

LM-79

Test Report

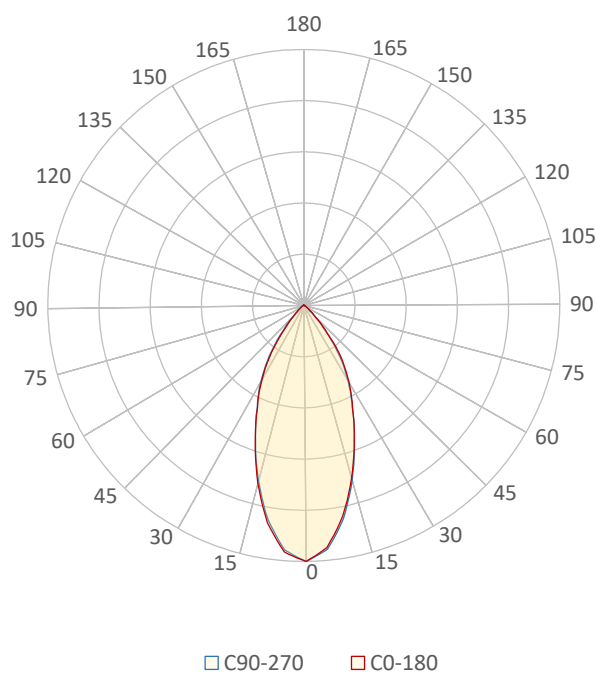
LM79-JADE-TW27-50-MEDIUM (2700K-5000K)

General Discription

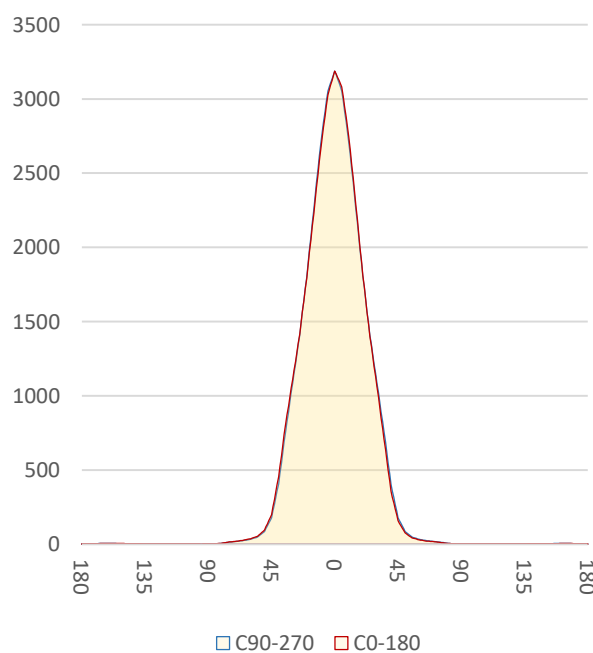
Item number	
Date and time	10-4-2018 09:28:23
CCT (Kelvin)	3678 K
Beam angle	44,9°
Luminous flux	2271 lm
Efficiency	77 lm/watt
Weighted energy	29,4 kWh/1000h
Power factor	0,57
CRI (RA)	79,6
Fidelity index Rf	Rf 79,7
Gammut index Rg	Rg 98,5
Peak	3206 cd



Polar diagram



Cartesian diagram



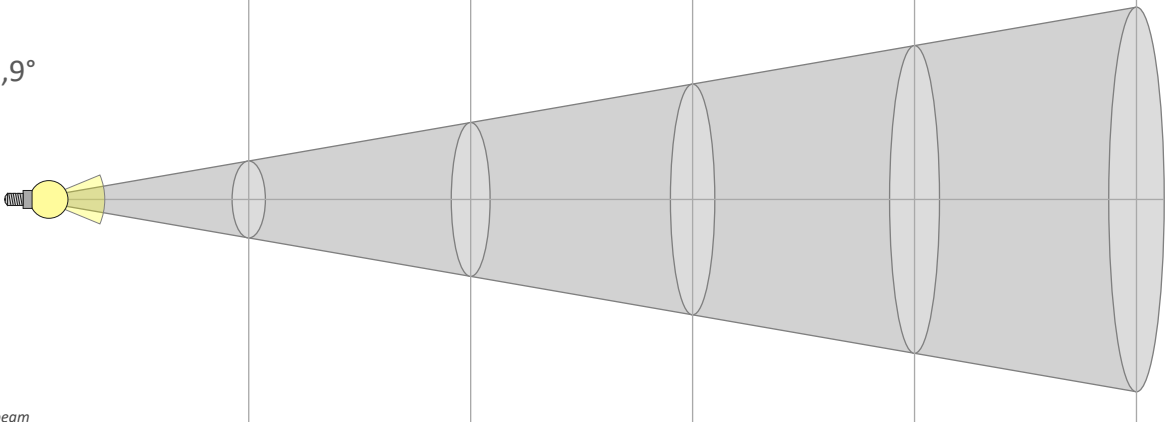
CLS LED BV
info@cls-led.com
www.cls-led.com

