

Light efficiency:

110 Lumen/Watt

Light quality:

CRI: 83,8

Color temperature:

3978 K

Output: 3383 lm

Peak: 1236 cd

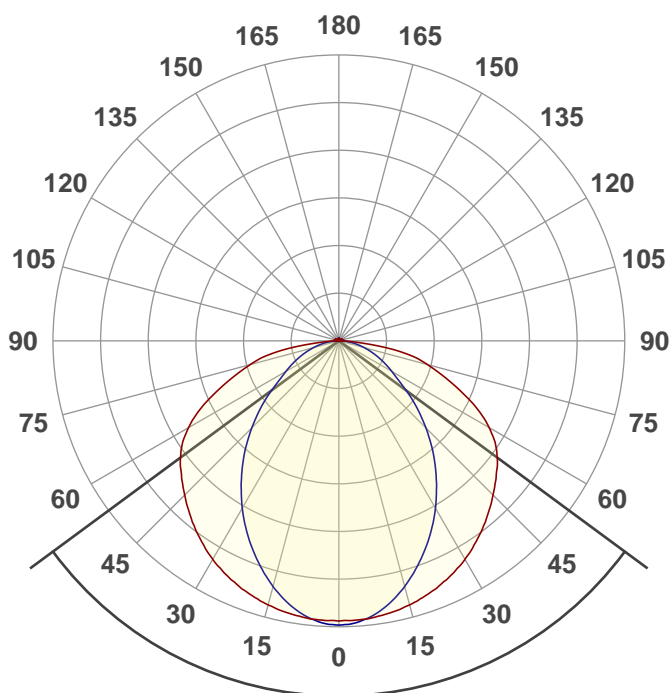
Power: 30,8 W

PF: 0,97



Product name:

E0096-MACERATA-2X14W-4K-AM



Beam angle

107,2°



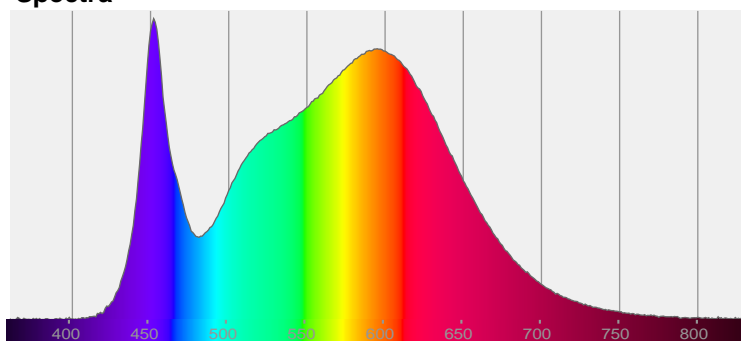
CIE 1931
x: 0,382
y: 0,379

THD Values:

