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### Lotus LED Lights

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Client:

LumCAT: LFR-6S-RB-14W-5CCT-3000K

Luminaire: Fire rated slim panel

Report No:

Ballast type:

Test No: LCZP23080240

Voltage(V): 120.000

LampCAT:

Current(A): 0.120

Lamp flux(lm): 1609.7

Power (W): 14.150

Number of Lamps: 1

PF: 0.981

Length(mm): -130

Width(mm): -130

Phm Type: C

Height(mm): 0

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### Photometric Results

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Lumens(lm): 1609.72, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 113.76

Central intensity(cd): 643.860, Maximum intensity(cd): 643.860

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

Beam Angle(50%Imax): [C0/180]Total=101.0

[C90/270]Total=101.0

Field angle(10%Imax): [C0/180]Total=152.6

[C90/270]Total=153.0

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(%): 0.15%

Down flux rate of lamp(%): 99.85%

Up flux rate of LUM(%): 0.15%

Down flux rate of LUM(%): 99.85%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 82.768%

Lotus LED Lights LFR-6S-RB-14W-5CCT-3000K

Zonal flux distribution table

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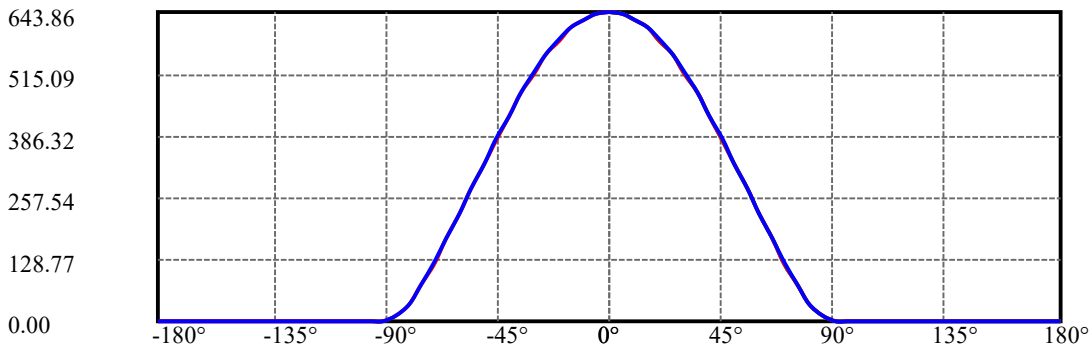
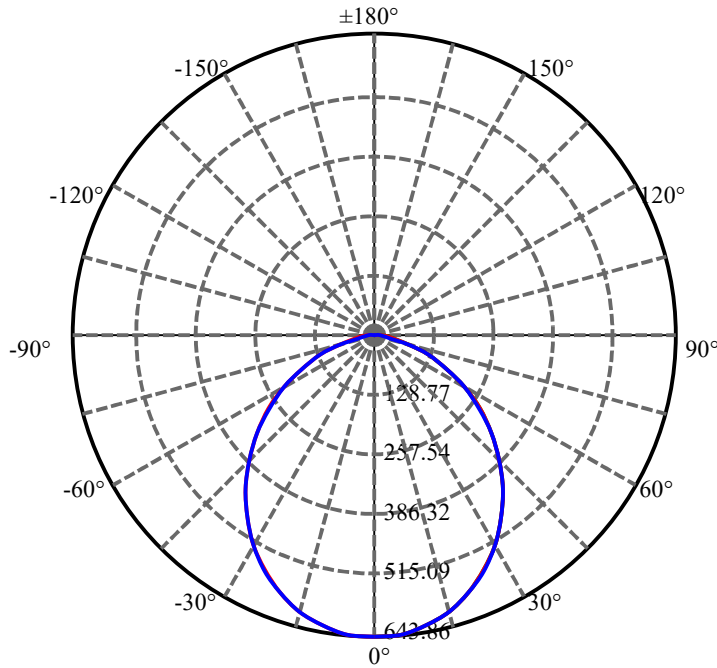
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	643.860	0.000	0	0.00%	0.00%
5.0	641.012	15.360	15.36	0.95%	0.95%
10.0	630.489	45.486	60.846	2.83%	3.78%
15.0	612.146	73.712	134.558	4.58%	8.36%
20.0	588.002	98.909	233.467	6.14%	14.50%
25.0	557.123	120.103	353.57	7.46%	21.96%
30.0	520.179	136.333	489.903	8.47%	30.43%
35.0	477.771	146.955	636.858	9.13%	39.56%
40.0	431.138	151.645	788.503	9.42%	48.98%
45.0	381.551	150.476	938.979	9.35%	58.33%
50.0	330.050	143.789	1082.769	8.93%	67.26%
55.0	278.627	132.347	1215.115	8.22%	75.49%
60.0	228.490	117.219	1332.334	7.28%	82.77%
65.0	174.698	98.016	1430.349	6.09%	88.86%
70.0	125.220	75.941	1506.291	4.72%	93.57%
75.0	78.217	53.175	1559.466	3.30%	96.88%
80.0	37.575	30.983	1590.448	1.92%	98.80%
85.0	11.539	13.345	1603.794	0.83%	99.63%
90.0	1.568	3.589	1607.382	0.22%	99.85%
95.0	0.000	0.429	1607.812	0.03%	99.88%
100.0	0.000	0.000	1607.812	0.00%	99.88%
105.0	0.074	0.020	1607.832	0.00%	99.88%
110.0	0.111	0.049	1607.88	0.00%	99.89%
115.0	0.000	0.028	1607.908	0.00%	99.89%
120.0	0.112	0.027	1607.936	0.00%	99.89%
125.0	0.000	0.026	1607.961	0.00%	99.89%
130.0	0.000	0.000	1607.961	0.00%	99.89%
135.0	0.336	0.068	1608.029	0.00%	99.90%
140.0	0.786	0.208	1608.237	0.01%	99.91%
145.0	0.898	0.281	1608.518	0.02%	99.93%
150.0	0.898	0.265	1608.783	0.02%	99.94%
155.0	0.898	0.227	1609.01	0.01%	99.96%
160.0	0.898	0.188	1609.198	0.01%	99.97%
165.0	1.422	0.191	1609.39	0.01%	99.98%
170.0	1.534	0.175	1609.565	0.01%	99.99%
175.0	1.797	0.119	1609.684	0.01%	100.00%
180.0	0.961	0.033	1609.717	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	489.90	30.43%	30.43%
0-40	788.50	48.98%	48.98%
0-60	1332.33	82.77%	82.77%
0-90	1607.38	99.85%	99.85%
0-120	1607.94	99.89%	99.89%
0-180	1609.72	100.00%	100.00%
60-90	275.05	17.09%	17.09%
90-120	0.55	0.03%	0.03%
90-130	0.58	0.04%	0.04%
90-150	1.40	0.09%	0.09%
90-180	2.30	0.14%	0.14%
0-58.10	1287.77	80.00%	80.00%

