

### Light efficiency:

**149 Lumen/Watt**

### Light quality:

**CRI: 82,0**

### Color temperature:

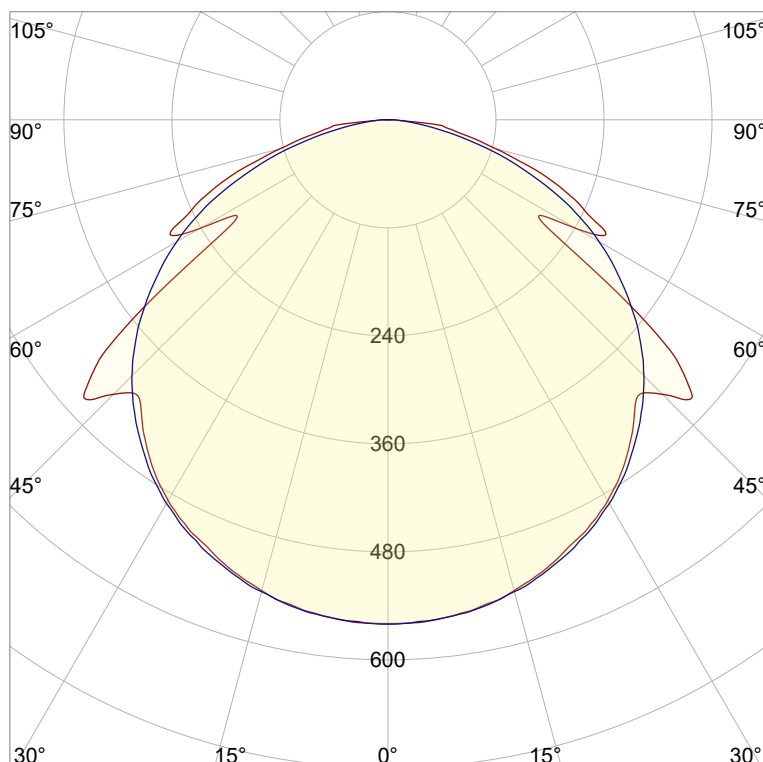
**2773 K**

**Output: 1721 lm**

**Peak: 560 cd**

**Power: 11,5 W**

**PF: 1,0**



### Product name:

**Nova-6\_510mm\_827\_Cover-Square-Transparent**

### Item number:

**NP/L1C/06F/G1/L1C/0510/827/CST**

### Date and time:

**15.07.2022 08:51:04**

### Description:

**Rank: D60-AC-8GB**

**Tolerances:**

**Lumen +/-4%**

**Candela +/-2,5%**

**Colour Temp +/-35 Kelvin**

**CRI +/-0,7**

**Angular Resolution: 1 Degree Step**

**Last Calibration 20-09-2021**

**Tester: Peter Ulrich**

**Test Site: Lichtlabor**

**Gaustrasse 13**

**55411 Bingen am Rhein**

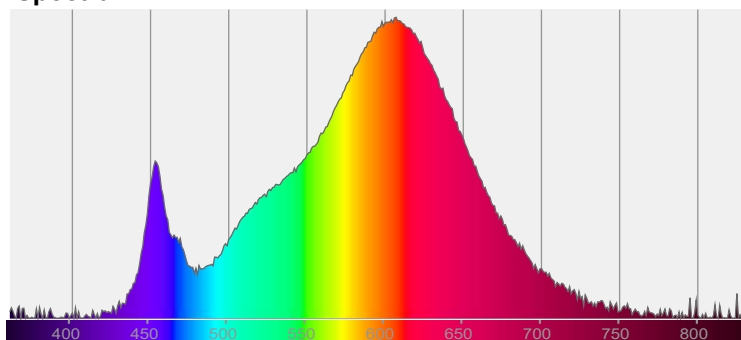


