

# PHOTOMETRIC TEST REPORT

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PALERMO 900 MATT BLACK

astro

## LIGHT EFFICIENCY:

54 Lumen/Watt

OUTPUT: 629 lm

## LIGHT QUALITY:

CRI: 95.1

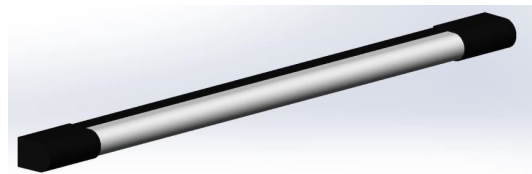
PEAK: 132 cd

## COLOR TEMPERATURE:

3028 K

POWER: 11.7 W

PF: 0.81

Tracking number: [n/a](#)

Product name:

Palermo 900 Matt Black

Item number:

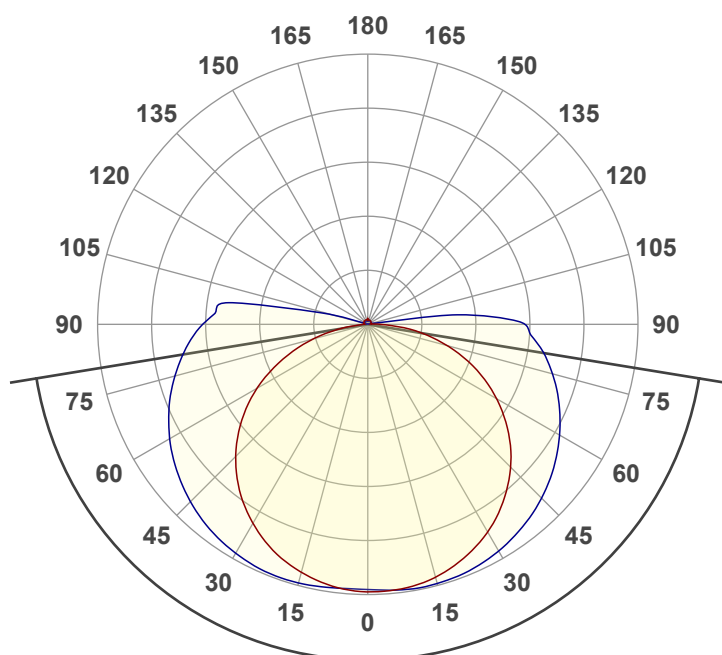
1084037

Date and time:

14/07/2022 10:46:44

Description:

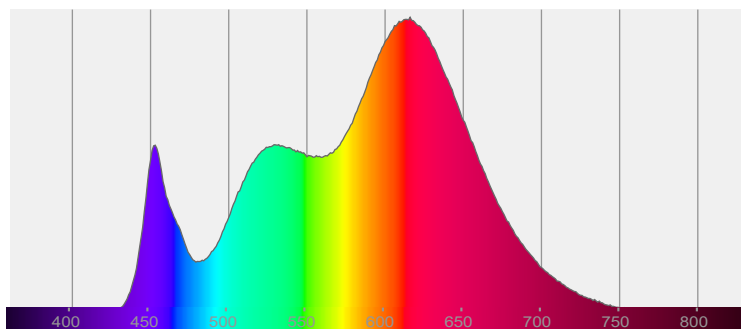
IP44 Bathroom wall light



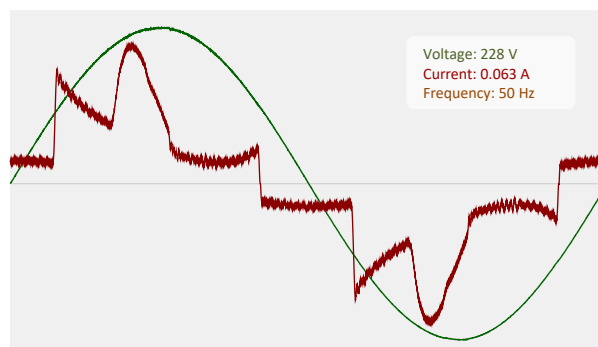
161.5°

CIE 1931  
x: 0.433  
y: 0.400

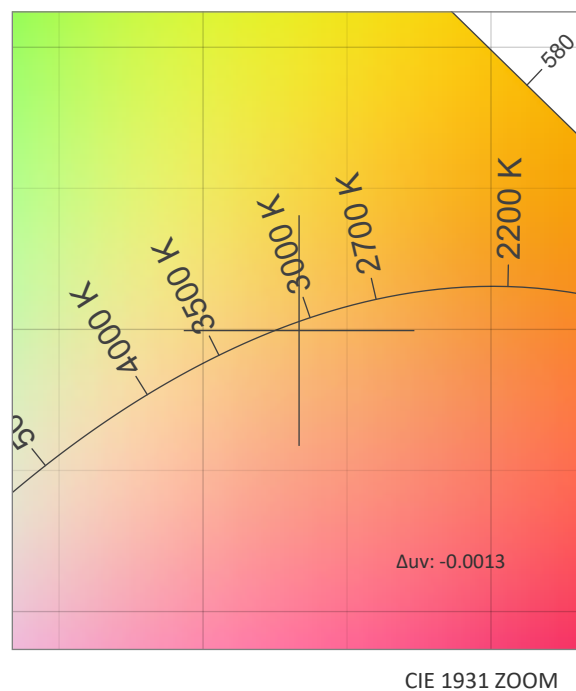
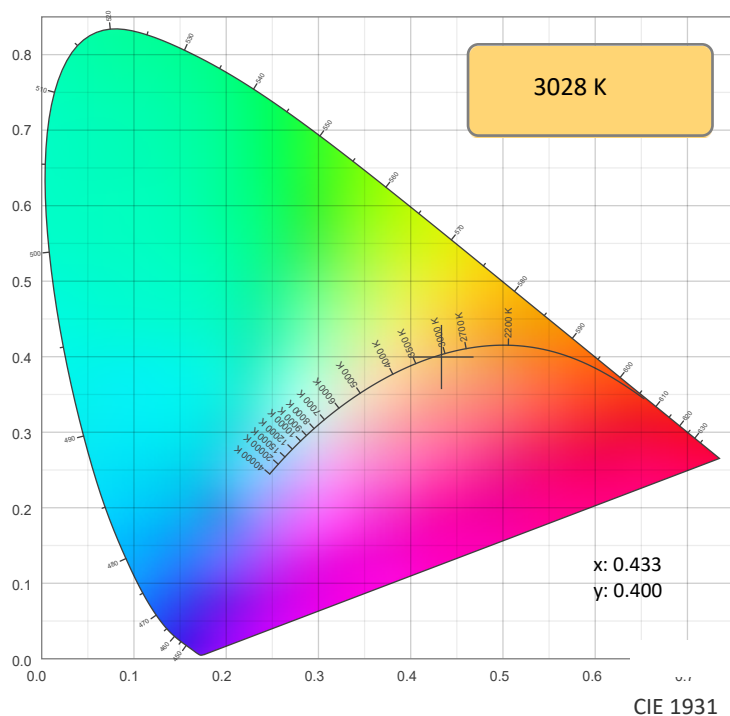
## SPECTRA



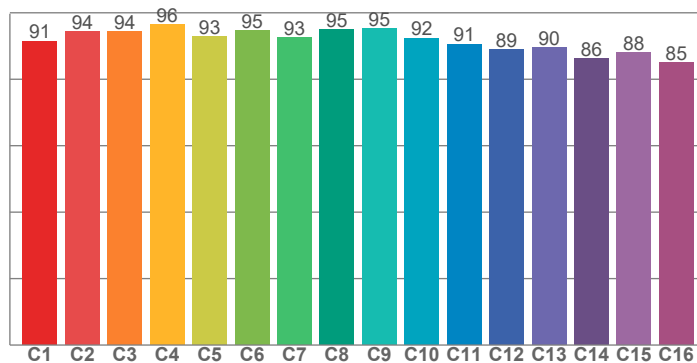
## POWER



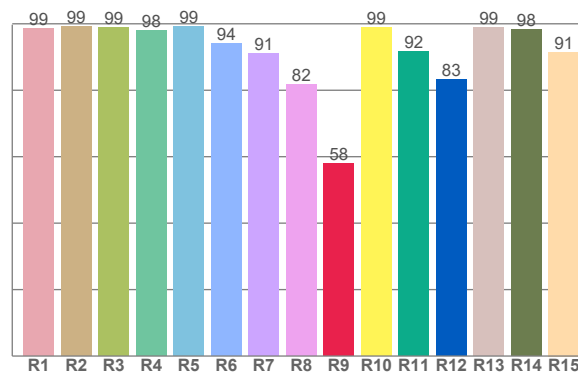
## COLOR DETAILS



TM30: 92.2



CRI: 95.1 (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
98.7	99.2	98.9	97.9	99.2	94.1	91.1	81.7	67.9	98.8	91.7	83.2	98.8	98.4	91.5

