

LM-79

Test Report

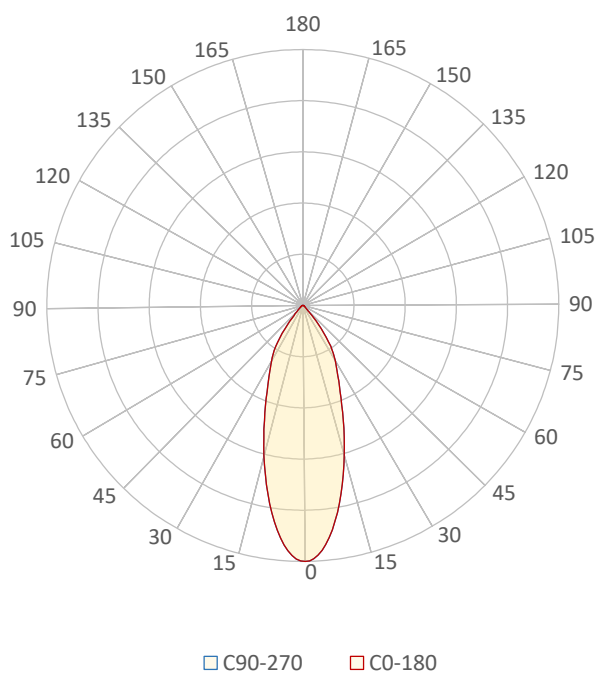
LM79-JADE-HP-2700K-CRI90-MEDIUM

General Discription

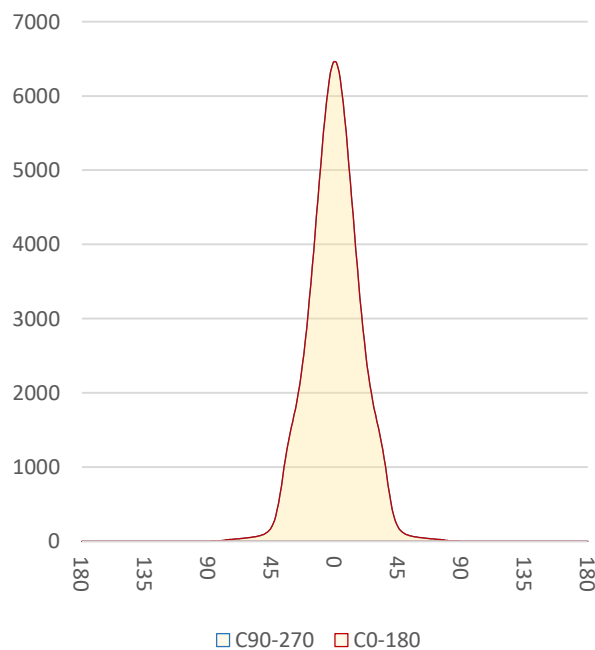
Item number	
Date and time	22-1-2021 14:26:43
CCT (Kelvin)	2769 K
Beam angle	36,3°
Luminous flux	3594 lm
Efficiency	90 lm/watt
Weighted energy	40,0 kWh/1000h
Power factor	0,97
CRI (RA)	92,3
Fidelity index Rf	Rf 91,4
Gammut index Rg	Rg 98,3
Peak	6464 cd



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-HP-2700K-CRI90-MEDIUM

Beam details	1m	2m	3m	4m	5m
Lux*	6464 lx	1616 lx	718 lx	404 lx	259 lx

36,3°

*measured at center of beam

Footcandles*	600,5 fcd	150,1 fcd	66,7 fcd	37,5 fcd	24,0 fcd
Beam width (meter)	0,7 m	1,3 m	2 m	2,6 m	3,3 m
Beam width (Feet)	2,2 ft	4,3 ft	6,5 ft	8,6 ft	10,8 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
6464lx	1616lx	718lx	404lx	259lx	180lx	132lx	101lx	80lx	65lx	53lx	45lx	38lx	33lx	29lx	25lx	22lx	20lx	18lx	16lx
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
600,5fcd	150,1fcd	66,7fcd	37,5fcd	24fcd	16,7fcd	12,3fcd	9,4fcd	7,4fcd	6fcd	5fcd	4,2fcd	3,6fcd	3,1fcd	2,7fcd	2,3fcd	2,1fcd	1,9fcd	1,7fcd	1,5fcd

