

# LM-79

## Test Report

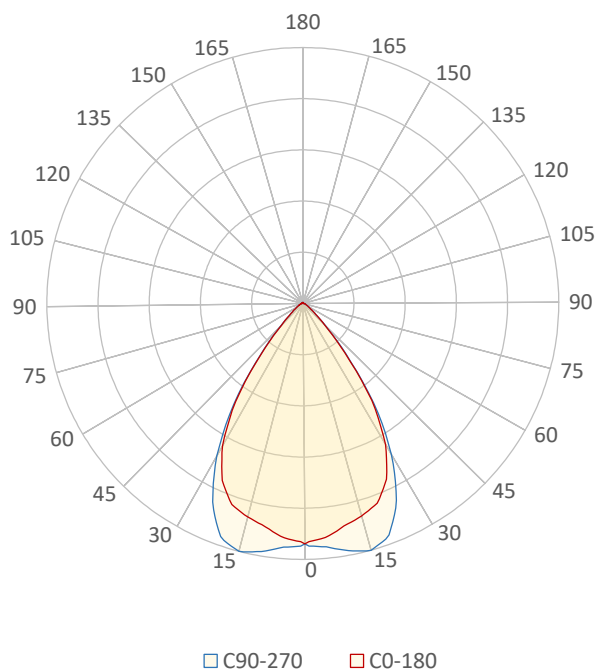
### LM79-JADE-COLOUR-FLOW-FLOOD [white leds on]

#### General Description

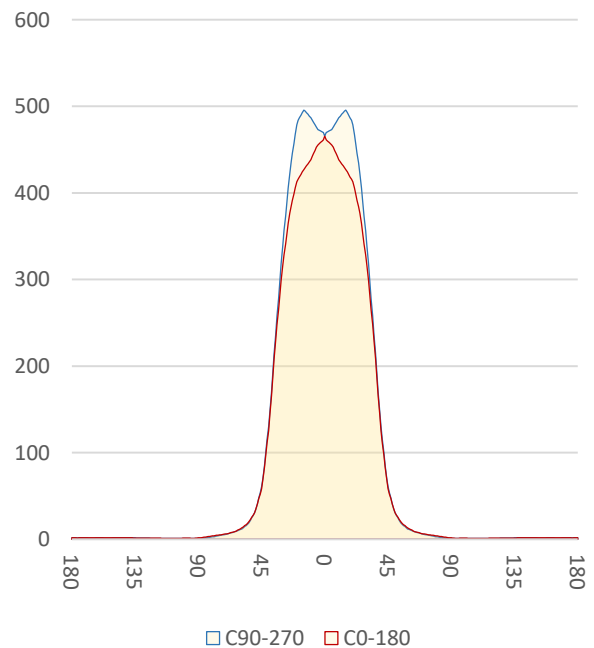
Item number	J-SXX-1-C-C470-3
Date and time	30-11-2018 15:55:06
CCT (Kelvin)	3811 K
Beam angle	69°
Luminous flux	588 lm
Efficiency	98 lm/watt
Weighted energy	6,0 kWh/1000h
Power factor	1,0
CRI (RA)	83,6
Fidelity index Rf	Rf 83,8
Gammut index Rg	Rg 97,0
Peak	496 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m																			
Lux*	466 lx	116 lx	52 lx	29 lx	19 lx																			
*measured at center of beam																								
Footcandles*	43,3 fcd	10,8 fcd	4,8 fcd	2,7 fcd	1,7 fcd																			
Beam width (meter)	1,4 m	2,8 m	4,2 m	5,5 m	6,9 m																			
Beam width (Feet)	4,5 ft	9,1 ft	13,6 ft	18,2 ft	22,7 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					
466lx	116lx	52lx	29lx	19lx	13lx	10lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx					
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					
43,3fcd	10,8fcd	4,8fcd	2,7fcd	1,7fcd	1,2fcd	0,9fcd	0,7fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd					
<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°					
466	460	457	453	445	438	434	429	424	419	413	399	384	365	341	316	282	248	209	166					
100%	99%	98%	97%	96%	94%	93%	92%	91%	90%	89%	86%	82%	78%	73%	68%	61%	53%	45%	36%					
<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°					
466	471	472	476	481	487	491	495	493	487	478	457	435	406	373	339	298	258	215	170					
100%	101%	101%	102%	103%	105%	105%	106%	106%	105%	103%	98%	93%	87%	80%	73%	64%	55%	46%	37%					
<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°					
466	460	457	453	445	438	434	429	424	419	413	399	384	365	341	316	282	248	209	166					
100%	99%	98%	97%	96%	94%	93%	92%	91%	90%	89%	86%	82%	78%	73%	68%	61%	53%	45%	36%					
<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°					
466	471	472	476	481	487	491	495	493	487	478	457	435	406	373	339	298	258	215	170					
100%	101%	101%	102%	103%	105%	105%	106%	106%	105%	103%	98%	93%	87%	80%	73%	64%	55%	46%	37%					
<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>				
69,4°					93,8°					119,3°					95,9%					90,0%				



