

Light efficiency:

66 Lumen/Watt

Light quality:

CRI: 94.5

Color temperature:

3512 K

Output: 1321 lm

Peak: 233 cd

Power: 20.0 W

PF: 1.0



Tracking number: [n/a](#)

Product name:

**PC20.5MRBOVWDR2012.0VW-ALL
ON**

Item number:

Date and time:

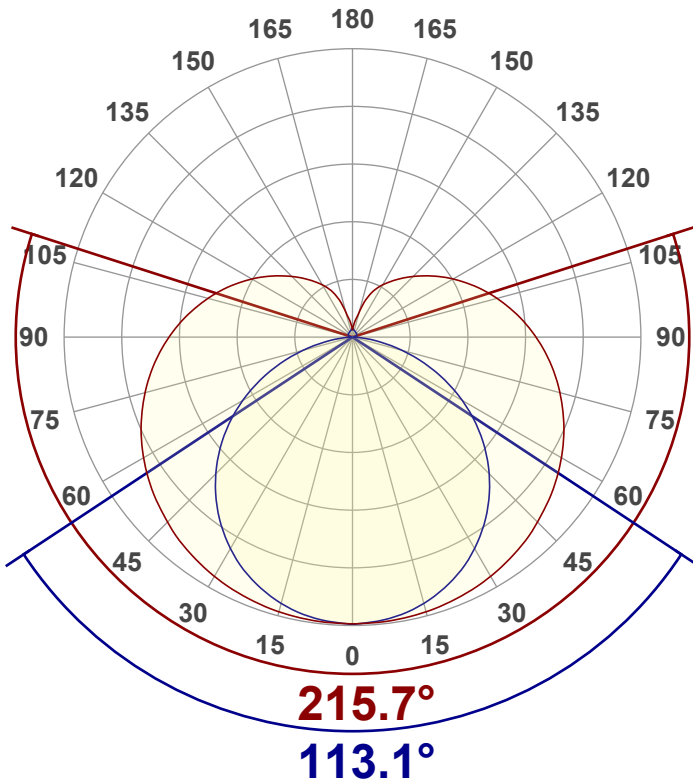
2024/10/14 10:13:02

Operator:

Nick

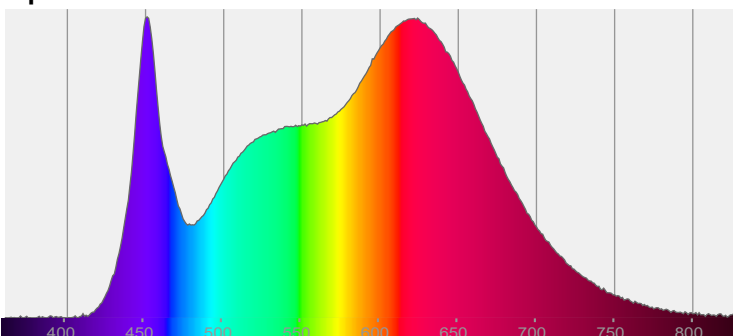
Description:

DIAMETER 61MM,LENGTH 500MM



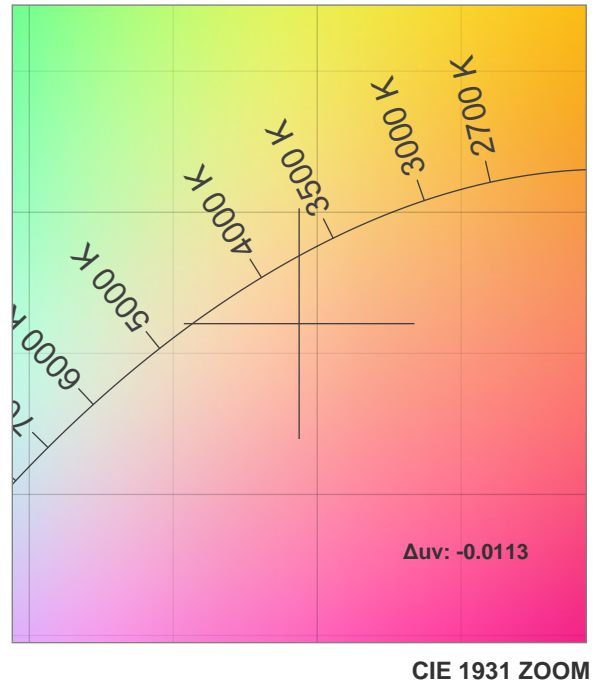
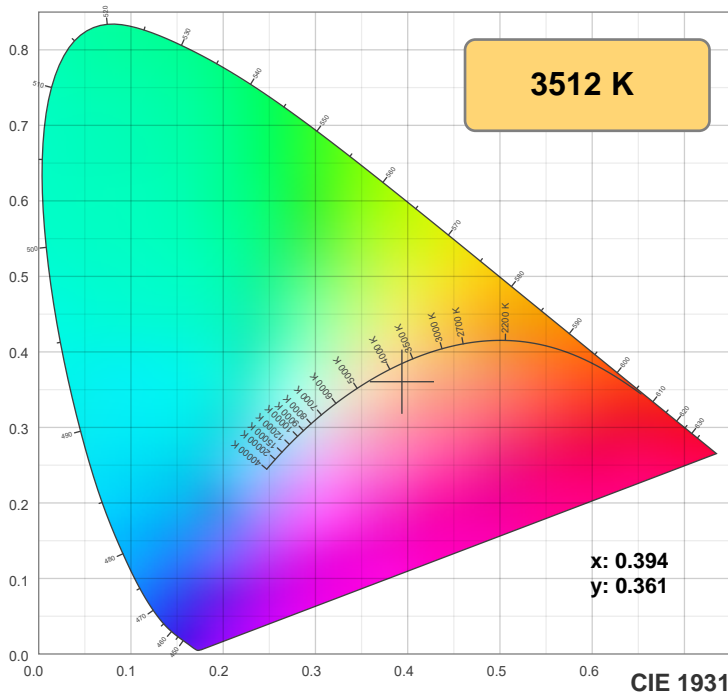
CIE 1931
x: 0.394
y: 0.361

Spectra

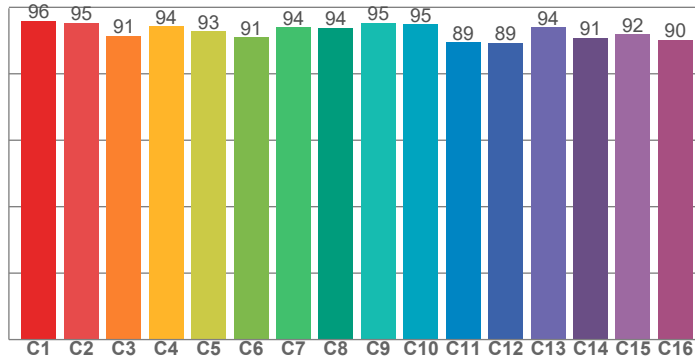


Power

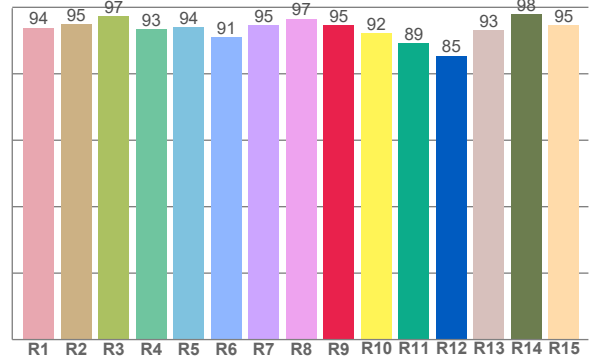
Voltage: 24.0 V
Current: 0.835 A
Frequency: 0 Hz



TM-30: 93.0



CRI: 94.5 (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
93.9	95.0	97.3	93.5	94.1	91.0	94.5	96.6	94.7	92.3	89.3	85.4	93.2	97.9	94.7

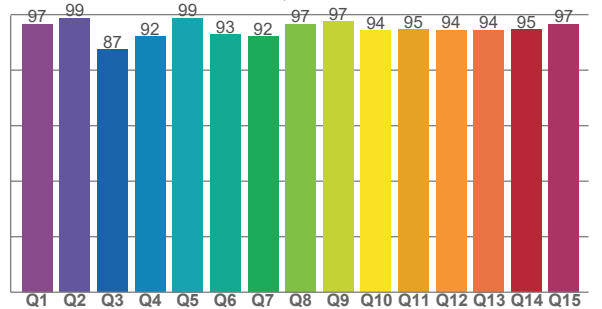
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.9	95.3	91.4	94.3	92.7	91.0	94.0	93.8	95.4	94.9	89.4	89.3	93.9	90.9	91.8	90.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96.7	98.7	87.5	92.0	98.8	92.9	92.1	96.6	97.5	94.3	94.6	94.5	94.5	94.7	96.7

