

LM-79

Test Report

LM79-JADE-S-3000K-CRI90-SPOT

General Discription

Item number	J-SX-X-3-1-30-90-1
Date and time	27-1-2017 13:58:32
CCT (Kelvin)	3116 K
Beam angle	19,8°
Luminous flux	2612 lm
Efficiency	93 lm/watt
Weighted energy	28,0 kWh/1000h
Power factor	0,95
CRI (RA)	92,2
Fidelity index Rf	Rf 90,3
Gammut index Rg	Rg 101,1



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Beam details	1m	2m	3m	4m	5m														
Lux*	11168 lx	2792 lx	1241 lx	698 lx	447 lx														
*measured at center of beam																			
Footcandles*	1037,5 fcd	259,4 fcd	115,3 fcd	64,8 fcd	41,5 fcd														
Beam width (meter)	0,3 m	0,7 m	1 m	1,4 m	1,7 m														
Beam width (Feet)	1,1 ft	2,3 ft	3,4 ft	4,6 ft	5,7 ft														
Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
11168lx	2792lx	1241lx	698lx	447lx	310lx	228lx	174lx	138lx	112lx	92lx	78lx	66lx	57lx	50lx	44lx	39lx	34lx	31lx	28lx
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
1037,5fcd	259,4fcd	115,3fcd	64,8fcd	41,5fcd	28,8fcd	21,2fcd	16,2fcd	12,8fcd	10,4fcd	8,6fcd	7,2fcd	6,1fcd	5,3fcd	4,6fcd	4,1fcd	3,6fcd	3,2fcd	2,9fcd	2,6fcd
Intensities in 0° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
11,2K	10,9K	10,0K	8,6K	7,0K	5,5K	4,2K	3,1K	2,3K	1,8K	1,5K	1,3K	1,1K	1,0K	1,0K	0,9K	0,8K	0,7K	0,6K	0,4K
100%	97%	89%	77%	63%	49%	38%	28%	21%	17%	14%	12%	10%	9%	9%	8%	7%	6%	5%	4%
Intensities in 90° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
11,2K	10,9K	10,0K	8,6K	7,0K	5,5K	4,2K	3,1K	2,3K	1,8K	1,5K	1,3K	1,1K	1,0K	1,0K	0,9K	0,8K	0,7K	0,6K	0,4K
100%	97%	89%	77%	63%	49%	38%	28%	21%	17%	14%	12%	10%	9%	9%	8%	7%	6%	5%	4%
Intensities in 180° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
11,2K	10,9K	10,0K	8,6K	7,0K	5,5K	4,2K	3,1K	2,3K	1,8K	1,5K	1,3K	1,1K	1,0K	1,0K	0,9K	0,8K	0,7K	0,6K	0,4K
100%	97%	89%	77%	63%	49%	38%	28%	21%	17%	14%	12%	10%	9%	9%	8%	7%	6%	5%	4%
Intensities in 270° c-plane																			
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
11,2K	10,9K	10,0K	8,6K	7,0K	5,5K	4,2K	3,1K	2,3K	1,8K	1,5K	1,3K	1,1K	1,0K	1,0K	0,9K	0,8K	0,7K	0,6K	0,4K
100%	97%	89%	77%	63%	49%	38%	28%	21%	17%	14%	12%	10%	9%	9%	8%	7%	6%	5%	4%
Beam angle 50%		Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone					
19,8°		49,1°				{C_ANG}°				97,9%				95,6%					



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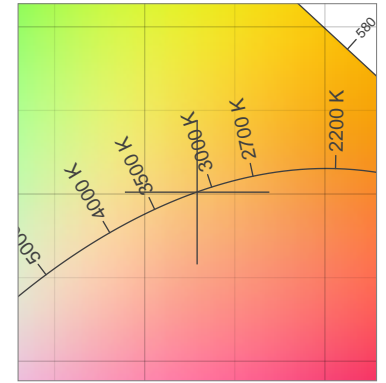
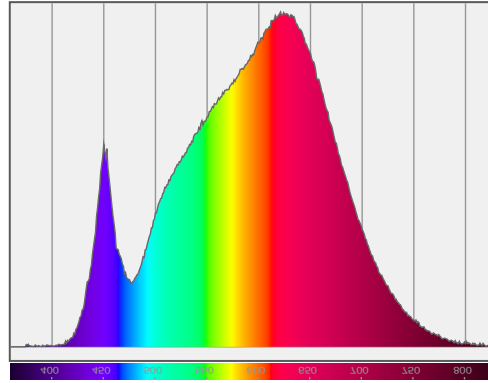
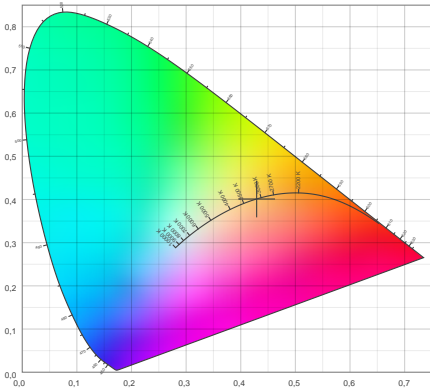
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Color details



