

LM-79

Test Report

LM79-JADE-S-3000K-CRI80-SPOT

General Description

Item number	J-SX-X-3-1-27-80-1
Date and time	25-11-2016 13:36:21
CCT (Kelvin)	3094 K
Beam angle	19,4°
Luminous flux	3068 lm
Efficiency	107 lm/watt
Weighted energy	28,7 kWh/1000h
Power factor	0,99
CRI (RA)	81,6
Fidelity index Rf	Rf 82,9
Gammut index Rg	Rg 95,9



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Beam details	1m	2m	3m	4m	5m																			
Lux*	13532 lx	3383 lx	1504 lx	846 lx	541 lx																			
<small>*measured at center of beam</small>																								
Footcandles*	1257,1 fcd	314,3 fcd	139,7 fcd	78,6 fcd	50,3 fcd																			
Beam width (meter)	0,3 m	0,7 m	1 m	1,4 m	1,7 m																			
Beam width (Feet)	1,1 ft	2,2 ft	3,4 ft	4,5 ft	5,6 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
13532lx	3383lx	1504lx	846lx	541lx	376lx	276lx	211lx	167lx	135lx	112lx	94lx	80lx	69lx	60lx	53lx	47lx	42lx	37lx	34lx					
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					
1257,1fcd	314,3fcd	139,7fcd	78,6fcd	50,3fcd	34,9fcd	25,7fcd	19,6fcd	15,5fcd	12,6fcd	10,4fcd	8,7fcd	7,4fcd	6,4fcd	5,6fcd	4,9fcd	4,3fcd	3,9fcd	3,5fcd	3,1fcd					
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°					
13,5K	12,8K	11,8K	10,3K	8,4K	6,5K	5,1K	3,7K	2,8K	2,2K	1,7K	1,5K	1,3K	1,2K	1,1K	1,0K	0,9K	0,8K	0,6K	0,5K					
100%	94%	87%	76%	62%	48%	38%	27%	21%	17%	13%	11%	10%	9%	8%	8%	7%	6%	5%	3%					
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°					
13,5K	12,7K	11,8K	10,3K	8,3K	6,5K	5,1K	3,7K	2,8K	2,2K	1,7K	1,5K	1,3K	1,2K	1,1K	1,0K	0,9K	0,8K	0,7K	0,5K					
100%	94%	87%	76%	62%	48%	37%	27%	21%	16%	13%	11%	10%	9%	8%	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°					
13,5K	12,8K	11,8K	10,3K	8,4K	6,5K	5,1K	3,7K	2,8K	2,2K	1,7K	1,5K	1,3K	1,2K	1,1K	1,0K	0,9K	0,8K	0,6K	0,5K					
100%	94%	87%	76%	62%	48%	38%	27%	21%	17%	13%	11%	10%	9%	8%	8%	7%	6%	5%	3%					
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°					
13,5K	12,7K	11,8K	10,3K	8,3K	6,5K	5,1K	3,7K	2,8K	2,2K	1,7K	1,5K	1,3K	1,2K	1,1K	1,0K	0,9K	0,8K	0,7K	0,5K					
100%	94%	87%	76%	62%	48%	37%	27%	21%	16%	13%	11%	10%	9%	8%	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				
19,4°					47,8°					{C_ANG}°					98,2%					96,0%				



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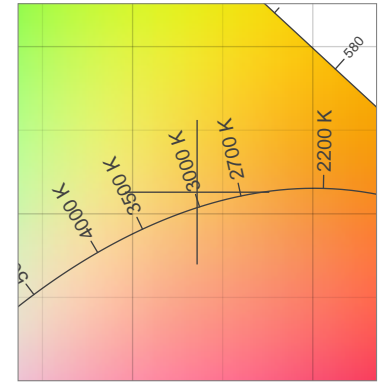
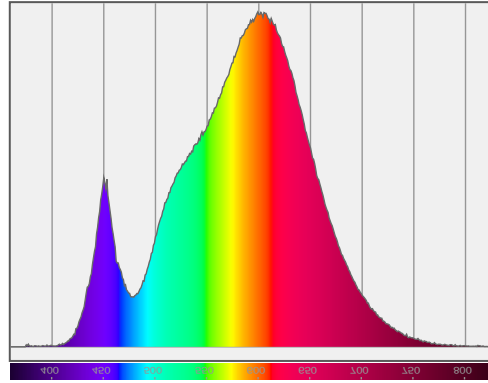
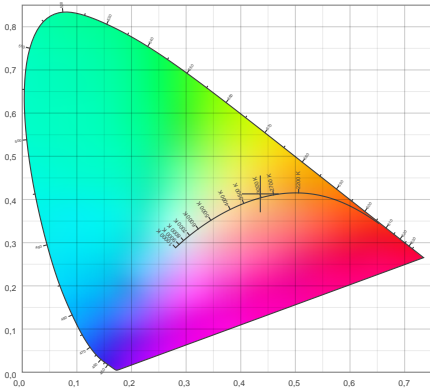
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Color details



