

# LM-79

## Test Report

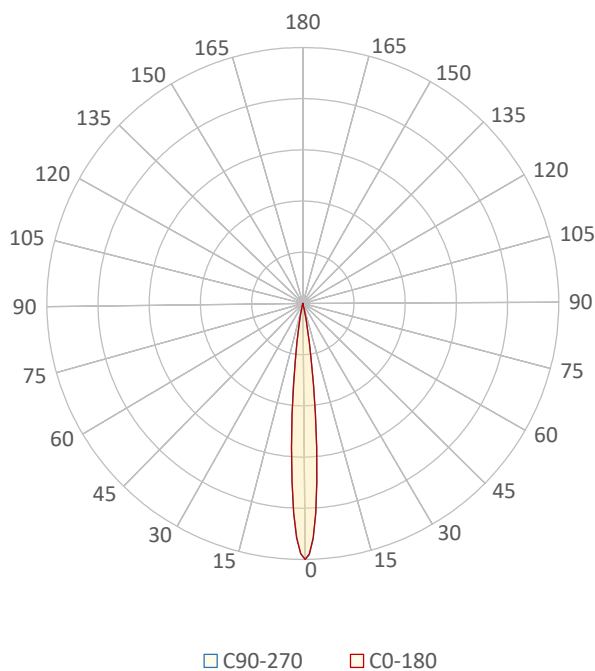
### LM79-JADE-ZOOM-XICATO-2700K-CRI98-SPOT

#### General Discription

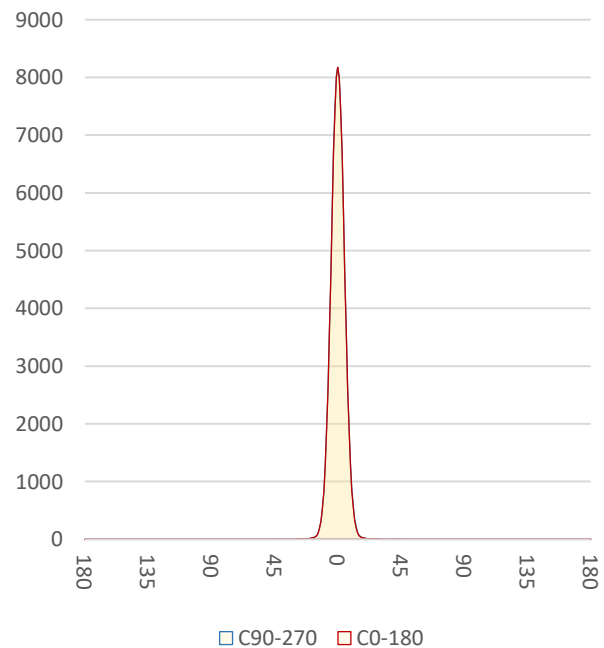
Item number	
Date and time	29-5-2019 13:46:58
CCT (Kelvin)	2736 K
Beam angle	11°
Luminous flux	358 lm
Efficiency	16 lm/watt
Weighted energy	22,5 kWh/1000h
Power factor	0,97
CRI (RA)	97,2
Fidelity index Rf	Rf 95,5
Gammut index Rg	Rg 103,0
Peak	8190 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	8176 lx	2044 lx	908 lx	511 lx	327 lx																			
*measured at center of beam																								
Footcandles*	759,6 fcd	189,9 fcd	84,4 fcd	47,5 fcd	30,4 fcd																			
Beam width (meter)	0,2 m	0,4 m	0,6 m	0,8 m	1 m																			
Beam width (Feet)	0,6 ft	1,3 ft	1,9 ft	2,5 ft	3,2 ft																			
<b>Beam intensities</b>																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
8176lx	2044lx	908lx	511lx	327lx	227lx	167lx	128lx	101lx	82lx	68lx	57lx	48lx	42lx	36lx	32lx	28lx	25lx	23lx	20lx					
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					
759,6fcd	189,9fcd	84,4fcd	47,5fcd	30,4fcd	21,1fcd	15,5fcd	11,9fcd	9,4fcd	7,6fcd	6,3fcd	5,3fcd	4,5fcd	3,9fcd	3,4fcd	3fcd	2,6fcd	2,3fcd	2,1fcd	1,9fcd					
<b>Intensities in 0° c-plane</b>																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
8176	8000	7498	6701	5696	4615	3564	2622	1850	1262	832	523	319	189	110	67	44	31	24	18					
100%	98%	92%	82%	70%	56%	44%	32%	23%	15%	10%	6%	4%	2%	1%	1%	1%	0%	0%	0%					
<b>Intensities in 90° c-plane</b>																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
8176	8032	7535	6742	5741	4642	3558	2606	1839	1252	823	519	315	186	107	66	43	31	23	19					
100%	98%	92%	82%	70%	57%	44%	32%	22%	15%	10%	6%	4%	2%	1%	1%	1%	0%	0%	0%					
<b>Intensities in 180° c-plane</b>																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
8176	7992	7484	6694	5703	4617	3560	2629	1862	1273	840	534	327	194	113	68	44	31	24	19					
100%	98%	92%	82%	70%	56%	44%	32%	23%	16%	10%	7%	4%	2%	1%	1%	1%	0%	0%	0%					
<b>Intensities in 270° c-plane</b>																								
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°					
8176	7995	7479	6677	5687	4621	3573	2644	1891	1310	879	569	357	217	127	75	48	34	25	19					
100%	98%	91%	82%	70%	57%	44%	32%	23%	16%	11%	7%	4%	3%	2%	1%	1%	0%	0%	0%					
<b>Beam angle 50%</b>					<b>Field angle 10%</b>					<b>Cutoff angle 2,5%</b>					<b>Intensity ratio in 120° cone</b>					<b>Intensity ratio in 90° cone</b>				
11°					20,1°					25,8°					98,4%					98,1%				



