
Lotus LED Lights

Client:

LumCAT: LFR-4S-FE-9W-5CCT-5000K

Luminaire: Fire rated slim panel

Report No:

Ballast type:

Test No: LCZP23080240

Voltage(V): 119.990

LampCAT:

Current(A): 0.082

Lamp flux(lm): 807.8

Power (W): 9.490

Number of Lamps: 1

PF: 0.968

Length(mm): -75

Width(mm): -75

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 807.81, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 85.12

Central intensity(cd): 284.805, Maximum intensity(cd): 284.805

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=111.4

[C90/270]Total=110.8

Field angle(10%Imax): [C0/180]Total=162.6

[C90/270]Total=163.4

Maximum s/h(1/2): C0_180=1.25 C90_270=1.24

Maximum s/h(1/4): C0_180=1.37 C90_270=1.36

Up flux rate of lamp(%): 0.19%

Down flux rate of lamp(%): 99.81%

Up flux rate of LUM(%): 0.19%

Down flux rate of LUM(%): 99.81%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 78.134%

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Zonal flux distribution table

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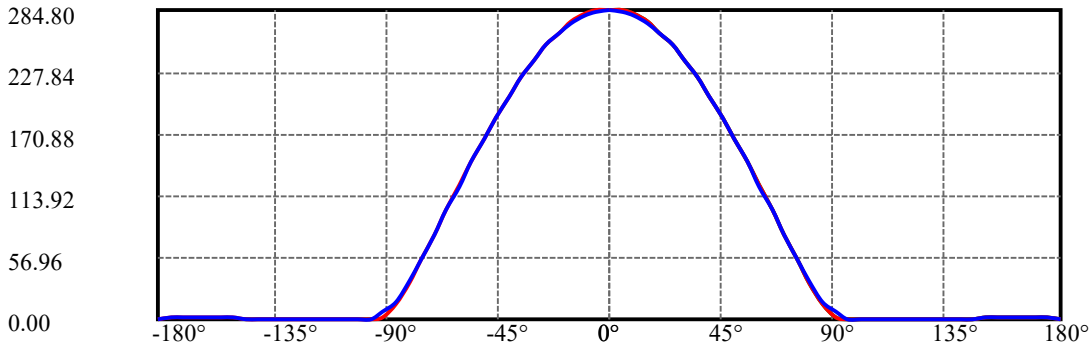
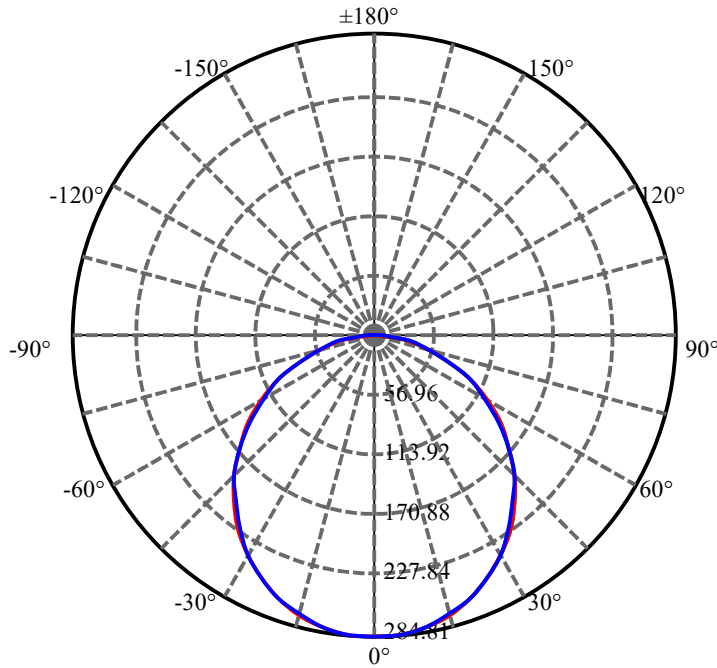
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	284.805	0.000	0	0.00%	0.00%
5.0	283.570	6.795	6.795	0.84%	0.84%
10.0	279.304	20.136	26.931	2.49%	3.33%
15.0	272.642	32.741	59.672	4.05%	7.39%
20.0	263.174	44.159	103.83	5.47%	12.85%
25.0	251.497	53.979	157.81	6.68%	19.54%
30.0	238.060	61.954	219.764	7.67%	27.20%
35.0	222.043	67.753	287.517	8.39%	35.59%
40.0	204.453	71.158	358.675	8.81%	44.40%
45.0	186.226	72.337	431.012	8.95%	53.36%
50.0	165.419	71.055	502.067	8.80%	62.15%
55.0	144.460	67.378	569.445	8.34%	70.49%
60.0	122.603	61.731	631.176	7.64%	78.13%
65.0	99.664	54.033	685.209	6.69%	84.82%
70.0	76.908	44.709	729.918	5.53%	90.36%
75.0	55.200	34.531	764.449	4.27%	94.63%
80.0	33.721	23.793	788.242	2.95%	97.58%
85.0	15.046	13.251	801.493	1.64%	99.22%
90.0	2.291	4.747	806.24	0.59%	99.81%
95.0	0.000	0.627	806.867	0.08%	99.88%
100.0	0.000	0.000	806.867	0.00%	99.88%
105.0	0.000	0.000	806.867	0.00%	99.88%
110.0	0.000	0.000	806.867	0.00%	99.88%
115.0	0.000	0.000	806.867	0.00%	99.88%
120.0	0.000	0.000	806.867	0.00%	99.88%
125.0	0.000	0.000	806.867	0.00%	99.88%
130.0	0.000	0.000	806.867	0.00%	99.88%
135.0	0.000	0.000	806.867	0.00%	99.88%
140.0	0.000	0.000	806.867	0.00%	99.88%
145.0	0.262	0.044	806.911	0.01%	99.89%
150.0	0.823	0.160	807.071	0.02%	99.91%
155.0	0.898	0.218	807.288	0.03%	99.94%
160.0	0.898	0.188	807.477	0.02%	99.96%
165.0	0.898	0.148	807.625	0.02%	99.98%
170.0	0.898	0.107	807.731	0.01%	99.99%
175.0	0.898	0.064	807.796	0.01%	100.00%
180.0	0.450	0.016	807.812	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	219.76	27.20%	27.20%
0-40	358.67	44.40%	44.40%
0-60	631.18	78.13%	78.13%
0-90	806.24	99.81%	99.81%
0-120	806.87	99.88%	99.88%
0-180	807.81	100.00%	100.00%
60-90	175.06	21.67%	21.67%
90-120	0.63	0.08%	0.08%
90-130	0.63	0.08%	0.08%
90-150	0.83	0.10%	0.10%
90-180	1.56	0.19%	0.19%
0-61.39	646.25	80.00%	80.00%

