

Light efficiency:



Light quality:



Color temperature:



Output: 3531 lm

Peak: 1558 cd

Power: 29,9 W

PF: 0,97



Tracking number: [VT241003-000996](#)

Product name:

PB-H12030-5000K

Item number:

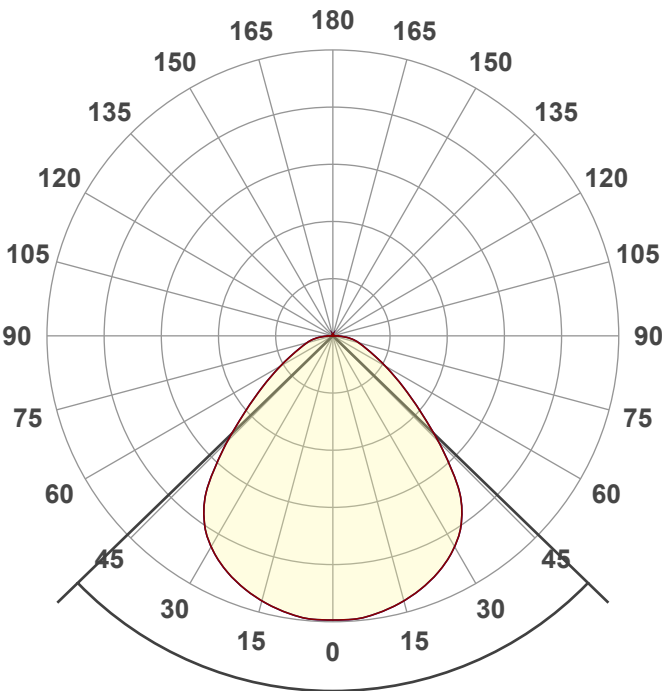
PB-H12030-5000K

Date and time:

3-10-2024 17:00:28

Description:

**BACK-LIT LED PANEEL | EUROPA |
120x30CM | 30W**

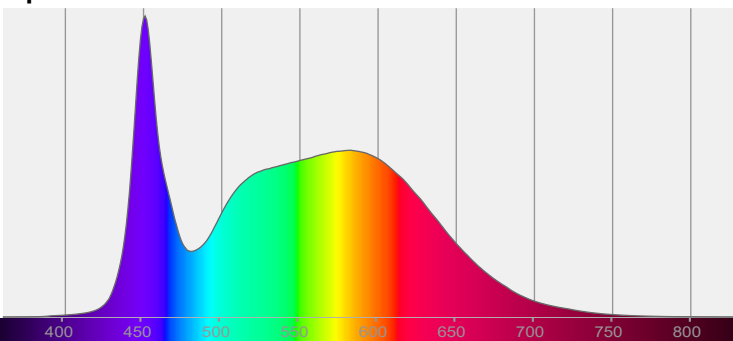


Beam angle **91,8°**

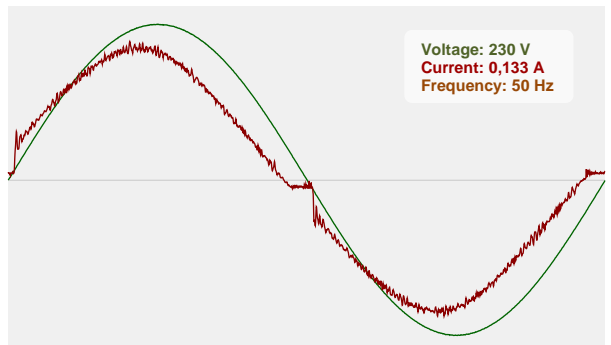


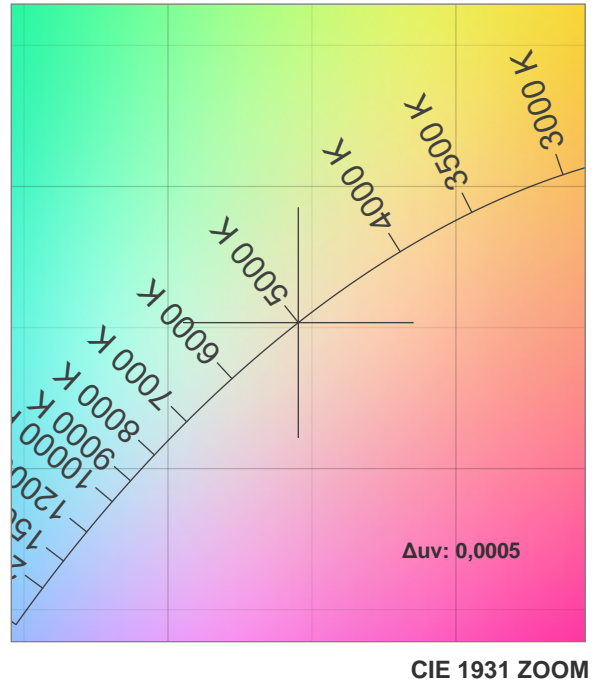
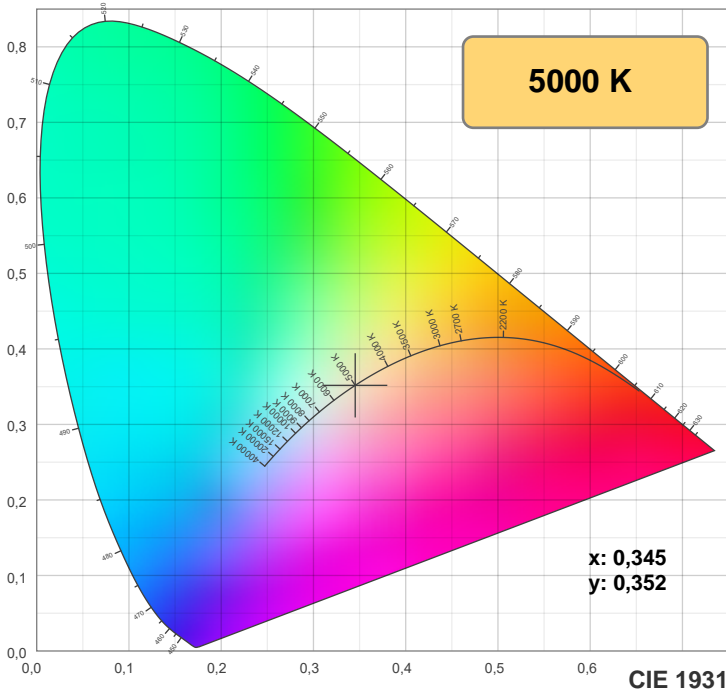
CIE 1931
x: 0,345
y: 0,352

