Light efficiency:

45 Lumen/Watt

Light quality:

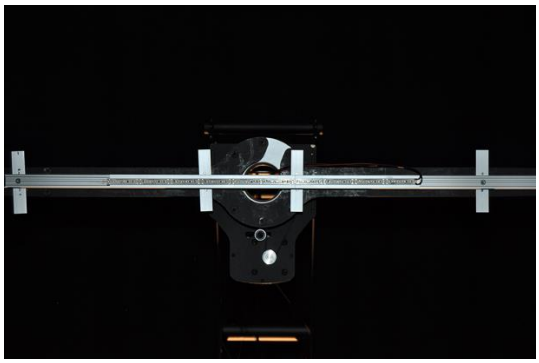
CRI: 44,5

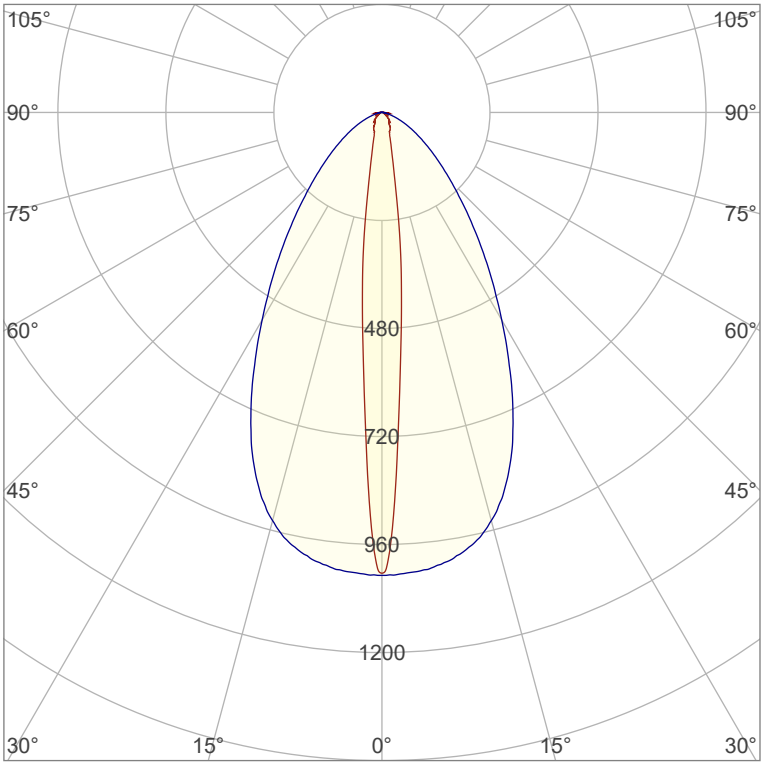
Color temperature:

16928 K

Output: 408 lm
Peak: 1029 cd

Power: 9,1 W
PF: 1,0





Product name:
Defiant-3_510mm_RGB_Inlay-Lens-15°

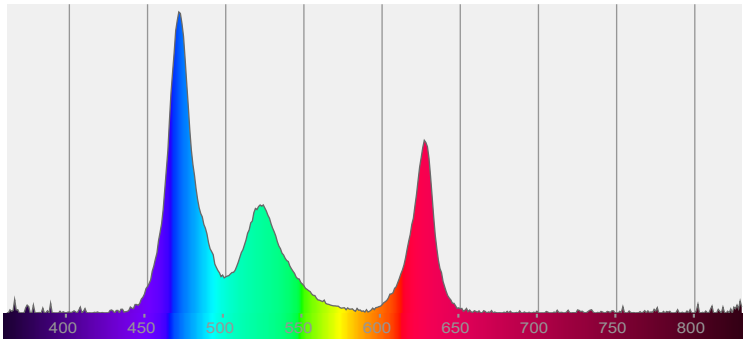
Item number:
NP/L3C/22C/0510/RGB/IL1F

Date and time:
08.09.2025 16:51:30

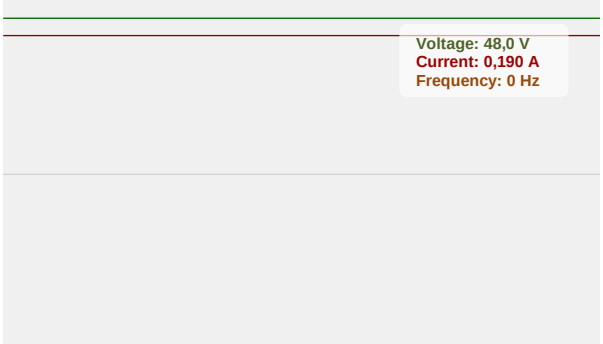
Description:
Tolerances:
Lumen +/-4%
Candela +/-2,5%
Colour Temp +/-35 Kelvin
CRI +/-0,7
Angular Resolution: 1 Degree Step
Last Calibration 13.10.2023
Tester: Peter Ulrich
Test Site: Lichtlabor
Gaustrasse 13
55411 Bingen am Rhein

