

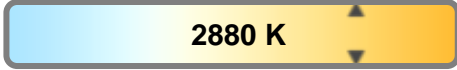
Light efficiency:



Light quality:



Color temperature:

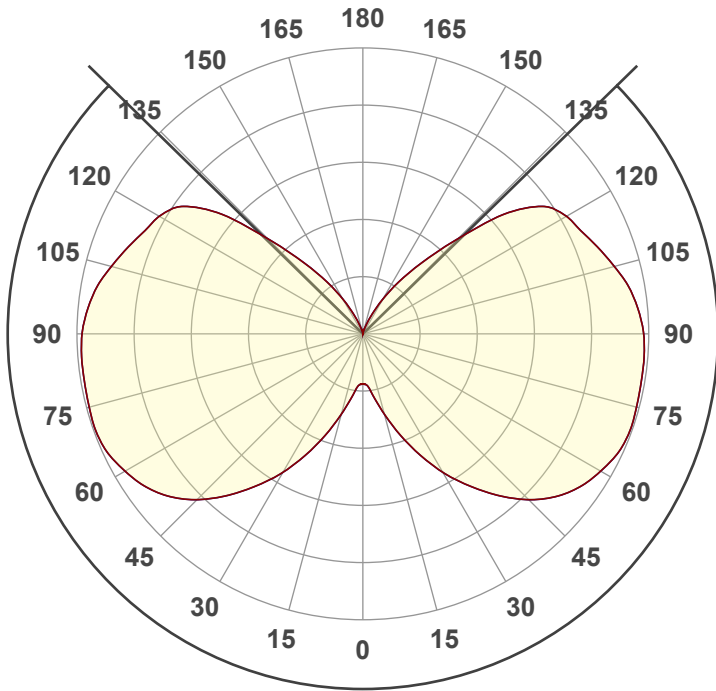


**Output: 1157 lm**

**Peak: 122 cd**

**Power: 11,9 W**

**PF: 0,95**



Tracking number: [VT240913-008243](#)

Product name:  
**272163**

Item number:  
**272163**

Date and time:  
**13-9-2024 09:58:07**

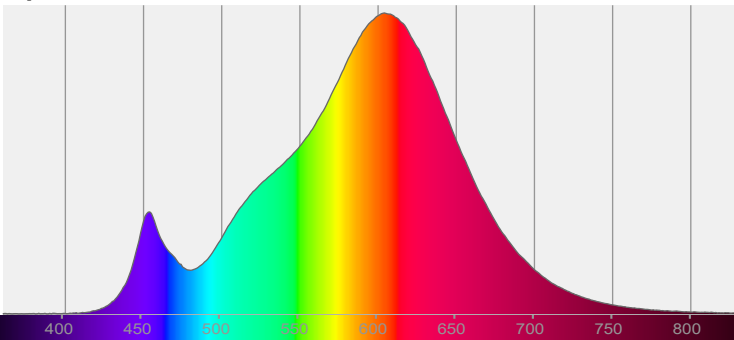
Description:  
**LEDUXA | HANGLAMP | ROUND | 12W**

Beam angle **268,7°**

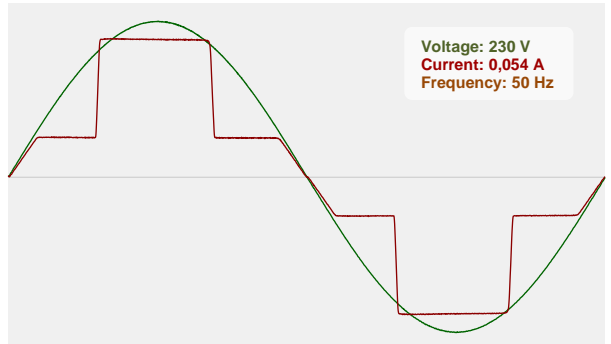


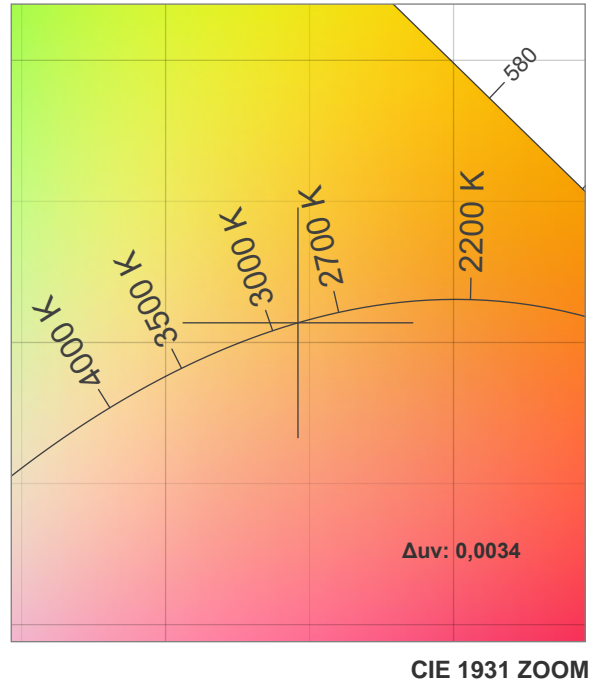
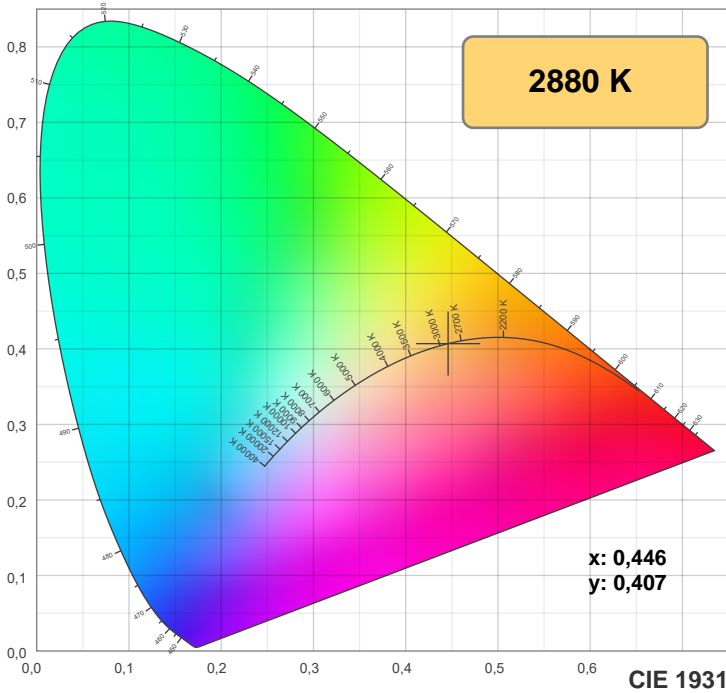
CIE 1931  
x: 0,446  
y: 0,407