CIE 1931

x: 0,436



Spectra

CIE 1931 ZOOM

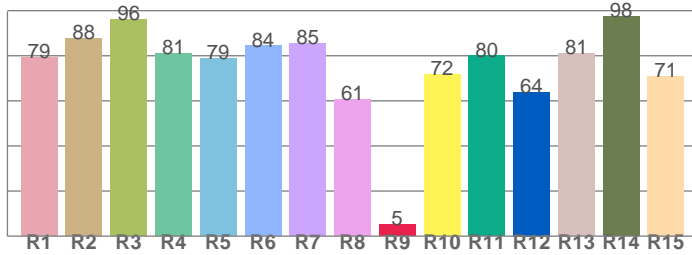
3094 K

y: 0,413

$\Delta uv: 0,0037$

CRI: 81,6 (R1-R8)

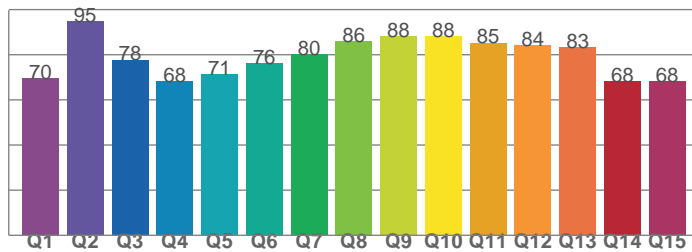
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
79,2	87,7	96,0	81,1	78,8	84,4	85,3	60,5
R9	R10	R11	R12	R13	R14	R15	
5,3	71,9	80,0	63,9	80,9	97,6	71,0	

CQS: 77,6

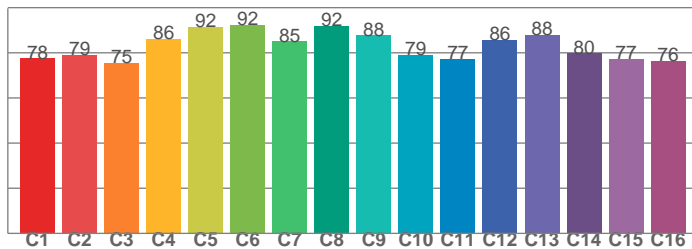
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
69,6	94,8	77,8	68,4	71,3	76,2	80,2	86,0
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
88,1	88,2	85,3	84,4	83,2	68,3	68,3	

TM30: 82,9

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



C1	C2	C3	C4	C5	C6	C7	C8
77,5	79,2	75,4	86,1	91,6	92,3	85,0	92,0
C9	C10	C11	C12	C13	C14	C15	
87,6	79,0	77,3	85,7	88,0	79,7	77,2	

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
3094 K	81,6	5,3	82,9	95,9	77,6	0,436	0,413	0,246	0,350	0,0037



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TM30 details

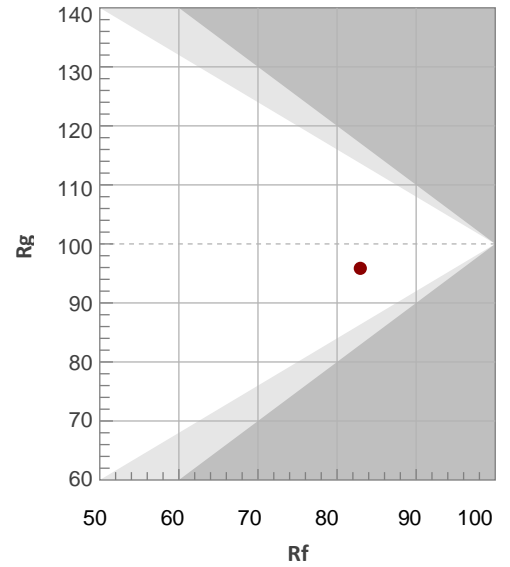
Rf 82,9

Fidelity index Rf

Rg 95,9

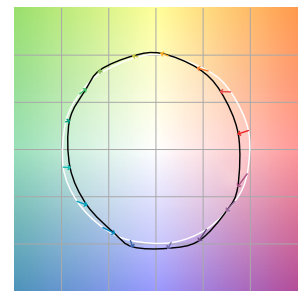
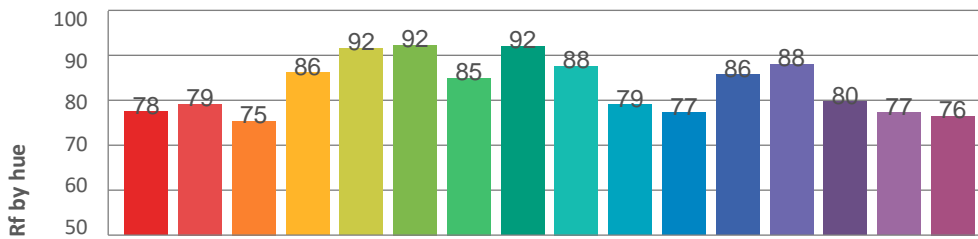
Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	78	-11%	-1%
2	79	-9%	6%
3	75	-4%	11%
4	86	1%	8%
5	92	2%	5%
6	92	3%	-2%
7	85	-3%	-8%
8	92	-4%	-2%
9	88	-7%	2%
10	79	-6%	9%
11	77	-2%	13%
12	86	6%	4%
13	88	5%	-5%
14	80	6%	-13%
15	77	-2%	-13%
16	76	-7%	-15%



