

Light efficiency:



Light quality:



Color temperature:

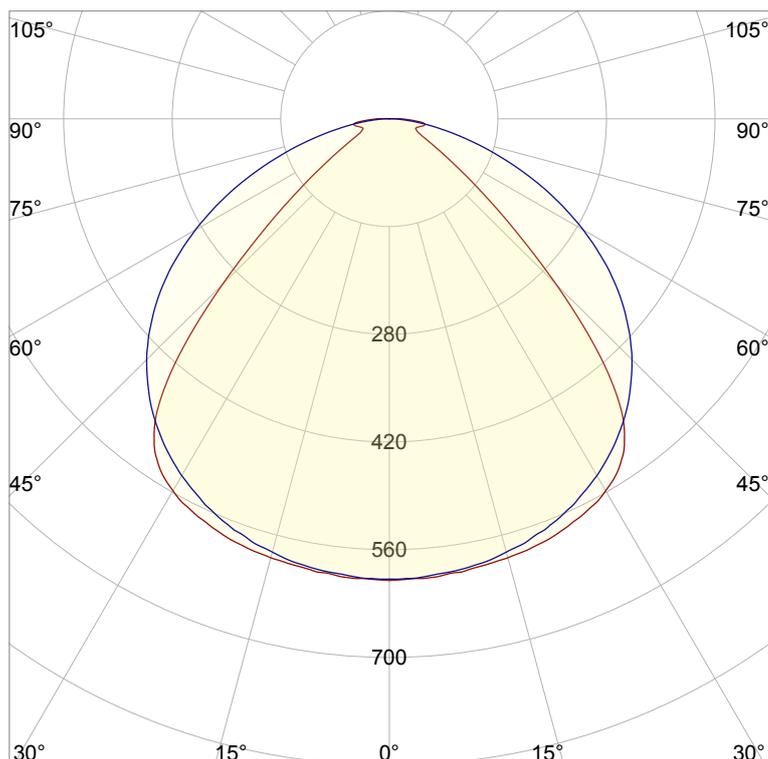


Output: 1513 lm

Peak: 600 cd

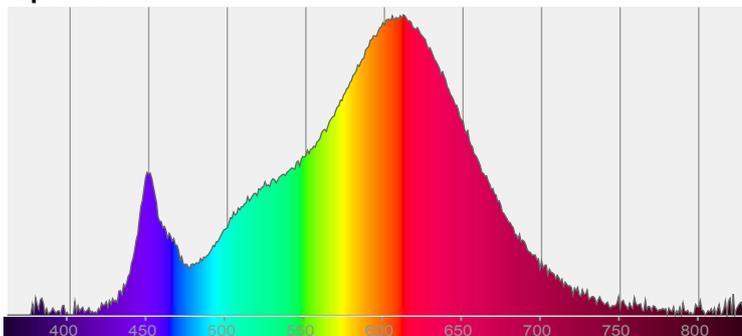
Power: 11,5 W

PF: 1,0

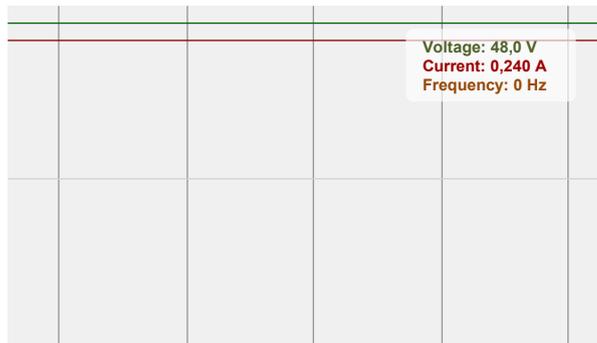


CIE 1931
x: 0,451
y: 0,402

Spectra



Power



Product name:

Nova-5-0508-827-L9F

Item number:

FLNP/L/06E0508/827/L9F

Date and time:

06.08.2019 11:45:54

Description:

Rank:T0H23Z54

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Grad K

CRI +/-0,7

Angular Resolution 1 Grad step

Last Calibration 20.05.2019

Pruefer:

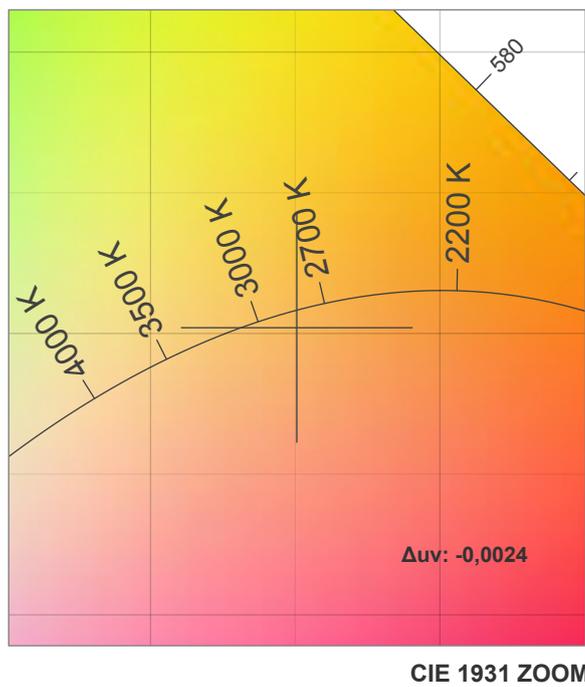
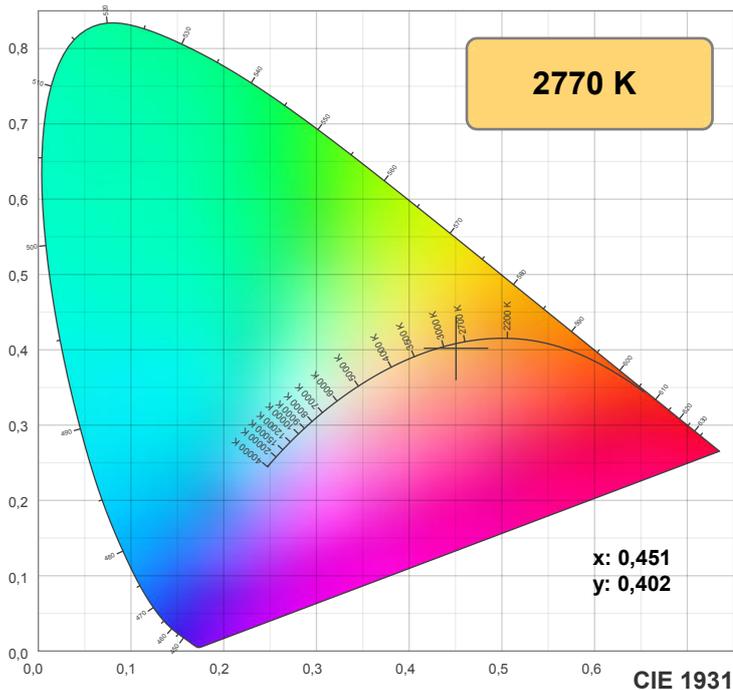
Peter Ulrich

Pruefort:

Lichtlabor

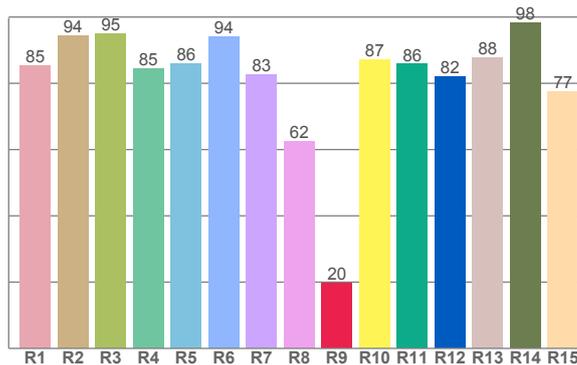
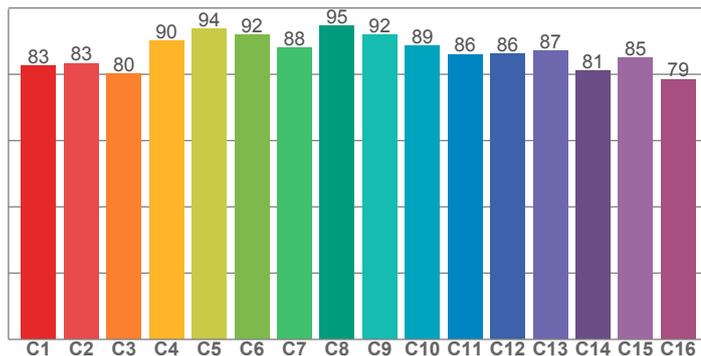
Gaustrasse 13

55411 Bingen am Rhein

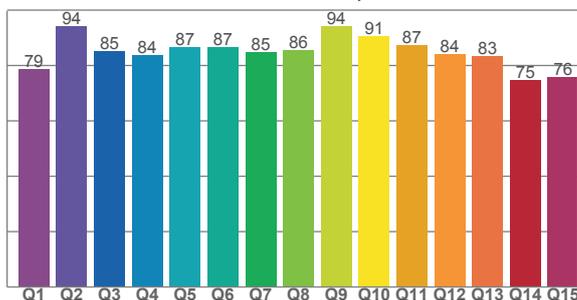


TM30: 86,8

CRI: 85,5 (R1-R8)



