Light efficiency:

133 Lumen/Watt

Light quality:

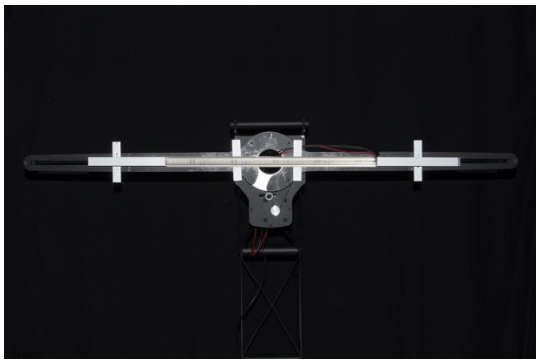
CRI: 82,3

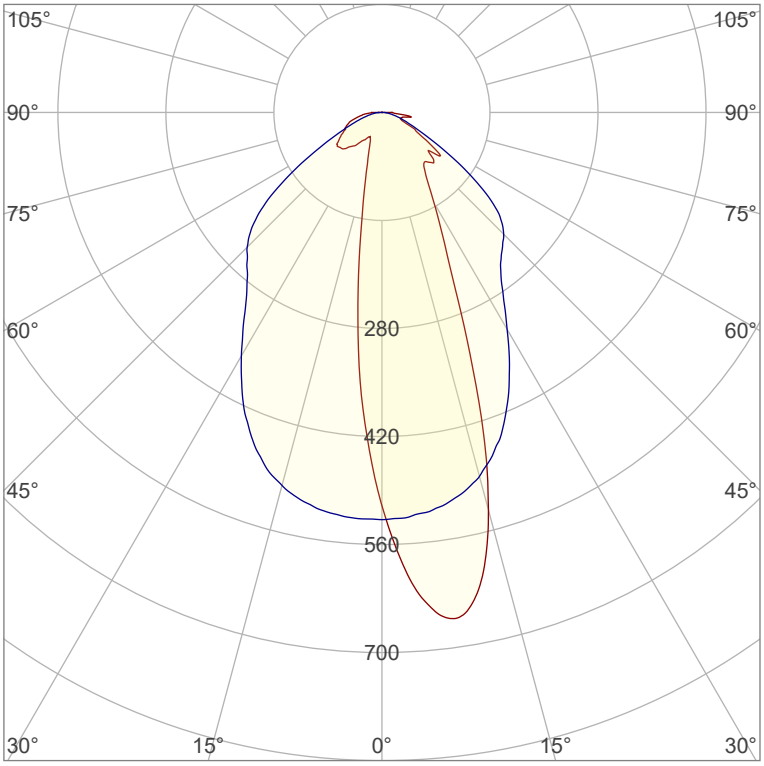
Color temperature:

2700 K

Output: 639 lm
Peak: 700 cd

Power: 4,8 W
PF: 1,0





Product name:
Navigator-3_510mm_827_Lens-Asymmetric-Frosted-2

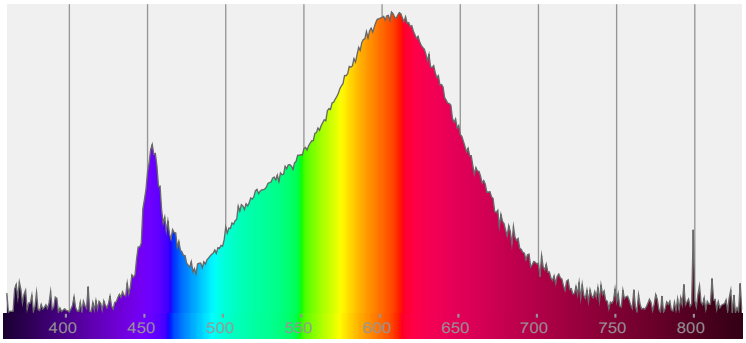
Item number:
NP/L1C/14C/0510/827/LAF-2

Date and time:
21.06.2022 12:12:24

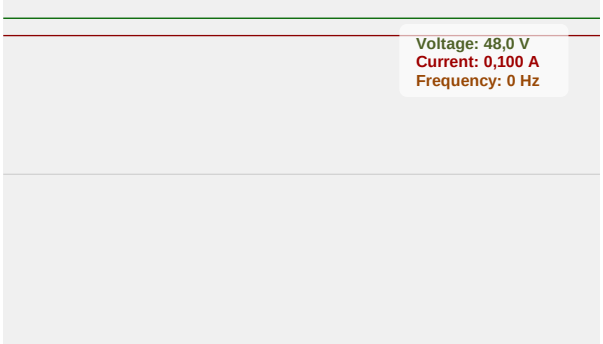
Description:
Tolerances:
Lumen +/-4%
Candela +/-2,5%
Colour Temp +/-35 Kelvin
CRI +/-0,7
Angular Resolution: 1 Degree Step
Last Calibration 20-09-2021
Tester: Peter Ulrich
Test Site: Lichtlabor
Gaustrasse 13
55411 Bingen am Rhein

