

Light efficiency:

42 Lumen/Watt

Light quality:

CRI: 98,2

Color temperature:

2895 K

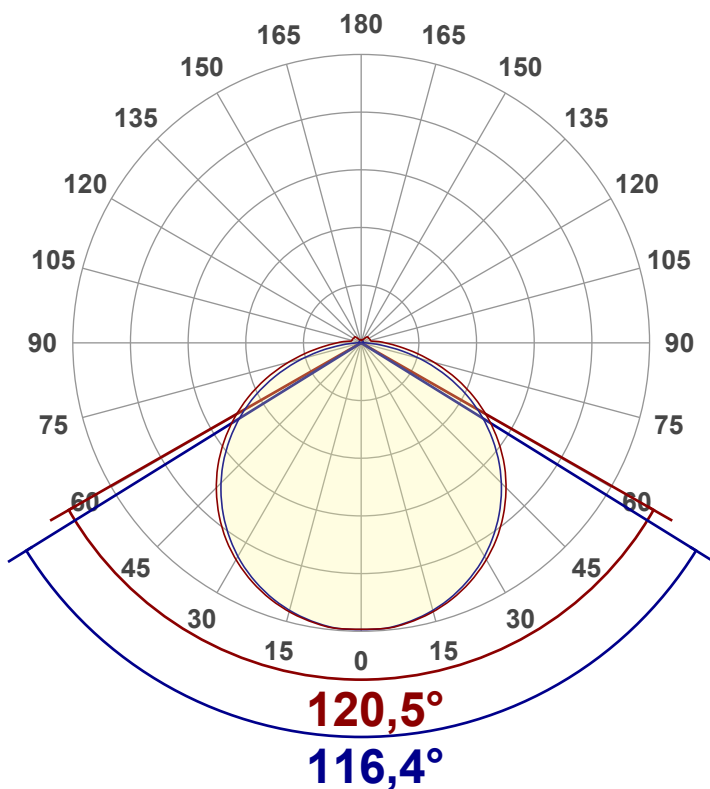
Output: 389 lm

Peak: 120 cd

Power: 9,3 W

PF: 1,0

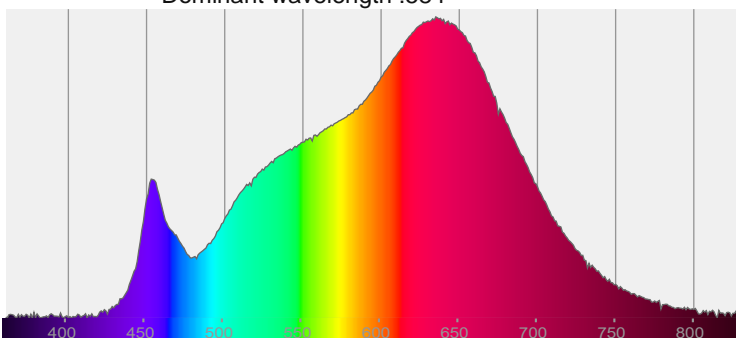
No photo



CIE 1931
x: 0,445
y: 0,406

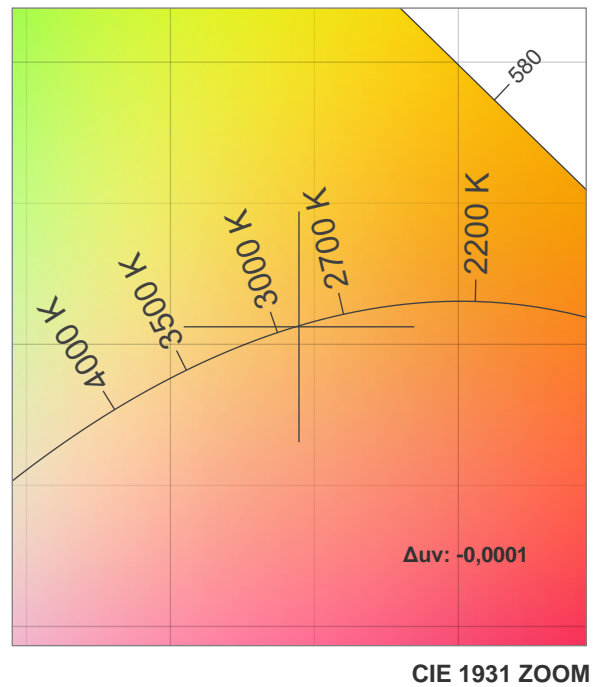
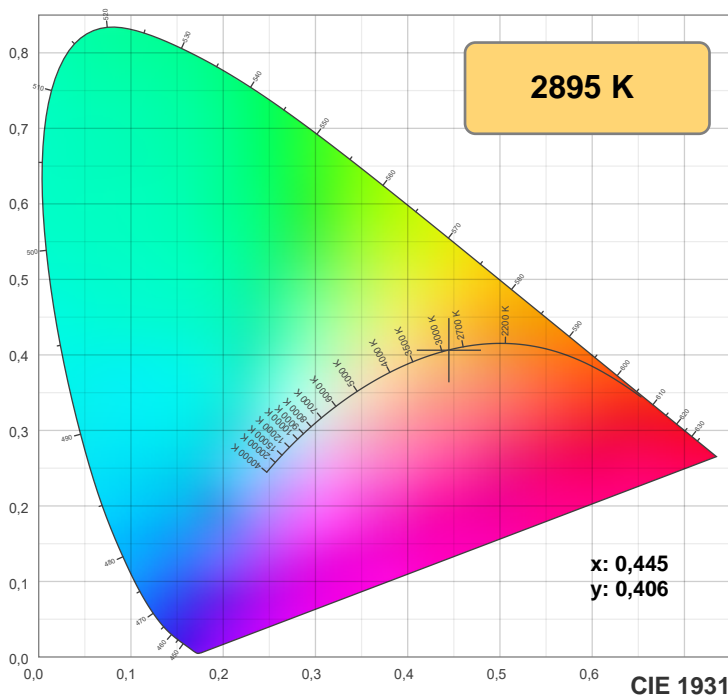
Spectra: Peak wavelength :635

