

PHOTOMETRIC TEST REPORT

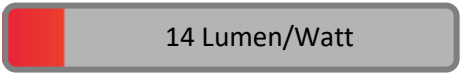
YUMA 300 LED TEXTURED BLACK

astro

YUMA 300 LED TEXTURED BLACK

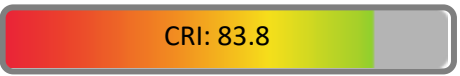
astro

LIGHT EFFICIENCY:



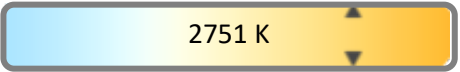
OUTPUT: 173 lm

LIGHT QUALITY:



PEAK: 186 cd

COLOR TEMPERATURE:



POWER: 12.0 W

PF: 0.98



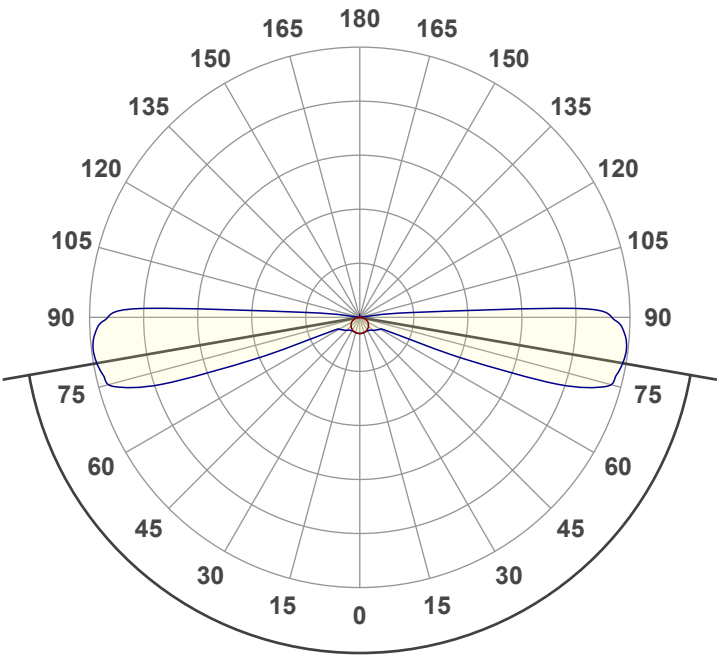
Tracking number: [n/a](#)

