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Zhongshan litian lighting co.,ltd

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Client:

LumCAT: LT-YC-30W-40K

Luminaire: LED CANOPY LIGHT

Report No:

Ballast type:

Test No: LCZP20060001

Voltage(V): 120.000

LampCAT:

Current(A): 0.228

Lamp flux(lm): 4084.8

Power (W): 27.080

Number of Lamps: 1

PF: 0.990

Length(mm): -150

Width(mm): -150

Phm Type: C

Height(mm): 40

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Photometric Results

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Lumens(lm): 4056.56, Efficiency(%): 99.31% , Luminous Efficacy(lm/W): 149.80

Central intensity(cd): 1172.092, Maximum intensity(cd): 1172.092

Angle of maximum intensity: C=30.0  $\gamma$ =0.0

Beam Angle(50% Imax): [C0/180]Total=118.6  
[C90/270]Total=118.6

Field angle(10% Imax): [C0/180]Total=194.4  
[C90/270]Total=194.8

Maximum s/h(1/2): C0\_180=1.27 C90\_270=1.27

Maximum s/h(1/4): C0\_180=1.40 C90\_270=1.40

Up flux rate of lamp(%): 5.76%

Down flux rate of lamp(%): 93.55%

Up flux rate of LUM(%): 5.80%

Down flux rate of LUM(%): 94.20%

CIE Type : Direct lighting

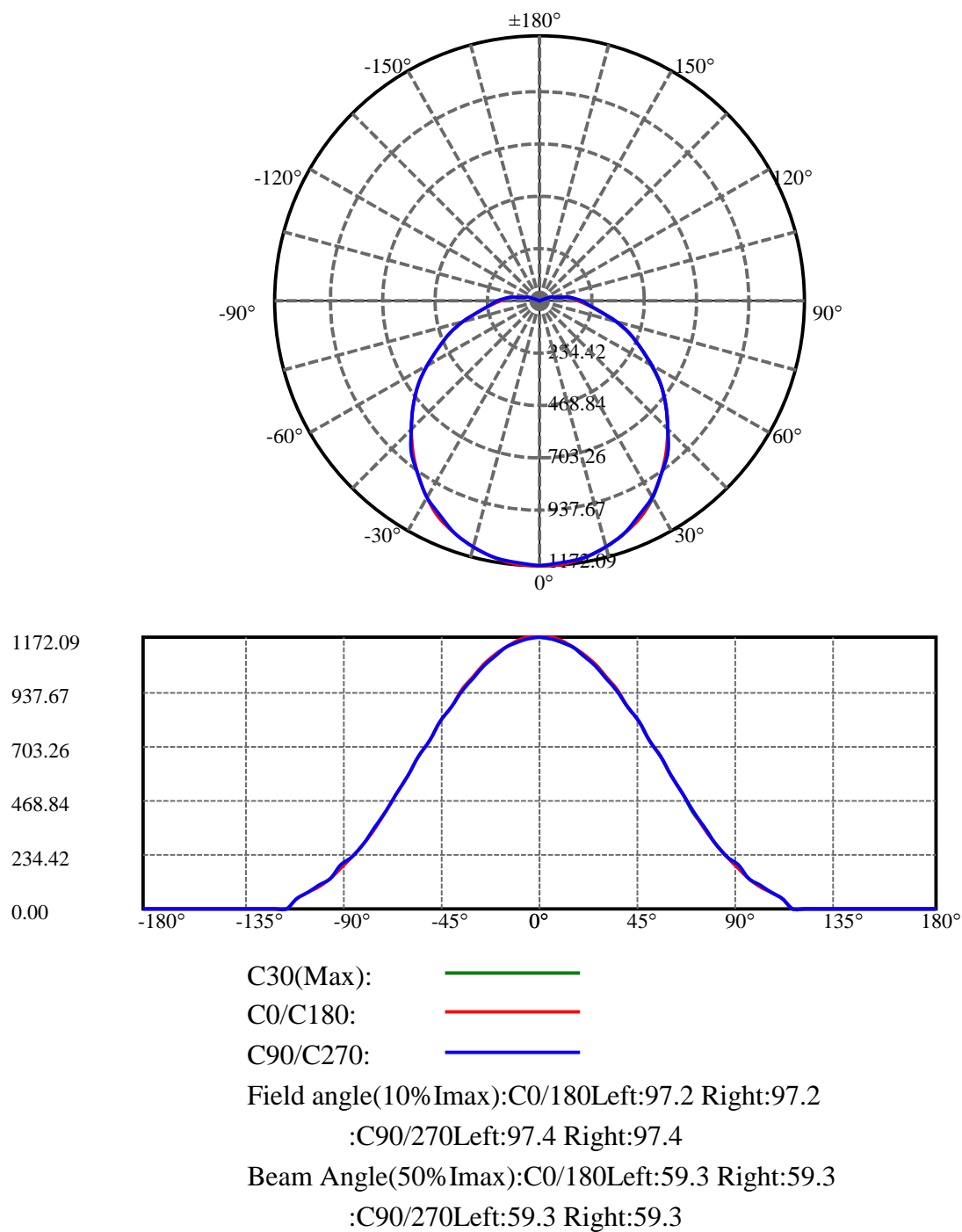
Output flux ratio in  $\pi$  solid angle : 66.873%

