

LM-79

Test Report

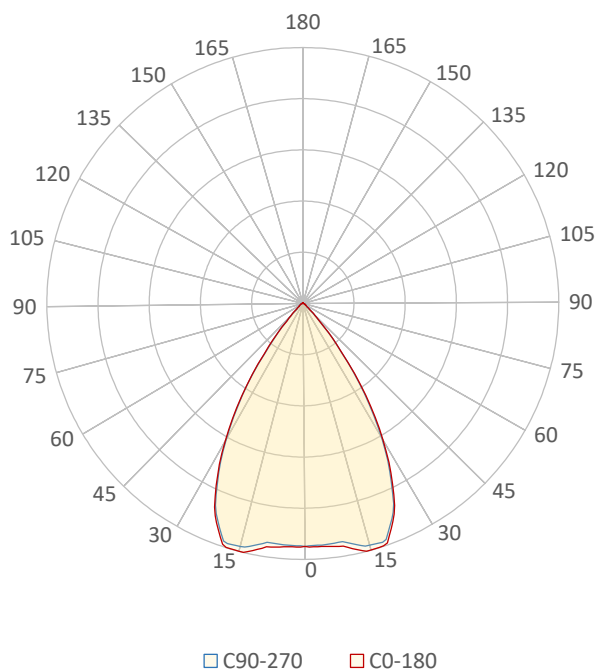
LM79-MIKA-3000K-CRI80-FLOOD

General Discription

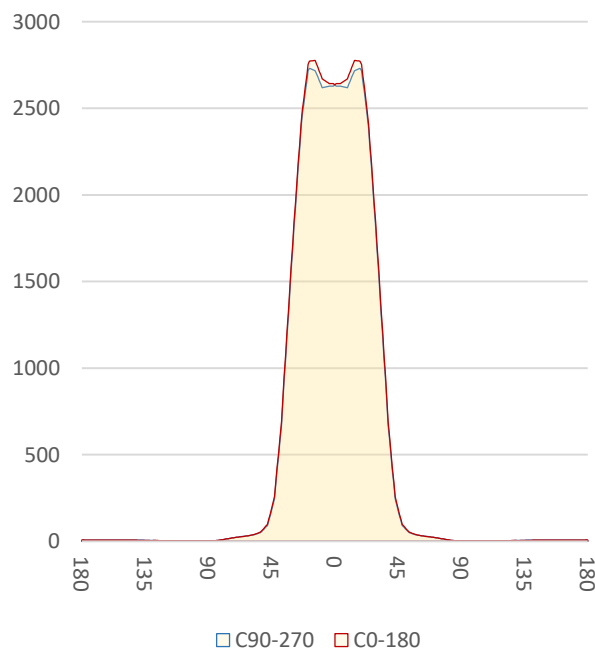
Item number	M-XXX-3-1-3080-3
Date and time	25-11-2016 13:44:07
CCT (Kelvin)	3095 K
Beam angle	65,1°
Luminous flux	2986 lm
Efficiency	105 lm/watt
Weighted energy	28,4 kWh/1000h
Power factor	0,99
CRI (RA)	81,5
Fidelity index Rf	Rf 82,8
Gammut index Rg	Rg 95,8
Peak	2777 cd



