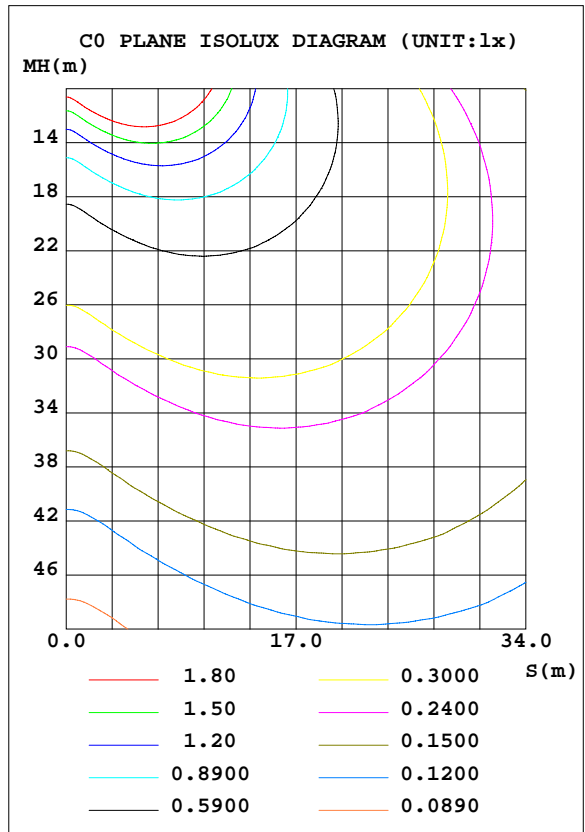
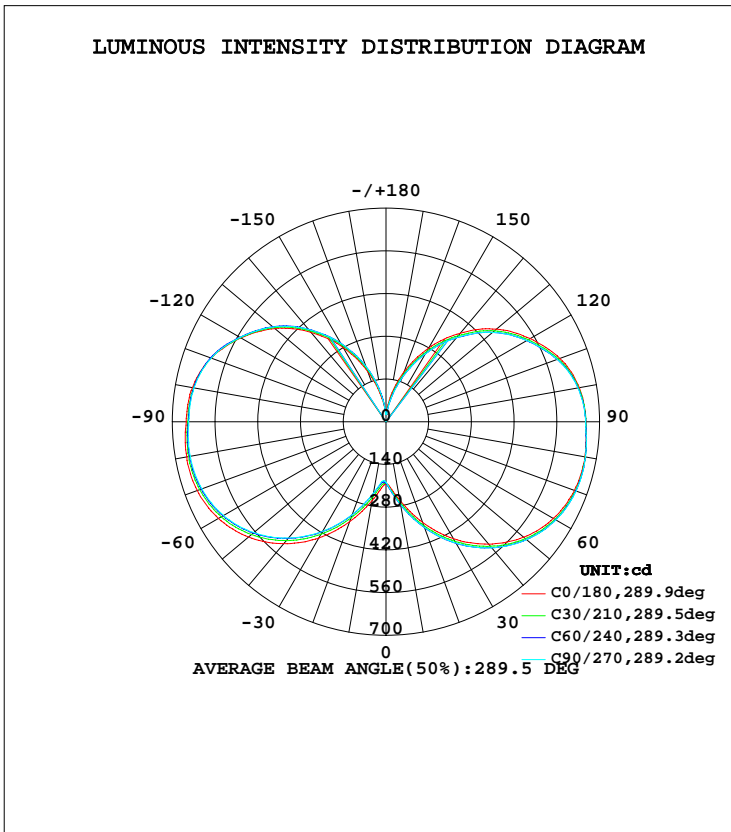


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.02 lm/W			
MODEL		I <sub>max</sub> (cd)	665.5	S/MH(C0/180)	2.99
NOMINAL POWER(W)	62	LOR(%)	100.0	S/MH(C90/270)	3.03
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	6697.2	η UP, DN(C0-180)	22.6, 27.5
NOMINAL FLUX(lm)	6697.2	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	23.3, 26.6
LAMPS INSIDE	1	η up(%)	46.0	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	231.4	η down(%)	54.0	CIBSE SHR MAX	0.00



