

Light efficiency:

43 Lumen/Watt

Light quality:

CRI: 0,0

Color temperature:

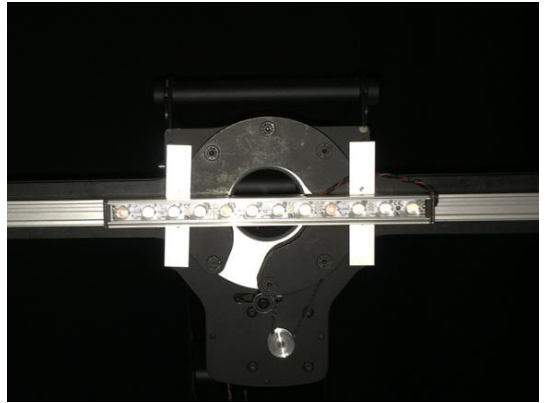
0 K

Output: 306 lm

Peak: 1424 cd

Power: 7,1 W

PF: 0,82



Product name:

FLNP-F4CH-C-258-G-927-10772

Item number:

FLNP-F4CH-C-258-G-927-10772

Date and time:

15.02.2019 16:01:48

Description:

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Grad K

CRI +/-0,7

Angular Resolution 1 Grad step

Last Calibration 06-06-2018

Pruefer:

Mourad Benzineb

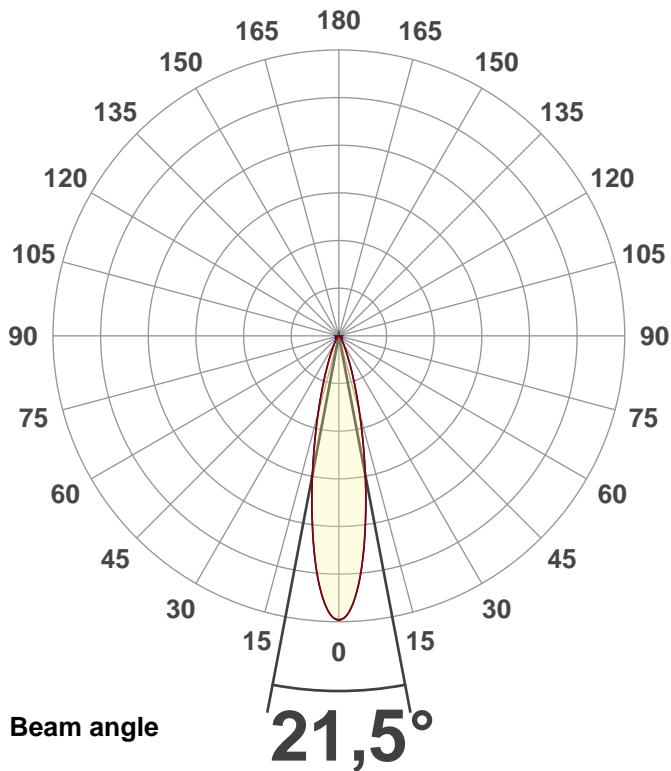
Master of Engineering

Pruefort:

Lichtlabor

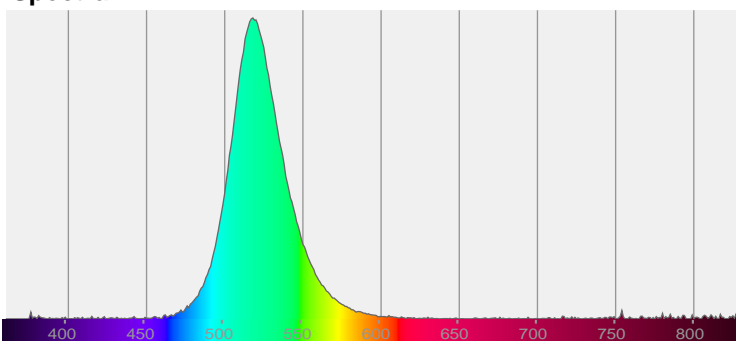
Gaustrasse13-15

55411 Bingen am Rhein

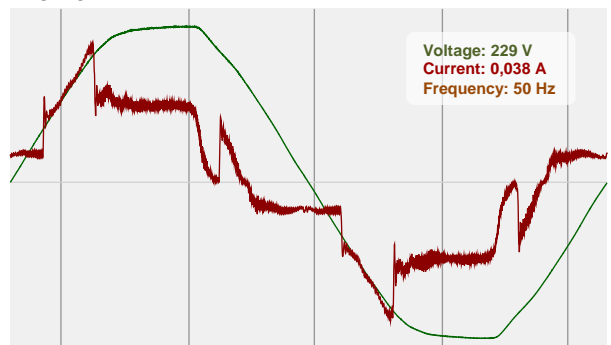


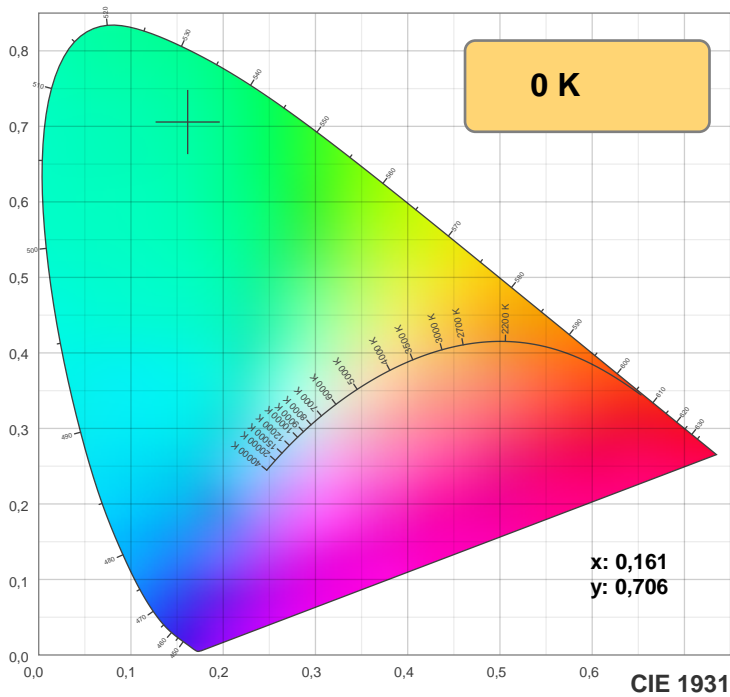
CIE 1931
x: 0,161
y: 0,706

Spectra

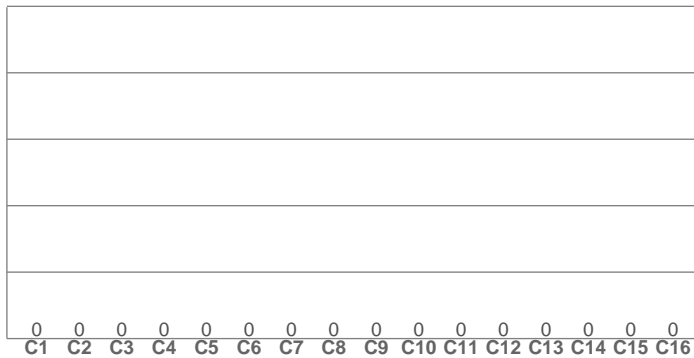


Power





TM30: 0,0



CRI R values, only R1-R8 are used to calculate final CRI value

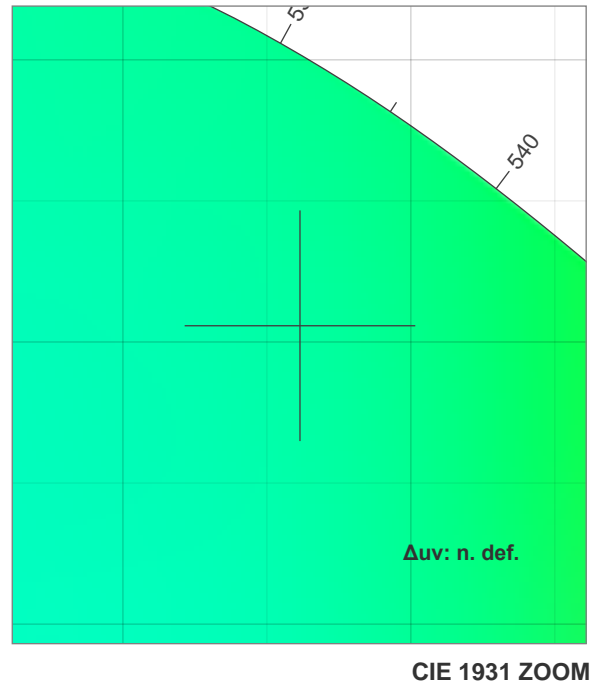
