

# PHOTOMETRIC TEST REPORT

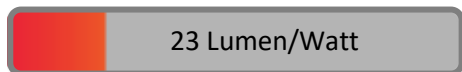
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KINZO 260 LED BRONZE

astro

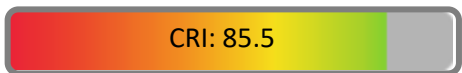


## LIGHT EFFICIENCY:



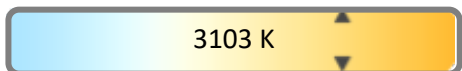
OUTPUT: 372 lm

## LIGHT QUALITY:



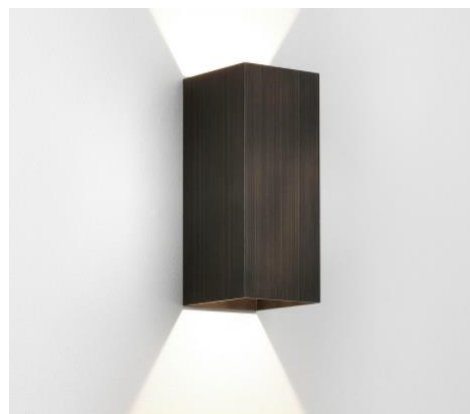
PEAK: 246 cd

## COLOR TEMPERATURE:



POWER: 16.5 W

PF: 0.98

Tracking number: [n/a](#)

Product name:

Kinzo 260 LED Bronze

Item number:

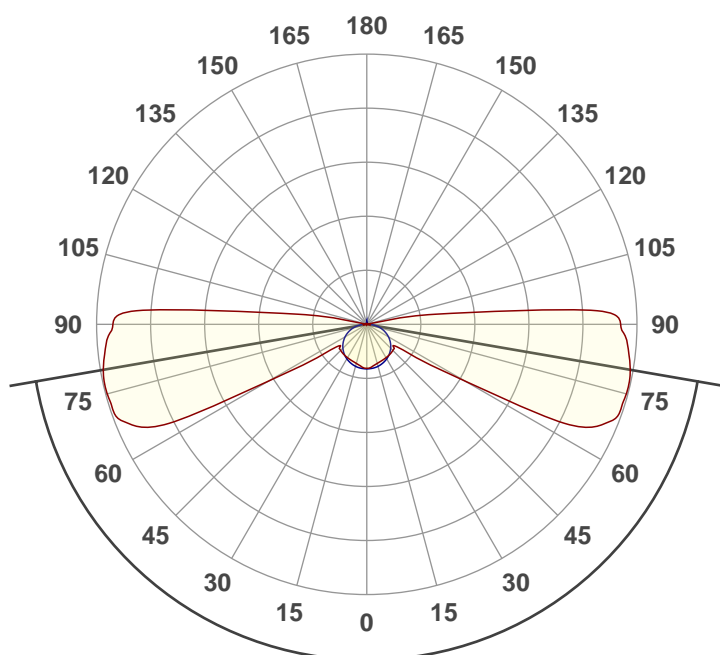
1398041

Date and time:

16/06/2021 12:43:58

Description:

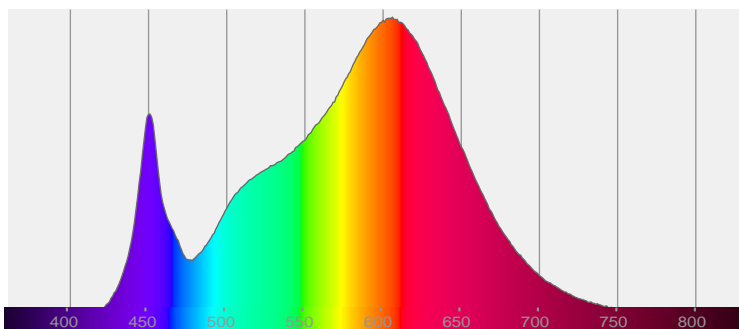
IP20 LED Wall Light



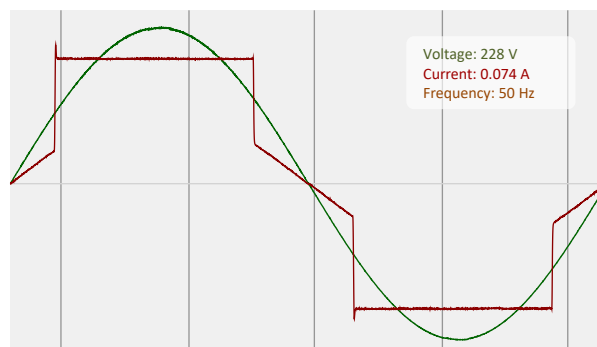
160.4°

CIE 1931  
x: 0.425  
y: 0.392

## SPECTRA

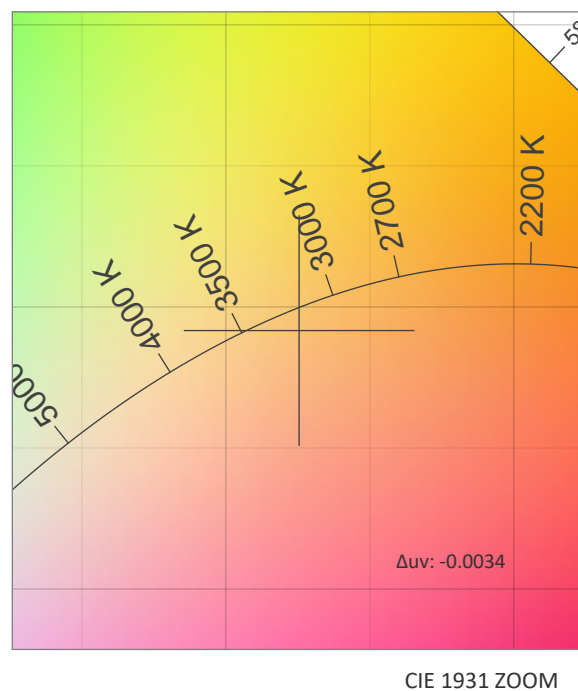
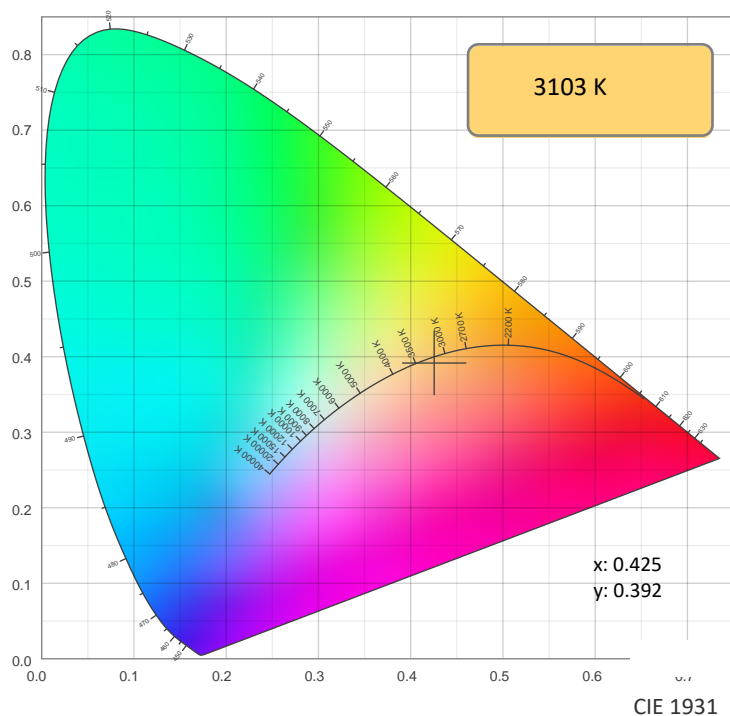


## POWER



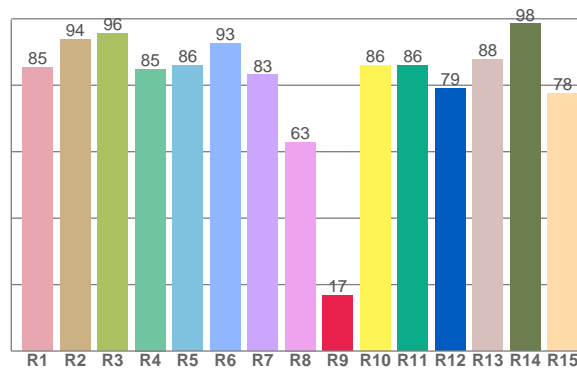
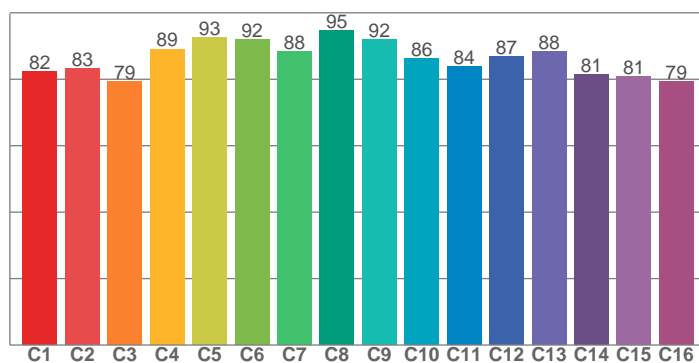


