

Light efficiency:



Light quality:



Color temperature:

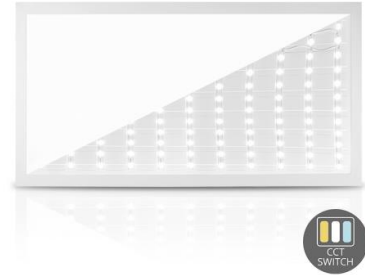


Output: 2171 lm

Peak: 722 cd

Power: 23,5 W

PF: 0,95



Tracking number: [VT240918-009857](#)

Product name:

**271777-3000K**

Item number:

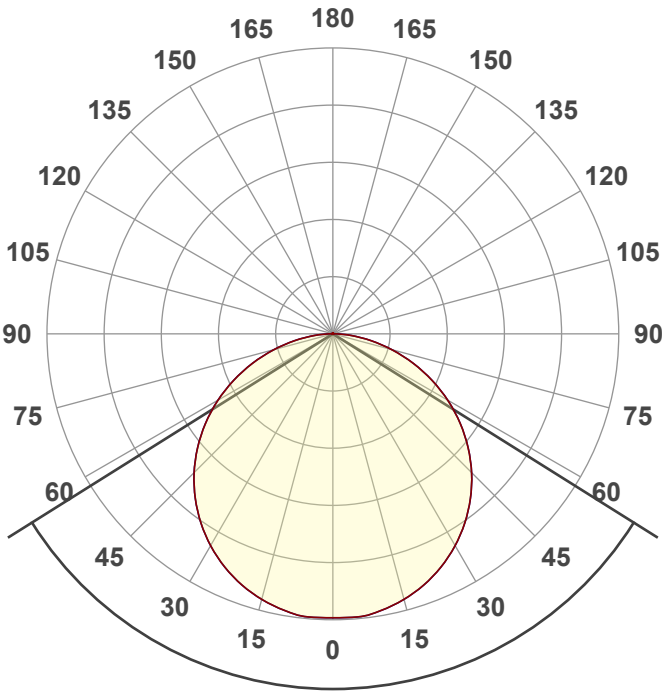
**271777-3000K**

Date and time:

**18-9-2024 16:58:15**

Description:

**BACK-LIT LED PANEEL | 60X30CM |  
24W | CCT-SWITCH**



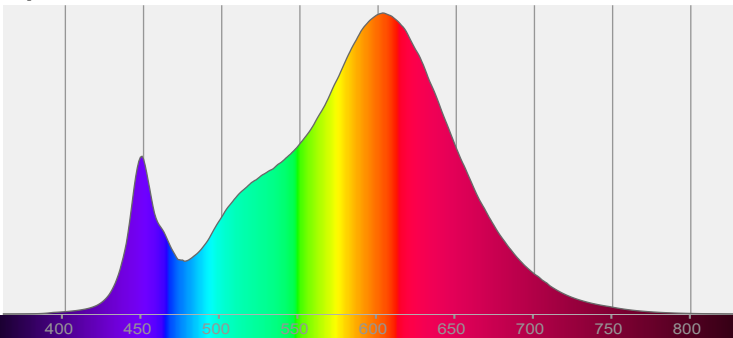
Beam angle

**115,8°**

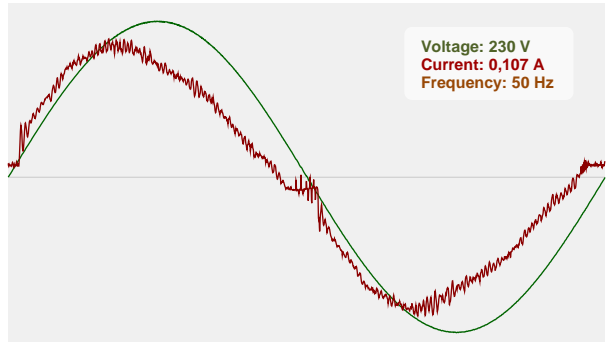


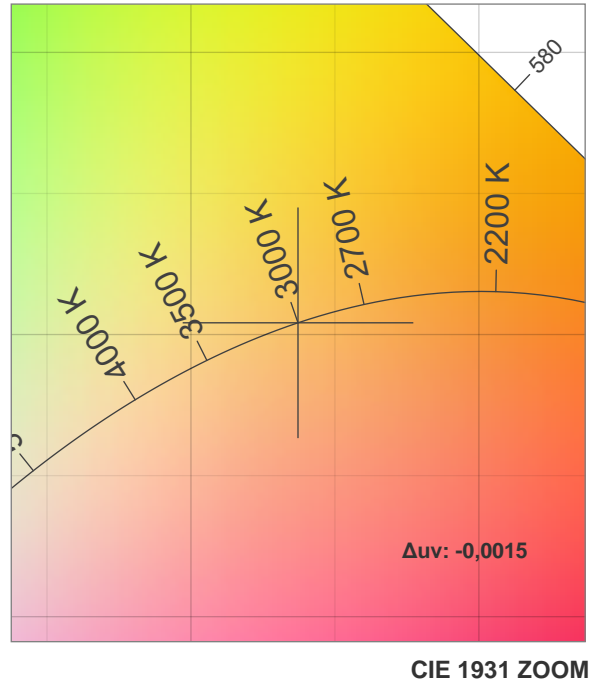
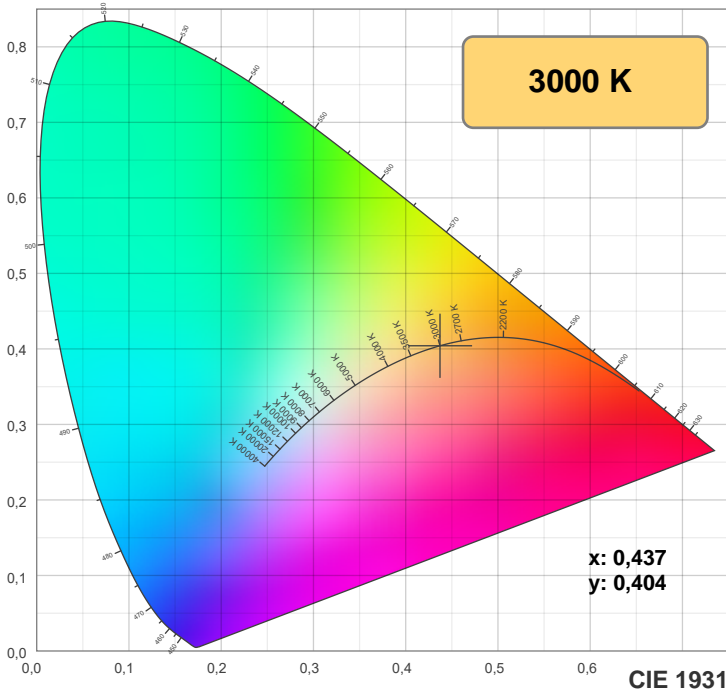
CIE 1931  
x: 0,437  
y: 0,404