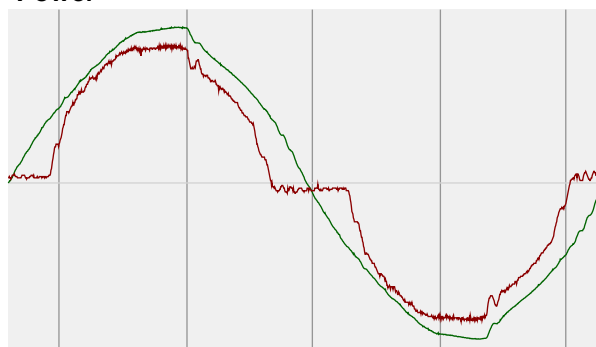
Voltage: 3,04%

Current: 20,74%

Spectra

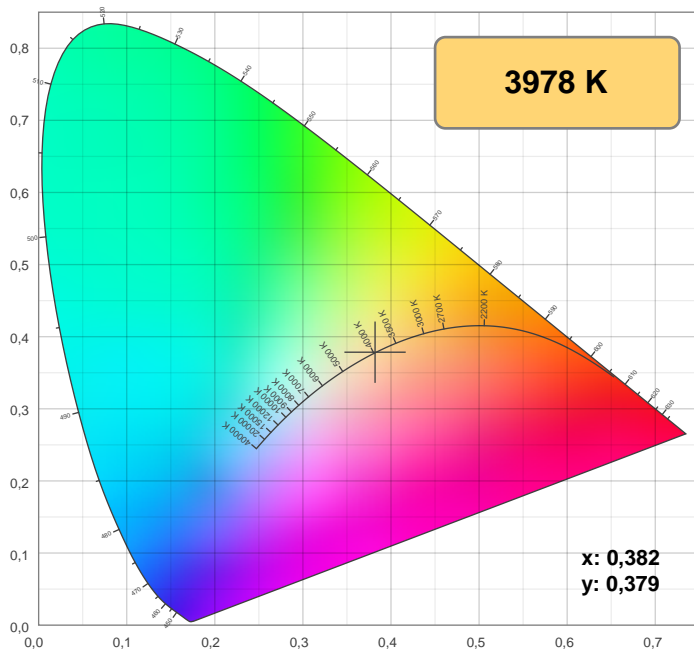


Power



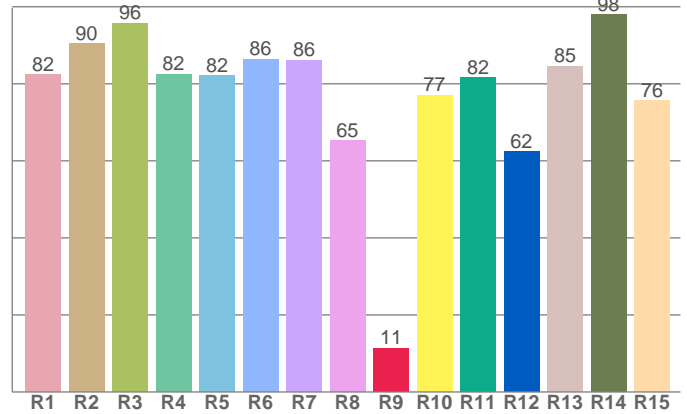
Voltage: 113 V
Current: 0,281 A
Frequency: 60,1 Hz

Color details



CIE 1931

CRI: 83,8 (R1-R8)

