

Light efficiency:

79 Lumen/Watt

Light quality:

CRI: 93,2

Color temperature:

2986 K

Output: 800 lm

Peak: 4745 cd

Power: 10,1 W

PF: 1,0



Product name:

Focus-4-1CH-Darklite-0258-930-LSNF-10771-BA

Item number:

FLDL-F1C-D0258-930-LSNF-10771-BA

Date and time:

02.02.2021 14:32:21

Description:

Rank: P4-7D2

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Grad K

CRI +/-0,7

Angular Resolution 1 Grad step

Last Calibration 20.05.2020

Pruefer:

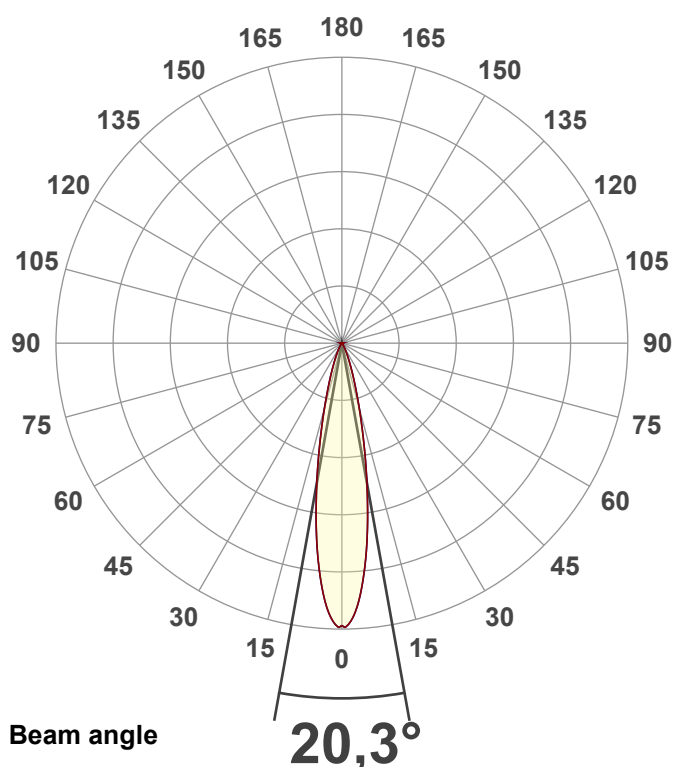
Peter Ulrich

Pruefort:

Lichtlabor

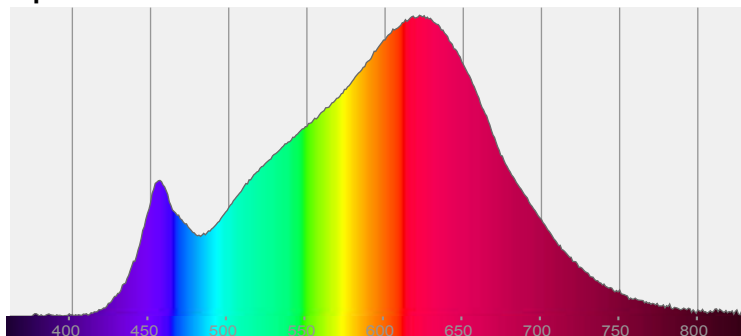
Gaustrasse13-15

55411 Bingen am Rhein

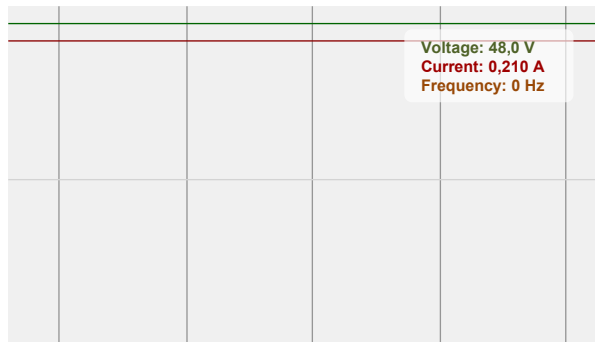


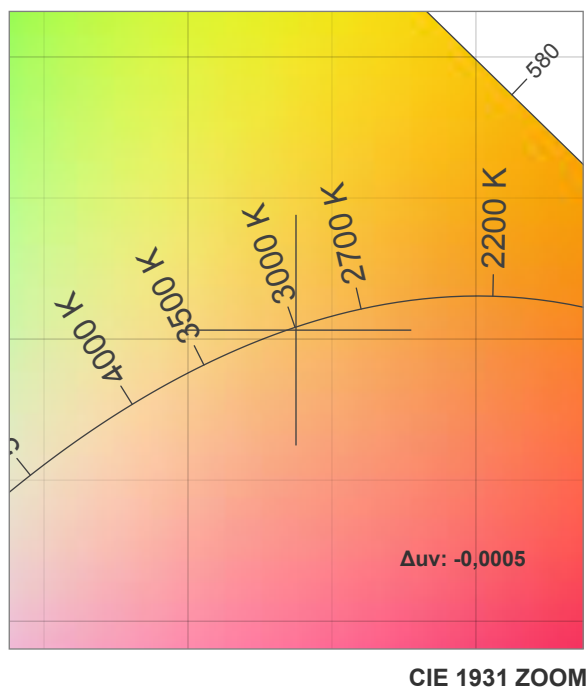
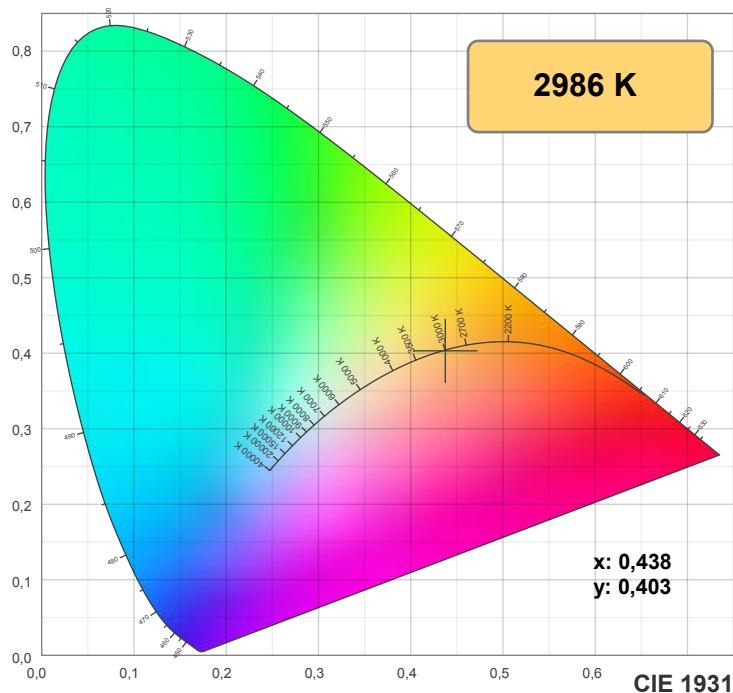
CIE 1931
x: 0,438
y: 0,403

Spectra

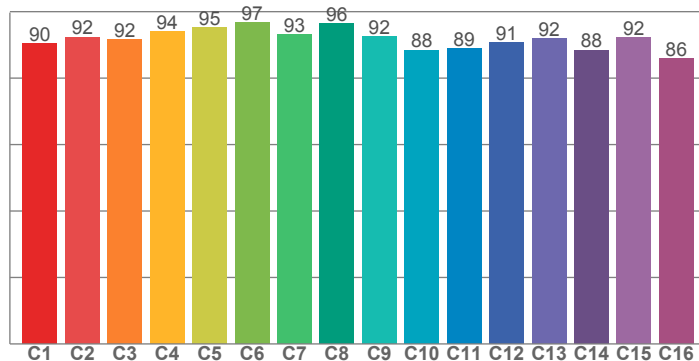


Power

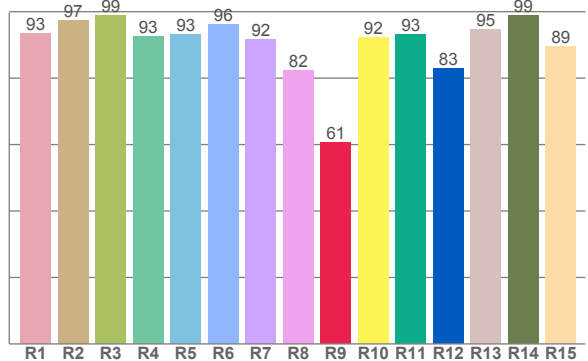




TM30: 91,7



CRI: 93,2 (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
93,4	97,2	98,7	92,6	93,0	96,2	91,8	82,2	60,7	92,1	93,1	82,8	94,6	98,9	89,5

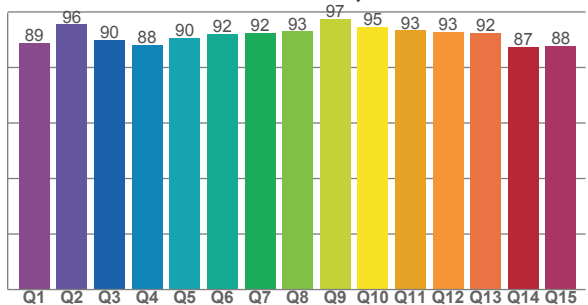
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90,5	92,4	91,6	94,0	95,3	96,8	93,2	96,3	92,4	88,5	88,9	90,8	91,9	88,5	92,1	85,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88,7	95,5	89,9	88,0	90,5	92,0	92,4	93,0	97,5	94,6	93,3	92,7	92,3	87,3	87,8

