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Lotus LED Lights

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Client:

LumCAT: LFR-6R-FE-12W-5CCT-3500K

Luminaire: Fire rated slim panel

Report No:

Ballast type:

Test No: LCZP23080240

Voltage(V): 120.000

LampCAT:

Current(A): 0.101

Lamp flux(lm): 1231.8

Power (W): 11.780

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): 1231.78, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 104.57

Central intensity(cd): 496.481, Maximum intensity(cd): 496.481

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

Beam Angle(50%Imax): [C0/180]Total=101.2

[C90/270]Total=100.2

Field angle(10%Imax): [C0/180]Total=153.2

[C90/270]Total=152.8

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

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

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 : 82.918%

Lotus LED Lights LFR-6R-FE-12W-5CCT-3500K

Zonal flux distribution table

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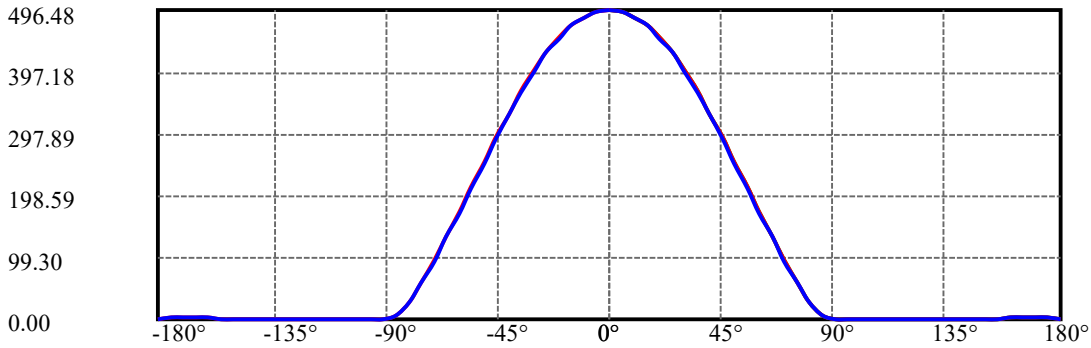
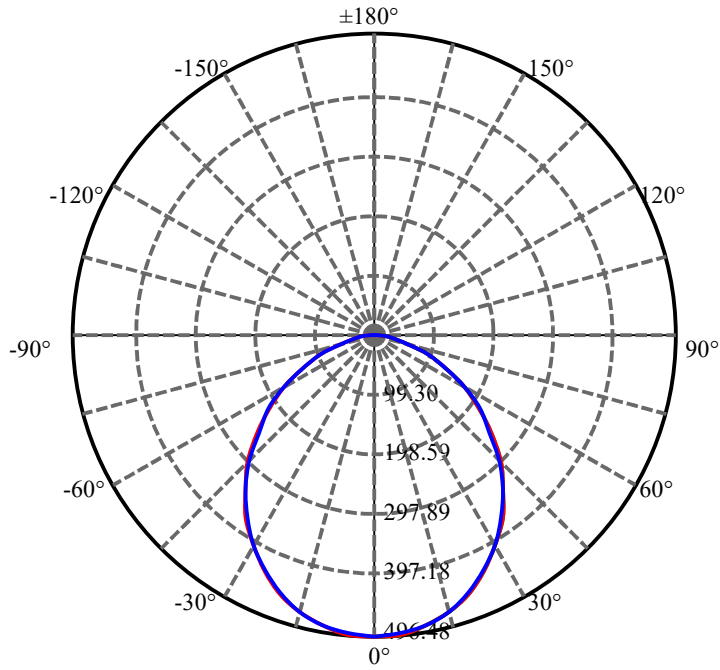
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	496.481	0.000	0	0.00%	0.00%
5.0	493.824	11.839	11.839	0.96%	0.96%
10.0	485.328	35.027	46.866	2.84%	3.80%
15.0	471.668	56.768	103.634	4.61%	8.41%
20.0	452.431	76.159	179.793	6.18%	14.60%
25.0	428.292	92.372	272.165	7.50%	22.10%
30.0	400.075	104.831	376.995	8.51%	30.61%
35.0	366.354	112.862	489.857	9.16%	39.77%
40.0	330.388	116.246	606.103	9.44%	49.21%
45.0	292.440	115.322	721.425	9.36%	58.57%
50.0	251.908	109.993	831.419	8.93%	67.50%
55.0	212.237	100.921	932.339	8.19%	75.69%
60.0	172.942	89.033	1021.372	7.23%	82.92%
65.0	132.597	74.277	1095.649	6.03%	88.95%
70.0	94.835	57.587	1153.236	4.68%	93.62%
75.0	59.617	40.371	1193.608	3.28%	96.90%
80.0	26.609	23.072	1216.679	1.87%	98.77%
85.0	5.725	8.786	1225.465	0.71%	99.49%
90.0	0.674	1.752	1227.217	0.14%	99.63%
95.0	0.224	0.246	1227.463	0.02%	99.65%
100.0	0.449	0.183	1227.646	0.01%	99.66%
105.0	0.449	0.240	1227.887	0.02%	99.68%
110.0	0.449	0.235	1228.121	0.02%	99.70%
115.0	0.449	0.227	1228.349	0.02%	99.72%
120.0	0.449	0.218	1228.567	0.02%	99.74%
125.0	0.599	0.242	1228.809	0.02%	99.76%
130.0	0.898	0.326	1229.135	0.03%	99.79%
135.0	0.898	0.363	1229.498	0.03%	99.81%
140.0	0.898	0.333	1229.83	0.03%	99.84%
145.0	0.898	0.300	1230.13	0.02%	99.87%
150.0	0.898	0.265	1230.395	0.02%	99.89%
155.0	1.347	0.284	1230.679	0.02%	99.91%
160.0	1.796	0.330	1231.009	0.03%	99.94%
165.0	1.984	0.312	1231.32	0.03%	99.96%
170.0	2.246	0.251	1231.571	0.02%	99.98%
175.0	2.395	0.166	1231.737	0.01%	100.00%
180.0	1.347	0.045	1231.782	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	377.00	30.61%	30.61%
0-40	606.10	49.21%	49.21%
0-60	1021.37	82.92%	82.92%
0-90	1227.22	99.63%	99.63%
0-120	1228.57	99.74%	99.74%
0-180	1231.78	100.00%	100.00%
60-90	205.85	16.71%	16.71%
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%
0-57.98	985.43	80.00%	80.00%

