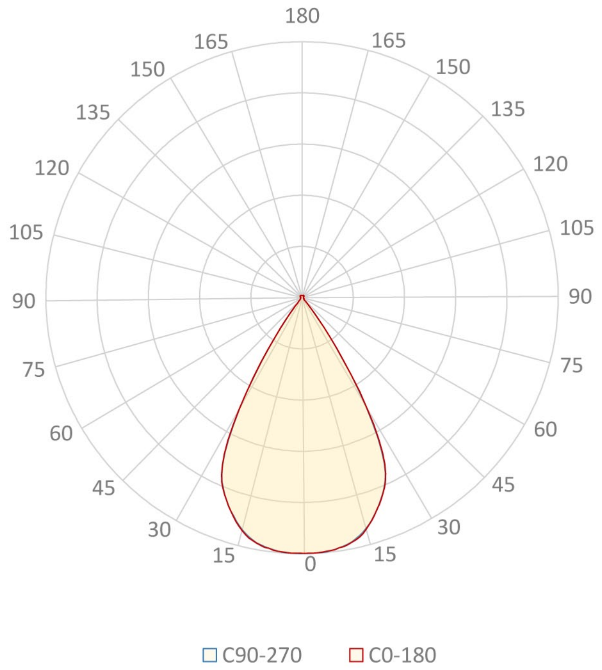
LM-79
Test Report

LM79-FOCUS-COMPACT-3000K-CRI90-WIDE

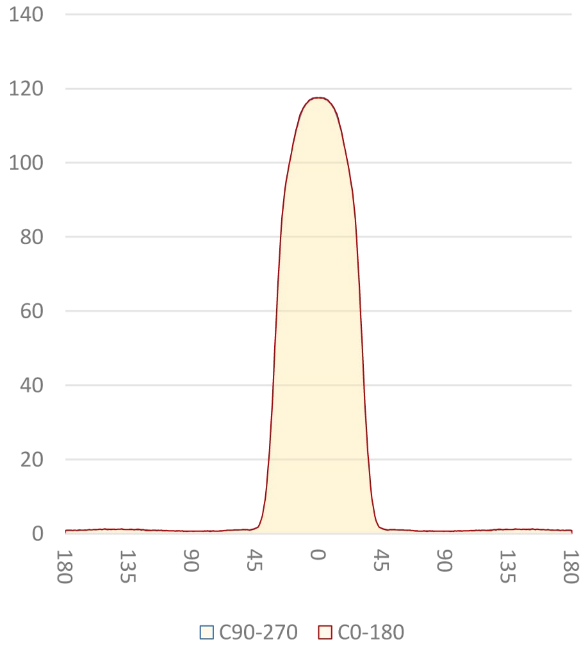
General Discription

Item number	F-3-2-02-Z
Date and time	21-5-2015 09:18:44
CCT (Kelvin)	3120 K
Beam angle	59,8°
Luminous flux	107 lm
Efficiency	24 lm/watt
Weighted energy	4,4 kWh/1000h
Power factor	0,5
CRI (RA)	94,5
Fidelity index Rf	Rf 91,9
Gammut index Rg	Rg 103,1
Peak	118 cd

Polar diagram



Cartesian diagram



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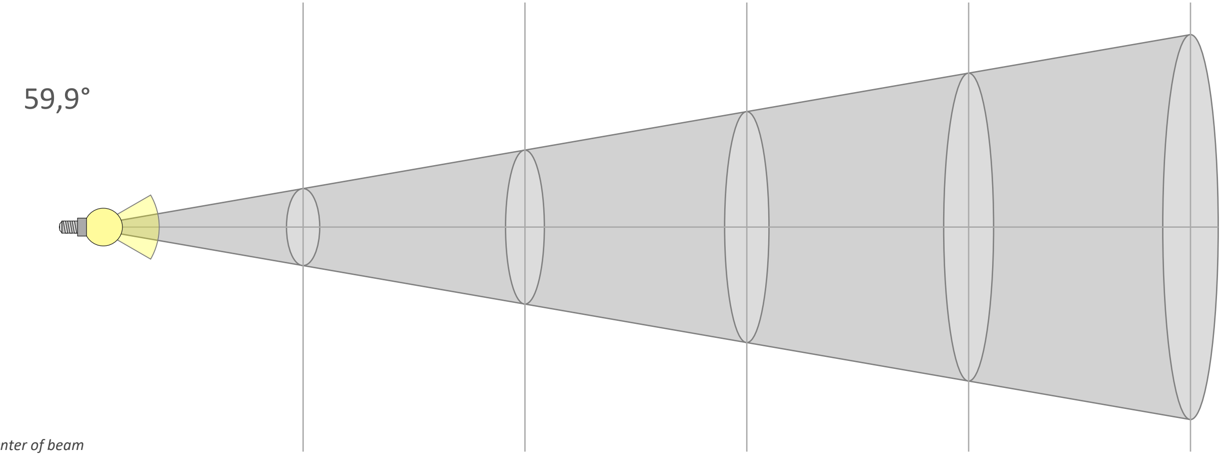
Beam details	**1m**	**2m**	**3m**	**4m**	**5m**
*Lux**	117 lx	29 lx	13 lx	7 lx	5 lx



