

PHOTOMETRIC TEST REPORT

KINZO 140 TEXTURED BLACK

astro

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LIGHT EFFICIENCY:

57 Lumen/Watt

LIGHT QUALITY:

CRI: 80.6

COLOR TEMPERATURE:

2714 K

OUTPUT: 662 lm

PEAK: 1159 cd

POWER: 11.7 W

PF: 0.99



Tracking number: [n/a](#)

Product name:

Kinzo 140 Textured Black

Item number:

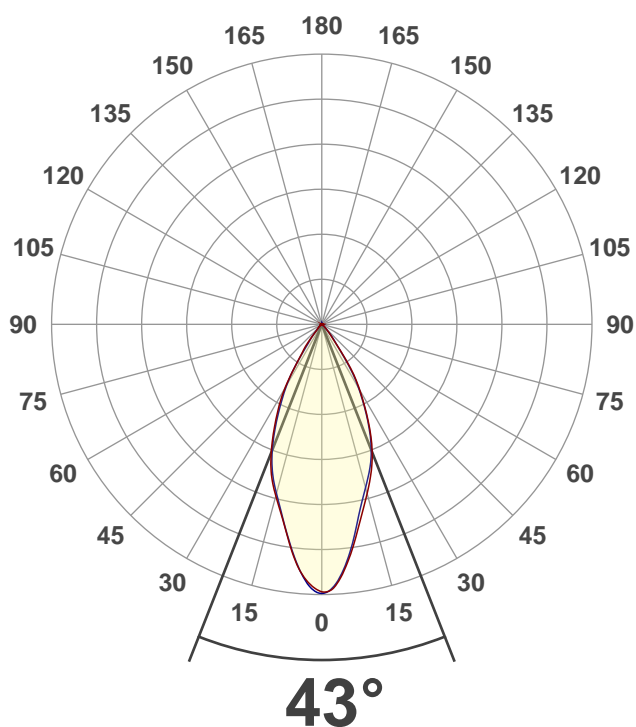
1398018

Date and time:

07/02/2020 15:52:32

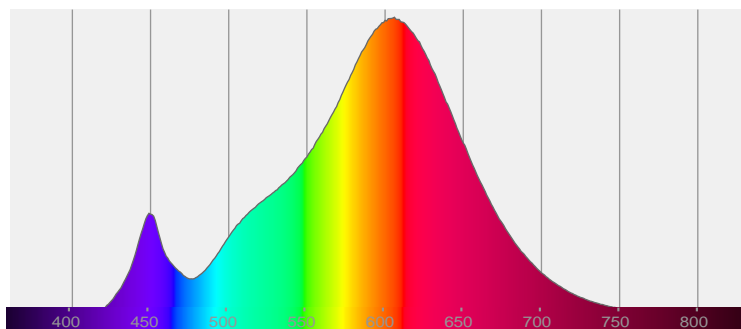
Description:

