

Light efficiency:

109 Lumen/Watt

Light quality:

CRI: 94,5

Color temperature:

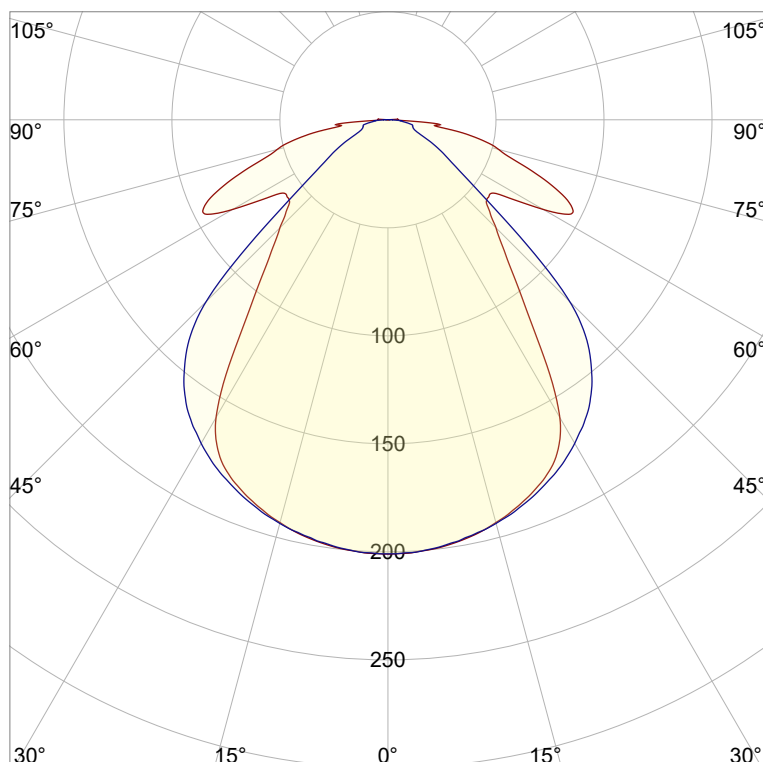
2733 K

Output: 473 lm

Peak: 201 cd

Power: 4,3 W

PF: 1,0



Product name:

Victory-7_510mm_927_Cover-Square-Microprismatic

Item number:

NP/L1C/03F/G1/L1C/0510/927/CSM

Date and time:

02.06.2022 09:25:12

Description:

Rank: C80-AD-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

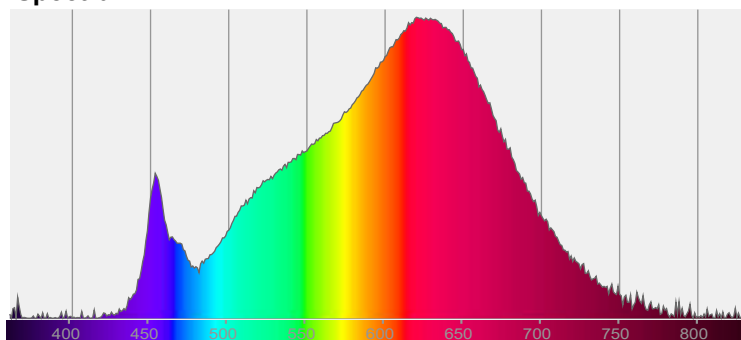


CIE 1931

x: 0,457

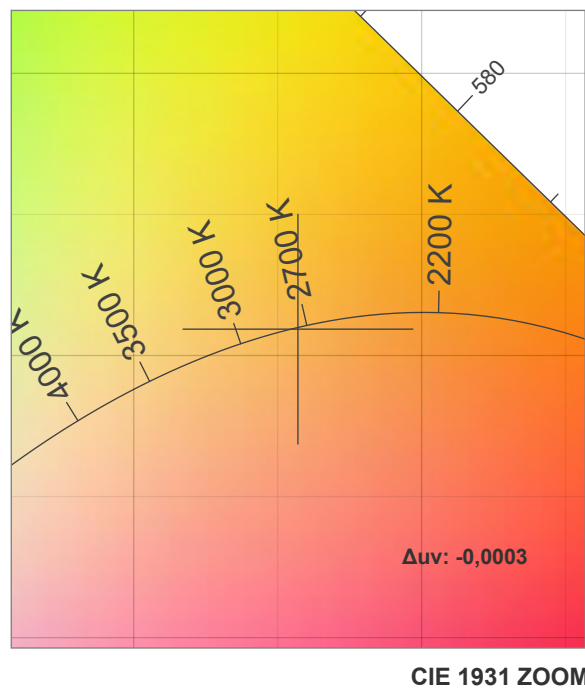
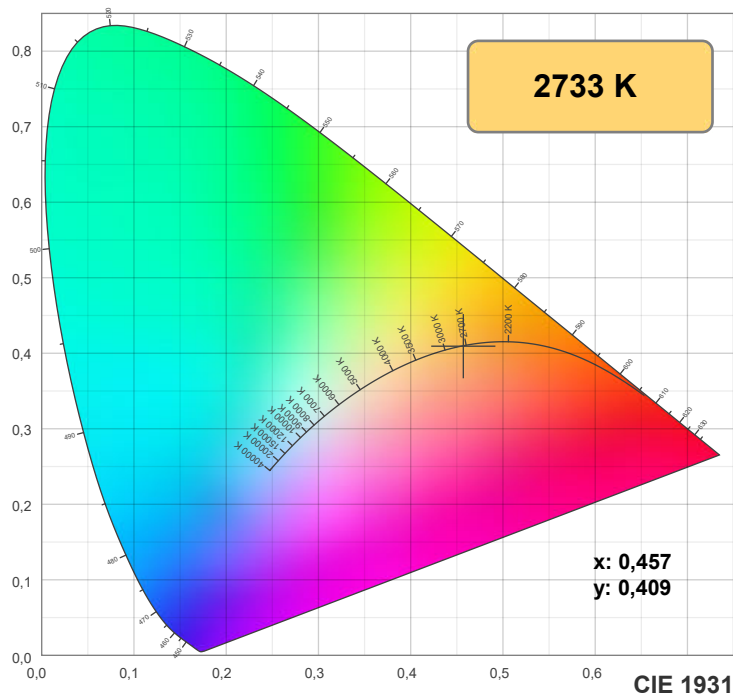
y: 0,409

Spectra

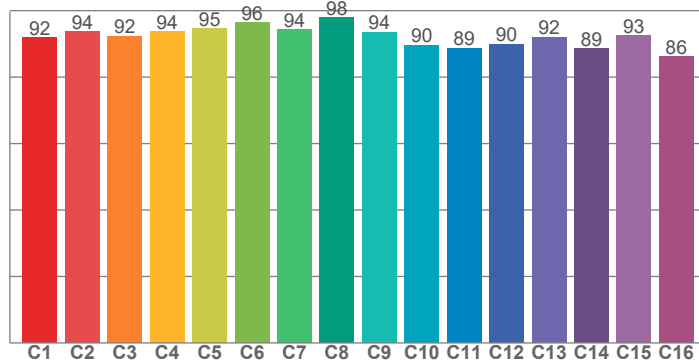


Power

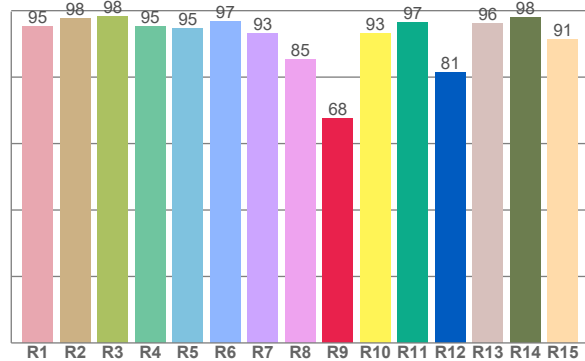
Voltage: 48,0 V
Current: 0,090 A
Frequency: 0 Hz



TM30: 92,1



CRI: 94,5 (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
95,3	97,6	98,2	95,2	94,8	96,8	93,2	85,2	67,6	93,1	96,5	81,5	96,1	98,0	91,3

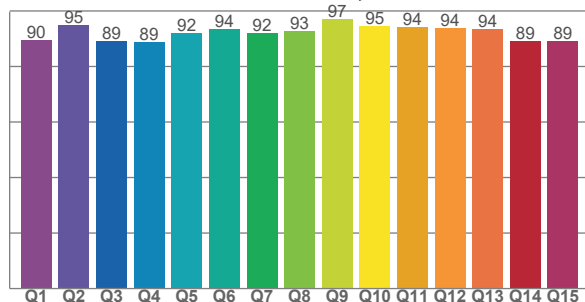
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,9	93,7	92,3	93,7	94,7	96,4	94,4	97,9	93,6	89,6	88,7	90,0	92,1	88,5	92,6	86,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,5	95,1	89,2	88,8	92,1	93,5	92,0	92,9	97,2	94,6	94,3	94,0	93,6	89,1	89,2

CQS: 91,8



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
2733 K	94,5	67,6	92,1	99,3	91,8	0,457	0,409	0,261	0,351	-0,0003

