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## Lotus LED Lights

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Client:

LumCAT: LFR-6S-FE-12W-5CCT-3000K

Luminaire: Fire rated slim panel

Report No:

Ballast type:

Test No: LCZP23080240

Voltage(V): 120.000

LampCAT:

Current(A): 0.102

Lamp flux(lm): 1226.9

Power (W): 11.860

Number of Lamps: 1

PF: 0.974

Length(mm): -120

Width(mm): -120

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1226.93, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 103.45

Central intensity(cd): 494.684, Maximum intensity(cd): 494.684

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=100.2

[C90/270]Total=101.0

Field angle(10%Imax): [C0/180]Total=152.8

[C90/270]Total=153.2

Maximum s/h(1/2): C0\_180=1.20 C90\_270=1.20

Maximum s/h(1/4): C0\_180=1.30 C90\_270=1.31

Up flux rate of lamp(%): 0.37%

Down flux rate of lamp(%): 99.63%

Up flux rate of LUM(%): 0.37%

Down flux rate of LUM(%): 99.63%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 82.911%

Lotus LED Lights LFR-6S-FE-12W-5CCT-3000K

Zonal flux distribution table

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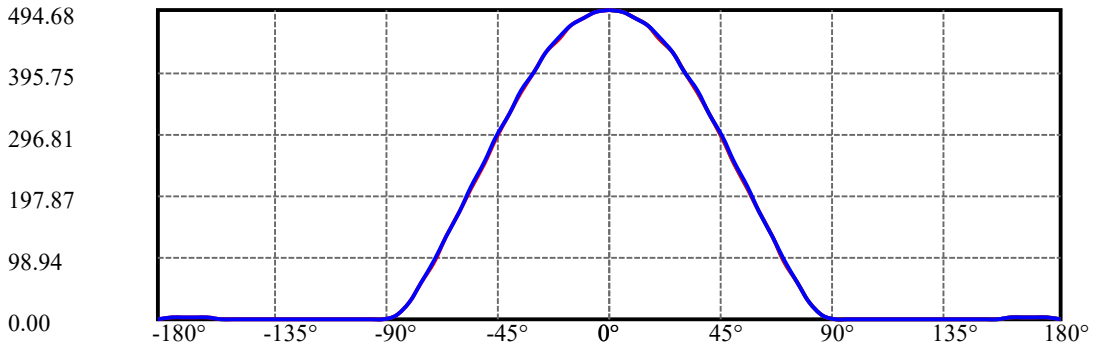
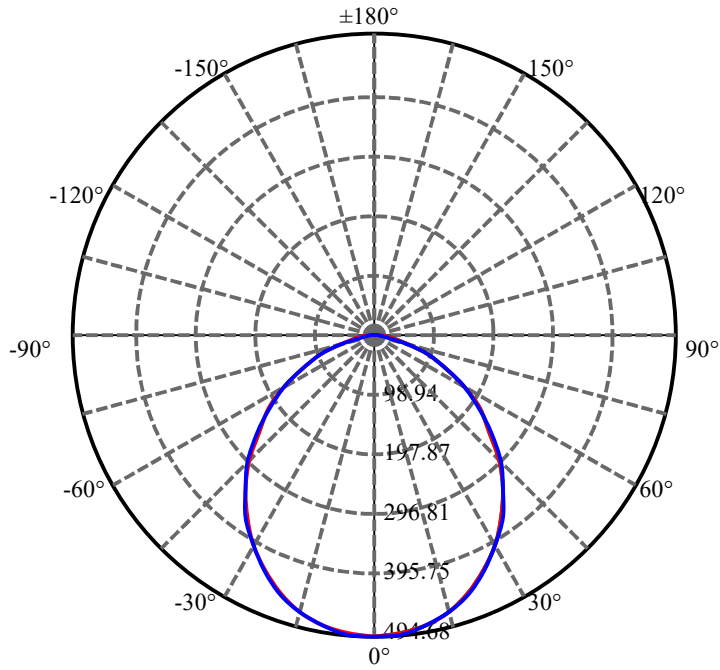
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	494.684	0.000	0	0.00%	0.00%
5.0	492.027	11.796	11.796	0.96%	0.96%
10.0	483.532	34.899	46.695	2.84%	3.81%
15.0	469.871	56.555	103.25	4.61%	8.42%
20.0	450.635	75.863	179.113	6.18%	14.60%
25.0	426.496	91.995	271.107	7.50%	22.10%
30.0	398.278	104.376	375.483	8.51%	30.60%
35.0	364.894	112.382	487.866	9.16%	39.76%
40.0	329.041	115.778	603.643	9.44%	49.20%
45.0	291.505	114.899	718.543	9.36%	58.56%
