

LM-79

Test Report

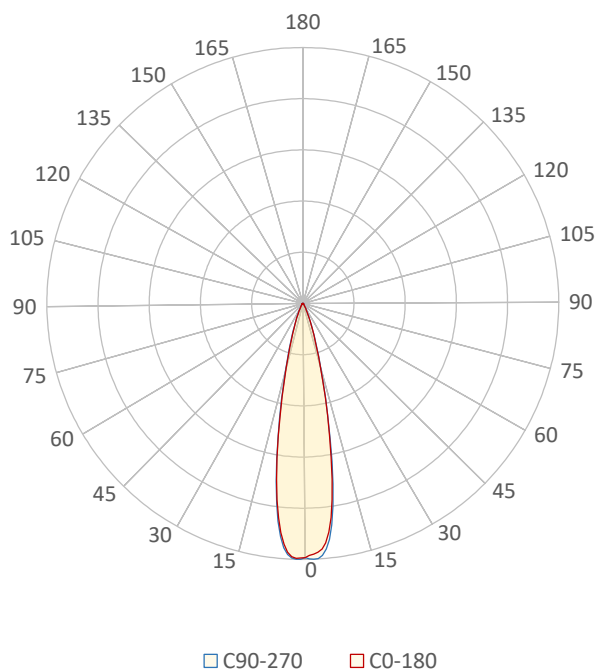
LM79-CLS-KRYPTON-RGBW30-80-SPOT [RGBW]

General Discription

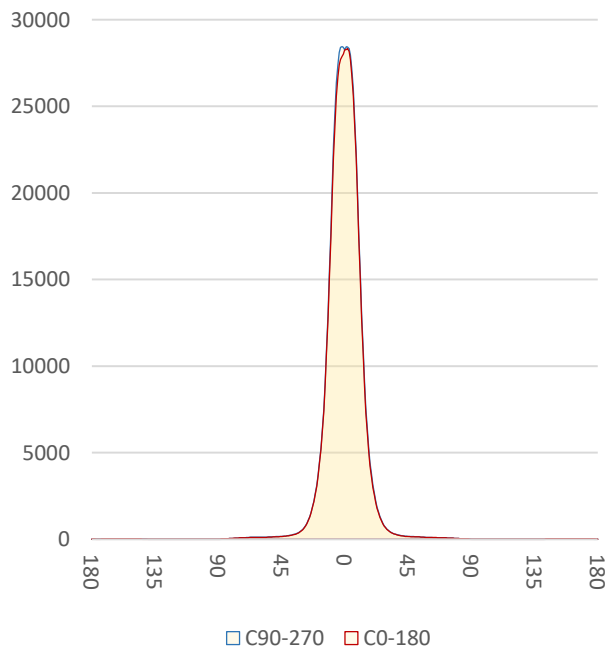
Item number	
Date and time	16-12-2019 16:47:43
CCT (Kelvin)	3775 K
Beam angle	22,9°
Luminous flux	5778 lm
Efficiency	62 lm/watt
Weighted energy	92,6 kWh/1000h
Power factor	0,91
CRI (RA)	74,8
Fidelity index Rf	Rf 80,0
Gammut index Rg	Rg 120,5
Peak	28449 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m
Lux*	28258 lx	7064 lx	3140 lx	1766 lx	1130 lx

22,8°

*measured at center of beam

Footcandles*	2625,2 fcd	656,3 fcd	291,7 fcd	164,1 fcd	105,0 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	4 ft	5,3 ft	6,6 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
28258lx	7064lx	3140lx	1766lx	1130lx	785lx	577lx	442lx	349lx	283lx	234lx	196lx	167lx	144lx	126lx	110lx	98lx	87lx	78lx	71lx
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
2625,2fcd	656,3fcd	291,7fcd	164,1fcd	105fcd	72,9fcd	53,6fcd	41fcd	32,4fcd	26,3fcd	21,7fcd	18,2fcd	15,5fcd	13,4fcd	11,7fcd	10,3fcd	9,1fcd	8,1fcd	7,3fcd	6,6fcd

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°
28,3K	27,9K	27,4K	25,6K	22,1K	17,4K	12,6K	8,9K	6,1K	4,3K	3,1K	2,2K	1,5K	1,1K	0,8K	0,6K	0,4K	0,3K	0,3K	0,2K
100%	99%	97%	91%	78%	62%	45%	31%	22%	15%	11%	8%	5%	4%	3%	2%	1%	1%	1%	1%