CIE 1931
x: 0,460
y: 0,411

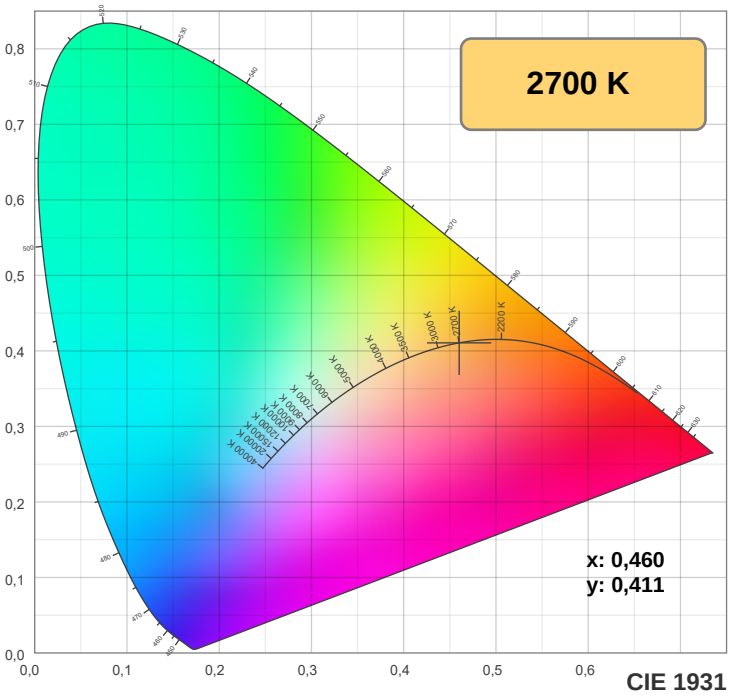
Spectra



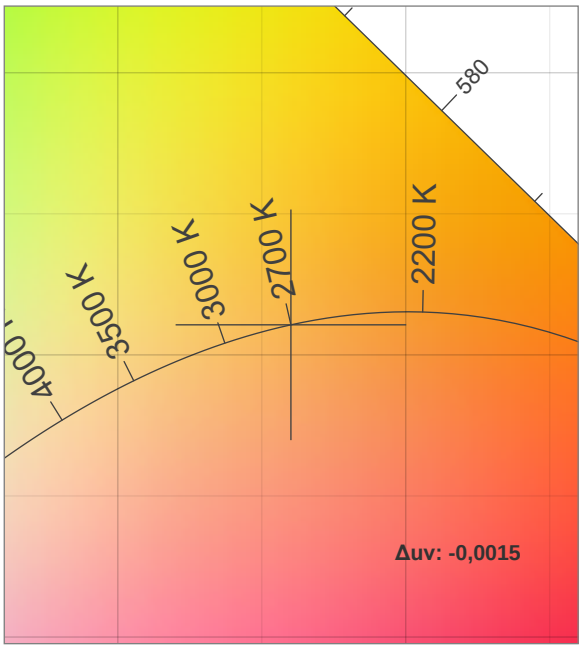
Power



Color details

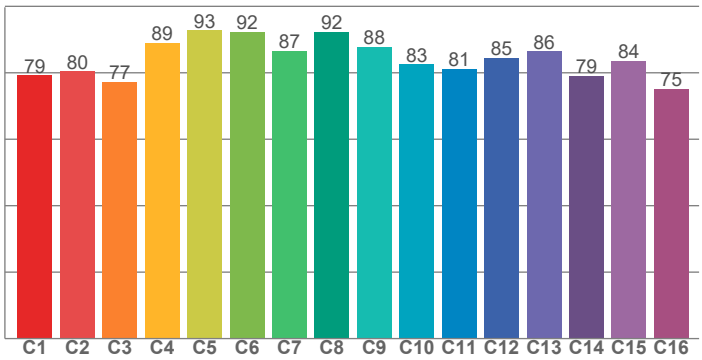


CIE 1931

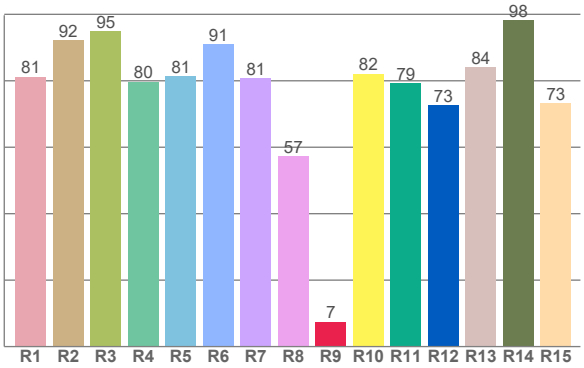


CIE 1931 ZOOM

TM30: 84,2



CRI: 82,3 (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
81,3	92,1	95,0	79,7	81,3	90,9	80,9	57,2	7,5	82,2	79,3	72,6	84,0	98,2	73,2

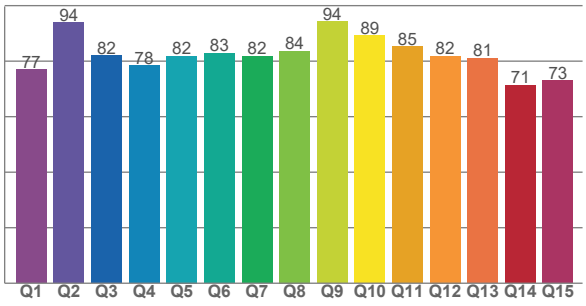
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79,2	80,4	77,3	89,0	92,8	92,4	86,6	92,3	87,8	82,5	81,2	84,5	86,5	79,0	83,6	75,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
77,0	93,8	82,1	78,4	81,8	82,8	81,8	83,6	94,2	89,2	85,2	81,9	81,0	71,3	73,0

CQS: 81,3



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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2700 K	82,3	7,5	84,2	95,9	81,3	0,460	0,411	0,263	0,352	-0,0015

