

Light efficiency:

138 Lumen/Watt

Light quality:

CRI: 81,8

Color temperature:

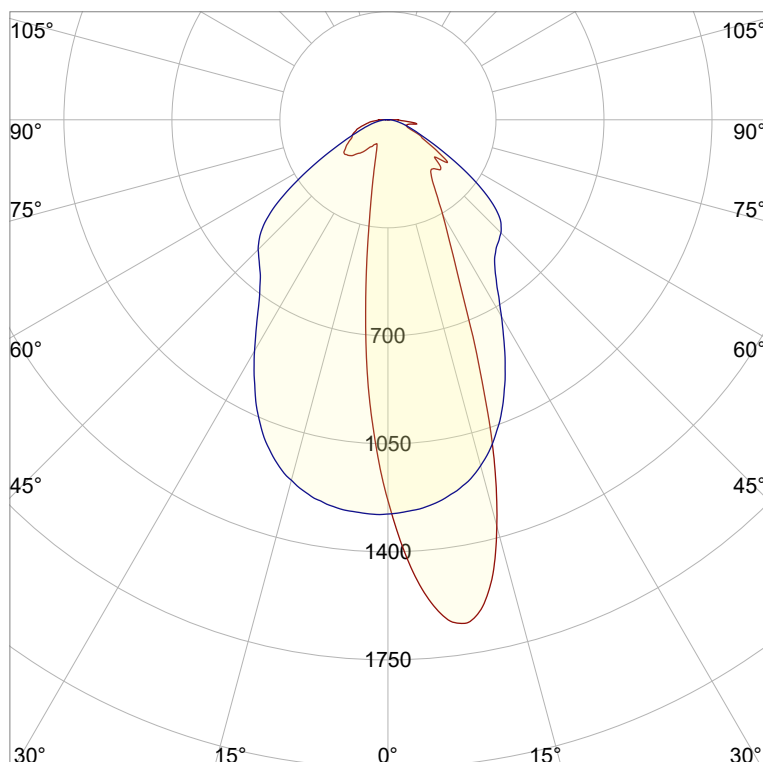
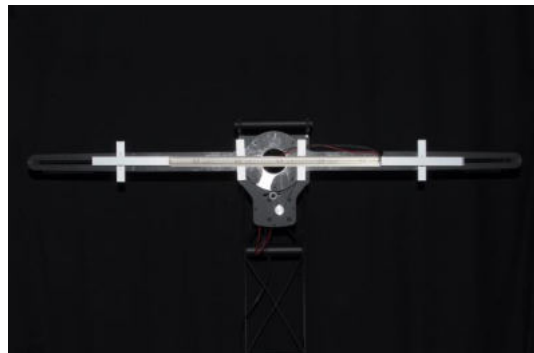
2760 K

Output: 1589 lm

Peak: 1748 cd

Power: 11,5 W

PF: 1,0



Product name:

Nova-6_510mm_827_Lens-Asymmetric-Frosted-2

Item number:

NP/L1C/06F/G1/L1C/0510/827/LAF-2

Date and time:

19.07.2022 11:41:54

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

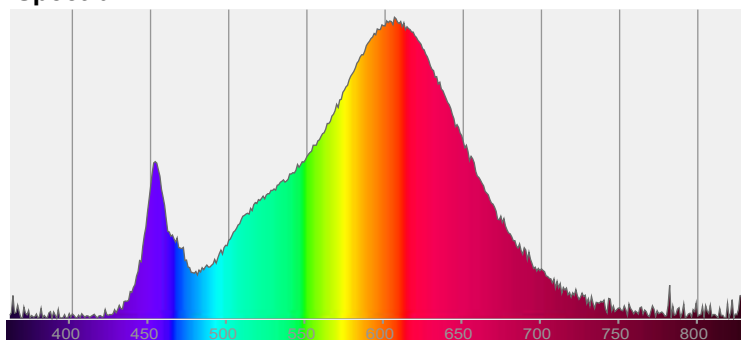


CIE 1931

x: 0,453

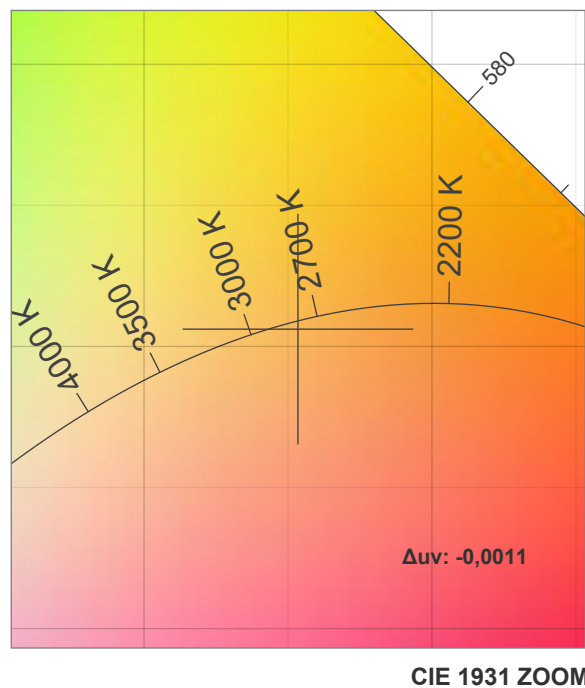
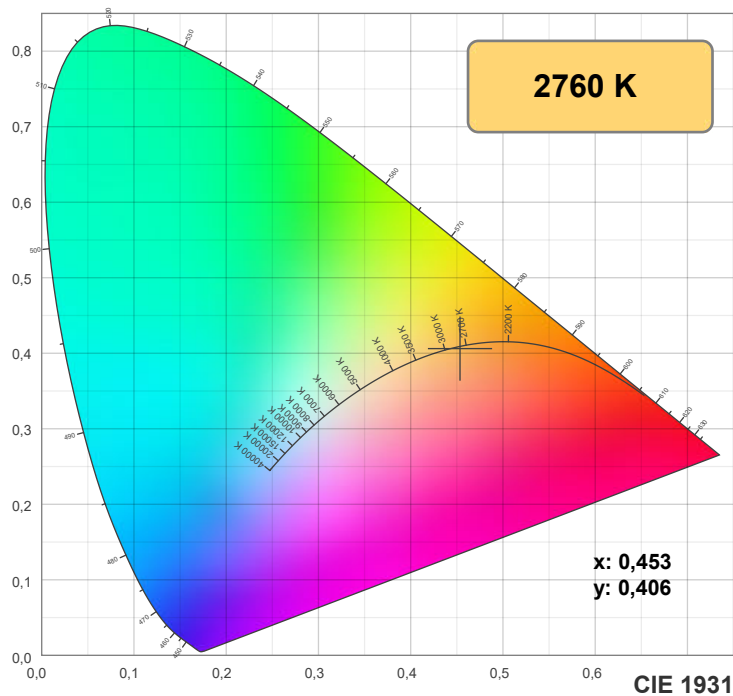
y: 0,406

Spectra



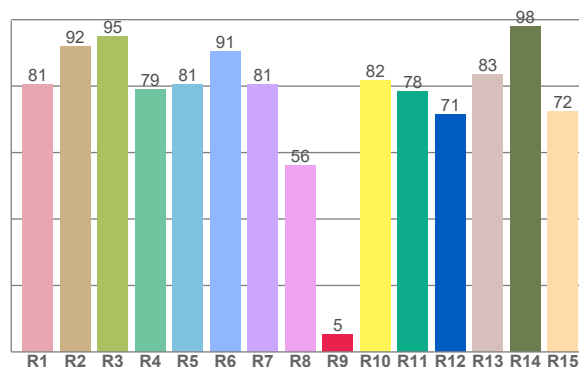
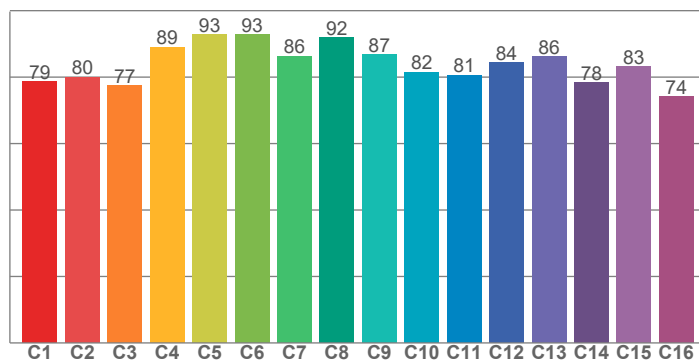
Power

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



TM30: 83,8

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	91,9	94,8	79,0	80,6	90,6	80,5	56,2	5,3	81,6	78,3	71,5	83,4	98,0	72,3

