

LM-79

Test Report

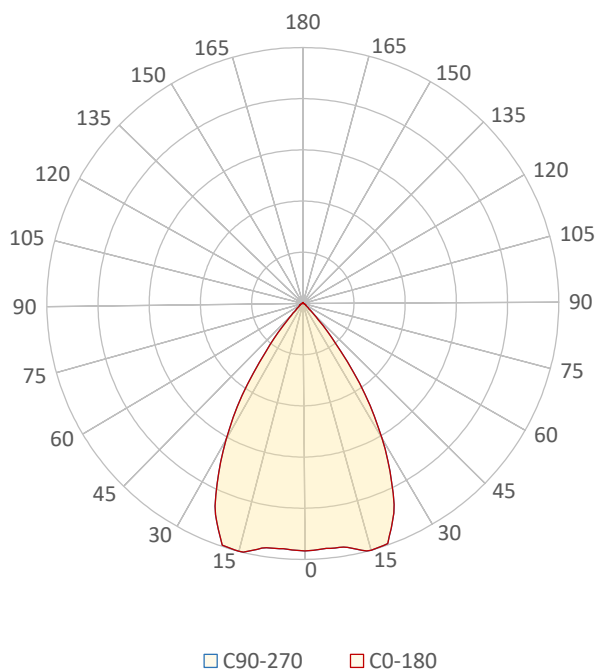
LM79-MIKA-2700K-CRI90-FLOOD

General Discription

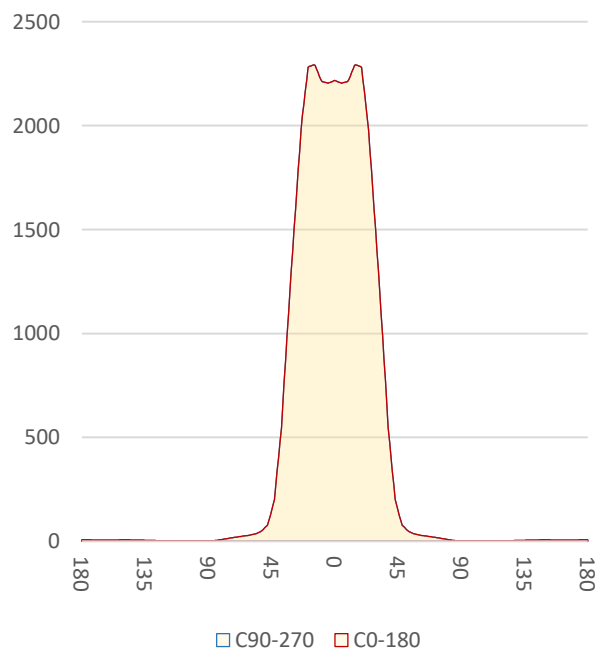
Item number	M-XXX-3-1-2790-3
Date and time	27-1-2017 13:52:31
CCT (Kelvin)	2776 K
Beam angle	65°
Luminous flux	2472 lm
Efficiency	88 lm/watt
Weighted energy	28,0 kWh/1000h
Power factor	0,95
CRI (RA)	93,2
Fidelity index Rf	Rf 91,3
Gammut index Rg	Rg 100,5
Peak	2294 cd



Polar diagram



Cartesian diagram



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Beam details	1m	2m	3m	4m	5m
Lux*	2217 lx	554 lx	246 lx	139 lx	89 lx

65°

*measured at center of beam

Footcandles*	206,0 fcd	51,5 fcd	22,9 fcd	12,9 fcd	8,2 fcd
Beam width (meter)	1,3 m	2,5 m	3,8 m	5,1 m	6,4 m
Beam width (Feet)	4,2 ft	8,4 ft	12,5 ft	16,7 ft	20,9 ft

Beam intensities																			
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
2217lx	554lx	246lx	139lx	89lx	62lx	45lx	35lx	27lx	22lx	18lx	15lx	13lx	11lx	10lx	9lx	8lx	7lx	6lx	6lx
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
206fcd	51,5fcd	22,9fcd	12,9fcd	8,2fcd	5,7fcd	4,2fcd	3,2fcd	2,5fcd	2,1fcd	1,7fcd	1,4fcd	1,2fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd

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°
2217	2212	2206	2206	2210	2221	2256	2290	2290	2285	2222	2105	1977	1787	1598	1398	1196	986	766	547
100%	100%	99%	99%	100%	100%	102%	103%	103%	103%	100%	95%	89%	81%	72%	63%	54%	44%	35%	25%