Spectra

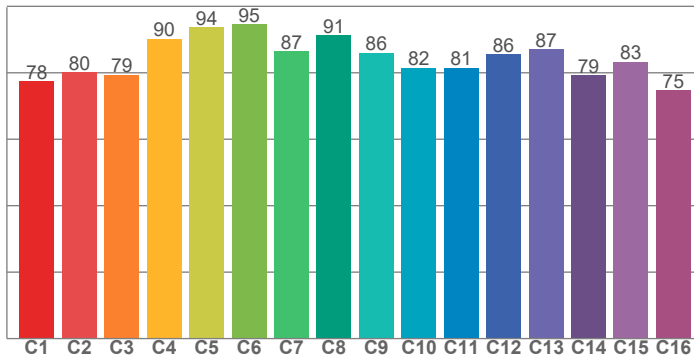


Power

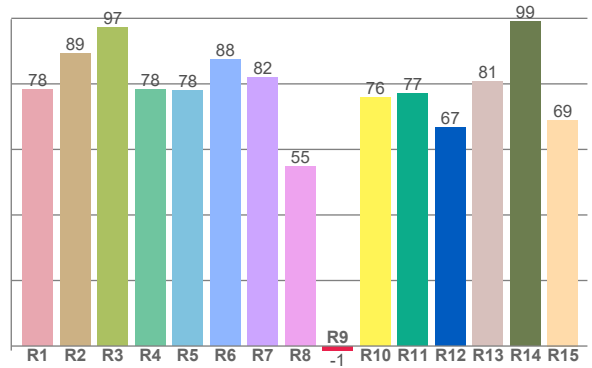




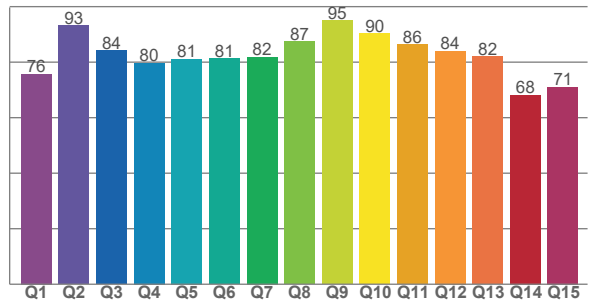
**TM-30: 84,3**



**CRI: 80,7 (R1-R8)**



**CQS: 81,1**



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
78,4	89,3	97,3	78,4	77,9	87,5	82,0	54,8	-1,4	75,9	77,2	66,7	80,8	99,1	69,0

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
77,5	80,2	79,4	90,2	93,6	94,5	86,5	91,2	86,0	81,5	81,5	85,5	87,1	79,2	83,3	74,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
75,7	93,3	84,2	79,7	81,1	81,2	81,9	87,3	95,0	90,2	86,3	84,0	82,0	68,1	71,1