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

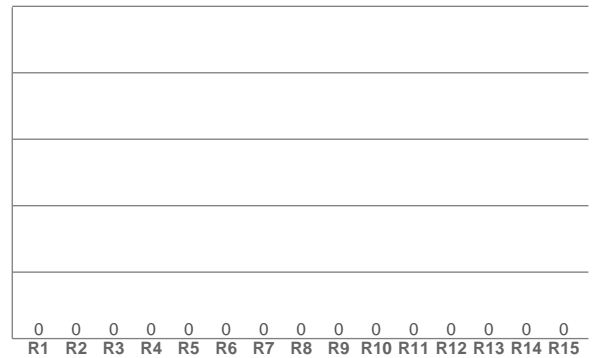
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

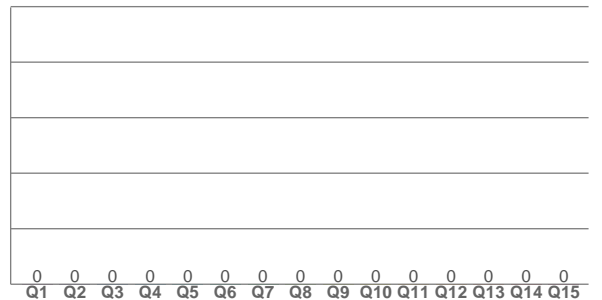
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



CRI: 0,0 (R1-R8)



CQS: 0,0



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
0 K	0,0	0,0	0,0	0,0	0,0	0,161	0,706	0,058	0,380	n. def.