50.0	250.673	109.555	828.097	8.93%	67.49%
55.0	211.339	100.457	928.554	8.19%	75.68%
60.0	172.455	88.713	1017.267	7.23%	82.91%
65.0	131.923	73.995	1091.262	6.03%	88.94%
70.0	94.386	57.303	1148.565	4.67%	93.61%
75.0	59.505	40.225	1188.79	3.28%	96.89%
80.0	26.609	23.042	1211.831	1.88%	98.77%
85.0	5.725	8.786	1220.617	0.72%	99.49%
90.0	0.674	1.752	1222.369	0.14%	99.63%
95.0	0.224	0.246	1222.615	0.02%	99.65%
100.0	0.449	0.183	1222.798	0.01%	99.66%
105.0	0.449	0.240	1223.038	0.02%	99.68%
110.0	0.449	0.235	1223.273	0.02%	99.70%
115.0	0.449	0.227	1223.501	0.02%	99.72%
120.0	0.449	0.218	1223.719	0.02%	99.74%
125.0	0.599	0.242	1223.961	0.02%	99.76%
130.0	0.898	0.325	1224.286	0.03%	99.78%
135.0	0.898	0.363	1224.649	0.03%	99.81%
140.0	0.898	0.333	1224.982	0.03%	99.84%
145.0	0.898	0.300	1225.282	0.02%	99.87%
150.0	0.898	0.265	1225.546	0.02%	99.89%
155.0	1.347	0.284	1225.831	0.02%	99.91%
160.0	1.796	0.330	1226.16	0.03%	99.94%
165.0	1.984	0.312	1226.472	0.03%	99.96%
170.0	2.246	0.251	1226.723	0.02%	99.98%
175.0	2.395	0.166	1226.889	0.01%	100.00%
180.0	1.347	0.045	1226.933	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	375.48	30.60%	30.60%
0-40	603.64	49.20%	49.20%
0-60	1017.27	82.91%	82.91%
0-90	1222.37	99.63%	99.63%
0-120	1223.72	99.74%	99.74%
0-180	1226.93	100.00%	100.00%
60-90	205.10	16.72%	16.72%
90-120	1.35	0.11%	0.11%
90-130	1.92	0.16%	0.16%
90-150	3.18	0.26%	0.26%
90-180	4.52	0.37%	0.37%
0-57.99	981.55	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	46.69
10-20	132.42
20-30	196.37
30-40	228.16
40-50	224.45
50-60	189.17
60-70	131.30
70-80	63.27
80-90	10.54
90-100	0.43
100-110	0.48
110-120	0.45
120-130	0.57
130-140	0.70
140-150	0.56
150-160	0.61
160-170	0.56
170-180	0.17