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°
6464	6405	6208	5901	5513	5078	4618	4154	3699	3268	2875	2527	2233	1991	1790	1613	1440	1243	1003	746
100%	99%	96%	91%	85%	79%	71%	64%	57%	51%	44%	39%	35%	31%	28%	25%	22%	19%	16%	12%

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°
6464	6405	6208	5901	5513	5078	4618	4154	3699	3268	2875	2527	2233	1991	1790	1613	1440	1243	1003	746
100%	99%	96%	91%	85%	79%	71%	64%	57%	51%	44%	39%	35%	31%	28%	25%	22%	19%	16%	12%

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°
6464	6405	6208	5901	5513	5078	4618	4154	3699	3268	2875	2527	2233	1991	1790	1613	1440	1243	1003	746
100%	99%	96%	91%	85%	79%	71%	64%	57%	51%	44%	39%	35%	31%	28%	25%	22%	19%	16%	12%

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°
6464	6405	6208	5901	5513	5078	4618	4154	3699	3268	2875	2527	2233	1991	1790	1613	1440	1243	1003	746
100%	99%	96%	91%	85%	79%	71%	64%	57%	51%	44%	39%	35%	31%	28%	25%	22%	19%	16%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
36,3°	77,6°	92,1°	98,0%	94,7%



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

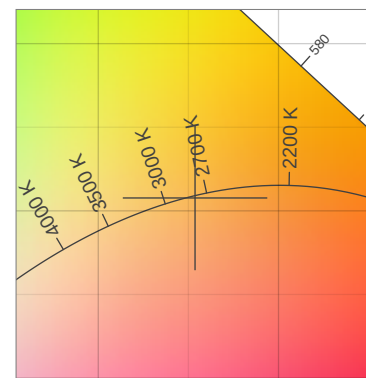
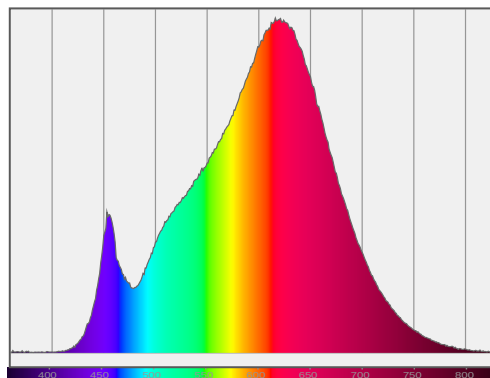
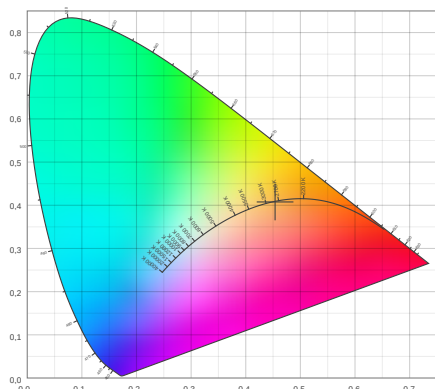
2017 CLS-LED BV. All rights reserved. Information subject to change without notice, CLS-LED BV and all affiliated companies disclaim liability for injury, damage direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information 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-HP-2700K-CRI90-MEDIUM

Color details



CIE 1931

x: 0,454



Spectra

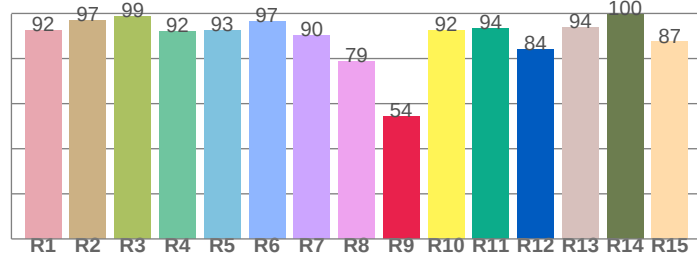
CIE 1931 ZOOM

2769 K

y: 0,408

Δuv : -0,0006

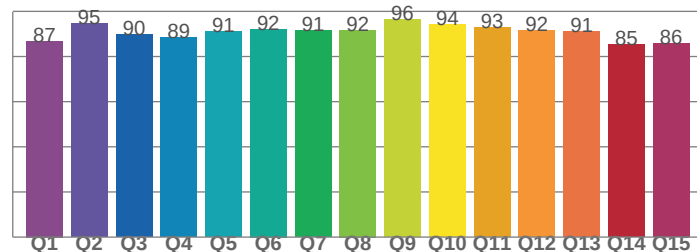
CRI: 92,3 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
92,5	97,0	98,5	92,2	92,5	96,6	90,1	78,7
R9	R10	R11	R12	R13	R14	R15	
54,2	92,5	93,6	84,1	93,8	99,5	87,4	