AC LED Ceiling Light

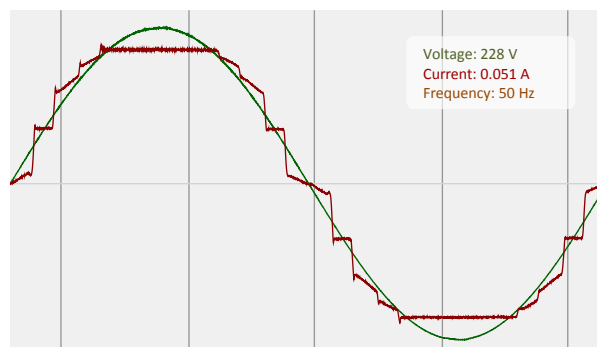


CIE 1931
x: 0.460
y: 0.412

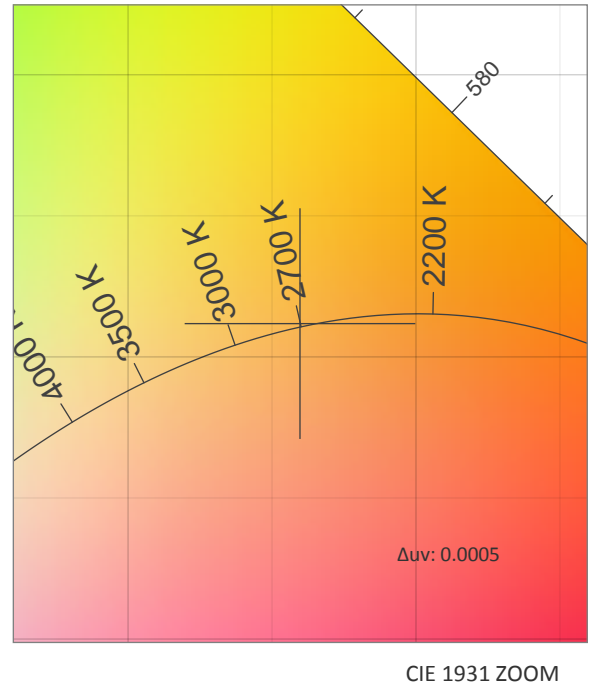
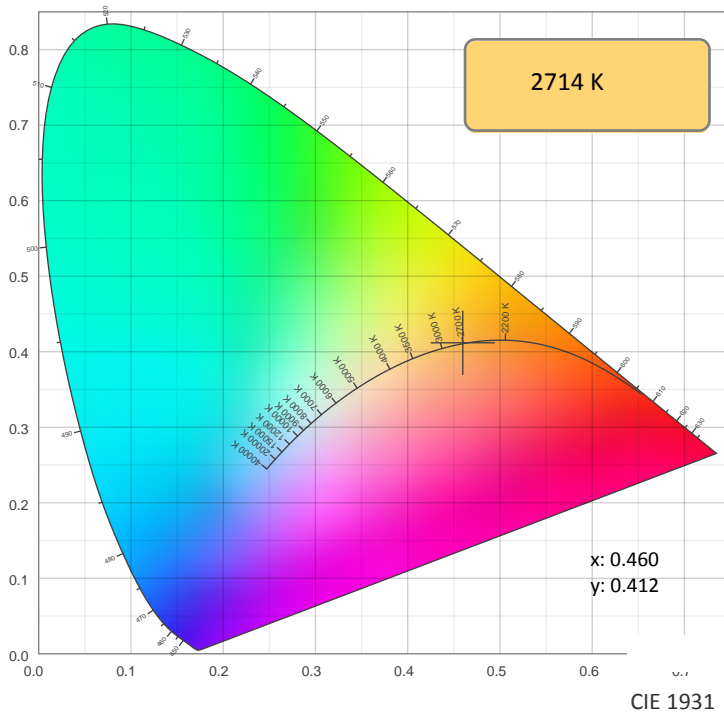
SPECTRA



POWER

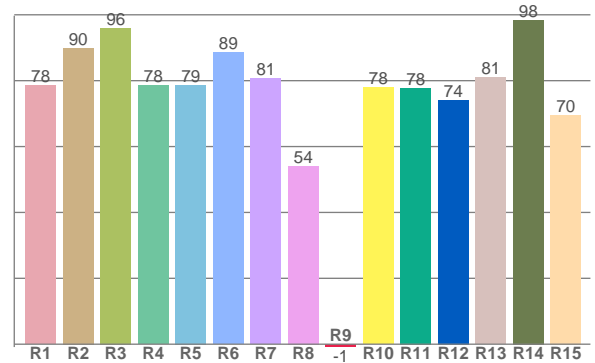
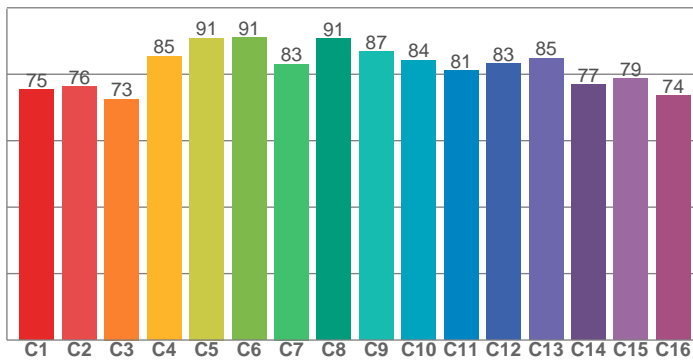


COLOR DETAILS



TM30: 82.0

CRI: 80.6 (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
78.5	89.9	96.0	78.5	78.7	88.6	80.7	54.1	-0.9	77.9	77.7	74.1	81.0	98.4	69.6

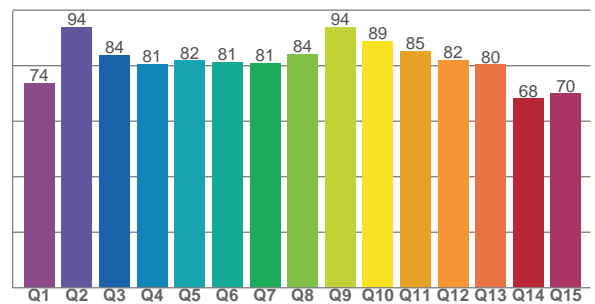
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
75.4	76.3	72.6	85.5	90.9	91.1	83.1	90.7	86.9	84.3	81.2	83.2	84.9	77.0	78.8	73.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
73.8	93.8	83.7	80.5	81.8	81.2	80.9	84.2	93.9	88.8	85.3	82.0	80.4	68.2	70.0

