

Light efficiency:

80 Lumen/Watt

Light quality:

CRI: 93.1

Color temperature:

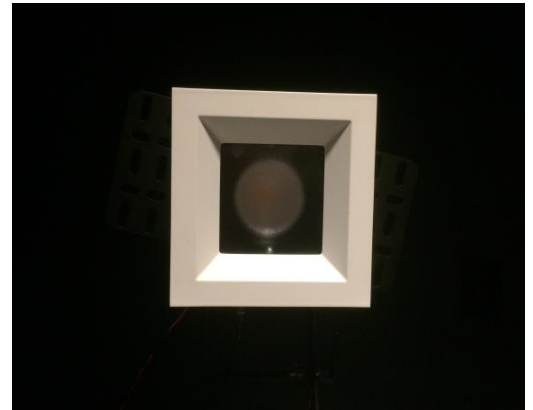
3132 K

Output: 1175 lm

Peak: 2591 cd

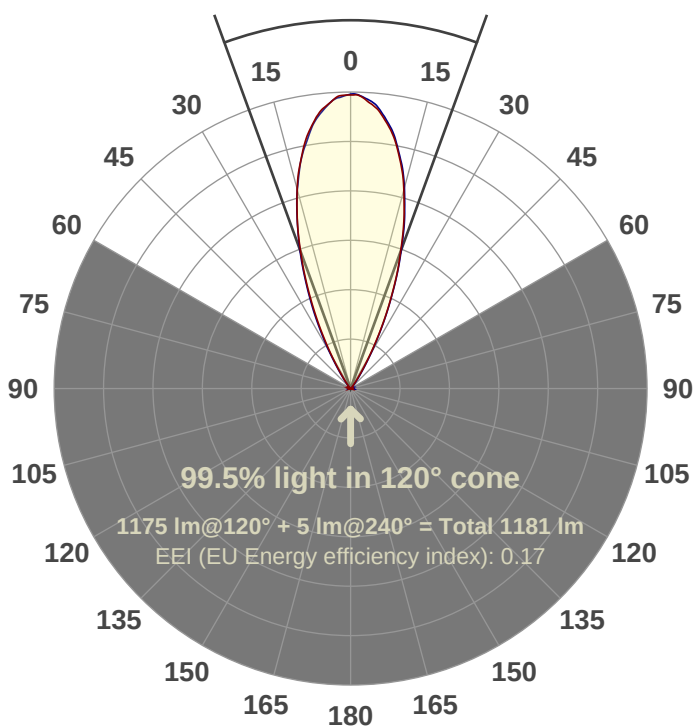
Power: 14.7 W

PF: 0.98



Beam angle

40.1°



Test number:

GRO-CZ14-FL-SQ-91A

Luminaire Model:

GRO-CZ14-FL-SQ-91A

Date and time:

9/26/2017 3:31:24 PM

Description:

CZ V6

LUM: 1175

PPF: 19.8

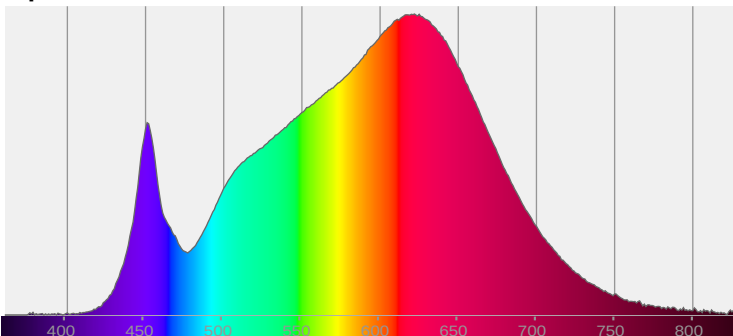


CIE 1931

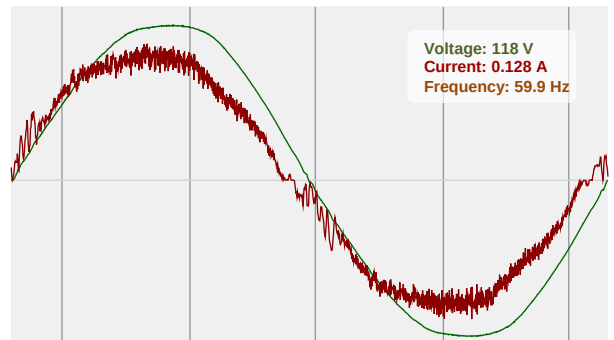
x: 0.428

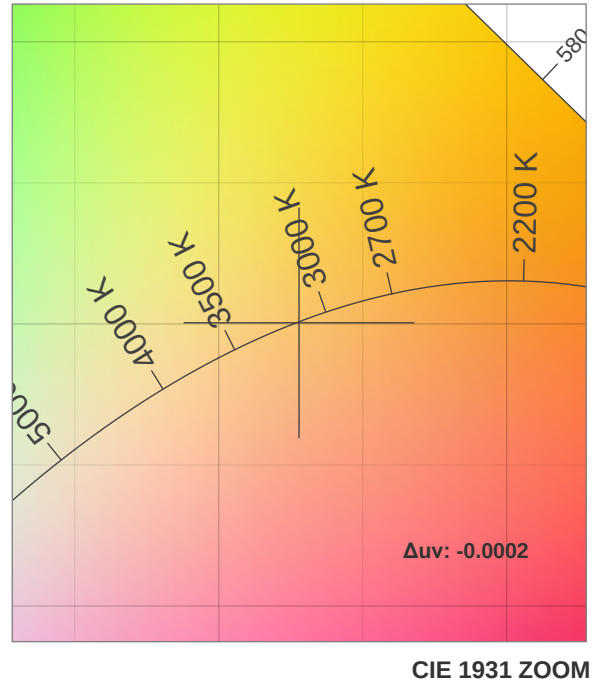
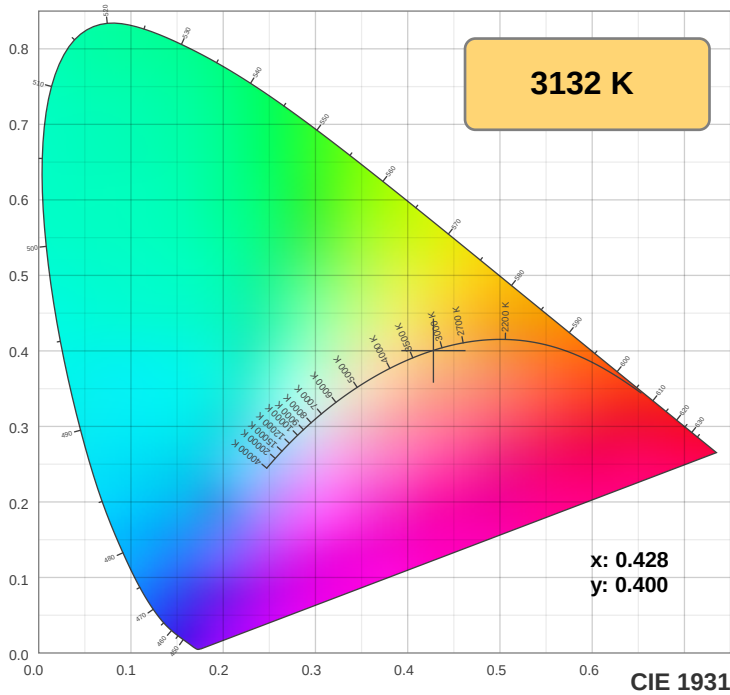
y: 0.400