CQS: 94.1



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
3512 K	94.5	94.7	93.0	105.1	94.1	0.394	0.361	0.241	0.331	-0.0113

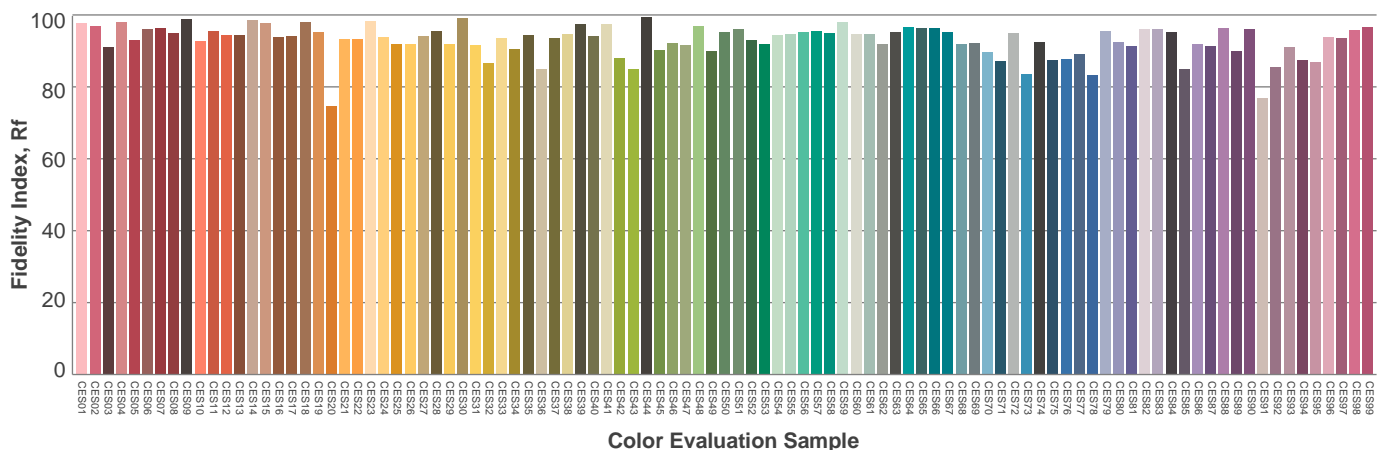
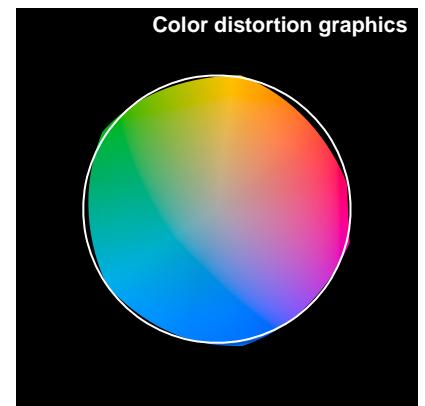
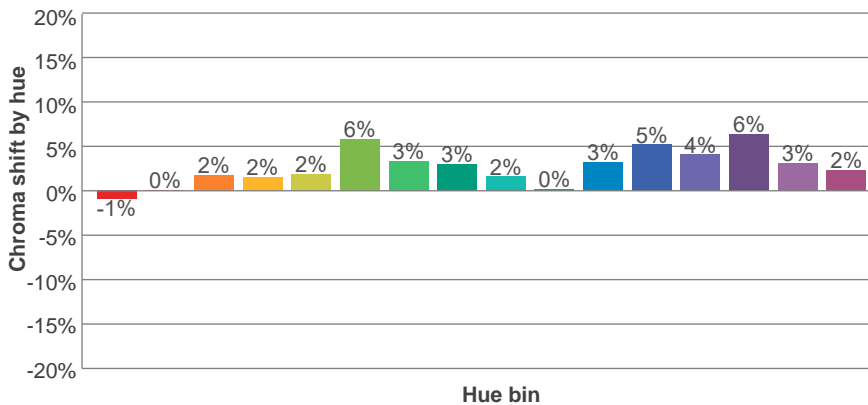
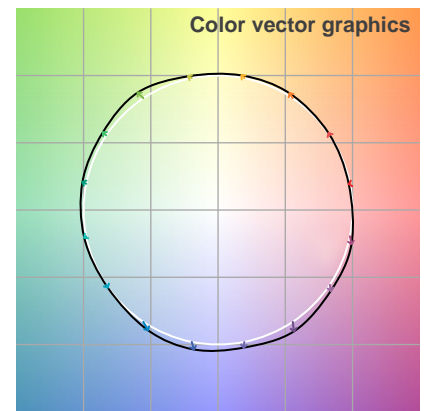
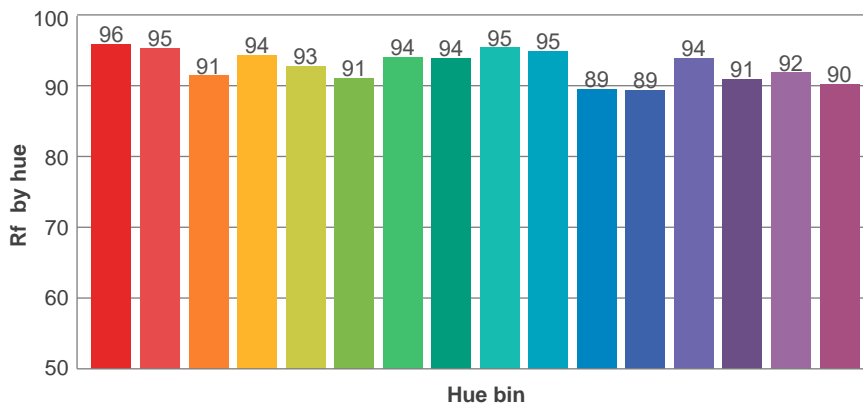
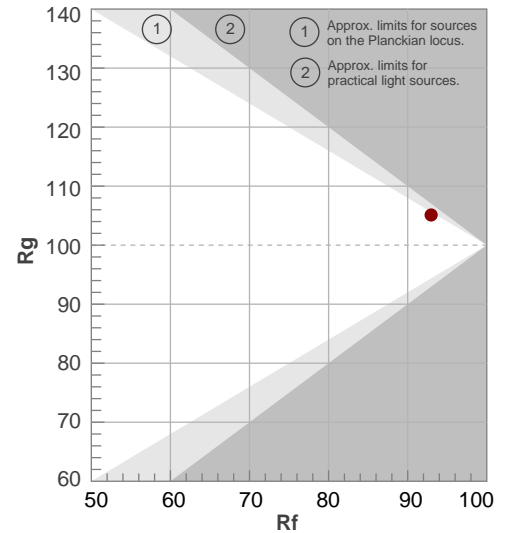
Rf 93.0

