

Light efficiency:



Light quality:



Color temperature:

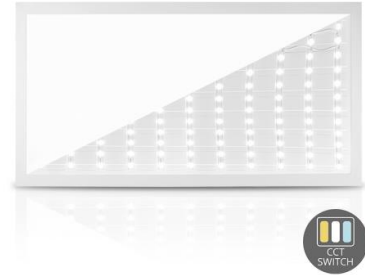


Output: 2397 lm

Peak: 800 cd

Power: 22,6 W

PF: 0,95



Tracking number: [VT240918-006357](https://www.visosystems.com/VT240918-006357)

Product name:

**271777-4000K**

Item number:

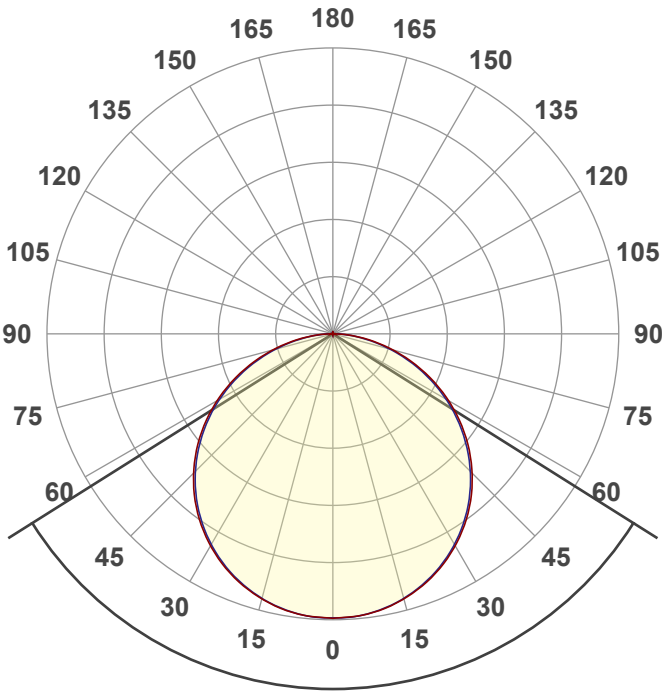
**271777-4000K**

Date and time:

**18-9-2024 16:25:33**

Description:

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

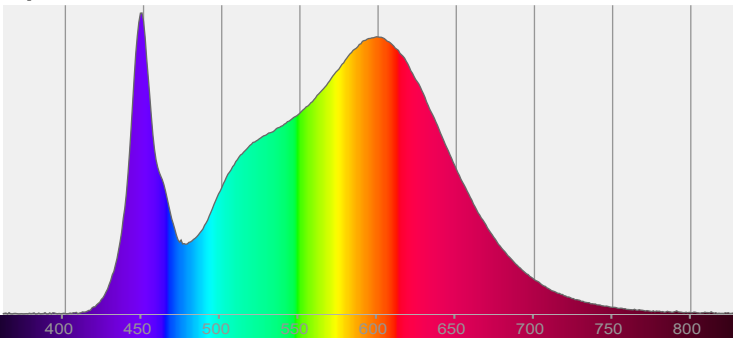


Beam angle **115,6°**

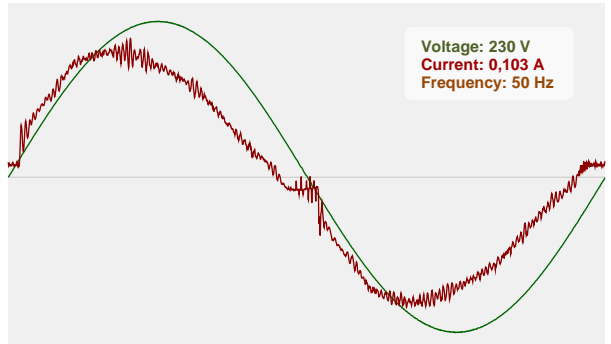


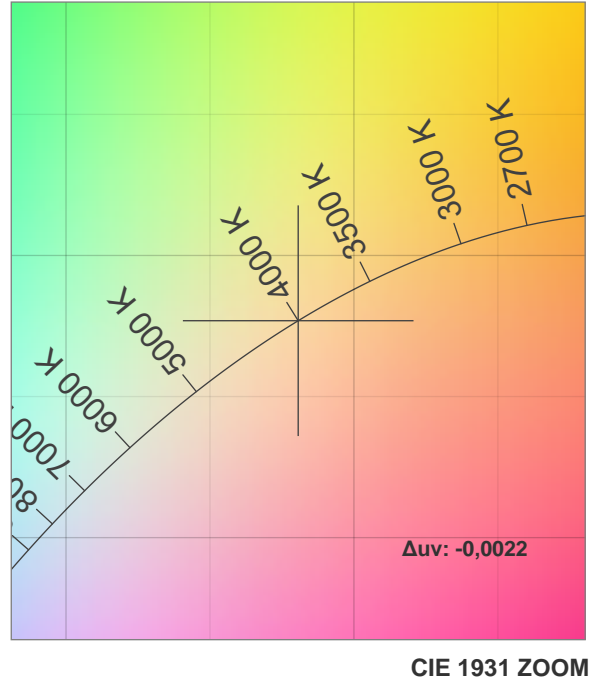
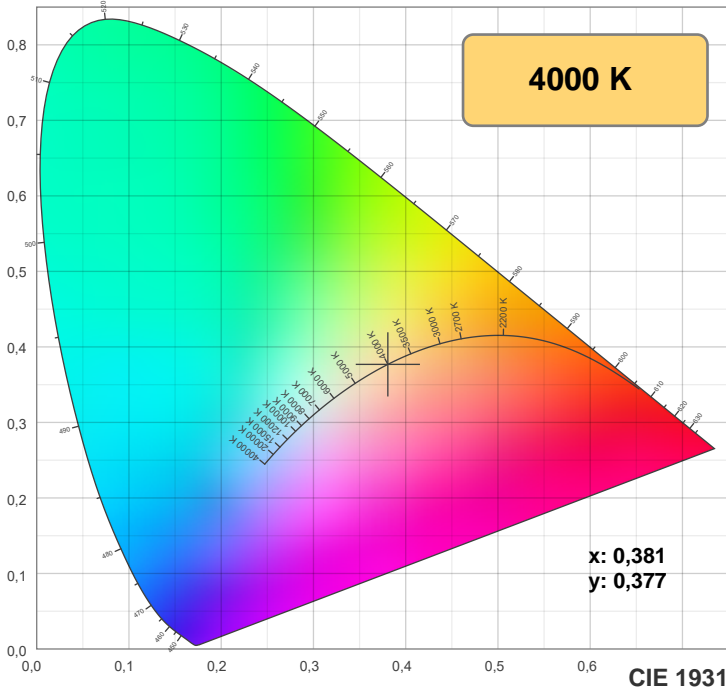
CIE 1931  
x: 0,381  
y: 0,377