ZONAL LUMEN SUMMARY

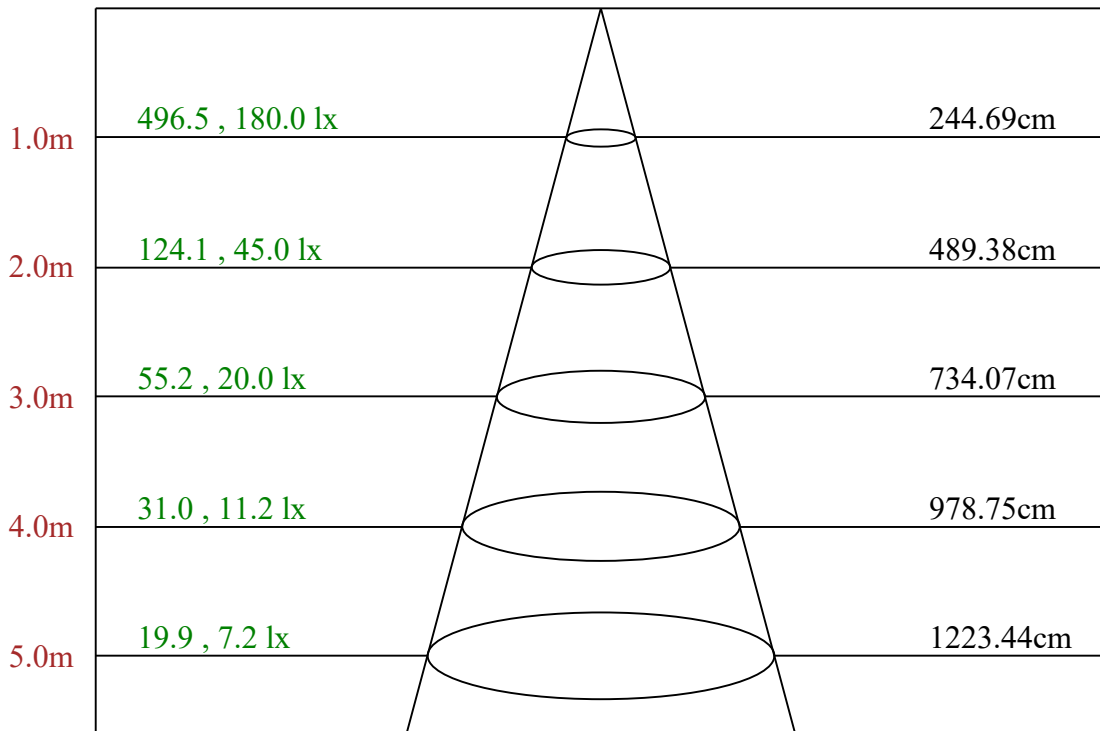
0-10	46.87
10-20	132.93
20-30	197.20
30-40	229.11
40-50	225.32
50-60	189.95
60-70	131.86
70-80	63.44
80-90	10.54
90-100	0.43
100-110	0.48
110-120	0.45
120-130	0.57
130-140	0.70
140-150	0.56
150-160	0.61
160-170	0.56
170-180	0.17



