

PHOTOMETRIC TEST REPORT

GERRIT UL

astro

LIGHT EFFICIENCY:

43 Lumen/Watt

LIGHT QUALITY:

CRI: 93.4

COLOR TEMPERATURE:

3011 K

OUTPUT: 459 lm

PEAK: 170 cd

POWER: 10.6 W

PF: 0.53

Tracking number: [n/a](#)

Product name:

Gerrit UL

Item number:

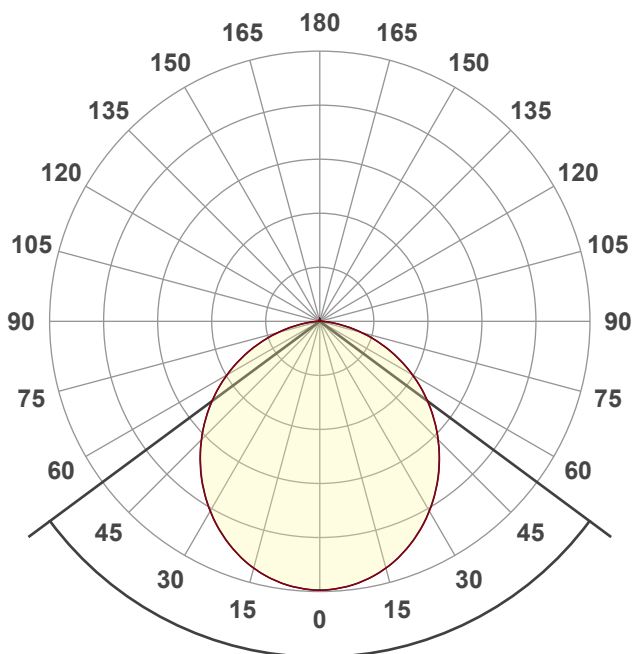
1465002

Date and time:

11/01/2022 11:35:30

Description:

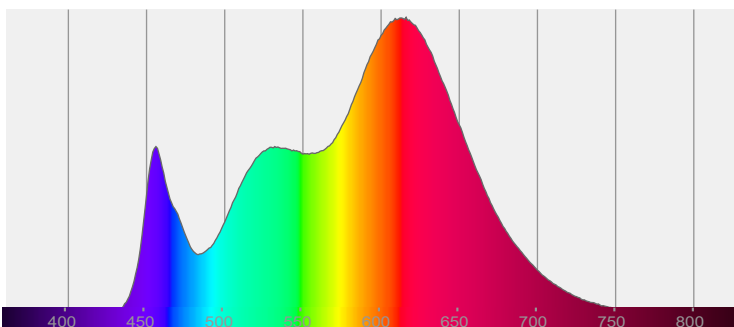
Tested with Gui Jin 12V LED driver at 120V



