

# LM-79

## Test Report

### LM79-JADE-S-2700K-CRI80-MEDIUM

#### General Discription

Item number	J-SX-X-3-1-27-80-2
Date and time	28-11-2016 09:40:15
CCT (Kelvin)	2715 K
Beam angle	36,9°
Luminous flux	2836 lm
Efficiency	102 lm/watt
Weighted energy	27,9 kWh/1000h
Power factor	0,95
CRI (RA)	81,6
Fidelity index Rf	Rf 81,9
Gammut index Rg	Rg 96,8



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Beam details	1m	2m	3m	4m	5m																			
Lux*	5331 lx	1333 lx	592 lx	333 lx	213 lx																			
*measured at center of beam																								
Footcandles*	495,2 fcd	123,8 fcd	55,0 fcd	31,0 fcd	19,8 fcd																			
Beam width (meter)	0,7 m	1,3 m	2 m	2,7 m	3,3 m																			
Beam width (Feet)	2,2 ft	4,4 ft	6,6 ft	8,8 ft	11 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					
5331lx	1333lx	592lx	333lx	213lx	148lx	109lx	83lx	66lx	53lx	44lx	37lx	32lx	27lx	24lx	21lx	18lx	16lx	15lx	13lx					
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					
495,2fcd	123,8fcd	55fcd	31fcd	19,8fcd	13,8fcd	10,1fcd	7,7fcd	6,1fcd	5fcd	4,1fcd	3,4fcd	2,9fcd	2,5fcd	2,2fcd	1,9fcd	1,7fcd	1,5fcd	1,4fcd	1,2fcd					
<b>Intensities in 0° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5331	5242	5134	4929	4634	4327	3937	3542	3140	2736	2346	2045	1748	1529	1355	1186	1032	878	701	516					
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	19%	16%	13%	10%					
<b>Intensities in 90° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5331	5314	5162	4935	4669	4323	3964	3573	3168	2769	2407	2061	1788	1552	1355	1205	1052	881	701	525					
100%	100%	97%	93%	88%	81%	74%	67%	59%	52%	45%	39%	34%	29%	25%	23%	20%	17%	13%	10%					
<b>Intensities in 180° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5331	5242	5134	4929	4634	4327	3937	3542	3140	2736	2346	2045	1748	1529	1355	1186	1032	878	701	516					
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	19%	16%	13%	10%					
<b>Intensities in 270° c-plane</b>																								
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°					
5331	5314	5162	4935	4669	4323	3964	3573	3168	2769	2407	2061	1788	1552	1355	1205	1052	881	701	525					
100%	100%	97%	93%	88%	81%	74%	67%	59%	52%	45%	39%	34%	29%	25%	23%	20%	17%	13%	10%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
36,9°					75,7°					{C_ANG}°					97,6%					95,1%				



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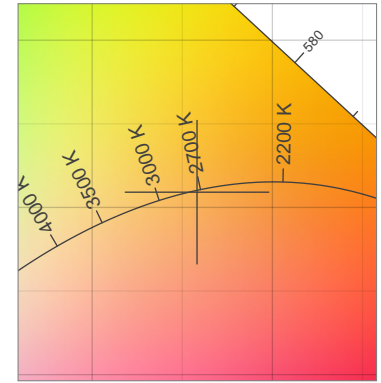
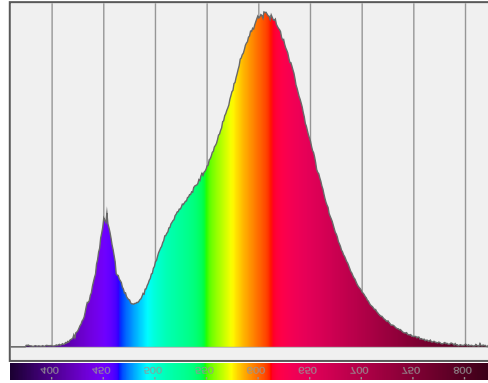
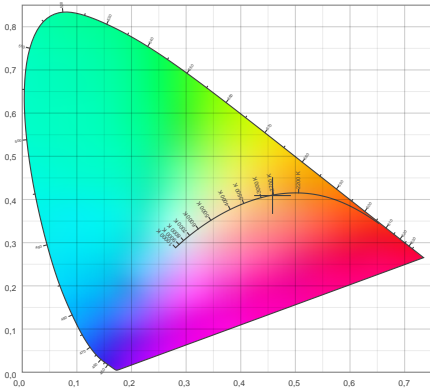
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### LM79-JADE-S-2700K-CRI80-MEDIUM