Product name:
Yuma 300 LED Textured Black

Item number:
1399027

Date and time:
21/02/2022 15:01:27

Description:
IP20 LED Wall Light

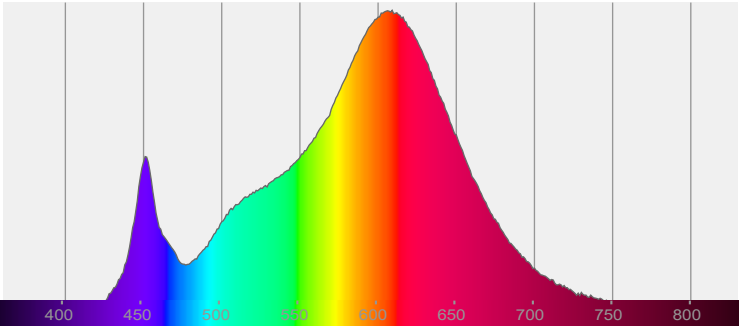


160.2°

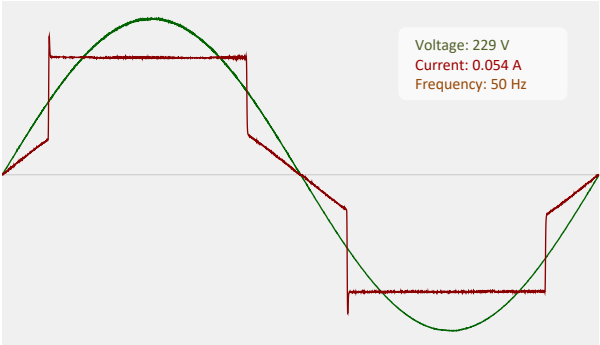


CIE 1931
x: 0.450
y: 0.399

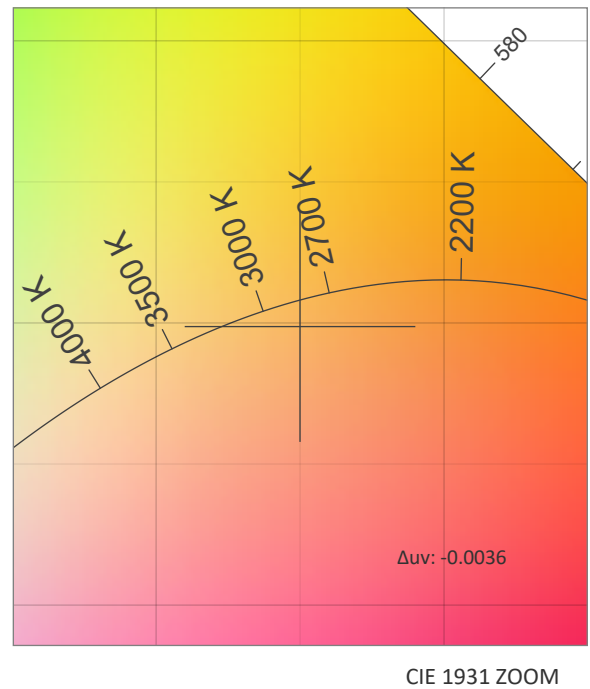
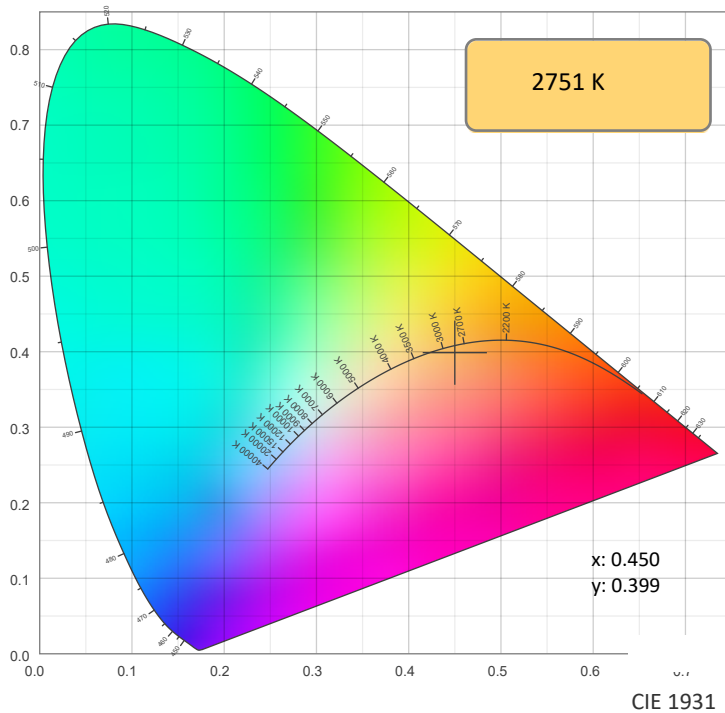
SPECTRA



POWER

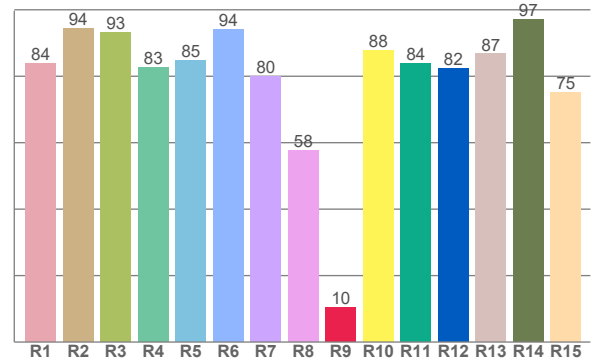
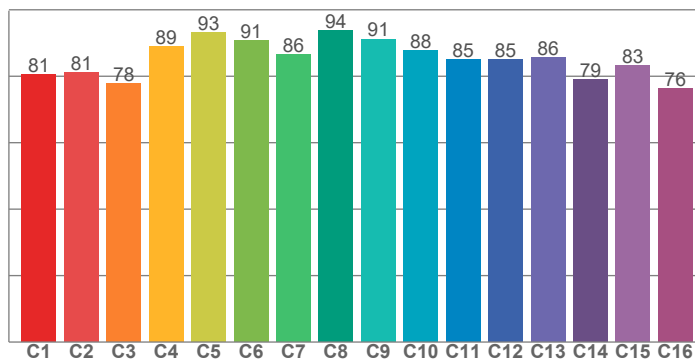


