

Light efficiency:

66 Lumen/Watt

Light quality:

CRI: 96.5

Color temperature:

3069 K

Output: 991 lm

Peak: 2238 cd

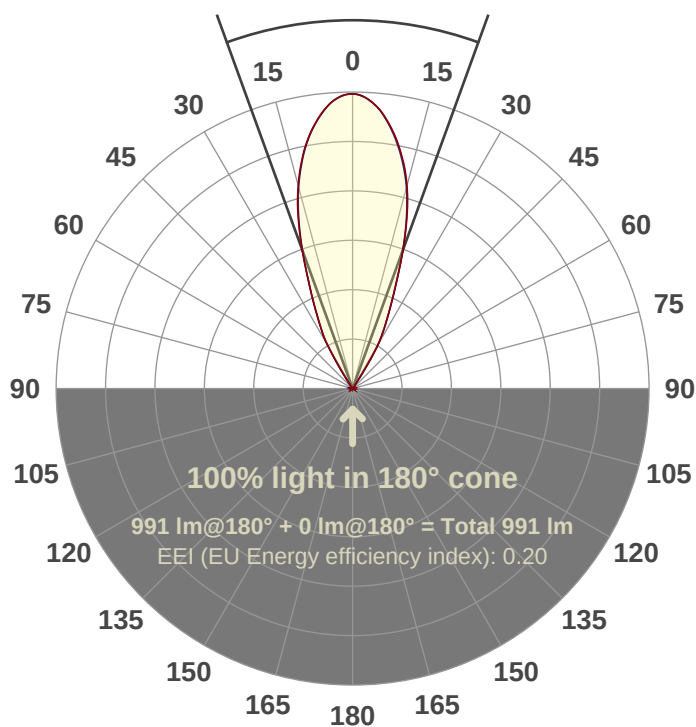
Power: 15.0 W

PF: 0.98



Beam angle

39.9°



Test number:

GRO-AD-FL-RD

Luminaire Model:

GRO-AD-FL-RD

Date and time:

8/10/2017 11:54:49 AM

Description:

350mA AD

LUM: 991

PPF: 18.3

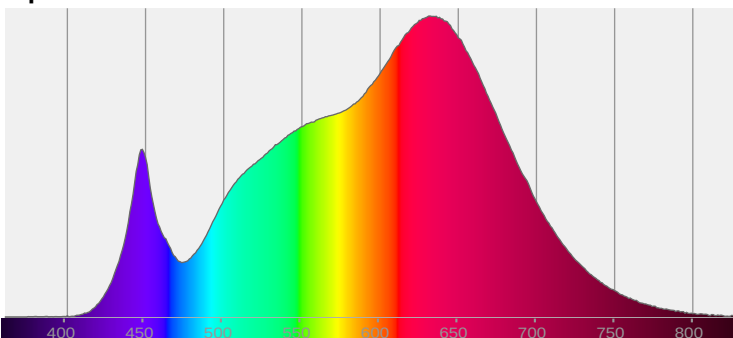


CIE 1931

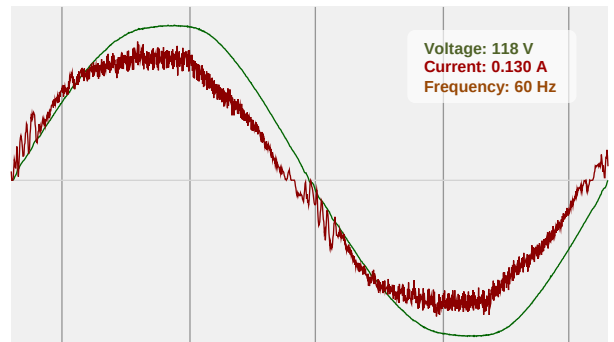
x: 0.430

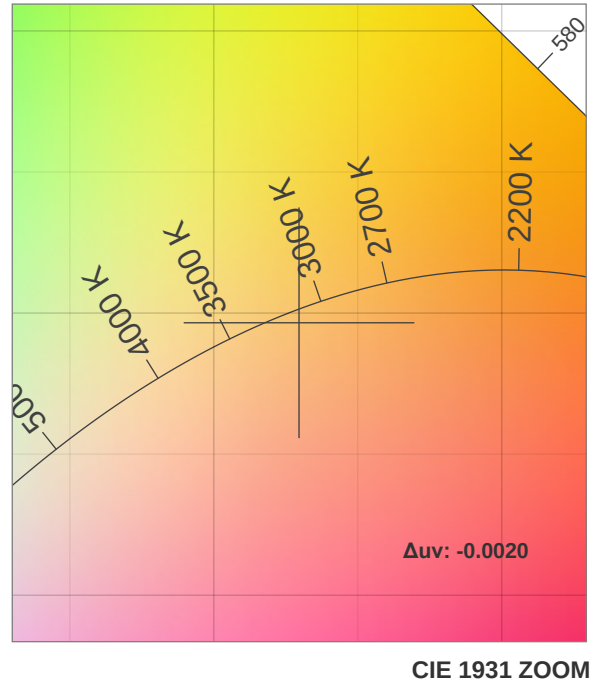
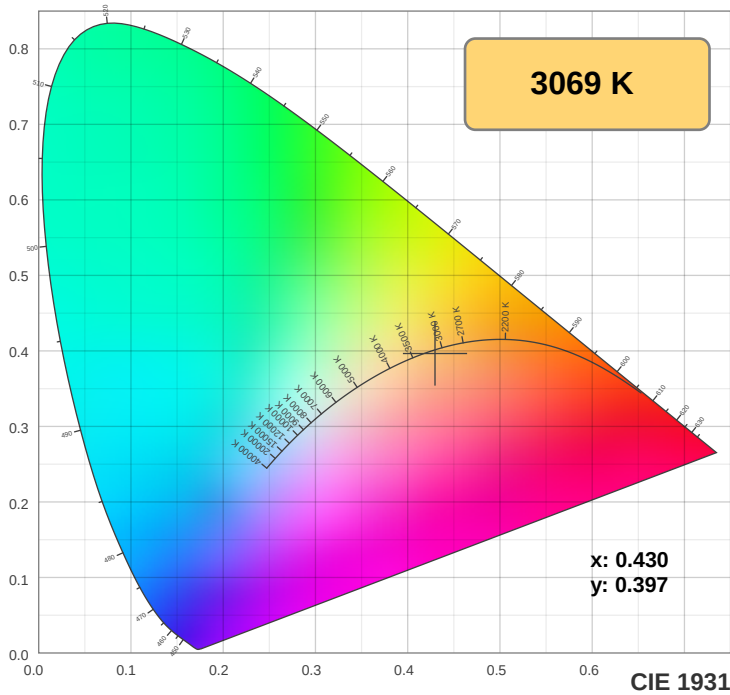
y: 0.397

Spectra

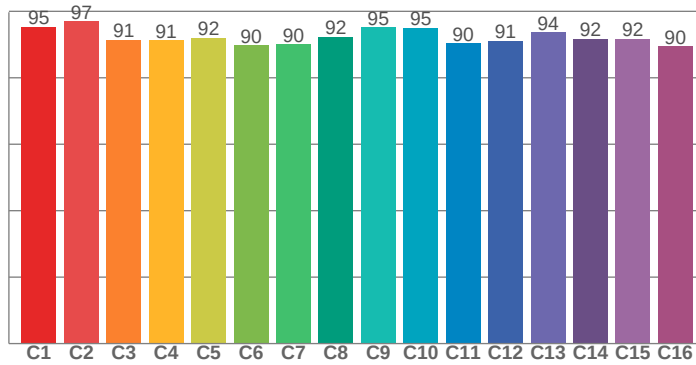


Power

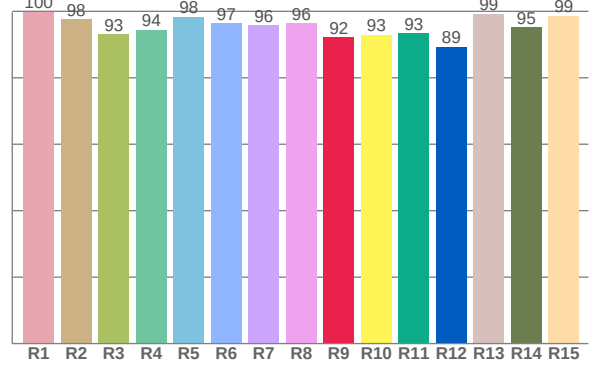




TM30: 92.6



CRI: 96.5 (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
99.9	97.6	93.0	94.5	98.3	96.5	95.8	96.5	92.2	93.0	93.4	89.3	99.3	95.1	98.6

