

Light efficiency:

160 Lumen/Watt

Light quality:

CRI: 96.8

Color temperature:

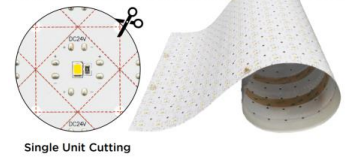
3018 K

Output: 3275 lm

Peak: 1085 cd

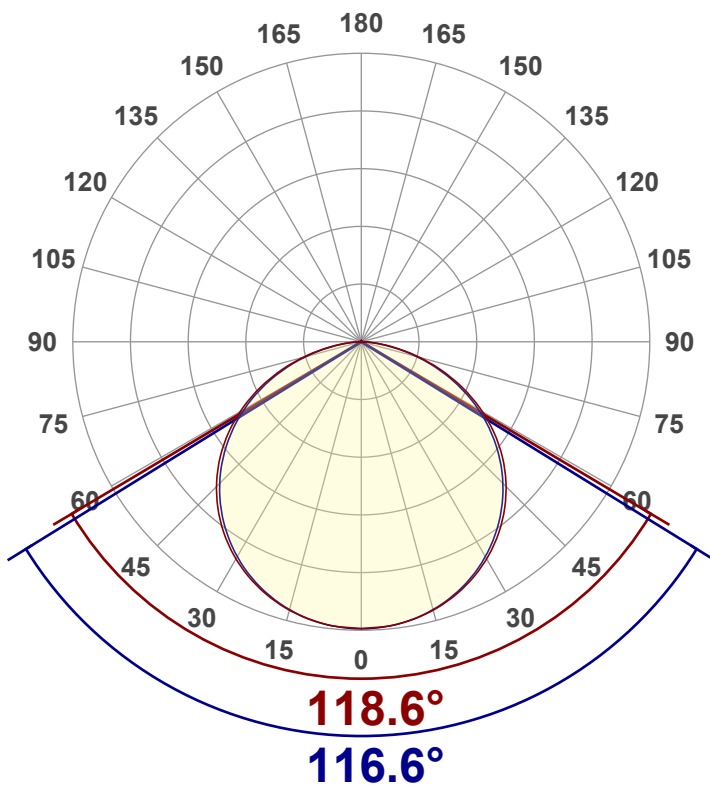
Power: 20.4 W

PF: 1.0



RoHS

IP20



Tracking number: [n/a](#)

Product name:
FBL24202230

Item number:
EU150435

Date and time:
12/8/2025 3:38:53 PM

Operator:
FC

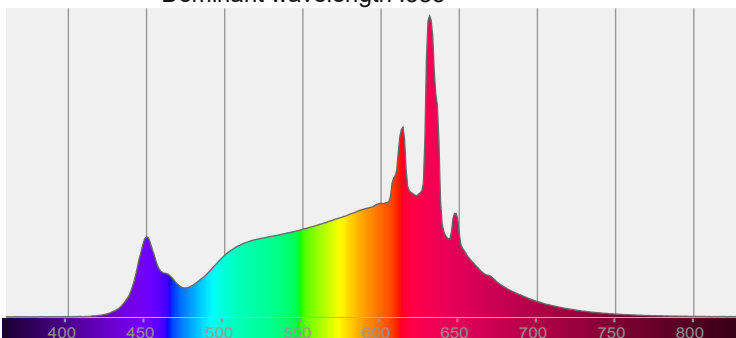
Description:
3000K-61X60.5-22W



CIE 1931
x: 0.436
y: 0.405

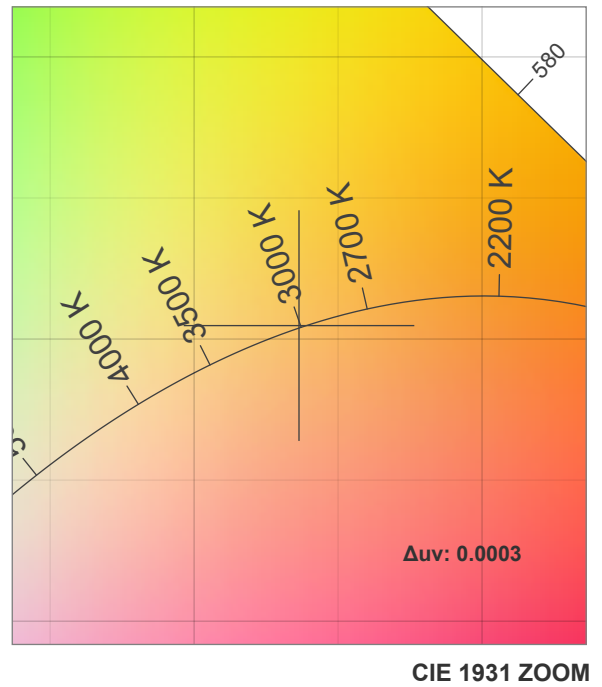
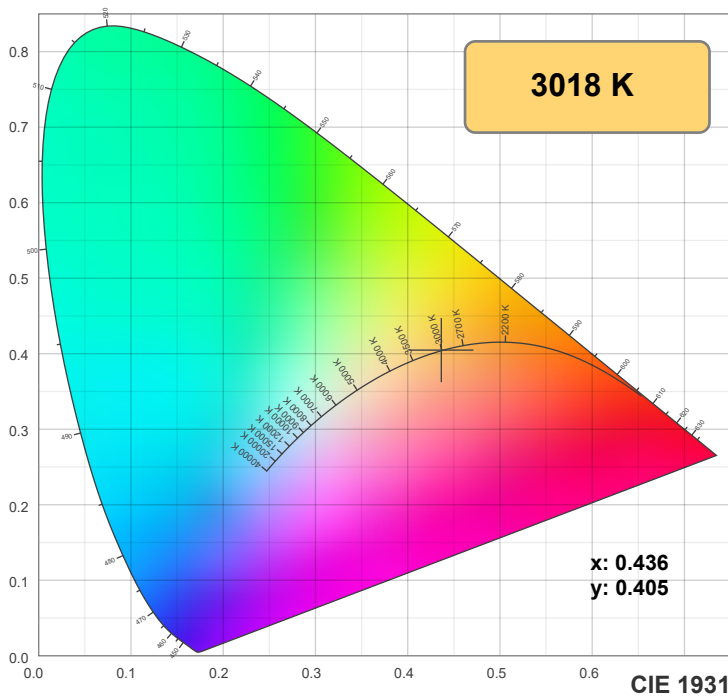
Spectra: Peak wavelength :631

