

LM-79

Test Report

LM79-JADE-S-4000K-CRI90-MEDIUM

General Discription

Item number	J-SX-X-3-1-40-90-2
Date and time	27-1-2017 14:26:24
CCT (Kelvin)	3961 K
Beam angle	36,7°
Luminous flux	2824 lm
Efficiency	101 lm/watt
Weighted energy	28,1 kWh/1000h
Power factor	0,95
CRI (RA)	93,0
Fidelity index Rf	Rf 89,8
Gammut index Rg	Rg 98,2

NEW



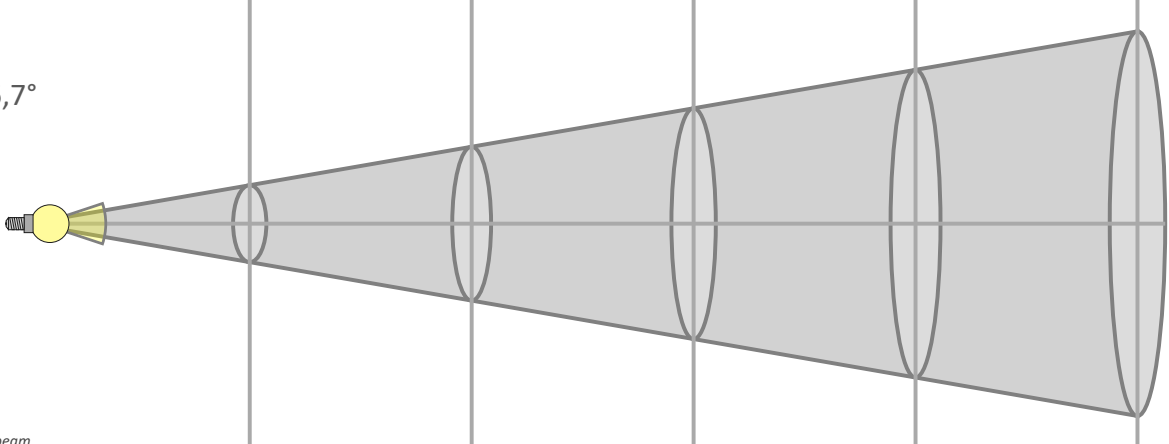
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Beam details					1m		2m		3m		4m		5m						
Lux*					5306 lx		1326 lx		590 lx		332 lx		212 lx						
36,7° 																			
*measured at center of beam																			
Footcandles*					492,9 fcd		123,2 fcd		54,8 fcd		30,8 fcd		19,7 fcd						
Beam 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		6,5 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
5306lx	1326lx	590lx	332lx	212lx	147lx	108lx	83lx	66lx	53lx	44lx	37lx	31lx	27lx	24lx	21lx	18lx	16lx	15lx	13lx
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
492,9fcd	123,2fcd	54,8fcd	30,8fcd	19,7fcd	13,7fcd	10,1fcd	7,7fcd	6,1fcd	4,9fcd	4,1fcd	3,4fcd	2,9fcd	2,5fcd	2,2fcd	1,9fcd	1,7fcd	1,5fcd	1,4fcd	1,2fcd
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°
5306	5211	5106	4902	4611	4312	3921	3528	3128	2726	2340	2037	1735	1524	1351	1185	1035	885	705	519
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	20%	17%	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°
5306	5211	5106	4902	4611	4312	3921	3528	3128	2726	2340	2037	1735	1524	1351	1185	1035	885	705	519
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	20%	17%	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°
5306	5211	5106	4902	4611	4312	3921	3528	3128	2726	2340	2037	1735	1524	1351	1185	1035	885	705	519
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	20%	17%	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°
5306	5211	5106	4902	4611	4312	3921	3528	3128	2726	2340	2037	1735	1524	1351	1185	1035	885	705	519
100%	98%	96%	92%	87%	81%	74%	66%	59%	51%	44%	38%	33%	29%	25%	22%	20%	17%	13%	10%
Beam angle 50%				Field angle 10%				Cutoff angle 2,5%				Intensity ratio in 120° cone				Intensity ratio in 90° cone			
36,7°				75,8°				{C_ANG}°				97,8%				95,3%			