TM30 details

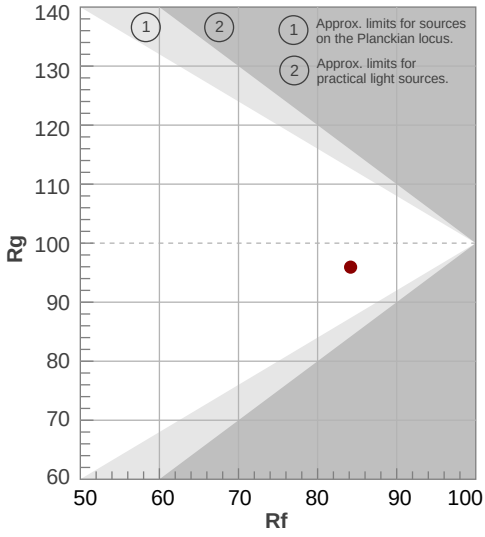
Rf 84,2

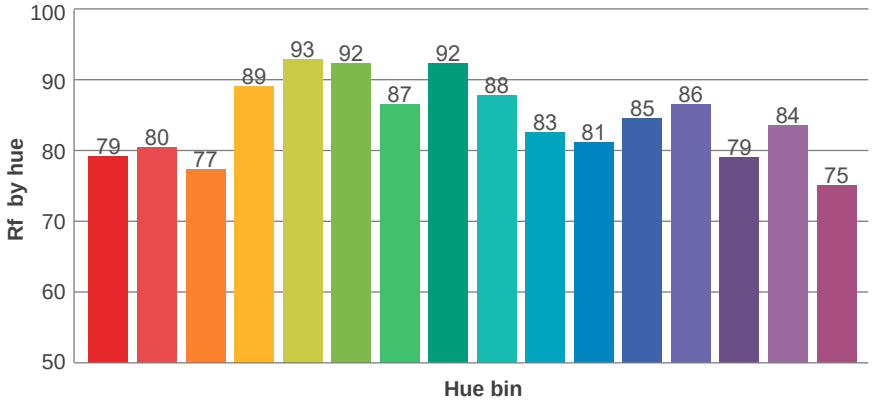
Fidelity index Rf

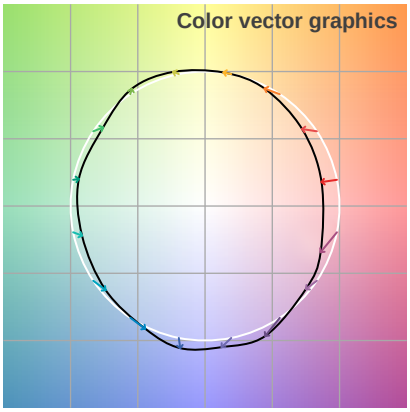
Rg 95,9

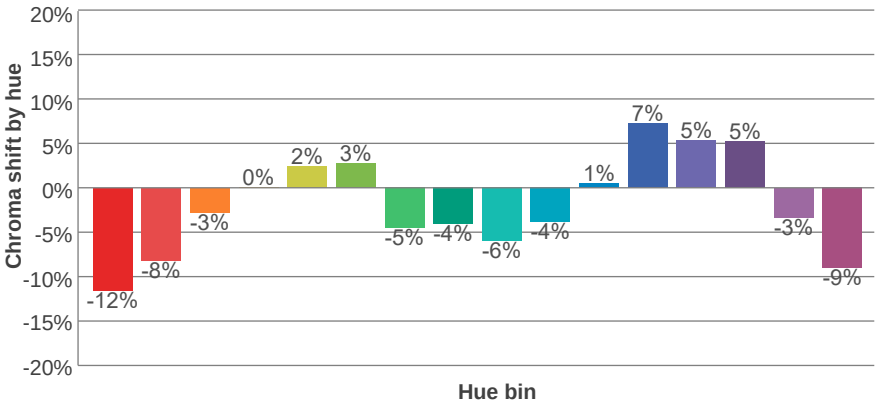
Gammut index Rg

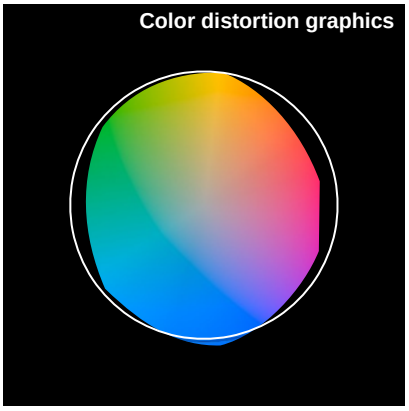
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	79	-12%	1%
2	80	-8%	7%
3	77	-3%	12%
4	89	0%	6%
5	93	2%	4%
6	92	3%	-3%
7	87	-5%	-6%
8	92	-4%	-1%
9	88	-6%	4%
10	83	-4%	11%
11	81	1%	14%
12	85	7%	3%
13	86	5%	-8%
14	79	5%	-16%
15	84	-3%	-10%
16	75	-9%	-17%