Polar diagram



Cartesian diagram



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info@cls-led.com
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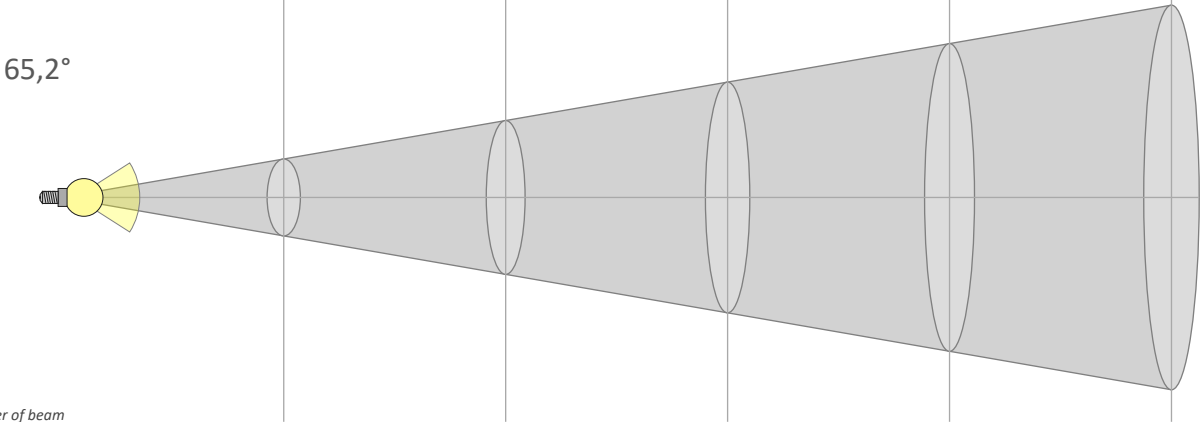
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Beam details		1m	2m	3m	4m	5m
Lux*		2636 lx	659 lx	293 lx	165 lx	105 lx



65,2°

*measured at center of beam

Footcandles*		244,9 fcd	61,2 fcd	27,2 fcd	15,3 fcd	9,8 fcd
Beam width (meter)		1,3 m	2,6 m	3,8 m	5,1 m	6,4 m
Beam width (Feet)		4,2 ft	8,4 ft	12,6 ft	16,8 ft	21 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2636lx	659lx	293lx	165lx	105lx	73lx	54lx	41lx	33lx	26lx	22lx	18lx	16lx	13lx	12lx	10lx	9lx	8lx	7lx	7lx
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
244,9fcd	61,2fcd	27,2fcd	15,3fcd	9,8fcd	6,8fcd	5fcd	3,8fcd	3fcd	2,4fcd	2fcd	1,7fcd	1,4fcd	1,2fcd	1,1fcd	1fcd	0,8fcd	0,8fcd	0,7fcd	0,6fcd

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°
2636	2643	2643	2653	2664	2692	2736	2777	2774	2772	2689	2557	2408	2185	1962	1718	1466	1211	951	691
100%	100%	100%	101%	101%	102%	104%	105%	105%	105%	102%	97%	91%	83%	74%	65%	56%	46%	36%	26%

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°
2636	2628	2628	2624	2620	2639	2679	2717	2724	2731	2653	2528	2383	2158	1933	1688	1436	1182	926	669
100%	100%	100%	100%	99%	100%	102%	103%	103%	104%	101%	96%	90%	82%	73%	64%	54%	45%	35%	25%

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°
2636	2643	2643	2653	2664	2692	2736	2777	2774	2772	2689	2557	2408	2185	1962	1718	1466	1211	951	691
100%	100%	100%	101%	101%	102%	104%	105%	105%	105%	102%	97%	91%	83%	74%	65%	56%	46%	36%	26%

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°
2636	2628	2628	2624	2620	2639	2679	2717	2724	2731	2653	2528	2383	2158	1933	1688	1436	1182	926	669
100%	100%	100%	100%	99%	100%	102%	103%	103%	104%	101%	96%	90%	82%	73%	64%	54%	45%	35%	25%

Beam angle 50%		Field angle 10%		Cutoff angle 2,5%		Intensity ratio in 120° cone		Intensity ratio in 90° cone	
65,2°		85,4°		101,7°		97,5%		94,6%	