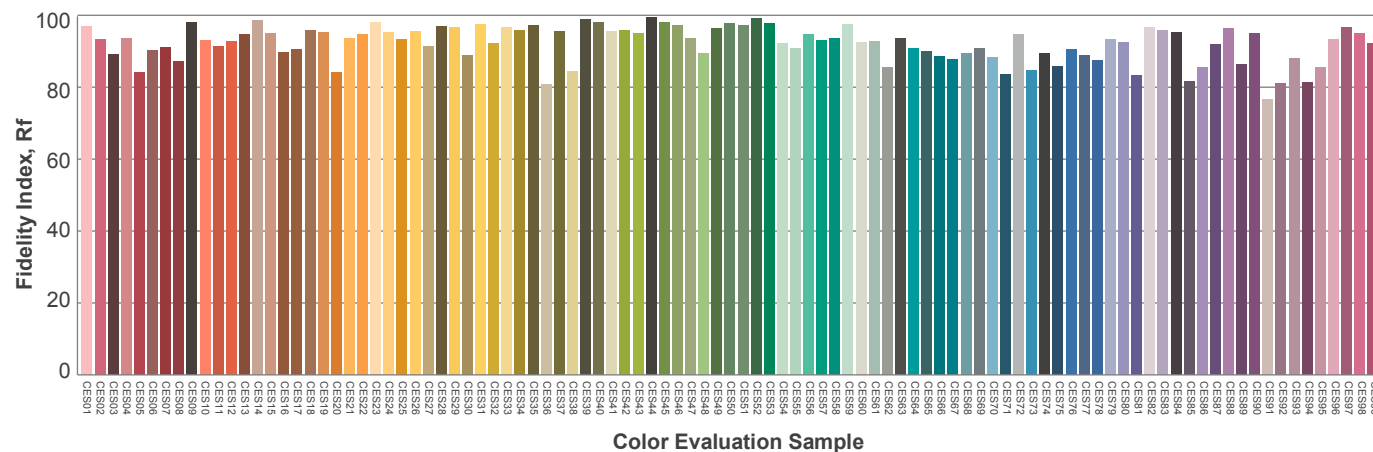
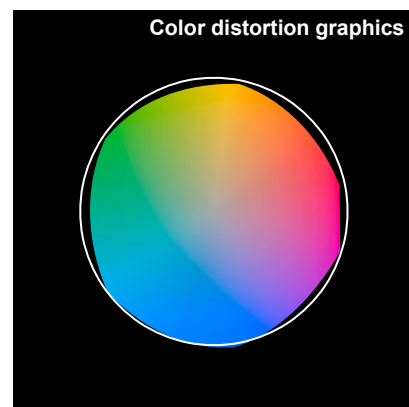
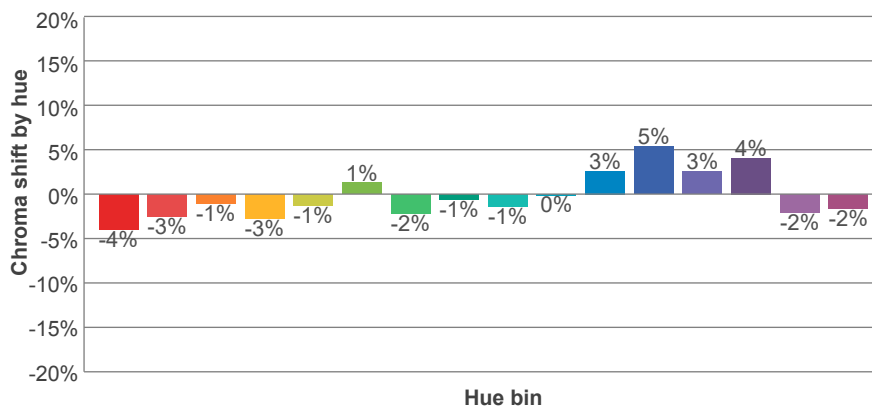
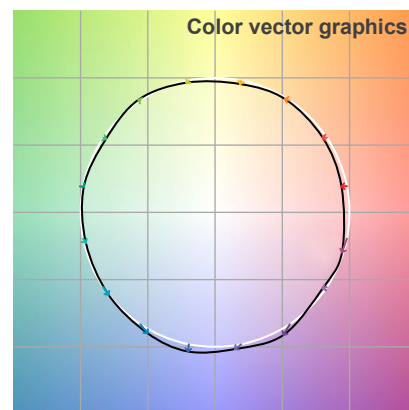
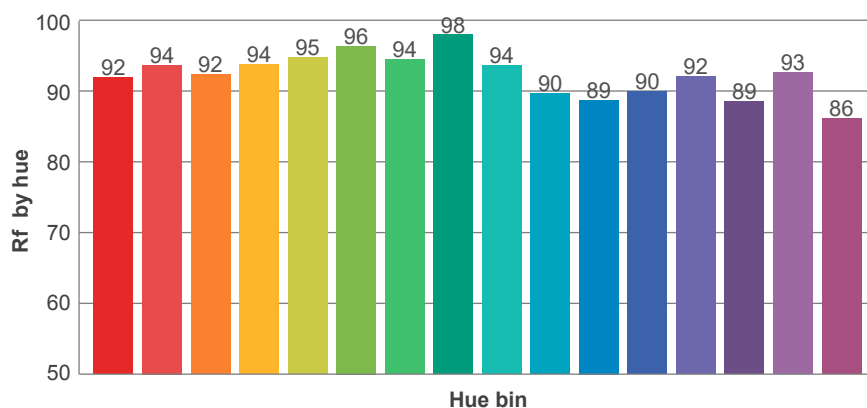
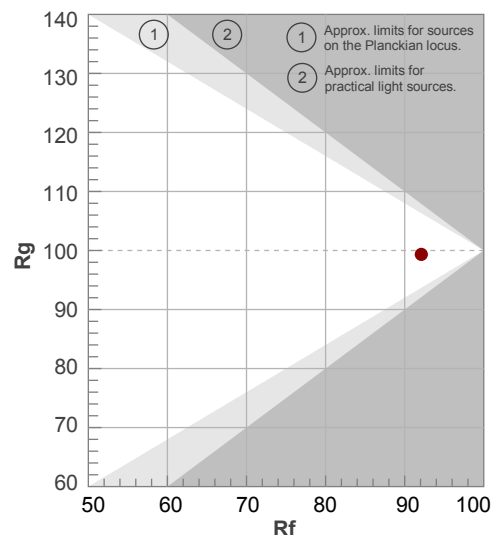
Rf 92,1