CQS: 84,0



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
85,2	94,2	95,1	84,5	85,9	94,0	82,7	62,5	19,6	87,2	85,8	81,9	87,7	98,2	77,4

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
82,6	83,4	80,2	90,0	93,6	92,0	88,0	94,6	91,9	88,5	86,0	86,3	87,0	81,1	85,0	78,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
78,7	94,3	85,3	83,8	86,6	86,6	84,8	85,6	94,2	90,5	87,4	84,2	83,4	74,9	75,8

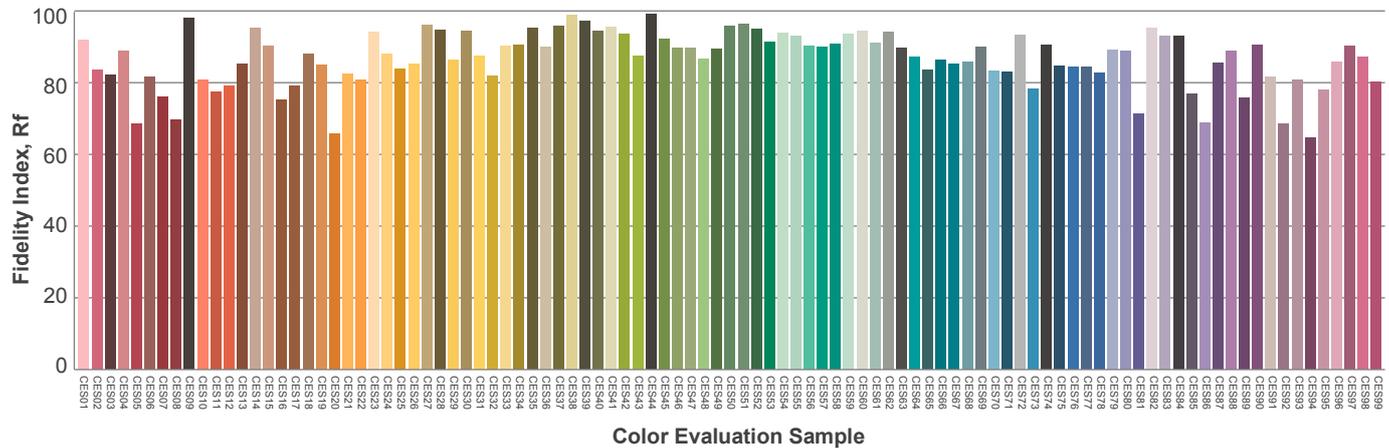
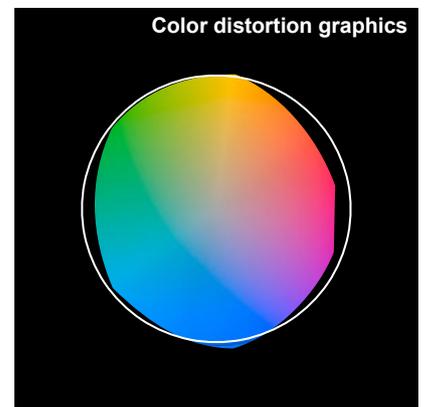
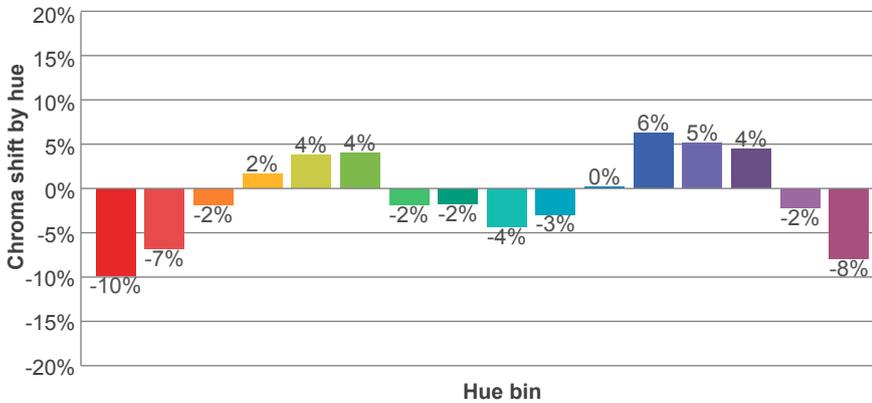
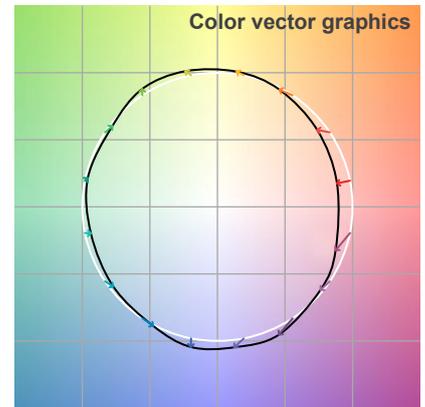
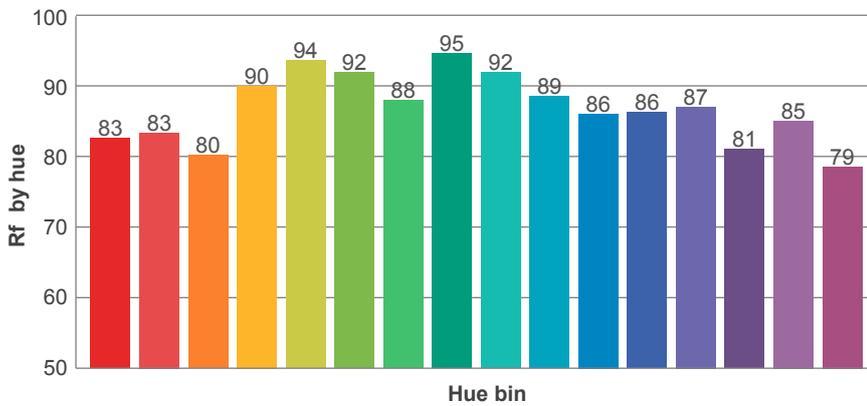
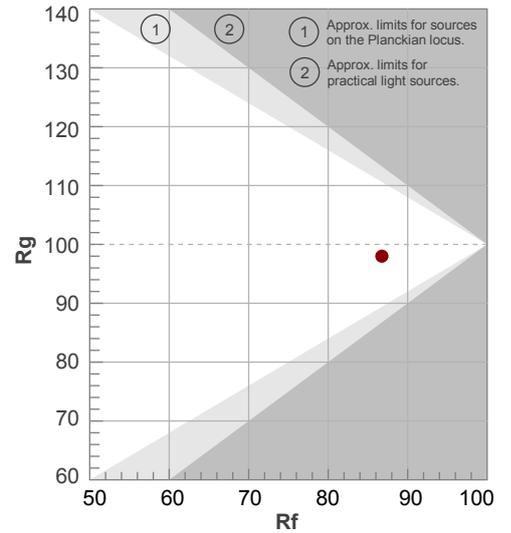
Color parameters