ZONAL LUMEN SUMMARY

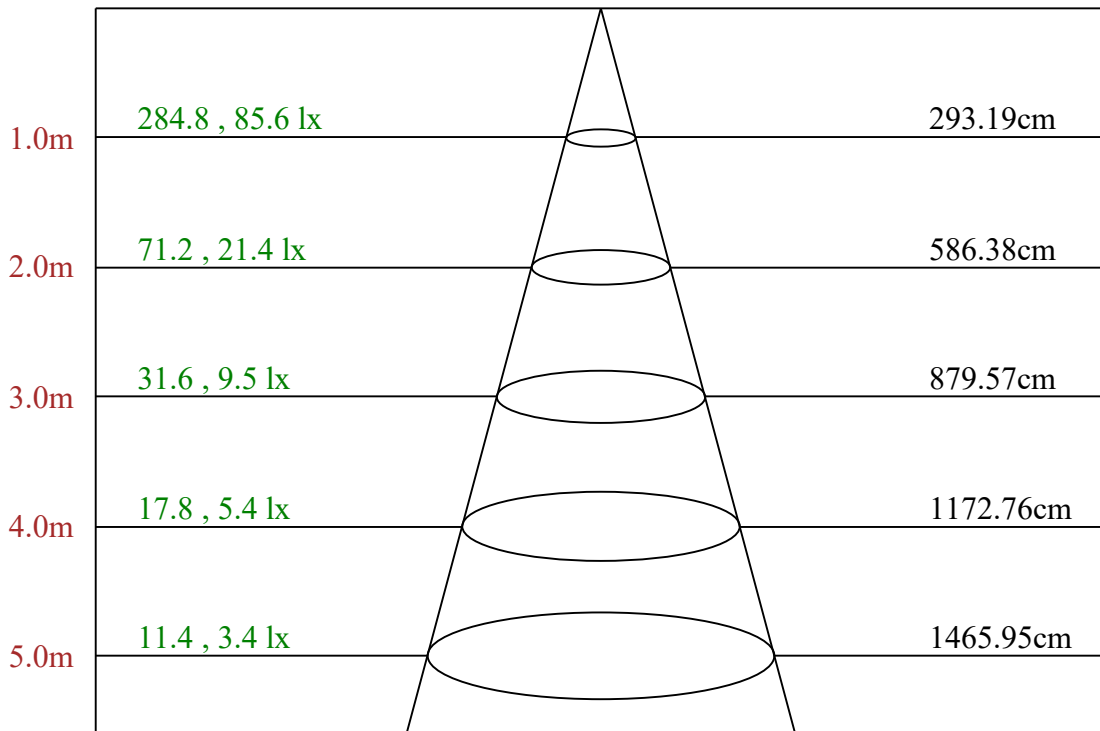
0-10	26.93
10-20	76.90
20-30	115.93
30-40	138.91
40-50	143.39
50-60	129.11
60-70	98.74
70-80	58.32
80-90	18.00
90-100	0.63
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.20
150-160	0.41
160-170	0.25
170-180	0.06



