

PHOTOMETRIC TEST REPORT

MONET 250 UL - PHASE

astro

LIGHT EFFICIENCY:



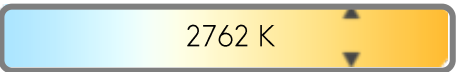
OUTPUT: 421 lm

LIGHT QUALITY:



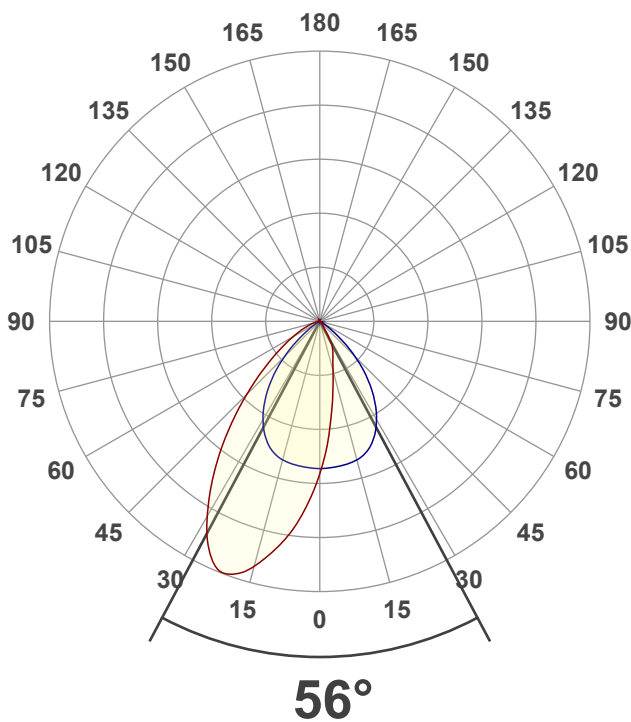
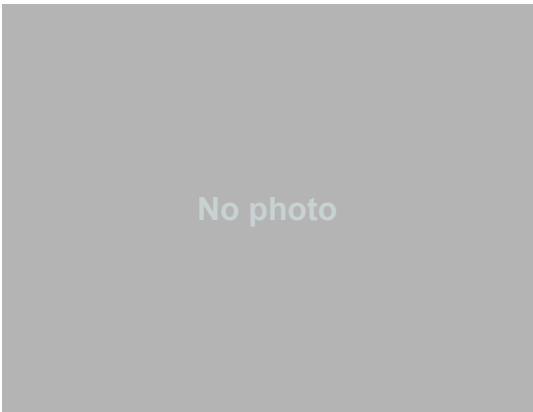
PEAK: 405 cd

COLOR TEMPERATURE:



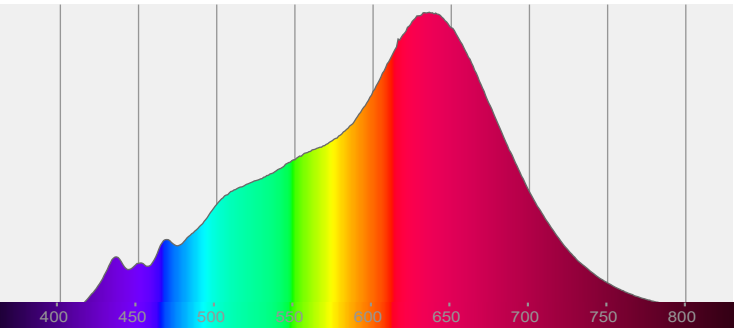
POWER: 9.4 W

PF: 0.89

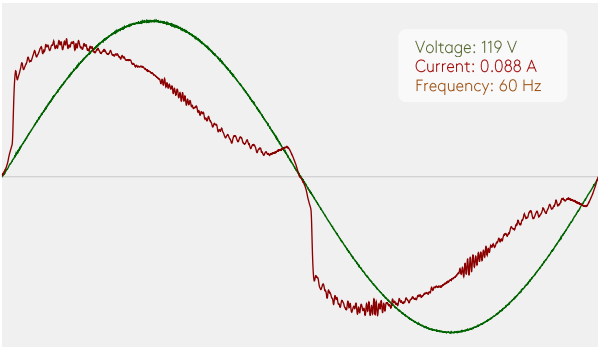


CIE 1931
x: 0.455
y: 0.410

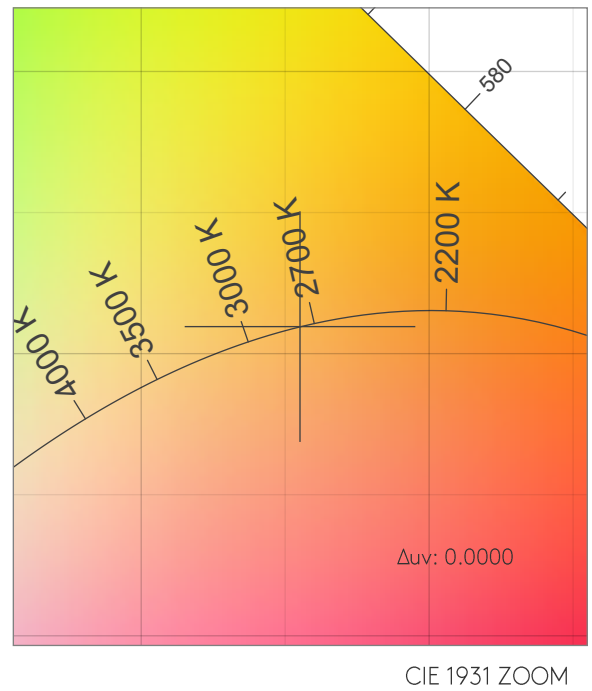
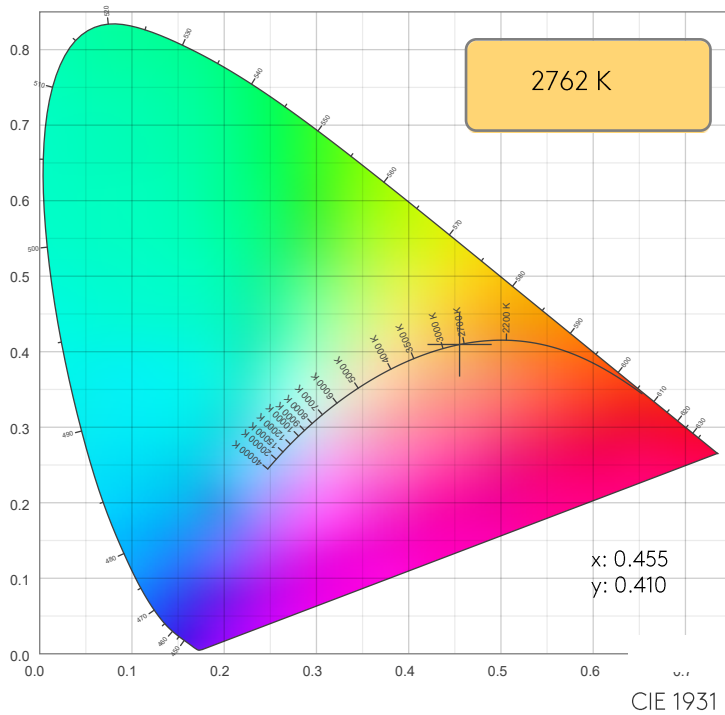
SPECTRA



POWER

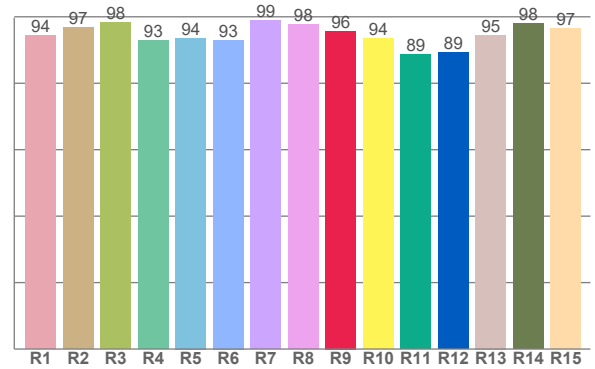
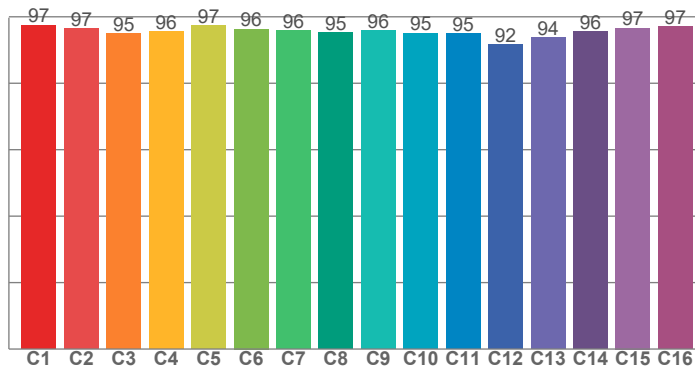


