

LM-79

Test Report

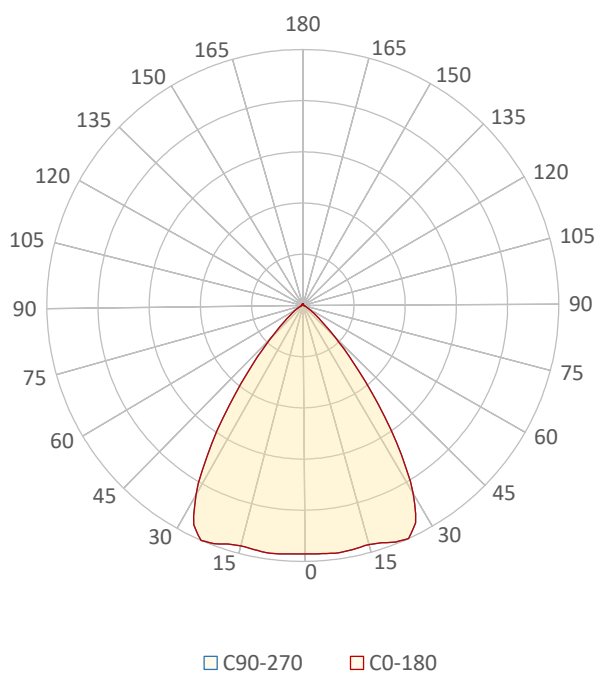
LM79-REVO-MICRO-BASIC-3000K-CRI80-66DEG

General Discription

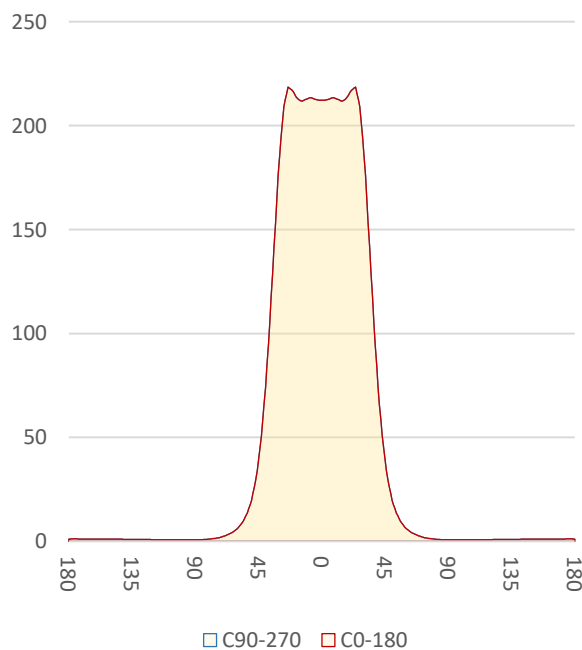
Item number	RM-2-X-03-4
Date and time	12-11-2018 13:16:34
CCT (Kelvin)	2904 K
Beam angle	73,3°
Luminous flux	312 lm
Efficiency	59 lm/watt
Weighted energy	5,3 kWh/1000h
Power factor	0,48
CRI (RA)	84,5
Fidelity index Rf	Rf 83,8
Gammut index Rg	Rg 98,6
Peak	219 cd



Polar diagram



Cartesian diagram



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info@cls-led.com
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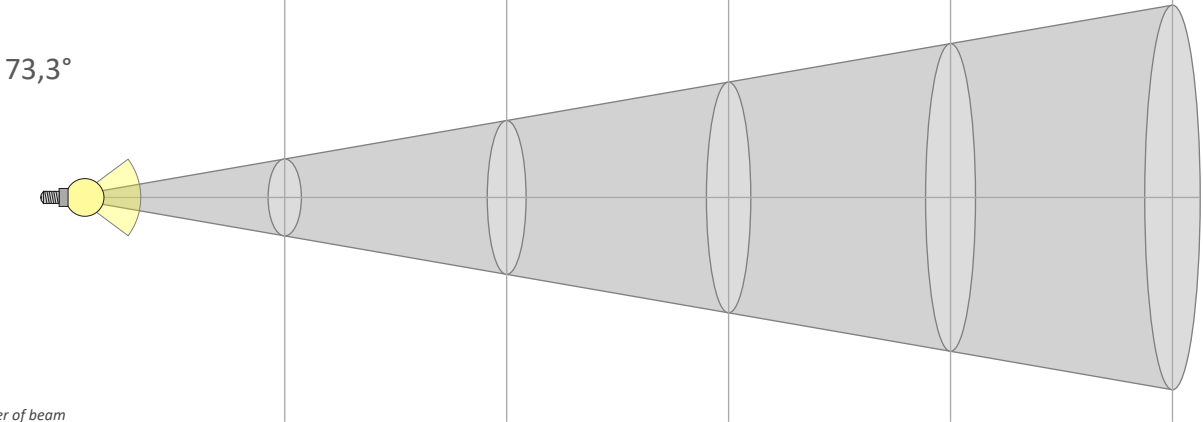
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Beam details	1m	2m	3m	4m	5m
Lux*	212 lx	53 lx	24 lx	13 lx	8 lx