Spectra

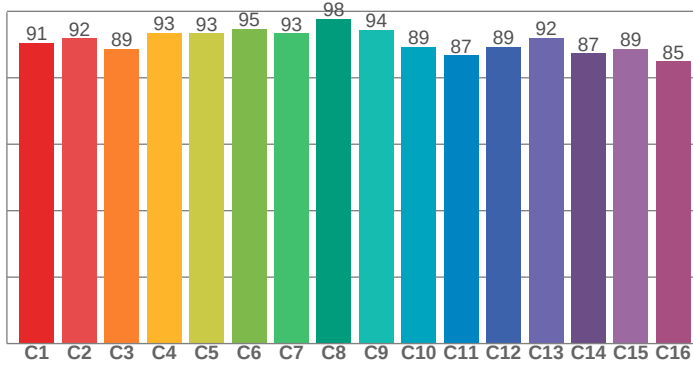


Power

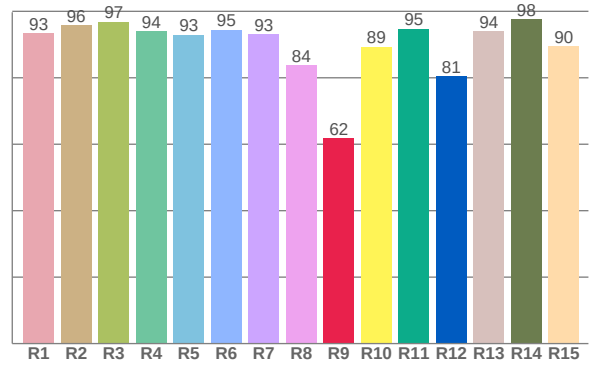




TM30: 91.1



CRI: 93.1 (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
93.4	95.8	96.8	93.9	93.0	94.5	93.2	83.8	61.9	89.3	94.8	80.5	94.0	97.6	89.6

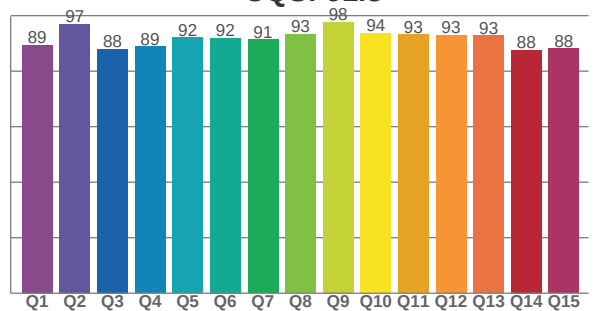
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.6	91.9	88.6	93.4	93.4	94.7	93.3	97.7	94.4	89.3	86.7	89.4	92.0	87.4	88.7	85.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89.5	96.9	88.0	88.9	92.1	92.0	91.4	93.3	97.8	93.7	93.2	93.0	92.9	87.6	88.1

CQS: 91.3



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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3132 K	93.1	61.9	91.1	100.3	91.3	0.428	0.400	0.246	0.346	-0.0002

