

Light efficiency:



Light quality:



Color temperature:



Output: 3597 lm

Peak: 7165 cd

Power: 34,5 W

PF: 0,97



Tracking number: [VT240918-000855](#)

Product name:

**804312**

Item number:

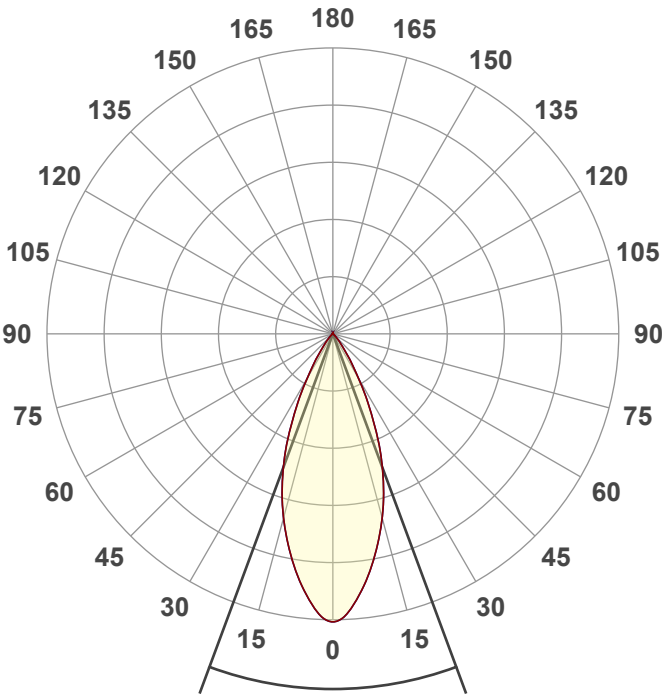
**804312**

Date and time:

**18-9-2024 13:15:13**

Description:

**KANTELBARE DOWNLIGHT | Ø180 |  
40W | CCT-SWITCH**



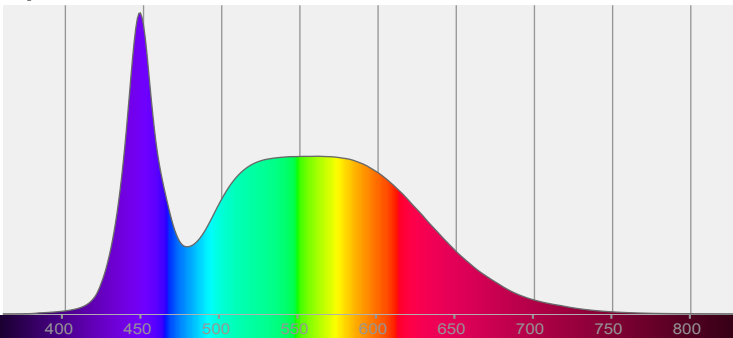
Beam angle

**40,7°**

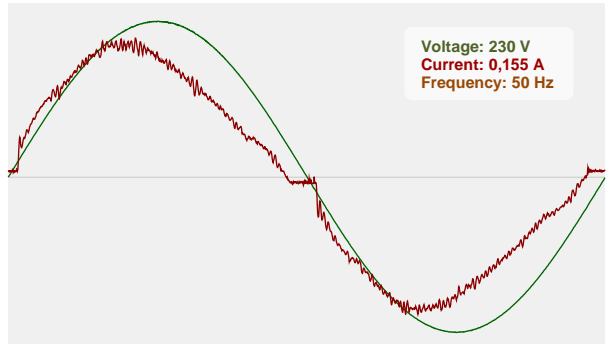


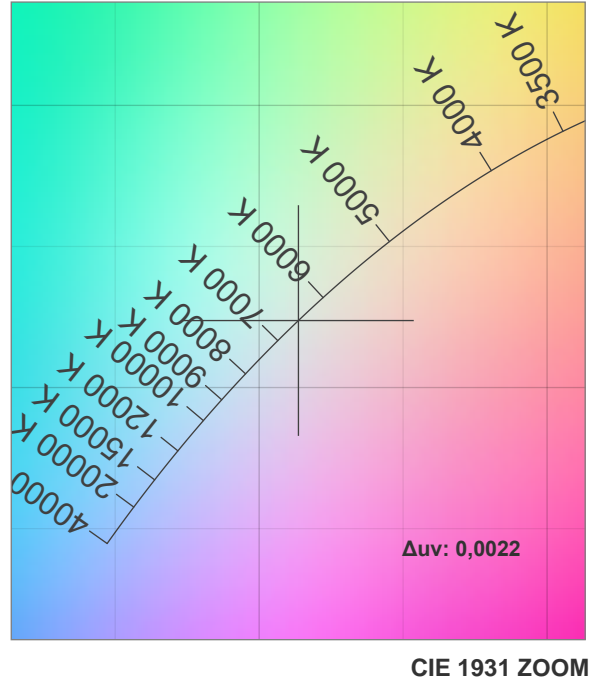
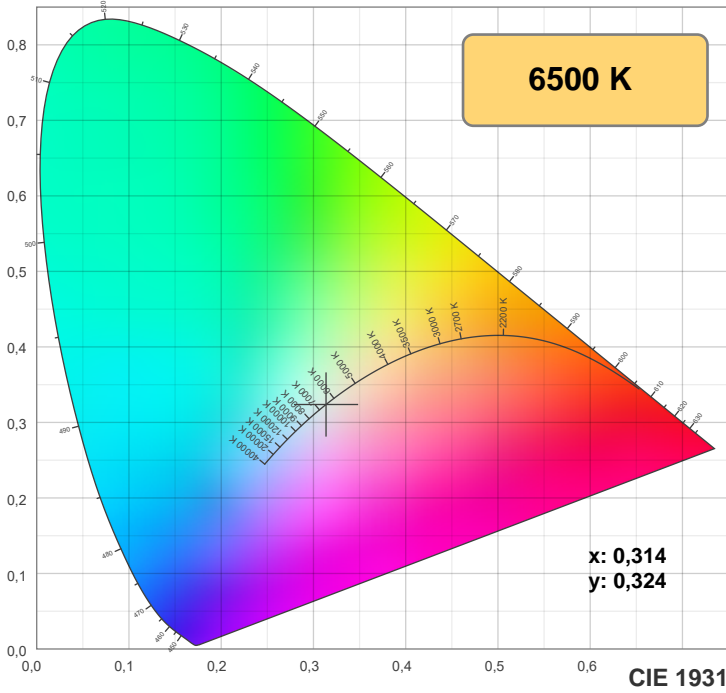
CIE 1931  
x: 0,314  
y: 0,324

