

Light efficiency:



Light quality:



Color temperature:

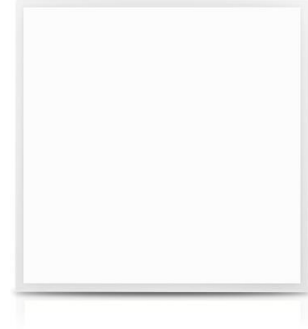


Output: 4601 lm

Peak: 1548 cd

Power: 31,7 W

PF: 0,96



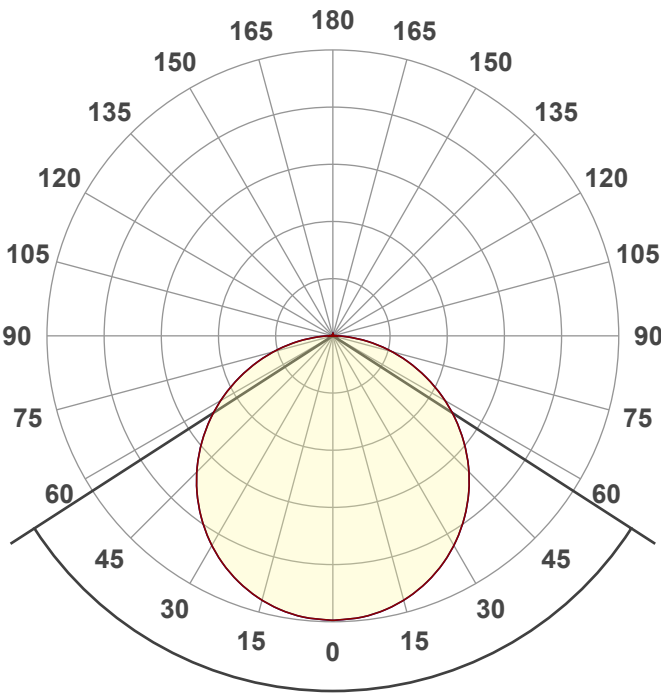
Tracking number: [VT240927-008144](#)

Product name:
272613-4000K

Item number:
272613-4000K

Date and time:
27-9-2024 16:27:06

Description:
**SIDE-LIT LED PANEL | PANDIA |
60X60CM | 34W**

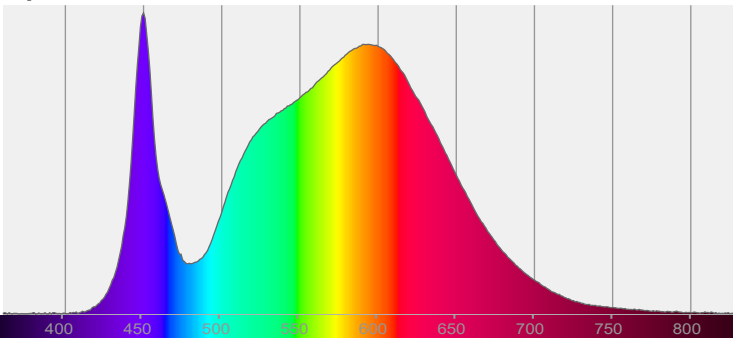


Beam angle **114,4°**

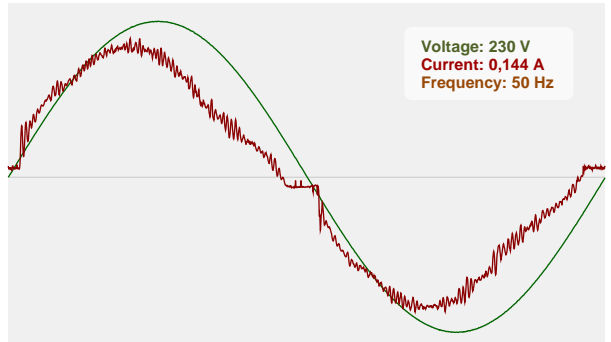


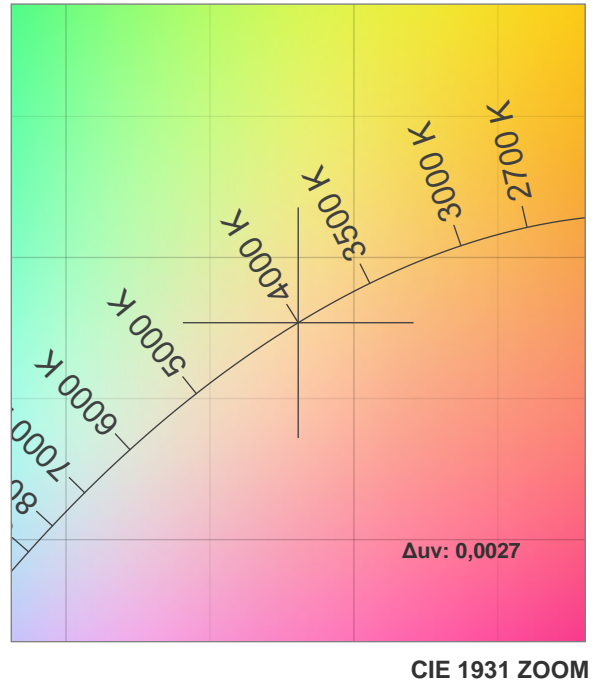
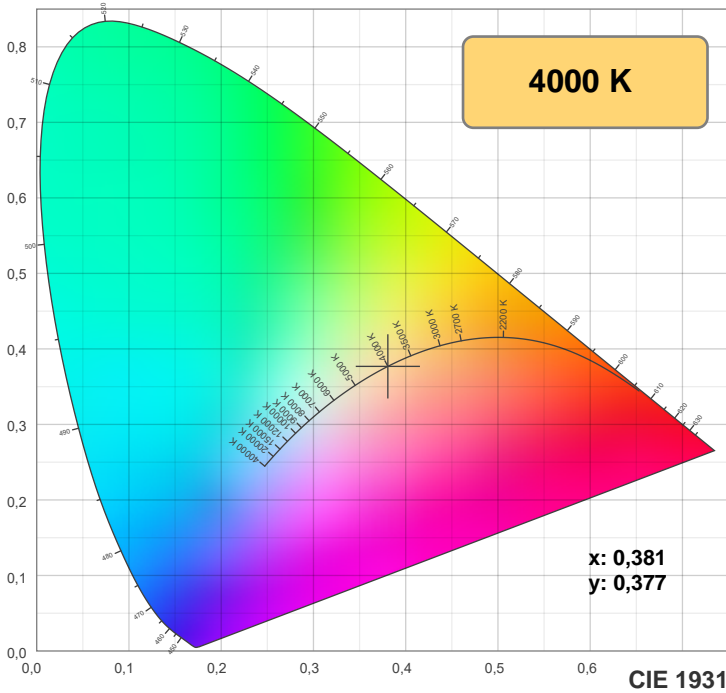
CIE 1931
x: 0,381
y: 0,377