ZONAL LUMEN SUMMARY

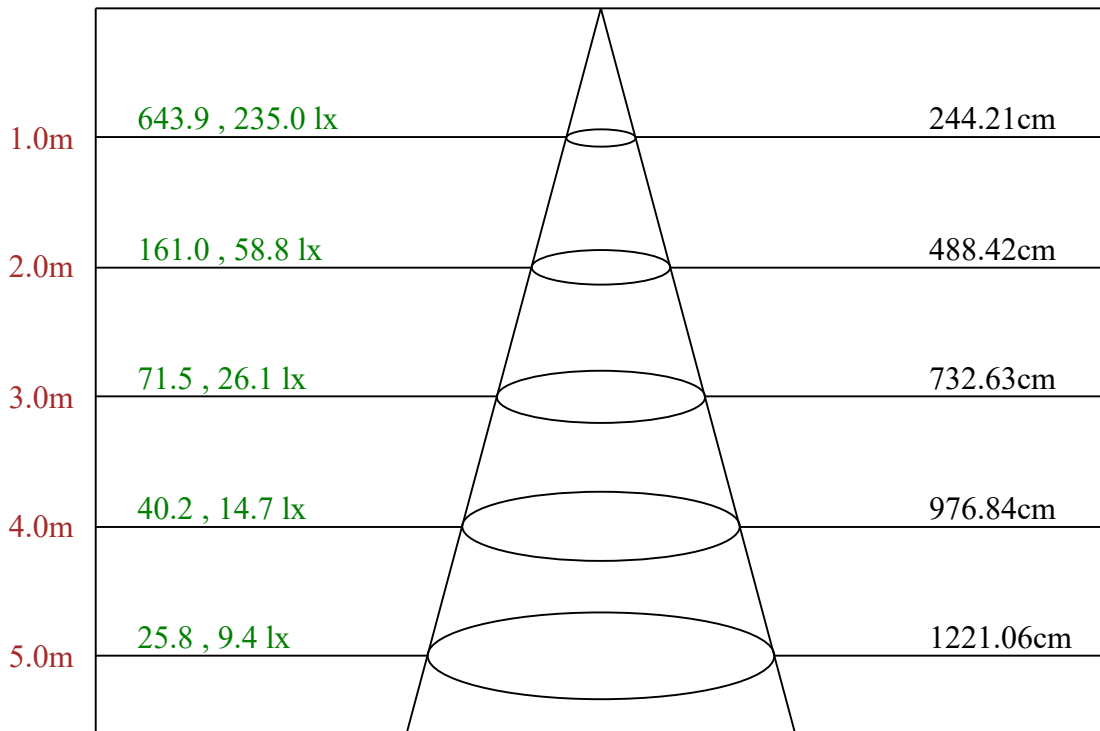
0-10	60.85
10-20	172.62
20-30	256.44
30-40	298.60
40-50	294.27
50-60	249.57
60-70	173.96
70-80	84.16
80-90	16.93
90-100	0.43
100-110	0.07
110-120	0.06
120-130	0.03
130-140	0.28
140-150	0.55
150-160	0.42
160-170	0.37
170-180	0.12