COLOR DETAILS



TM30: 85.3

CRI: 83.8 (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
83.8	94.3	93.2	82.5	84.8	94.0	80.0	57.7	10.4	87.7	83.9	82.4	86.7	97.0	75.1

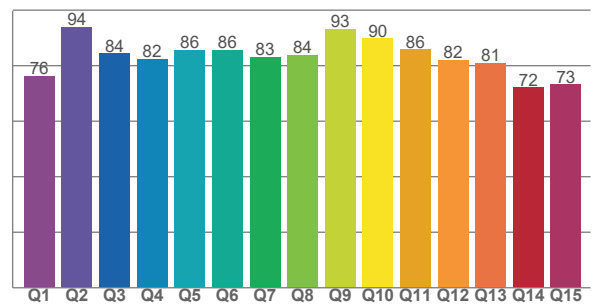
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
80.5	81.2	77.7	88.8	93.1	90.7	86.4	93.8	91.2	87.8	85.1	85.1	85.6	79.0	83.3	76.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76.3	93.9	84.3	82.5	85.5	85.6	83.1	83.7	93.2	89.8	85.8	81.9	81.0	72.2	73.1

CQS: 82.2



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
2751 K	83.8	10.4	85.3	97.9	82.2	0.450	0.399	0.261	0.347	-0.0036

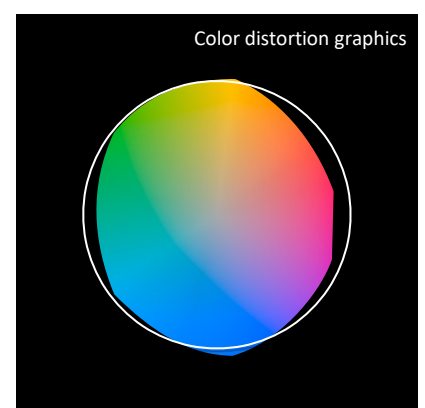
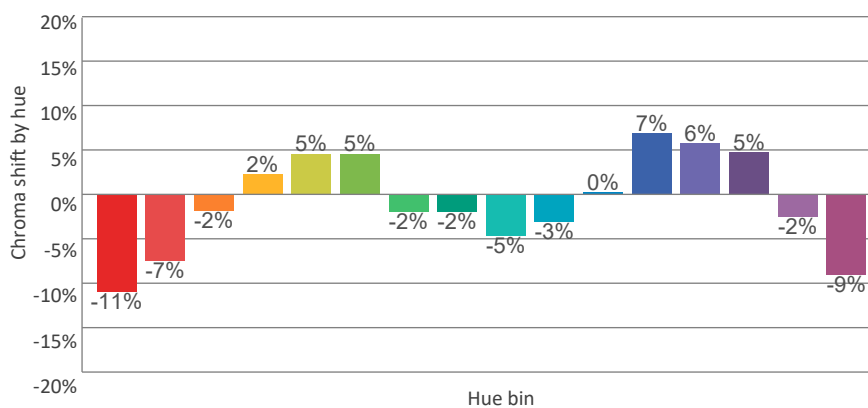
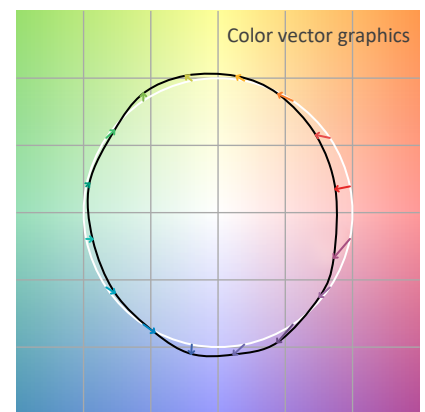
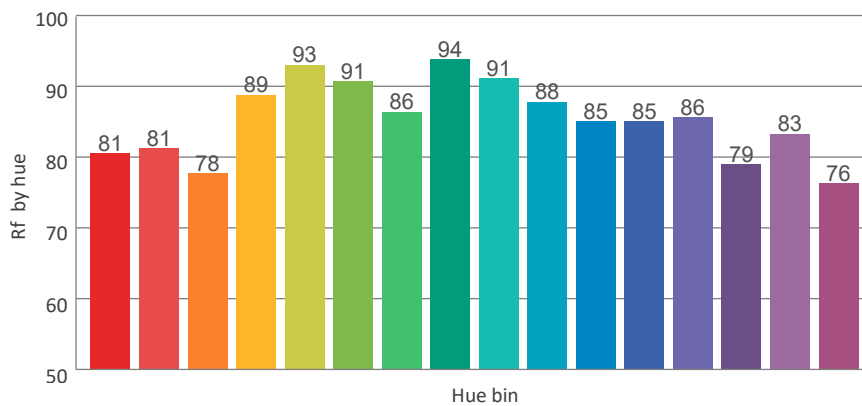
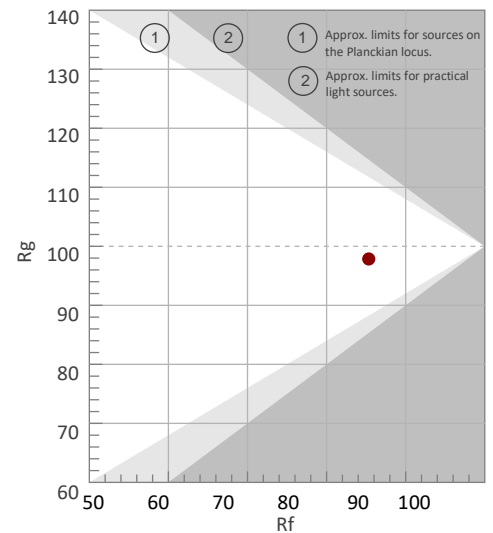
Rf 85.3