Spectra

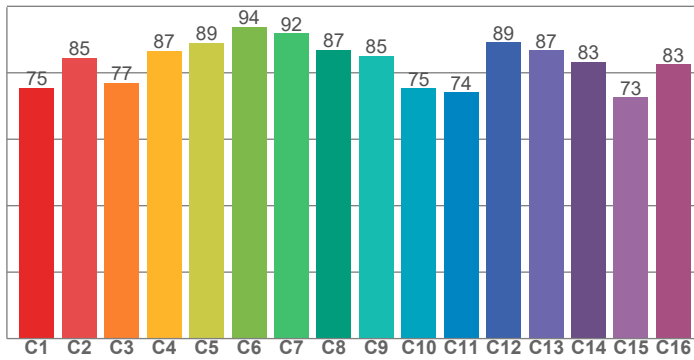


Power

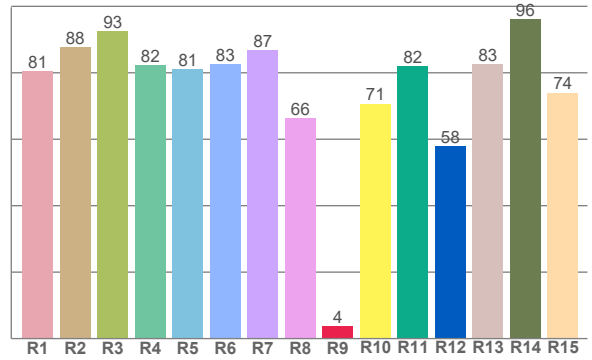




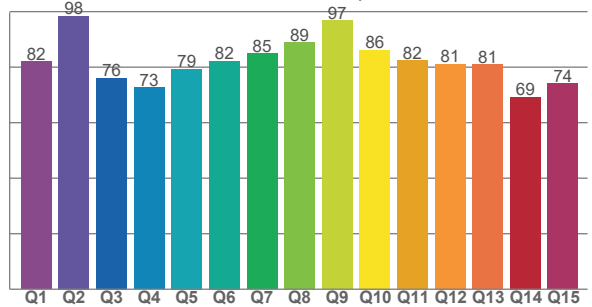
TM-30: 83,2



CRI: 82,5 (R1-R8)



CQS: 80,7



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
80,5	87,7	92,5	82,4	81,1	82,6	86,8	66,5	3,8	70,7	81,9	58,0	82,5	96,2	74,0

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
75,5	84,5	77,0	86,6	89,0	93,9	91,9	86,9	85,1	75,4	74,2	89,1	86,7	83,3	72,7	82,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82,0	98,4	76,1	72,7	79,3	82,1	85,0	88,9	96,8	86,2	82,4	81,2	81,0	69,2	74,0

