

Light efficiency:

133 Lumen/Watt

Output: 20818 lm

Light quality:

CRI: 83.7

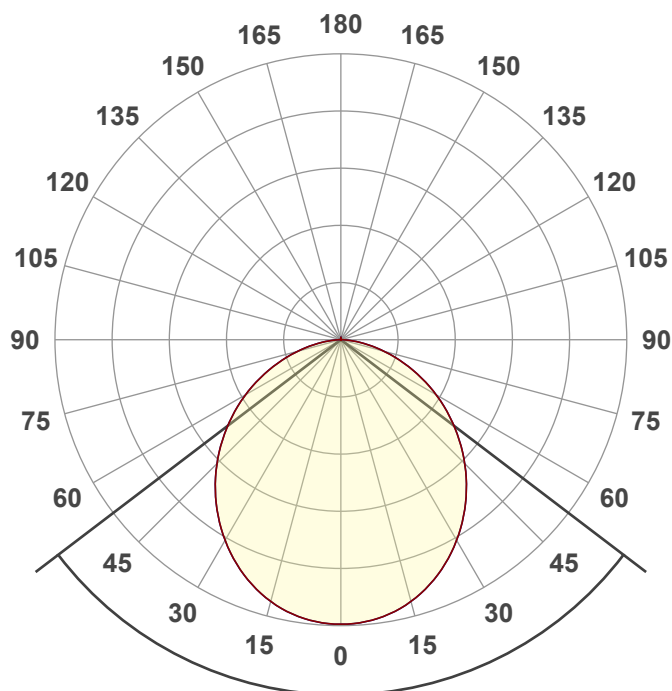
Peak: 7841 cd

Color temperature:

5008 K

Power: 156.2 W

PF: 1.0



Product name:

LHBDP-50K22-165

Date and time:

9/1/2021 10:26:56 AM

Beam angle

105.5°

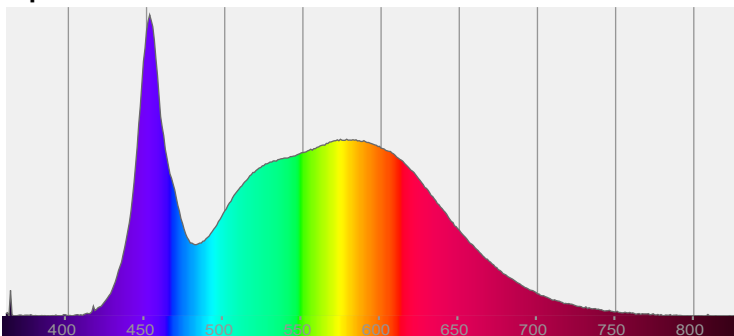


CIE 1931

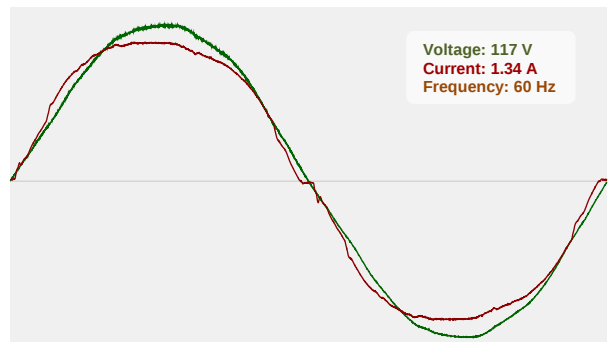
x: 0.345

y: 0.356

Spectra



Power



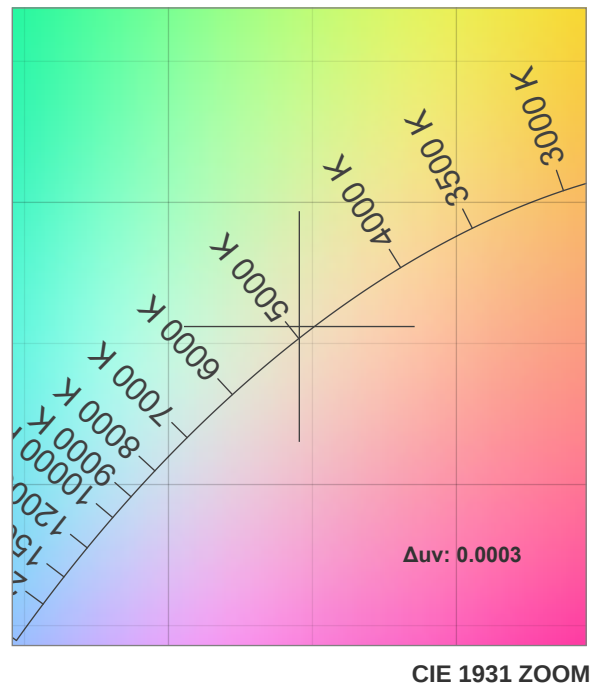
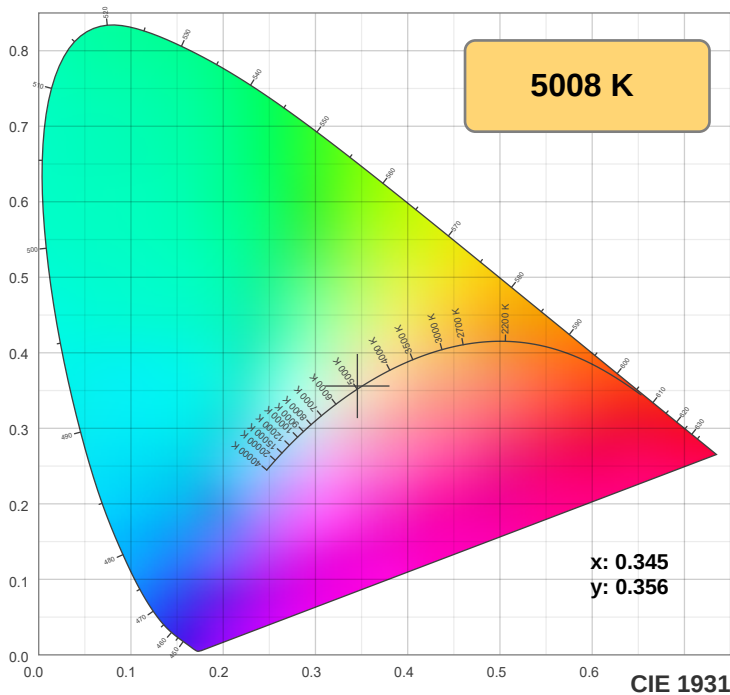
T 314.743.3067