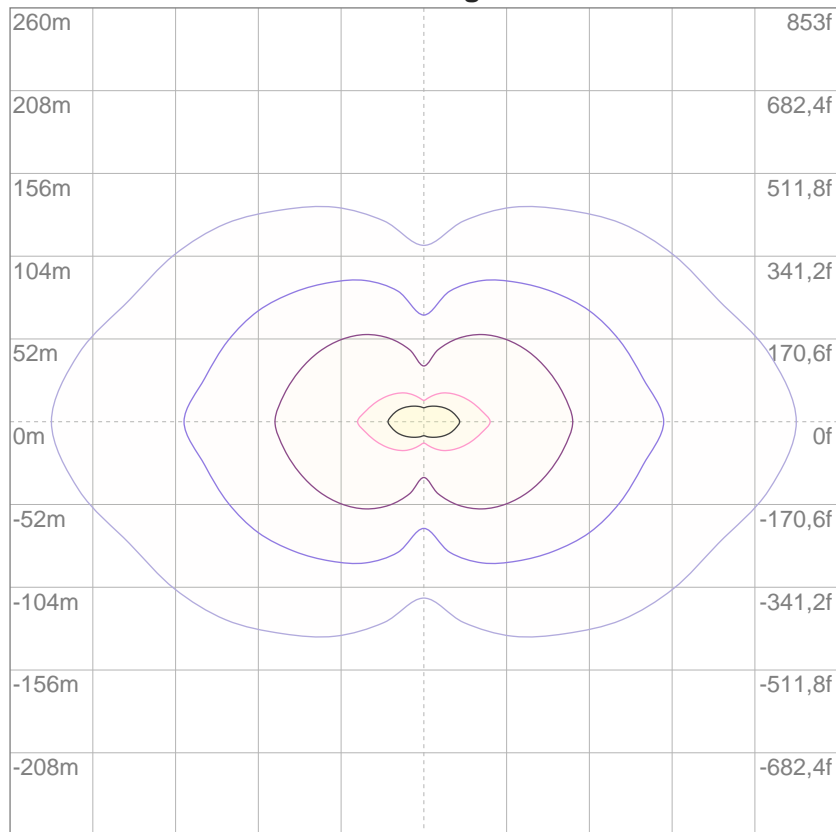


CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	9	R10	R11	R12	R13	R14	R15
82,3	90,4	95,7	82,4	82,1	86,4	86,1	65,2	11,3	77,0	81,6	62,3	84,5	98,0	75,5

ISO Diagrams

ISO lux diagram



Mounting height: 10 meters (33 f)

3%	0,368 lx
5%	0,614 lx
10%	1,23 lx
30%	3,68 lx
50%	6,14 lx

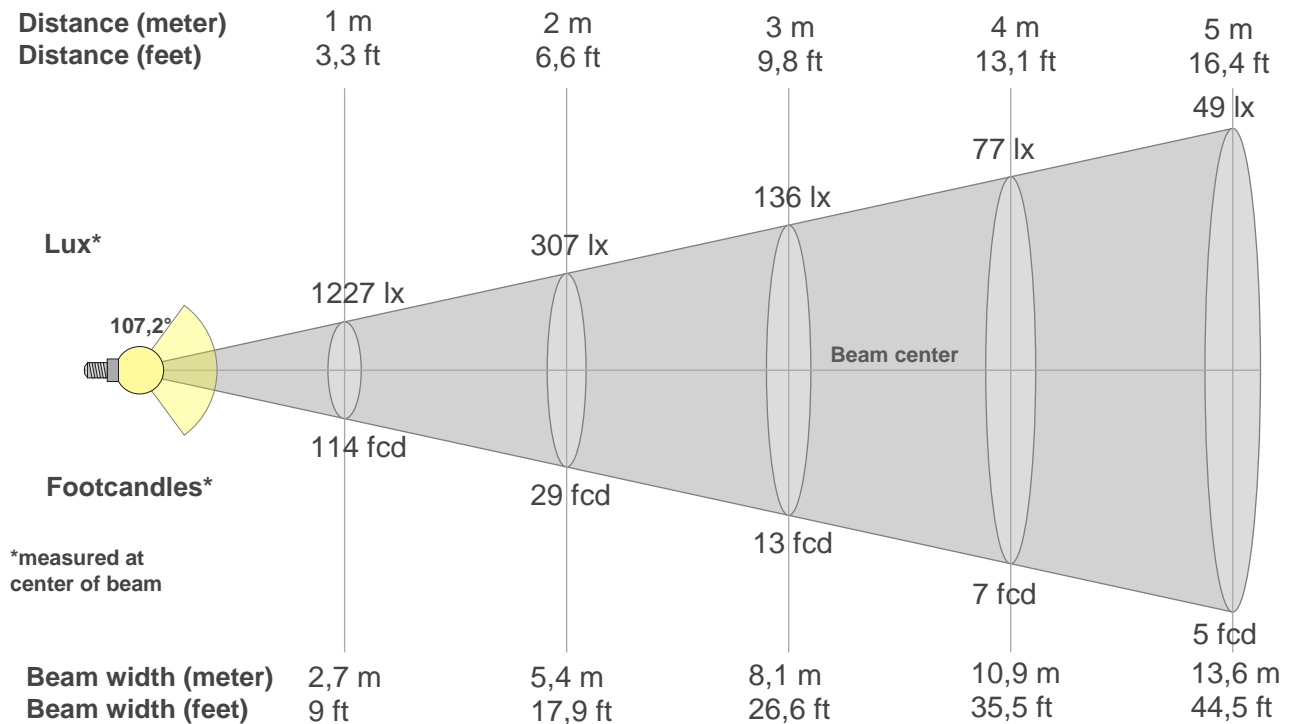
Conditions:

Number of c-planes: 4

Lux at center: 12,3 lx

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

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
1227lx	307lx	136lx	77lx	49lx	34lx	25lx	19lx	15lx	12lx	10lx	9lx	7lx	6lx	5lx	5lx	4lx	4lx	3lx	3lx
114fcd	28,5fcd	12,7fcd	7,1fcd	4,6fcd	3,2fcd	2,3fcd	1,8fcd	1,4fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd

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°
1227	1216	1206	1189	1164	1134	1097	1052	1002	948	895	839	755	642	512	399	272	90	16	8
100%	99%	98%	97%	95%	92%	89%	86%	82%	77%	73%	68%	62%	52%	42%	33%	22%	7%	1%	1%

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°
1227	1219	1174	1106	1024	936	840	739	639	536	436	337	266	211	161	115	73	36	9	5
100%	99%	96%	90%	83%	76%	68%	60%	52%	44%	35%	27%	22%	17%	13%	9%	6%	3%	1%	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°
1227	1216	1206	1189	1164	1134	1097	1052	1002	948	895	839	755	642	512	399	272	90	16	8
100%	99%	98%	97%	95%	92%	89%	86%	82%	77%	73%	68%	62%	52%	42%	33%	22%	7%	1%	1%

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°
1227	1219	1174	1106	1024	936	840	739	639	536	436	337	266	211	161	115	73	36	9	5
100%	99%	96%	90%	83%	76%	68%	60%	52%	44%	35%	27%	22%	17%	13%	9%	6%	3%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
107,2°	157,9°	173,7°	76,1%	52,2%