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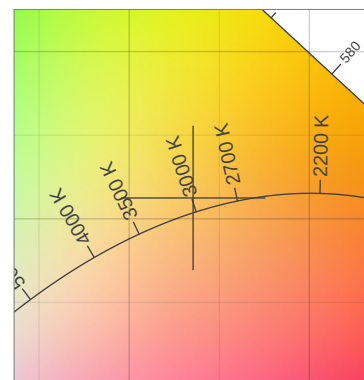
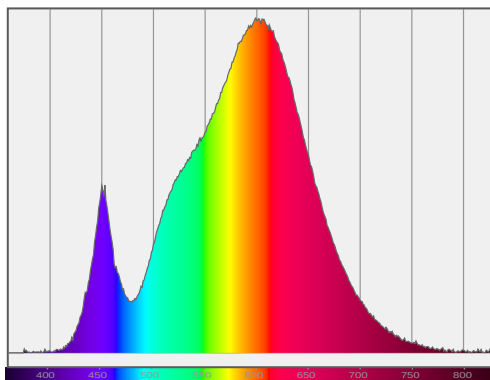
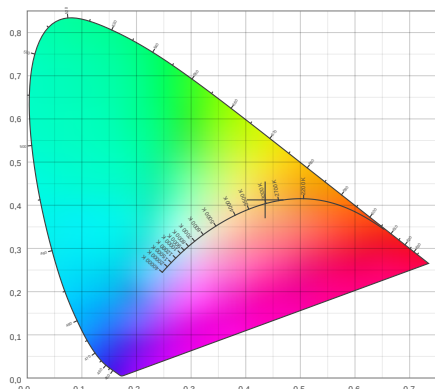
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Color details



CIE 1931

x: 0,435

3095 K

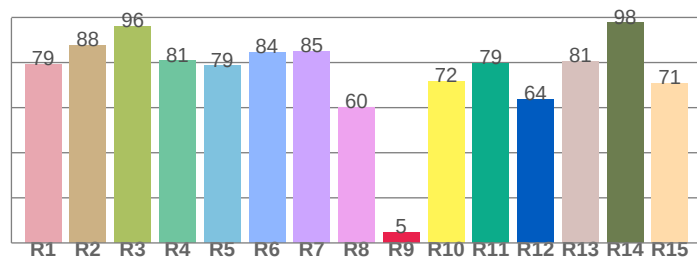
y: 0,412

Spectra

CIE 1931 ZOOM

 $\Delta uv: 0,0035$

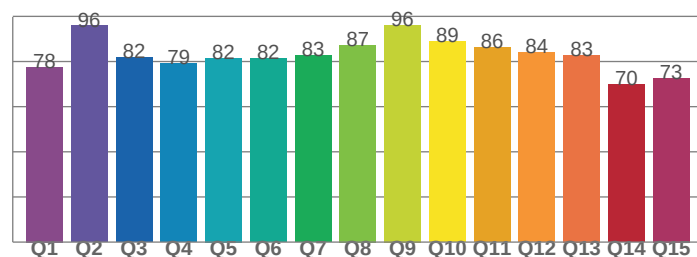
CRI: 81,5 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
79,0	87,6	96,0	80,7	78,5	84,3	85,1	60,2
R9	R10	R11	R12	R13	R14	R15	
4,6	71,8	79,5	63,8	80,7	97,6	70,8	

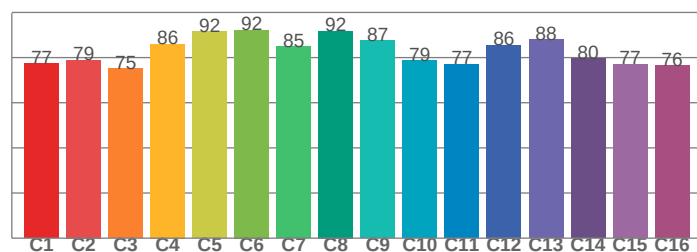
CQS: 81,7



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
77,6	95,8	81,9	79,3	81,6	81,5	82,6	87,3
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
96,2	88,8	86,1	84,1	82,8	69,9	72,7	

TM30: 82,8



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

C1	C2	C3	C4	C5	C6	C7	C8
77,3	78,9	75,1	86,0	91,6	92,3	84,9	91,8
C9	C10	C11	C12	C13	C14	C15	
87,4	78,6	77,1	85,6	88,0	79,7	77,1	

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
3095 K	81,5	4,6	82,8	95,8	81,7	0,435	0,412	0,246	0,350	0,0035

