

### Light efficiency:

**63 Lumen/Watt**

### Light quality:

**CRI: 81,8**

### Color temperature:

**2657 K**

**Output: 726 lm**

**Peak: 181 cd**

**Power: 11,5 W**

**PF: 1,0**



### Product name:

**Nova-6\_510mm\_827\_Cover-Round-White**

### Item number:

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

### Date and time:

**14.07.2022 16:52:14**

### Description:

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

**Tolerances:**

**Lumen +/-4%**

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

**Colour Temp +/-35 Kelvin**

**CRI +/-0,7**

**Angular Resolution: 1 Degree Step**

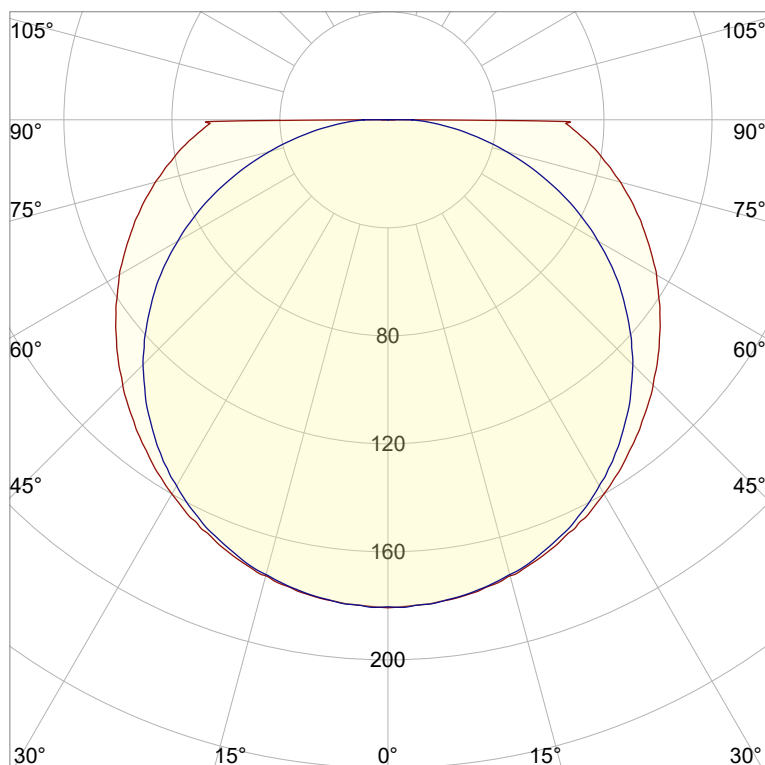
**Last Calibration 20-09-2021**

**Tester: Peter Ulrich**

**Test Site: Lichtlabor**

**Gaustrasse 13**

**55411 Bingen am Rhein**

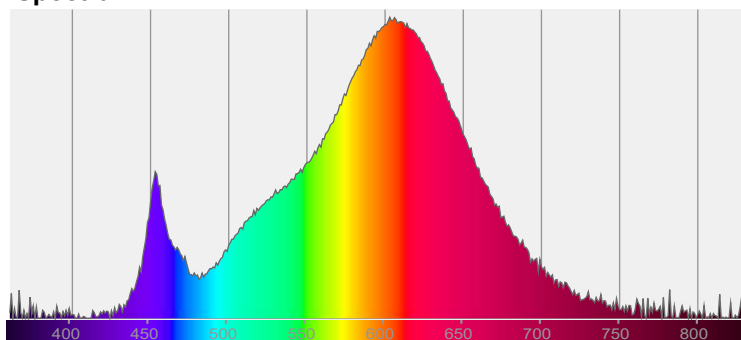