TM30 details

Rf 0,0

Fidelity index Rf

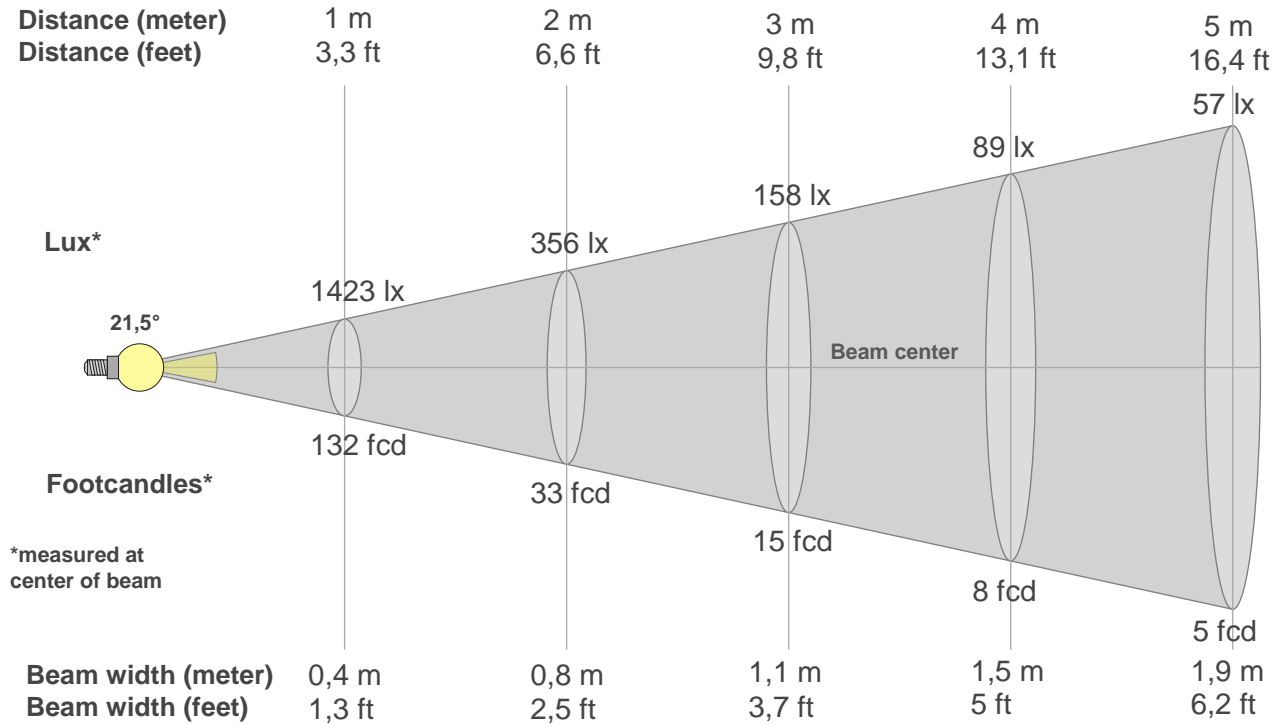
Rg 0,0

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	0	0%	0%
2	0	0%	0%
3	0	0%	0%
4	0	0%	0%
5	0	0%	0%
6	0	0%	0%
7	0	0%	0%
8	0	0%	0%
9	0	0%	0%
10	0	0%	0%
11	0	0%	0%
12	0	0%	0%
13	0	0%	0%
14	0	0%	0%
15	0	0%	0%
16	0	0%	0%



Beam details



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
1423lx	356lx	158lx	89lx	57lx	40lx	29lx	22lx	18lx	14lx	12lx	10lx	8lx	7lx	6lx	6lx	5lx	4lx	4lx	4lx
132,2fcd	33fcd	14,7fcd	8,3fcd	5,3fcd	3,7fcd	2,7fcd	2,1fcd	1,6fcd	1,3fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1423	1387	1284	1132	952	774	606	462	344	252	184	133	98	73	56	44	34	28	23	20
100%	97%	90%	80%	67%	54%	43%	32%	24%	18%	13%	9%	7%	5%	4%	3%	2%	2%	2%	1%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1423	1388	1286	1135	955	776	608	464	347	256	188	137	101	74	56	43	34	27	22	19
100%	98%	90%	80%	67%	55%	43%	33%	24%	18%	13%	10%	7%	5%	4%	3%	2%	2%	2%	1%