## COLOR DETAILS



TM30: 86.3

CRI: 85.5 (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
85.3	93.8	95.6	84.9	86.0	92.6	83.1	62.9	16.8	85.9	86.0	79.0	87.7	98.4	77.6

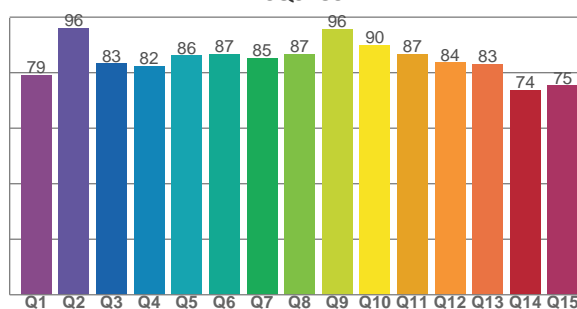
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
82.4	83.2	79.4	89.1	92.6	91.9	88.2	94.7	91.8	86.1	83.8	86.9	88.2	81.4	80.9	79.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79.2	96.0	83.3	82.4	86.1	86.7	85.3	86.6	95.7	89.8	86.6	83.7	83.0	73.8	75.4

CQS: 83.7



## 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 division from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	$\Delta uv$
3103 K	85.5	16.8	86.3	98.4	83.7	0.425	0.392	0.248	0.343	-0.0034



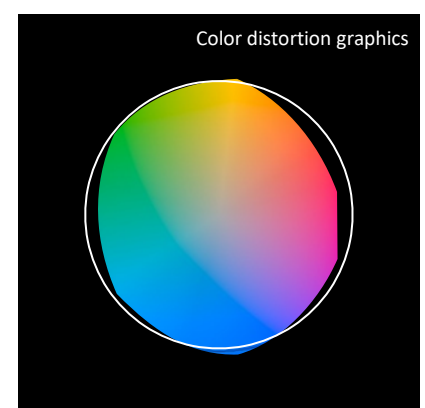
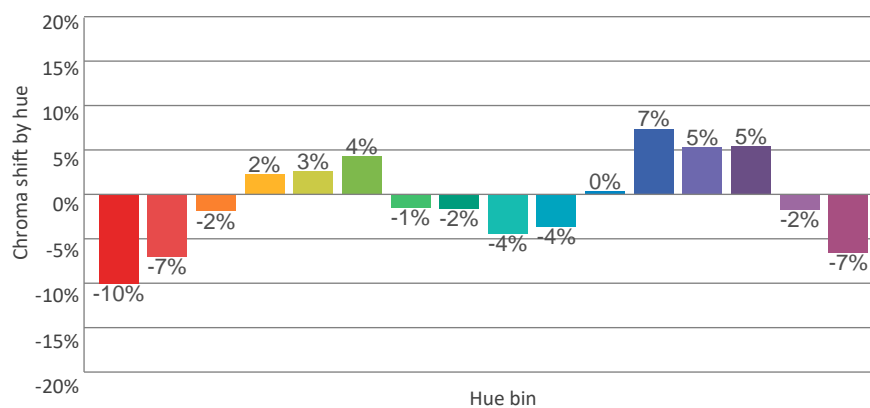
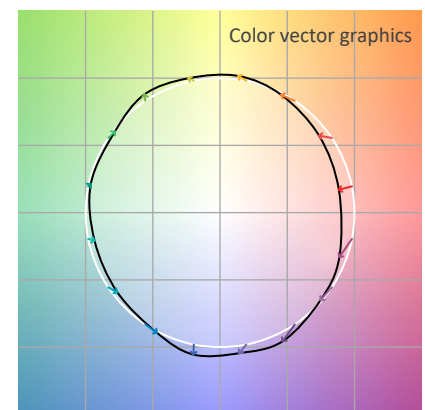
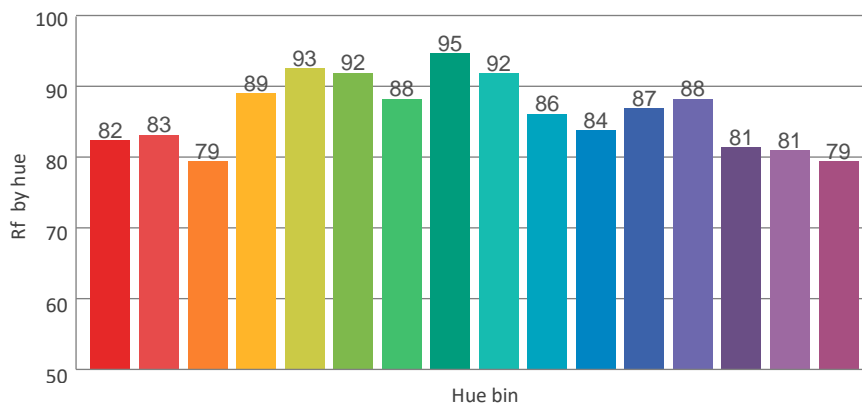
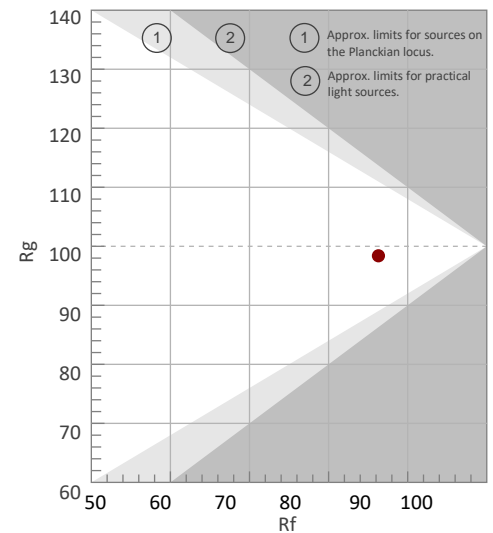
Rf 86.3