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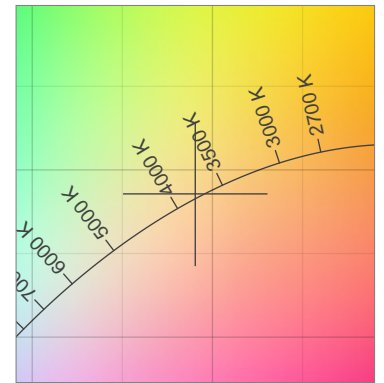
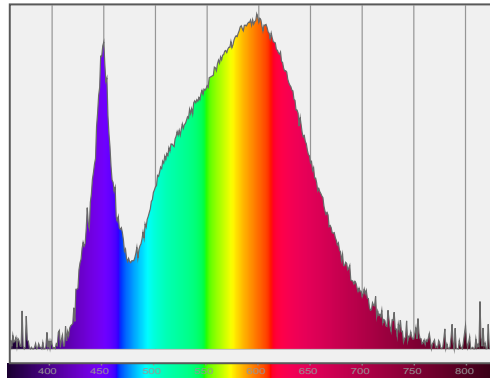
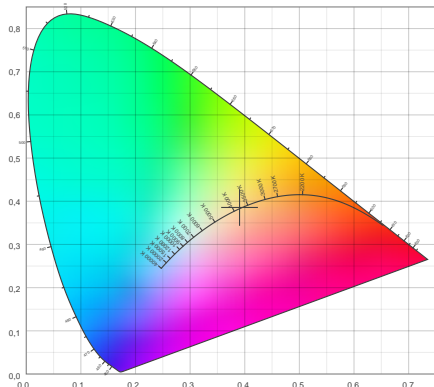
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### LM79-JADE-COLOUR-FLOW-FLOOD [white leds on]

#### Color details



CIE 1931

x: 0,390



Spectra

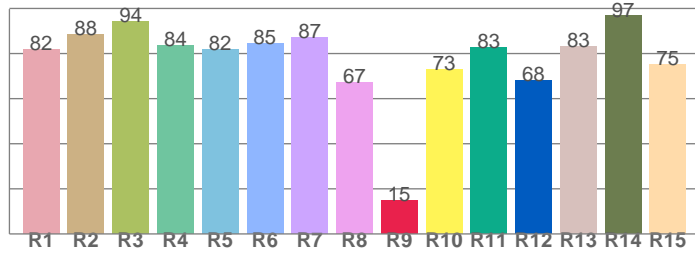
CIE 1931 ZOOM

3811 K

y: 0,386

$\Delta uv$ : 0,0013

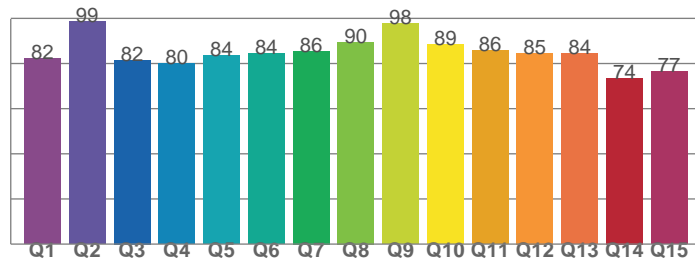
CRI: **83,6** (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,7	88,5	94,2	83,6	81,8	84,7	87,2	67,1
R9	R10	R11	R12	R13	R14	R15	
14,8	73,1	82,6	68,0	83,0	96,7	75,2	