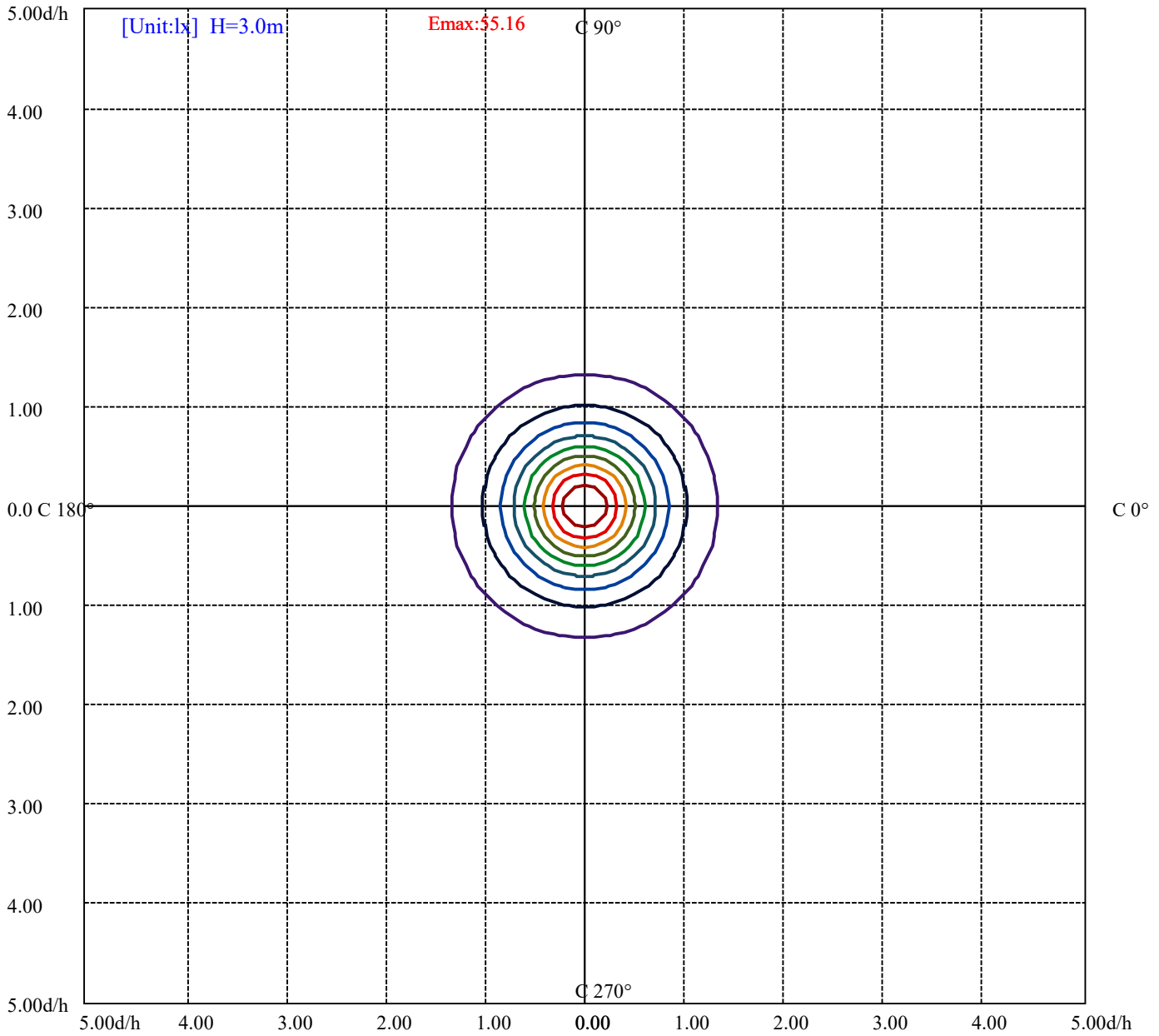
C0(Max): ———  
 C0/C180: ———  
 C90/C270: ———