COLOR DETAILS



TM30: 95.8

CRI: 95.7 (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
94.4	96.8	98.4	92.9	93.6	93.0	99.0	97.6	95.7	93.5	88.7	89.2	94.5	98.1	96.6

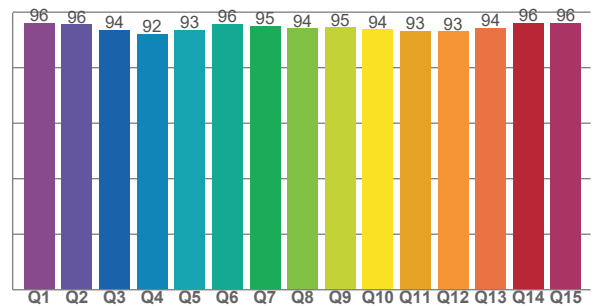
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
97.5	96.5	94.9	95.7	97.3	96.3	96.0	95.2	95.8	95.1	94.9	91.7	93.7	95.7	96.6	97.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96.0	95.5	93.6	92.0	93.5	95.8	95.0	94.1	94.5	93.7	93.2	93.0	94.3	96.1	96.0

CQS: 94.2



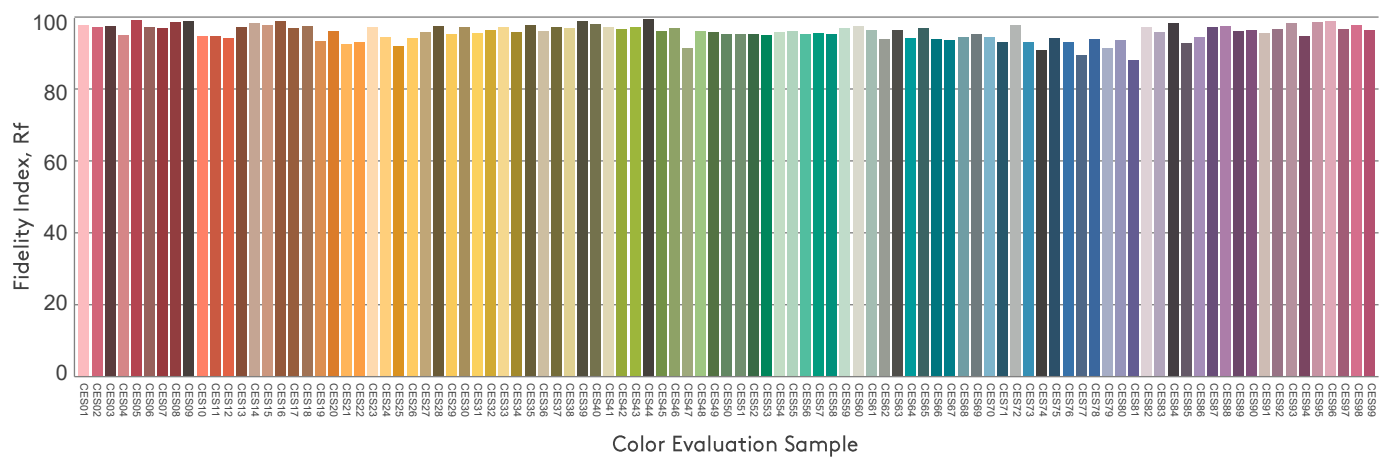
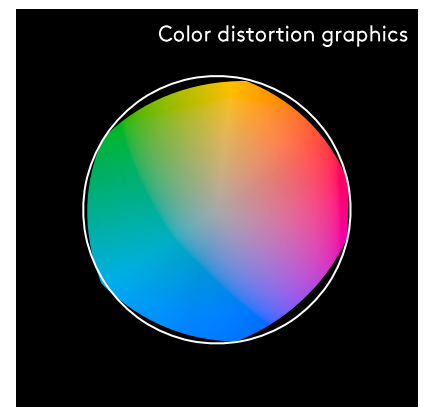
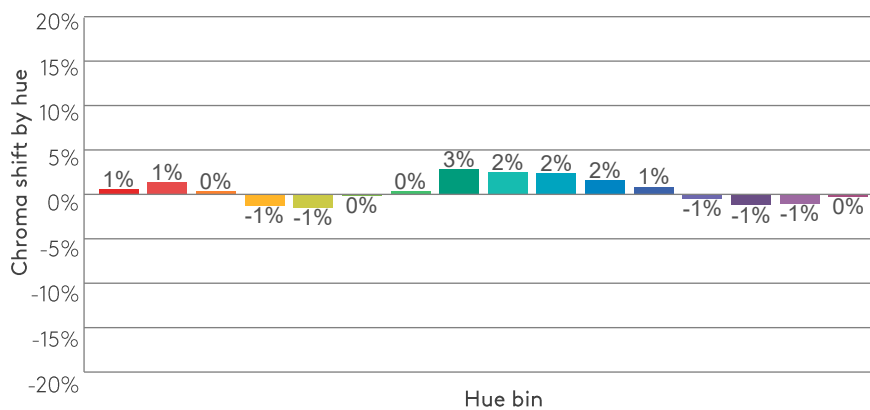
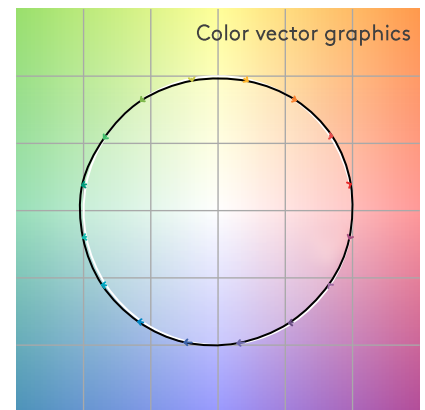
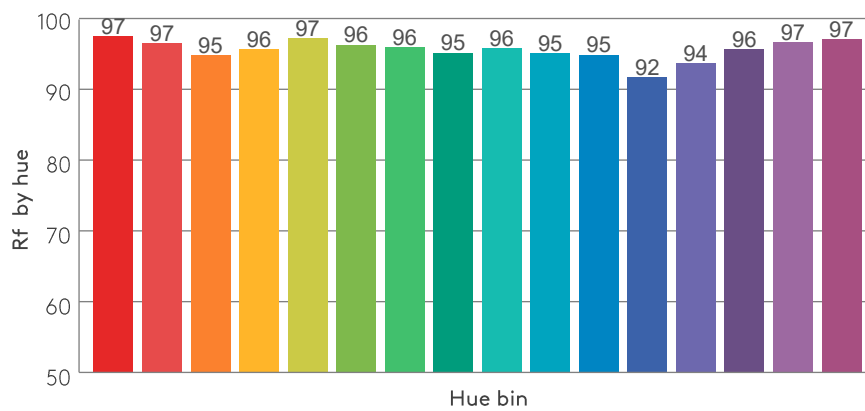
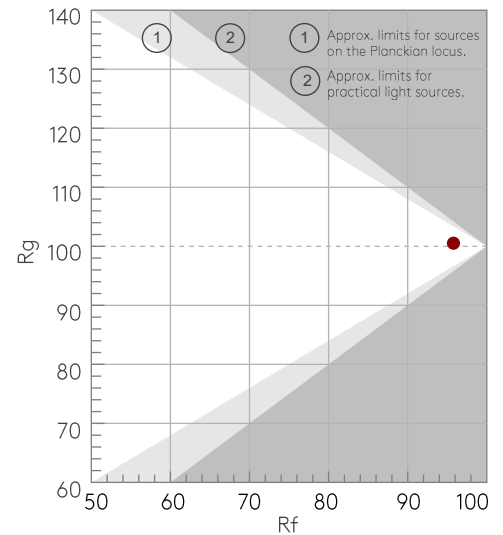
COLOR PARAMETERS

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
2762 K	95.7	95.7	95.8	100.5	94.2	0.455	0.410	0.260	0.351	0.0000