Fidelity index Rf

Rg 97.9

Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	81	-11%	0%
2	81	-7%	8%
3	78	-2%	12%
4	89	2%	6%
5	93	5%	4%
6	91	5%	-3%
7	86	-2%	-8%
8	94	-2%	-3%
9	91	-5%	1%
10	88	-3%	7%
11	85	0%	10%
12	85	7%	1%
13	86	6%	-9%
14	79	5%	-17%
15	83	-2%	-10%
16	76	-9%	-16%



The diagram illustrates the beam spread of a 160.2° beam light. It shows a light source on the left with a beam angle of 160.2°. The beam is represented by a shaded cone that widens as it moves to the right. Vertical lines mark distances from the source at 1 m, 2 m, 3 m, 4 m, and 5 m. At each distance, the beam width is shown as an oval, and the footcandle (fcd) and lux (lx) measurements are indicated. The beam center is marked with a horizontal line. The beam width increases from 11.5 m at 1 m to 57.3 m at 5 m. The footcandle measurements are 1 fcd at 1 m, 0 fcd at 2 m, 0 fcd at 3 m, 0 fcd at 4 m, and 0 fcd at 5 m. The lux measurements are 11 lx at 1 m, 3 lx at 2 m, 1 lx at 3 m, 1 lx at 4 m, and 0 lx at 5 m.

Distance (meter)	1 m	2 m	3 m	4 m	5 m
Distance (feet)	3,3 ft	6,6 ft	9,8 ft	13,1 ft	16,4 ft
Lux*	11 lx	3 lx	1 lx	1 lx	0 lx
Footcandles*	1 fcd	0 fcd	0 fcd	0 fcd	0 fcd
Beam width (meter)	11.5 m	22.9 m	34.4 m	45.8 m	57.3 m
Beam width (feet)	37.8 ft	75.6 ft	112.3 ft	150.1 ft	187.9 ft

*measured at center of beam

[illegible]

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
11.1	11.2	10.8	10.3	9.6	8.5	7.3	5.9	4.3	2.5	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
100%	100%	97%	93%	86%	77%	66%	53%	38%	22%	5%	4%	4%	4%	4%	4%	5%	5%	5%	5%

