

LM-79

Test Report

LM79-JADE-S-4000K-CRI80-SPOT

General Discription

Item number	J-S1-X-X-1-30-90-2
Date and time	28-11-2016 09:25:03
CCT (Kelvin)	3924 K
Beam angle	19,8°
Luminous flux	3458 lm
Efficiency	121 lm/watt
Weighted energy	28,5 kWh/1000h
Power factor	0,95
CRI (RA)	82,4
Fidelity index Rf	Rf 82,5
Gammut index Rg	Rg 97,9

NEW



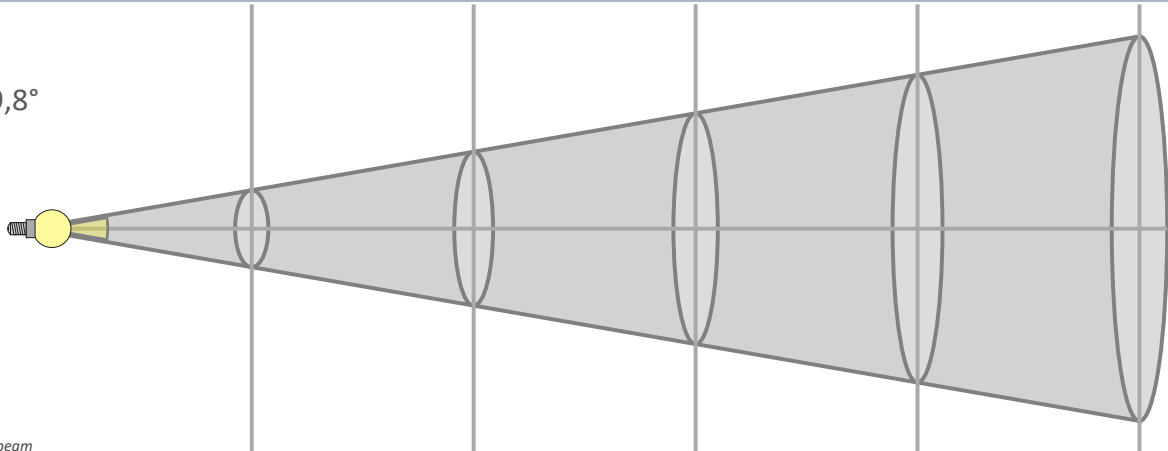
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Beam details				1m		2m		3m		4m		5m							
Lux*				15278 lx		3819 lx		1698 lx		955 lx		611 lx							
19,8° 																			
*measured at center of beam																			
Footcandles*				1419,3 fcd		354,8 fcd		157,7 fcd		88,7 fcd		56,8 fcd							
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
15278lx	3819lx	1698lx	955lx	611lx	424lx	312lx	239lx	189lx	153lx	126lx	106lx	90lx	78lx	68lx	60lx	53lx	47lx	42lx	38lx
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
1419,3fcd	354,8fcd	157,7fcd	88,7fcd	56,8fcd	39,4fcd	29fcd	22,2fcd	17,5fcd	14,2fcd	11,7fcd	9,9fcd	8,4fcd	7,2fcd	6,3fcd	5,5fcd	4,9fcd	4,4fcd	3,9fcd	3,5fcd
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°
15,3K	15,2K	13,8K	11,9K	9,8K	7,7K	5,7K	4,4K	3,3K	2,5K	2,1K	1,7K	1,6K	1,4K	1,3K	1,2K	1,1K	0,9K	0,8K	0,6K
100%	100%	90%	78%	64%	51%	37%	29%	21%	16%	14%	11%	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°
15,3K	14,3K	13,3K	11,6K	9,4K	7,3K	5,7K	4,1K	3,2K	2,5K	2,0K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	0,9K	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°
15,3K	15,2K	13,8K	11,9K	9,8K	7,7K	5,7K	4,4K	3,3K	2,5K	2,1K	1,7K	1,6K	1,4K	1,3K	1,2K	1,1K	0,9K	0,8K	0,6K
100%	100%	90%	78%	64%	51%	37%	29%	21%	16%	14%	11%	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°
15,3K	14,3K	13,3K	11,6K	9,4K	7,3K	5,7K	4,1K	3,2K	2,5K	2,0K	1,7K	1,5K	1,4K	1,3K	1,2K	1,1K	0,9K	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			
19,8°				48,3°				{C_ANG}°				98,2%				96,0%			



