

Light efficiency:



Light quality:



Color temperature:



Output: 90,5 lm

Peak: 50,7 cd

Power: 5,4 W

PF: 0,85



Tracking number: [VT240909-009384](#)

Product name:

**847882**

Item number:

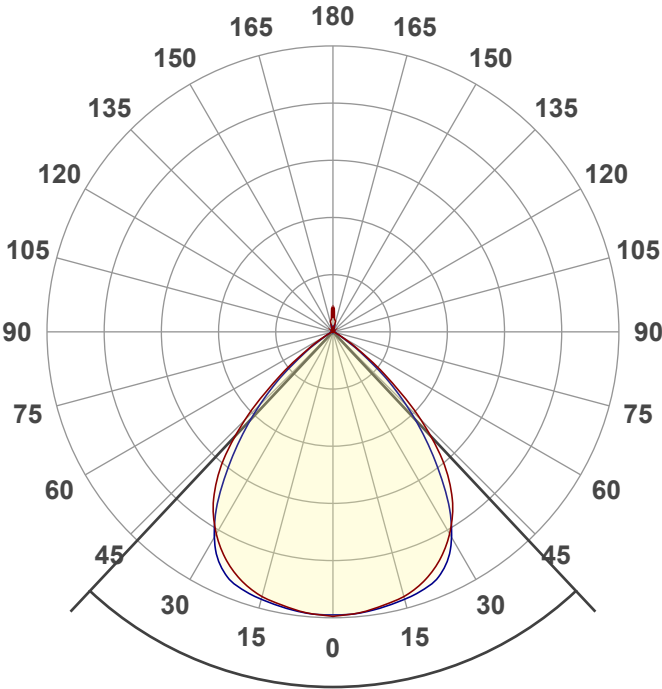
**847882**

Date and time:

**9-9-2024 12:18:13**

Description:

**LED CUBE | THEBE | 2x3W | DIM TO WARM |**

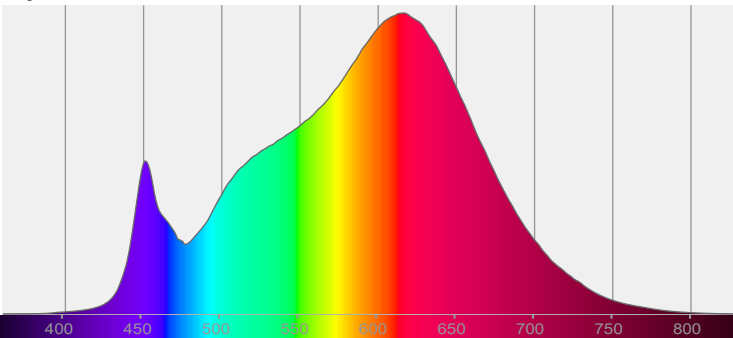


Beam angle **86,3°**

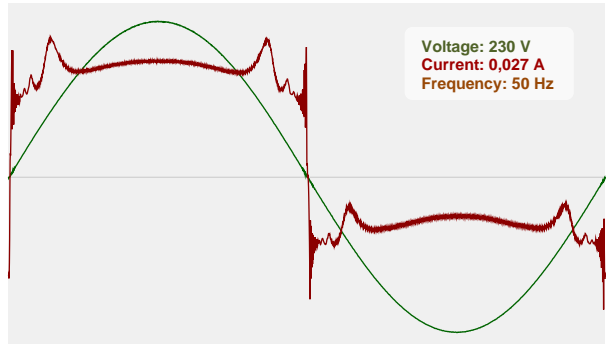


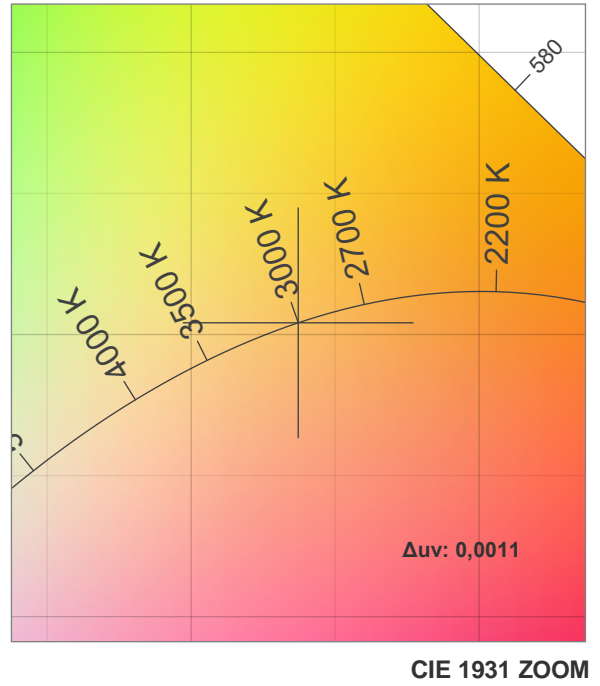
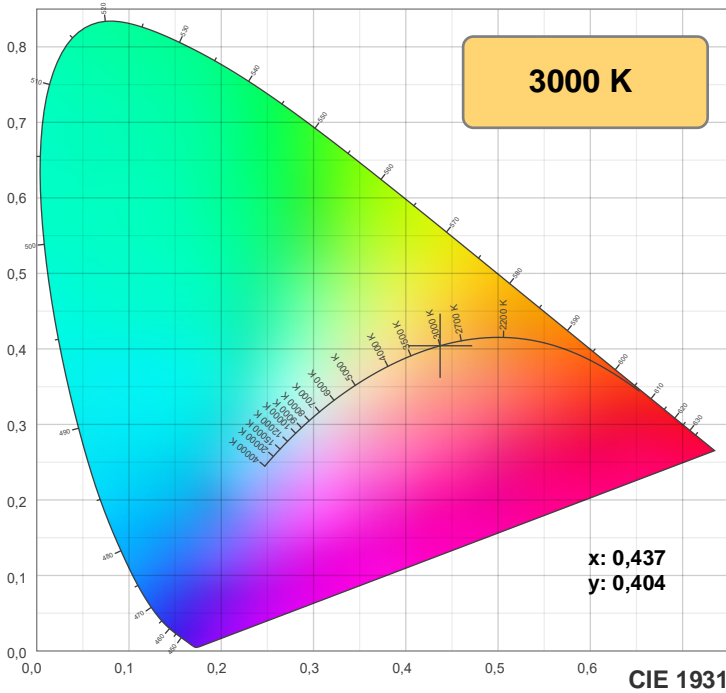
CIE 1931  
x: 0,437  
y: 0,404