*measured at center of beam

Footcandles*	19,7 fcd	4,9 fcd	2,2 fcd	1,2 fcd	0,8 fcd
Beam width (meter)	1,5 m	3 m	4,5 m	6 m	7,4 m
Beam width (Feet)	4,9 ft	9,8 ft	14,7 ft	19,5 ft	24,4 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
212lx	53lx	24lx	13lx	8lx	6lx	4lx	3lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
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
19,7fcd	4,9fcd	2,2fcd	1,2fcd	0,8fcd	0,5fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd

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°
212	212	213	213	213	213	212	212	212	214	216	217	219	212	202	186	165	141	117	95
100%	100%	100%	100%	101%	100%	100%	100%	100%	101%	102%	102%	103%	100%	95%	88%	78%	67%	55%	45%

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°
212	212	213	213	213	213	212	212	212	214	216	217	219	212	202	186	165	141	117	95
100%	100%	100%	100%	101%	100%	100%	100%	100%	101%	102%	102%	103%	100%	95%	88%	78%	67%	55%	45%

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°
212	212	213	213	213	213	212	212	212	214	216	217	219	212	202	186	165	141	117	95
100%	100%	100%	100%	101%	100%	100%	100%	100%	101%	102%	102%	103%	100%	95%	88%	78%	67%	55%	45%

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°
212	212	213	213	213	213	212	212	212	214	216	217	219	212	202	186	165	141	117	95
100%	100%	100%	100%	101%	100%	100%	100%	100%	101%	102%	102%	103%	100%	95%	88%	78%	67%	55%	45%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
73,3°	98,7°	122,6°	96,2%	89,4%



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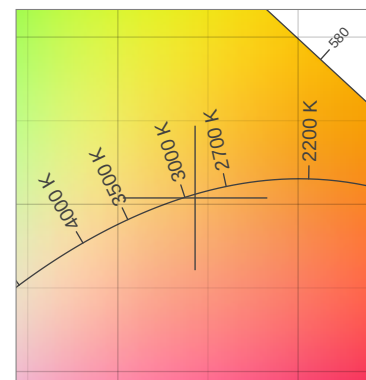
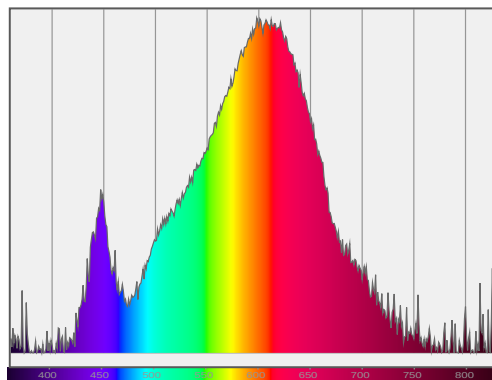
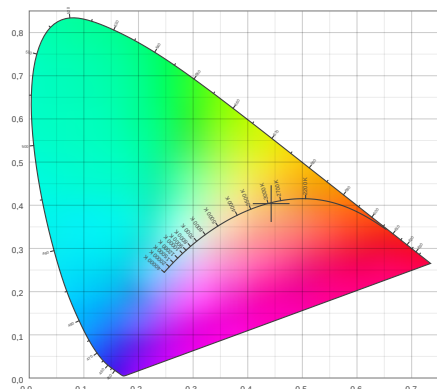
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Color details



CIE 1931

x: 0,443

2904 K

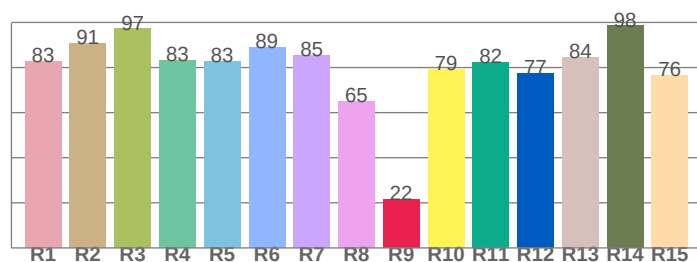
y: 0,404

Spectra

CIE 1931 ZOOM

Δuv : -0,0009

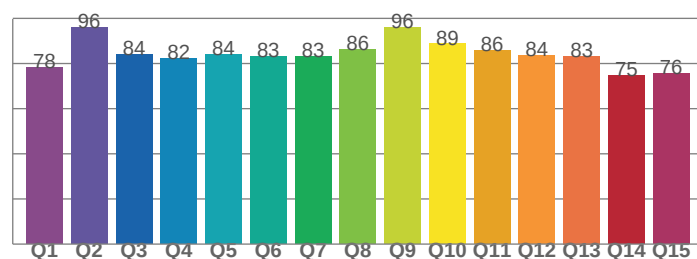
CRI: 84,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
82,7	90,9	97,1	83,2	82,8	88,9	85,2	65,1
R9	R10	R11	R12	R13	R14	R15	
21,5	79,4	82,5	77,5	84,3	98,5	76,5	