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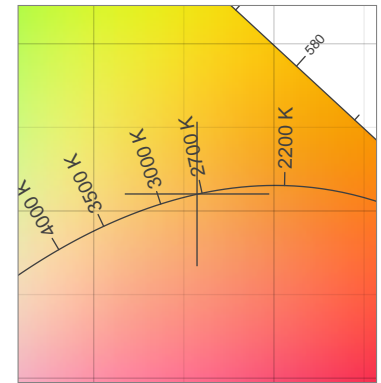
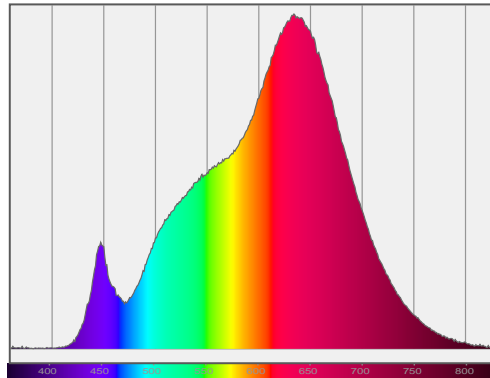
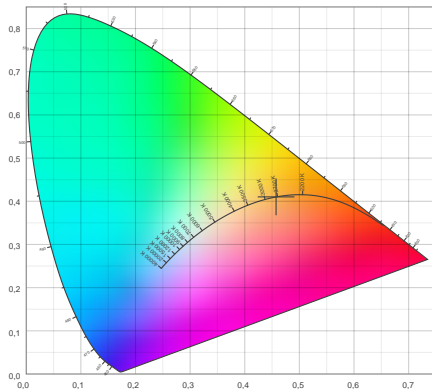
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# LM79-JADE-ZOOM-XICATO-2700K-CRI98-SPOT

### Color details



CIE 1931

x: 0,457



Spectra

CIE 1931 ZOOM

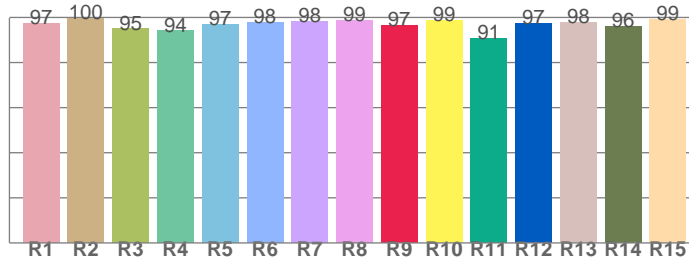
2736 K

y: 0,410

$\Delta uv$ : 0,0002

**CRI: 97,2 (R1-R8)**

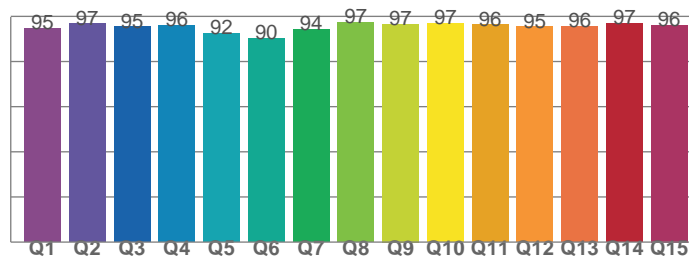
*CRI values, R1-R8 are used to calculate final CRI value*