TM30 details

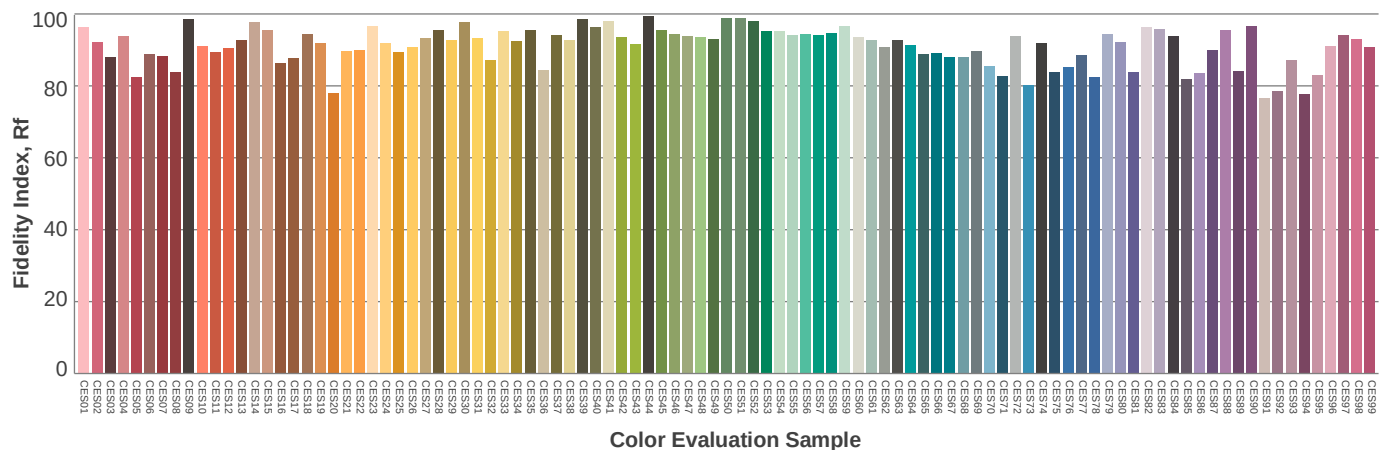
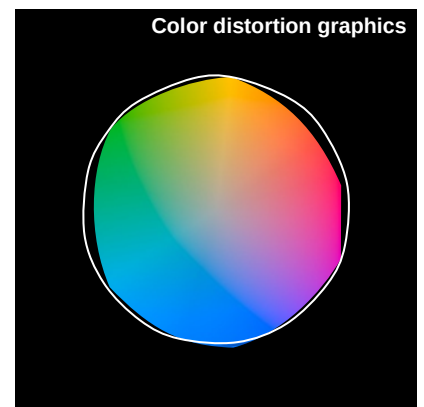
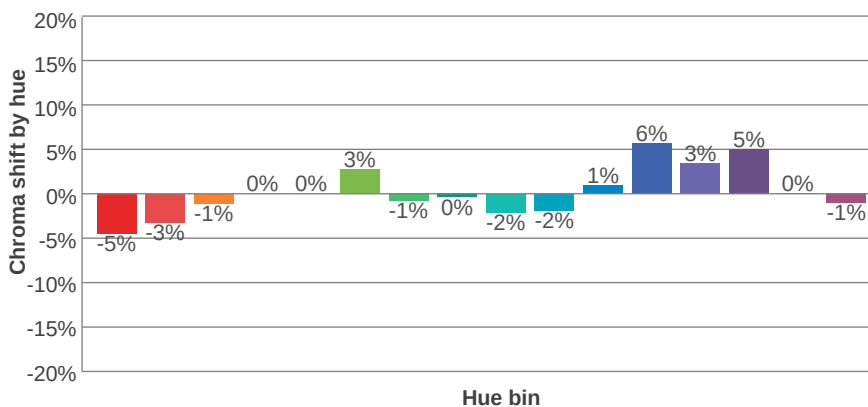