CQS: 80.4



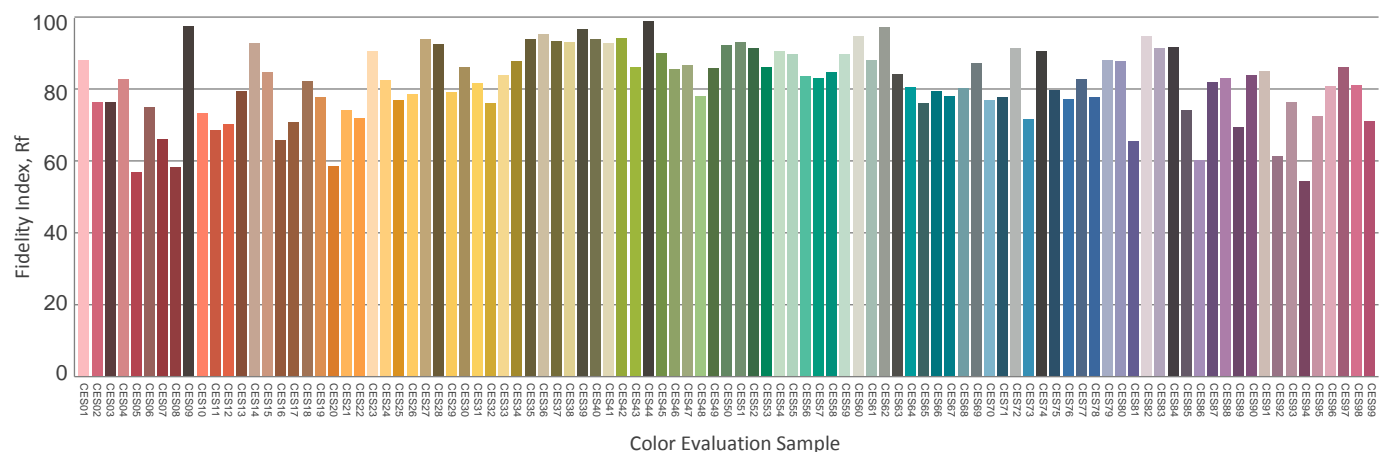
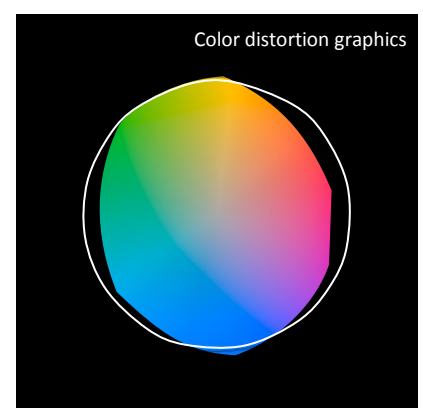
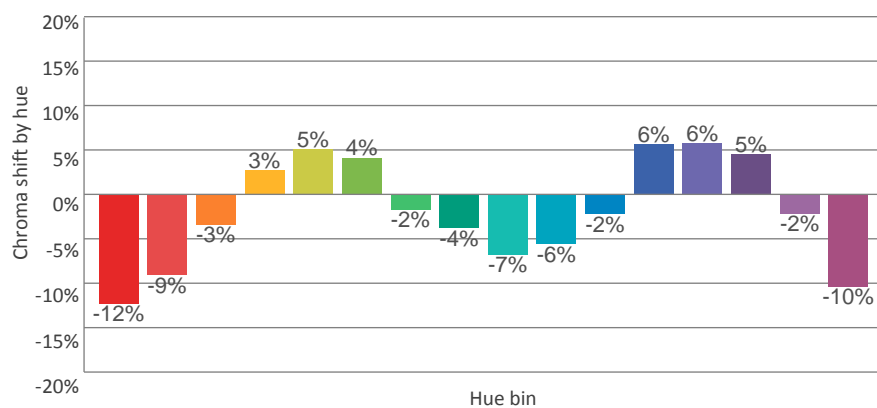
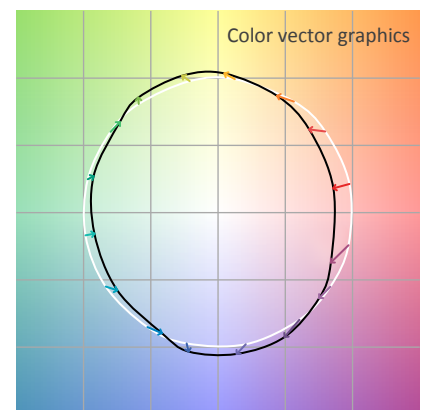
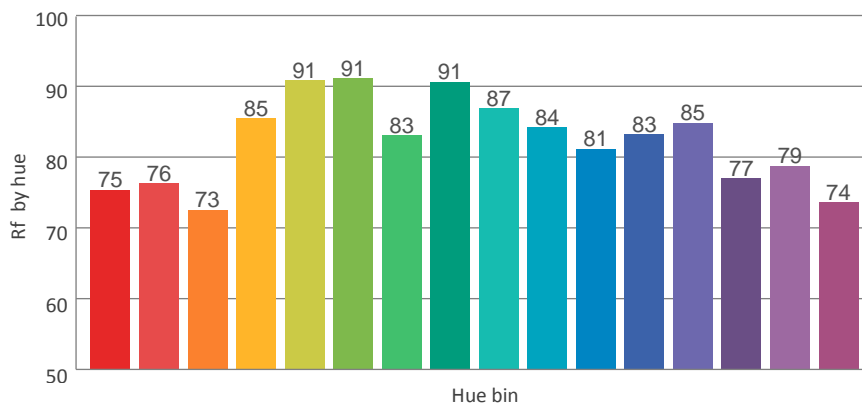
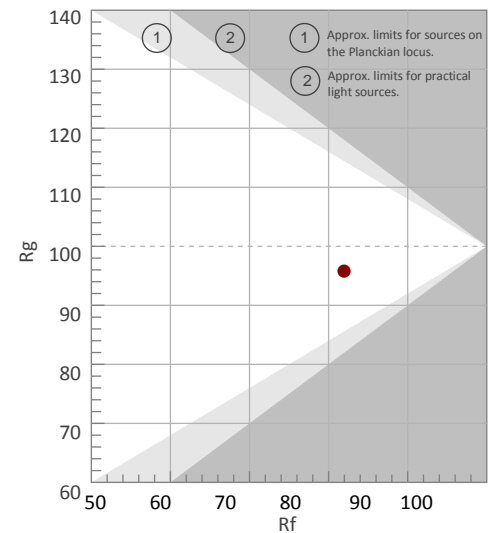
COLOR PARAMETERS