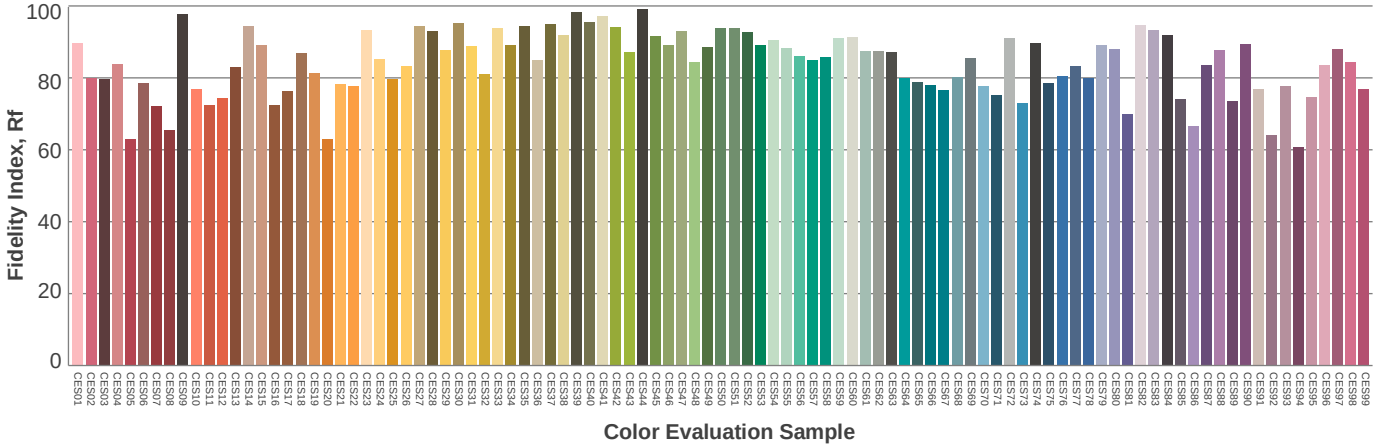




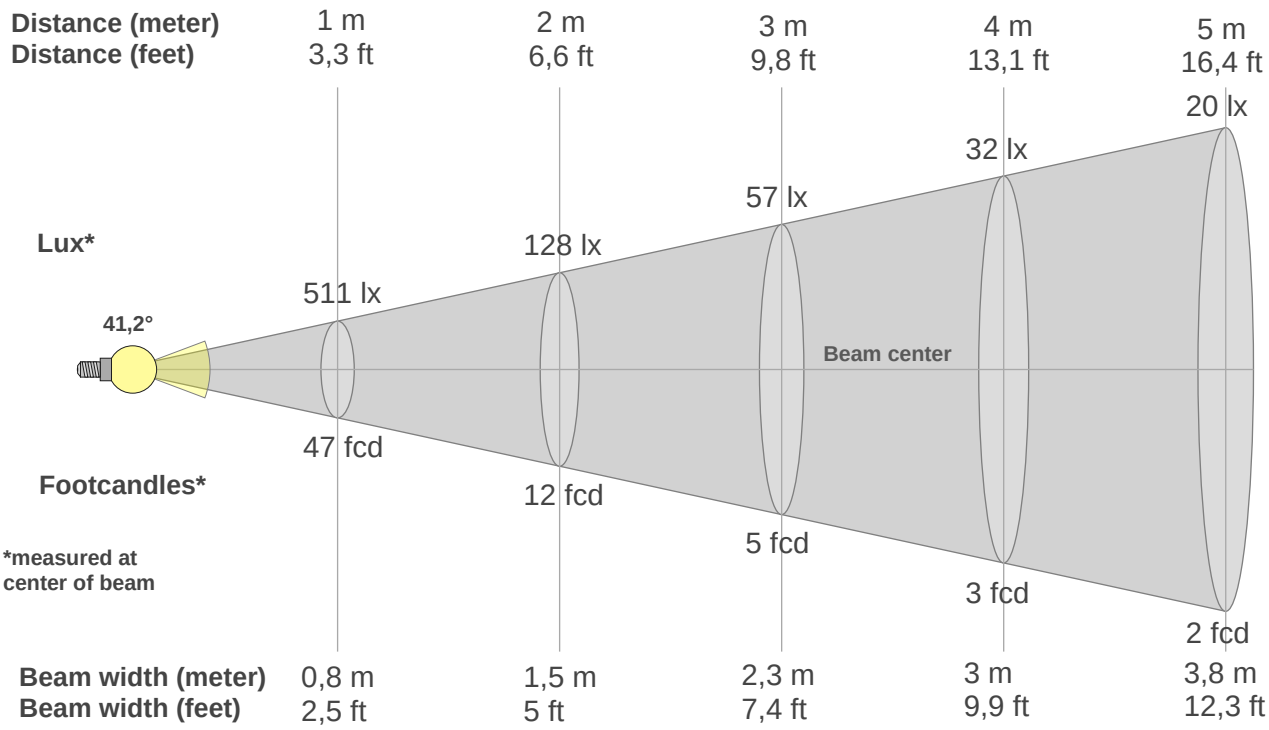








Beam details



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
511lx	128lx	57lx	32lx	20lx	14lx	10lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx
47,5fcd	11,9fcd	5,3fcd	3fcd	1,9fcd	1,3fcd	1fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd

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°
511	568	618	649	662	652	619	566	497	418	335	265	215	182	156	135	118	105	95	88
100%	111%	121%	127%	129%	127%	121%	111%	97%	82%	65%	52%	42%	36%	30%	26%	23%	20%	19%	17%

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°
511	527	525	522	517	511	504	494	480	466	448	426	403	377	351	325	301	280	263	250
100%	103%	103%	102%	101%	100%	99%	97%	94%	91%	88%	83%	79%	74%	69%	63%	59%	55%	51%	49%