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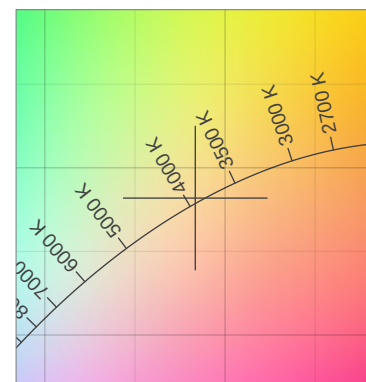
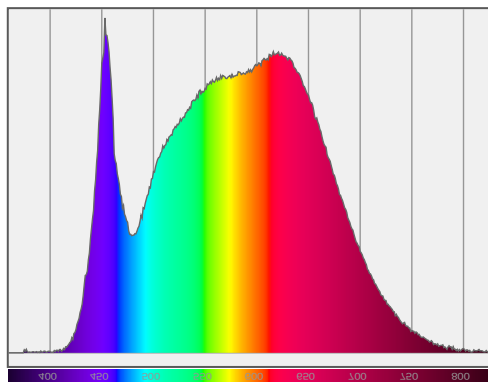
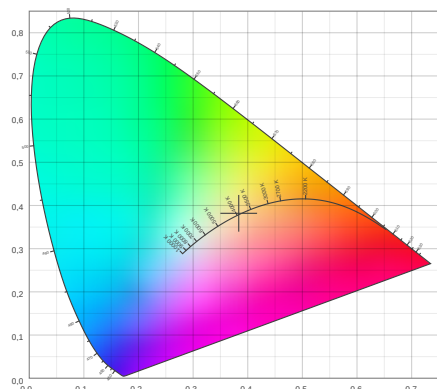
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Color details



CIE 1931

x: 0,383

3961 K

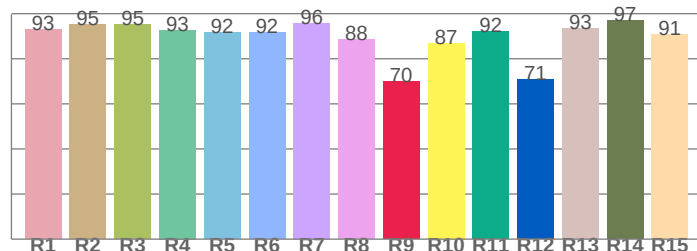
y: 0,382

Spectra

CIE 1931 ZOOM

Δuv : 0,0015

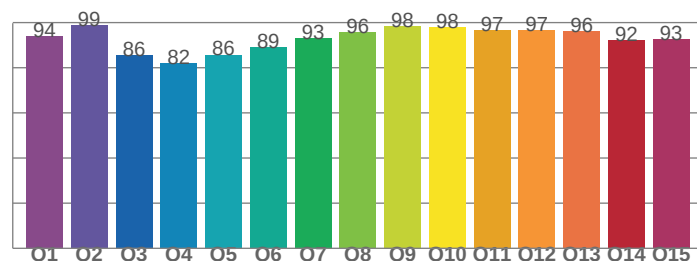
CRI: 93,0 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,0	95,1	95,3	92,8	91,6	91,8	95,8	88,5
R9	R10	R11	R12	R13	R14	R15	
70,0	87,0	92,2	70,7	93,5	97,0	91,0	

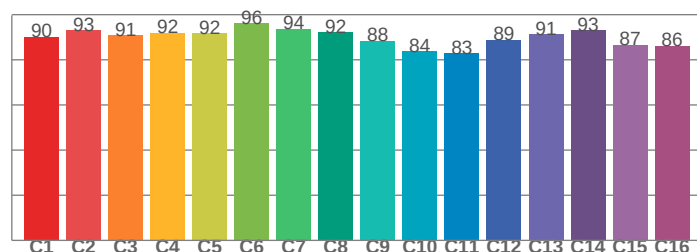
CQS: 91,3



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
93,9	98,8	85,6	81,9	85,7	88,9	93,1	95,6
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
98,4	97,9	96,7	96,6	96,3	92,2	92,8	