Spectra

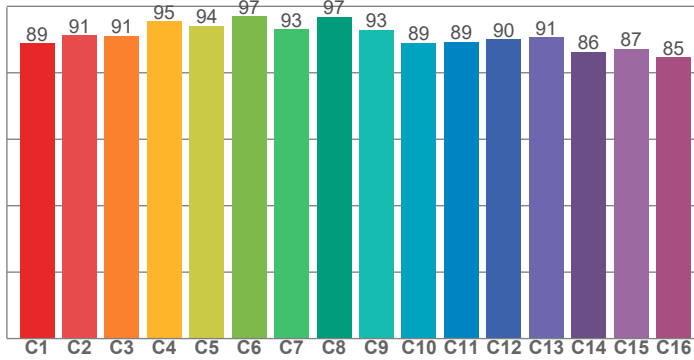


Power

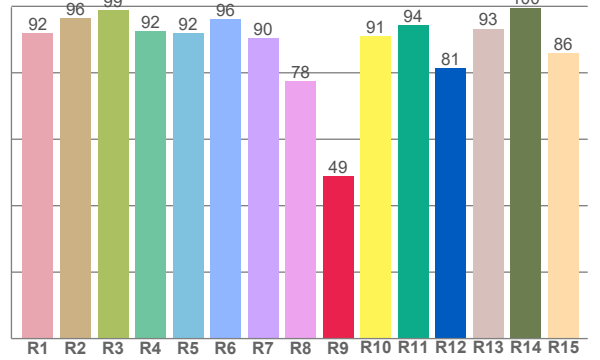




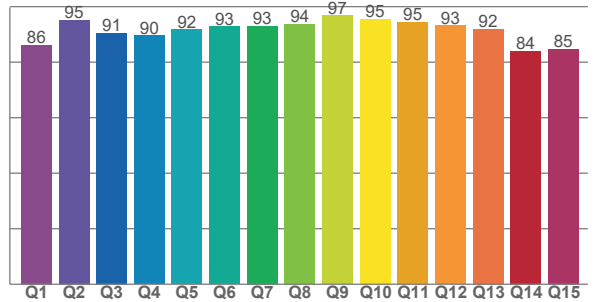
**TM-30: 91,3**



**CRI: 92,0 (R1-R8)**



**CQS: 90,6**



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
91,9	96,3	99,0	92,5	92,0	96,1	90,4	77,6	49,0	91,1	94,3	81,4	93,3	99,6	85,8

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
88,8	91,3	91,2	95,5	94,2	97,0	93,1	96,9	93,0	89,0	89,3	90,1	90,7	86,3	87,2	84,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86,2	95,2	90,6	89,6	91,8	92,8	93,0	93,7	96,9	95,5	94,5	93,2	92,0	83,9	84,8