TM30 details

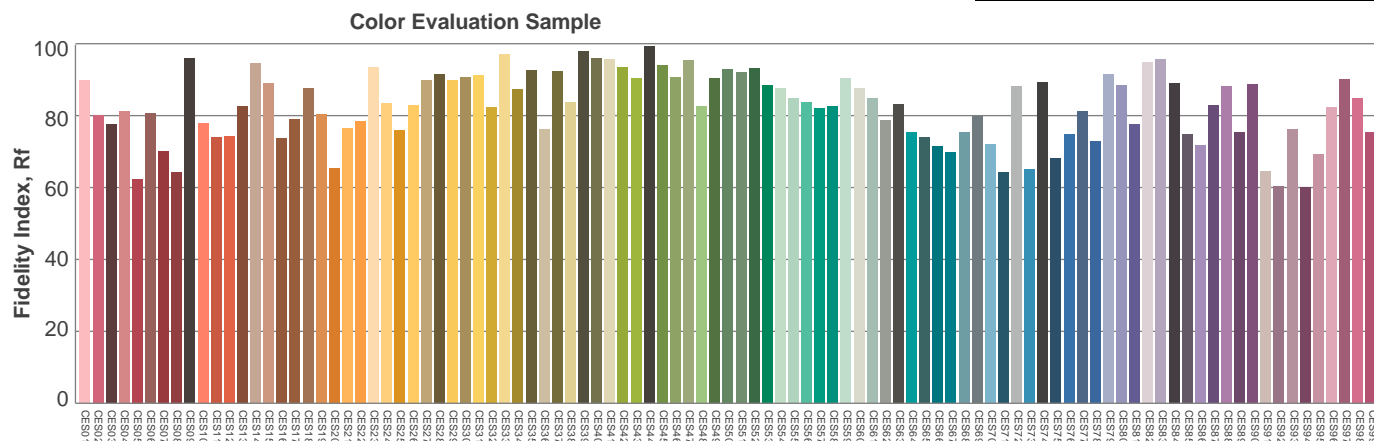
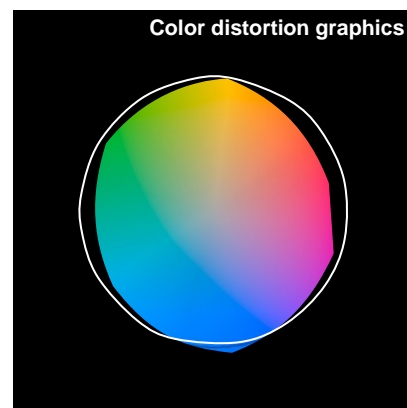
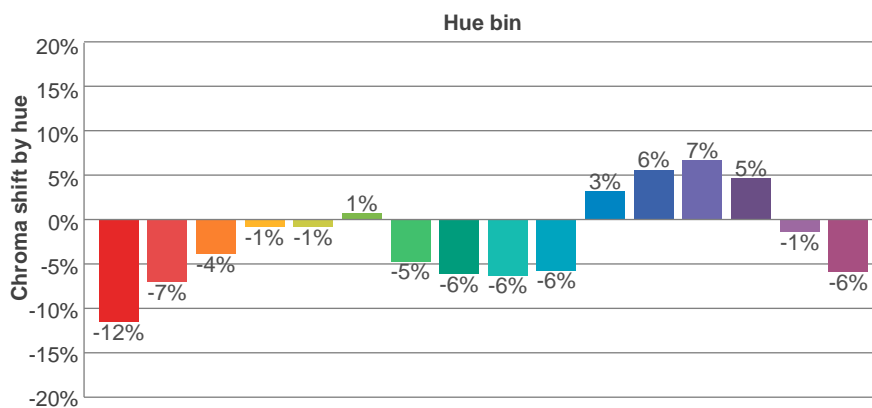
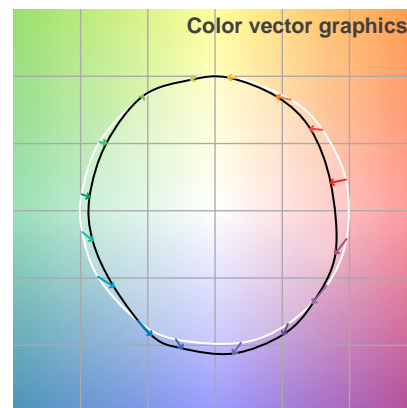
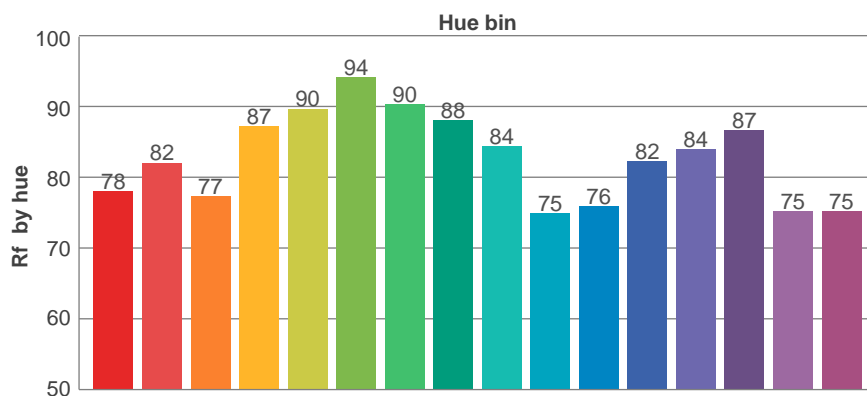
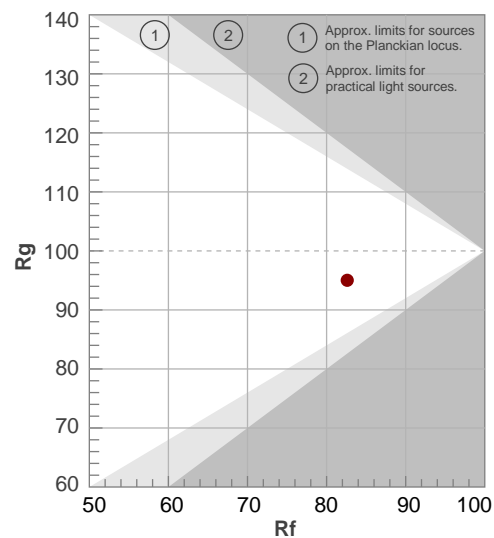
Rf 82,6