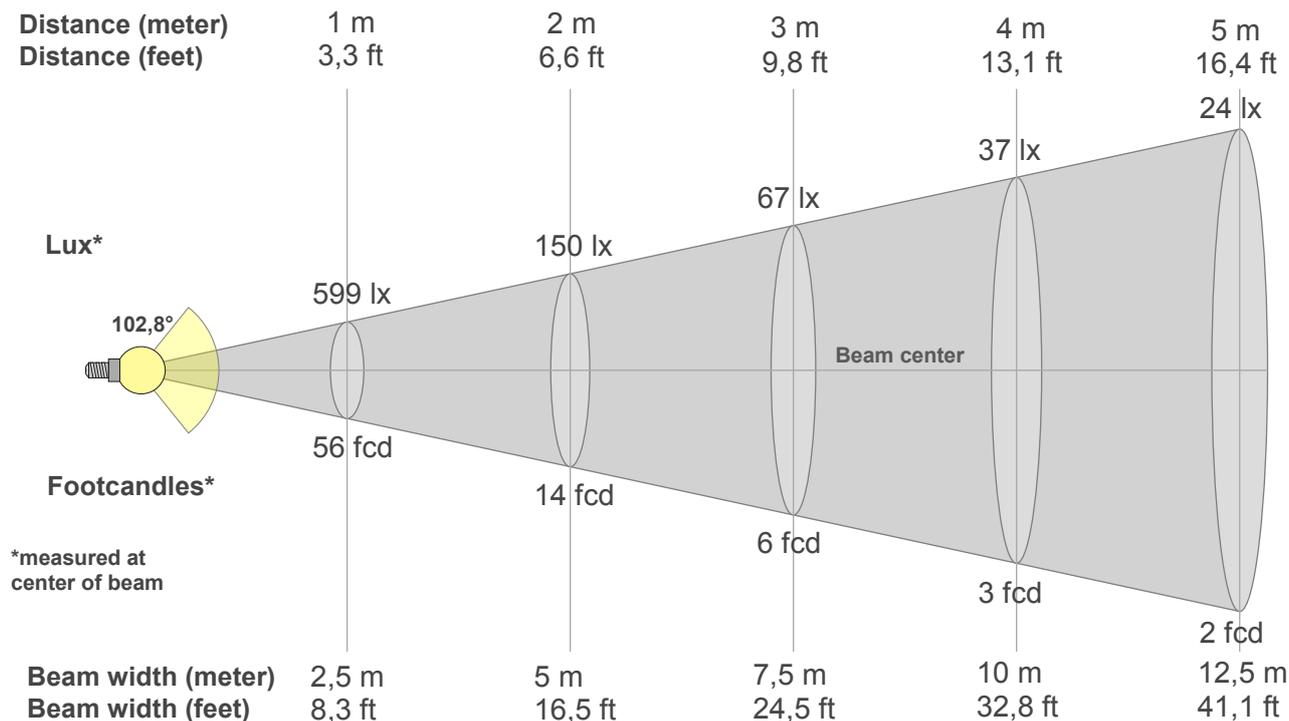
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2770 K	85,5	19,6	86,8	98,0	84,0	0,451	0,402	0,260	0,348	-0,0024

