

LM-79

Test Report

LM79-JADE-S-2700K-CRI90-MEDIUM

General Discription

Item number	J-SX-X-3-1-27-90-2
Date and time	27-1-2017 13:50:50
CCT (Kelvin)	2780 K
Beam angle	36,8°
Luminous flux	2522 lm
Efficiency	90 lm/watt
Weighted energy	28,1 kWh/1000h
Power factor	0,95
CRI (RA)	93,2
Fidelity index Rf	Rf 91,3
Gammut index Rg	Rg 100,5

NEW



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Beam details	1m	2m	3m	4m	5m
Lux*	4731 lx	1183 lx	526 lx	296 lx	189 lx

36,8°

*measured at center of beam

Footcandles*	439,6 fcd	109,9 fcd	48,8 fcd	27,5 fcd	17,6 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	8,7 ft	10,9 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
4731lx	1183lx	526lx	296lx	189lx	131lx	97lx	74lx	58lx	47lx	39lx	33lx	28lx	24lx	21lx	18lx	16lx	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
439,6fcd	109,9fcd	48,8fcd	27,5fcd	17,6fcd	12,2fcd	9fcd	6,9fcd	5,4fcd	4,4fcd	3,6fcd	3,1fcd	2,6fcd	2,2fcd	2fcd	1,7fcd	1,5fcd	1,4fcd	1,2fcd	1,1fcd

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°
4731	4679	4591	4406	4150	3867	3526	3172	2806	2441	2098	1811	1543	1347	1187	1044	910	773	617	456
100%	99%	97%	93%	88%	82%	75%	67%	59%	52%	44%	38%	33%	28%	25%	22%	19%	16%	13%	10%

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°
4731	4679	4591	4406	4150	3867	3526	3172	2806	2441	2098	1811	1543	1347	1187	1044	910	773	617	456
100%	99%	97%	93%	88%	82%	75%	67%	59%	52%	44%	38%	33%	28%	25%	22%	19%	16%	13%	10%

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°
4731	4679	4591	4406	4150	3867	3526	3172	2806	2441	2098	1811	1543	1347	1187	1044	910	773	617	456
100%	99%	97%	93%	88%	82%	75%	67%	59%	52%	44%	38%	33%	28%	25%	22%	19%	16%	13%	10%

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°
4731	4679	4591	4406	4150	3867	3526	3172	2806	2441	2098	1811	1543	1347	1187	1044	910	773	617	456
100%	99%	97%	93%	88%	82%	75%	67%	59%	52%	44%	38%	33%	28%	25%	22%	19%	16%	13%	10%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
36,8°	75,6°	{C_ANG}°	97,5%	95,0%



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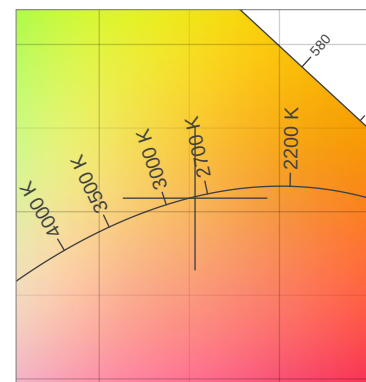
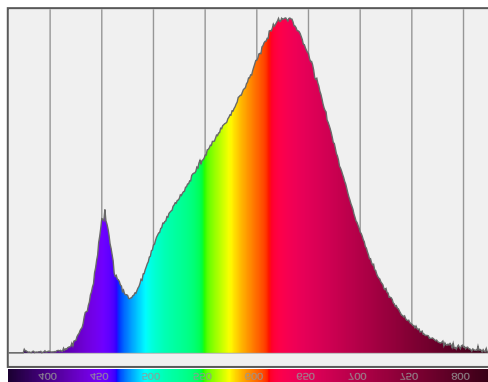
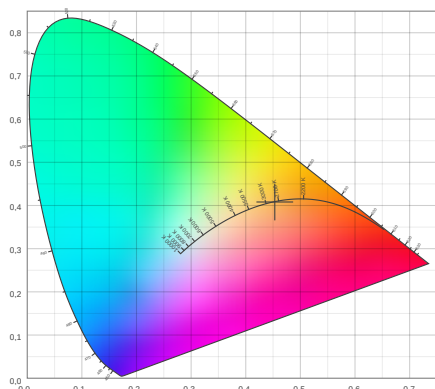
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Color details