CQS: 91,1



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
2986 K	93,2	60,7	91,7	98,1	91,1	0,438	0,403	0,251	0,347	-0,0005

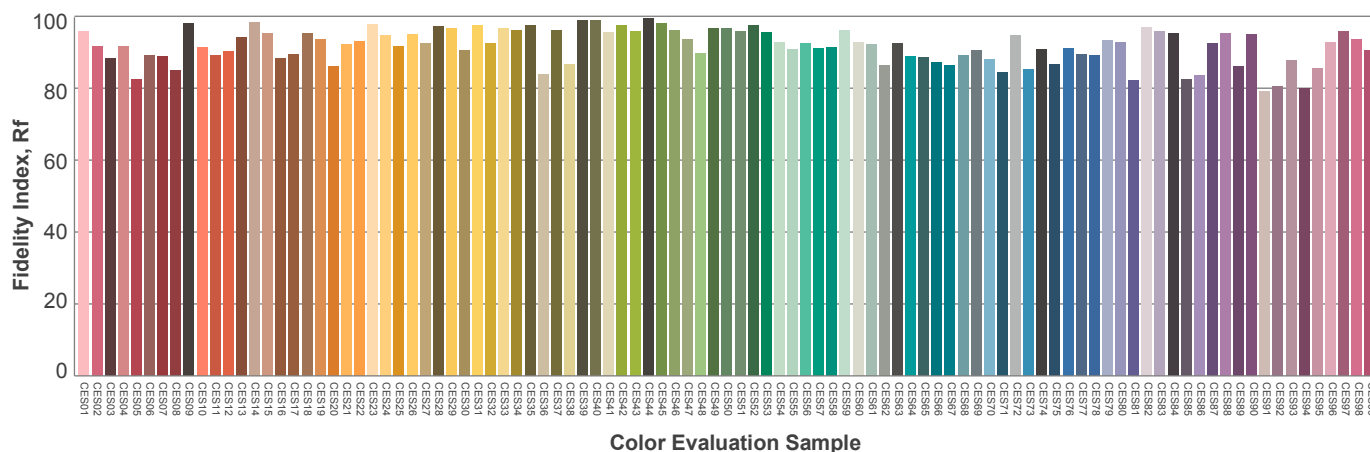
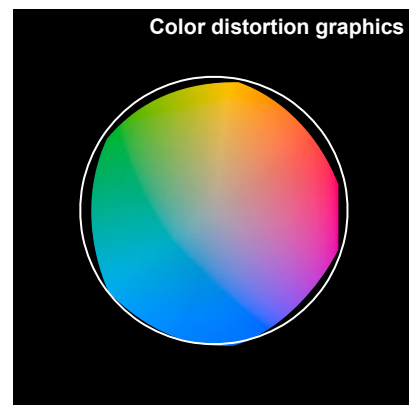
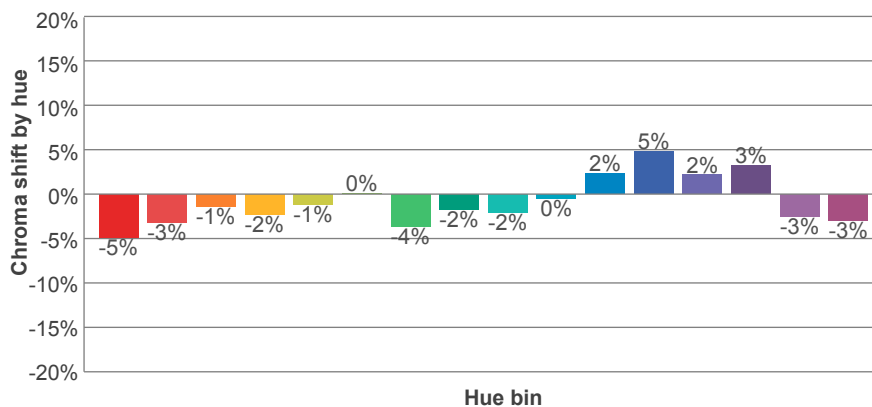
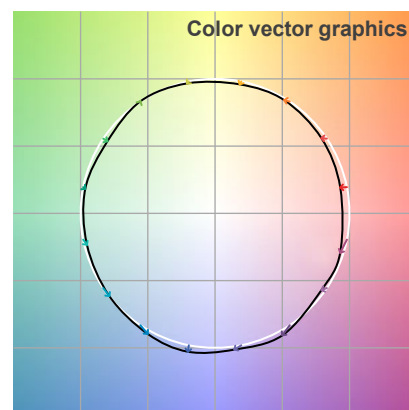
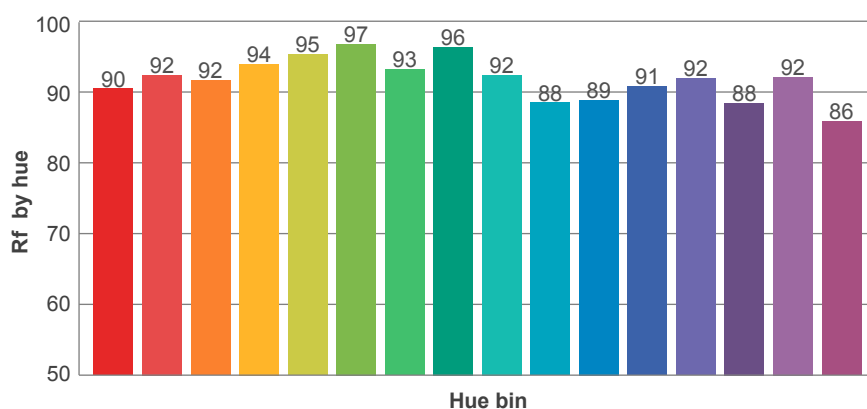
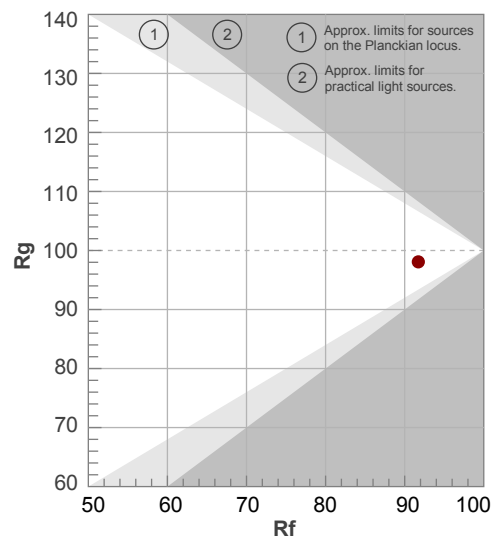
Rf 91,7