Rf 86,8
Fidelity index Rf

Rg 98,0
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	83	-10%	0%
2	83	-7%	7%
3	80	-2%	10%
4	90	2%	6%
5	94	4%	4%
6	92	4%	-2%
7	88	-2%	-7%
8	95	-2%	-2%
9	92	-4%	1%
10	89	-3%	7%
11	86	0%	10%
12	86	6%	1%
13	87	5%	-8%
14	81	4%	-15%
15	85	-2%	-9%
16	79	-8%	-15%





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
599lx	150lx	67lx	37lx	24lx	17lx	12lx	9lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx
55,6fcd	13,9fcd	6,2fcd	3,5fcd	2,2fcd	1,5fcd	1,1fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd

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°
599	599	595	590	584	574	558	527	446	304	179	100	59	40	36	40	46	35	11	0
100%	100%	99%	99%	98%	96%	93%	88%	75%	51%	30%	17%	10%	7%	6%	7%	8%	6%	2%	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°
599	596	592	583	571	556	535	510	480	442	398	347	289	227	163	105	58	22	2	2
100%	100%	99%	97%	95%	93%	89%	85%	80%	74%	66%	58%	48%	38%	27%	18%	10%	4%	0%	0%

Intensities in 180° c-plane

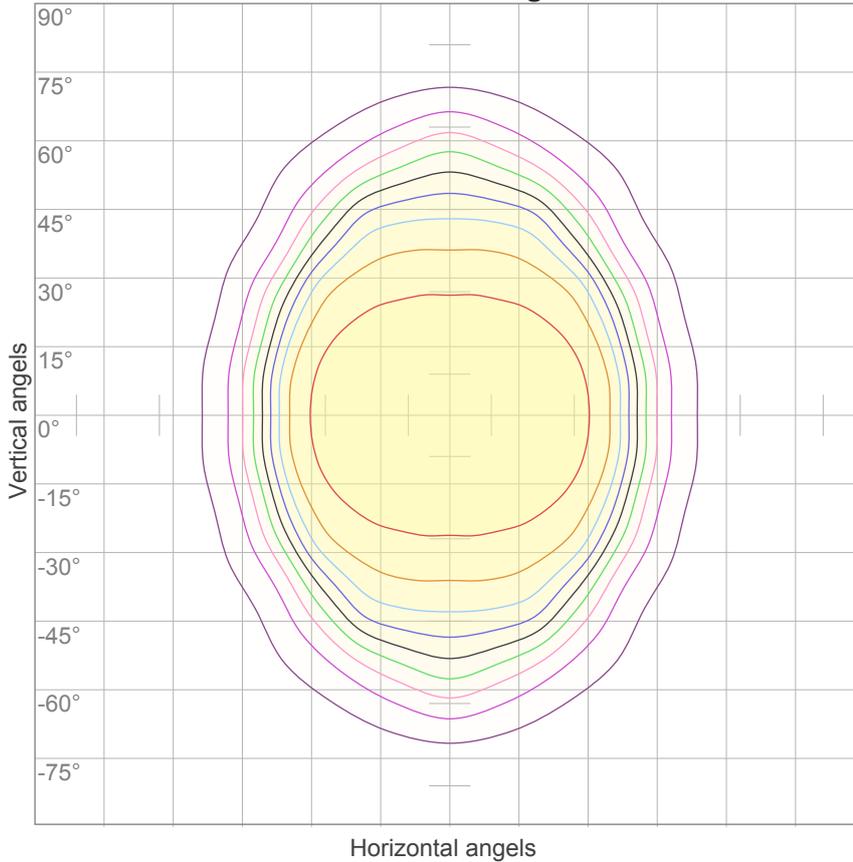
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
599	599	595	590	584	574	558	527	446	304	179	100	59	40	36	40	46	35	11	0
100%	100%	99%	99%	98%	96%	93%	88%	75%	51%	30%	17%	10%	7%	6%	7%	8%	6%	2%	0%