CIE 1931
x: 0,249
y: 0,276

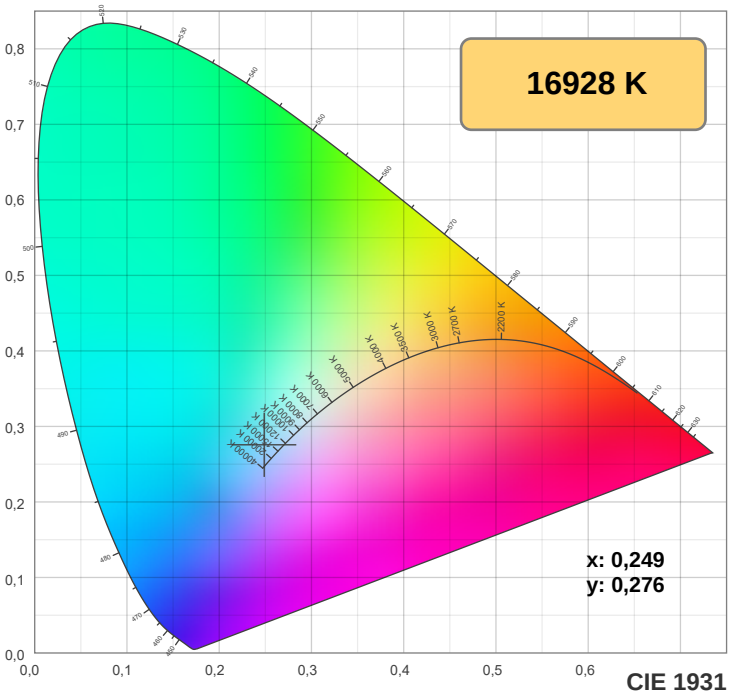
Spectra

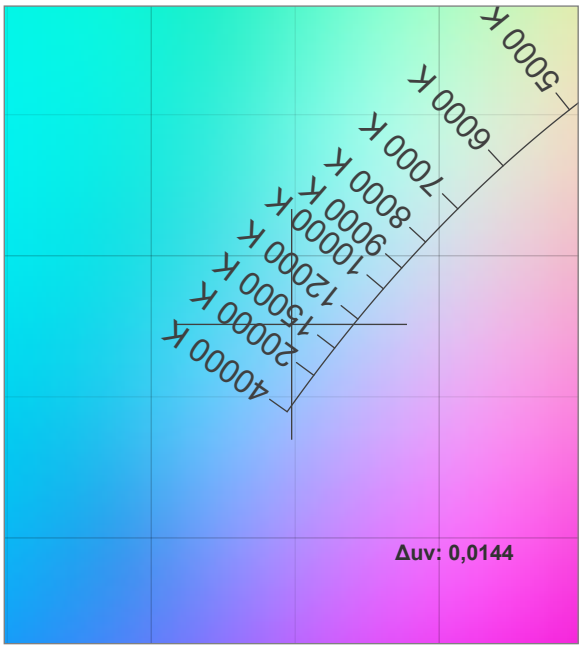


Power

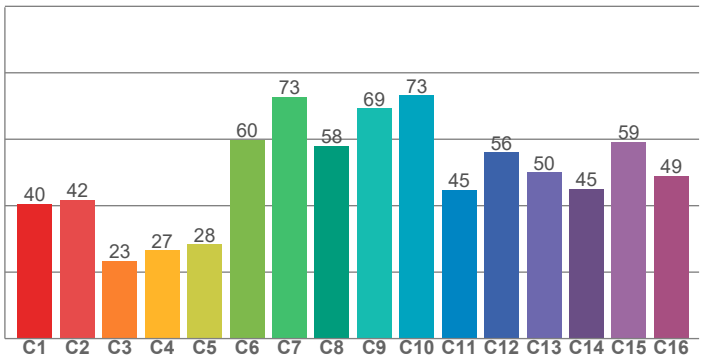


Color details

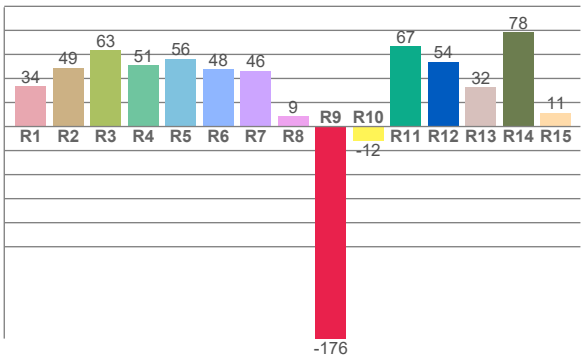




TM30: 48,2



CRI: 44,5 (R1-R8)