Fidelity index Rf

Rg 98.4

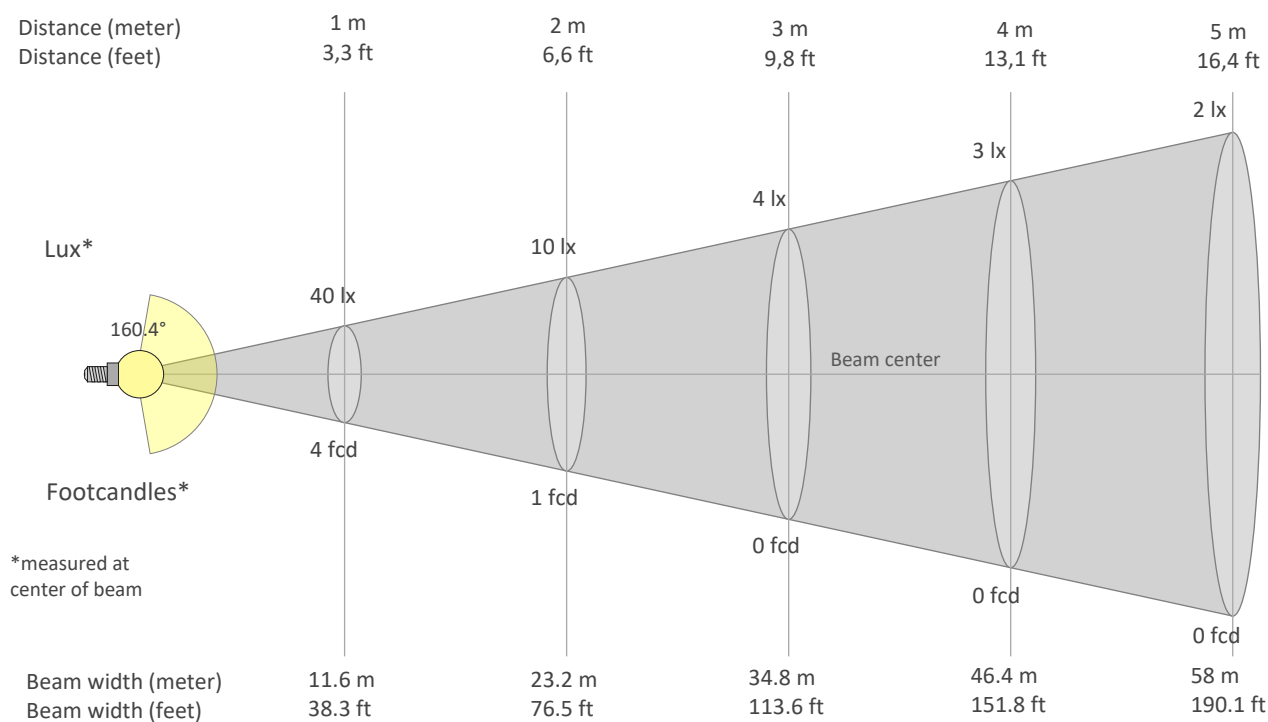
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R <sub>f</sub>	Chroma	Hue
1	82	-10%	0%
2	83	-7%	7%
3	79	-2%	11%
4	89	2%	7%
5	93	3%	4%
6	92	4%	-2%
7	88	-1%	-7%
8	95	-2%	-2%
9	92	-4%	2%
10	86	-4%	7%
11	84	0%	11%
12	87	7%	1%
13	88	5%	-6%
14	81	5%	-14%
15	81	-2%	-13%
16	79	-7%	-15%