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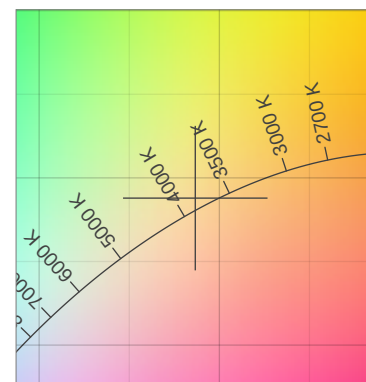
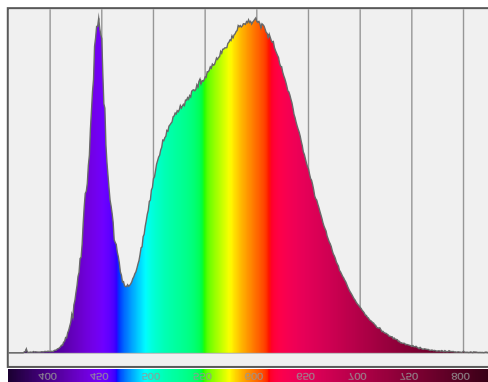
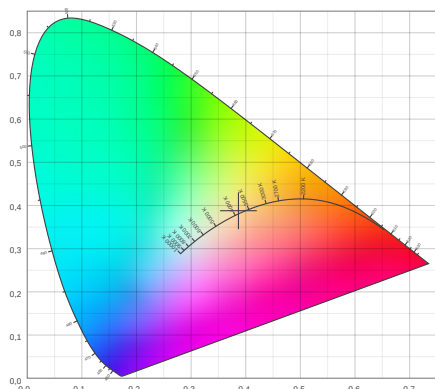
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Color details



CIE 1931

x: 0,387

3924 K

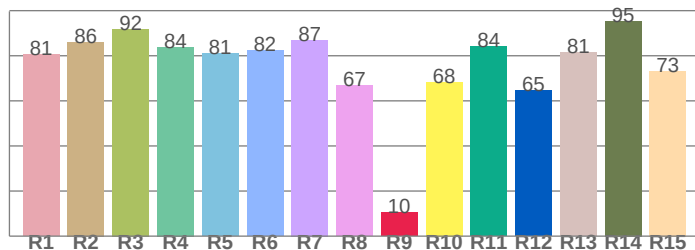
y: 0,388

Spectra

CIE 1931 ZOOM

Δuv : 0,0034

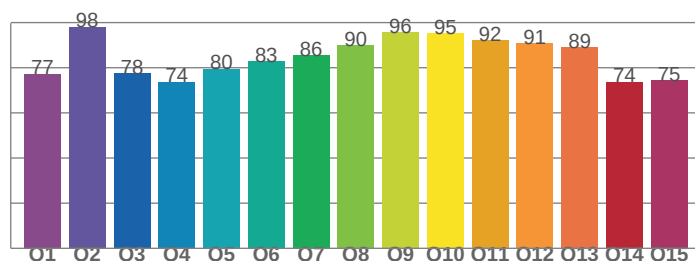
CRI: 82,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,7	86,2	91,8	83,9	80,9	82,2	87,0	66,7
R9	R10	R11	R12	R13	R14	R15	
10,3	68,4	84,0	64,7	81,5	95,4	73,2	

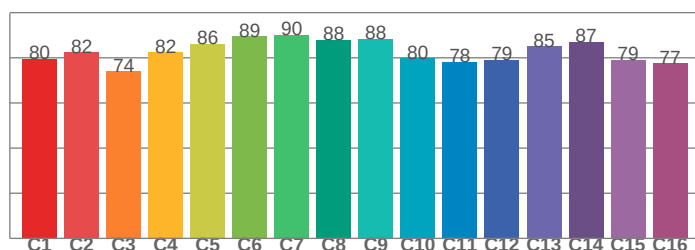
CQS: 83,0



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,3	98,2	77,7	73,8	79,6	83,0	85,6	89,9
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,8	95,3	92,1	90,9	89,2	73,8	74,6	

