

# LM-79

## Test Report

### LM79-JADE-S-3000K-CRI90-FLOOD

#### General Description

Item number	J-S1-X-X-1-30-90-2
Date and time	27-1-2017 14:03:23
CCT (Kelvin)	3112 K
Beam angle	64,9°
Luminous flux	2556 lm
Efficiency	92 lm/watt
Weighted energy	27,7 kWh/1000h
Power factor	0,94
CRI (RA)	92,2
Fidelity index Rf	Rf 90,3
Gammut index Rg	Rg 101,0



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Beam details	1m	2m	3m	4m	5m																			
Lux*	2272 lx	568 lx	252 lx	142 lx	91 lx																			
*measured at center of beam																								
Footcandles*	211,1 fcd	52,8 fcd	23,5 fcd	13,2 fcd	8,4 fcd																			
Beam width (meter)	1,3 m	2,5 m	3,8 m	5,1 m	6,4 m																			
Beam width (Feet)	4,2 ft	8,4 ft	12,5 ft	16,7 ft	20,9 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					
2272lx	568lx	252lx	142lx	91lx	63lx	46lx	35lx	28lx	23lx	19lx	16lx	13lx	12lx	10lx	9lx	8lx	7lx	6lx	6lx					
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					
211,1fcd	52,8fcd	23,5fcd	13,2fcd	8,4fcd	5,9fcd	4,3fcd	3,3fcd	2,6fcd	2,1fcd	1,7fcd	1,5fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,7fcd	0,6fcd	0,5fcd					
<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°					
2272	2270	2266	2262	2274	2295	2325	2357	2380	2359	2293	2184	2031	1855	1657	1450	1240	1021	798	589					
100%	100%	100%	100%	100%	101%	102%	104%	105%	104%	101%	96%	89%	82%	73%	64%	55%	45%	35%	26%					
<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°					
2272	2270	2266	2262	2274	2295	2325	2357	2380	2359	2293	2184	2031	1855	1657	1450	1240	1021	798	589					
100%	100%	100%	100%	100%	101%	102%	104%	105%	104%	101%	96%	89%	82%	73%	64%	55%	45%	35%	26%					
<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°					
2272	2270	2266	2262	2274	2295	2325	2357	2380	2359	2293	2184	2031	1855	1657	1450	1240	1021	798	589					
100%	100%	100%	100%	100%	101%	102%	104%	105%	104%	101%	96%	89%	82%	73%	64%	55%	45%	35%	26%					
<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°					
2272	2270	2266	2262	2274	2295	2325	2357	2380	2359	2293	2184	2031	1855	1657	1450	1240	1021	798	589					
100%	100%	100%	100%	100%	101%	102%	104%	105%	104%	101%	96%	89%	82%	73%	64%	55%	45%	35%	26%					
<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>				
64,9°					85,3°					{C_ANG}°					97,4%					94,4%				



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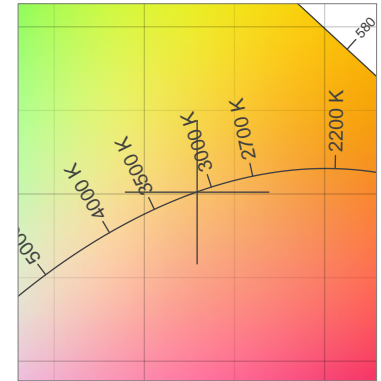
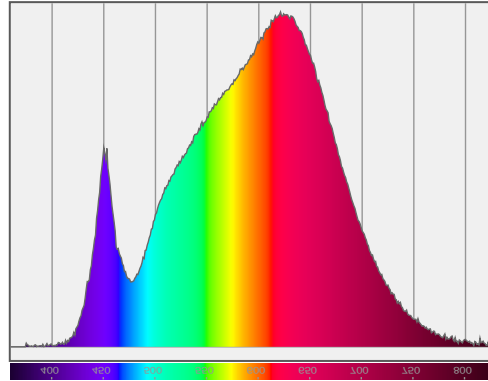
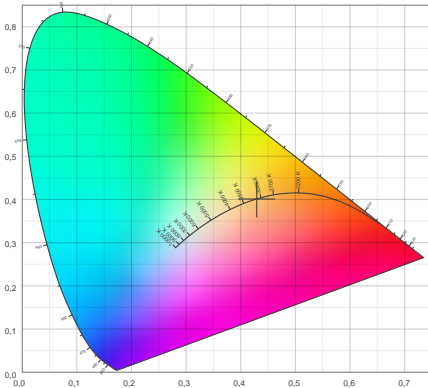
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### Color details



