

PHOTOMETRIC TEST REPORT

MALLON LED MATT NICKEL 3000K

astro

LIGHT EFFICIENCY:

49 Lumen/Watt

OUTPUT: 730 lm

LIGHT QUALITY:

CRI: 91.8

PEAK: 243 cd

COLOR TEMPERATURE:

2976 K

POWER: 14.9 W

PF: 0.97

Tracking number: [n/a](#)

Product name:

Mallon LED Matt Nickel 3000K

Item number:

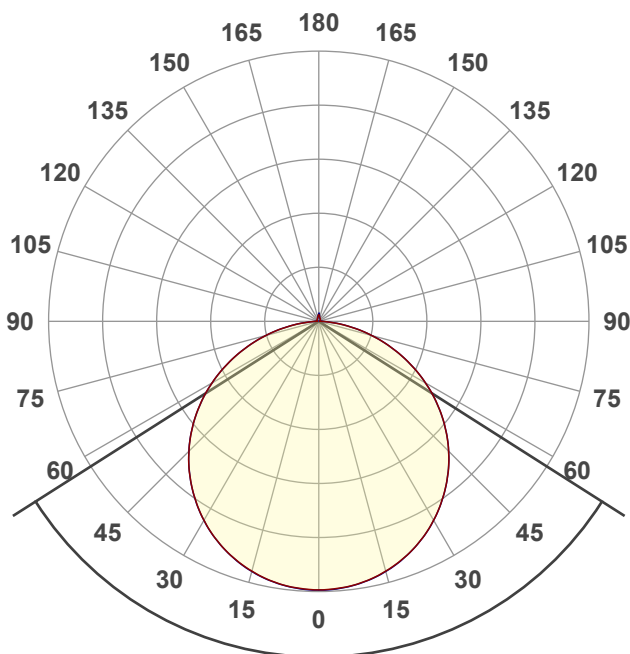
1125015

Date and time:

08/12/2021 11:15:48

Description:

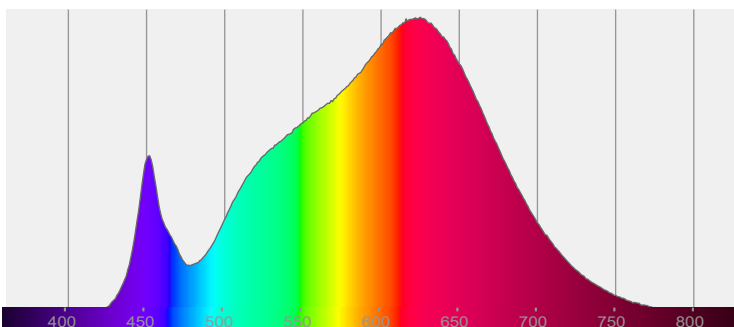
IP44 LED Bathroom Ceiling Light



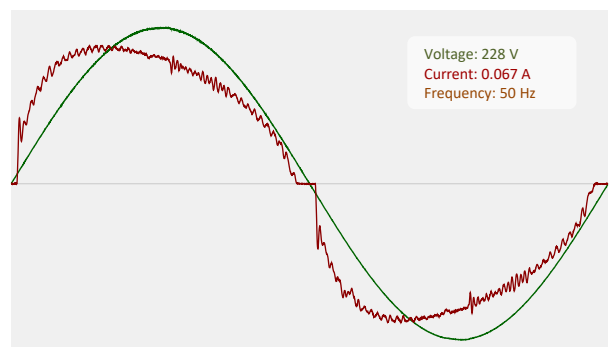
115.1°

CIE 1931
x: 0.440
y: 0.407

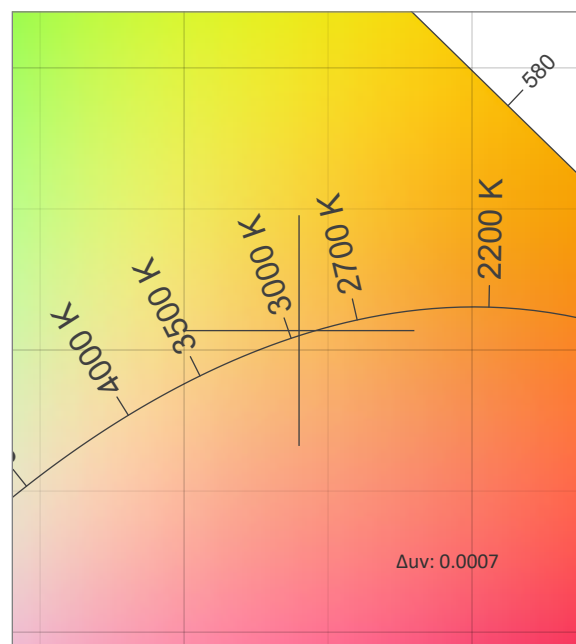
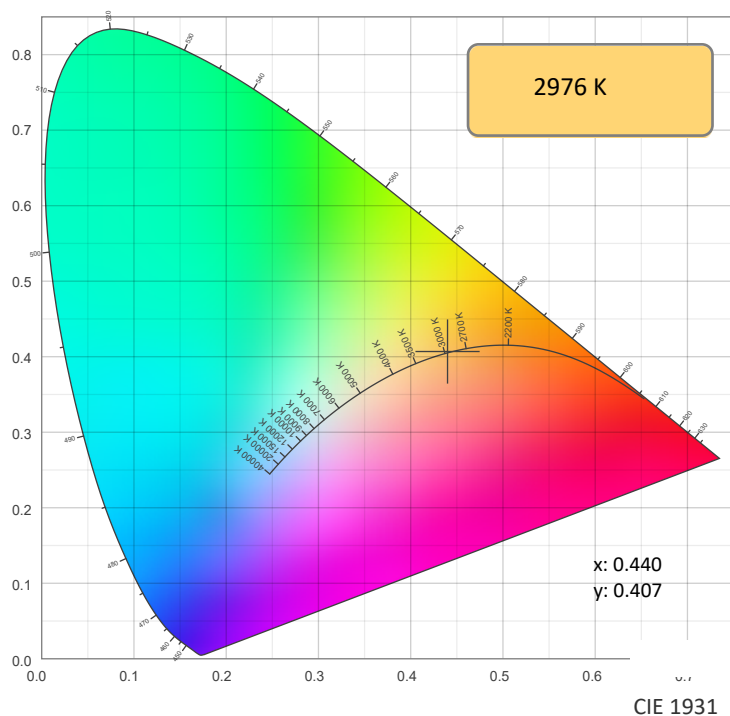
SPECTRA



POWER

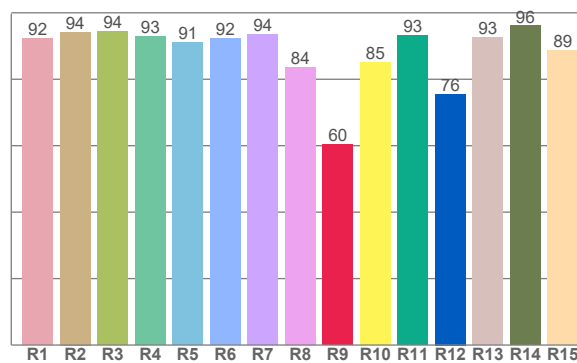
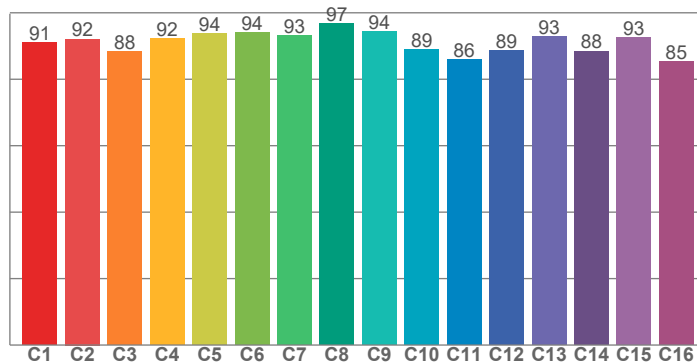


COLOR DETAILS



TM30: 91.0

CRI: 91.8 (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
92.3	94.2	94.5	92.9	91.2	92.3	93.6	83.5	60.4	85.1	93.1	75.6	92.7	96.0	88.6

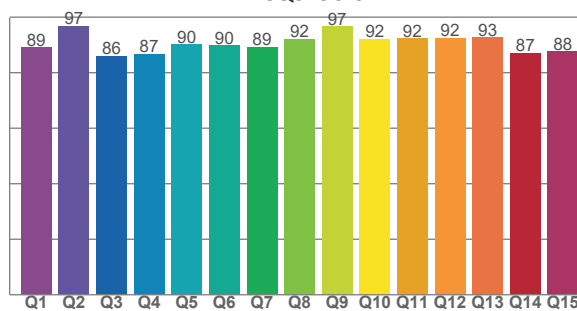
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.0	92.1	88.3	92.2	93.8	94.1	93.2	96.6	94.3	88.9	85.9	88.5	92.8	88.5	92.5	85.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89.0	96.8	85.9	86.6	90.1	89.8	89.1	92.2	96.6	92.2	92.2	92.5	92.6	87.0	87.6