F 314.972.6202

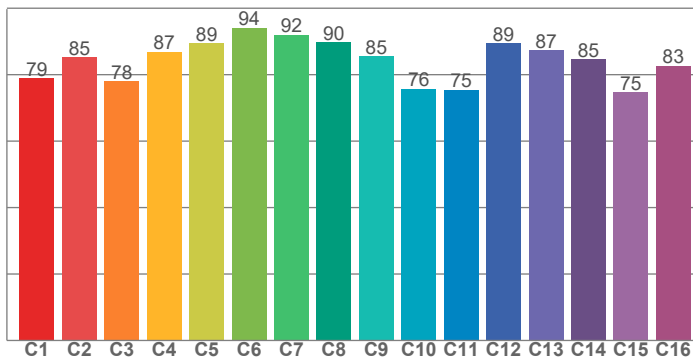
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

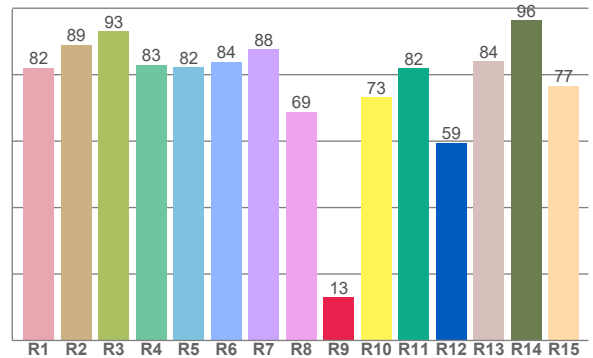
Color Specifications



TM30: 84.0



CRI: 83.7 (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
82.1	89.1	93.1	83.0	82.2	83.9	87.7	68.9	13.0	73.3	82.0	59.5	84.1	96.4	76.7

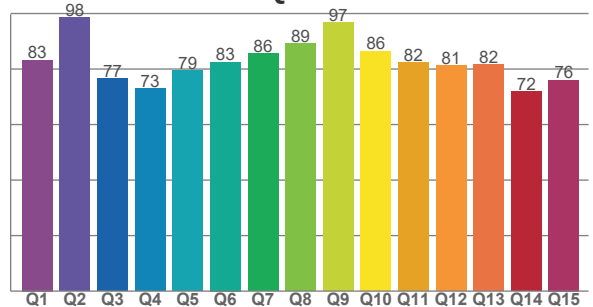
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78.9	85.2	78.0	86.9	89.5	94.1	92.0	89.7	85.5	75.8	75.4	89.4	87.3	84.6	74.7	82.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.2	98.5	76.6	72.9	79.4	82.5	85.5	89.2	96.7	86.4	82.3	81.3	81.5	71.8	76.1

CQS: 81.4



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	Δuv
5008 K	83.7	13.0	84.0	96.0	81.4	0.345	0.356	0.210	0.325	0.0003