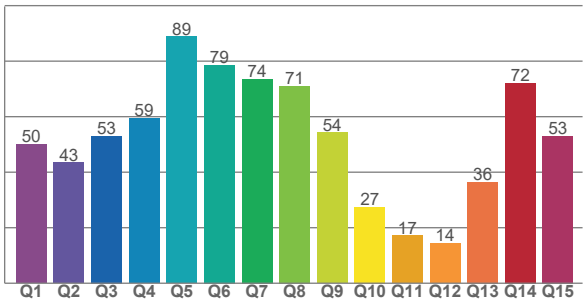
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
33,8	49,0	63,5	51,1	56,4	47,6	46,4	8,5	-176,4	-12,4	66,9	54,1	32,5	78,3	11,5

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
40,5	41,7	23,4	26,5	28,4	59,7	72,8	58,0	69,3	73,2	44,8	56,1	50,0	45,1	59,2	49,0

CQS: 47,7



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
50,0	43,5	53,0	59,4	88,9	78,6	73,5	71,1	54,3	27,4	17,1	14,4	36,5	72,2	53,1

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
16928 K	44,5	-176,4	48,2	87,6	47,7	0,249	0,276	0,171	0,285	0,0144

TM30 details

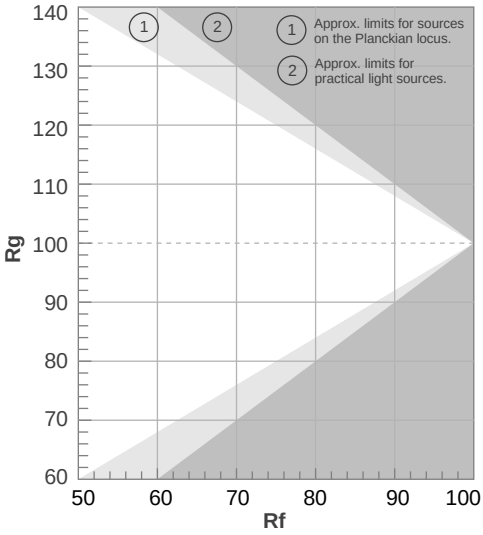
Rf 48,2

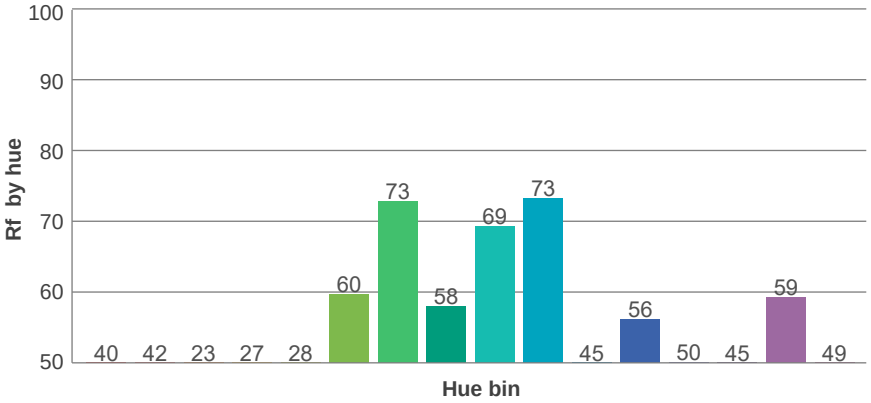
Fidelity index Rf

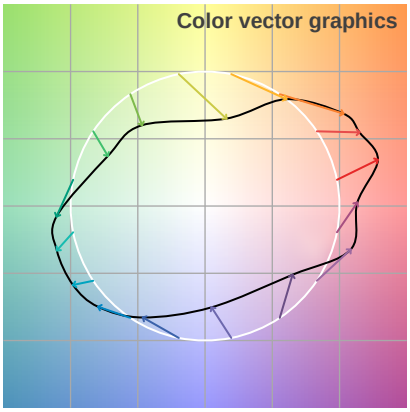
Rg 87,6

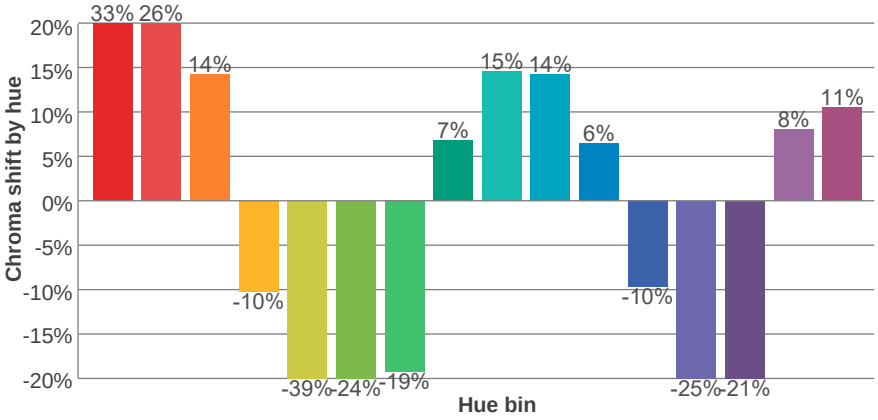
Gammut index Rg

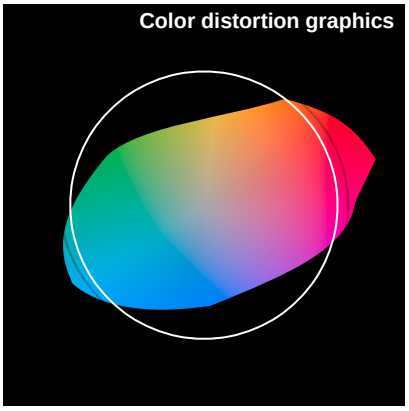
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	40	33%	9%
2	42	26%	-18%
3	23	14%	-47%
4	27	-10%	-44%
5	28	-39%	-28%
6	60	-24%	6%
7	73	-19%	9%
8	58	7%	29%
9	69	15%	11%
10	73	14%	-6%
11	45	6%	-24%
12	56	-10%	-29%
13	50	-25%	-10%
14	45	-21%	26%
15	59	8%	33%
16	49	11%	25%