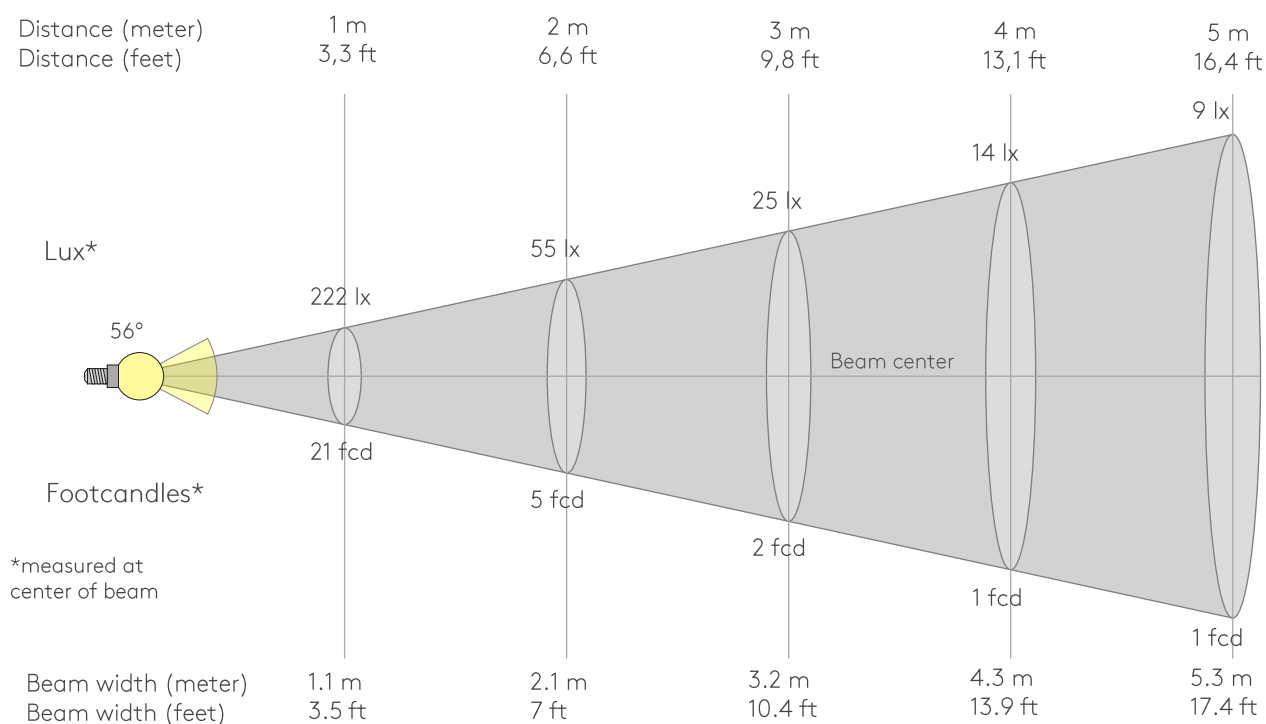
Rf 95.8
Fidelity index Rf

Rg 100.5
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	1%	0%
2	97	1%	-1%
3	95	0%	-3%
4	96	-1%	-3%
5	97	-1%	0%
6	96	0%	2%
7	96	0%	3%
8	95	3%	1%
9	96	2%	0%
10	95	2%	-2%
11	95	2%	-3%
12	92	1%	-5%
13	94	-1%	-5%
14	96	-1%	-3%
15	97	-1%	0%
16	97	0%	-1%



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
222lx	55lx	25lx	14lx	9lx	6lx	5lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
20.6fcd	5.2fcd	2.3fcd	1.3fcd	0.8fcd	0.6fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

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°
222	204	179	155	131	114	97	84	73	63	58	53	47	42	36	26	16	11	8	5
100%	92%	81%	70%	59%	52%	44%	38%	33%	29%	26%	24%	21%	19%	16%	12%	7%	5%	4%	2%

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°
222	220	220	219	219	218	217	215	213	210	206	202	195	188	179	170	160	148	136	123
100%	99%	99%	99%	99%	98%	98%	97%	96%	95%	93%	91%	88%	85%	81%	76%	72%	67%	61%	56%

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°
222	253	276	299	320	338	356	371	385	395	399	402	390	377	359	336	313	288	263	238
100%	114%	124%	135%	144%	152%	160%	167%	174%	178%	180%	181%	176%	170%	162%	152%	141%	130%	119%	107%