CIE 1931

x: 0,429



Spectra

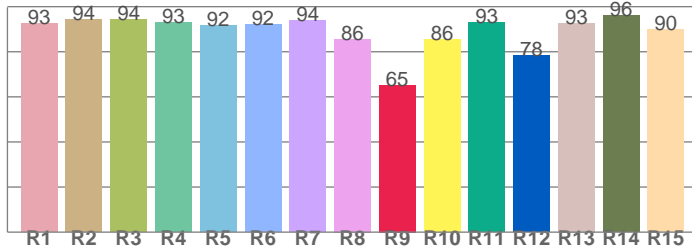
CIE 1931 ZOOM

3116 K

y: 0,401

Δuv : 0,0001

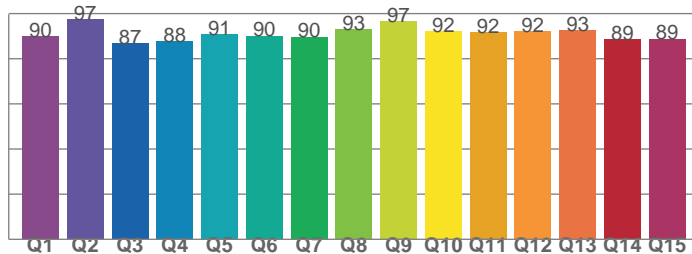
CRI: 92,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,6	94,3	94,5	93,0	91,8	92,1	94,0	85,7
R9	R10	R11	R12	R13	R14	R15	
65,2	85,7	93,1	78,4	92,8	96,2	89,9	

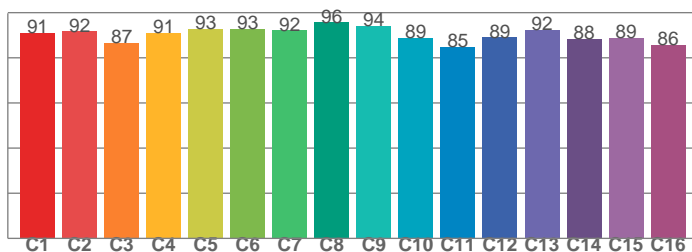
CQS: 90,7



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
90,1	97,5	86,7	87,7	90,9	90,2	89,7	92,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,7	92,1	91,8	92,1	92,6	88,5	88,8	

TM30: 90,3



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

C1	C2	C3	C4	C5	C6	C7	C8
90,9	91,7	86,7	91,0	92,6	92,7	92,1	95,6
C9	C10	C11	C12	C13	C14	C15	
94,1	88,7	84,9	89,0	92,5	88,3	88,9	

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	Δuv
3116 K	92,2	65,2	90,3	101,1	90,7	0,429	0,401	0,247	0,346	0,0001



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LM-79

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TM30 details

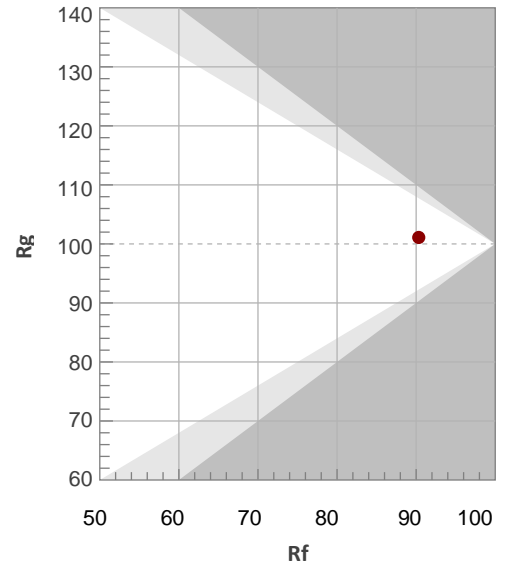
Rf 90,3

Fidelity index Rf

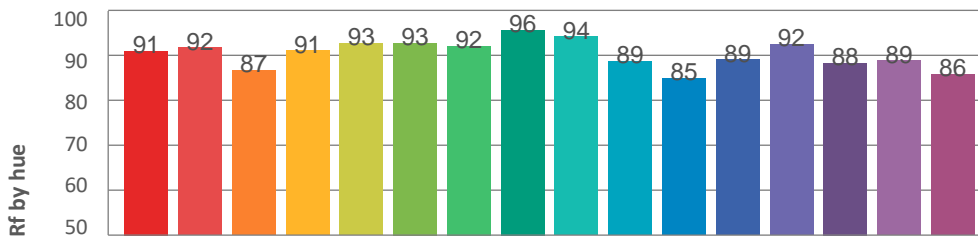
Rg 101,1

Gamut index Rg

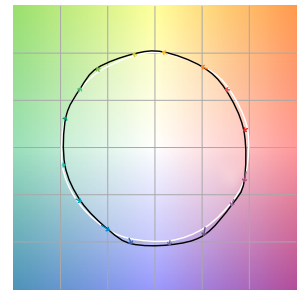
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-1%
2	92	-3%	3%
3	87	-1%	6%
4	91	1%	5%
5	93	2%	3%
6	93	4%	0%
7	92	1%	-4%
8	96	-1%	-2%
9	94	-3%	1%
10	89	-3%	5%
11	85	0%	9%
12	89	5%	4%
13	92	4%	-1%
14	88	6%	-6%
15	89	1%	-6%
16	86	0%	-10%