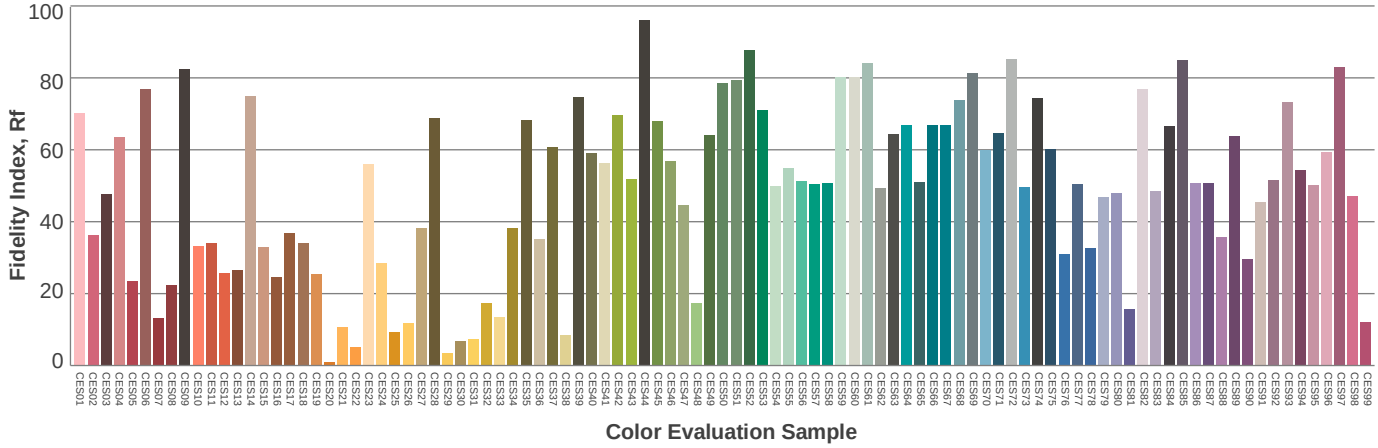




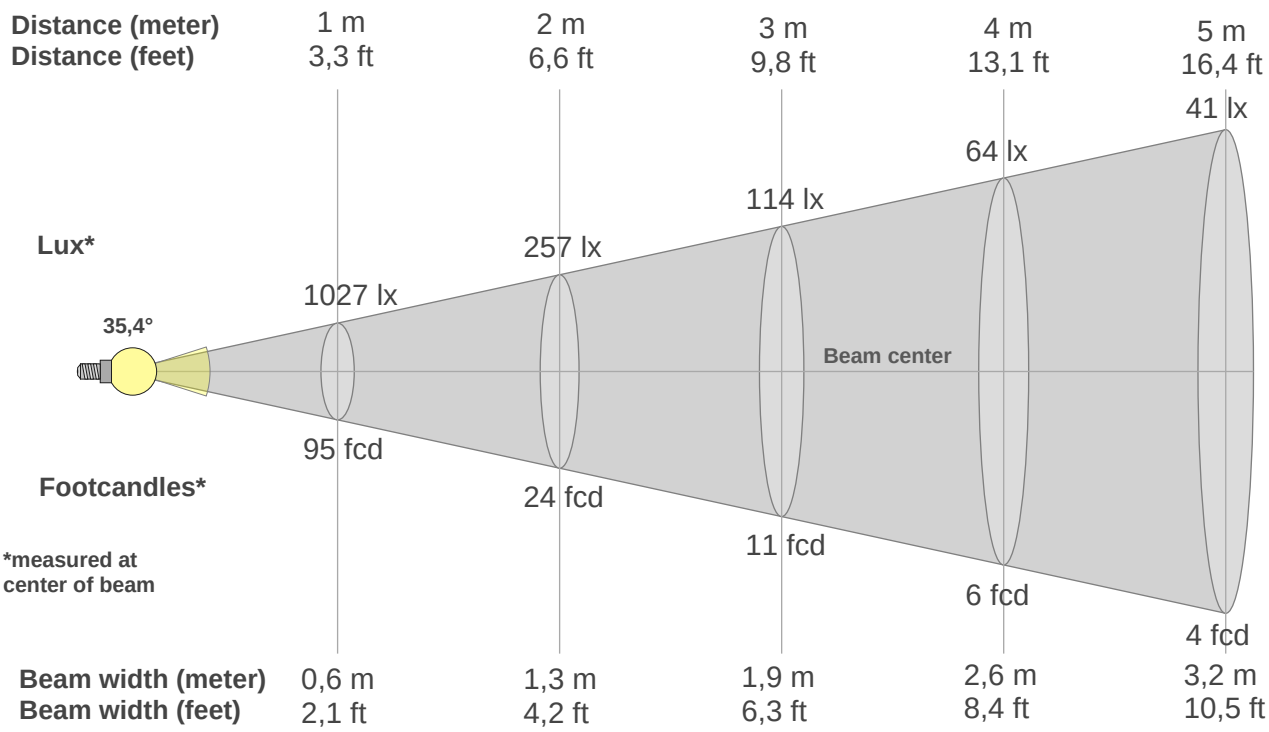








Beam details



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
1027lx	257lx	114lx	64lx	41lx	29lx	21lx	16lx	13lx	10lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx	3lx	3lx	3lx
95,4fcd	23,9fcd	10,6fcd	6fcd	3,8fcd	2,7fcd	1,9fcd	1,5fcd	1,2fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd

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°
1027	844	582	415	289	182	123	91	72	57	49	45	43	42	38	34	31	28	26	26