TM30: 89,8



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

C1	C2	C3	C4	C5	C6	C7	C8
90,3	93,1	90,8	91,8	91,6	96,0	93,6	92,1
C9	C10	C11	C12	C13	C14	C15	
88,5	83,7	82,8	88,8	91,3	92,9	86,6	

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
3961 K	93,0	70,0	89,8	98,2	91,3	0,383	0,382	0,225	0,336	0,0015



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TM30 details

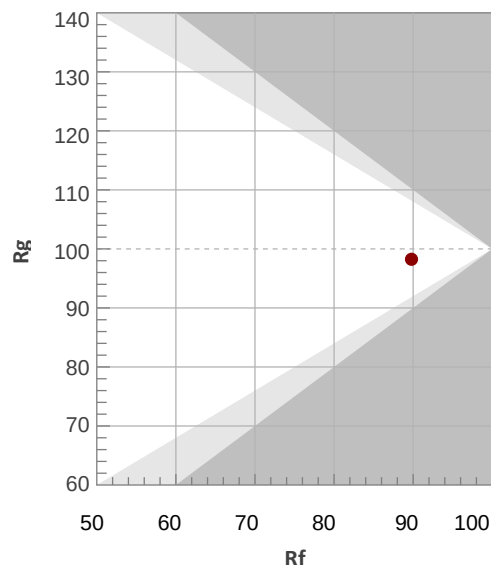
Rf 89,8

Fidelity index Rf

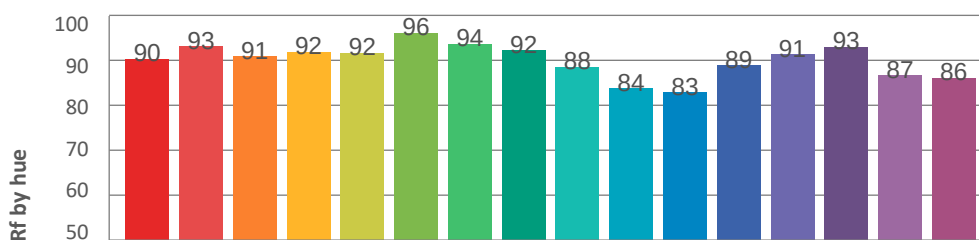
Rg 98,2

Gamut index Rg

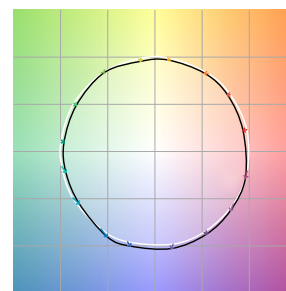
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-4%	0%
2	93	-3%	1%
3	91	-2%	3%
4	92	-2%	2%
5	92	-3%	1%
6	96	-1%	0%
7	94	-3%	0%
8	92	-3%	2%
9	88	-3%	7%
10	84	-2%	9%
11	83	3%	10%
12	89	4%	4%
13	91	4%	-3%
14	93	3%	-2%
15	87	1%	-8%
16	86	-1%	-7%