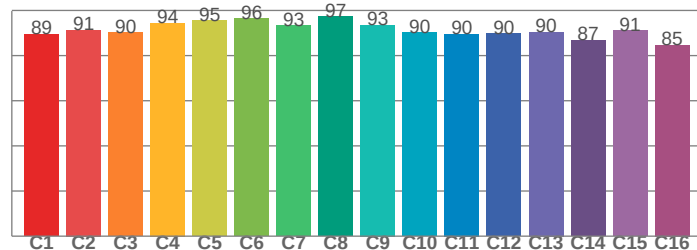
CQS: 90,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
86,9	94,7	89,8	88,6	91,1	92,2	91,4	91,7
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,3	94,3	93,0	91,7	91,0	85,2	85,6	

TM30: 91,4



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

C1	C2	C3	C4	C5	C6	C7	C8
89,5	91,3	90,1	94,4	95,5	96,3	93,2	97,2
C9	C10	C11	C12	C13	C14	C15	
93,5	90,1	89,6	89,8	90,4	86,8	91,2	

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
2769 K	92,3	54,2	91,4	98,3	90,2	0,454	0,408	0,260	0,350	-0,0006



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-HP-2700K-CRI90-MEDIUM

TM30 details

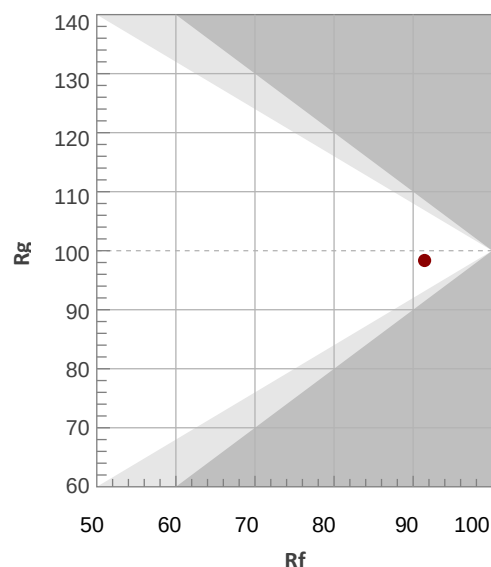
Rf 91,4

Fidelity index Rf

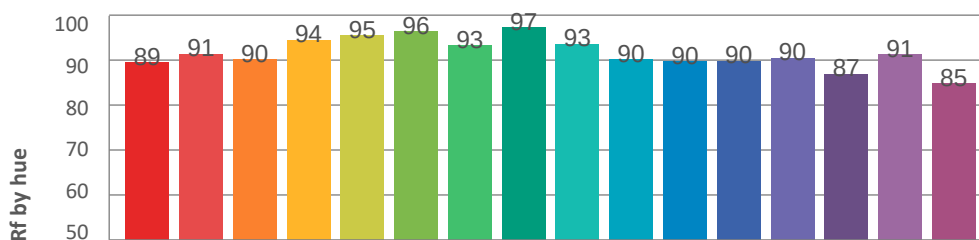
Rg 98,3

Gamut index Rg

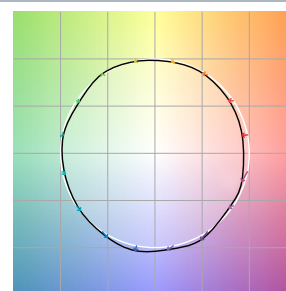
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	89	-6%	1%
2	91	-4%	3%
3	90	-1%	5%
4	94	-2%	1%
5	95	0%	2%
6	96	1%	0%
7	93	-3%	-1%
8	97	-1%	1%
9	93	-2%	3%
10	90	-1%	6%
11	90	2%	7%
12	90	5%	0%
13	90	3%	-7%
14	87	3%	-10%
15	91	-3%	-4%
16	85	-4%	-11%