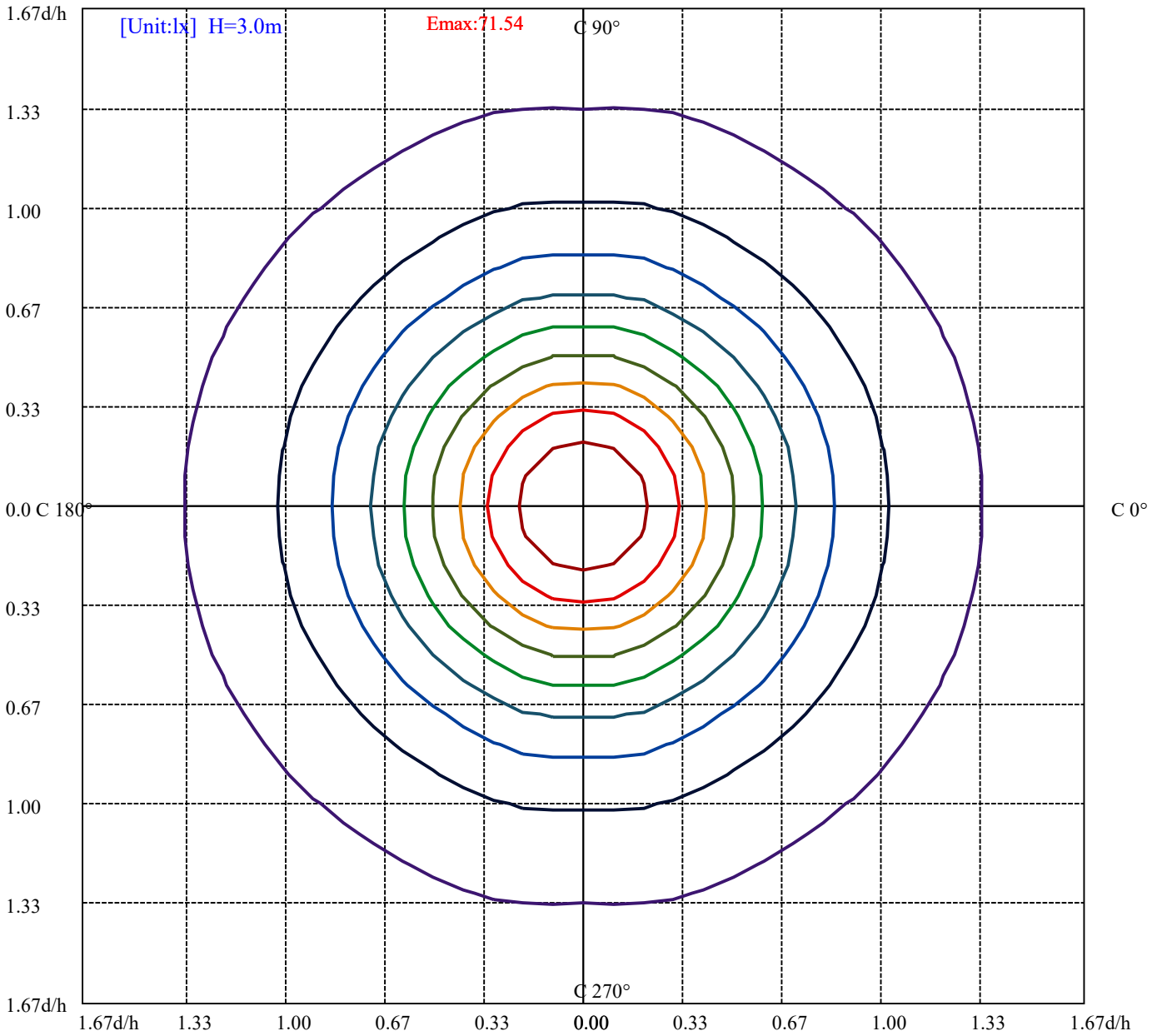
C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:76.3 Right:76.3  
:C90/270Left:76.5 Right:76.5