Dominant wavelength :583

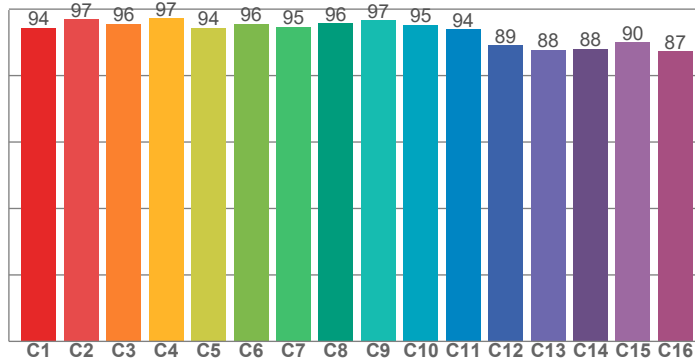


Power

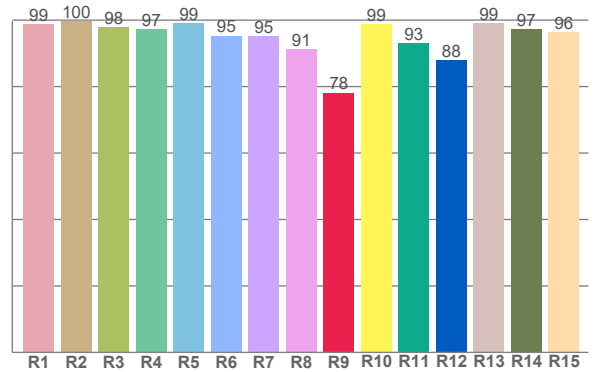
Voltage: 24.0 V
Current: 0.851 A
Frequency: 0 Hz



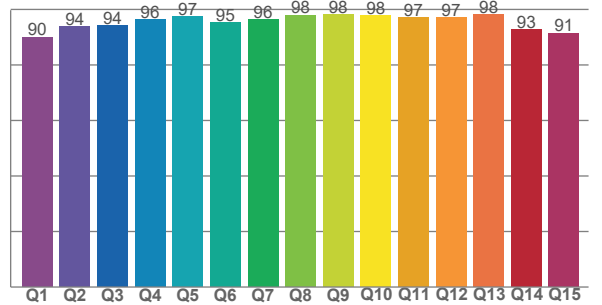
TM-30: 93.9



CRI: 96.8 (R1-R8)



CQS: 94.6



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
98.8	99.8	97.8	97.3	99.0	95.3	95.3	91.2	78.2	98.7	92.9	88.0	99.0	97.3	96.3

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
94.3	97.0	95.6	97.3	94.3	95.6	94.6	95.7	96.6	95.3	94.0	89.1	87.8	88.1	90.0	87.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90.0	93.8	94.1	96.4	97.4	95.3	96.4	98.0	98.1	97.7	97.0	97.1	98.0	92.9	91.5

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
3018 K	96.8	78.2	93.9	100.5	94.6	0.436	0.405	0.250	0.348	0.0003