2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-JADE-TW27-50-MEDIUM (2700K-5000K)

Beam details					1m		2m		3m		4m		5m											
Lux*					3188 lx		797 lx		354 lx		199 lx		128 lx											
44,9° 																								
*measured at center of beam																								
Footcandles*					296,1 fcd		74,0 fcd		32,9 fcd		18,5 fcd		11,8 fcd											
Beam width (meter)					0,8 m		1,7 m		2,5 m		3,3 m		4,1 m											
Beam width (Feet)					2,7 ft		5,4 ft		8,1 ft		10,8 ft		13,6 ft											
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
3188lx	797lx	354lx	199lx	128lx	89lx	65lx	50lx	39lx	32lx	26lx	22lx	19lx	16lx	14lx	12lx	11lx	10lx	9lx	8lx					
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					
296,1fcd	74fcd	32,9fcd	18,5fcd	11,8fcd	8,2fcd	6fcd	4,6fcd	3,7fcd	3fcd	2,4fcd	2,1fcd	1,8fcd	1,5fcd	1,3fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd					
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°					
3188	3136	3084	2957	2818	2666	2490	2315	2139	1962	1793	1638	1483	1354	1232	1111	995	880	738	591					
100%	98%	97%	93%	88%	84%	78%	73%	67%	62%	56%	51%	47%	42%	39%	35%	31%	28%	23%	19%					
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°					
3188	3136	3084	2957	2818	2666	2490	2315	2139	1962	1793	1638	1483	1354	1232	1111	995	880	738	591					
100%	98%	97%	93%	88%	84%	78%	73%	67%	62%	56%	51%	47%	42%	39%	35%	31%	28%	23%	19%					
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°					
3188	3169	3110	3040	2892	2744	2571	2381	2192	2001	1811	1639	1479	1322	1192	1062	924	780	636	497					
100%	99%	98%	95%	91%	86%	81%	75%	69%	63%	57%	51%	46%	41%	37%	33%	29%	24%	20%	16%					
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°					
3188	3169	3110	3040	2892	2744	2571	2381	2192	2001	1811	1639	1479	1322	1192	1062	924	780	636	497					
100%	99%	98%	95%	91%	86%	81%	75%	69%	63%	57%	51%	46%	41%	37%	33%	29%	24%	20%	16%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
44,9°					83°					101,6°					97,5%					93,2%				



CLS LED BV
 info@cls-led.com
 www.cls-led.com

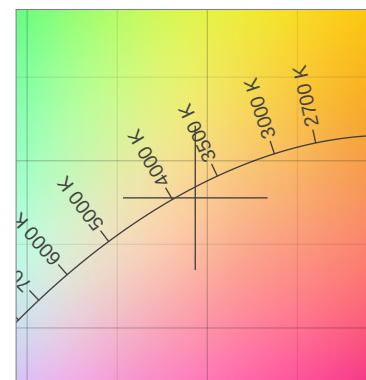
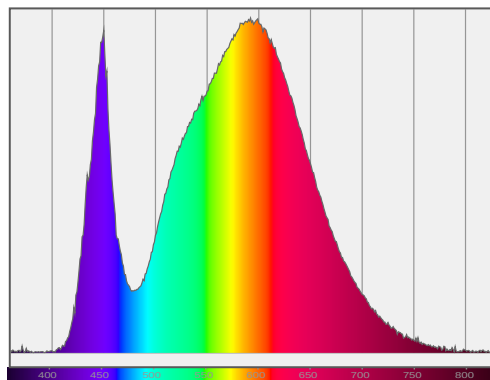
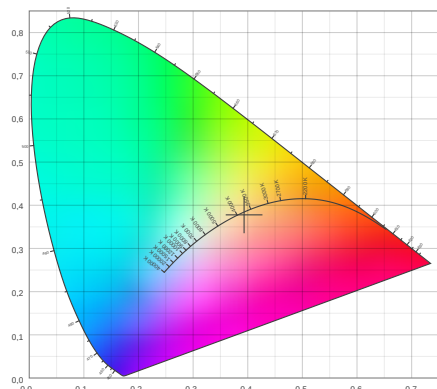
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-JADE-TW27-50-MEDIUM (2700K-5000K)