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
2714 K	80.6	-0.9	82.0	95.8	80.4	0.460	0.412	0.262	0.352	0.0005

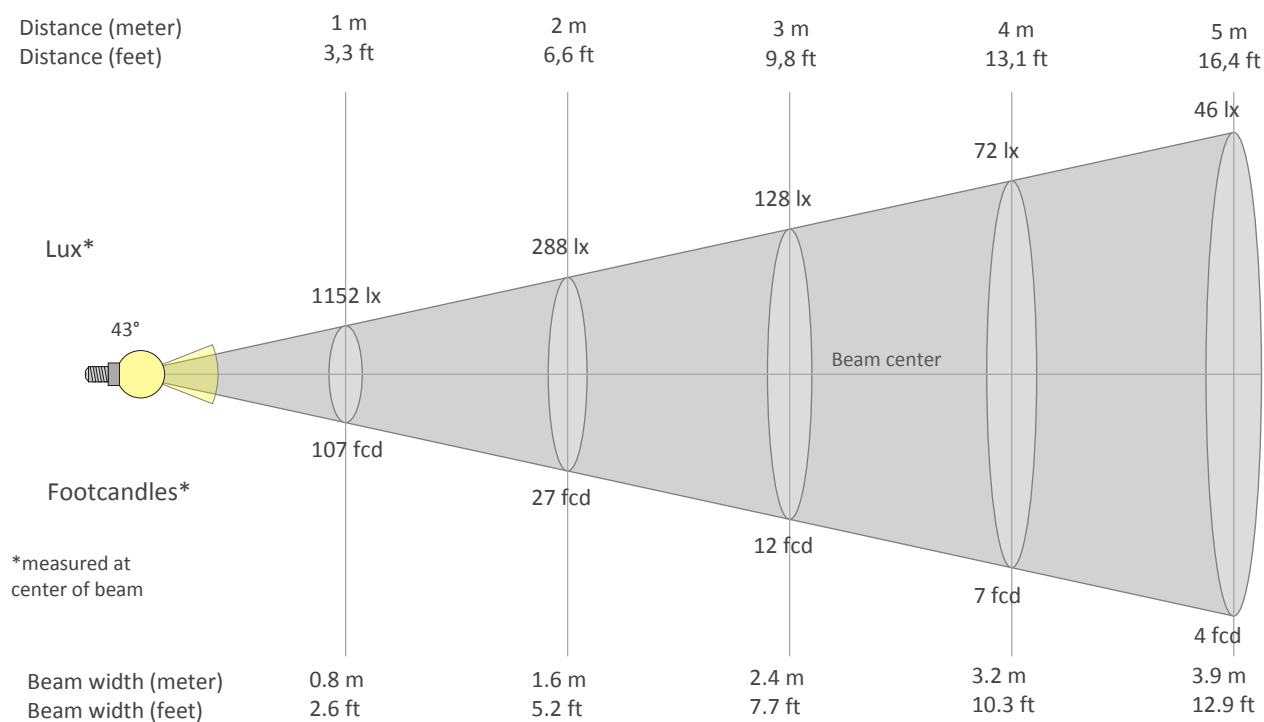
Rf 82.0
Fidelity index Rf

Rg 95.8
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	75	-12%	-1%
2	76	-9%	8%
3	73	-3%	13%
4	85	3%	8%
5	91	5%	5%
6	91	4%	-2%
7	83	-2%	-10%
8	91	-4%	-3%
9	87	-7%	0%
10	84	-6%	7%
11	81	-2%	11%
12	83	6%	3%
13	85	6%	-8%
14	77	5%	-16%
15	79	-2%	-12%
16	74	-10%	-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
1152lx	288lx	128lx	72lx	46lx	32lx	24lx	18lx	14lx	12lx	10lx	8lx	7lx	6lx	5lx	4lx	4lx	4lx	3lx	3lx
107fcd	26.8fcd	11.9fcd	6.7fcd	4.3fcd	3fcd	2.2fcd	1.7fcd	1.3fcd	1.1fcd	0.9fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd	0.3fcd

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°
1152	1145	1102	1039	969	898	835	781	732	684	634	578	517	451	387	327	269	198	122	76