100%	82%	57%	40%	28%	18%	12%	9%	7%	6%	5%	4%	4%	4%	4%	3%	3%	3%	3%	3%

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°
1027	1027	1023	1019	1009	997	979	954	923	881	832	776	715	653	591	532	477	428	381	338
100%	100%	100%	99%	98%	97%	95%	93%	90%	86%	81%	76%	70%	64%	58%	52%	46%	42%	37%	33%

Intensities in 180° c-plane

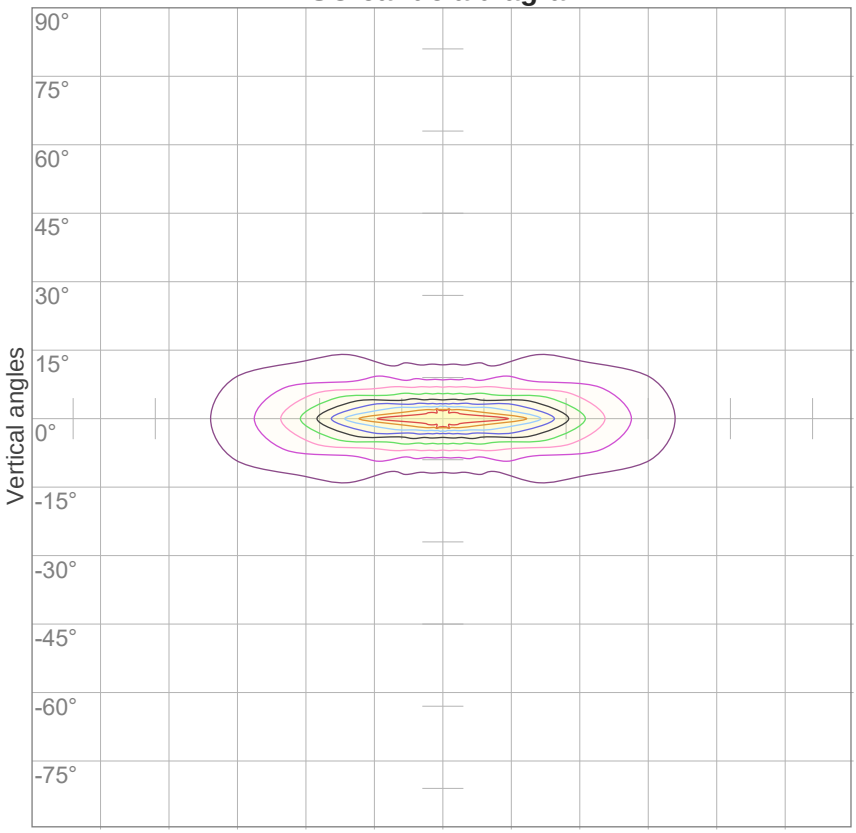
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1027	844	582	415	289	182	123	91	72	57	49	45	43	42	38	34	31	28	26	26
100%	82%	57%	40%	28%	18%	12%	9%	7%	6%	5%	4%	4%	4%	4%	3%	3%	3%	3%	3%