Color details



CIE 1931

x: 0,393

3678 K

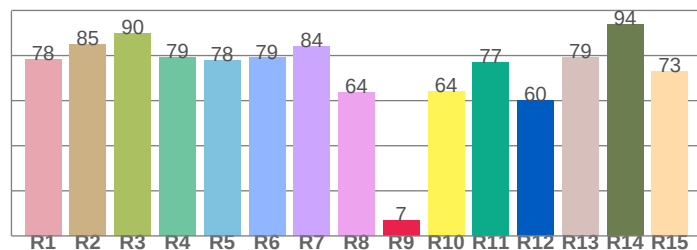
y: 0,378

Spectra

CIE 1931 ZOOM

Δuv : -0,0030

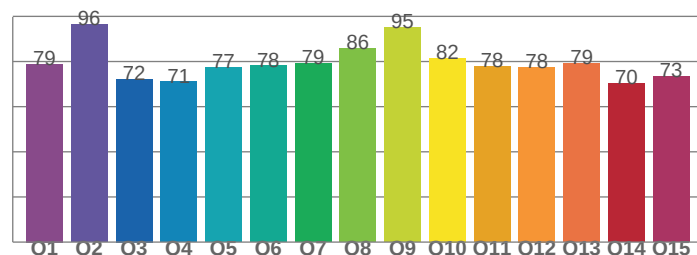
CRI: 79,6 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
78,3	85,1	89,8	79,3	77,8	79,0	84,2	63,6
R9	R10	R11	R12	R13	R14	R15	
6,9	64,2	77,0	60,1	79,3	94,0	73,0	

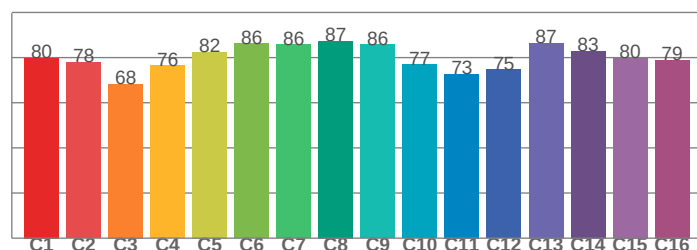
CQS: 78,3



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,9	96,4	72,2	71,0	77,5	78,1	79,1	85,7
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,1	81,6	77,9	77,6	79,1	70,3	73,4	

TM30: 79,7



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

C1	C2	C3	C4	C5	C6	C7	C8
79,9	78,0	68,3	76,4	82,4	86,1	85,7	87,4
C9	C10	C11	C12	C13	C14	C15	
85,7	76,9	72,8	74,7	86,5	82,9	79,8	

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
3678 K	79,6	6,9	79,7	98,5	78,3	0,393	0,378	0,233	0,336	-0,0030



CLS LED BV
info@cls-led.com
www.cls-led.com

2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

LM-79

Test Report

LM79-JADE-TW27-50-MEDIUM (2700K-5000K)