Field angle(10%Imax):C0/180Left:76.6 Right:76.6  
 :C90/270Left:76.4 Right:76.4

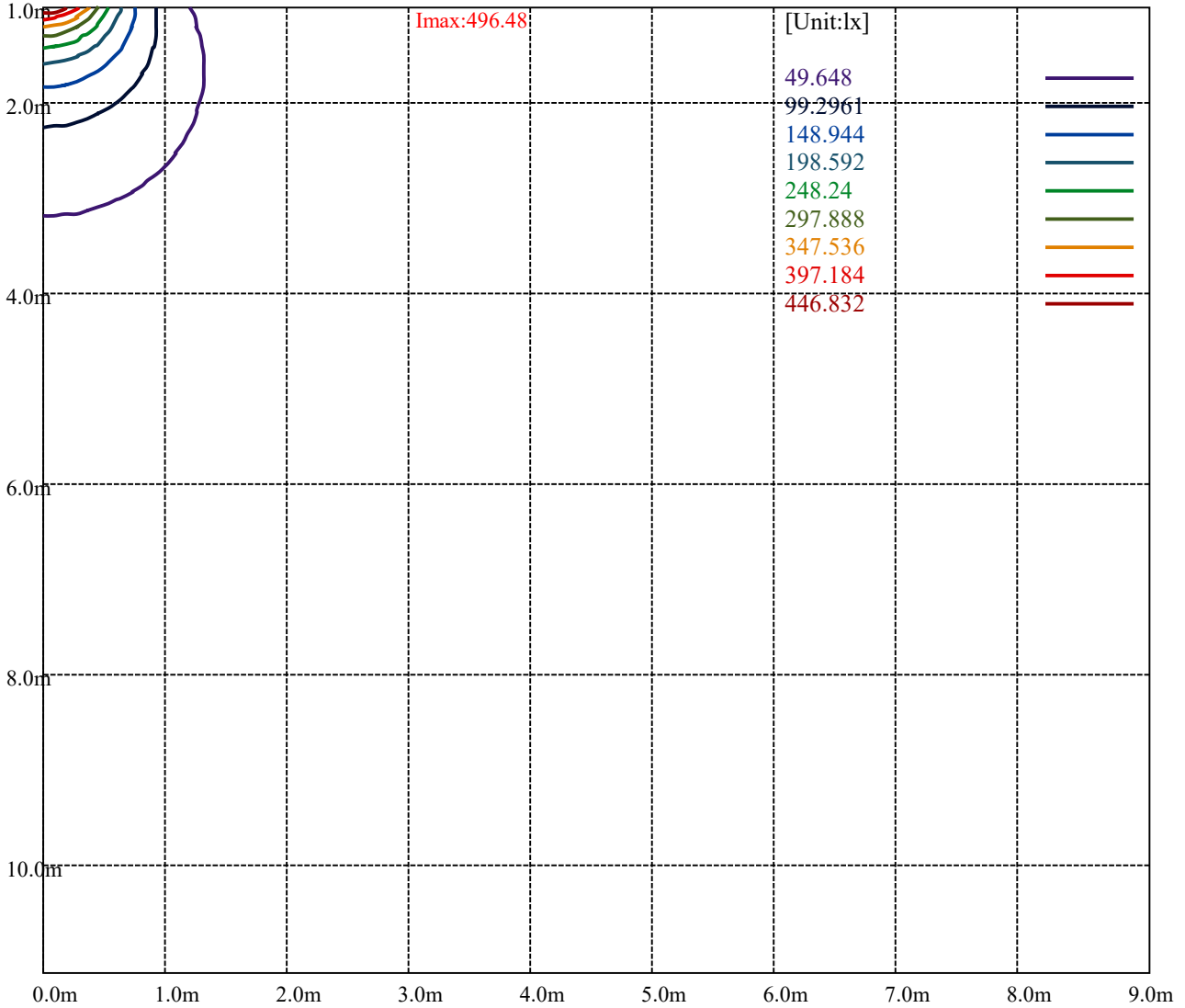
Beam Angle(50%Imax):C0/180Left:50.6 Right:50.6  
 :C90/270Left:50.1 Right:50.1