**CIE 1931**

**x: 0,452**

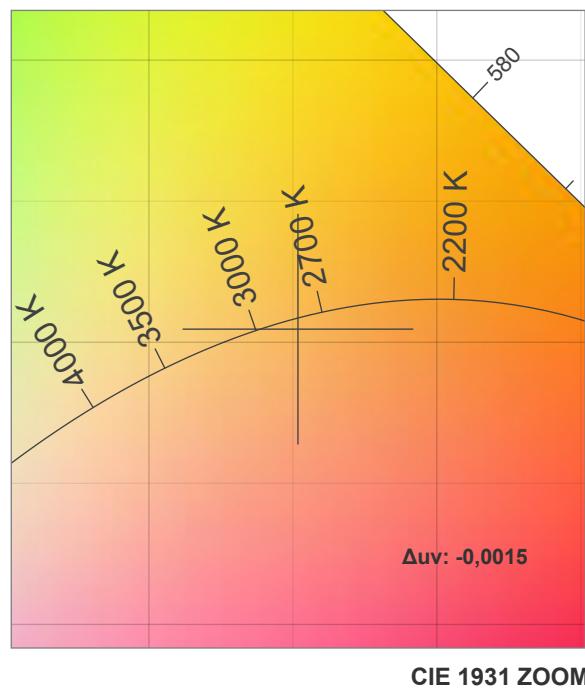
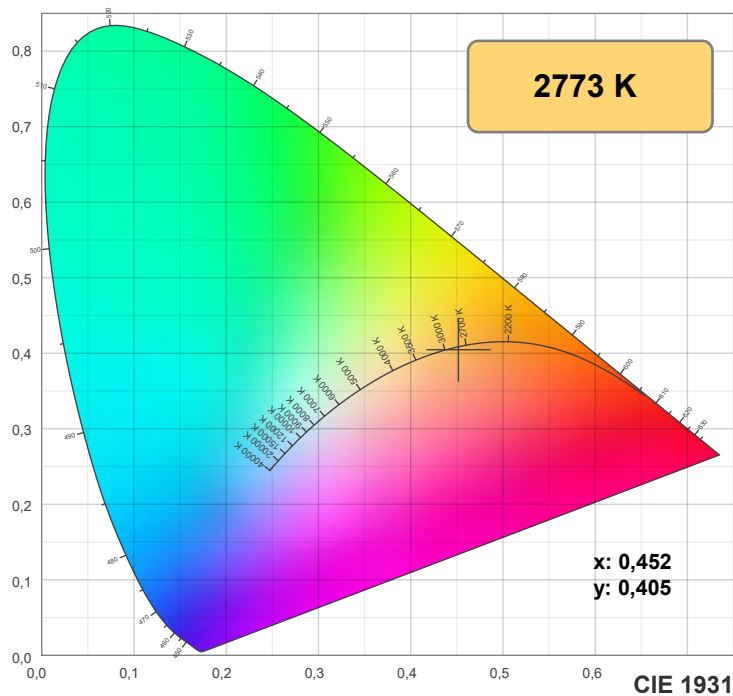
**y: 0,405**

### Spectra



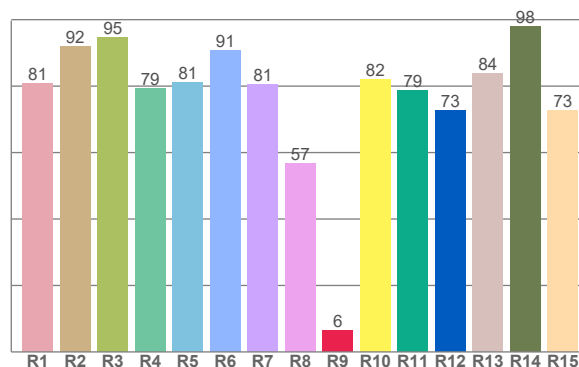
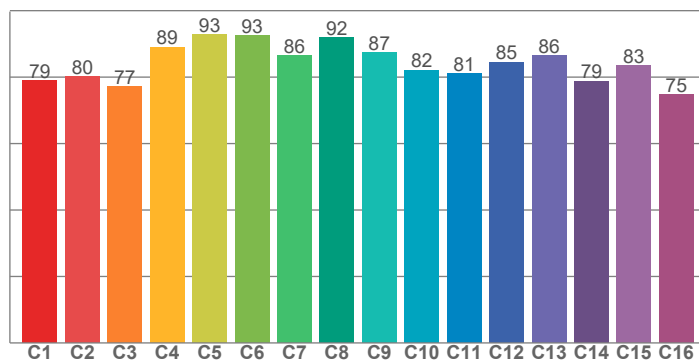
### Power

**Voltage: 48,0 V**  
**Current: 0,240 A**  
**Frequency: 0 Hz**



**TM30: 84,0**

**CRI: 82,0 (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
80,9	92,1	94,8	79,2	81,0	90,8	80,6	56,7	6,3	82,0	78,6	72,6	83,7	98,0	72,8

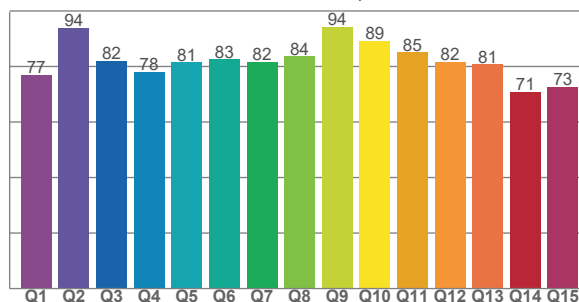
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,9	80,2	77,2	89,1	92,9	92,5	86,5	92,0	87,4	82,1	81,0	84,5	86,5	78,8	83,4	74,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,8	93,8	82,1	78,1	81,5	82,5	81,6	83,6	94,2	89,2	85,0	81,7	80,8	71,0	72,7