#### Color details



CIE 1931

x: 0,458



Spectra

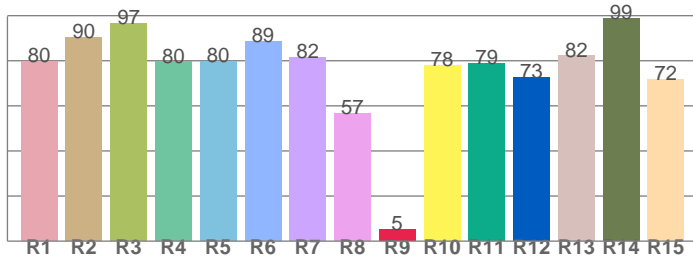
CIE 1931 ZOOM

2715 K

y: 0,409

$\Delta uv$ : 0,0004

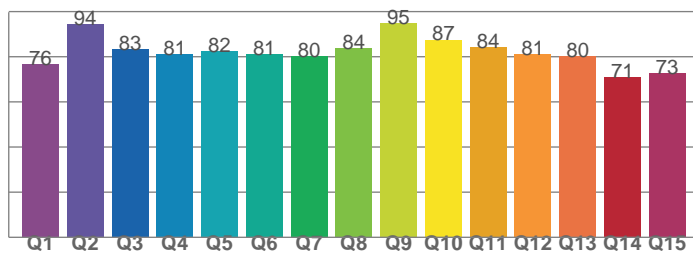
CRI: **81,6** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
79,8	90,3	96,5	79,5	79,7	88,7	81,6	56,7
R9	R10	R11	R12	R13	R14	R15	
5,2	78,1	78,9	72,5	82,2	98,8	71,6	

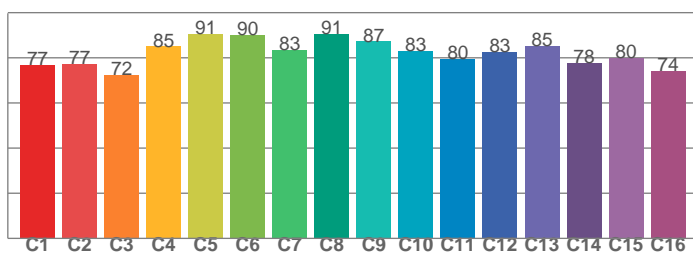
CQS: **81,0**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
76,5	94,3	83,3	81,0	82,4	81,3	80,3	83,6
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
94,9	87,5	84,2	81,2	80,4	70,9	72,6	

TM30: **81,9**



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

C1	C2	C3	C4	C5	C6	C7	C8
76,7	77,2	72,4	85,1	90,5	90,3	83,5	90,6
C9	C10	C11	C12	C13	C14	C15	
87,2	83,2	79,5	82,6	85,3	77,6	80,0	

#### 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	$\Delta uv$
2715 K	81,6	5,2	81,9	96,8	81,0	0,458	0,409	0,262	0,351	0,0004



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### TM30 details

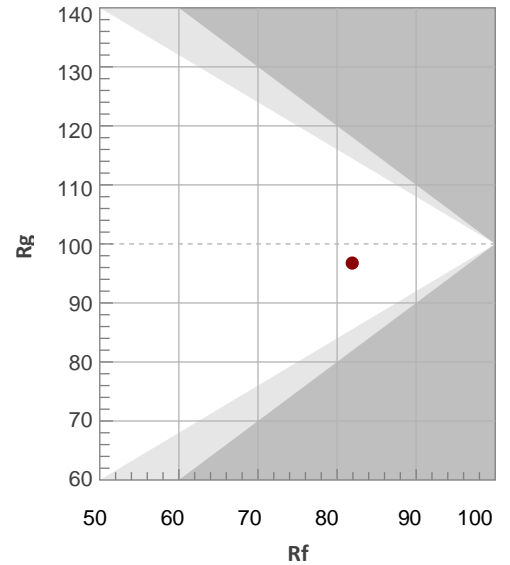
Rf 81,9

Fidelity index Rf

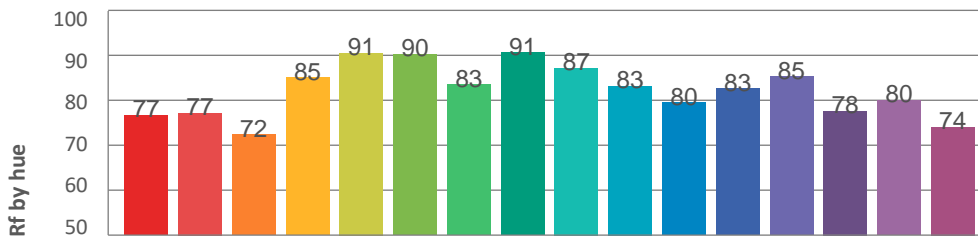
Rg 96,8

Gamut index Rg

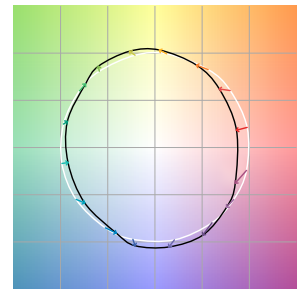
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	77	-12%	-1%
2	77	-9%	8%
3	72	-3%	13%
4	85	3%	8%
5	91	5%	5%
6	90	5%	-2%
7	83	-1%	-10%
8	91	-3%	-4%
9	87	-7%	0%
10	83	-6%	8%
11	80	-2%	13%
12	83	6%	4%
13	85	6%	-7%
14	78	5%	-15%
15	80	-2%	-11%
16	74	-9%	-16%