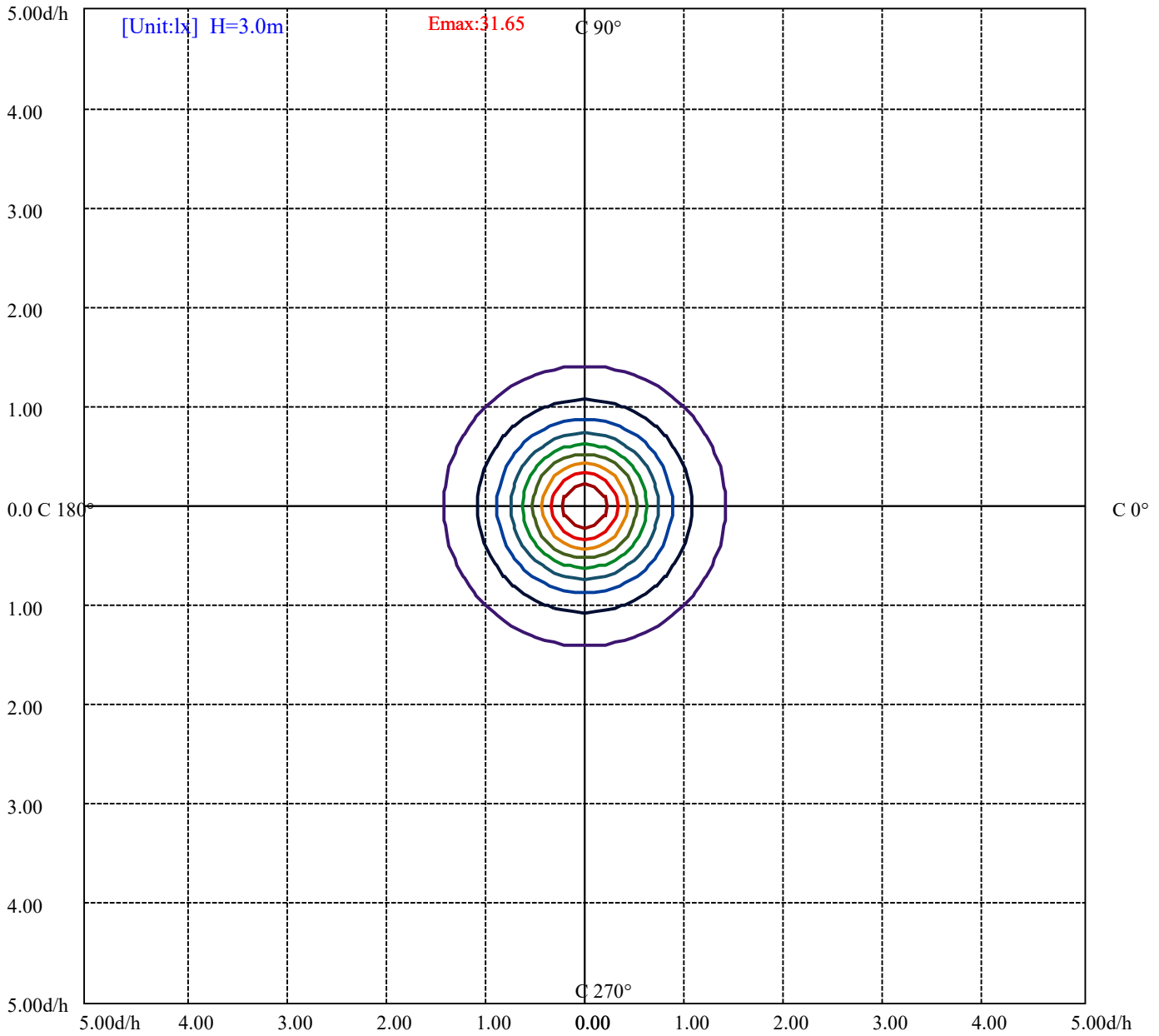
C0(Max): ———
 C0/C180: ———
 C90/C270: ———