Fidelity index Rf

Rg 95,0

Gammut index Rg

Hue Bin	Rf	Graphic shifts (%)	
		Chroma	Hue
1	78	-12%	0%
2	82	-7%	6%
3	77	-4%	10%
4	87	-1%	6%
5	90	-1%	3%
6	94	1%	-1%
7	90	-5%	-2%
8	88	-6%	1%
9	84	-6%	8%
10	75	-6%	13%
11	76	3%	14%
12	82	6%	6%
13	84	7%	-7%
14	87	5%	-7%
15	75	-1%	-16%
16	75	-6%	-12%



UGR

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	17,7	19,0	18,0	19,2	19,5	14,2	15,6	14,6	15,8	16,1
	3H	19,7	20,9	20,1	21,2	21,5	15,4	16,6	15,7	16,9	17,2
	4H	20,7	21,8	21,0	22,1	22,4	15,9	17,0	16,2	17,3	17,6
	6H	21,5	22,6	21,9	22,9	23,2	16,2	17,3	16,6	17,6	18,0
	8H	21,8	22,8	22,2	23,1	23,5	16,4	17,4	16,7	17,7	18,1
	12H	21,9	22,9	22,3	23,2	23,6	16,4	17,4	16,8	17,8	18,1
4H	2H	18,1	19,2	18,4	19,5	19,8	15,5	16,7	15,9	17,0	17,3
	3H	20,4	21,3	20,7	21,7	22,0	17,0	17,9	17,3	18,3	18,6
	4H	21,5	22,3	21,9	22,7	23,1	17,6	18,4	18,0	18,8	19,2
	6H	22,5	23,3	22,9	23,7	24,1	18,1	18,8	18,5	19,2	19,7
	8H	22,8	23,5	23,3	24,0	24,4	18,2	18,9	18,7	19,3	19,8
	12H	23,0	23,6	23,5	24,1	24,5	18,3	19,0	18,8	19,4	19,9
8H	4H	21,7	22,4	22,1	22,8	23,2	18,4	19,1	18,8	19,5	19,9
	6H	22,9	23,4	23,3	23,9	24,4	19,1	19,6	19,5	20,1	20,6
	8H	23,3	23,8	23,8	24,3	24,8	19,3	19,8	19,8	20,3	20,8
	12H	23,5	24,0	24,0	24,5	25,0	19,5	19,9	20,0	20,4	20,9
12H	4H	21,7	22,3	22,1	22,7	23,2	18,5	19,1	19,0	19,6	20,0
	6H	22,9	23,4	23,4	23,9	24,4	19,3	19,8	19,8	20,3	20,8
	8H	23,4	23,8	23,9	24,3	24,8	19,6	20,0	20,1	20,5	21,0
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,1 / -0,0					+0,2 / -0,2				
S = 1,5H		+0,1 / -0,1					+0,3 / -0,5				
S = 2,0H		+0,3 / -0,3					+0,6 / -1,1				
Standard table		BK08					BK14				
Correction summand		6,7					2,7				
Corrected glare indices referring to 3383 lm total luminous flux											