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	261.1	272.9	275.6	270.2	262.3	244.5	237.6	240.2	0- 10	22.17	22.17	0.33,0.33
20	351.1	365.7	369.1	362.7	348.5	330.1	324.3	327.5	10- 20	86.83	109.0	1.63,1.63
30	442.0	456.4	459.3	453.8	439.6	420.3	414.3	417.7	20- 30	183.1	292.1	4.36,4.36
40	523.8	535.7	539.5	533.5	521.6	504.1	497.3	499.9	30- 40	302.3	594.4	8.87,8.87
50	588.6	598.0	601.7	596.7	587.4	571.2	565.3	567.1	40- 50	429.1	1023	15.3,15.3
60	633.3	640.6	643.1	638.9	634.3	620.1	614.5	615.0	50- 60	546.4	1570	23.4,23.4
70	657.0	661.4	663.5	659.0	657.9	647.0	642.1	642.0	60- 70	638.5	2208	33,33
80	661.6	663.1	663.9	660.4	662.8	654.9	651.0	650.5	70- 80	695.3	2904	43.4,43.4
90	655.0	654.9	653.8	649.6	654.8	648.8	646.7	645.1	80- 90	714.4	3618	54,54
100	643.5	639.9	638.7	635.1	644.0	640.7	639.0	638.4	90-100	705.4	4324	64.6,64.6
110	606.3	599.8	597.3	596.3	609.3	611.1	609.8	608.1	100-110	660.5	4984	74.4,74.4
120	545.7	535.5	532.3	532.1	549.6	552.3	552.8	550.2	110-120	571.4	5555	83,83
130	472.4	459.8	456.0	456.8	475.3	482.3	483.1	480.9	120-130	456.6	6012	89.8,89.8
140	378.9	363.6	359.9	361.2	382.5	392.8	395.3	391.2	130-140	330.7	6343	94.7,94.7
150	278.5	260.8	256.2	258.9	280.8	294.4	297.2	292.8	140-150	207.6	6550	97.8,97.8
160	174.2	157.4	151.7	155.1	175.2	189.0	192.7	187.5	150-160	105.5	6656	99.4,99.4
170	81.29	65.24	59.25	61.97	78.76	90.42	90.43	86.61	160-170	36.46	6692	99.9,99.9
180	24.98	24.81	24.63	24.45	25.12	24.79	24.61	24.46	170-180	4.897	6697	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