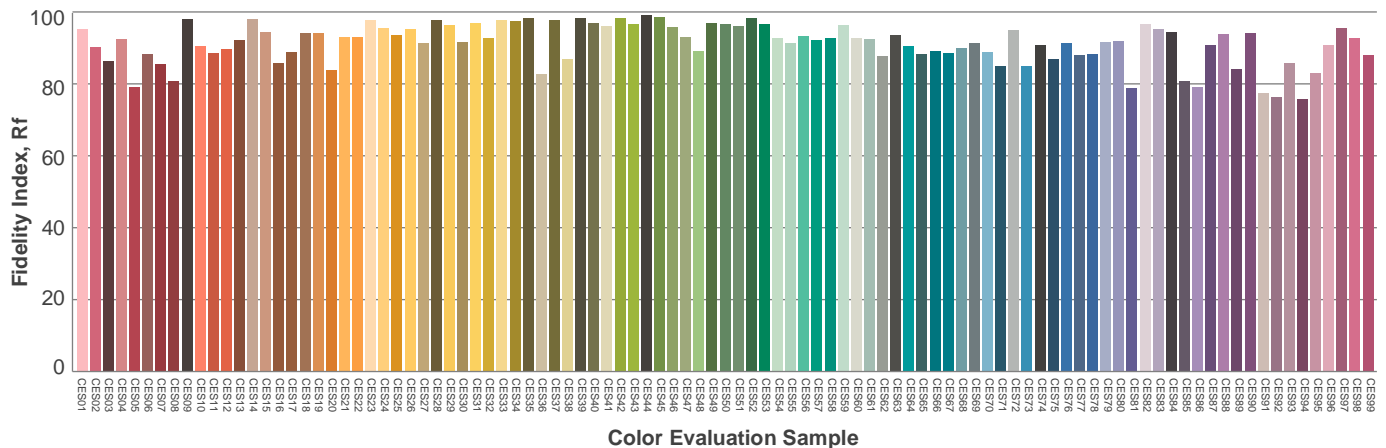
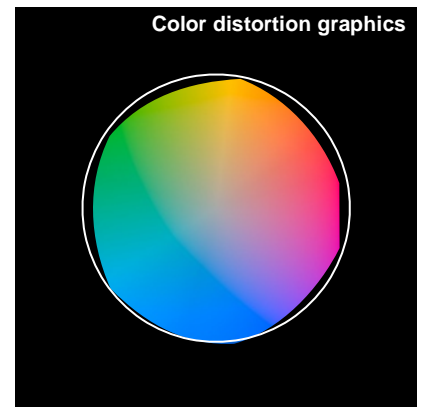
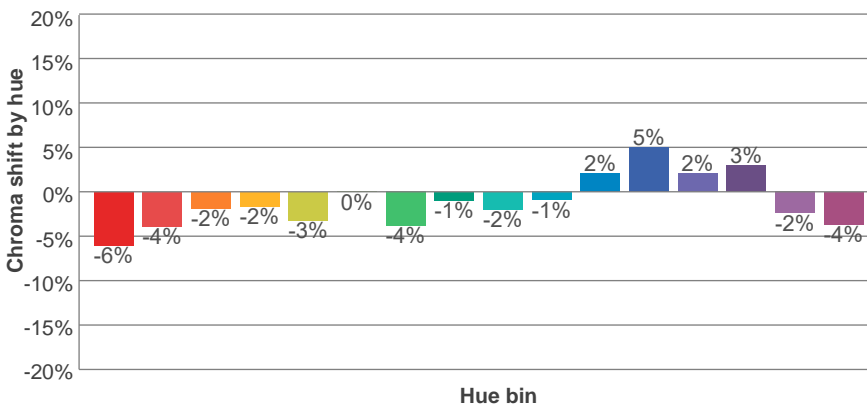
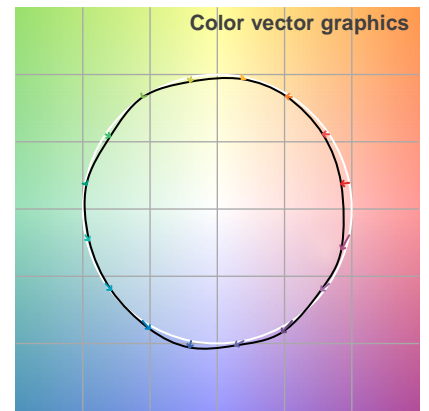
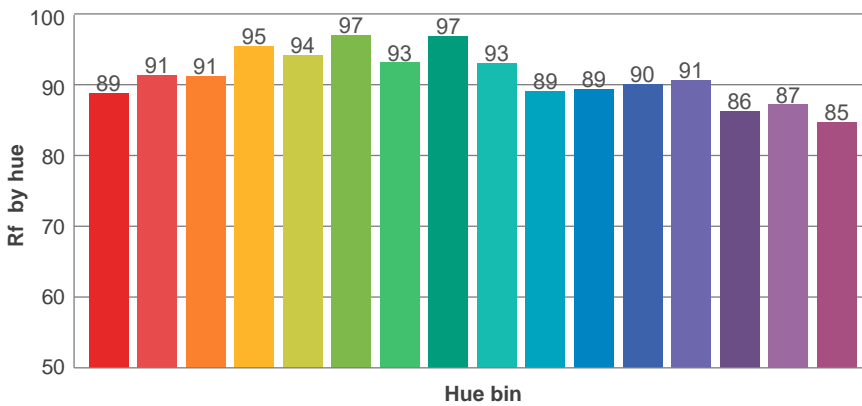
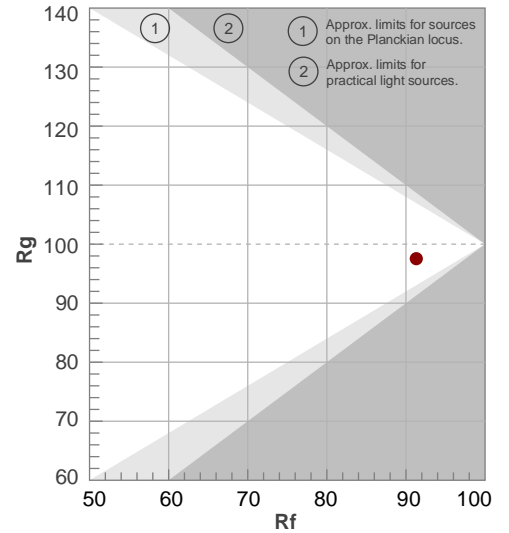
**Color parameters**

