

LM-79

Test Report

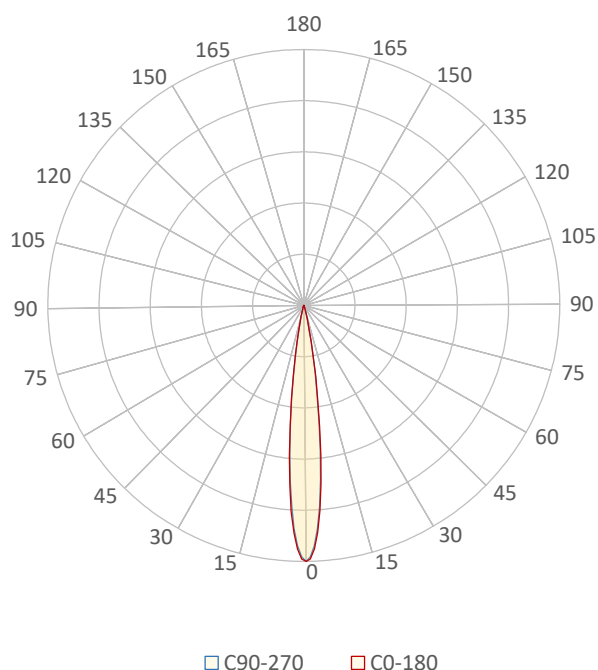
LM79-CLS-JADE-HD-3000K-CRI95-SPOT [SHADE+DIFFUSER]

General Discription

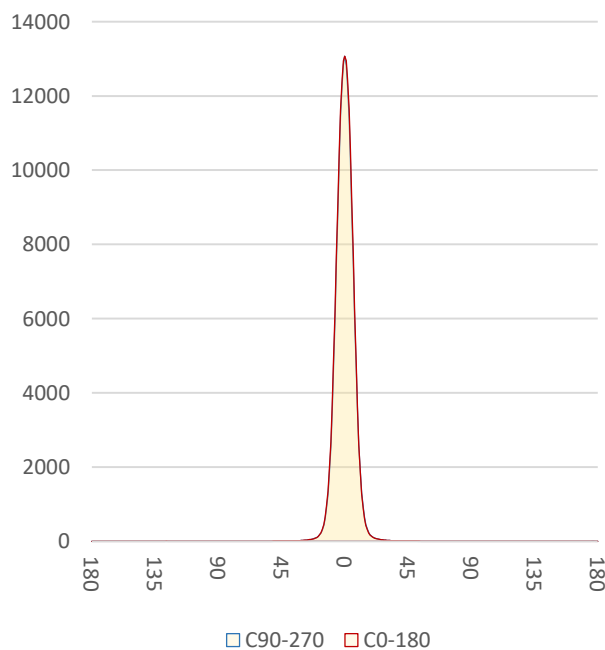
Item number	
Date and time	28-4-2020 15:58:13
CCT (Kelvin)	3020 K
Beam angle	13,3°
Luminous flux	850 lm
Efficiency	35 lm/watt
Weighted energy	24,0 kWh/1000h
Power factor	0,96
CRI (RA)	96,7
Fidelity index Rf	Rf 94,6
Gammut index Rg	Rg 104,1
Peak	13119 cd



Polar diagram



Cartesian diagram



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info@cls-led.com
www.cls-led.com

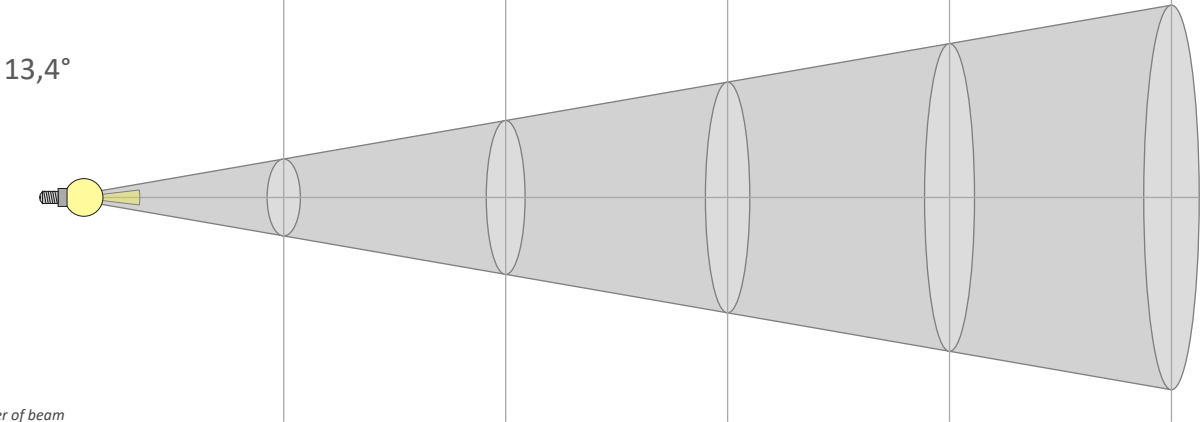
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Beam details	1m	2m	3m	4m	5m
Lux*	13071 lx	3268 lx	1452 lx	817 lx	523 lx