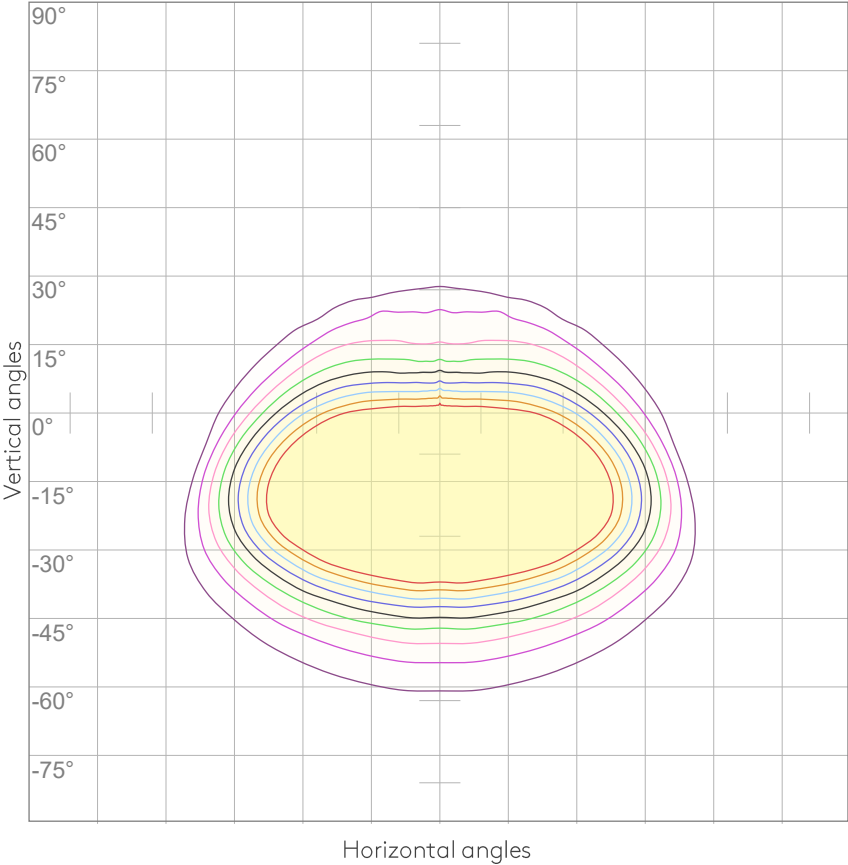
Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
222	220	220	219	219	218	217	215	213	210	206	202	195	188	179	170	160	148	136	123
100%	99%	99%	99%	99%	98%	98%	97%	96%	95%	93%	91%	88%	85%	81%	76%	72%	67%	61%	56%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
56°	98.6°	116.5°	94.8%	76.7%

ISO DIAGRAMS

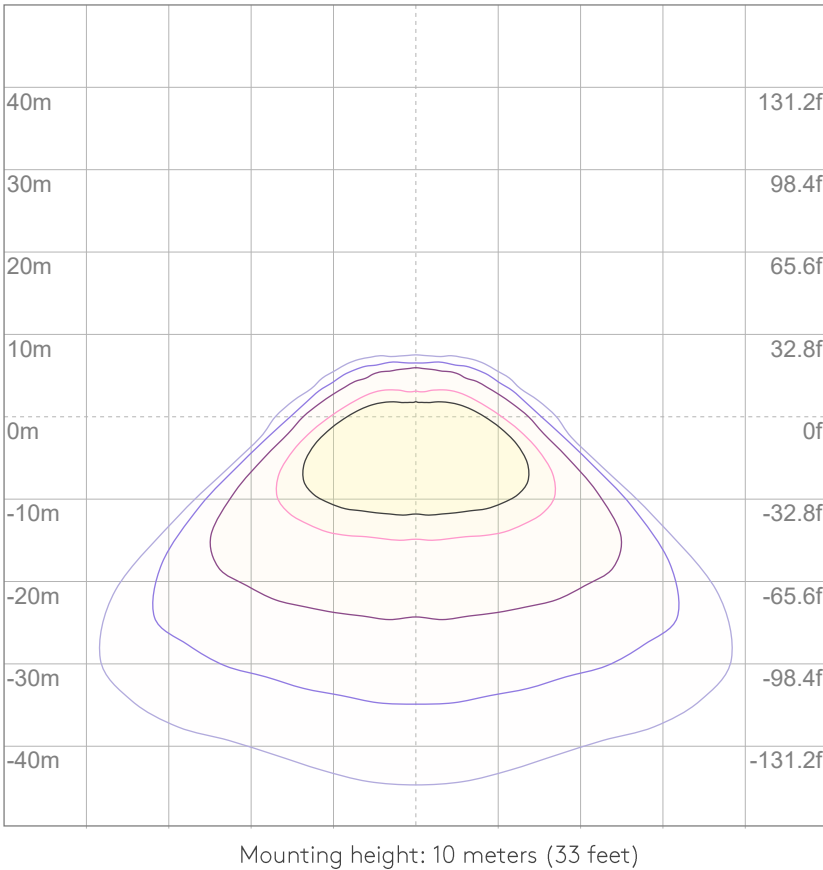
ISO CANDELA DIAGRAM



10%	22 cd
20%	44 cd
30%	67 cd
40%	89 cd
50%	111 cd
60%	133 cd
70%	155 cd
80%	177 cd
90%	200 cd