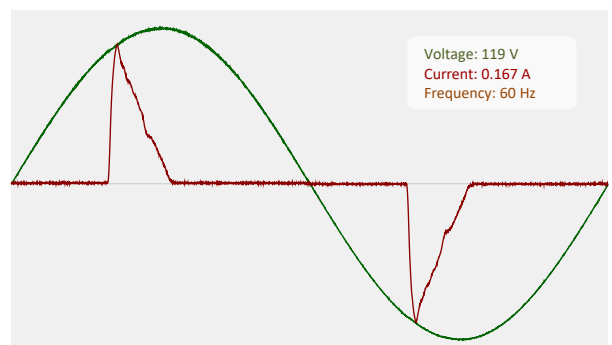
107°

CIE 1931
x: 0.435
y: 0.402

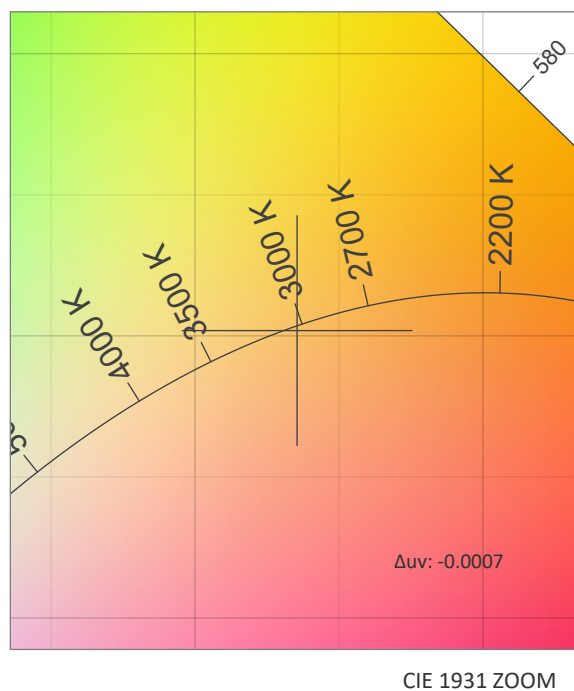
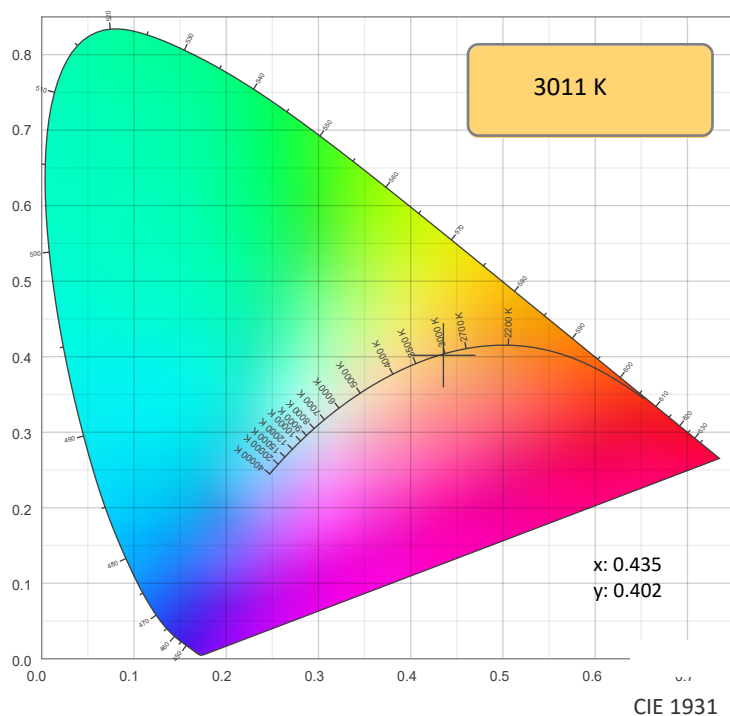
SPECTRA



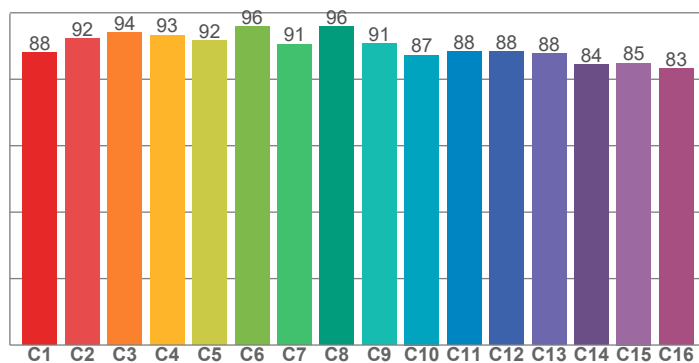
POWER



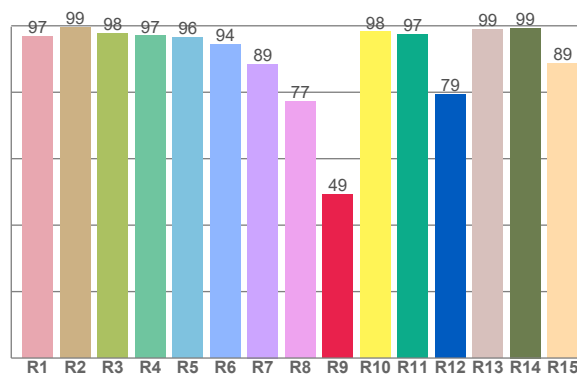
COLOR DETAILS



TM30: 90.0



CRI: 93.4 (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
96.9	99.4	97.8	96.9	96.5	94.3	88.5	77.2	49.3	98.2	97.4	79.4	98.9	99.3	88.6

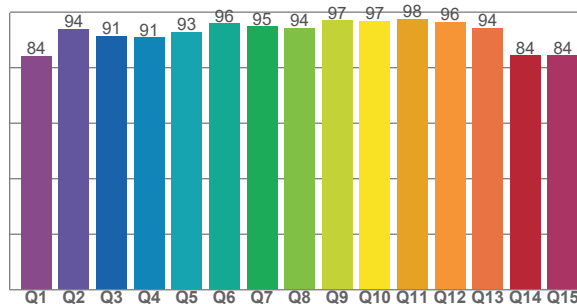
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88.1	92.4	94.1	93.3	91.7	95.7	90.6	95.8	90.7	87.3	88.4	88.2	87.7	84.4	84.9	83.2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84.1	94.0	91.4	90.9	92.8	95.9	94.8	94.2	96.9	96.7	97.5	96.3	94.3	84.4	84.4