**CIE 1931**

**x: 0,461**

**y: 0,407**

### Spectra

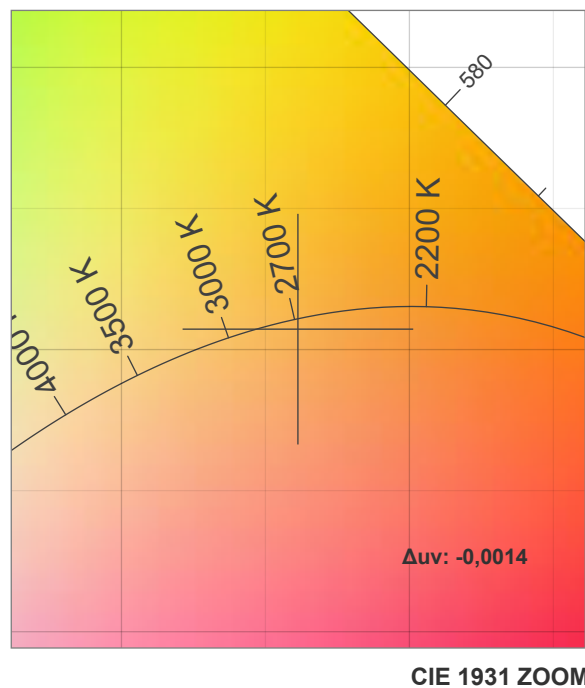
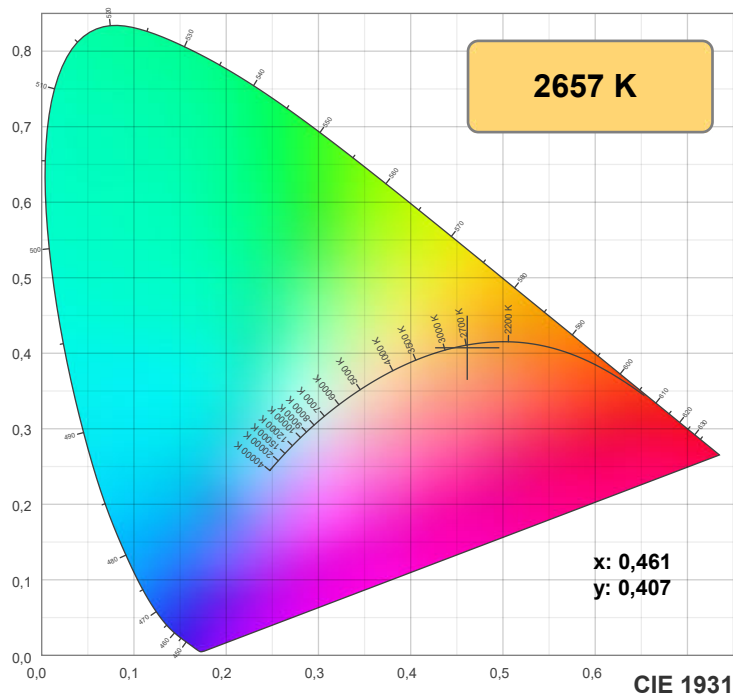


### Power

**Voltage: 48,0 V**

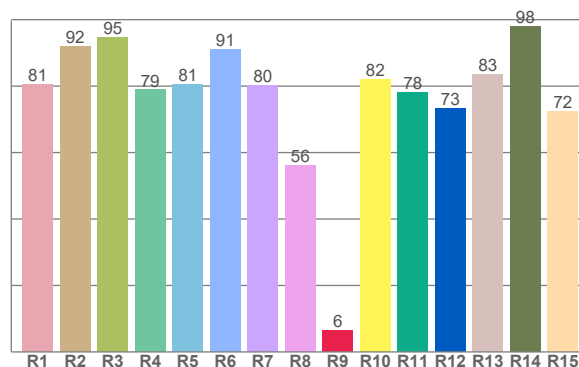
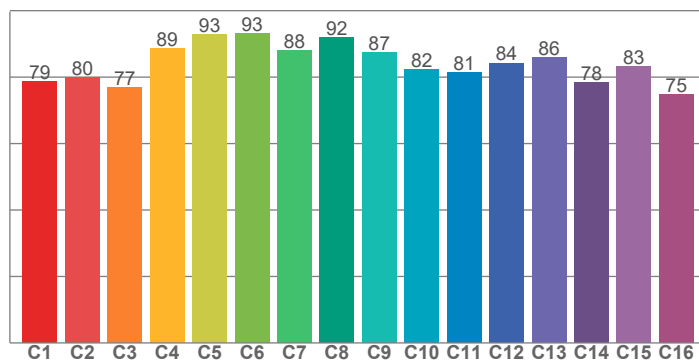
**Current: 0,240 A**

**Frequency: 0 Hz**



**TM30: 83,9**

**CRI: 81,8 (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
80,6	92,0	94,6	78,9	80,6	91,0	80,2	56,0	6,4	82,1	78,2	73,2	83,5	98,0	72,4

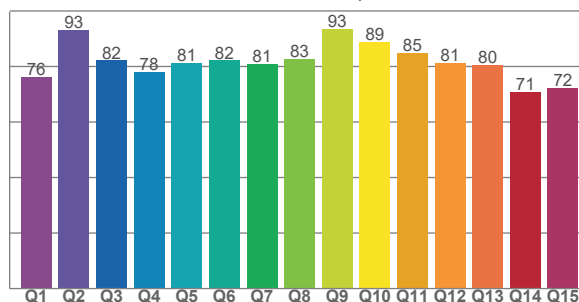
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,7	79,9	76,9	88,5	92,9	93,2	88,0	91,9	87,4	82,3	81,3	84,2	85,9	78,4	83,1	74,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,3	93,1	82,1	78,1	81,3	82,1	80,9	82,8	93,4	88,9	84,8	81,4	80,4	70,9	72,4