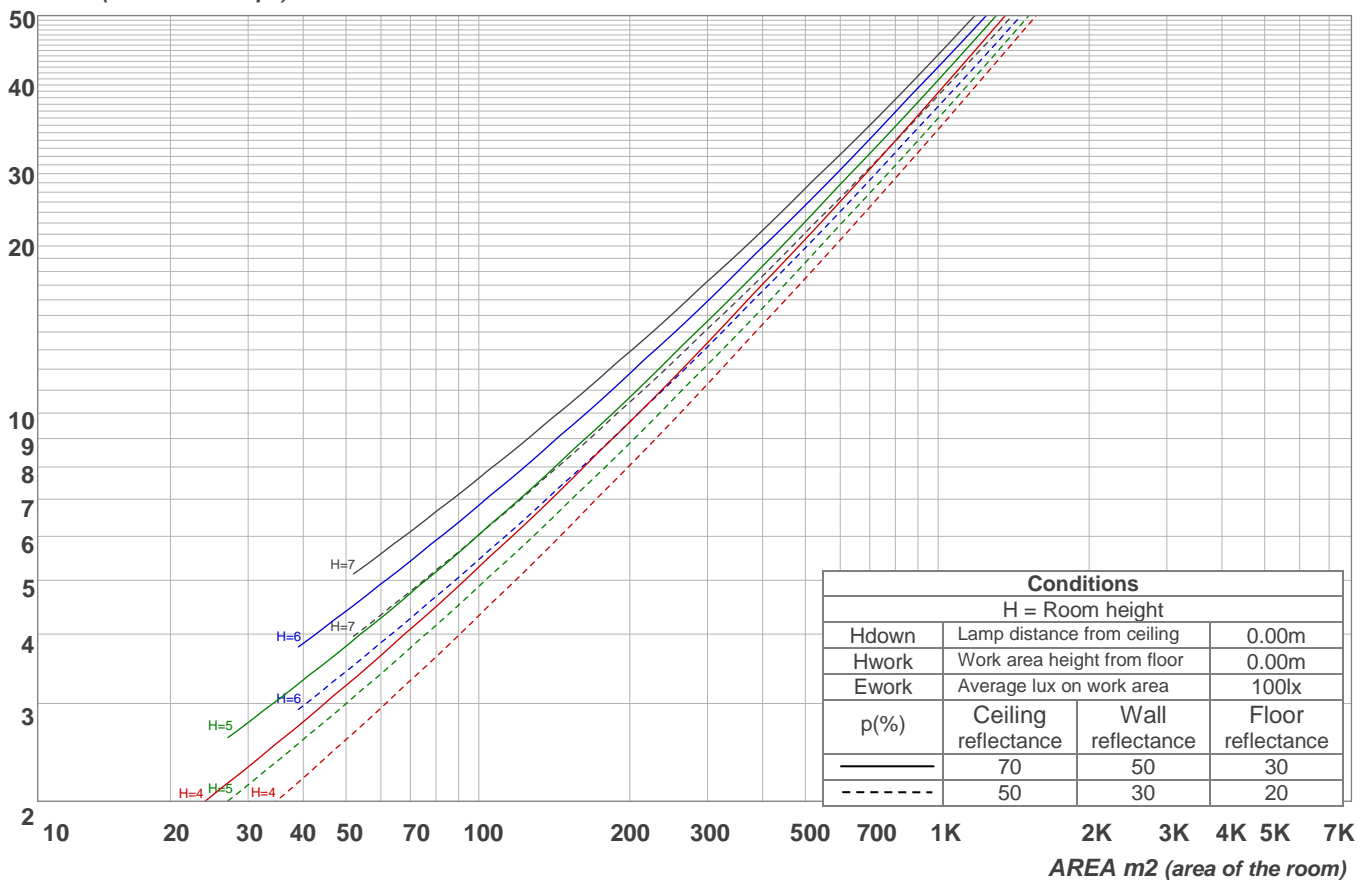
Light planning

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	101	101	101	99
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	82
2	98	90	83	77	95	88	81	76	84	78	74	80	76	72	77	73	70	68
3	89	79	70	64	87	77	69	63	74	67	62	71	65	60	68	63	59	57
4	82	69	61	54	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	36	63	50	41	36	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	46	37	32	44	37	31	43	36	31	42	35	31	29
9	56	43	34	29	55	42	34	29	41	33	28	40	33	28	38	32	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

LAMPS (number of lamps)