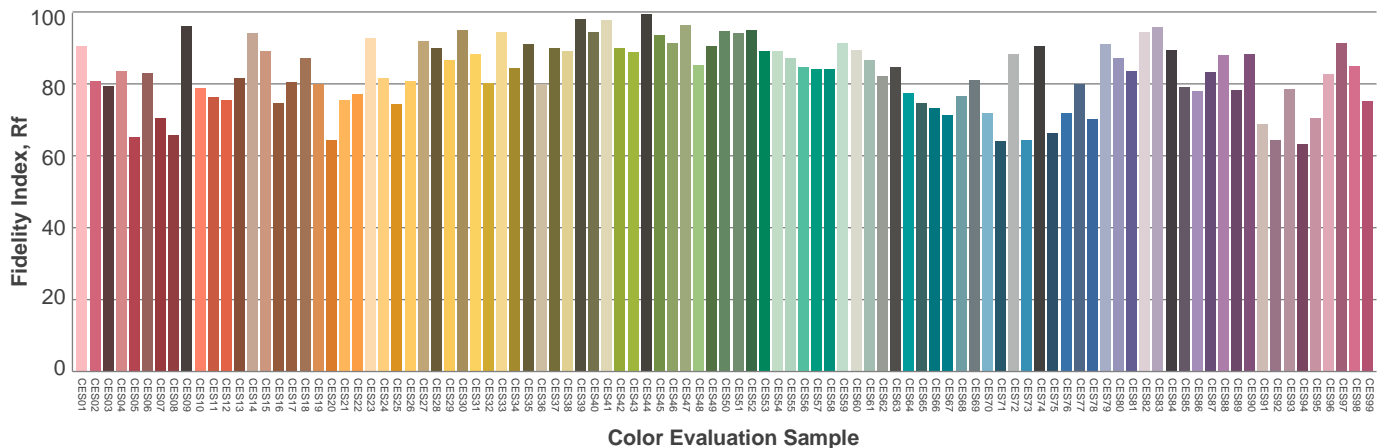
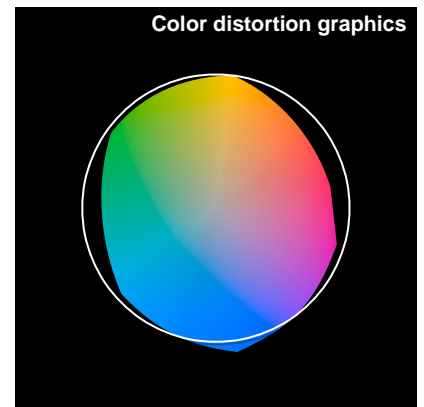
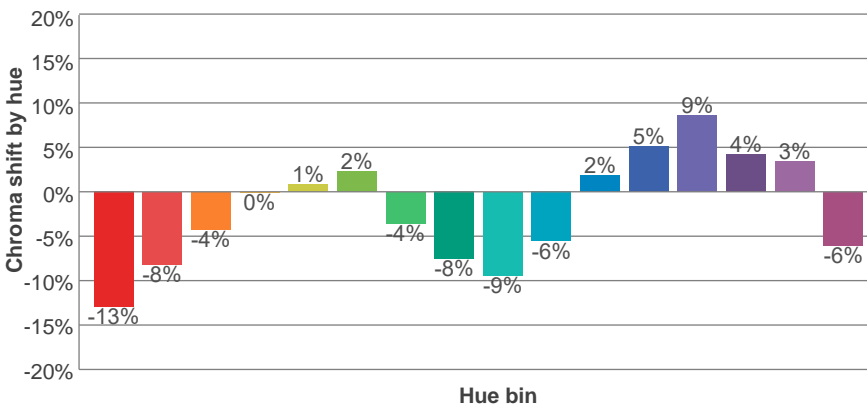
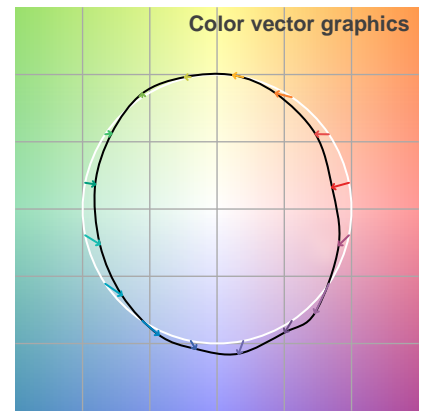
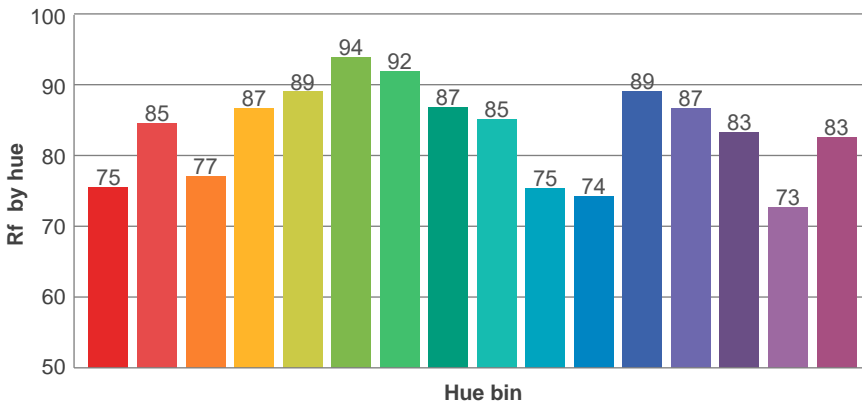
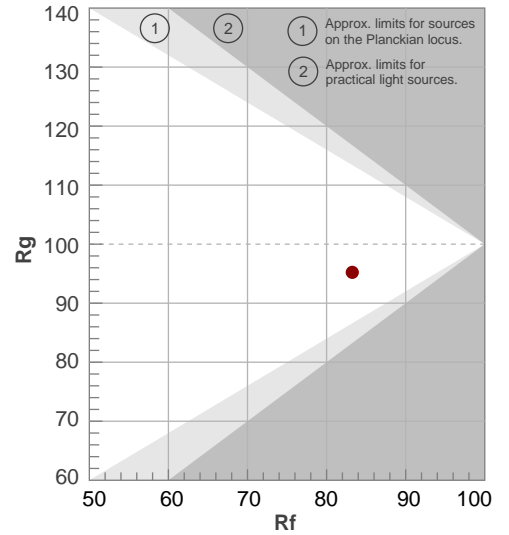
Color parameters