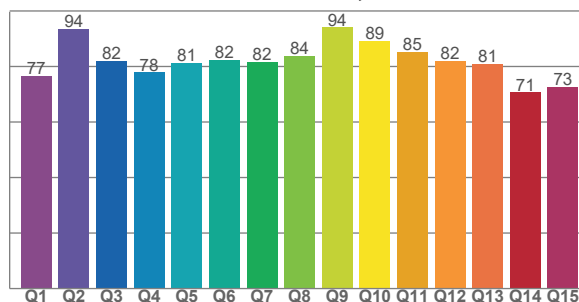
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,6	80,1	77,4	89,1	92,9	92,7	86,3	91,9	86,9	81,5	80,7	84,3	86,3	78,4	83,3	74,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,7	93,6	82,0	77,9	81,2	82,3	81,6	83,7	94,1	89,3	85,2	81,9	80,8	70,7	72,5

CQS: 81,0



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
2760 K	81,8	5,3	83,8	95,4	81,0	0,453	0,406	0,260	0,350	-0,0011

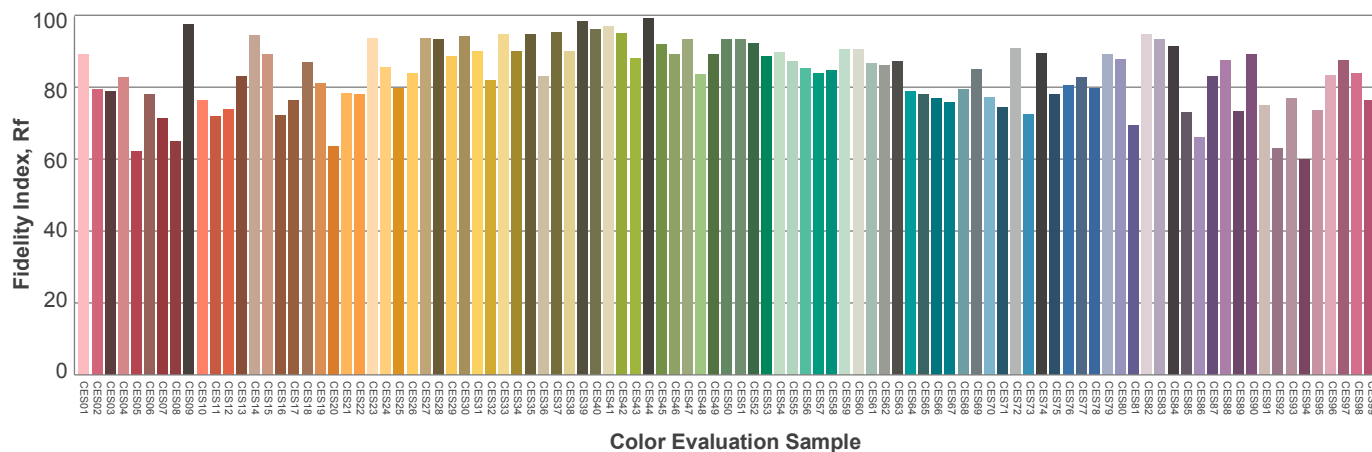
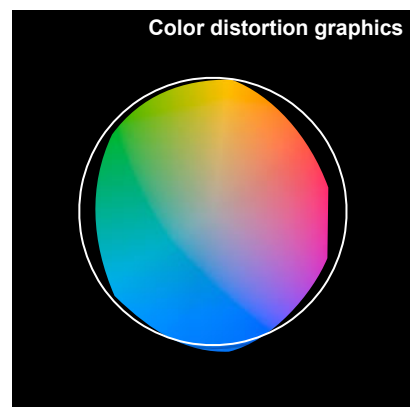
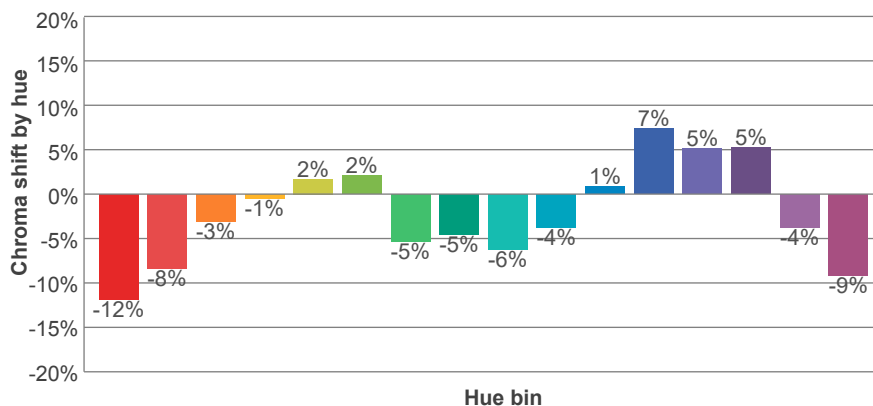
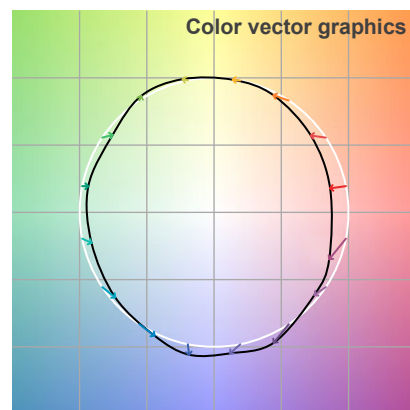
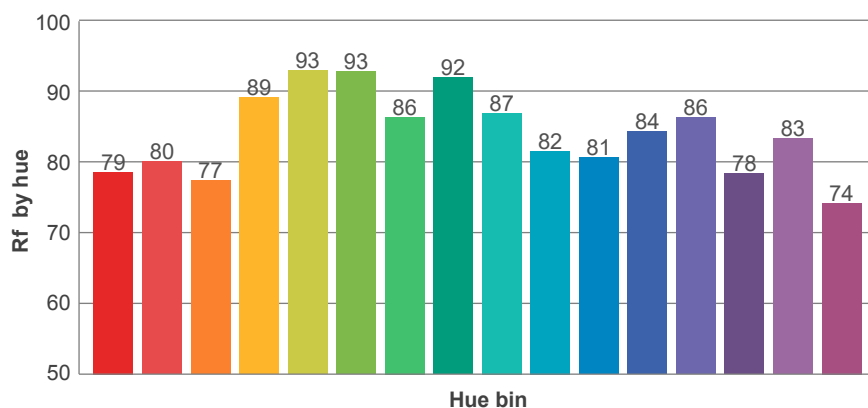
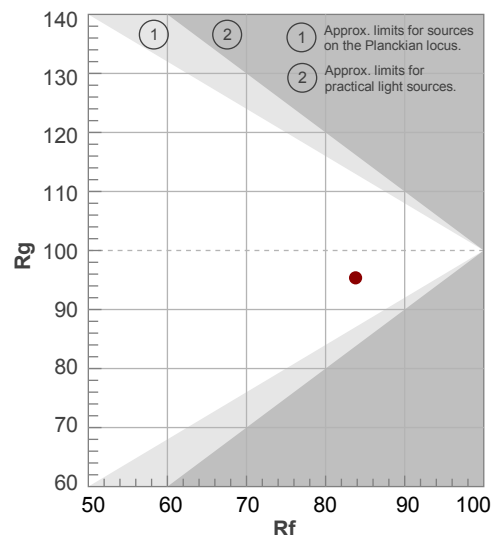
Rf 83,8