TM30 details

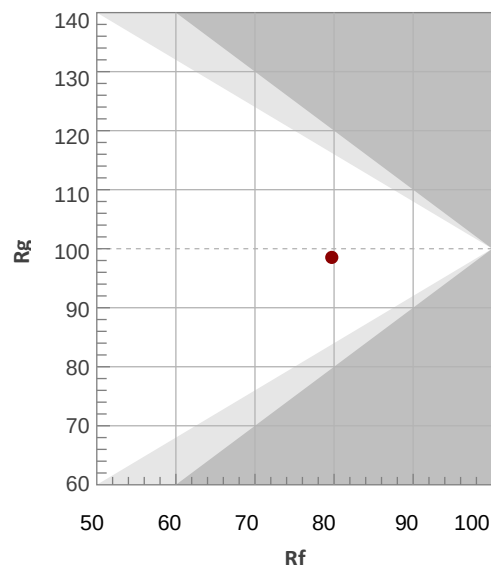
Rf 79,7

Fidelity index Rf

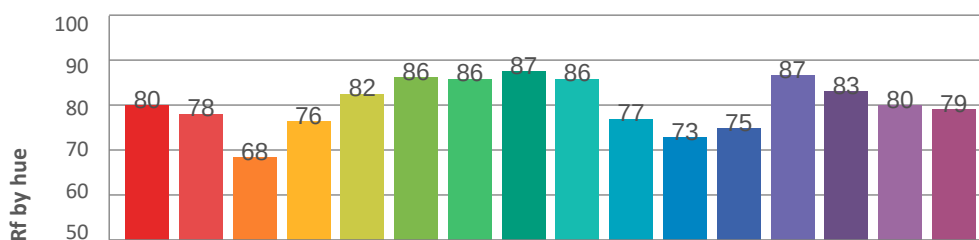
Rg 98,5

Gamut index Rg

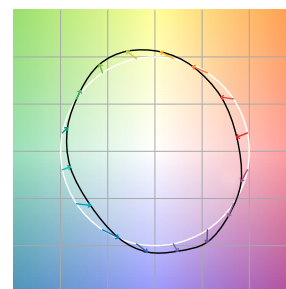
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-12%	-2%
2	78	-10%	9%
3	68	-3%	17%
4	76	5%	15%
5	82	10%	9%
6	86	9%	-2%
7	86	1%	-10%
8	87	-4%	-6%
9	86	-9%	-1%
10	77	-11%	10%
11	73	-2%	19%
12	75	6%	13%
13	87	9%	3%
14	83	11%	-8%
15	80	3%	-14%
16	79	-4%	-13%



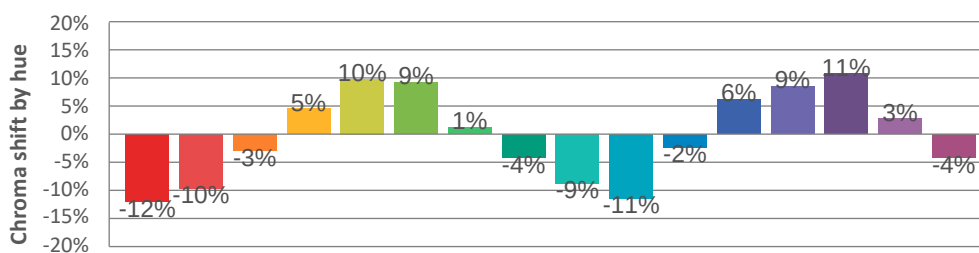
Hue binH



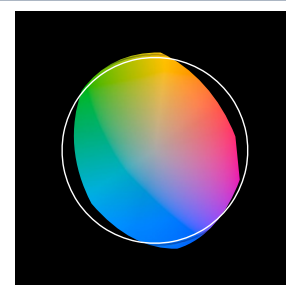
Color vector graphics



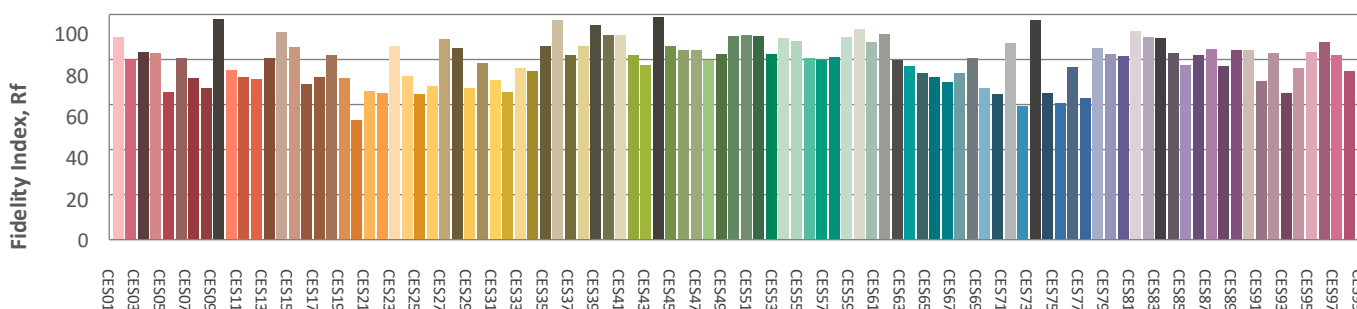
Hue bin



Color distortion graphics



Color Evaluation Sample



CLS LED BV
info@cls-led.com
www.cls-led.com

2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf

Test Report

LM79-JADE-TW27-50-MEDIUM (2700K-5000K)

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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 2271lm total luminous flux										



CLS LED BV
info@cls-led.com
www.cls-led.com

2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document. No part of this document may be reproduced, in any form or by any means, without permission in writing from CLS-LED BV. Other legal information can be found in our General conditions, found on the back of your CLS-LED BV invoice, inside the CLS catalogue or on our website www.cls-led.com/voorwaarden.pdf