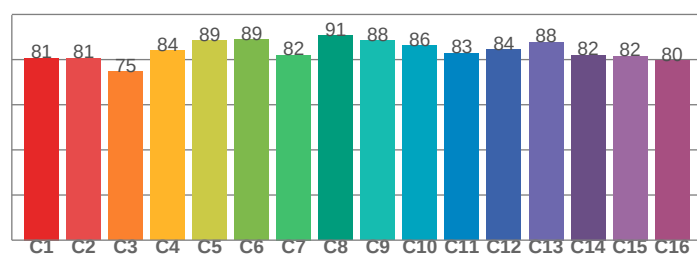
CQS: 83,2



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
78,3	96,0	84,0	82,4	84,0	83,1	83,1	86,2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
95,9	88,7	85,7	83,6	83,4	74,8	75,7	

TM30: 83,8



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

C1	C2	C3	C4	C5	C6	C7	C8
80,7	80,6	74,7	84,0	88,5	88,8	82,0	90,7
C9	C10	C11	C12	C13	C14	C15	
88,4	86,2	82,8	84,4	87,8	82,0	81,5	

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
2904 K	84,5	21,5	83,8	98,6	83,2	0,443	0,404	0,255	0,348	-0,0009



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info@cls-led.com
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TM30 details

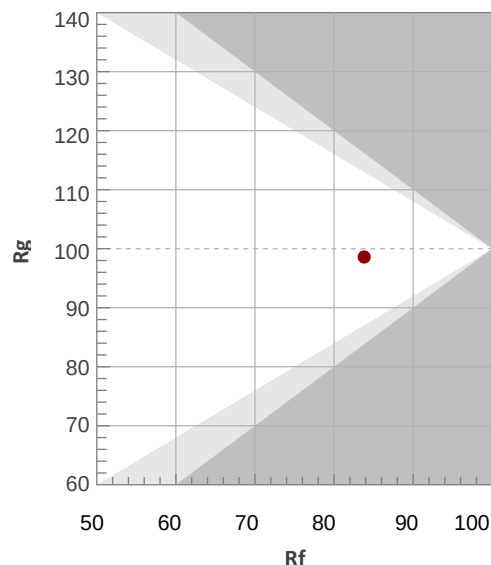
Rf 83,8

Fidelity index Rf

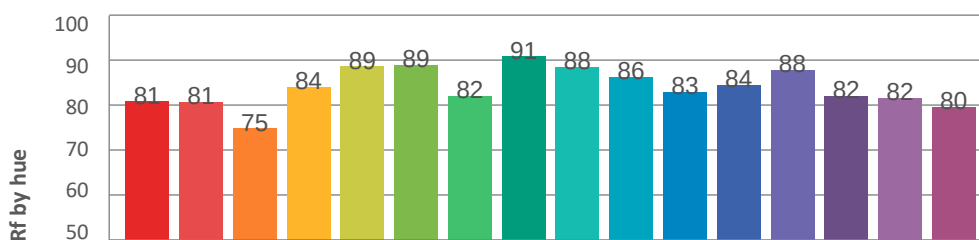
Rg 98,6

Gamut index Rg

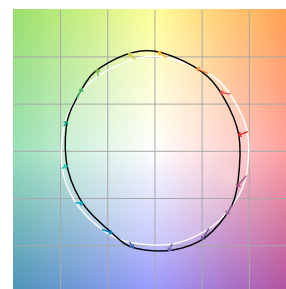
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	81	-10%	-2%
2	81	-7%	7%
3	75	-2%	12%
4	84	4%	9%
5	89	7%	5%
6	89	6%	-3%
7	82	1%	-10%
8	91	-2%	-4%
9	88	-6%	-2%
10	86	-6%	4%
11	83	-3%	10%
12	84	5%	4%
13	88	6%	-5%
14	82	5%	-12%
15	82	0%	-10%
16	80	-7%	-13%