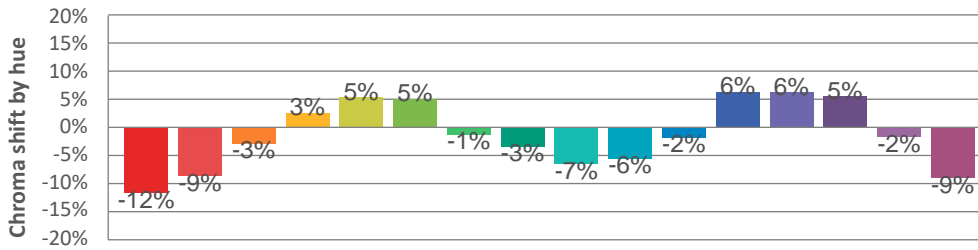
### Hue binH



### Color vector graphics



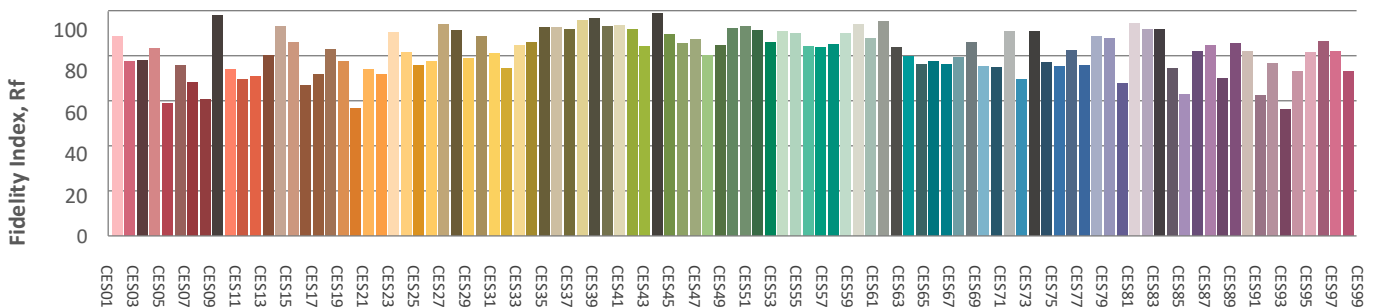
### Hue bin



### 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					
2H	2H	21,9	22,6	22,2	22,8	23,0	21,9	22,6	22,2	22,8	23,0
	3H	22,0	22,6	22,3	22,8	23,1	22,0	22,6	22,3	22,9	23,1
	4H	22,0	22,6	22,3	22,9	23,2	22,1	22,7	22,4	22,9	23,2
	6H	22,1	22,6	22,4	22,9	23,2	22,1	22,7	22,4	22,9	23,2
	8H	22,1	22,6	22,4	22,9	23,2	22,1	22,6	22,5	22,9	23,3
	12H	22,1	22,6	22,4	22,9	23,2	22,1	22,6	22,5	22,9	23,3
4H	2H	21,8	22,4	22,1	22,6	22,9	21,8	22,4	22,1	22,7	22,9
	3H	21,9	22,4	22,3	22,8	23,1	22,0	22,5	22,3	22,8	23,1
	4H	22,1	22,5	22,5	22,8	23,2	22,1	22,5	22,5	22,9	23,2
	6H	22,2	22,6	22,6	22,9	23,3	22,2	22,6	22,6	23,0	23,4
	8H	22,2	22,5	22,7	22,9	23,4	22,3	22,6	22,7	23,0	23,4
	12H	22,2	22,5	22,7	22,9	23,4	22,3	22,5	22,7	23,0	23,4
8H	4H	22,1	22,4	22,5	22,8	23,2	22,1	22,4	22,5	22,8	23,2
	6H	22,2	22,5	22,7	22,9	23,4	22,3	22,5	22,7	23,0	23,4
	8H	22,3	22,5	22,8	23,0	23,5	22,3	22,5	22,8	23,0	23,5
	12H	22,3	22,5	22,8	23,0	23,5	22,4	22,5	22,9	23,0	23,5
12H	4H	22,1	22,3	22,5	22,7	23,2	22,1	22,4	22,5	22,8	23,2
	6H	22,2	22,4	22,7	22,9	23,4	22,3	22,5	22,7	22,9	23,4
	8H	22,3	22,5	22,8	22,9	23,5	22,3	22,5	22,8	23,0	23,5
Variation of the observer position for the luminaire distance S											
S = 1,0H	+3,9 / -3,6					+3,9 / -3,6					
S = 1,5H	+6,4 / -3,9					+6,5 / -3,9					
S = 2,0H	+8,4 / -4,2					+8,4 / -4,3					
Standard table	BK01					BK01					
Correction summand	4,1					4,1					
Corrected glare indices referring to 2836lm total luminous flux											



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