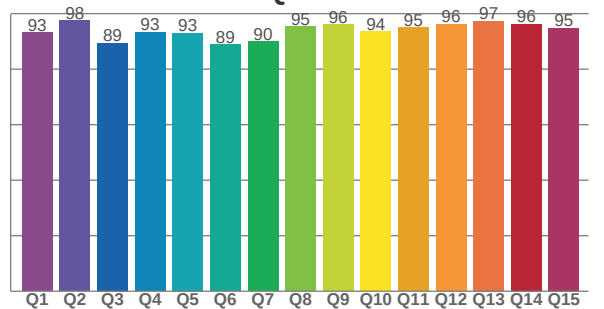
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.3	97.0	91.4	91.2	92.1	89.8	90.0	92.4	95.1	95.0	90.4	91.1	93.7	91.7	91.7	89.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.1	97.5	89.5	93.3	93.0	88.8	89.9	95.3	96.1	93.6	94.9	96.3	97.4	96.2	94.9

CQS: 93.2



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
3069 K	96.5	92.2	92.6	104.5	93.2	0.430	0.397	0.249	0.345	-0.0020

TM30 details

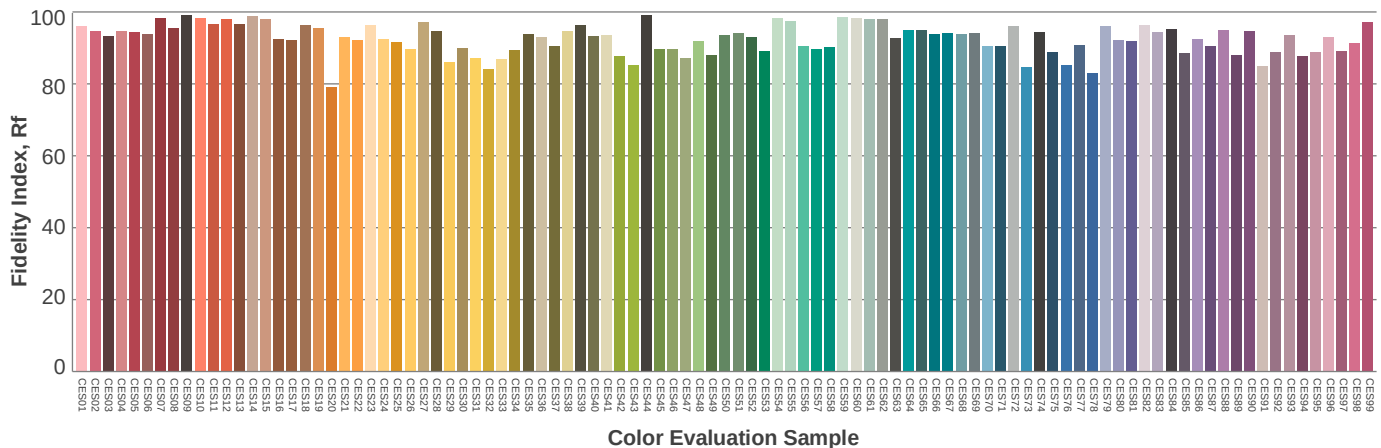
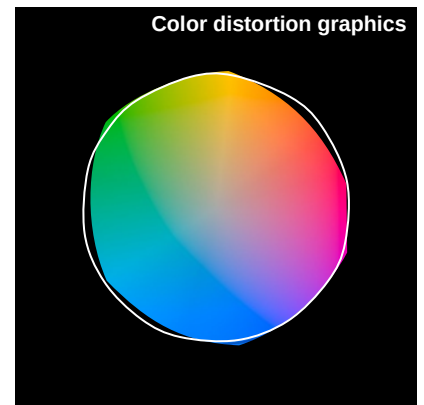
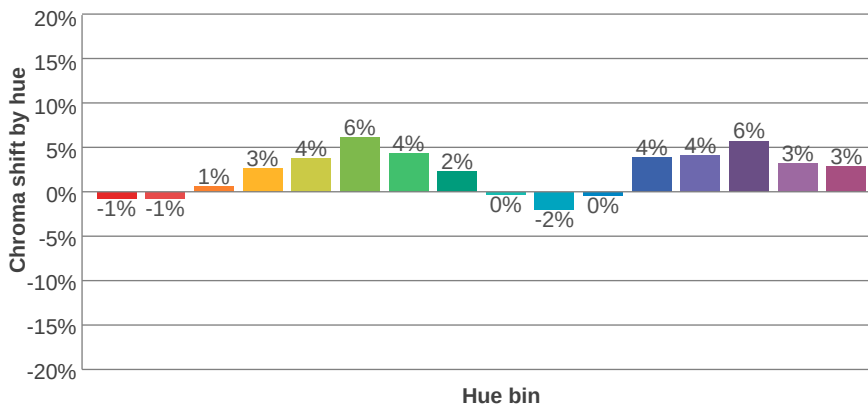
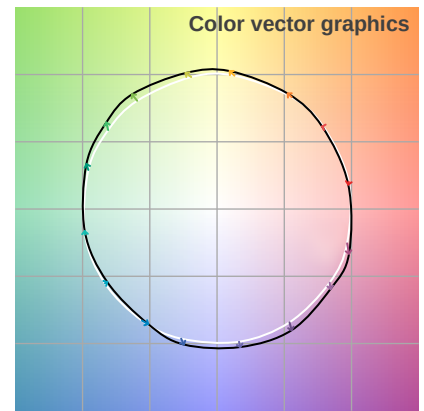
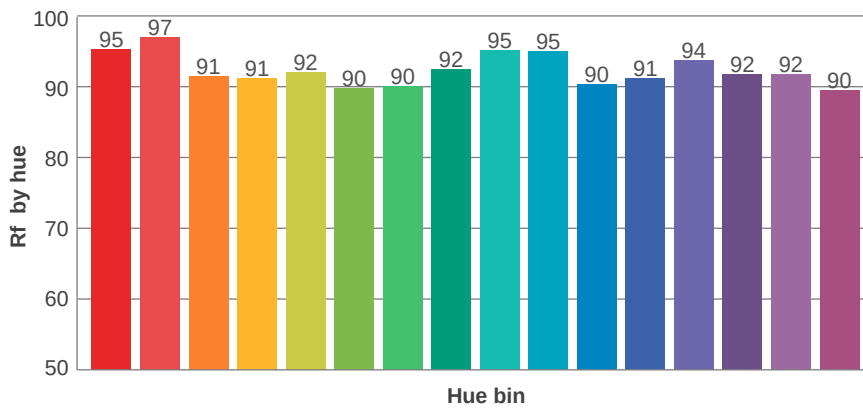
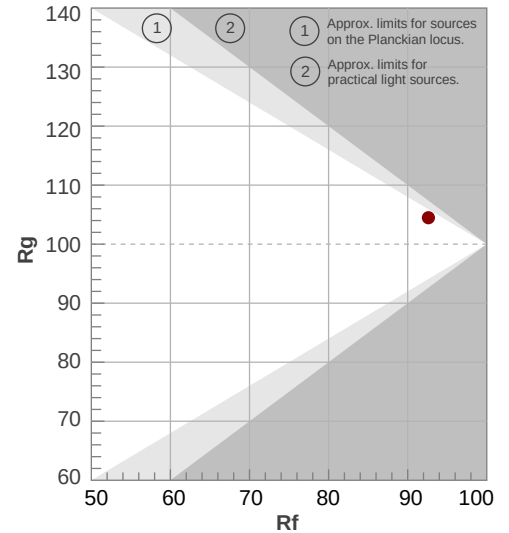
Rf 92.6