C0(Max): ———

C0/C180: ———

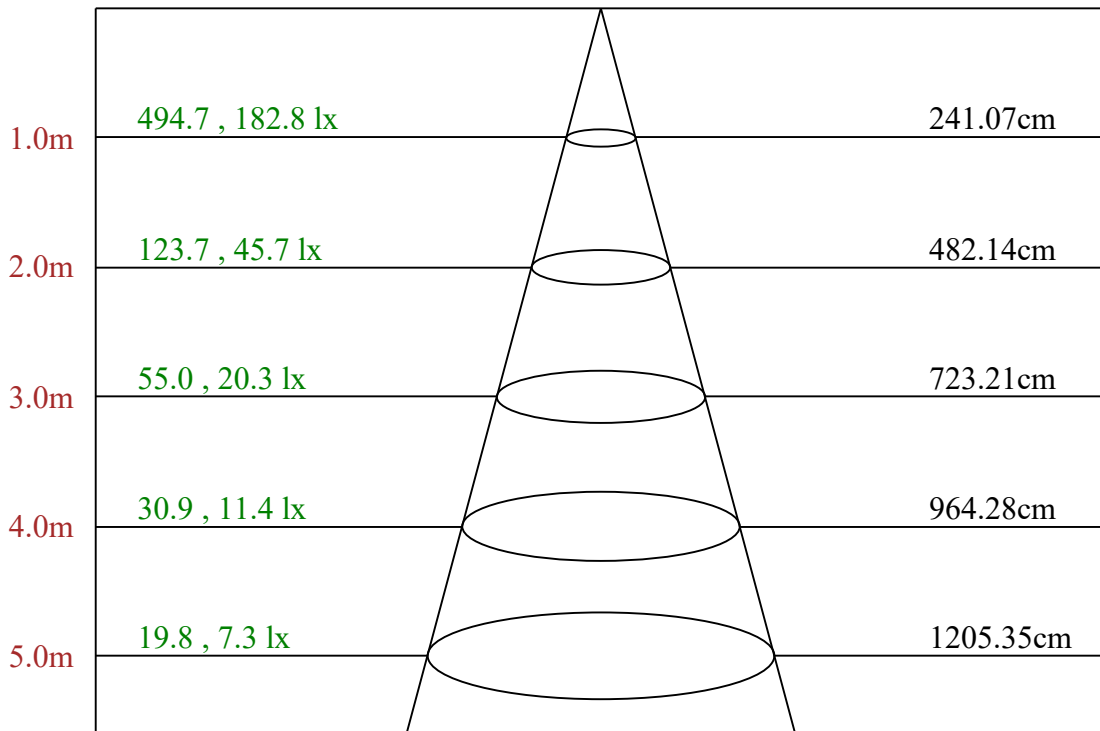
C90/C270: ———

Field angle(10%I<sub>max</sub>):C0/180Left:76.4 Right:76.4

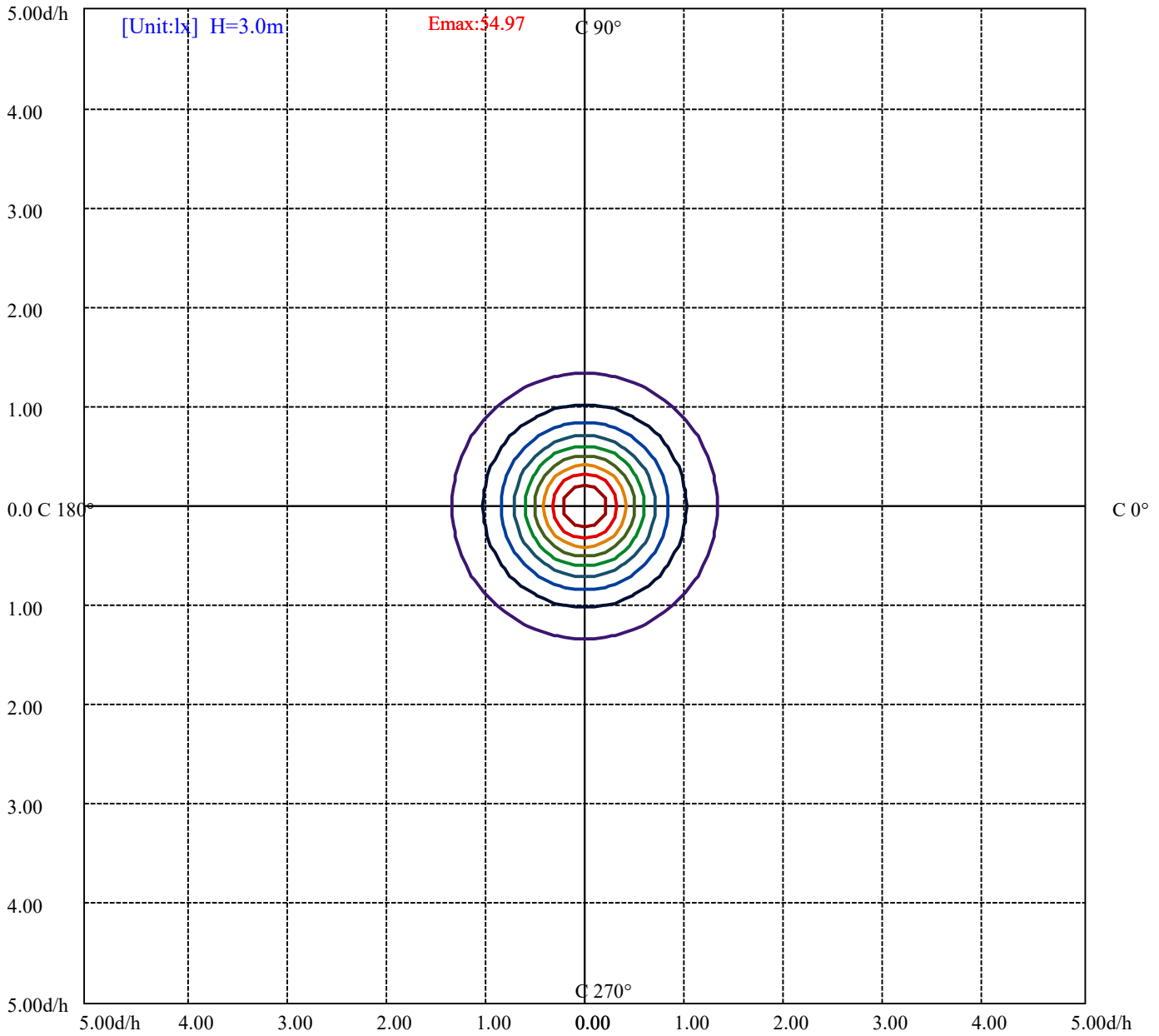