Intensities in 180° c-plane

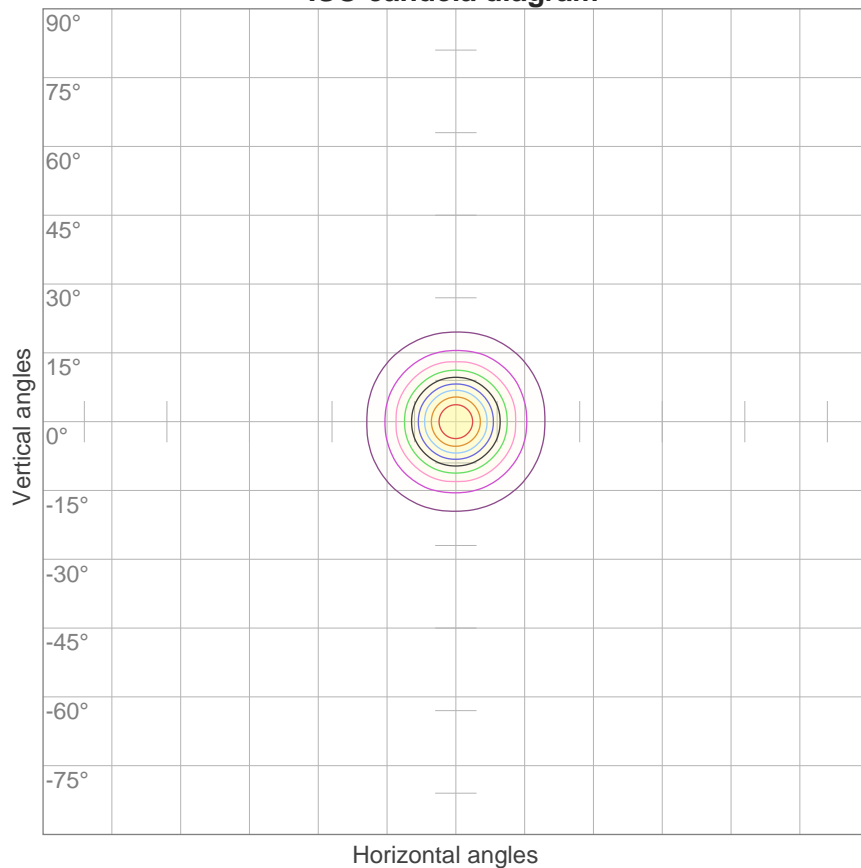
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1423	1387	1284	1132	952	774	606	462	344	252	184	133	98	73	56	44	34	28	23	20
100%	97%	90%	80%	67%	54%	43%	32%	24%	18%	13%	9%	7%	5%	4%	3%	2%	2%	2%	1%

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1423	1388	1286	1135	955	776	608	464	347	256	188	137	101	74	56	43	34	27	22	19
100%	98%	90%	80%	67%	55%	43%	33%	24%	18%	13%	10%	7%	5%	4%	3%	2%	2%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
21,5°	43,8°	63,8°	95,6%	91,4%

ISO candela diagram



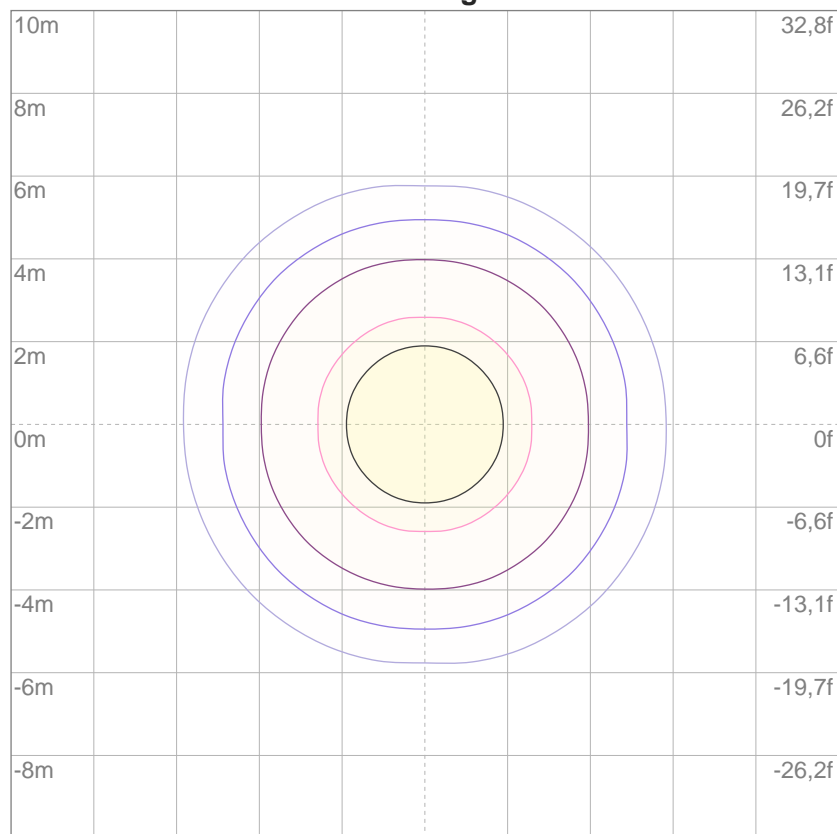
10%	142 cd
20%	285 cd
30%	427 cd
40%	569 cd
50%	711 cd
60%	854 cd
70%	996 cd
80%	1138 cd
90%	1280 cd