100%	99%	96%	90%	84%	78%	73%	68%	64%	59%	55%	50%	45%	39%	34%	28%	23%	17%	11%	7%

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°
1152	1140	1094	1029	953	875	808	754	708	665	620	568	508	444	379	318	257	177	113	84
100%	99%	95%	89%	83%	76%	70%	65%	61%	58%	54%	49%	44%	39%	33%	28%	22%	15%	10%	7%

Intensities in 180° c-plane

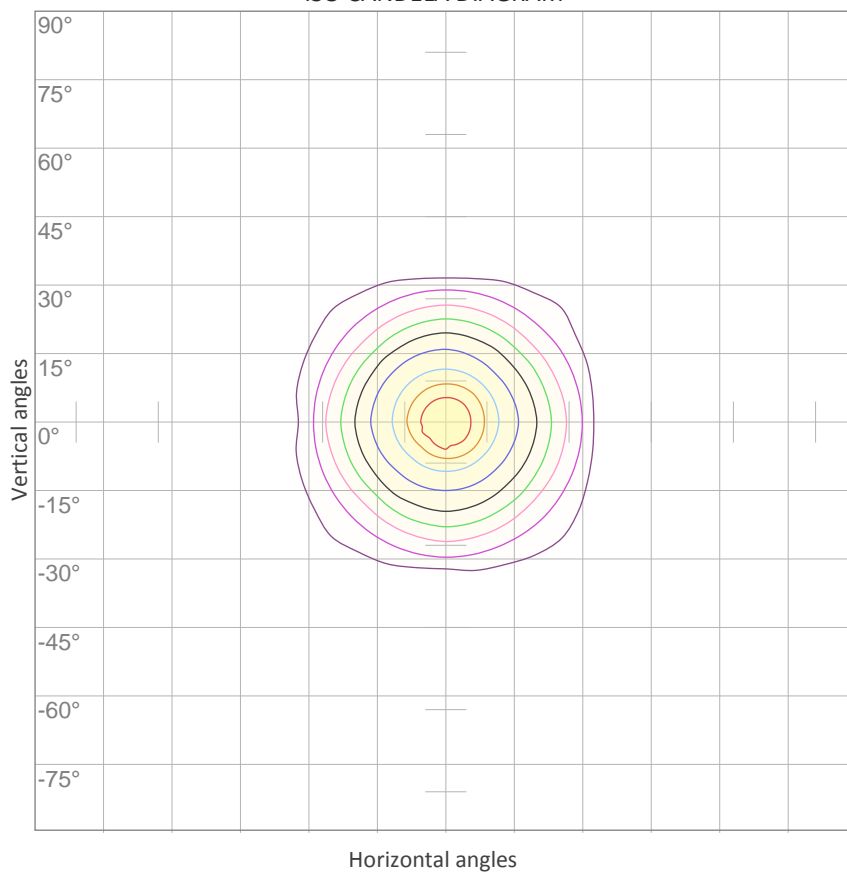
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1152	1131	1092	1038	970	901	841	790	744	696	641	579	512	447	385	316	232	165	126	80
100%	98%	95%	90%	84%	78%	73%	69%	65%	60%	56%	50%	44%	39%	33%	27%	20%	14%	11%	7%

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°
1152	1141	1097	1035	965	897	834	780	732	684	629	566	497	427	362	301	232	148	95	68
100%	99%	95%	90%	84%	78%	72%	68%	64%	59%	55%	49%	43%	37%	31%	26%	20%	13%	8%	6%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
43°	75.5°	90.5°	99.1%	96.9%