**CQS: 81,1**



## 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
2773 K	82,0	6,3	84,0	95,7	81,1	0,452	0,405	0,260	0,349	-0,0015

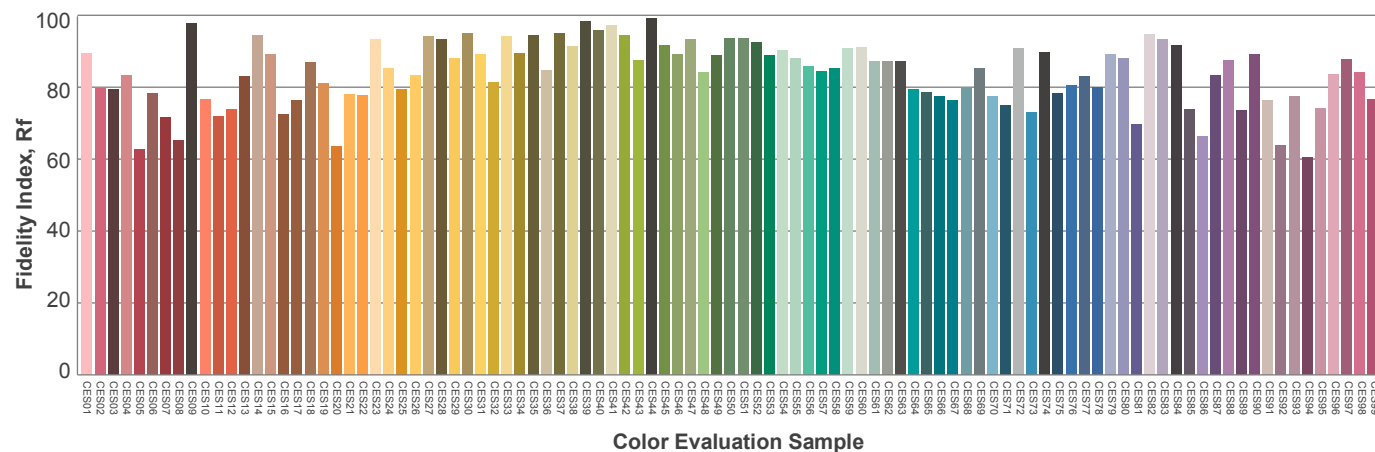
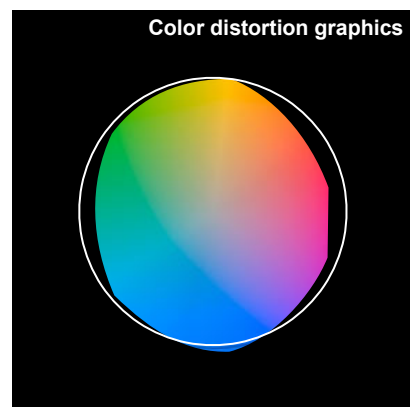
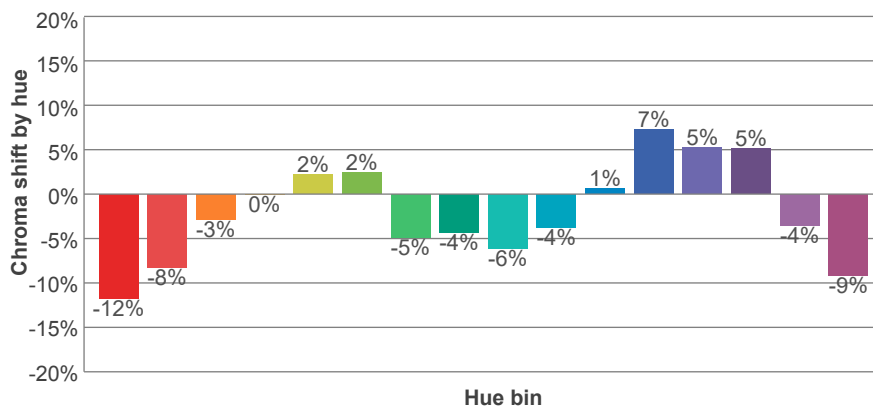
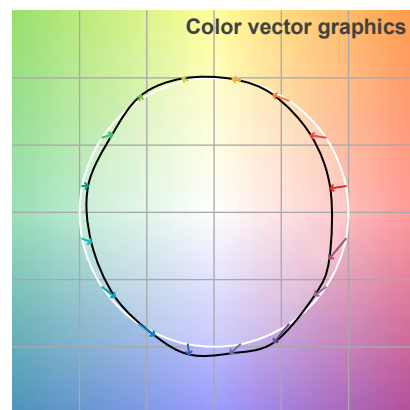
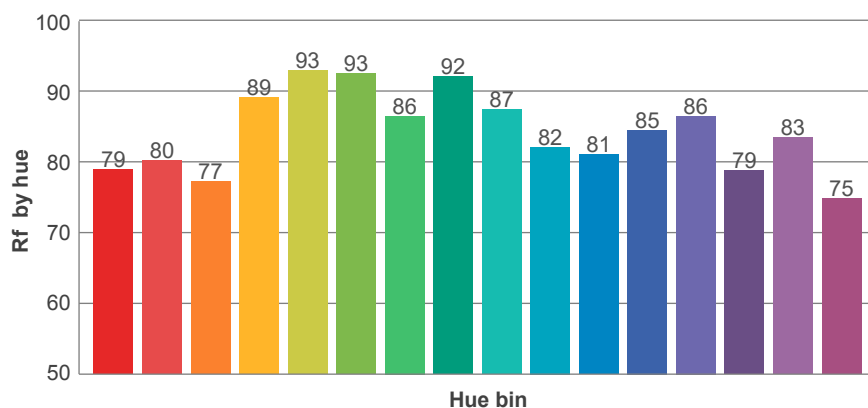
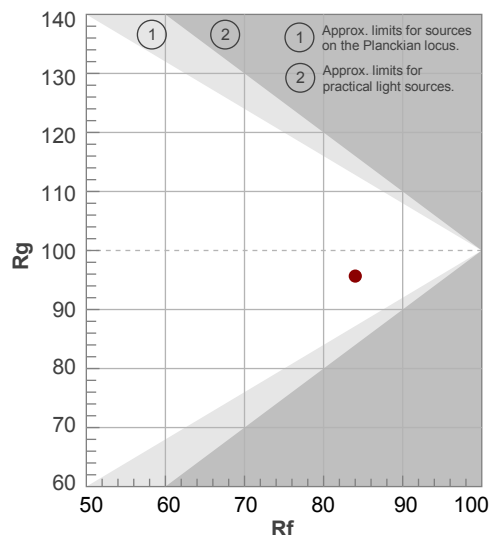
**Rf 84,0**