Fidelity index Rf

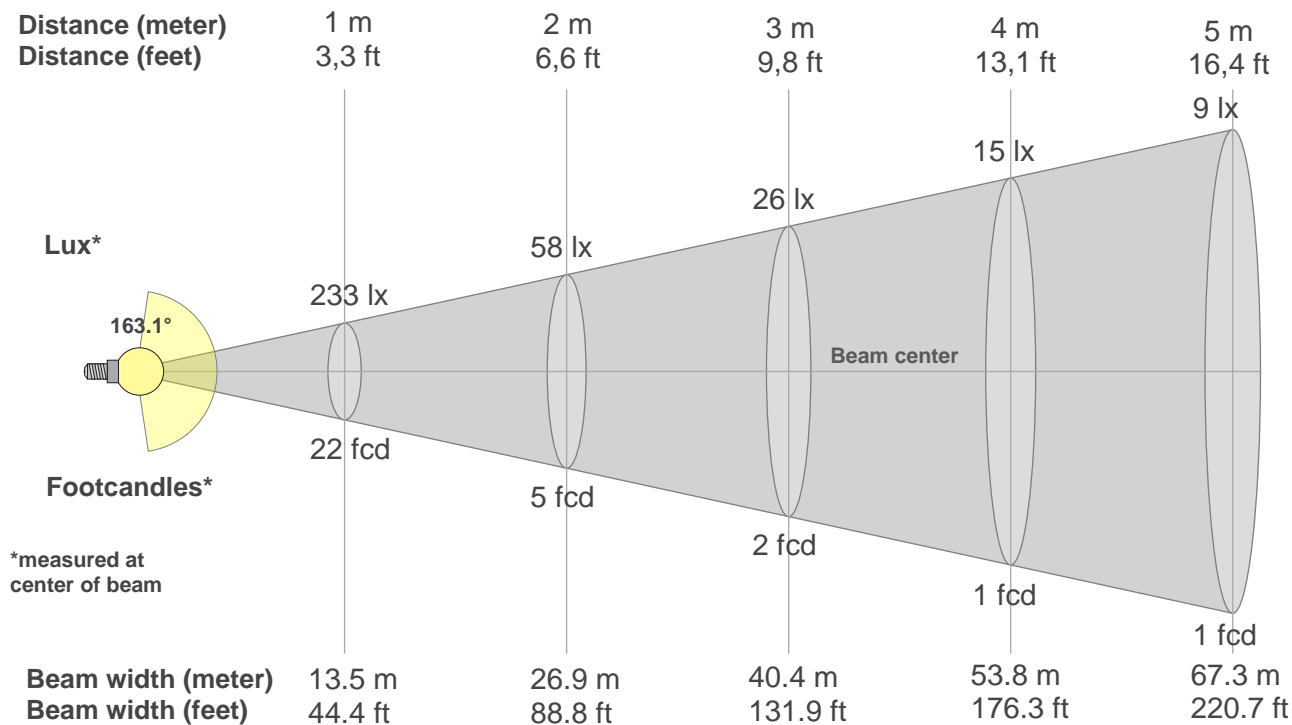
Rg 105.1

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	96	-1%	0%
2	95	0%	2%
3	91	2%	4%
4	94	2%	2%
5	93	2%	2%
6	91	6%	1%
7	94	3%	0%
8	94	3%	-1%
9	95	2%	1%
10	95	0%	2%
11	89	3%	6%
12	89	5%	3%
13	94	4%	-1%
14	91	6%	-3%
15	92	3%	-3%
16	90	2%	-5%



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
233lx	58lx	26lx	15lx	9lx	6lx	5lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
21.6fcd	5.4fcd	2.4fcd	1.4fcd	0.9fcd	0.6fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