ISO CANDELA DIAGRAM



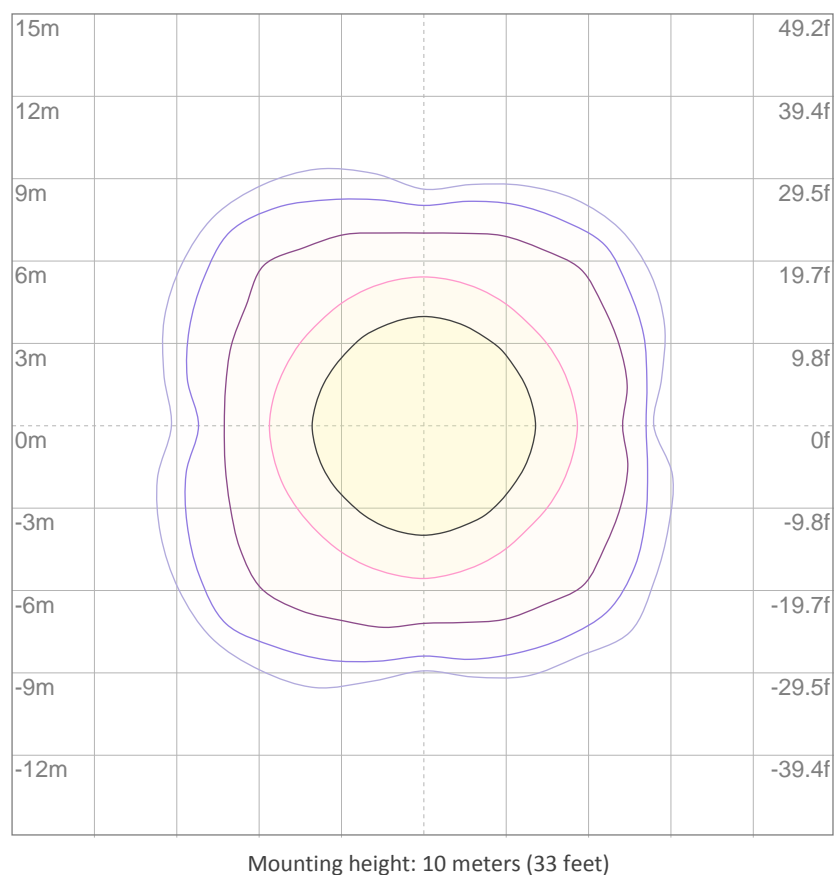
10%	115 cd
20%	230 cd
30%	346 cd
40%	461 cd
50%	576 cd
60%	691 cd
70%	806 cd
80%	921 cd
90%	1037 cd

Conditions:

Number of c-planes: 8

Candela at center: 1152 cd

ISO LUX DIAGRAM



3%	0.346 lx
5%	0.576 lx
10%	1.15 lx
30%	3.46 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 11.5 lx