TM30 Report

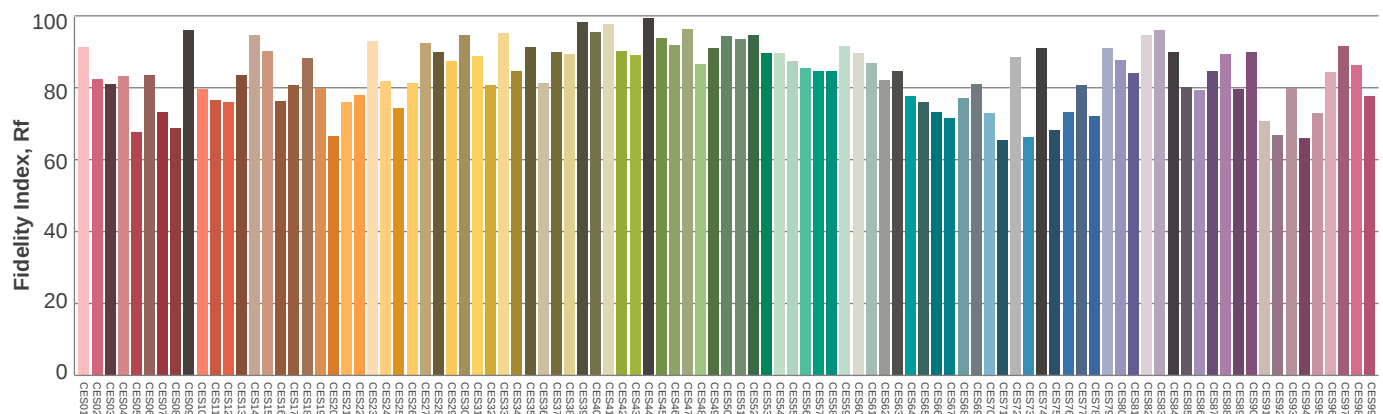
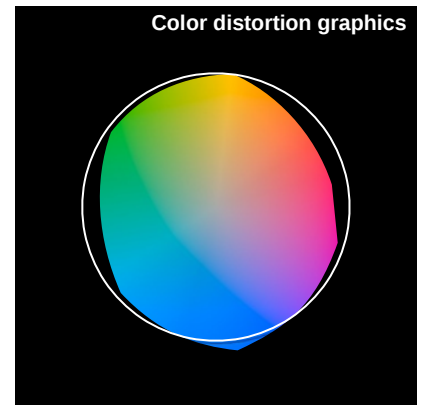
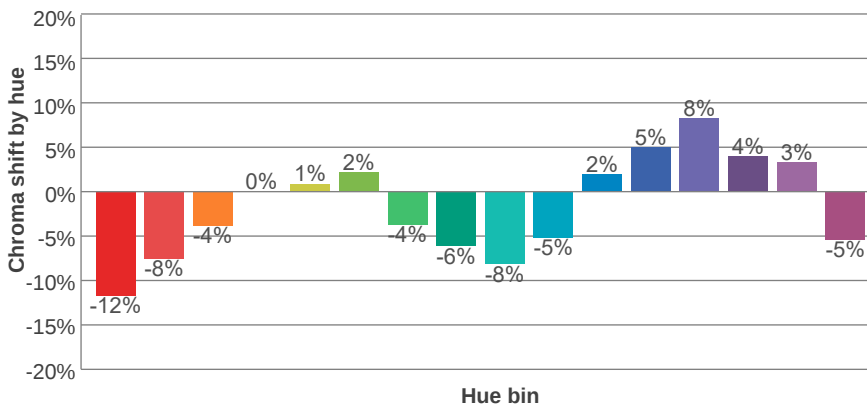
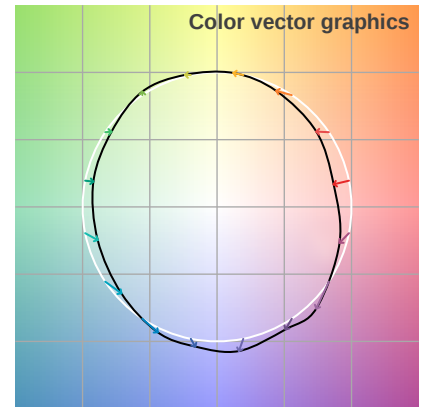
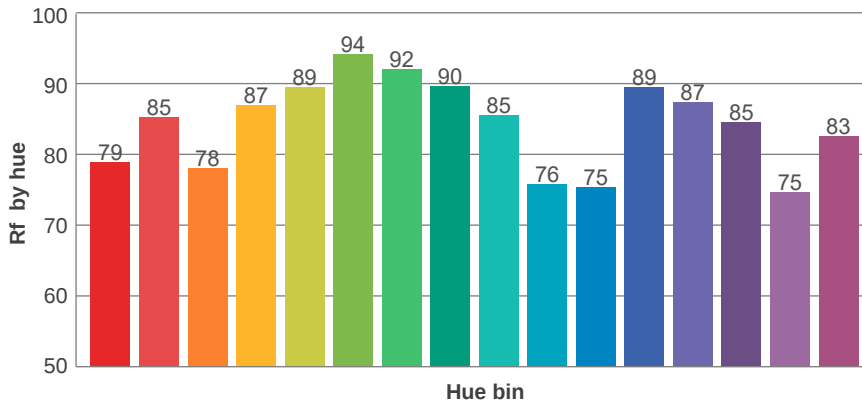
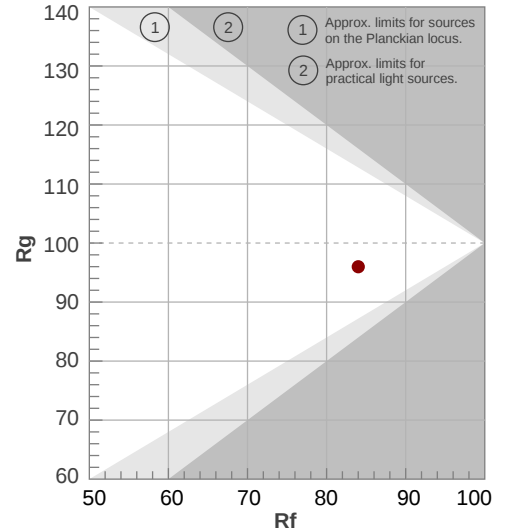
Rf 84.0