CQS: 91.0



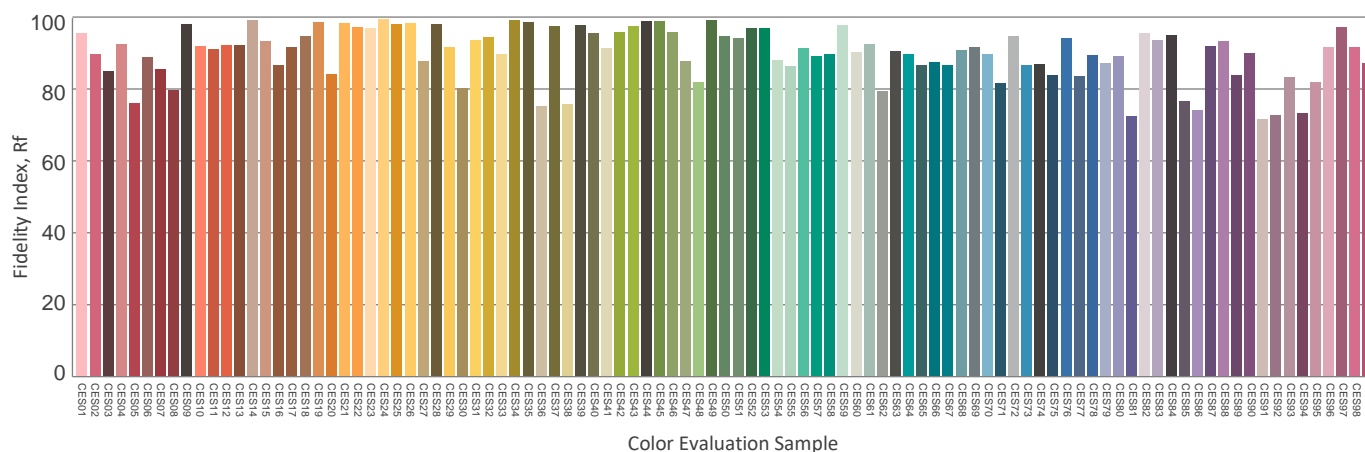
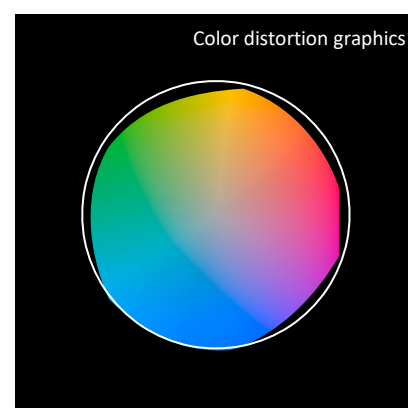
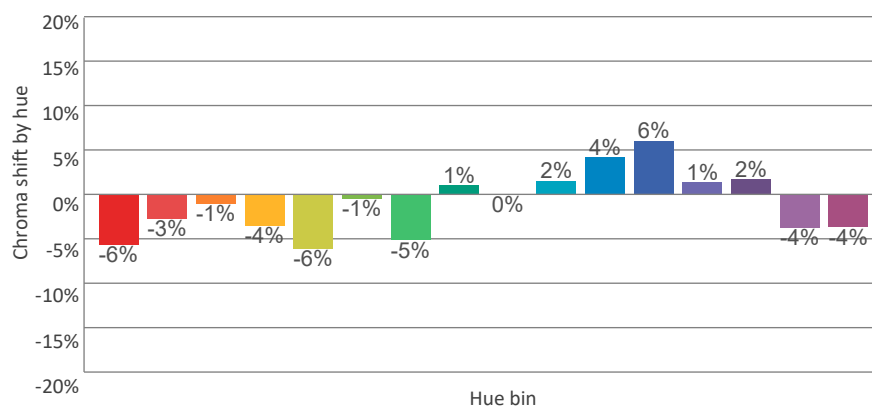
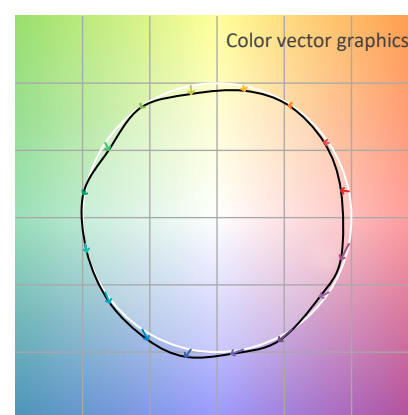
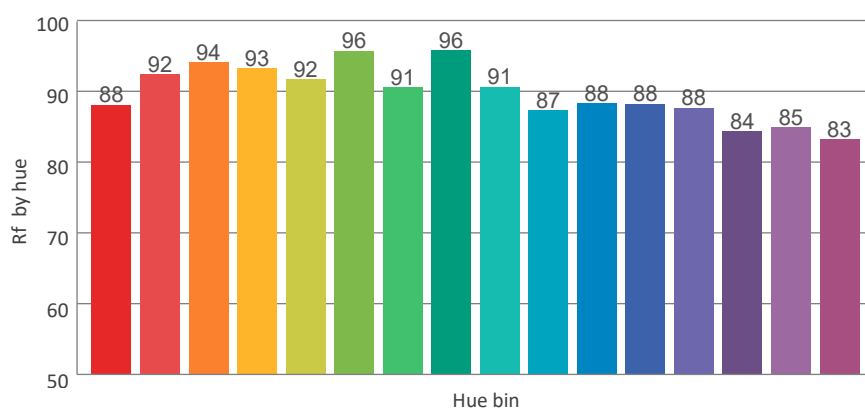
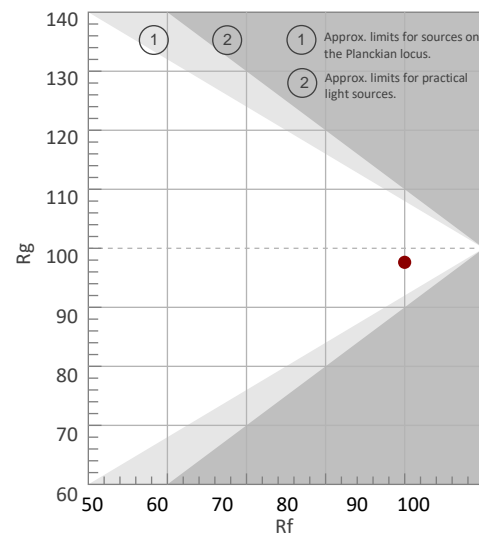
COLOR PARAMETERS