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°
1027	1027	1023	1019	1009	997	979	954	923	881	832	776	715	653	591	532	477	428	381	338
100%	100%	100%	99%	98%	97%	95%	93%	90%	86%	81%	76%	70%	64%	58%	52%	46%	42%	37%	33%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
35,4°	**69,5°**	**112,6°**	**88,4%**	**74,5%**

ISO candela diagram



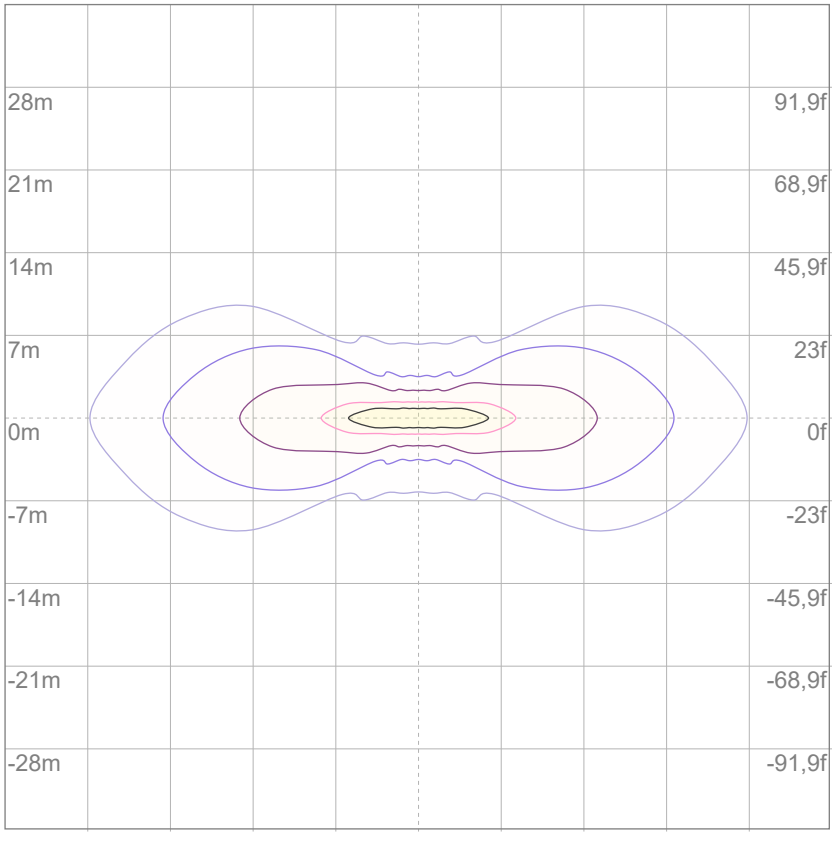
10%	103 cd
20%	205 cd
30%	308 cd
40%	411 cd
50%	514 cd
60%	616 cd
70%	719 cd
80%	822 cd
90%	924 cd

Conditions:

Number of c-planes: 16

Candela at center: 1027 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,308 lx
5%	0,514 lx
10%	1,03 lx
30%	3,08 lx
50%	5,14 lx

Conditions:

Number of c-planes: 16

Lux at center: 10,3 lx

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

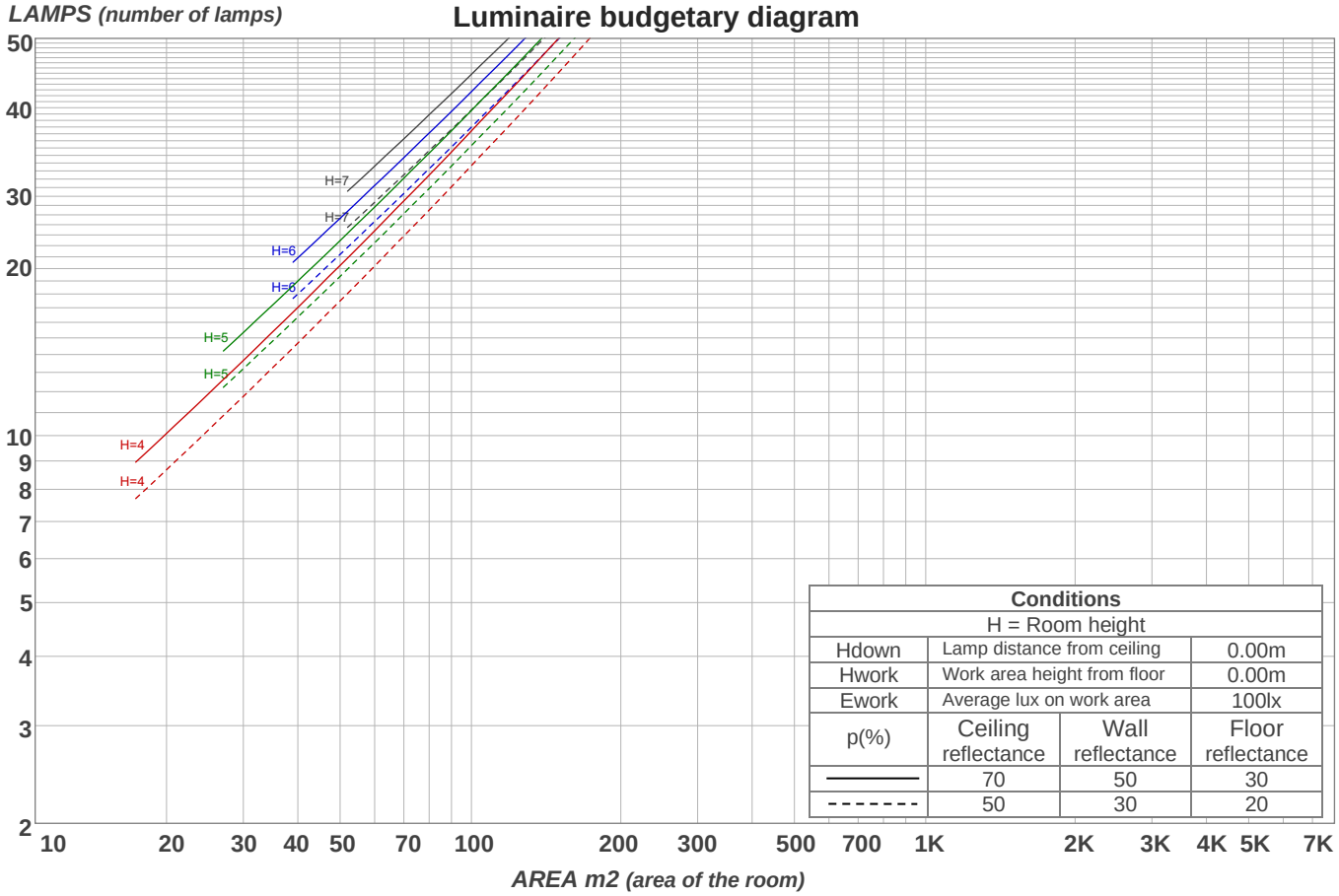
Glare Evaluation According to UGR

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	8,7	9,6	8,9	9,9	10,1	21,0	21,9	21,2	22,2	22,4
	3H	9,8	10,8	10,2	11,0	11,2	21,7	22,6	22,1	22,9	23,0
	4H	10,9	11,8	11,3	12,1	12,3	21,9	22,8	22,3	23,0	23,3
	6H	12,3	13,1	12,6	13,4	13,7	22,0	22,8	22,3	23,1	23,4
	8H	13,0	13,7	13,3	14,1	14,4	22,0	22,8	22,3	23,1	23,5
	12H	13,6	14,4	14,0	14,7	15,2	22,0	22,7	22,3	23,1	23,5
4H	2H	10,6	11,5	11,0	11,7	12,0	20,7	21,7	21,2	21,9	22,2
	3H	11,8	12,5	12,1	12,9	13,3	21,6	22,4	22,0	22,7	23,2
	4H	12,7	13,4	13,2	13,8	14,4	21,8	22,5	22,2	22,9	23,4
	6H	14,0	14,7	14,5	15,1	15,4	21,9	22,6	22,4	23,0	23,3
	8H	14,7	15,4	15,2	15,7	16,1	22,0	22,6	22,5	23,0	23,3
	12H	15,5	16,0	15,9	16,4	16,9	22,0	22,5	22,5	22,9	23,4
8H	4H	13,4	14,0	13,9	14,4	14,8	21,7	22,4	22,3	22,7	23,1
	6H	15,0	15,4	15,5	15,9	16,4	21,9	22,4	22,4	22,9	23,4
	8H	15,9	16,3	16,4	16,8	17,4	22,0	22,4	22,5	22,9	23,6
	12H	16,8	17,1	17,3	17,6	18,2	22,1	22,4	22,6	22,9	23,5
12H	4H	13,5	14,0	14,0	14,4	14,9	21,7	22,2	22,2	22,6	23,1
	6H	15,2	15,6	15,7	16,1	16,7	22,0	22,4	22,5	22,9	23,5
	8H	16,2	16,5	16,7	17,0	17,6	22,0	22,4	22,6	22,9	23,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,2 / -0,2					1,2 / -1,2				
S = 1.5H		0,3 / -0,3					2,6 / -2,5				
S = 2.0H		0,6 / -0,4					4,0 / -3,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 408 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	111	107	104	101	108	105	102	99	100	98	96	96	94	93	92	91	90	87
2	104	97	92	88	101	95	91	87	92	88	84	88	85	82	85	83	80	78
3	97	89	83	78	95	87	82	77	84	79	75	82	77	74	79	76	73	71
4	91	82	75	70	89	81	74	69	78	73	68	76	71	67	73	69	66	64
5	86	76	69	64	84	75	68	63	72	67	62	70	66	62	69	64	61	59
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	64	60	56	55
7	77	66	59	54	75	65	58	54	63	58	53	62	57	53	61	56	52	51
8	73	62	55	50	71	61	55	50	60	54	50	59	53	49	57	53	49	48
9	69	58	52	47	68	58	51	47	56	51	47	55	50	46	54	50	46	45
10	66	55	49	44	65	55	48	44	54	48	44	53	47	44	52	47	44	42