Spectra



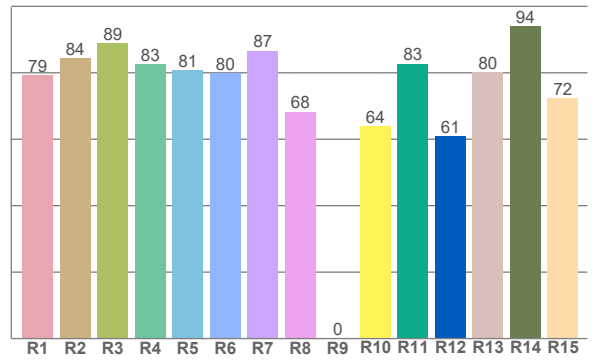
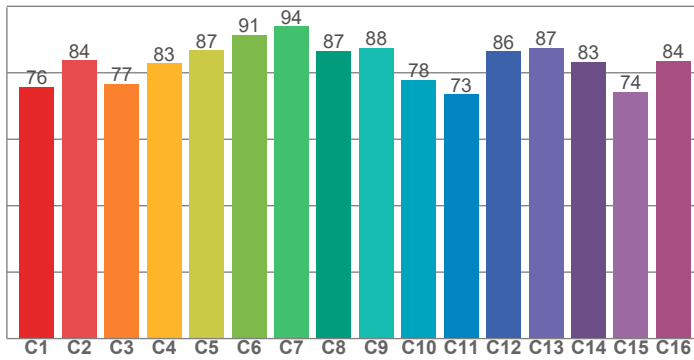
Power





**TM-30: 82,9**

**CRI: 81,3 (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
79,2	84,4	88,8	82,7	80,7	79,8	86,6	68,3	0,1	63,8	82,7	61,0	80,3	94,1	72,4

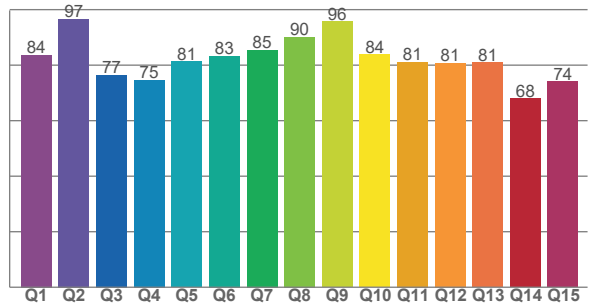
**TM30 C values, 16 binned values out of total of 99 C values**

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
75,8	83,8	76,7	82,9	86,8	91,5	94,0	86,7	87,5	77,8	73,5	86,4	87,5	83,3	74,2	83,7

**CQS Q values**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83,7	96,7	76,5	74,7	81,3	83,3	85,4	90,1	95,6	83,9	81,1	80,7	80,9	68,1	74,1