Luminaire budgetary diagram

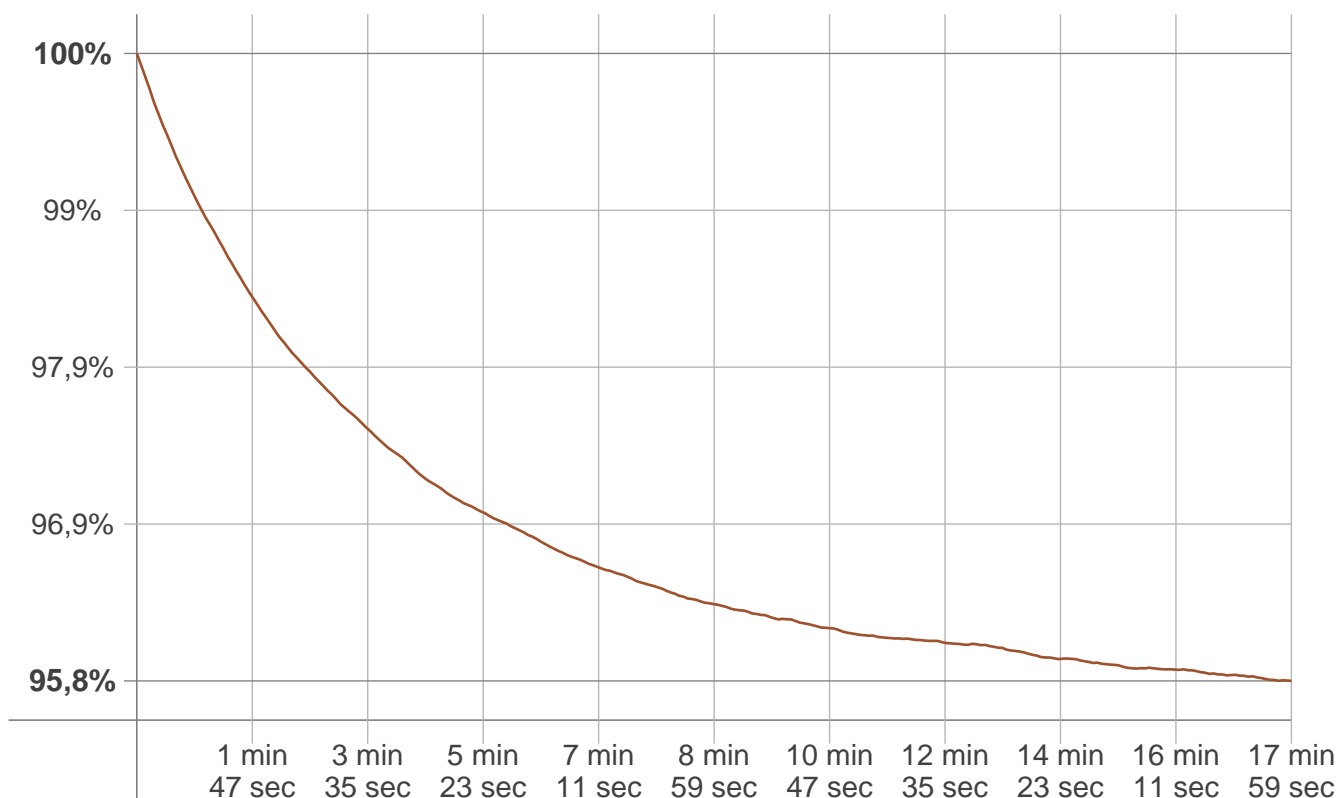


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
115 lm	323 lm	477 lm	561 lm	573 lm	526 lm	421 lm	271 lm	80,4 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
7,43 lm	5,05 lm	4,64 lm	4,55 lm	4,21 lm	3,62 lm	2,89 lm	1,85 lm	0,644 lm

Stabilization

Warmup curve



Warmup result

Warmup time:	17 min 59 sec
Warmup variation	-4,2%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
3945 K	+33 K	3978 K

Output change

Output start	Output change	Output end
3525 lm	-142 lm	3383 lm