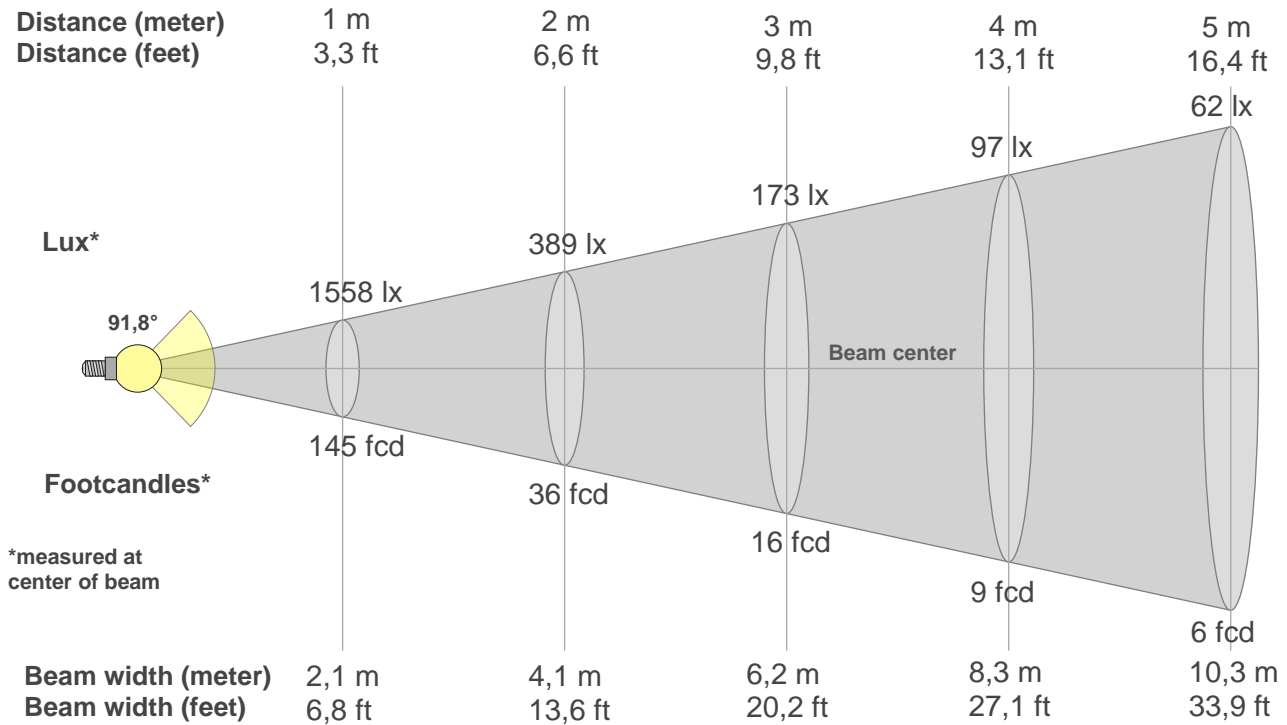
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
5000 K	82,5	3,8	83,2	95,2	80,7	0,345	0,352	0,211	0,323	0,0005

Rf 83,2
Fidelity index Rf

Rg 95,2
Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	75	-13%	-1%
2	85	-8%	6%
3	77	-4%	12%
4	87	0%	8%
5	89	1%	4%
6	94	2%	-1%
7	92	-4%	-3%
8	87	-8%	0%
9	85	-9%	9%
10	75	-6%	14%
11	74	2%	16%
12	89	5%	5%
13	87	9%	-5%
14	83	4%	-9%
15	73	3%	-24%
16	83	-6%	-9%





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
1558lx	389lx	173lx	97lx	62lx	43lx	32lx	24lx	19lx	16lx	13lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx
144,7fcd	36,2fcd	16,1fcd	9fcd	5,8fcd	4fcd	3fcd	2,3fcd	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°
1558	1555	1535	1503	1461	1406	1332	1226	1056	820	608	452	335	248	188	147	110	63	18	4
100%	100%	99%	96%	94%	90%	85%	79%	68%	53%	39%	29%	21%	16%	12%	9%	7%	4%	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°
1558	1555	1535	1503	1461	1406	1332	1226	1056	820	608	452	335	248	188	147	110	63	18	4
100%	100%	99%	96%	94%	90%	85%	79%	68%	53%	39%	29%	21%	16%	12%	9%	7%	4%	1%	0%

Intensities in 180° c-plane

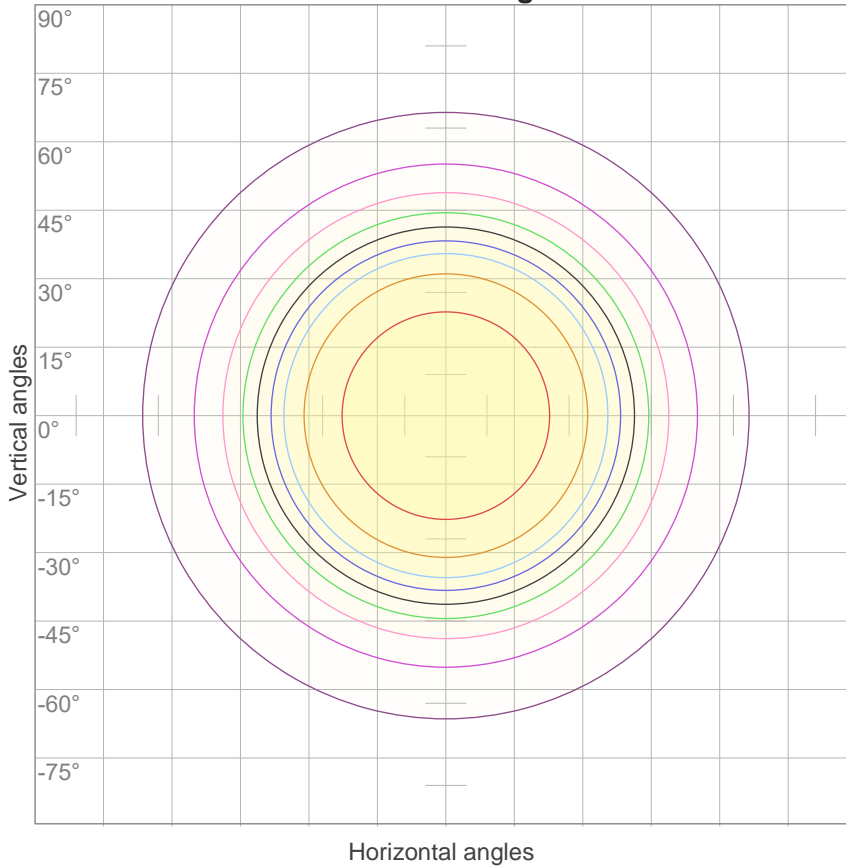
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1558	1555	1535	1503	1461	1406	1332	1226	1056	820	608	452	335	248	188	147	110	63	18	4
100%	100%	99%	96%	94%	90%	85%	79%	68%	53%	39%	29%	21%	16%	12%	9%	7%	4%	1%	0%