Field angle(10%Imax):C0/180Left:81.3 Right:81.3
 :C90/270Left:81.7 Right:81.7

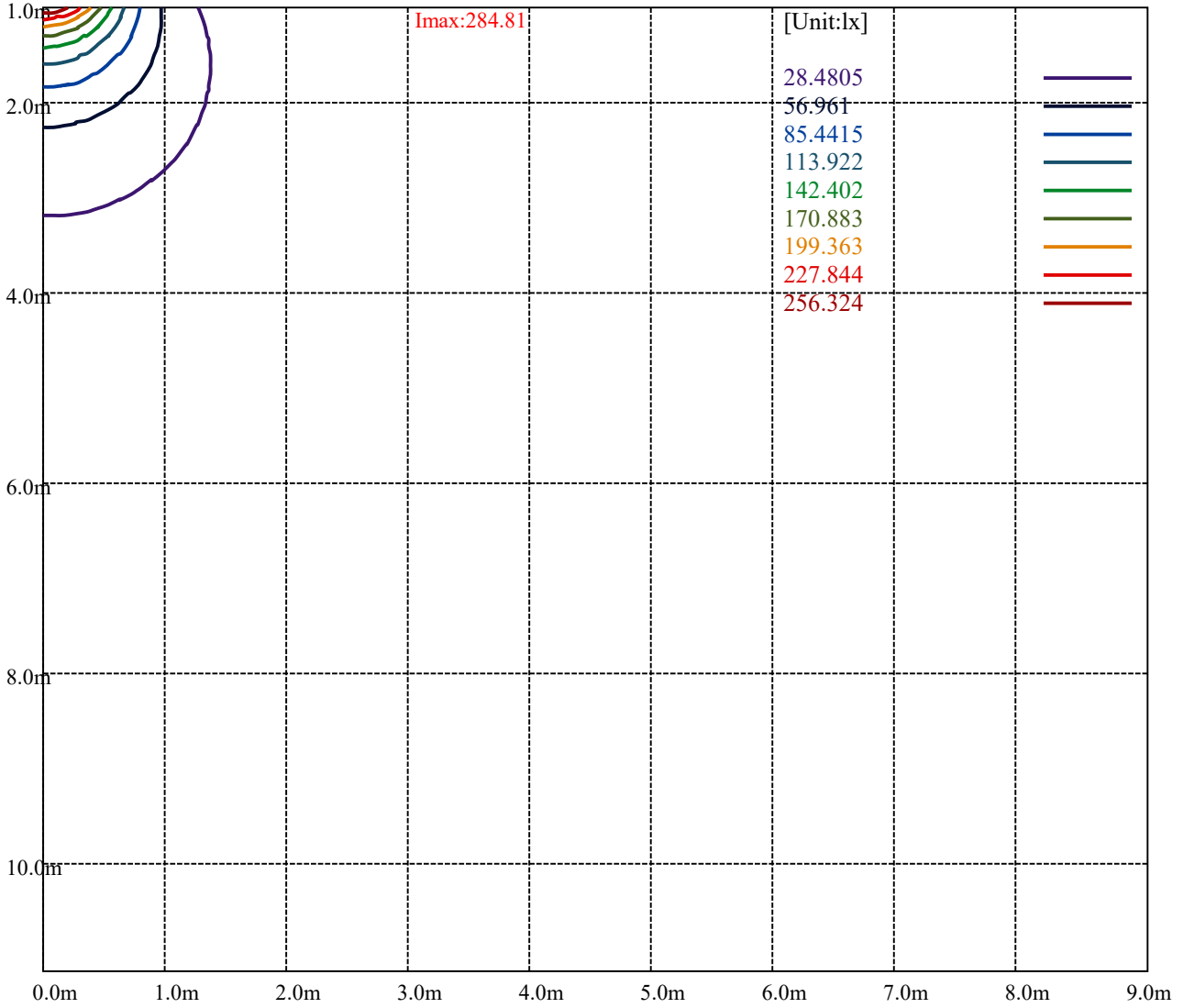
Beam Angle(50%Imax):C0/180Left:55.7 Right:55.7
 :C90/270Left:55.4 Right:55.4



