

Light efficiency:

153 Lumen/Watt

Light quality:

CRI: 81,9

Color temperature:

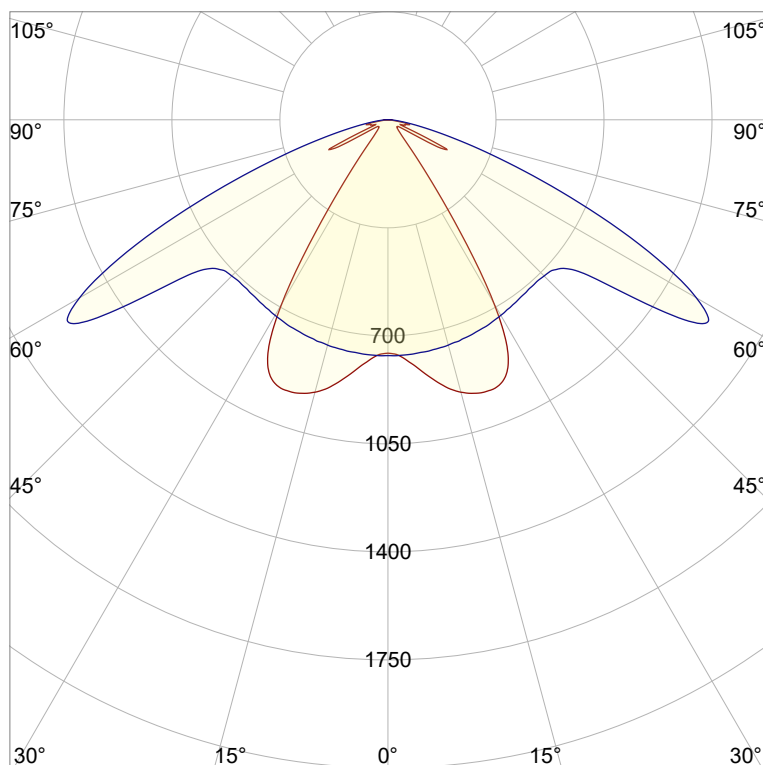
2768 K

Output: 1765 lm

Peak: 1226 cd

Power: 11,5 W

PF: 1,0



Product name:

Nova-6_510mm_827_Lens-60°-Transparent

Item number:

NP/L1C/06F/G1/L1C/0510/827/L6T

Date and time:

18.07.2022 16:41:45

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

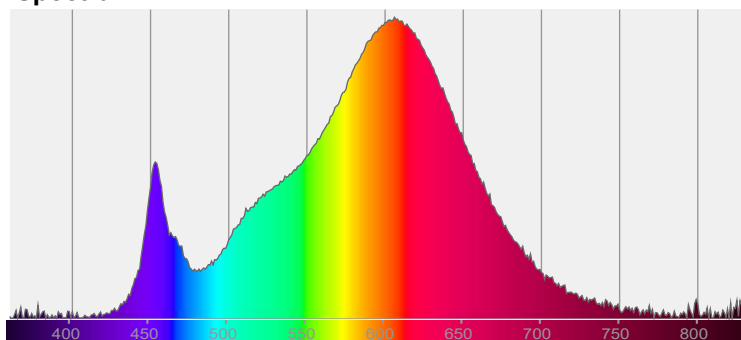


CIE 1931

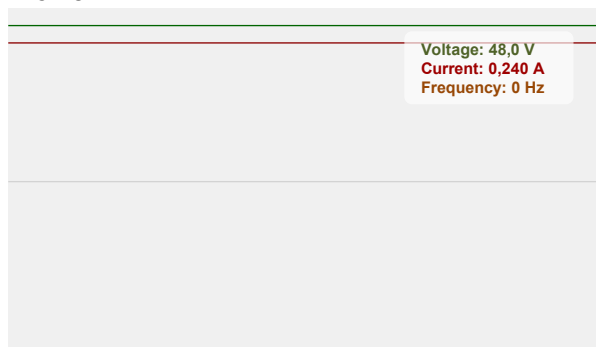
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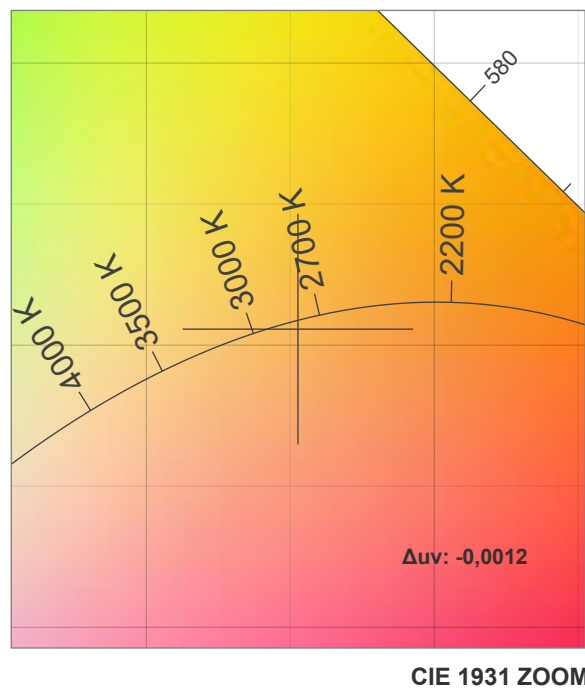
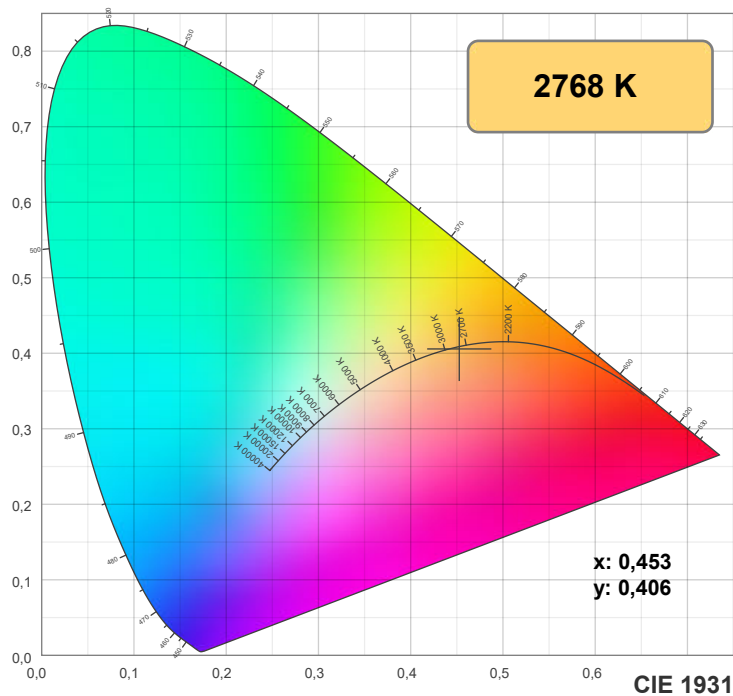
y: 0,406

Spectra



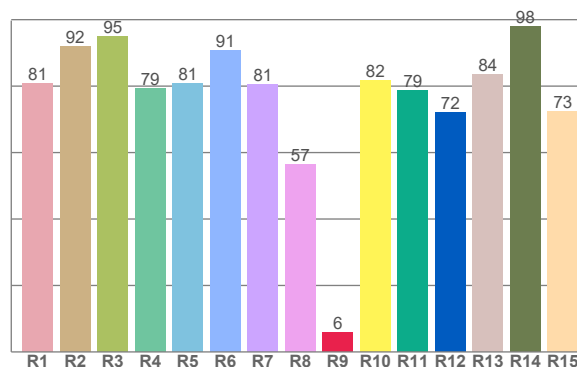
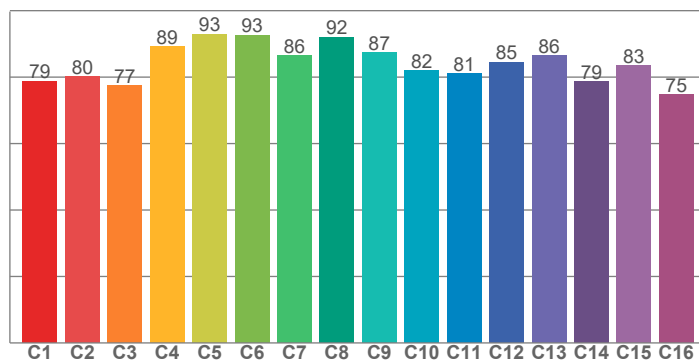
Power





TM30: 84,0

CRI: 81,9 (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
80,8	91,9	94,9	79,2	80,8	90,7	80,7	56,5	5,9	81,8	78,7	72,2	83,6	98,1	72,5