**CQS: 80,7**



## 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	$\Delta uv$
2657 K	81,8	6,4	83,9	95,9	80,7	0,461	0,407	0,265	0,351	-0,0014

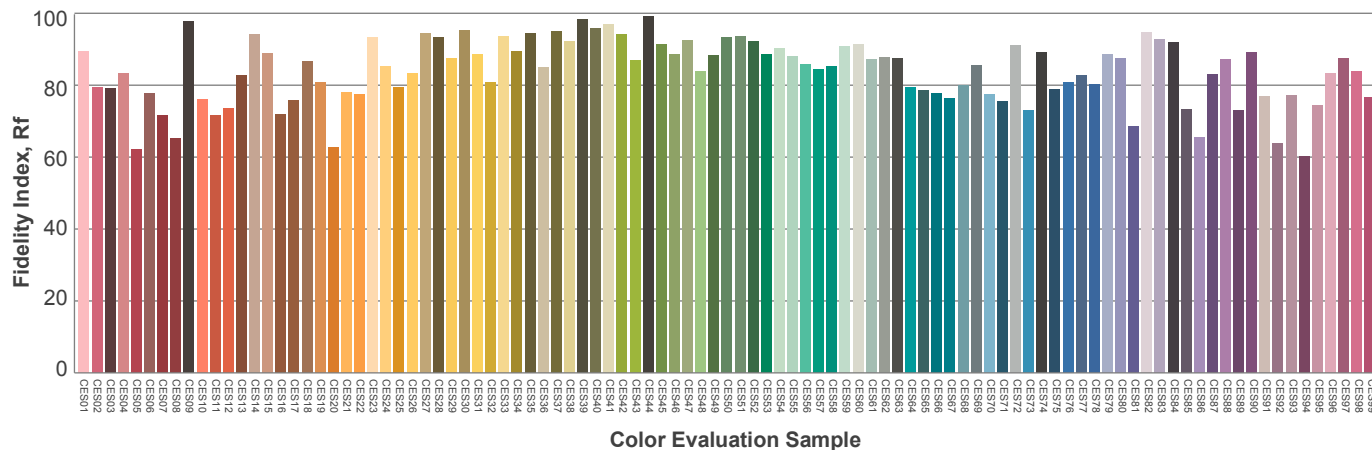
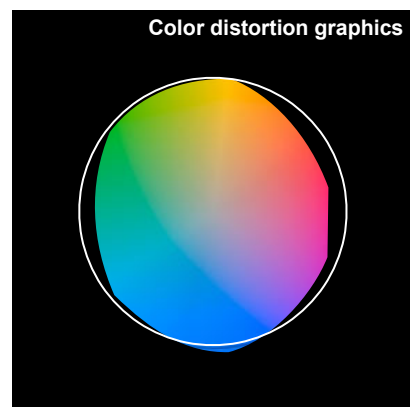
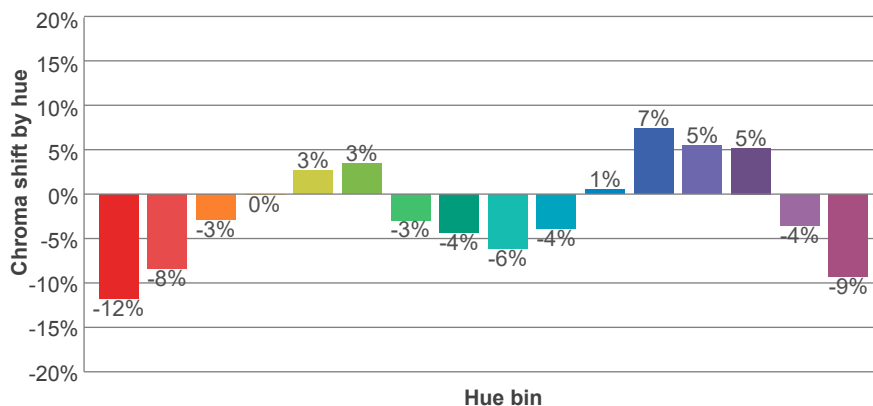
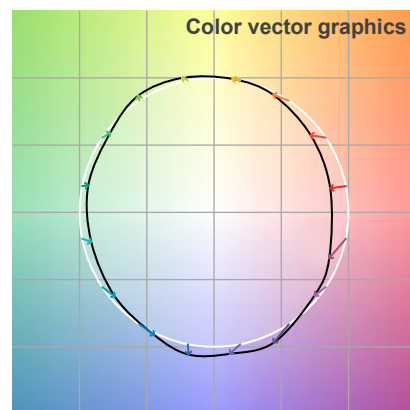
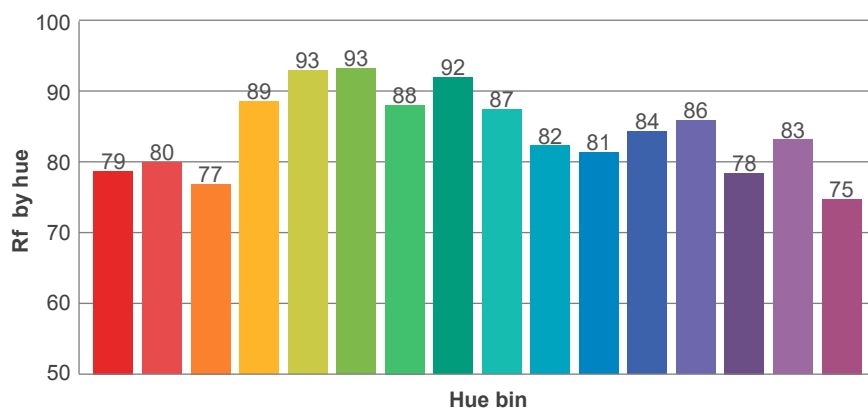
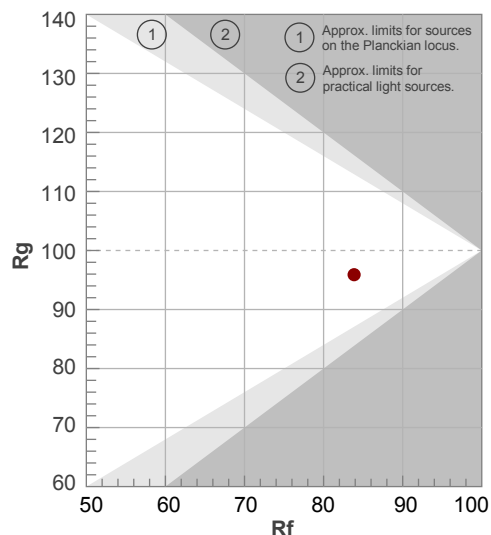
**Rf 83,9**