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°
28,3K	28,4K	28,1K	26,4K	22,8K	17,8K	13,0K	9,0K	6,3K	4,4K	3,1K	2,2K	1,6K	1,1K	0,8K	0,6K	0,4K	0,3K	0,3K	0,2K
100%	101%	99%	93%	81%	63%	46%	32%	22%	16%	11%	8%	6%	4%	3%	2%	2%	1%	1%	1%

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°
28,3K	28,3K	27,7K	25,6K	22,1K	17,4K	12,6K	8,8K	6,1K	4,2K	3,0K	2,1K	1,5K	1,1K	0,8K	0,6K	0,4K	0,3K	0,3K	0,2K
100%	100%	98%	91%	78%	62%	45%	31%	21%	15%	11%	7%	5%	4%	3%	2%	2%	1%	1%	1%

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°
28,3K	28,4K	28,0K	26,0K	22,4K	17,7K	13,0K	9,1K	6,3K	4,4K	3,1K	2,2K	1,6K	1,1K	0,8K	0,6K	0,4K	0,4K	0,3K	0,2K
100%	101%	99%	92%	79%	63%	46%	32%	22%	16%	11%	8%	6%	4%	3%	2%	2%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
22,8°	40,9°	57,1°	96,0%	92,9%



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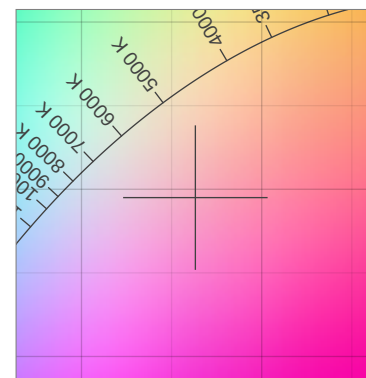
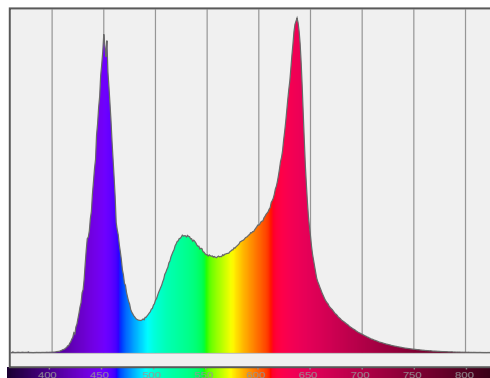
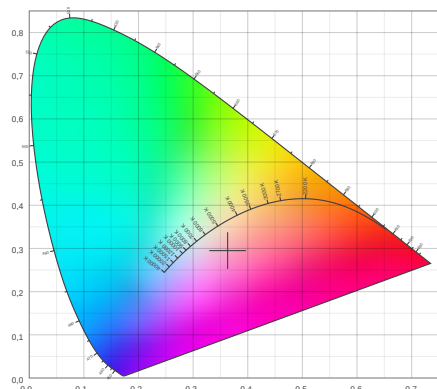
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Color details



CIE 1931

x: 0,363



Spectra

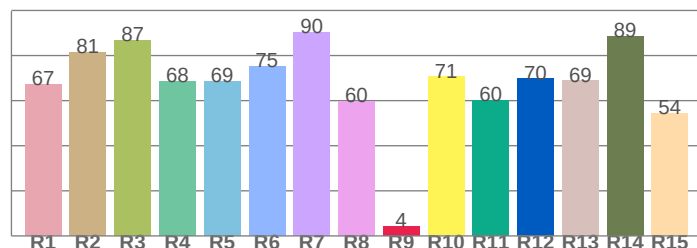
CIE 1931 ZOOM

3775 K

y: 0,295

Δuv : -0,0386

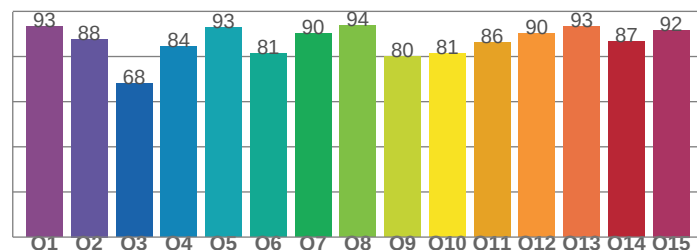
CRI: 74,8 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
67,3	81,5	86,9	68,5	68,7	75,2	90,3	59,9
R9	R10	R11	R12	R13	R14	R15	
4,1	70,6	60,1	69,7	68,7	88,6	54,5	