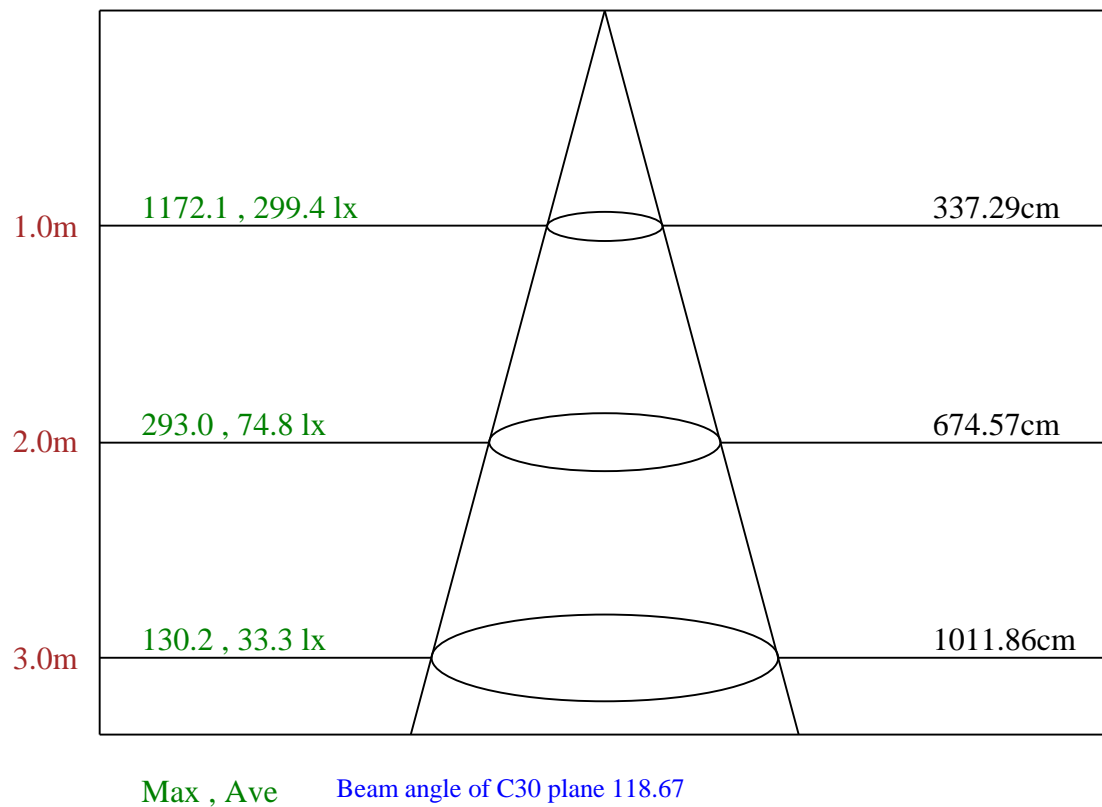
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1172.092	0.000	0	0.00%	0.00%
5.0	1167.158	27.965	27.965	0.68%	0.69%
10.0	1153.422	83.014	110.98	2.03%	2.74%
15.0	1129.067	135.396	246.375	3.31%	6.07%
20.0	1095.368	183.325	429.7	4.49%	10.59%
25.0	1052.886	225.312	655.012	5.52%	16.15%
30.0	1002.014	260.049	915.061	6.37%	22.56%
35.0	942.187	286.297	1201.359	7.01%	29.62%
40.0	876.724	303.472	1504.83	7.43%	37.10%
45.0	807.733	311.891	1816.721	7.64%	44.78%
50.0	730.897	310.903	2127.623	7.61%	52.45%
55.0	653.461	301.006	2428.629	7.37%	59.87%
60.0	575.734	284.125	2712.754	6.96%	66.87%
65.0	495.925	260.522	2973.276	6.38%	73.30%
70.0	419.227	231.722	3204.999	5.67%	79.01%
75.0	348.296	200.618	3405.617	4.91%	83.95%
80.0	281.859	168.612	3574.229	4.13%	88.11%
85.0	224.456	137.578	3711.807	3.37%	91.50%
90.0	176.048	109.661	3821.468	2.68%	94.20%
95.0	133.655	84.799	3906.267	2.08%	96.30%
100.0	98.380	63.050	3969.317	1.54%	97.85%
105.0	70.086	45.077	4014.394	1.10%	98.96%
110.0	46.334	30.430	4044.824	0.74%	99.71%
115.0	0.000	11.732	4056.556	0.29%	100.00%
120.0	0.000	0.000	4056.556	0.00%	100.00%
125.0	0.000	0.000	4056.556	0.00%	100.00%
130.0	0.000	0.000	4056.556	0.00%	100.00%
135.0	0.000	0.000	4056.556	0.00%	100.00%
140.0	0.000	0.000	4056.556	0.00%	100.00%
145.0	0.000	0.000	4056.556	0.00%	100.00%
150.0	0.000	0.000	4056.556	0.00%	100.00%
155.0	0.000	0.000	4056.556	0.00%	100.00%
160.0	0.000	0.000	4056.556	0.00%	100.00%
165.0	0.000	0.000	4056.556	0.00%	100.00%
170.0	0.000	0.000	4056.556	0.00%	100.00%
175.0	0.000	0.000	4056.556	0.00%	100.00%
180.0	0.000	0.000	4056.556	0.00%	100.00%