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°
2217	2212	2206	2206	2210	2221	2256	2290	2290	2285	2222	2105	1977	1787	1598	1398	1196	986	766	547
100%	100%	99%	99%	100%	100%	102%	103%	103%	103%	100%	95%	89%	81%	72%	63%	54%	44%	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°
2217	2212	2206	2206	2210	2221	2256	2290	2290	2285	2222	2105	1977	1787	1598	1398	1196	986	766	547
100%	100%	99%	99%	100%	100%	102%	103%	103%	103%	100%	95%	89%	81%	72%	63%	54%	44%	35%	25%

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°
2217	2212	2206	2206	2210	2221	2256	2290	2290	2285	2222	2105	1977	1787	1598	1398	1196	986	766	547
100%	100%	99%	99%	100%	100%	102%	103%	103%	103%	100%	95%	89%	81%	72%	63%	54%	44%	35%	25%

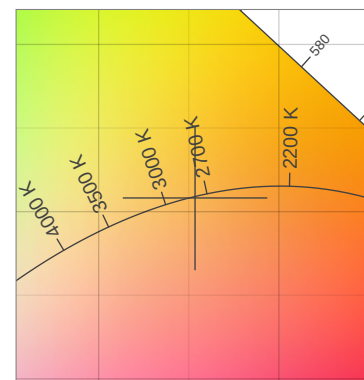
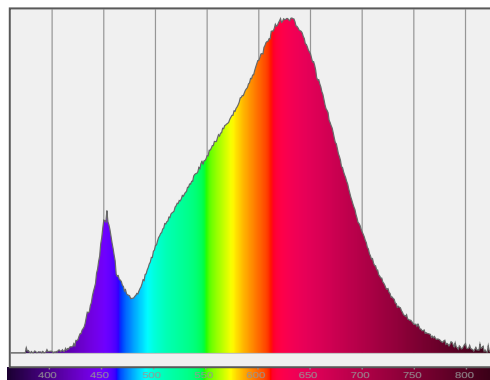
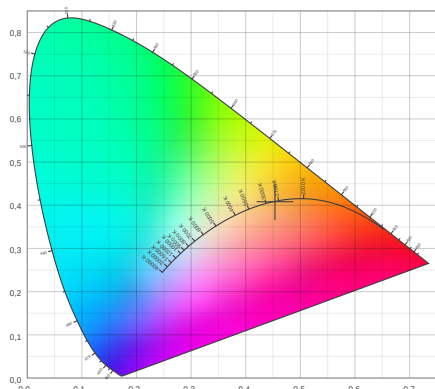
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
65°	85,2°	101,9°	97,3%	94,4%

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Color details



CIE 1931

x: 0,453



Spectra

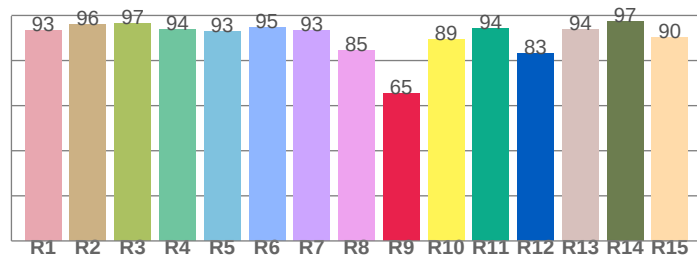
CIE 1931 ZOOM

2776 K

y: 0,408

 $\Delta uv: -0,0004$

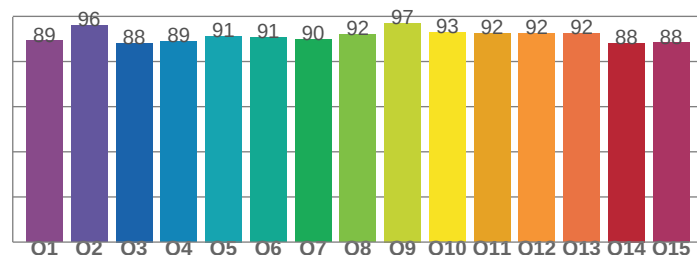
CRI: 93,2 (R1-R8)



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

R1	R2	R3	R4	R5	R6	R7	R8
93,4	95,9	96,6	93,6	92,9	94,8	93,4	84,6
R9	R10	R11	R12	R13	R14	R15	
65,3	89,3	94,2	83,1	94,0	97,3	90,2	