CQS: 90.0



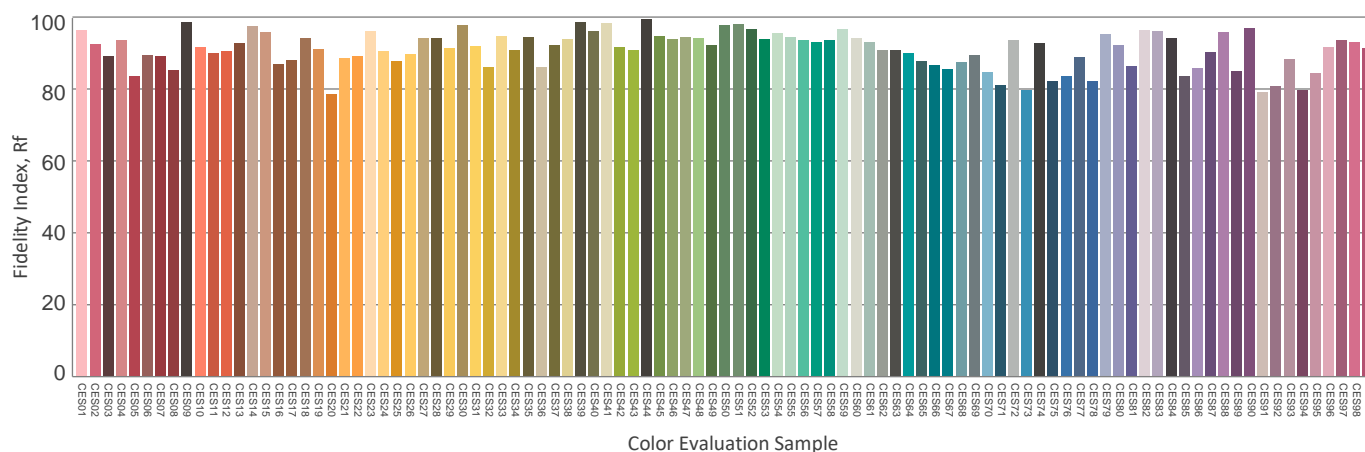
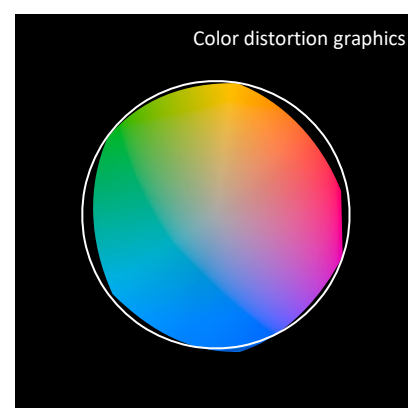
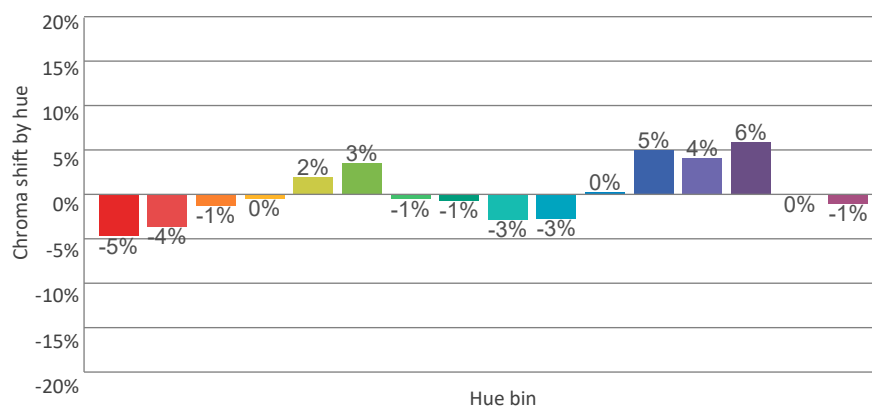
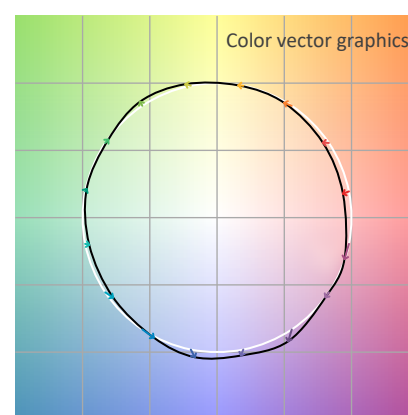
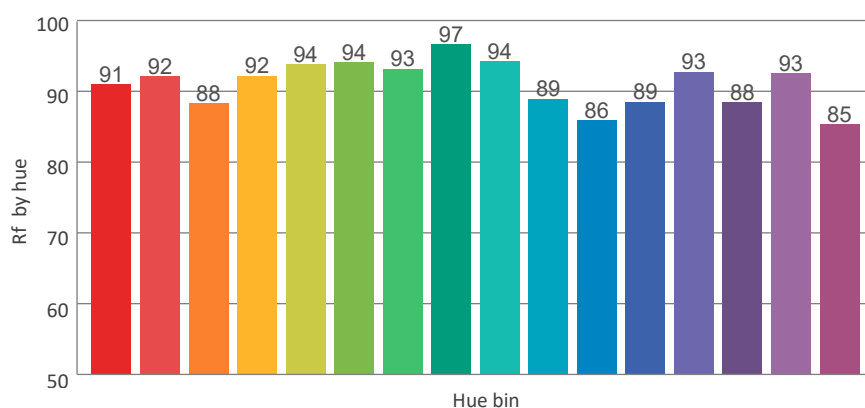
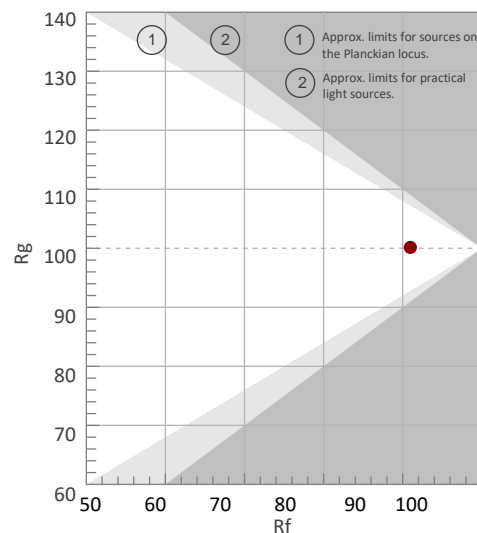
COLOR PARAMETERS