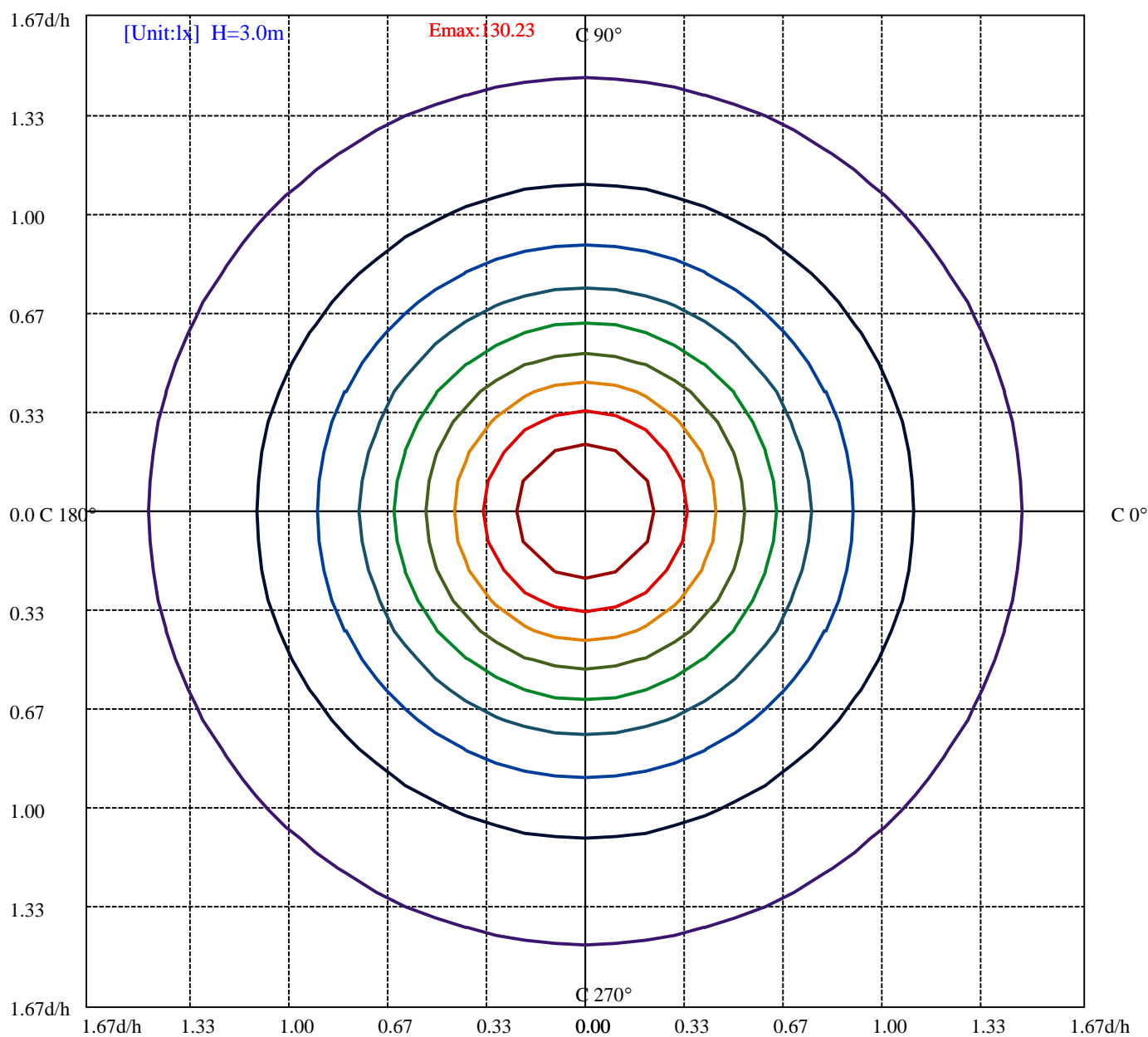
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	915.06	22.40%	22.56%
0-40	1504.83	36.84%	37.10%
0-60	2712.75	66.41%	66.87%
0-90	3821.47	93.55%	94.20%
0-120	4056.56	99.31%	100.00%
0-180	4056.56	99.31%	100.00%
60-90	1108.71	27.14%	27.33%
90-120	235.09	5.76%	5.80%
90-130	235.09	5.76%	5.80%
90-150	235.09	5.76%	5.80%
90-180	235.09	5.76%	5.80%
0-71.00	3245.25	79.45%	80.00%