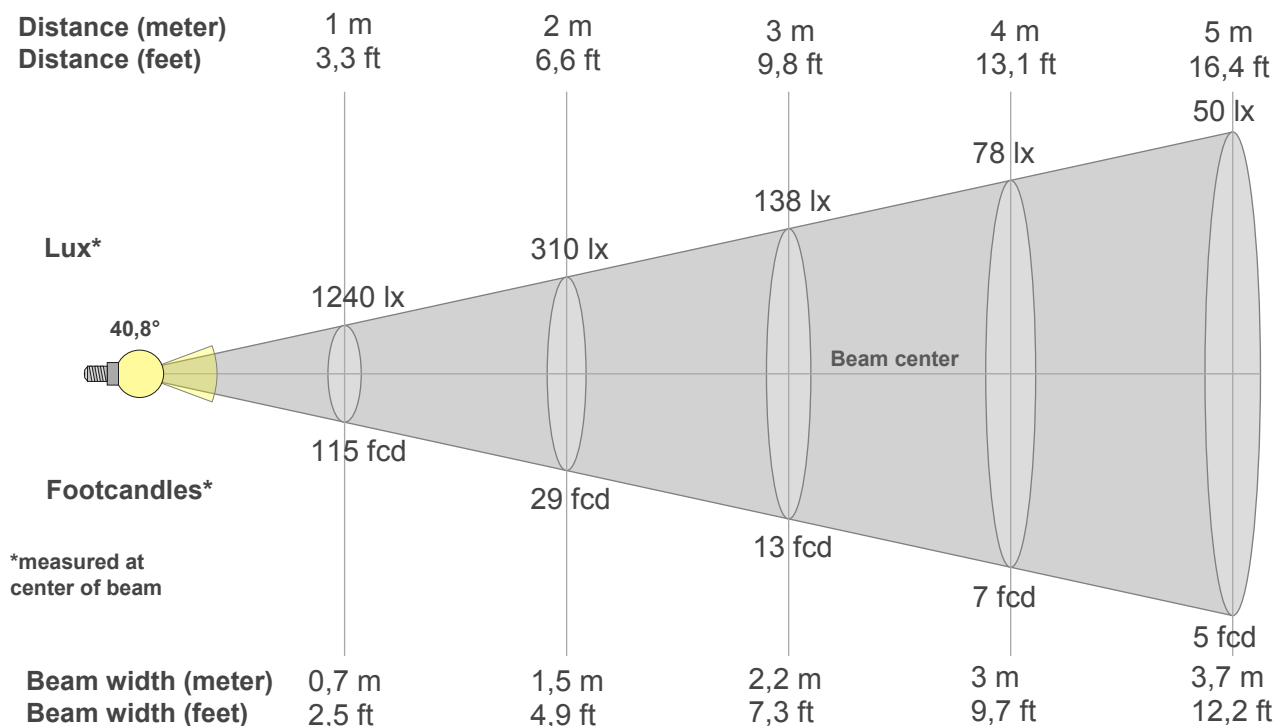
Fidelity index Rf

Rg 95,4

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	-1%	6%
5	93	2%	4%
6	93	2%	-3%
7	86	-5%	-6%
8	92	-5%	-1%
9	87	-6%	4%
10	82	-4%	12%
11	81	1%	14%
12	84	7%	2%
13	86	5%	-9%
14	78	5%	-17%
15	83	-4%	-10%
16	74	-9%	-18%





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
1240lx	310lx	138lx	78lx	50lx	34lx	25lx	19lx	15lx	12lx	10lx	9lx	7lx	6lx	6lx	5lx	4lx	4lx	3lx	3lx
115,2fcd	28,8fcd	12,8fcd	7,2fcd	4,6fcd	3,2fcd	2,4fcd	1,8fcd	1,4fcd	1,2fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1240	1386	1515	1605	1647	1634	1564	1442	1278	1088	886	701	565	474	407	355	309	274	246	228
100%	112%	122%	129%	133%	132%	126%	116%	103%	88%	71%	57%	46%	38%	33%	29%	25%	22%	20%	18%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1240	1273	1267	1258	1245	1227	1205	1177	1142	1099	1050	994	932	866	798	735	678	628	589	562
100%	103%	102%	101%	100%	99%	97%	95%	92%	89%	85%	80%	75%	70%	64%	59%	55%	51%	48%	45%