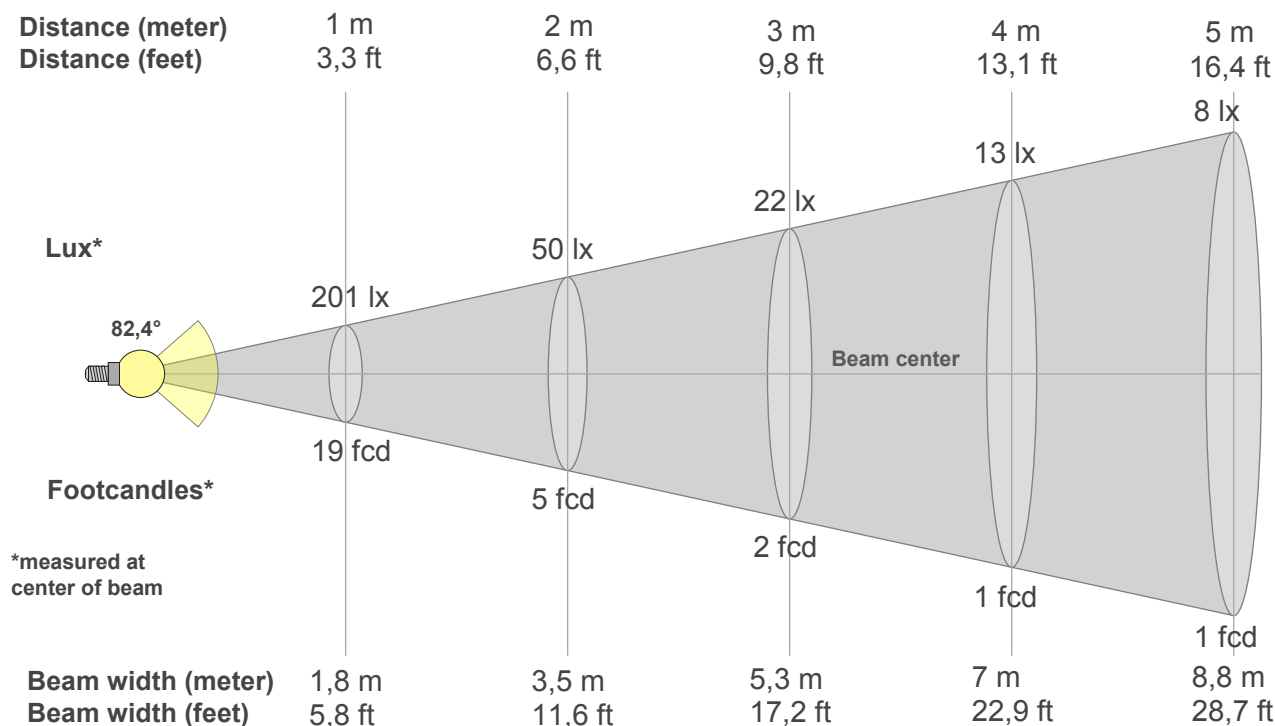
Fidelity index Rf

Rg 99,3

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	1%
2	94	-3%	2%
3	92	-1%	4%
4	94	-3%	0%
5	95	-1%	2%
6	96	1%	1%
7	94	-2%	0%
8	98	-1%	1%
9	94	-1%	3%
10	90	0%	7%
11	89	3%	8%
12	90	5%	0%
13	92	3%	-5%
14	89	4%	-8%
15	93	-2%	-3%
16	86	-2%	-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
201lx	50lx	22lx	13lx	8lx	6lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
18,7fcd	4,7fcd	2,1fcd	1,2fcd	0,7fcd	0,5fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd

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°
201	200	198	193	187	178	159	117	87	71	60	59	83	93	73	53	35	23	5	0
100%	100%	98%	96%	93%	89%	79%	58%	43%	35%	30%	29%	41%	46%	36%	26%	17%	12%	2%	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°
201	200	197	193	188	181	173	162	146	119	66	39	27	17	13	12	10	6	1	0
100%	99%	98%	96%	94%	90%	86%	81%	73%	59%	33%	19%	14%	9%	6%	6%	5%	3%	1%	0%

Intensities in 180° c-plane

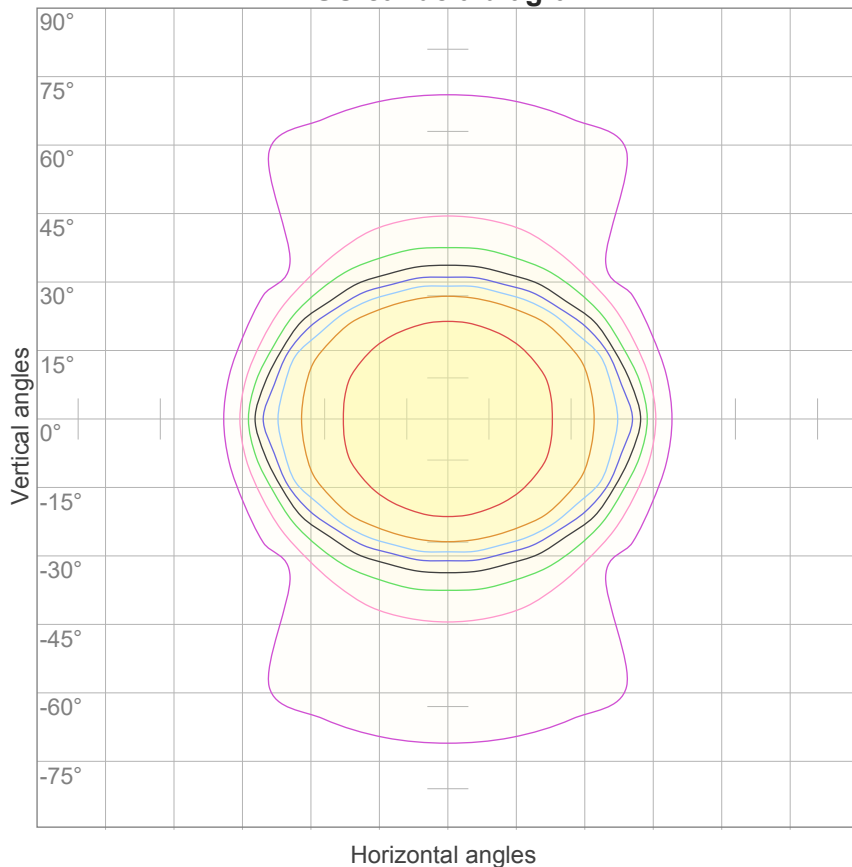
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
201	200	198	193	187	178	159	117	87	71	60	59	83	93	73	53	35	23	5	0
100%	100%	98%	96%	93%	89%	79%	58%	43%	35%	30%	29%	41%	46%	36%	26%	17%	12%	2%	0%

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°
201	200	197	193	188	181	173	162	146	119	66	39	27	17	13	12	10	6	1	0
100%	99%	98%	96%	94%	90%	86%	81%	73%	59%	33%	19%	14%	9%	6%	6%	5%	3%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
82,4°	163,4°	177,3°	74,5%	59,6%