Fidelity index Rf

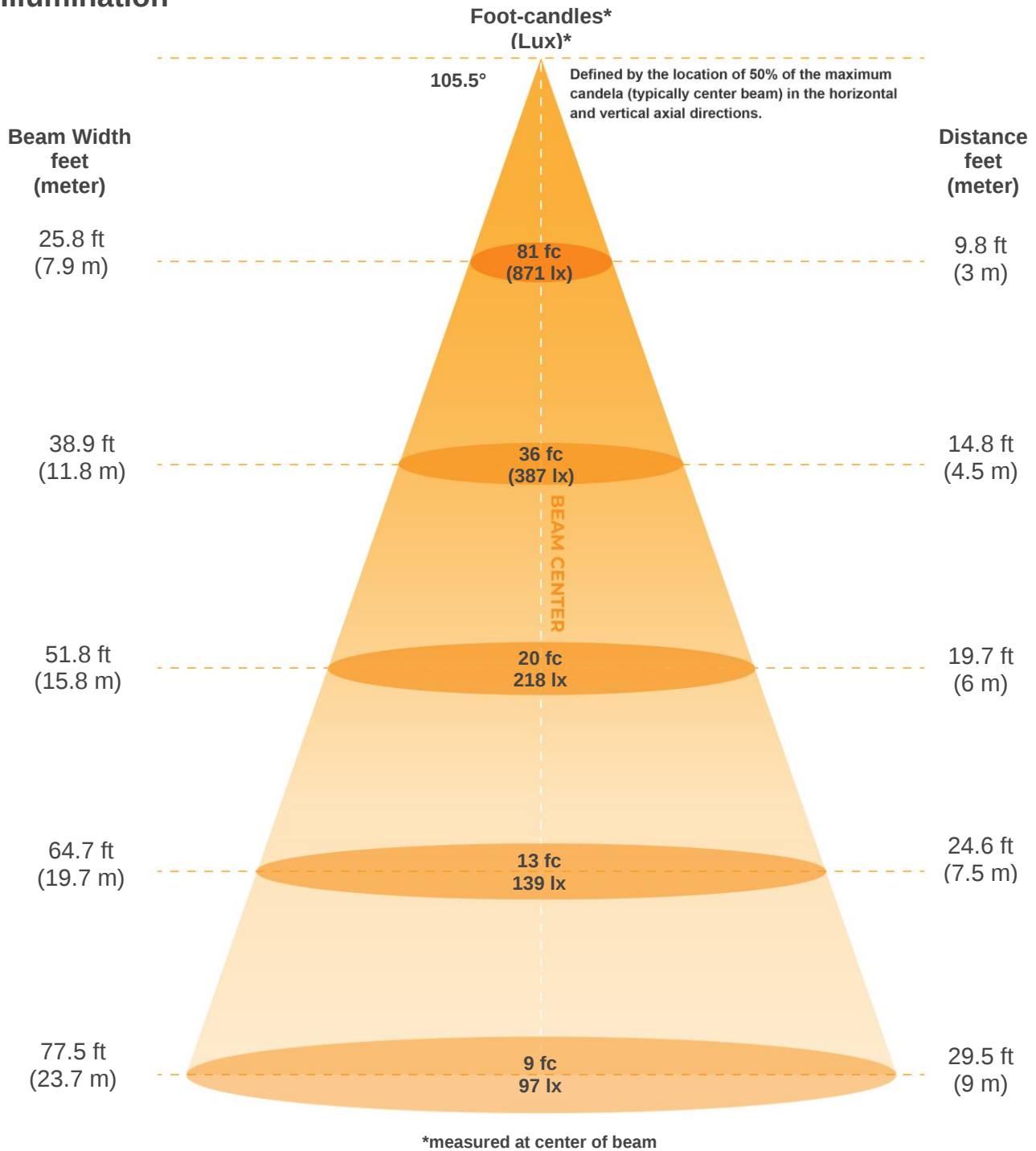
Rg 96.0

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	0%
2	85	-8%	6%
3	78	-4%	11%
4	87	0%	8%
5	89	1%	4%
6	94	2%	-1%
7	92	-4%	-3%
8	90	-6%	-1%
9	85	-8%	7%
10	76	-5%	14%
11	75	2%	15%
12	89	5%	4%
13	87	8%	-5%
14	85	4%	-8%
15	75	3%	-22%
16	83	-5%	-8%