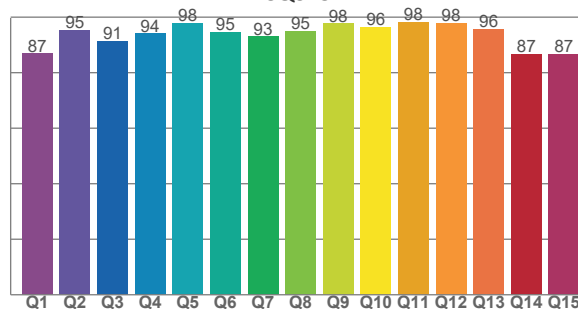
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.5	94.4	94.4	96.5	92.8	94.6	92.6	94.8	95.4	92.4	90.6	88.9	89.5	86.2	87.9	84.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86.8	95.2	91.4	94.1	98.0	94.7	93.1	95.0	97.7	96.4	98.2	97.8	95.8	86.8	86.7

CQS: 92.4



## 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	$\Delta uv$
3028 K	95.1	57.9	92.2	100.4	92.4	0.433	0.400	0.250	0.346	-0.0013

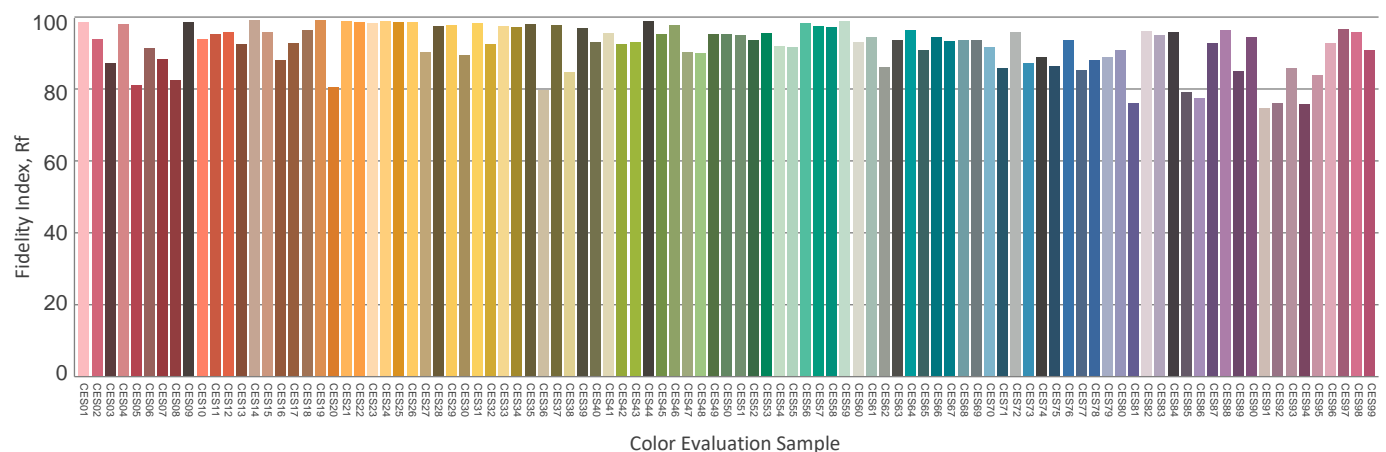
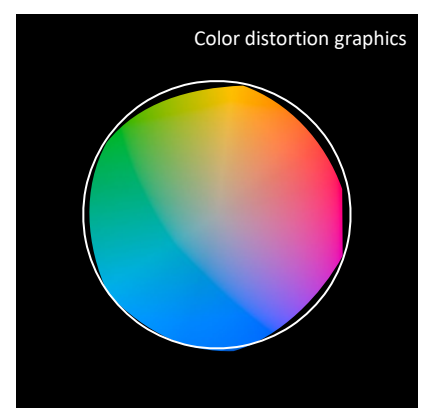
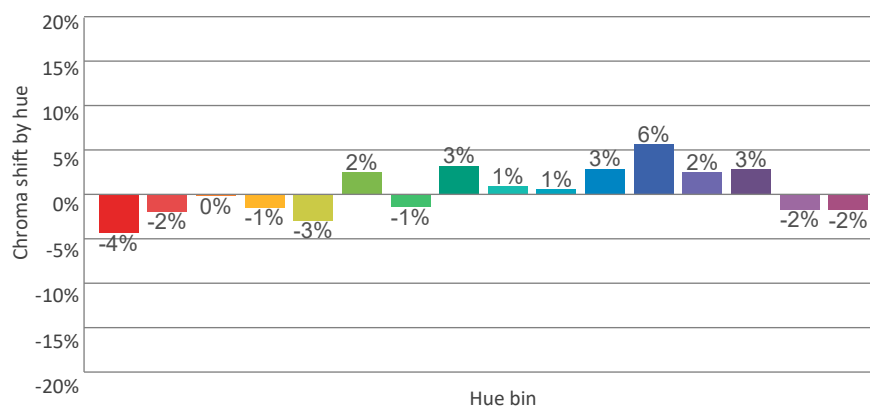
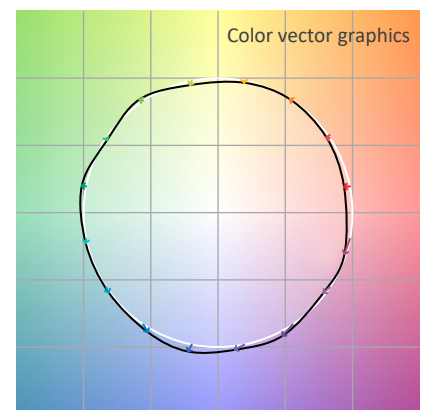
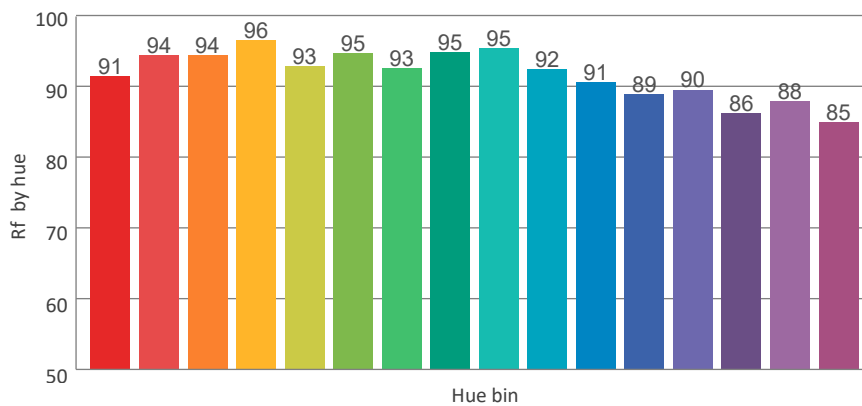
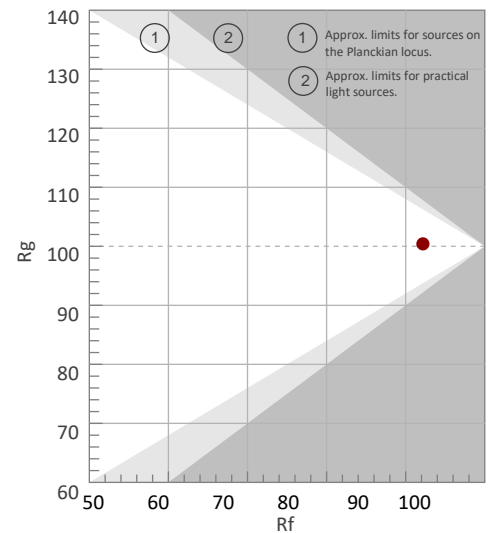
Rf 92.2