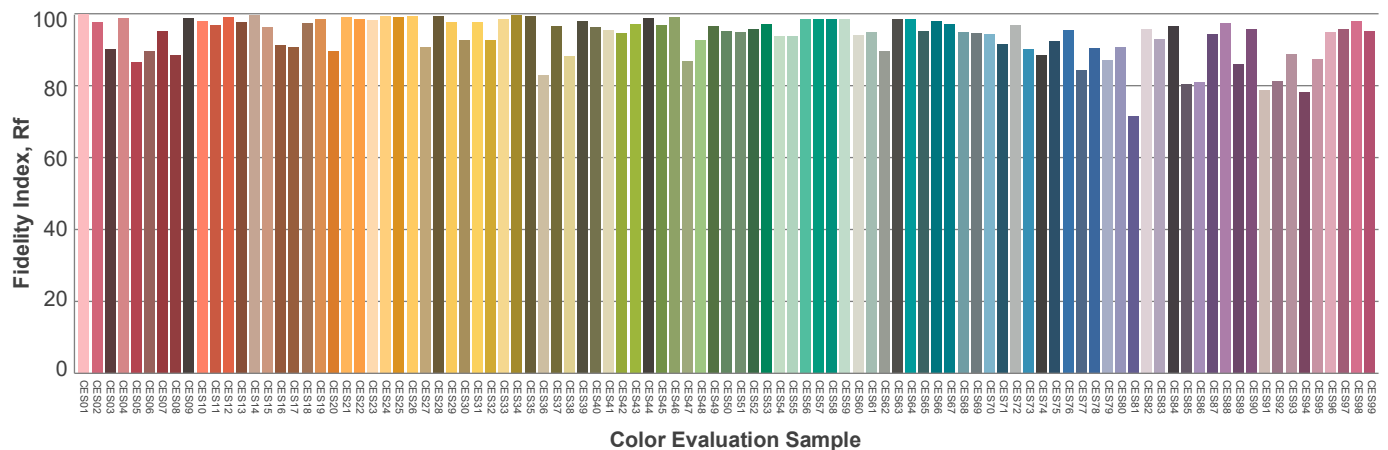
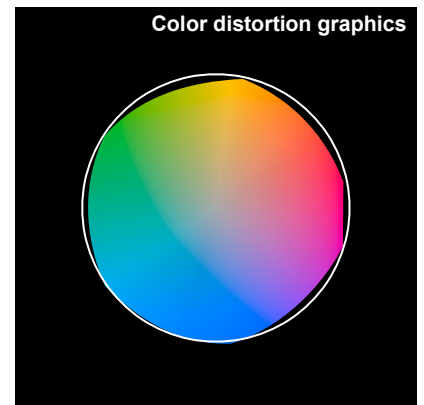
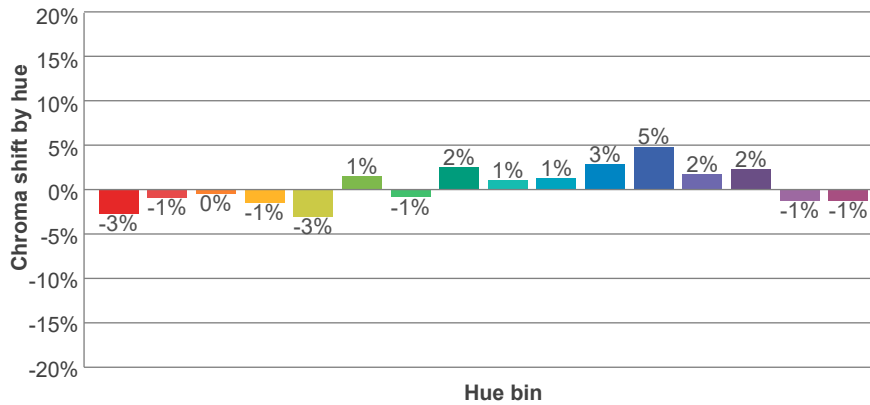
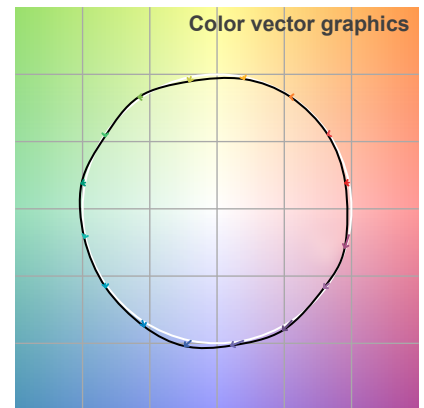
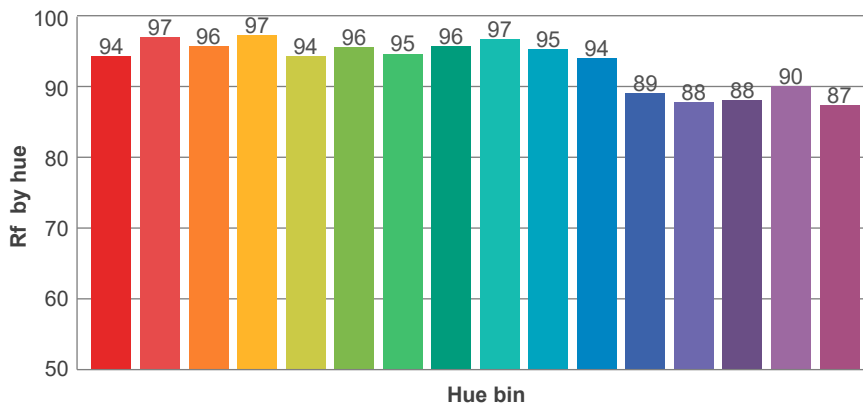
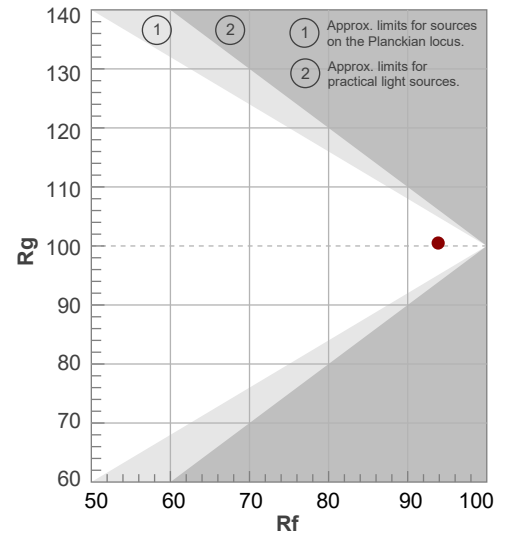
Rf 93.9