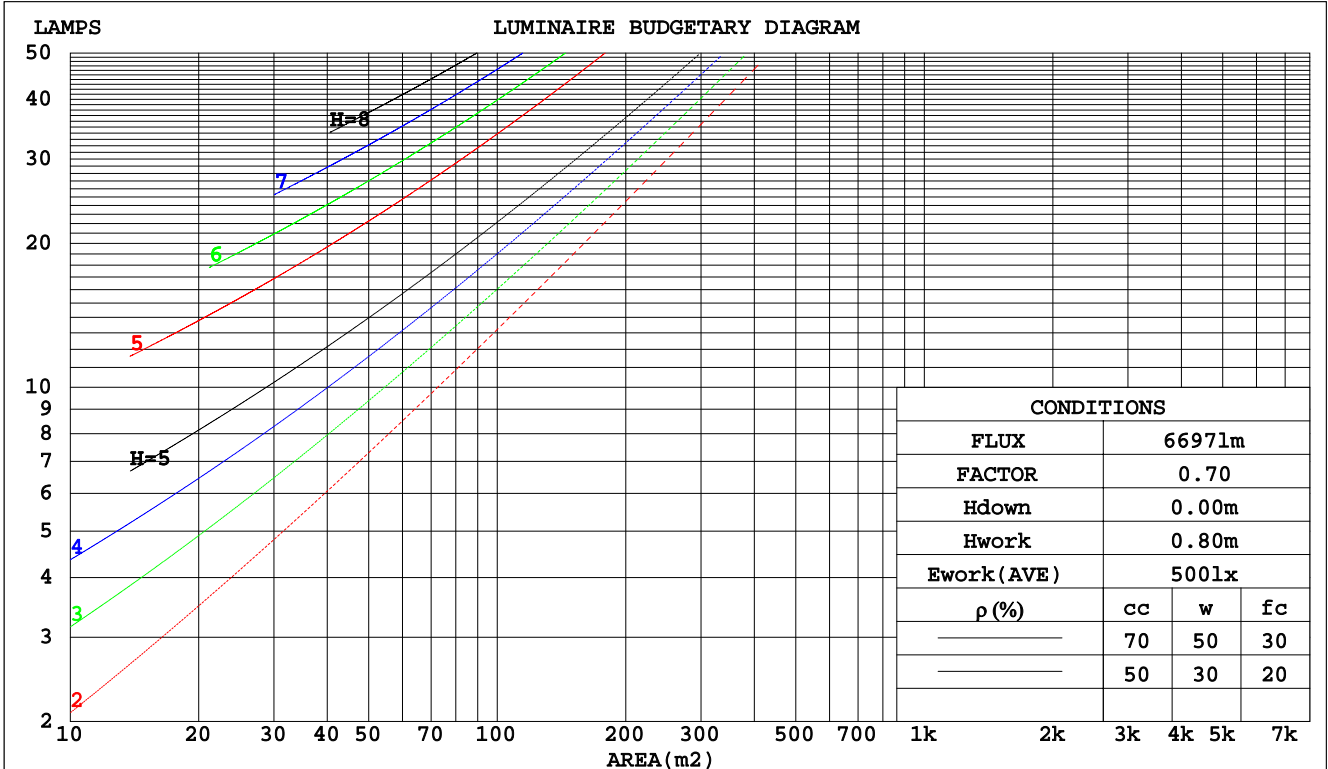
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.08	1.08	1.08	1.00	1.00	1.00	.86	.86	.86	.72	.72	.72	.60	.60	.60	.54
1.0	.87	.81	.75	.80	.74	.70	.67	.63	.59	.55	.52	.49	.44	.42	.40	.34
2.0	.73	.64	.57	.67	.59	.53	.56	.50	.45	.45	.41	.37	.36	.32	.29	.24
3.0	.62	.53	.45	.57	.48	.42	.47	.41	.35	.38	.33	.29	.30	.26	.23	.18
4.0	.54	.44	.37	.49	.41	.34	.41	.34	.28	.33	.28	.23	.26	.22	.18	.14
5.0	.47	.37	.30	.43	.35	.28	.36	.29	.24	.29	.23	.19	.23	.18	.15	.11
6.0	.42	.32	.26	.38	.30	.24	.32	.25	.20	.26	.20	.16	.20	.16	.12	.09
7.0	.37	.28	.22	.34	.26	.20	.29	.22	.17	.23	.18	.14	.18	.14	.11	.08
8.0	.34	.25	.19	.31	.23	.17	.26	.19	.15	.21	.16	.12	.17	.12	.09	.07
9.0	.30	.22	.16	.28	.20	.15	.23	.17	.13	.19	.14	.10	.15	.11	.08	.06
10.0	.28	.20	.14	.26	.18	.13	.21	.15	.11	.18	.13	.09	.14	.10	.07	.05