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info@cls-led.com
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TM30 details

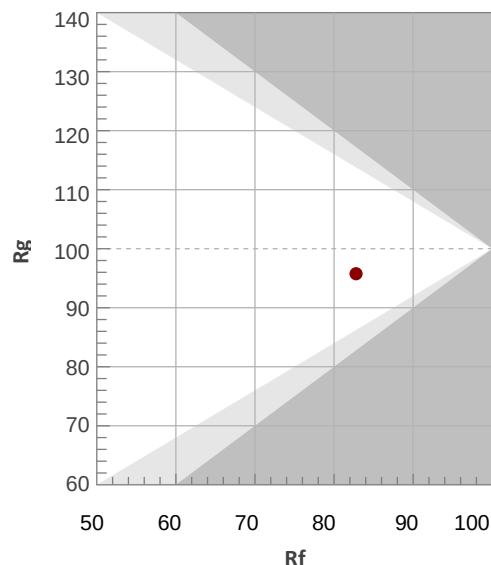
Rf 82,8

Fidelity index Rf

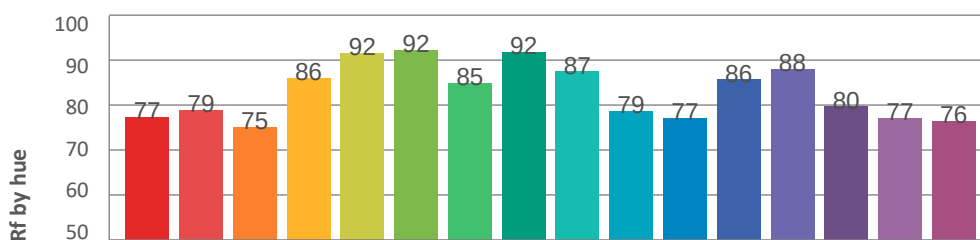
Rg 95,8

Gamut index Rg

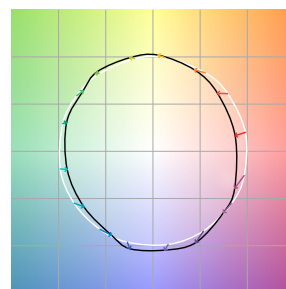
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	77	-11%	-1%
2	79	-9%	6%
3	75	-4%	11%
4	86	1%	8%
5	92	2%	5%
6	92	3%	-2%
7	85	-3%	-8%
8	92	-4%	-2%
9	87	-7%	2%
10	79	-6%	9%
11	77	-2%	14%
12	86	6%	4%
13	88	5%	-5%
14	80	6%	-13%
15	77	-2%	-13%
16	76	-7%	-15%



