

LM-79

Test Report

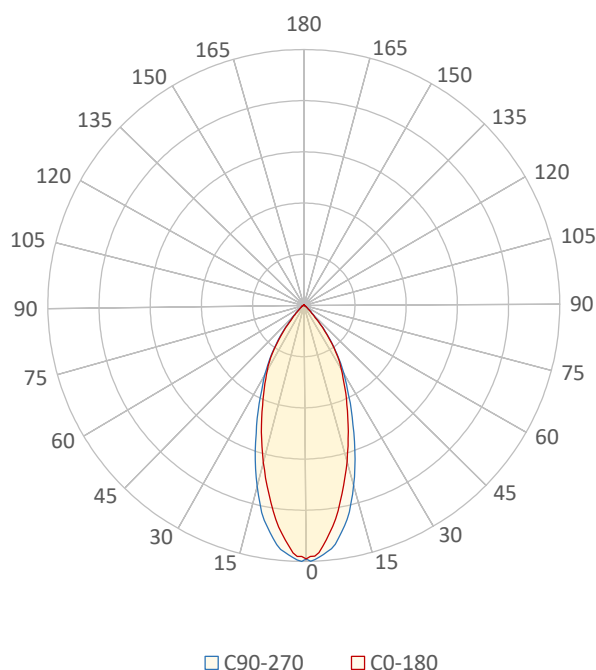
LM79-JADE-COLOUR-FLOW-MEDIUM [white leds on]

General Discription

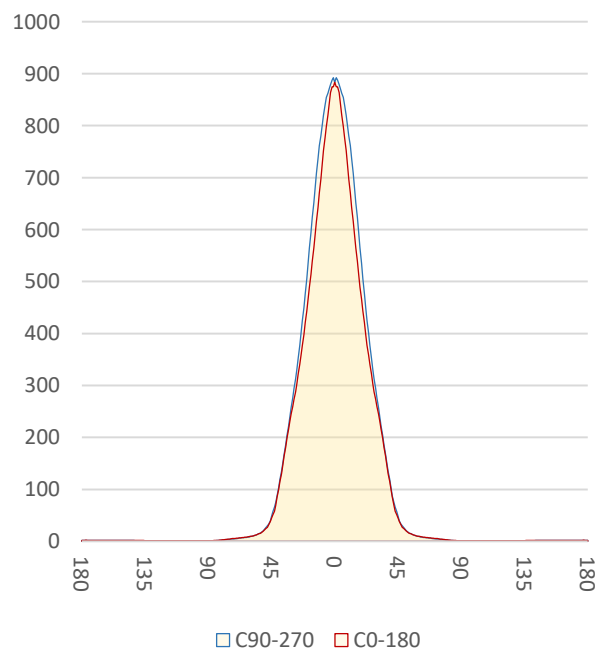
Item number	J-SXX-1-C-C470-2
Date and time	30-11-2018 15:58:59
CCT (Kelvin)	3815 K
Beam angle	44,3°
Luminous flux	593 lm
Efficiency	99 lm/watt
Weighted energy	6,0 kWh/1000h
Power factor	1,0
CRI (RA)	83,6
Fidelity index Rf	Rf 83,7
Gammut index Rg	Rg 97,0
Peak	892 cd



Polar diagram



Cartesian diagram



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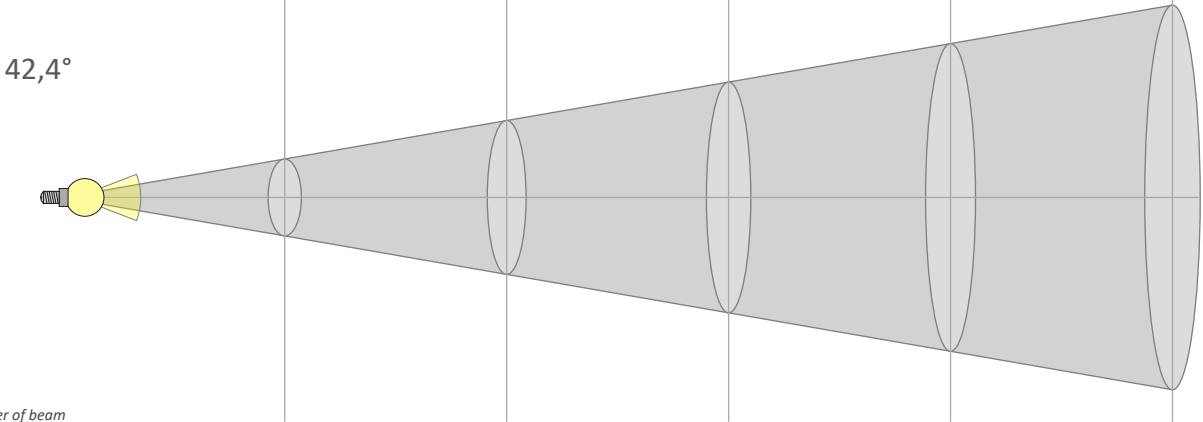
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Beam details	1m	2m	3m	4m	5m
Lux*	884 lx	221 lx	98 lx	55 lx	35 lx