Dominant wavelength :584

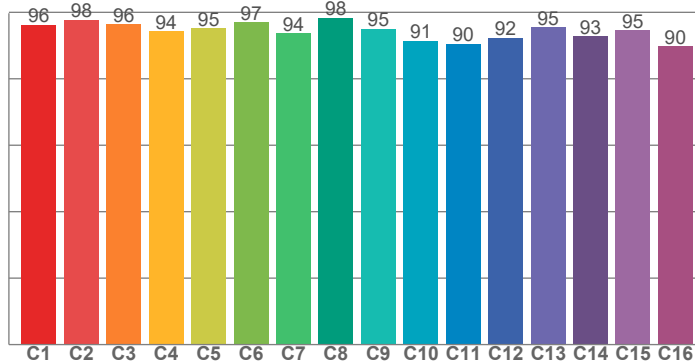


Power

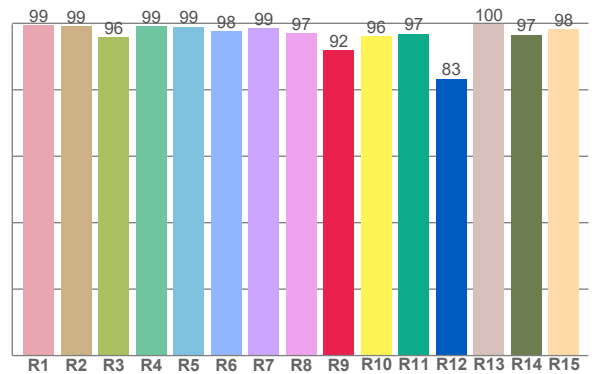
Voltage: 24,0 V
Current: 0,386 A
Frequency: 0 Hz



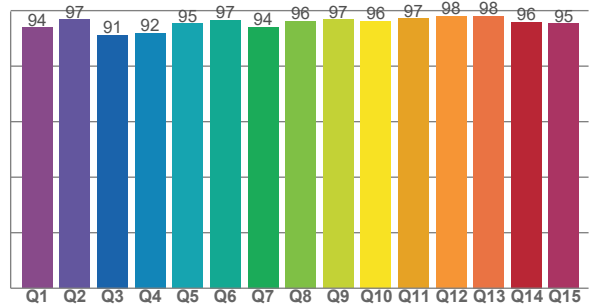
TM-30: 94,4



CRI: 98,2 (R1-R8)



CQS: 95,0



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
99,4	99,2	95,8	99,1	99,0	97,7	98,6	97,0	91,8	96,2	96,9	83,3	99,8	96,6	98,3

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
96,3	97,8	96,3	94,3	95,2	97,1	93,8	98,4	95,1	91,4	90,5	92,3	95,4	92,8	94,6	89,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93,9	96,7	91,2	92,0	95,3	96,7	94,1	96,3	96,7	96,3	97,2	98,0	98,1	96,0	95,4

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
2895 K	98,2	91,8	94,4	100,7	95,0	0,445	0,406	0,255	0,349	-0,0001