:C90/270Left:76.6 Right:76.6

Beam Angle(50%I<sub>max</sub>):C0/180Left:50.1 Right:50.1

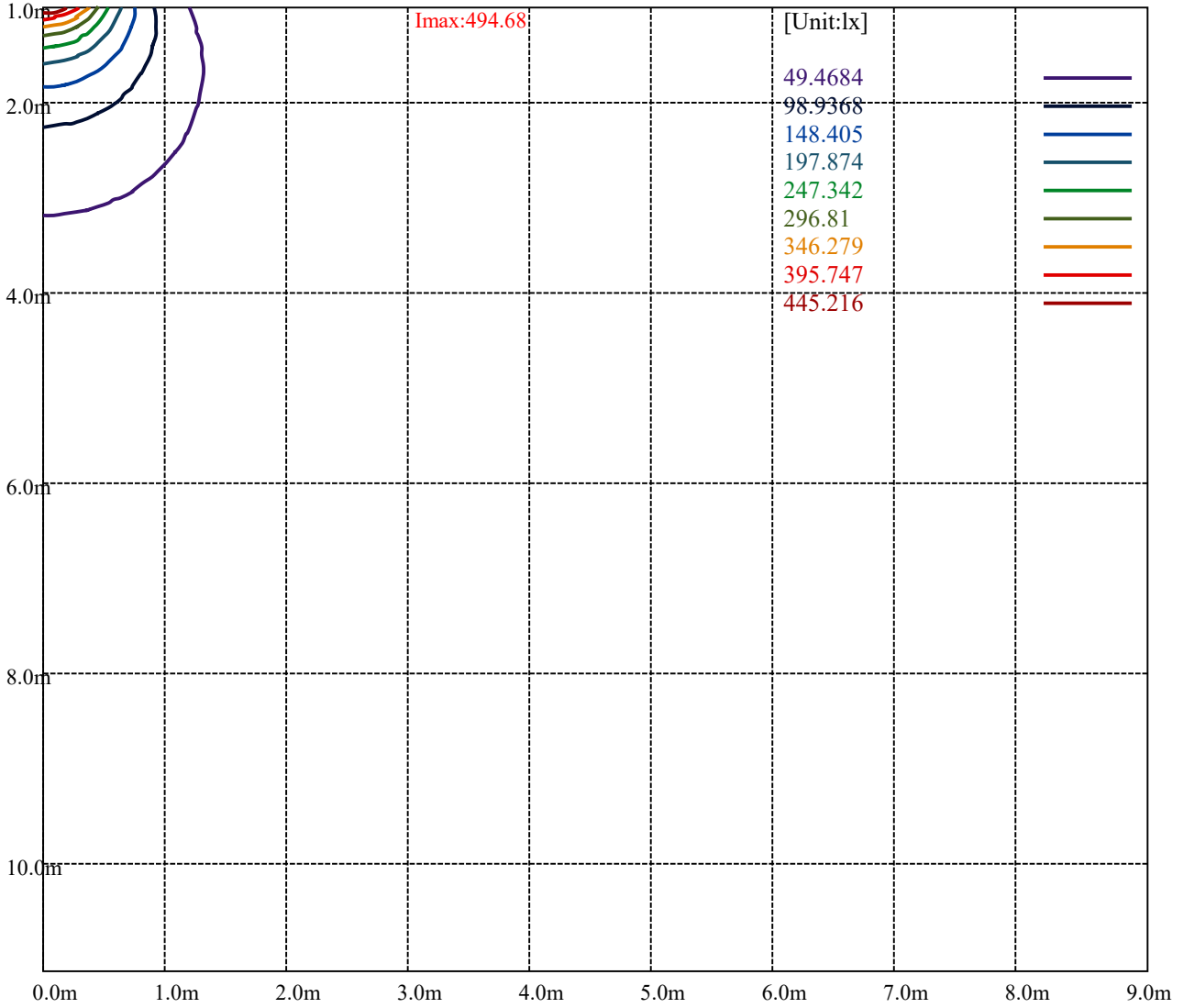
:C90/270Left:50.5 Right:50.5



Max , Ave      Beam angle of C0 plane 100.64



- (10%Emax) 5.496489
- (20%Emax) 10.99298
- (30%Emax) 16.48944
- (40%Emax) 21.986
- (50%Emax) 27.48244
- (60%Emax) 32.97889
- (70%Emax) 38.47544
- (80%Emax) 43.97189
- (90%Emax) 49.46844