Spectra

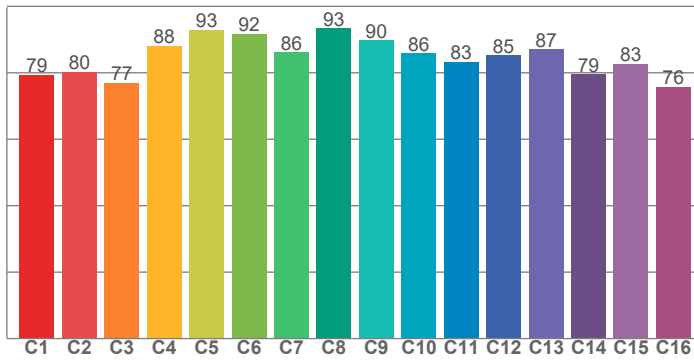


Power

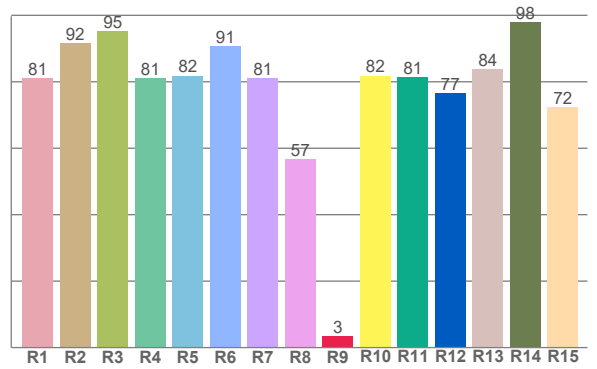




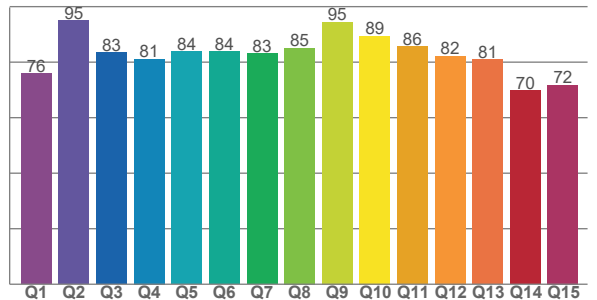
**TM-30: 84,7**



**CRI: 82,4 (R1-R8)**



**CQS: 81,6**



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
81,1	91,7	95,1	81,0	81,9	90,8	81,0	56,7	3,5	81,9	81,4	76,6	83,8	98,0	72,3

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
79,3	80,3	77,0	88,1	93,0	91,8	86,1	93,3	89,7	85,9	83,3	85,3	87,1	79,5	82,7	75,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75,9	95,0	83,4	81,1	83,8	83,9	83,1	85,0	94,5	89,4	85,6	82,2	81,0	69,8	71,7