CIE 1931

x: 0,453

2780 K

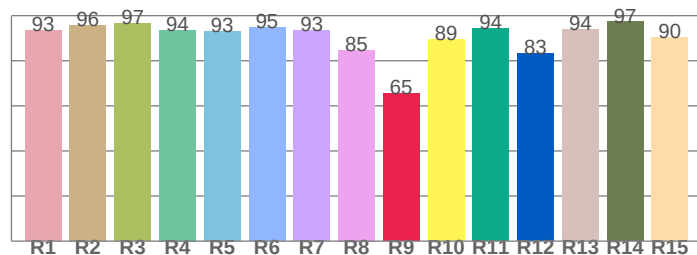
y: 0,408

Spectra

CIE 1931 ZOOM

 $\Delta uv: 0,0004$

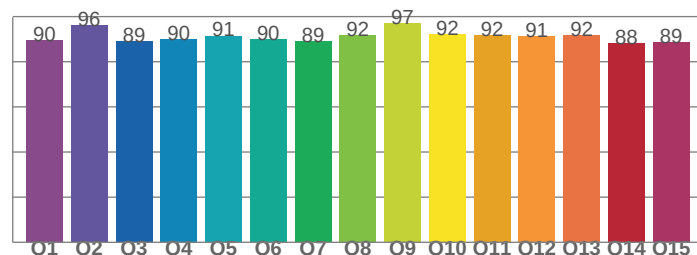
CRI: 93,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,5	95,9	96,6	93,7	92,9	94,9	93,4	84,7
R9	R10	R11	R12	R13	R14	R15	
65,5	89,3	94,2	83,1	94,0	97,3	90,2	

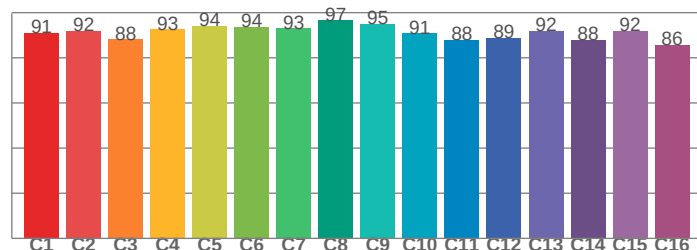
CQS: 90,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
89,7	96,1	89,1	90,0	91,5	90,0	89,0	91,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,0	92,3	91,8	91,5	91,7	88,3	88,6	

TM30: 91,3



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

C1	C2	C3	C4	C5	C6	C7	C8
91,2	92,0	88,1	92,5	94,2	93,8	92,9	96,5
C9	C10	C11	C12	C13	C14	C15	
94,9	90,8	87,9	88,9	91,9	88,0	91,9	

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
2780 K	93,2	65,5	91,3	100,5	90,8	0,453	0,408	0,259	0,350	0,0004



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TM30 details

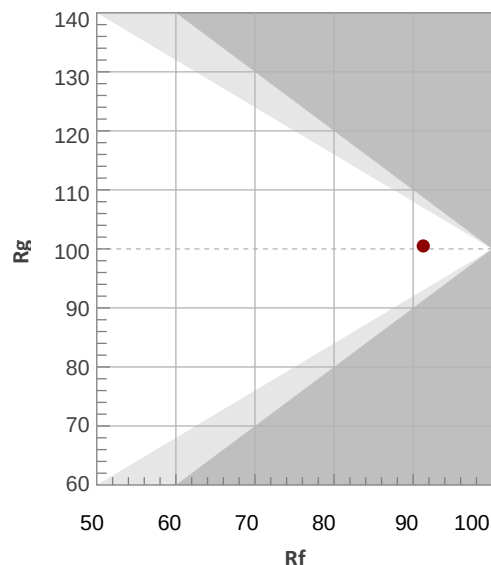
Rf 91,3

Fidelity index Rf

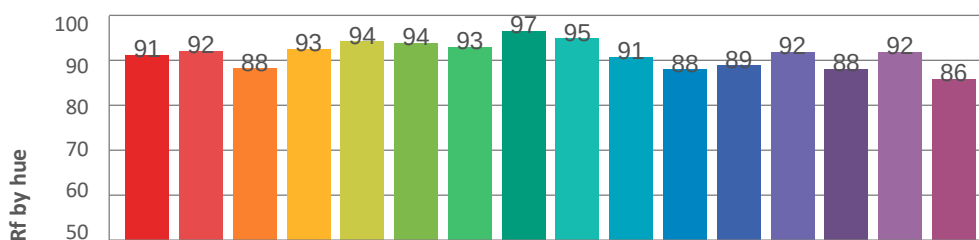
Rg 100,5

Gamut index Rg

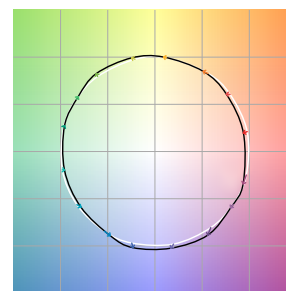
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-1%
2	92	-3%	3%
3	88	-1%	5%
4	93	0%	3%
5	94	2%	3%
6	94	3%	0%
7	93	0%	-3%
8	97	-1%	-2%
9	95	-2%	1%
10	91	-2%	5%
11	88	0%	8%
12	89	5%	2%
13	92	4%	-4%
14	88	5%	-7%
15	92	0%	-4%
16	86	-2%	-10%