CIE 1931

x: 0,429



Spectra

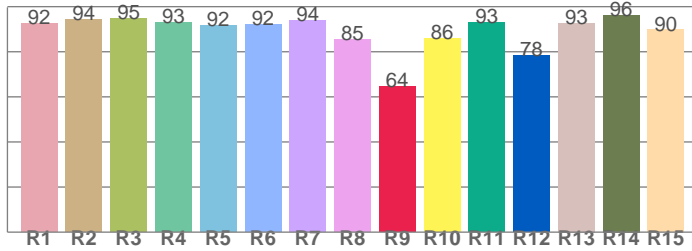
CIE 1931 ZOOM

3112 K

y: 0,401

$\Delta uv$ : 0,0001

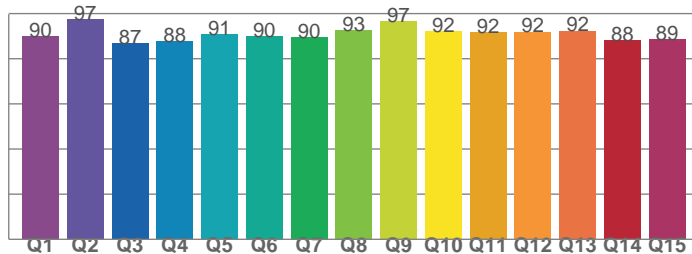
**CRI: 92,2 (R1-R8)**



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

R1	R2	R3	R4	R5	R6	R7	R8
92,5	94,3	94,6	92,9	91,7	92,2	93,8	85,3
R9	R10	R11	R12	R13	R14	R15	
64,5	85,7	93,0	78,4	92,7	96,3	89,7	

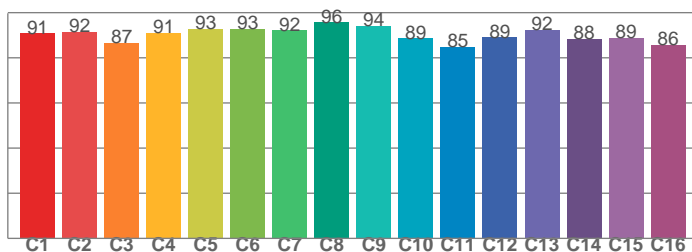
**CQS: 90,6**



*CQS values*

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,0	97,4	86,7	87,7	90,8	90,0	89,6	92,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,7	92,0	91,7	91,9	92,4	88,4	88,7	

**TM30: 90,3**



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

C1	C2	C3	C4	C5	C6	C7	C8
90,8	91,5	86,6	91,1	92,7	92,8	92,1	95,7
C9	C10	C11	C12	C13	C14	C15	
94,1	88,6	84,9	89,0	92,4	88,2	88,8	

### 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	$\Delta uv$
3112 K	92,2	64,5	90,3	101,0	90,6	0,429	0,401	0,247	0,346	0,0001



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### TM30 details

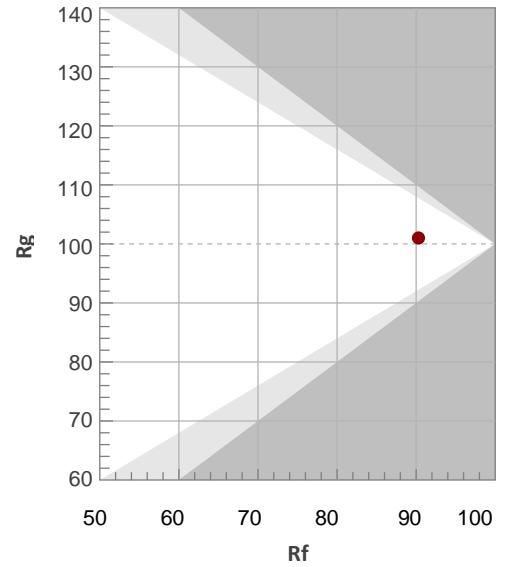
Rf 90,3

Fidelity index Rf

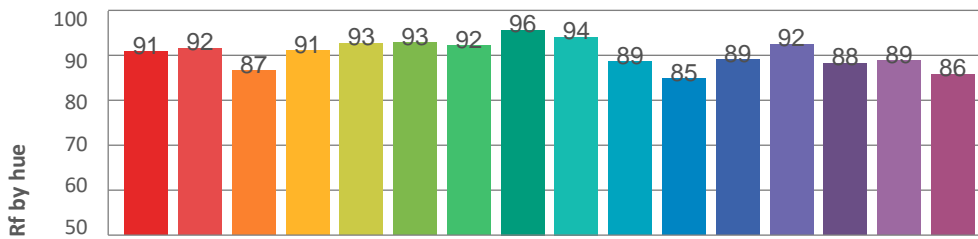
Rg 101,0

Gamut index Rg

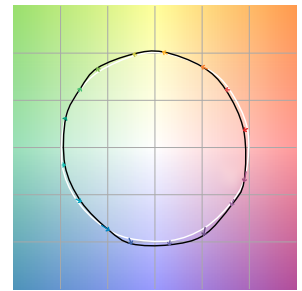
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-1%
2	92	-3%	3%
3	87	-1%	6%
4	91	1%	5%
5	93	2%	3%
6	93	4%	0%
7	92	0%	-4%
8	96	-1%	-2%
9	94	-3%	1%
10	89	-3%	5%
11	85	0%	9%
12	89	5%	4%
13	92	4%	-1%
14	88	6%	-6%
15	89	1%	-6%
16	86	0%	-10%