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
3011 K	93.4	49.3	90.0	97.6	91.0	0.435	0.402	0.251	0.347	-0.0007

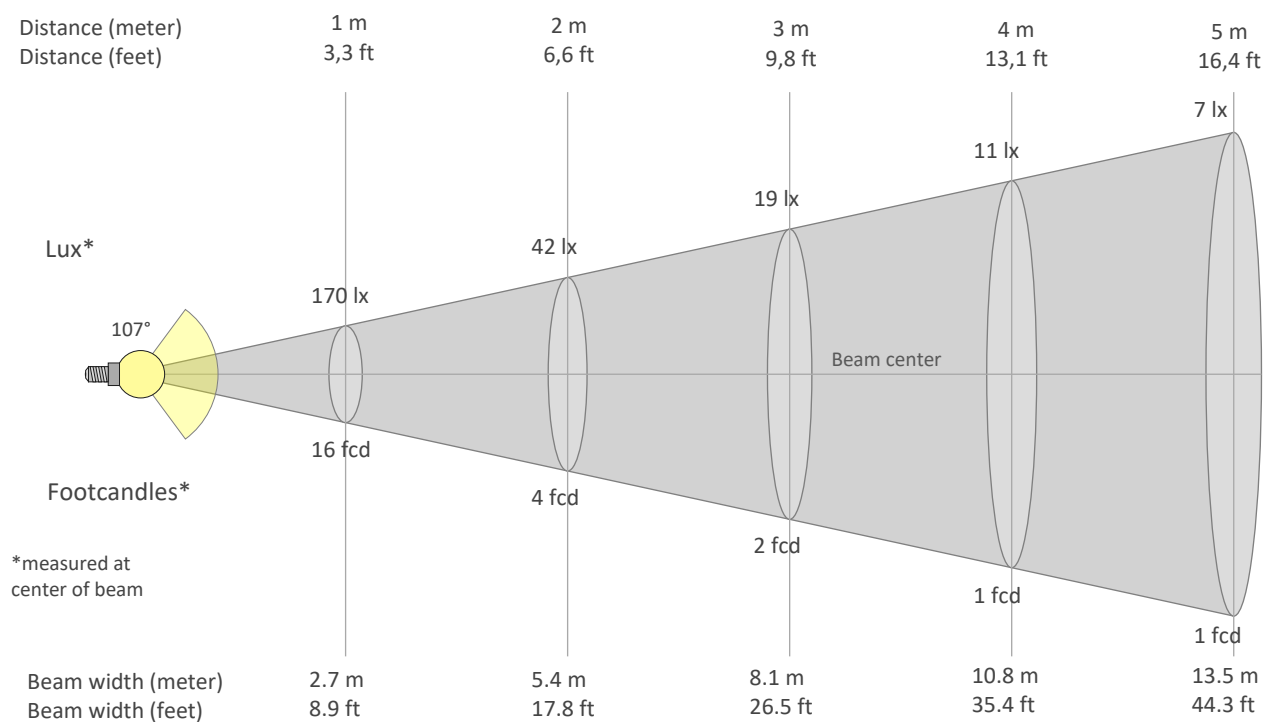
Rf 90.0
Fidelity index Rf

Rg 97.6
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	88	-6%	2%
2	92	-3%	2%
3	94	-1%	2%
4	93	-4%	-2%
5	92	-6%	1%
6	96	-1%	2%
7	91	-5%	3%
8	96	1%	2%
9	91	0%	6%
10	87	2%	8%
11	88	4%	8%
12	88	6%	-3%
13	88	1%	-9%
14	84	2%	-13%
15	85	-4%	-6%
16	83	-4%	-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
170lx	42lx	19lx	11lx	7lx	5lx	3lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx
15.8fcd	3.9fcd	1.8fcd	1fcd	0.6fcd	0.4fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