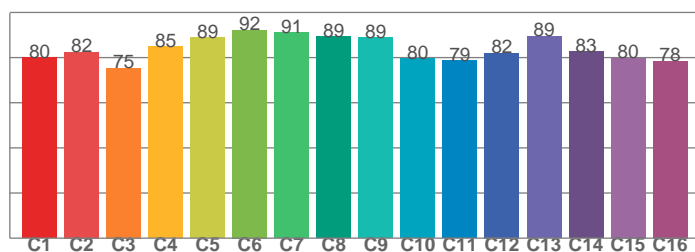
CQS: **83,7**



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
82,2	98,6	81,5	79,9	83,7	84,4	85,6	89,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,6	88,6	85,8	84,6	84,3	73,6	76,6	

TM30: **83,8**



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

C1	C2	C3	C4	C5	C6	C7	C8
80,1	82,5	75,5	85,0	89,0	92,2	91,2	89,4
C9	C10	C11	C12	C13	C14	C15	
88,8	79,6	78,6	82,1	89,5	82,6	79,7	

#### 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	$\Delta uv$
3811 K	83,6	14,8	83,8	97,0	83,7	0,390	0,386	0,228	0,338	0,0013



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#### TM30 details

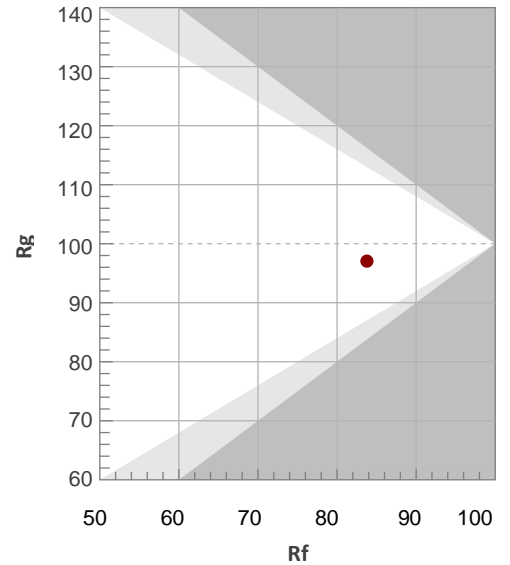
Rf 83,8

Fidelity index Rf

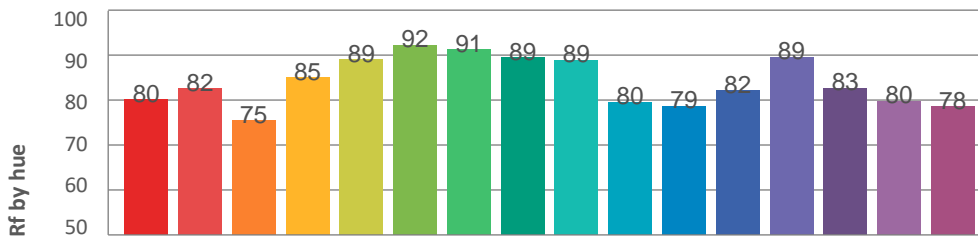
Rg 97,0

Gamut index Rg

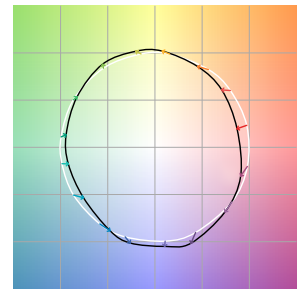
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-2%
2	82	-7%	6%
3	75	-4%	11%
4	85	2%	8%
5	89	4%	5%
6	92	4%	-2%
7	91	-2%	-5%
8	89	-5%	-3%
9	89	-7%	2%
10	80	-7%	8%
11	79	0%	13%
12	82	5%	7%
13	89	5%	-2%
14	83	7%	-10%
15	80	0%	-13%
16	78	-5%	-11%



