

LM-79

Test Report

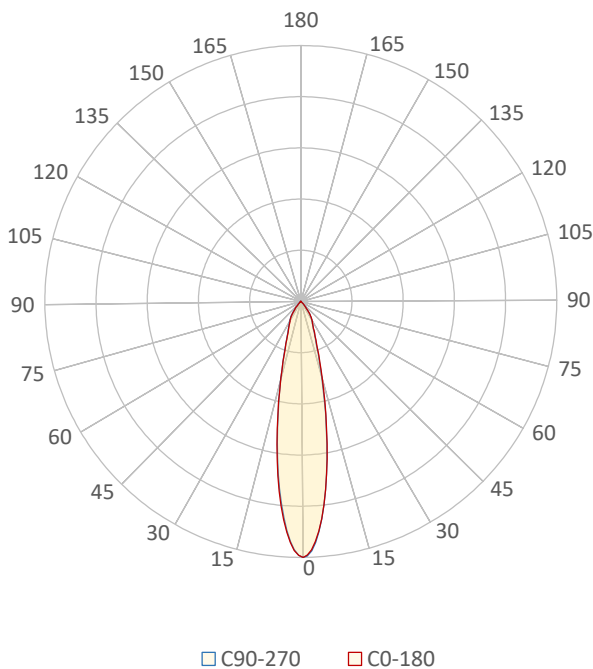
LM79-JADE-TW18-40-MEDIUM (4000K)

General Discription

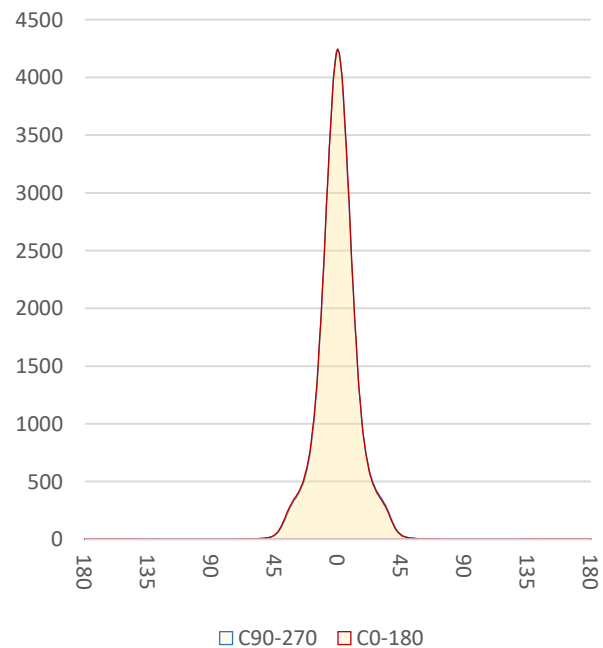
Item number	
Date and time	17-1-2020 15:08:48
CCT (Kelvin)	3781 K
Beam angle	22°
Luminous flux	1111 lm
Efficiency	74 lm/watt
Weighted energy	14,9 kWh/1000h
Power factor	0,56
CRI (RA)	82,4
Fidelity index Rf	Rf 84,8
Gammut index Rg	Rg 95,6
Peak	4252 cd



Polar diagram



Cartesian diagram



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

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Beam details	1m	2m	3m	4m	5m																			
Lux*	4246 lx	1062 lx	472 lx	265 lx	170 lx																			
*measured at center of beam																								
Footcandles*	394,5 fcd	98,6 fcd	43,8 fcd	24,7 fcd	15,8 fcd																			
Beam width (meter)	0,4 m	0,8 m	1,2 m	1,6 m	2 m																			
Beam width (Feet)	1,3 ft	2,6 ft	3,9 ft	5,1 ft	6,4 ft																			
Beam intensities																								
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m					
4246lx	1062lx	472lx	265lx	170lx	118lx	87lx	66lx	52lx	42lx	35lx	29lx	25lx	22lx	19lx	17lx	15lx	13lx	12lx	11lx					
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					
394,5fcd	98,6fcd	43,8fcd	24,7fcd	15,8fcd	11fcd	8,1fcd	6,2fcd	4,9fcd	3,9fcd	3,3fcd	2,7fcd	2,3fcd	2fcd	1,8fcd	1,5fcd	1,4fcd	1,2fcd	1,1fcd	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°					
4246	4127	3824	3397	2905	2402	1925	1515	1184	937	753	623	527	459	410	369	332	289	235	177					
100%	97%	90%	80%	68%	57%	45%	36%	28%	22%	18%	15%	12%	11%	10%	9%	8%	7%	6%	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°					
4246	4142	3834	3398	2890	2378	1892	1483	1150	905	725	599	506	442	395	355	318	274	218	161					
100%	98%	90%	80%	68%	56%	45%	35%	27%	21%	17%	14%	12%	10%	9%	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°					
4246	4139	3839	3410	2919	2405	1923	1503	1171	919	738	608	514	449	400	360	321	279	226	166					
100%	97%	90%	80%	69%	57%	45%	35%	28%	22%	17%	14%	12%	11%	9%	8%	8%	7%	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°					
4246	4120	3805	3364	2870	2366	1900	1496	1172	928	751	622	529	462	411	373	335	293	239	180					
100%	97%	90%	79%	68%	56%	45%	35%	28%	22%	18%	15%	12%	11%	10%	9%	8%	7%	6%	4%					
Beam angle 50%					Field angle 10%					Cutoff angle 2,5%					Intensity ratio in 120° cone					Intensity ratio in 90° cone				
22,1°					54,2°					80,8°					99,2%					97,8%				