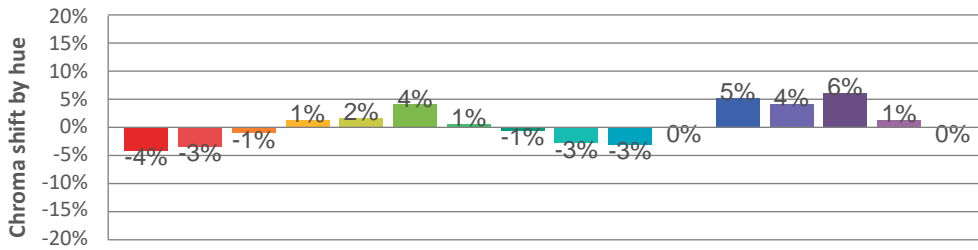
Hue binH



Color vector graphics



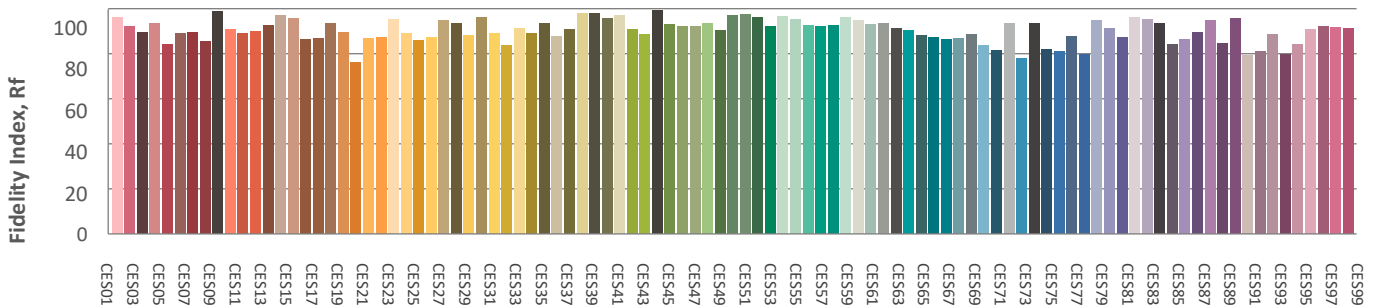
Hue bin



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	20,6	21,2	20,8	21,4	21,7	20,6	21,2	20,8	21,4	21,7
	3H	20,6	21,3	20,9	21,5	21,8	20,6	21,3	20,9	21,5	21,8
	4H	20,7	21,3	21,0	21,6	21,8	20,7	21,3	21,0	21,6	21,8
	6H	20,7	21,3	21,1	21,6	21,9	20,7	21,3	21,1	21,6	21,9
	8H	20,7	21,2	21,1	21,5	21,9	20,7	21,2	21,1	21,5	21,9
	12H	20,7	21,2	21,1	21,5	21,8	20,7	21,2	21,1	21,5	21,8
4H	2H	20,5	21,0	20,8	21,3	21,6	20,5	21,0	20,8	21,3	21,6
	3H	20,6	21,1	21,0	21,4	21,8	20,6	21,1	21,0	21,4	21,8
	4H	20,8	21,2	21,1	21,5	21,9	20,8	21,2	21,1	21,5	21,9
	6H	20,8	21,2	21,2	21,6	22,0	20,8	21,2	21,2	21,6	22,0
	8H	20,9	21,2	21,3	21,6	22,0	20,9	21,2	21,3	21,6	22,0
	12H	20,9	21,1	21,3	21,5	22,0	20,9	21,1	21,3	21,5	22,0
8H	4H	20,7	21,1	21,2	21,5	21,9	20,7	21,1	21,2	21,5	21,9
	6H	20,9	21,1	21,3	21,5	22,0	20,9	21,1	21,3	21,5	22,0
	8H	20,9	21,1	21,4	21,6	22,0	20,9	21,1	21,4	21,6	22,0
	12H	20,9	21,1	21,4	21,6	22,1	20,9	21,1	21,4	21,6	22,1
12H	4H	20,7	21,0	21,2	21,4	21,8	20,7	21,0	21,2	21,4	21,8
	6H	20,8	21,0	21,3	21,5	22,0	20,8	21,0	21,3	21,5	22,0
	8H	20,9	21,1	21,4	21,5	22,0	20,9	21,1	21,4	21,5	22,0
Variation of the observer position for the luminaire distance S											
S = 1,0H	+3,8 / -3,5					+3,8 / -3,5					
S = 1,5H	+6,4 / -4,0					+6,4 / -4,0					
S = 2,0H	+8,3 / -4,3					+8,3 / -4,3					
Standard table	BK01					BK01					
Correction summand	2,7					2,7					
Corrected glare indices referring to 2612lm total luminous flux											



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