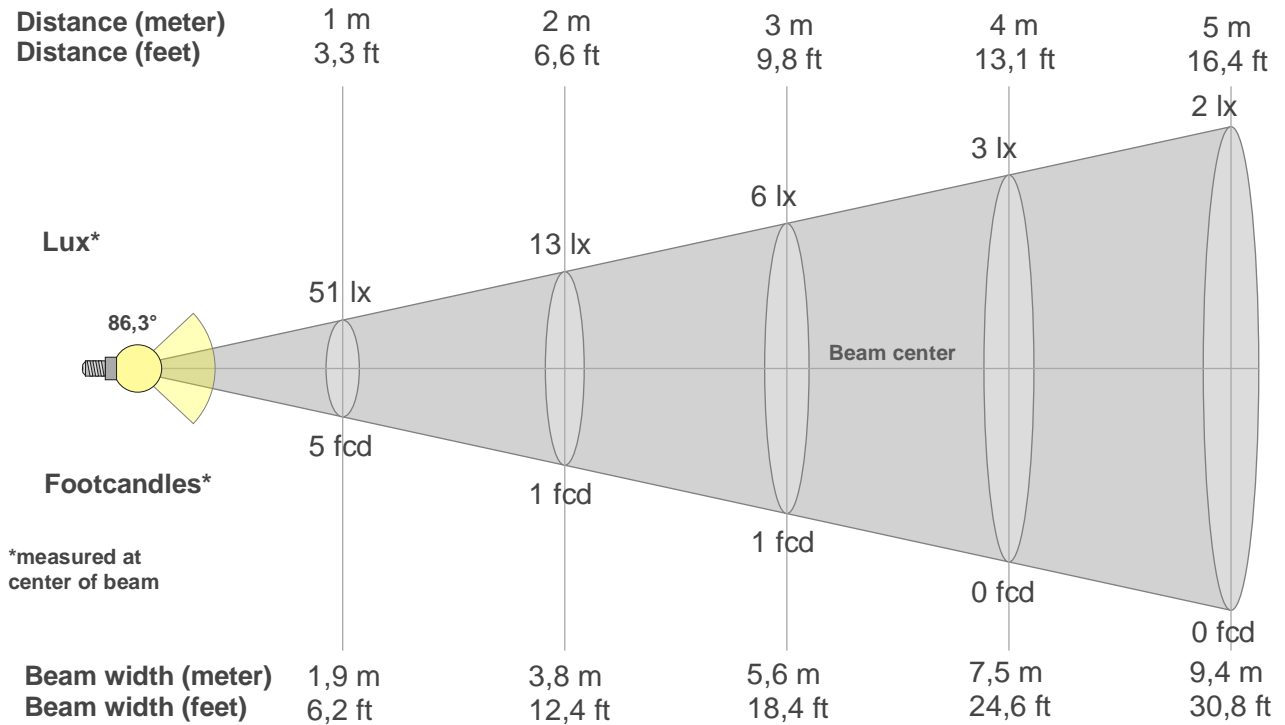
Color temperature	Color rendering Index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3000 K	92,0	49,0	91,3	97,5	90,6	0,437	0,404	0,251	0,348	0,0011

**Rf 91,3**  
Fidelity index Rf

**Rg 97,5**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	89	-6%	0%
2	91	-4%	3%
3	91	-2%	4%
4	95	-2%	1%
5	94	-3%	1%
6	97	0%	0%
7	93	-4%	-1%
8	97	-1%	1%
9	93	-2%	4%
10	89	-1%	6%
11	89	2%	8%
12	90	5%	0%
13	91	2%	-7%
14	86	3%	-11%
15	87	-2%	-7%
16	85	-4%	-11%





**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
51lx	13lx	6lx	3lx	2lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
4,7fcd	1,2fcd	0,5fcd	0,3fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

**Intensities in 0° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
50,5	50,4	49,7	48,9	47,3	44,9	41,6	37,1	30,8	22,2	13,0	5,9	2,2	0,8	0,5	0,3	0,3	0,2	0,1	0,1
100%	100%	98%	97%	94%	89%	82%	73%	61%	44%	26%	12%	4%	2%	1%	1%	0%	0%	0%	0%

**Intensities in 90° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
50,5	50,4	49,9	49,4	48,5	46,4	42,0	35,1	26,7	18,6	11,0	4,8	1,7	0,8	0,6	0,5	0,4	0,2	0,1	0,1
100%	100%	99%	98%	96%	92%	83%	69%	53%	37%	22%	10%	3%	2%	1%	1%	1%	0%	0%	0%

**Intensities in 180° c-plane**

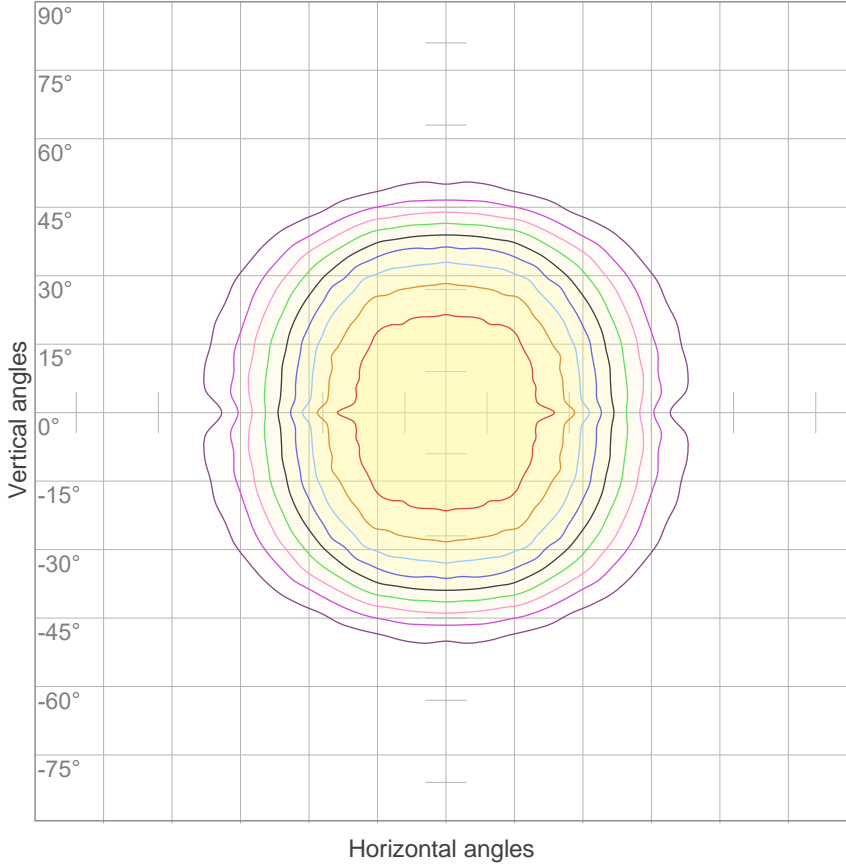
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
50,5	50,4	49,7	48,9	47,3	44,9	41,6	37,1	30,8	22,2	13,0	5,9	2,2	0,8	0,5	0,3	0,3	0,2	0,1	0,1
100%	100%	98%	97%	94%	89%	82%	73%	61%	44%	26%	12%	4%	2%	1%	1%	0%	0%	0%	0%