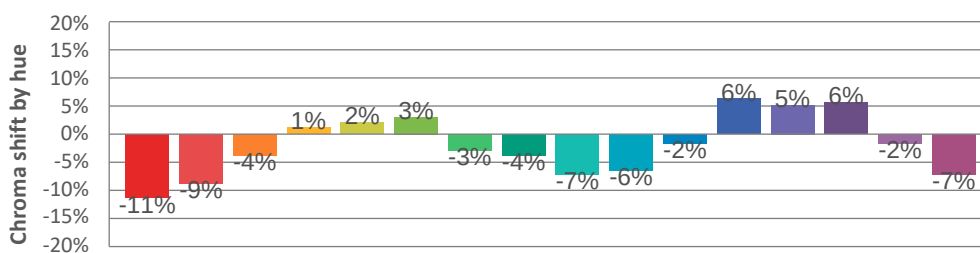
Hue binH



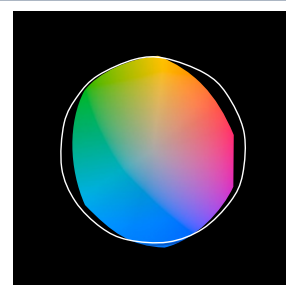
Color vector graphics



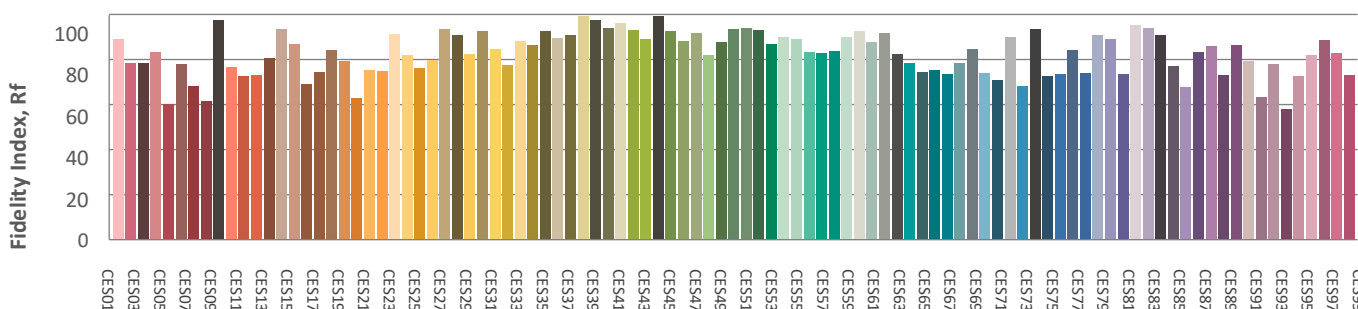
Hue bin



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	24,1	24,8	24,3	25,0	25,2	24,0	24,7	24,2	24,9	25,1
	3H	24,1	24,7	24,4	25,0	25,2	24,0	24,6	24,3	24,9	25,1
	4H	24,1	24,7	24,4	25,0	25,2	24,0	24,6	24,3	24,9	25,1
	6H	24,1	24,6	24,4	24,9	25,2	24,0	24,5	24,3	24,8	25,1
	8H	24,1	24,6	24,4	24,9	25,2	24,0	24,5	24,3	24,8	25,1
	12H	24,0	24,5	24,4	24,9	25,2	23,9	24,4	24,3	24,8	25,1
4H	2H	23,9	24,5	24,2	24,8	25,1	23,8	24,4	24,1	24,7	25,0
	3H	24,0	24,5	24,3	24,8	25,1	23,9	24,4	24,2	24,7	25,0
	4H	24,0	24,5	24,4	24,8	25,2	23,9	24,4	24,3	24,7	25,1
	6H	24,1	24,4	24,5	24,8	25,2	24,0	24,3	24,4	24,7	25,1
	8H	24,1	24,4	24,5	24,8	25,2	24,0	24,3	24,4	24,7	25,1
	12H	24,1	24,3	24,5	24,8	25,2	24,0	24,2	24,4	24,7	25,1
8H	4H	24,0	24,3	24,4	24,7	25,1	23,9	24,2	24,3	24,6	25,0
	6H	24,0	24,3	24,5	24,7	25,2	23,9	24,2	24,4	24,6	25,1
	8H	24,1	24,3	24,5	24,7	25,2	24,0	24,2	24,4	24,6	25,1
	12H	24,1	24,2	24,6	24,7	25,2	24,0	24,1	24,5	24,6	25,1
12H	4H	23,9	24,2	24,4	24,6	25,1	23,9	24,1	24,3	24,6	25,0
	6H	24,0	24,2	24,5	24,7	25,2	23,9	24,1	24,4	24,6	25,1
	8H	24,0	24,2	24,5	24,7	25,2	23,9	24,1	24,4	24,6	25,1
Variation of the observer position for the luminaire distance S											
S = 1,0H		+4,1 / -4,9					+4,1 / -4,9				
S = 1,5H		+6,8 / -5,4					+6,8 / -5,3				
S = 2,0H		+8,8 / -5,7					+8,7 / -5,6				
Standard table		BK01					BK01				
Correction summand		6,1					6,0				
Corrected glare indices referring to 2986lm total luminous flux											