R1	R2	R3	R4	R5	R6	R7	R8
97,2	99,7	94,9	94,0	97,1	98,0	98,1	98,8
R9	R10	R11	R12	R13	R14	R15	
96,6	98,6	90,7	97,3	97,6	96,0	99,1	

**CQS: 94,8**

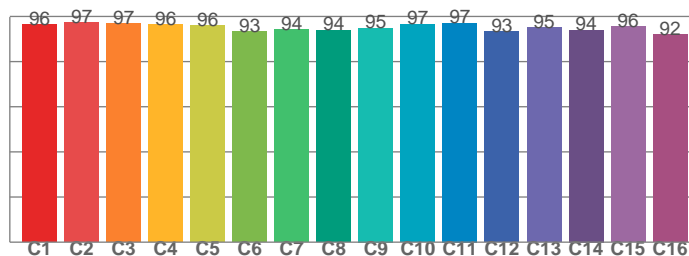
*CQS values*



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
94,6	96,7	95,4	95,9	92,4	90,3	94,3	97,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,6	97,0	96,2	95,3	95,6	96,8	96,2	

**TM30: 95,5**

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



C1	C2	C3	C4	C5	C6	C7	C8
96,3	97,3	96,7	96,4	96,0	93,4	94,3	93,9
C9	C10	C11	C12	C13	C14	C15	
94,9	96,6	97,1	93,4	95,0	94,0	95,6	

### 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	$\Delta uv$
2736 K	97,2	96,6	95,5	103,0	94,8	0,457	0,410	0,261	0,351	0,0002



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### LM79-JADE-ZOOM-XICATO-2700K-CRI98-SPOT

#### TM30 details

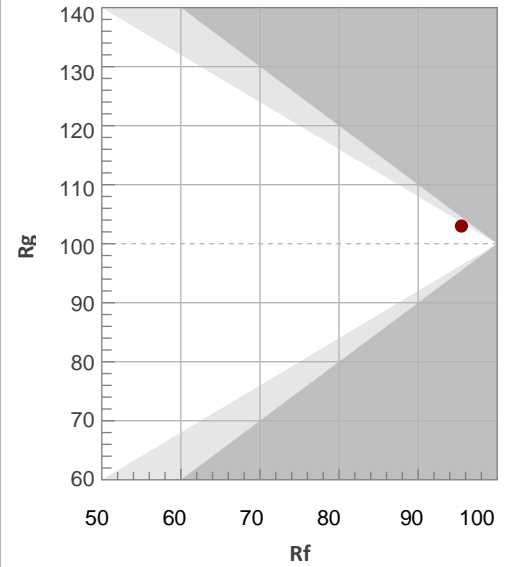
Rf 95,5

Fidelity index Rf

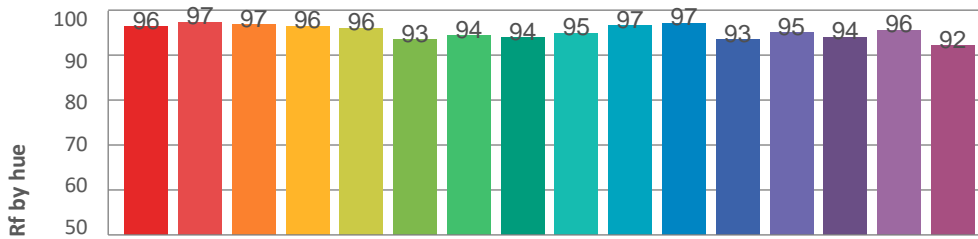
Rg 103,0

Gamut index Rg

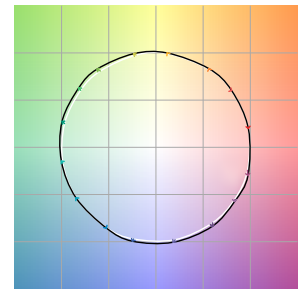
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	96	0%	-1%
2	97	0%	0%
3	97	0%	1%
4	96	1%	1%
5	96	2%	2%
6	93	4%	2%
7	94	3%	-1%
8	94	3%	-2%
9	95	1%	-2%
10	97	0%	-1%
11	97	0%	1%
12	93	3%	-1%
13	95	2%	-3%
14	94	3%	-3%
15	96	1%	-2%
16	92	2%	-5%