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

UGR

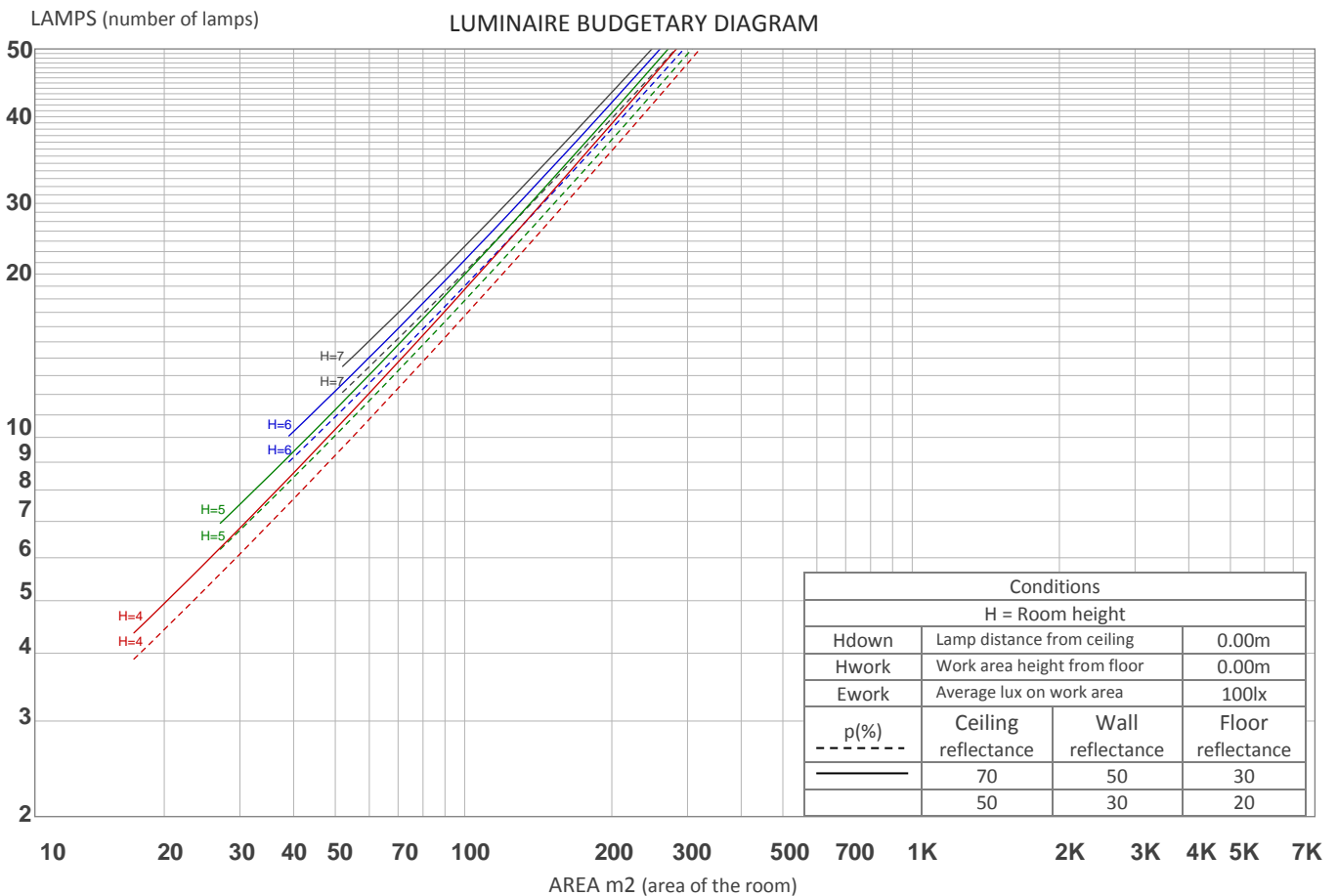
GLARE EVALUATION ACCORDING TO UGR

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	19.4	20.1	19.7	20.3	20.5	19.1	19.7	19.3	20.0	20.2
	3H	19.3	19.9	19.6	20.1	20.4	18.9	19.5	19.2	19.8	20.0
	4H	19.2	19.8	19.5	20.1	20.3	18.9	19.4	19.2	19.7	20.0
	6H	19.2	19.7	19.5	20.0	20.3	18.8	19.3	19.1	19.6	19.9
	8H	19.1	19.6	19.5	19.9	20.2	18.8	19.3	19.1	19.6	19.9
	12H	19.1	19.6	19.4	19.9	20.2	18.7	19.2	19.1	19.5	19.8
4H	2H	19.2	19.8	19.5	20.1	20.3	18.9	19.4	19.2	19.7	20.0
	3H	19.1	19.6	19.4	19.9	20.2	18.7	19.2	19.1	19.5	19.8
	4H	19.0	19.4	19.4	19.8	20.1	18.7	19.1	19.0	19.4	19.8
	6H	18.9	19.3	19.4	19.7	20.1	18.6	18.9	19.0	19.3	19.7
	8H	18.9	19.2	19.3	19.6	20.0	18.5	18.9	19.0	19.2	19.7
	12H	18.9	19.1	19.3	19.5	20.0	18.5	18.8	19.0	19.2	19.6
8H	4H	18.9	19.2	19.3	19.6	20.0	18.5	18.8	19.0	19.2	19.6
	6H	18.8	19.0	19.3	19.5	19.9	18.5	18.7	18.9	19.1	19.6
	8H	18.8	19.0	19.2	19.4	19.9	18.4	18.6	18.9	19.1	19.5
	12H	18.7	18.9	19.2	19.4	19.9	18.4	18.5	18.9	19.0	19.5
12H	4H	18.9	19.1	19.3	19.5	20.0	18.5	18.8	18.9	19.2	19.6
	6H	18.8	19.0	19.2	19.4	19.9	18.4	18.6	18.9	19.1	19.5
	8H	18.7	18.9	19.2	19.4	19.9	18.4	18.5	18.9	19.0	19.5
Variation of the observer position for the luminaire distance S											
S = 1.0H		+4.8 / -12.3					+4.9 / -13.6				
S = 1.5H		+7.6 / -16.3					+7.5 / -16.4				
S = 2.0H		+9.6 / -16.6					+9.5 / -16.6				
Standard table		BK00					BK00				
Correction summand		0.8					0.4				
Corrected glare indices referring to 662 lm total luminous flux											

UGR data could be incorrect as lamp output is not symmetrical. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	101	101	101	99
1	114	111	109	107	111	109	107	105	105	103	101	101	100	98	97	96	95	94
2	108	104	100	97	106	102	99	96	99	96	94	96	93	91	93	91	90	88
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82
4	99	92	86	82	97	90	86	82	88	84	81	86	83	80	84	81	79	77
5	94	86	81	77	92	85	80	76	84	79	76	82	78	75	80	77	74	73
6	90	82	76	72	88	81	75	72	79	75	71	78	74	71	76	73	70	69
7	86	77	72	68	84	76	71	67	75	70	67	74	70	67	73	69	66	65
8	82	73	68	64	81	73	67	64	71	67	63	70	66	63	69	66	63	61
9	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	59	58
10	75	66	61	57	74	66	60	57	65	60	57	64	60	57	63	59	56	55