## ZONAL LUMEN SUMMARY

0-10	110.98
10-20	318.72
20-30	485.36
30-40	589.77
40-50	622.79
50-60	585.13
60-70	492.24
70-80	369.23
80-90	247.24
90-100	147.85
100-110	75.51
110-120	11.73
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00







(10% E <sub>max</sub> ) 13.02322	—
(20% E <sub>max</sub> ) 26.04644	—
(30% E <sub>max</sub> ) 39.06967	—
(40% E <sub>max</sub> ) 52.093	—
(50% E <sub>max</sub> ) 65.11623	—
(60% E <sub>max</sub> ) 78.13944	—
(70% E <sub>max</sub> ) 91.16267	—
(80% E <sub>max</sub> ) 104.1859	—
(90% E <sub>max</sub> ) 117.2089	—

Luminance Limiting Curve(no luminous side)

Luminance Table

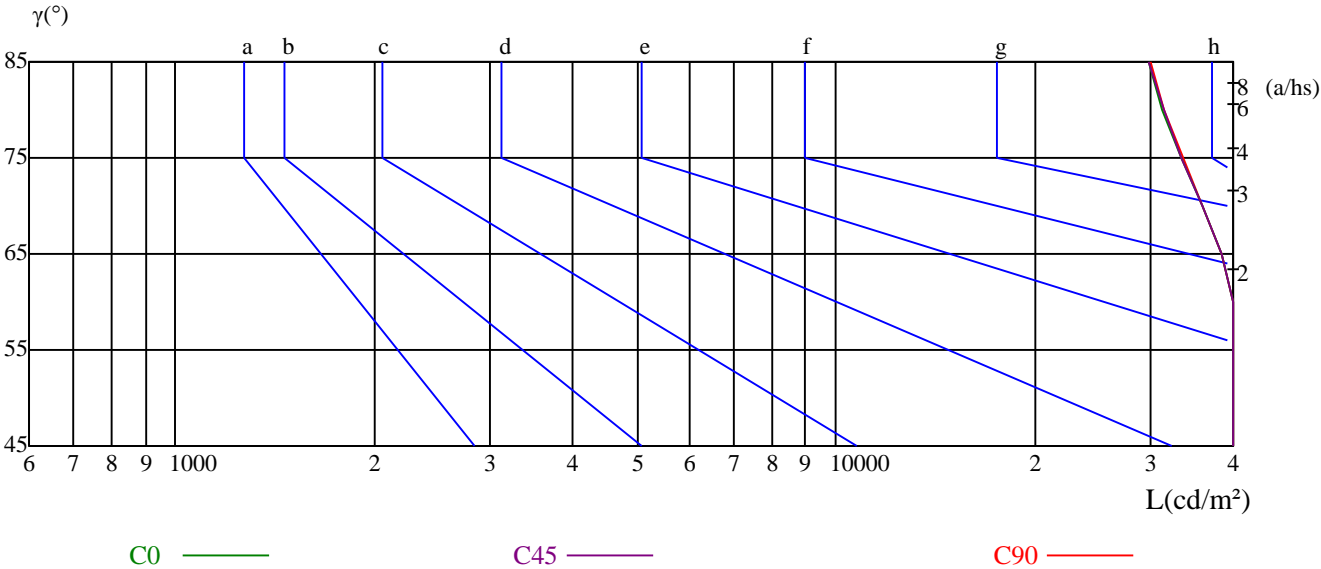
$\gamma$	45	50	55	60	65	70	75	80	85
C0	48170	45855	43366	40968	38359	35861	33345	31280	29709
C45	48700	45830	43443	40918	38419	35916	33494	31408	29834
C90	48125	45819	43450	40968	38389	35941	33541	31458	29928