Intensities in 180° c-plane

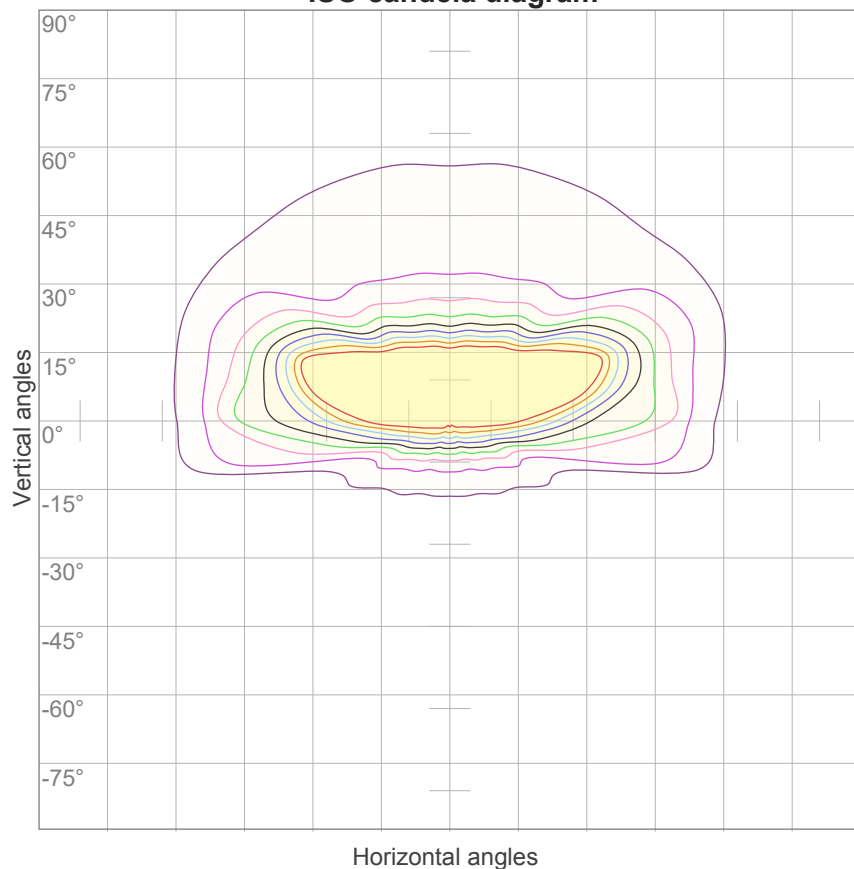
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1240	1066	886	688	504	358	264	200	158	128	108	95	87	87	90	97	103	109	121	132
100%	86%	71%	56%	41%	29%	21%	16%	13%	10%	9%	8%	7%	7%	7%	8%	8%	9%	10%	11%

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1240	1279	1276	1273	1266	1254	1240	1221	1198	1167	1131	1088	1038	982	924	864	806	754	708	673
100%	103%	103%	103%	102%	101%	100%	98%	97%	94%	91%	88%	84%	79%	74%	70%	65%	61%	57%	54%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
40,8°	94,3°	172,9°	83,7%	65,5%

ISO candela diagram



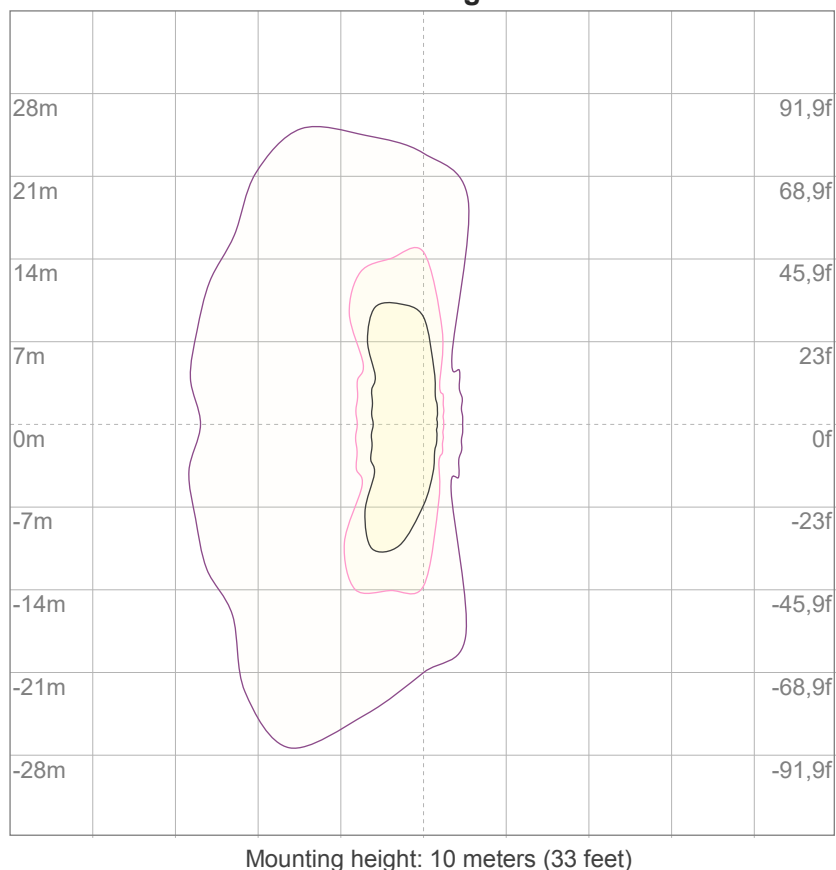
10%	124 cd
20%	248 cd
30%	372 cd
40%	496 cd
50%	620 cd
60%	744 cd
70%	868 cd
80%	992 cd
90%	1116 cd