Spectra



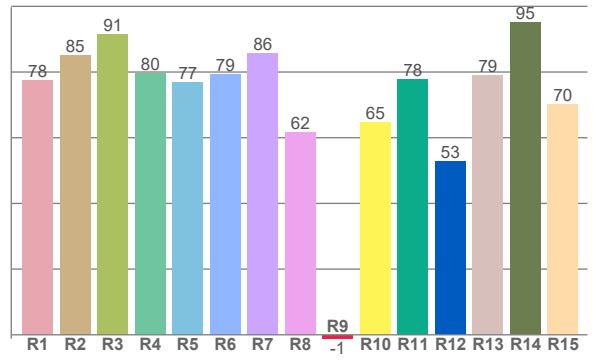
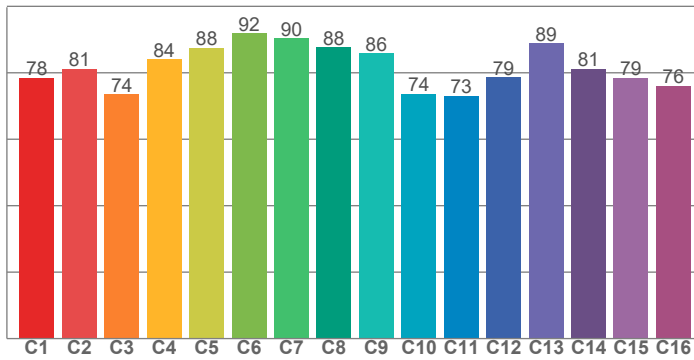
Power





TM-30: 81,6

CRI: 79,7 (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
77,6	85,1	91,4	79,7	77,0	79,4	85,6	61,6	-1,2	64,7	77,9	52,7	79,1	95,1	70,2

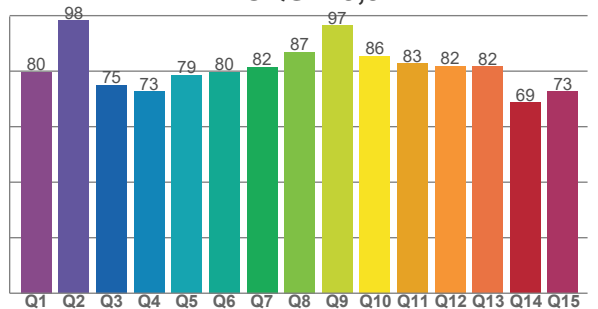
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,4	81,1	73,6	84,0	87,5	91,8	90,3	87,7	85,9	73,7	73,1	78,6	88,8	81,2	78,5	76,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79,7	98,2	74,9	72,7	78,5	79,7	81,5	86,9	96,5	85,5	82,8	81,9	81,7	68,7	72,7