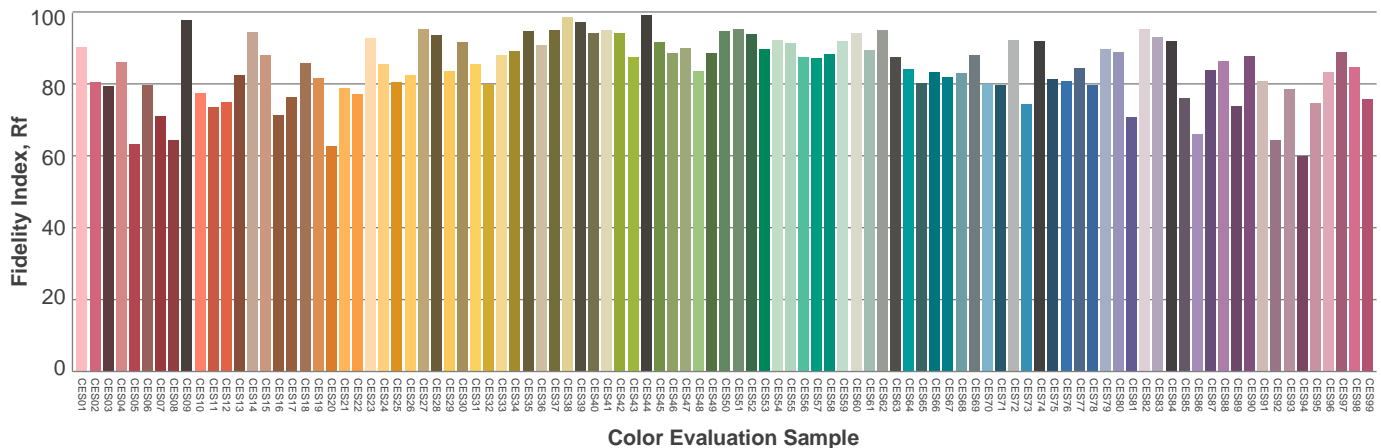
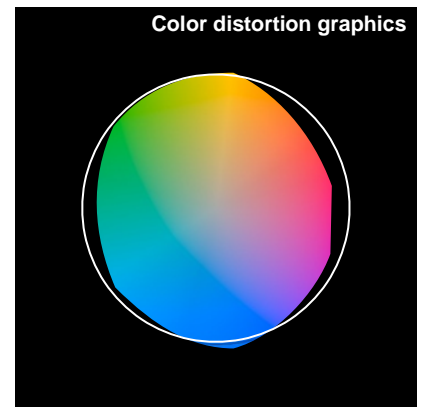
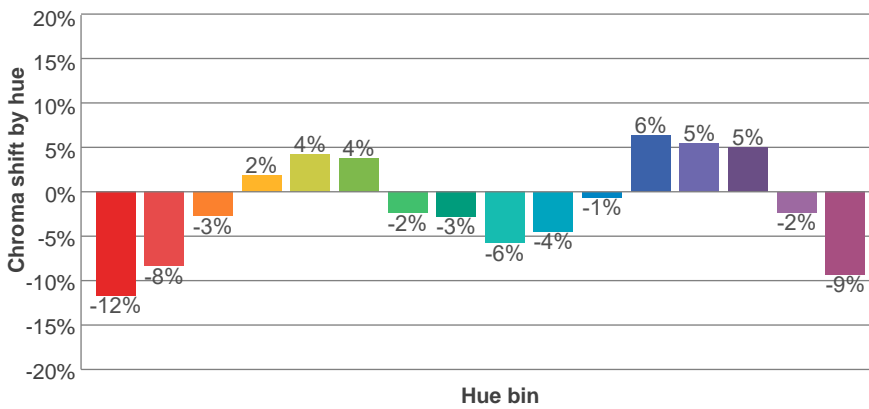
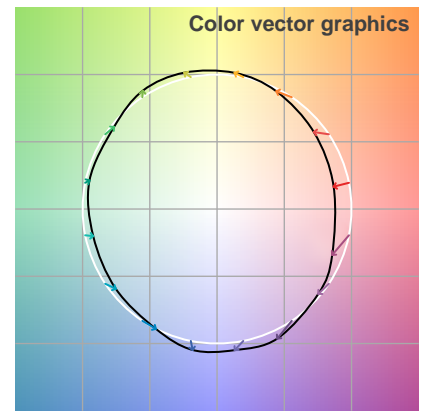
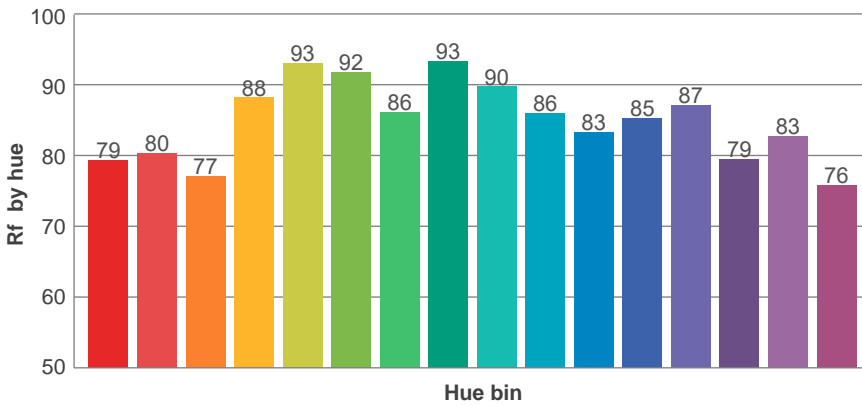
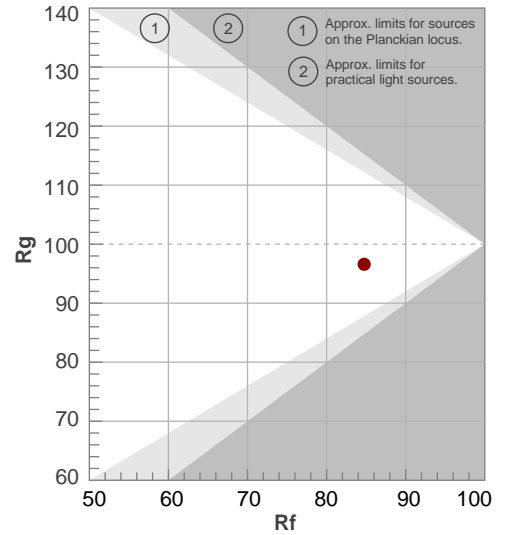
**Color parameters**

