

Light efficiency:

74 Lumen/Watt

Light quality:

CRI: 92.5

Color temperature:

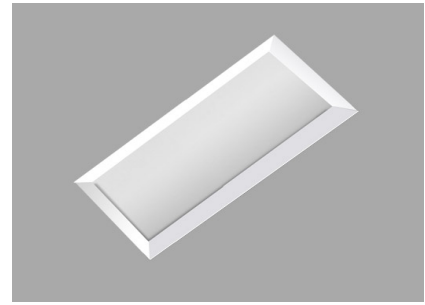
3020 K

Output: 3171 lm

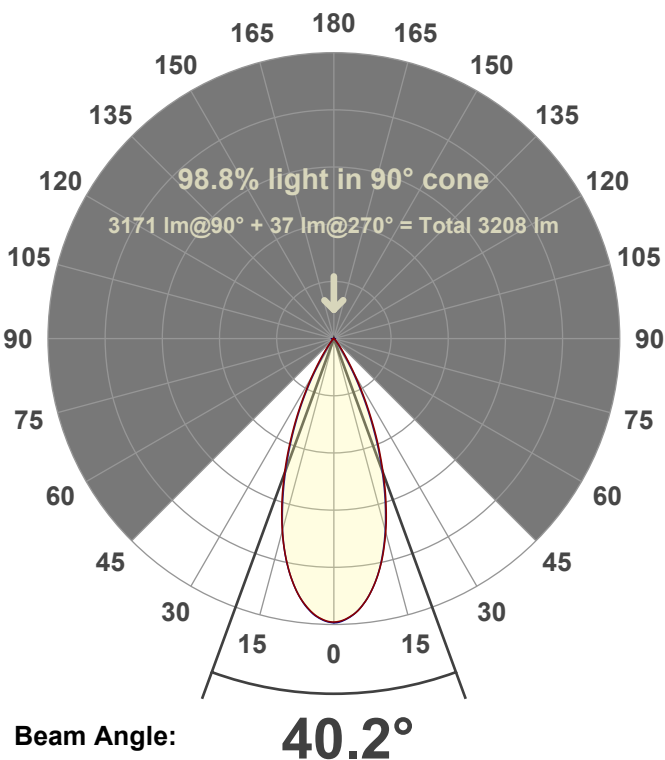
Peak: 6950 cd

Power: 43.0 W

PF: 0.99



*Variation due to source size, bezel geometry, or secondary optics



Product name:

CR4MD-TMHA-OR2-CZ20-40

Item number:

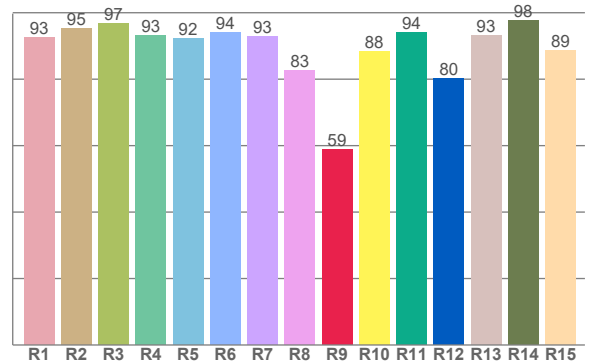
1017-2LEDZ-CZ20-FL V6

Date and time:

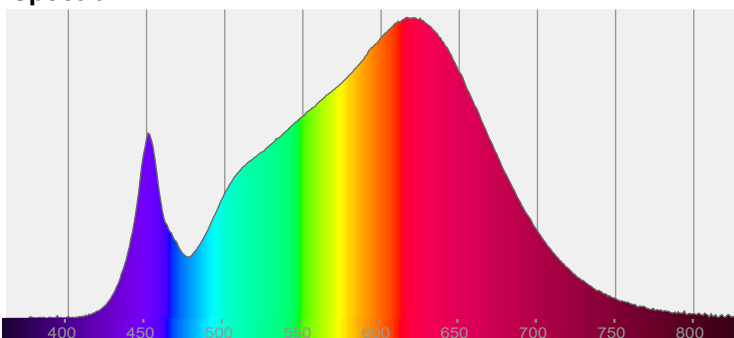
10/3/2024 1:44:28 PM

LUM: 3171

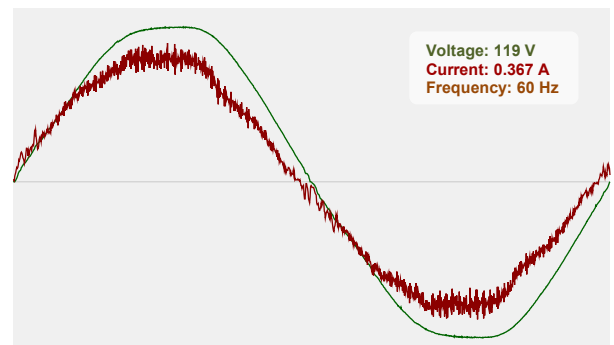
CRI: 92.5 (R1-R8)