Illumination



Beam intensities from 1-20m

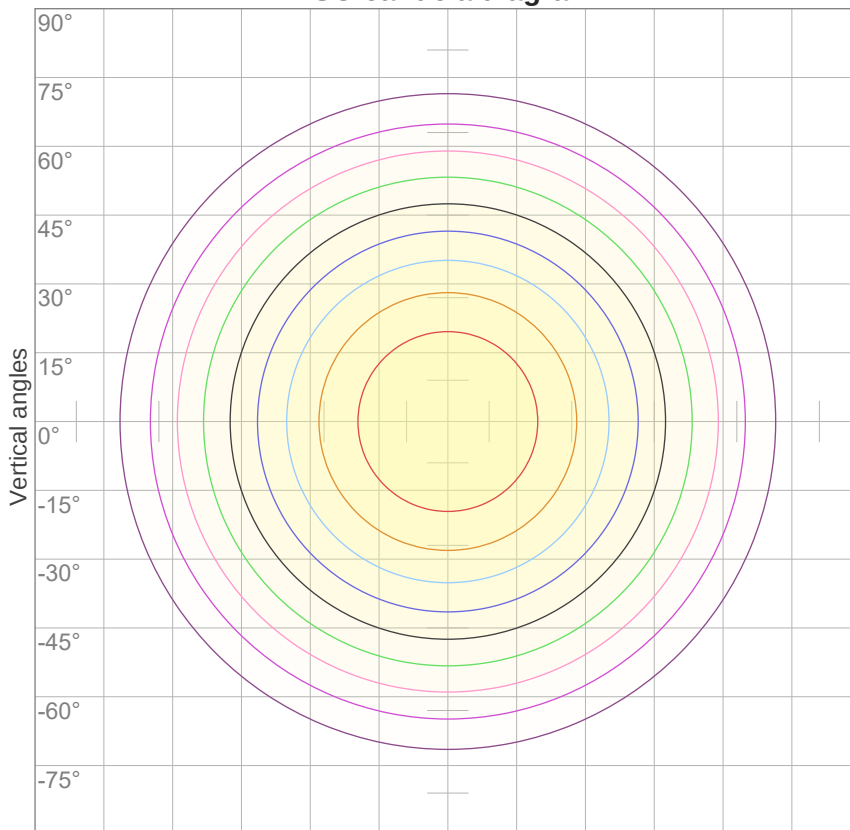
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
7841lx	1960lx	871lx	490lx	314lx	218lx	160lx	123lx	97lx	78lx	65lx	54lx	46lx	40lx	35lx	31lx	27lx	24lx	22lx	20lx
728.5fc	182.1fc	80.9fcd	45.5fcd	29.1fcd	20.2fcd	14.9fcd	11.4fcd	9fcd	7.3fcd	6fcd	5.1fcd	4.3fcd	3.7fcd	3.2fcd	2.8fcd	2.5fcd	2.2fcd	2fcd	1.8fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
105.5°	158.8°	173°	80.1%	55.7%



ISO Diagrams

ISO candela diagram



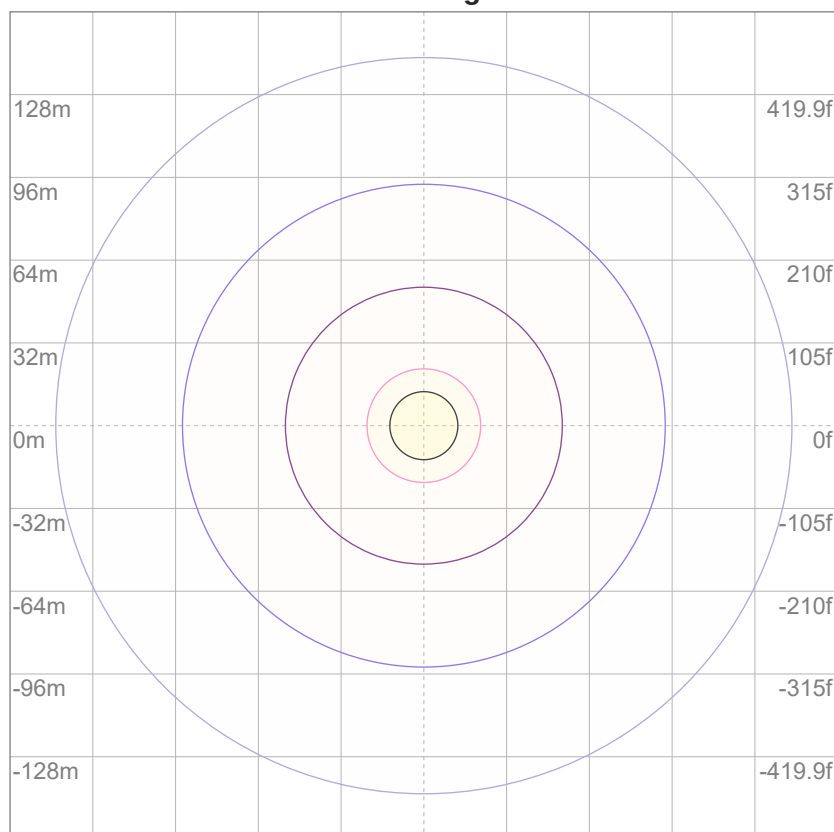
10%	784 cd
20%	1568 cd
30%	2352 cd
40%	3137 cd
50%	3921 cd
60%	4705 cd
70%	5489 cd
80%	6273 cd
90%	7057 cd

Conditions:

Number of c-planes: 16

Candela at center: 7841 cd

ISO lux diagram



3%	2.35 lx
5%	3.92 lx
10%	7.84 lx
30%	23.5 lx
50%	39.2 lx

Conditions:

Number of c-planes: 16

Lux at center: 78.4 lx

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



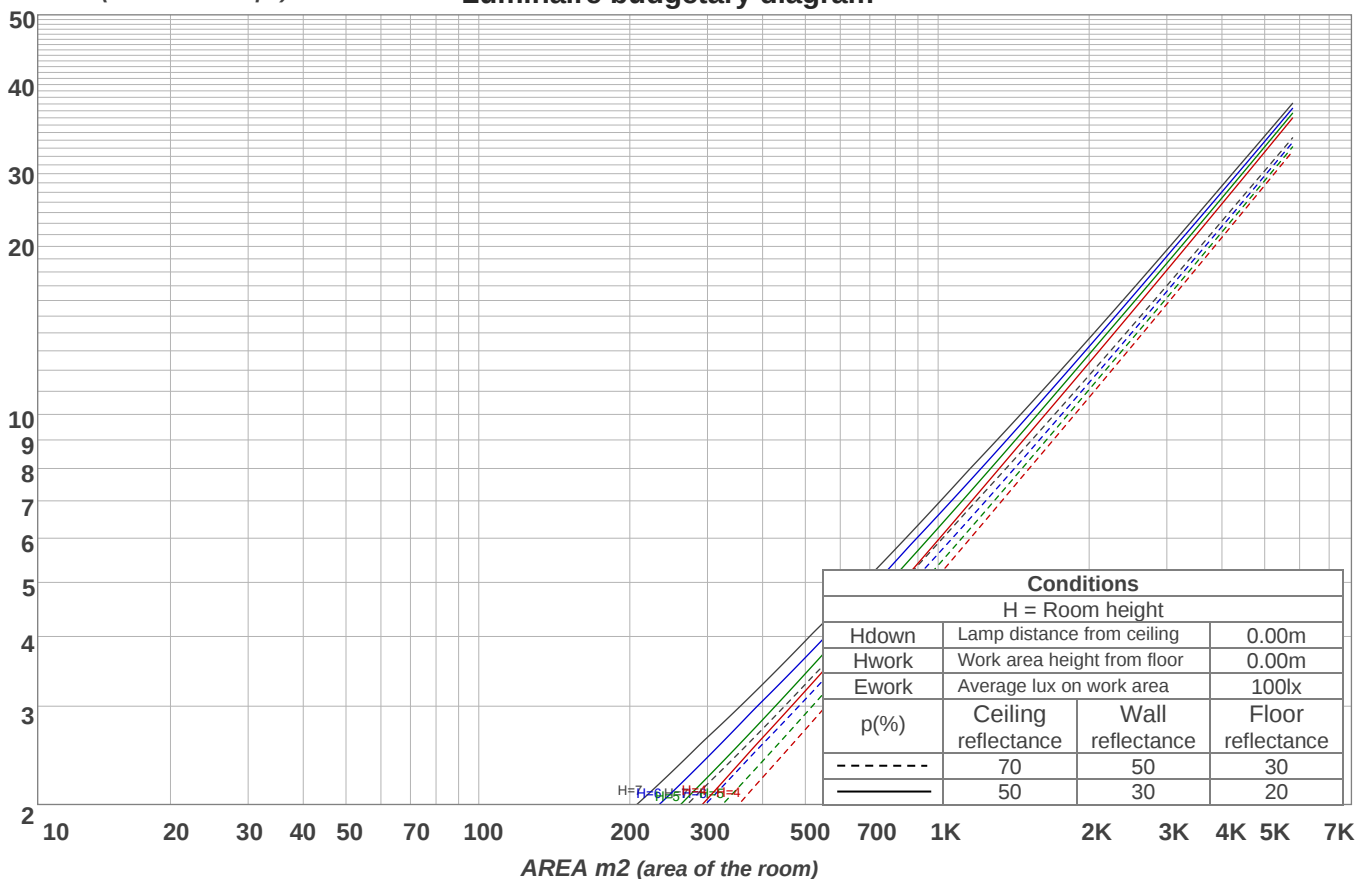
Light Planning

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	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	44	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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°
743 lm	2110 lm	3142 lm	3698 lm	3729 lm	3261 lm	2392 lm	1312 lm	348 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
8.95 lm	10.1 lm	11.0 lm	11.8 lm	12.3 lm	11.3 lm	9.40 lm	6.12 lm	2.12 lm