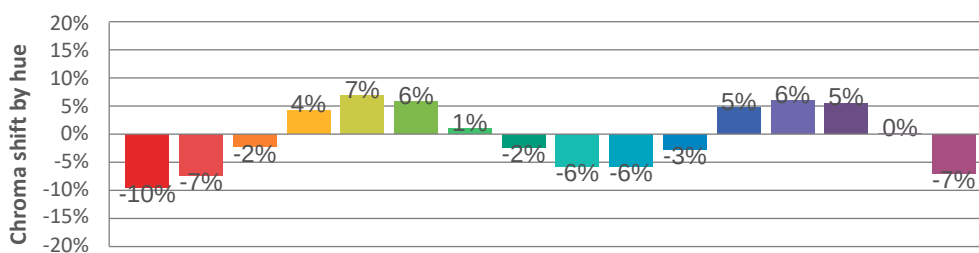
Hue binH



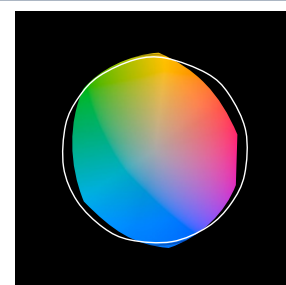
Color vector graphics



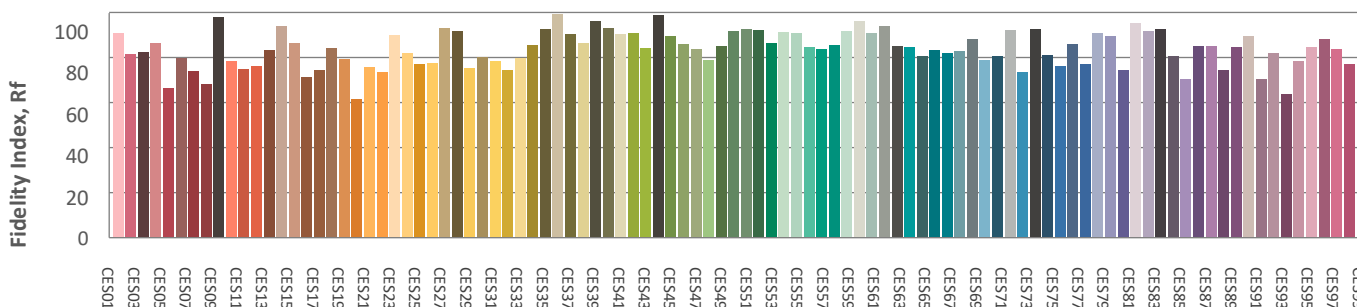
Hue bin



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	16,4	17,1	16,6	17,4	17,6	16,4	17,1	16,6	17,4	17,6
	3H	16,3	17,0	16,6	17,3	17,5	16,3	17,0	16,6	17,3	17,5
	4H	16,3	16,9	16,6	17,2	17,5	16,3	16,9	16,6	17,2	17,5
	6H	16,2	16,8	16,6	17,1	17,5	16,2	16,8	16,6	17,1	17,5
	8H	16,2	16,8	16,6	17,1	17,5	16,2	16,8	16,6	17,1	17,5
	12H	16,2	16,8	16,6	17,1	17,4	16,2	16,8	16,6	17,1	17,4
4H	2H	16,2	16,9	16,6	17,2	17,5	16,2	16,9	16,6	17,2	17,5
	3H	16,2	16,7	16,6	17,1	17,4	16,2	16,7	16,6	17,1	17,4
	4H	16,2	16,7	16,6	17,0	17,4	16,2	16,7	16,6	17,0	17,4
	6H	16,2	16,6	16,6	17,0	17,4	16,2	16,6	16,6	17,0	17,4
	8H	16,2	16,5	16,6	16,9	17,4	16,2	16,5	16,6	16,9	17,4
	12H	16,2	16,5	16,6	16,9	17,4	16,2	16,5	16,6	16,9	17,4
8H	4H	16,1	16,5	16,5	16,9	17,3	16,1	16,5	16,5	16,9	17,3
	6H	16,1	16,4	16,6	16,8	17,3	16,1	16,4	16,6	16,8	17,3
	8H	16,1	16,4	16,6	16,8	17,3	16,1	16,4	16,6	16,8	17,3
	12H	16,2	16,4	16,7	16,8	17,4	16,2	16,4	16,7	16,8	17,4
12H	4H	16,1	16,4	16,5	16,8	17,3	16,1	16,4	16,5	16,8	17,3
	6H	16,1	16,3	16,6	16,8	17,3	16,1	16,3	16,6	16,8	17,3
	8H	16,1	16,3	16,6	16,8	17,3	16,1	16,3	16,6	16,8	17,3
Variation of the observer position for the luminaire distance S											
S = 1,0H		+3,2 / -4,4					+3,2 / -4,4				
S = 1,5H		+5,7 / -5,9					+5,7 / -5,9				
S = 2,0H		+7,6 / -6,8					+7,6 / -6,8				
Standard table		BK00					BK00				
Correction summand		-2,0					-2,0				
Corrected glare indices referring to 312lm total luminous flux											



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