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°
1558	1555	1535	1503	1461	1406	1332	1226	1056	820	608	452	335	248	188	147	110	63	18	4
100%	100%	99%	96%	94%	90%	85%	79%	68%	53%	39%	29%	21%	16%	12%	9%	7%	4%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
91,8°	147,6°	174,7°	85,5%	65,9%

iso-candela diagram



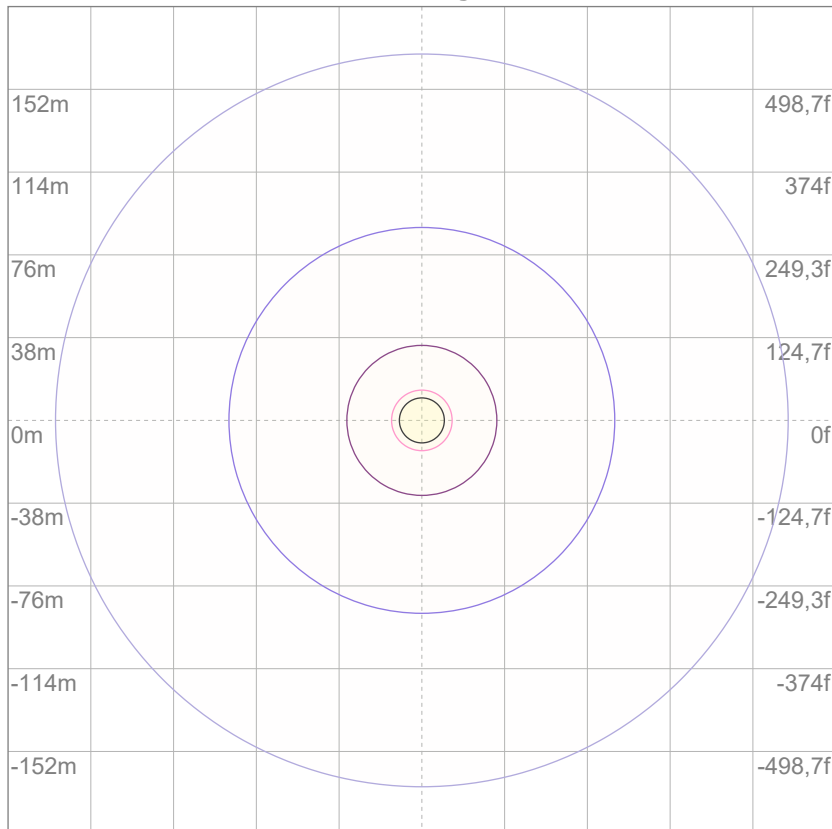
10%	156 cd
20%	312 cd
30%	467 cd
40%	623 cd
50%	779 cd
60%	935 cd
70%	1091 cd
80%	1246 cd
90%	1402 cd

Conditions:

Number of c-planes: 12

Candela at center: 1558 cd

iso-lux diagram



3%	0,467 lx
5%	0,779 lx
10%	1,56 lx
30%	4,67 lx
50%	7,79 lx

Conditions:

Number of c-planes: 12

Lux at center: 15,6 lx

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

Glare evaluation according to UGR

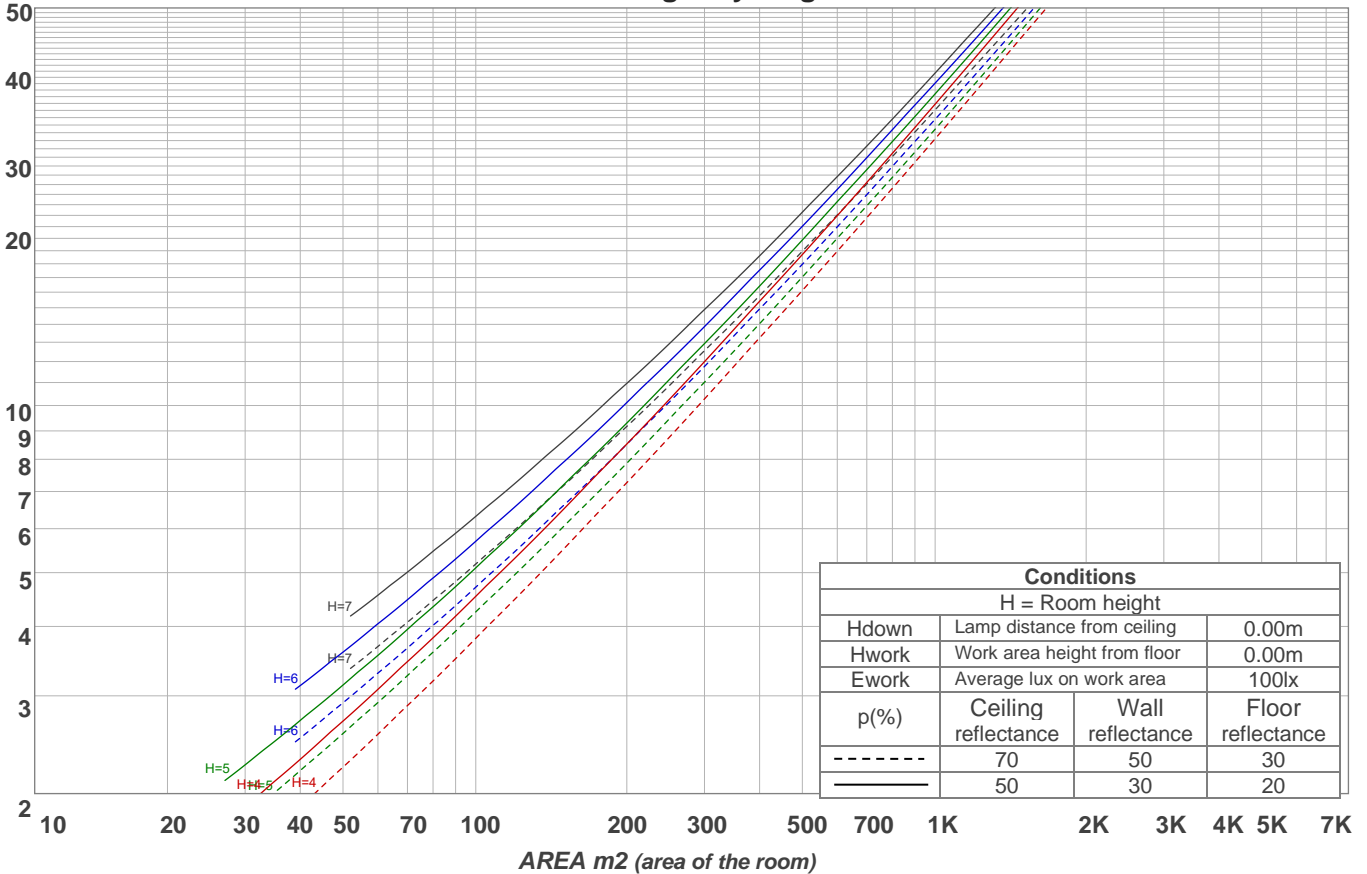
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	15,4	16,4	15,6	16,7	17,0	15,3	16,4	15,5	16,7	16,9
	3H	16,1	17,3	16,5	17,5	17,7	16,0	17,1	16,4	17,4	17,6
	4H	16,6	17,7	17,0	18,0	18,2	16,5	17,5	16,9	17,8	18,1
	6H	17,2	18,1	17,5	18,4	18,8	17,0	17,9	17,3	18,2	18,6
	8H	17,4	18,3	17,7	18,6	19,0	17,2	18,1	17,5	18,4	18,8
	12H	17,6	18,4	17,9	18,8	19,3	17,3	18,2	17,7	18,6	19,0
4H	2H	15,6	16,7	16,0	17,0	17,2	15,5	16,6	16,0	16,9	17,2
	3H	16,7	17,6	17,1	18,0	18,4	16,6	17,5	17,0	17,9	18,3
	4H	17,3	18,1	17,7	18,5	19,1	17,2	18,0	17,6	18,4	19,0
	6H	18,0	18,7	18,5	19,1	19,5	17,8	18,6	18,3	18,9	19,3
	8H	18,3	19,0	18,8	19,4	19,8	18,1	18,8	18,6	19,2	19,6
	12H	18,5	19,1	19,0	19,6	20,0	18,3	18,9	18,8	19,3	19,8
8H	4H	17,5	18,2	18,0	18,6	19,0	17,4	18,1	17,9	18,5	18,9
	6H	18,4	18,9	18,9	19,4	20,0	18,2	18,8	18,8	19,2	19,8
	8H	18,8	19,3	19,4	19,8	20,5	18,6	19,1	19,2	19,6	20,3
	12H	19,2	19,6	19,8	20,1	20,8	19,0	19,4	19,6	19,9	20,5
12H	4H	17,5	18,1	18,1	18,6	19,1	17,4	18,0	17,9	18,5	19,0
	6H	18,5	19,0	19,0	19,5	20,1	18,4	18,8	18,9	19,3	20,0
	8H	19,0	19,4	19,6	19,9	20,5	18,8	19,2	19,4	19,7	20,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,2 / -0,2					0,2 / -0,3				
S = 1.5H		0,5 / -0,5					0,5 / -0,5				
S = 2.0H		1,0 / -0,8					1,1 / -0,8				
CIE 117-1995. Corrected glare indices referring to 3531 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
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	110	105	102	98	107	103	100	96	99	96	93	95	92	90	91	89	87	85		
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	78	75	73		
3	93	84	76	70	91	82	75	70	79	73	68	76	71	67	73	69	66	64		
4	86	75	67	61	84	74	66	60	71	65	60	69	63	59	67	62	58	56		
5	80	68	60	53	78	67	59	53	65	58	53	62	57	52	61	55	51	49		
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	55	50	46	44		
7	69	56	48	42	67	55	48	42	54	47	42	52	46	42	51	45	41	39		
8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	41	37	35		
9	60	48	40	35	59	47	40	35	46	39	34	45	39	34	44	38	34	32		
10	57	44	37	32	55	44	36	32	43	36	31	42	35	31	41	35	31	29		

