

# LM-79

## Test Report

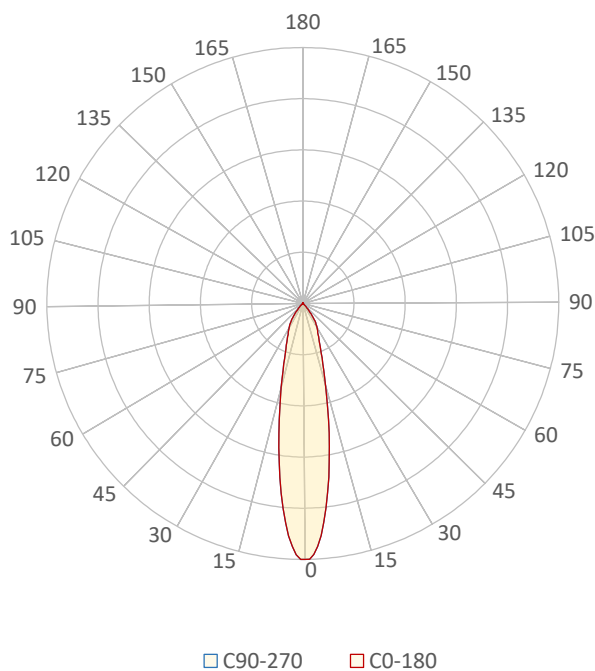
### LM79-JADE-COLOUR-FLOW-SPOT-all-leds-on

#### General Discription

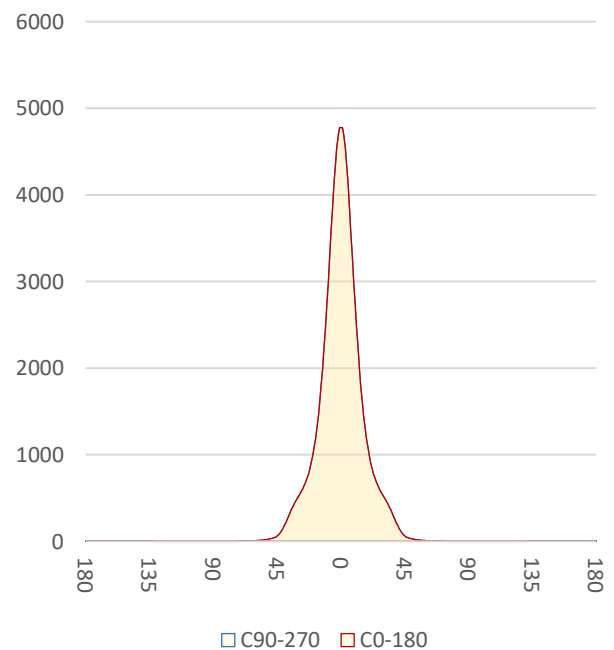
Item number	J-SXX-1-C-C470-1
Date and time	14-4-2017 13:57:54
CCT (Kelvin)	15542 K
Beam angle	22,6°
Luminous flux	1425 lm
Efficiency	48 lm/watt
Weighted energy	29,4 kWh/1000h
Power factor	0,57
CRI (RA)	41,0
Fidelity index Rf	Rf 56,8
Gammut index Rg	Rg 128,4
Peak	4777 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m														
Lux*	4777 lx	1194 lx	531 lx	299 lx	191 lx														
*measured at center of beam																			
Footcandles*	443,8 fcd	111,0 fcd	49,3 fcd	27,7 fcd	17,8 fcd														
Beam width (meter)	0,4 m	0,8 m	1,2 m	1,6 m	2 m														
Beam width (Feet)	1,3 ft	2,6 ft	3,9 ft	5,2 ft	6,6 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
4777lx	1194lx	531lx	299lx	191lx	133lx	97lx	75lx	59lx	48lx	39lx	33lx	28lx	24lx	21lx	19lx	17lx	15lx	13lx	12lx
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
443,8fcd	111fcd	49,3fcd	27,7fcd	17,8fcd	12,3fcd	9,1fcd	6,9fcd	5,5fcd	4,4fcd	3,7fcd	3,1fcd	2,6fcd	2,3fcd	2fcd	1,7fcd	1,5fcd	1,4fcd	1,2fcd	1,1fcd
<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°
4777	4691	4344	3841	3281	2725	2220	1788	1449	1182	986	836	727	642	576	519	464	400	330	252
100%	98%	91%	80%	69%	57%	46%	37%	30%	25%	21%	18%	15%	13%	12%	11%	10%	8%	7%	5%
<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°
4777	4691	4344	3841	3281	2725	2220	1788	1449	1182	986	836	727	642	576	519	464	400	330	252
100%	98%	91%	80%	69%	57%	46%	37%	30%	25%	21%	18%	15%	13%	12%	11%	10%	8%	7%	5%
<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°
4777	4691	4344	3841	3281	2725	2220	1788	1449	1182	986	836	727	642	576	519	464	400	330	252
100%	98%	91%	80%	69%	57%	46%	37%	30%	25%	21%	18%	15%	13%	12%	11%	10%	8%	7%	5%
<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°
4777	4691	4344	3841	3281	2725	2220	1788	1449	1182	986	836	727	642	576	519	464	400	330	252
100%	98%	91%	80%	69%	57%	46%	37%	30%	25%	21%	18%	15%	13%	12%	11%	10%	8%	7%	5%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
22,6°		63°				84°				99,0%				96,9%					