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
2976 K	91.8	60.4	91.0	100.2	90.0	0.440	0.407	0.251	0.349	0.0007

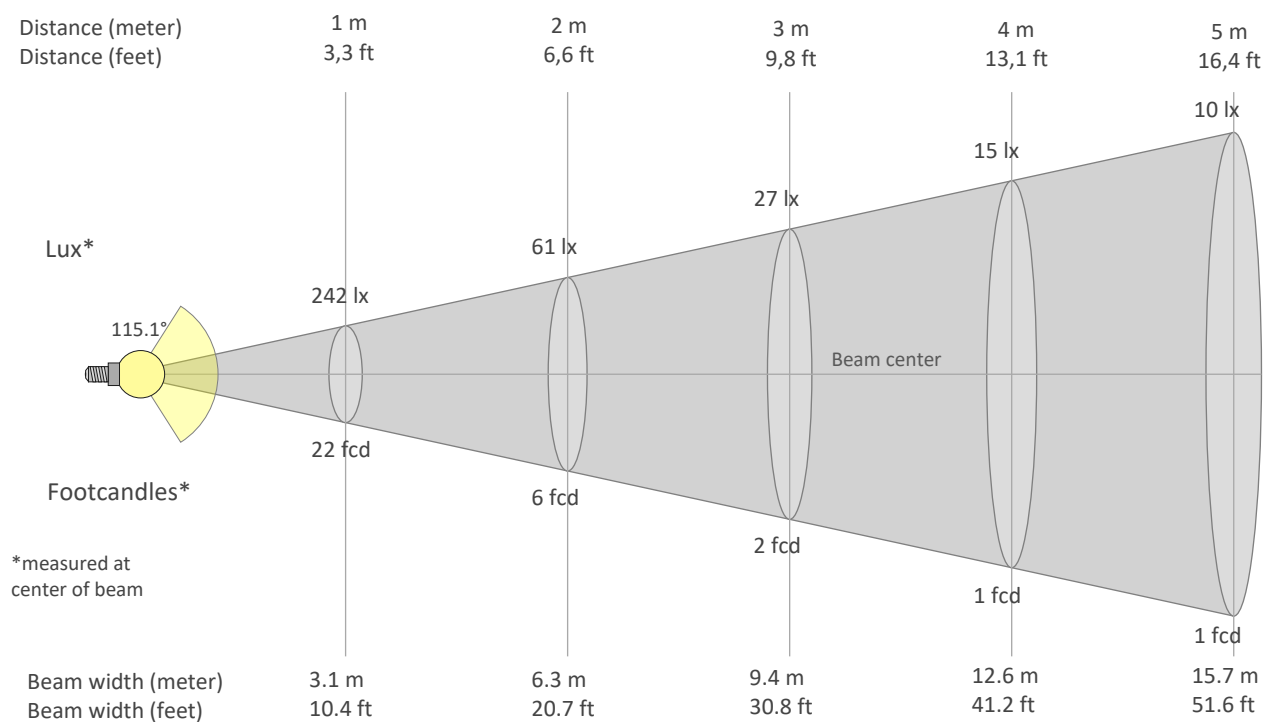
Rf 91.0
Fidelity index Rf

Rg 100.2
Gammut index Rg

Hue Bin	Graphic shifts (%)		
	R _f	Chroma	Hue
1	91	-5%	-1%
2	92	-4%	3%
3	88	-1%	6%
4	92	0%	4%
5	94	2%	4%
6	94	3%	0%
7	93	-1%	-3%
8	97	-1%	-2%
9	94	-3%	1%
10	89	-3%	6%
11	86	0%	10%
12	89	5%	4%
13	93	4%	-2%
14	88	6%	-7%
15	93	0%	-4%
16	85	-1%	-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
242lx	61lx	27lx	15lx	10lx	7lx	5lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
22.5fcd	5.6fcd	2.5fcd	1.4fcd	0.9fcd	0.6fcd	0.5fcd	0.4fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

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°
242	242	239	234	227	218	208	195	182	166	149	131	112	91	71	50	30	13	3	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	21%	12%	5%	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°
242	242	239	234	227	218	208	195	181	166	149	131	111	91	70	50	30	13	3	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	21%	12%	5%	1%	0%

Intensities in 180° c-plane

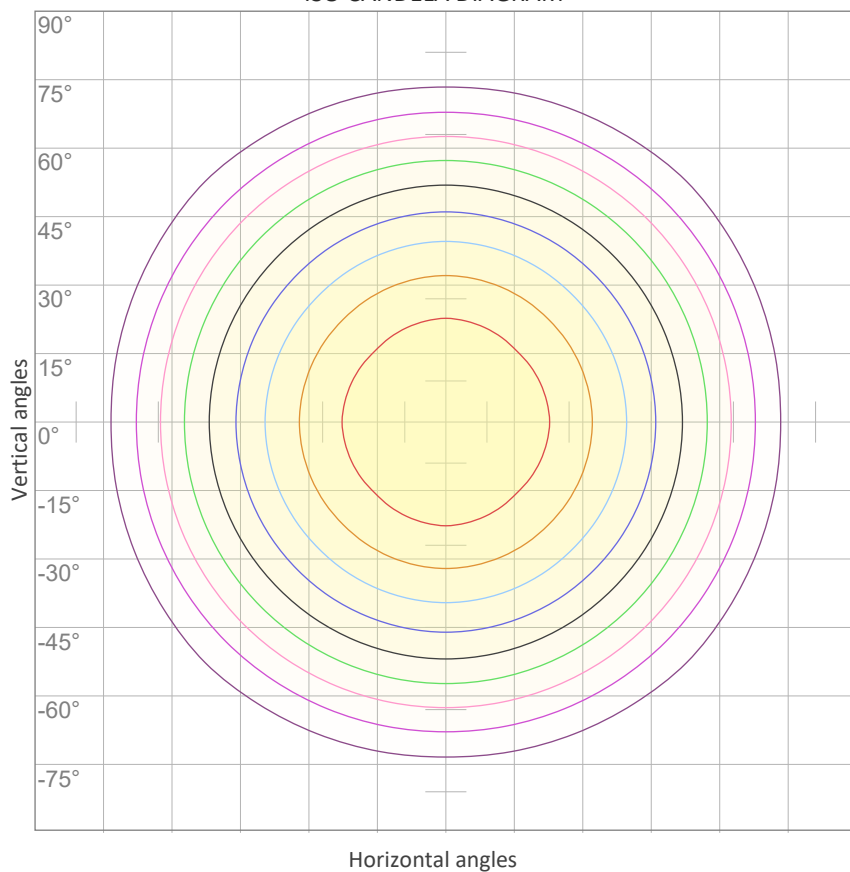
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
242	242	239	234	227	218	208	195	182	166	149	131	112	91	71	50	30	13	3	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	21%	12%	5%	1%	0%

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°
242	242	239	234	227	218	208	195	181	166	149	131	111	91	70	50	30	13	3	1
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	21%	12%	5%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115.1°	164.4°	225.9°	76.2%	51.4%