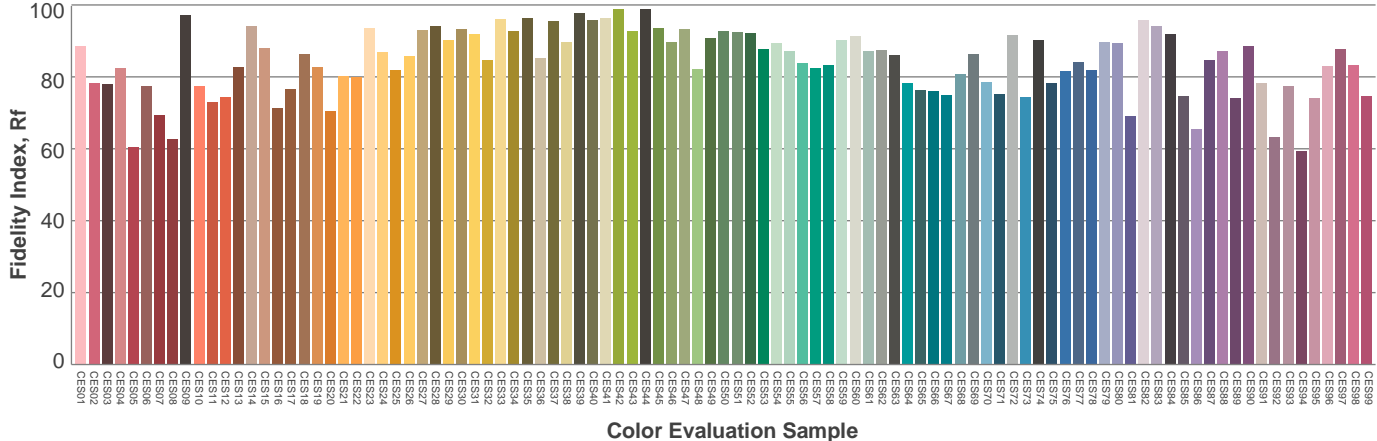
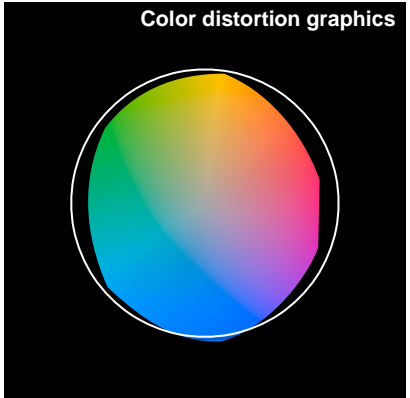
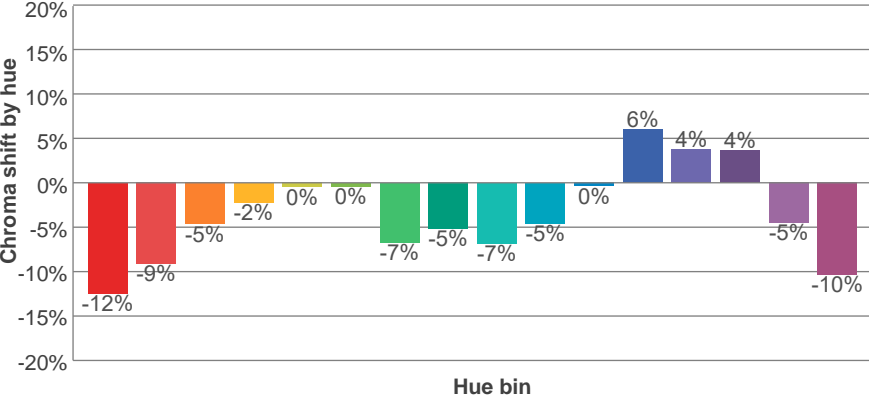
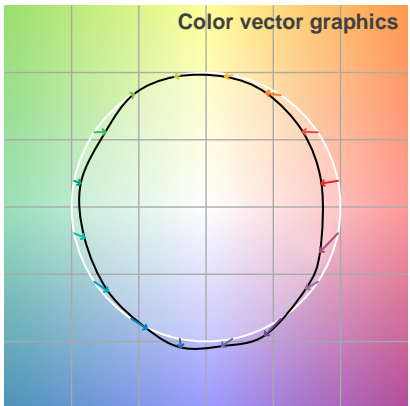
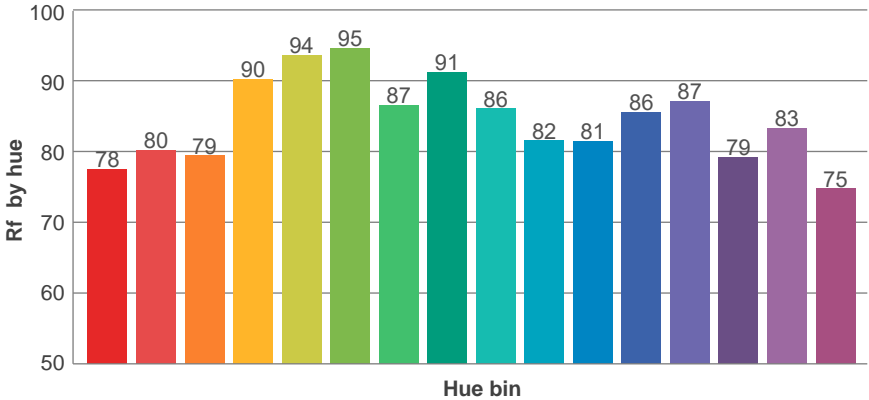
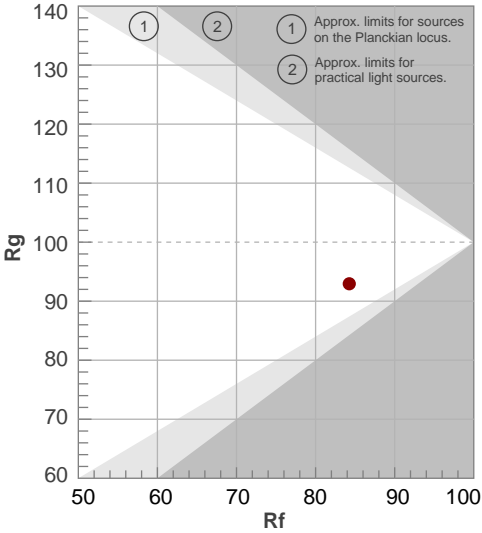
**Color parameters**