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 info@cls-led.com
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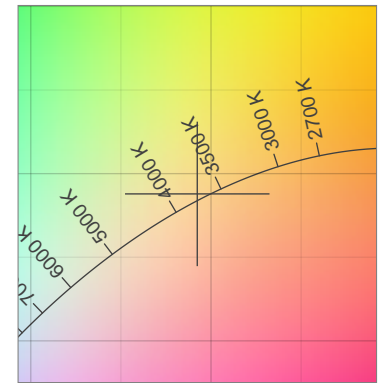
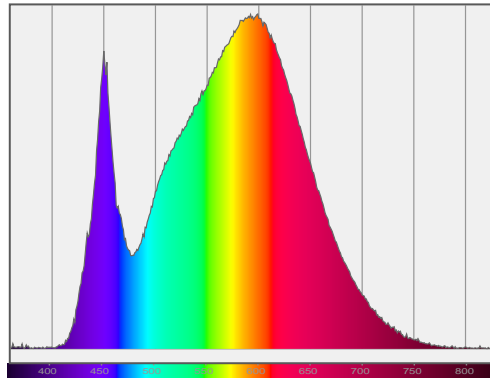
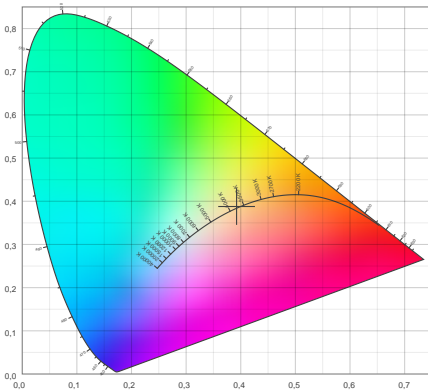
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Color details



CIE 1931

x: 0,392



Spectra

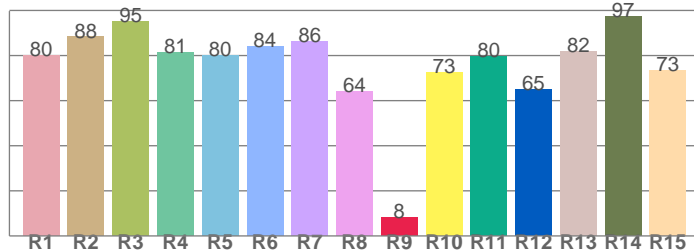
CIE 1931 ZOOM

3781 K

y: 0,388

Δuv : 0,0018

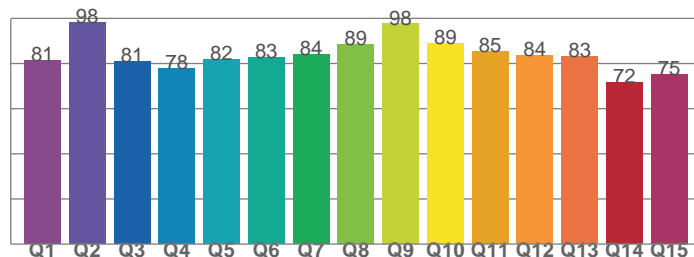
CRI: 82,4 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
80,0	88,3	95,0	81,4	80,1	84,1	86,3	64,2
R9	R10	R11	R12	R13	R14	R15	
8,4	72,6	79,7	65,1	81,8	97,3	73,3	

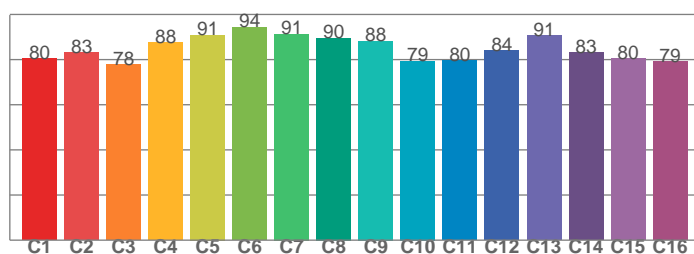
CQS: 82,6



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
81,2	98,3	81,0	77,9	81,7	82,8	84,2	88,6
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,6	88,8	85,2	83,7	83,0	71,7	75,1	

TM30: 84,8



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

C1	C2	C3	C4	C5	C6	C7	C8
80,5	83,1	77,7	87,6	90,9	94,3	91,4	89,6
C9	C10	C11	C12	C13	C14	C15	
88,2	79,4	79,6	84,0	90,5	83,0	80,4	

