

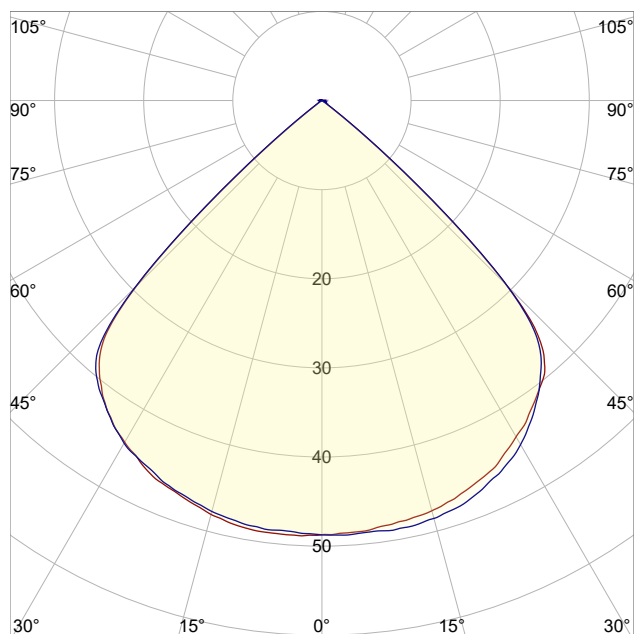
LM-79

Test Report

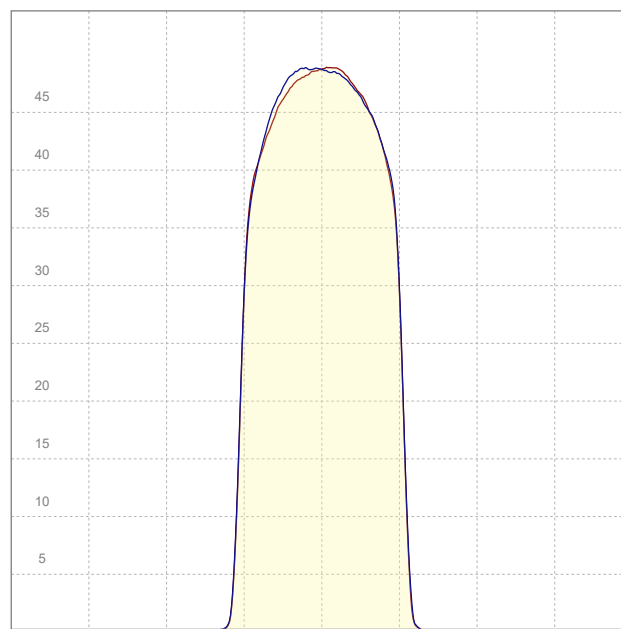
LM79-FOCUS-MICRO-G2-3500K-CRI95-WIDE

General Discription

Item number	FM-X-X-3595-Z
Date and time	16-10-2020 14:09:26
CCT (Kelvin)	3316 K
Beam angle	92,4°
Luminous flux	87,6 lm
Efficiency	83 lm/watt
Weighted energy	1,1 kWh/1000h
Power factor	1,0
CRI (RA)	94,2
Fidelity index Rf	Rf 93,5
Gammut index Rg	Rg 102,4
Peak	48,9 cd



Polar curve



Linear distribution diagram



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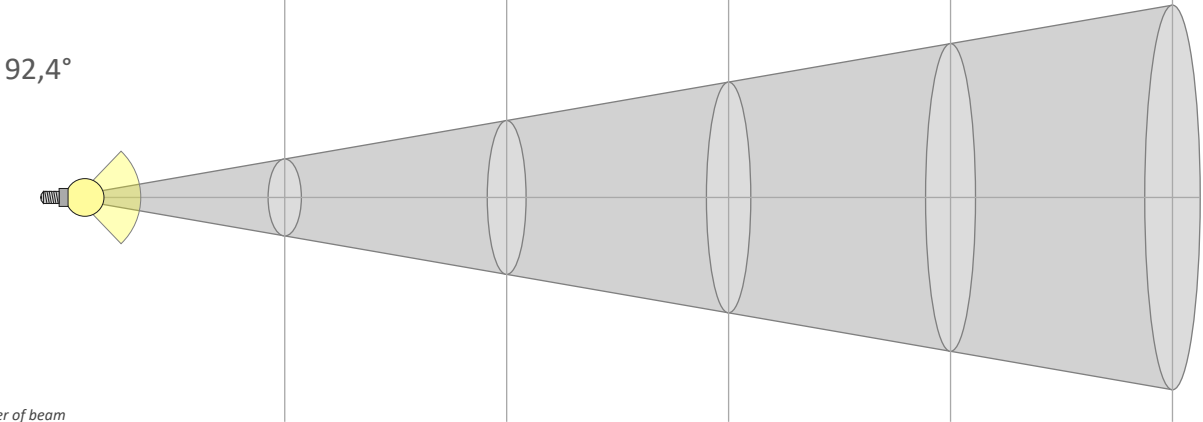
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LM-79