ISO CANDELA DIAGRAM



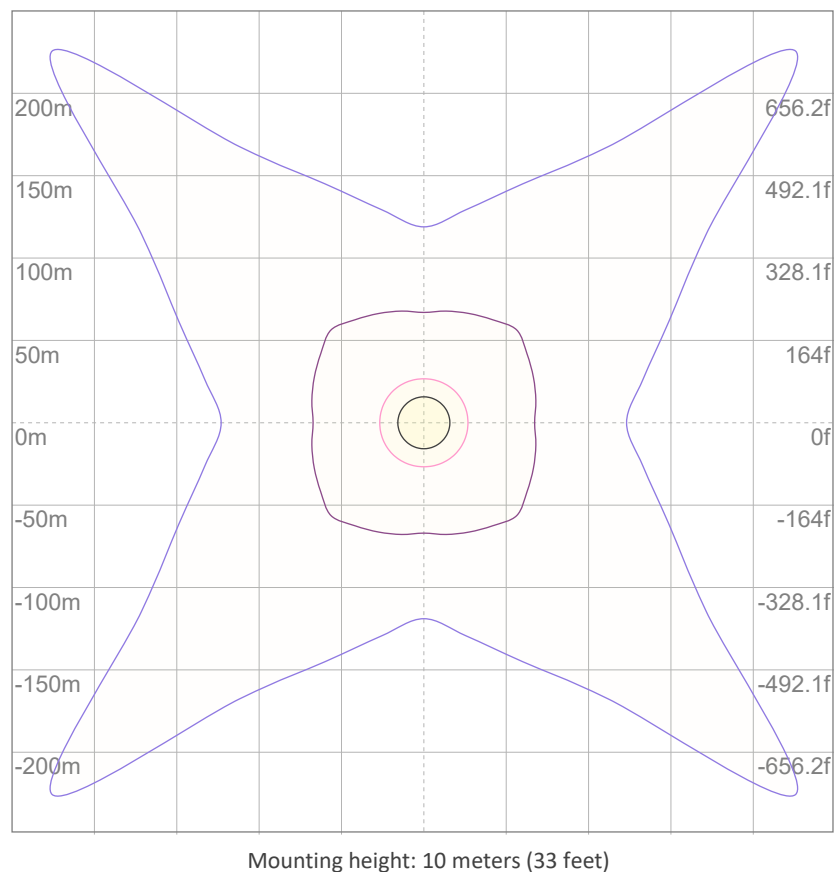
10%	24 cd
20%	48 cd
30%	73 cd
40%	97 cd
50%	121 cd
60%	145 cd
70%	169 cd
80%	194 cd
90%	218 cd

Conditions:

Number of c-planes: 8

Candela at center: 242 cd

ISO LUX DIAGRAM



3%	72.6 lx
5%	0.121 lx
10%	0.242 lx
30%	0.726 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 8