Fidelity index Rf

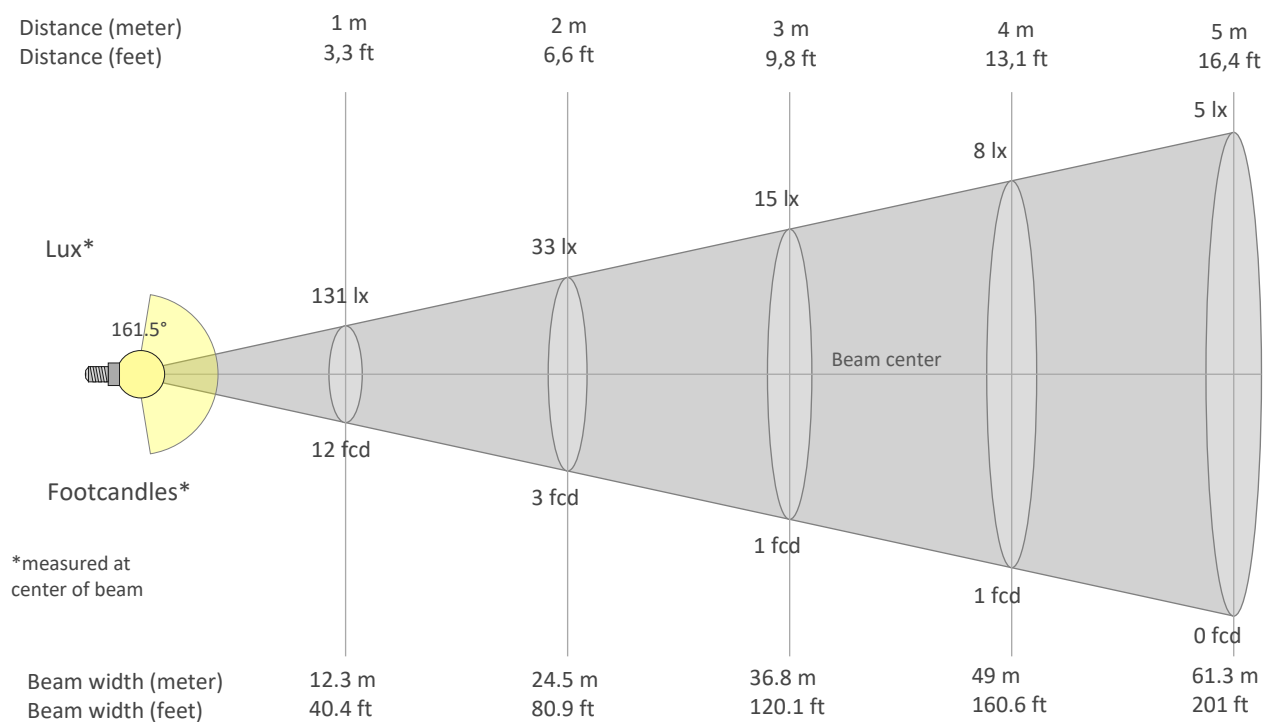
Rg 100.4

Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R <sub>f</sub>	Chroma	Hue
1	91	-4%	1%
2	94	-2%	2%
3	94	0%	2%
4	96	-1%	0%
5	93	-3%	2%
6	95	2%	2%
7	93	-1%	1%
8	95	3%	0%
9	95	1%	3%
10	92	1%	4%
11	91	3%	6%
12	89	6%	-2%
13	90	2%	-8%
14	86	3%	-11%
15	88	-2%	-6%
16	85	-2%	-12%



## 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
131lx	33lx	15lx	8lx	5lx	4lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx
12.2fcd	3fcd	1.4fcd	0.8fcd	0.5fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	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°
131	131	127	121	111	99	85	67	47	27	7	2	2	2	2	2	2	2	2	2
100%	100%	97%	92%	85%	76%	64%	51%	36%	20%	5%	1%	1%	1%	1%	2%	2%	2%	2%	2%

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°
131	132	132	130	126	121	114	106	97	88	76	20	2	2	2	2	2	2	2	2
100%	101%	100%	99%	96%	92%	87%	81%	74%	67%	58%	15%	1%	1%	1%	1%	1%	1%	1%	1%

Intensities in 180° c-plane

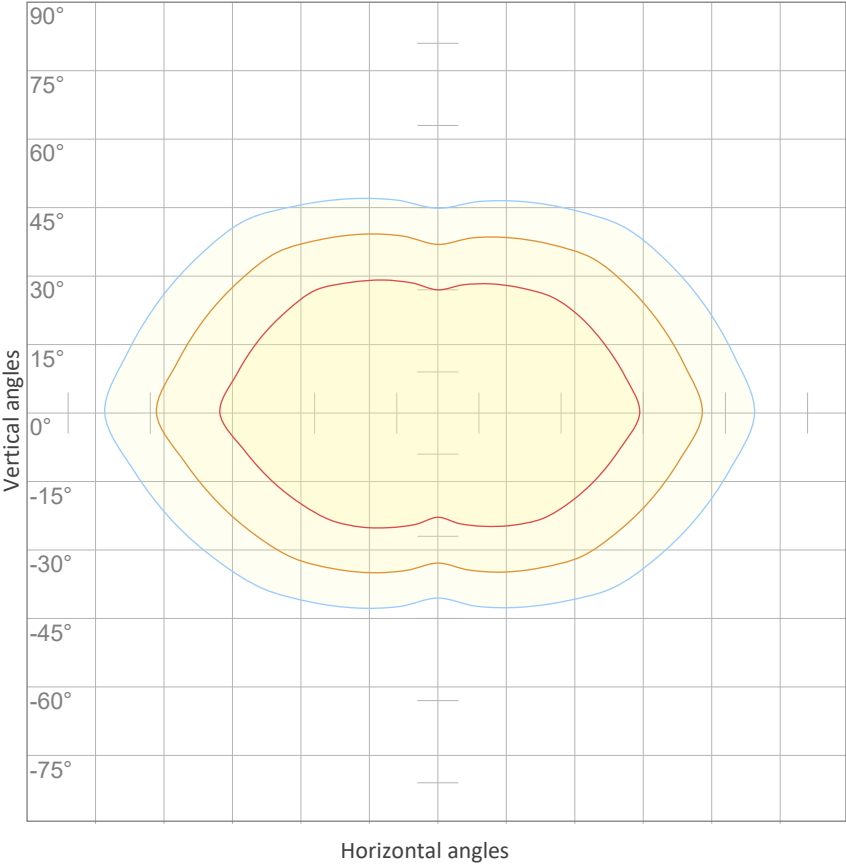
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
131	130	124	116	106	92	75	56	35	14	2	2	2	2	2	2	2	2	2	2
100%	99%	95%	89%	81%	70%	57%	43%	27%	11%	2%	1%	2%	2%	2%	2%	2%	2%	2%	2%