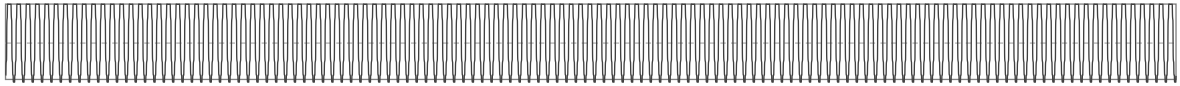


ZONAL LUMEN SUMMARY

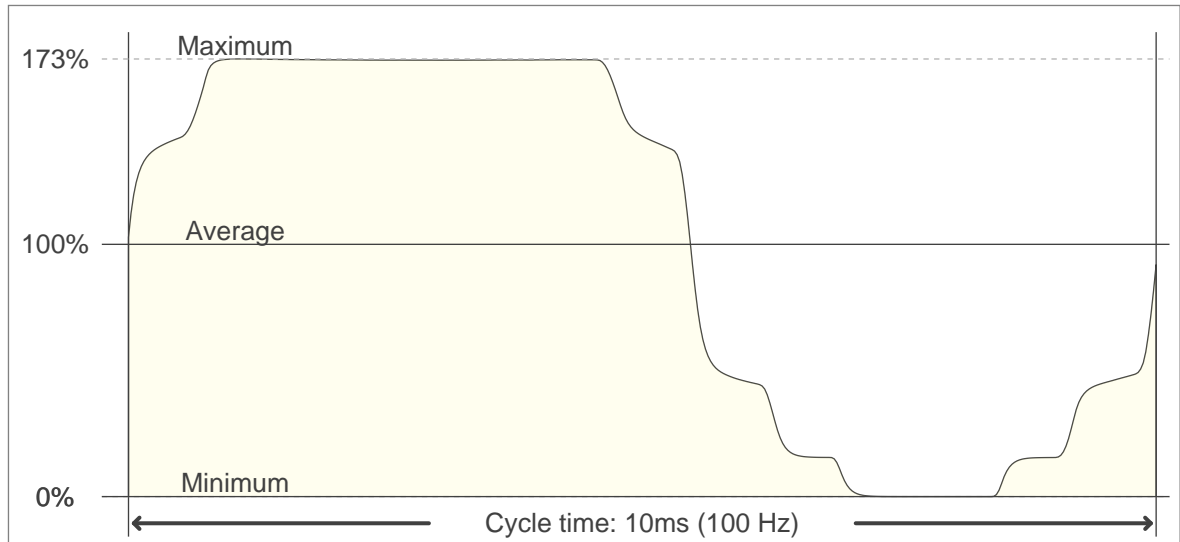
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
96.0 lm	209 lm	210 lm	107 lm	29.6 lm	5.44 lm	0.772 lm	0.449 lm	0.283 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.263 lm	0.311 lm	0.430 lm	0.554 lm	0.685 lm	0.746 lm	0.635 lm	0.413 lm	0.142 lm

FLICKER

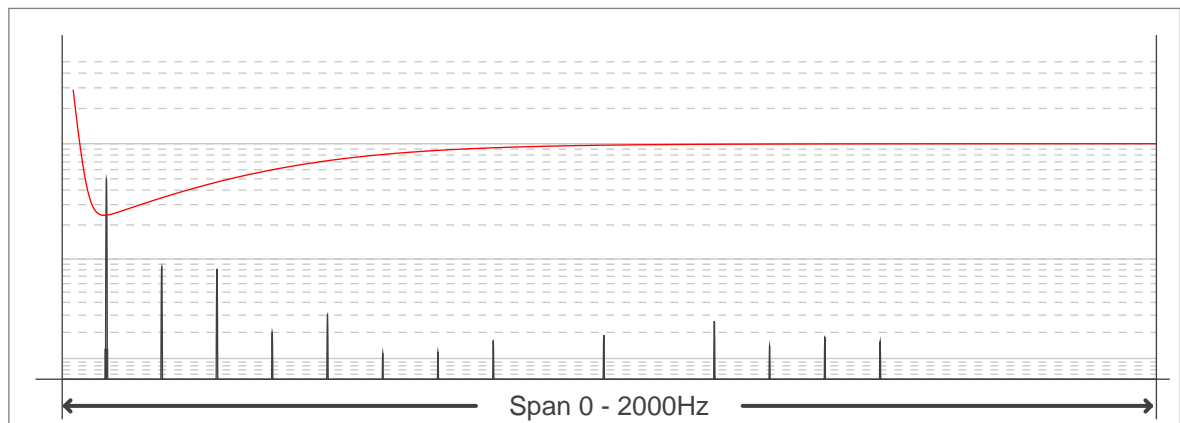
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	100 Hz
Flicker index:	0.35
Flicker percentage:	100 %
SVM: (Visual flicker)	3.86

FLICKER CONDITIONS:

Sample rate:	40000 samples/second
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