**Intensities in 270° c-plane**

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
50,5	50,4	49,9	49,4	48,5	46,4	42,0	35,1	26,7	18,6	11,0	4,8	1,7	0,8	0,6	0,5	0,4	0,2	0,1	0,1
100%	100%	99%	98%	96%	92%	83%	69%	53%	37%	22%	10%	3%	2%	1%	1%	1%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
86,3°	117°	256,5°	95,8%	79,1%

**iso-candela diagram**



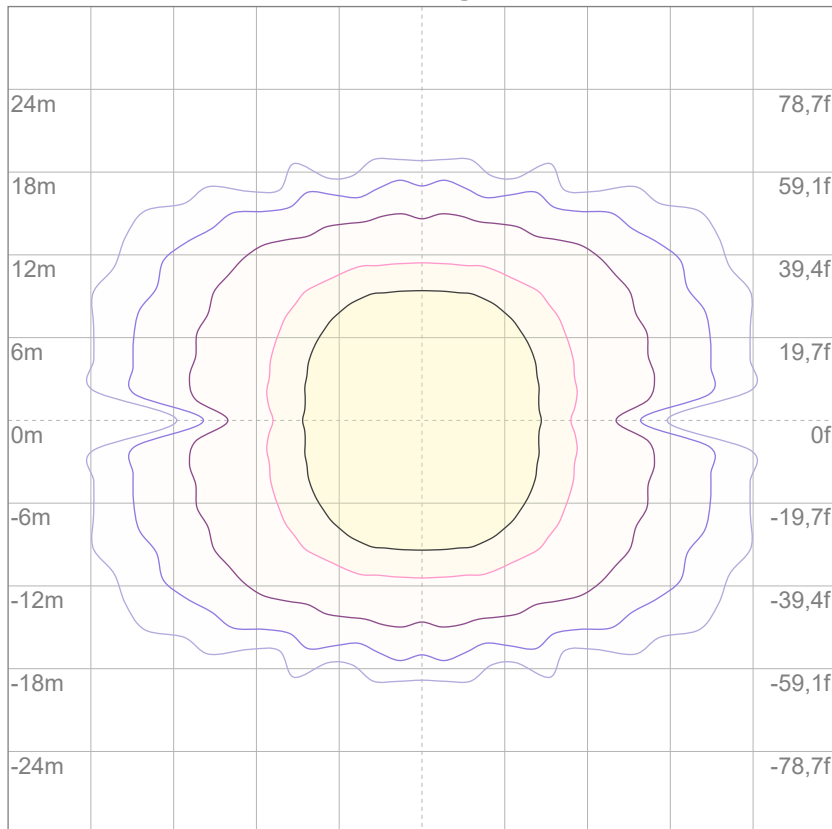
- 10% 5 cd
- 20% 10 cd
- 30% 15 cd
- 40% 20 cd
- 50% 25 cd
- 60% 30 cd
- 70% 35 cd
- 80% 40 cd
- 90% 45 cd

**Conditions:**

Number of c-planes: 68

Candela at center: 51 cd

**iso-lux diagram**



Mounting height: 10 meters (33 feet)

- 3% 15,2m lx
- 5% 25,3m lx
- 10% 50,5m lx
- 30% 0,152 lx
- 50% 0,253 lx

**Conditions:**

Number of c-planes: 68

Lux at center: 0,505 lx

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

Glare evaluation according to UGR

p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
CIE 117-1995. Corrected glare indices referring to 90,5 lm total luminous flux										