Conditions:

Number of c-planes: 16

Candela at center: 1423 cd

ISO lux diagram



3%	0,427 lx
5%	0,711 lx
10%	1,42 lx
30%	4,27 lx
50%	7,11 lx

Conditions:

Number of c-planes: 16

Lux at center: 14,2 lx

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

Glare Evaluation According to UGR

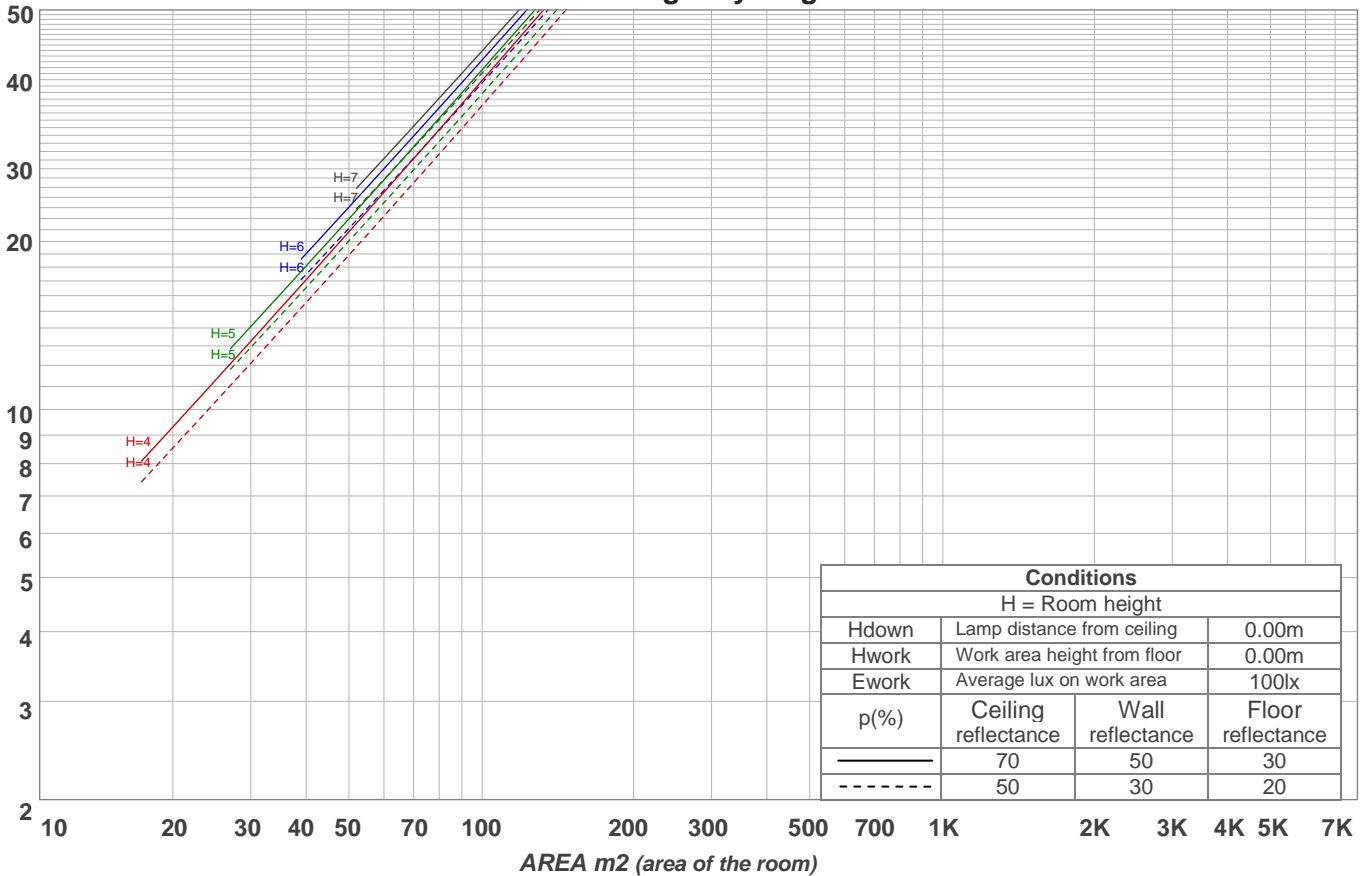
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	11,4	12,1	11,6	12,3	12,5	10,2	10,9	10,4	11,1	11,3
	3H	13,1	13,8	13,4	14,0	14,3	11,6	12,2	11,8	12,5	12,7
	4H	13,8	14,4	14,1	14,7	14,9	12,2	12,9	12,6	13,1	13,4
	6H	14,2	14,8	14,5	15,0	15,3	12,9	13,5	13,2	13,8	14,1
	8H	14,3	14,9	14,7	15,2	15,5	13,2	13,7	13,5	14,0	14,3
	12H	14,5	15,1	14,9	15,4	15,7	13,5	14,0	13,8	14,3	14,6
4H	2H	11,9	12,5	12,2	12,8	13,0	10,9	11,6	11,2	11,8	12,1
	3H	13,8	14,4	14,2	14,7	15,0	12,6	13,1	12,9	13,4	13,7
	4H	14,6	15,1	15,0	15,4	15,8	13,4	13,8	13,7	14,2	14,5
	6H	15,2	15,6	15,6	16,0	16,4	14,1	14,5	14,5	14,9	15,3
	8H	15,5	15,9	15,9	16,2	16,6	14,4	14,8	14,9	15,2	15,6
	12H	15,8	16,1	16,2	16,5	16,9	14,8	15,2	15,3	15,6	16,0
8H	4H	14,9	15,3	15,3	15,6	16,0	13,8	14,1	14,2	14,5	14,9
	6H	15,7	16,0	16,1	16,4	16,8	14,7	15,0	15,2	15,4	15,9
	8H	16,1	16,4	16,6	16,8	17,3	15,1	15,3	15,6	15,8	16,2