Test Report

LM79-FOCUS-MICRO-G2-3500K-CRI95-WIDE

Beam details	1m	2m	3m	4m	5m
Lux*	49 lx	12 lx	5 lx	3 lx	2 lx



92,4°

*measured at center of beam

Footcandles*	4,5 fcd	1,1 fcd	0,5 fcd	0,3 fcd	0,2 fcd
Beam width (meter)	2,1 m	4,2 m	6,3 m	8,3 m	10,4 m
Beam width (Feet)	6,8 ft	13,7 ft	20,5 ft	27,4 ft	34,2 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
49lx	12lx	5lx	3lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	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
4,5fcd	1,1fcd	0,5fcd	0,3fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

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°
48,7	48,6	48,1	47,6	46,7	45,5	43,6	41,5	38,9	29,3	7,9	0,4	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0
100%	100%	99%	98%	96%	93%	89%	85%	80%	60%	16%	1%	0%	0%	0%	0%	0%	0%	0%	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°
48,7	48,7	48,8	48,5	47,8	46,4	44,6	41,8	38,3	29,2	8,2	0,5	0,2	0,1	0,1	0,1	0,1	0,1	0,1	0,0
100%	100%	100%	100%	98%	95%	91%	86%	79%	60%	17%	1%	0%	0%	0%	0%	0%	0%	0%	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°
48,7	48,9	48,7	48,1	47,0	46,0	44,3	42,1	38,9	29,3	7,6	0,5	0,2	0,1	0,1	0,1	0,1	0,1	0,0	0,0
100%	100%	100%	99%	97%	94%	91%	86%	80%	60%	16%	1%	0%	0%	0%	0%	0%	0%	0%	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°
48,7	48,5	48,3	47,7	46,8	45,6	44,4	42,2	39,4	29,5	8,1	0,5	0,1	0,1	0,1	0,1	0,1	0,1	0,0	0,0
100%	99%	99%	98%	96%	94%	91%	87%	81%	61%	17%	1%	0%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
92,4°	102°	106,2°	99,7%	89,8%



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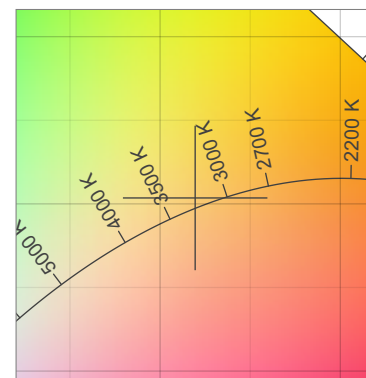
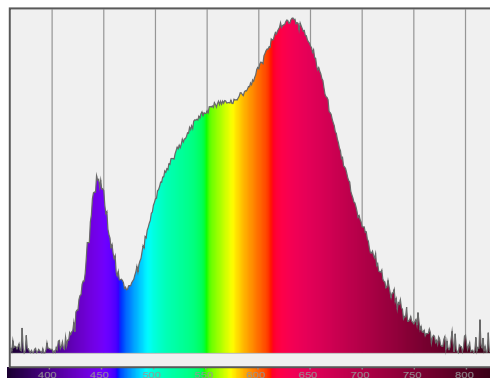
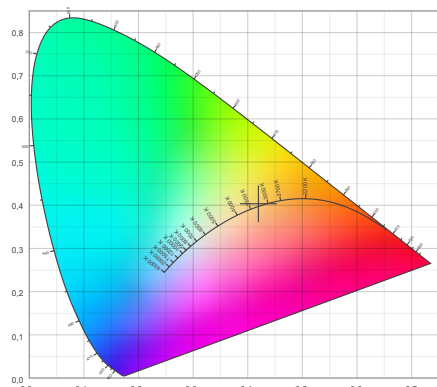
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LM-79