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°
131	131	132	131	128	123	117	110	101	92	81	68	5	2	2	2	2	2	2	2
100%	100%	101%	100%	98%	94%	89%	84%	77%	70%	62%	52%	4%	1%	1%	1%	1%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
161.5°	193.1°	199.4°	56.8%	35.7%

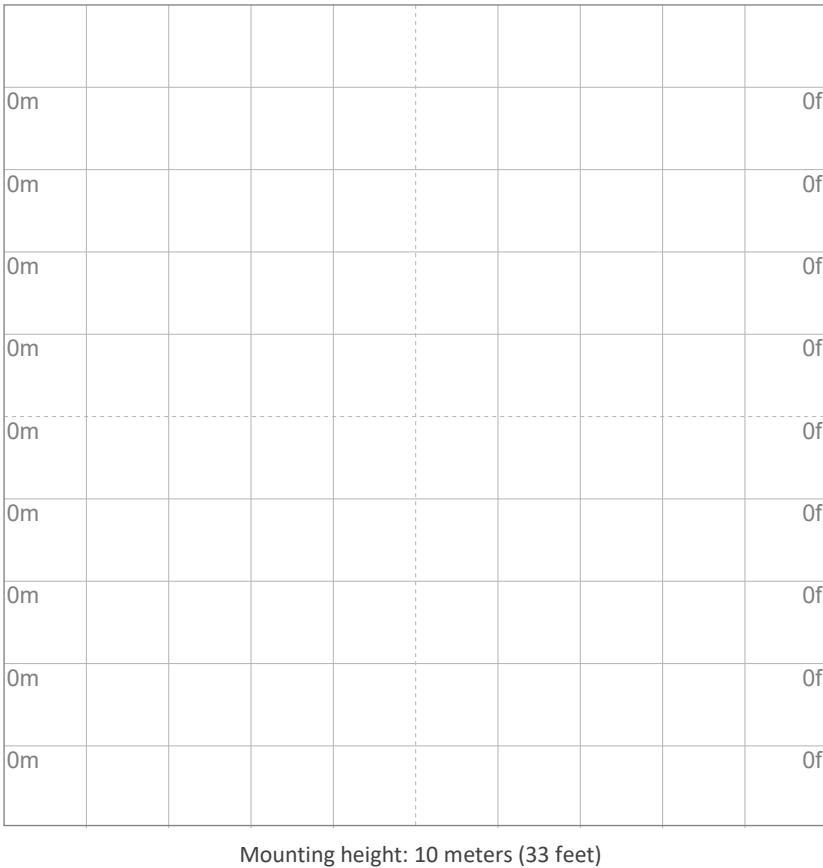
ISO CANDELA DIAGRAM



10%	13 cd
20%	26 cd
30%	39 cd
40%	52 cd
50%	66 cd
60%	79 cd
70%	92 cd
80%	105 cd
90%	118 cd