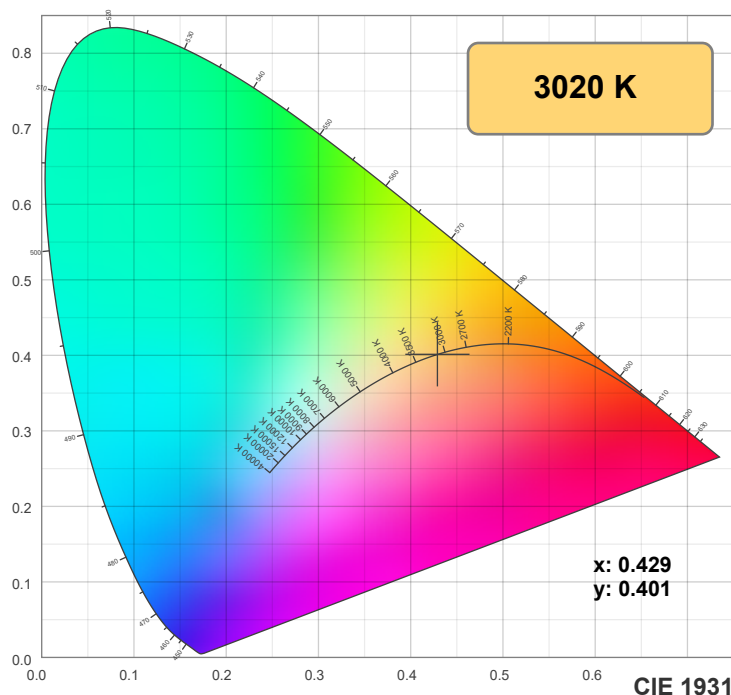
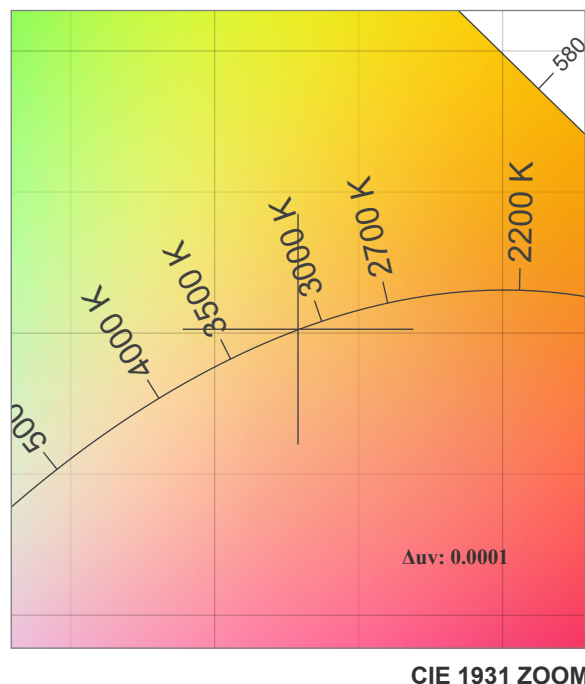