**CQS: 80,9**



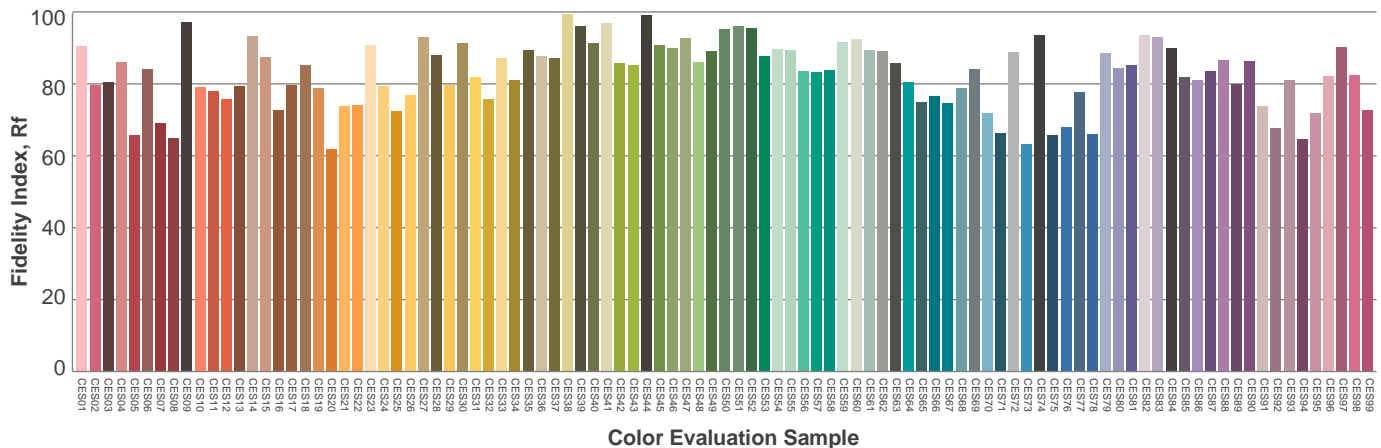
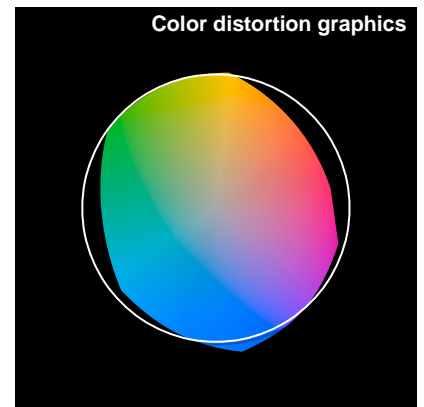
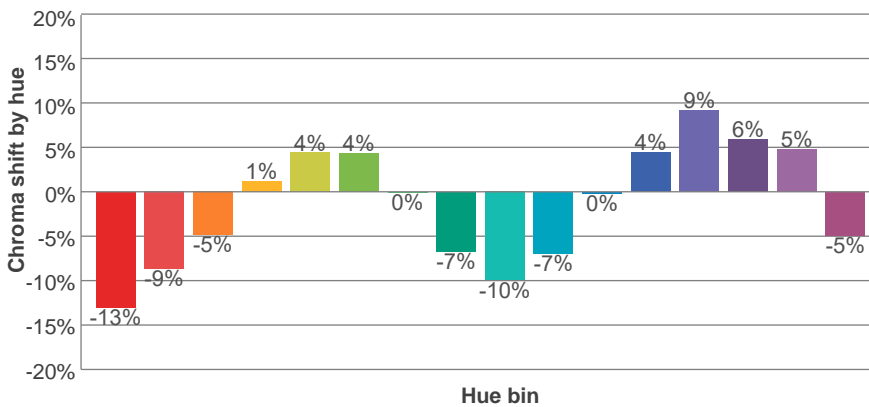
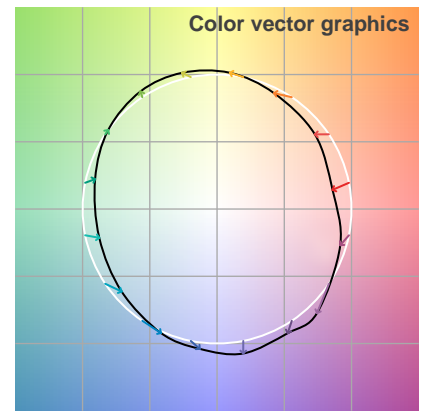
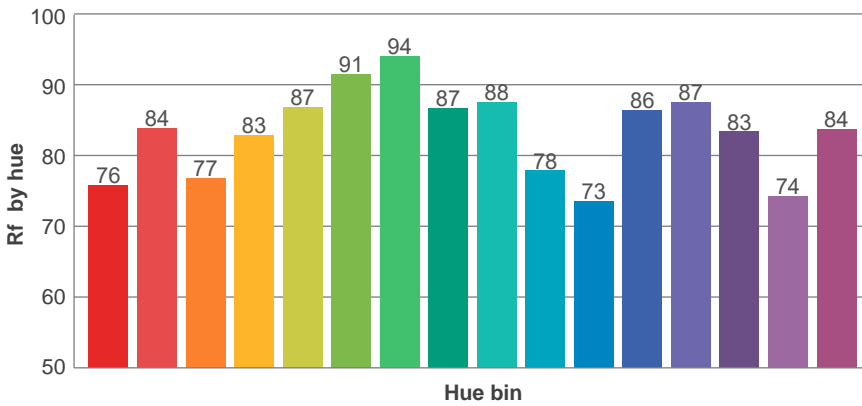
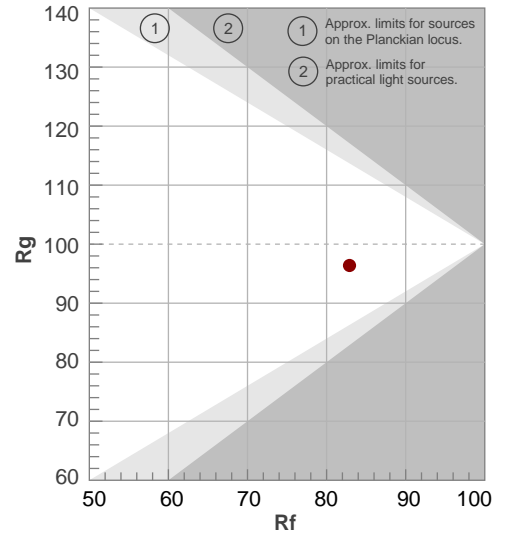
**Color parameters**