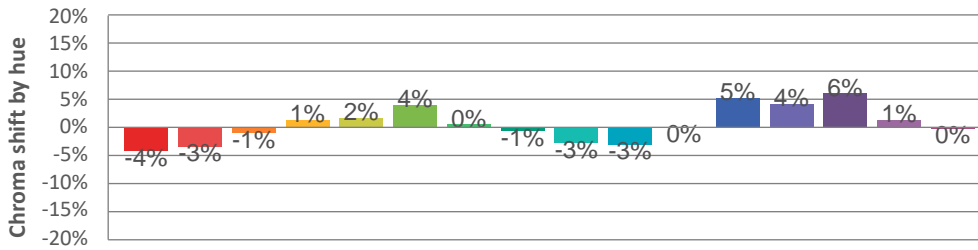
### Hue binH



### Color vector graphics



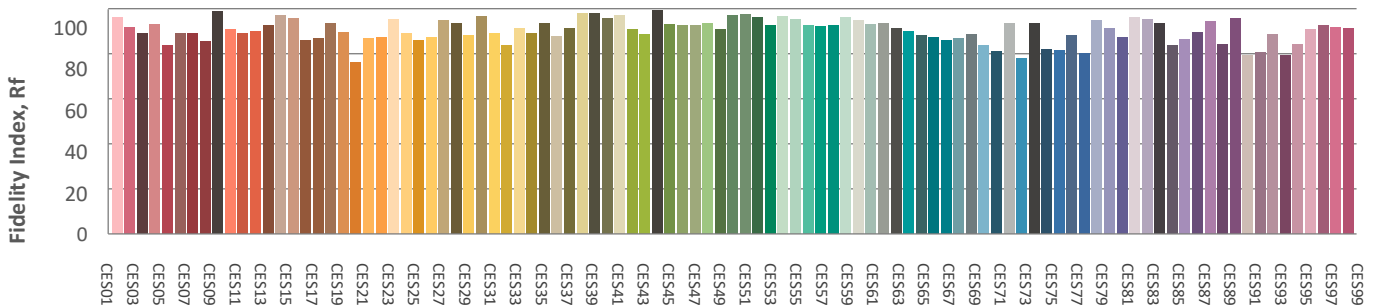
### Hue bin



### 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	23,3	24,0	23,5	24,2	24,4	23,3	24,0	23,5	24,2	24,4
	3H	23,3	23,9	23,6	24,2	24,4	23,3	23,9	23,6	24,2	24,4
	4H	23,3	23,9	23,6	24,2	24,4	23,3	23,9	23,6	24,2	24,4
	6H	23,3	23,8	23,6	24,1	24,4	23,3	23,8	23,6	24,1	24,4
	8H	23,3	23,8	23,6	24,1	24,4	23,3	23,8	23,6	24,1	24,4
	12H	23,3	23,8	23,6	24,1	24,4	23,3	23,8	23,6	24,1	24,4
4H	2H	23,1	23,7	23,4	24,0	24,3	23,1	23,7	23,4	24,0	24,3
	3H	23,2	23,7	23,5	24,0	24,3	23,2	23,7	23,5	24,0	24,3
	4H	23,2	23,7	23,6	24,0	24,4	23,2	23,7	23,6	24,0	24,4
	6H	23,3	23,7	23,7	24,0	24,4	23,3	23,7	23,7	24,0	24,4
	8H	23,3	23,6	23,7	24,0	24,4	23,3	23,6	23,7	24,0	24,4
	12H	23,3	23,6	23,8	24,0	24,4	23,3	23,6	23,8	24,0	24,4
8H	4H	23,2	23,5	23,6	23,9	24,3	23,2	23,5	23,6	23,9	24,3
	6H	23,3	23,5	23,8	24,0	24,4	23,3	23,5	23,8	24,0	24,4
	8H	23,3	23,5	23,8	24,0	24,5	23,3	23,5	23,8	24,0	24,5
	12H	23,3	23,5	23,8	24,0	24,5	23,3	23,5	23,8	24,0	24,5
12H	4H	23,2	23,5	23,6	23,9	24,3	23,2	23,5	23,6	23,9	24,3
	6H	23,3	23,5	23,8	23,9	24,4	23,3	23,5	23,8	23,9	24,4
	8H	23,3	23,5	23,8	24,0	24,5	23,3	23,5	23,8	24,0	24,5
Variation of the observer position for the luminaire distance S											
S = 1,0H	+4,3 / -4,6					+4,3 / -4,6					
S = 1,5H	+7,0 / -5,0					+7,0 / -5,0					
S = 2,0H	+8,9 / -5,3					+8,9 / -5,3					
Standard table	BK01					BK01					
Correction summand	5,3					5,3					
Corrected glare indices referring to 2556lm total luminous flux											



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