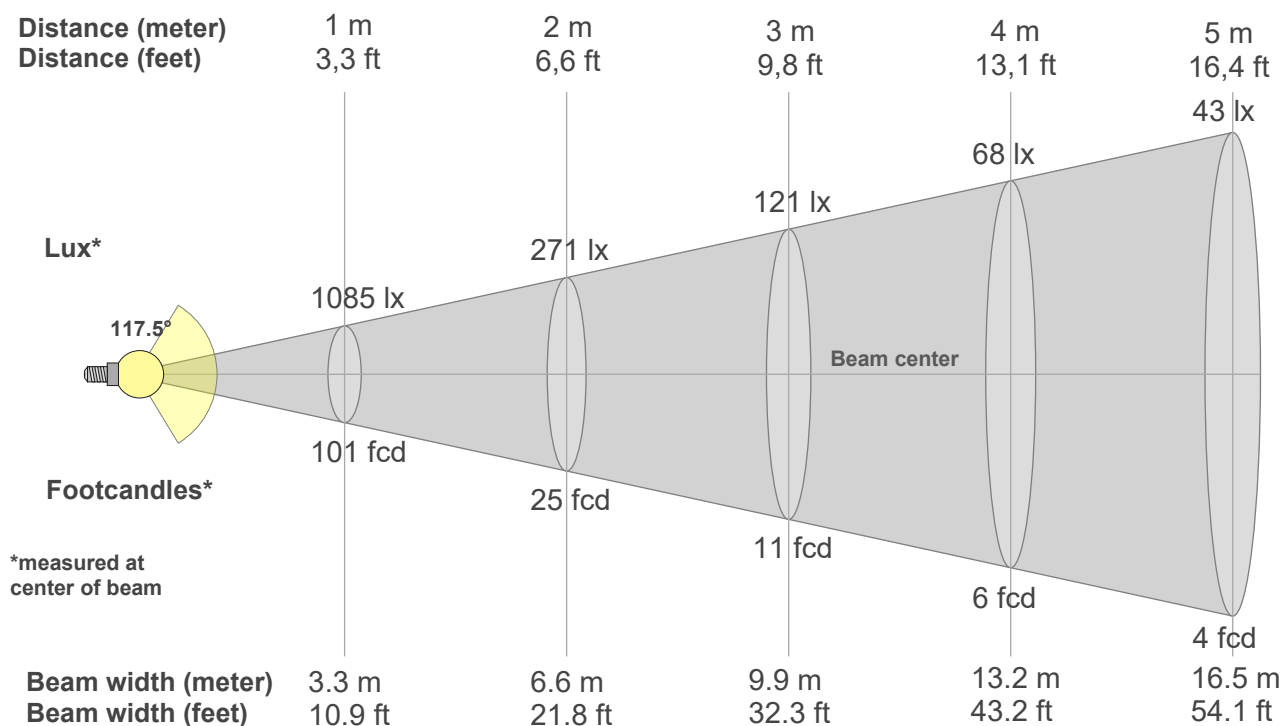
Fidelity index Rf

Rg 100.5

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	94	-3%	0%
2	97	-1%	0%
3	96	0%	1%
4	97	-1%	-1%
5	94	-3%	2%
6	96	1%	2%
7	95	-1%	1%
8	96	2%	1%
9	97	1%	2%
10	95	1%	3%
11	94	3%	3%
12	89	5%	-4%
13	88	2%	-9%
14	88	2%	-9%
15	90	-1%	-5%
16	87	-1%	-10%





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
1085lx	271lx	121lx	68lx	43lx	30lx	22lx	17lx	13lx	11lx	9lx	8lx	6lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx
100.8fcd	25.2fcd	11.2fcd	6.3fcd	4fcd	2.8fcd	2.1fcd	1.6fcd	1.2fcd	1fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd	0.3fcd	0.3fcd

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°
1085	1081	1070	1051	1025	990	948	898	840	775	701	619	529	433	331	229	133	55	12	2
100%	100%	99%	97%	94%	91%	87%	83%	77%	71%	65%	57%	49%	40%	31%	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°
1085	1081	1069	1049	1020	983	938	885	825	757	682	600	511	417	318	218	124	50	12	2
100%	100%	99%	97%	94%	91%	86%	82%	76%	70%	63%	55%	47%	38%	29%	20%	11%	5%	1%	0%