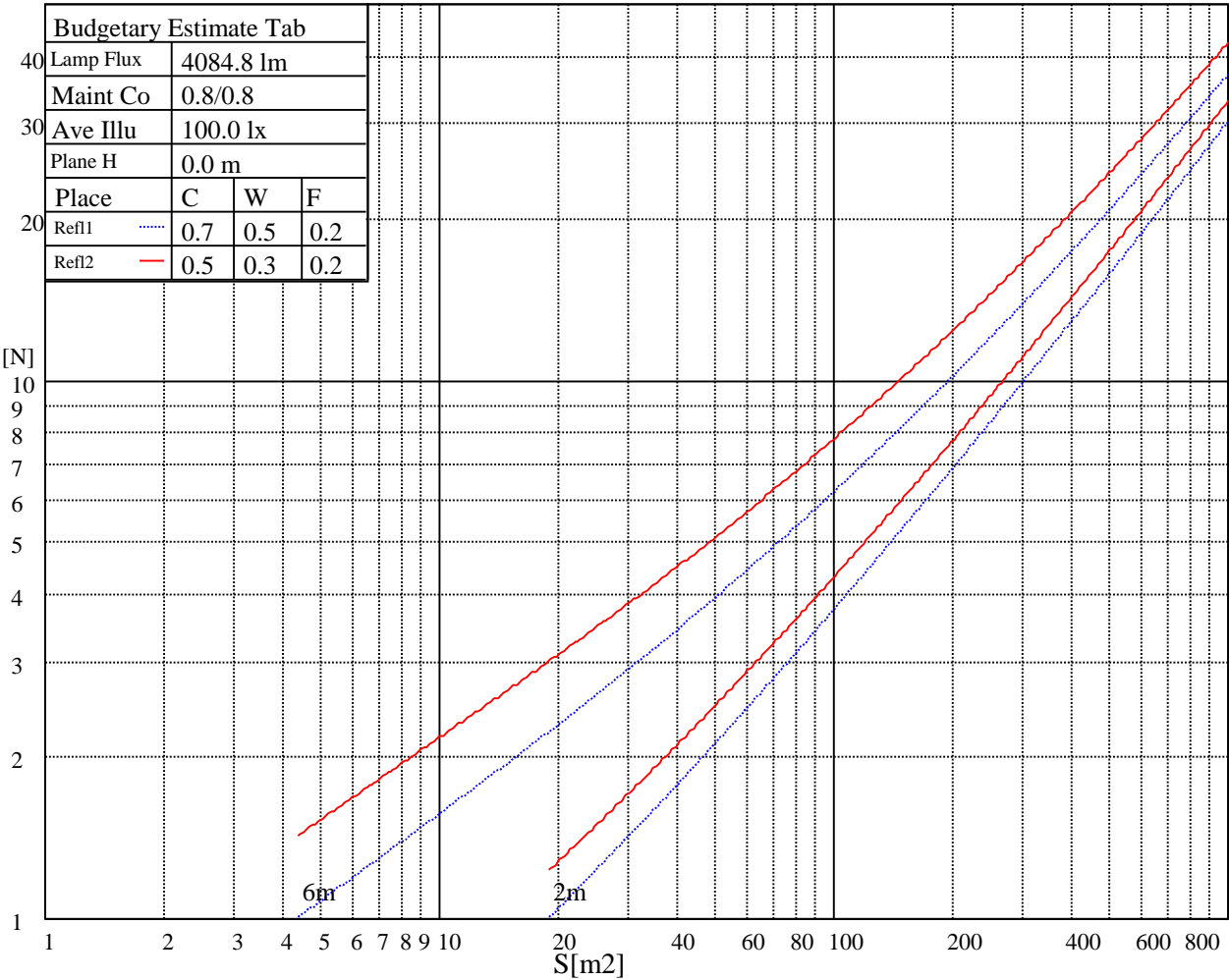
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
66289	66342	66393	75599	76042	75935	145005	146076	145617

Glare Table

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

Luminance Limiting Curve





RHOC	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	1.17	1.17	1.17	1.13	1.13	1.13	1.07	1.07	1.07	1.01	1.01	1.01	0.96	0.96	0.96	0.94
1	0.99	0.94	0.89	0.96	0.91	0.87	0.91	0.87	0.83	0.86	0.83	0.80	0.81	0.79	0.76	0.74
2	0.85	0.78	0.71	0.83	0.76	0.70	0.78	0.72	0.67	0.74	0.69	0.65	0.70	0.66	0.63	0.60
3	0.74	0.65	0.58	0.72	0.64	0.57	0.68	0.61	0.56	0.65	0.59	0.54	0.61	0.57	0.52	0.50
4	0.65	0.56	0.49	0.64	0.55	0.48	0.60	0.53	0.47	0.57	0.51	0.46	0.55	0.49	0.45	0.42
5	0.58	0.49	0.42	0.57	0.48	0.41	0.54	0.46	0.40	0.51	0.45	0.39	0.49	0.43	0.38	0.36
6	0.52	0.43	0.36	0.51	0.42	0.36	0.49	0.41	0.35	0.46	0.40	0.34	0.44	0.38	0.34	0.31
7	0.47	0.38	0.32	0.46	0.38	0.32	0.44	0.37	0.31	0.42	0.35	0.30	0.40	0.34	0.30	0.28
8	0.43	0.34	0.28	0.42	0.34	0.28	0.40	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.27	0.25
9	0.40	0.31	0.26	0.39	0.31	0.25	0.37	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.24	0.22
10	0.36	0.28	0.23	0.36	0.28	0.23	0.34	0.27	0.22	0.33	0.27	0.22	0.32	0.26	0.22	0.20