Spectra



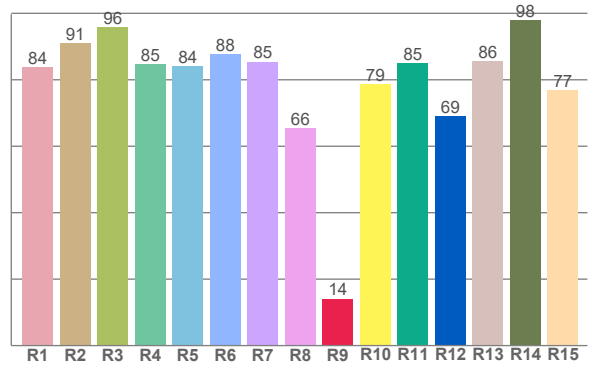
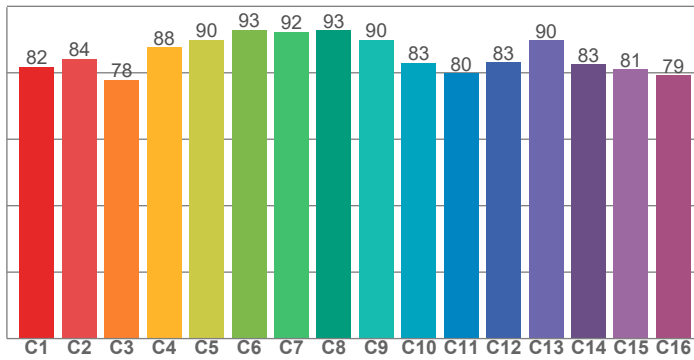
Power





**TM-30: 85,2**

**CRI: 84,8 (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
83,8	90,9	95,8	84,6	84,2	87,8	85,5	65,5	14,1	78,7	84,9	69,2	85,7	98,0	76,9

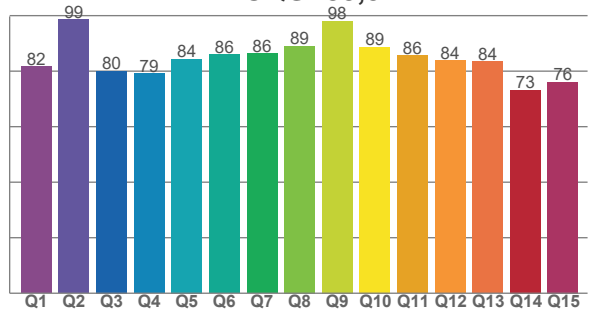
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
81,8	84,2	77,8	87,6	89,9	93,0	92,4	92,9	90,0	83,0	79,8	83,1	89,8	82,5	81,1	79,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81,6	98,6	80,0	79,1	84,4	86,0	86,4	89,0	98,1	88,7	85,7	83,9	83,5	73,2	76,1