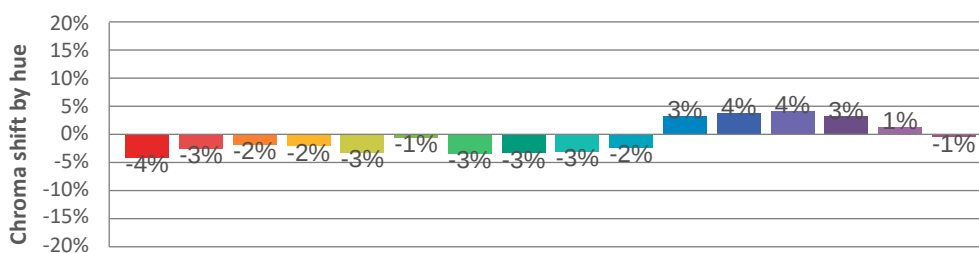
Hue binH



Color vector graphics



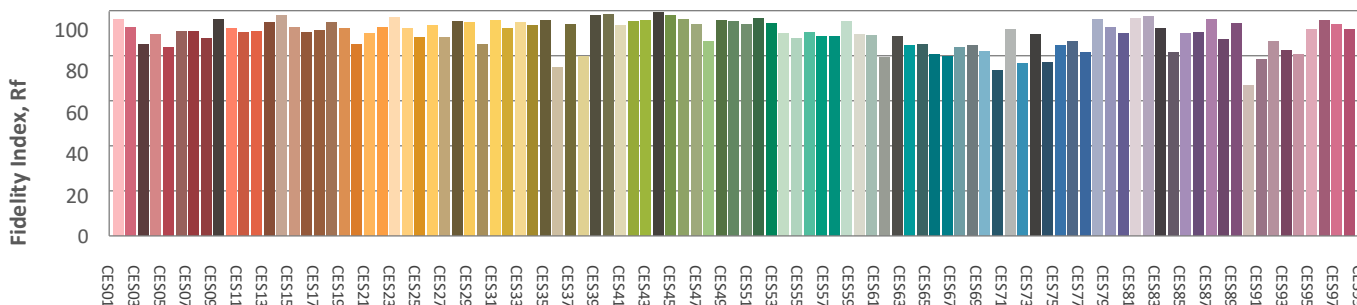
Hue bin



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	22,0	22,7	22,2	22,9	23,1	22,0	22,7	22,2	22,9	23,1
	3H	22,0	22,7	22,3	22,9	23,2	22,0	22,7	22,3	22,9	23,2
	4H	22,1	22,7	22,4	23,0	23,2	22,1	22,7	22,4	23,0	23,2
	6H	22,1	22,7	22,4	23,0	23,2	22,1	22,7	22,4	23,0	23,2
	8H	22,1	22,6	22,5	22,9	23,2	22,1	22,6	22,5	22,9	23,2
	12H	22,1	22,6	22,4	22,9	23,2	22,1	22,6	22,4	22,9	23,2
4H	2H	21,9	22,5	22,2	22,7	23,0	21,9	22,5	22,2	22,7	23,0
	3H	22,0	22,5	22,4	22,8	23,2	22,0	22,5	22,4	22,8	23,2
	4H	22,1	22,6	22,5	22,9	23,3	22,1	22,6	22,5	22,9	23,3
	6H	22,2	22,6	22,6	22,9	23,3	22,2	22,6	22,6	22,9	23,3
	8H	22,2	22,5	22,6	22,9	23,3	22,2	22,5	22,6	22,9	23,3
	12H	22,2	22,5	22,7	22,9	23,3	22,2	22,5	22,7	22,9	23,3
8H	4H	22,1	22,4	22,5	22,8	23,2	22,1	22,4	22,5	22,8	23,2
	6H	22,2	22,5	22,7	22,9	23,4	22,2	22,5	22,7	22,9	23,4
	8H	22,3	22,5	22,7	22,9	23,4	22,3	22,5	22,7	22,9	23,4
	12H	22,3	22,4	22,8	22,9	23,4	22,3	22,4	22,8	22,9	23,4
12H	4H	22,1	22,4	22,5	22,8	23,2	22,1	22,4	22,5	22,8	23,2
	6H	22,2	22,4	22,7	22,9	23,3	22,2	22,4	22,7	22,9	23,3
	8H	22,2	22,4	22,7	22,9	23,4	22,2	22,4	22,7	22,9	23,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+4,0 / -3,9					+4,0 / -3,9				
S = 1,5H		+6,6 / -4,2					+6,6 / -4,2				
S = 2,0H		+8,5 / -4,6					+8,5 / -4,6				
Standard table		BK01					BK01				
Correction summand		4,1					4,1				
Corrected glare indices referring to 2824lm total luminous flux											



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