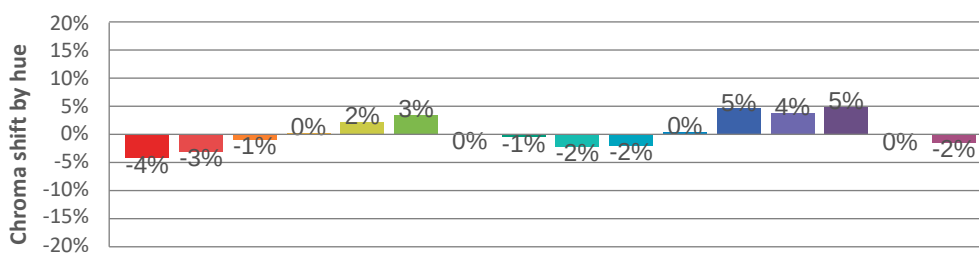
Hue binH



Color vector graphics



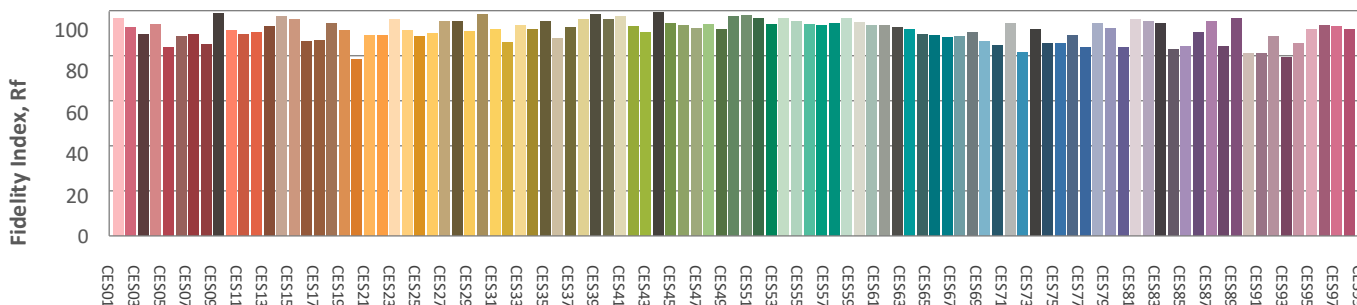
Hue bin



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	21,5	22,2	21,7	22,4	22,6	21,5	22,2	21,7	22,4	22,6
	3H	21,5	22,2	21,8	22,4	22,7	21,5	22,2	21,8	22,4	22,7
	4H	21,6	22,2	21,9	22,5	22,7	21,6	22,2	21,9	22,5	22,7
	6H	21,7	22,2	22,0	22,5	22,8	21,7	22,2	22,0	22,5	22,8
	8H	21,7	22,2	22,0	22,5	22,8	21,7	22,2	22,0	22,5	22,8
	12H	21,7	22,2	22,1	22,5	22,8	21,7	22,2	22,1	22,5	22,8
4H	2H	21,3	21,9	21,7	22,2	22,5	21,3	21,9	21,7	22,2	22,5
	3H	21,5	22,0	21,9	22,3	22,7	21,5	22,0	21,9	22,3	22,7
	4H	21,7	22,1	22,1	22,4	22,8	21,7	22,1	22,1	22,4	22,8
	6H	21,8	22,2	22,3	22,6	23,0	21,8	22,2	22,3	22,6	23,0
	8H	21,9	22,2	22,3	22,6	23,0	21,9	22,2	22,3	22,6	23,0
	12H	21,9	22,2	22,3	22,6	23,0	21,9	22,2	22,3	22,6	23,0
8H	4H	21,7	22,0	22,1	22,4	22,8	21,7	22,0	22,1	22,4	22,8
	6H	21,9	22,2	22,4	22,6	23,1	21,9	22,2	22,4	22,6	23,1
	8H	22,0	22,2	22,5	22,6	23,1	22,0	22,2	22,5	22,6	23,1
	12H	22,0	22,2	22,5	22,7	23,2	22,0	22,2	22,5	22,7	23,2
12H	4H	21,7	21,9	22,1	22,4	22,8	21,7	21,9	22,1	22,4	22,8
	6H	21,9	22,1	22,4	22,6	23,1	21,9	22,1	22,4	22,6	23,1
	8H	22,0	22,2	22,5	22,6	23,1	22,0	22,2	22,5	22,6	23,1

Variation of the observer position for the luminaire distance S

S = 1,0H	+3,8 / -3,4	+3,8 / -3,4
S = 1,5H	+6,3 / -3,6	+6,3 / -3,6
S = 2,0H	+8,3 / -4,0	+8,3 / -4,0
Standard table	BK01	BK01
Correction summand	3,7	3,7

Corrected glare indices referring to 2522lm total luminous flux



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