170	169	166	162	156	148	139	129	118	106	94	81	68	54	41	28	15	6	1	0
100%	100%	98%	95%	92%	87%	82%	76%	69%	63%	55%	48%	40%	32%	24%	16%	9%	4%	1%	0%

Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
170	169	166	162	155	148	139	129	118	106	94	81	68	54	41	28	15	6	1	0
100%	100%	98%	95%	92%	87%	82%	76%	69%	62%	55%	48%	40%	32%	24%	16%	9%	4%	1%	0%

Intensities in 180° c-plane

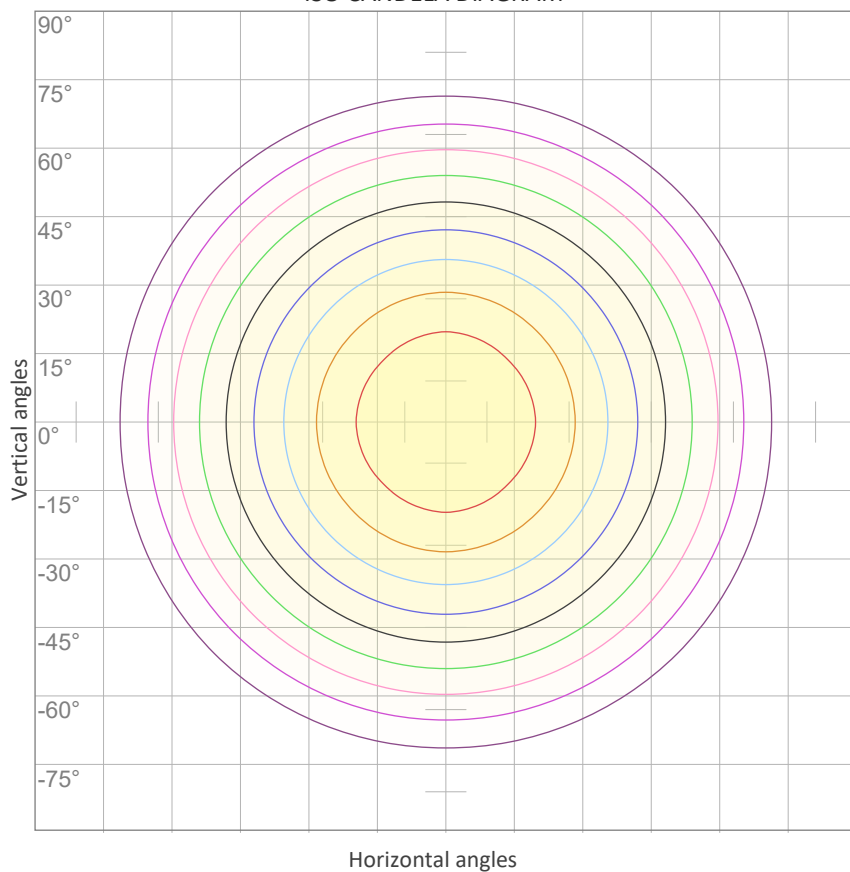
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
170	169	166	162	156	148	139	129	118	106	94	81	68	54	41	28	15	6	1	0
100%	100%	98%	95%	92%	87%	82%	76%	69%	63%	55%	48%	40%	32%	24%	16%	9%	4%	1%	0%

Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
170	169	166	162	155	148	139	129	118	106	94	81	68	54	41	28	15	6	1	0
100%	100%	98%	95%	92%	87%	82%	76%	69%	62%	55%	48%	40%	32%	24%	16%	9%	4%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
107°	159°	174.2°	79.3%	54.7%

ISO CANDELA DIAGRAM



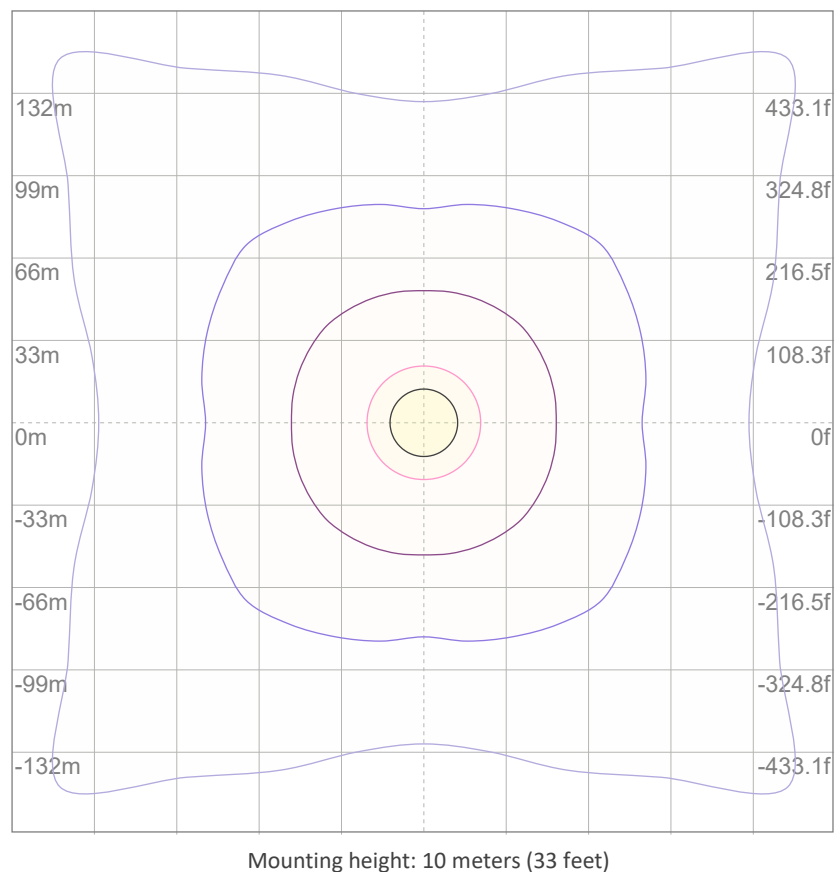
10%	17 cd
20%	34 cd
30%	51 cd
40%	68 cd
50%	85 cd
60%	102 cd
70%	119 cd
80%	136 cd
90%	153 cd

Conditions:

Number of c-planes: 8

Candela at center: 170 cd

ISO LUX DIAGRAM



3%	50.9m lx
5%	84.9m lx
10%	0.170 lx
30%	0.509 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 1.70 lx