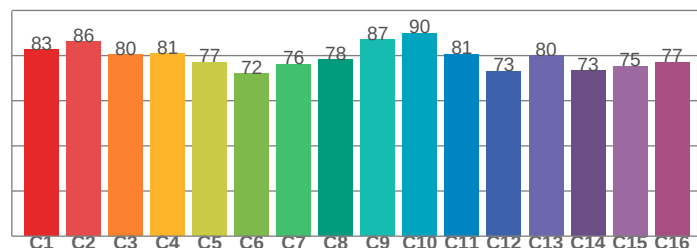
CQS: 85,1



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
93,2	87,8	68,2	84,4	92,9	81,4	90,1	93,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
80,0	81,3	86,1	90,1	93,2	86,7	91,7	

TM30: 80,0



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

C1	C2	C3	C4	C5	C6	C7	C8
82,6	86,1	80,4	80,9	77,1	72,0	76,2	78,4
C9	C10	C11	C12	C13	C14	C15	
87,1	90,0	80,7	73,1	80,0	73,4	75,3	

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
3775 K	74,8	4,1	80,0	120,5	85,1	0,363	0,295	0,250	0,304	-0,0386



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TM30 details

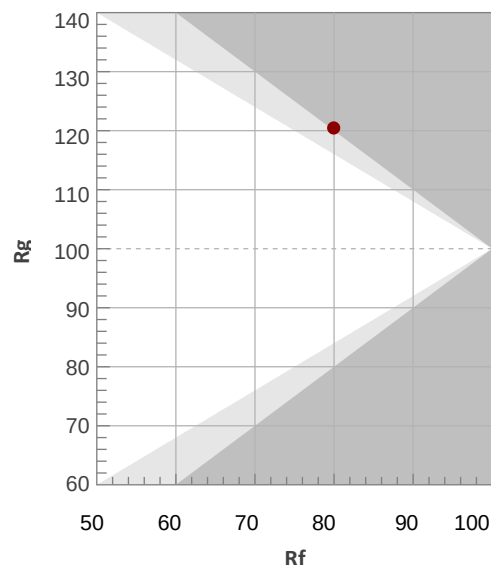
Rf 80,0

Fidelity index R_f

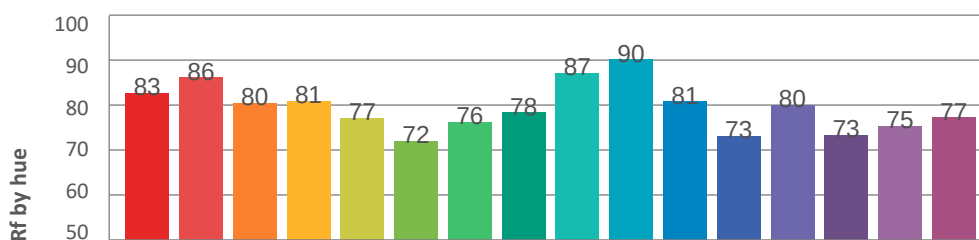
Rg 120,5

Gammut index Rg

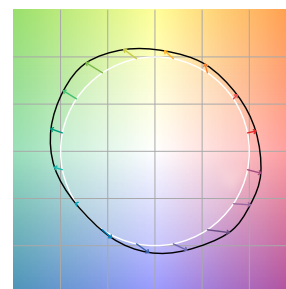
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	83	9%	0%
2	86	6%	1%
3	80	6%	7%
4	81	6%	11%
5	77	12%	11%
6	72	18%	8%
7	76	16%	1%
8	78	13%	-2%
9	87	8%	-4%
10	90	1%	-1%
11	81	2%	12%
12	73	6%	14%
13	80	9%	13%
14	73	15%	17%
15	75	15%	9%
16	77	14%	-1%