Lux at center: 2.42 lx

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

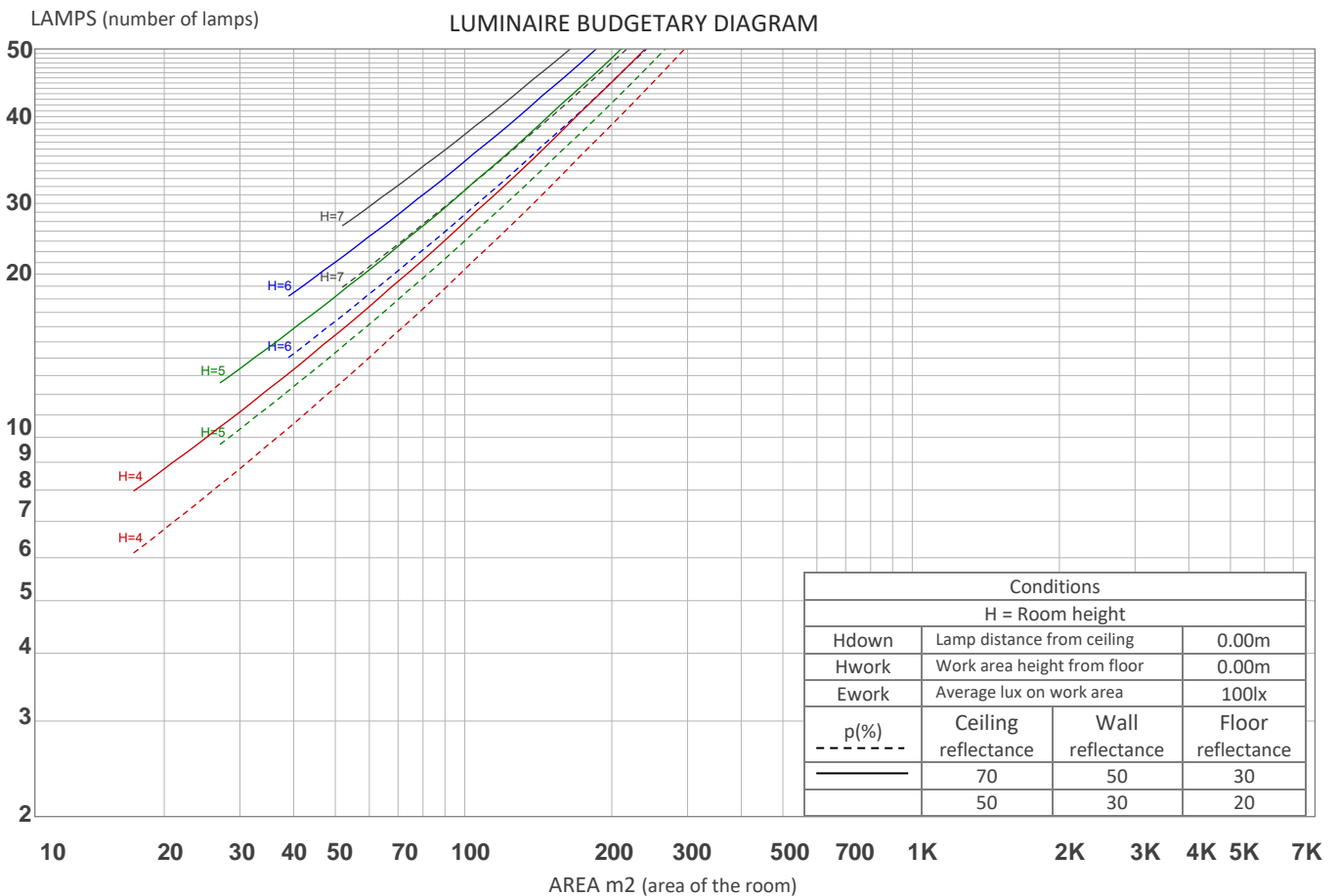
UGR

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	20.0	21.2	20.3	21.6	21.8	20.0	21.2	20.3	21.6	21.8
	3H	20.9	22.1	21.3	22.4	22.7	20.8	22.1	21.3	22.4	22.7
	4H	21.2	22.4	21.6	22.7	23.0	21.2	22.4	21.6	22.7	23.0
	6H	21.4	22.4	21.7	22.7	23.2	21.4	22.4	21.7	22.7	23.1
	8H	21.4	22.4	21.8	22.8	23.2	21.4	22.4	21.7	22.7	23.2
	12H	21.4	22.4	21.8	22.7	23.2	21.4	22.4	21.8	22.7	23.2
4H	2H	20.4	21.6	20.8	21.9	22.2	20.4	21.6	20.8	21.9	22.2
	3H	21.5	22.5	21.9	22.9	23.4	21.5	22.5	21.9	22.9	23.4
	4H	21.8	22.8	22.3	23.2	23.8	21.8	22.8	22.3	23.2	23.8
	6H	22.1	23.0	22.6	23.3	23.7	22.1	22.9	22.6	23.3	23.7
	8H	22.1	22.9	22.6	23.3	23.7	22.1	22.9	22.6	23.3	23.7
	12H	22.1	22.8	22.6	23.2	23.8	22.1	22.8	22.6	23.2	23.7
8H	4H	22.0	22.8	22.5	23.2	23.6	22.0	22.8	22.5	23.2	23.6
	6H	22.3	22.9	22.8	23.4	24.0	22.3	22.9	22.8	23.4	24.0
	8H	22.4	22.9	22.9	23.5	24.2	22.4	22.9	22.9	23.5	24.1
	12H	22.4	22.9	23.1	23.4	24.1	22.4	22.9	23.0	23.4	24.1
12H	4H	21.9	22.6	22.5	23.1	23.6	21.9	22.6	22.5	23.1	23.6
	6H	22.3	22.9	22.9	23.4	24.1	22.3	22.9	22.9	23.4	24.1
	8H	22.4	22.9	23.0	23.4	24.1	22.4	22.9	23.0	23.4	24.0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.2 / -0.3					0.2 / -0.3				
S = 1.5H		0.4 / -0.7					0.4 / -0.7				
S = 2.0H		0.9 / -1.3					0.9 / -1.3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 730 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	110	110	110	105	105	105	100	100	100	98
1	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	81
2	98	90	83	77	95	87	81	76	84	78	74	80	76	72	77	73	70	67
3	89	78	70	63	86	77	69	63	73	67	61	70	65	60	68	63	59	57
4	82	69	60	54	79	68	60	53	65	58	52	63	56	51	60	55	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	25
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23