CQS: 79,9



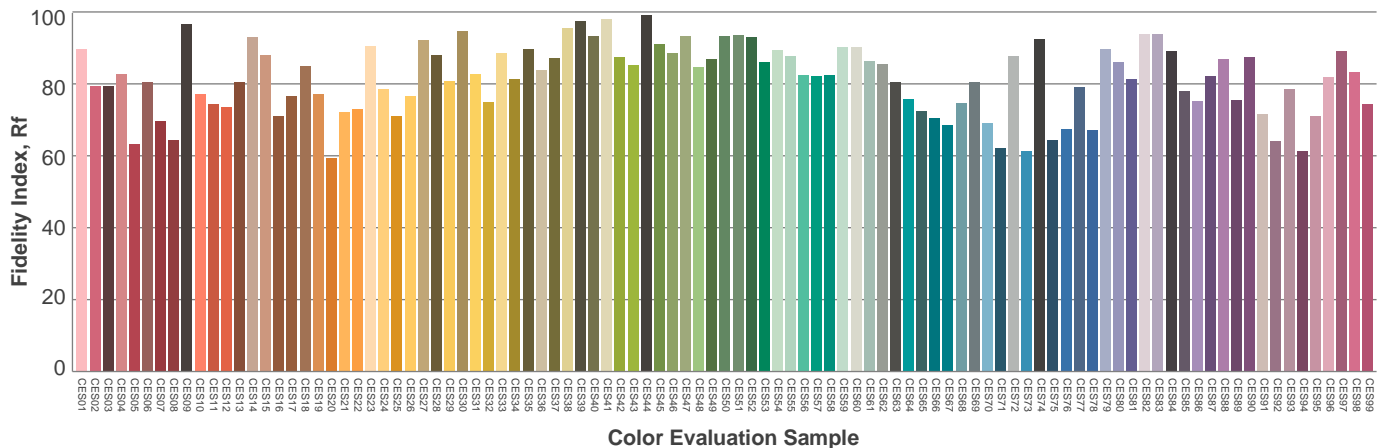
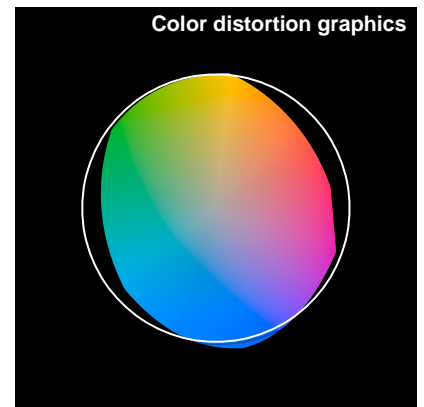
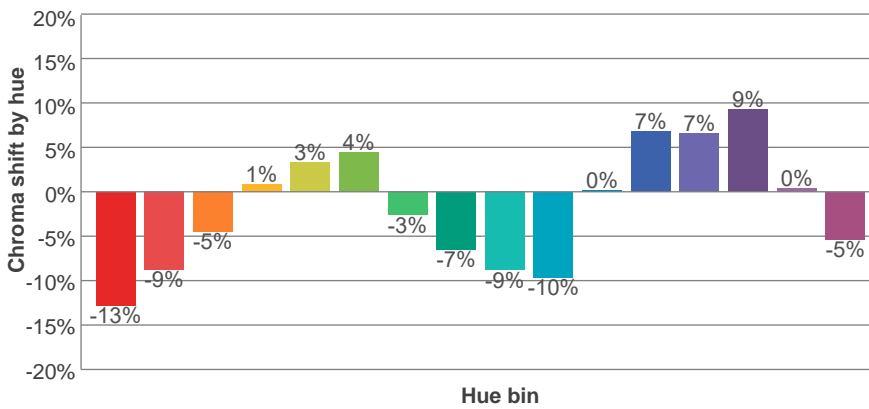
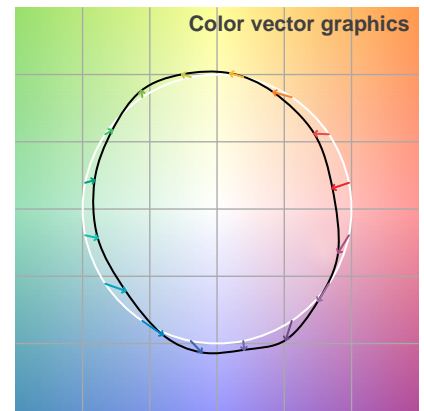
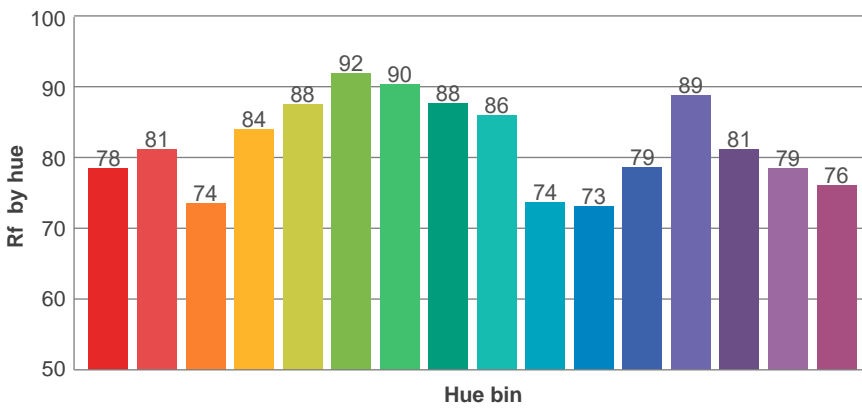
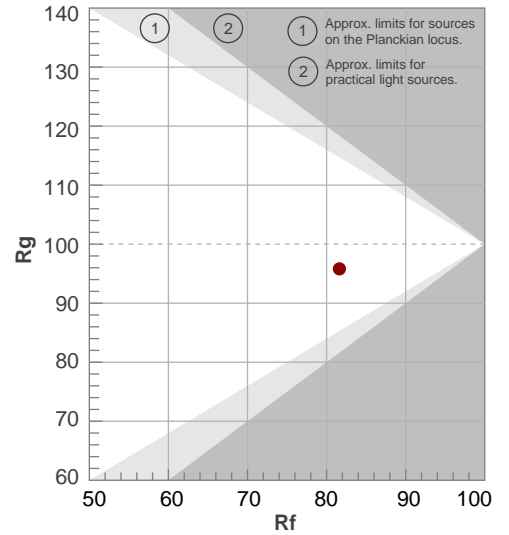
Color parameters