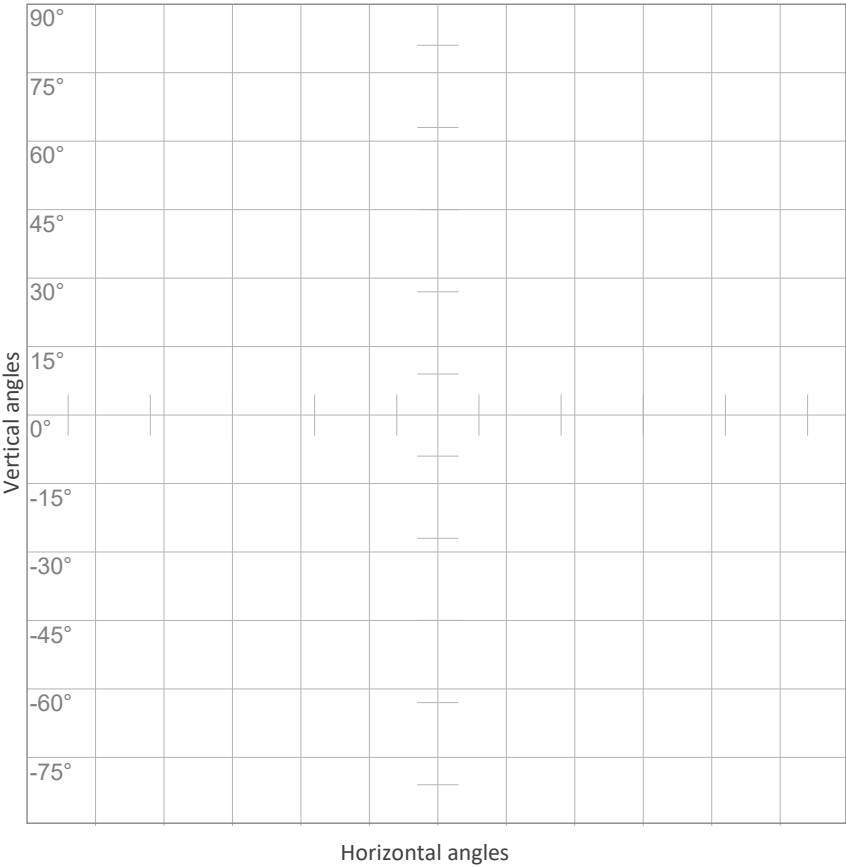
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
11	11	11	11	11	13	15	21	152	186	172	1	0	0	0	0	0	0	0	0
100%	99%	98%	96%	100%	114%	133%	185%	1369%	1669%	1543%	8%	1%	1%	2%	2%	2%	1%	1%	1%

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
11.1	11.2	10.8	10.3	9.6	8.5	7.3	5.9	4.3	2.5	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
100%	100%	97%	93%	86%	77%	66%	53%	38%	22%	5%	4%	4%	4%	4%	4%	5%	5%	5%	5%

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
11	11	11	11	11	13	15	21	152	186	172	1	0	0	0	0	0	0	0	0
100%	99%	98%	96%	100%	114%	133%	185%	1369%	1669%	1543%	8%	1%	1%	2%	2%	2%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
160.2°	190.3°	282.3°	18.4%	11.0%