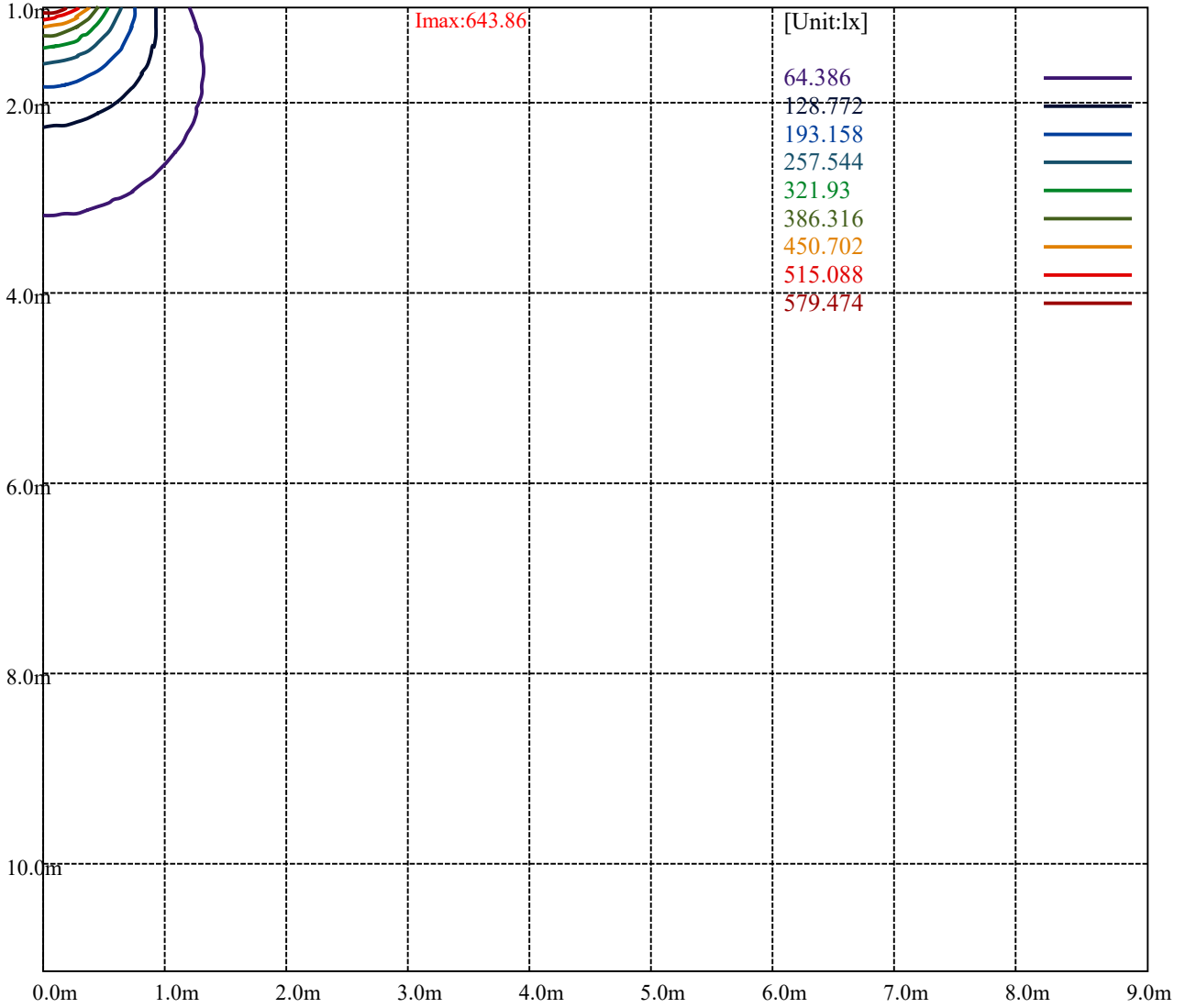
Beam Angle(50%Imax):C0/180Left:50.5 Right:50.5  
:C90/270Left:50.5 Right:50.5