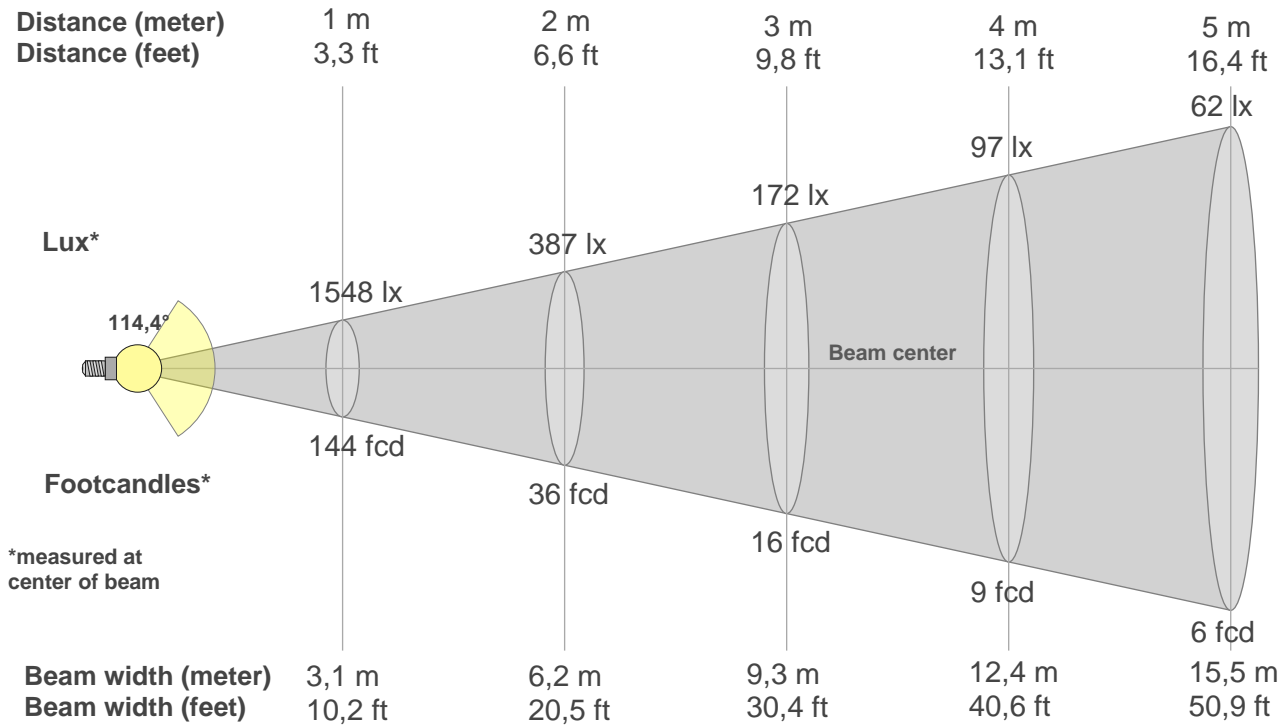
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color divition from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4000 K	79,7	-1,2	81,6	95,8	79,9	0,381	0,377	0,225	0,334	0,0027

Rf 81,6
Fidelity index Rf

Rg 95,8
Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	78	-13%	-2%
2	81	-9%	6%
3	74	-5%	13%
4	84	1%	10%
5	88	3%	6%
6	92	4%	-2%
7	90	-3%	-6%
8	88	-7%	-3%
9	86	-9%	4%
10	74	-10%	13%
11	73	0%	19%
12	79	7%	10%
13	89	7%	-1%
14	81	9%	-12%
15	79	0%	-15%
16	76	-5%	-14%





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
1548lx	387lx	172lx	97lx	62lx	43lx	32lx	24lx	19lx	15lx	13lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx
143,8fcd	36fcd	16fcd	9fcd	5,8fcd	4fcd	2,9fcd	2,2fcd	1,8fcd	1,4fcd	1,2fcd	1fcd	0,9fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,4fcd

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°
1548	1542	1523	1490	1444	1387	1317	1237	1147	1048	940	826	706	582	457	334	214	102	25	4
100%	100%	98%	96%	93%	90%	85%	80%	74%	68%	61%	53%	46%	38%	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°
1548	1542	1523	1490	1444	1387	1317	1237	1147	1048	940	826	706	582	457	334	214	102	25	4
100%	100%	98%	96%	93%	90%	85%	80%	74%	68%	61%	53%	46%	38%	30%	22%	14%	7%	2%	0%

Intensities in 180° c-plane

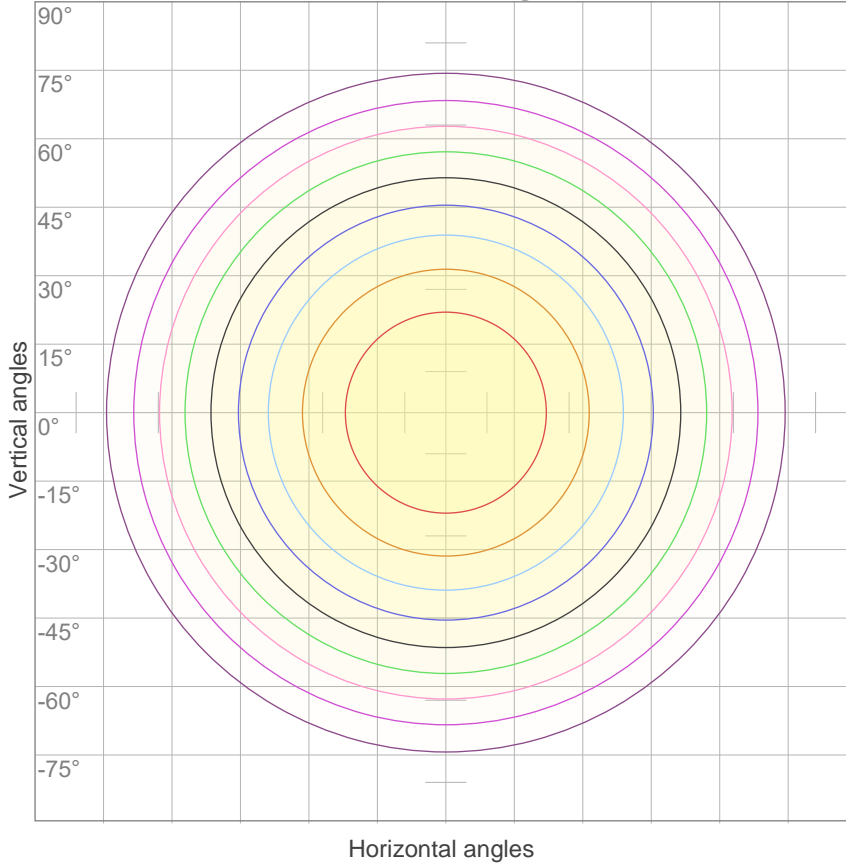
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1548	1542	1523	1490	1444	1387	1317	1237	1147	1048	940	826	706	582	457	334	214	102	25	4
100%	100%	98%	96%	93%	90%	85%	80%	74%	68%	61%	53%	46%	38%	30%	22%	14%	7%	2%	0%