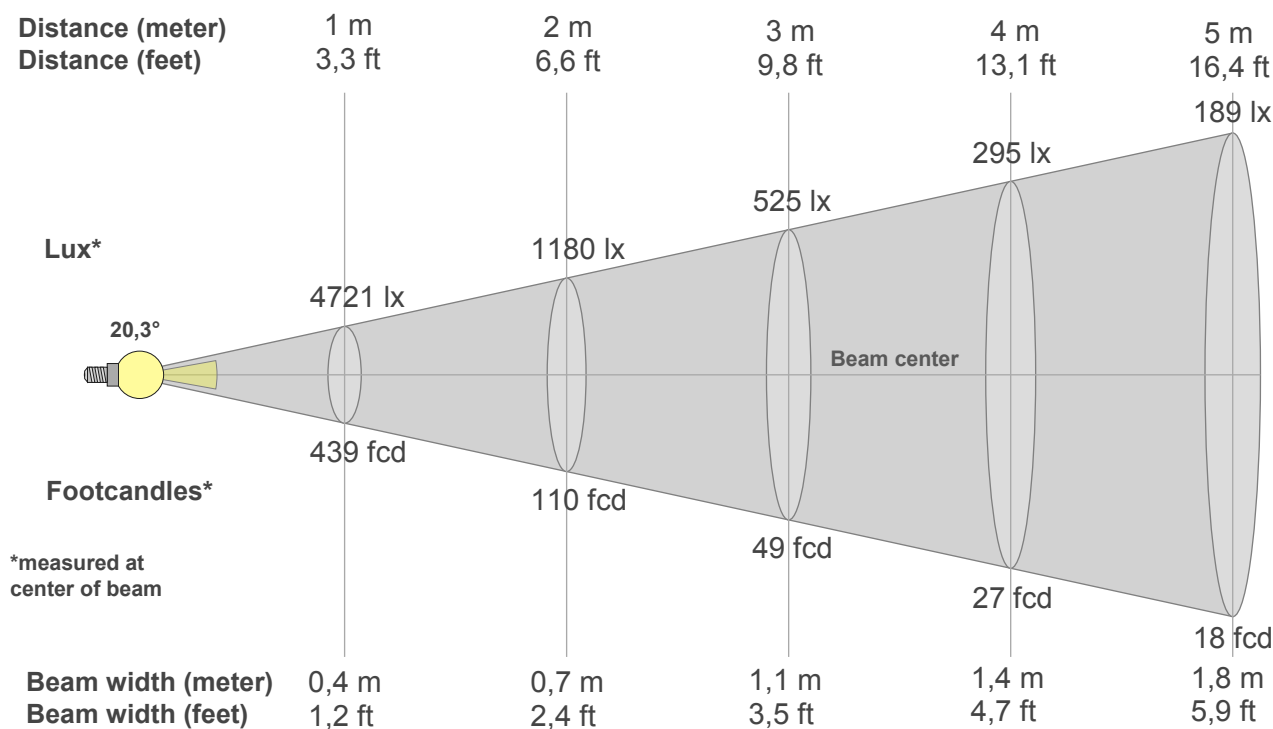
Fidelity index Rf

Rg 98,1

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	1%
2	92	-3%	3%
3	92	-1%	4%
4	94	-2%	1%
5	95	-1%	2%
6	97	0%	0%
7	93	-4%	0%
8	96	-2%	1%
9	92	-2%	4%
10	88	0%	7%
11	89	2%	8%
12	91	5%	0%
13	92	2%	-6%
14	88	3%	-9%
15	92	-3%	-3%
16	86	-3%	-11%





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
4721lx	1180lx	525lx	295lx	189lx	131lx	96lx	74lx	58lx	47lx	39lx	33lx	28lx	24lx	21lx	18lx	16lx	15lx	13lx	12lx
438,6fcd	109,6fcd	48,7fcd	27,4fcd	17,5fcd	12,2fcd	9fcd	6,9fcd	5,4fcd	4,4fcd	3,6fcd	3fcd	2,6fcd	2,2fcd	1,9fcd	1,7fcd	1,5fcd	1,4fcd	1,2fcd	1,1fcd

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