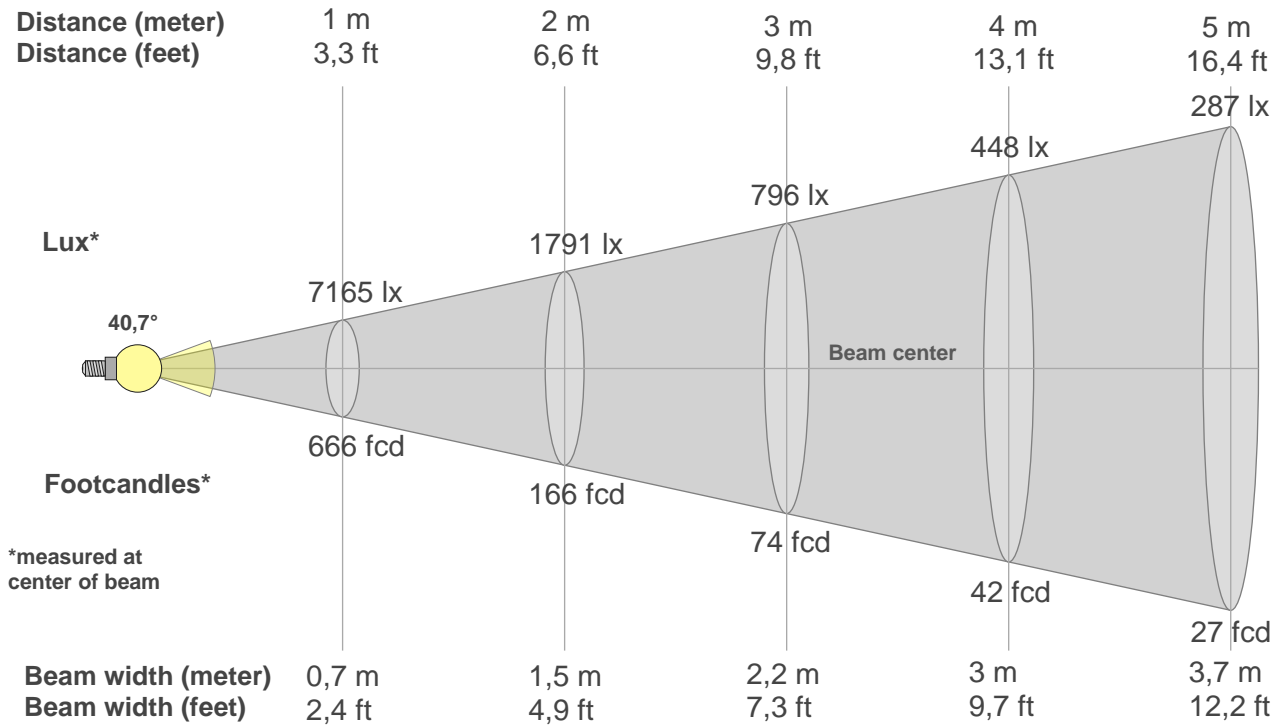
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
6500 K	81,3	0,1	82,9	96,4	80,9	0,314	0,324	0,200	0,310	0,0022

**Rf 82,9**  
Fidelity index Rf

**Rg 96,4**  
Gamut index Rg

Hue Bin	R <sub>f</sub>	Shifts (%)	
		Chroma	Hue
1	76	-13%	-3%
2	84	-9%	6%
3	77	-5%	13%
4	83	1%	10%
5	87	4%	6%
6	91	4%	-1%
7	94	0%	-4%
8	87	-7%	-4%
9	88	-10%	4%
10	78	-7%	12%
11	73	0%	17%
12	86	4%	8%
13	87	9%	-2%
14	83	6%	-8%
15	74	5%	-23%
16	84	-5%	-9%





**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
7165lx	1791lx	796lx	448lx	287lx	199lx	146lx	112lx	88lx	72lx	59lx	50lx	42lx	37lx	32lx	28lx	25lx	22lx	20lx	18lx
665,7fc	166,4fc	74fcd	41,6fcd	26,6fcd	18,5fcd	13,6fcd	10,4fcd	8,2fcd	6,7fcd	5,5fcd	4,6fcd	3,9fcd	3,4fcd	3fcd	2,6fcd	2,3fcd	2,1fcd	1,8fcd	1,7fcd

**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°
7165	7165	6863	6556	6208	5817	5426	5003	4580	4133	3661	3189	2691	2192	1745	1352	959	738	519	362
100%	100%	96%	91%	87%	81%	76%	70%	64%	58%	51%	45%	38%	31%	24%	19%	13%	10%	7%	5%

**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°
7165	7165	6863	6556	6208	5817	5426	5003	4580	4133	3661	3189	2691	2192	1745	1352	959	738	519	362
100%	100%	96%	91%	87%	81%	76%	70%	64%	58%	51%	45%	38%	31%	24%	19%	13%	10%	7%	5%

**Intensities in 180° c-plane**

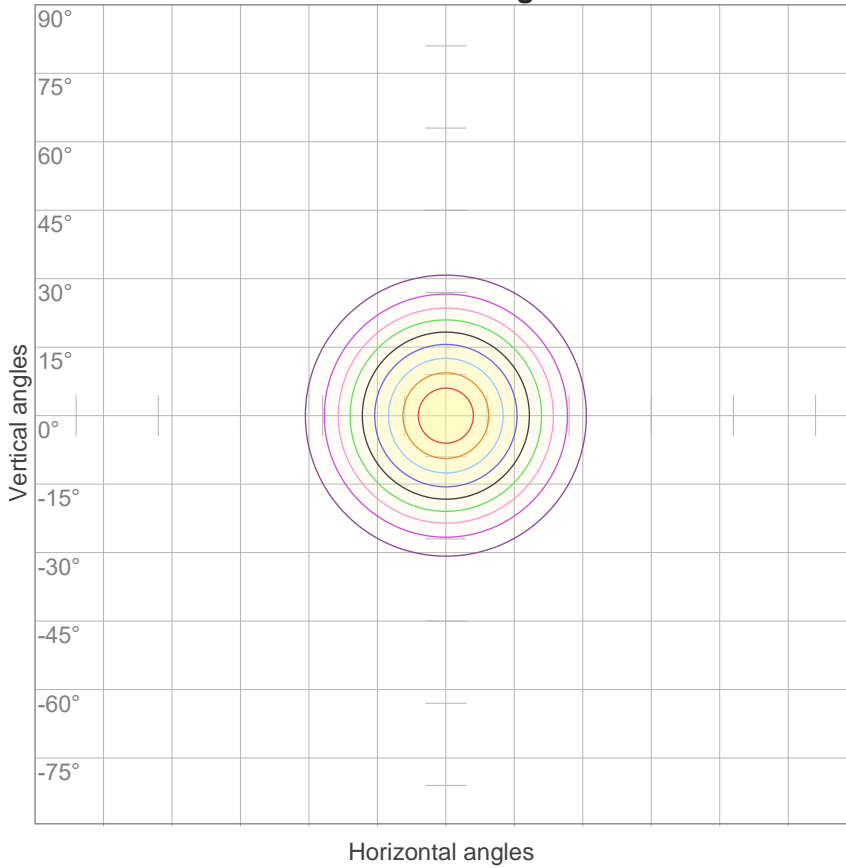
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
7165	7165	6863	6556	6208	5817	5426	5003	4580	4133	3661	3189	2691	2192	1745	1352	959	738	519	362
100%	100%	96%	91%	87%	81%	76%	70%	64%	58%	51%	45%	38%	31%	24%	19%	13%	10%	7%	5%