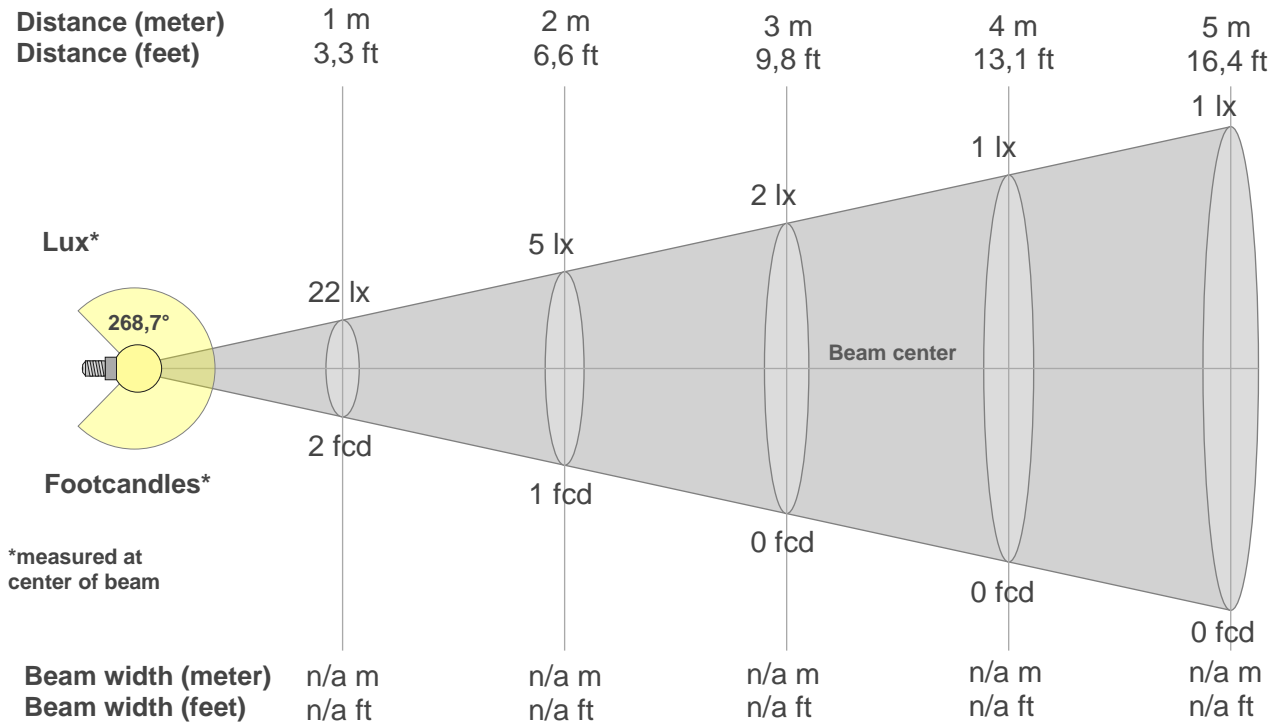
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2880 K	80,7	-1,4	84,3	92,9	81,1	0,446	0,407	0,255	0,349	0,0034

**Rf 84,3**  
Fidelity index Rf

**Rg 92,9**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	78	-12%	0%
2	80	-9%	7%
3	79	-5%	10%
4	90	-2%	5%
5	94	0%	4%
6	95	0%	-2%
7	87	-7%	-5%
8	91	-5%	1%
9	86	-7%	5%
10	82	-5%	11%
11	81	0%	14%
12	86	6%	2%
13	87	4%	-9%
14	79	4%	-17%
15	83	-5%	-9%
16	75	-10%	-16%





**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
22lx	5lx	2lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
2fcd	0,5fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

**Intensities in 0° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
22	27	42	62	82	101	113	120	122	122	121	117	110	103	93	58	30	12	2	0
100%	123%	193%	285%	379%	466%	523%	554%	564%	561%	558%	539%	506%	475%	429%	268%	141%	57%	11%	1%

**Intensities in 90° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
22	27	42	62	82	101	113	120	122	122	121	117	110	103	93	58	30	12	2	0
100%	123%	193%	285%	379%	466%	523%	554%	564%	561%	558%	539%	506%	475%	429%	268%	141%	57%	11%	1%

**Intensities in 180° c-plane**

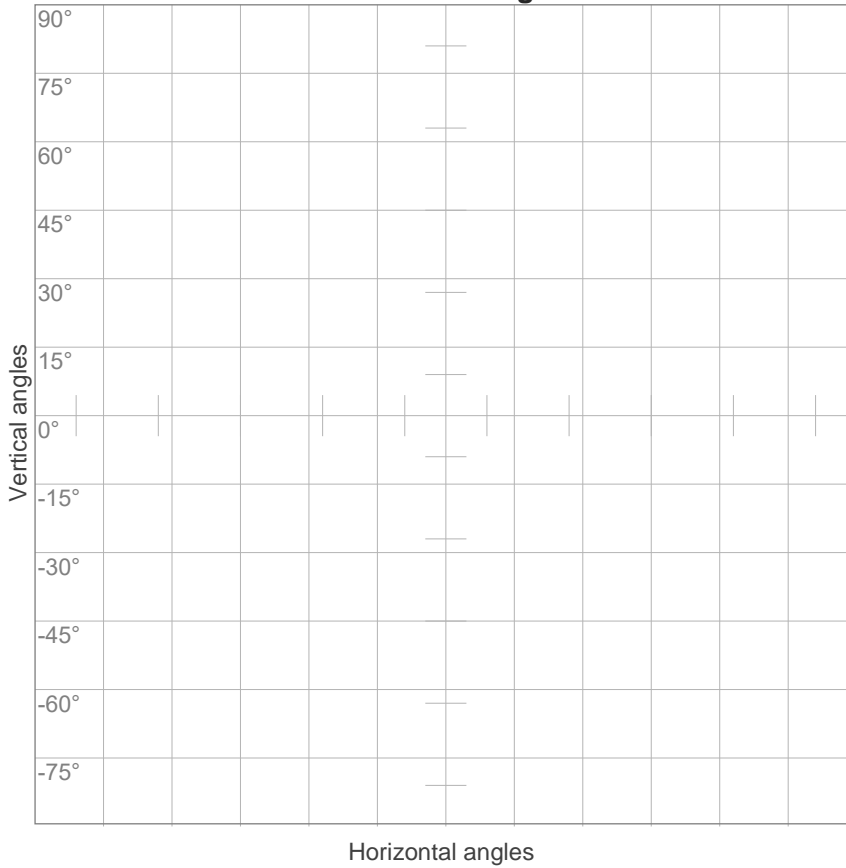
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
22	27	42	62	82	101	113	120	122	122	121	117	110	103	93	58	30	12	2	0
100%	123%	193%	285%	379%	466%	523%	554%	564%	561%	558%	539%	506%	475%	429%	268%	141%	57%	11%	1%