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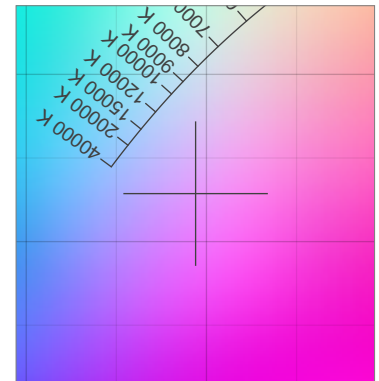
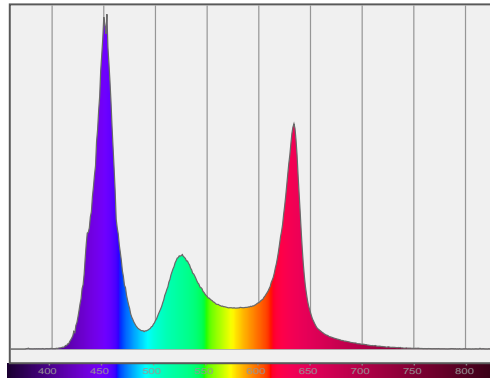
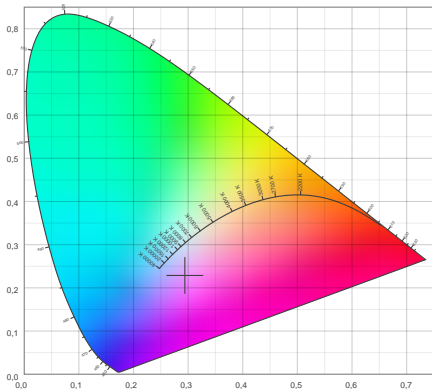
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# LM79-JADE-COLOUR-FLOW-SPOT-all-leds-on

### Color details



CIE 1931

x: 0,294



Spectra

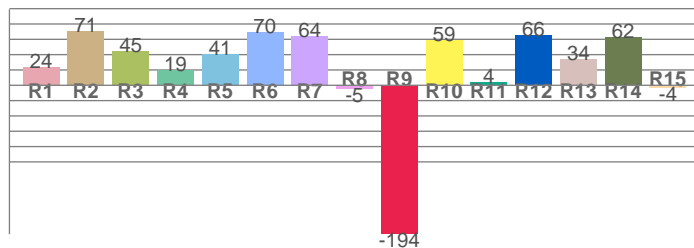
CIE 1931 ZOOM

15542 K

y: 0,229

$\Delta uv$ : 0,0485

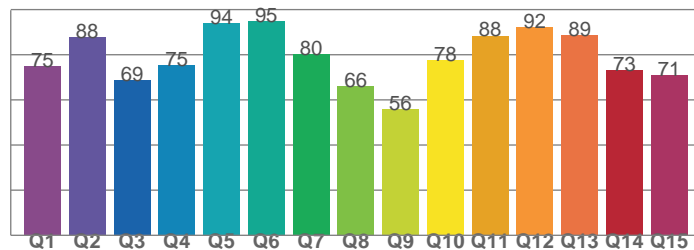
CRI: 41,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
23,6	70,9	44,6	19,2	40,5	69,5	64,2	-4,7
R9	R10	R11	R12	R13	R14	R15	
-194,3	59,1	4,1	65,5	34,4	62,1	-3,7	