**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°
7165	7165	6863	6556	6208	5817	5426	5003	4580	4133	3661	3189	2691	2192	1745	1352	959	738	519	362
100%	100%	96%	91%	87%	81%	76%	70%	64%	58%	51%	45%	38%	31%	24%	19%	13%	10%	7%	5%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>40,7°</b>	<b>68,4°</b>	<b>83,8°</b>	<b>99,2%</b>	<b>97,4%</b>

**iso-candela diagram**



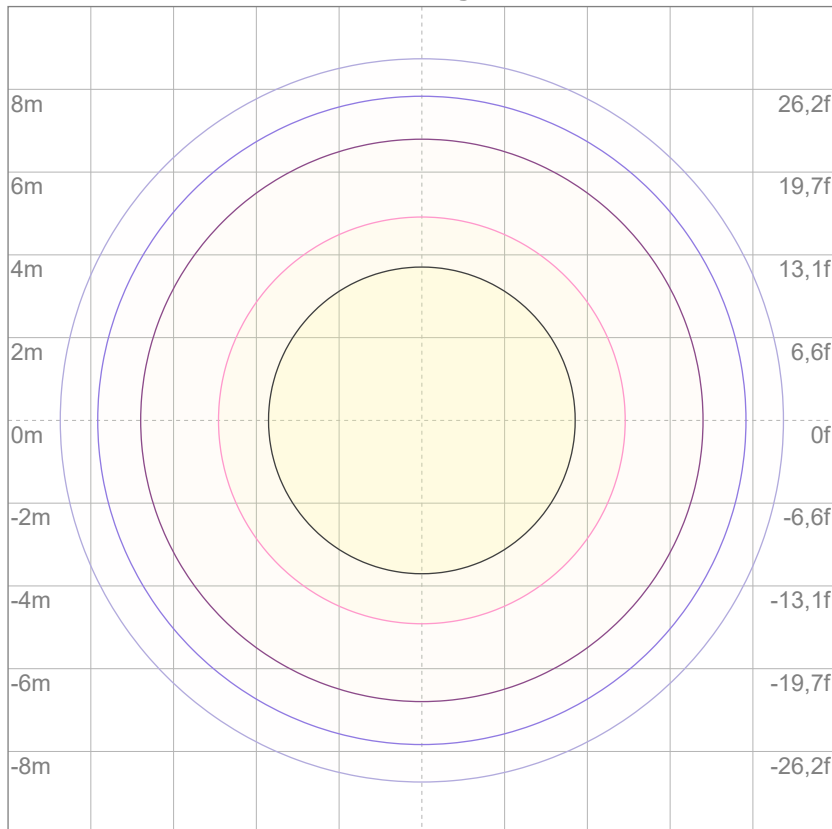
10%	717 cd
20%	1433 cd
30%	2150 cd
40%	2866 cd
50%	3583 cd
60%	4299 cd
70%	5016 cd
80%	5732 cd
90%	6449 cd

Conditions:

Number of c-planes: 72

Candela at center: 7165 cd

**iso-lux diagram**



Mounting height: 10 meters (33 feet)

3%	2,15 lx
5%	3,58 lx
10%	7,17 lx
30%	21,5 lx
50%	35,8 lx

Conditions:

Number of c-planes: 72

Lux at center: 71,7 lx

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

**Glare evaluation according to UGR**

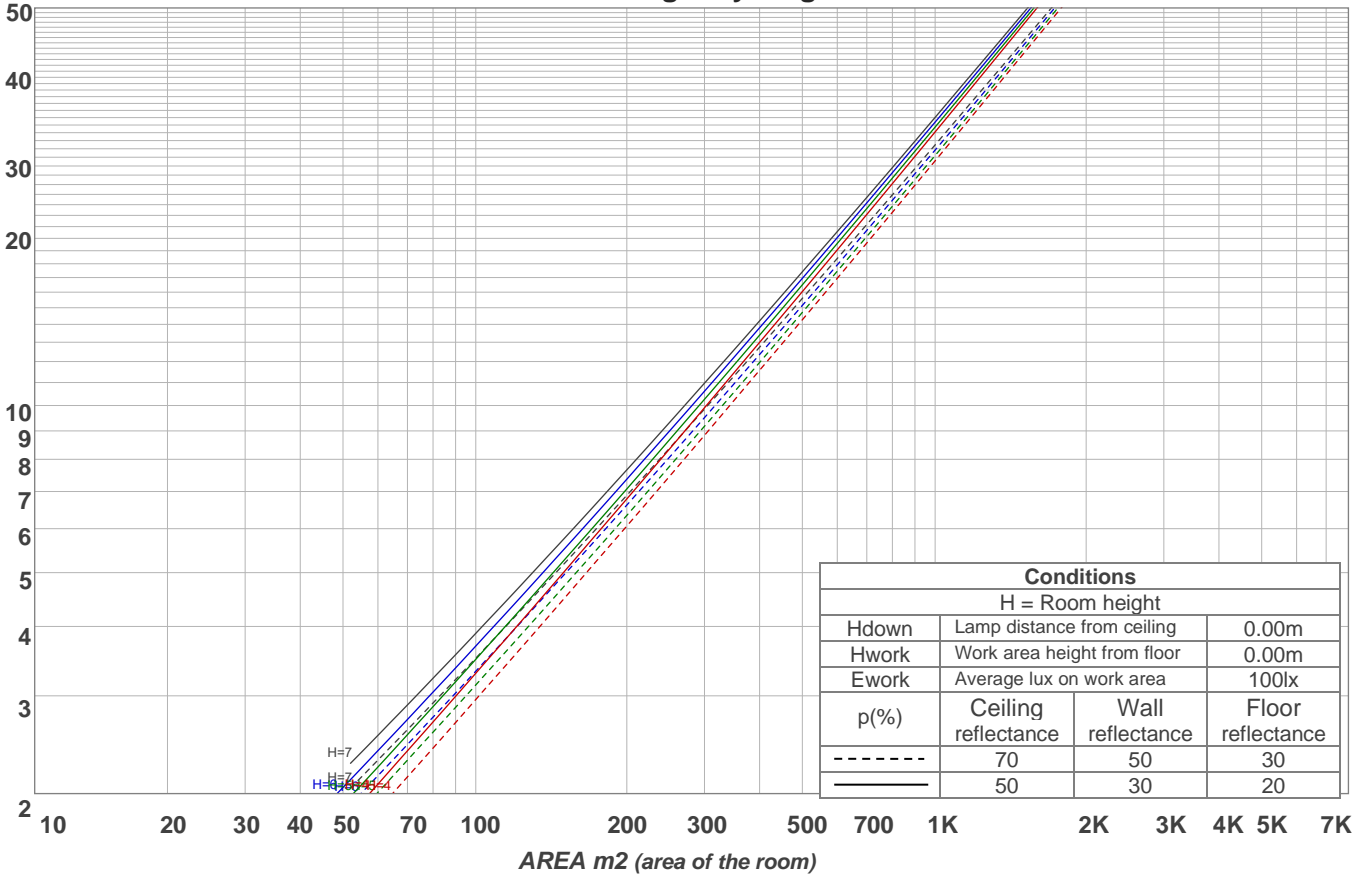
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	20,1	20,7	20,2	20,9	21,1	20,1	20,7	20,2	20,9	21,1
	3H	19,9	20,6	20,2	20,8	21,0	19,9	20,6	20,2	20,8	21,0
	4H	19,8	20,5	20,2	20,7	21,0	19,8	20,5	20,2	20,7	21,0
	6H	19,8	20,4	20,1	20,7	21,0	19,8	20,4	20,1	20,7	21,0
	8H	19,8	20,3	20,1	20,6	21,0	19,8	20,3	20,1	20,6	21,0
	12H	19,7	20,2	20,1	20,6	21,0	19,7	20,2	20,1	20,6	21,0
4H	2H	19,8	20,5	20,2	20,7	20,9	19,8	20,5	20,2	20,7	20,9
	3H	19,8	20,3	20,1	20,6	21,1	19,8	20,3	20,1	20,6	21,1
	4H	19,7	20,1	20,1	20,6	21,1	19,7	20,1	20,1	20,6	21,1
	6H	19,6	20,1	20,1	20,4	20,8	19,6	20,1	20,1	20,4	20,8
	8H	19,5	20,0	20,1	20,4	20,7	19,5	20,0	20,1	20,4	20,7
	12H	19,5	19,9	20,0	20,3	20,7	19,5	19,9	20,0	20,3	20,7
8H	4H	19,5	20,0	20,0	20,4	20,7	19,5	20,0	20,0	20,4	20,7
	6H	19,5	19,8	20,0	20,3	20,8	19,5	19,8	20,0	20,3	20,8
	8H	19,5	19,7	20,0	20,3	20,9	19,5	19,7	20,0	20,3	20,9
	12H	19,4	19,6	20,0	20,1	20,7	19,4	19,6	20,0	20,1	20,7
12H	4H	19,5	19,8	20,0	20,2	20,7	19,5	19,8	20,0	20,2	20,7
	6H	19,5	19,7	20,0	20,3	20,9	19,5	19,7	20,0	20,3	20,9
	8H	19,4	19,6	20,0	20,1	20,7	19,4	19,6	20,0	20,1	20,7
Variation of the observer position for the luminaire distance S											
S = 1.0H	5,3 / -6,9					5,3 / -6,9					
S = 1.5H	7,9 / -8,1					7,9 / -8,1					
S = 2.0H	9,9 / -9,3					9,9 / -9,3					
CIE 117-1995. Corrected glare indices referring to 3597 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	20	20	20	0
<b>RCR</b>	<b>(RCR: Room Cavity Ratio)</b>																				
	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	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89			
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84			
4	100	93	88	85	98	92	88	84	90	86	83	88	85	82	86	84	81	80			
5	96	88	83	79	94	88	83	79	86	82	78	84	81	78	83	80	77	76			
6	92	84	79	75	90	83	78	75	82	77	74	80	77	74	79	76	73	72			
7	88	80	75	71	87	79	74	71	78	74	70	77	73	70	76	72	70	68			
8	85	76	71	67	83	76	71	67	75	70	67	74	70	67	73	69	66	65			
9	81	73	68	64	80	72	67	64	71	67	64	71	66	64	70	66	63	62			
10	78	70	65	61	77	69	64	61	68	64	61	68	64	61	67	63	61	59			