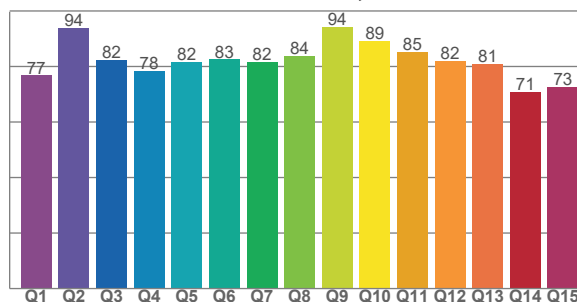
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,8	80,2	77,4	89,2	92,9	92,7	86,5	92,1	87,3	82,1	81,1	84,5	86,4	78,7	83,4	74,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,8	93,7	82,2	78,2	81,5	82,5	81,7	83,8	94,1	89,3	85,3	81,9	80,9	70,8	72,6

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
2768 K	81,9	5,9	84,0	95,5	81,1	0,453	0,406	0,260	0,350	-0,0012

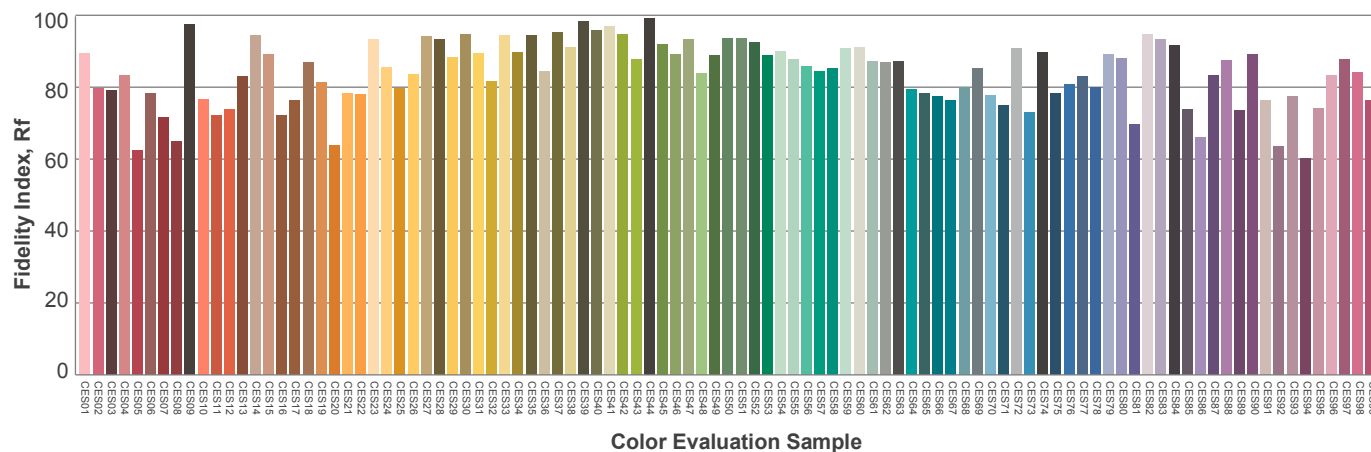
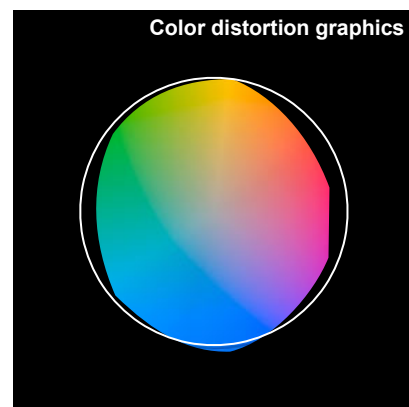
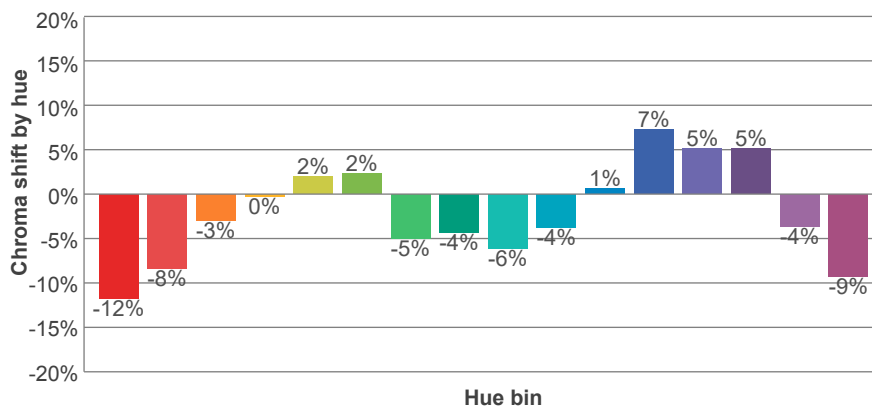
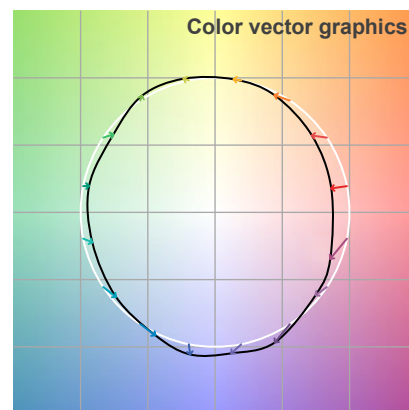
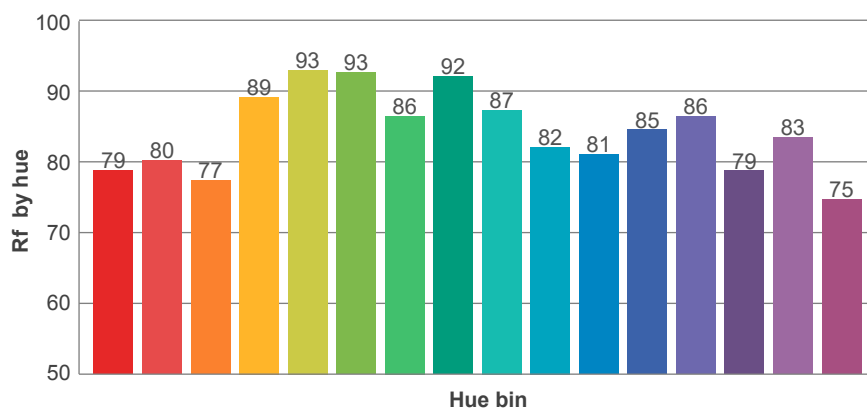
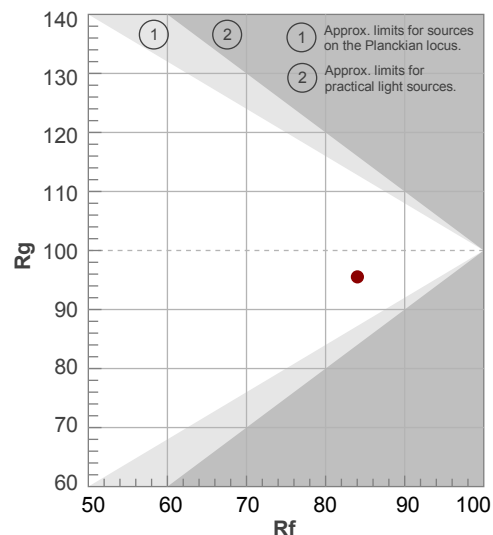
Rf 84,0