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°
1548	1542	1523	1490	1444	1387	1317	1237	1147	1048	940	826	706	582	457	334	214	102	25	4
100%	100%	98%	96%	93%	90%	85%	80%	74%	68%	61%	53%	46%	38%	30%	22%	14%	7%	2%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
114,4°	165,2°	178,1°	76,6%	51,9%

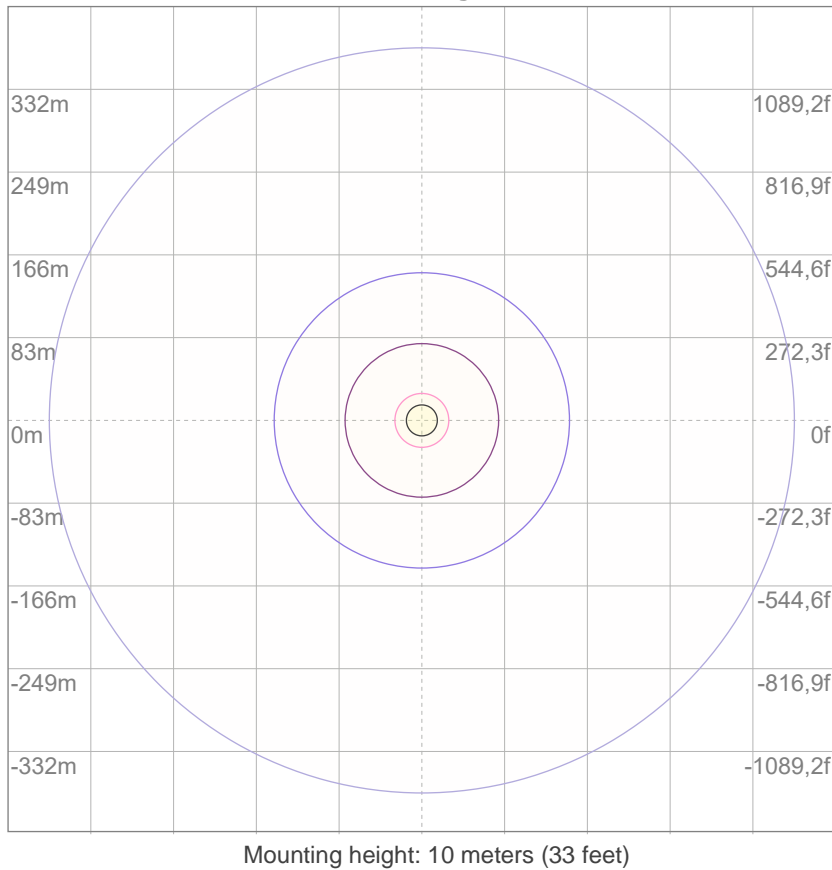
iso-candela diagram



10%	155 cd
20%	310 cd
30%	464 cd
40%	619 cd
50%	774 cd
60%	929 cd
70%	1084 cd
80%	1238 cd
90%	1393 cd