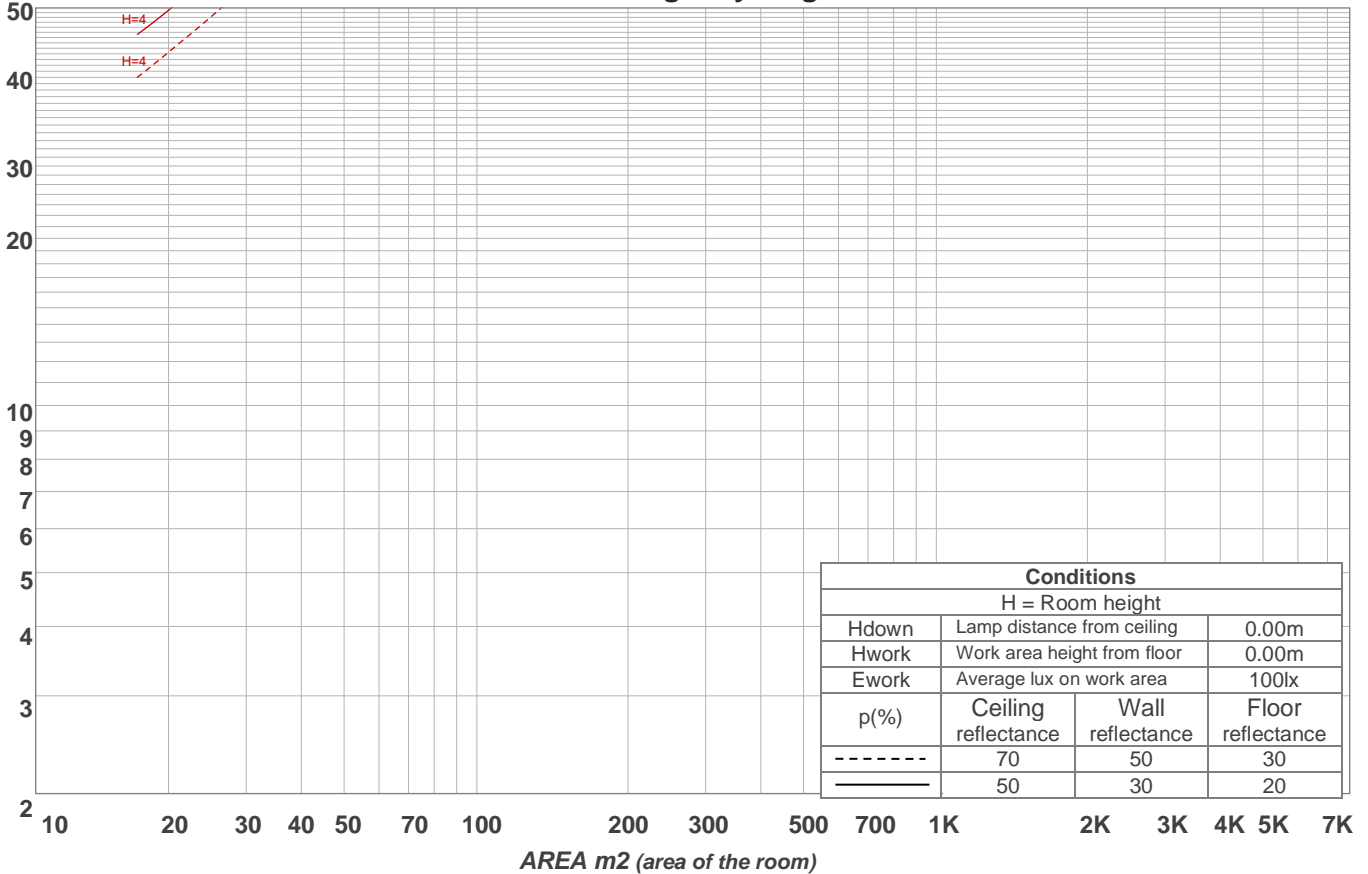
UGR data could not be calculated due to missing dimensions. Goto Edit->Photometric->Dimensions and set the fixture/lamp dimensions.

**Coefficients of Utilization**

Ceiling reflectance	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	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
<b>RCR</b>	<b>(RCR: Room Cavity Ratio)</b>																	
	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	105	105	105	101	101	101	99
1	112	108	105	102	109	106	103	101	102	99	97	98	96	94	94	93	91	89
2	104	98	93	89	102	96	92	88	93	89	86	89	86	84	86	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	79	76	73	71
4	91	81	74	69	89	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	63	58	54	62	57	53	52
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	57	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	50	45	41	49	44	40	39
10	61	49	43	38	60	49	42	38	48	42	38	47	41	37	46	41	37	36

LAMPS (number of lamps)

**Luminaire budgetary diagram**



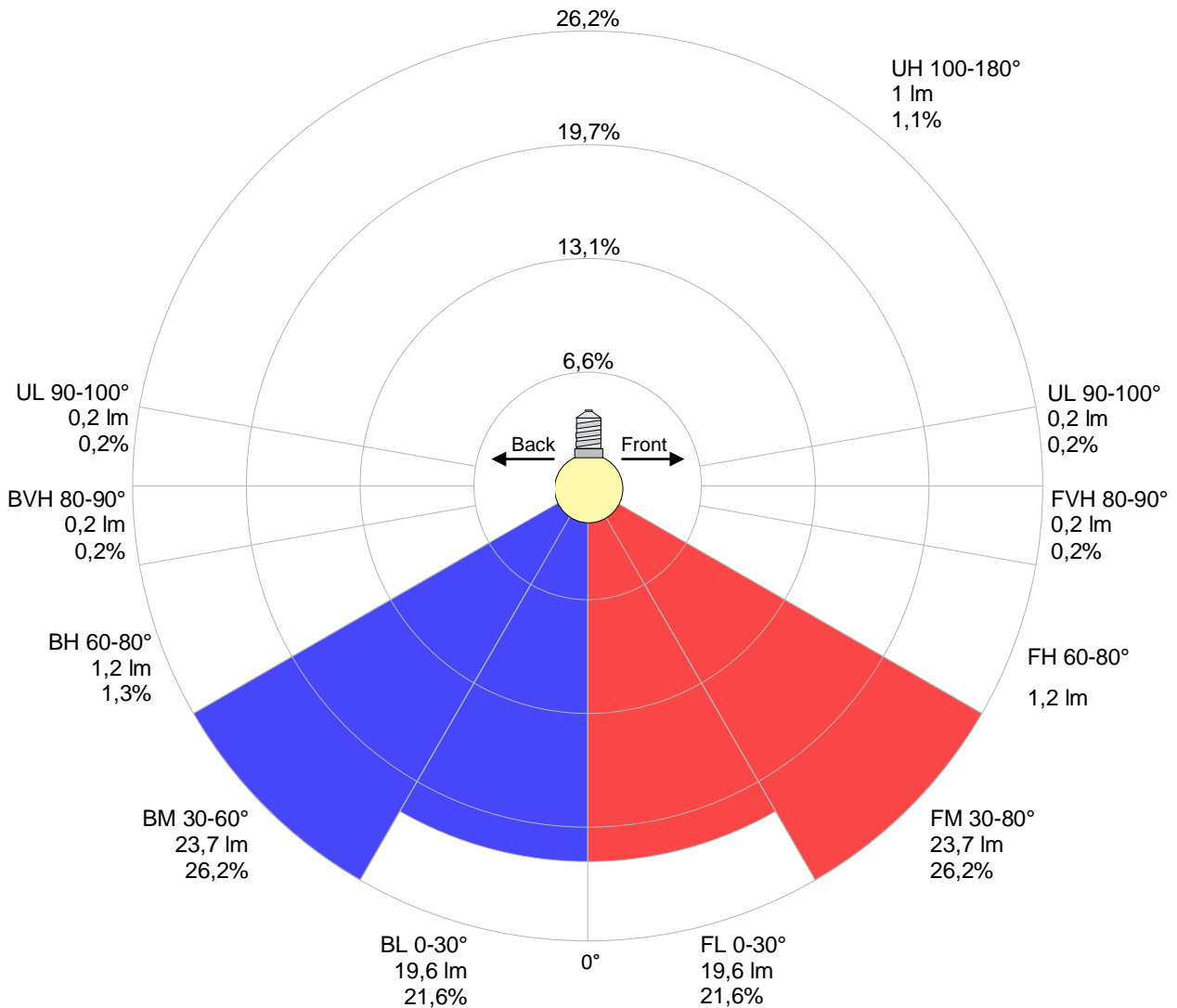
**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	13,8 lm	20,6 lm	22,6 lm	17,3 lm	7,61 lm	1,85 lm	0,473 lm	0,308 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,157 lm	0,120 lm	0,157 lm	0,153 lm	0,156 lm	0,048 lm	0,048 lm	0,162 lm	0,134 lm