Max , Ave      Beam angle of C0 plane 101.37



(10%Emax) 7.154	
(20%Emax) 14.308	
(30%Emax) 21.462	
(40%Emax) 28.616	
(50%Emax) 35.77	
(60%Emax) 42.924	
(70%Emax) 50.078	
(80%Emax) 57.232	
(90%Emax) 64.386	



Luminance Table

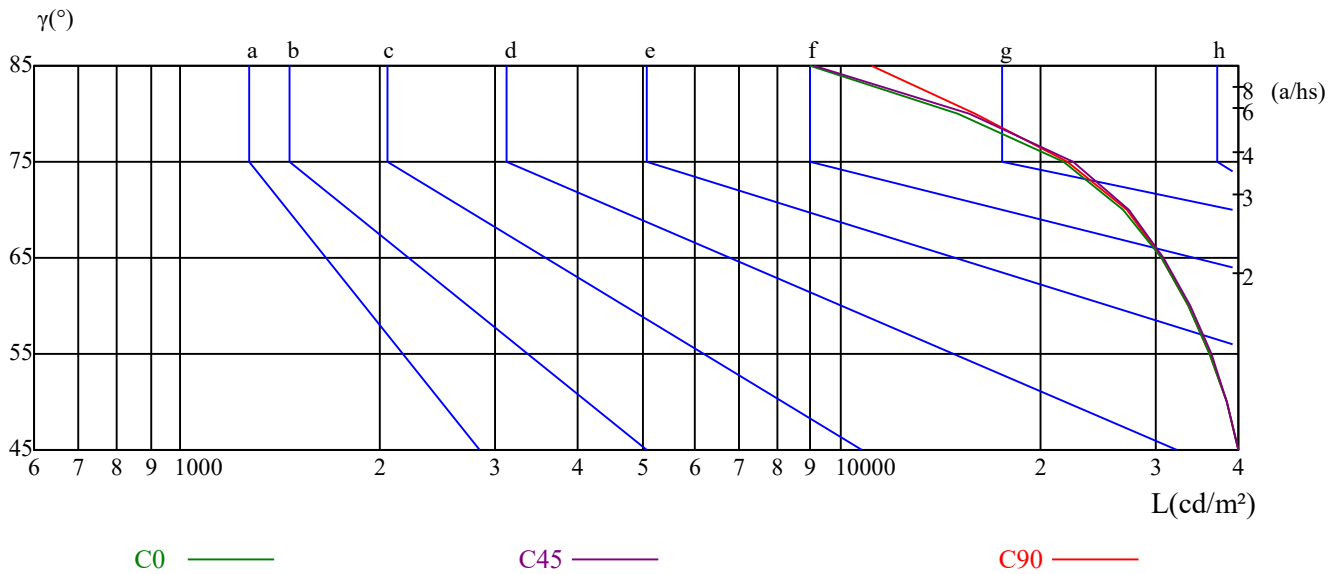
$\gamma$	45	50	55	60	65	70	75	80	85
C0	40249	38366	36076	33583	30581	26779	21757	15042	8952
C45	40505	38488	36331	33842	30887	27306	22454	15696	9117
C90	40348	38356	36228	33675	30592	27057	22072	15968	11116

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
30581	30592	30887	21757	22072	22454	8952	11116	9117

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	0.80	0.90	0.84	0.79	0.87	0.82	0.78	0.84	0.79	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	0.63	0.61
4	0.73	0.64	0.58	0.71	0.63	0.57	0.69	0.62	0.56	0.66	0.60	0.56	0.64	0.59	0.55	0.53
5	0.65	0.56	0.50	0.64	0.56	0.50	0.62	0.55	0.49	0.60	0.54	0.49	0.58	0.52	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	0.42	0.40
7	0.53	0.45	0.39	0.53	0.44	0.39	0.51	0.44	0.38	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	0.34	0.46	0.39	0.34	0.44	0.38	0.34	0.32
9	0.45	0.37	0.31	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	0.41	0.34	0.29	0.41	0.34	0.28	0.40	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28	0.26