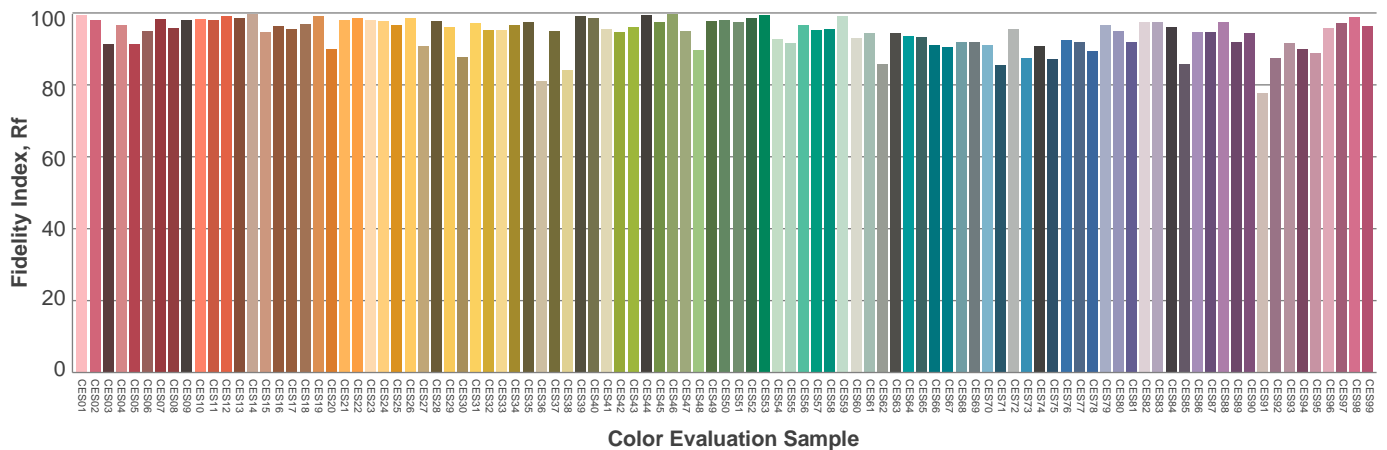
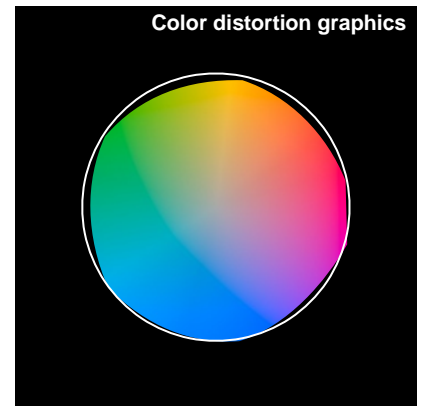
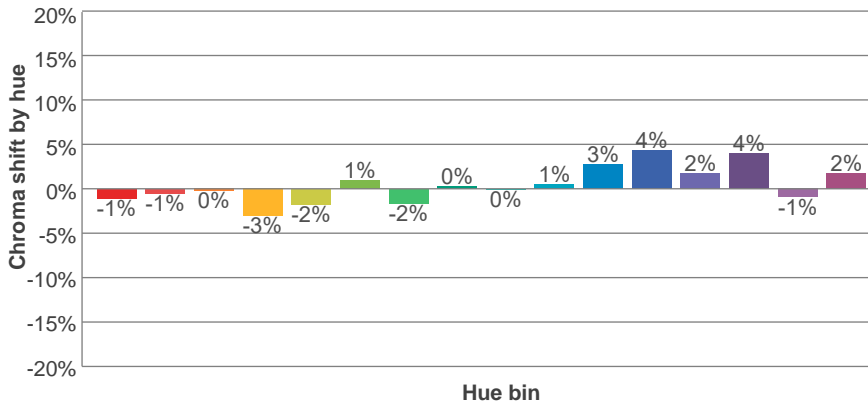
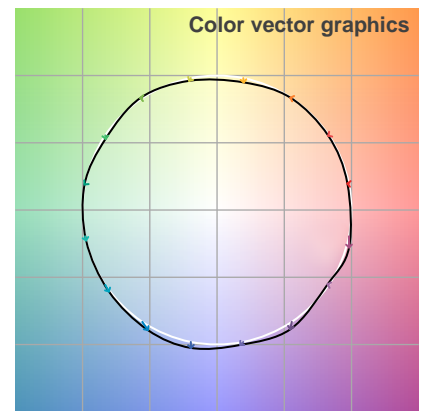
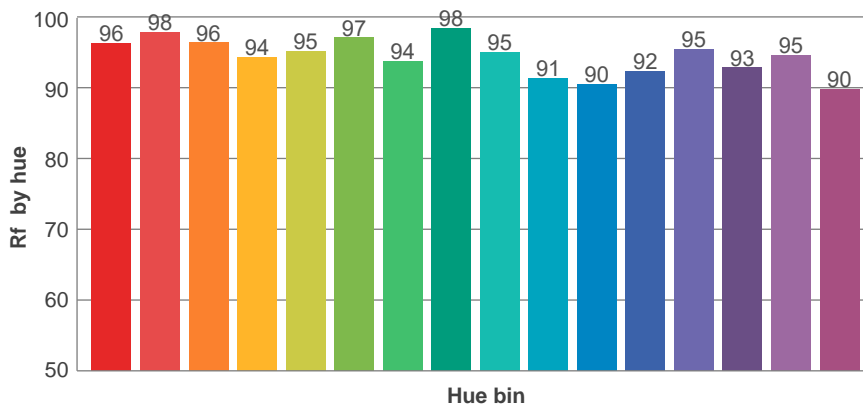
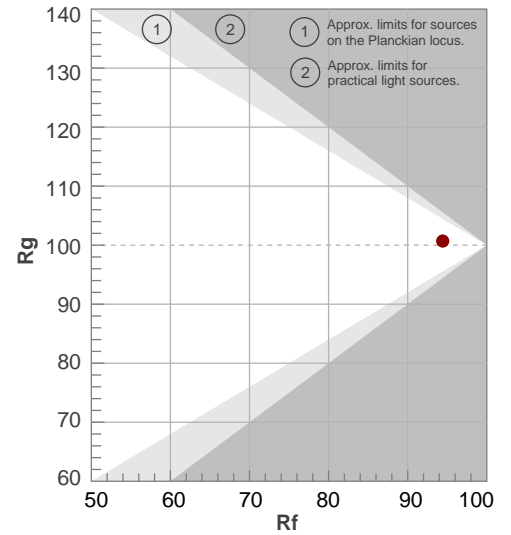
Rf 94,4