Conditions:
Number of c-planes: 48
Candela at center: 222 cd

ISO LUX DIAGRAM



3%	66.5m lx
5%	0.111 lx
10%	0.222 lx
30%	0.665 lx
50%	1.11 lx

Conditions:
Number of c-planes: 48
Lux at center: 2.22 lx

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

GLARE EVALUATION ACCORDING TO UGR

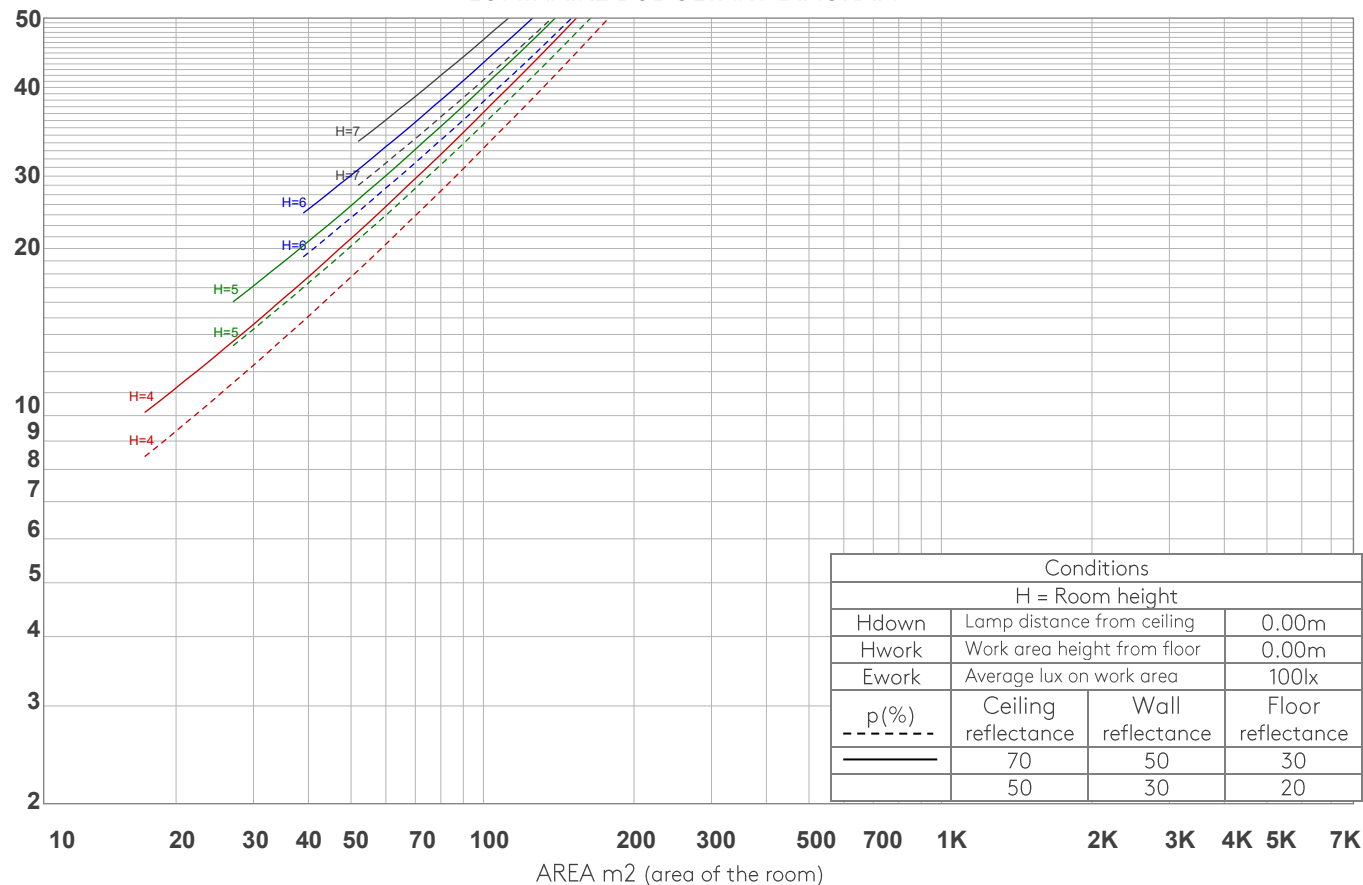
UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