	12H	16,6	16,8	17,0	17,2	17,7	15,6	15,8	16,1	16,3	16,8
12H	4H	14,9	15,2	15,4	15,6	16,1	13,9	14,2	14,3	14,6	15,0
	6H	15,8	16,0	16,3	16,5	16,9	14,9	15,1	15,3	15,5	16,0
	8H	16,3	16,5	16,8	17,0	17,4	15,3	15,5	15,8	16,0	16,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,2 / -0,1					+0,3 / -0,2				
S = 1,5H		+0,5 / -0,2					+0,5 / -0,4				
S = 2,0H		+0,7 / -0,4					+1,0 / -0,7				
Standard table		BK06					BK07				
Correction summand		-1,5					-1,9				
Corrected glare indices referring to 306 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	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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89
3	105	99	95	92	103	98	94	91	95	92	89	93	90	88	91	88	87	85
4	101	95	90	86	99	93	89	86	91	88	85	89	86	84	88	85	83	81
5	97	90	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78
6	94	87	82	79	93	86	82	78	85	81	78	83	80	77	82	79	77	75
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	76	74	73
8	88	81	76	73	87	80	76	73	79	75	72	78	75	72	77	74	72	71
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	70	68
10	83	76	71	68	82	75	71	68	75	71	68	74	70	68	73	70	68	67

LAMPS (number of lamps)