**CQS: 83,5**



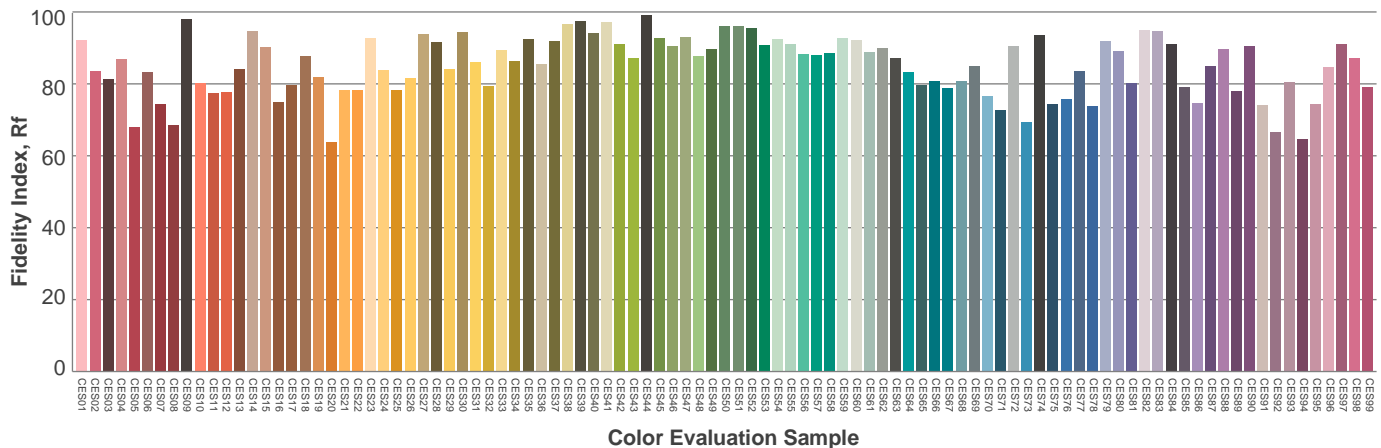
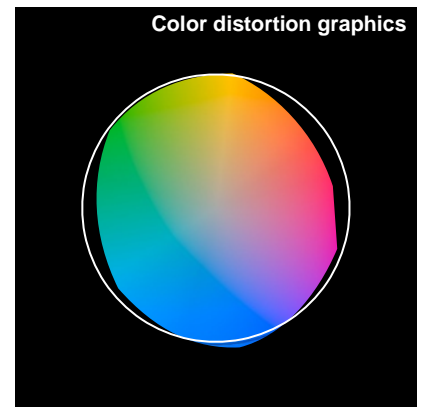
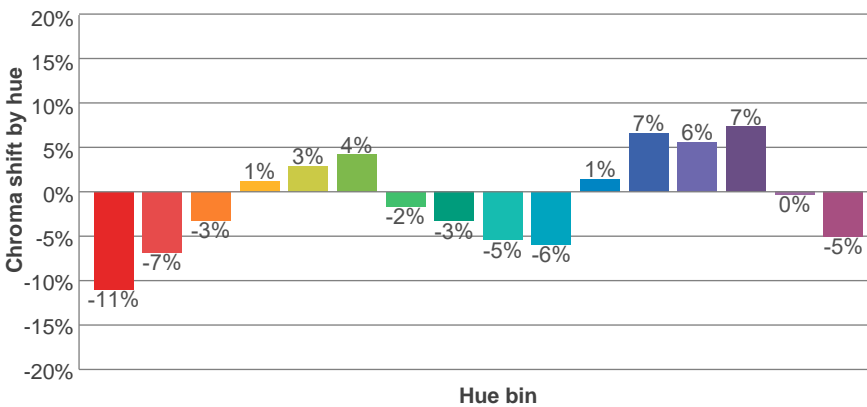
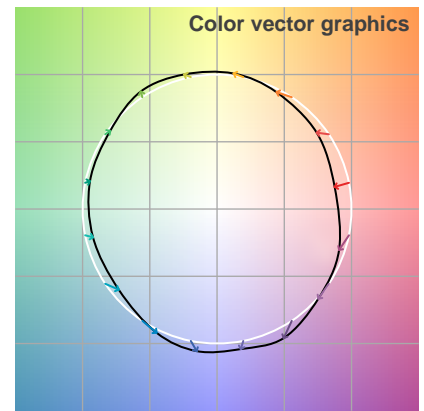
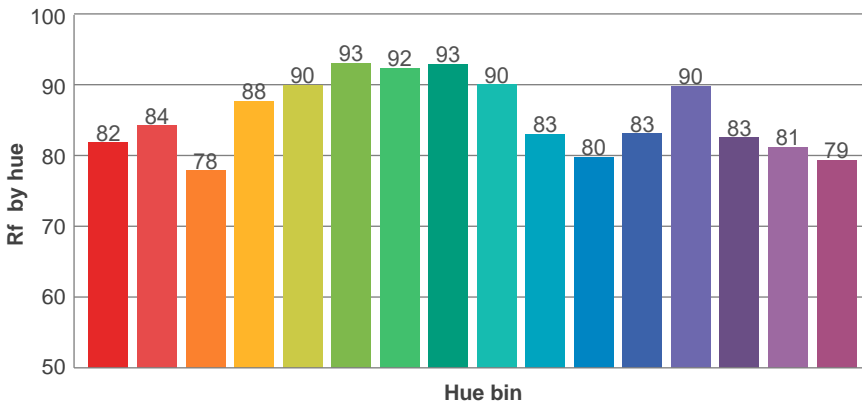
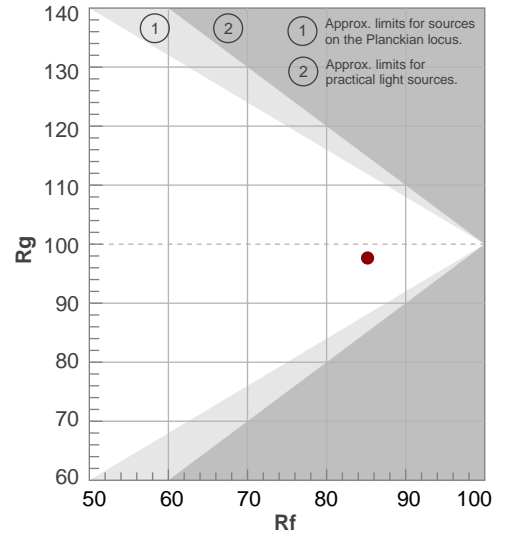
**Color parameters**