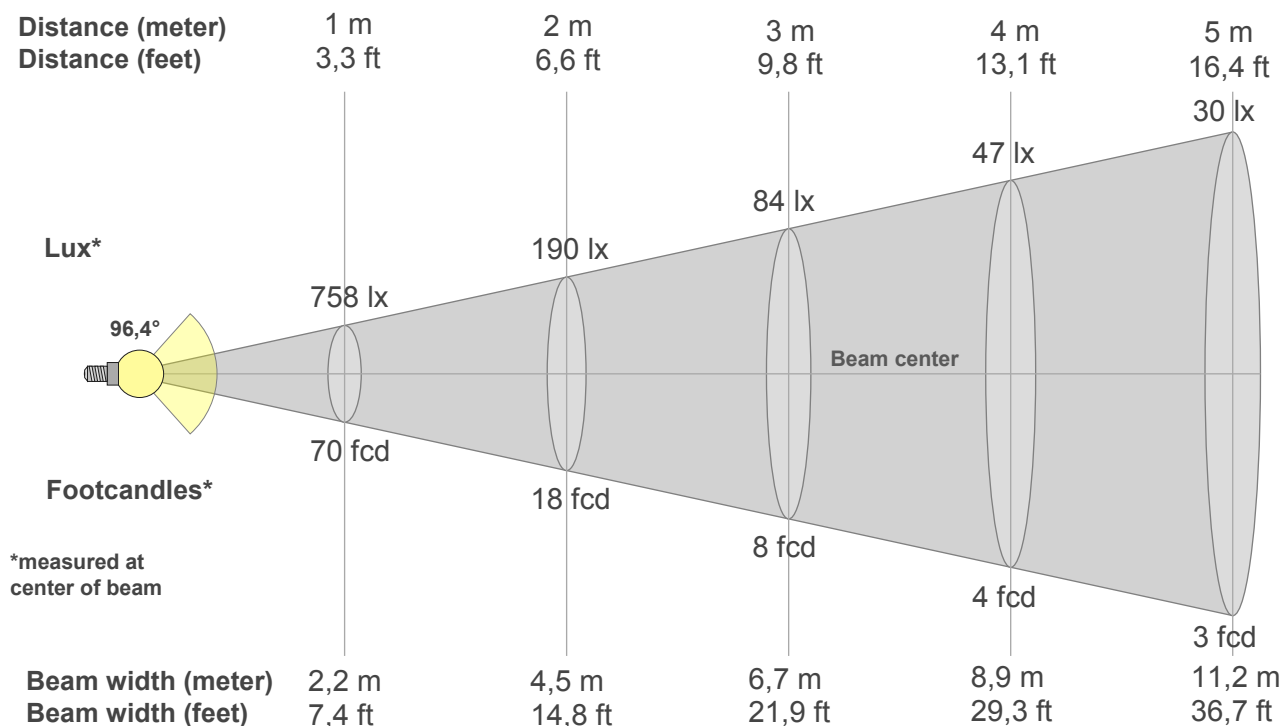
Fidelity index Rf

Rg 95,5

Gamut index Rg

Hue Bin	R _f	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
758lx	190lx	84lx	47lx	30lx	21lx	15lx	12lx	9lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx
70,4fcd	17,6fcd	7,8fcd	4,4fcd	2,8fcd	2fcd	1,4fcd	1,1fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd

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°
758	788	855	913	936	908	686	257	81	47	38	38	93	128	46	59	44	13	5	0
100%	104%	113%	120%	123%	120%	90%	34%	11%	6%	5%	5%	12%	17%	6%	8%	6%	2%	1%	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°
758	764	761	756	749	741	731	722	714	716	750	1072	1153	800	433	196	75	25	3	0
100%	101%	100%	100%	99%	98%	96%	95%	94%	94%	99%	141%	152%	105%	57%	26%	10%	3%	0%	0%

Intensities in 180° c-plane

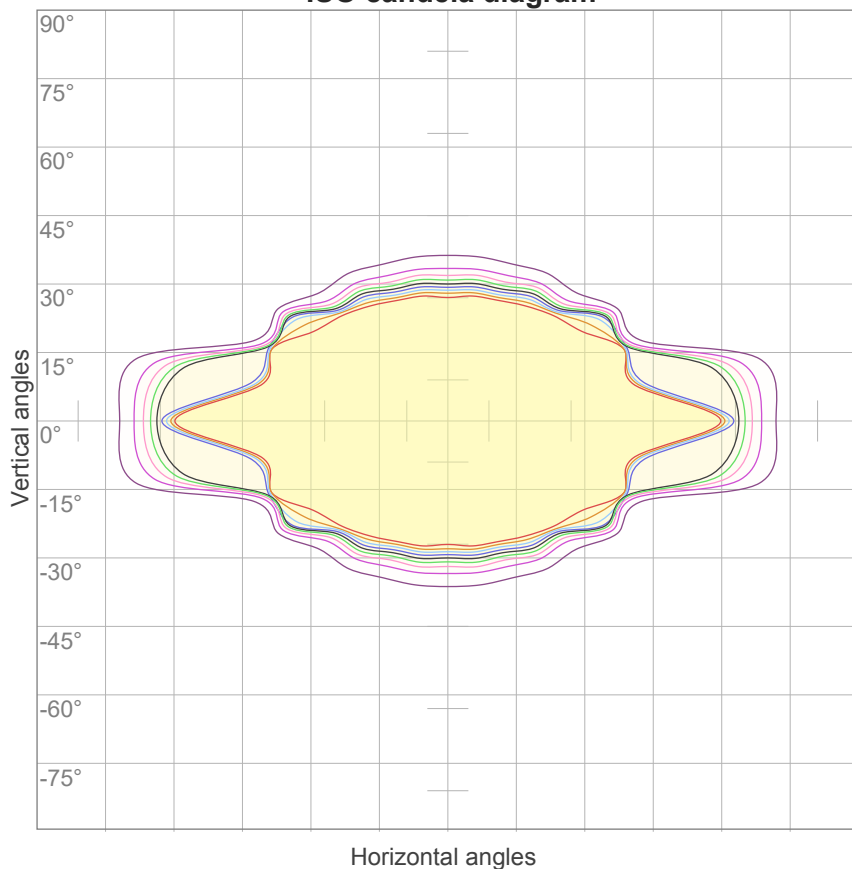
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
758	788	855	913	936	908	686	257	81	47	38	38	93	128	46	59	44	13	5	0
100%	104%	113%	120%	123%	120%	90%	34%	11%	6%	5%	5%	12%	17%	6%	8%	6%	2%	1%	0%