ISO candela diagram



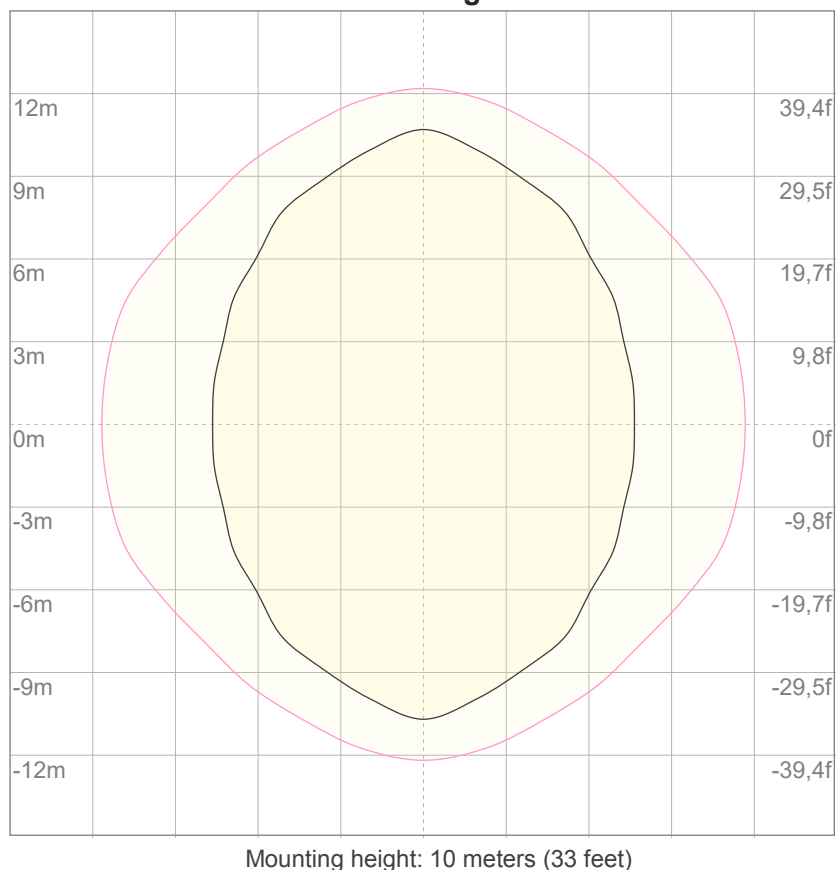
10%	20 cd
20%	40 cd
30%	60 cd
40%	80 cd
50%	101 cd
60%	121 cd
70%	141 cd
80%	161 cd
90%	181 cd

Conditions:

Number of c-planes: 16

Candela at center: 201 cd

ISO lux diagram



3%	60,3m lx
5%	0,101 lx
10%	0,201 lx
30%	0,603 lx
50%	1,01 lx

Conditions:

Number of c-planes: 16

Lux at center: 2,01 lx

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

Glare Evaluation According to UGR

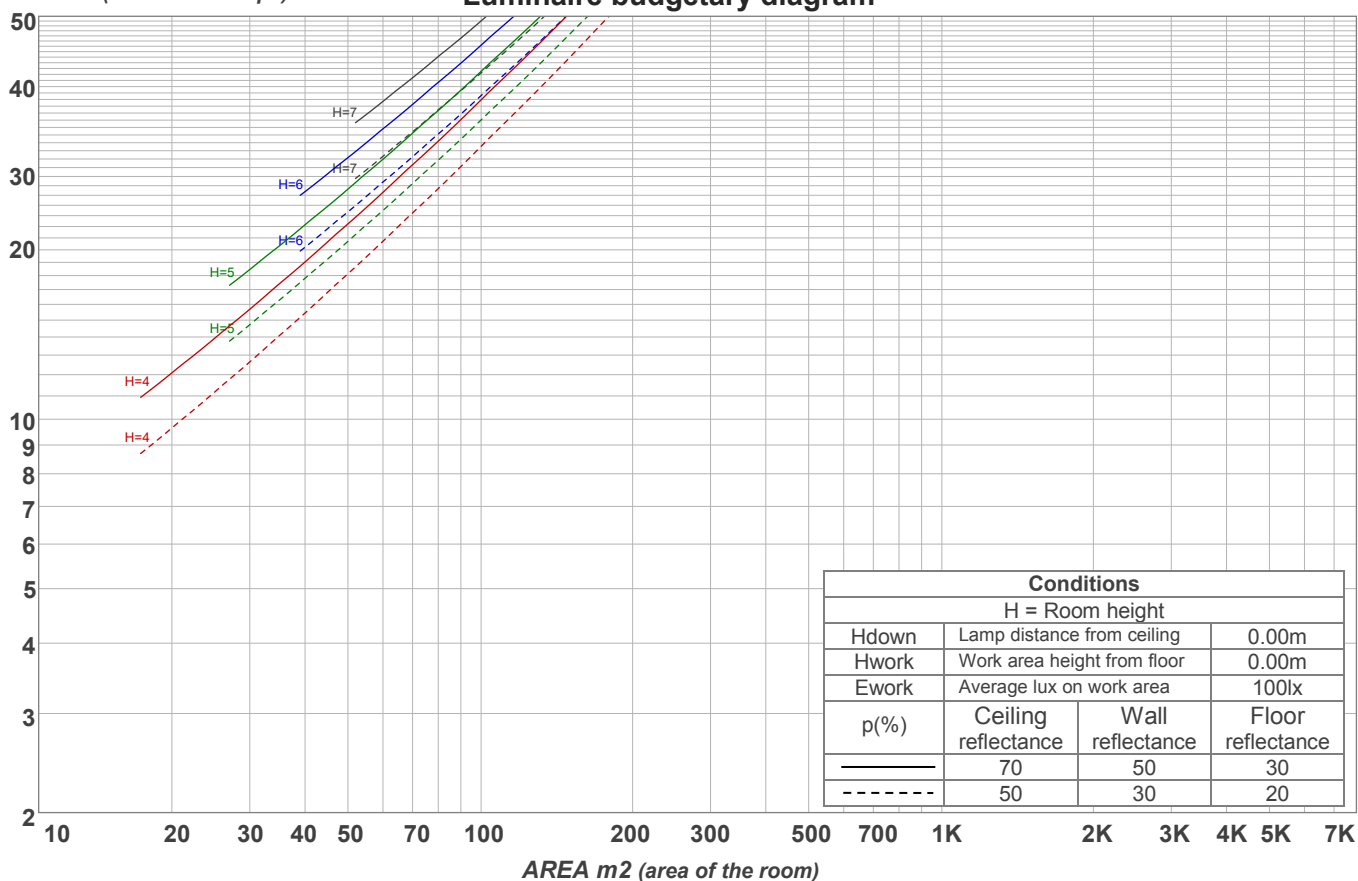
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	19,1	20,2	19,3	20,5	20,8	17,2	18,3	17,4	18,6	18,9
	3H	22,2	23,4	22,6	23,7	23,9	17,6	18,8	18,0	19,1	19,3
	4H	23,0	24,2	23,4	24,4	24,7	18,1	19,3	18,5	19,5	19,8
	6H	23,6	24,7	23,9	24,9	25,3	19,0	20,0	19,3	20,3	20,7
	8H	23,7	24,8	24,1	25,1	25,5	19,2	20,2	19,6	20,5	21,0
	12H	23,8	24,8	24,2	25,2	25,6	19,4	20,4	19,8	20,7	21,2
4H	2H	19,6	20,7	20,0	21,0	21,3	17,9	19,1	18,4	19,4	19,7
	3H	23,1	24,1	23,5	24,5	24,9	19,2	20,2	19,6	20,5	21,0
	4H	24,0	24,9	24,5	25,3	25,9	19,8	20,8	20,3	21,2	21,7
	6H	24,7	25,6	25,2	26,0	26,3	20,9	21,8	21,4	22,2	22,6
	8H	24,9	25,7	25,4	26,1	26,4	21,3	22,1	21,8	22,5	22,8
	12H	25,0	25,7	25,5	26,1	26,6	21,5	22,2	22,0	22,6	23,1
8H	4H	24,3	25,2	24,9	25,5	25,9	21,2	22,0	21,7	22,3	22,7
	6H	25,2	25,8	25,7	26,3	26,9	22,5	23,1	23,0	23,5	24,1
	8H	25,5	26,0	26,0	26,5	27,2	22,9	23,5	23,4	24,0	24,6
	12H	25,7	26,2	26,3	26,7	27,3	23,2	23,7	23,8	24,2	24,8