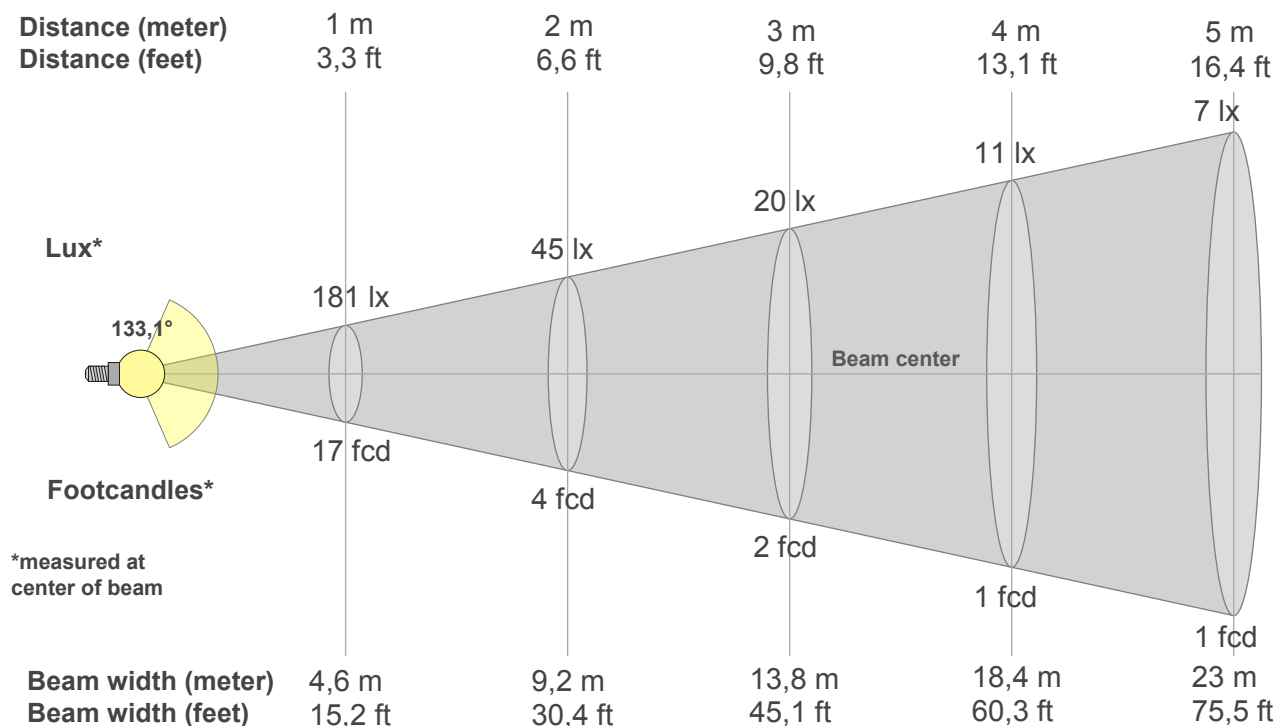
Fidelity index Rf

**Rg 95,9**

Gammut 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	3%	4%
6	93	3%	-1%
7	88	-3%	-7%
8	92	-4%	-1%
9	87	-6%	4%
10	82	-4%	11%
11	81	1%	14%
12	84	7%	2%
13	86	5%	-9%
14	78	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
181lx	45lx	20lx	11lx	7lx	5lx	4lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx
16,8fcd	4,2fcd	1,9fcd	1fcd	0,7fcd	0,5fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd

## Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
181	179	173	164	152	139	125	110	94	79	32	29	26	23	19	16	13	10	6	3
100%	99%	96%	91%	84%	77%	69%	61%	52%	44%	18%	16%	14%	12%	11%	9%	7%	5%	3%	2%

## Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
181	178	172	161	146	128	106	81	54	29	4	4	3	3	2	2	2	1	1	0
100%	99%	95%	89%	81%	71%	59%	45%	30%	16%	2%	2%	2%	2%	1%	1%	1%	1%	0%	0%

## Intensities in 180° c-plane

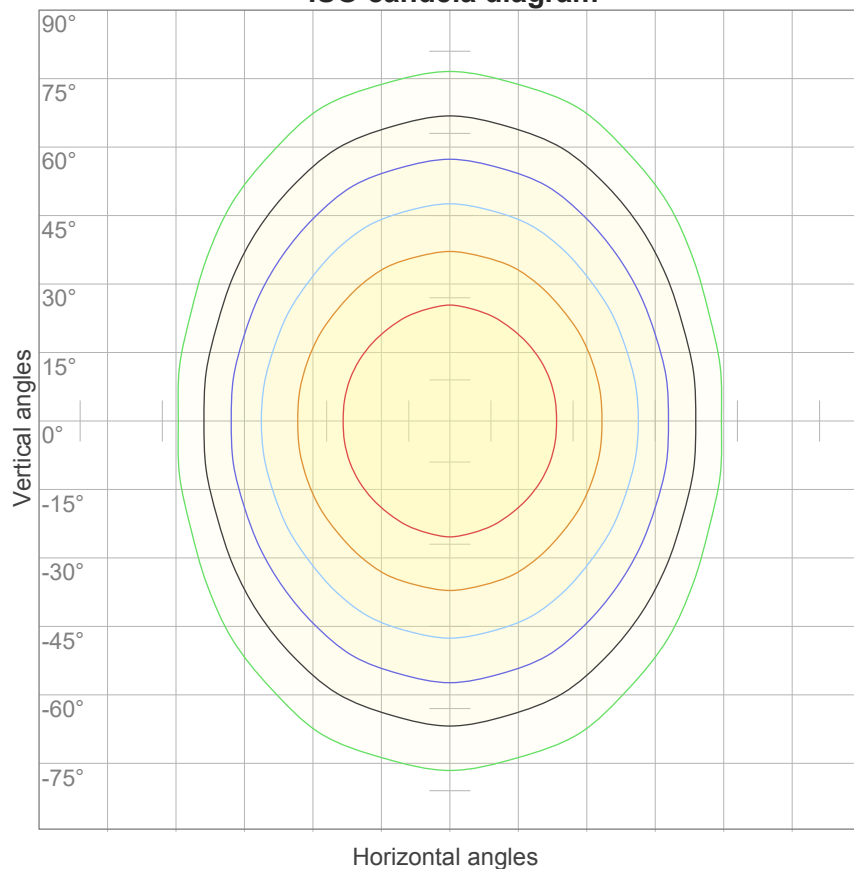
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
181	179	173	164	152	139	125	110	94	79	32	29	26	23	19	16	13	10	6	3
100%	99%	96%	91%	84%	77%	69%	61%	52%	44%	18%	16%	14%	12%	11%	9%	7%	5%	3%	2%

## Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
181	178	172	161	146	128	106	81	54	29	4	4	3	3	2	2	2	1	1	0
100%	99%	95%	89%	81%	71%	59%	45%	30%	16%	2%	2%	2%	2%	1%	1%	1%	1%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
133,1°	194,7°	292,4°	60,8%	39,7%