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°
758	764	761	756	749	741	731	722	714	716	750	1072	1153	800	433	196	75	25	3	0
100%	101%	100%	100%	99%	98%	96%	95%	94%	94%	99%	141%	152%	105%	57%	26%	10%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
96,4°	121,6°	164,1°	85,3%	72,1%

ISO candela diagram



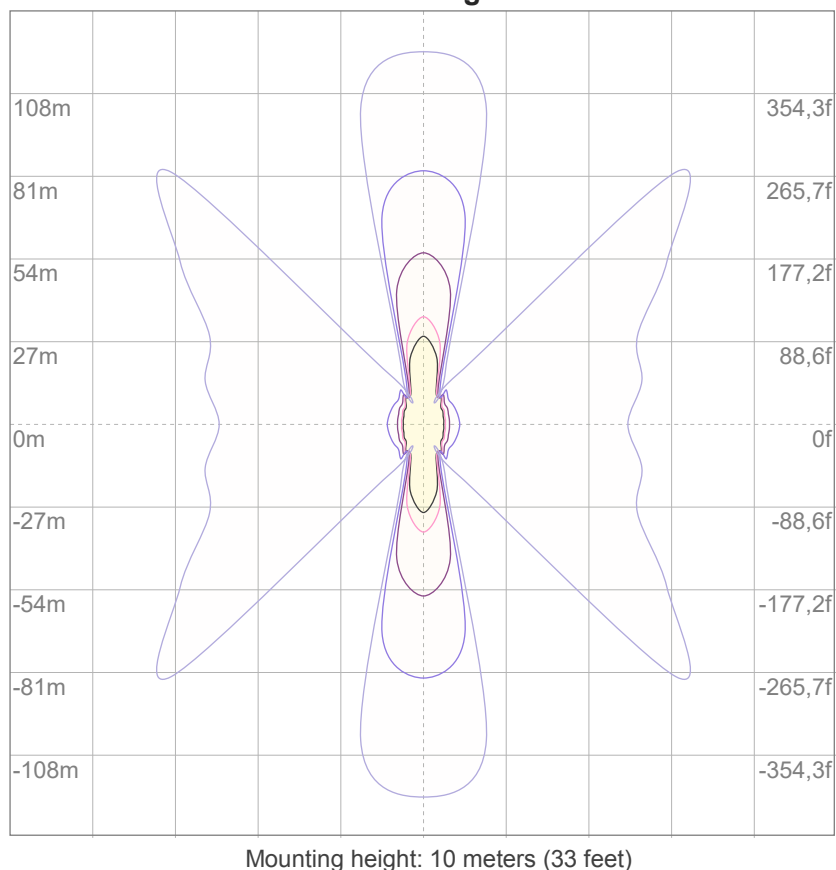
10%	76 cd
20%	152 cd
30%	227 cd
40%	303 cd
50%	379 cd
60%	455 cd
70%	531 cd
80%	606 cd
90%	682 cd

Conditions:

Number of c-planes: 16

Candela at center: 758 cd

ISO lux diagram



3%	0,227 lx
5%	0,379 lx
10%	0,758 lx
30%	2,27 lx
50%	3,79 lx

Conditions:

Number of c-planes: 16

Lux at center: 7,58 lx

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

Glare Evaluation According to UGR

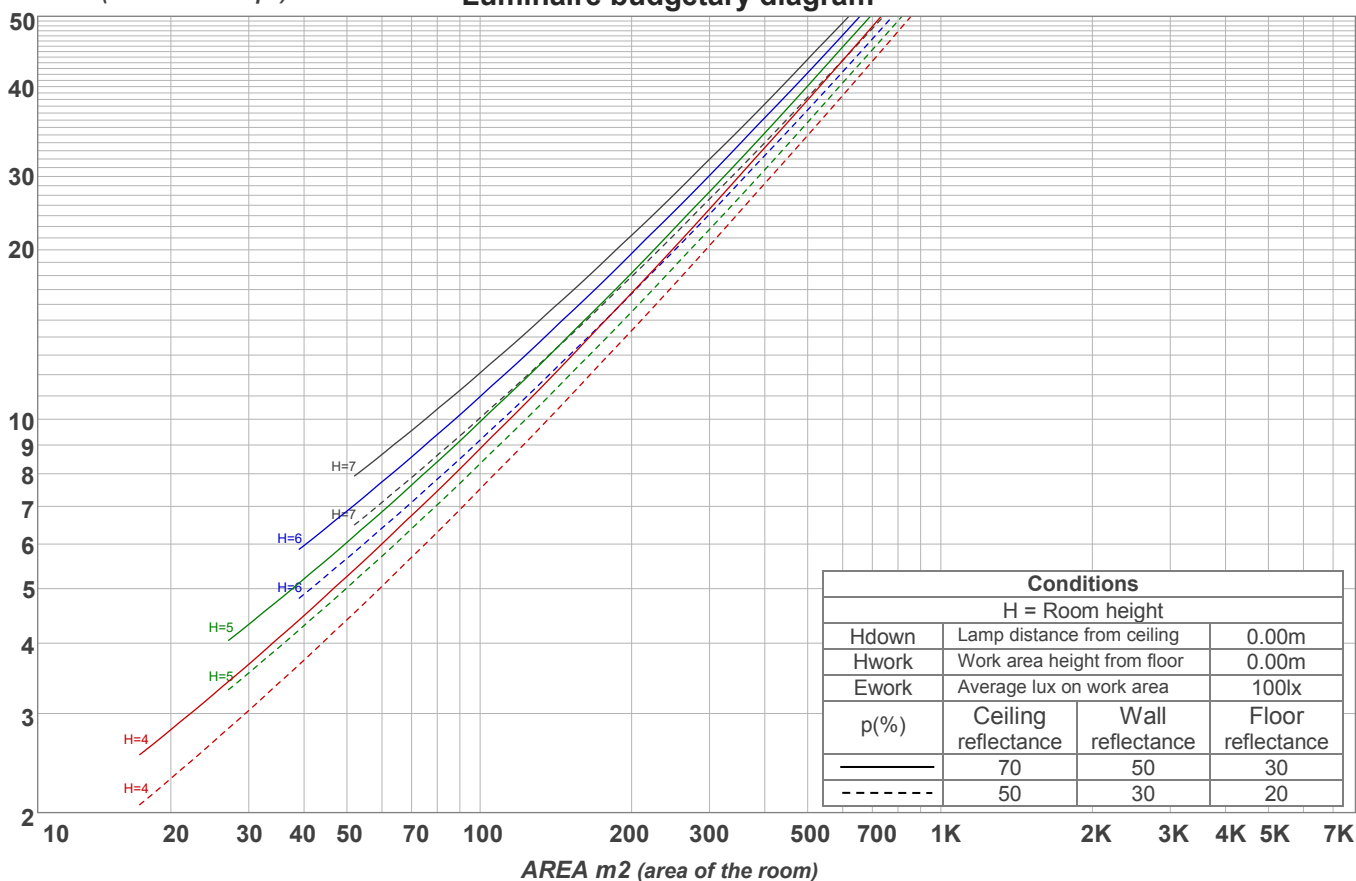
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	17,9	18,9	18,1	19,2	19,4	29,5	30,5	29,7	30,8	31,0
	3H	19,4	20,5	19,8	20,7	20,9	31,1	32,2	31,5	32,4	32,6
	4H	19,9	20,9	20,3	21,2	21,5	31,4	32,4	31,8	32,7	32,9
	6H	20,7	21,6	21,0	21,9	22,3	31,6	32,5	31,9	32,8	33,1
	8H	20,8	21,7	21,1	22,0	22,4	31,6	32,4	31,9	32,8	33,2
	12H	20,8	21,6	21,1	22,0	22,4	31,5	32,4	31,9	32,7	33,2
4H	2H	18,1	19,2	18,5	19,4	19,7	29,2	30,2	29,6	30,5	30,7
	3H	20,0	20,9	20,4	21,2	21,6	30,9	31,8	31,3	32,1	32,5
	4H	20,6	21,4	21,0	21,8	22,3	31,2	31,9	31,6	32,4	32,9
	6H	21,6	22,4	22,1	22,7	23,1	31,3	32,1	31,8	32,4	32,8
	8H	21,7	22,4	22,2	22,8	23,1	31,3	32,0	31,8	32,4	32,8
	12H	21,7	22,3	22,2	22,7	23,2	31,3	31,9	31,8	32,3	32,8
8H	4H	20,8	21,5	21,3	21,8	22,2	31,1	31,8	31,6	32,1	32,5
	6H	22,0	22,5	22,5	23,0	23,5	31,2	31,7	31,7	32,2	32,7
	8H	22,2	22,7	22,7	23,2	23,8	31,3	31,7	31,8	32,3	32,9
	12H	22,2	22,6	22,8	23,1	23,7	31,3	31,7	31,9	32,2	32,8
12H	4H	20,8	21,4	21,3	21,8	22,2	31,0	31,6	31,5	32,0	32,5
	6H	22,1	22,6	22,6	23,1	23,7	31,2	31,7	31,7	32,2	32,8
	8H	22,3	22,7	22,9	23,2	23,8	31,3	31,6	31,8	32,1	32,7
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,6 / -1,2					1,5 / -2,3				
S = 1.5H		2,5 / -1,6					3,3 / -5,4				
S = 2.0H		2,2 / -1,7					4,9 / -7,6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1765 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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	88	86
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	72	80	75	70	78	73	69	75	71	68	66
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	68	64	60	58
5	81	70	62	56	79	69	61	56	66	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	44	40	49	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	40	36	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	37	33	32