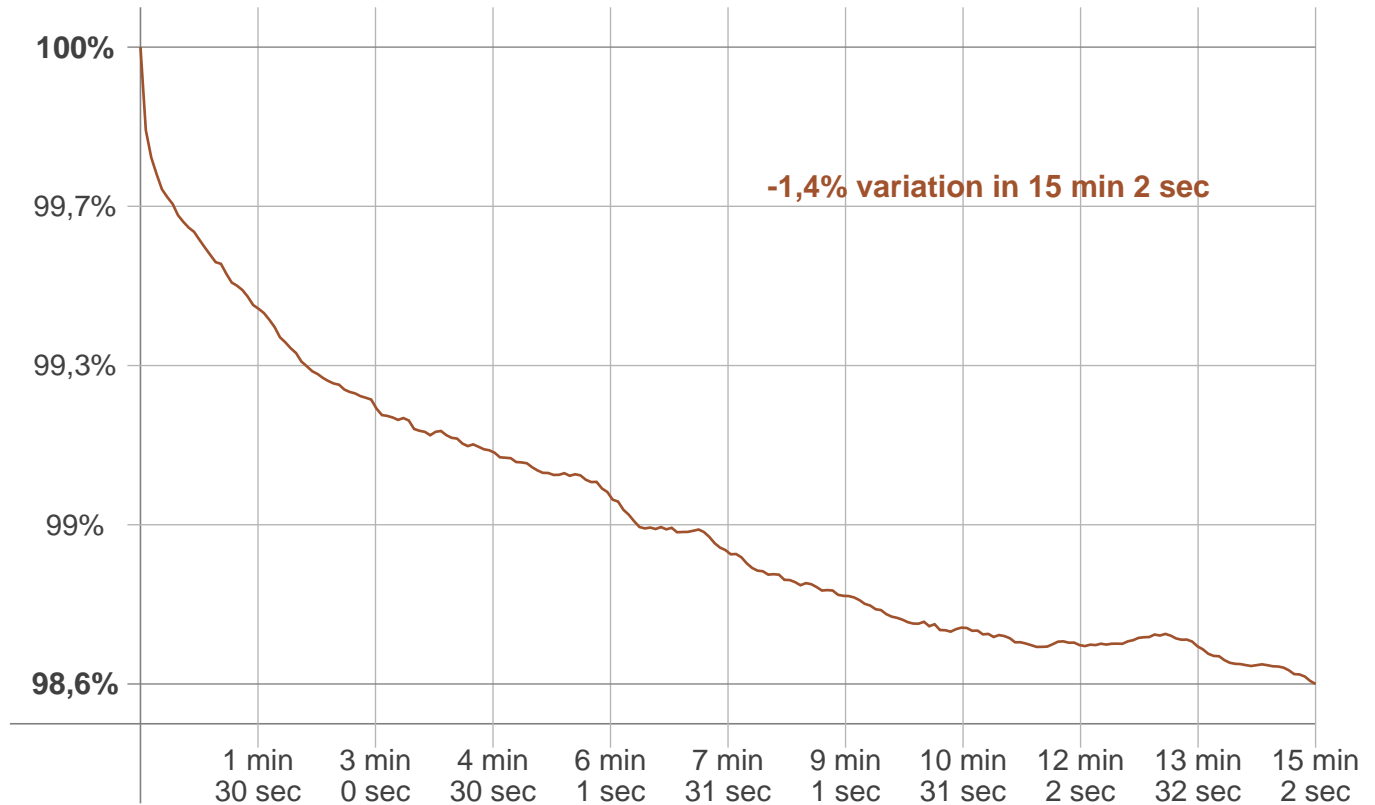
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	114 lm	43,5 lm	16,4 lm	9,80 lm	8,24 lm	6,51 lm	3,98 lm	1,87 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,353 lm	0,280 lm	0,263 lm	0,238 lm	0,088 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm

Warmup curve



Warmup result

Warmup time:	15 min 2 sec
Warmup variation	-1,4%

Warmup conditions

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

Color temperature change

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

Output change

Output start	Output change	Output end
309 lm	-2 lm	306 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:	n/a Hz
Flicker index:	n/a
Flicker percentage:	n/a %
SVM: (Visual flicker)	n/a

Flicker conditions:

Sample rate:	60.000 samples/second
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