4721	4723	4624	4468	4257	3998	3713	3406	3077	2742	2422	2115	1821	1557	1325	1121	943	793	669	564
100%	100%	98%	95%	90%	85%	79%	72%	65%	58%	51%	45%	39%	33%	28%	24%	20%	17%	14%	12%

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
4721	4723	4624	4468	4257	3998	3713	3406	3077	2742	2422	2115	1821	1557	1325	1121	943	793	669	564
100%	100%	98%	95%	90%	85%	79%	72%	65%	58%	51%	45%	39%	33%	28%	24%	20%	17%	14%	12%

Intensities in 180° c-plane

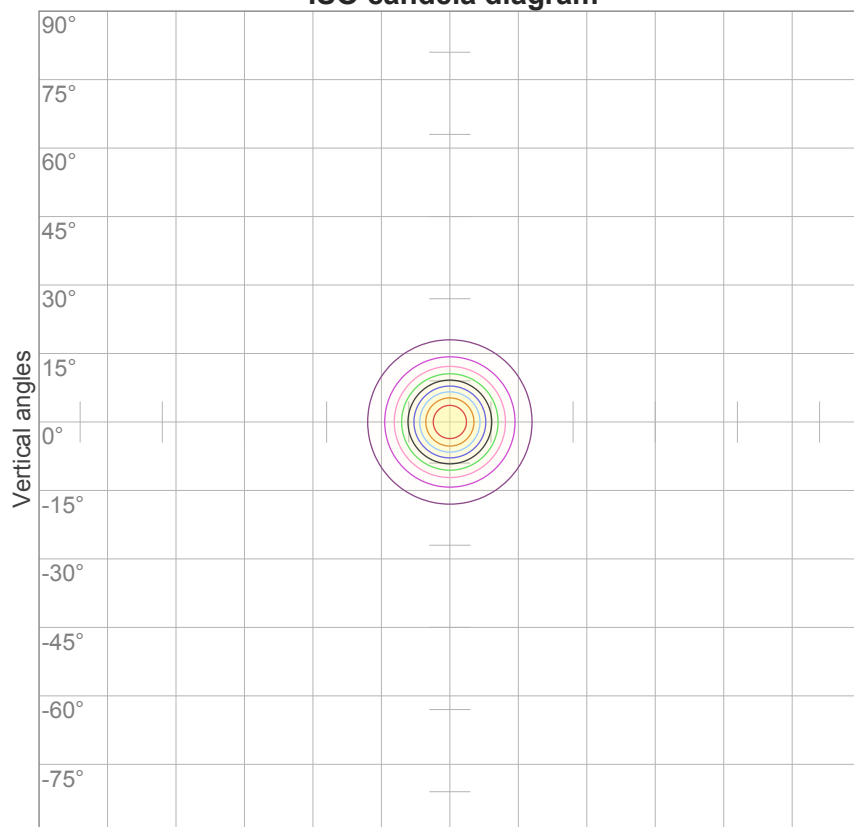
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
4721	4723	4624	4468	4257	3998	3713	3406	3077	2742	2422	2115	1821	1557	1325	1121	943	793	669	564
100%	100%	98%	95%	90%	85%	79%	72%	65%	58%	51%	45%	39%	33%	28%	24%	20%	17%	14%	12%

Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
4721	4723	4624	4468	4257	3998	3713	3406	3077	2742	2422	2115	1821	1557	1325	1121	943	793	669	564
100%	100%	98%	95%	90%	85%	79%	72%	65%	58%	51%	45%	39%	33%	28%	24%	20%	17%	14%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
20,3°	39,9°	55,6°	98,2%	96,9%

ISO candela diagram



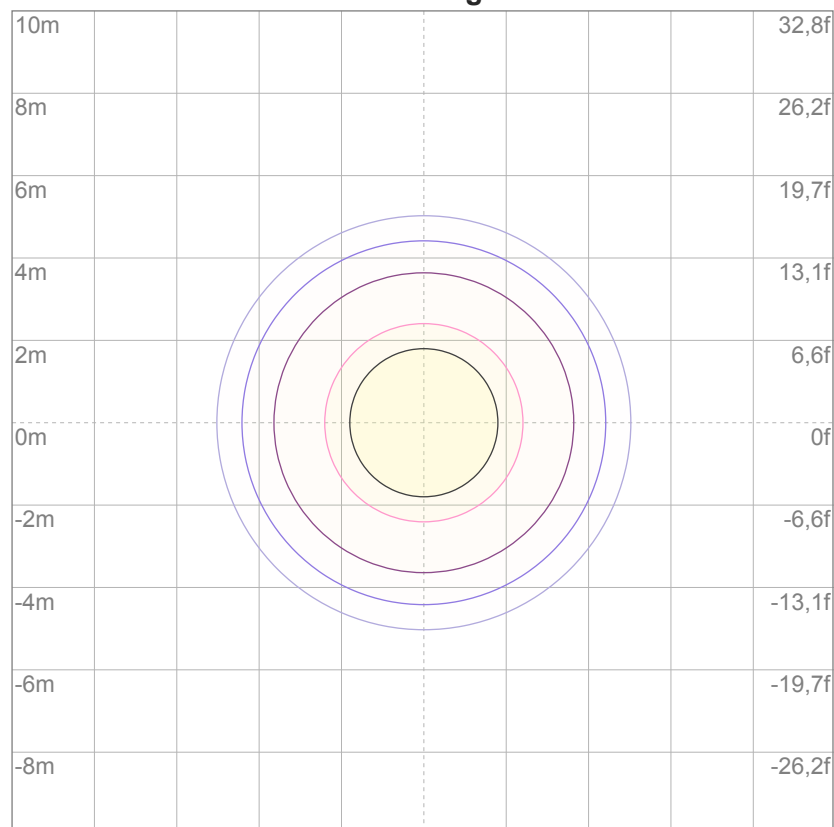
10%	472 cd
20%	944 cd
30%	1416 cd
40%	1888 cd
50%	2360 cd
60%	2833 cd
70%	3305 cd
80%	3777 cd
90%	4249 cd

Conditions:

Number of c-planes: 16

Candela at center: 4721 cd

ISO lux diagram



3%	1,42 lx
5%	2,36 lx
10%	4,72 lx
30%	14,2 lx
50%	23,6 lx

Conditions:

Number of c-planes: 16

Lux at center: 47,2 lx

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

Glare Evaluation According to UGR

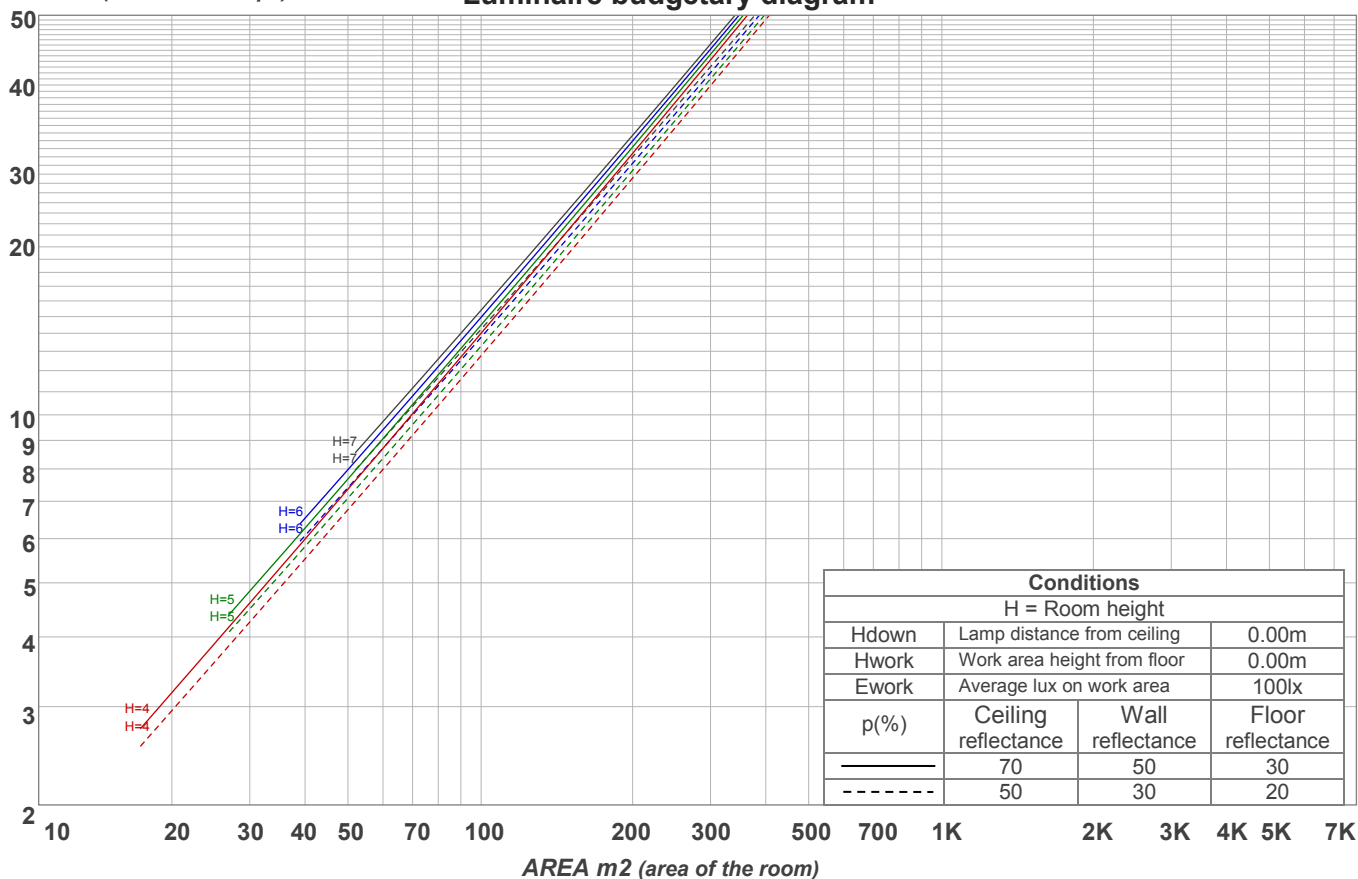
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	7,0	7,3	7,0	7,5	7,7	7,0	7,3	7,0	7,5	7,7
	3H	7,4	8,0	7,8	8,2	8,4	7,4	8,0	7,8	8,2	8,4
	4H	7,8	8,4	8,2	8,6	8,8	7,8	8,4	8,2	8,6	8,8
	6H	8,3	8,8	8,6	9,1	9,4	8,3	8,8	8,6	9,1	9,4
	8H	8,6	9,1	9,0	9,4	9,8	8,6	9,1	9,0	9,4	9,8
	12H	9,1	9,5	9,4	9,8	10,2	9,1	9,5	9,4	9,8	10,2
4H	2H	7,1	7,6	7,4	7,8	8,1	7,1	7,6	7,4	7,8	8,1
	3H	8,0	8,4	8,3	8,7	9,1	8,0	8,4	8,3	8,7	9,1
	4H	8,4	8,8	8,8	9,2	9,7	8,4	8,8	8,8	9,2	9,7
	6H	9,0	9,5	9,5	9,8	10,2	9,0	9,5	9,5	9,8	10,2
	8H	9,5	9,9	10,0	10,2	10,6	9,5	9,9	10,0	10,2	10,6
	12H	10,0	10,4	10,5	10,8	11,2	10,0	10,4	10,5	10,8	11,2
8H	4H	8,6	9,0	9,1	9,3	9,7	8,6	9,0	9,1	9,3	9,7
	6H	9,5	9,7	10,0	10,2	10,7	9,5	9,7	10,0	10,2	10,7
	8H	10,1	10,3	10,6	10,9	11,5	10,1	10,3	10,6	10,9	11,5
	12H	11,0	11,1	11,5	11,6	12,2	11,0	11,1	11,5	11,6	12,2
12H	4H	8,6	8,9	9,1	9,3	9,8	8,6	8,9	9,1	9,3	9,8
	6H	9,7	9,8	10,2	10,4	11,0	9,7	9,8	10,2	10,4	11,0
	8H	10,3	10,5	10,9	11,0	11,6	10,3	10,5	10,9	11,0	11,6
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,9 / -0,3					0,9 / -0,3				
S = 1.5H		1,9 / -0,4					1,9 / -0,4				
S = 2.0H		2,9 / -0,8					2,9 / -0,8				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 800 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	101	101	101	99
1	115	113	111	109	112	110	109	107	106	105	104	103	102	101	99	98	98	96
2	111	107	104	102	109	106	103	101	102	100	98	99	98	96	97	95	94	93
3	108	103	99	96	106	102	98	96	99	96	94	97	94	93	94	93	91	90
4	104	99	95	92	103	98	94	92	96	93	90	94	91	89	92	90	88	87
5	101	96	91	88	100	95	91	88	93	90	87	91	89	87	90	88	86	85
6	99	92	88	85	97	92	88	85	90	87	85	89	86	84	88	85	83	82
7	96	90	86	83	95	89	85	83	88	85	82	87	84	82	86	83	81	80
8	94	87	83	80	93	87	83	80	86	82	80	85	82	80	84	81	79	78
9	91	85	81	78	90	84	81	78	84	80	78	83	80	78	82	79	77	76
10	89	83	79	76	88	82	79	76	82	78	76	81	78	76	80	78	76	75