13,4°

*measured at center of beam

Footcandles*	1214,4 fcd	303,6 fcd	134,9 fcd	75,9 fcd	48,6 fcd
Beam width (meter)	0,2 m	0,5 m	0,7 m	0,9 m	1,2 m
Beam width (Feet)	0,8 ft	1,5 ft	2,3 ft	3,1 ft	3,9 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
13071lx	3268lx	1452lx	817lx	523lx	363lx	267lx	204lx	161lx	131lx	108lx	91lx	77lx	67lx	58lx	51lx	45lx	40lx	36lx	33lx
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
1214,4fcd	303,6fcd	134,9fcd	75,9fcd	48,6fcd	33,7fcd	24,8fcd	19fcd	15fcd	12,1fcd	10fcd	8,4fcd	7,2fcd	6,2fcd	5,4fcd	4,7fcd	4,2fcd	3,7fcd	3,4fcd	3fcd

Intensities in 0° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
13,1K	13,0K	12,5K	11,6K	10,5K	9,2K	7,7K	6,2K	4,9K	3,7K	2,7K	1,9K	1,3K	0,9K	0,7K	0,5K	0,3K	0,2K	0,2K	0,1K
100%	99%	95%	89%	80%	70%	59%	48%	37%	28%	21%	15%	10%	7%	5%	3%	2%	2%	1%	1%

Intensities in 90° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
13,1K	12,8K	12,3K	11,4K	10,3K	8,9K	7,5K	6,0K	4,6K	3,5K	2,5K	1,8K	1,3K	0,9K	0,6K	0,4K	0,3K	0,2K	0,2K	0,1K
100%	98%	94%	87%	79%	68%	57%	46%	35%	27%	19%	14%	10%	7%	5%	3%	2%	2%	1%	1%

Intensities in 180° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
13,1K	13,0K	12,5K	11,6K	10,5K	9,2K	7,7K	6,2K	4,8K	3,6K	2,6K	1,8K	1,3K	0,9K	0,6K	0,4K	0,3K	0,2K	0,2K	0,1K
100%	99%	95%	89%	81%	71%	59%	48%	37%	28%	20%	14%	10%	7%	5%	3%	2%	2%	1%	1%

Intensities in 270° c-plane																			
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
13,1K	12,8K	12,3K	11,4K	10,2K	8,9K	7,4K	6,0K	4,7K	3,5K	2,6K	1,9K	1,3K	0,9K	0,6K	0,5K	0,3K	0,2K	0,2K	0,1K
100%	98%	94%	87%	78%	68%	57%	46%	36%	27%	20%	14%	10%	7%	5%	3%	3%	2%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
13,4°	24°	31,8°	99,4%	99,0%



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info@cls-led.com
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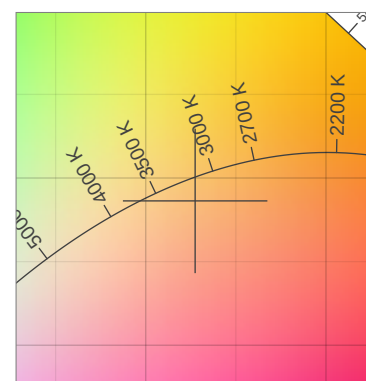
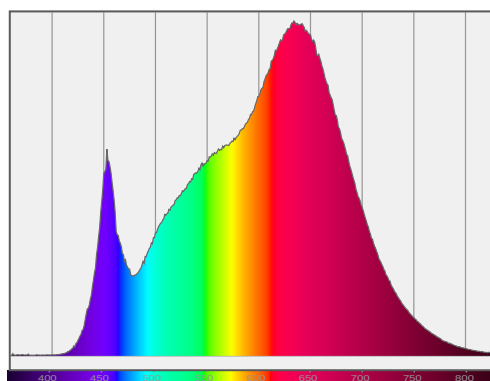
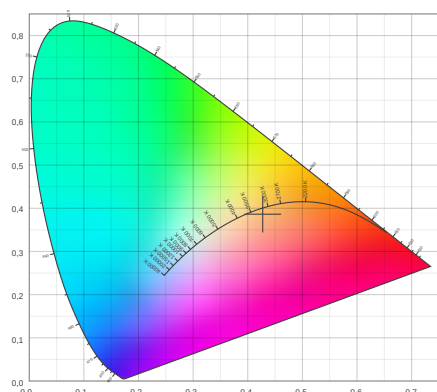
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Color details