Test Report

LM79-FOCUS-MICRO-G2-3500K-CRI95-WIDE

Color details



CIE 1931

x: 0,419



Spectra

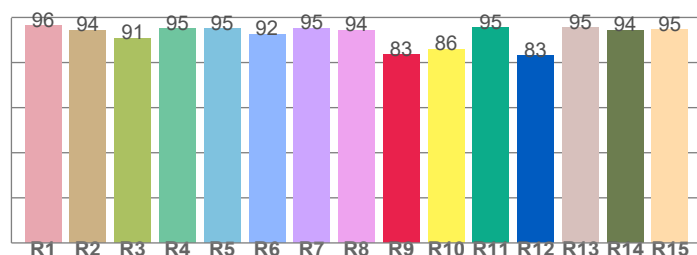
CIE 1931 ZOOM

3316 K

y: 0,404

Δuv : 0,0026

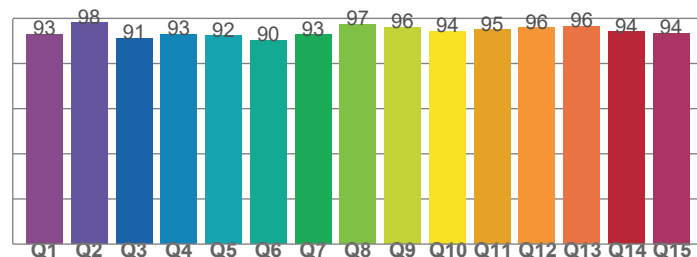
CRI: 94,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
96,3	94,3	90,9	95,0	95,0	92,4	95,1	94,3
R9	R10	R11	R12	R13	R14	R15	
83,4	85,9	95,4	83,0	95,4	94,2	94,5	

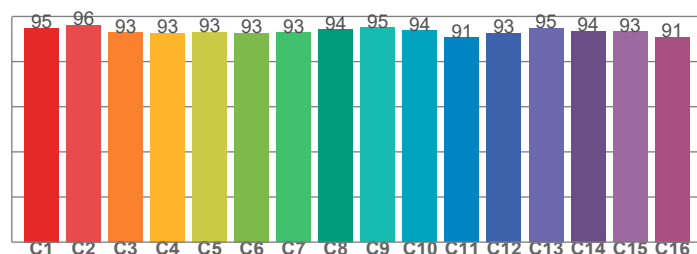
CQS: 93,7



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
92,9	98,0	91,2	93,0	92,3	90,1	92,7	97,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,0	94,4	94,9	95,8	96,5	94,0	93,5	

TM30: 93,5



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

C1	C2	C3	C4	C5	C6	C7	C8
94,9	96,3	93,0	92,6	93,1	92,7	92,9	94,4
C9	C10	C11	C12	C13	C14	C15	
95,1	93,7	90,8	92,7	94,9	93,5	93,2	

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
3316 K	94,2	83,4	93,5	102,4	93,7	0,419	0,404	0,240	0,346	0,0026