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
3781 K	82,4	8,4	84,8	95,6	82,6	0,392	0,388	0,228	0,339	0,0018



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TM30 details

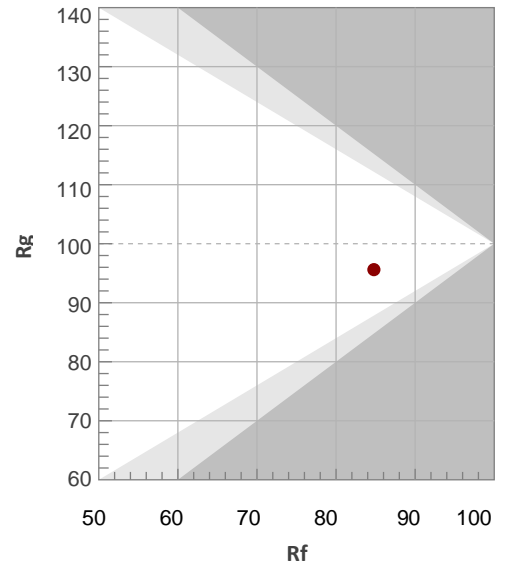
Rf 84,8

Fidelity index Rf

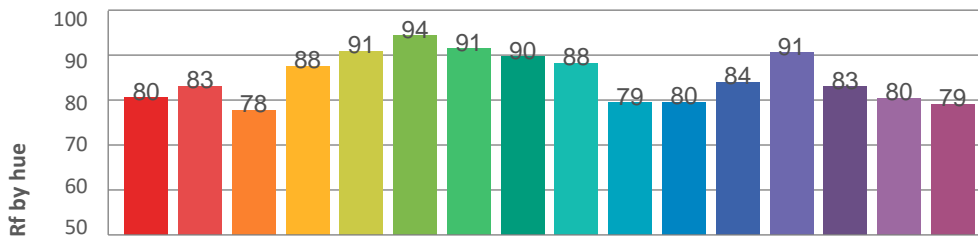
Rg 95,6

Gamut index Rg

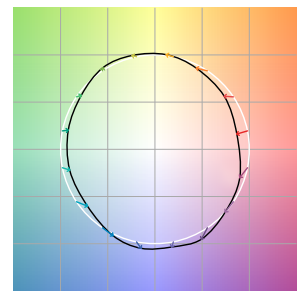
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-12%	-1%
2	83	-8%	6%
3	78	-4%	11%
4	88	1%	8%
5	91	2%	4%
6	94	3%	-2%
7	91	-3%	-4%
8	90	-6%	-2%
9	88	-7%	4%
10	79	-7%	10%
11	80	1%	14%
12	84	6%	6%
13	91	5%	-3%
14	83	7%	-12%
15	80	-1%	-14%
16	79	-6%	-12%



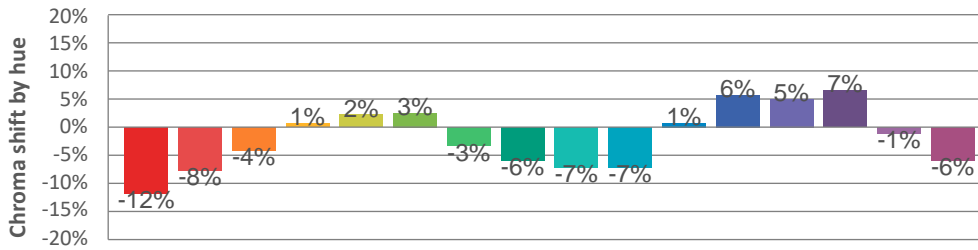
Hue binH



Color vector graphics



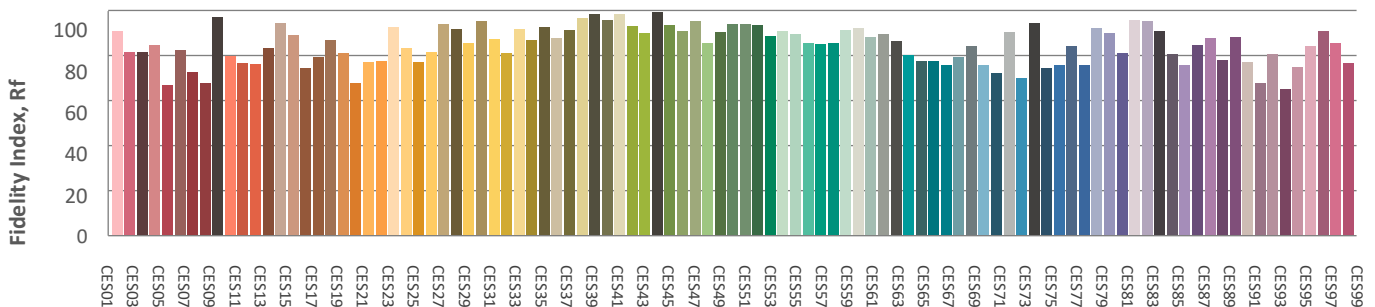
Hue bin



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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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 1111lm total luminous flux



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