Max , Ave      Beam angle of C0 plane 101.48



(10%Emax) 5.516444	—
(20%Emax) 11.0329	—
(30%Emax) 16.54933	—
(40%Emax) 22.06578	—
(50%Emax) 27.58222	—
(60%Emax) 33.09867	—
(70%Emax) 38.61511	—
(80%Emax) 44.13155	—
(90%Emax) 49.648	—



Lotus LED Lights LFR-6R-FE-12W-5CCT-3500K

Luminance Limiting Curve(no luminous side)

Luminance Table

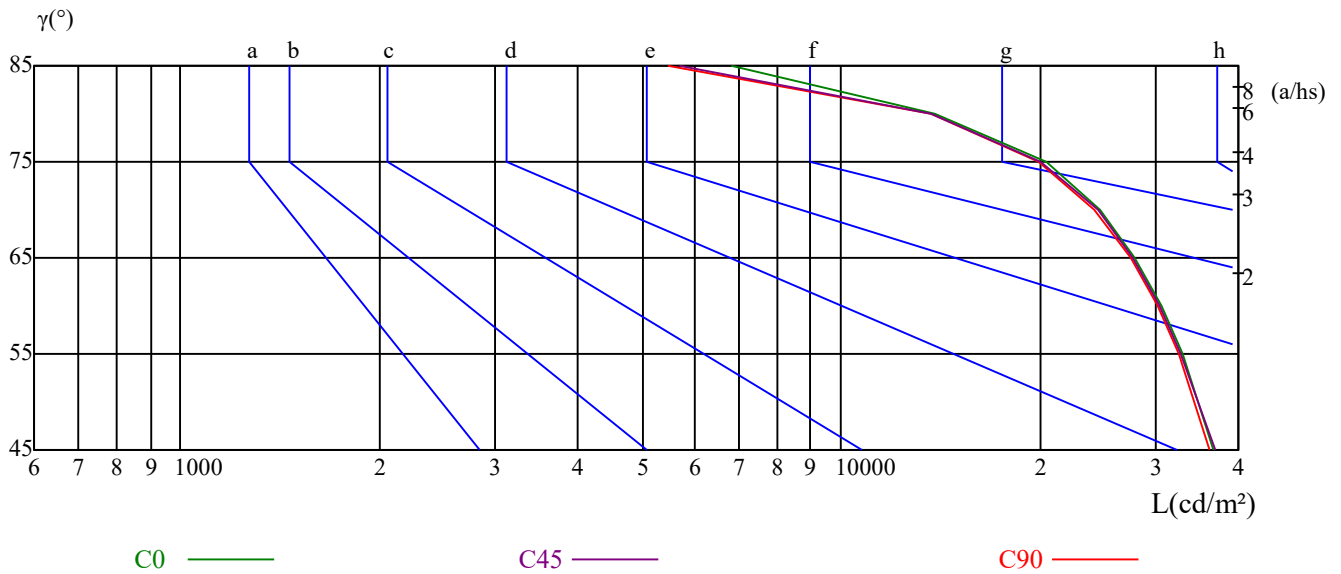
$\gamma$	45	50	55	60	65	70	75	80	85
C0	36690	34762	32889	30610	27887	24745	20476	13893	6806
C45	37002	34735	32791	30459	27756	24473	20049	13739	5703
C90	36205	34270	32455	30245	27518	24254	19936	13714	5465