Lotus LED Lights LFR-6S-RB-14W-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	643.86	640.26	628.55	610.54	585.78	554.26	517.79	475.02	427.74
15.0	643.86	640.93	629.89	611.64	587.32	556.23	519.30	477.18	430.34
30.0	643.86	640.48	630.12	610.74	586.19	555.55	516.80	475.12	428.04
45.0	643.86	640.70	630.33	611.41	587.53	556.46	518.85	475.84	429.24
60.0	643.86	640.94	629.69	611.24	586.72	555.01	518.34	474.47	427.68
75.0	643.86	642.74	634.02	617.27	594.26	565.00	529.92	489.05	443.26
90.0	643.86	640.31	629.23	610.60	586.21	554.73	517.93	474.91	428.80
105.0	643.86	642.74	634.02	617.27	594.26	565.00	529.92	489.05	443.26
120.0	643.86	640.94	629.69	611.24	586.72	555.01	518.34	474.47	427.68
135.0	643.86	640.70	630.33	611.41	587.53	556.46	518.85	475.84	429.24
150.0	643.86	640.48	630.12	610.74	586.19	555.55	516.80	475.12	428.04
165.0	643.86	640.93	629.89	611.64	587.32	556.23	519.30	477.18	430.34
180.0	643.86	640.26	628.55	610.54	585.78	554.26	517.79	475.02	427.74
195.0	643.86	640.93	629.89	611.64	587.32	556.23	519.30	477.18	430.34
210.0	643.86	640.48	630.12	610.74	586.19	555.55	516.80	475.12	428.04
225.0	643.86	640.70	630.33	611.41	587.53	556.46	518.85	475.84	429.24
240.0	643.86	640.94	629.69	611.24	586.72	555.01	518.34	474.47	427.68
255.0	643.86	642.74	634.02	617.27	594.26	565.00	529.92	489.05	443.26
270.0	643.86	640.31	629.23	610.60	586.21	554.73	517.93	474.91	428.80
285.0	643.86	642.74	634.02	617.27	594.26	565.00	529.92	489.05	443.26
300.0	643.86	640.94	629.69	611.24	586.72	555.01	518.34	474.47	427.68
315.0	643.86	640.70	630.33	611.41	587.53	556.46	518.85	475.84	429.24
330.0	643.86	640.48	630.12	610.74	586.19	555.55	516.80	475.12	428.04
345.0	643.86	640.93	629.89	611.64	587.32	556.23	519.30	477.18	430.34
360.0	643.86	640.26	628.55	610.54	585.78	554.26	517.79	475.02	427.74
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	377.76	327.33	274.65	222.88	171.55	121.57	74.74	34.67	10.36
15.0	380.57	328.99	277.65	231.04	173.38	123.61	76.77	36.23	11.25
30.0	378.48	326.22	275.52	228.90	171.22	121.88	75.25	34.92	10.13
45.0	380.16	328.38	276.60	224.60	173.26	123.96	77.14	36.18	10.55
60.0	378.42	326.66	274.92	223.19	171.43	121.94	75.36	34.86	9.88
75.0	393.46	342.76	291.83	240.03	187.32	137.73	89.50	47.52	15.81
90.0	378.69	327.25	275.81	223.49	171.61	122.83	75.83	36.81	12.86
105.0	393.46	342.76	291.83	240.03	187.32	137.73	89.50	47.52	15.81
120.0	378.42	326.66	274.92	223.19	171.43	121.94	75.36	34.86	9.88
135.0	380.16	328.38	276.60	224.60	173.26	123.96	77.14	36.18	10.55
150.0	378.48	326.22	275.52	228.90	171.22	121.88	75.25	34.92	10.13
165.0	380.57	328.99	277.65	231.04	173.38	123.61	76.77	36.23	11.25
180.0	377.76	327.33	274.65	222.88	171.55	121.57	74.74	34.67	10.36
195.0	380.57	328.99	277.65	231.04	173.38	123.61	76.77	36.23	11.25
210.0	378.48	326.22	275.52	228.90	171.22	121.88	75.25	34.92	10.13
225.0	380.16	328.38	276.60	224.60	173.26	123.96	77.14	36.18	10.55
240.0	378.42	326.66	274.92	223.19	171.43	121.94	75.36	34.86	9.88
255.0	393.46	342.76	291.83	240.03	187.32	137.73	89.50	47.52	15.81
270.0	378.69	327.25	275.81	223.49	171.61	122.83	75.83	36.81	12.86
285.0	393.46	342.76	291.83	240.03	187.32	137.73	89.50	47.52	15.81
300.0	378.42	326.66	274.92	223.19	171.43	121.94	75.36	34.86	9.88
315.0	380.16	328.38	276.60	224.60	173.26	123.96	77.14	36.18	10.55
330.0	378.48	326.22	275.52	228.90	171.22	121.88	75.25	34.92	10.13
345.0	380.57	328.99	277.65	231.04	173.38	123.61	76.77	36.23	11.25
360.0	377.76	327.33	274.65	222.88	171.55	121.57	74.74	34.67	10.36