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	1172.09	1170.00	1154.36	1130.33	1096.00	1053.02	1001.92	942.25	877.08
15.0	1172.09	1170.34	1154.36	1128.01	1094.39	1050.66	998.59	941.69	876.46
30.0	1172.09	1168.22	1154.21	1128.67	1092.21	1052.75	999.20	939.58	875.46
45.0	1172.09	1167.67	1151.76	1128.34	1093.61	1051.36	998.43	939.83	873.99
60.0	1172.09	1167.48	1152.84	1128.79	1094.36	1054.16	999.50	941.83	875.81
75.0	1172.09	1167.03	1151.66	1129.98	1094.09	1054.38	1004.00	944.92	880.07
90.0	1172.09	1165.79	1153.54	1127.53	1098.24	1052.88	1002.28	943.43	883.33
105.0	1172.09	1167.91	1156.44	1133.13	1101.19	1058.85	1007.88	951.21	886.99
120.0	1172.09	1168.44	1156.85	1134.57	1103.29	1064.16	1013.72	956.14	890.72
135.0	1172.09	1169.50	1157.64	1137.84	1106.09	1066.58	1017.70	961.33	895.59
150.0	1172.09	1168.35	1159.98	1139.93	1107.77	1067.05	1019.92	962.99	902.14
165.0	1172.09	1169.77	1162.01	1140.15	1112.31	1075.47	1024.70	971.08	906.39
180.0	1172.09	1167.72	1156.02	1131.64	1098.62	1053.98	1004.01	944.09	876.47
195.0	1172.09	1169.72	1157.25	1130.74	1097.11	1057.51	1003.25	946.00	878.12
210.0	1172.09	1168.92	1155.45	1132.11	1098.20	1056.54	1004.05	943.80	879.16
225.0	1172.09	1169.18	1154.24	1131.53	1098.74	1057.29	1005.50	946.90	878.41
240.0	1172.09	1167.12	1154.26	1129.77	1097.55	1054.70	1001.63	945.20	878.29
255.0	1172.09	1165.87	1151.48	1128.11	1094.89	1051.98	1000.72	940.57	876.43
270.0	1172.09	1162.86	1151.05	1123.45	1091.49	1046.93	995.80	935.08	870.99
285.0	1172.09	1165.15	1149.50	1124.77	1089.54	1044.35	991.95	931.55	866.35
300.0	1172.09	1164.07	1149.01	1121.65	1086.26	1042.77	987.16	926.37	859.80
315.0	1172.09	1164.51	1148.10	1121.43	1083.52	1037.32	983.98	923.15	855.63
330.0	1172.09	1163.09	1145.45	1116.50	1080.77	1033.46	1005.58	918.27	851.36
345.0	1172.09	1163.08	1144.70	1118.65	1078.59	1031.12	976.88	915.23	846.35
360.0	1172.09	1170.00	1154.36	1130.33	1096.00	1053.02	1001.92	942.25	877.08
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	805.53	732.15	653.18	576.13	496.98	421.07	348.39	283.74	227.57
15.0	806.04	728.60	651.59	572.83	495.13	417.86	345.07	280.97	224.08
30.0	802.62	725.82	649.81	570.63	493.57	414.65	344.19	280.25	221.51
45.0	803.99	727.98	651.45	571.55	492.45	416.18	344.50	278.22	221.48
60.0	805.80	729.48	652.91	572.87	495.85	416.61	344.56	280.49	222.19
75.0	808.28	733.83	654.41	577.74	501.69	418.53	347.11	281.81	222.64
90.0	813.20	737.22	661.14	580.63	502.34	423.96	351.17	283.08	226.18
105.0	817.07	742.43	664.77	584.62	506.52	430.64	354.49	288.40	229.77
120.0	822.27	748.03	672.27	591.35	513.54	433.51	359.00	291.71	233.06
135.0	828.43	753.95	677.25	597.24	517.50	438.30	364.27	295.68	235.38
150.0	834.61	759.77	680.04	599.68	521.45	443.59	370.98	300.68	241.08
165.0	840.82	764.53	688.07	605.54	528.81	447.80	373.83	303.80	243.22
180.0	807.02	731.10	652.22	573.60	493.14	416.79	343.14	277.89	219.10
195.0	806.83	731.14	655.81	573.09	493.63	417.24	346.21	279.04	222.14
210.0	809.23	734.19	656.59	576.09	496.47	420.73	346.84	281.93	224.59
225.0	810.09	735.50	656.40	575.53	498.90	422.63	348.92	284.85	225.19
240.0	807.93	731.79	654.33	575.89	498.07	421.58	349.08	283.59	226.72
255.0	804.37	729.04	651.57	575.16	496.00	420.13	347.91	283.32	225.57
270.0	797.85	724.88	646.76	569.09	488.58	415.79	344.42	281.75	223.78
285.0	794.65	719.57	640.75	564.52	484.99	412.40	371.66	277.99	221.15
300.0	789.03	713.36	636.62	594.65	480.57	406.15	335.38	273.26	218.63
315.0	818.08	707.48	630.33	552.29	474.51	401.19	331.53	269.10	215.05
330.0	777.50	701.69	623.91	545.42	467.46	393.79	325.27	263.09	210.26
345.0	774.35	697.97	620.89	541.48	464.04	390.34	321.19	259.99	206.64
360.0	805.53	732.15	653.18	576.13	496.98	421.07	348.39	283.74	227.57