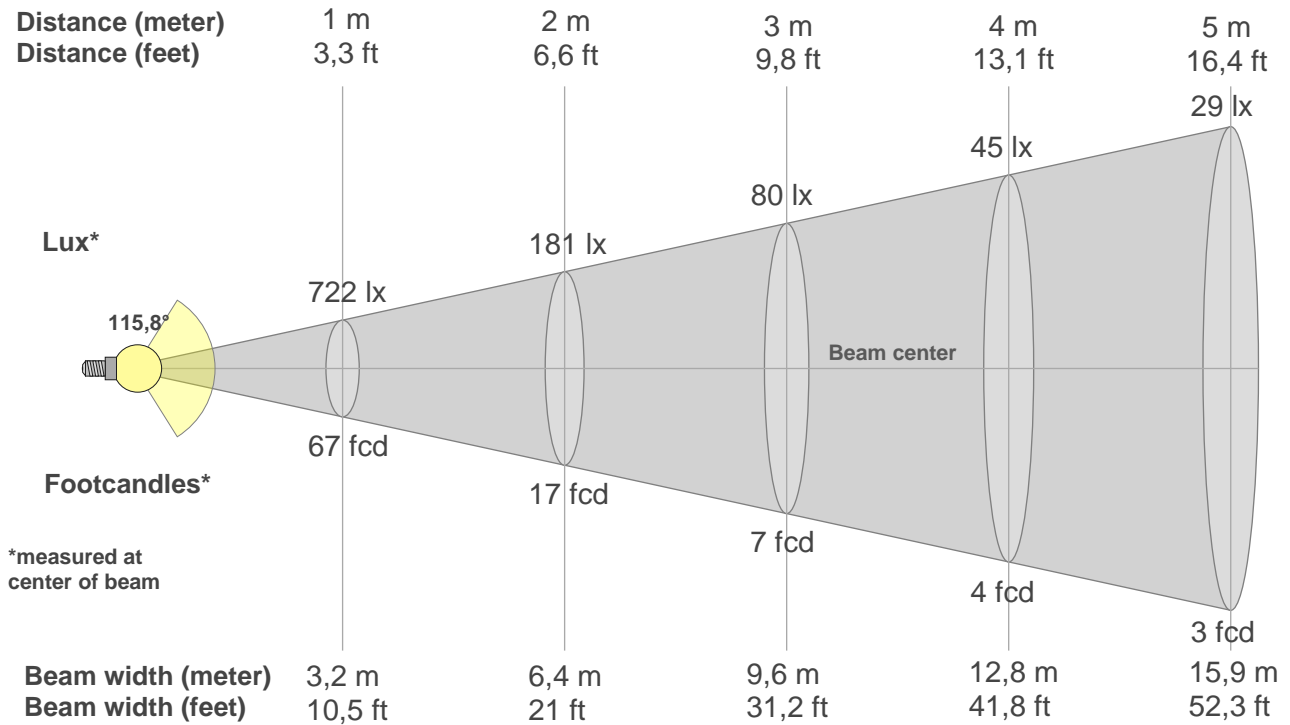
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3000 K	82,4	3,5	84,7	96,6	81,6	0,437	0,404	0,251	0,348	-0,0015

**Rf 84,7**  
Fidelity index Rf

**Rg 96,6**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	79	-12%	-1%
2	80	-8%	8%
3	77	-3%	12%
4	88	2%	7%
5	93	4%	4%
6	92	4%	-3%
7	86	-2%	-8%
8	93	-3%	-2%
9	90	-6%	2%
10	86	-4%	7%
11	83	-1%	12%
12	85	6%	3%
13	87	5%	-8%
14	79	5%	-16%
15	83	-2%	-11%
16	76	-9%	-17%





**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
722lx	181lx	80lx	45lx	29lx	20lx	15lx	11lx	9lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx
67,1fcd	16,8fcd	7,5fcd	4,2fcd	2,7fcd	1,9fcd	1,4fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd

**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°
722	722	713	699	678	653	621	585	544	499	448	394	337	277	216	155	97	46	10	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	55%	47%	38%	30%	21%	13%	6%	1%	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°
722	722	713	699	678	653	621	585	544	499	448	394	337	277	216	155	97	46	10	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	55%	47%	38%	30%	21%	13%	6%	1%	0%

**Intensities in 180° c-plane**

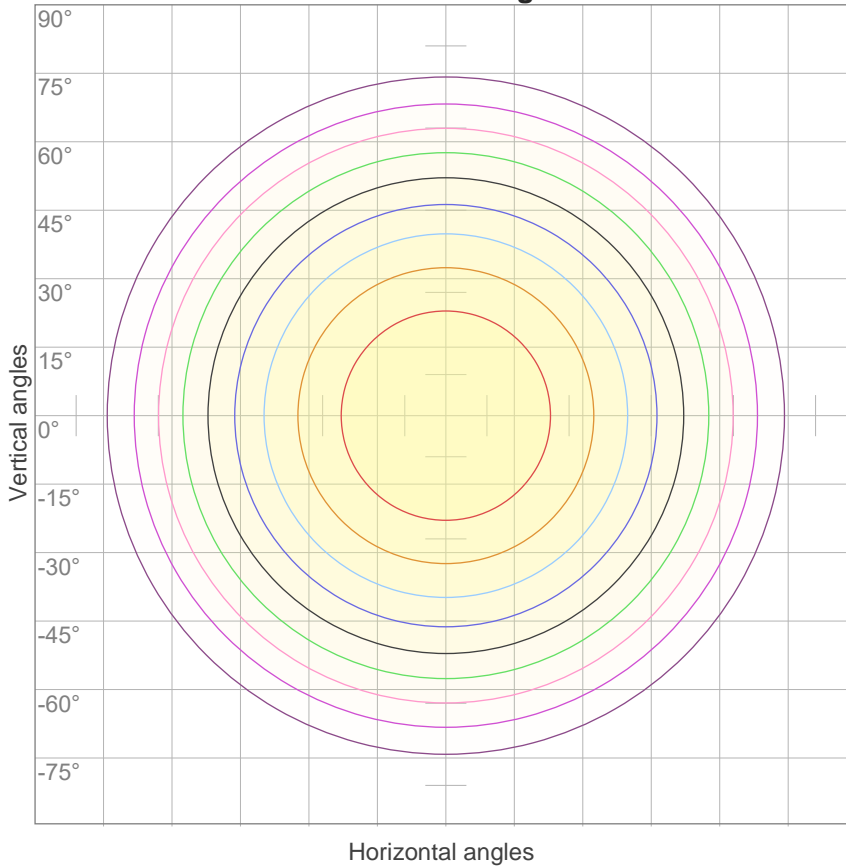
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
722	722	713	699	678	653	621	585	544	499	448	394	337	277	216	155	97	46	10	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	55%	47%	38%	30%	21%	13%	6%	1%	0%