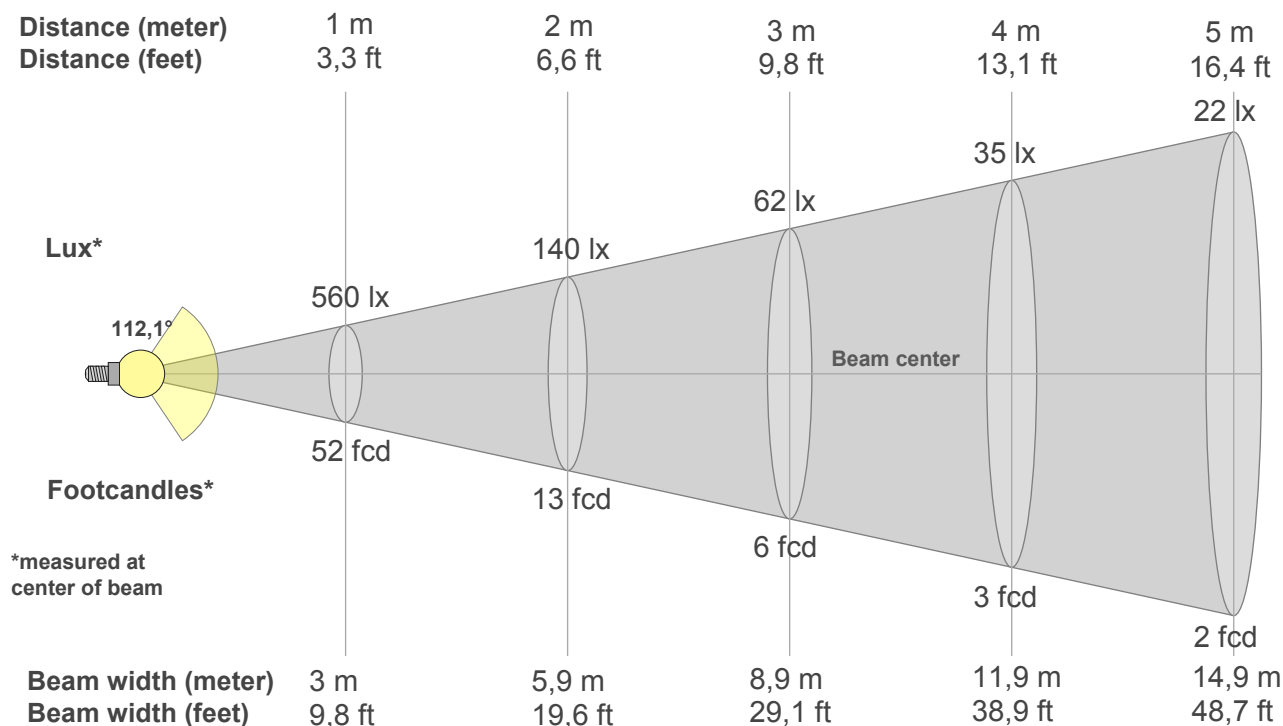
Fidelity index Rf

**Rg 95,7**

Gamut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	1%
2	80	-8%	8%
3	77	-3%	12%
4	89	0%	6%
5	93	2%	4%
6	93	2%	-3%
7	86	-5%	-6%
8	92	-4%	-1%
9	87	-6%	4%
10	82	-4%	11%
11	81	1%	14%
12	85	7%	2%
13	86	5%	-9%
14	79	5%	-17%
15	83	-4%	-10%
16	75	-9%	-17%





## 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
560lx	140lx	62lx	35lx	22lx	16lx	11lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	2lx	1lx
52fcd	13fcd	5,8fcd	3,2fcd	2,1fcd	1,4fcd	1,1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd

## 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°
560	558	552	541	527	509	488	461	426	431	421	240	242	243	189	123	78	39	2	0
100%	100%	99%	97%	94%	91%	87%	82%	76%	77%	75%	43%	43%	43%	34%	22%	14%	7%	0%	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°
560	558	553	543	529	512	492	466	436	402	363	318	271	218	159	101	51	19	3	3
100%	100%	99%	97%	95%	92%	88%	83%	78%	72%	65%	57%	48%	39%	28%	18%	9%	3%	0%	0%

## Intensities in 180° c-plane

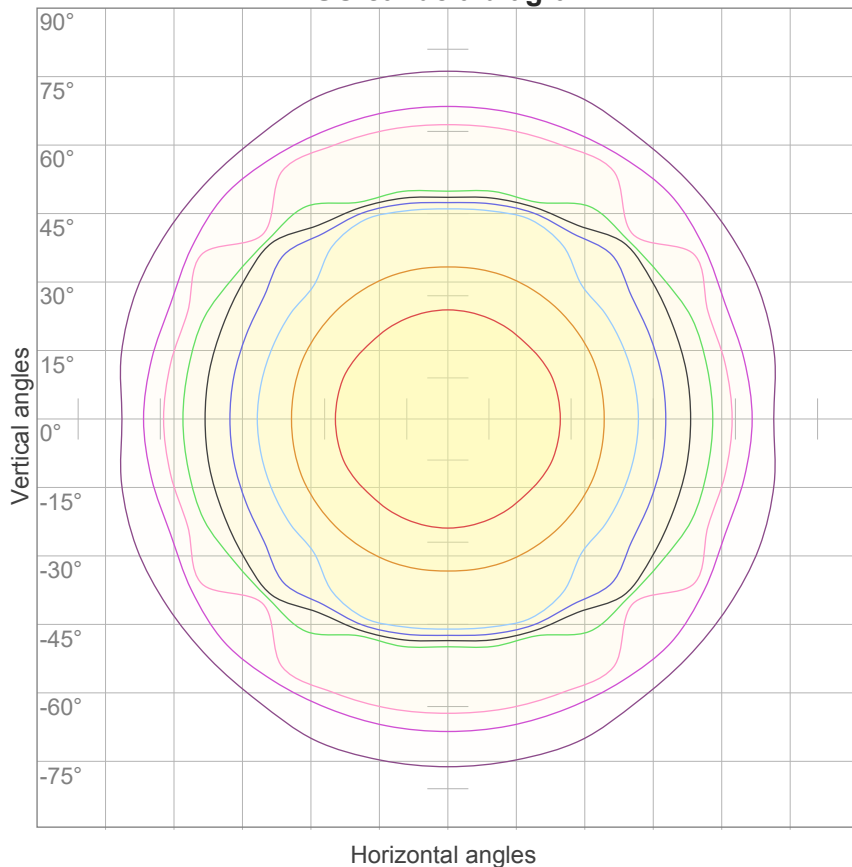
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
560	558	552	541	527	509	488	461	426	431	421	240	242	243	189	123	78	39	2	0
100%	100%	99%	97%	94%	91%	87%	82%	76%	77%	75%	43%	43%	43%	34%	22%	14%	7%	0%	0%