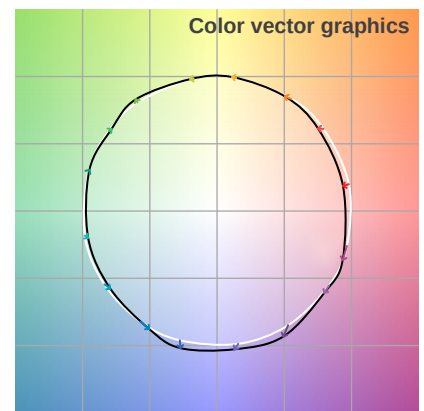
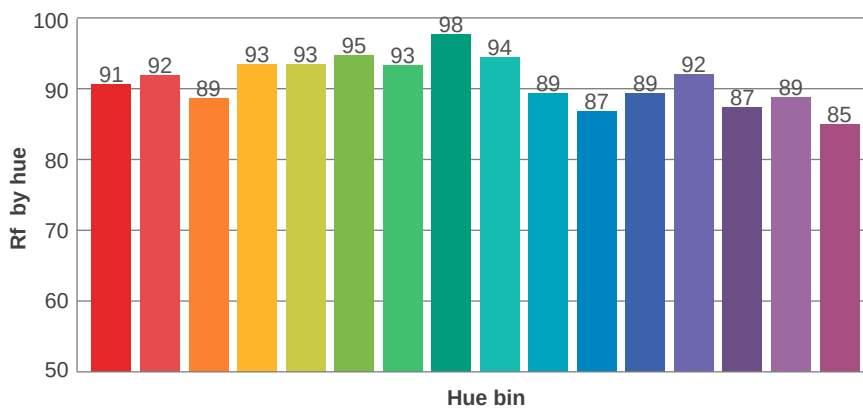
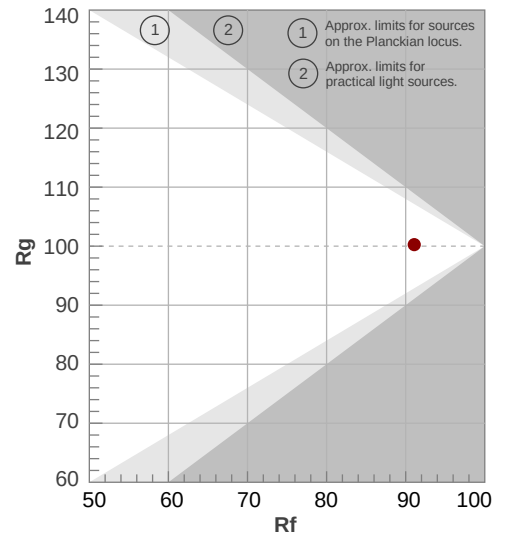
Rf 91.1