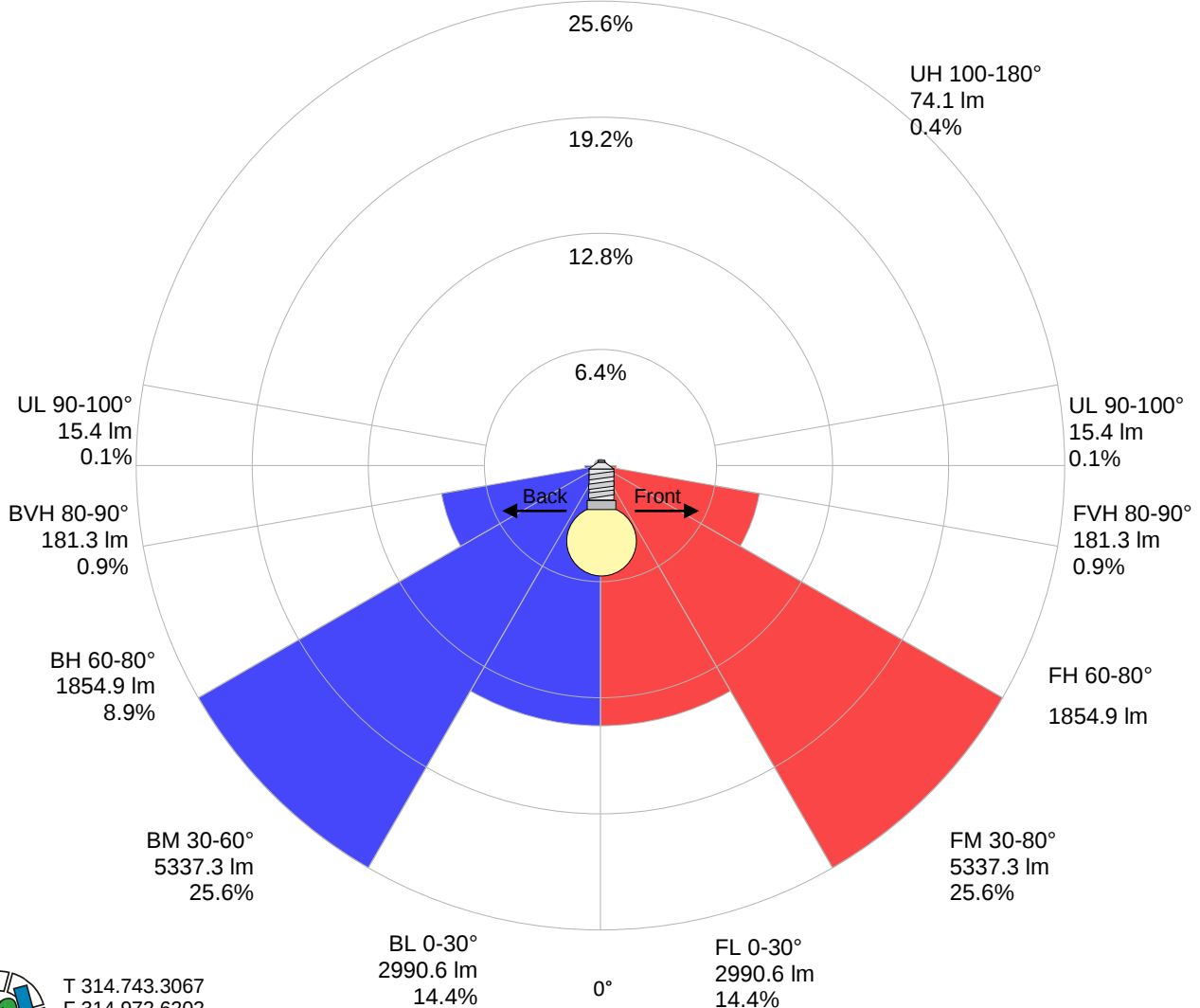


Road Report

LCS table

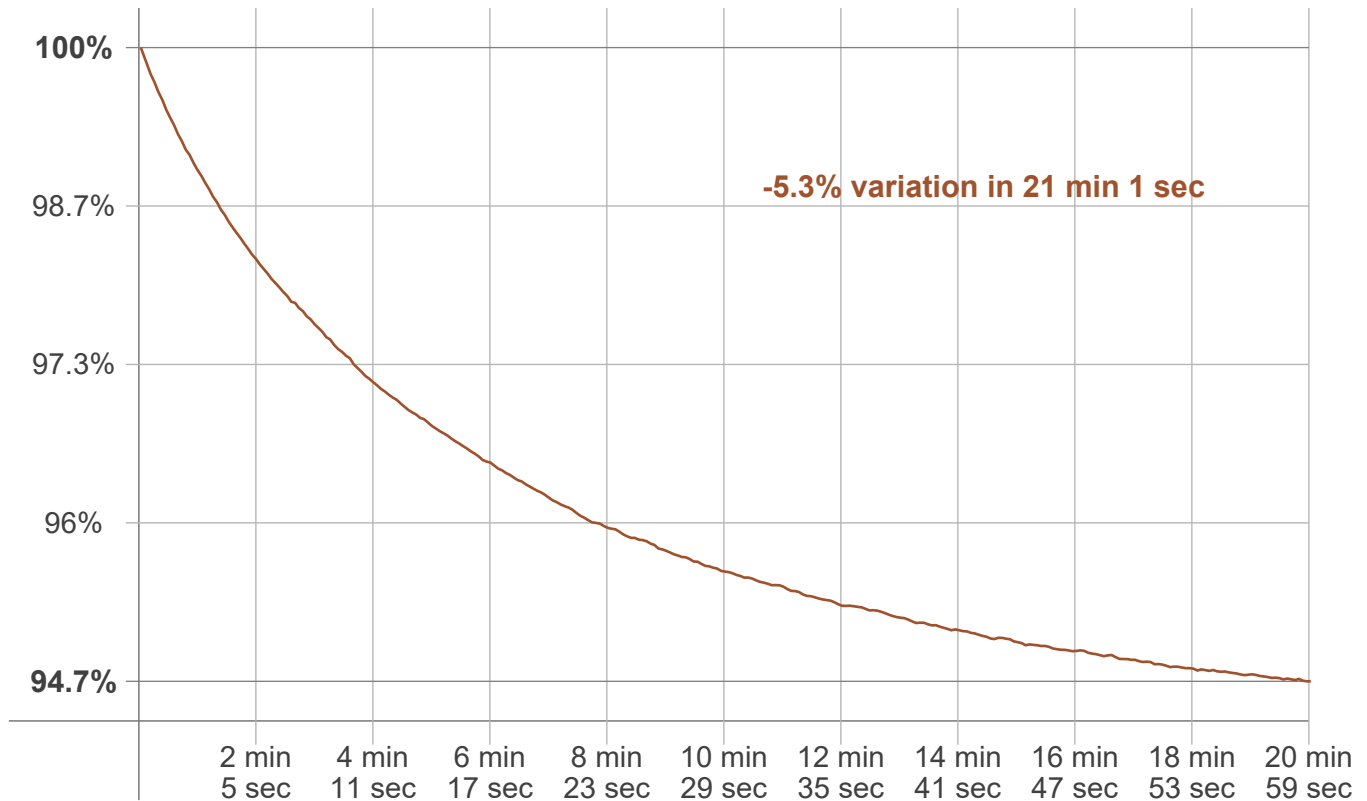
BUG rating:	B4 U3 G2	
Forward light	Lumens	Lumens %
Low(0-30):	2990.6	14.4%
Medium(30-60):	5337.3	25.6%
High(60-80):	1854.9	8.9%
Very high(80-90):	181.3	0.9%
Back light		
Low(0-30):	2990.6	14.4%
Medium(30-60):	5337.3	25.6%
High(60-80):	1854.9	8.9%
Very high(80-90):	181.3	0.9%
Uplight		
Low(90-100):	15.4	0.1%
High(100-180):	74.1	0.4%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 21 min 1 sec
Warmup variation	-5.4%