Intensities in 180° c-plane

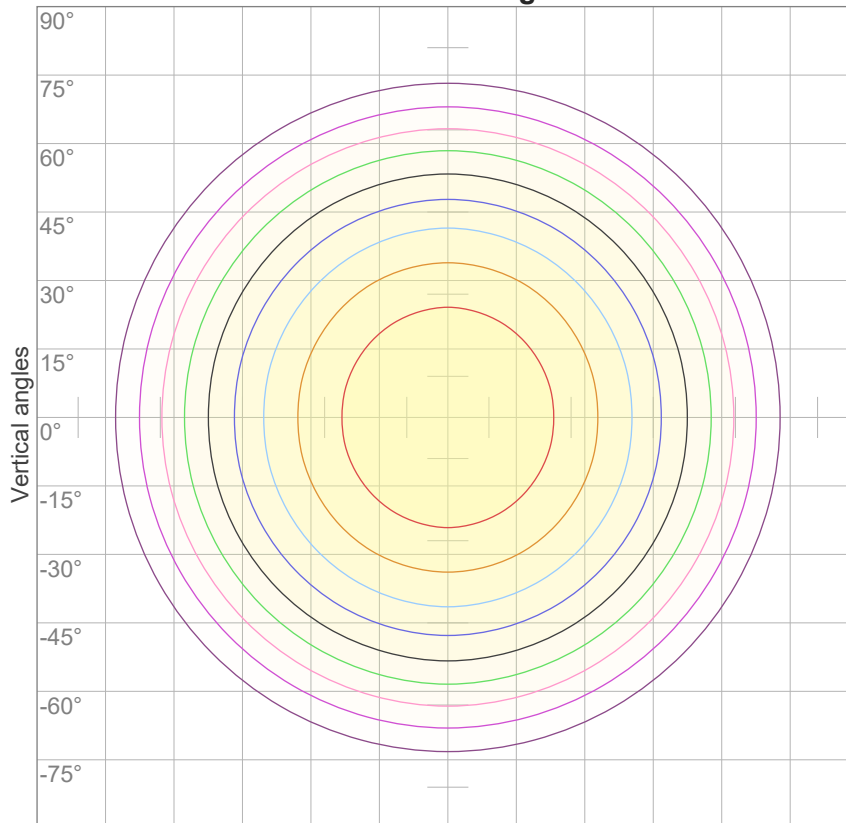
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
1085	1081	1070	1051	1025	990	948	898	840	775	701	619	529	433	331	229	133	55	12	2
100%	100%	99%	97%	94%	91%	87%	83%	77%	71%	65%	57%	49%	40%	31%	21%	12%	5%	1%	0%

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°
1085	1081	1069	1049	1020	983	938	885	825	757	682	600	511	417	318	218	124	50	12	2
100%	100%	99%	97%	94%	91%	86%	82%	76%	70%	63%	55%	47%	38%	29%	20%	11%	5%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
117.5°	162.3°	174.5°	77.9%	52.2%

iso-candela diagram



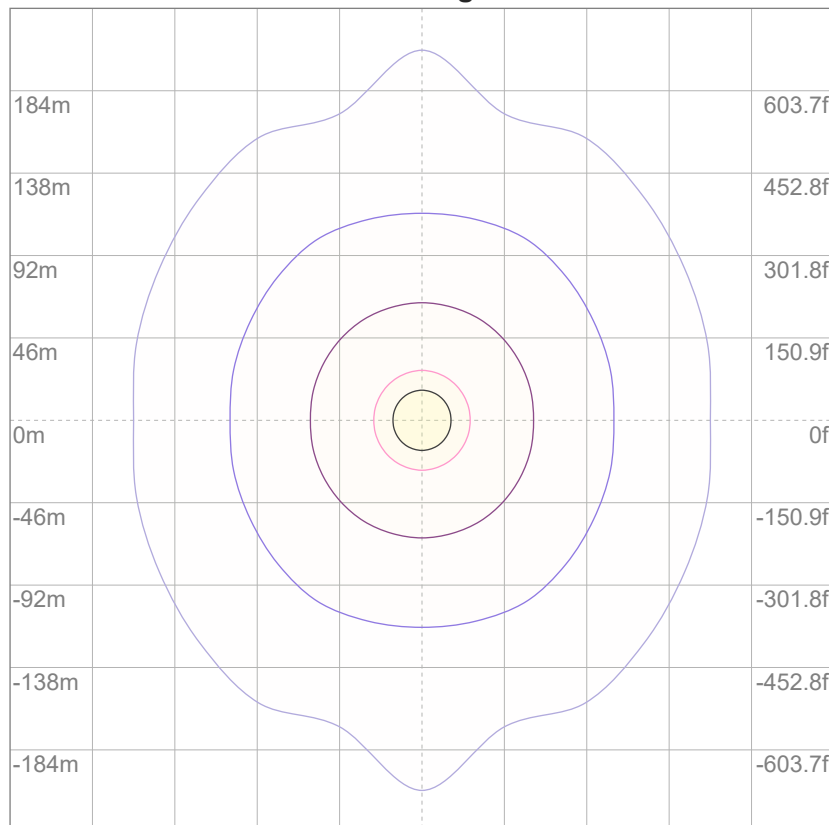
10%	109 cd
20%	217 cd
30%	326 cd
40%	434 cd
50%	543 cd
60%	651 cd
70%	760 cd
80%	868 cd
90%	977 cd