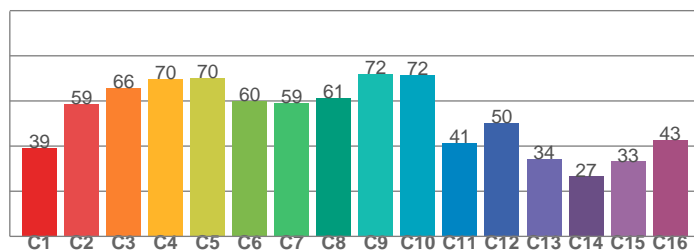
CQS: 76,4



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
74,8	87,6	68,8	75,3	93,9	94,9	80,2	66,1
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
56,0	77,6	88,4	92,1	88,5	73,1	70,7	

TM30: 56,8



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

C1	C2	C3	C4	C5	C6	C7	C8
39,2	58,7	65,8	69,7	70,2	59,9	59,0	61,2
C9	C10	C11	C12	C13	C14	C15	
71,9	71,5	41,3	50,3	34,3	26,6	33,2	

### 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	$\Delta uv$
15542 K	41,0	-194,3	56,8	128,4	76,4	0,294	0,229	0,228	0,266	0,0485



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# LM79-JADE-COLOUR-FLOW-SPOT-all-leds-on

### TM30 details

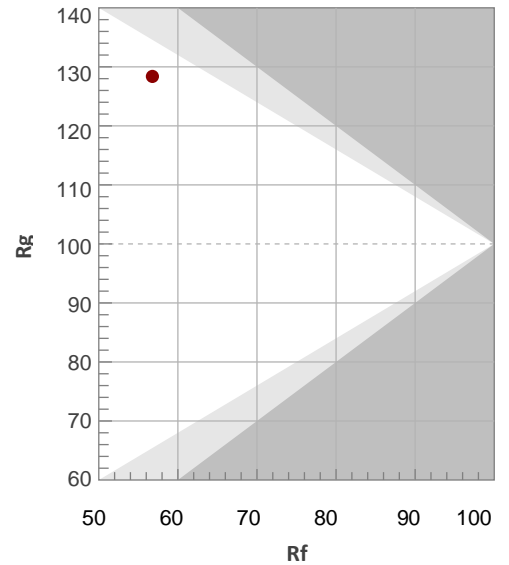
Rf 56,8

Fidelity index Rf

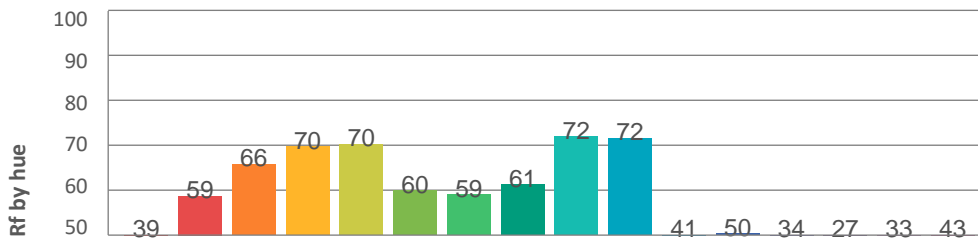
Rg 128,4

Gamut index Rg

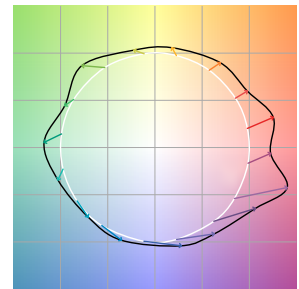
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	39	29%	6%
2	59	15%	-1%
3	66	13%	-5%
4	70	7%	6%
5	70	6%	10%
6	60	15%	19%
7	59	4%	11%
8	61	16%	12%
9	72	8%	10%
10	72	0%	21%
11	41	1%	26%
12	50	-3%	40%
13	34	2%	40%
14	27	13%	44%
15	33	40%	41%
16	43	21%	15%