Zhongshan litian lighting co.,ltd LT-YC-30W-40K

Intensity data(cd)										Appendix Page: 11 Total:12	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	177.60	135.93	100.46	71.28	46.82	0.00	0.00	0.00	0.00		
15.0	174.38	133.20	98.87	70.42	46.27	0.00	0.00	0.00	0.00		
30.0	173.77	132.38	97.06	68.70	45.71	0.00	0.00	0.00	0.00		
45.0	172.34	130.89	95.80	67.61	44.72	0.00	0.00	0.00	0.00		
60.0	173.48	131.86	96.45	67.26	44.19	0.00	0.00	0.00	0.00		
75.0	173.86	132.29	97.46	68.05	45.04	0.00	0.00	0.00	0.00		
90.0	175.05	133.60	98.53	69.33	45.27	0.00	0.00	0.00	0.00		
105.0	177.38	136.19	100.08	70.28	46.26	0.00	0.00	0.00	0.00		
120.0	181.46	138.41	102.14	71.84	47.95	0.00	0.00	0.00	0.00		
135.0	185.79	142.09	104.00	74.39	49.95	0.00	0.00	0.00	0.00		
150.0	187.72	143.35	105.93	75.91	51.14	0.00	0.00	0.00	0.00		
165.0	190.40	147.57	108.76	77.35	52.64	0.00	0.00	0.00	0.00		
180.0	171.75	129.82	94.87	67.70	44.82	0.00	0.00	0.00	0.00		
195.0	173.15	131.27	97.46	68.57	45.83	0.00	0.00	0.00	0.00		
210.0	175.18	133.43	97.85	70.02	47.47	0.00	0.00	0.00	0.00		
225.0	175.61	133.98	99.52	71.32	47.81	0.00	0.00	0.00	0.00		
240.0	177.47	135.41	100.45	71.25	47.74	0.00	0.00	0.00	0.00		
255.0	177.42	135.57	99.86	83.24	48.24	0.00	0.00	0.00	0.00		
270.0	196.80	134.48	98.44	70.13	47.58	0.00	0.00	0.00	0.00		
285.0	174.00	131.66	97.85	68.85	46.35	0.00	0.00	0.00	0.00		
300.0	170.59	130.30	95.81	67.82	44.74	0.00	0.00	0.00	0.00		
315.0	166.26	128.17	93.92	65.56	43.62	0.00	0.00	0.00	0.00		
330.0	163.13	124.19	91.32	63.79	42.41	0.00	0.00	0.00	0.00		
345.0	160.60	121.70	88.24	61.38	39.44	0.00	0.00	0.00	0.00		
360.0	177.60	135.93	100.46	71.28	46.82	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	0.00	0.00	0.00	0.00	0.00	0.00		
15.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
30.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
60.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
75.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
195.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
210.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
240.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
255.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
285.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
300.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
330.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
345.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Intensity data(cd)

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C/γ(°)	180.0
0.0	0.00
15.0	0.00
30.0	0.00
45.0	0.00
60.0	0.00
75.0	0.00
90.0	0.00
105.0	0.00
120.0	0.00
135.0	0.00
150.0	0.00
165.0	0.00
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	0.00