**measured at center of beam*

*Footcandles**	10,9 fcd	2,7 fcd	1,2 fcd	0,7 fcd	0,4 fcd
Beam width (meter)	1,2 m	2,3 m	3,5 m	4,6 m	5,8 m
Beam width (Feet)	3,8 ft	7,6 ft	11,3 ft	15,1 ft	18,9 ft

Beam intensities

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
117lx	29lx	13lx	7lx	5lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx
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
10,9fcd	2,7fcd	1,2fcd	0,7fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

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°
117	117	117	117	116	115	114	112	109	105	101	97	93	85	74	59	43	28	17	9
100%	100%	100%	100%	99%	98%	97%	95%	93%	90%	86%	83%	79%	73%	63%	50%	36%	24%	15%	8%

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°
117	118	118	117	116	115	114	111	109	105	101	97	92	85	73	58	42	27	17	9
100%	100%	100%	100%	99%	98%	97%	95%	92%	89%	86%	83%	78%	72%	62%	49%	36%	23%	14%	8%

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°
117	117	117	117	116	115	114	112	109	105	101	97	93	85	74	59	43	28	17	9
100%	100%	100%	100%	99%	98%	97%	95%	93%	90%	86%	83%	79%	73%	63%	50%	36%	24%	15%	8%

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°
117	118	118	117	116	115	114	111	109	105	101	97	92	85	73	58	42	27	17	9
100%	100%	100%	100%	99%	98%	97%	95%	92%	89%	86%	83%	78%	72%	62%	49%	36%	23%	14%	8%

Beam angle 50%	*Field angle 10%*	*Cutoff angle 2,5%*	*Intensity ratio in 120° cone*	*Intensity ratio in 90° cone*
59,9°	74,5°	82,8°	92,4%	91,1%

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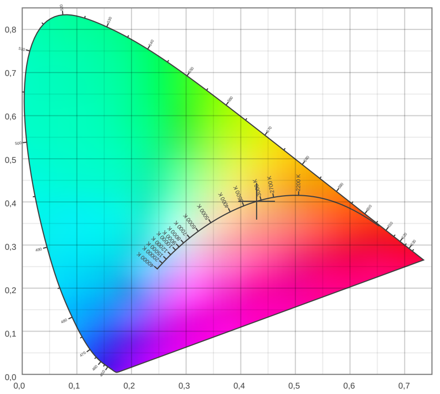
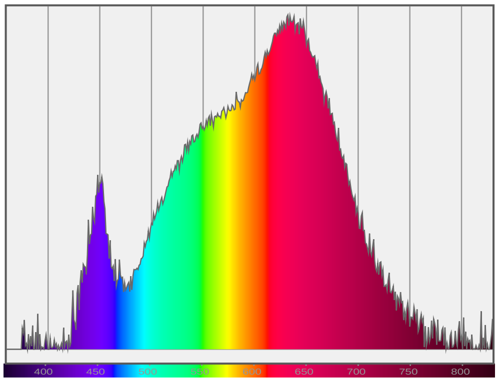
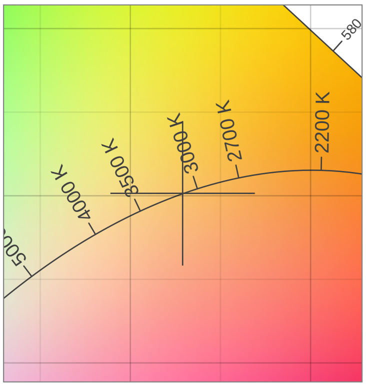
Color details