CIE 1931

x: 0,427



Spectra

CIE 1931 ZOOM

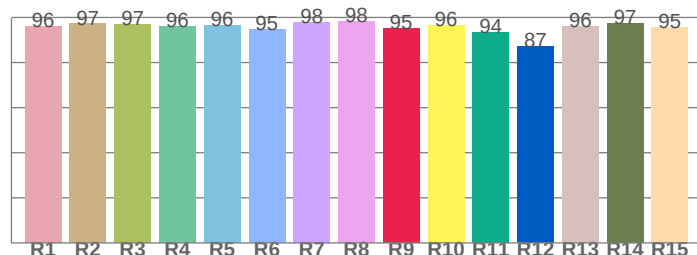
3020 K

y: 0,386

Δuv : -0,0059

CRI: 96,7 (R1-R8)

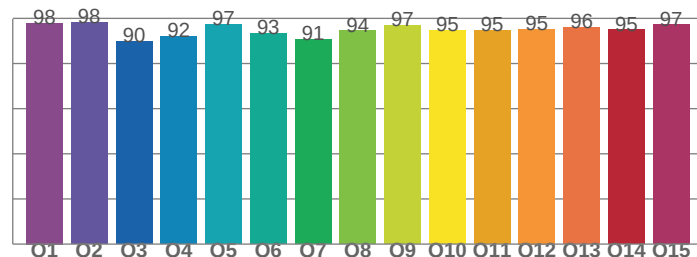
CRI values, R1-R8 are used to calculate final CRI value



R1	R2	R3	R4	R5	R6	R7	R8
96,0	97,2	96,9	96,0	96,4	94,9	97,7	98,4
R9	R10	R11	R12	R13	R14	R15	
95,4	96,4	93,6	87,1	95,9	97,3	95,4	

CQS: 94,1

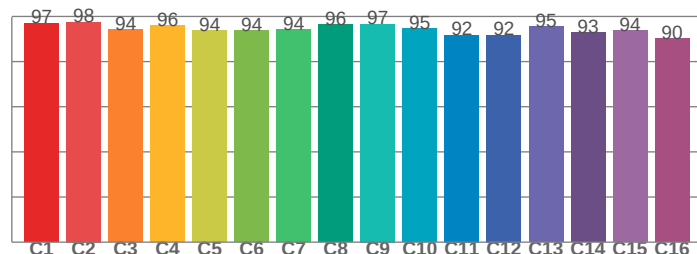
CQS values



Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
98,0	98,0	89,6	92,0	97,4	93,5	90,7	94,4
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,0	94,8	94,8	95,3	96,0	94,9	97,1	

TM30: 94,6

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



C1	C2	C3	C4	C5	C6	C7	C8
97,0	97,5	94,3	95,8	93,8	93,9	94,1	96,5
C9	C10	C11	C12	C13	C14	C15	
96,6	94,6	91,7	91,8	95,4	92,9	93,7	

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
3020 K	96,7	95,4	94,6	104,1	94,1	0,427	0,386	0,252	0,342	-0,0059



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info@cls-led.com
www.cls-led.com