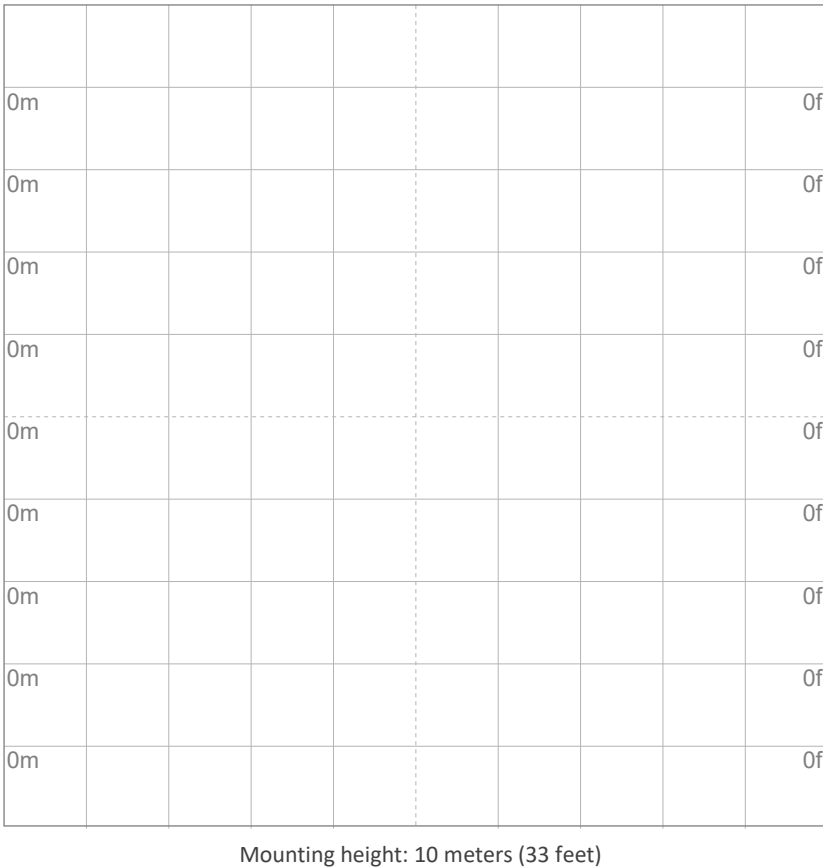
ISO CANDELA DIAGRAM



- 10% 1 cd
- 20% 2 cd
- 30% 3 cd
- 40% 4 cd
- 50% 6 cd
- 60% 7 cd
- 70% 8 cd
- 80% 9 cd
- 90% 10 cd