Conditions:
 Number of c-planes: 12
 Candela at center: 1548 cd

iso-lux diagram



3%	0,464 lx
5%	0,774 lx
10%	1,55 lx
30%	4,64 lx
50%	7,74 lx

Conditions:
 Number of c-planes: 12
 Lux at center: 15,5 lx

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

Glare evaluation according to UGR

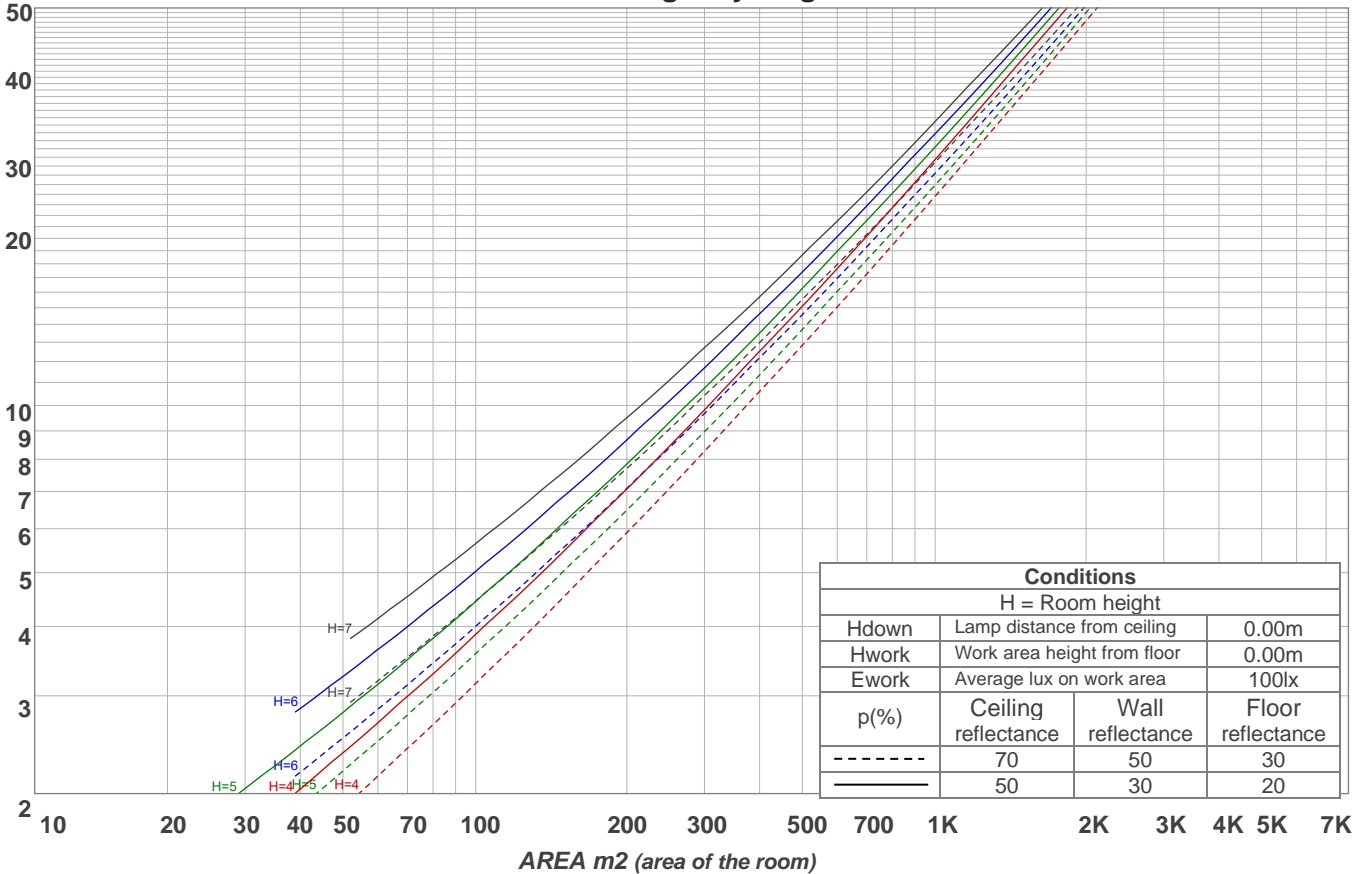
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	17,9	19,1	18,1	19,5	19,7	17,9	19,1	18,1	19,5	19,7
	3H	19,4	20,7	19,9	21,0	21,2	19,4	20,7	19,9	21,0	21,2
	4H	20,1	21,4	20,6	21,7	21,9	20,1	21,4	20,6	21,7	21,9
	6H	20,8	21,8	21,1	22,1	22,5	20,8	21,8	21,1	22,1	22,5
	8H	20,9	22,0	21,3	22,3	22,7	20,9	22,0	21,3	22,3	22,7
	12H	21,0	22,1	21,4	22,4	22,9	21,0	22,1	21,4	22,4	22,9
4H	2H	18,5	19,7	18,9	20,0	20,3	18,5	19,7	18,9	20,0	20,3
	3H	20,4	21,4	20,8	21,8	22,2	20,4	21,4	20,8	21,8	22,2
	4H	21,1	22,1	21,6	22,5	23,1	21,1	22,1	21,6	22,5	23,1
	6H	21,8	22,7	22,3	23,1	23,5	21,8	22,7	22,3	23,1	23,5
	8H	22,1	22,9	22,6	23,2	23,6	22,1	22,9	22,6	23,2	23,6
	12H	22,2	22,9	22,7	23,3	23,8	22,2	22,9	22,7	23,3	23,8
8H	4H	21,5	22,3	22,0	22,7	23,1	21,5	22,3	22,0	22,7	23,1
	6H	22,3	22,9	22,8	23,4	24,0	22,3	22,9	22,8	23,4	24,0
	8H	22,7	23,2	23,2	23,7	24,4	22,7	23,2	23,2	23,7	24,4
	12H	22,9	23,4	23,5	23,9	24,5	22,9	23,4	23,5	23,9	24,5
12H	4H	21,5	22,2	22,0	22,6	23,1	21,5	22,2	22,0	22,6	23,1
	6H	22,4	22,9	22,9	23,5	24,1	22,4	22,9	22,9	23,5	24,1
	8H	22,8	23,2	23,4	23,8	24,4	22,8	23,2	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	0,3 / -0,4					0,3 / -0,4					
CIE 117-1995. Corrected glare indices referring to 4601 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99			
1	108	103	99	95	105	101	97	93	96	93	90	92	90	87	89	86	84	82			
2	98	90	83	77	95	88	81	76	84	78	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	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	42	34	28	40	33	28	39	33	28	38	32	28	26			
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23			

LAMPS (number of lamps)