Conditions:

Number of c-planes: 16

Candela at center: 1240 cd

ISO lux diagram



3%	0,372 lx
5%	0,620 lx
10%	1,24 lx
30%	3,72 lx
50%	6,20 lx

Conditions:

Number of c-planes: 16

Lux at center: 12,4 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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 1589 lm total luminous flux										

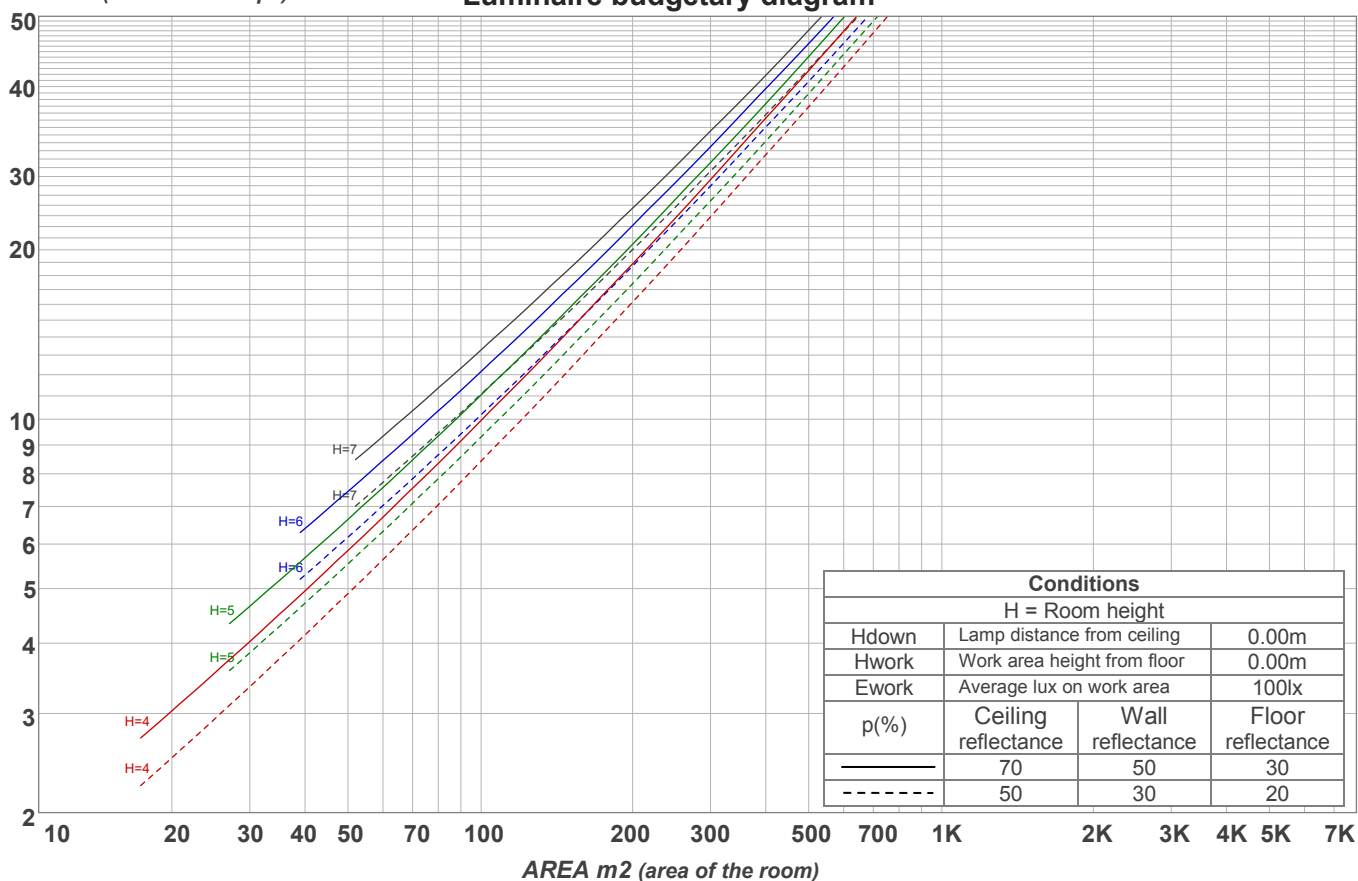
UGR data could not be calculated due to missing/wrong symmetry. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	102	102	102	100
1	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65
4	87	76	68	62	85	75	67	62	72	66	61	70	65	60	68	63	59	57
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	48	44	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35	34