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TM30 details

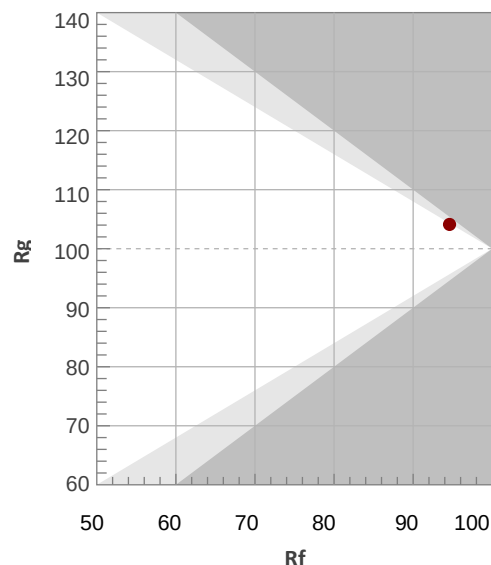
Rf 94,6

Fidelity index Rf

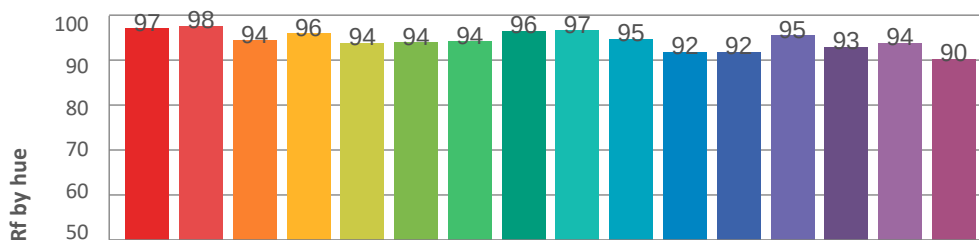
Rg 104,1

Gamut index Rg

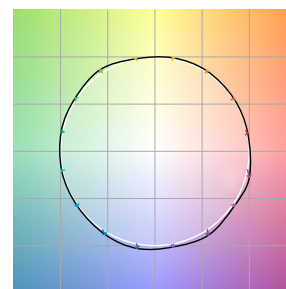
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	97	0%	0%
2	98	1%	1%
3	94	1%	2%
4	96	1%	1%
5	94	0%	2%
6	94	4%	0%
7	94	2%	0%
8	96	1%	-2%
9	97	1%	2%
10	95	1%	3%
11	92	3%	6%
12	92	5%	2%
13	95	3%	-1%
14	93	5%	-2%
15	94	2%	-2%
16	90	4%	-7%



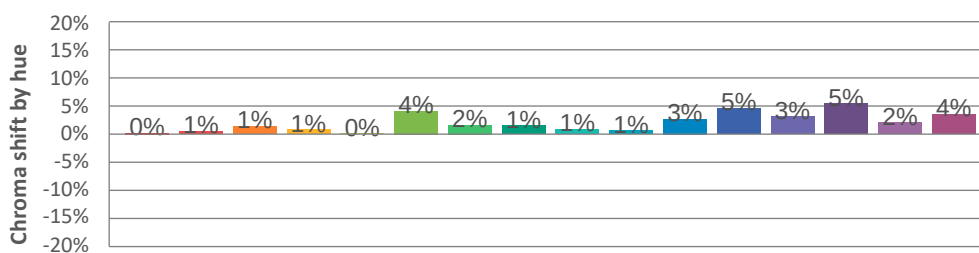
Hue binH



Color vector graphics



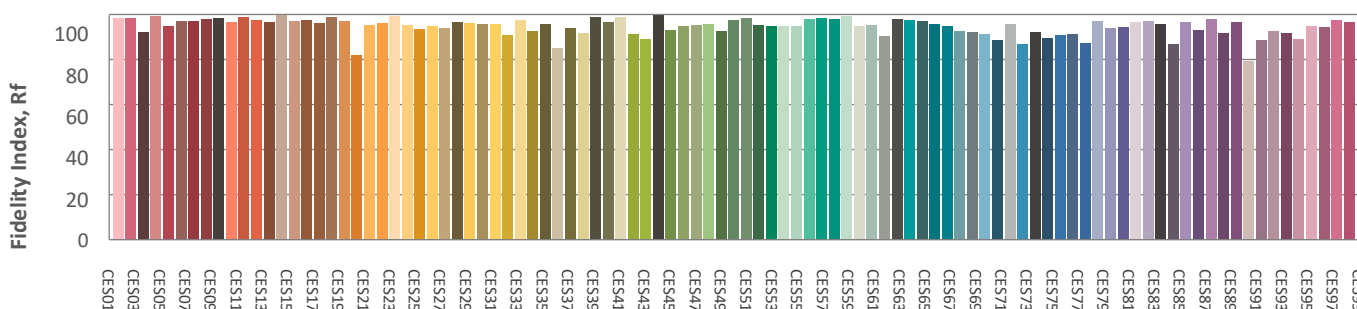
Hue bin



Color distortion graphics



Color Evaluation Sample



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[SHADE+DIFFUSER]

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
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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 850lm total luminous flux										



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