Spectra

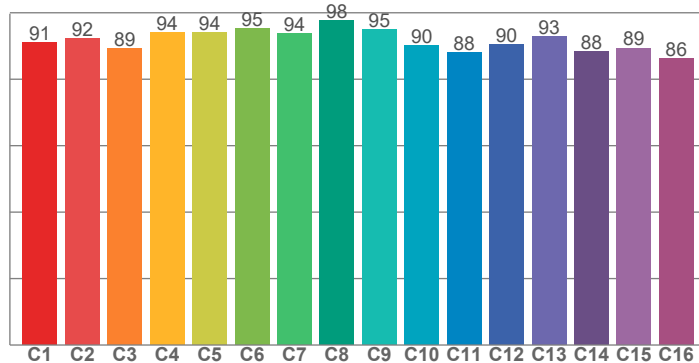


Power

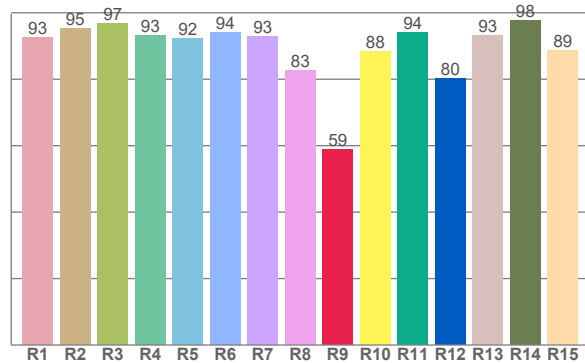




TM-30: 91.7



CRI: 92.5 (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
92.6	95.3	96.8	93.3	92.2	94.1	92.8	82.6	58.9	88.4	94.1	80.1	93.3	97.7	88.6

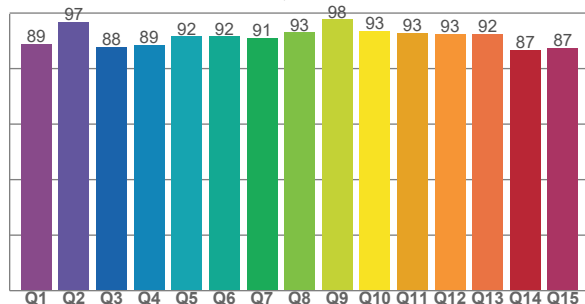
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.0	92.2	89.2	94.0	94.0	95.1	93.7	97.7	94.9	90.2	87.9	90.4	92.7	88.4	89.4	86.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88.8	96.9	87.8	88.6	91.6	91.5	91.1	93.0	97.7	93.5	92.9	92.6	92.4	86.7	87.3

CQS: 90.8



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
3020 K	92.5	58.9	91.7	100.1	90.8	0.429	0.401	0.247	0.346	0.0001