42,4°

*measured at center of beam

Footcandles*	82,1 fcd	20,5 fcd	9,1 fcd	5,1 fcd	3,3 fcd
Beam width (meter)	0,8 m	1,6 m	2,3 m	3,1 m	3,9 m
Beam width (Feet)	2,5 ft	5,1 ft	7,6 ft	10,2 ft	12,7 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
884lx	221lx	98lx	55lx	35lx	25lx	18lx	14lx	11lx	9lx	7lx	6lx	5lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx
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
82,1fcd	20,5fcd	9,1fcd	5,1fcd	3,3fcd	2,3fcd	1,7fcd	1,3fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd

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°
884	875	842	799	752	697	642	590	539	489	443	398	359	322	287	259	231	198	164	130
100%	99%	95%	90%	85%	79%	73%	67%	61%	55%	50%	45%	41%	36%	33%	29%	26%	22%	19%	15%

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°
884	887	871	854	820	781	737	680	623	565	506	449	401	352	313	276	239	204	168	135
100%	100%	99%	97%	93%	88%	83%	77%	71%	64%	57%	51%	45%	40%	35%	31%	27%	23%	19%	15%

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°
884	875	842	799	752	697	642	590	539	489	443	398	359	322	287	259	231	198	164	130
100%	99%	95%	90%	85%	79%	73%	67%	61%	55%	50%	45%	41%	36%	33%	29%	26%	22%	19%	15%

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°
884	887	871	854	820	781	737	680	623	565	506	449	401	352	313	276	239	204	168	135
100%	100%	99%	97%	93%	88%	83%	77%	71%	64%	57%	51%	45%	40%	35%	31%	27%	23%	19%	15%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
42,4°	81,7°	100,4°	96,5%	92,5%



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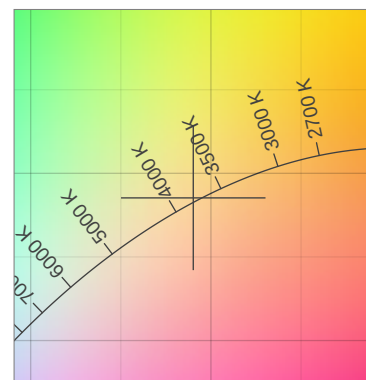
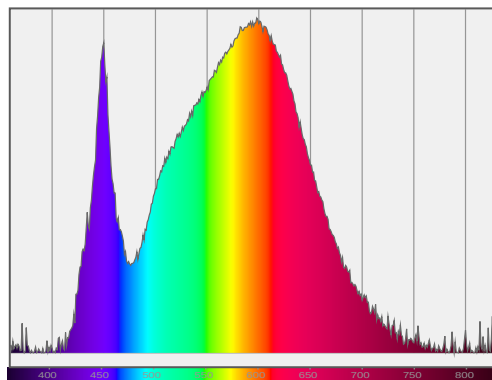
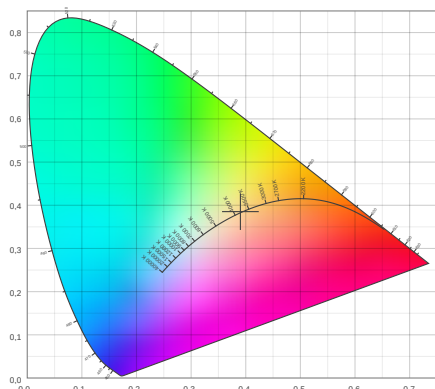
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Color details