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

WEC AND CCEC

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.430	.245	.078	.409	.233	.074	.369	.212	.068	.333	.192	.062	.299	.173	.056	
2.0	.357	.196	.060	.337	.186	.057	.301	.167	.052	.267	.150	.047	.236	.134	.042	
3.0	.310	.165	.049	.292	.156	.047	.259	.140	.043	.228	.125	.038	.199	.110	.034	
4.0	.275	.143	.042	.258	.135	.040	.228	.121	.036	.199	.107	.032	.173	.094	.029	
5.0	.247	.126	.036	.232	.119	.035	.204	.106	.031	.178	.094	.028	.154	.082	.025	
6.0	.225	.113	.032	.211	.107	.031	.185	.095	.028	.161	.084	.025	.138	.073	.022	
7.0	.206	.102	.029	.193	.096	.027	.169	.086	.025	.147	.075	.022	.126	.065	.019	
8.0	.190	.093	.026	.178	.088	.025	.156	.078	.022	.135	.069	.020	.116	.059	.017	
9.0	.176	.085	.024	.165	.081	.023	.145	.072	.020	.125	.063	.018	.107	.054	.016	
10.0	.164	.079	.022	.154	.075	.021	.135	.066	.019	.117	.058	.016	.100	.050	.014	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.541	.541	.541	.462	.462	.462	.315	.315	.315	.181	.181	.181	.058	.058	.058	
1.0	.542	.508	.478	.464	.436	.411	.317	.300	.285	.183	.174	.165	.058	.056	.054	
2.0	.536	.487	.446	.459	.419	.385	.315	.290	.269	.182	.169	.158	.058	.055	.051	
3.0	.530	.472	.426	.454	.407	.369	.312	.283	.259	.180	.165	.153	.058	.054	.050	
4.0	.522	.461	.414	.448	.398	.359	.308	.277	.253	.178	.162	.150	.057	.053	.049	
5.0	.515	.452	.405	.442	.391	.352	.304	.273	.249	.176	.160	.148	.057	.052	.049	
6.0	.507	.444	.399	.436	.385	.347	.301	.269	.246	.175	.158	.146	.056	.052	.048	
7.0	.500	.438	.395	.430	.380	.344	.297	.266	.244	.173	.157	.145	.056	.051	.048	
8.0	.494	.433	.391	.425	.376	.341	.294	.264	.242	.171	.156	.144	.055	.051	.048	
9.0	.487	.428	.389	.420	.372	.339	.291	.261	.241	.169	.154	.144	.055	.051	.048	
10.0	.482	.424	.386	.415	.369	.337	.288	.259	.240	.168	.153	.143	.054	.050	.047	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

Uncorrected UGR Table

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	26.5	27.6	27.3	28.5	29.6	26.6	27.7	27.4	28.6	29.7
3H	29.9	30.9	30.7	31.8	32.9	29.9	31.0	30.8	31.9	33.0
4H	31.7	32.7	32.6	33.6	34.8	31.8	32.8	32.7	33.7	34.8
6H	33.8	34.7	34.7	35.7	36.8	33.8	34.8	34.7	35.7	36.9
8H	35.0	35.9	35.8	36.8	37.9	35.0	35.9	35.9	36.8	38.0
12H	36.3	37.1	37.2	38.0	39.2	36.3	37.1	37.2	38.1	39.3
4H 2H	27.6	28.5	28.4	29.4	30.6	27.6	28.6	28.5	29.5	30.6
3H	31.0	31.9	31.9	32.8	34.0	31.1	31.9	32.0	32.9	34.0
4H	33.0	33.8	33.9	34.8	36.0	33.1	33.8	34.0	34.8	36.0
6H	35.2	35.9	36.2	36.9	38.1	35.2	36.0	36.2	36.9	38.1
8H	36.4	37.1	37.4	38.1	39.3	36.5	37.1	37.4	38.1	39.3
12H	37.8	38.5	38.8	39.4	40.7	37.9	38.5	38.8	39.5	40.7
8H 4H	33.7	34.4	34.7	35.4	36.6	33.8	34.4	34.7	35.4	36.6
6H	36.2	36.8	37.2	37.8	39.0	36.2	36.8	37.2	37.8	39.1
8H	37.6	38.1	38.6	39.1	40.4	37.6	38.1	38.6	39.1	40.4
12H	39.2	39.7	40.2	40.7	42.0	39.2	39.7	40.2	40.7	42.0
12H 4H	33.9	34.6	34.9	35.5	36.8	34.0	34.6	34.9	35.6	36.8
6H	36.5	37.0	37.5	38.0	39.3	36.5	37.1	37.5	38.1	39.3
8H	38.1	38.5	39.0	39.5	40.8	38.1	38.5	39.1	39.5	40.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 6697 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.6)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