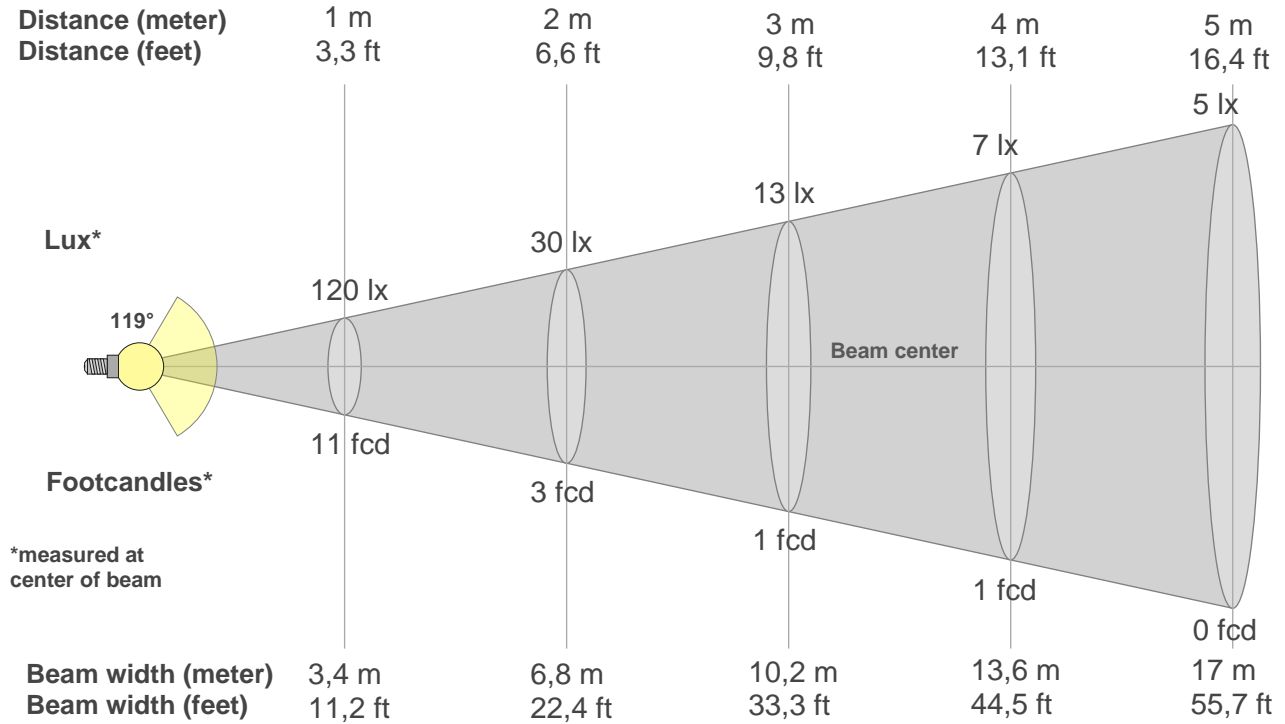
Fidelity index Rf

Rg 100,7

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	96	-1%	0%
2	98	-1%	0%
3	96	0%	1%
4	94	-3%	-1%
5	95	-2%	2%
6	97	1%	1%
7	94	-2%	2%
8	98	0%	1%
9	95	0%	3%
10	91	1%	6%
11	90	3%	7%
12	92	4%	1%
13	95	2%	-3%
14	93	4%	-4%
15	95	-1%	0%
16	90	2%	-8%





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
120lx	30lx	13lx	7lx	5lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx
11,1fcd	2,8fcd	1,2fcd	0,7fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	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°
120	119	118	116	113	109	104	99	92	85	78	69	60	51	41	31	23	15	10	7
100%	100%	99%	97%	94%	91%	87%	83%	77%	71%	65%	58%	50%	42%	34%	26%	19%	13%	8%	6%

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°
120	119	118	115	112	108	103	97	90	82	74	65	56	46	36	25	15	7	2	1
100%	100%	98%	96%	94%	90%	86%	81%	75%	69%	62%	55%	47%	39%	30%	21%	13%	6%	2%	1%