### ISO candela diagram



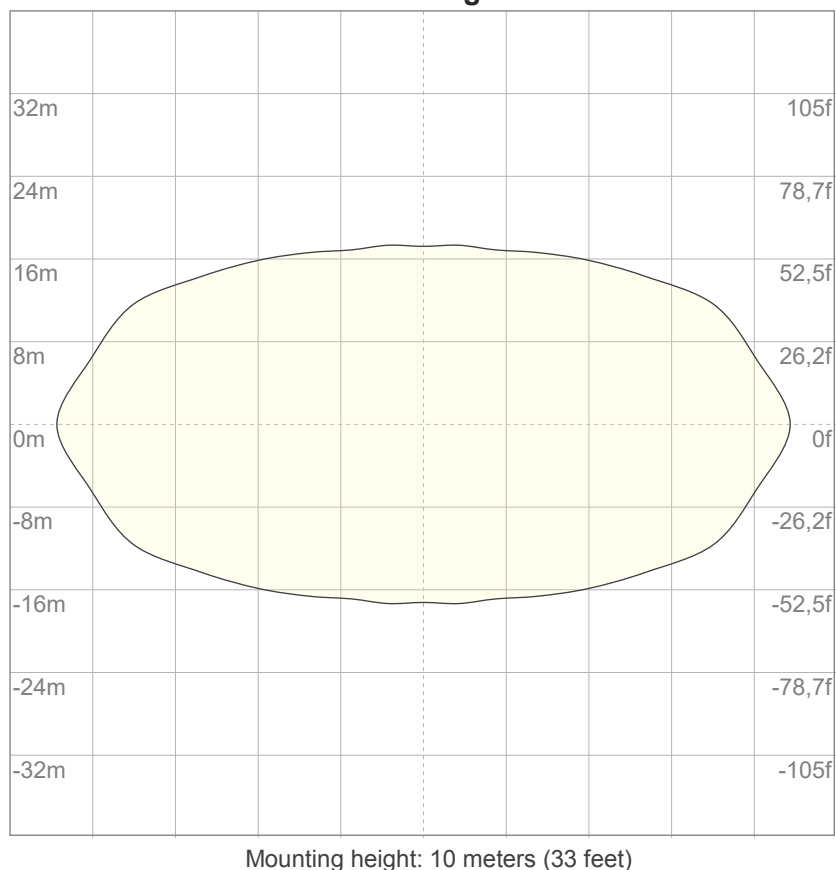
10%	18 cd
20%	36 cd
30%	54 cd
40%	72 cd
50%	90 cd
60%	108 cd
70%	126 cd
80%	144 cd
90%	163 cd