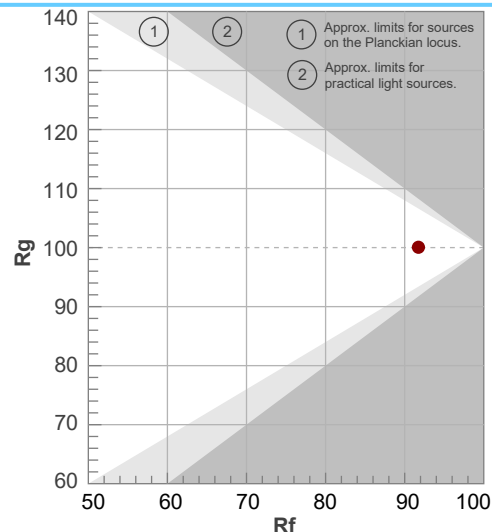
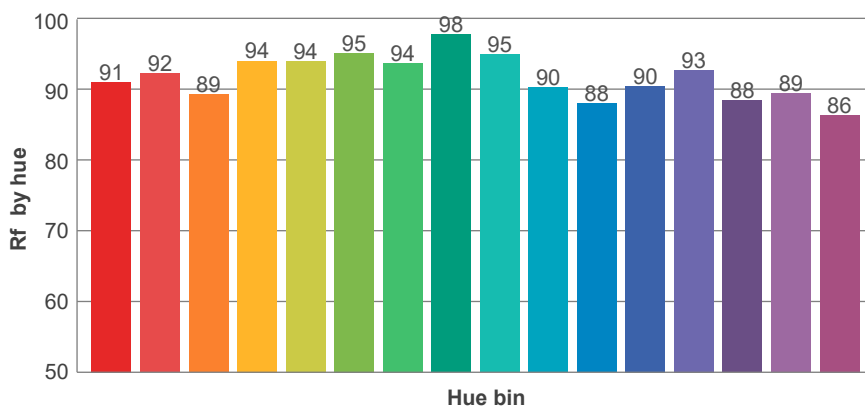
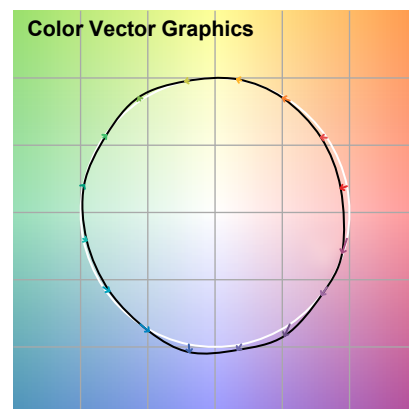
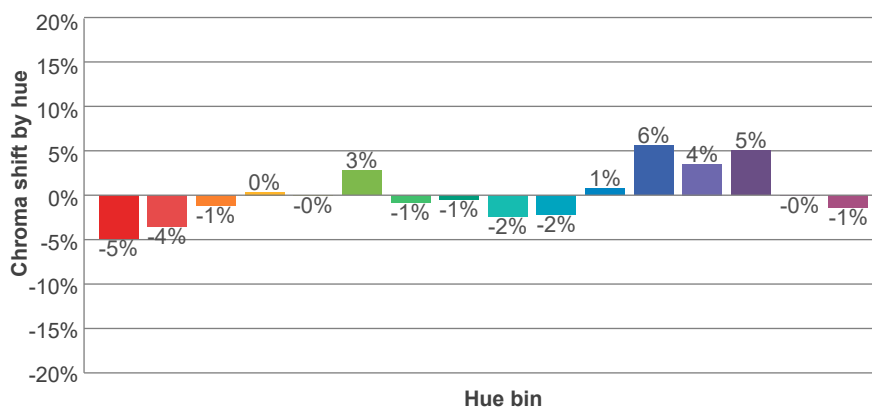
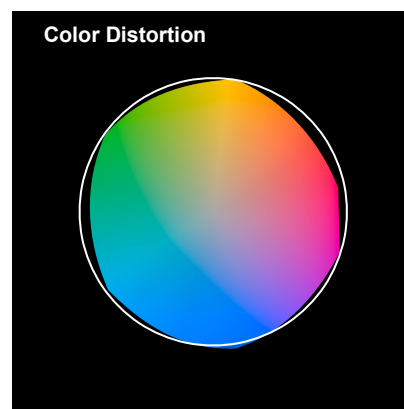
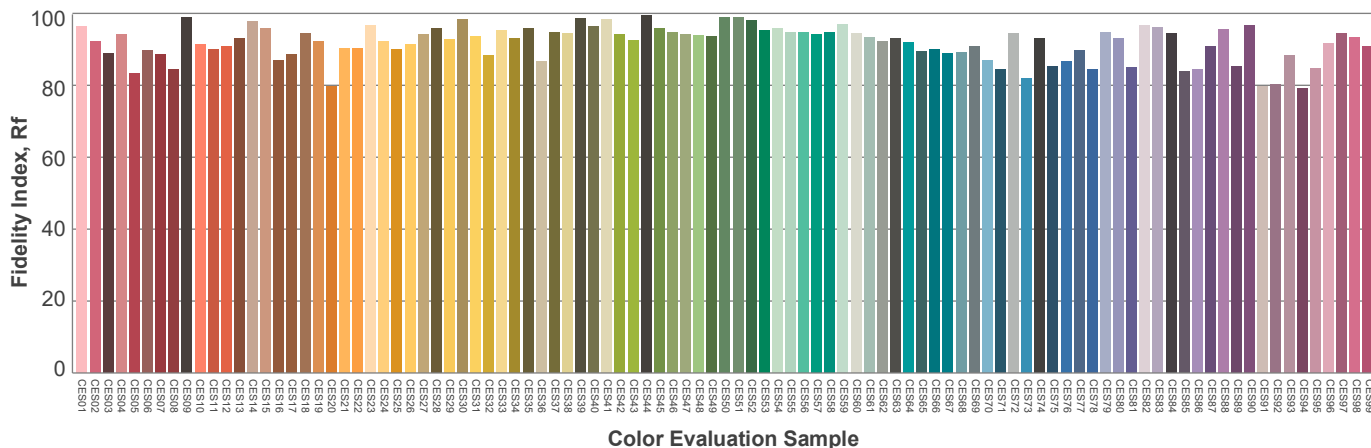
Rf 91.7