Conditions:

Number of c-planes: 12

Candela at center: 1085 cd

iso-lux diagram



3%	0.326 lx
5%	0.543 lx
10%	1.09 lx
30%	3.26 lx
50%	5.43 lx

Conditions:

Number of c-planes: 12

Lux at center: 10.9 lx

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

Glare evaluation according to UGR

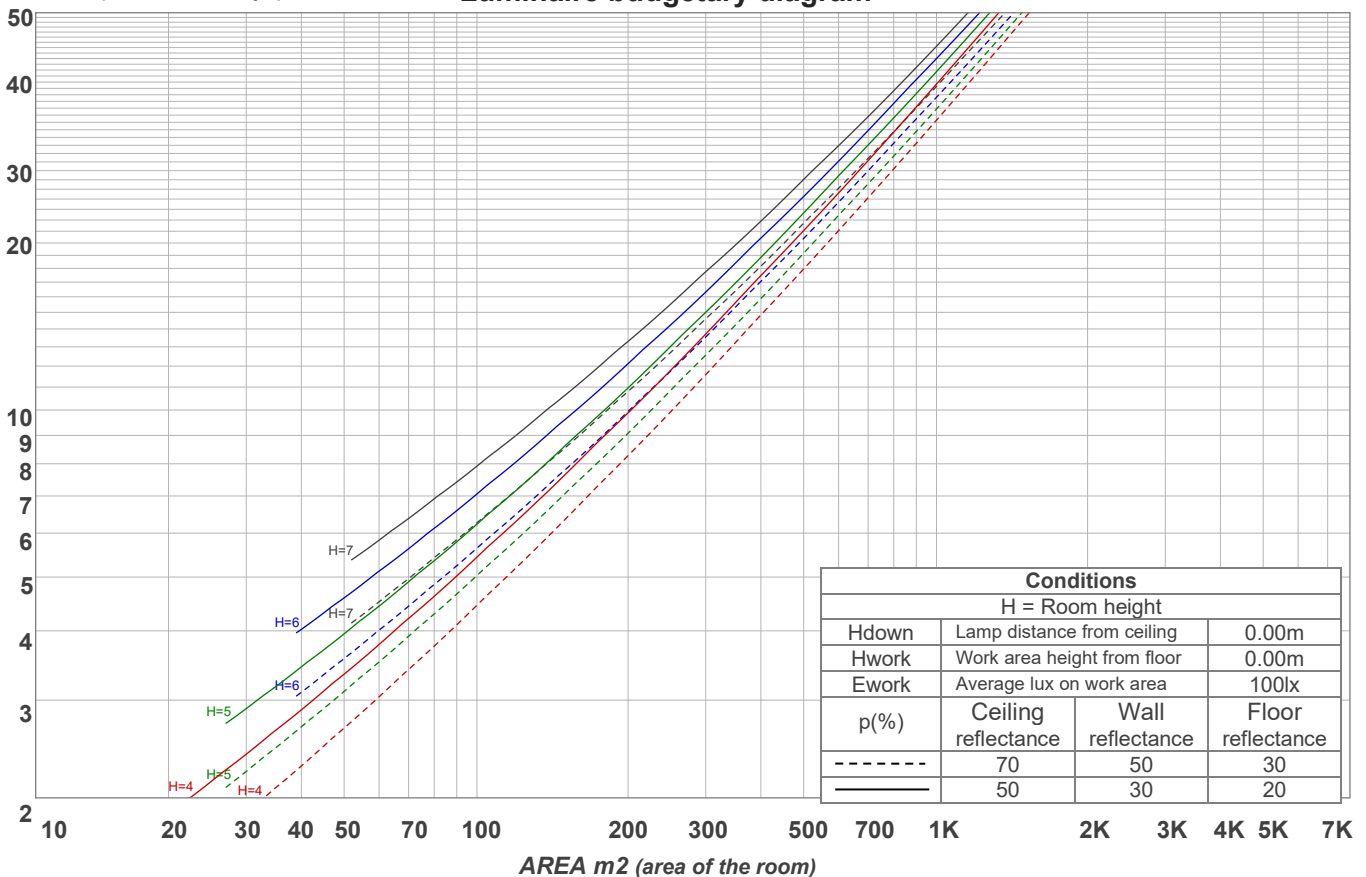
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	18.8	20.0	19.0	20.4	20.6	18.7	19.9	18.9	20.2	20.4
	3H	20.3	21.6	20.7	21.9	22.1	20.1	21.4	20.6	21.7	21.9
	4H	21.0	22.2	21.4	22.5	22.7	20.8	22.0	21.2	22.3	22.5
	6H	21.5	22.5	21.8	22.8	23.2	21.2	22.3	21.6	22.6	23.0
	8H	21.6	22.6	21.9	22.9	23.4	21.4	22.4	21.7	22.7	23.1
	12H	21.7	22.7	22.0	23.0	23.5	21.4	22.4	21.8	22.8	23.2
4H	2H	19.4	20.6	19.8	20.9	21.2	19.3	20.5	19.7	20.8	21.1
	3H	21.2	22.2	21.6	22.6	23.0	21.1	22.1	21.5	22.4	22.9
	4H	21.9	22.8	22.4	23.3	23.8	21.7	22.7	22.2	23.1	23.6
	6H	22.5	23.4	23.0	23.7	24.1	22.3	23.2	22.8	23.5	23.9
	8H	22.6	23.5	23.2	23.8	24.2	22.4	23.2	22.9	23.6	24.0
	12H	22.8	23.4	23.3	23.9	24.4	22.5	23.2	23.0	23.6	24.1
8H	4H	22.2	23.0	22.7	23.4	23.8	22.0	22.8	22.5	23.2	23.6
	6H	22.9	23.5	23.4	24.0	24.5	22.7	23.3	23.2	23.8	24.4
	8H	23.2	23.7	23.7	24.2	24.9	23.0	23.5	23.5	24.0	24.7
	12H	23.4	23.8	23.9	24.3	24.9	23.1	23.6	23.7	24.1	24.7
12H	4H	22.2	22.9	22.7	23.3	23.8	22.0	22.7	22.5	23.2	23.6
	6H	23.0	23.5	23.5	24.0	24.7	22.8	23.3	23.3	23.9	24.5
	8H	23.3	23.7	23.8	24.2	24.8	23.1	23.5	23.6	24.0	24.6
Variation of the observer position for the luminaire distance S											
S = 1.0H		0.1 / -0.1					0.1 / -0.1				
S = 1.5H		0.1 / -0.2					0.1 / -0.2				
S = 2.0H		0.4 / -0.4					0.4 / -0.5				
CIE 117-1995. Corrected glare indices referring to 3275 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	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