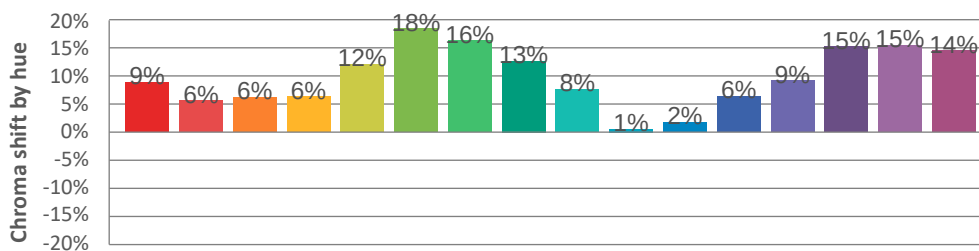
Hue binH



Color vector graphics



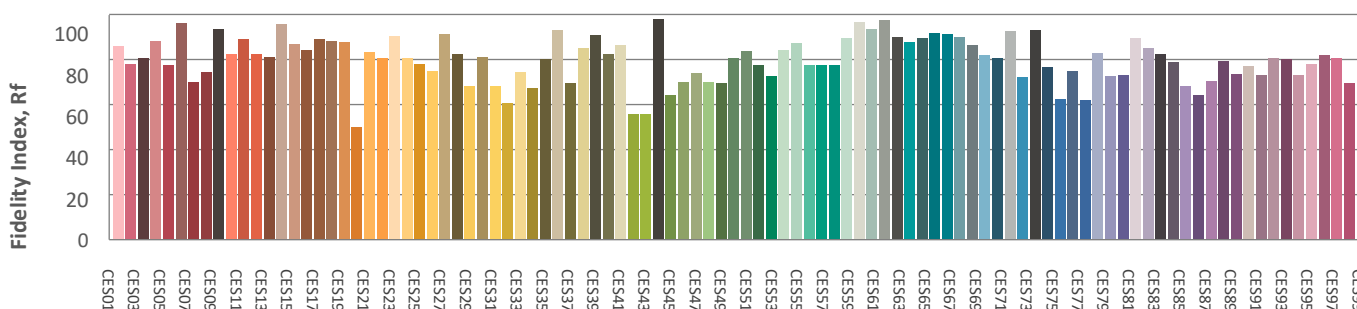
Hue bin



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	4,8	5,5	5,0	5,7	5,9	4,8	5,5	5,0	5,7	5,9
	3H	4,6	5,3	4,9	5,5	5,8	4,6	5,3	4,9	5,5	5,8
	4H	4,6	5,2	4,9	5,4	5,7	4,6	5,2	4,9	5,4	5,7
	6H	4,5	5,1	4,8	5,3	5,6	4,5	5,1	4,8	5,3	5,6
	8H	4,4	5,0	4,8	5,3	5,6	4,4	5,0	4,8	5,3	5,6
	12H	4,4	4,9	4,8	5,2	5,6	4,4	4,9	4,8	5,2	5,6
4H	2H	4,6	5,2	4,9	5,4	5,7	4,6	5,2	4,9	5,4	5,7
	3H	4,4	4,9	4,8	5,2	5,6	4,4	4,9	4,8	5,2	5,6
	4H	4,3	4,8	4,7	5,1	5,5	4,3	4,8	4,7	5,1	5,5
	6H	4,3	4,6	4,7	5,0	5,4	4,3	4,6	4,7	5,0	5,4
	8H	4,2	4,6	4,6	4,9	5,4	4,2	4,6	4,6	4,9	5,4
	12H	4,2	4,5	4,6	4,9	5,3	4,2	4,5	4,6	4,9	5,3
8H	4H	4,2	4,6	4,6	4,9	5,4	4,2	4,6	4,6	4,9	5,4
	6H	4,1	4,4	4,6	4,8	5,3	4,1	4,4	4,6	4,8	5,3
	8H	4,1	4,3	4,6	4,7	5,2	4,1	4,3	4,6	4,7	5,2
	12H	4,0	4,2	4,5	4,7	5,2	4,0	4,2	4,5	4,7	5,2
12H	4H	4,2	4,5	4,6	4,9	5,3	4,2	4,5	4,6	4,9	5,3
	6H	4,1	4,3	4,6	4,7	5,2	4,1	4,3	4,6	4,7	5,2
	8H	4,0	4,2	4,5	4,7	5,2	4,0	4,2	4,5	4,7	5,2
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,0 / 0,0					+0,0 / 0,0				
S = 1,5H		+0,0 / 0,0					+0,0 / 0,0				
S = 2,0H		+0,0 / 0,0					+0,0 / 0,0				
Standard table		BK00					BK00				
Correction summand		-13,9					-13,9				
Corrected glare indices referring to 5778lm total luminous flux											



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