12H	4H	24,4	25,0	24,9	25,5	26,0	21,3	22,0	21,8	22,4	22,9
	6H	25,3	25,9	25,8	26,4	27,0	22,7	23,3	23,2	23,8	24,4
	8H	25,6	26,1	26,2	26,6	27,2	23,2	23,7	23,8	24,2	24,8
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					0,3 / -0,2				
S = 1.5H		0,4 / -0,4					0,8 / -0,3				
S = 2.0H		0,6 / -0,8					1,4 / -0,6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 473 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	110	110	110	105	105	105	100	100	100	98
1	108	103	98	94	105	100	96	92	96	92	89	91	89	86	87	85	83	81
2	98	90	83	77	95	88	82	76	84	79	74	80	76	72	77	73	70	68
3	90	80	72	65	87	78	70	64	75	68	63	72	66	62	69	64	60	58
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	62	57	53	51
5	77	64	56	49	75	63	55	49	61	54	48	59	52	47	57	51	47	45
6	71	59	50	44	69	58	49	43	56	48	43	54	47	42	52	46	42	40
7	67	54	45	39	65	53	45	39	51	44	39	49	43	38	48	42	38	36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	44	39	34	32
9	59	46	38	32	57	45	37	32	44	37	32	42	36	32	41	36	31	30
10	55	42	35	30	54	42	34	29	41	34	29	40	33	29	39	33	29	27