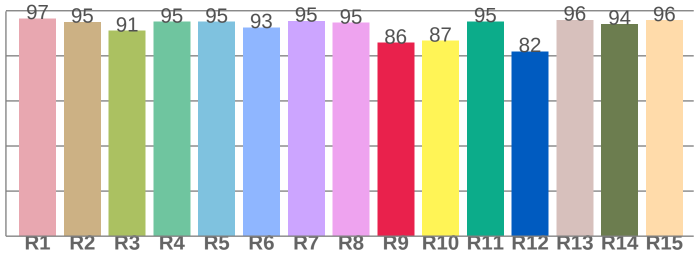






CIE 1931	x: 0,429		Spectra	CIE 1931 ZOOM
3120 K	y: 0,401			Δuv: 0,0002

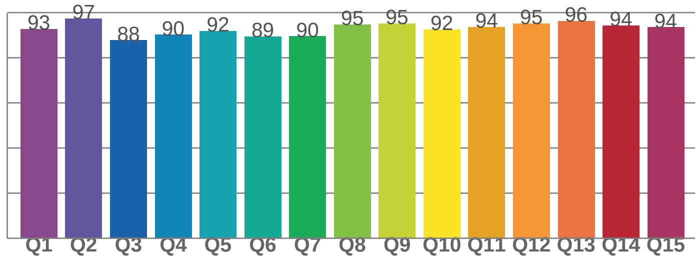
CRI: **94,5** (R1-R8)



CRI values, R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8
96,6	**95,1**	**91,2**	**95,1**	**95,1**	**92,6**	**95,5**	**94,7**
R9	R10	R11	R12	R13	R14	R15	
85,8	**86,8**	**95,2**	**81,9**	**95,9**	**94,2**	**95,8**	

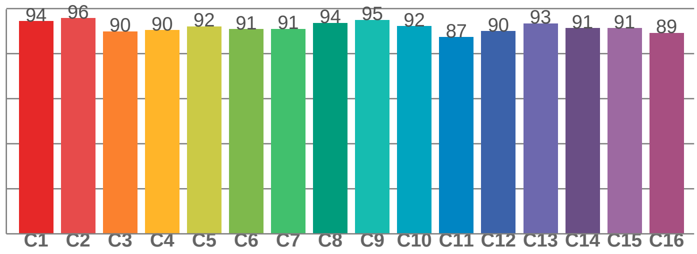
CQS: **92,4**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
92,8	**97,4**	**87,8**	**90,2**	**91,9**	**89,4**	**89,6**	**94,8**
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,2	**92,5**	**93,6**	**95,2**	**96,4**	**94,3**	**93,5**	

TM30: **91,9**



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

C1	C2	C3	C4	C5	C6	C7	C8
94,5	**95,7**	**90,0**	**90,4**	**92,1**	**90,9**	**91,0**	**93,7**
C9	C10	C11	C12	C13	C14	C15	
95,0	**92,2**	**87,3**	**90,0**	**93,4**	**91,4**	**91,3**	

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3120 K	**94,5**	**85,8**	**91,9**	**103,1**	**92,4**	**0,429**	**0,401**	**0,247**	**0,346**	**0,0002**