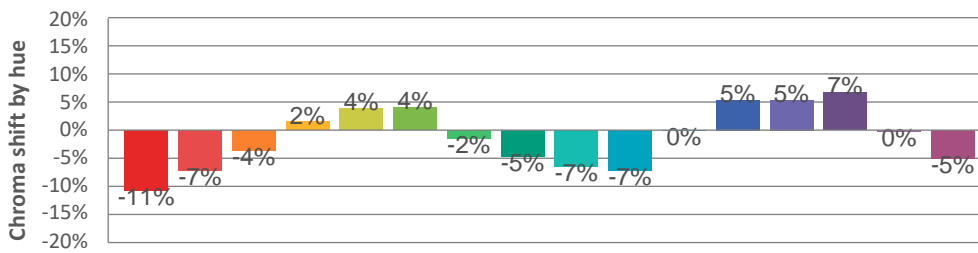
#### Hue binH



#### Color vector graphics



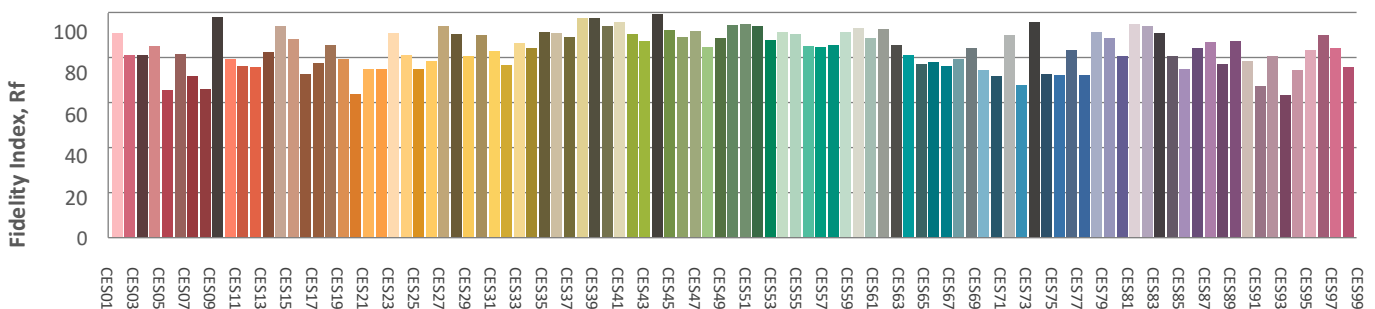
#### Hue bin



#### 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	19,6	20,4	19,9	20,6	20,9	19,8	20,6	20,1	20,8	21,0
	3H	19,7	20,4	20,0	20,7	20,9	19,8	20,5	20,1	20,8	21,0
	4H	19,7	20,4	20,1	20,7	21,0	19,8	20,5	20,1	20,8	21,0
	6H	19,8	20,4	20,2	20,7	21,0	19,8	20,4	20,2	20,7	21,1
	8H	19,9	20,4	20,2	20,8	21,1	19,8	20,4	20,2	20,7	21,1
	12H	19,9	20,5	20,3	20,8	21,1	19,8	20,4	20,2	20,7	21,1
4H	2H	19,5	20,2	19,9	20,5	20,8	19,7	20,3	20,0	20,6	20,9
	3H	19,7	20,2	20,0	20,5	20,9	19,8	20,3	20,1	20,6	21,0
	4H	19,8	20,2	20,2	20,6	21,0	19,8	20,3	20,2	20,7	21,0
	6H	19,9	20,3	20,3	20,7	21,1	19,9	20,3	20,3	20,7	21,1
	8H	20,0	20,4	20,5	20,8	21,2	19,9	20,3	20,4	20,7	21,1
	12H	20,1	20,5	20,6	20,9	21,3	20,0	20,3	20,4	20,7	21,2
8H	4H	19,7	20,1	20,2	20,5	20,9	19,8	20,2	20,2	20,6	21,0
	6H	20,0	20,3	20,5	20,7	21,2	19,9	20,2	20,4	20,7	21,1
	8H	20,1	20,4	20,6	20,8	21,3	20,0	20,3	20,5	20,7	21,2
	12H	20,3	20,5	20,8	21,0	21,6	20,1	20,3	20,6	20,8	21,3
12H	4H	19,7	20,0	20,2	20,5	20,9	19,8	20,1	20,2	20,5	21,0
	6H	20,0	20,2	20,5	20,7	21,2	19,9	20,2	20,4	20,6	21,1
	8H	20,2	20,4	20,7	20,8	21,4	20,0	20,2	20,5	20,7	21,2
Variation of the observer position for the luminaire distance S											
S = 1,0H	+2,7 / -2,8					+3,0 / -3,4					
S = 1,5H	+5,1 / -3,4					+5,5 / -4,1					
S = 2,0H	+7,0 / -3,9					+7,4 / -4,6					
Standard table	BK01					BK01					
Correction summand	2,0					2,0					
Corrected glare indices referring to 588lm total luminous flux											