LAMPS (number of lamps)

Luminaire budgetary diagram



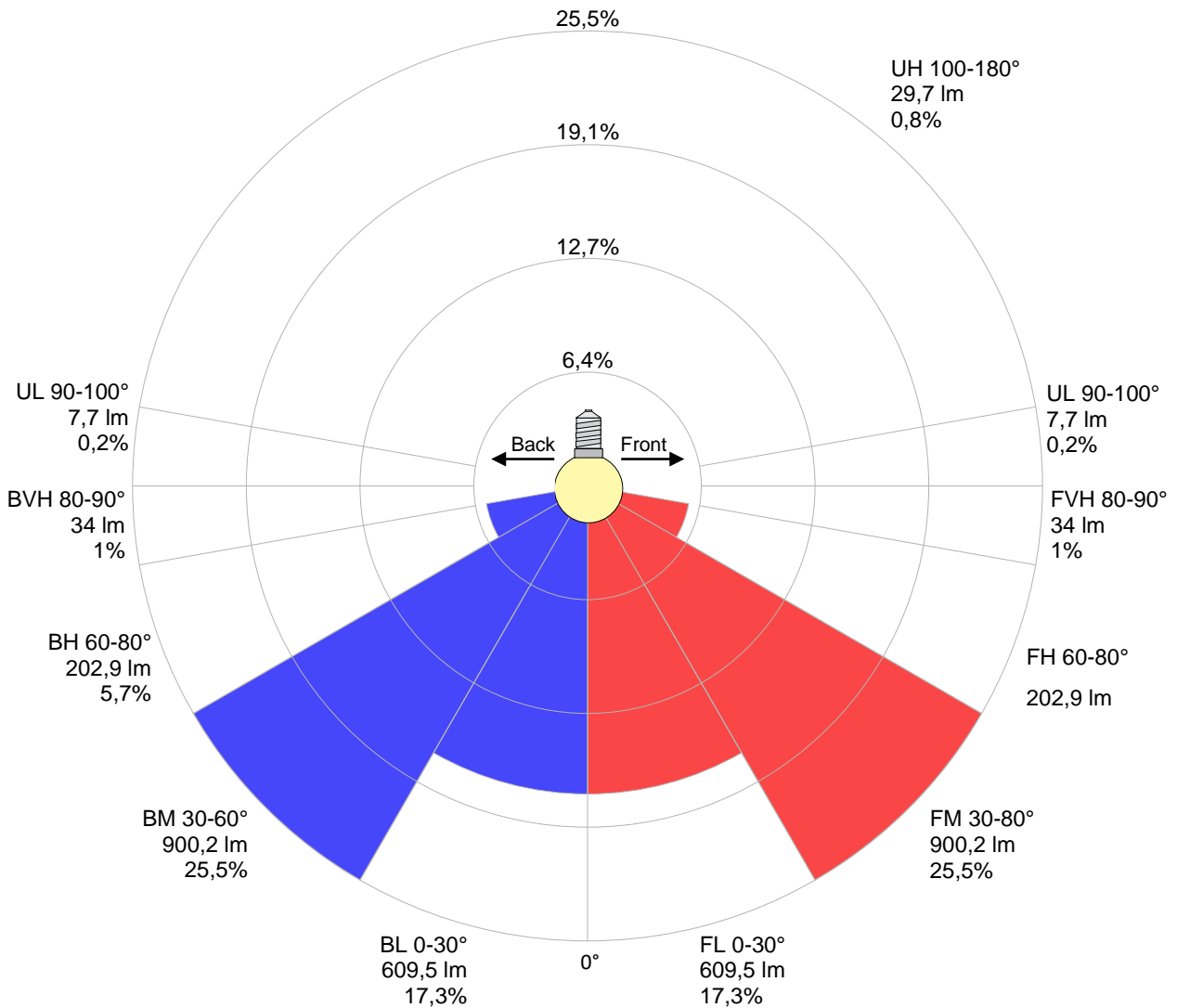
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	424 lm	647 lm	761 lm	631 lm	408 lm	249 lm	156 lm	67,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
7,49 lm	4,80 lm	5,16 lm	4,92 lm	4,84 lm	4,14 lm	3,13 lm	1,97 lm	0,732 lm