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°
599	596	592	583	571	556	535	510	480	442	398	347	289	227	163	105	58	22	2	2
100%	100%	99%	97%	95%	93%	89%	85%	80%	74%	66%	58%	48%	38%	27%	18%	10%	4%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
102,8°	136,3°	178,4°	86,5%	64,3%

ISO candela diagram



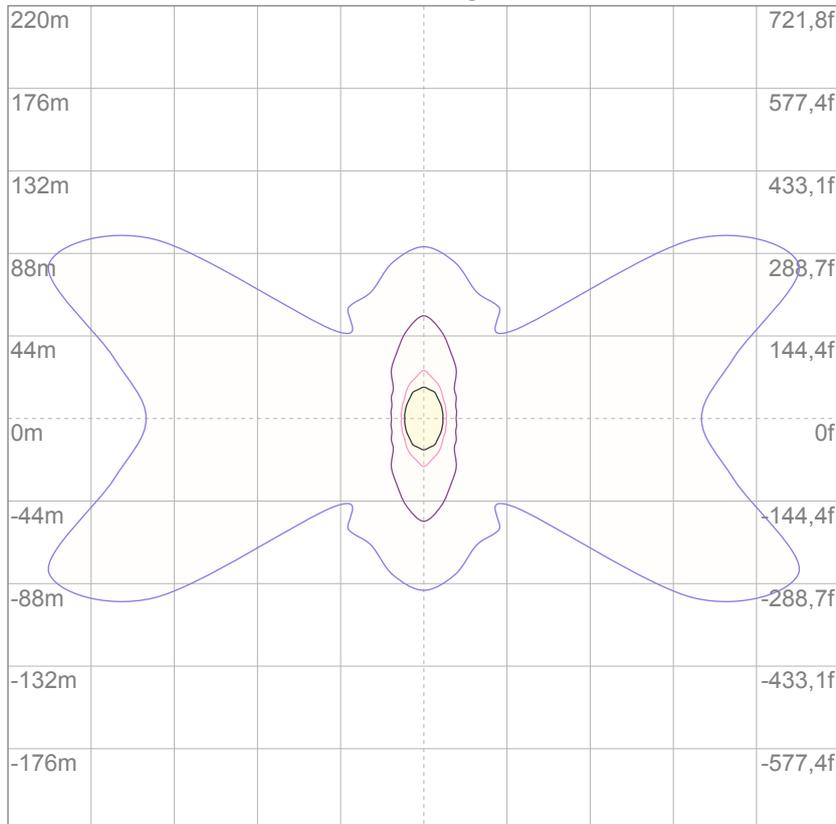
10%	60 cd
20%	120 cd
30%	180 cd
40%	239 cd
50%	299 cd
60%	359 cd
70%	419 cd
80%	479 cd
90%	539 cd

Conditions:

Number of c-planes: 16

Candela at center: 599 cd

ISO lux diagram



3%	0,180 lx
5%	0,299 lx
10%	0,599 lx
30%	1,80 lx
50%	2,99 lx

Conditions:

Number of c-planes: 16

Lux at center: 5,99 lx

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

Mounting height: 10 meters (33 feet)