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

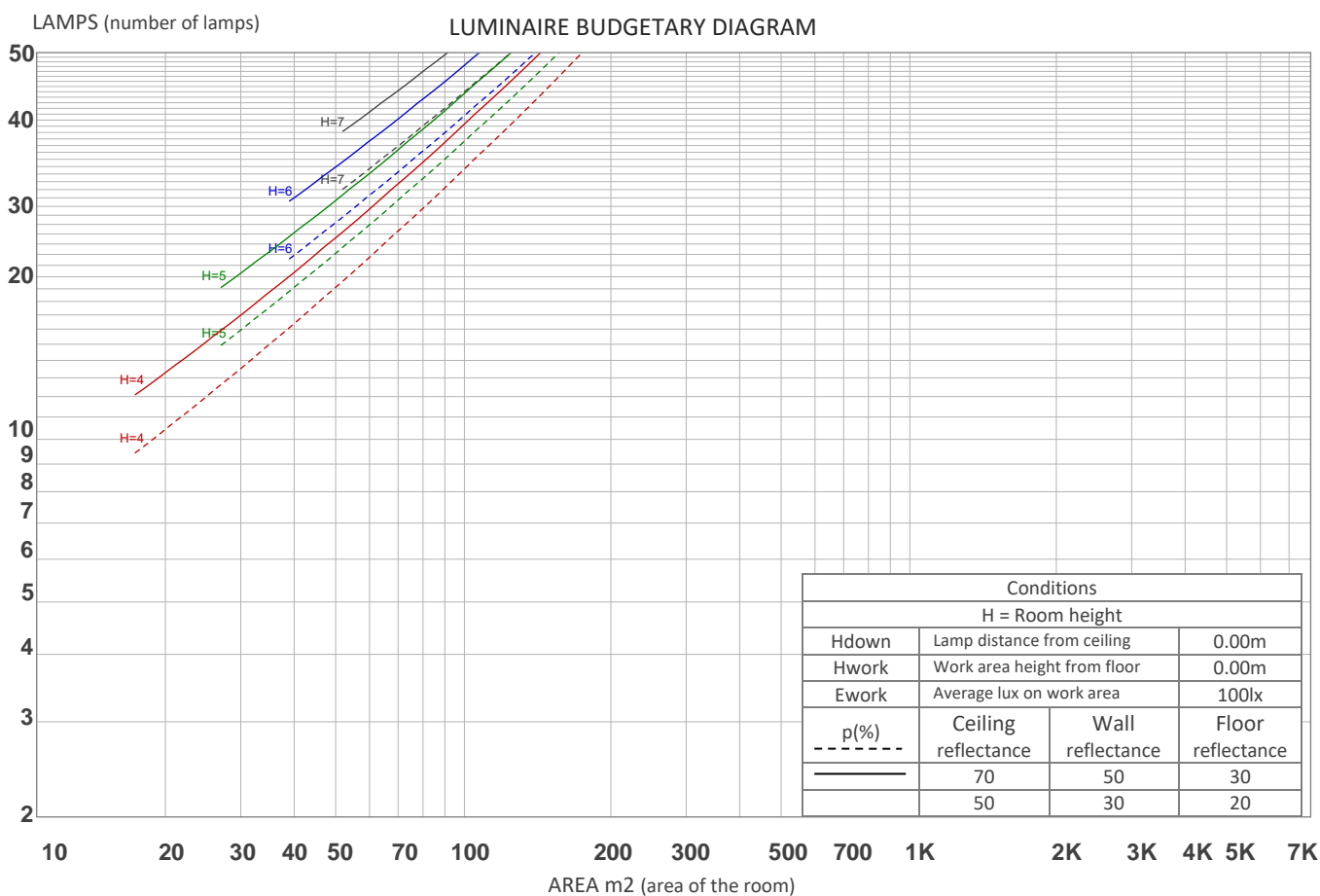
UGR

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	28.9	30.0	29.1	30.4	30.6	28.8	30.0	29.1	30.4	30.6
	3H	29.7	30.9	30.1	31.2	31.4	29.7	30.9	30.1	31.2	31.4
	4H	30.0	31.1	30.4	31.4	31.7	29.9	31.1	30.4	31.4	31.7
	6H	30.1	31.2	30.5	31.5	31.9	30.1	31.2	30.5	31.5	31.9
	8H	30.1	31.2	30.5	31.5	31.9	30.1	31.1	30.5	31.5	31.9
	12H	30.1	31.1	30.5	31.4	31.9	30.1	31.1	30.5	31.4	31.9
4H	2H	29.1	30.3	29.5	30.6	30.9	29.1	30.3	29.5	30.6	30.9
	3H	30.2	31.2	30.6	31.5	32.0	30.2	31.2	30.6	31.5	32.0
	4H	30.5	31.4	31.0	31.8	32.4	30.5	31.4	31.0	31.8	32.4
	6H	30.7	31.6	31.2	31.9	32.3	30.7	31.5	31.2	31.9	32.3
	8H	30.7	31.5	31.2	31.9	32.3	30.7	31.5	31.2	31.9	32.3
	12H	30.7	31.4	31.2	31.8	32.3	30.7	31.4	31.2	31.8	32.3
8H	4H	30.6	31.4	31.1	31.7	32.1	30.6	31.4	31.1	31.7	32.1
	6H	30.8	31.4	31.4	31.9	32.5	30.8	31.4	31.4	31.9	32.5
	8H	30.9	31.4	31.5	32.0	32.6	30.9	31.4	31.4	32.0	32.6
	12H	30.9	31.4	31.5	31.9	32.5	30.9	31.4	31.5	31.9	32.5
12H	4H	30.6	31.2	31.1	31.6	32.1	30.5	31.2	31.1	31.6	32.1
	6H	30.9	31.4	31.4	31.9	32.6	30.9	31.4	31.4	31.9	32.6
	8H	30.9	31.4	31.5	31.9	32.5	30.9	31.4	31.5	31.9	32.5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.1 / -0.3					0.1 / -0.3				
S = 1.5H		0.6 / -0.8					0.6 / -0.8				
S = 2.0H		1.4 / -1.6					1.3 / -1.6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 459 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	89	87	86	83
2	99	91	84	78	96	89	83	77	85	80	75	82	77	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	64	58	53	62	57	53	50
5	76	63	54	48	74	62	54	48	60	53	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	42	54	47	41	52	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	37	48	41	36	46	40	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25