Warmup conditions

Stable period:	15 min
Stable change max:	2.0%
Minimum time:	15 min

Color temperature change

CCT start	CCT change	CCT end
4919 K	+89 K	5008 K

Output change

Output start	Output change	Output end
21913 lm	-1095 lm	20818 lm

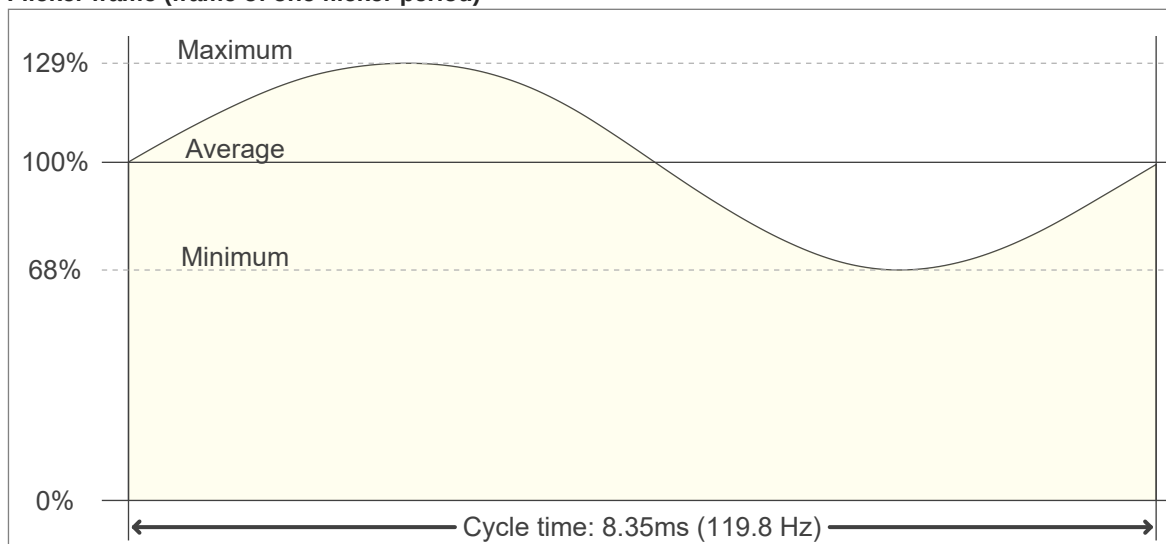


Flicker Specifications

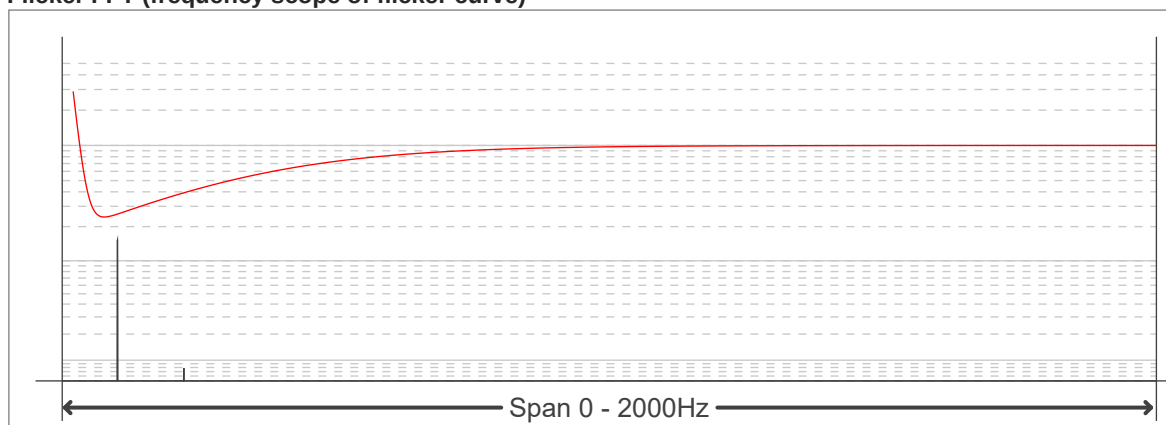
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.1
Flicker percentage:	31.12 %
SVM: (Visual flicker)	1.11

Flicker conditions:

Sample rate:	20000 samples/second
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