LAMPS (number of lamps)

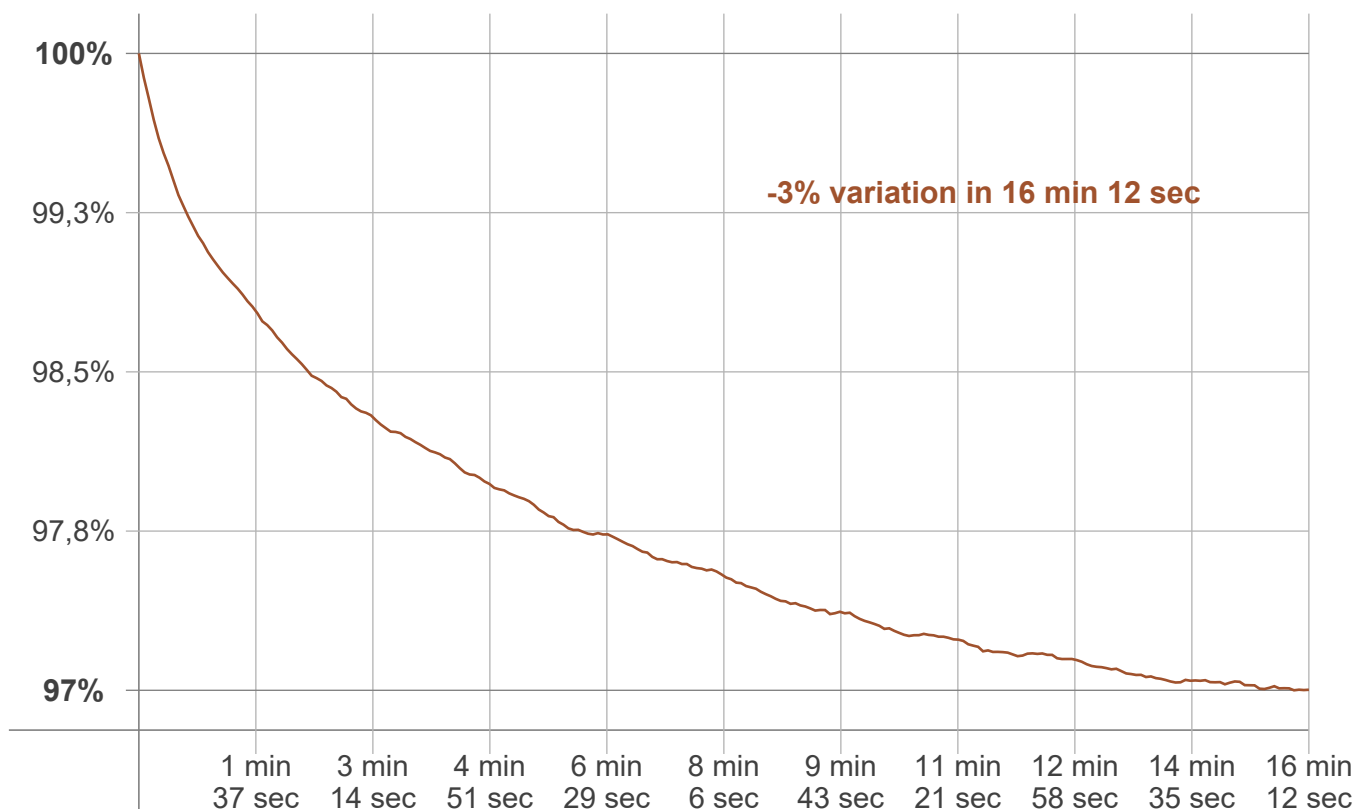
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
112 lm	269 lm	292 lm	255 lm	219 lm	183 lm	123 lm	79,5 lm	56,0 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,149 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 16 min 12 sec
Warmup variation	-3,0%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2753 K	+7 K	2760 K

Output change

Output start	Output change	Output end
1631 lm	-43 lm	1589 lm