Luminaire budgetary diagram

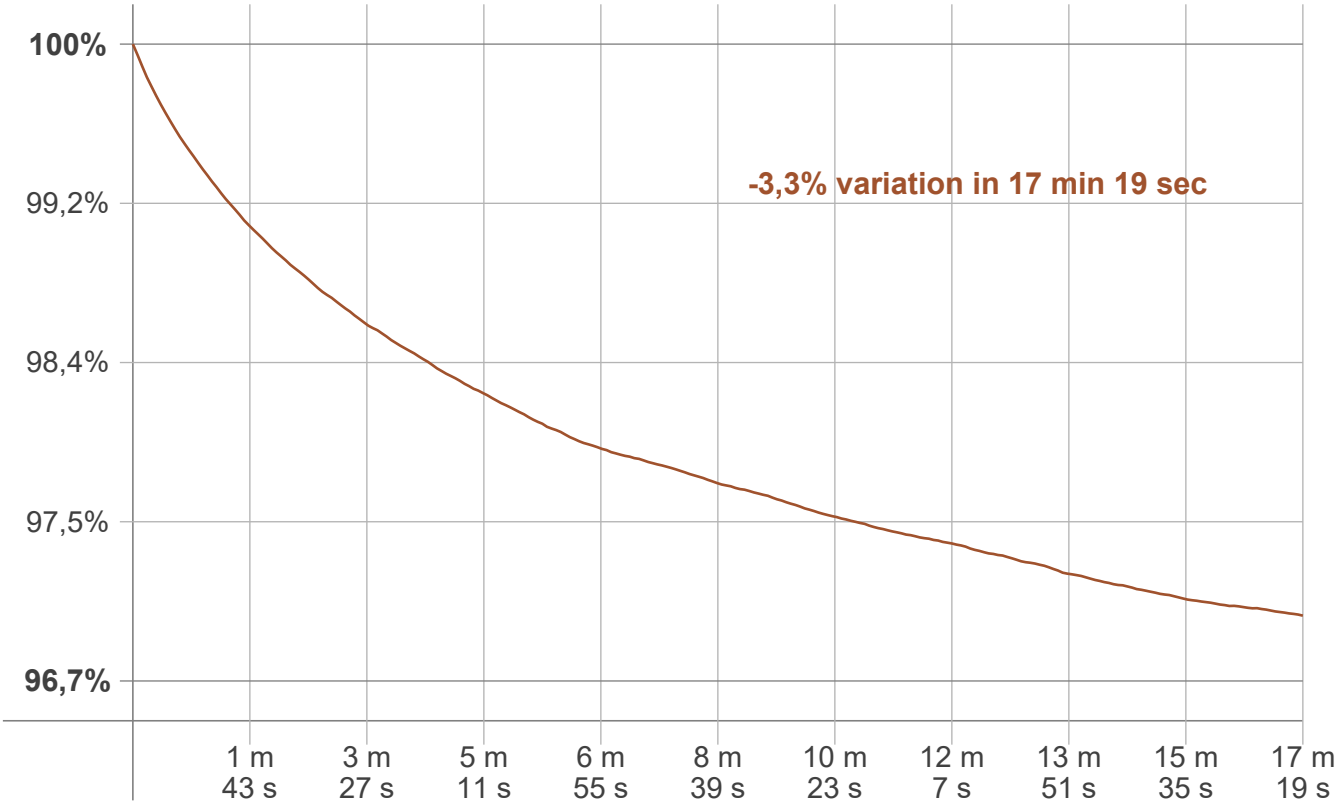


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
56,6 lm	82,9 lm	75,6 lm	62,9 lm	48,7 lm	33,9 lm	21,5 lm	12,1 lm	6,15 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
3,23 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	4,37 lm

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 17 min 19 sec**
Warmup variation	**-3,3%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
16240 K	+688 K	16928 K

Output change

Output start	Output change	Output end
421 lm	-13 lm	408 lm