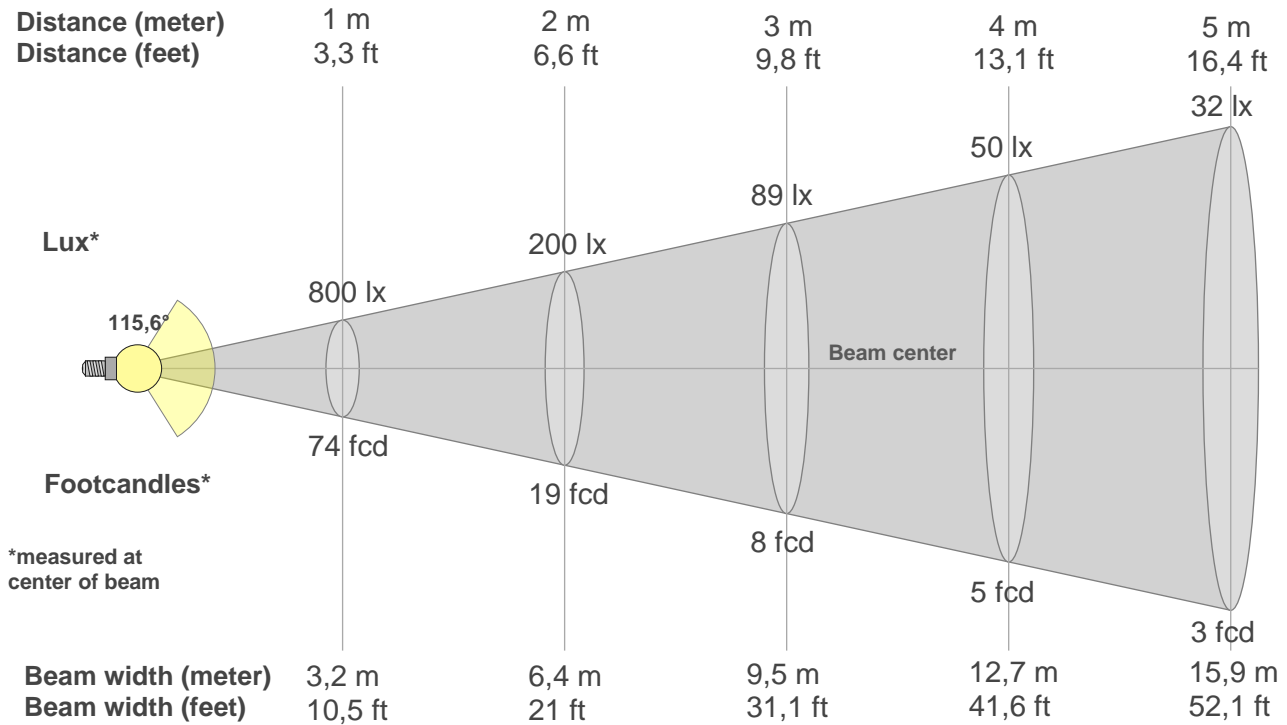
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4000 K	84,8	14,1	85,2	97,7	83,5	0,381	0,377	0,225	0,334	-0,0022

**Rf 85,2**  
Fidelity index Rf

**Rg 97,7**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	82	-11%	-1%
2	84	-7%	6%
3	78	-3%	11%
4	88	1%	8%
5	90	3%	4%
6	93	4%	-1%
7	92	-2%	-4%
8	93	-3%	-2%
9	90	-5%	3%
10	83	-6%	9%
11	80	1%	14%
12	83	7%	6%
13	90	6%	-3%
14	83	7%	-12%
15	81	0%	-14%
16	79	-5%	-12%





**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
800lx	200lx	89lx	50lx	32lx	22lx	16lx	12lx	10lx	8lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx
74,3fcd	18,6fcd	8,3fcd	4,6fcd	3fcd	2,1fcd	1,5fcd	1,2fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	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°
800	797	788	772	750	722	688	649	604	554	499	439	376	310	242	175	111	54	12	2
100%	100%	99%	96%	94%	90%	86%	81%	76%	69%	62%	55%	47%	39%	30%	22%	14%	7%	2%	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°
800	796	787	770	747	719	684	643	598	547	491	431	368	301	234	167	104	50	14	1
100%	100%	98%	96%	93%	90%	85%	80%	75%	68%	61%	54%	46%	38%	29%	21%	13%	6%	2%	0%