Max , Ave Beam angle of C0 plane 111.40



- (10%Emax) 3.1645
- (20%Emax) 6.329
- (30%Emax) 9.4935
- (40%Emax) 12.658
- (50%Emax) 15.82244
- (60%Emax) 18.987
- (70%Emax) 22.15145
- (80%Emax) 25.316
- (90%Emax) 28.48045



Lotus LED Lights LFR-4S-FE-9W-5CCT-5000K

Luminance Limiting Curve(no luminous side)

Luminance Table

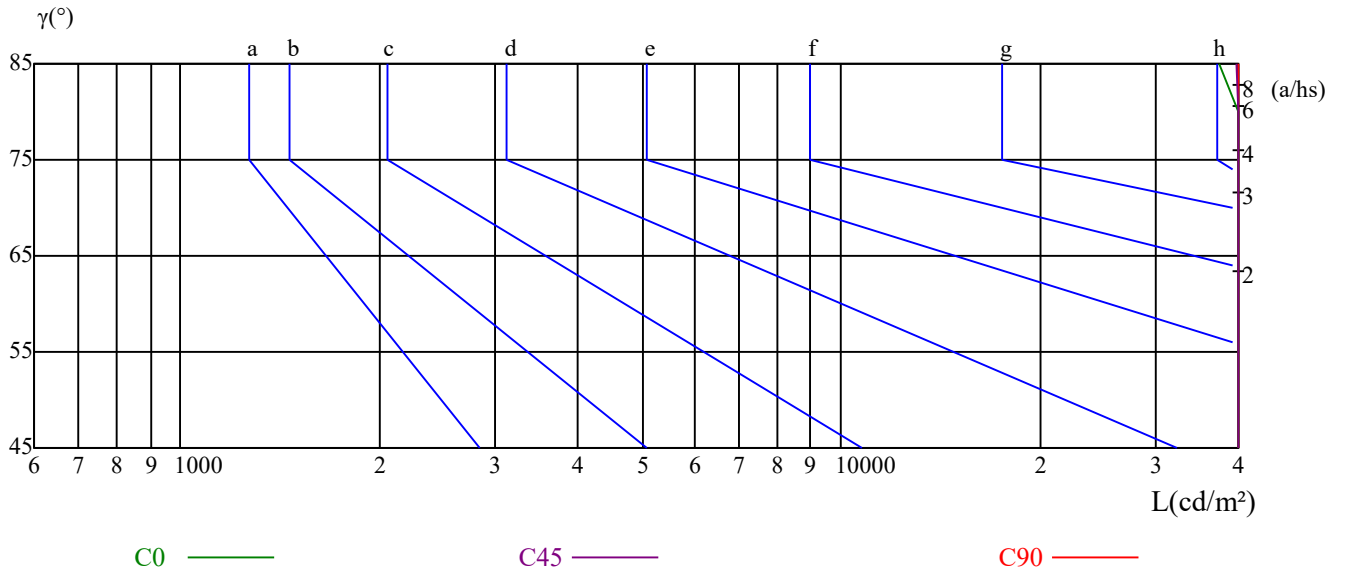
γ	45	50	55	60	65	70	75	80	85
C0	59722	58557	57442	55694	53824	50999	48082	43468	37450
C45	60178	58293	56906	55213	53413	50838	47930	44210	39668
C90	59622	58265	56911	55257	53753	51161	48235	45374	42268