Luminaire budgetary diagram



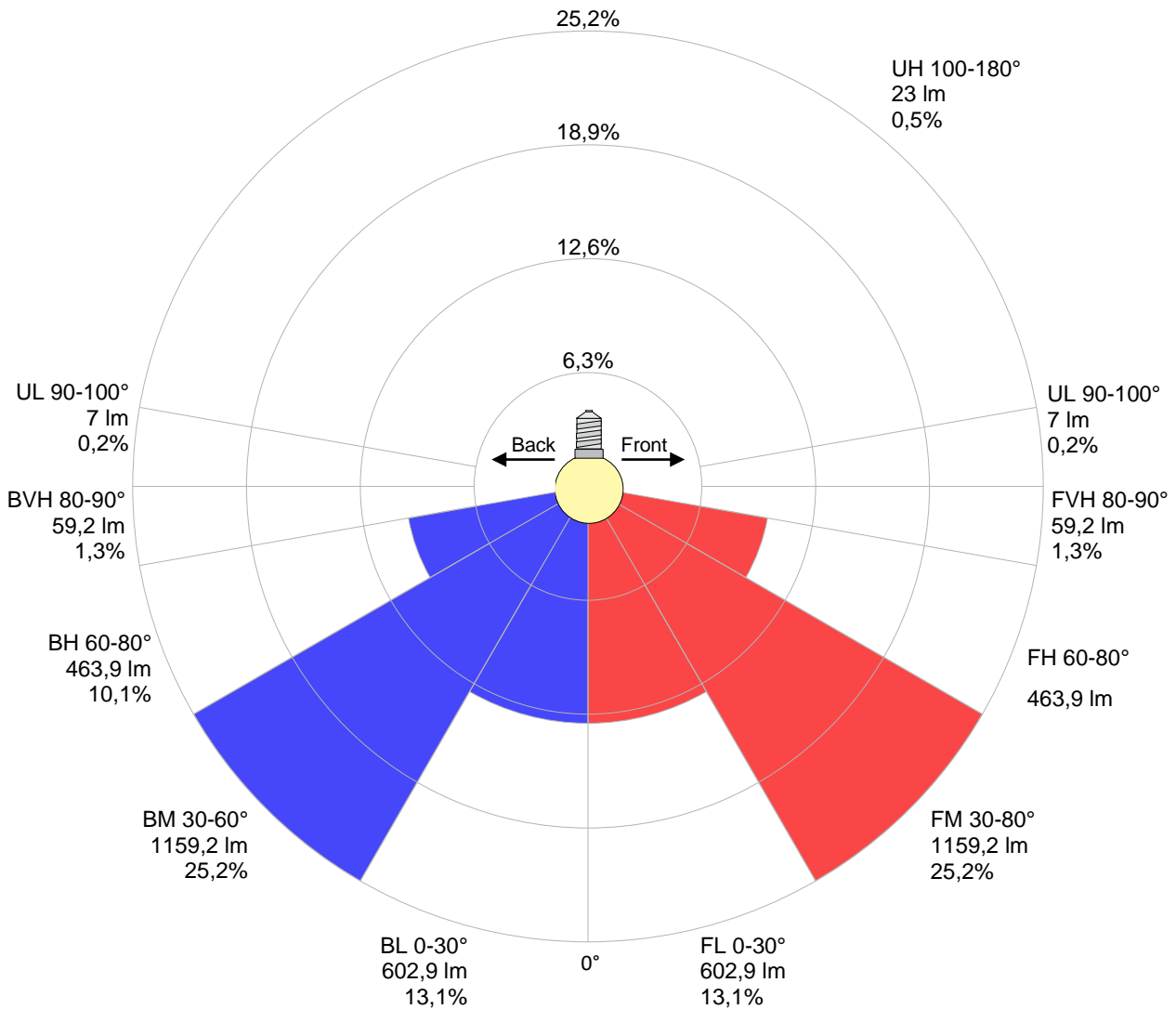
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	420 lm	639 lm	774 lm	808 lm	738 lm	576 lm	352 lm	118 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
6,31 lm	3,14 lm	3,65 lm	3,87 lm	3,79 lm	3,41 lm	2,69 lm	1,82 lm	0,612 lm