Luminance Table

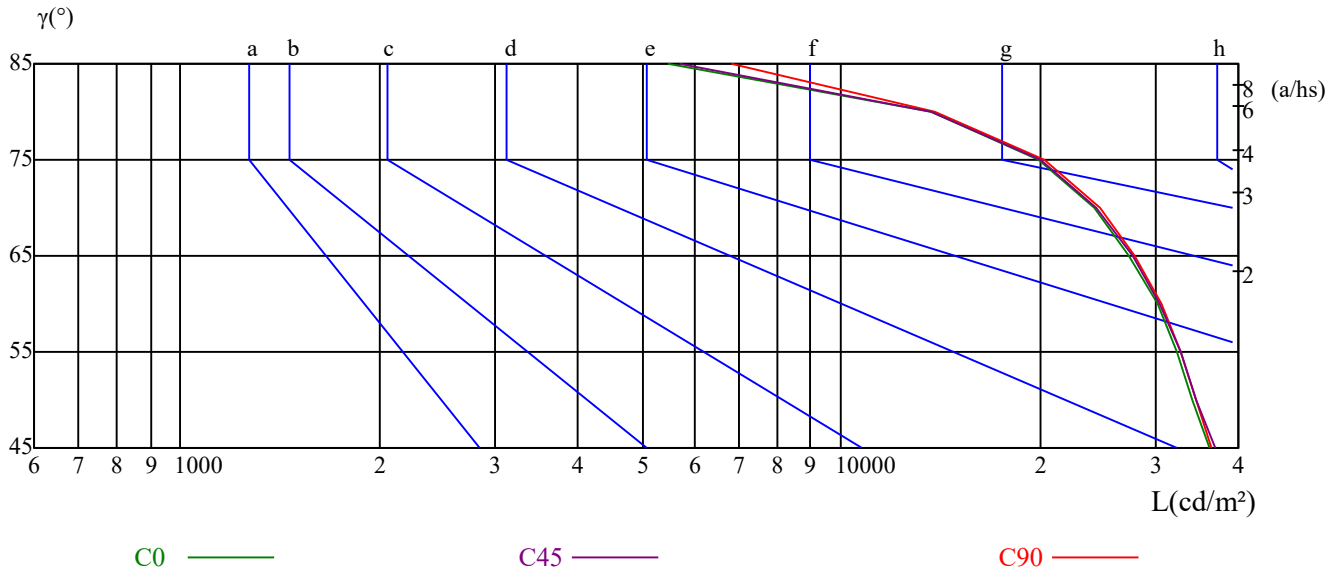
$\gamma$	45	50	55	60	65	70	75	80	85
C0	36093	34147	32316	30165	27330	24138	19936	13714	5465
C45	36889	34549	32652	30379	27615	24357	20049	13739	5702
C90	36521	34577	32751	30531	27886	24629	20322	13893	6806

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
27330	27886	27615	19936	20322	20049	5465	6806	5702

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	1.05	1.01	0.98	1.03	0.99	0.96	0.99	0.96	0.93	0.95	0.92	0.90	0.91	0.89	0.87	0.85
2	0.92	0.86	0.81	0.91	0.85	0.80	0.87	0.82	0.78	0.84	0.80	0.76	0.81	0.77	0.74	0.72
3	0.82	0.74	0.68	0.80	0.73	0.67	0.77	0.71	0.66	0.74	0.69	0.65	0.72	0.67	0.64	0.61
4	0.73	0.64	0.58	0.71	0.64	0.57	0.69	0.62	0.57	0.67	0.61	0.56	0.64	0.59	0.55	0.53
5	0.65	0.57	0.50	0.64	0.56	0.50	0.62	0.55	0.49	0.60	0.54	0.49	0.58	0.53	0.48	0.46
6	0.59	0.50	0.44	0.58	0.50	0.44	0.56	0.49	0.43	0.54	0.48	0.43	0.53	0.47	0.43	0.41
7	0.54	0.45	0.39	0.53	0.45	0.39	0.51	0.44	0.39	0.50	0.43	0.38	0.48	0.42	0.38	0.36
8	0.49	0.41	0.35	0.48	0.40	0.35	0.47	0.40	0.35	0.46	0.39	0.34	0.44	0.39	0.34	0.32
9	0.45	0.37	0.32	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31	0.41	0.35	0.31	0.29
10	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.29	0.39	0.33	0.28	0.38	0.32	0.28	0.27