233	232	230	226	220	212	203	192	179	165	149	133	116	100	84	70	57	45	29	13
100%	100%	99%	97%	95%	91%	87%	82%	77%	71%	64%	57%	50%	43%	36%	30%	24%	19%	12%	6%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
233	229	220	205	183	157	126	91	54	20	2	1	2	4	4	4	4	5	5	6
100%	98%	94%	88%	79%	67%	54%	39%	23%	9%	1%	0%	1%	2%	2%	2%	2%	2%	2%	3%

Intensities in 180° c-plane

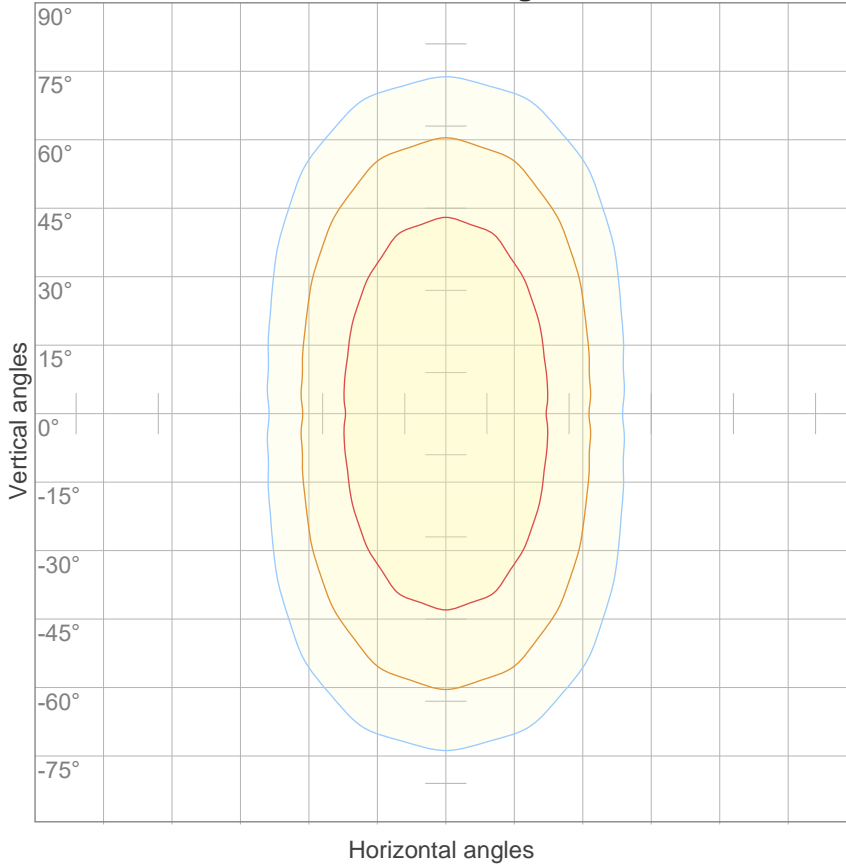
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
233	232	230	226	220	212	203	192	179	165	149	133	116	100	84	70	57	45	29	13
100%	100%	99%	97%	95%	91%	87%	82%	77%	71%	64%	57%	50%	43%	36%	30%	24%	19%	12%	6%

Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
233	229	220	205	183	157	126	91	54	20	2	1	2	4	4	4	4	5	5	6
100%	98%	94%	88%	79%	67%	54%	39%	23%	9%	1%	0%	1%	2%	2%	2%	2%	2%	2%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
163.1°	278.7°	360°	46.0%	29.2%

iso-candela diagram



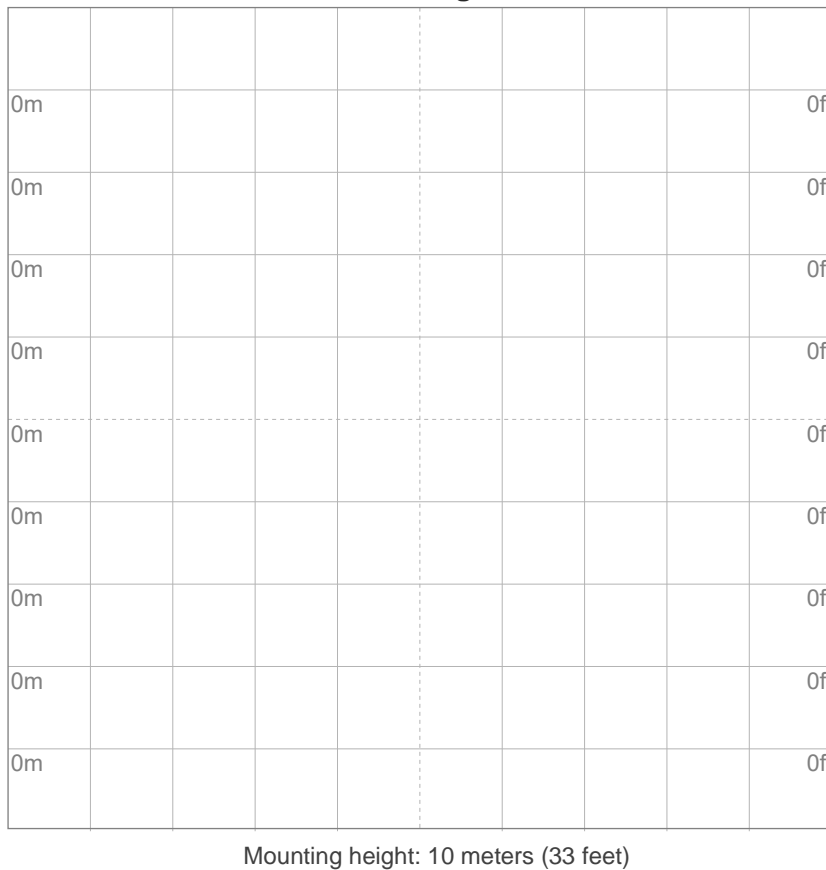
10%	23 cd
20%	47 cd
30%	70 cd
40%	93 cd
50%	116 cd
60%	140 cd
70%	163 cd
80%	186 cd
90%	210 cd

Conditions:

Number of c-planes: 24

Candela at center: 233 cd

iso-lux diagram



3%	69.9m lx
5%	0.116 lx
10%	0.233 lx
30%	0.699 lx
50%	1.16 lx

Conditions:

Number of c-planes: 24

Lux at center: 2.33 lx

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

Glare evaluation according to UGR

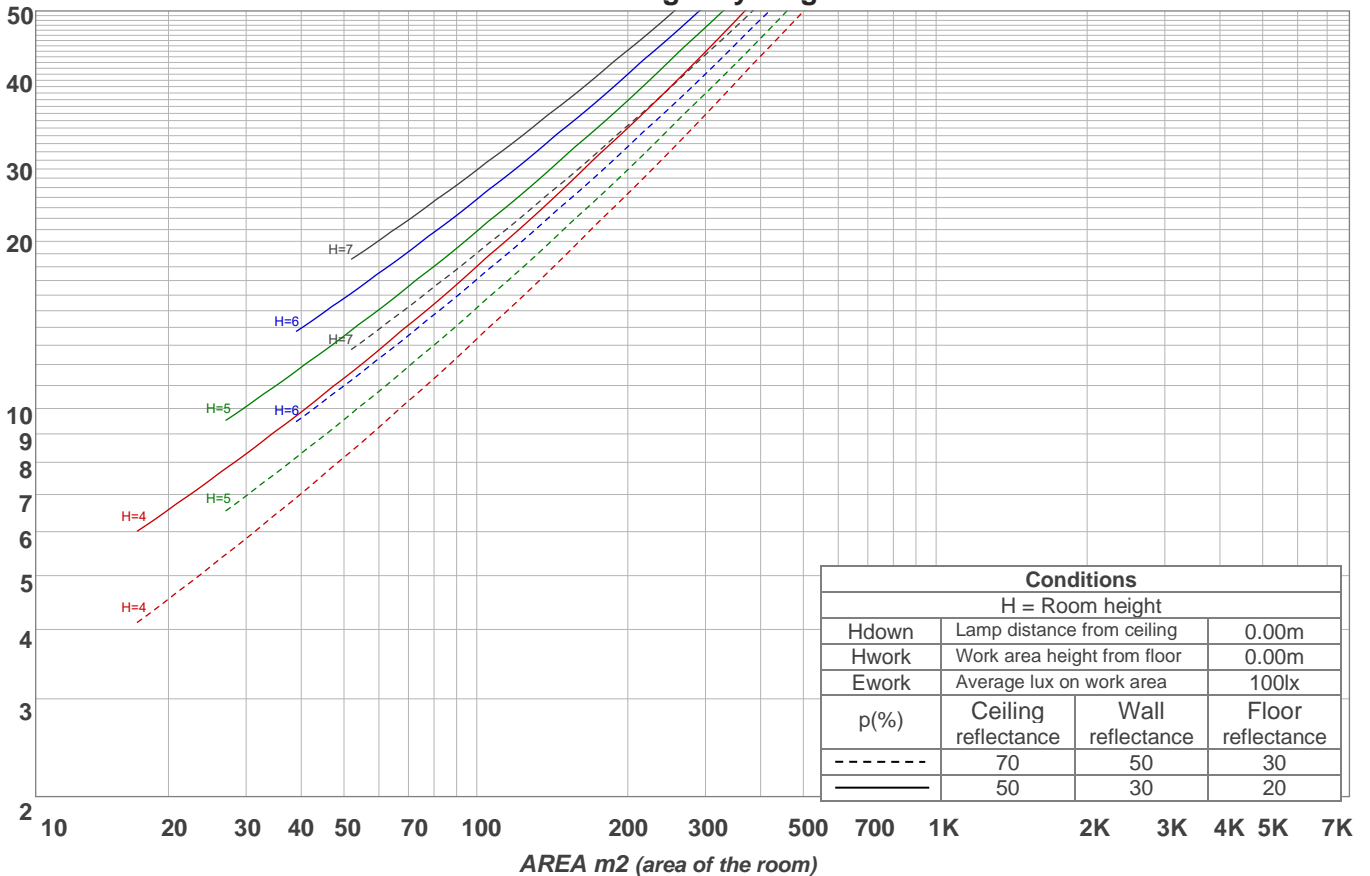
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	16.8	17.9	17.4	18.6	19.3	15.6	16.7	16.2	17.4	18.1
	3H	19.1	20.2	19.8	20.8	21.5	17.0	18.0	17.7	18.7	19.4
	4H	20.2	21.3	21.0	21.9	22.7	17.5	18.5	18.2	19.2	19.9
	6H	21.5	22.4	22.1	23.1	23.9	17.9	18.8	18.5	19.5	20.3
	8H	22.0	23.0	22.7	23.6	24.5	17.9	18.9	18.6	19.5	20.4
	12H	22.6	23.6	23.3	24.2	25.0	18.0	19.0	18.7	19.6	20.4
4H	2H	17.4	18.4	18.1	19.1	19.8	16.5	17.5	17.2	18.2	18.9
	3H	19.9	20.9	20.6	21.5	22.4	18.1	19.1	18.8	19.7	20.6
	4H	21.2	22.3	22.0	22.8	23.7	18.7	19.9	19.5	20.4	21.3
	6H	22.6	23.4	23.4	24.1	24.9	19.2	20.0	20.0	20.7	21.5
	8H	23.3	23.9	24.0	24.7	25.5	19.4	20.1	20.2	20.8	21.6
	12H	23.9	24.5	24.7	25.3	26.2	19.5	20.0	20.2	20.8	21.7
8H	4H	21.5	22.2	22.3	23.0	23.8	19.5	20.2	20.3	20.9	21.7
	6H	23.2	23.7	23.9	24.5	25.4	20.3	20.8	21.1	21.6	22.6
	8H	24.0	24.5	24.8	25.3	26.3	20.6	21.1	21.4	21.9	22.9
	12H	24.8	25.3	25.7	26.1	27.0	20.8	21.2	21.6	22.0	23.0
12H	4H	21.5	22.1	22.3	22.9	23.8	19.7	20.3	20.4	21.0	21.9
	6H	23.2	23.7	24.1	24.6	25.6	20.6	21.1	21.4	22.0	22.9
	8H	24.2	24.6	25.0	25.4	26.4	21.0	21.5	21.9	22.3	23.2
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.1 / 0.0					0.0 / -0.1				