Intensities in 180° c-plane

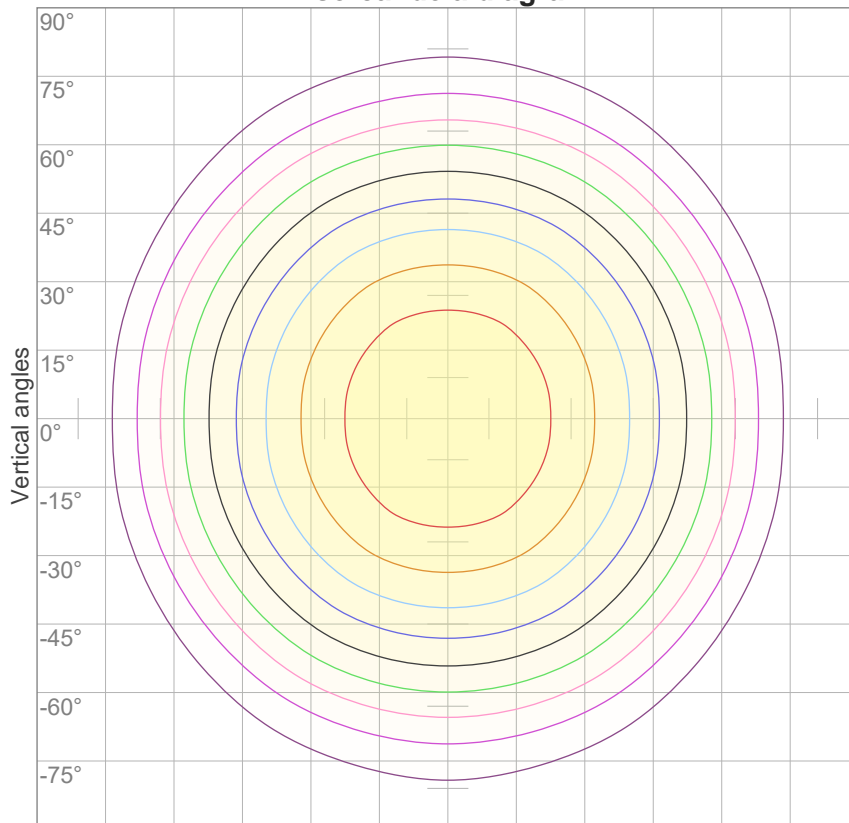
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
120	119	118	116	113	109	104	99	92	85	78	69	60	51	41	31	23	15	10	7
100%	100%	99%	97%	94%	91%	87%	83%	77%	71%	65%	58%	50%	42%	34%	26%	19%	13%	8%	6%

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°
120	119	118	115	112	108	103	97	90	82	74	65	56	46	36	25	15	7	2	1
100%	100%	98%	96%	94%	90%	86%	81%	75%	69%	62%	55%	47%	39%	30%	21%	13%	6%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
119°	170,1°	218,1°	72,2%	48,3%

iso-candela diagram



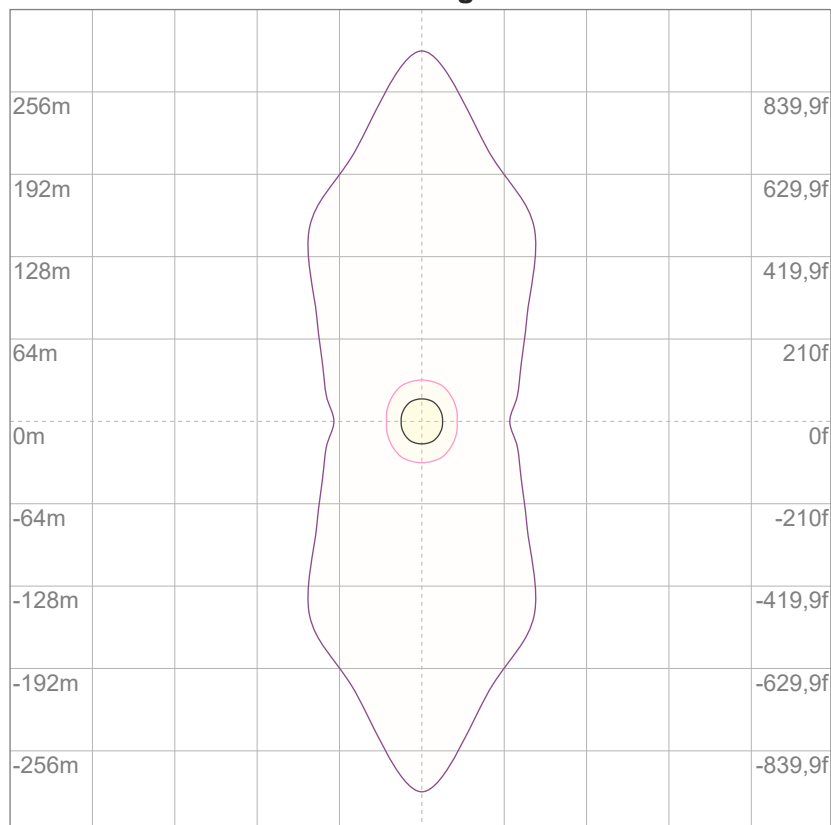
10%	12 cd
20%	24 cd
30%	36 cd
40%	48 cd
50%	60 cd
60%	72 cd
70%	84 cd
80%	96 cd
90%	108 cd

Conditions:

Number of c-planes: 12

Candela at center: 120 cd

iso-lux diagram



3%	35,9m lx
5%	59,8m lx
10%	0,120 lx
30%	0,359 lx
50%	0,598 lx

Conditions:

Number of c-planes: 12

Lux at center: 1,20 lx

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

Glare evaluation according to UGR

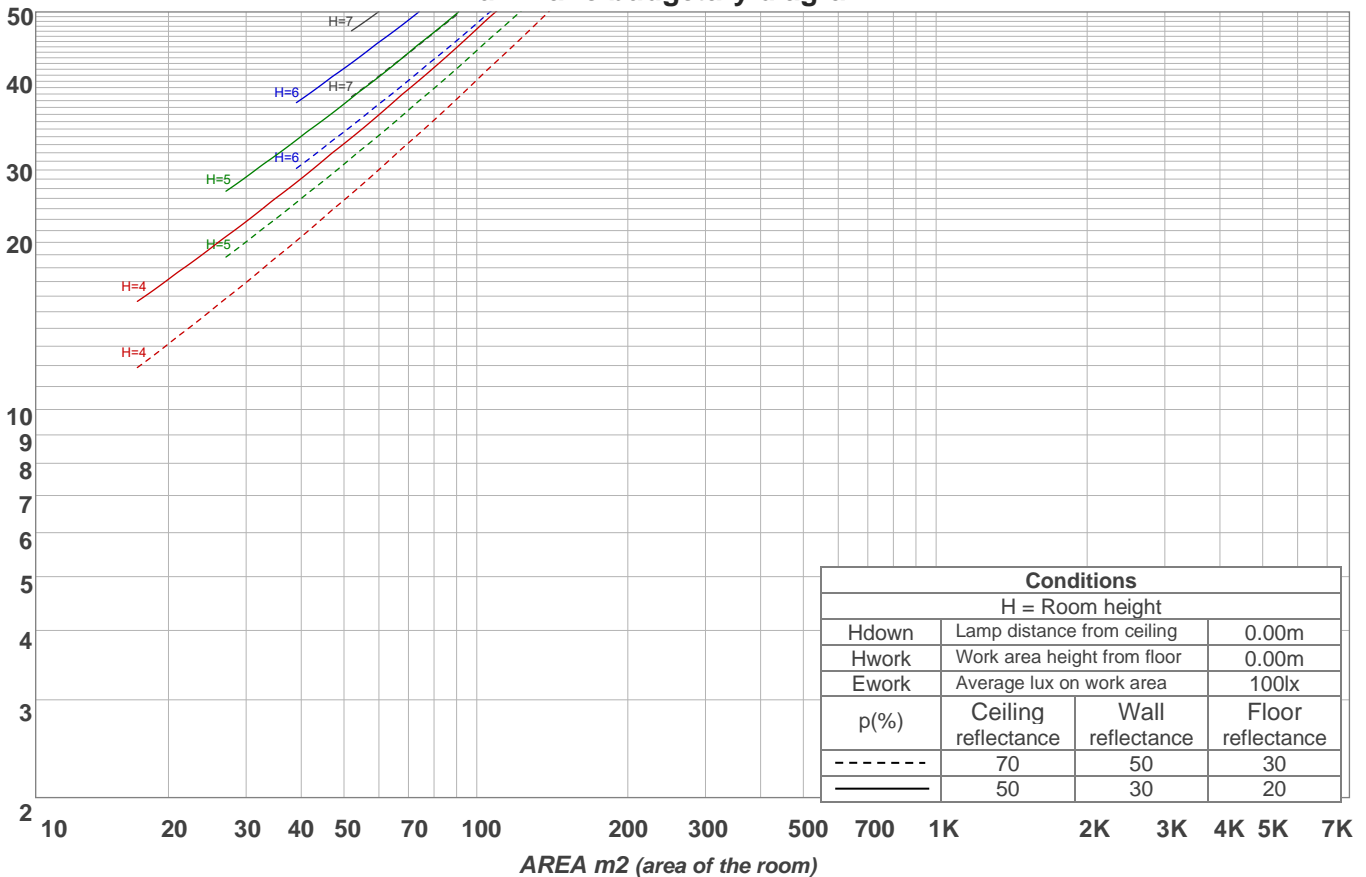
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	20,4	21,7	20,7	22,0	22,3	22,0	23,2	22,3	23,6	23,9
	3H	21,6	22,9	22,1	23,3	23,5	23,5	24,8	24,0	25,1	25,4
	4H	22,1	23,3	22,6	23,7	24,0	24,2	25,4	24,6	25,7	26,0
	6H	22,6	23,6	22,9	24,0	24,4	24,7	25,7	25,1	26,1	26,6
	8H	22,7	23,7	23,1	24,1	24,6	24,8	25,9	25,2	26,2	26,7
	12H	22,8	23,8	23,2	24,2	24,7	24,9	25,9	25,4	26,3	26,9
4H	2H	21,1	22,3	21,5	22,6	23,0	22,3	23,5	22,7	23,8	24,2
	3H	22,6	23,6	23,0	24,0	24,5	24,1	25,1	24,5	25,5	26,0
	4H	23,1	24,1	23,6	24,5	25,1	24,7	25,7	25,2	26,1	26,7
	6H	23,5	24,4	24,1	24,9	25,3	25,3	26,2	25,8	26,6	27,0
	8H	23,7	24,5	24,3	25,0	25,4	25,5	26,3	26,0	26,7	27,2
	12H	23,8	24,5	24,4	25,0	25,6	25,6	26,3	26,2	26,8	27,3
8H	4H	23,4	24,2	23,9	24,6	25,1	24,9	25,6	25,4	26,1	26,6
	6H	24,0	24,6	24,5	25,1	25,7	25,5	26,1	26,1	26,7	27,3
	8H	24,2	24,8	24,8	25,4	26,1	25,8	26,3	26,4	26,9	27,6
	12H	24,4	24,9	25,1	25,5	26,1	26,0	26,4	26,6	27,0	27,7
12H	4H	23,4	24,0	23,9	24,5	25,1	24,8	25,5	25,4	26,0	26,5
	6H	24,0	24,6	24,6	25,2	25,9	25,6	26,1	26,1	26,7	27,4
	8H	24,3	24,8	25,0	25,3	26,0	25,8	26,3	26,5	26,8	27,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					0,1 / -0,1				
S = 1.5H		0,2 / -0,3					0,4 / -0,4				
S = 2.0H		0,5 / -0,7					0,9 / -0,9				
CIE 117-1995. Corrected glare indices referring to 389 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	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	107	102	97	93	104	99	95	91	94	91	87	89	87	84	85	83	81	78
2	97	88	81	75	94	86	79	74	82	76	71	78	73	69	74	70	67	64
3	88	77	68	62	85	75	67	61	71	65	59	68	62	58	65	60	56	54
4	80	68	59	52	78	66	58	51	63	56	50	60	54	49	58	52	48	46
5	74	60	51	44	71	59	50	44	56	49	43	54	47	42	52	46	41	39
6	68	54	45	39	66	53	44	38	51	43	38	49	42	37	47	41	36	34
7	63	49	40	34	61	48	40	34	46	39	33	44	38	33	43	37	32	30
8	59	45	36	30	57	44	36	30	42	35	29	41	34	29	39	33	29	27
9	55	41	33	27	53	40	32	27	39	32	26	37	31	26	36	30	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	28	24	33	28	23	22