Lotus LED Lights LFR-6S-FE-12W-5CCT-3000K

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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	494.68	491.54	483.01	469.10	449.79	425.55	396.38	364.05	327.70
15.0	494.68	491.99	483.45	469.75	450.65	425.94	396.96	363.94	327.99
30.0	494.68	492.21	483.67	469.73	450.84	426.33	397.55	364.49	328.74
45.0	494.68	492.66	483.89	469.95	450.61	426.78	397.77	365.62	329.64
60.0	494.68	492.21	483.90	469.97	450.65	427.06	402.58	365.29	329.79
75.0	494.68	491.32	483.02	470.02	450.51	426.51	397.81	365.07	329.42
90.0	494.68	492.00	483.50	470.53	451.30	427.15	397.63	365.87	329.64
105.0	494.68	491.32	483.02	470.02	450.51	426.51	397.81	365.07	329.42
120.0	494.68	492.21	483.90	469.97	450.65	427.06	402.58	365.29	329.79
135.0	494.68	492.66	483.89	469.95	450.61	426.78	397.77	365.62	329.64
150.0	494.68	492.21	483.67	469.73	450.84	426.33	397.55	364.49	328.74
165.0	494.68	491.99	483.45	469.75	450.65	425.94	396.96	363.94	327.99
180.0	494.68	491.54	483.01	469.10	449.79	425.55	396.38	364.05	327.70
195.0	494.68	491.99	483.45	469.75	450.65	425.94	396.96	363.94	327.99
210.0	494.68	492.21	483.67	469.73	450.84	426.33	397.55	364.49	328.74
225.0	494.68	492.66	483.89	469.95	450.61	426.78	397.77	365.62	329.64
240.0	494.68	492.21	483.90	469.97	450.65	427.06	402.58	365.29	329.79
255.0	494.68	491.32	483.02	470.02	450.51	426.51	397.81	365.07	329.42
270.0	494.68	492.00	483.50	470.53	451.30	427.15	397.63	365.87	329.64
285.0	494.68	491.32	483.02	470.02	450.51	426.51	397.81	365.07	329.42
300.0	494.68	492.21	483.90	469.97	450.65	427.06	402.58	365.29	329.79
315.0	494.68	492.66	483.89	469.95	450.61	426.78	397.77	365.62	329.64
330.0	494.68	492.21	483.67	469.73	450.84	426.33	397.55	364.49	328.74
345.0	494.68	491.99	483.45	469.75	450.65	425.94	396.96	363.94	327.99
360.0	494.68	491.54	483.01	469.10	449.79	425.55	396.38	364.05	327.70
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	288.64	248.24	209.63	170.58	130.63	93.37	58.36	26.93	5.39
15.0	289.80	249.81	210.27	170.96	131.20	93.90	62.00	26.28	5.17
30.0	290.74	250.49	210.91	175.39	131.54	94.21	59.14	26.53	5.62
45.0	295.01	251.16	211.82	171.79	131.99	94.21	58.69	26.98	5.62
60.0	292.05	251.16	211.85	172.31	132.77	94.58	58.86	26.06	5.84
75.0	291.07	251.60	212.14	172.67	132.08	95.08	59.42	26.68	6.05
90.0	292.07	251.37	212.46	172.65	133.29	95.27	59.49	27.28	6.71
105.0	291.07	251.60	212.14	172.67	132.08	95.08	59.42	26.68	6.05
120.0	292.05	251.16	211.85	172.31	132.77	94.58	58.86	26.06	5.84
135.0	295.01	251.16	211.82	171.79	131.99	94.21	58.69	26.98	5.62
150.0	290.74	250.49	210.91	175.39	131.54	94.21	59.14	26.53	5.62
165.0	289.80	249.81	210.27	170.96	131.20	93.90	62.00	26.28	5.17
180.0	288.64	248.24	209.63	170.58	130.63	93.37	58.36	26.93	5.39
195.0	289.80	249.81	210.27	170.96	131.20	93.90	62.00	26.28	5.17
210.0	290.74	250.49	210.91	175.39	131.54	94.21	59.14	26.53	5.62
225.0	295.01	251.16	211.82	171.79	131.99	94.21	58.69	26.98	5.62
240.0	292.05	251.16	211.85	172.31	132.77	94.58	58.86	26.06	5.84
255.0	291.07	251.60	212.14	172.67	132.08	95.08	59.42	26.68	6.05
270.0	292.07	251.37	212.46	172.65	133.29	95.27	59.49	27.28	6.71
285.0	291.07	251.60	212.14	172.67	132.08	95.08	59.42	26.68	6.05
300.0	292.05	251.16	211.85	172.31	132.77	94.58	58.86	26.06	5.84
315.0	295.01	251.16	211.82	171.79	131.99	94.21	58.69	26.98	5.62
330.0	290.74	250.49	210.91	175.39	131.54	94.21	59.14	26.53	5.62
345.0	289.80	249.81	210.27	170.96	131.20	93.90	62.00	26.28	5.17
360.0	288.64	248.24	209.63	170.58	130.63	93.37	58.36	26.93	5.39