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
27887	27518	27756	20476	19936	20049	6806	5465	5703

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-6R-FE-12W-5CCT-3500K

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	496.48	496.48	490.22	479.48	462.49	440.12	413.29	382.87	347.98
15.0	496.48	495.58	489.31	478.56	460.63	438.23	411.34	379.98	345.92
30.0	496.48	495.58	490.20	477.63	459.67	438.12	411.19	378.87	343.86
45.0	496.48	496.48	489.29	476.69	459.60	436.22	409.24	377.76	342.68
60.0	496.48	495.58	488.39	475.79	459.60	435.32	409.24	375.96	341.78
75.0	496.48	495.58	488.39	476.69	459.60	435.32	407.44	375.06	339.08
90.0	496.48	494.68	487.50	474.93	457.88	434.53	405.80	375.28	339.37
105.0	496.48	494.68	487.50	474.93	458.77	434.53	407.60	375.28	339.37
120.0	496.48	495.58	488.39	475.79	458.70	435.32	408.34	375.96	339.98
135.0	496.48	495.58	488.39	475.79	458.70	435.32	408.34	377.76	342.68
150.0	496.48	495.58	488.39	475.79	459.60	436.22	410.14	377.76	342.68
165.0	496.48	494.68	488.40	476.73	459.67	437.23	410.29	377.07	342.06
180.0	496.48	491.11	480.38	465.17	443.70	417.76	385.56	351.56	313.99
195.0	496.48	491.10	480.35	464.22	442.71	417.62	386.25	352.20	314.56
210.0	496.48	491.99	481.22	465.96	443.51	418.37	386.95	351.94	315.13
225.0	496.48	491.98	482.09	466.80	444.31	420.03	387.65	353.47	315.70
240.0	496.48	491.98	482.09	466.80	445.21	420.03	387.65	353.47	315.70
255.0	496.48	492.88	482.99	467.70	445.21	420.03	389.45	355.27	318.40
270.0	496.48	491.99	482.12	466.85	445.31	420.17	390.54	355.53	318.72
285.0	496.48	491.99	482.12	466.85	446.20	421.07	390.54	355.53	320.51
300.0	496.48	492.88	482.99	467.70	447.01	421.83	392.15	358.87	322.89
315.0	496.48	493.78	482.99	467.70	447.01	422.73	393.05	359.77	322.89
330.0	496.48	492.88	482.99	467.70	447.01	422.73	409.24	358.87	322.89
345.0	496.48	491.09	481.22	467.75	446.20	420.17	390.54	356.42	320.51
360.0	496.48	496.48	490.22	479.48	462.49	440.12	413.29	382.87	347.98
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	312.20	271.05	231.69	191.44	152.08	112.71	76.04	42.04	11.63
15.0	306.49	269.75	230.32	189.99	148.76	112.02	76.17	40.33	11.65
30.0	307.05	266.65	227.14	186.74	148.14	108.63	73.62	37.71	10.77
45.0	304.00	266.23	225.75	186.18	146.61	107.93	71.05	37.78	9.89
60.0	303.10	263.53	223.06	183.48	144.81	107.03	70.15	35.98	8.99
75.0	301.31	260.83	223.06	182.58	143.01	105.23	68.36	35.08	8.09
90.0	300.76	259.46	221.76	182.25	141.85	103.25	67.33	35.01	7.18
105.0	300.76	261.26	221.76	182.25	142.75	103.25	66.44	34.12	7.18
120.0	302.21	263.53	223.96	183.48	143.01	104.33	67.46	33.28	7.20
135.0	303.10	264.43	224.86	184.38	143.91	104.33	67.46	34.18	6.30
150.0	305.80	264.43	224.86	185.28	145.71	106.13	68.36	34.18	7.20
165.0	304.35	265.75	225.35	184.95	146.34	106.84	69.13	35.01	7.18
180.0	274.63	234.37	195.01	154.76	114.50	78.72	43.83	12.52	1.79
195.0	275.13	234.80	194.47	155.04	114.71	78.86	43.91	13.44	2.69
210.0	275.62	235.22	195.72	155.32	115.82	79.01	43.99	14.36	2.69
225.0	275.22	235.65	196.07	155.60	116.03	80.05	44.97	16.19	2.70
240.0	277.92	236.55	196.97	156.50	117.82	81.85	47.67	17.09	2.70
255.0	278.82	239.25	197.87	159.20	120.52	83.65	47.67	17.09	2.70
270.0	278.32	238.81	199.31	159.81	121.20	84.39	49.38	18.85	3.59
285.0	281.91	241.51	202.00	161.60	122.10	85.29	65.54	18.85	2.69
300.0	283.32	243.74	203.27	160.78	123.22	85.45	51.27	19.79	3.60
315.0	301.31	243.74	204.17	162.80	124.12	86.34	51.27	19.79	3.60
330.0	283.32	243.74	203.27	163.69	124.12	86.34	50.37	17.99	2.70
345.0	281.91	241.51	202.00	162.50	121.20	84.39	49.38	17.96	2.69
360.0	312.20	271.05	231.69	191.44	152.08	112.71	76.04	42.04	11.63