LAMPS (number of lamps)

Luminaire budgetary diagram



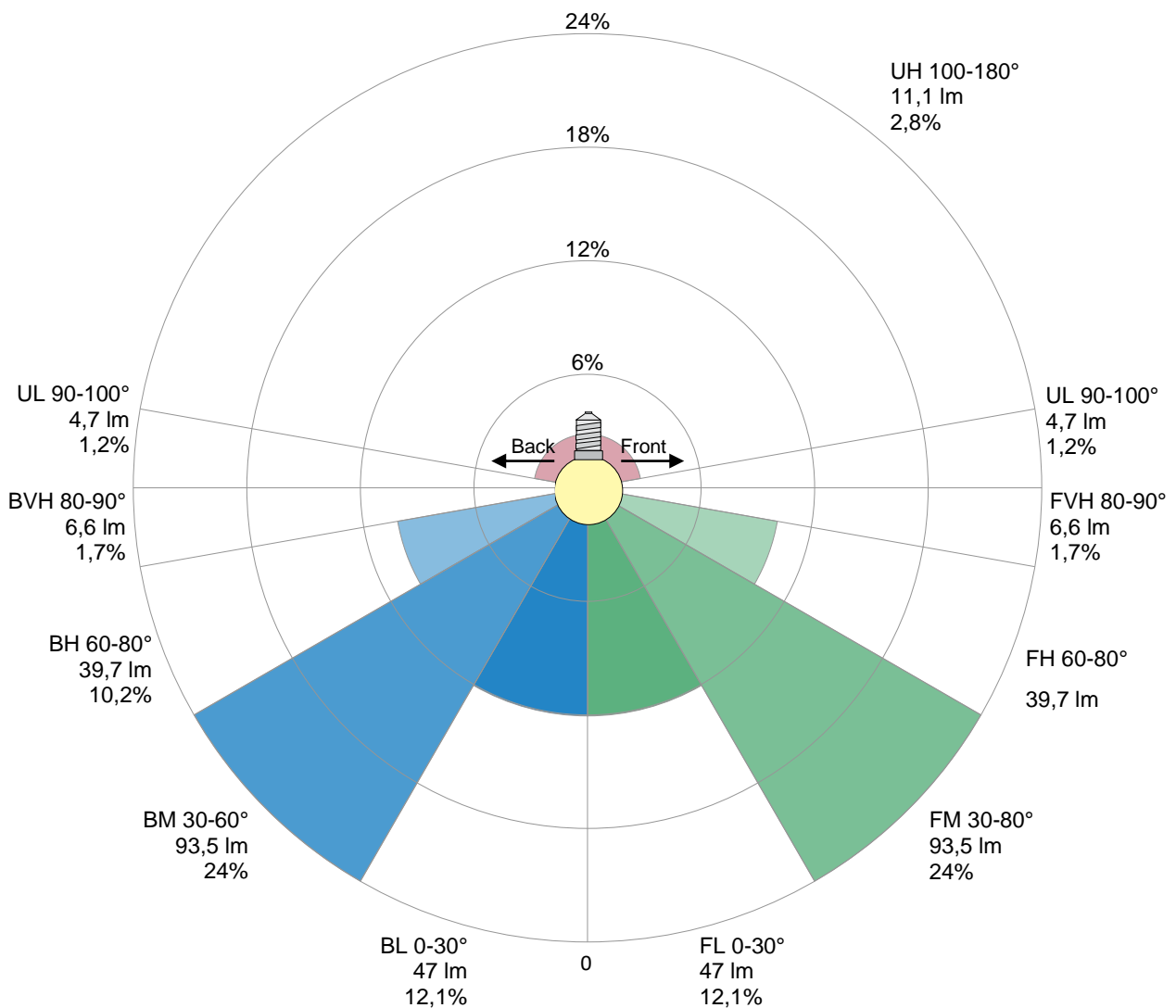
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
11,3 lm	32,7 lm	50,0 lm	61,3 lm	65,1 lm	60,7 lm	48,7 lm	30,7 lm	13,2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
4,61 lm	2,80 lm	2,47 lm	2,03 lm	1,60 lm	1,03 lm	0,636 lm	0,372 lm	0,121 lm