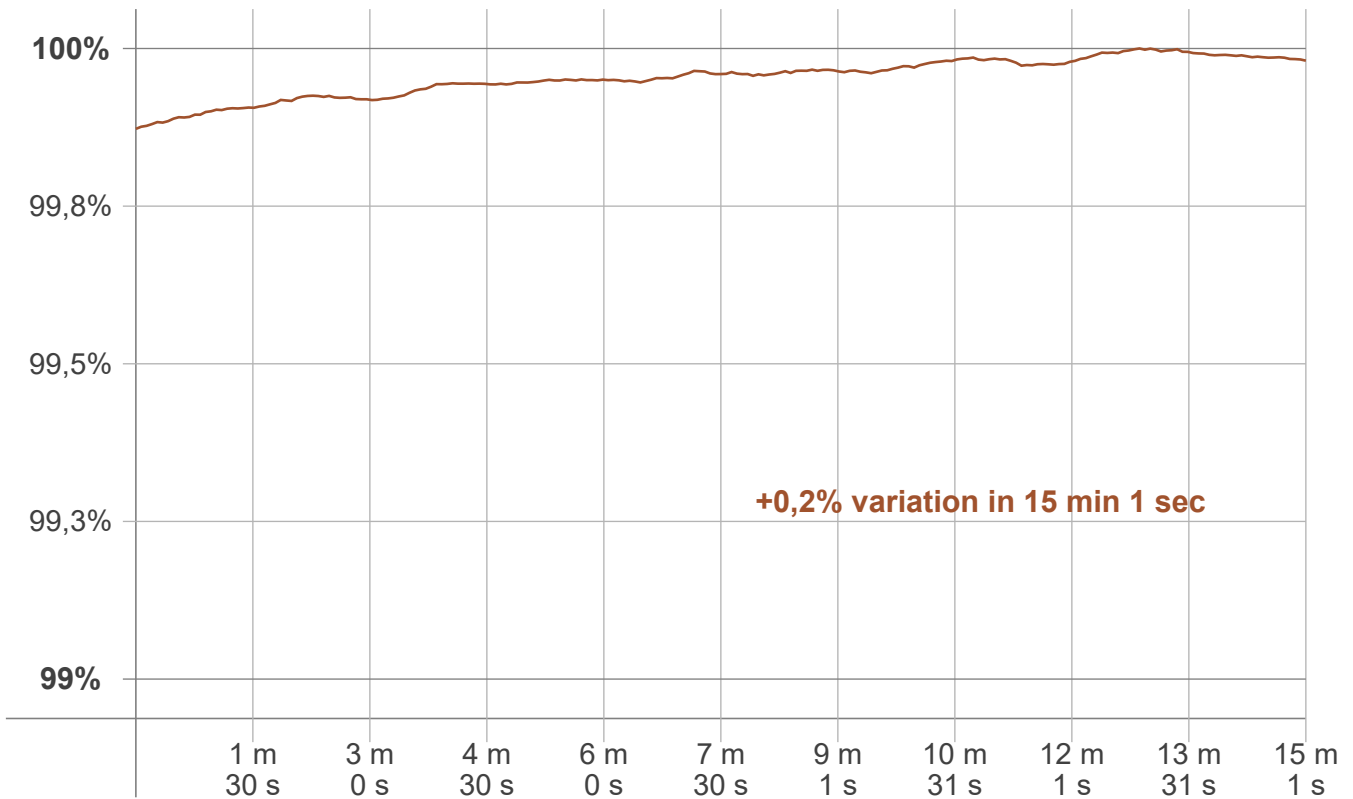
LCS table

BUG rating:	B2 U2 G1	
Forward light	Lumens	Lumens %
Low(0-30):	602,9	13,1%
Medium(30-60):	1159,2	25,2%
High(60-80):	463,9	10,1%
Very high(80-90):	59,2	1,3%
Back light		
Low(0-30):	602,9	13,1%
Medium(30-60):	1159,2	25,2%
High(60-80):	463,9	10,1%
Very high(80-90):	59,2	1,3%
Uplight		
Low(90-100):	7	0,2%
High(100-180):	23	0,5%

LCS graph



Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 15 min 1 sec
Warmup variation	+0,2%

Warmup conditions

Stable period:	15 min
Stable change max:	2,0%
Minimum time:	15 min

Color temperature change

CCT start	CCT change	CCT end
4000 K	0 K	4000 K

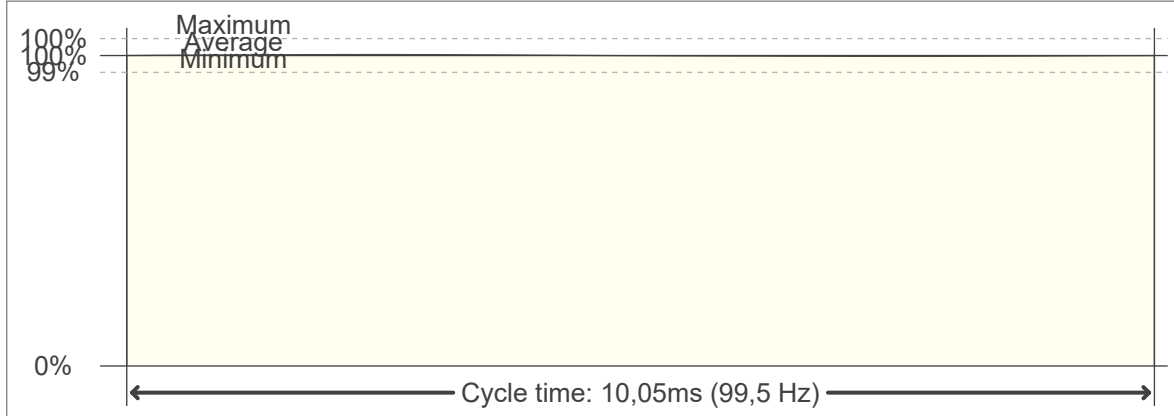
Output change

Output start	Output change	Output end
4595 lm	+6 lm	4601 lm

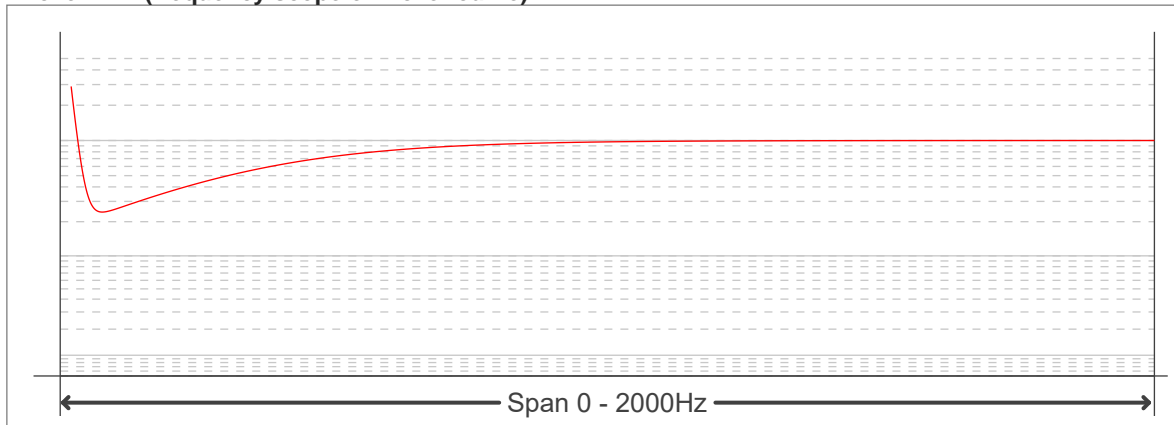
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		99,5 Hz	
Flicker index:	0	JA8/10 40Hz	0,02 %
Flicker percentage:	0,31 %	JA8/10 90Hz	0,02 %
SVM: (Visual flicker)	0,01	JA8/10 200Hz	0,3 %
PstLM	0,01	JA8/10 400Hz	0,31 %
Mp	0,01	JA8/10 1000Hz	0,31 %

Flicker conditions:

Sample rate:	20000 samples/second
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