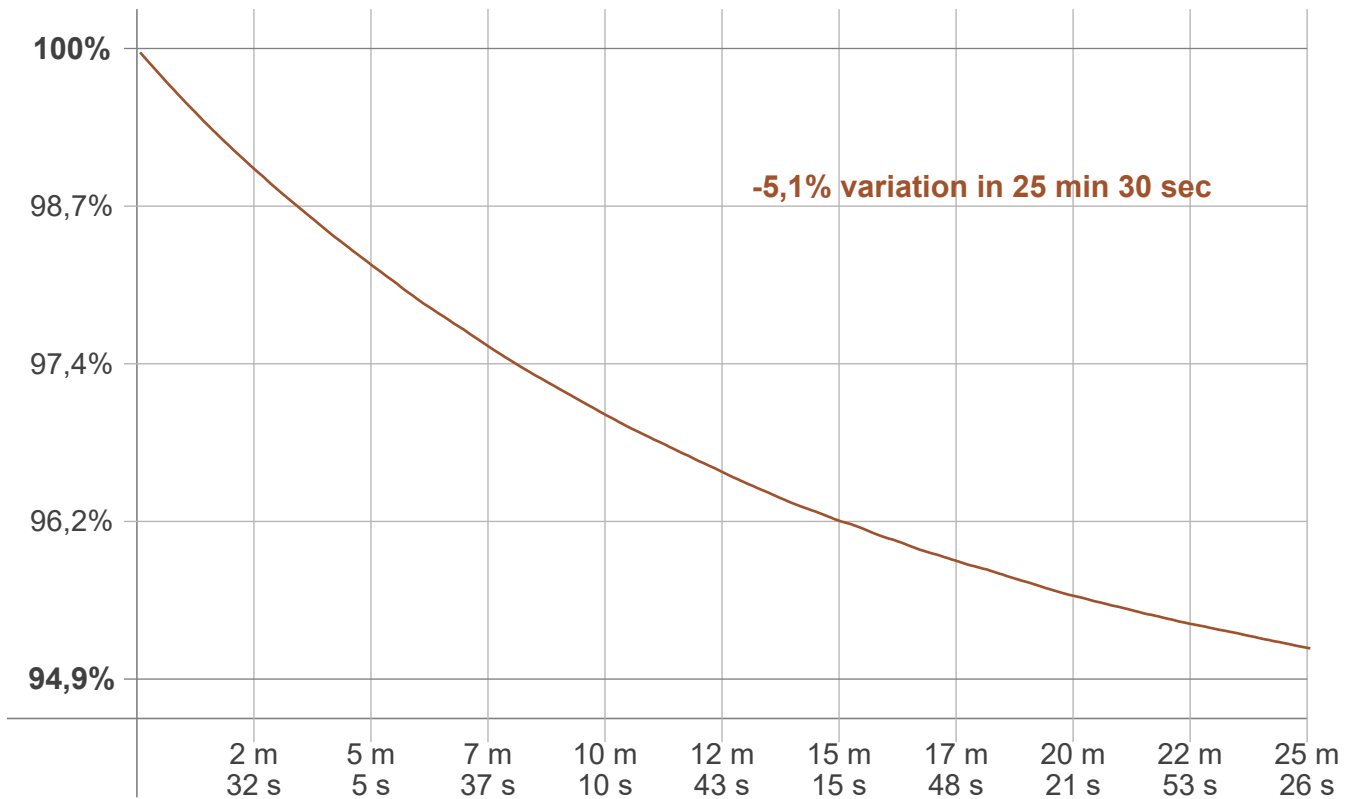
LCS table

BUG rating:	B0 U1 G0	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	19,6	21,6%
Medium(30-60):	23,7	26,2%
High(60-80):	1,2	1,3%
Very high(80-90):	0,2	0,2%
<b>Back light</b>		
Low(0-30):	19,6	21,6%
Medium(30-60):	23,7	26,2%
High(60-80):	1,2	1,3%
Very high(80-90):	0,2	0,2%
<b>Uplight</b>		
Low(90-100):	0,2	0,2%
High(100-180):	1	1,1%