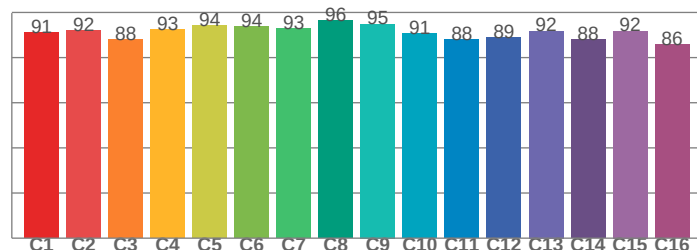
CQS: 90,8



CQS values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
89,2	96,0	88,2	88,7	91,3	90,6	89,6	91,8
Q9	Q10	Q11	Q12	Q13	Q14	Q15	
97,1	93,0	92,5	92,3	92,5	88,2	88,3	

TM30: 91,3



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

C1	C2	C3	C4	C5	C6	C7	C8
91,1	92,0	88,0	92,5	94,2	93,8	92,9	96,5
C9	C10	C11	C12	C13	C14	C15	
94,8	90,7	87,9	88,9	91,8	88,0	91,8	

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
2776 K	93,2	65,3	91,3	100,5	90,8	0,453	0,408	0,259	0,350	-0,0004

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TM30 details

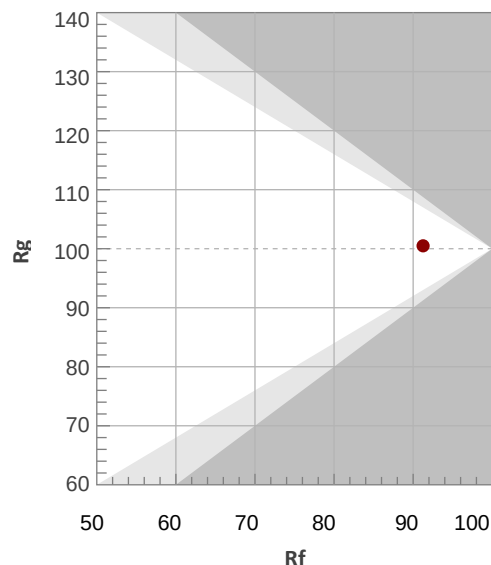
Rf 91,3

Fidelity index Rf

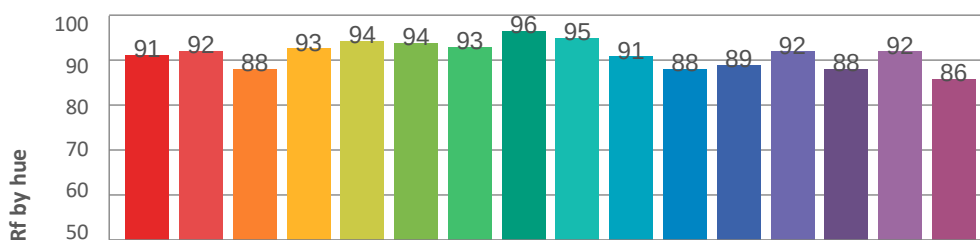
Rg 100,5

Gamut index Rg

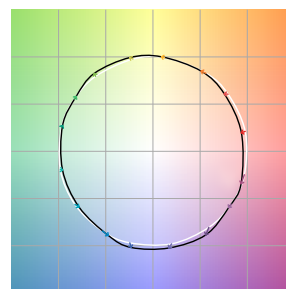
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-1%
2	92	-3%	3%
3	88	-1%	5%
4	93	0%	3%
5	94	2%	3%
6	94	3%	0%
7	93	0%	-3%
8	96	-1%	-2%
9	95	-2%	1%
10	91	-2%	5%
11	88	0%	8%
12	89	5%	2%
13	92	4%	-4%
14	88	5%	-7%
15	92	0%	-5%
16	86	-2%	-10%