#### Conditions:

Number of c-planes: 16

Candela at center: 181 cd

### ISO lux diagram



3%	54,2m lx
5%	90,3m lx
10%	0,181 lx
30%	0,542 lx
50%	0,903 lx

#### Conditions:

Number of c-planes: 16

Lux at center: 1,81 lx

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

### Glare Evaluation According to UGR

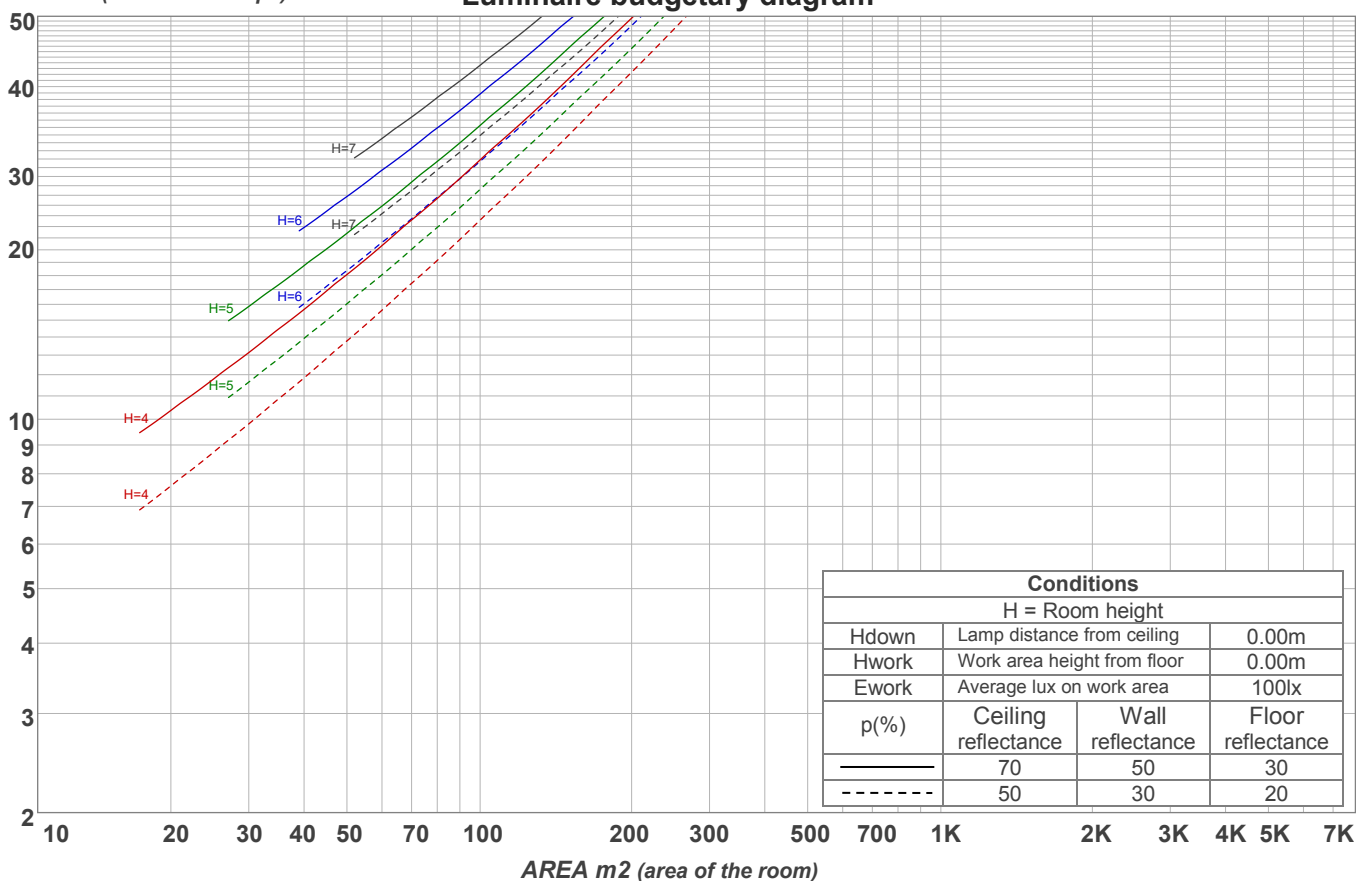
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	20,8	22,1	21,0	22,5	22,7	20,9	22,2	21,1	22,6	22,8
	3H	22,8	24,2	23,2	24,5	24,7	22,6	24,0	23,0	24,3	24,5
	4H	23,8	25,2	24,3	25,5	25,8	23,4	24,7	23,8	25,0	25,3
	6H	25,0	26,2	25,3	26,4	26,8	24,1	25,4	24,5	25,6	26,0
	8H	25,4	26,6	25,8	26,9	27,4	24,4	25,6	24,8	25,9	26,3
	12H	25,9	27,1	26,3	27,4	27,9	24,6	25,8	25,0	26,1	26,6
4H	2H	21,4	22,8	21,9	23,1	23,4	21,5	22,9	21,9	23,2	23,4
	3H	23,8	25,0	24,2	25,3	25,8	23,5	24,7	23,9	25,0	25,5
	4H	24,9	26,0	25,4	26,4	27,0	24,4	25,5	24,9	25,9	26,5
	6H	26,2	27,2	26,7	27,6	28,0	25,2	26,3	25,7	26,6	27,0
	8H	26,8	27,7	27,3	28,1	28,5	25,6	26,6	26,1	26,9	27,3
	12H	27,4	28,2	27,8	28,6	29,1	25,9	26,7	26,4	27,2	27,7
8H	4H	25,4	26,3	25,9	26,7	27,1	24,9	25,8	25,4	26,2	26,6
	6H	26,8	27,6	27,3	28,1	28,6	26,0	26,7	26,5	27,2	27,7