LAMPS (number of lamps)

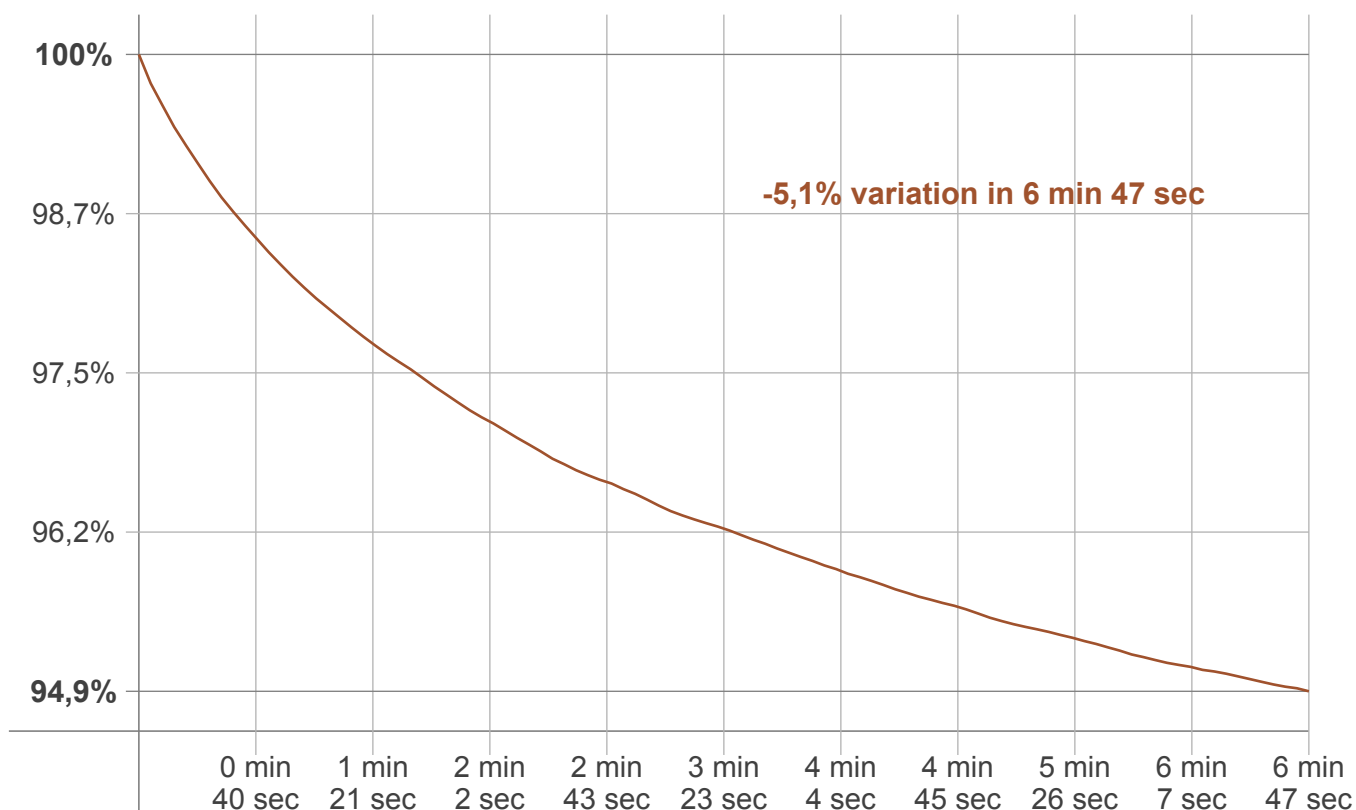
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
329 lm	320 lm	97,2 lm	23,9 lm	9,31 lm	6,32 lm	4,21 lm	2,50 lm	1,80 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,985 lm	0,930 lm	0,872 lm	0,788 lm	0,681 lm	0,552 lm	0,407 lm	0,249 lm	0,084 lm

Warmup curve



Warmup result

Warmup time:	Not completed
Warmup variation	-5,1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
3018 K	-32 K	2986 K

Output change

Output start	Output change	Output end
837 lm	-38 lm	800 lm