## 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
40lx	10lx	4lx	3lx	2lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
3.8fcd	0.9fcd	0.4fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

## 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°
40	38	37	36	35	34	40	193	244	244	227	56	1	1	1	1	1	0	0	0
100%	95%	90%	88%	86%	84%	99%	477%	604%	603%	561%	138%	2%	1%	1%	1%	1%	1%	1%	1%

## 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°
40.4	40.4	39.3	37.3	34.6	30.9	26.4	21.1	15.1	8.5	2.3	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2
100%	100%	97%	92%	86%	76%	65%	52%	37%	21%	6%	2%	2%	2%	3%	3%	3%	3%	3%	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°
40	38	37	36	35	34	40	193	244	244	227	56	1	1	1	1	1	0	0	0
100%	95%	90%	88%	86%	84%	99%	477%	604%	603%	561%	138%	2%	1%	1%	1%	1%	1%	1%	1%

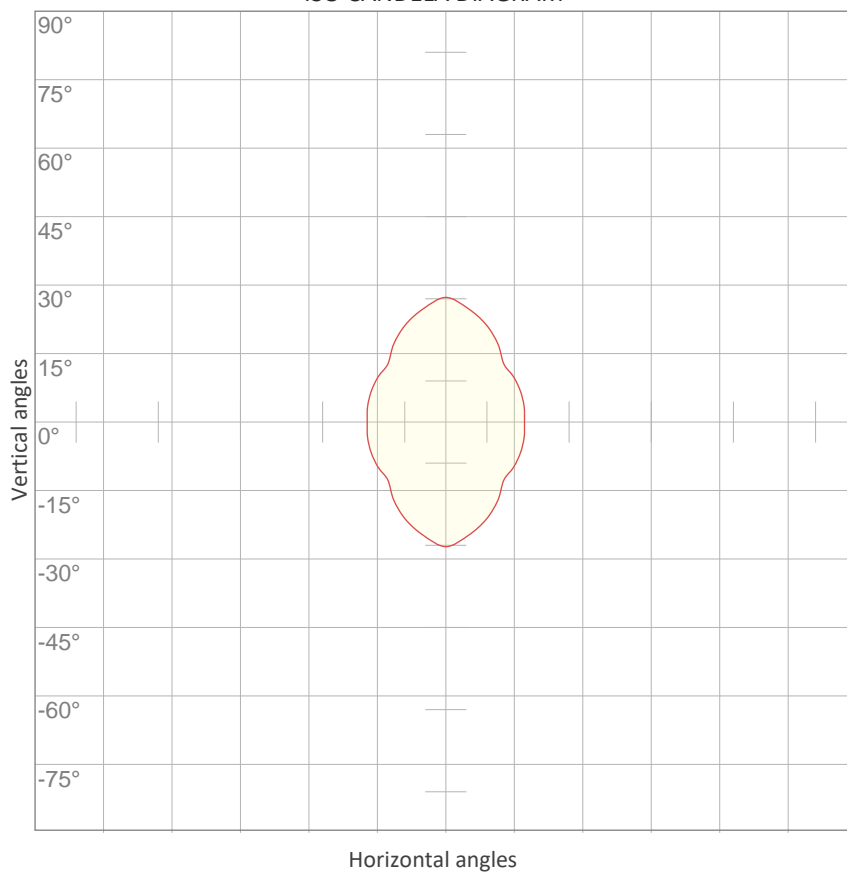
## Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
40.4	40.4	39.3	37.3	34.6	30.9	26.4	21.1	15.1	8.5	2.3	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2
100%	100%	97%	92%	86%	76%	65%	52%	37%	21%	6%	2%	2%	2%	3%	3%	3%	3%	3%	3%