Intensities in 180° c-plane

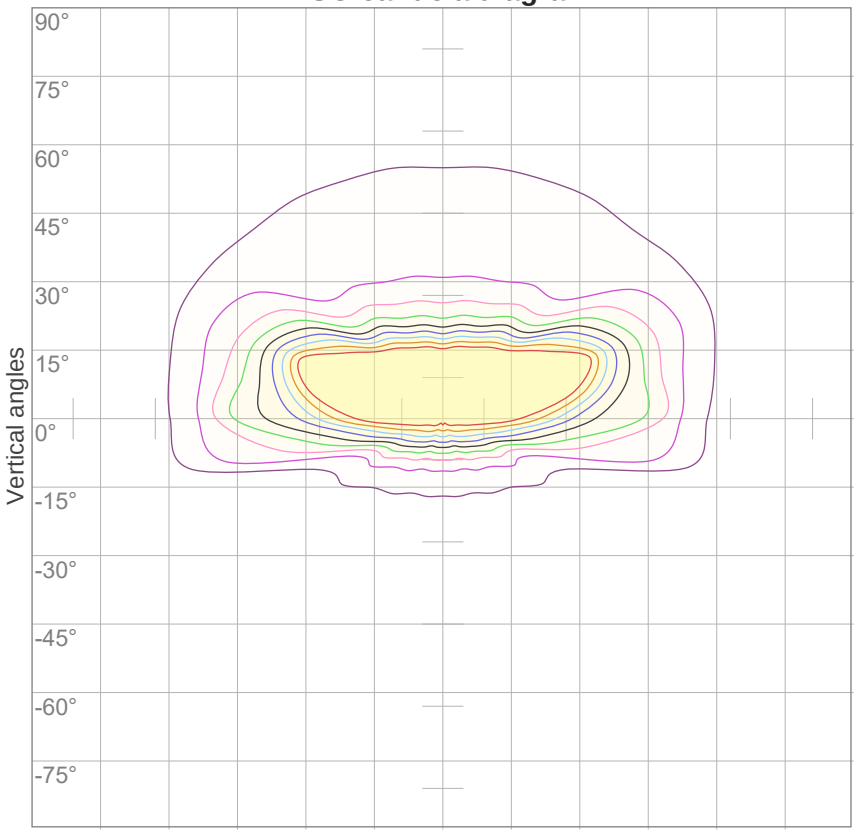
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
511	443	373	295	220	157	115	87	68	56	47	40	37	35	36	38	42	44	47	53
100%	87%	73%	58%	43%	31%	23%	17%	13%	11%	9%	8%	7%	7%	7%	8%	8%	9%	9%	10%

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°
511	527	527	525	522	518	512	505	495	484	469	452	433	412	388	364	341	319	299	284
100%	103%	103%	103%	102%	101%	100%	99%	97%	95%	92%	88%	85%	81%	76%	71%	67%	62%	59%	56%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
41,2°	**94,3°**	**173,9°**	**83,5%**	**65,5%**

ISO candela diagram



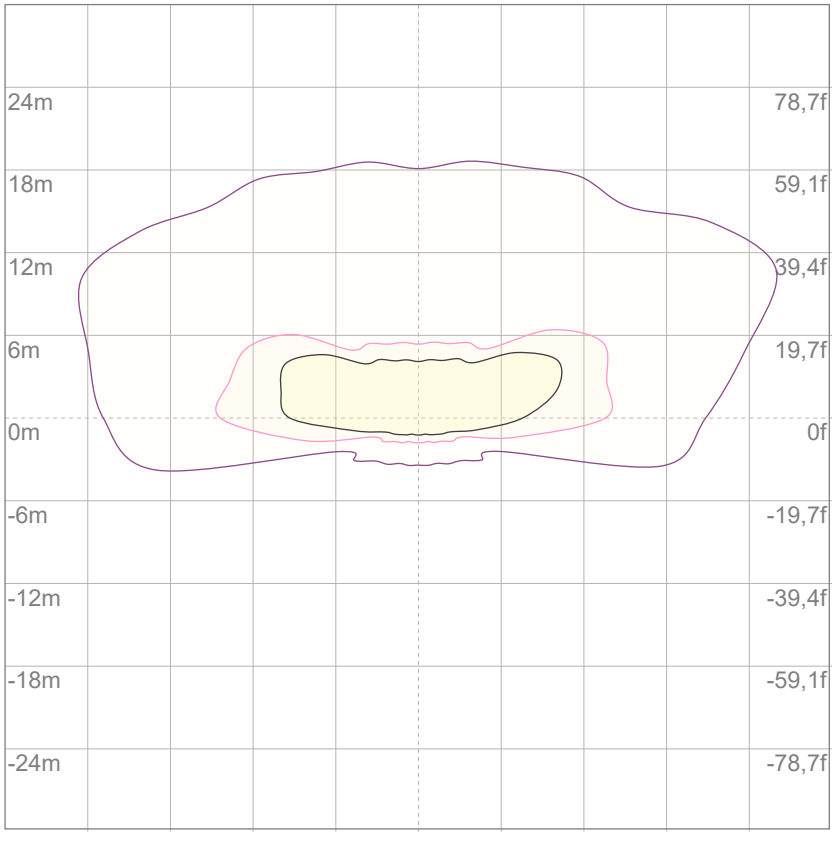
10%	51 cd
20%	102 cd
30%	153 cd
40%	205 cd
50%	256 cd
60%	307 cd
70%	358 cd
80%	409 cd
90%	460 cd