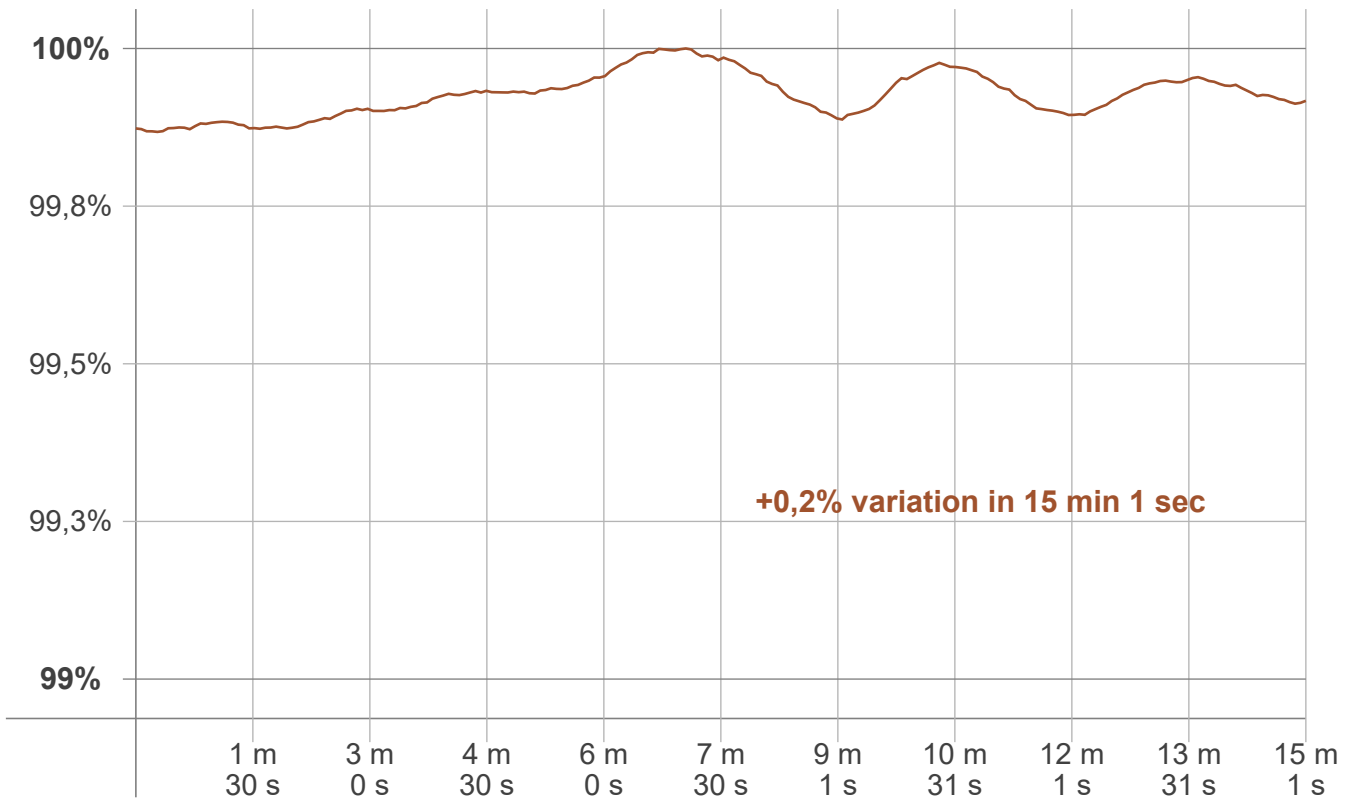
LCS table

BUG rating:	B2 U2 G1	
Forward light	Lumens	Lumens %
Low(0-30):	609,5	17,3%
Medium(30-60):	900,2	25,5%
High(60-80):	202,9	5,7%
Very high(80-90):	34	1%
Back light		
Low(0-30):	609,5	17,3%
Medium(30-60):	900,2	25,5%
High(60-80):	202,9	5,7%
Very high(80-90):	34	1%
Uplight		
Low(90-100):	7,7	0,2%
High(100-180):	29,7	0,8%

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
4990 K	+10 K	5000 K

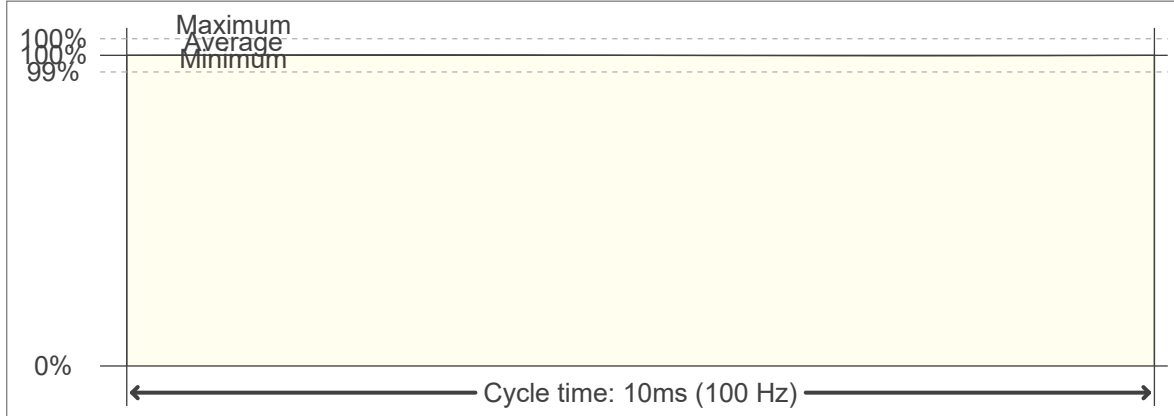
Output change

Output start	Output change	Output end
3529 lm	+2 lm	3531 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	JA8/10 40Hz	0,05 %
Flicker percentage:	0,26 %	JA8/10 90Hz	0,08 %
SVM: (Visual flicker)	0,01	JA8/10 200Hz	0,25 %
PstLM	0,04	JA8/10 400Hz	0,26 %
Mp	0,03	JA8/10 1000Hz	0,26 %

Flicker conditions:

Sample rate:	20000 samples/second
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