## 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°
560	558	553	543	529	512	492	466	436	402	363	318	271	218	159	101	51	19	3	3
100%	100%	99%	97%	95%	92%	88%	83%	78%	72%	65%	57%	48%	39%	28%	18%	9%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
112,1°	166,5°	173,1°	76,7%	51,2%

**ISO candela diagram**



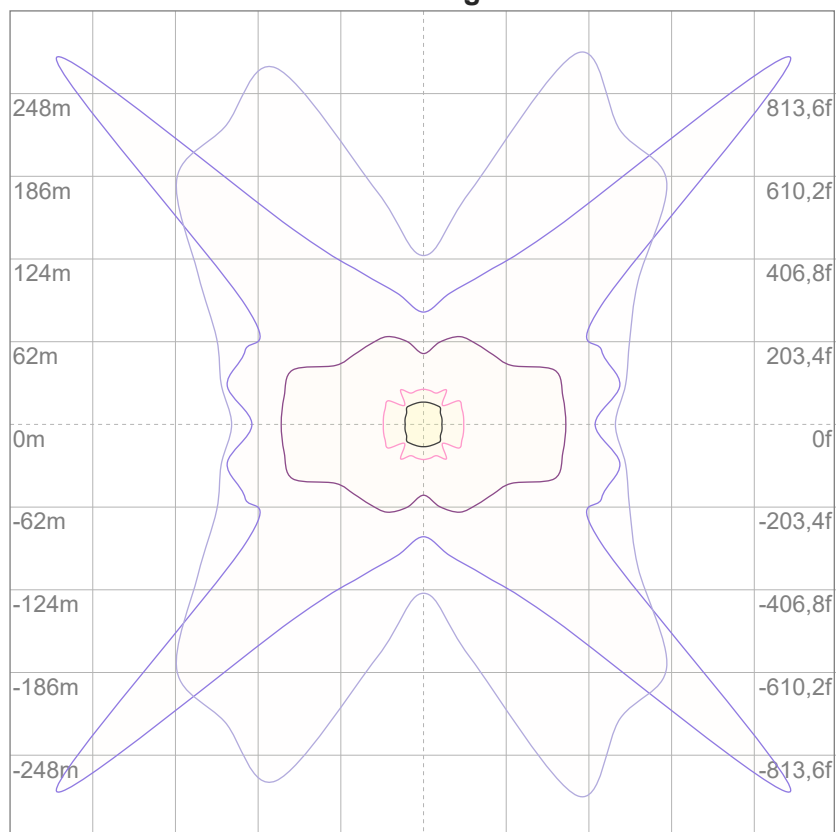
10%	56 cd
20%	112 cd
30%	168 cd
40%	224 cd
50%	280 cd
60%	336 cd
70%	392 cd
80%	448 cd
90%	504 cd

Conditions:

Number of c-planes: 16

Candela at center: 560 cd

**ISO lux diagram**



3%	0,168 lx
5%	0,280 lx
10%	0,560 lx
30%	1,68 lx
50%	2,80 lx

Conditions:

Number of c-planes: 16

Lux at center: 5,60 lx

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

### Glare Evaluation According to UGR

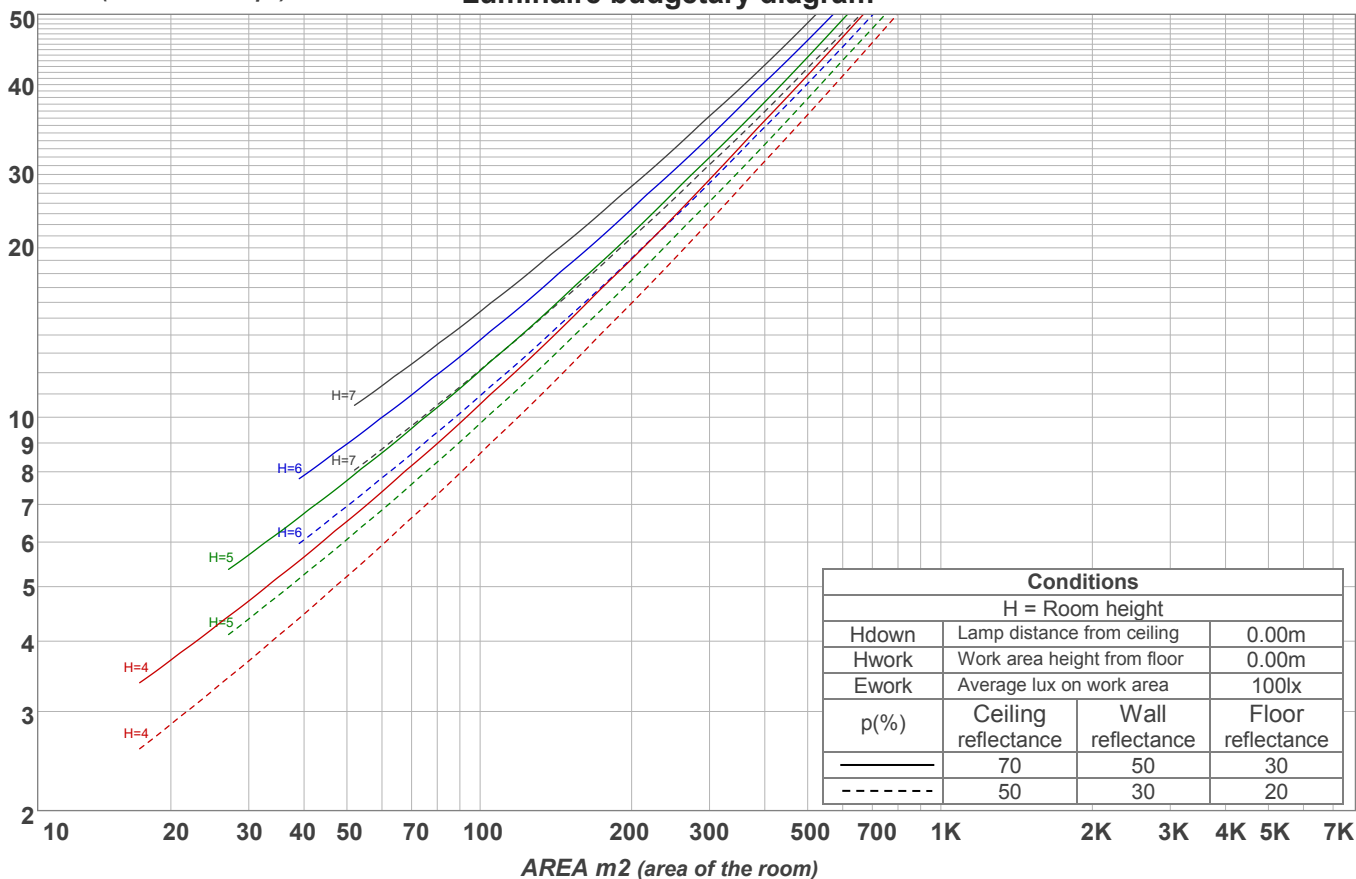
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	24,3	25,5	24,5	25,8	26,0	25,5	26,8	25,7	27,1	27,3
	3H	25,8	27,1	26,2	27,4	27,6	26,8	28,1	27,2	28,4	28,6
	4H	26,3	27,5	26,7	27,8	28,0	27,3	28,5	27,7	28,8	29,0
	6H	26,6	27,7	26,9	28,0	28,3	27,6	28,7	27,9	29,0	29,4
	8H	26,7	27,7	27,0	28,0	28,4	27,7	28,7	28,0	29,0	29,5
	12H	26,7	27,7	27,1	28,1	28,5	27,7	28,7	28,1	29,1	29,5
4H	2H	24,8	26,0	25,2	26,3	26,6	25,8	27,0	26,2	27,3	27,6
	3H	26,7	27,7	27,1	28,1	28,5	27,4	28,4	27,8	28,8	29,2
	4H	27,2	28,1	27,7	28,6	29,1	27,9	28,8	28,3	29,2	29,8
	6H	27,6	28,5	28,1	28,8	29,2	28,3	29,2	28,8	29,5	29,9
	8H	27,7	28,5	28,2	28,9	29,3	28,4	29,2	28,9	29,6	30,0
	12H	27,8	28,5	28,3	28,9	29,4	28,4	29,1	28,9	29,6	30,0
8H	4H	27,5	28,3	28,0	28,7	29,0	28,1	28,9	28,6	29,3	29,6
	6H	27,9	28,6	28,4	29,0	29,6	28,6	29,2	29,1	29,7	30,3
	8H	28,2	28,7	28,7	29,2	29,9	28,8	29,4	29,3	29,9	30,5
	12H	28,3	28,8	28,9	29,3	29,9	28,9	29,4	29,5	29,9	30,5
12H	4H	27,5	28,2	28,0	28,6	29,1	28,1	28,7	28,6	29,2	29,6
	6H	28,0	28,6	28,5	29,1	29,7	28,7	29,2	29,2	29,7	30,4
	8H	28,2	28,7	28,8	29,2	29,8	28,9	29,3	29,4	29,8	30,4
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,3 / -0,3					0,1 / -0,1				
S = 1.5H		0,6 / -0,9					0,3 / -0,4				
S = 2.0H		1,0 / -0,7					0,8 / -0,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1721 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	108	103	99	95	105	101	97	93	96	93	90	92	90	87	89	86	84	82
2	98	90	82	77	95	88	81	76	84	78	74	80	76	72	77	73	70	68
3	89	78	70	63	87	77	69	63	73	67	61	71	65	60	68	63	59	57
4	81	69	60	53	79	68	59	53	65	58	52	63	56	51	60	55	50	48
5	75	62	52	46	73	60	52	45	58	51	45	56	49	44	54	48	44	41
6	69	55	46	40	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	47	40	34	46	39	34	45	38	34	32
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