**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°
722	722	713	699	678	653	621	585	544	499	448	394	337	277	216	155	97	46	10	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	55%	47%	38%	30%	21%	13%	6%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,8°	164,9°	177,5°	76,8%	51,8%

**iso-candela diagram**



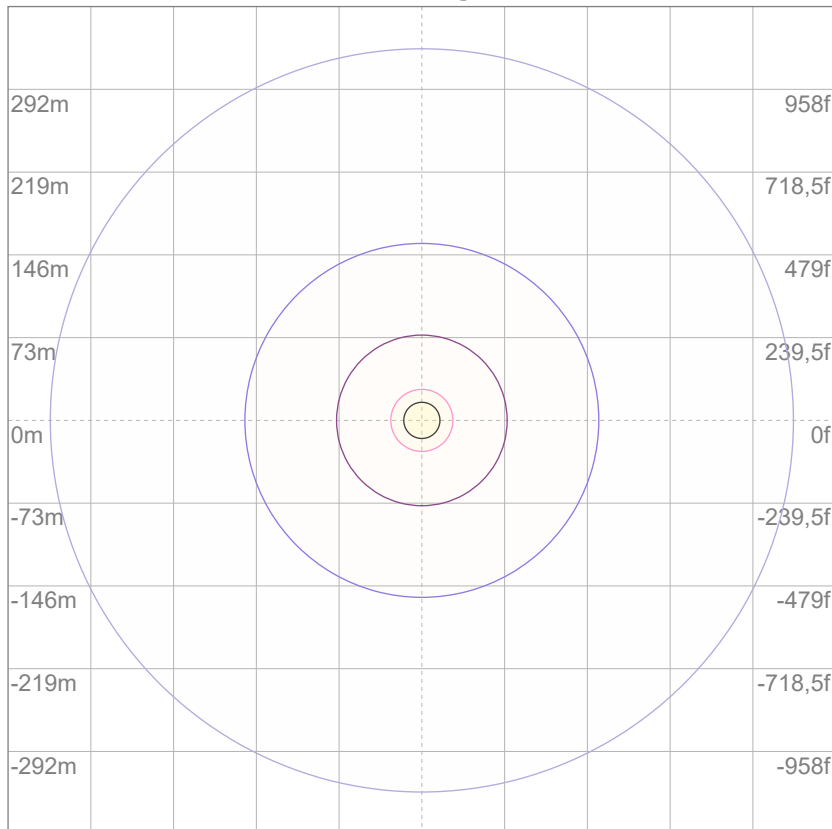
10%	72 cd
20%	144 cd
30%	217 cd
40%	289 cd
50%	361 cd
60%	433 cd
70%	506 cd
80%	578 cd
90%	650 cd

Conditions:

Number of c-planes: 12

Candela at center: 722 cd

**iso-lux diagram**



3%	0,217 lx
5%	0,361 lx
10%	0,722 lx
30%	2,17 lx
50%	3,61 lx

Conditions:

Number of c-planes: 12

Lux at center: 7,22 lx

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

**Glare evaluation according to UGR**

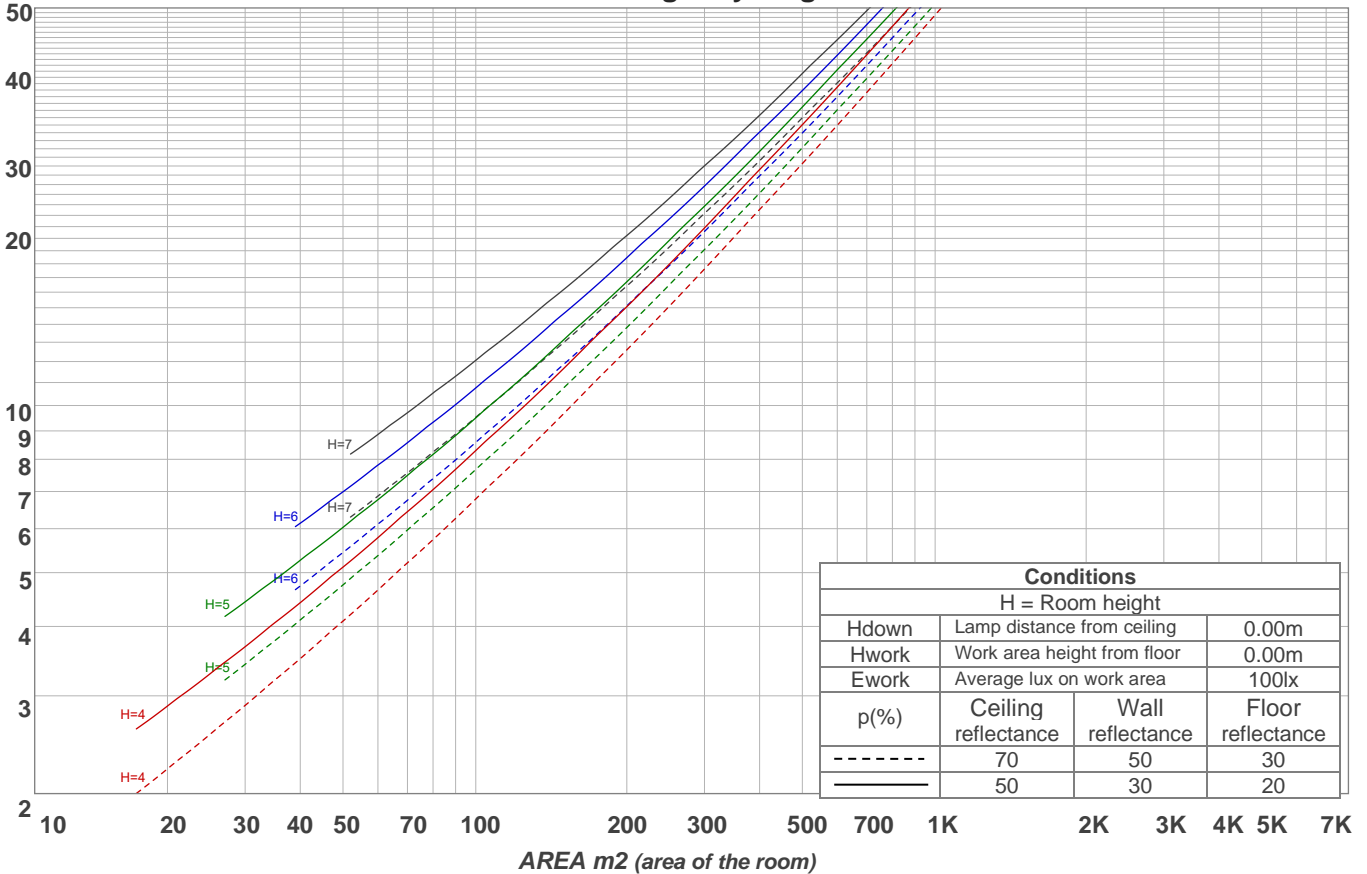
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	18,1	19,3	18,3	19,6	19,9	18,0	19,2	18,3	19,6	19,8
	3H	19,6	20,9	20,0	21,2	21,4	19,5	20,8	19,9	21,1	21,3
	4H	20,3	21,5	20,7	21,8	22,1	20,2	21,4	20,6	21,7	21,9
	6H	20,8	21,9	21,2	22,2	22,6	20,7	21,8	21,0	22,1	22,5
	8H	21,0	22,1	21,4	22,4	22,8	20,9	21,9	21,2	22,2	22,6
12H	21,1	22,1	21,5	22,5	22,9	20,9	22,0	21,3	22,3	22,8	
4H	2H	18,7	19,9	19,1	20,2	20,5	18,6	19,8	19,0	20,1	20,4
	3H	20,5	21,5	20,9	21,9	22,3	20,4	21,5	20,8	21,8	22,3
	4H	21,2	22,2	21,7	22,6	23,1	21,1	22,1	21,6	22,5	23,0
	6H	21,9	22,8	22,4	23,1	23,5	21,7	22,6	22,2	23,0	23,4
	8H	22,1	22,9	22,6	23,3	23,7	21,9	22,8	22,5	23,1	23,5
12H	22,2	22,9	22,8	23,4	23,9	22,1	22,8	22,6	23,2	23,7	
8H	4H	21,5	22,3	22,0	22,7	23,1	21,4	22,3	22,0	22,6	23,0
	6H	22,3	22,9	22,8	23,4	24,0	22,2	22,8	22,7	23,3	23,9
	8H	22,7	23,2	23,2	23,7	24,4	22,5	23,1	23,0	23,6	24,2
	12H	22,9	23,4	23,5	23,9	24,5	22,7	23,2	23,3	23,7	24,3
12H	4H	21,5	22,2	22,0	22,7	23,1	21,5	22,1	22,0	22,6	23,1
	6H	22,4	23,0	22,9	23,5	24,1	22,3	22,8	22,8	23,4	24,0
	8H	22,8	23,2	23,3	23,7	24,4	22,6	23,1	23,2	23,6	24,2
Variation of the observer position for the luminaire distance S											
S = 1.0H	0,1 / -0,1					0,1 / -0,1					
S = 1.5H	0,1 / -0,2					0,1 / -0,2					
S = 2.0H	0,4 / -0,4					0,4 / -0,4					
CIE 117-1995. Corrected glare indices referring to 2171 lm total luminous flux											

**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																			
Floor reflectance	20	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	111	111	111	106	106	106	102	102	102	99	
1	108	103	99	95	105	101	97	93	96	93	90	92	90	87	89	87	85	82	
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	77	74	70	68	
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	63	59	57	
4	82	69	60	53	79	68	60	53	65	58	52	63	57	51	61	55	51	48	
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	54	49	44	42	
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	36	
7	64	50	41	35	62	49	41	35	48	40	35	46	40	34	45	39	34	32	
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	31	29	
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	28	26	
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23	