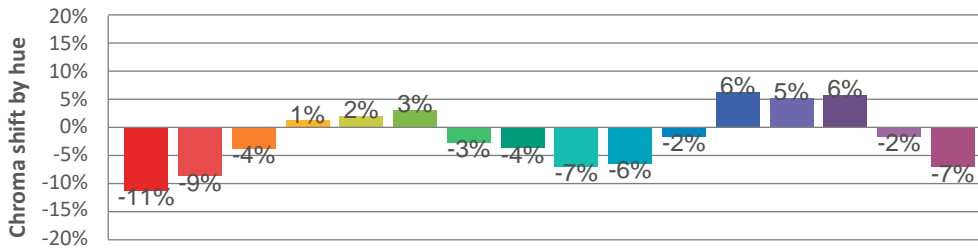
Hue binH

Color vector graphics

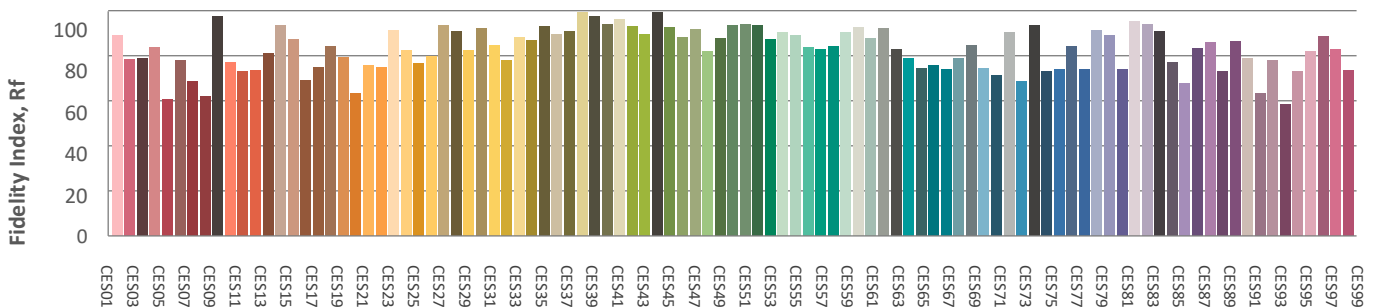


Hue bin

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	21,1	21,7	21,3	21,9	22,1	21,2	21,9	21,4	22,1	22,3
	3H	21,1	21,7	21,4	22,0	22,2	21,2	21,8	21,5	22,1	22,3
	4H	21,1	21,7	21,4	22,0	22,2	21,2	21,8	21,5	22,1	22,4
	6H	21,1	21,7	21,4	21,9	22,2	21,2	21,8	21,6	22,1	22,4
	8H	21,1	21,6	21,4	21,9	22,2	21,2	21,7	21,6	22,0	22,4
	12H	21,1	21,6	21,4	21,9	22,2	21,2	21,7	21,6	22,0	22,3
4H	2H	20,9	21,5	21,2	21,8	22,1	21,1	21,6	21,4	21,9	22,2
	3H	21,0	21,5	21,4	21,8	22,2	21,2	21,6	21,5	22,0	22,3
	4H	21,1	21,5	21,5	21,9	22,2	21,2	21,7	21,6	22,0	22,4
	6H	21,2	21,5	21,6	21,9	22,3	21,3	21,6	21,7	22,0	22,4
	8H	21,1	21,5	21,6	21,9	22,3	21,3	21,6	21,7	22,0	22,4
	12H	21,1	21,4	21,6	21,8	22,2	21,3	21,5	21,7	21,9	22,4
8H	4H	21,1	21,4	21,5	21,8	22,2	21,2	21,5	21,6	21,9	22,3
	6H	21,1	21,4	21,6	21,8	22,3	21,3	21,5	21,7	21,9	22,4
	8H	21,1	21,3	21,6	21,8	22,3	21,3	21,5	21,8	21,9	22,4
	12H	21,1	21,3	21,6	21,8	22,3	21,3	21,4	21,8	21,9	22,4
12H	4H	21,1	21,3	21,5	21,7	22,2	21,2	21,4	21,6	21,8	22,3
	6H	21,1	21,3	21,6	21,8	22,2	21,3	21,4	21,7	21,9	22,4
	8H	21,1	21,3	21,6	21,8	22,3	21,3	21,4	21,8	21,9	22,4
Variation of the observer position for the luminaire distance S											
S = 1,0H	+4,0 / -4,3					+4,0 / -4,2					
S = 1,5H	+6,6 / -4,8					+6,6 / -4,7					
S = 2,0H	+8,6 / -5,2					+8,5 / -5,2					
Standard table	BK01					BK01					
Correction summand	3,1					3,2					
Corrected glare indices referring to 3068lm total luminous flux											



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