LCS graph



**Warmup curve**



**Warmup result**

<b>Warmup time:</b>	<b>Lamp stabilized in 25 min 30 sec</b>
<b>Warmup variation</b>	<b>-5,1%</b>

**Warmup conditions**

<b>Stable period:</b>	<b>15 min</b>
<b>Stable change max:</b>	<b>2,0%</b>
<b>Minimum time:</b>	<b>15 min</b>

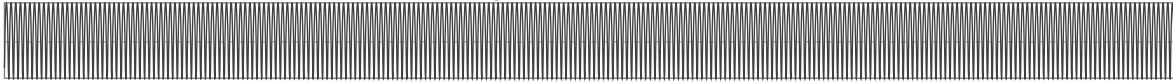
**Color temperature change**

<b>CCT start</b>	<b>CCT change</b>	<b>CCT end</b>
<b>3009 K</b>	<b>-9 K</b>	<b>3000 K</b>

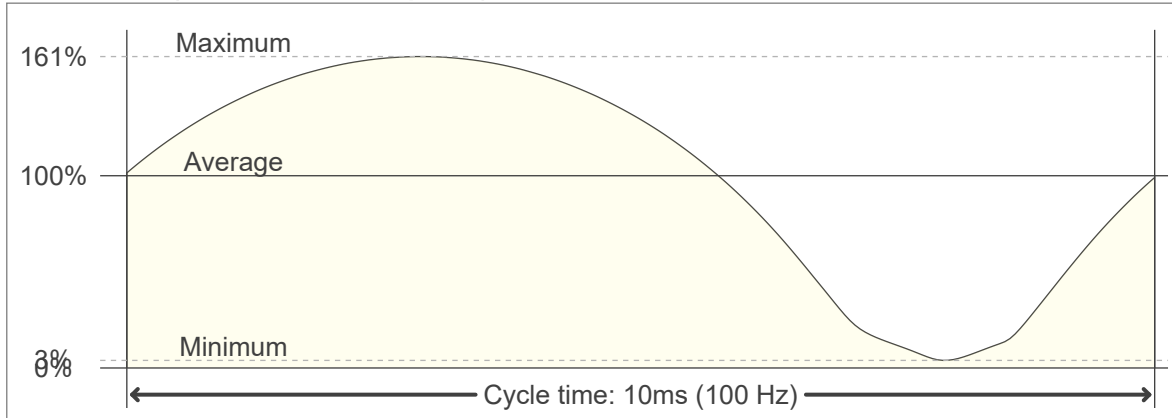
**Output change**

<b>Output start</b>	<b>Output change</b>	<b>Output end</b>
<b>95,3 lm</b>	<b>-4,8 lm</b>	<b>90,5 lm</b>

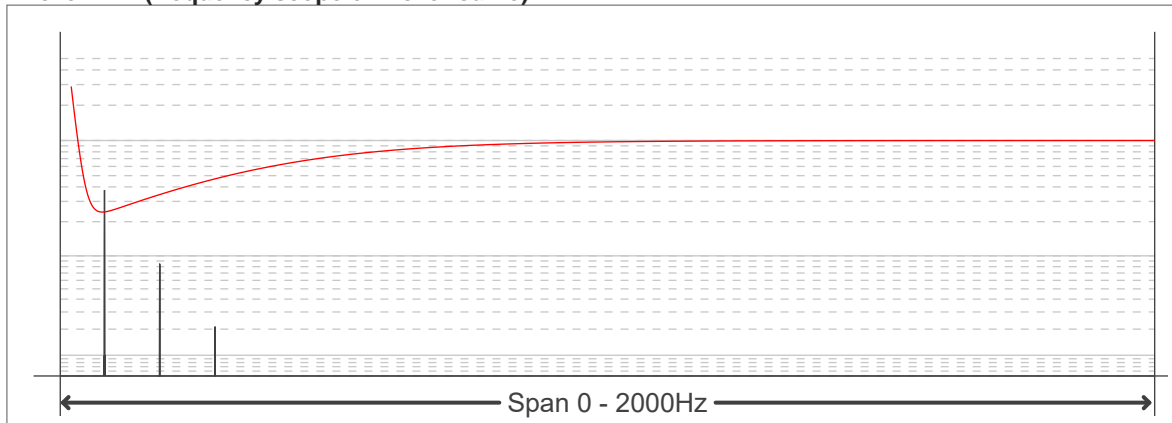
**Flicker curve (complete sampled flicker signal)**



**Flicker frame (frame of one flicker period)**



**Flicker FFT (frequency scope of flicker curve)**



**Flicker results:**

Flicker frequency:		100 Hz	
Flicker index:	0,24	JA8/10 40Hz	0,16 %
Flicker percentage:	95,27 %	JA8/10 90Hz	0,72 %
SVM: (Visual flicker)	2,94	JA8/10 200Hz	83,45 %
PstLM	0,06	JA8/10 400Hz	96,12 %
Mp	0,03	JA8/10 1000Hz	94,23 %

**Flicker conditions:**

Sample rate:	20000 samples/second
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