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TM30 details

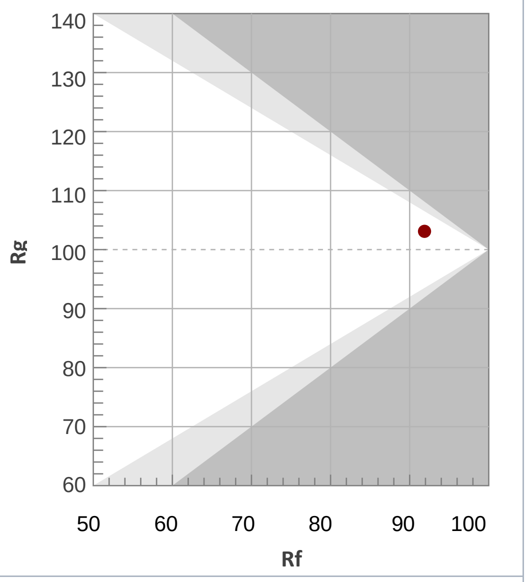
Rf 91,9

Fidelity index Rf

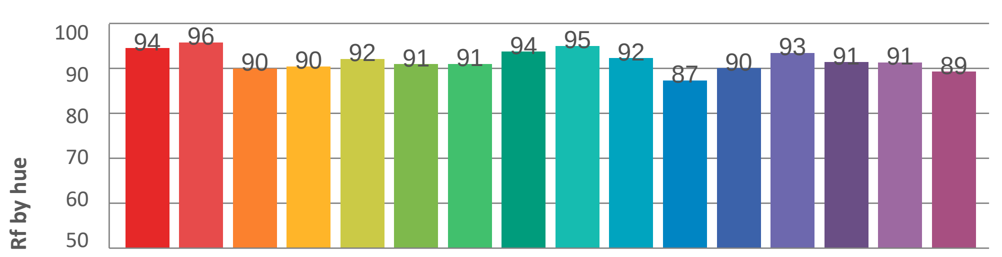
Rg 103,1

Gammut index Rg

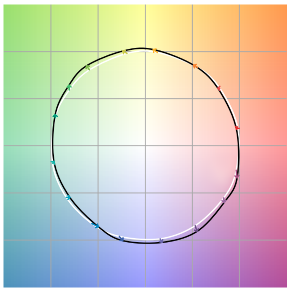
		Graphic shifts (%)	
Hue Bin	**R_f**	**Chroma**	**Hue**
1	94	-2%	-2%
2	96	-2%	1%
3	90	0%	5%
4	90	2%	5%
5	92	3%	4%
6	91	5%	0%
7	91	3%	-4%
8	94	1%	-4%
9	95	-2%	-2%
10	92	-3%	2%
11	87	-1%	7%
12	90	4%	5%
13	93	4%	1%
14	91	6%	-2%
15	91	3%	-4%
16	89	3%	-8%



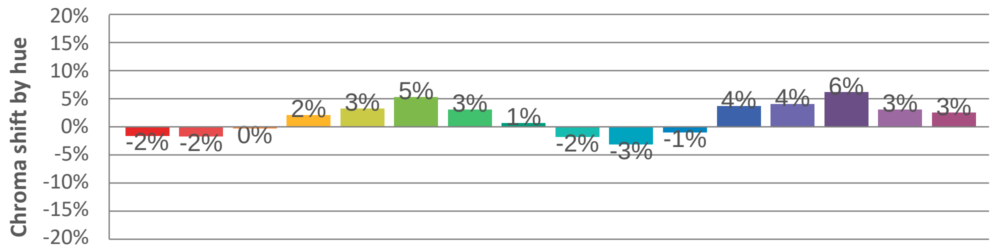
Hue binH



Color vector graphics

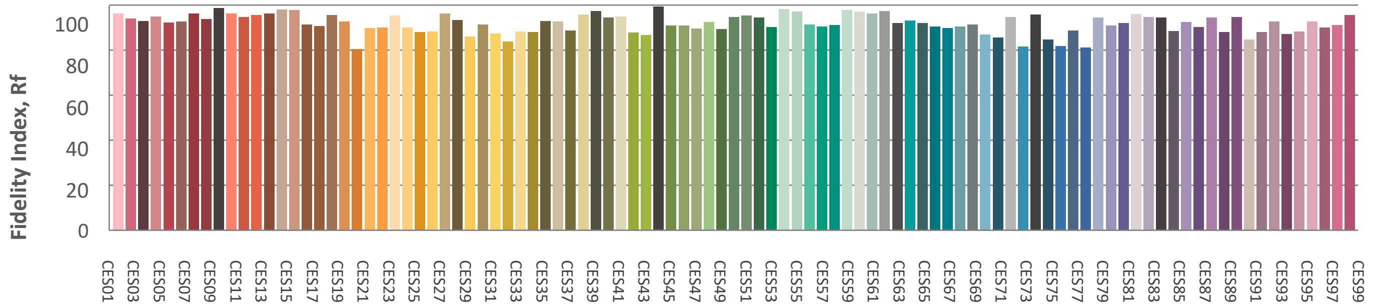


Hue bin



Color distortion graphics

Color Evaluation Sample



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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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Variation of the observer position for the luminaire distance S

n/a	n/a	n/a
n/a	n/a	n/a
n/a	n/a	n/a
Standard table	n/a	n/a
Correction summand	n/a	n/a

Corrected glare indices referring to 107lm total luminous flux