Fidelity index Rf

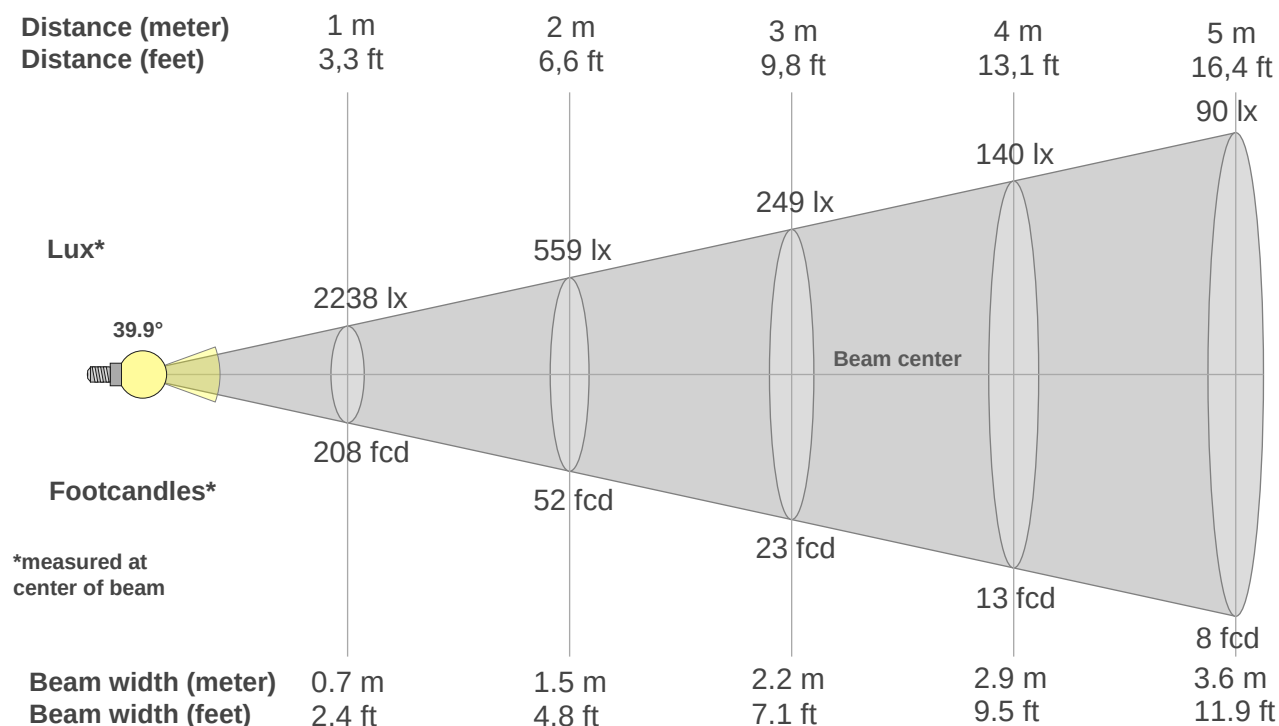
Rg 104.5

Gamut index Rg

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



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
2238lx	559lx	249lx	140lx	90lx	62lx	46lx	35lx	28lx	22lx	18lx	16lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	6lx
207.9fcd	52fcd	23.1fcd	13fcd	8.3fcd	5.8fcd	4.2fcd	3.2fcd	2.6fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd

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°
2238	2226	2187	2121	2035	1934	1813	1673	1514	1326	1119	910	745	608	499	377	171	23	2	1
100%	99%	98%	95%	91%	86%	81%	75%	68%	59%	50%	41%	33%	27%	22%	17%	8%	1%	0%	0%

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°
2238	2224	2185	2117	2031	1928	1805	1661	1500	1314	1111	911	749	611	501	370	177	32	1	1
100%	99%	98%	95%	91%	86%	81%	74%	67%	59%	50%	41%	33%	27%	22%	17%	8%	1%	0%	0%

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°
2238	2220	2177	2111	2022	1920	1802	1671	1513	1324	1119	909	740	608	501	397	206	39	2	1
100%	99%	97%	94%	90%	86%	81%	75%	68%	59%	50%	41%	33%	27%	22%	18%	9%	2%	0%	0%

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°
2238	2221	2175	2108	2015	1908	1789	1654	1496	1312	1111	911	744	611	498	379	201	45	2	1
100%	99%	97%	94%	90%	85%	80%	74%	67%	59%	50%	41%	33%	27%	22%	17%	9%	2%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
39.9°	63.3°	67.2°	99.9%	99.8%