ZONAL LUMEN SUMMARY

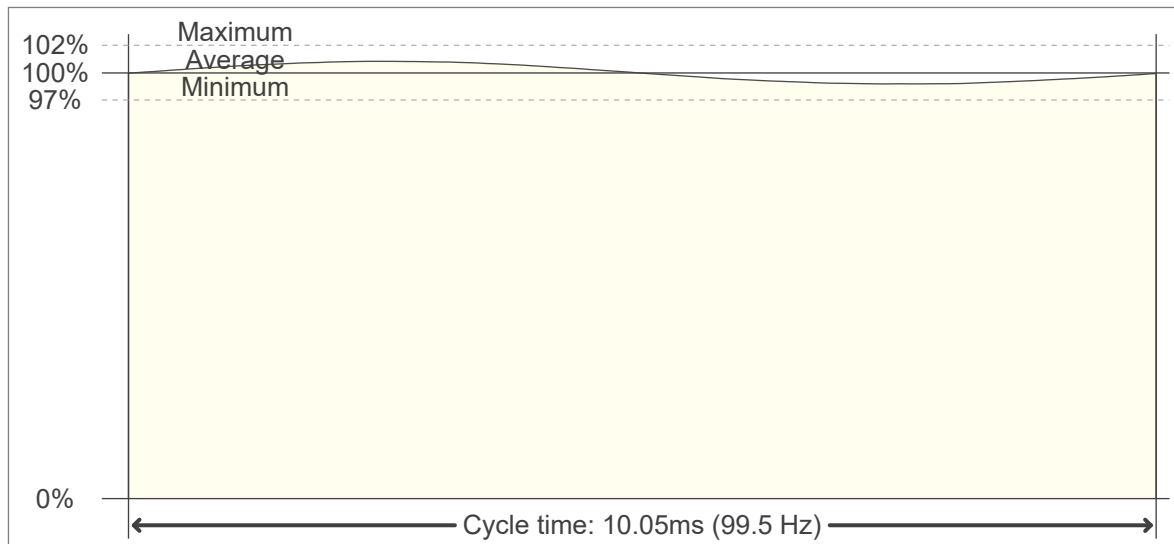
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
22.9 lm	65.8 lm	100 lm	122 lm	128 lm	117 lm	90.3 lm	53.4 lm	17.7 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2.44 lm	1.27 lm	1.44 lm	1.54 lm	1.57 lm	1.47 lm	1.27 lm	0.975 lm	0.455 lm

FLICKER

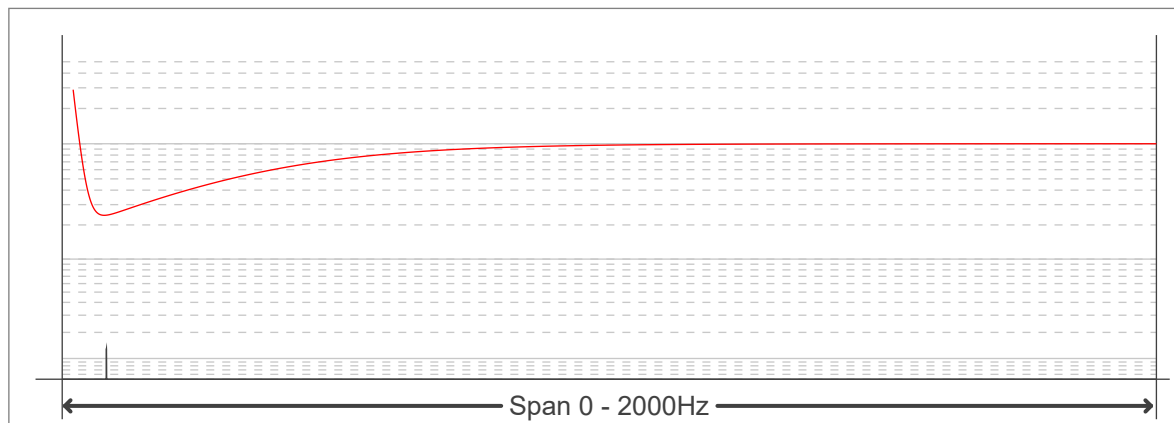
FLICKER CURVE (COMPLETE SAMPLED FLICKER)



FLICKER FRAME (FRAME OF ONE FLICKER PERIOD)



FLICKER FFT (FREQUENCY SCOPE OF FLICKER CURVE)



FLICKER RESULTS:

Flicker frequency:	99.5 Hz
Flicker index:	0.01
Flicker percentage:	2.85 %
SVM: (Visual flicker)	0.1

FLICKER CONDITIONS:

Sample rate:	20000 samples/second
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