Lotus LED Lights LFR-6S-FE-12W-5CCT-3000K

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	0.90	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
15.0	0.45	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
30.0	0.90	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
45.0	0.68	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
60.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.90
75.0	0.67	0.22	0.45	0.45	0.45	0.45	0.45	0.45	0.90
90.0	0.89	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.89
105.0	0.67	0.22	0.45	0.45	0.45	0.45	0.45	0.45	0.90
120.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.90
135.0	0.68	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
150.0	0.90	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
165.0	0.45	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
180.0	0.90	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
195.0	0.45	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
210.0	0.90	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
225.0	0.68	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
240.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.90
255.0	0.67	0.22	0.45	0.45	0.45	0.45	0.45	0.45	0.90
270.0	0.89	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.89
285.0	0.67	0.22	0.45	0.45	0.45	0.45	0.45	0.45	0.90
300.0	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.90
315.0	0.68	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
330.0	0.90	0.22	0.45	0.45	0.45	0.45	0.45	0.90	0.90
345.0	0.45	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
360.0	0.90	0.00	0.45	0.45	0.45	0.45	0.45	0.45	0.90
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.24	2.24
15.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.25	2.47
30.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.47
45.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.25
60.0	0.90	0.90	0.90	0.90	1.35	1.80	2.25	2.25	2.25
75.0	0.90	0.90	0.90	0.90	1.35	1.79	2.02	2.24	2.69
90.0	0.89	0.89	0.89	0.89	1.34	1.79	1.79	2.24	2.24
105.0	0.90	0.90	0.90	0.90	1.35	1.79	2.02	2.24	2.69
120.0	0.90	0.90	0.90	0.90	1.35	1.80	2.25	2.25	2.25
135.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.25
150.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.47
165.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.25	2.47
180.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.24	2.24
195.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.25	2.47
210.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.47
225.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.25
240.0	0.90	0.90	0.90	0.90	1.35	1.80	2.25	2.25	2.25
255.0	0.90	0.90	0.90	0.90	1.35	1.79	2.02	2.24	2.69
270.0	0.89	0.89	0.89	0.89	1.34	1.79	1.79	2.24	2.24
285.0	0.90	0.90	0.90	0.90	1.35	1.79	2.02	2.24	2.69
300.0	0.90	0.90	0.90	0.90	1.35	1.80	2.25	2.25	2.25
315.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.25
330.0	0.90	0.90	0.90	0.90	1.35	1.80	2.02	2.25	2.47
345.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.25	2.47
360.0	0.90	0.90	0.90	0.90	1.35	1.80	1.80	2.24	2.24

Intensity data(cd)

C/γ(°)	180.0
0.0	1.35
15.0	1.35
30.0	1.35
45.0	1.35
60.0	1.35
75.0	1.35
90.0	1.34
105.0	1.35
120.0	1.35
135.0	1.35
150.0	1.35
165.0	1.35
180.0	1.35
195.0	1.35
210.0	1.35
225.0	1.35
240.0	1.35
255.0	1.35
270.0	1.34
285.0	1.35
300.0	1.35
315.0	1.35
330.0	1.35
345.0	1.35
360.0	1.35