CIE 1931

x: 0,390

3815 K

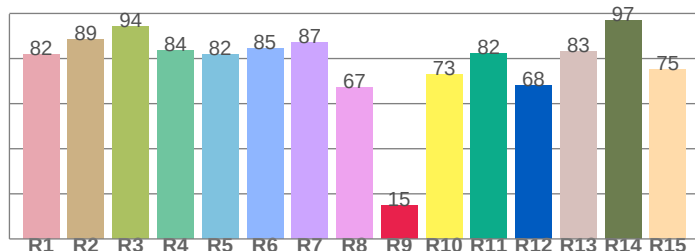
y: 0,385

Spectra

CIE 1931 ZOOM

Δuv : 0,0012

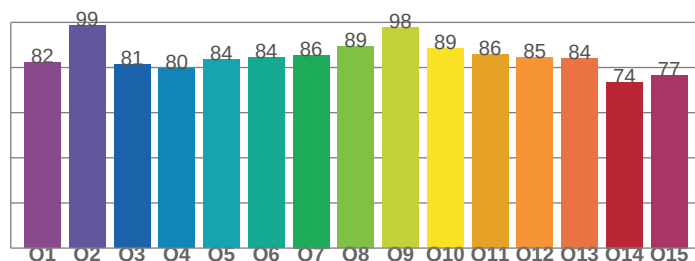
CRI: 83,6 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
81,7	88,5	94,3	83,5	81,8	84,7	87,2	67,0
R9	R10	R11	R12	R13	R14	R15	
14,8	73,1	82,5	67,9	83,0	96,7	75,3	

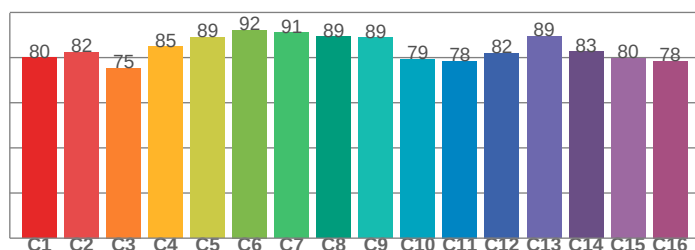
CQS: 83,7



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
82,2	98,6	81,4	79,7	83,6	84,3	85,5	89,5
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,6	88,5	85,7	84,5	84,2	73,6	76,6	

TM30: 83,7



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

C1	C2	C3	C4	C5	C6	C7	C8
80,0	82,4	75,4	85,0	89,0	92,2	91,2	89,4
C9	C10	C11	C12	C13	C14	C15	
88,8	79,4	78,5	82,0	89,5	82,6	79,7	

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
3815 K	83,6	14,8	83,7	97,0	83,7	0,390	0,385	0,228	0,338	0,0012



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TM30 details

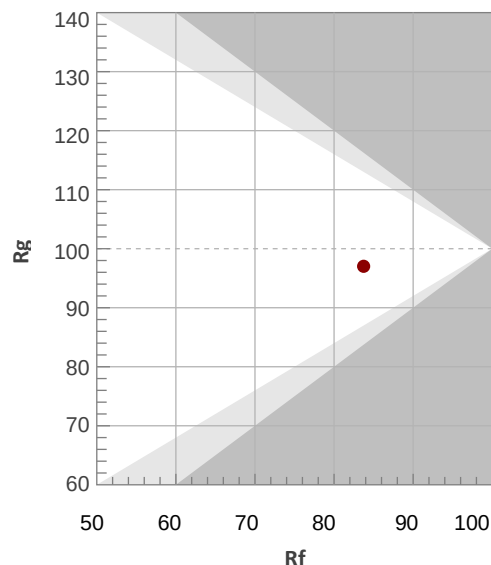
Rf 83,7

Fidelity index Rf

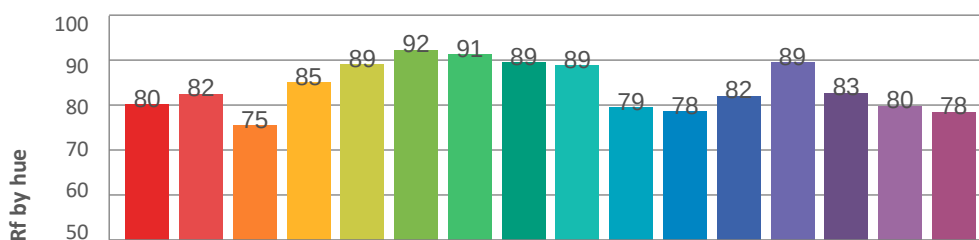
Rg 97,0

Gamut index Rg

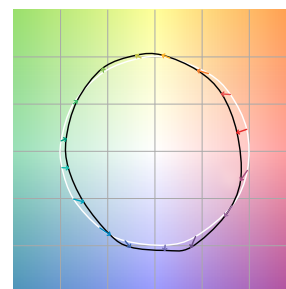
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	80	-11%	-1%
2	82	-7%	6%
3	75	-4%	11%
4	85	2%	8%
5	89	4%	5%
6	92	4%	-2%
7	91	-2%	-5%
8	89	-5%	-3%
9	89	-7%	2%
10	79	-7%	8%
11	78	0%	13%
12	82	5%	7%
13	89	5%	-2%
14	83	7%	-10%
15	80	0%	-13%
16	78	-5%	-11%