Conditions:

Number of c-planes: 16

Candela at center: 511 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,153 lx
5%	0,256 lx
10%	0,511 lx
30%	1,53 lx
50%	2,56 lx

Conditions:

Number of c-planes: 16

Lux at center: 5,11 lx

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

Glare Evaluation According to UGR

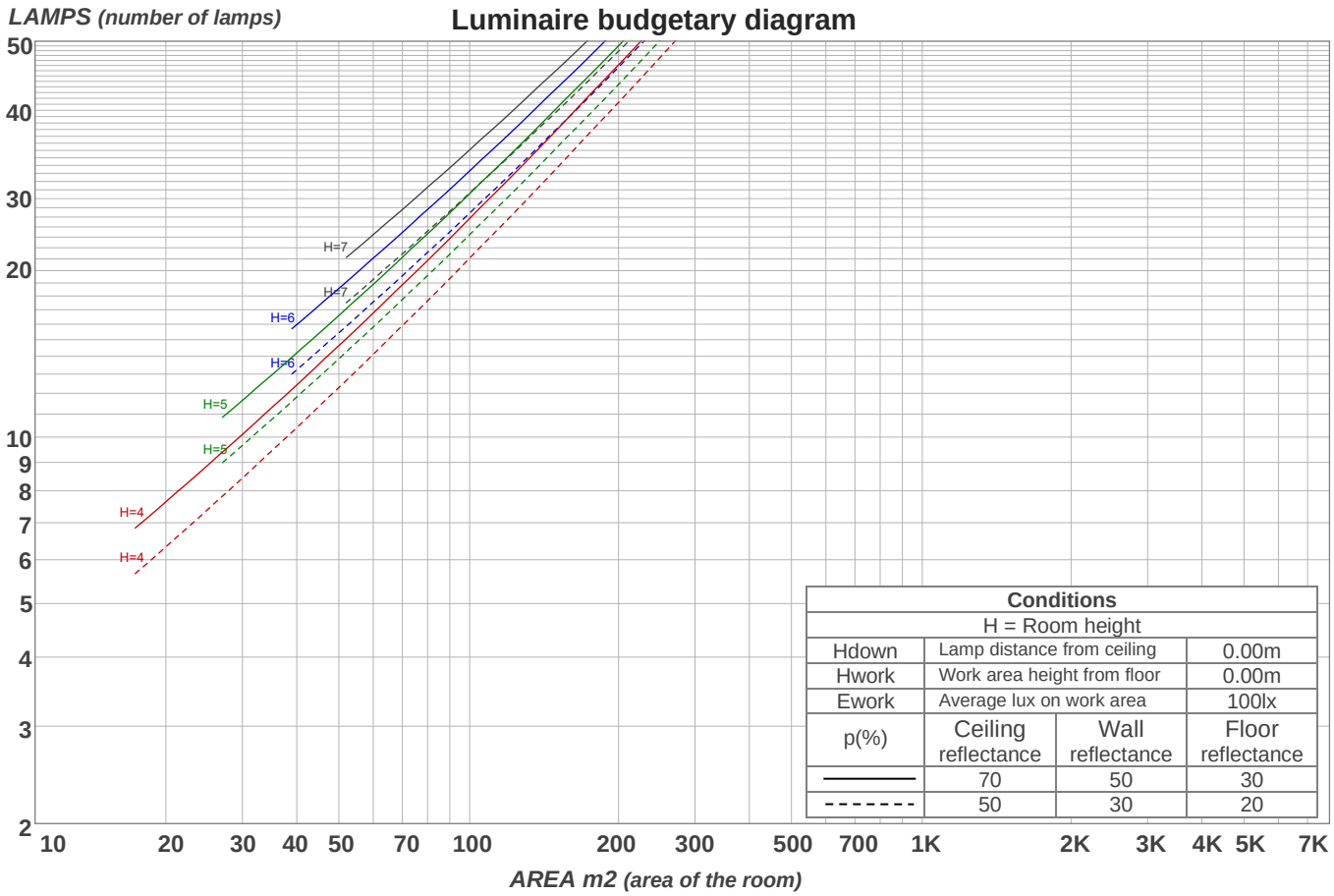
p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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
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 639 lm total luminous flux										

UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

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	98	95	93	95	92	90	91	89	87	85
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65
4	87	76	68	62	85	75	68	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	54	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43
8	67	55	47	42	65	54	47	42	53	46	41	52	46	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	36	45	40	35	45	39	35	34

Luminaire budgetary diagram

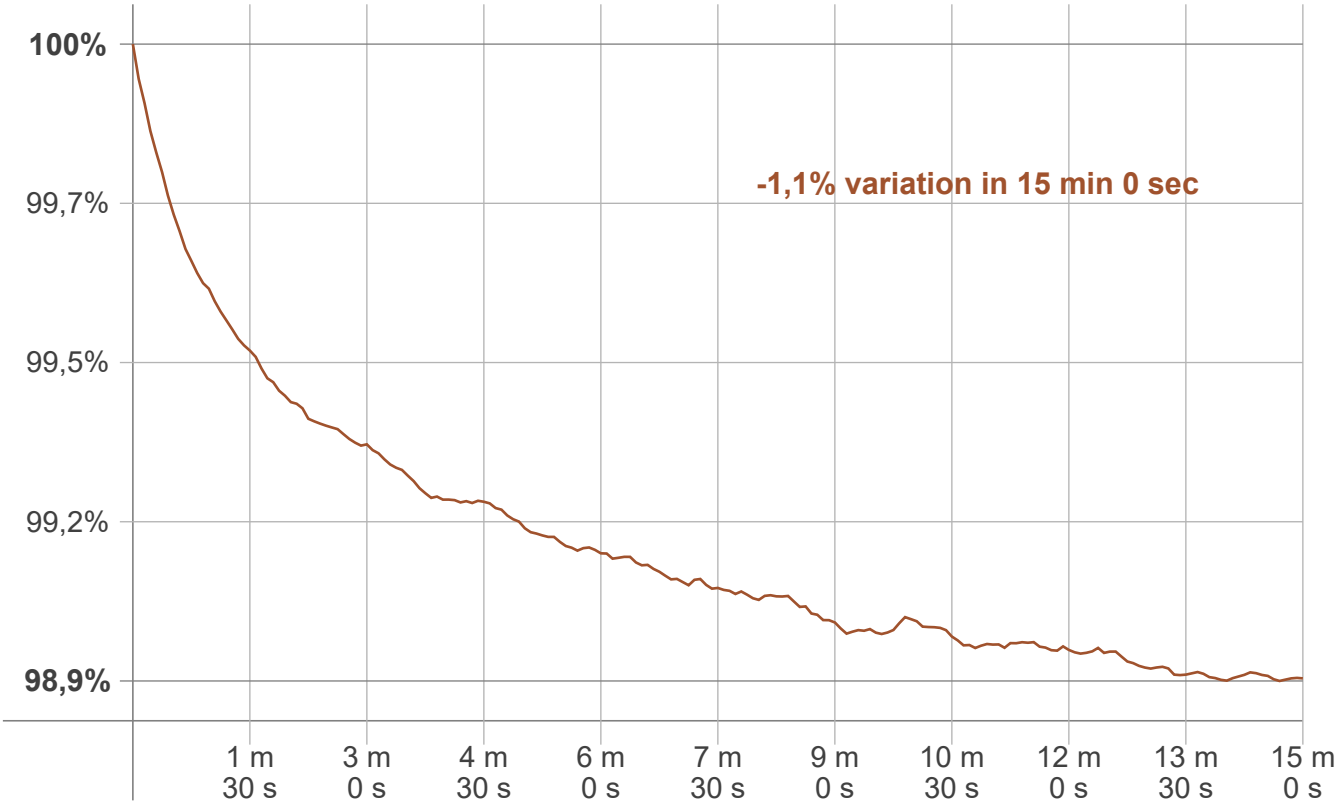


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
46,1 lm	109 lm	117 lm	102 lm	87,5 lm	72,6 lm	49,2 lm	32,8 lm	23,3 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,067 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 15 min 0 sec**
Warmup variation	**-1,1%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2699 K	+1 K	2700 K

Output change

Output start	Output change	Output end
647 lm	-8 lm	639 lm