**Intensities in 270° c-plane**

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
22	27	42	62	82	101	113	120	122	122	121	117	110	103	93	58	30	12	2	0
100%	123%	193%	285%	379%	466%	523%	554%	564%	561%	558%	539%	506%	475%	429%	268%	141%	57%	11%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
268,7°	306,1°	322,2°	23,4%	10,9%

**iso-candela diagram**



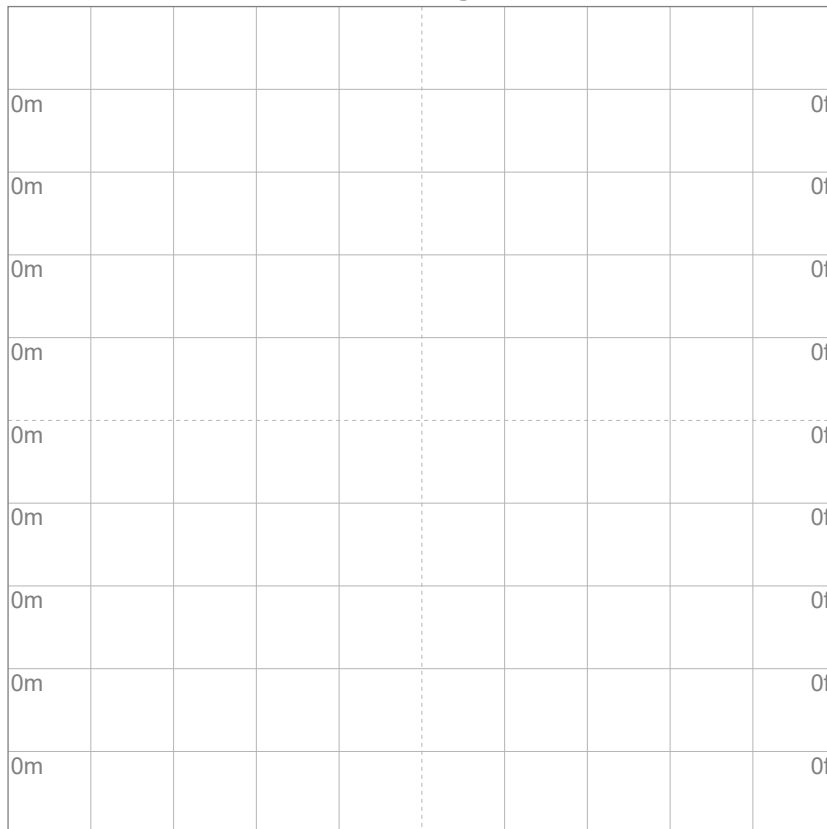
- 10% 2 cd
- 20% 4 cd
- 30% 6 cd
- 40% 9 cd
- 50% 11 cd
- 60% 13 cd
- 70% 15 cd
- 80% 17 cd
- 90% 19 cd

Conditions:

Number of c-planes: 72

Candela at center: 22 cd

**iso-lux diagram**



- 3% 6,49m lx
- 5% 10,8m lx
- 10% 21,6m lx
- 30% 64,9m lx
- 50% 0,108 lx

Conditions:

Number of c-planes: 72

Lux at center: 0,216 lx

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

**Glare evaluation according to UGR**

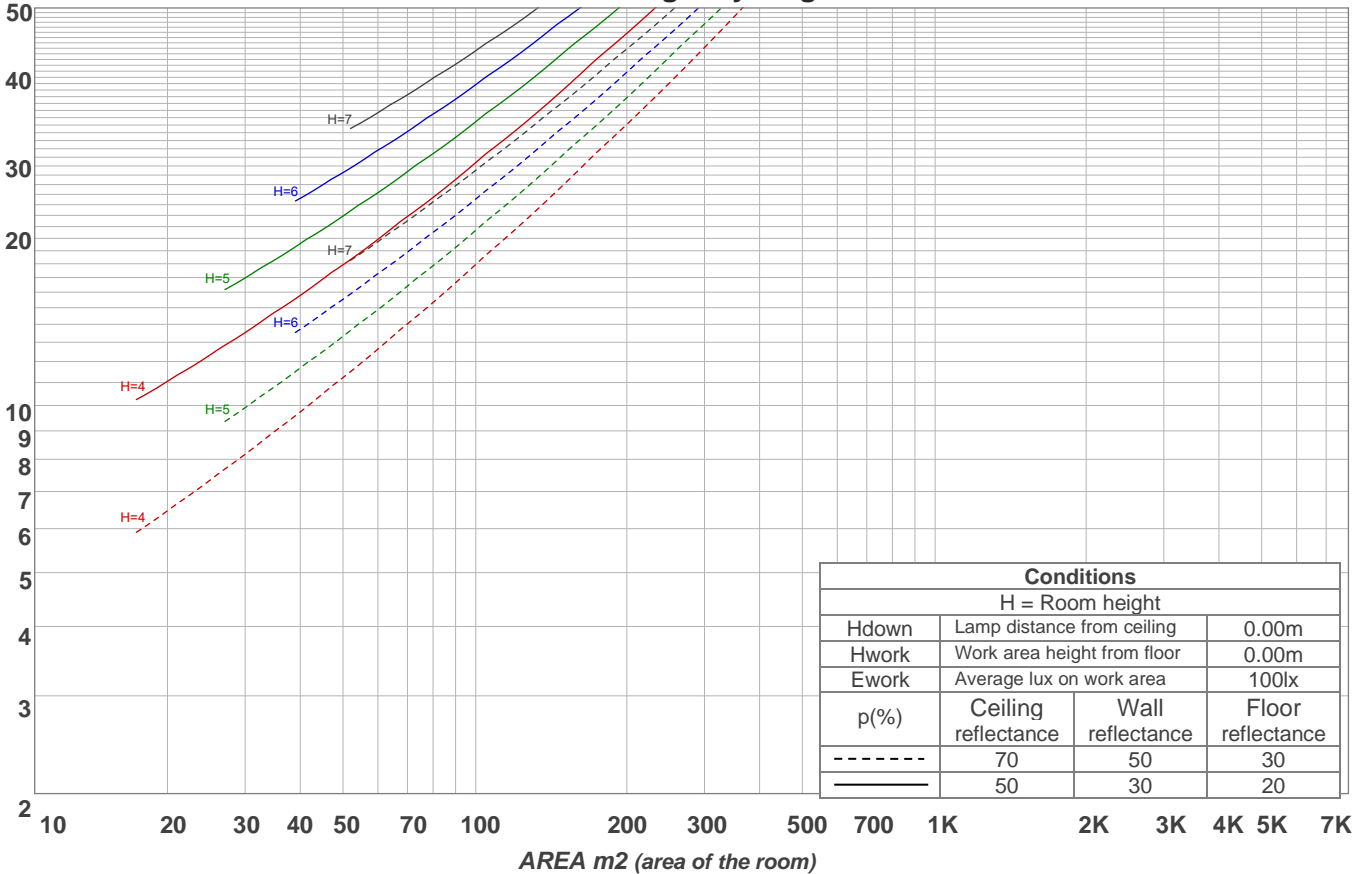
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	20,6	21,7	21,5	22,5	23,6	20,6	21,7	21,5	22,5	23,6
	3H	23,3	24,3	24,2	25,1	26,2	23,3	24,3	24,2	25,1	26,2
	4H	24,6	25,5	25,5	26,4	27,5	24,6	25,5	25,5	26,4	27,5
	6H	25,9	26,7	26,7	27,6	28,7	25,9	26,7	26,7	27,6	28,7
	8H	26,5	27,4	27,4	28,2	29,3	26,5	27,4	27,4	28,2	29,3
12H	27,1	28,1	28,0	28,8	29,9	27,1	28,1	28,0	28,8	29,9	
4H	2H	21,5	22,5	22,4	23,4	24,4	21,5	22,5	22,4	23,4	24,4
	3H	24,4	25,4	25,2	26,1	27,2	24,4	25,4	25,2	26,1	27,2
	4H	25,7	26,9	26,7	27,5	28,6	25,7	26,9	26,7	27,5	28,6
	6H	27,2	27,9	28,1	28,8	29,9	27,2	27,9	28,1	28,8	29,9
	8H	27,9	28,5	28,8	29,4	30,5	27,9	28,5	28,8	29,4	30,5
12H	28,6	29,1	29,5	30,1	31,2	28,6	29,1	29,5	30,1	31,2	
8H	4H	26,3	26,9	27,2	27,9	28,9	26,3	26,9	27,2	27,9	28,9
	6H	28,0	28,4	28,9	29,5	30,6	28,0	28,4	28,9	29,5	30,6
	8H	28,8	29,2	29,7	30,3	31,4	28,8	29,2	29,7	30,3	31,4
	12H	29,6	30,0	30,6	31,0	32,2	29,6	30,0	30,6	31,0	32,2
12H	4H	26,4	26,9	27,3	27,9	29,0	26,4	26,9	27,3	27,9	29,0
	6H	28,1	28,6	29,1	29,6	30,8	28,1	28,6	29,1	29,6	30,8
	8H	29,1	29,5	30,0	30,5	31,6	29,1	29,5	30,0	30,5	31,6
Variation of the observer position for the luminaire distance S											
S = 1.0H	0,1 / 0,0					0,1 / 0,0					
S = 1.5H	0,1 / -0,1					0,1 / -0,1					
S = 2.0H	0,2 / -0,2					0,2 / -0,2					
CIE 117-1995. Corrected glare indices referring to 1157 lm total luminous flux											

**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	20	20	20	0
RCR	(RCR: Room Cavity Ratio)																				
	Room Values are expressed as percentage of Lumens delivered to the task surface																				
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56			
1	93	86	80	75	86	80	74	69	67	63	59	56	53	49	45	43	40	35			
2	83	72	63	56	76	66	59	52	56	49	44	46	41	37	36	33	30	25			
3	74	61	52	44	67	56	48	41	47	40	34	38	33	28	30	26	23	18			
4	67	53	43	35	61	49	40	33	41	33	28	33	27	23	26	21	18	14			
5	61	46	36	29	55	43	34	27	35	28	23	29	23	18	23	18	14	11			
6	55	41	31	24	50	38	29	23	31	24	19	26	20	15	20	15	12	9			
7	51	37	27	21	46	34	25	19	28	21	16	23	17	13	18	13	10	7			
8	47	33	24	18	43	30	22	16	25	19	14	21	15	11	16	12	9	6			
9	44	30	21	15	40	27	20	14	23	17	12	19	13	10	15	11	7	5			
10	41	27	19	14	37	25	18	13	21	15	10	17	12	8	14	9	6	4			

LAMPS (number of lamps)