S = 1.5H		0.1 / -0.1					0.1 / -0.1				
S = 2.0H		0.2 / -0.2					0.3 / -0.4				
CIE 117-1995. Corrected glare indices referring to 1321 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	0
RCR	(RCR: Room Cavity Ratio) Room Values are expressed as percentage of Lumens delivered to the task surface																	
0	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74
1	99	93	88	83	94	89	84	79	79	76	72	71	68	65	63	61	59	55
2	89	80	72	65	84	75	68	62	68	62	57	60	56	52	54	50	47	43
3	81	69	60	53	76	65	57	50	59	52	46	52	47	42	47	42	38	35
4	73	60	51	44	69	57	49	42	51	44	39	46	40	35	41	36	32	29
5	67	53	44	37	63	51	42	35	46	38	33	41	35	30	37	31	27	25
6	62	48	38	32	58	45	37	31	41	34	28	37	31	26	33	28	24	21
7	57	43	34	28	54	41	33	27	37	30	25	33	27	23	30	25	21	18
8	53	39	30	24	50	37	29	23	34	27	22	30	24	20	27	22	18	16
9	49	36	27	22	46	34	26	21	31	24	19	28	22	18	25	20	17	14
10	46	33	25	19	43	31	24	19	28	22	17	26	20	16	23	19	15	13

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°
{LUM0-10}	64.4 lm	101 lm	128 lm	144 lm	148 lm	141 lm	126 lm	106 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
89.2 lm	73.9 lm	59.5 lm	45.8 lm	32.9 lm	21.4 lm	11.6 lm	4.30 lm	0.926 lm

LCS table

BUG rating:	B1 U3 G1	
Forward light	Lumens	Lumens %
Low(0-30):	93.6	7.1%
Medium(30-60):	210.2	15.9%
High(60-80):	133.4	10.1%
Very high(80-90):	53.2	4%
Back light		
Low(0-30):	93.6	7.1%
Medium(30-60):	210.2	15.9%
High(60-80):	133.4	10.1%
Very high(80-90):	53.2	4%
Uplight		
Low(90-100):	89.1	6.7%
High(100-180):	250.1	18.9%

LCS graph