	8H	27,6	28,3	28,1	28,8	29,5	26,5	27,2	27,0	27,7	28,3
	12H	28,4	29,0	29,0	29,5	30,1	26,9	27,5	27,5	28,0	28,6
12H	4H	25,4	26,2	25,9	26,7	27,1	25,0	25,8	25,5	26,2	26,7
	6H	27,0	27,7	27,5	28,2	28,8	26,2	26,9	26,7	27,4	28,0
	8H	27,8	28,4	28,4	28,9	29,5	26,7	27,3	27,3	27,8	28,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / 0,0					0,0 / 0,0				
S = 1.5H		0,1 / -0,1					0,0 / -0,1				
S = 2.0H		0,2 / -0,2					0,3 / -0,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 726 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	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	104	98	92	87	100	94	90	85	88	84	81	83	80	77	78	75	73	70
2	93	84	76	69	89	81	73	67	76	70	64	71	66	61	66	62	59	56
3	84	72	63	56	81	70	62	55	66	59	53	62	56	51	58	53	49	46
4	77	64	54	47	74	62	53	46	58	50	44	54	48	43	51	46	41	38
5	70	56	47	40	67	55	46	39	52	44	38	49	42	36	46	40	35	33
6	65	51	41	34	62	49	40	34	46	39	33	44	37	32	41	35	31	28
7	60	46	36	30	58	44	36	30	42	34	29	40	33	28	38	32	27	25
8	56	42	33	27	54	40	32	26	38	31	25	36	30	25	34	29	24	22
9	52	38	30	24	50	37	29	23	35	28	23	33	27	22	32	26	22	20
10	49	35	27	21	47	34	26	21	33	25	21	31	25	20	29	24	20	18