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LM-79

Test Report

LM79-FOCUS-MICRO-G2-3500K-CRI95-WIDE

TM30 details

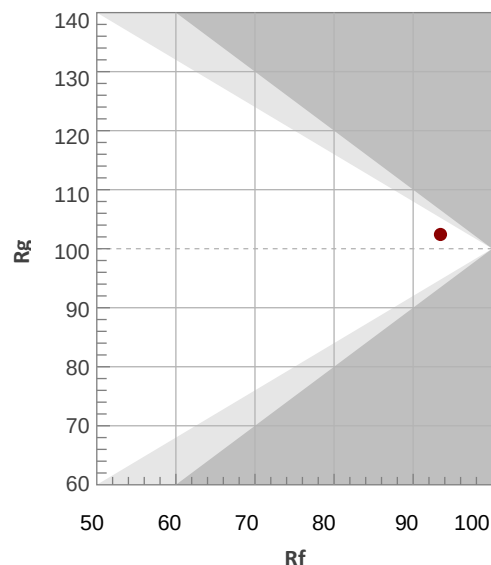
Rf 93,5

Fidelity index Rf

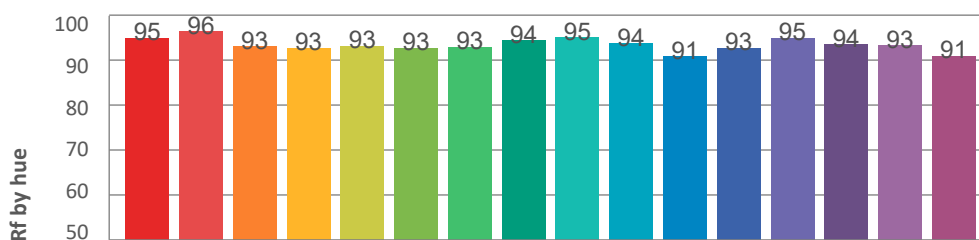
Rg 102,4

Gamut index Rg

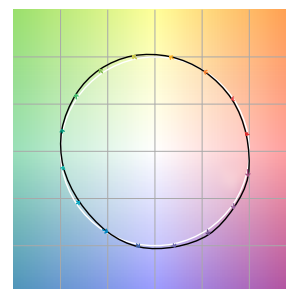
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	95	-2%	-2%
2	96	-2%	1%
3	93	-1%	4%
4	93	1%	4%
5	93	4%	3%
6	93	5%	1%
7	93	3%	-4%
8	94	1%	-3%
9	95	-2%	-3%
10	94	-4%	0%
11	91	-1%	6%
12	93	3%	3%
13	95	3%	1%
14	94	5%	-2%
15	93	3%	-4%
16	91	2%	-6%



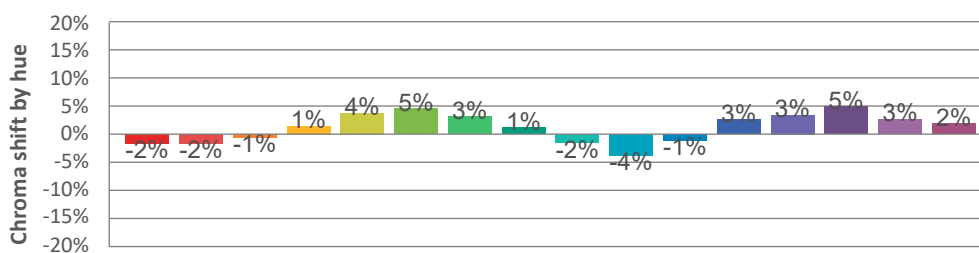
Hue binH



Color vector graphics



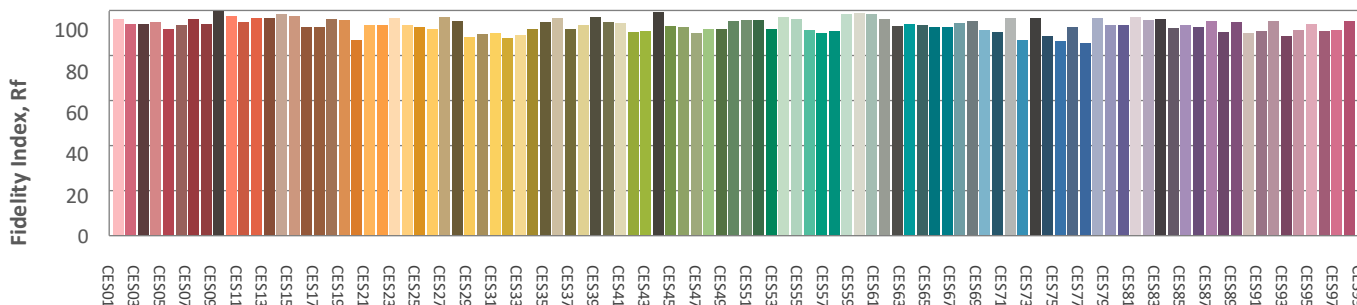
Hue bin



Color distortion graphics



Color Evaluation Sample



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Test Report

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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
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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 87,6lm total luminous flux										



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