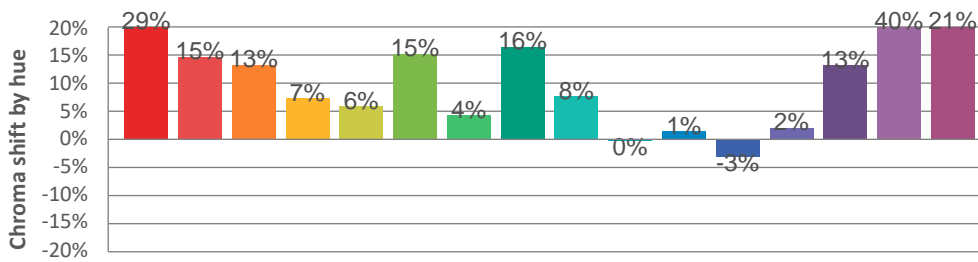
### Hue binH



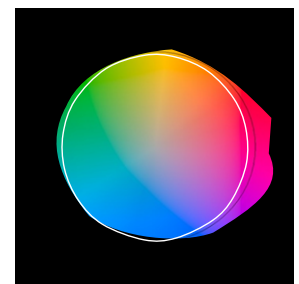
### Color vector graphics



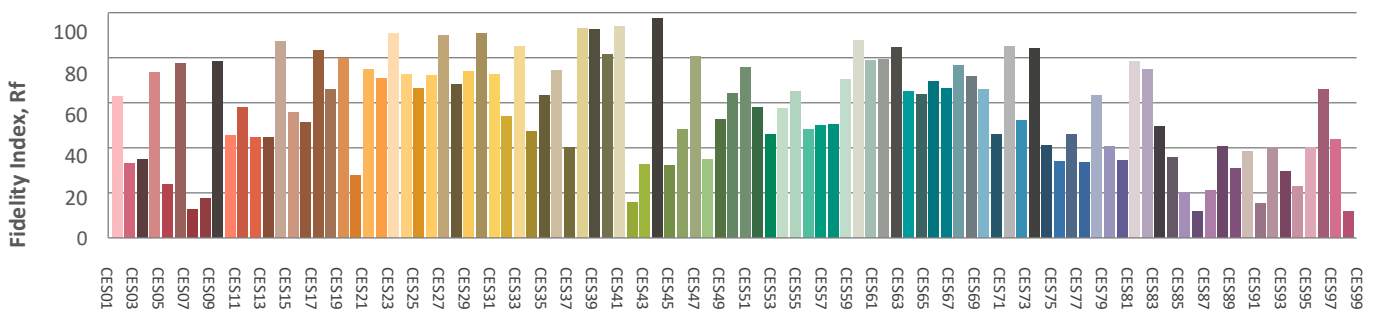
### Hue bin



### Color distortion graphics



### Color Evaluation Sample



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### LM79-JADE-COLOUR-FLOW-SPOT-all-leds-on

#### 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	18,9	19,6	19,1	19,8	20,0	18,9	19,6	19,1	19,8	20,0
	3H	18,8	19,4	19,0	19,6	19,9	18,8	19,4	19,0	19,6	19,9
	4H	18,7	19,3	19,0	19,5	19,8	18,7	19,3	19,0	19,5	19,8
	6H	18,6	19,2	18,9	19,4	19,7	18,6	19,2	18,9	19,4	19,7
	8H	18,6	19,1	18,9	19,4	19,7	18,6	19,1	18,9	19,4	19,7
	12H	18,5	19,0	18,9	19,3	19,7	18,5	19,0	18,9	19,3	19,7
4H	2H	18,7	19,3	19,0	19,5	19,8	18,7	19,3	19,0	19,5	19,8
	3H	18,6	19,0	18,9	19,4	19,7	18,6	19,0	18,9	19,4	19,7
	4H	18,5	18,9	18,9	19,2	19,6	18,5	18,9	18,9	19,2	19,6
	6H	18,4	18,8	18,8	19,1	19,5	18,4	18,8	18,8	19,1	19,5
	8H	18,4	18,7	18,8	19,1	19,5	18,4	18,7	18,8	19,1	19,5
	12H	18,4	18,6	18,8	19,0	19,5	18,4	18,6	18,8	19,0	19,5
8H	4H	18,4	18,7	18,8	19,1	19,5	18,4	18,7	18,8	19,1	19,5
	6H	18,3	18,5	18,8	19,0	19,4	18,3	18,5	18,8	19,0	19,4
	8H	18,3	18,4	18,7	18,9	19,4	18,3	18,4	18,7	18,9	19,4
	12H	18,2	18,4	18,7	18,8	19,4	18,2	18,4	18,7	18,8	19,4
12H	4H	18,3	18,6	18,8	19,0	19,4	18,3	18,6	18,8	19,0	19,4
	6H	18,2	18,4	18,7	18,9	19,4	18,2	18,4	18,7	18,9	19,4
	8H	18,2	18,4	18,7	18,8	19,3	18,2	18,4	18,7	18,8	19,3
Variation of the observer position for the luminaire distance S											
S = 1,0H	+4,5 / -9,4					+4,5 / -9,4					
S = 1,5H	+7,3 / -12,1					+7,3 / -12,1					
S = 2,0H	+9,3 / -14,6					+9,3 / -14,6					
Standard table	BK00					BK00					
Correction summand	0,2					0,2					
Corrected glare indices referring to 1425lm total luminous flux											



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