LAMPS (number of lamps)

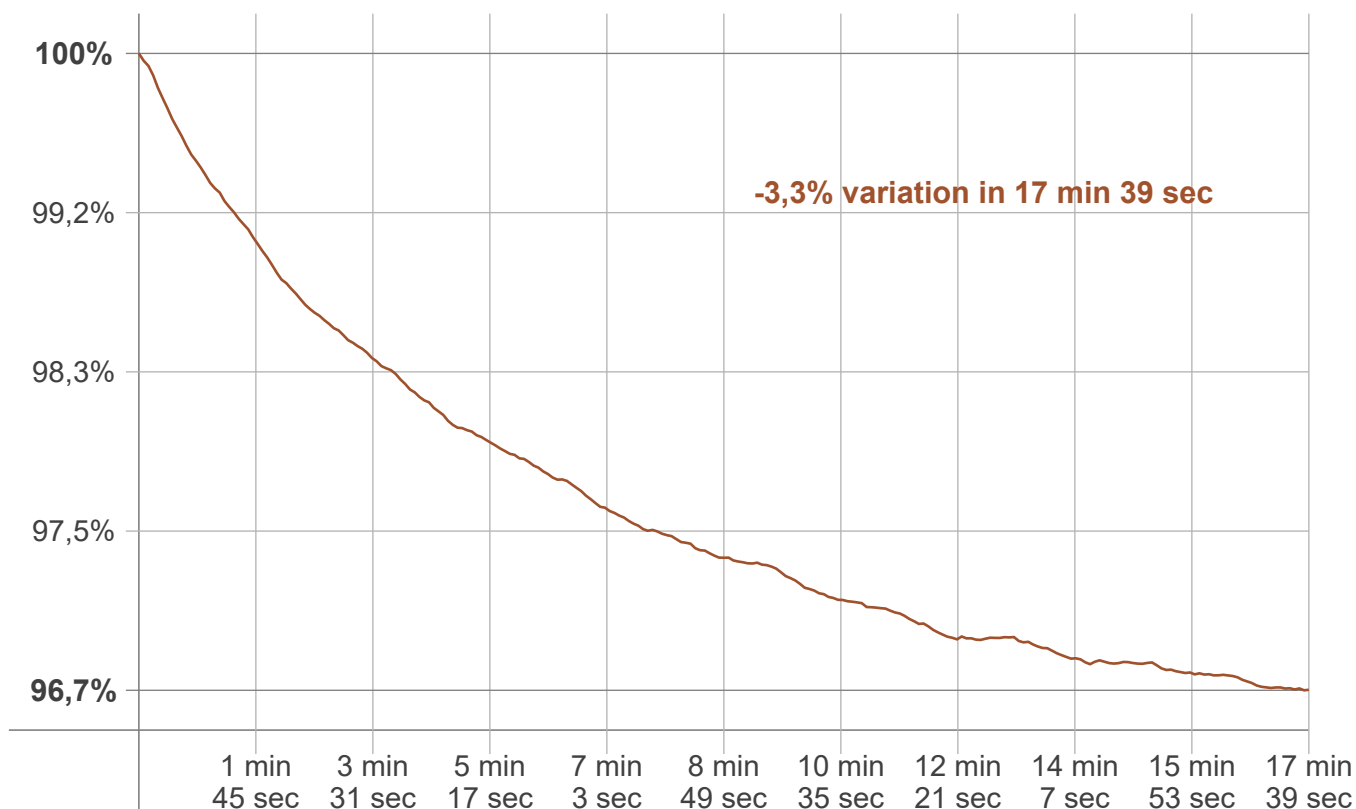
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
17,1 lm	49,4 lm	76,0 lm	94,4 lm	103 lm	101 lm	90,8 lm	73,9 lm	53,2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
18,1 lm	16,3 lm	15,1 lm	9,31 lm	3,90 lm	1,78 lm	1,31 lm	0,802 lm	0,270 lm

### Warmup curve



### Warmup result

Warmup time:	Lamp stabilized in 17 min 39 sec
Warmup variation	-3,3%

### Warmup conditions

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

### Color temperature change

CCT start	CCT change	CCT end
2653 K	+4 K	2657 K

### Output change

Output start	Output change	Output end
750 lm	-24 lm	726 lm