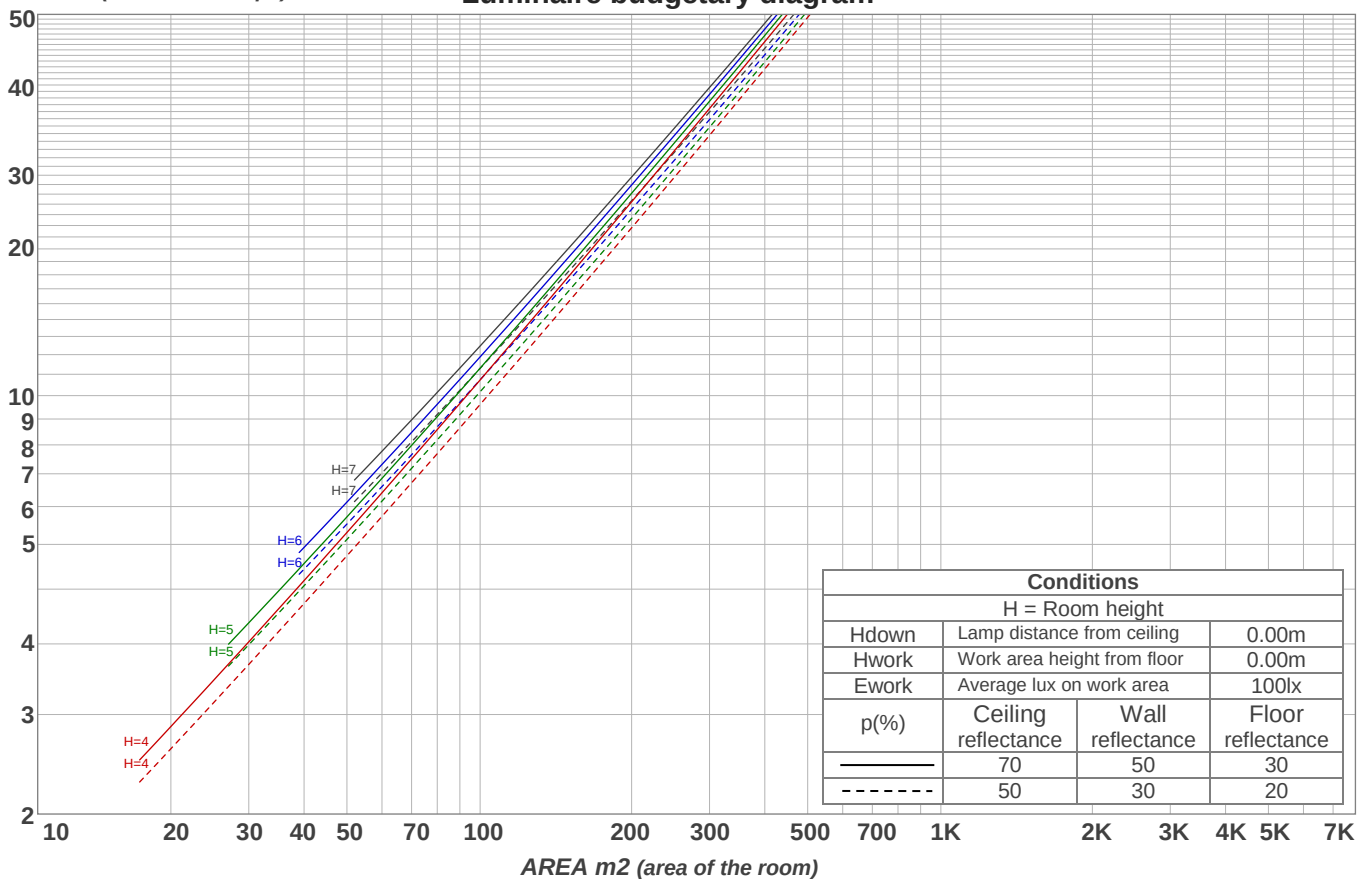
Light planning

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	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96
2	110	106	103	100	108	105	102	99	101	99	97	98	97	95	96	94	93	91
3	106	101	97	94	104	100	96	93	97	94	91	95	92	90	93	90	89	87
4	102	96	92	88	100	95	91	88	93	89	87	91	88	86	89	87	85	83
5	98	92	87	84	97	91	86	83	89	85	82	88	84	82	86	83	81	80
6	95	88	83	79	93	87	82	79	86	82	79	84	81	78	83	80	78	77
7	91	84	79	76	90	83	79	76	82	78	75	81	78	75	80	77	75	73
8	88	81	76	72	87	80	76	72	79	75	72	78	74	72	77	74	72	70
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	75	71	69	68
10	82	74	70	67	81	74	70	67	73	69	66	73	69	66	72	69	66	65

LAMPS (number of lamps)

Luminaire budgetary diagram



Zonal Lumen Summary

[illegible]

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