Conditions:
Number of c-planes: 8
Candela at center: 11 cd

ISO LUX DIAGRAM



- 3% 3.34m lx
- 5% 5.56m lx
- 10% 11.1m lx
- 30% 33.4m lx
- 50% {LUX_10M50} lx

Conditions:
Number of c-planes: 8
Lux at center: 0.111 lx

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

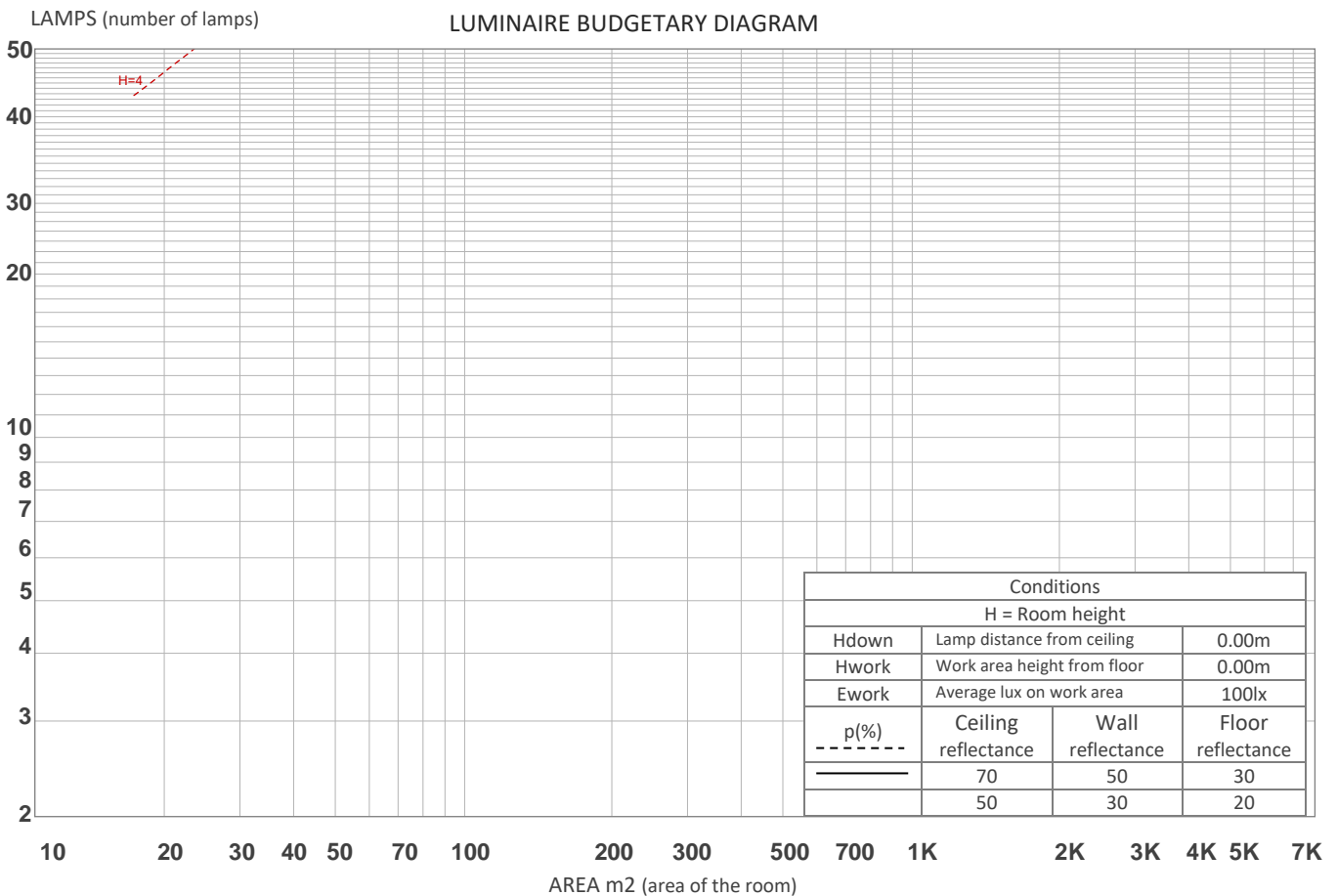
UGR

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	6.6	8.2	7.1	8.8	9.4	10.6	12.2	11.1	12.8	13.4
	3H	7.8	9.5	8.4	10.1	10.6	22.3	23.9	22.9	24.5	25.1
	4H	8.3	9.9	8.9	10.5	11.1	27.1	28.7	27.7	29.2	29.8
	6H	8.7	10.2	9.2	10.7	11.4	30.1	31.6	30.6	32.1	32.7
	8H	8.8	10.3	9.3	10.8	11.5	31.2	32.7	31.8	33.2	33.9
	12H	8.8	10.3	9.4	10.8	11.5	32.3	33.8	32.8	34.2	35.0
4H	2H	7.8	9.4	8.4	10.0	10.6	11.0	12.6	11.6	13.2	13.8
	3H	9.2	10.7	9.8	11.2	11.9	22.8	24.3	23.4	24.8	25.6
	4H	9.7	11.3	10.4	11.8	12.6	27.6	29.1	28.2	29.6	30.4
	6H	10.2	11.5	10.8	12.1	12.8	30.8	32.1	31.4	32.7	33.3
	8H	10.3	11.5	11.0	12.2	12.8	32.1	33.3	32.7	33.9	34.6
	12H	10.4	11.5	11.1	12.2	12.9	33.3	34.4	33.9	35.0	35.8
8H	4H	15.5	16.7	16.1	17.3	18.0	27.5	28.7	28.2	29.3	30.0
	6H	15.6	16.6	16.2	17.3	18.1	30.9	31.9	31.5	32.6	33.4
	8H	15.6	16.6	16.3	17.3	18.2	32.3	33.3	33.0	34.0	34.9
	12H	15.6	16.5	16.4	17.2	18.0	33.8	34.7	34.5	35.4	36.2
12H	4H	17.9	18.9	18.5	19.6	20.3	27.5	28.5	28.1	29.2	30.0
	6H	18.0	18.9	18.6	19.7	20.5	30.8	31.8	31.5	32.5	33.4
	8H	18.0	18.9	18.7	19.6	20.4	32.4	33.2	33.1	33.9	34.7
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.2 / -0.2					0.1 / -0.1				
S = 1.5H		0.7 / -0.8					0.1 / -0.2				
S = 2.0H		1.5 / -2.2					0.3 / -0.4				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 173 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	97	97	97	90	90	90	87
1	91	80	70	61	86	76	67	59	69	61	54	62	56	50	56	51	46	42
2	78	63	50	40	73	60	48	38	53	44	35	47	39	32	42	35	29	26
3	69	52	39	29	65	49	37	28	44	34	25	39	30	23	34	27	21	17
4	62	45	32	23	58	43	31	22	38	28	20	34	25	18	30	22	16	13
5	57	40	27	19	53	37	26	18	34	24	16	30	21	15	27	19	13	10
6	52	35	24	16	49	34	23	15	30	21	14	27	19	13	24	17	11	8
7	49	32	21	14	46	30	20	13	27	18	12	25	17	11	22	15	10	7
8	45	29	19	12	43	28	18	11	25	17	10	23	15	10	20	14	9	6
9	42	27	17	10	40	25	16	10	23	15	9	21	14	9	19	13	8	6
10	40	24	15	9	38	23	15	9	21	14	8	20	13	8	18	12	7	5