**Intensities in 180° c-plane**

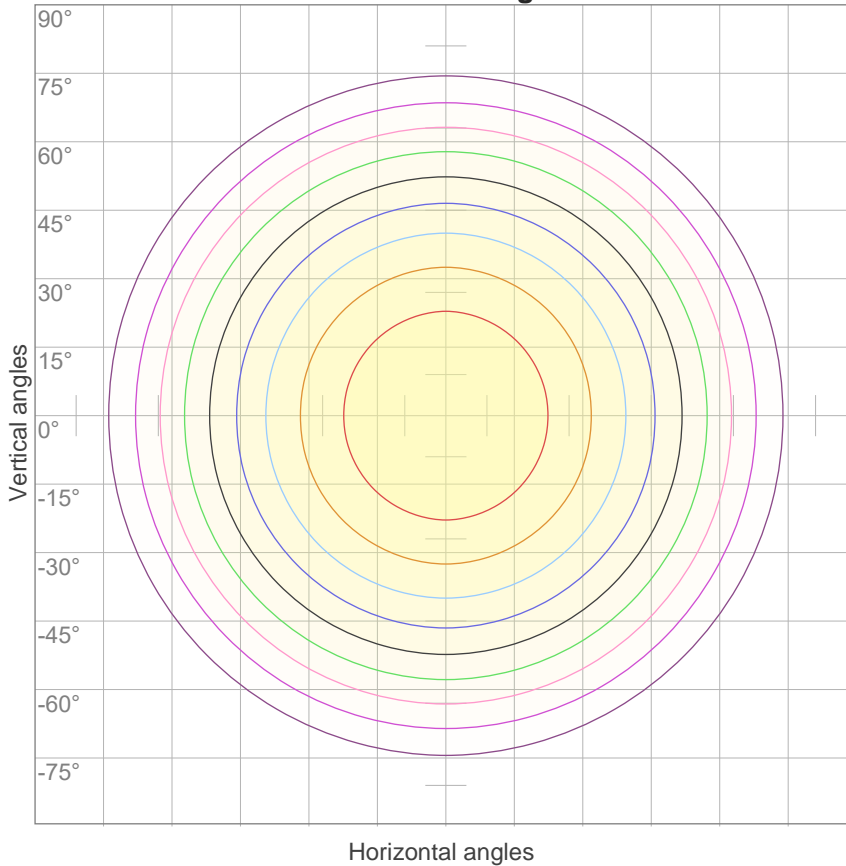
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
800	797	788	772	750	722	688	649	604	554	499	439	376	310	242	175	111	54	12	2
100%	100%	99%	96%	94%	90%	86%	81%	76%	69%	62%	55%	47%	39%	30%	22%	14%	7%	2%	0%

**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°
800	796	787	770	747	719	684	643	598	547	491	431	368	301	234	167	104	50	14	1
100%	100%	98%	96%	93%	90%	85%	80%	75%	68%	61%	54%	46%	38%	29%	21%	13%	6%	2%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>115,6°</b>	<b>164,7°</b>	<b>177,4°</b>	<b>76,9%</b>	<b>51,9%</b>

**iso-candela diagram**



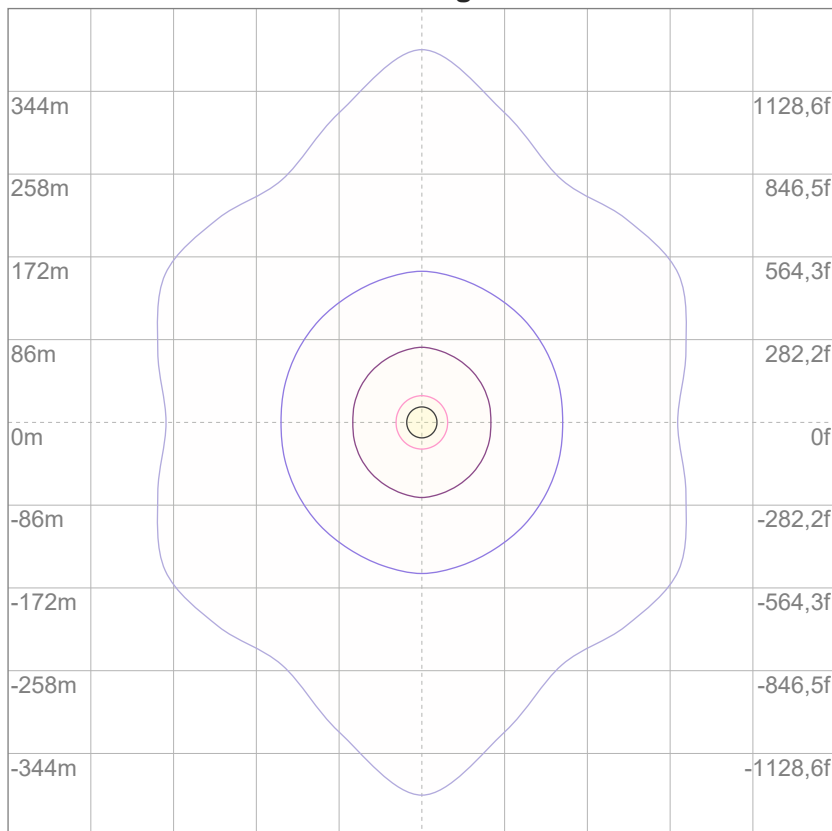
10%	80 cd
20%	160 cd
30%	240 cd
40%	320 cd
50%	400 cd
60%	480 cd
70%	560 cd
80%	640 cd
90%	720 cd

Conditions:

Number of c-planes: 12

Candela at center: 800 cd

**iso-lux diagram**



Mounting height: 10 meters (33 feet)

3%	0,240 lx
5%	0,400 lx
10%	0,800 lx
30%	2,40 lx
50%	4,00 lx

Conditions:

Number of c-planes: 12

Lux at center: 8,00 lx

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

**Glare evaluation according to UGR**

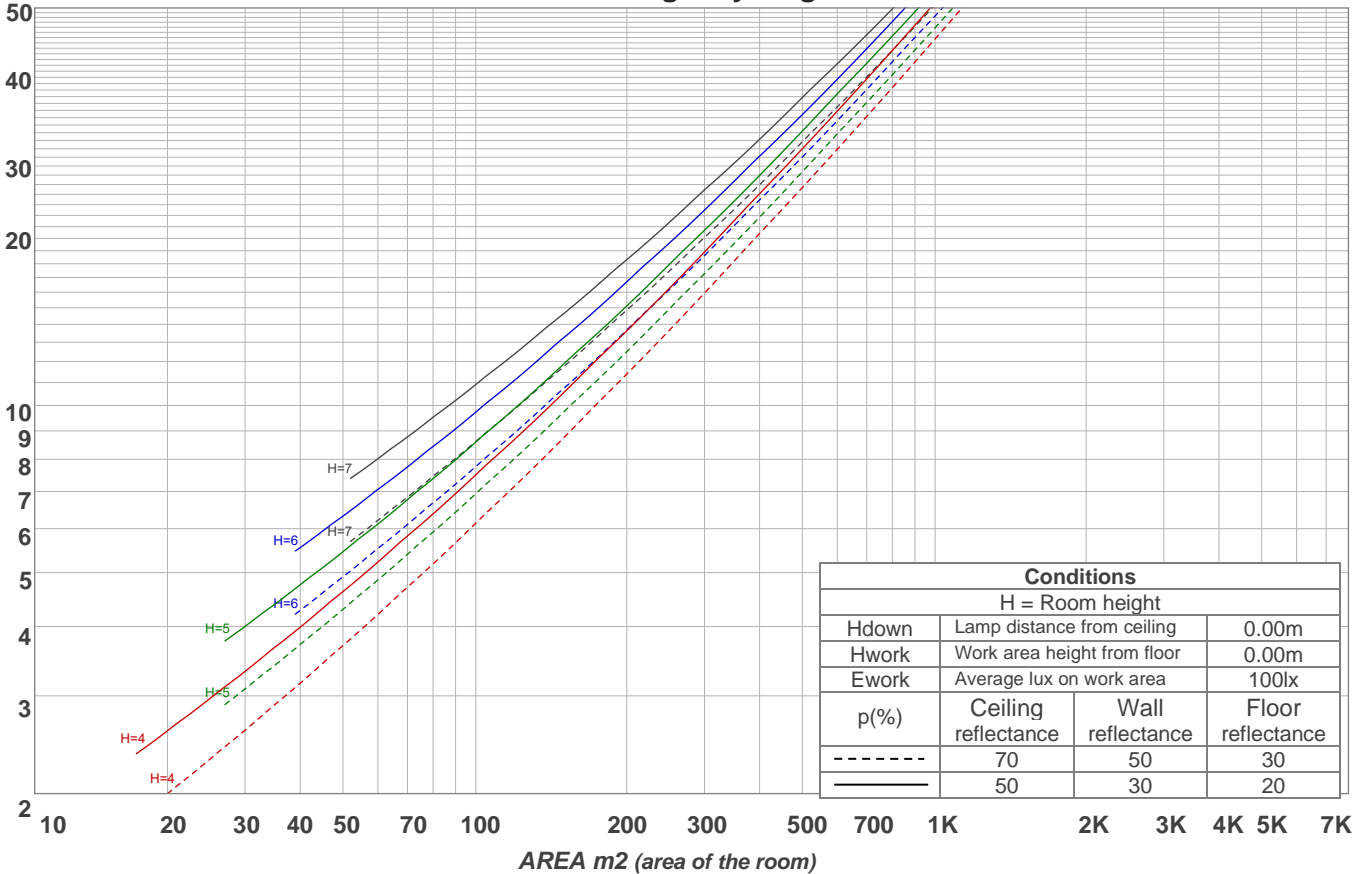
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	18,4	19,7	18,7	20,0	20,2	18,3	19,5	18,5	19,8	20,1
	3H	20,0	21,3	20,4	21,5	21,8	19,7	21,0	20,2	21,3	21,5
	4H	20,7	21,9	21,1	22,2	22,4	20,4	21,6	20,8	21,9	22,2
	6H	21,3	22,3	21,6	22,6	23,0	20,9	22,0	21,2	22,3	22,7
	8H	21,4	22,5	21,8	22,8	23,2	21,1	22,1	21,4	22,4	22,9
12H	21,5	22,6	21,9	22,9	23,4	21,1	22,2	21,5	22,5	23,0	
4H	2H	19,0	20,2	19,4	20,5	20,8	18,9	20,1	19,3	20,4	20,7
	3H	20,9	21,9	21,3	22,2	22,7	20,7	21,7	21,1	22,1	22,5
	4H	21,6	22,6	22,1	23,0	23,5	21,4	22,3	21,8	22,7	23,3
	6H	22,3	23,2	22,8	23,5	23,9	22,0	22,9	22,5	23,2	23,6
	8H	22,5	23,3	23,0	23,7	24,1	22,2	23,0	22,7	23,4	23,7
12H	22,7	23,4	23,2	23,8	24,3	22,3	23,0	22,8	23,4	23,9	
8H	4H	21,9	22,7	22,4	23,1	23,5	21,7	22,5	22,2	22,9	23,3
	6H	22,7	23,3	23,2	23,8	24,4	22,4	23,1	22,9	23,5	24,1
	8H	23,1	23,6	23,6	24,1	24,8	22,7	23,3	23,3	23,8	24,5
	12H	23,3	23,8	23,9	24,3	24,9	22,9	23,4	23,5	23,9	24,5
12H	4H	21,9	22,6	22,4	23,0	23,5	21,7	22,4	22,2	22,8	23,3
	6H	22,8	23,4	23,3	23,9	24,5	22,5	23,1	23,0	23,6	24,2
	8H	23,2	23,6	23,8	24,1	24,8	22,8	23,3	23,4	23,8	24,4
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 / -0,5					
CIE 117-1995. Corrected glare indices referring to 2397 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	100	
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	82	
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	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	54	79	68	60	53	65	58	52	63	57	52	61	55	51	49	
5	75	62	53	46	73	61	52	46	59	51	45	56	50	45	55	49	44	42	
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	49	43	39	36	
7	64	50	41	35	62	50	41	35	48	40	35	46	40	34	45	39	34	32	
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29	
9	56	42	34	28	54	41	34	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**