**Luminaire budgetary diagram**



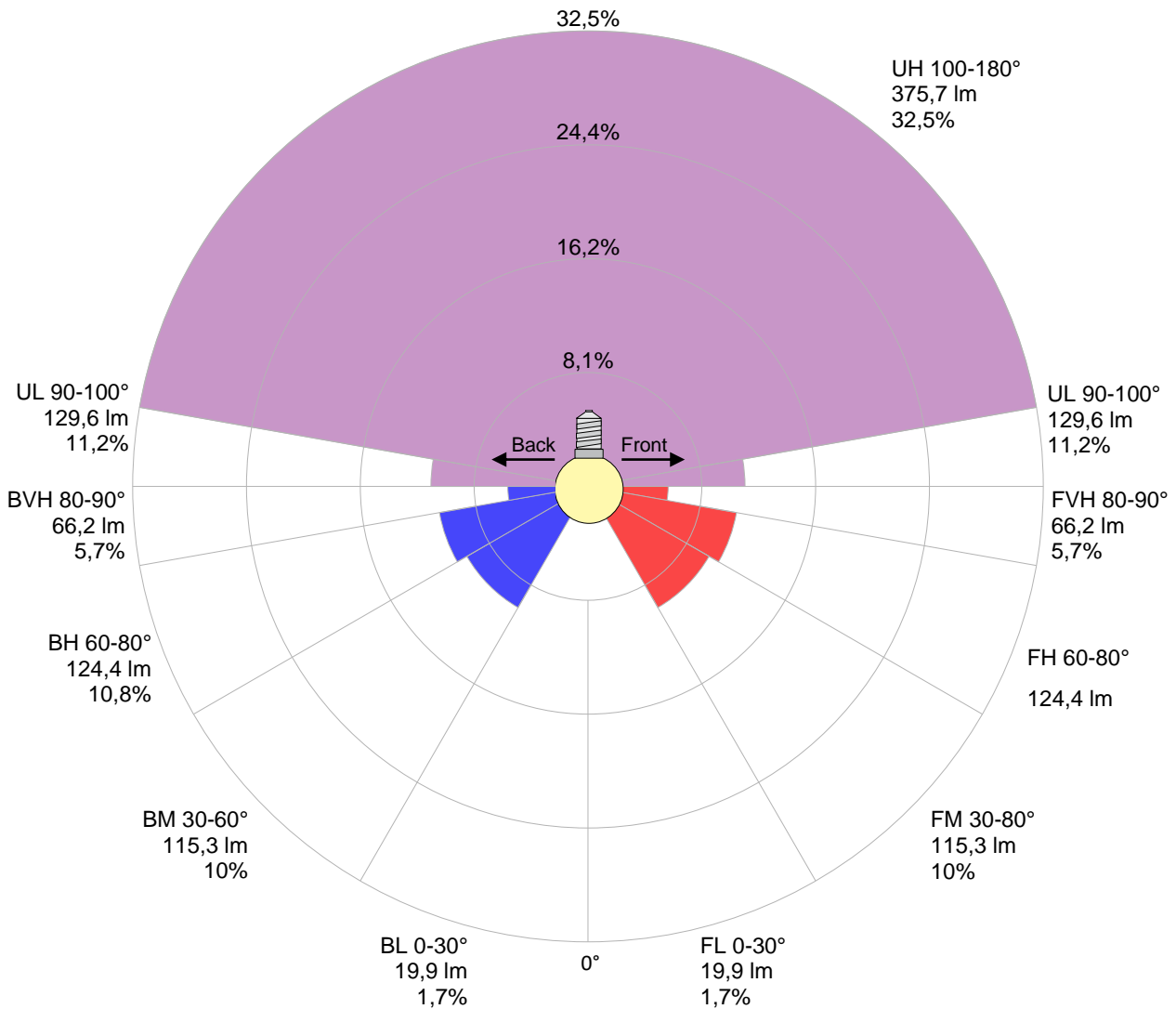
**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	10,6 lm	26,8 lm	50,4 lm	77,9 lm	102 lm	120 lm	129 lm	132 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
130 lm	119 lm	103 lm	83,8 lm	46,5 lm	18,2 lm	4,71 lm	0,438 lm	0,011 lm