LAMPS (number of lamps)

**Luminaire budgetary diagram**



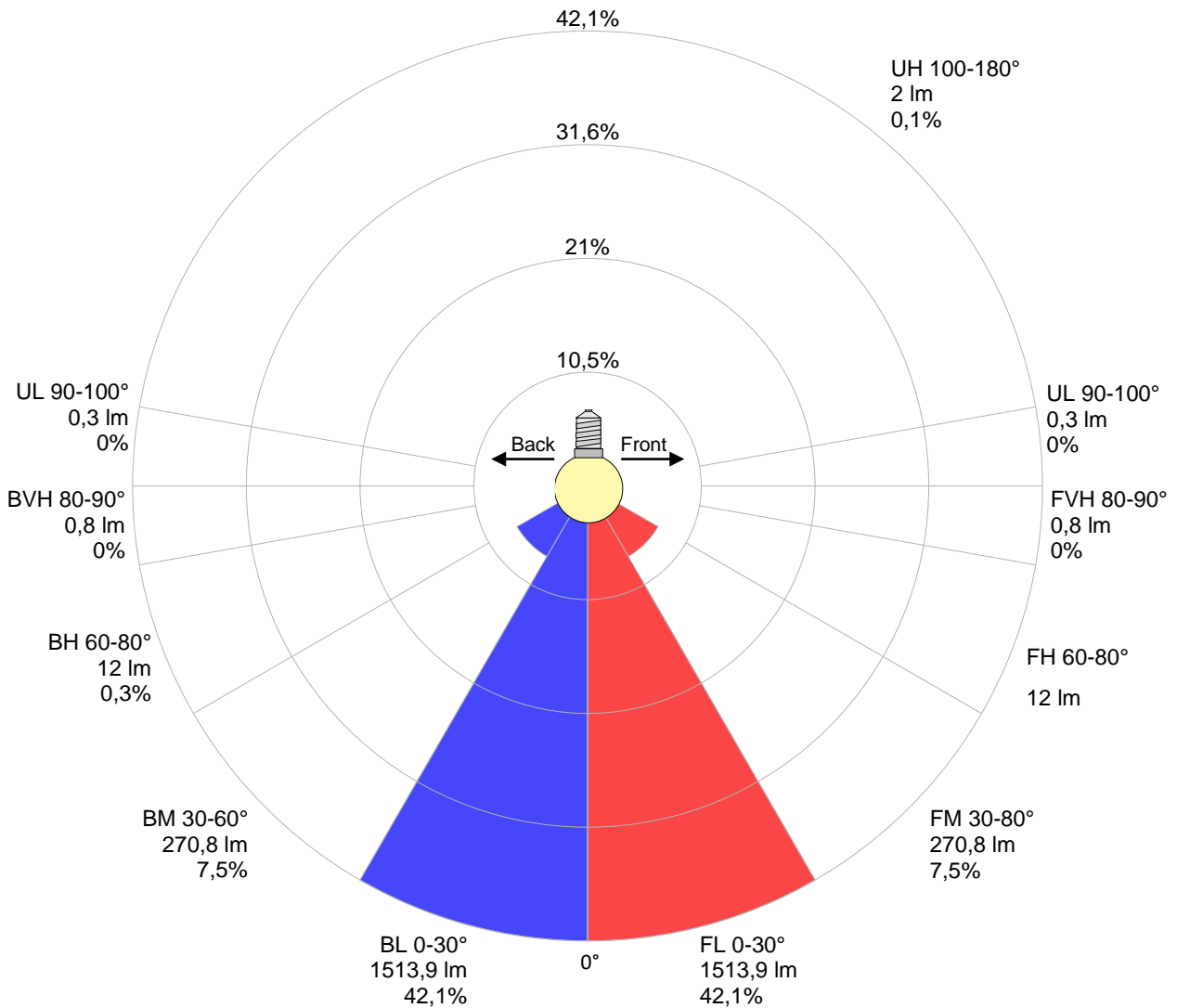
**Zonal Lumen Summary**

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	1327 lm	1105 lm	393 lm	91,0 lm	35,7 lm	17,7 lm	6,38 lm	1,55 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,301 lm	0,165 lm	0,148 lm	0,153 lm	0,194 lm	0,355 lm	0,482 lm	0,396 lm	0,149 lm

