEC) 2016b

JA8/10 40 Hz	0.63 %
JA8/10 90 Hz	4.3 %
JA8/10 200 Hz	69.36 %
JA8/10 400 Hz	73.91 %
JA8/10 1000 Hz	72.28 %

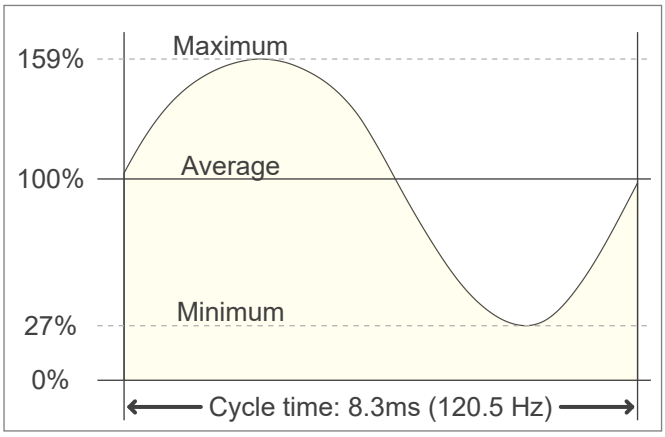
TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC 61000-4-15)

PstLM value (F < 80 Hz)	0.06
SVM value (80 < F < 2000 Hz)	2.44

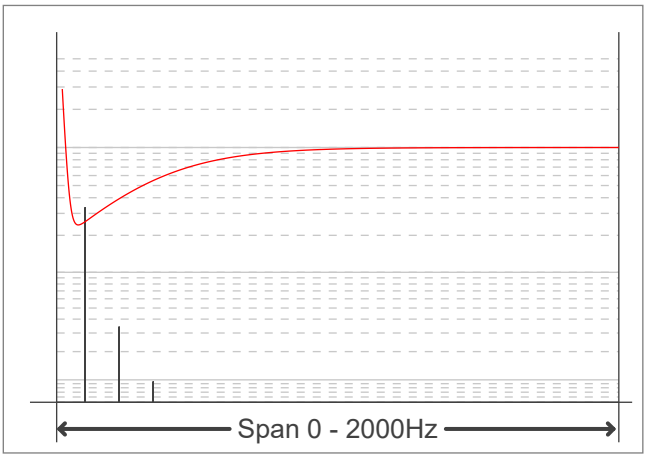
Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp	0.08

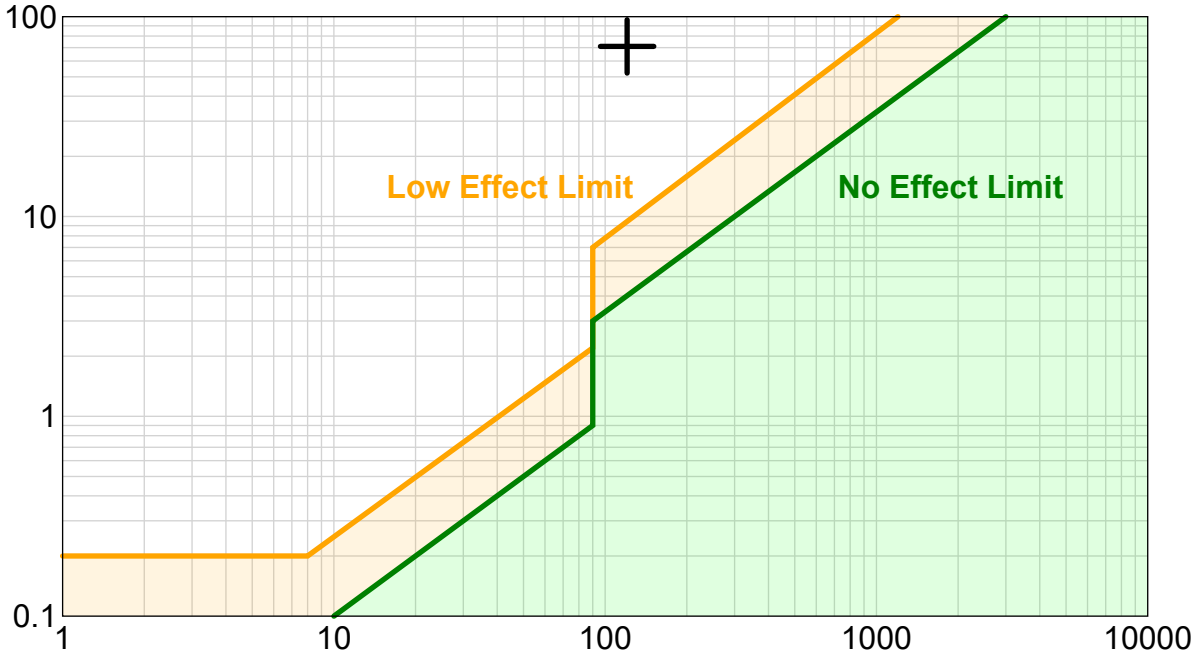
Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot



T 314.743.3067
F 314.972.6202
email: commercial-sales@superbrightleds.com
www.superbrightleds.com/