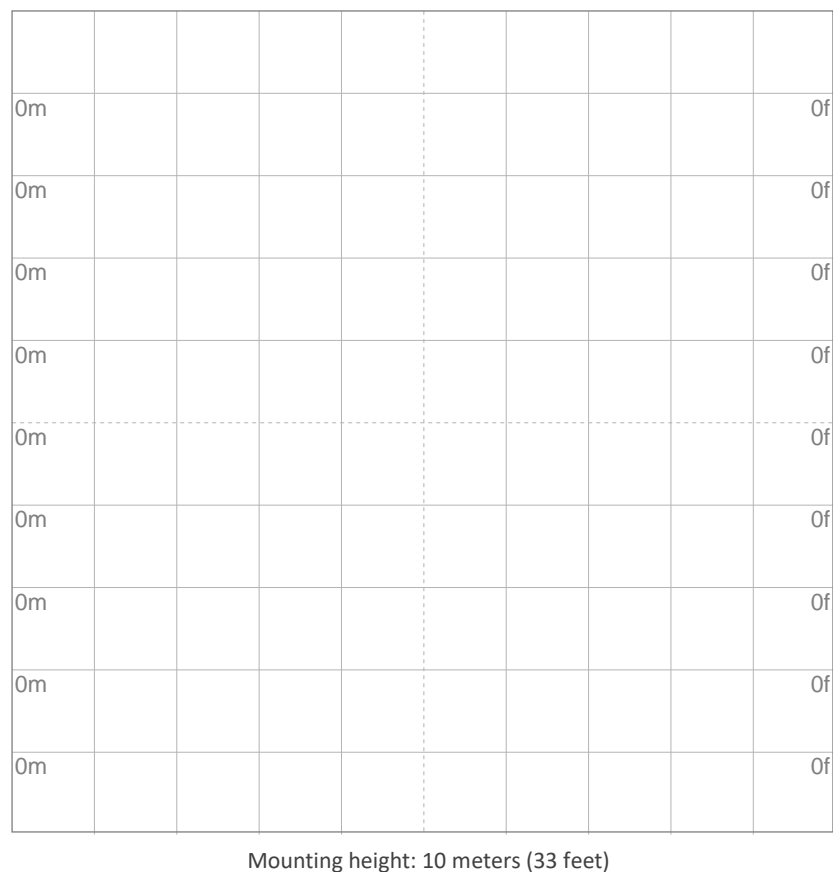
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
160.4°	188.6°	283°	27.7%	16.5%