LAMPS (number of lamps)

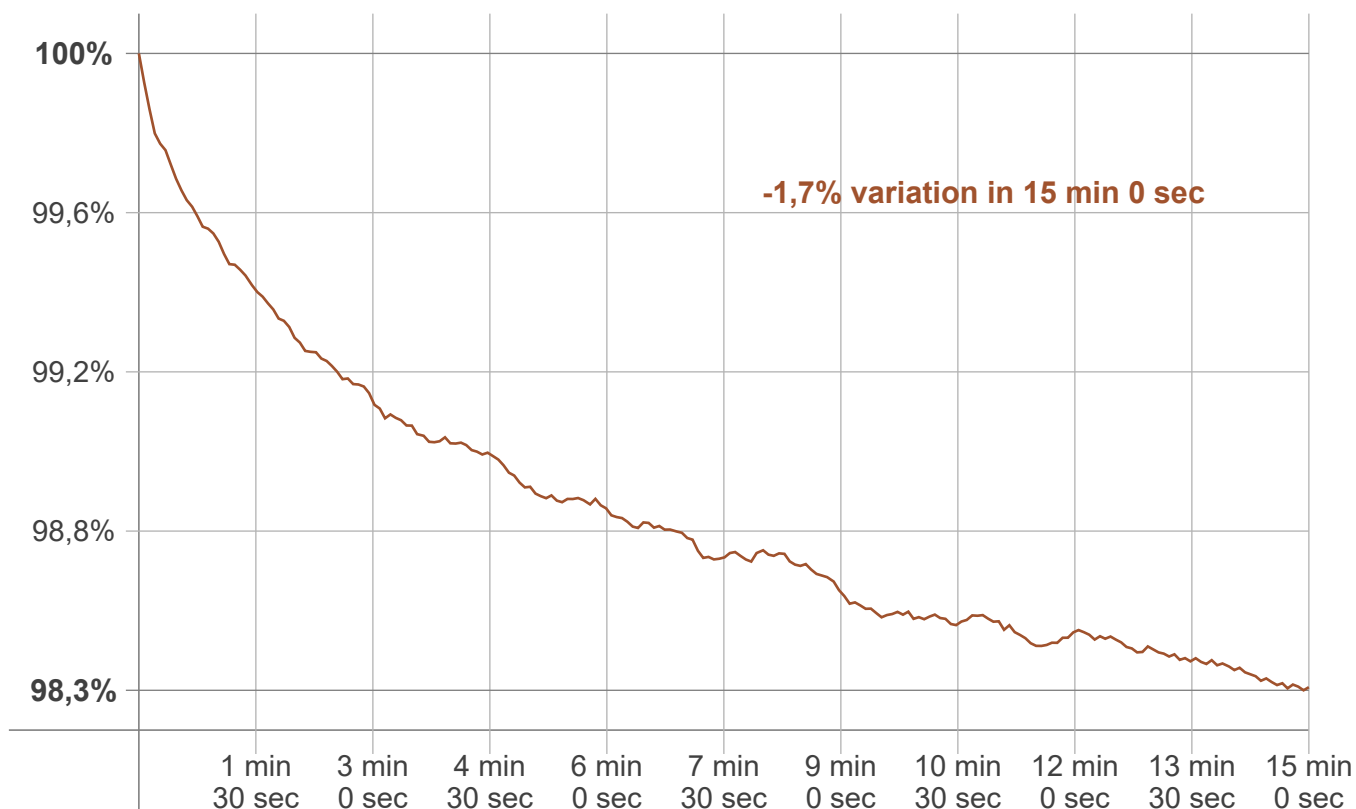
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
19,0 lm	54,6 lm	82,9 lm	89,2 lm	64,3 lm	42,4 lm	50,8 lm	42,9 lm	16,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
3,93 lm	1,27 lm	1,20 lm	1,08 lm	0,932 lm	0,756 lm	0,557 lm	0,341 lm	0,115 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 15 min 0 sec
Warmup variation	-1,7%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2736 K	-3 K	2733 K

Output change

Output start	Output change	Output end
479 lm	-6 lm	473 lm