Fidelity index Rf

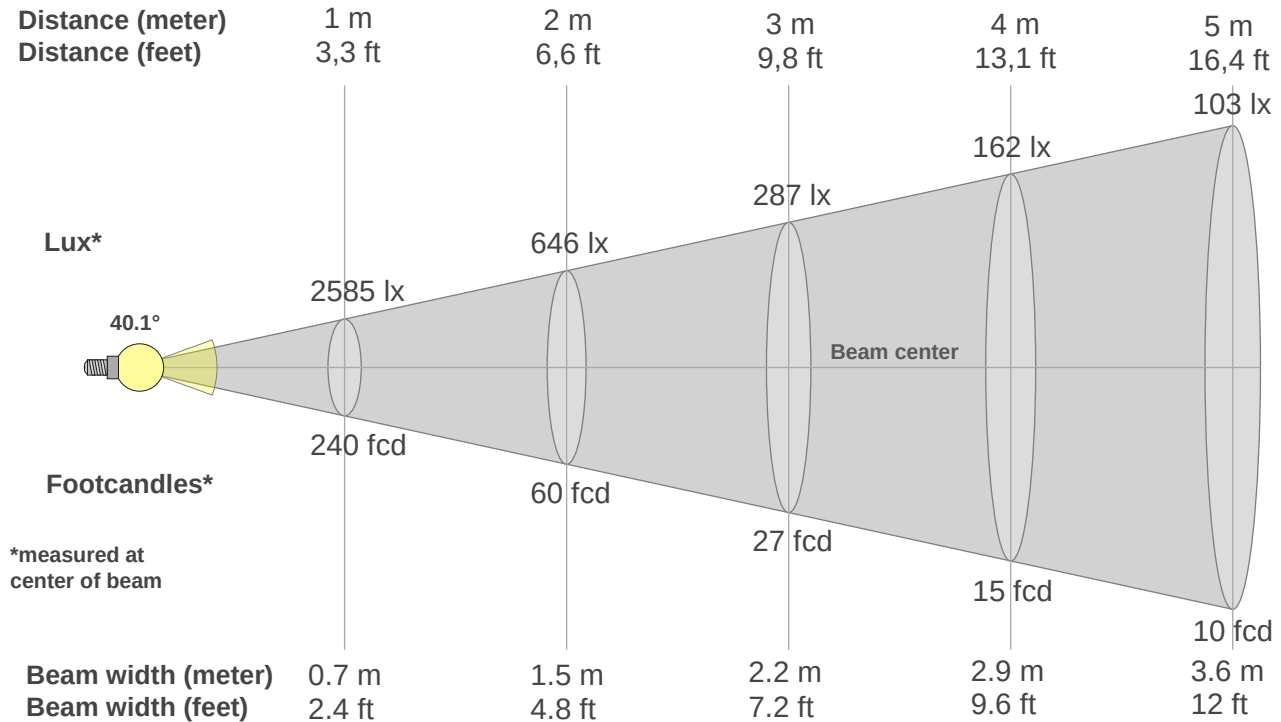
Rg 100.3

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-3%	2%
3	89	-1%	5%
4	93	0%	3%
5	93	0%	2%
6	95	3%	0%
7	93	-1%	-3%
8	98	0%	-1%
9	94	-2%	2%
10	89	-2%	5%
11	87	1%	8%
12	89	6%	2%
13	92	3%	-3%
14	87	5%	-8%
15	89	0%	-7%
16	85	-1%	-11%



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
2585lx	646lx	287lx	162lx	103lx	72lx	53lx	40lx	32lx	26lx	21lx	18lx	15lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx
240.1fcd	60fcd	26.7fcd	15fcd	9.6fcd	6.7fcd	4.9fcd	3.8fcd	3fcd	2.4fcd	2fcd	1.7fcd	1.4fcd	1.2fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.7fcd	0.6fcd

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°
2585	2577	2523	2462	2359	2238	2079	1914	1710	1508	1289	1076	863	666	481	327	201	120	71	43
100%	100%	98%	95%	91%	87%	80%	74%	66%	58%	50%	42%	33%	26%	19%	13%	8%	5%	3%	2%

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°
2585	2563	2523	2443	2349	2211	2073	1898	1716	1510	1307	1098	896	709	529	371	240	153	95	60
100%	99%	98%	95%	91%	86%	80%	73%	66%	58%	51%	42%	35%	27%	20%	14%	9%	6%	4%	2%

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°
2585	2570	2513	2445	2344	2226	2071	1908	1706	1508	1289	1089	876	679	492	335	211	127	75	43
100%	99%	97%	95%	91%	86%	80%	74%	66%	58%	50%	42%	34%	26%	19%	13%	8%	5%	3%	2%

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°
2585	2574	2535	2464	2361	2242	2086	1924	1725	1528	1307	1099	884	691	511	361	243	161	107	71
100%	100%	98%	95%	91%	87%	81%	74%	67%	59%	51%	43%	34%	27%	20%	14%	9%	6%	4%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
40.1°	62.7°	74.5°	99.5%	99.0%