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	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	89	86	83	87	84	81	80
3	97	88	82	77	95	87	81	76	84	79	75	82	77	74	79	76	72	71
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	59	54	76	66	59	54	64	58	53	63	57	53	61	56	52	51
7	73	61	54	49	71	61	53	48	59	53	48	58	52	48	57	51	47	46
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	40	38
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35

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°
21.0 lm	62.6 lm	97.7 lm	100.0 lm	75.5 lm	42.6 lm	16.5 lm	4.36 lm	0.624 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.125 lm	0.045 lm	0.039 lm	0.056 lm	0.071 lm	0.072 lm	0.054 lm	0.033 lm	0.011 lm

Flicker /TLA details

FLICKER

Flicker Meter Type Viso Systems LabFlicker
 Frequency of input power 60 Hz
 Flicker/TLA sample rate 20000 samples/s

Measurement time
 PstLM 180 sec
 All other indices 1,2 sec

Flicker indices according to Illuminating Engineering Society (IES)

Flicker frequency 232.56 Hz
 Percent Flicker 0.35 %
 Flicker index 0

Flicker indices according to California Energy Commission (CEC) 2016b

JA8/10 40 Hz 0.04 %
 JA8/10 90 Hz 0.05 %
 JA8/10 200 Hz 0.11 %
 JA8/10 400 Hz 0.17 %
 JA8/10 1000 Hz 0.21 %

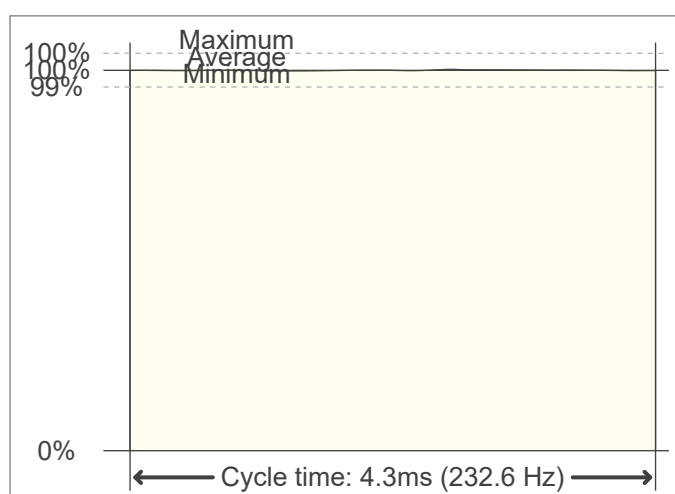
TLA indices (re IEC TR 61547-1, IEC 61000-3-3 and IEC 61000-4-15)

PstLM value ($F < 80$ Hz) 0.02
 SVM value ($80 < F < 2000$ Hz) 0

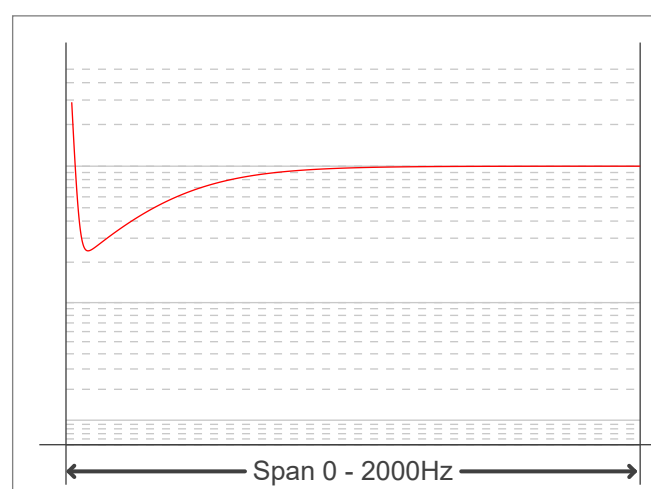
Flicker indices according to Lighting Research Center (2015)

Perception metric, Assist Mp 0.01

Flicker frame (frame of one flicker period in time domain)



Flicker FFT (flicker curve in frequency domain)



IEEE 1789 Frequency/modulation plot