ISO CANDELA DIAGRAM



ISO LUX DIAGRAM





## UGR

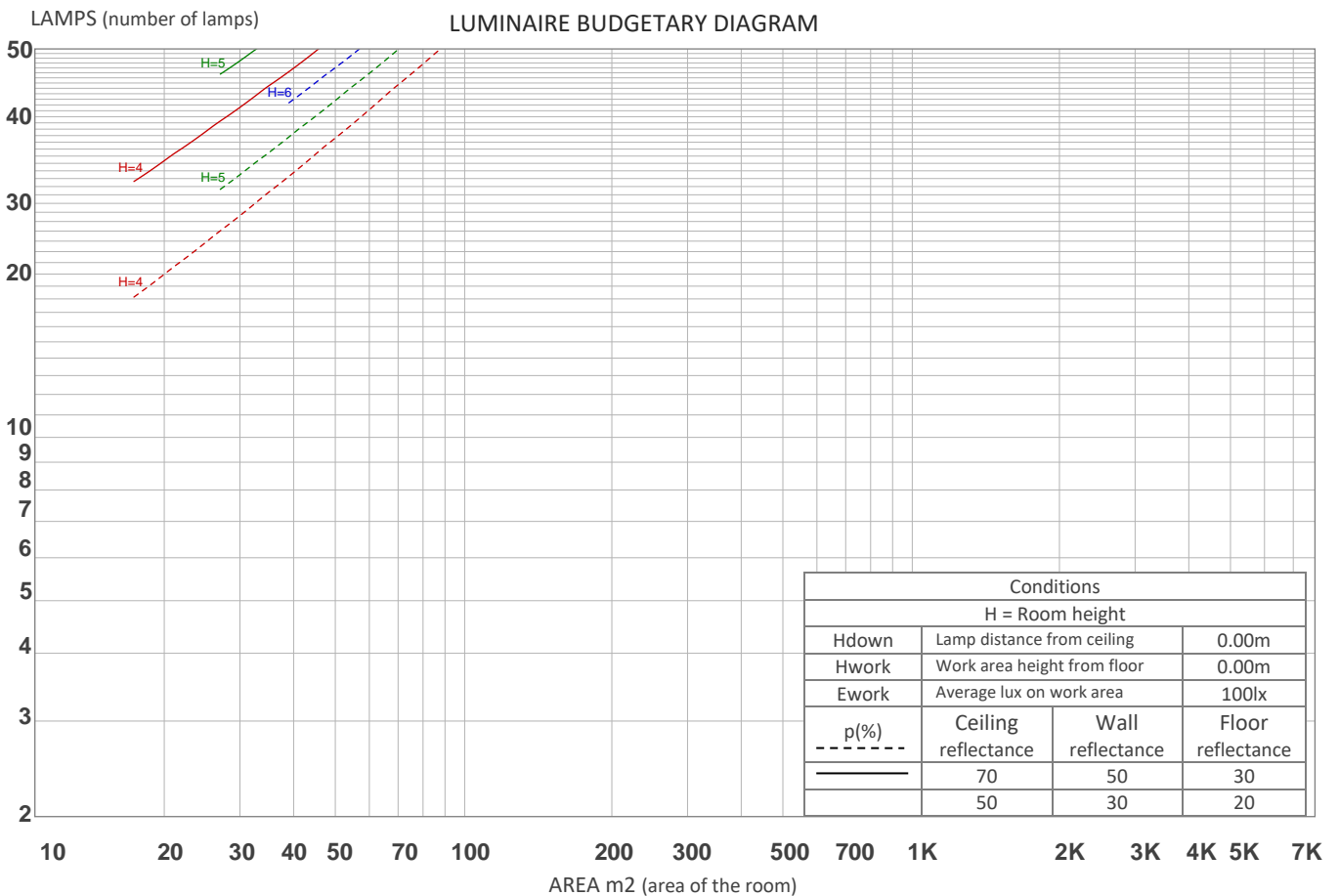
## GLARE EVALUATION ACCORDING TO UGR

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	16.1	17.6	16.6	18.2	18.7	7.7	9.2	8.2	9.8	10.3
	3H	22.7	24.2	23.3	24.7	25.3	9.1	10.6	9.7	11.1	11.7
	4H	25.0	26.4	25.6	27.0	27.6	9.6	11.1	10.2	11.6	12.2
	6H	27.1	28.4	27.6	28.9	29.6	10.1	11.4	10.6	11.9	12.6
	8H	28.0	29.3	28.5	29.8	30.5	10.2	11.5	10.7	12.0	12.7
	12H	28.8	30.2	29.4	30.7	31.4	10.2	11.6	10.8	12.1	12.8
4H	2H	16.1	17.5	16.6	18.1	18.6	9.4	10.8	10.0	11.4	12.0
	3H	22.8	24.1	23.4	24.6	25.4	10.6	12.0	11.2	12.4	13.2
	4H	25.2	26.6	25.8	27.1	27.8	11.1	12.5	11.7	12.9	13.7
	6H	27.5	28.6	28.1	29.2	29.9	11.5	12.7	12.2	13.2	13.9
	8H	28.6	29.6	29.2	30.2	30.9	11.6	12.7	12.3	13.3	14.0
	12H	29.7	30.6	30.3	31.2	32.0	11.7	12.7	12.4	13.3	14.1
8H	4H	25.1	26.1	25.8	26.8	27.4	13.6	14.7	14.3	15.3	16.0
	6H	27.5	28.4	28.2	29.1	29.9	13.9	14.8	14.6	15.5	16.3
	8H	28.7	29.6	29.4	30.3	31.2	14.0	14.8	14.7	15.6	16.4
	12H	30.0	30.8	30.8	31.5	32.3	14.1	14.8	14.8	15.5	16.4
12H	4H	25.1	26.0	25.7	26.6	27.4	14.9	15.8	15.6	16.5	17.2
	6H	27.5	28.3	28.2	29.0	29.9	15.2	16.0	15.8	16.7	17.6
	8H	28.7	29.5	29.5	30.2	31.0	15.3	16.0	16.0	16.7	17.5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.1 / -0.1					0.1 / -0.3				
S = 1.5H		0.3 / -0.3					0.5 / -0.6				
S = 2.0H		0.4 / -0.5					1.4 / -1.6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 372 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	116	116	116	116	112	112	112	112	104	104	104	96	96	96	89	89	89	86
1	95	86	78	71	91	83	75	69	75	69	64	69	64	59	63	59	55	51
2	83	70	59	50	78	67	57	48	60	52	45	55	48	42	49	44	39	35
3	73	58	47	37	69	56	45	36	50	41	34	45	38	31	41	34	29	25
4	66	50	38	29	62	48	37	28	43	34	26	39	31	24	35	28	23	19
5	60	44	32	24	57	42	31	23	38	29	22	34	26	20	31	24	18	15
6	55	39	28	20	52	37	27	19	34	25	18	31	23	17	28	21	16	13
7	51	35	25	17	48	33	24	17	30	22	16	28	20	14	25	18	13	11
8	47	32	22	15	45	30	21	15	28	19	14	25	18	13	23	17	12	9
9	44	29	20	13	42	28	19	13	25	18	12	23	16	11	21	15	10	8
10	41	27	18	12	39	26	17	11	24	16	11	22	15	10	20	14	9	7



## ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
2.97 lm	9.92 lm	16.0 lm	20.8 lm	23.9 lm	29.7 lm	67.8 lm	77.8 lm	72.6 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
44.4 lm	3.08 lm	0.893 lm	0.749 lm	0.635 lm	0.537 lm	0.341 lm	0.262 lm	0.077 lm

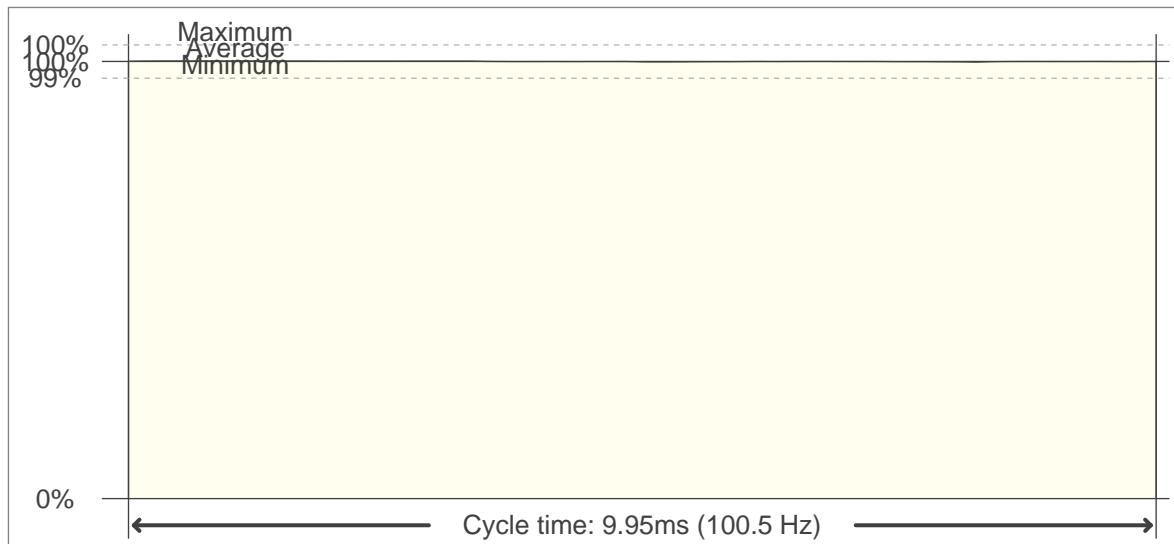


## FLICKER

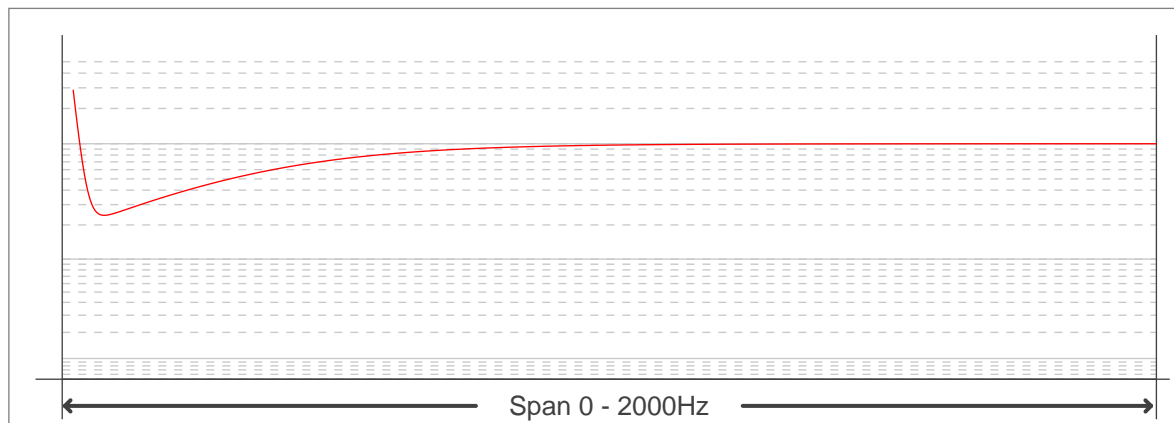
## FLICKER CURVE (COMPLETE SAMPLED FLICKER)



## FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



## FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



## FLICKER RESULTS:

Flicker frequency:	100.5 Hz
Flicker index:	0
Flicker percentage:	0.16 %
SVM: (Visual flicker)	0

## FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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