TM30: 82,5



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

C1	C2	C3	C4	C5	C6	C7	C8
79,6	82,3	74,0	82,4	86,2	89,4	90,0	87,9
C9	C10	C11	C12	C13	C14	C15	
88,3	79,6	78,3	79,0	85,1	87,1	79,0	

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
3924 K	82,4	10,3	82,5	97,9	83,0	0,387	0,388	0,225	0,338	0,0034



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TM30 details

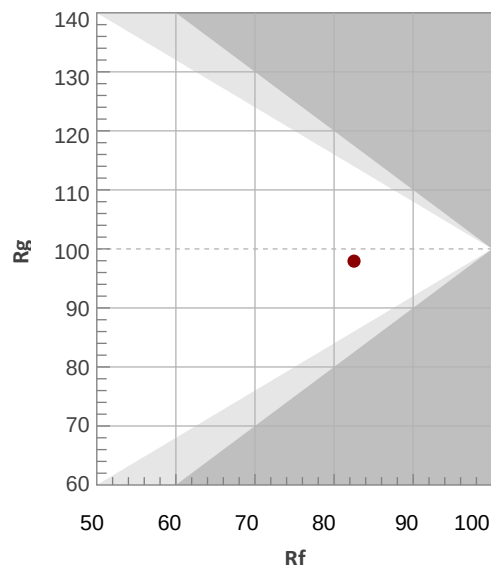
Rf 82,5

Fidelity index Rf

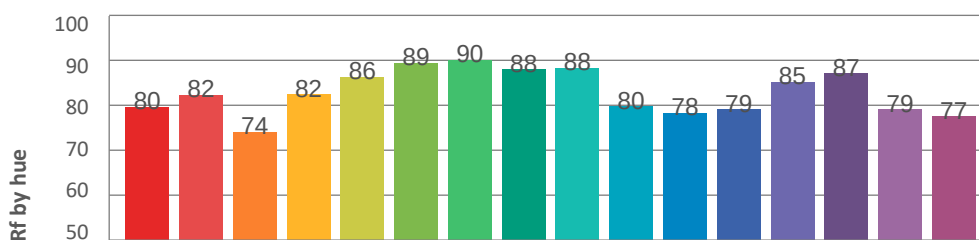
Rg 97,9

Gamut index Rg

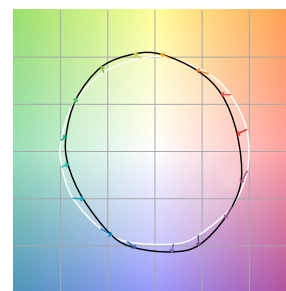
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-3%
2	82	-8%	5%
3	74	-4%	12%
4	82	2%	10%
5	86	6%	6%
6	89	6%	-1%
7	90	0%	-6%
8	88	-4%	-5%
9	88	-7%	-1%
10	80	-9%	6%
11	78	-1%	13%
12	79	5%	9%
13	85	8%	-3%
14	87	9%	-5%
15	79	1%	-13%
16	77	-4%	-13%