LAMPS (number of lamps)

Luminaire budgetary diagram



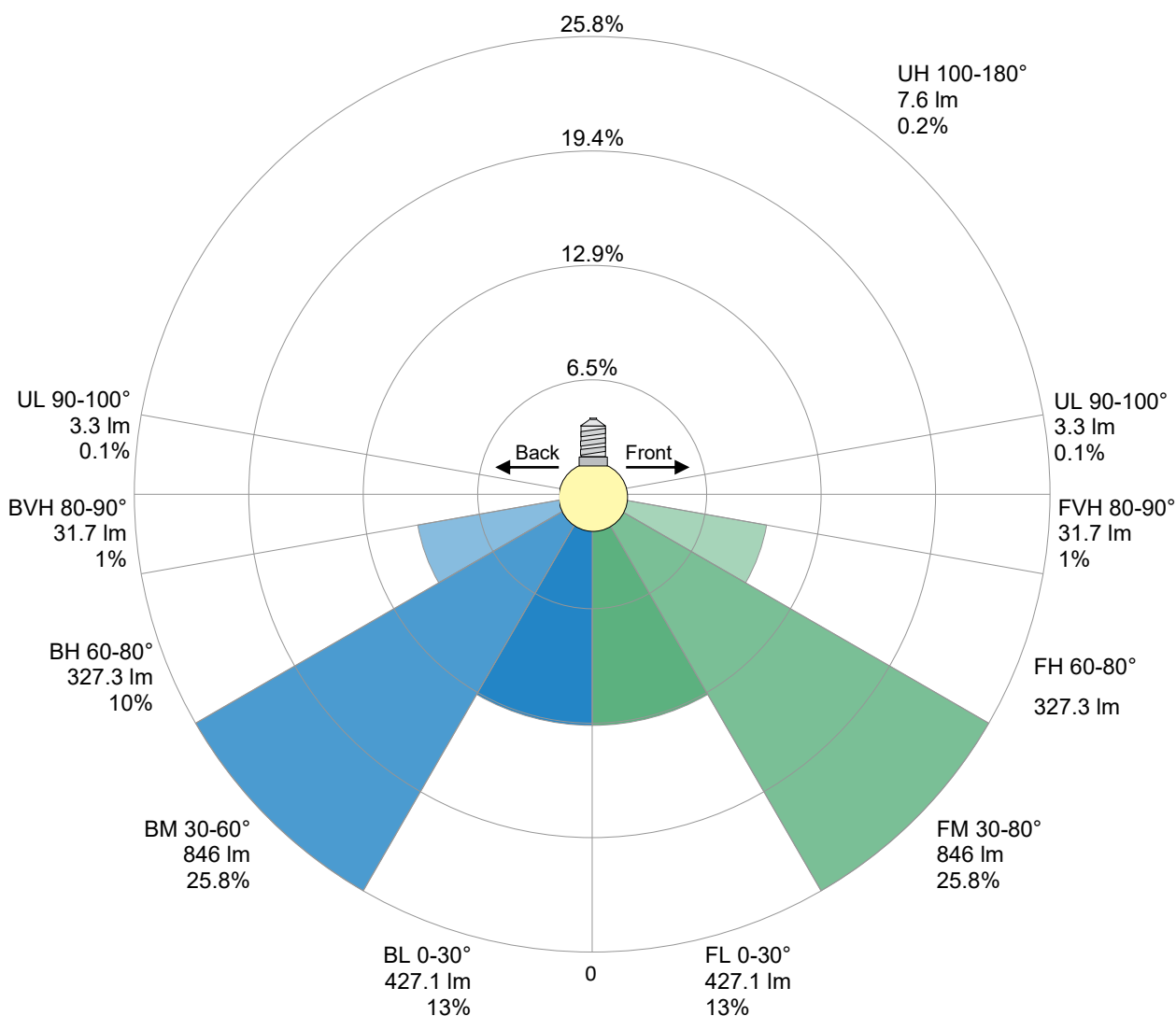
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
103 lm	297 lm	456 lm	559 lm	591 lm	545 lm	419 lm	236 lm	59.5 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2.03 lm	1.00 lm	1.25 lm	1.30 lm	1.27 lm	1.13 lm	0.875 lm	0.561 lm	0.196 lm