LCS table

BUG rating:	B0 U2 G0	
Forward light	Lumens	Lumens %
Low(0-30):	47	12,1%
Medium(30-60):	93,5	24%
High(60-80):	39,7	10,2%
Very high(80-90):	6,6	1,7%
Back light		
Low(0-30):	47	12,1%
Medium(30-60):	93,5	24%
High(60-80):	39,7	10,2%
Very high(80-90):	6,6	1,7%
Uplight		
Low(90-100):	4,7	1,2%
High(100-180):	11,1	2,8%

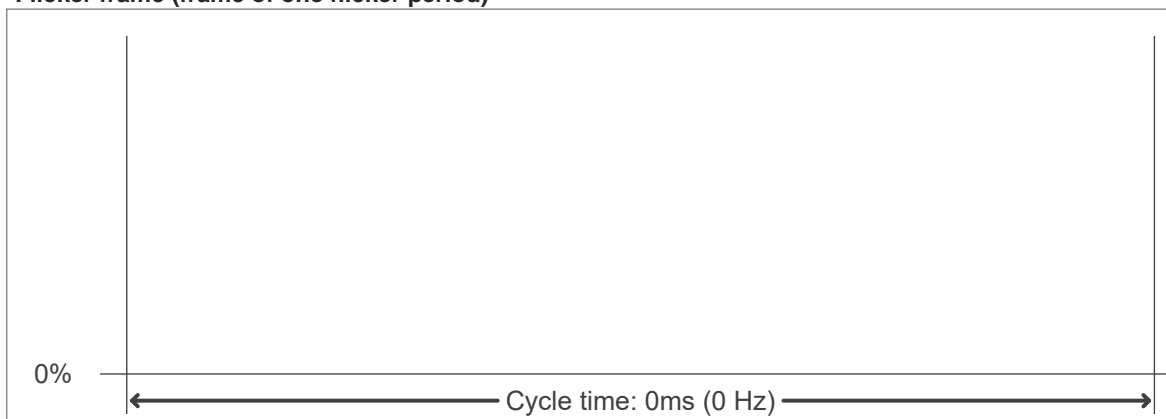
LCS graph



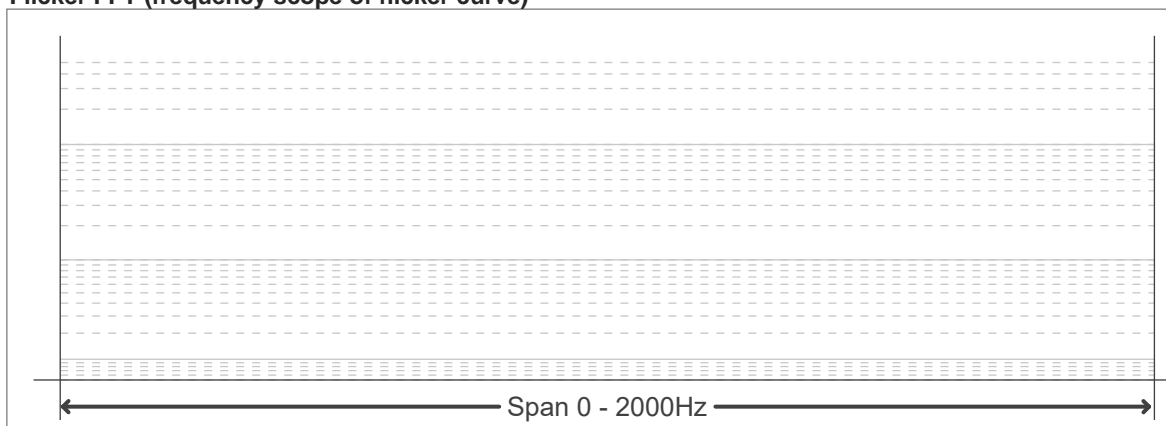
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		n/a Hz	
Flicker index:	n/a	JA8/10 40Hz	n/a %
Flicker percentage:	n/a %	JA8/10 90Hz	n/a %
SVM: (Visual flicker)	n/a	JA8/10 200Hz	n/a %
PstLM	n/a	JA8/10 400Hz	n/a %
Mp	n/a	JA8/10 1000Hz	n/a %

Flicker conditions:

Sample rate:	n/a samples/second
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