LAMPS (number of lamps)

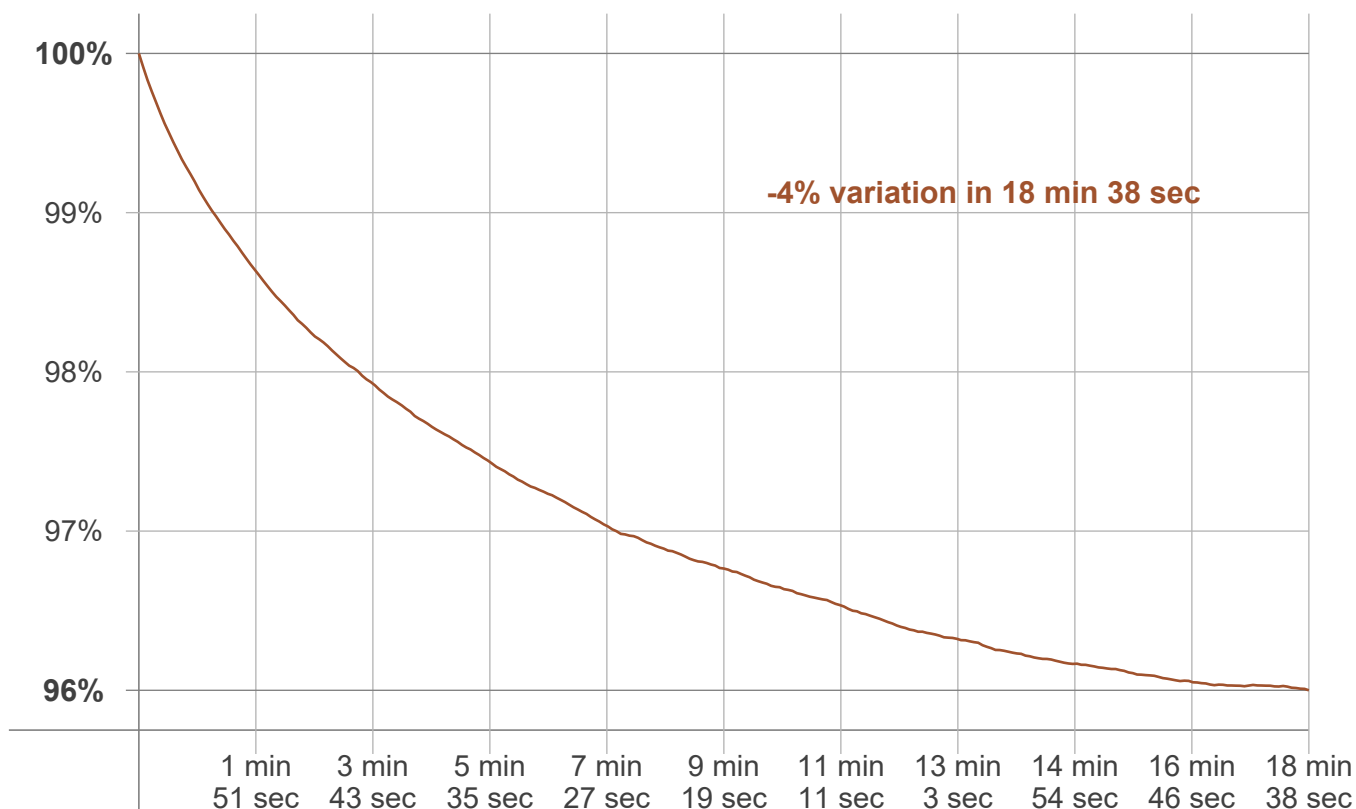
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
49,6 lm	150 lm	236 lm	288 lm	316 lm	281 lm	216 lm	129 lm	40,3 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2,99 lm	3,24 lm	1,09 lm	0,985 lm	0,705 lm	0,476 lm	0,351 lm	0,215 lm	5,00 lm

### Warmup curve



### Warmup result

Warmup time:	Lamp stabilized in 18 min 38 sec
Warmup variation	-4,0%

### Warmup conditions

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

### Color temperature change

CCT start	CCT change	CCT end
2767 K	+6 K	2773 K

### Output change

Output start	Output change	Output end
1787 lm	-67 lm	1721 lm