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
53824	53753	53413	48082	48235	47930	37450	42268	39668

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve



RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.04	0.99	0.95	1.01	0.97	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
2	0.90	0.83	0.77	0.88	0.82	0.76	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.75	0.71	0.69
3	0.79	0.71	0.64	0.78	0.70	0.64	0.74	0.68	0.62	0.72	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.54	0.69	0.60	0.54	0.66	0.59	0.53	0.64	0.58	0.52	0.62	0.56	0.52	0.50
5	0.63	0.53	0.47	0.61	0.53	0.47	0.59	0.52	0.46	0.57	0.51	0.45	0.55	0.50	0.45	0.43
6	0.56	0.47	0.41	0.55	0.47	0.41	0.54	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
7	0.51	0.42	0.36	0.50	0.42	0.36	0.49	0.41	0.36	0.47	0.40	0.35	0.46	0.40	0.35	0.33
8	0.47	0.38	0.32	0.46	0.38	0.32	0.45	0.37	0.32	0.43	0.37	0.32	0.42	0.36	0.31	0.29
9	0.43	0.34	0.29	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.28	0.39	0.33	0.28	0.26
10	0.39	0.32	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24

Lotus LED Lights LFR-4S-FE-9W-5CCT-5000K

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	284.80	284.80	280.75	273.99	264.08	252.81	239.29	223.07	205.04
15.0	284.80	283.24	278.76	272.27	262.19	250.77	237.12	221.89	203.98
30.0	284.80	283.23	279.20	272.24	263.05	251.17	237.49	222.01	204.30
45.0	284.80	283.68	279.42	272.90	263.69	251.79	237.86	222.36	204.84
60.0	284.80	283.45	279.19	272.67	263.69	251.34	239.65	221.91	204.62
75.0	284.80	283.46	278.97	272.47	262.60	251.39	237.48	221.34	204.30
90.0	284.80	283.90	279.83	272.60	263.56	252.26	238.24	222.42	204.34
105.0	284.80	283.46	278.97	272.47	262.60	251.39	237.48	221.34	204.30
120.0	284.80	283.45	279.19	272.67	263.69	251.34	239.65	221.91	204.62
135.0	284.80	283.68	279.42	272.90	263.69	251.79	237.86	222.36	204.84
150.0	284.80	283.23	279.20	272.24	263.05	251.17	237.49	222.01	204.30
165.0	284.80	283.24	278.76	272.27	262.19	250.77	237.12	221.89	203.98
180.0	284.80	284.80	280.75	273.99	264.08	252.81	239.29	223.07	205.04
195.0	284.80	283.24	278.76	272.27	262.19	250.77	237.12	221.89	203.98
210.0	284.80	283.23	279.20	272.24	263.05	251.17	237.49	222.01	204.30
225.0	284.80	283.68	279.42	272.90	263.69	251.79	237.86	222.36	204.84
240.0	284.80	283.45	279.19	272.67	263.69	251.34	239.65	221.91	204.62
255.0	284.80	283.46	278.97	272.47	262.60	251.39	237.48	221.34	204.30
270.0	284.80	283.90	279.83	272.60	263.56	252.26	238.24	222.42	204.34
285.0	284.80	283.46	278.97	272.47	262.60	251.39	237.48	221.34	204.30
300.0	284.80	283.45	279.19	272.67	263.69	251.34	239.65	221.91	204.62
315.0	284.80	283.68	279.42	272.90	263.69	251.79	237.86	222.36	204.84
330.0	284.80	283.23	279.20	272.24	263.05	251.17	237.49	222.01	204.30
345.0	284.80	283.24	278.76	272.27	262.19	250.77	237.12	221.89	203.98
360.0	284.80	284.80	280.75	273.99	264.08	252.81	239.29	223.07	205.04
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	186.57	166.29	145.56	123.03	100.49	77.06	54.98	33.35	14.42
15.0	185.84	165.24	144.64	122.03	99.19	76.80	57.09	33.36	14.78
30.0	185.68	165.50	144.20	124.90	99.57	76.92	54.72	33.64	14.80
45.0	187.99	165.54	144.20	121.96	99.73	76.82	54.80	33.92	15.27
60.0	185.97	165.31	144.87	122.19	99.50	76.82	55.03	33.69	15.05
75.0	185.46	165.05	143.97	121.99	99.57	76.92	54.49	33.64	15.03
90.0	186.25	165.46	144.21	122.06	100.36	77.30	55.15	34.81	16.27
105.0	185.46	165.05	143.97	121.99	99.57	76.92	54.49	33.64	15.03
120.0	185.97	165.31	144.87	122.19	99.50	76.82	55.03	33.69	15.05
135.0	187.99	165.54	144.20	121.96	99.73	76.82	54.80	33.92	15.27
150.0	185.68	165.50	144.20	124.90	99.57	76.92	54.72	33.64	14.80
165.0	185.84	165.24	144.64	122.03	99.19	76.80	57.09	33.36	14.78
180.0	186.57	166.29	145.56	123.03	100.49	77.06	54.98	33.35	14.42
195.0	185.84	165.24	144.64	122.03	99.19	76.80	57.09	33.36	14.78
210.0	185.68	165.50	144.20	124.90	99.57	76.92	54.72	33.64	14.80
225.0	187.99	165.54	144.20	121.96	99.73	76.82	54.80	33.92	15.27
240.0	185.97	165.31	144.87	122.19	99.50	76.82	55.03	33.69	15.05
255.0	185.46	165.05	143.97	121.99	99.57	76.92	54.49	33.64	15.03
270.0	186.25	165.46	144.21	122.06	100.36	77.30	55.15	34.81	16.27
285.0	185.46	165.05	143.97	121.99	99.57	76.92	54.49	33.64	15.03
300.0	185.97	165.31	144.87	122.19	99.50	76.82	55.03	33.69	15.05
315.0	187.99	165.54	144.20	121.96	99.73	76.82	54.80	33.92	15.27
330.0	185.68	165.50	144.20	124.90	99.57	76.92	54.72	33.64	14.80
345.0	185.84	165.24	144.64	122.03	99.19	76.80	57.09	33.36	14.78
360.0	186.57	166.29	145.56	123.03	100.49	77.06	54.98	33.35	14.42