Glare Evaluation According to UGR

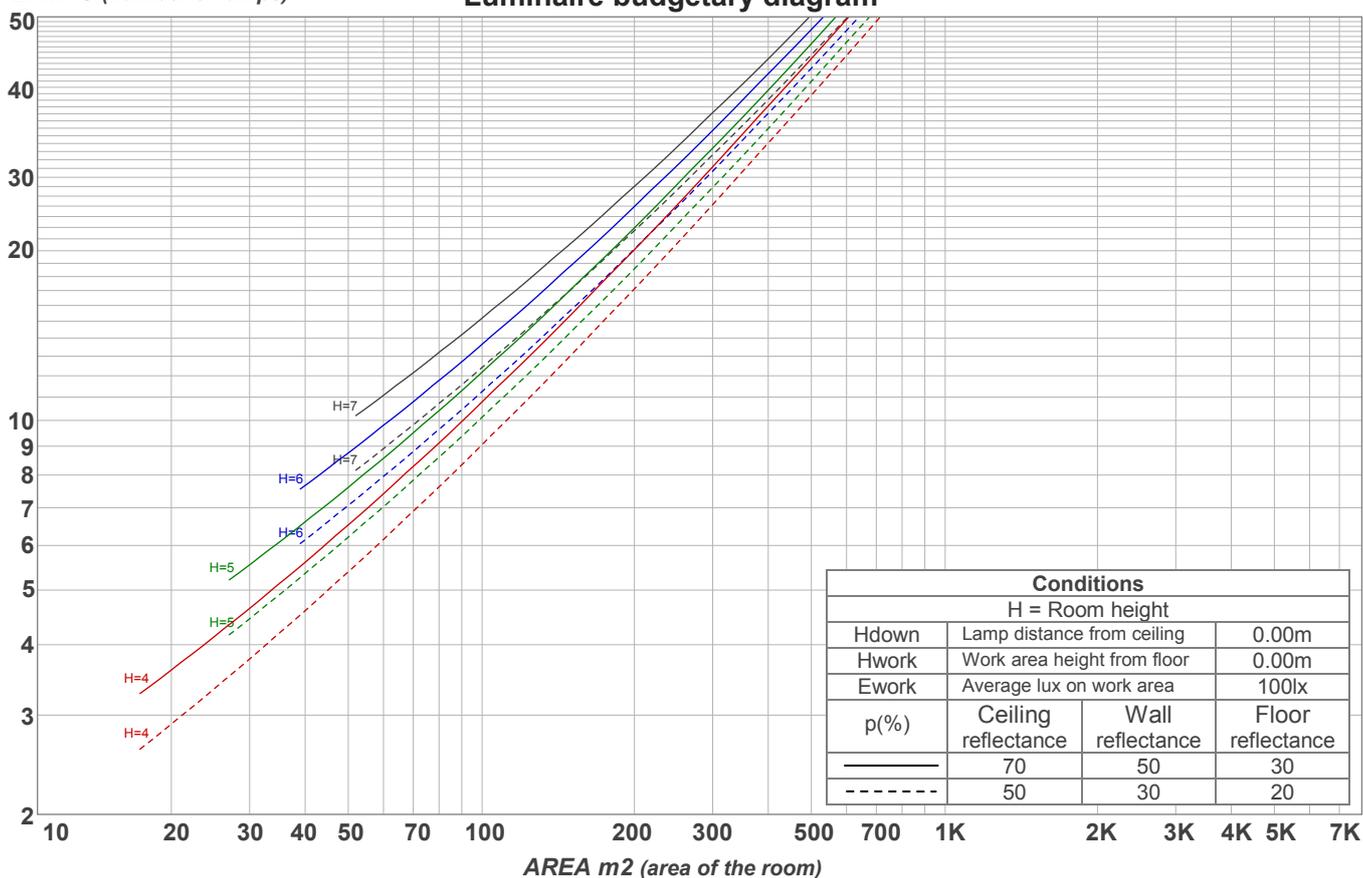
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	21,2	22,3	21,4	22,6	22,8	26,0	27,1	26,2	27,3	27,6
	3H	21,2	22,3	21,6	22,6	22,8	27,0	28,2	27,4	28,4	28,6
	4H	21,3	22,4	21,7	22,7	22,9	27,5	28,6	27,9	28,8	29,1
	6H	21,7	22,7	22,1	23,0	23,3	27,8	28,8	28,1	29,1	29,4
	8H	22,0	22,9	22,3	23,2	23,6	27,9	28,8	28,2	29,1	29,5
	12H	22,2	23,1	22,6	23,4	23,9	27,9	28,8	28,3	29,2	29,6
4H	2H	21,6	22,6	22,0	22,9	23,2	25,8	26,9	26,2	27,1	27,4
	3H	21,8	22,6	22,1	23,0	23,4	27,1	28,0	27,4	28,3	28,7
	4H	21,9	22,7	22,3	23,1	23,7	27,5	28,3	27,9	28,7	29,3
	6H	22,4	23,2	22,9	23,6	23,9	27,9	28,7	28,4	29,1	29,4
	8H	22,8	23,5	23,3	23,8	24,2	28,0	28,8	28,5	29,1	29,5
	12H	23,1	23,7	23,6	24,1	24,6	28,1	28,7	28,6	29,1	29,6
8H	4H	22,1	22,8	22,6	23,2	23,5	27,4	28,2	27,9	28,5	28,9
	6H	22,8	23,3	23,3	23,8	24,3	27,9	28,4	28,4	28,9	29,4
	8H	23,3	23,7	23,8	24,3	24,9	28,1	28,6	28,6	29,1	29,7
	12H	23,8	24,2	24,4	24,7	25,3	28,2	28,6	28,8	29,1	29,7
12H	4H	22,1	22,7	22,6	23,1	23,6	27,4	28,0	27,9	28,4	28,9
	6H	22,9	23,3	23,4	23,8	24,5	27,9	28,4	28,4	28,9	29,5
	8H	23,4	23,8	24,0	24,3	24,9	28,1	28,5	28,7	29,0	29,6
Variation of the observer position for the luminaire distance S											
S = 1.0H	0,6 / -0,9					0,1 / -0,2					
S = 1.5H	1,4 / -1,5					0,8 / -1,1					
S = 2.0H	2,5 / -1,8					1,7 / -2,3					
Standard table	n/a					n/a					
Correction summand	n/a					n/a					
Corrected glare indices referring to 1513 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	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	106	106	106	101	101	101	99			
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85			
2	101	93	87	82	98	92	86	81	88	83	79	84	81	77	81	78	75	73			
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	73	69	65	63			
4	86	75	67	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55			
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	50	48			
6	73	61	52	46	71	60	52	46	58	51	46	56	50	45	55	49	45	43			
7	68	55	47	41	66	55	47	41	53	46	41	51	45	40	50	44	40	38			
8	64	51	43	37	62	50	42	37	49	42	37	47	41	36	46	40	36	34			
9	59	47	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31			
10	56	43	35	30	54	42	35	30	41	35	30	40	34	30	40	34	30	28			