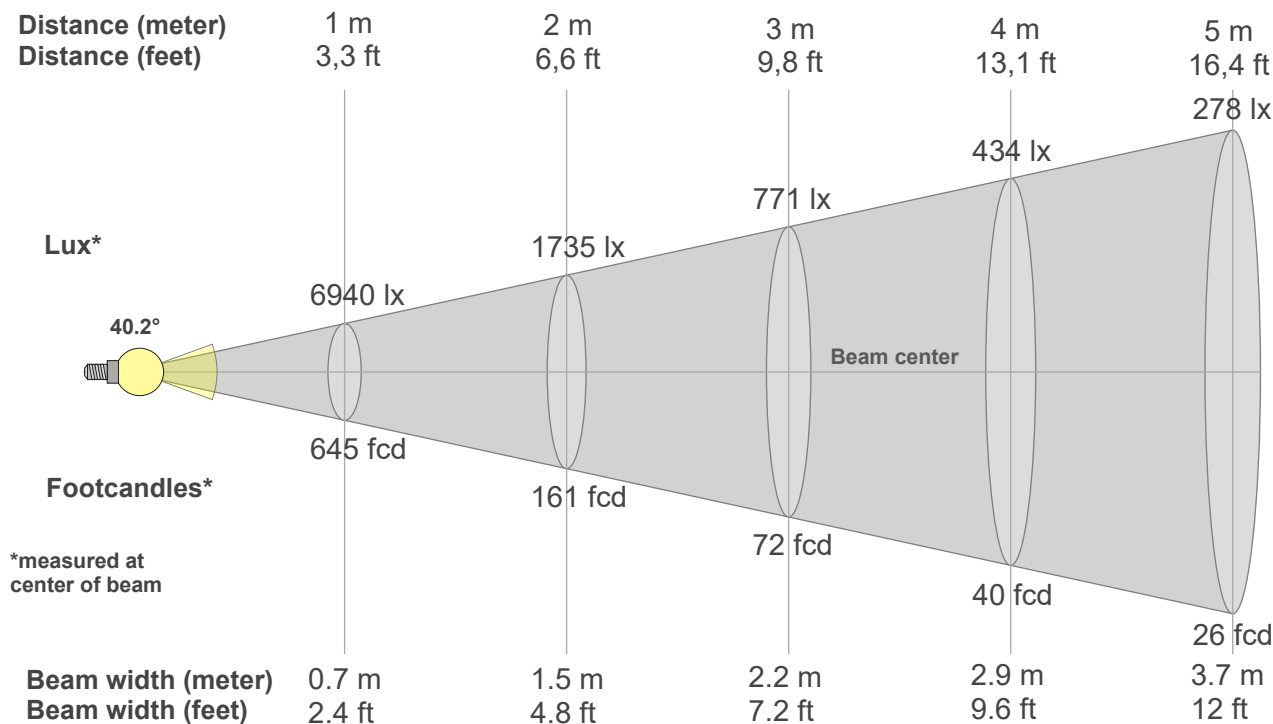
Fidelity index Rf

Rg 100.1

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-4%	3%
3	89	-1%	5%
4	94	0%	3%
5	94	-0%	3%
6	95	3%	-0%
7	94	-1%	-3%
8	98	-1%	-1%
9	95	-2%	2%
10	90	-2%	5%
11	88	1%	8%
12	90	6%	2%
13	93	4%	-4%
14	88	5%	-8%
15	89	-0%	-7%
16	86	-1%	-11%





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
6940lx	1735lx	771lx	434lx	278lx	193lx	142lx	108lx	86lx	69lx	57lx	48lx	41lx	35lx	31lx	27lx	24lx	21lx	19lx	17lx
644.8fcd	161.2fcd	71.6fcd	40.3fcd	25.8fcd	17.9fcd	13.2fcd	10.1fcd	8fcd	6.4fcd	5.3fcd	4.5fcd	3.8fcd	3.3fcd	2.9fcd	2.5fcd	2.2fcd	2fcd	1.8fcd	1.6fcd

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°
6940	6886	6766	6576	6310	5981	5590	5138	4643	4104	3539	2978	2429	1904	1429	1024	694	454	296	191
100%	99%	97%	95%	91%	86%	81%	74%	67%	59%	51%	43%	35%	27%	21%	15%	10%	7%	4%	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°
6940	6898	6771	6573	6307	5976	5573	5107	4589	4040	3461	2897	2328	1793	1293	868	544	326	193	114
100%	99%	98%	95%	91%	86%	80%	74%	66%	58%	50%	42%	34%	26%	19%	13%	8%	5%	3%	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°
6940	6887	6765	6566	6306	5964	5561	5114	4615	4089	3536	2991	2450	1947	1478	1073	745	495	328	217
100%	99%	97%	95%	91%	86%	80%	74%	67%	59%	51%	43%	35%	28%	21%	15%	11%	7%	5%	3%