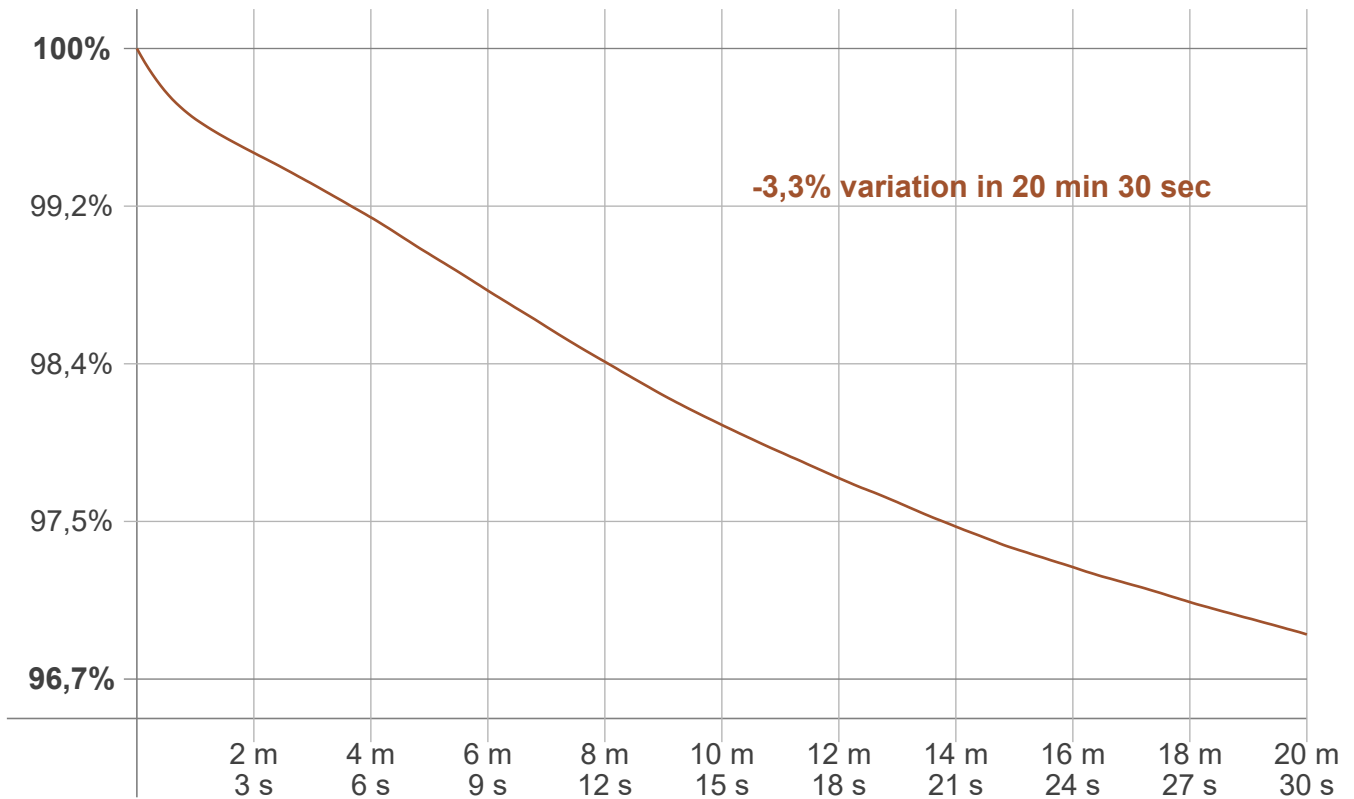
LCS table

BUG rating:	B3 U1 G0	
<b>Forward light</b>	Lumens	Lumens %
Low(0-30):	1513,9	42,1%
Medium(30-60):	270,8	7,5%
High(60-80):	12	0,3%
Very high(80-90):	0,8	0%
<b>Back light</b>		
Low(0-30):	1513,9	42,1%
Medium(30-60):	270,8	7,5%
High(60-80):	12	0,3%
Very high(80-90):	0,8	0%
<b>Uplight</b>		
Low(90-100):	0,3	0%
High(100-180):	2	0,1%

LCS graph



**Warmup curve**



**Warmup result**

<b>Warmup time:</b>	<b>Lamp stabilized in 20 min 30 sec</b>
<b>Warmup variation</b>	<b>-3,3%</b>

**Warmup conditions**

<b>Stable period:</b>	<b>15 min</b>
<b>Stable change max:</b>	<b>2,0%</b>
<b>Minimum time:</b>	<b>15 min</b>

**Color temperature change**

<b>CCT start</b>	<b>CCT change</b>	<b>CCT end</b>
6459 K	+41 K	6500 K

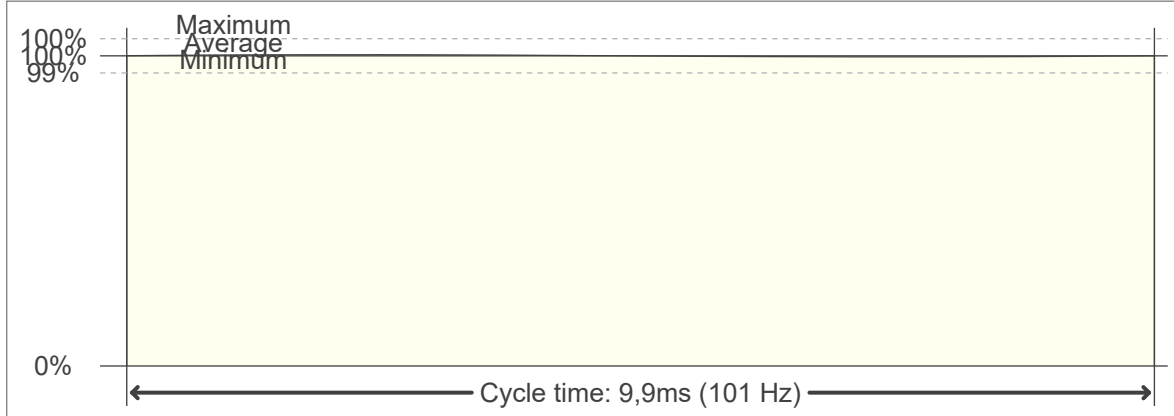
**Output change**

<b>Output start</b>	<b>Output change</b>	<b>Output end</b>
3716 lm	-119 lm	3597 lm

**Flicker curve (complete sampled flicker signal)**



**Flicker frame (frame of one flicker period)**



**Flicker FFT (frequency scope of flicker curve)**



**Flicker results:**

Flicker frequency:		101,01 Hz	
Flicker index:	0	JA8/10 40Hz	0,02 %
Flicker percentage:	0,39 %	JA8/10 90Hz	0,02 %
SVM: (Visual flicker)	0,01	JA8/10 200Hz	0,38 %
PstLM	0,03	JA8/10 400Hz	0,38 %
Mp	0,01	JA8/10 1000Hz	0,39 %

**Flicker conditions:**

Sample rate:	20000 samples/second
--------------	----------------------