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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	0.45	0.00	0.00
15.0	1.58	0.00	0.00	0.00	0.00	0.00	0.22	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	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	1.35	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
75.0	2.23	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
90.0	1.77	0.00	0.00	0.00	0.44	0.00	0.44	0.00	0.00
105.0	2.23	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
120.0	1.35	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
135.0	1.35	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	1.58	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
180.0	1.35	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00
195.0	1.58	0.00	0.00	0.00	0.00	0.00	0.22	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	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
240.0	1.35	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
255.0	2.23	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
270.0	1.77	0.00	0.00	0.00	0.44	0.00	0.44	0.00	0.00
285.0	2.23	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
300.0	1.35	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00
315.0	1.35	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	1.58	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
360.0	1.35	0.00	0.00	0.00	0.00	0.00	0.45	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	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.80	1.80
15.0	0.22	0.68	0.90	0.90	0.90	0.90	1.35	1.58	1.80
30.0	0.00	0.68	0.90	0.90	0.90	0.90	1.35	1.35	1.80
45.0	0.22	0.90	0.90	0.90	0.90	0.90	1.35	1.35	1.80
60.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.57	1.80
75.0	0.67	0.89	0.89	0.89	0.89	0.89	1.56	1.79	1.79
90.0	0.44	0.44	0.89	0.89	0.89	0.89	1.77	1.33	1.77
105.0	0.67	0.89	0.89	0.89	0.89	0.89	1.56	1.79	1.79
120.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.57	1.80
135.0	0.22	0.90	0.90	0.90	0.90	0.90	1.35	1.35	1.80
150.0	0.00	0.68	0.90	0.90	0.90	0.90	1.35	1.35	1.80
165.0	0.22	0.68	0.90	0.90	0.90	0.90	1.35	1.58	1.80
180.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.80	1.80
195.0	0.22	0.68	0.90	0.90	0.90	0.90	1.35	1.58	1.80
210.0	0.00	0.68	0.90	0.90	0.90	0.90	1.35	1.35	1.80
225.0	0.22	0.90	0.90	0.90	0.90	0.90	1.35	1.35	1.80
240.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.57	1.80
255.0	0.67	0.89	0.89	0.89	0.89	0.89	1.56	1.79	1.79
270.0	0.44	0.44	0.89	0.89	0.89	0.89	1.77	1.33	1.77
285.0	0.67	0.89	0.89	0.89	0.89	0.89	1.56	1.79	1.79
300.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.57	1.80
315.0	0.22	0.90	0.90	0.90	0.90	0.90	1.35	1.35	1.80
330.0	0.00	0.68	0.90	0.90	0.90	0.90	1.35	1.35	1.80
345.0	0.22	0.68	0.90	0.90	0.90	0.90	1.35	1.58	1.80
360.0	0.45	0.90	0.90	0.90	0.90	0.90	1.35	1.80	1.80

Intensity data(cd)

C/γ(°)	180.0
0.0	0.96
15.0	0.96
30.0	0.96
45.0	0.96
60.0	0.96
75.0	0.96
90.0	0.96
105.0	0.96
120.0	0.96
135.0	0.96
150.0	0.96
165.0	0.96
180.0	0.96
195.0	0.96
210.0	0.96
225.0	0.96
240.0	0.96
255.0	0.96
270.0	0.96
285.0	0.96
300.0	0.96
315.0	0.96
330.0	0.96
345.0	0.96
360.0	0.96