LCS table

BUG rating:	B1 U1 G1	
Forward light	Lumens	Lumens %
Low(0-30):	427.1	13%
Medium(30-60):	846	25.8%
High(60-80):	327.3	10%
Very high(80-90):	31.7	1%
Back light		
Low(0-30):	427.1	13%
Medium(30-60):	846	25.8%
High(60-80):	327.3	10%
Very high(80-90):	31.7	1%
Uplight		
Low(90-100):	3.3	0.1%
High(100-180):	7.6	0.2%

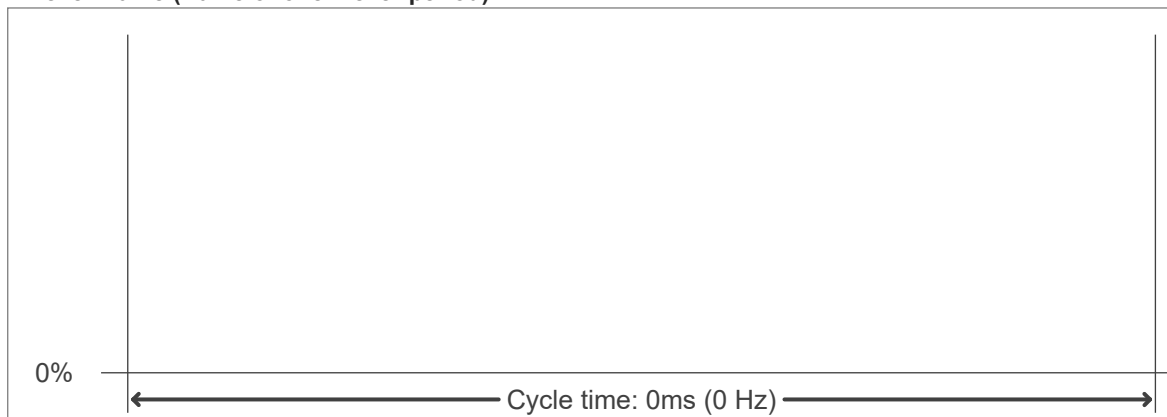
LCS graph



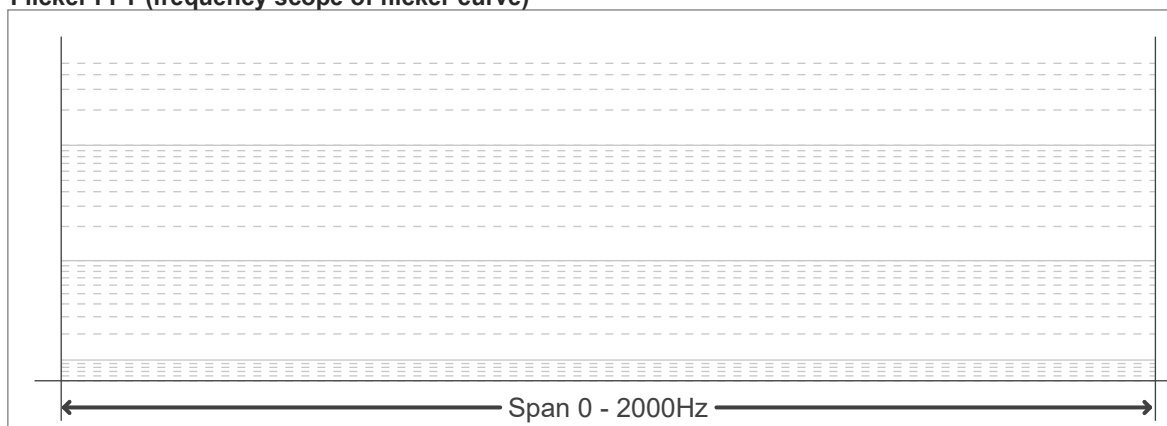
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		n/a Hz	
Flicker index:	n/a	JA8/10 40Hz	n/a %
Flicker percentage:	n/a %	JA8/10 90Hz	n/a %
SVM: (Visual flicker)	n/a	JA8/10 200Hz	n/a %
PstLM	n/a	JA8/10 400Hz	n/a %
Mp	n/a	JA8/10 1000Hz	n/a %

Flicker conditions:

Sample rate:	n/a samples/second
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