LAMPS (number of lamps)

**Luminaire budgetary diagram**



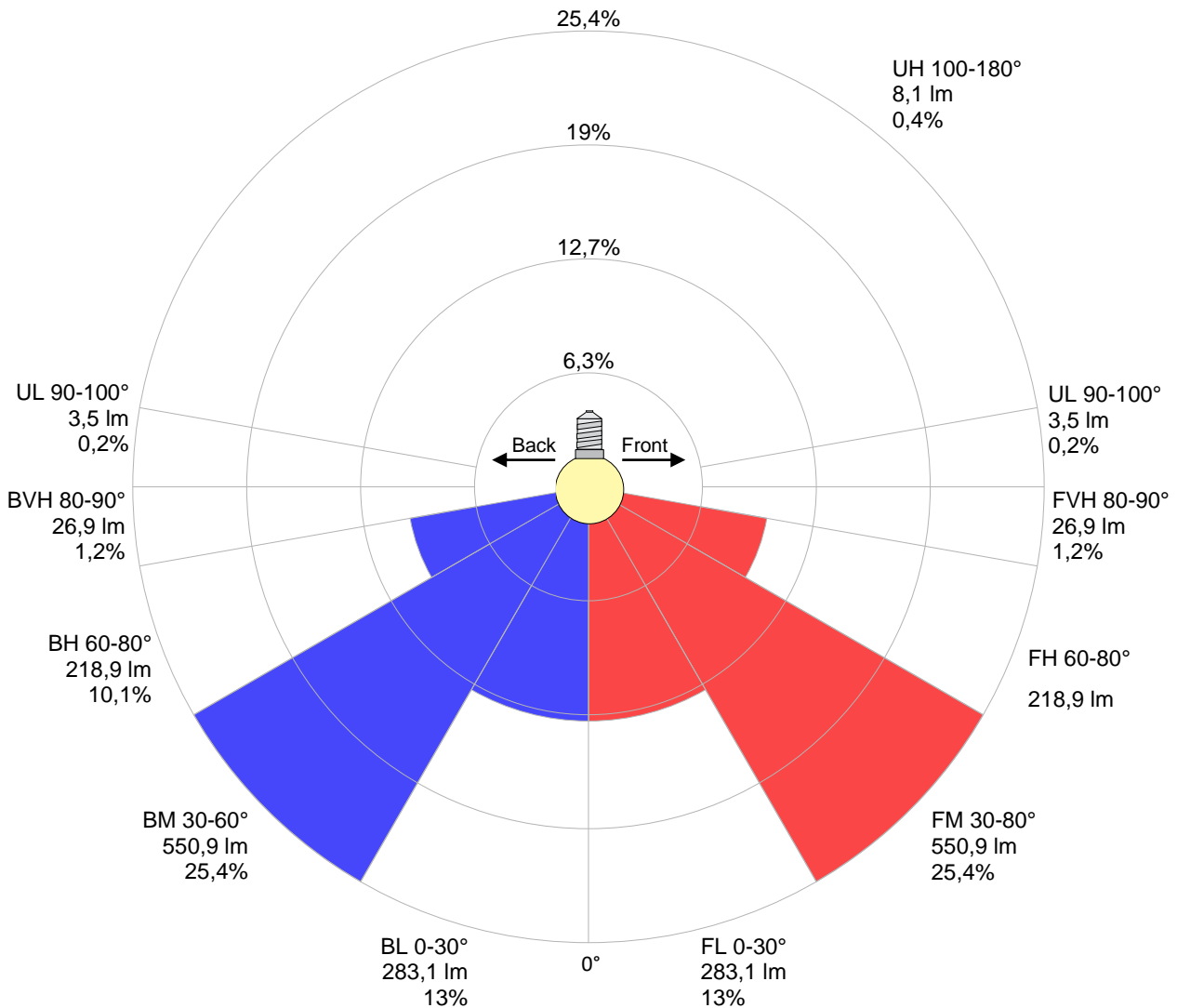
**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	197 lm	301 lm	366 lm	384 lm	352 lm	274 lm	164 lm	53,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
3,44 lm	1,14 lm	1,28 lm	1,38 lm	1,33 lm	1,15 lm	0,964 lm	0,620 lm	0,226 lm