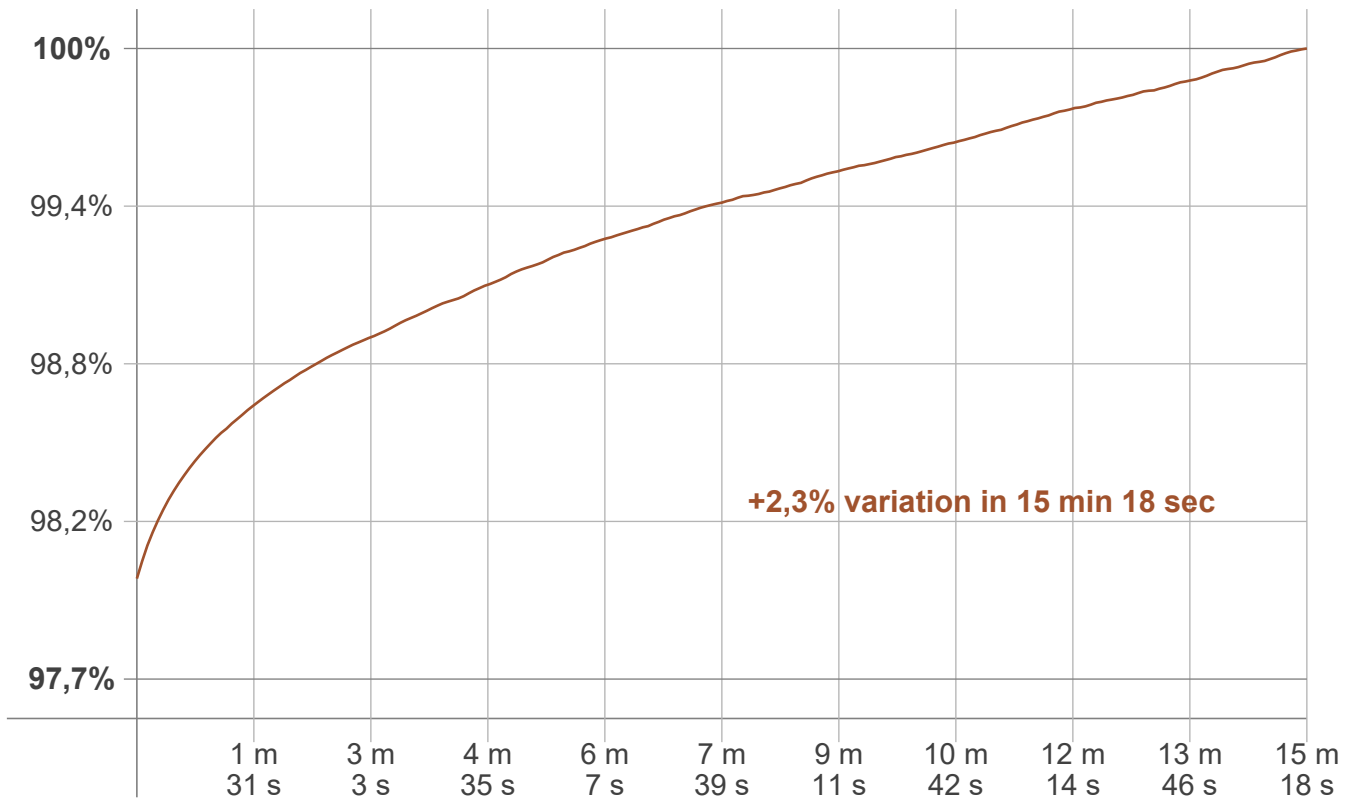
LCS table

BUG rating:	B1 U3 G1	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	19,9	1,7%
Medium(30-60):	115,3	10%
High(60-80):	124,4	10,8%
Very high(80-90):	66,2	5,7%
<b>Back light</b>		
Low(0-30):	19,9	1,7%
Medium(30-60):	115,3	10%
High(60-80):	124,4	10,8%
Very high(80-90):	66,2	5,7%
<b>Uplight</b>		
Low(90-100):	129,6	11,2%
High(100-180):	375,7	32,5%

LCS graph



**Warmup curve**



**Warmup result**

<b>Warmup time:</b>	<b>Lamp stabilized in 15 min 18 sec</b>
<b>Warmup variation</b>	<b>+2,3%</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**

CCT start	CCT change	CCT end
2885 K	-5 K	2880 K

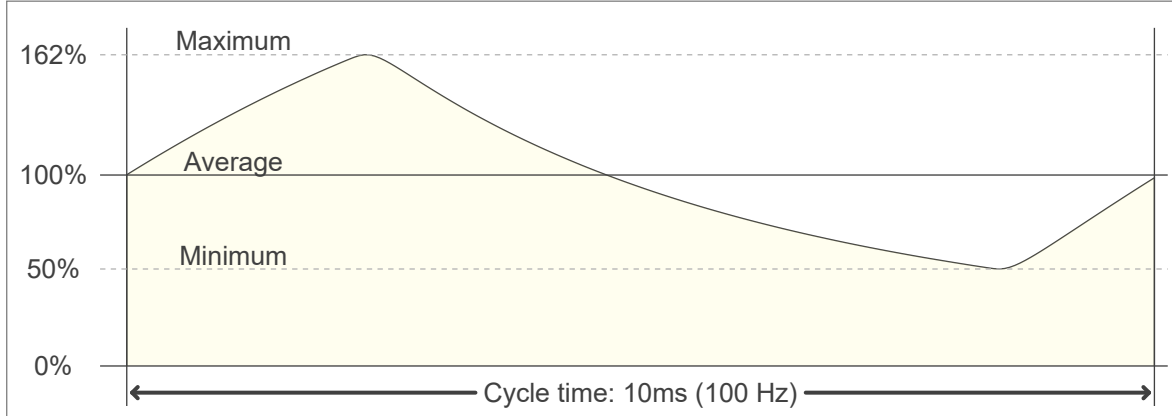
**Output change**

Output start	Output change	Output end
1132 lm	+25 lm	1157 lm

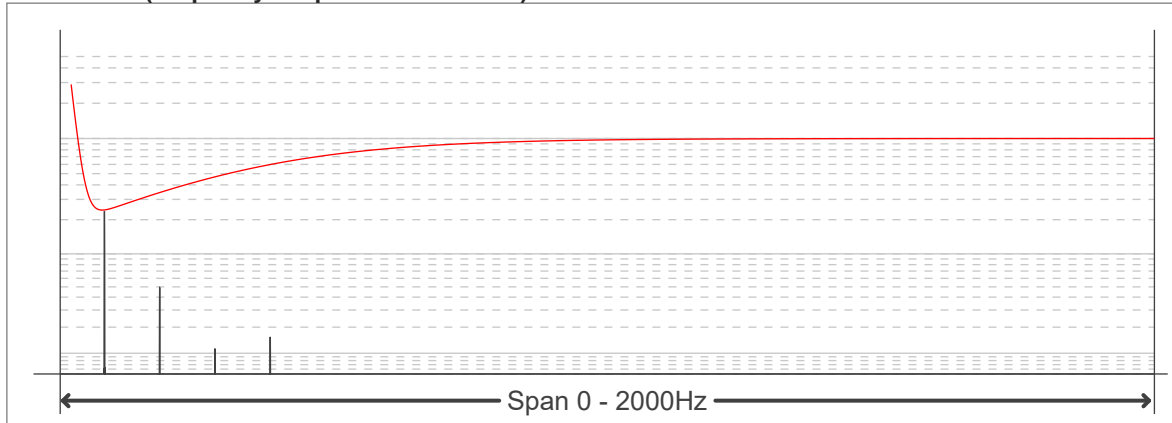
**Flicker curve (complete sampled flicker signal)**



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



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



**Flicker results:**

Flicker frequency:		100 Hz	
Flicker index:	0,15	JA8/10 40Hz	0,06 %
Flicker percentage:	52,51 %	JA8/10 90Hz	0,4 %
SVM: (Visual flicker)	1,85	JA8/10 200Hz	46,83 %
PstLM	0,04	JA8/10 400Hz	50,19 %
Mp	0,01	JA8/10 1000Hz	52,03 %

**Flicker conditions:**

Sample rate:	20000 samples/second
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