Intensities in 270° c-plane

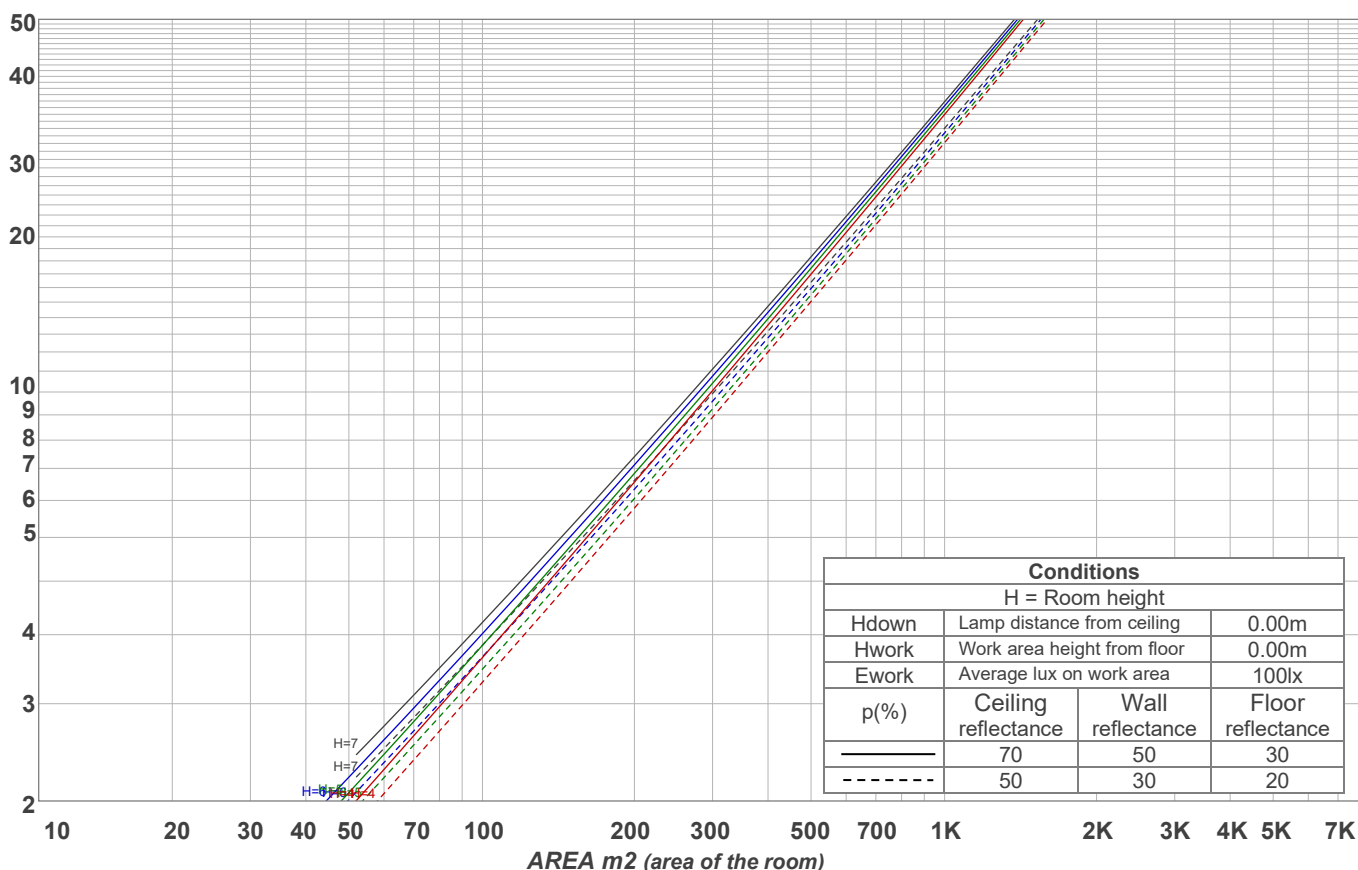
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6940	6899	6778	6579	6303	5962	5566	5104	4576	4021	3462	2906	2363	1857	1365	934	592	360	220	134
100%	99%	98%	95%	91%	86%	80%	74%	66%	58%	50%	42%	34%	27%	20%	13%	9%	5%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
40.2°	63.3°	75.5°	100.0%	100.0%

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LAMPS (number of lamps)

Luminaire Budgetary Diagram



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	84	81	85	83	80	79
6	94	87	82	78	93	86	82	78	85	81	78	83	80	77	82	79	77	75
7	91	83	78	75	89	82	78	75	81	77	74	80	77	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

Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
615 lm	1329 lm	965 lm	238 lm	23.7 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm	0.000 lm

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