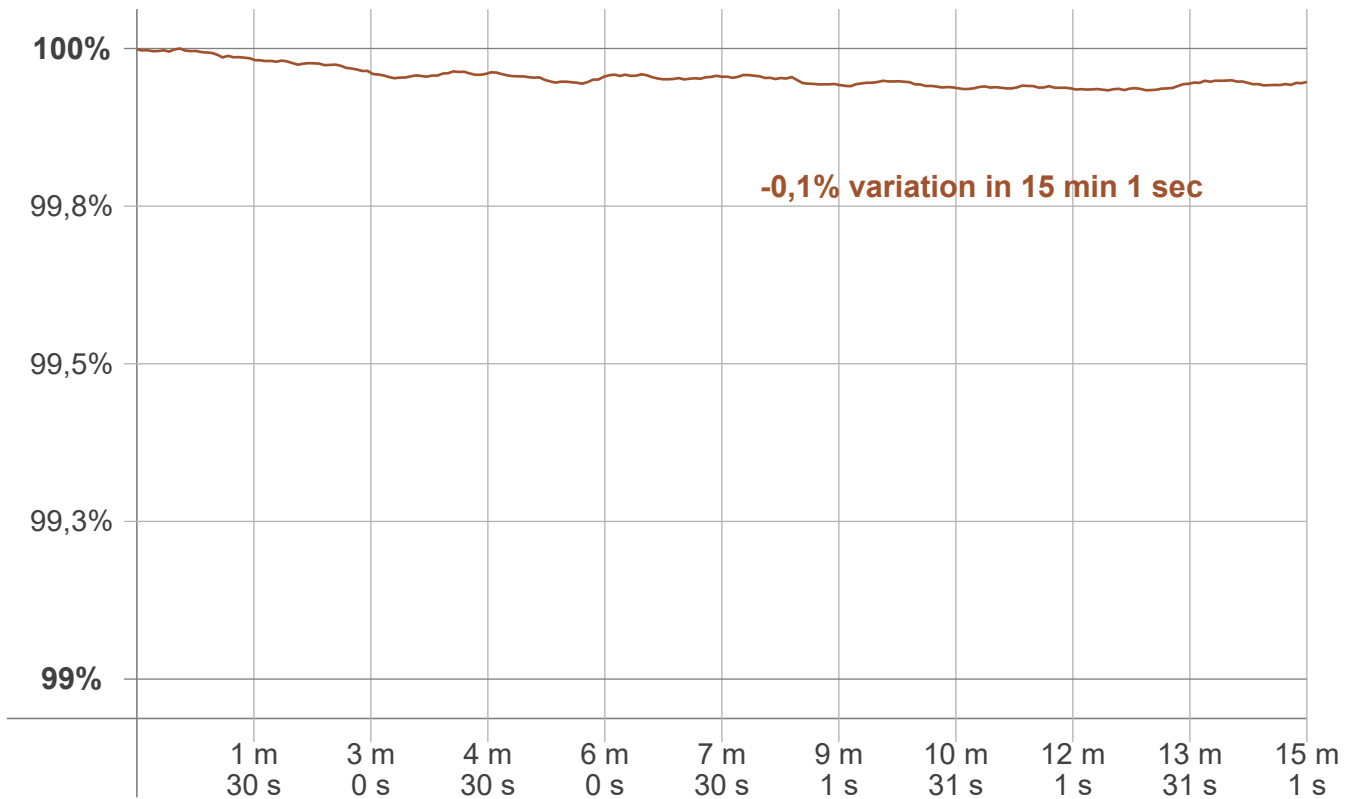
LCS table

BUG rating:	B1 U1 G1	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	283,1	13%
Medium(30-60):	550,9	25,4%
High(60-80):	218,9	10,1%
Very high(80-90):	26,9	1,2%
<b>Back light</b>		
Low(0-30):	283,1	13%
Medium(30-60):	550,9	25,4%
High(60-80):	218,9	10,1%
Very high(80-90):	26,9	1,2%
<b>Uplight</b>		
Low(90-100):	3,5	0,2%
High(100-180):	8,1	0,4%

LCS graph



**Warmup curve**



**Warmup result**

<b>Warmup time:</b>	<b>Lamp stabilized in 15 min 1 sec</b>
<b>Warmup variation</b>	<b>-0,1%</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>
2999 K	+1 K	3000 K

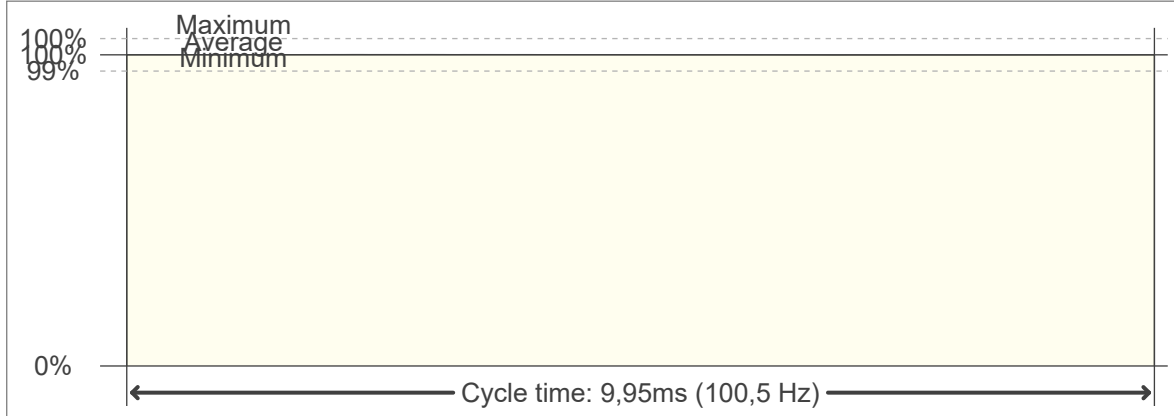
**Output change**

<b>Output start</b>	<b>Output change</b>	<b>Output end</b>
2173 lm	-1 lm	2171 lm

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



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



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



**Flicker results:**

Flicker frequency:		100,5 Hz	
Flicker index:	0	JA8/10 40Hz	0,01 %
Flicker percentage:	0,11 %	JA8/10 90Hz	0,02 %
SVM: (Visual flicker)	0	JA8/10 200Hz	0,09 %
PstLM	0,01	JA8/10 400Hz	0,1 %
Mp	0	JA8/10 1000Hz	0,1 %

**Flicker conditions:**

Sample rate:	20000 samples/second
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