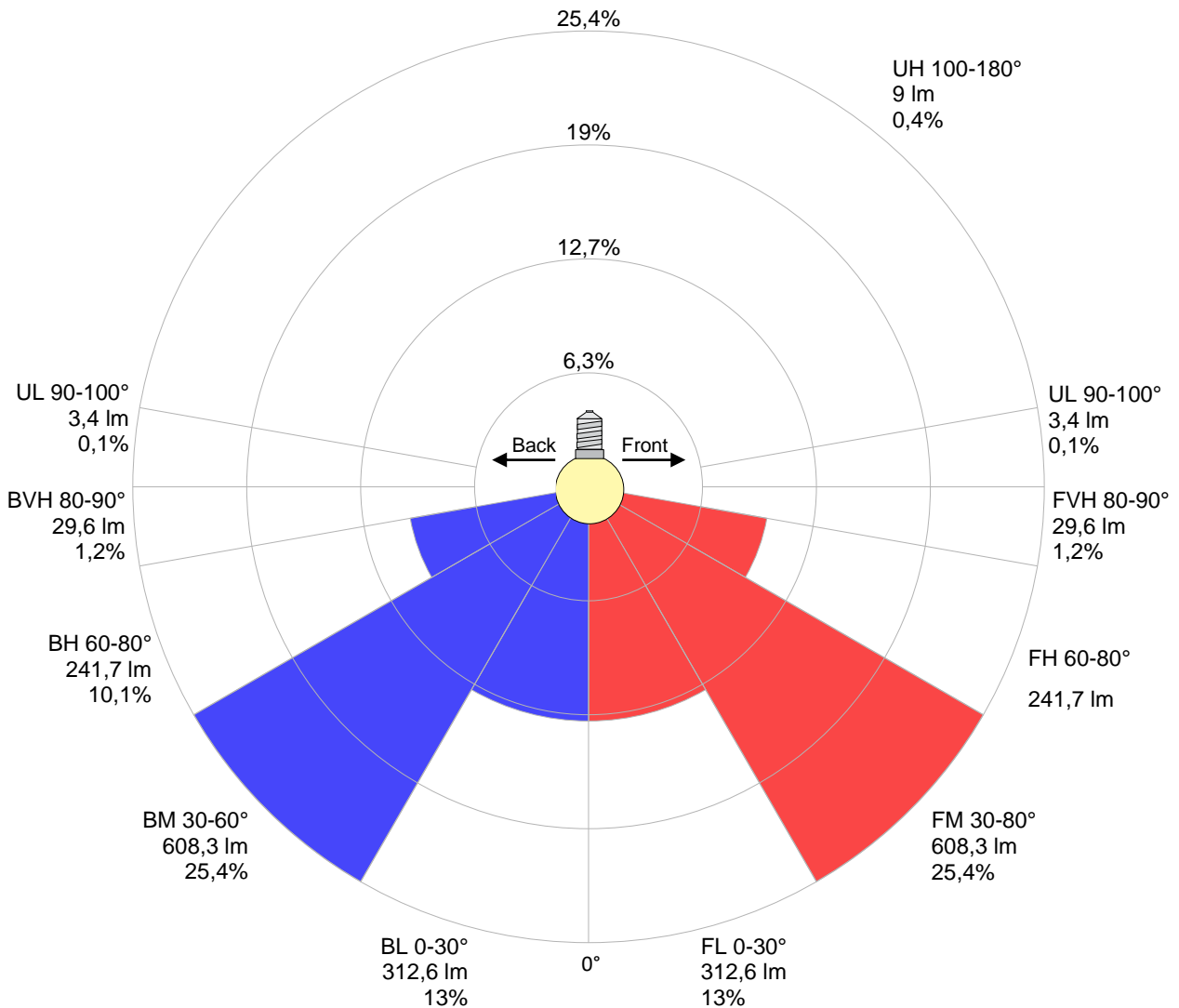
**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	218 lm	332 lm	404 lm	425 lm	389 lm	302 lm	181 lm	58,2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2,68 lm	1,29 lm	1,44 lm	1,49 lm	1,48 lm	1,33 lm	1,03 lm	0,686 lm	0,241 lm