ZONAL LUMEN SUMMARY

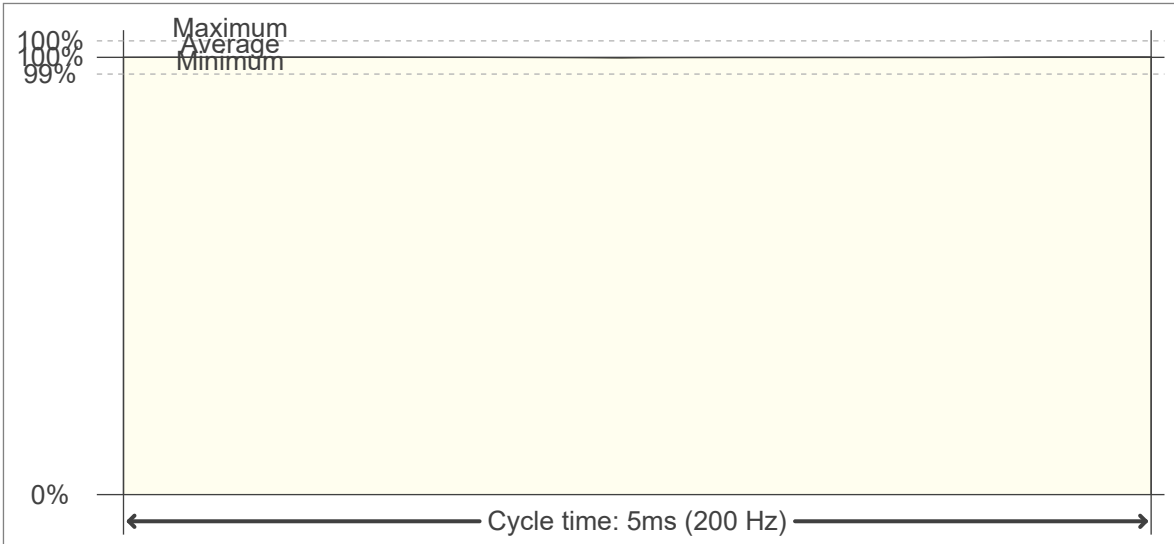
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
1.06 lm	3.08 lm	4.84 lm	6.33 lm	7.68 lm	8.84 lm	15.8 lm	49.7 lm	53.1 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
20.7 lm	0.390 lm	0.342 lm	0.303 lm	0.246 lm	0.198 lm	0.137 lm	0.076 lm	0.026 lm

FLICKER

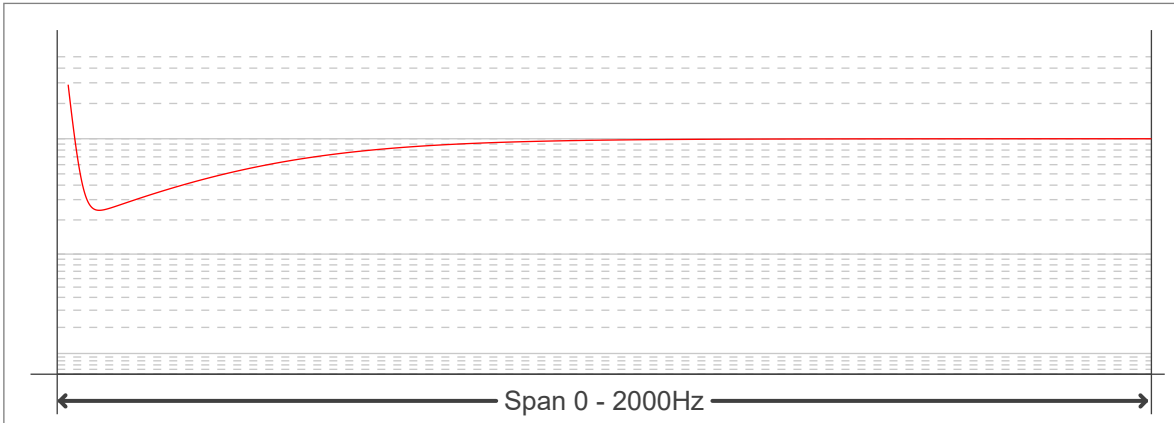
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	200 Hz
Flicker index:	0
Flicker percentage:	0.15 %
SVM: (Visual flicker)	0

FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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