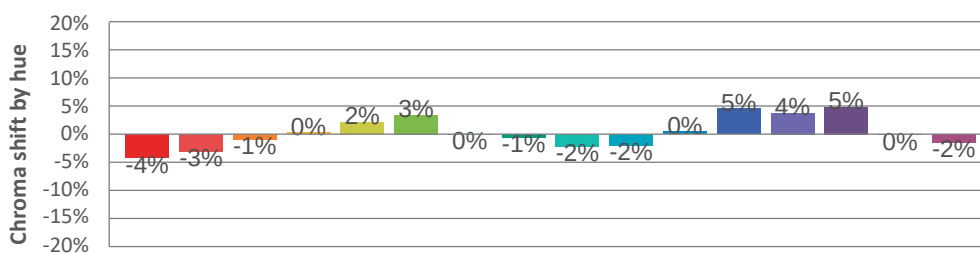
Hue binH



Color vector graphics



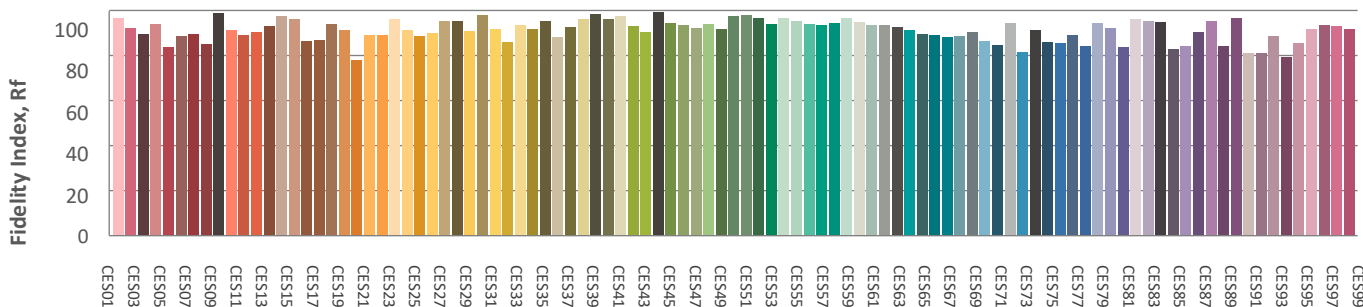
Hue bin



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	23,2	24,0	23,5	24,2	24,4	23,2	24,0	23,5	24,2	24,4
	3H	23,3	23,9	23,6	24,2	24,4	23,3	23,9	23,6	24,2	24,4
	4H	23,3	23,9	23,6	24,2	24,4	23,3	23,9	23,6	24,2	24,4
	6H	23,3	23,9	23,6	24,2	24,5	23,3	23,9	23,6	24,2	24,5
	8H	23,3	23,8	23,6	24,1	24,5	23,3	23,8	23,6	24,1	24,5
	12H	23,3	23,8	23,6	24,1	24,4	23,3	23,8	23,6	24,1	24,4
4H	2H	23,1	23,7	23,4	24,0	24,3	23,1	23,7	23,4	24,0	24,3
	3H	23,2	23,7	23,5	24,0	24,3	23,2	23,7	23,5	24,0	24,3
	4H	23,3	23,7	23,6	24,0	24,4	23,3	23,7	23,6	24,0	24,4
	6H	23,3	23,7	23,7	24,1	24,5	23,3	23,7	23,7	24,1	24,5
	8H	23,3	23,7	23,8	24,1	24,5	23,3	23,7	23,8	24,1	24,5
	12H	23,4	23,6	23,8	24,1	24,5	23,4	23,6	23,8	24,1	24,5
8H	4H	23,2	23,6	23,7	24,0	24,4	23,2	23,6	23,7	24,0	24,4
	6H	23,3	23,6	23,8	24,0	24,5	23,3	23,6	23,8	24,0	24,5
	8H	23,4	23,6	23,9	24,0	24,5	23,4	23,6	23,9	24,0	24,5
	12H	23,4	23,6	23,9	24,1	24,6	23,4	23,6	23,9	24,1	24,6
12H	4H	23,2	23,5	23,6	23,9	24,3	23,2	23,5	23,6	23,9	24,3
	6H	23,3	23,5	23,8	24,0	24,5	23,3	23,5	23,8	24,0	24,5
	8H	23,4	23,5	23,9	24,0	24,5	23,4	23,5	23,9	24,0	24,5
Variation of the observer position for the luminaire distance S											
S = 1,0H		+4,1 / -4,4					+4,1 / -4,4				
S = 1,5H		+6,7 / -4,7					+6,7 / -4,7				
S = 2,0H		+8,7 / -5,1					+8,7 / -5,1				
Standard table		BK01					BK01				
Correction summand		5,3					5,3				
Corrected glare indices referring to 2472lm total luminous flux											



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