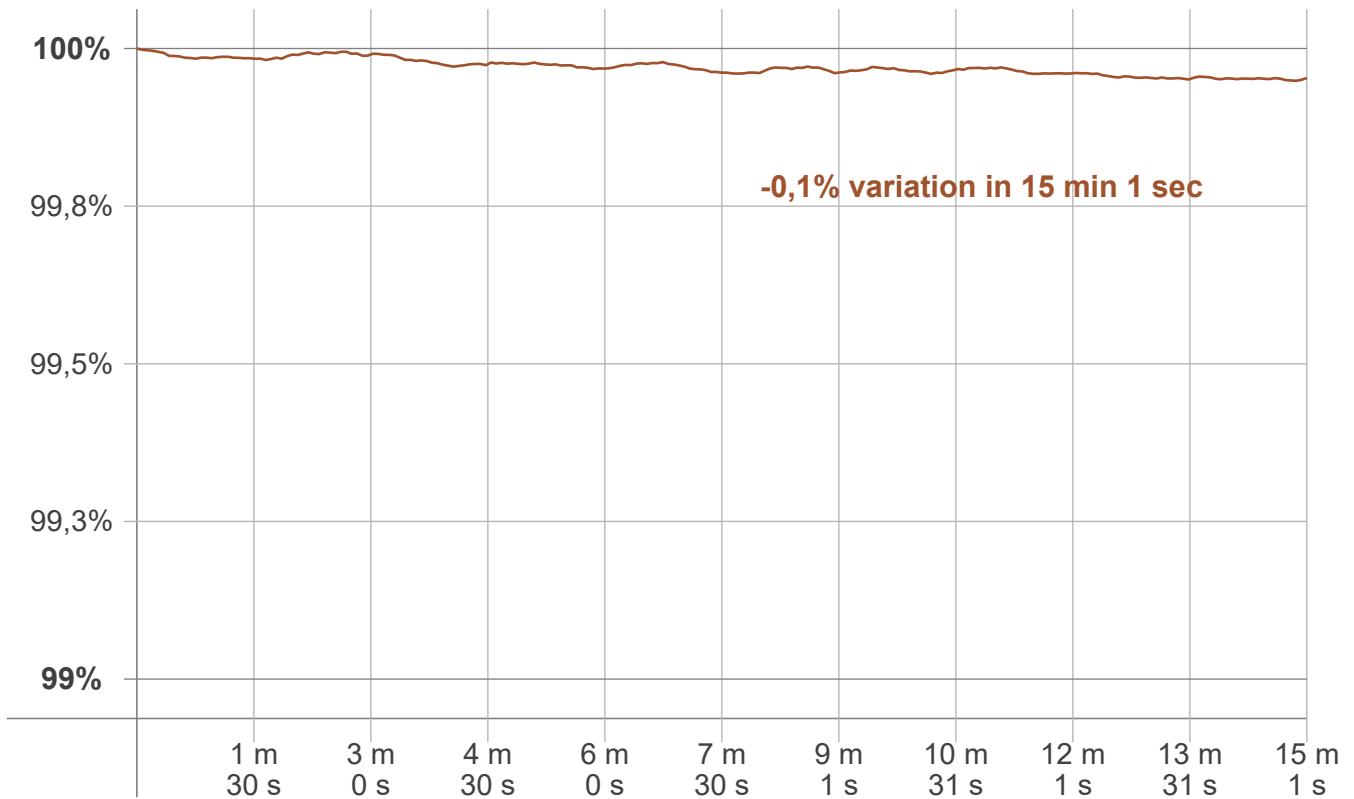
LCS table

BUG rating:	B1 U1 G1	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	312,6	13%
Medium(30-60):	608,3	25,4%
High(60-80):	241,7	10,1%
Very high(80-90):	29,6	1,2%
<b>Back light</b>		
Low(0-30):	312,6	13%
Medium(30-60):	608,3	25,4%
High(60-80):	241,7	10,1%
Very high(80-90):	29,6	1,2%
<b>Uplight</b>		
Low(90-100):	3,4	0,1%
High(100-180):	9	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>
<b>4001 K</b>	<b>-1 K</b>	<b>4000 K</b>

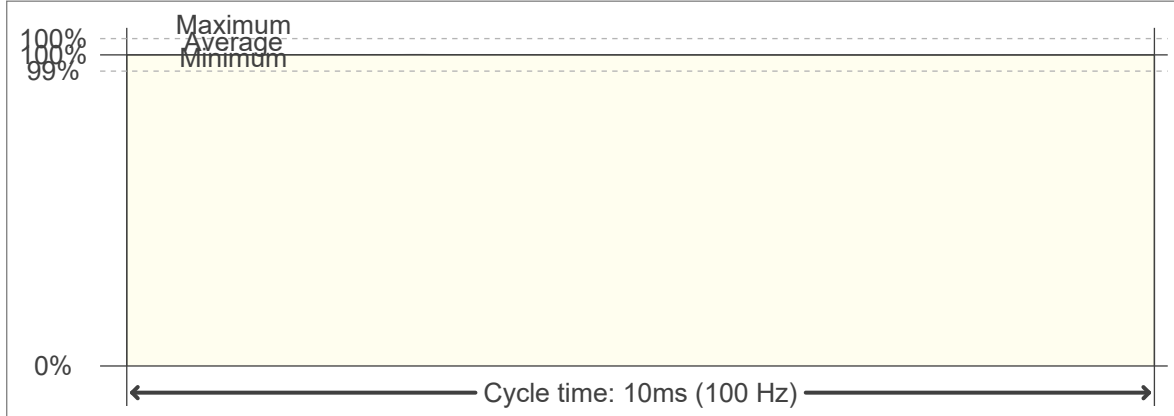
**Output change**

<b>Output start</b>	<b>Output change</b>	<b>Output end</b>
<b>2398 lm</b>	<b>-1 lm</b>	<b>2397 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	JA8/10 40Hz	0,01 %
Flicker percentage:	0,11 %	JA8/10 90Hz	0,02 %
SVM: (Visual flicker)	0	JA8/10 200Hz	0,1 %
PstLM	0,01	JA8/10 400Hz	0,1 %
Mp	0	JA8/10 1000Hz	0,11 %

**Flicker conditions:**

Sample rate:	20000 samples/second
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