Lotus LED Lights LFR-6R-FE-12W-5CCT-3500K

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	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
15.0	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
30.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
45.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.90
60.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.90
75.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
90.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
105.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
120.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.90
135.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.90
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
165.0	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90
180.0	0.00	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
195.0	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
210.0	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
225.0	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
240.0	0.90	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
255.0	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
270.0	0.90	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
285.0	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
300.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
315.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
330.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
345.0	0.00	0.00	0.90	0.90	0.90	0.90	0.90	0.90	0.90
360.0	1.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.89	0.89	0.89	0.89	1.79	1.79	1.79	2.68	2.68
15.0	0.90	0.90	0.90	0.90	1.79	1.79	1.79	2.69	2.69
30.0	0.90	0.90	0.90	0.90	1.80	1.80	2.69	2.69	2.69
45.0	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.70	2.70
60.0	0.90	0.90	0.90	0.90	1.80	1.80	2.70	2.70	2.70
75.0	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.70	2.70
90.0	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.69	2.69
105.0	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.69	2.69
120.0	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.70	2.70
135.0	0.90	0.90	0.90	0.90	1.80	1.80	2.70	2.70	2.70
150.0	0.90	0.90	0.90	0.90	1.80	1.80	2.70	2.70	2.70
165.0	0.90	0.90	0.90	0.90	1.80	1.80	2.69	2.69	2.69
180.0	0.89	0.89	0.89	0.89	0.89	1.79	1.79	1.79	1.79
195.0	0.90	0.90	0.90	0.90	0.90	1.79	1.79	1.79	2.69
210.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
225.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
240.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.70
255.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
270.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
285.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.69
300.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
315.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
330.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	1.80
345.0	0.90	0.90	0.90	0.90	0.90	1.80	1.80	1.80	2.69
360.0	0.89	0.89	0.89	0.89	1.79	1.79	1.79	2.68	2.68

Intensity data(cd)

C/γ(°)	180.0
0.0	2.68
15.0	2.69
30.0	2.69
45.0	2.70
60.0	2.70
75.0	2.70
90.0	2.69
105.0	2.69
120.0	2.70
135.0	2.70
150.0	2.70
165.0	2.69
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	2.68