Conditions:  
Number of c-planes: 8  
Candela at center: 131 cd

ISO LUX DIAGRAM



3%	39.4m lx
5%	65.6m lx
10%	0.131 lx
30%	0.394 lx
50%	{LUX_10M50} lx

Conditions:  
Number of c-planes: 8  
Lux at center: 1.31 lx

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

## UGR

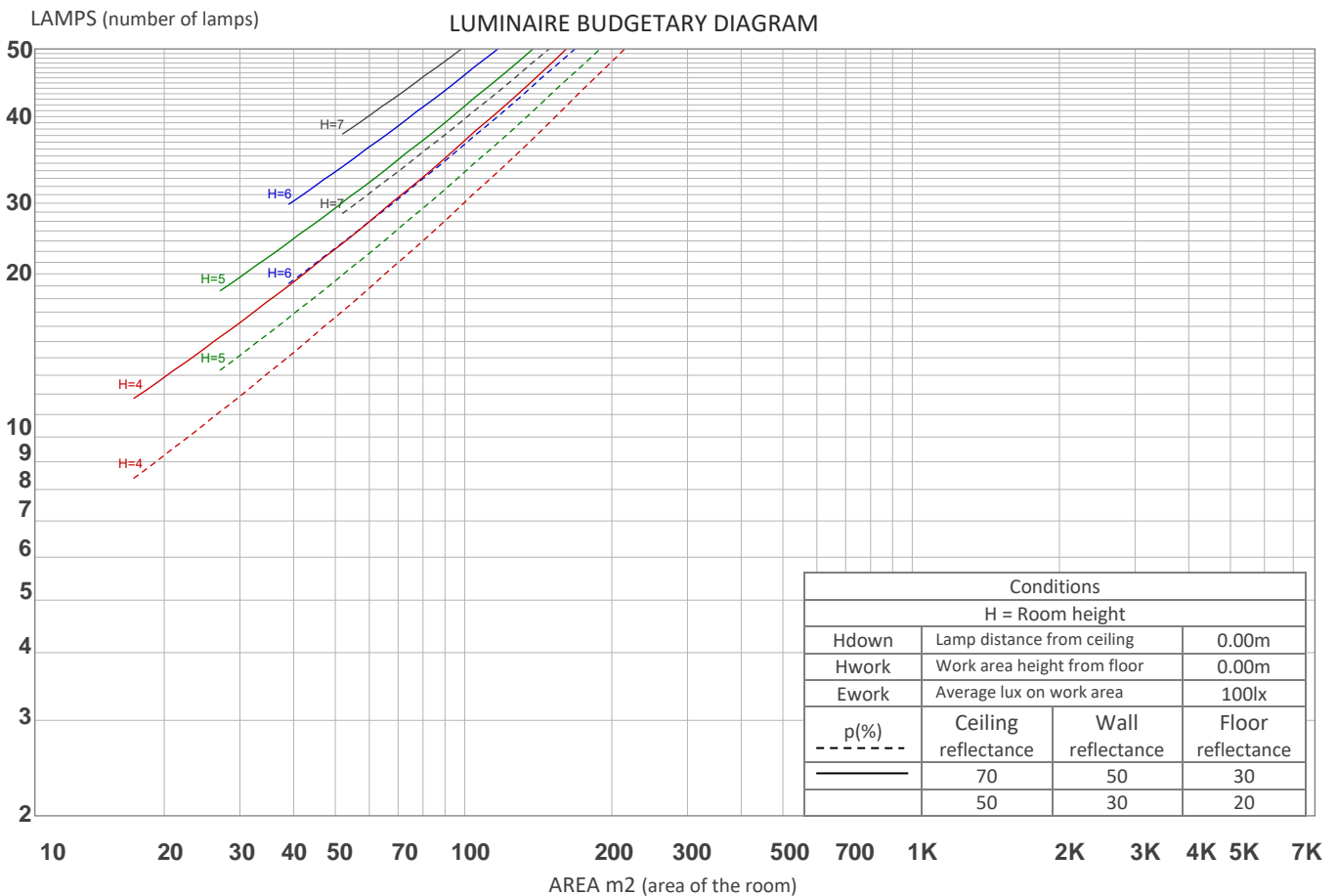
## GLARE EVALUATION ACCORDING TO UGR

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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 629 lm total luminous flux										

UGR data could not be calculated due to missing/wrong symmetry. 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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	94	94	94	92
1	103	96	90	85	99	93	87	83	87	82	78	81	78	74	76	73	71	68
2	92	81	73	66	88	79	71	64	74	67	61	69	63	59	65	60	56	53
3	83	70	60	53	79	68	59	52	63	56	50	59	53	48	56	50	46	43
4	75	61	51	44	72	59	50	43	56	48	41	52	45	40	49	43	38	36
5	69	54	44	37	66	53	43	36	49	41	35	46	39	34	44	38	33	30
6	63	48	39	32	60	47	38	31	44	36	30	42	35	29	39	33	28	26
7	58	44	34	28	56	42	33	27	40	32	26	38	31	26	36	30	25	22
8	54	40	31	24	52	39	30	24	36	29	23	35	28	23	33	27	22	20
9	50	36	27	22	49	35	27	21	33	26	21	32	25	20	30	24	20	18
10	47	33	25	19	45	32	25	19	31	24	19	29	23	18	28	22	18	16