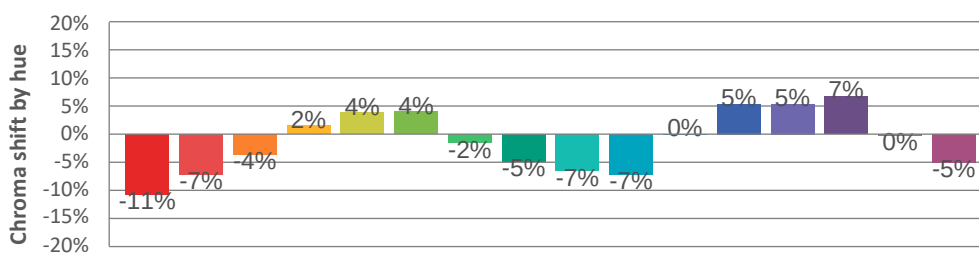
Hue binH



Color vector graphics



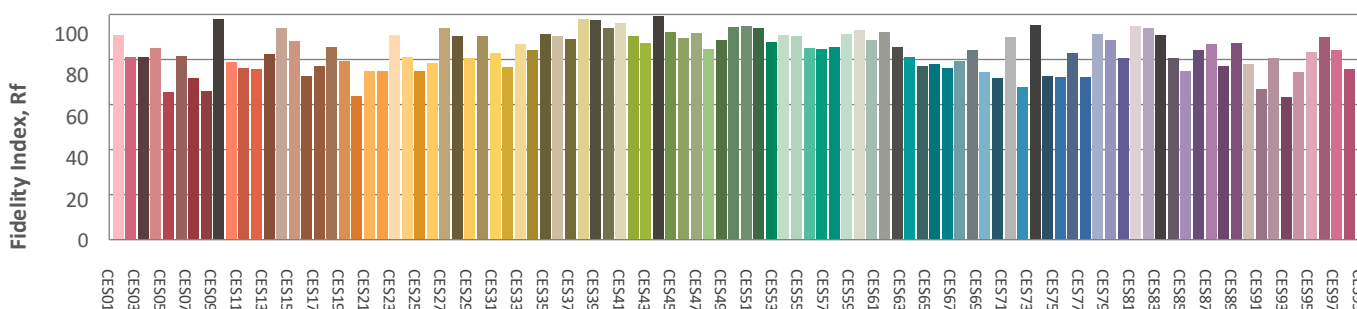
Hue bin



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	17,9	18,7	18,2	18,9	19,1	18,1	18,8	18,4	19,0	19,3
	3H	18,0	18,7	18,3	19,0	19,2	18,1	18,8	18,4	19,1	19,3
	4H	18,1	18,7	18,4	19,0	19,3	18,2	18,8	18,5	19,1	19,4
	6H	18,2	18,8	18,5	19,1	19,4	18,2	18,8	18,6	19,1	19,4
	8H	18,2	18,8	18,6	19,1	19,4	18,2	18,8	18,6	19,1	19,4
	12H	18,2	18,8	18,6	19,1	19,4	18,2	18,8	18,6	19,1	19,4
4H	2H	17,8	18,5	18,2	18,8	19,0	18,0	18,6	18,3	18,9	19,2
	3H	18,0	18,6	18,4	18,9	19,2	18,1	18,6	18,5	19,0	19,3
	4H	18,2	18,6	18,6	19,0	19,4	18,2	18,7	18,6	19,0	19,4
	6H	18,3	18,7	18,8	19,1	19,5	18,3	18,7	18,8	19,1	19,5
	8H	18,4	18,8	18,8	19,2	19,6	18,4	18,7	18,8	19,1	19,6
	12H	18,5	18,8	18,9	19,2	19,7	18,4	18,7	18,9	19,2	19,6
8H	4H	18,2	18,5	18,6	18,9	19,4	18,2	18,6	18,7	19,0	19,4
	6H	18,4	18,7	18,9	19,1	19,6	18,4	18,7	18,9	19,1	19,6
	8H	18,5	18,7	19,0	19,2	19,7	18,5	18,7	19,0	19,2	19,7
	12H	18,6	18,8	19,2	19,3	19,8	18,6	18,8	19,1	19,2	19,8
12H	4H	18,2	18,5	18,6	18,9	19,3	18,2	18,5	18,7	18,9	19,4
	6H	18,4	18,6	18,9	19,1	19,6	18,4	18,6	18,9	19,1	19,6
	8H	18,5	18,7	19,0	19,2	19,7	18,5	18,7	19,0	19,2	19,7
Variation of the observer position for the luminaire distance S											
S = 1,0H		+2,8 / -2,9					+3,0 / -3,2				
S = 1,5H		+5,2 / -3,4					+5,4 / -3,8				
S = 2,0H		+7,1 / -3,7					+7,4 / -4,2				
Standard table		BK01					BK01				
Correction summand		0,4					0,4				
Corrected glare indices referring to 593lm total luminous flux											



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