LAMPS (number of lamps)

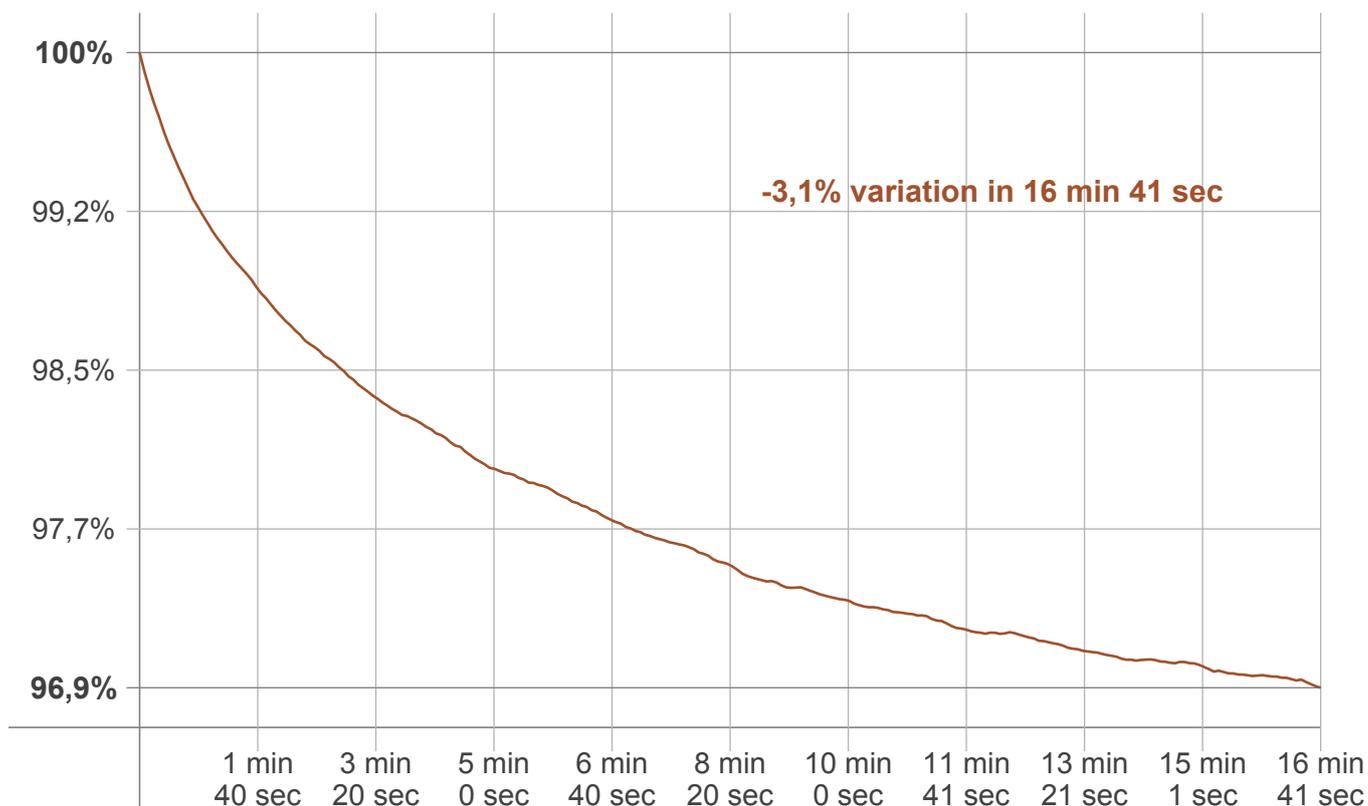
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
56,9 lm	166 lm	261 lm	326 lm	304 lm	194 lm	101 lm	55,1 lm	30,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
7,08 lm	2,59 lm	1,94 lm	1,75 lm	1,43 lm	1,08 lm	0,798 lm	0,489 lm	0,165 lm

Warmup curve



Warmup result

Warmup time:	16 min 41 sec
Warmup variation	-3,1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2764 K	+6 K	2770 K

Output change

Output start	Output change	Output end
1556 lm	-43 lm	1513 lm