## ZONAL LUMEN SUMMARY

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
12.5 lm	36.8 lm	58.4 lm	75.2 lm	85.5 lm	88.6 lm	84.6 lm	74.6 lm	60.8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
37.8 lm	6.17 lm	1.83 lm	1.74 lm	1.54 lm	1.28 lm	0.970 lm	0.598 lm	0.204 lm

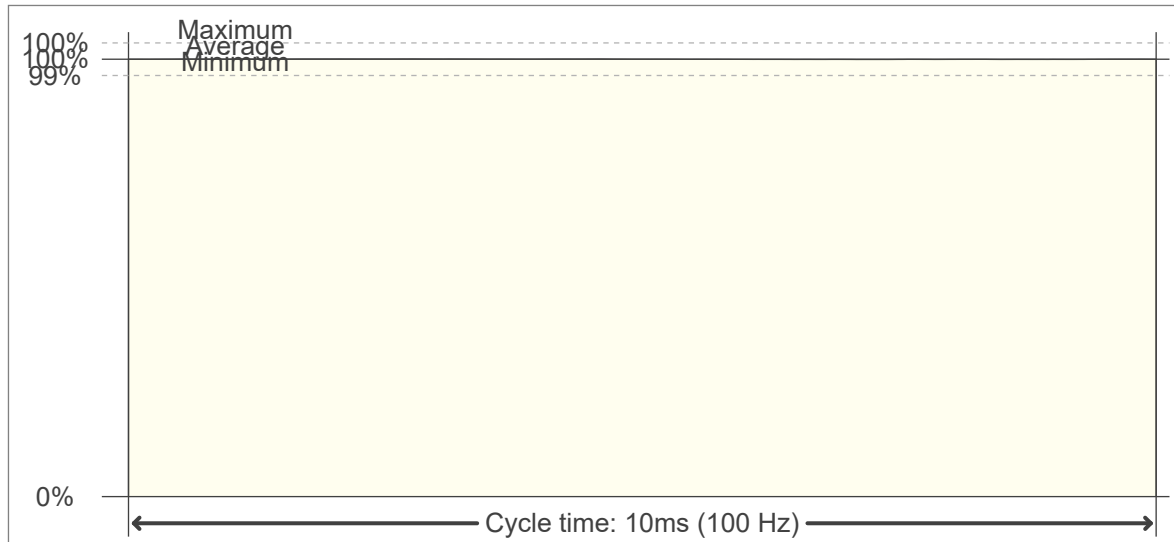


## FLICKER

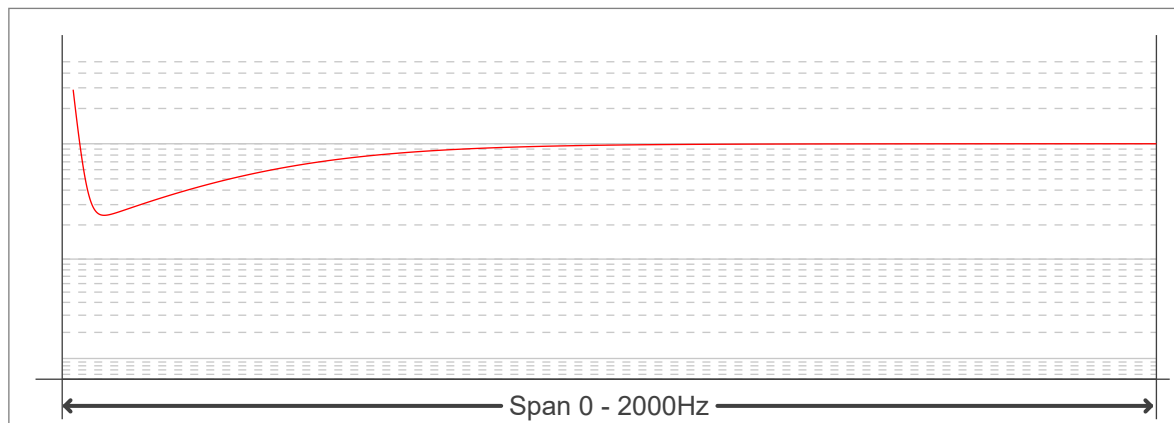
## FLICKER CURVE (COMPLETE SAMPLED FLICKER)



## FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



## FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



## FLICKER RESULTS:

Flicker frequency:	100 Hz
Flicker index:	0
Flicker percentage:	0.11 %
SVM: (Visual flicker)	0

## FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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