LAMPS (number of lamps)

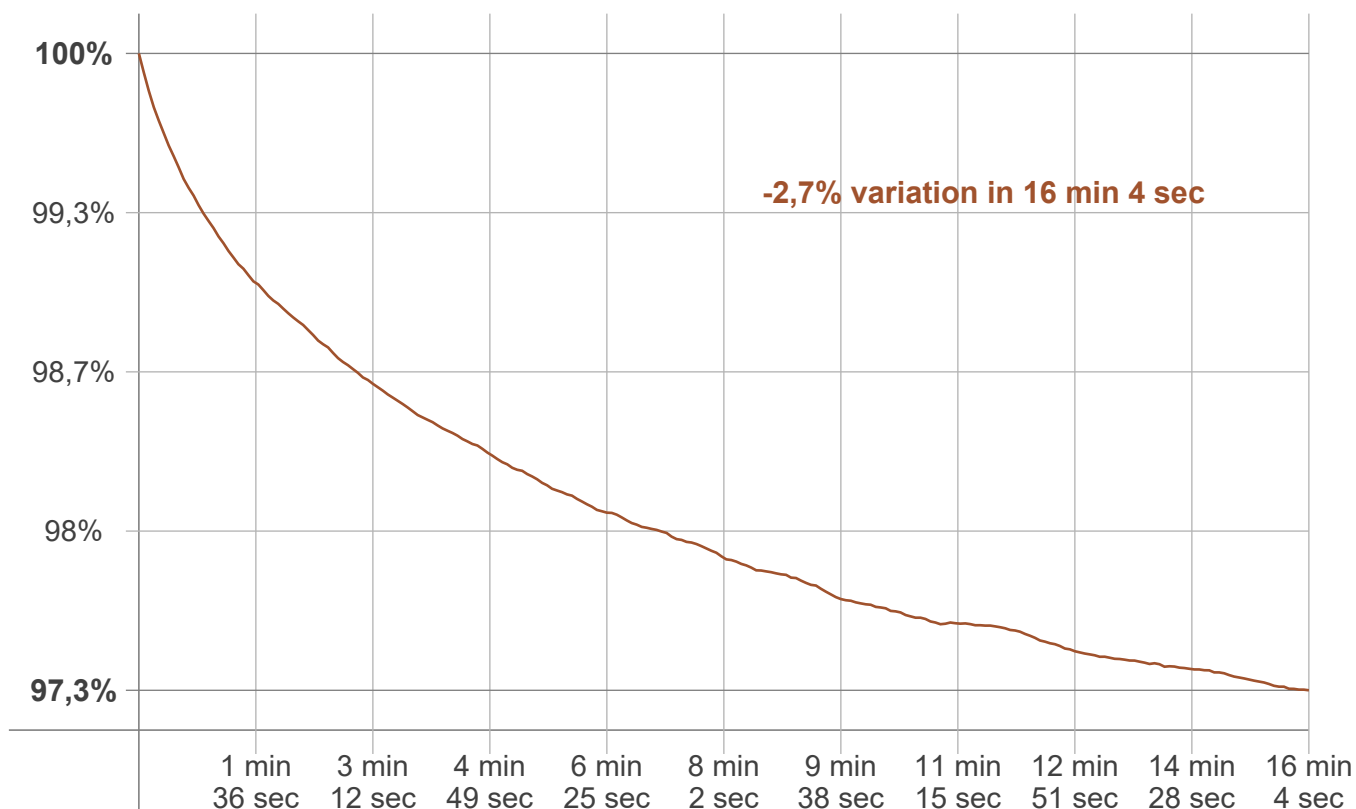
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
69,9 lm	235 lm	402 lm	414 lm	239 lm	145 lm	155 lm	70,1 lm	22,7 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
4,65 lm	0,524 lm	0,492 lm	0,445 lm	0,384 lm	0,311 lm	0,229 lm	0,140 lm	5,42 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 16 min 4 sec
Warmup variation	-2,7%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2763 K	+5 K	2768 K

Output change

Output start	Output change	Output end
1809 lm	-44 lm	1765 lm