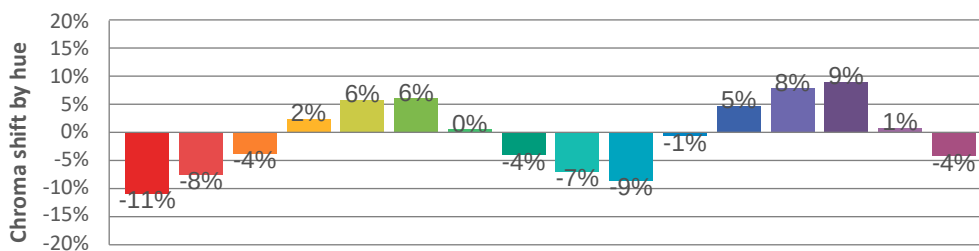
Hue binH



Color vector graphics



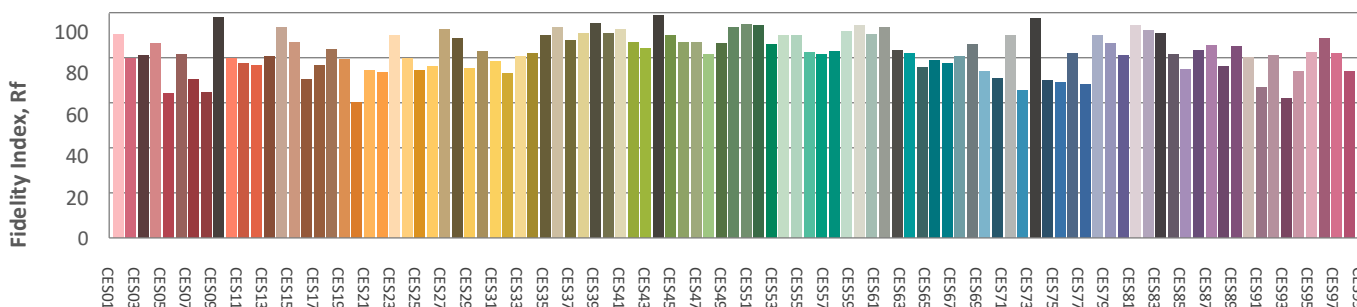
Hue bin



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	21,6	22,2	21,8	22,4	22,7	21,5	22,2	21,8	22,4	22,6
	3H	21,6	22,2	21,9	22,5	22,7	21,6	22,2	21,9	22,5	22,7
	4H	21,7	22,2	22,0	22,5	22,8	21,6	22,2	21,9	22,5	22,8
	6H	21,7	22,2	22,0	22,5	22,8	21,6	22,2	22,0	22,5	22,8
	8H	21,6	22,2	22,0	22,5	22,8	21,6	22,1	22,0	22,4	22,7
	12H	21,6	22,1	22,0	22,4	22,8	21,6	22,1	22,0	22,4	22,7
4H	2H	21,4	22,0	21,8	22,3	22,6	21,4	22,0	21,7	22,3	22,5
	3H	21,6	22,1	21,9	22,4	22,7	21,6	22,1	21,9	22,4	22,7
	4H	21,7	22,1	22,1	22,4	22,8	21,7	22,1	22,0	22,4	22,8
	6H	21,7	22,1	22,1	22,5	22,8	21,7	22,1	22,1	22,4	22,8
	8H	21,7	22,0	22,2	22,4	22,8	21,7	22,0	22,1	22,4	22,8
	12H	21,7	22,0	22,2	22,4	22,8	21,7	22,0	22,1	22,4	22,8
8H	4H	21,7	22,0	22,1	22,4	22,8	21,6	22,0	22,1	22,3	22,8
	6H	21,7	22,0	22,2	22,4	22,9	21,7	22,0	22,2	22,4	22,8
	8H	21,7	21,9	22,2	22,4	22,9	21,7	21,9	22,2	22,4	22,8
	12H	21,8	21,9	22,2	22,4	22,9	21,7	21,9	22,2	22,3	22,8
12H	4H	21,6	21,9	22,1	22,3	22,7	21,6	21,9	22,1	22,3	22,7
	6H	21,7	21,9	22,2	22,4	22,8	21,7	21,9	22,2	22,3	22,8
	8H	21,7	21,9	22,2	22,4	22,9	21,7	21,9	22,2	22,3	22,8
Variation of the observer position for the luminaire distance S											
S = 1,0H		+4,0 / -4,0					+3,9 / -4,0				
S = 1,5H		+6,6 / -4,4					+6,5 / -4,5				
S = 2,0H		+8,6 / -5,0					+8,5 / -4,9				
Standard table		BK01					BK01				
Correction summand		3,7					3,7				
Corrected glare indices referring to 3458lm total luminous flux											