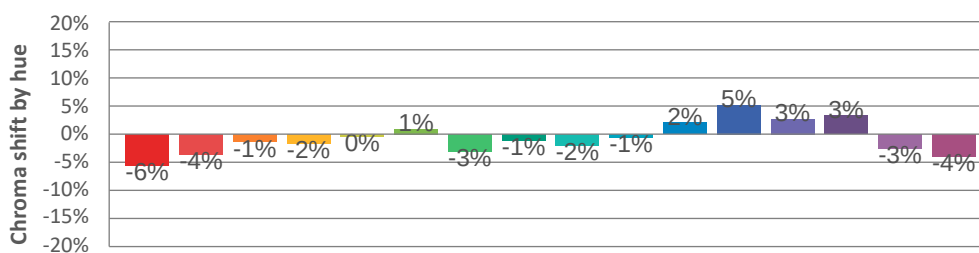
Hue binH



Color vector graphics



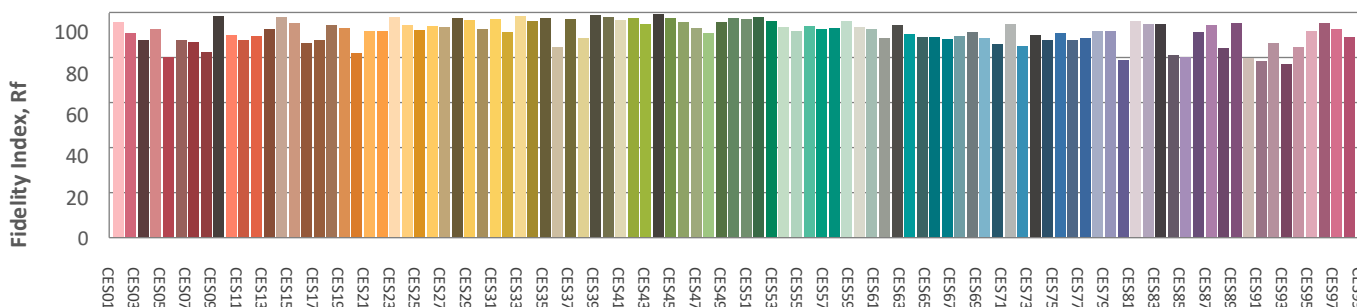
Hue bin



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

LM-79

Test Report

LM79-JADE-HP-2700K-CRI90-MEDIUM

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	23,7	24,3	23,8	24,6	24,8	23,7	24,3	23,8	24,6	24,8
	3H	23,7	24,4	24,0	24,6	24,8	23,7	24,4	24,0	24,6	24,8
	4H	23,7	24,4	24,1	24,7	24,9	23,7	24,4	24,1	24,7	24,9
	6H	23,8	24,4	24,1	24,7	25,1	23,8	24,4	24,1	24,7	25,1
	8H	23,8	24,4	24,1	24,7	25,1	23,8	24,4	24,1	24,7	25,1
	12H	23,8	24,3	24,1	24,7	25,1	23,8	24,3	24,1	24,7	25,1
4H	2H	23,5	24,2	23,8	24,4	24,7	23,5	24,2	23,8	24,4	24,7
	3H	23,7	24,3	24,0	24,6	25,0	23,7	24,3	24,0	24,6	25,0
	4H	23,8	24,3	24,2	24,7	25,2	23,8	24,3	24,2	24,7	25,2
	6H	23,8	24,4	24,3	24,7	25,1	23,8	24,4	24,3	24,7	25,1
	8H	23,8	24,4	24,4	24,7	25,1	23,8	24,4	24,4	24,7	25,1
	12H	23,8	24,2	24,3	24,6	25,1	23,8	24,2	24,3	24,6	25,1
8H	4H	23,7	24,3	24,3	24,6	25,0	23,7	24,3	24,3	24,6	25,0
	6H	23,9	24,2	24,4	24,7	25,2	23,9	24,2	24,4	24,7	25,2
	8H	24,0	24,2	24,5	24,7	25,4	24,0	24,2	24,5	24,7	25,4
	12H	23,9	24,2	24,5	24,7	25,3	23,9	24,2	24,5	24,7	25,3
12H	4H	23,7	24,1	24,2	24,5	25,0	23,7	24,1	24,2	24,5	25,0
	6H	23,9	24,2	24,4	24,7	25,3	23,9	24,2	24,4	24,7	25,3
	8H	23,9	24,1	24,5	24,7	25,3	23,9	24,1	24,5	24,7	25,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		3,9 / -3,5					3,9 / -3,5				
S = 1.5H		6,4 / -3,9					6,4 / -3,9				
S = 2.0H		8,2 / -4,2					8,2 / -4,2				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 3594lm 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