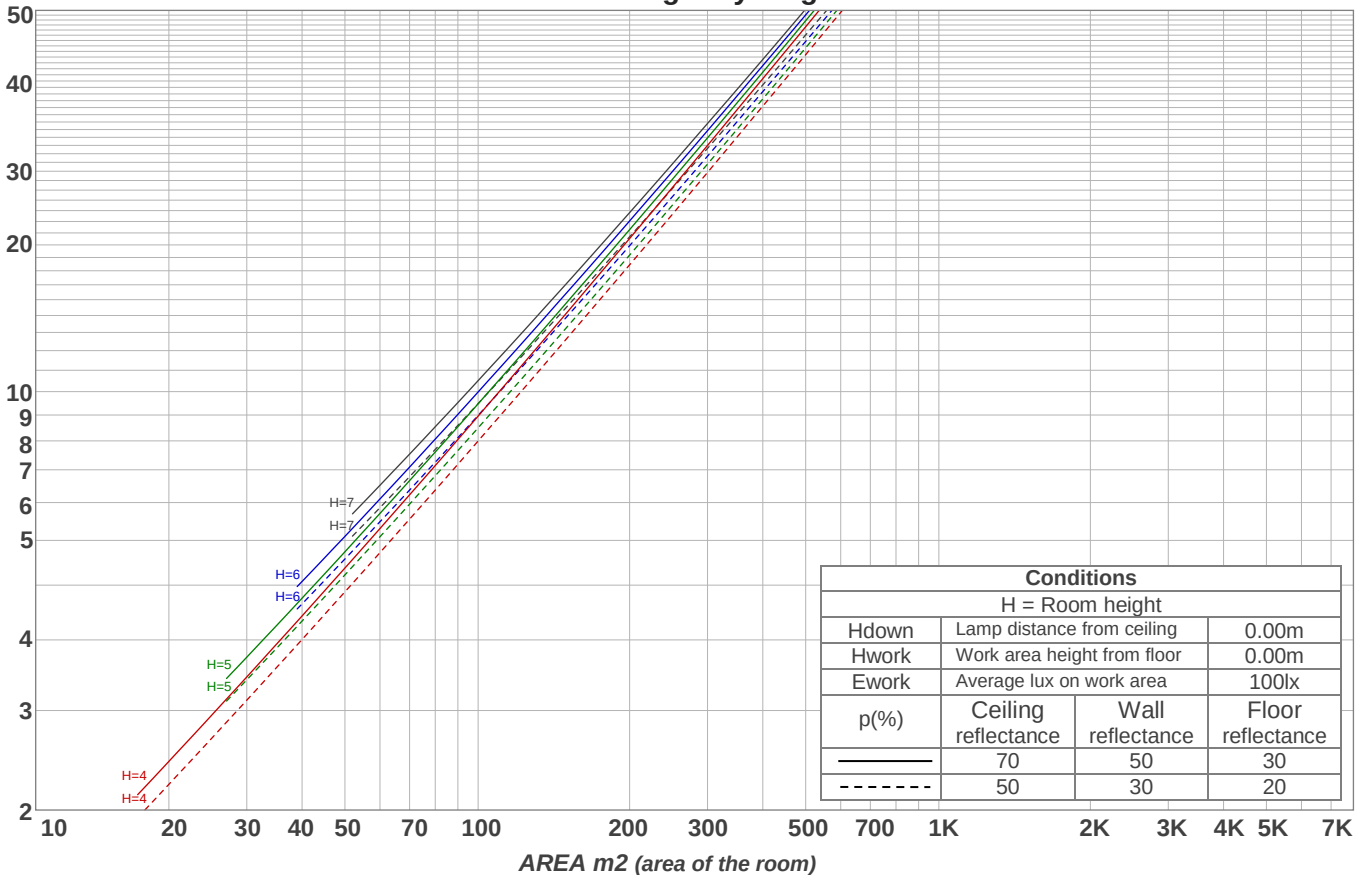
Light planning

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	102	102	102	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	103	100	108	104	101	99	101	99	96	98	96	94	95	94	92	91
3	106	100	96	93	104	99	95	92	97	93	91	94	92	89	92	90	88	87
4	102	95	91	87	100	94	90	87	92	89	86	90	87	85	89	86	84	83
5	98	91	86	83	96	90	86	82	88	85	82	87	83	81	85	83	80	79
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75
7	91	83	78	75	89	82	78	74	81	77	74	80	76	74	79	76	73	72
8	87	80	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69
9	84	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	67	66
10	81	73	69	65	80	73	68	65	72	68	65	71	68	65	71	67	65	64

LAMPS (number of lamps)

Luminaire budgetary diagram



Zonal Lumen Summary

[illegible]

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