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Appendix Page: 11 Total:12

Intensity data(cd)

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.0	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	6.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
195.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240.0	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
255.0	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	6.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
285.0	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.0	2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
330.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
345.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
15.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
30.0	0.00	0.00	0.22	0.90	0.90	0.90	0.90	0.90	0.90
45.0	0.00	0.00	0.45	0.67	0.90	0.90	0.90	0.90	0.90
60.0	0.00	0.00	0.22	0.67	0.90	0.90	0.90	0.90	0.90
75.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
90.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
105.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
120.0	0.00	0.00	0.22	0.67	0.90	0.90	0.90	0.90	0.90
135.0	0.00	0.00	0.45	0.67	0.90	0.90	0.90	0.90	0.90
150.0	0.00	0.00	0.22	0.90	0.90	0.90	0.90	0.90	0.90
165.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
180.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
195.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
210.0	0.00	0.00	0.22	0.90	0.90	0.90	0.90	0.90	0.90
225.0	0.00	0.00	0.45	0.67	0.90	0.90	0.90	0.90	0.90
240.0	0.00	0.00	0.22	0.67	0.90	0.90	0.90	0.90	0.90
255.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
270.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
285.0	0.00	0.00	0.45	0.90	0.90	0.90	0.90	0.90	0.90
300.0	0.00	0.00	0.22	0.67	0.90	0.90	0.90	0.90	0.90
315.0	0.00	0.00	0.45	0.67	0.90	0.90	0.90	0.90	0.90
330.0	0.00	0.00	0.22	0.90	0.90	0.90	0.90	0.90	0.90
345.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90
360.0	0.00	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90

Intensity data(cd)

C/γ(°)	180.0
0.0	0.45
15.0	0.45
30.0	0.45
45.0	0.45
60.0	0.45
75.0	0.45
90.0	0.45
105.0	0.45
120.0	0.45
135.0	0.45
150.0	0.45
165.0	0.45
180.0	0.45
195.0	0.45
210.0	0.45
225.0	0.45
240.0	0.45
255.0	0.45
270.0	0.45
285.0	0.45
300.0	0.45
315.0	0.45
330.0	0.45
345.0	0.45
360.0	0.45