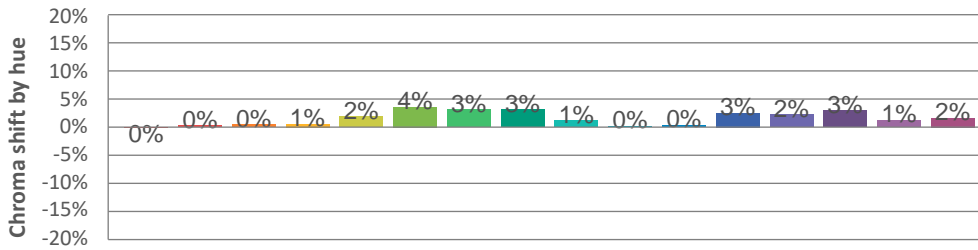
#### Hue binH



#### Color vector graphics



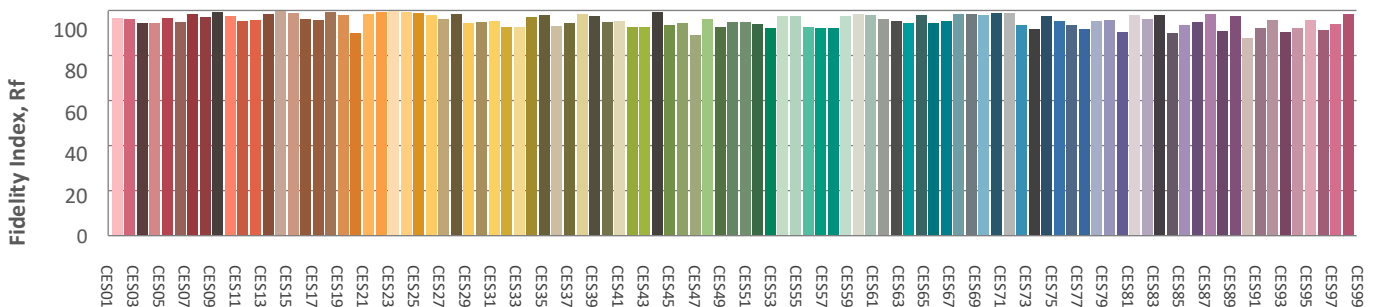
#### Hue bin



#### Color distortion graphics



#### Color Evaluation Sample



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### LM79-JADE-ZOOM-XICATO-2700K-CRI98-SPOT

#### 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	-4,6	-4,0	-4,4	-3,8	-3,6	-4,7	-4,1	-4,4	-3,9	-3,6
	3H	-2,5	-1,9	-2,2	-1,7	-1,4	-1,7	-1,1	-1,4	-0,9	-0,6
	4H	-1,2	-0,6	-0,9	-0,4	-0,1	-0,6	-0,1	-0,3	0,2	0,5
	6H	-0,7	-0,2	-0,3	0,1	0,4	0,6	1,1	1,0	1,4	1,7
	8H	-0,4	0,1	-0,0	0,4	0,7	1,5	2,0	1,9	2,3	2,6
	12H	1,0	1,5	1,4	1,8	2,1	2,2	2,7	2,6	3,0	3,3
4H	2H	-3,8	-3,2	-3,5	-3,0	-2,7	-3,7	-3,2	-3,4	-2,9	-2,6
	3H	-1,4	-0,9	-1,0	-0,6	-0,2	-0,6	-0,1	-0,2	0,2	0,5
	4H	0,1	0,5	0,4	0,8	1,2	0,6	1,0	1,0	1,3	1,7
	6H	0,7	1,0	1,1	1,4	1,8	2,1	2,4	2,5	2,8	3,2
	8H	1,0	1,3	1,5	1,7	2,2	3,0	3,3	3,5	3,7	4,2
	12H	2,7	3,0	3,2	3,4	3,8	3,9	4,1	4,3	4,5	5,0
8H	4H	0,5	0,8	1,0	1,2	1,6	1,1	1,4	1,5	1,8	2,2
	6H	1,4	1,6	1,8	2,0	2,5	2,8	3,1	3,3	3,5	4,0
	8H	1,9	2,1	2,4	2,5	3,0	4,0	4,2	4,5	4,6	5,1
	12H	4,1	4,2	4,6	4,7	5,2	5,0	5,1	5,5	5,6	6,1
12H	4H	0,6	0,9	1,1	1,3	1,7	1,2	1,4	1,7	1,9	2,3
	6H	1,6	1,8	2,1	2,2	2,7	3,0	3,2	3,5	3,7	4,1
	8H	2,3	2,4	2,8	2,9	3,4	4,2	4,4	4,7	4,9	5,4
Variation of the observer position for the luminaire distance S											
S = 1,0H	+0,3 / -0,3					+0,1 / -0,1					
S = 1,5H	+0,5 / -0,4					+0,3 / -0,3					
S = 2,0H	+0,6 / -1,1					+0,2 / -0,5					
Standard table	BK10					BK11					
Correction summand	-14,0					-12,3					
Corrected glare indices referring to 358lm total luminous flux											



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