ZONAL LUMEN SUMMARY

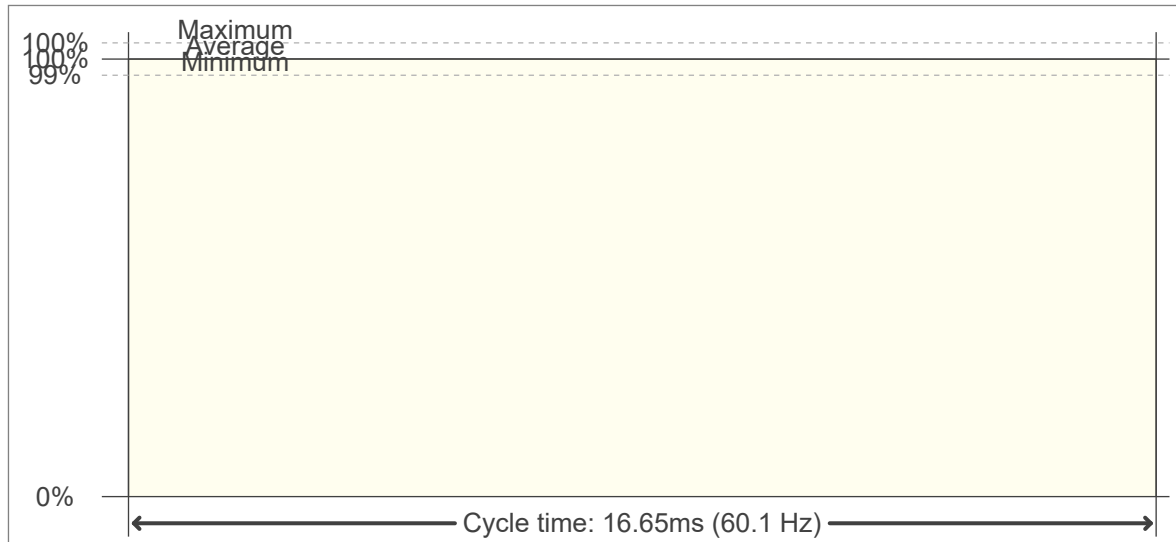
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
16.0 lm	45.5 lm	68.0 lm	80.4 lm	81.8 lm	72.4 lm	53.9 lm	29.5 lm	7.91 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0.672 lm	0.419 lm	0.487 lm	0.528 lm	0.542 lm	0.496 lm	0.395 lm	0.262 lm	0.092 lm

FLICKER

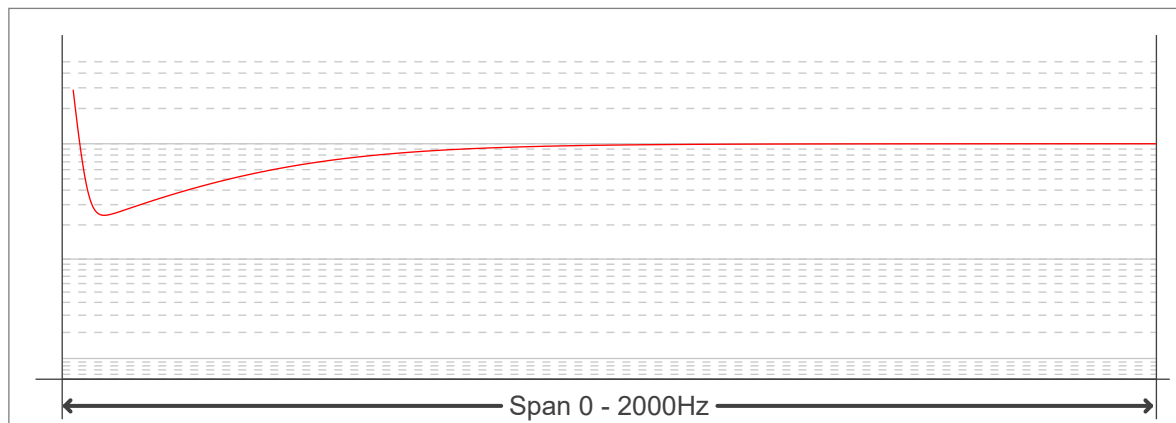
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	60.06 Hz
Flicker index:	0
Flicker percentage:	0.06 %
SVM: (Visual flicker)	0

FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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