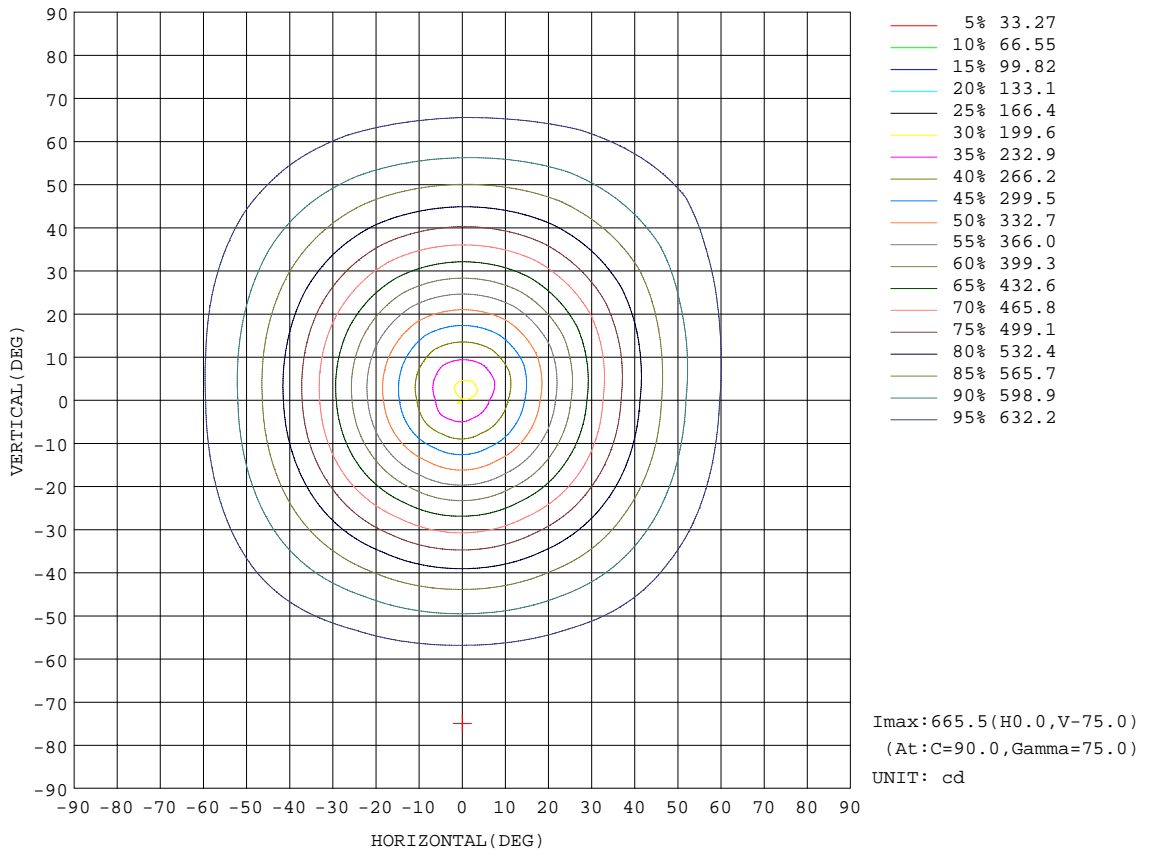
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	35	22	15	34	21	14	30	20	13	6
0.80	44	30	21	41	28	20	37	26	18	9
1.00	51	36	27	48	35	26	42	33	23	12
1.25	58	43	34	54	41	32	47	36	29	15
1.50	63	49	39	59	46	37	51	41	33	18
2.00	71	58	48	66	54	45	57	47	40	22
2.50	76	64	54	71	60	51	61	52	45	26
3.00	81	69	60	75	64	56	64	56	49	28
4.00	86	76	68	80	71	63	68	61	55	32
5.00	90	81	73	83	75	68	71	65	59	35
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:



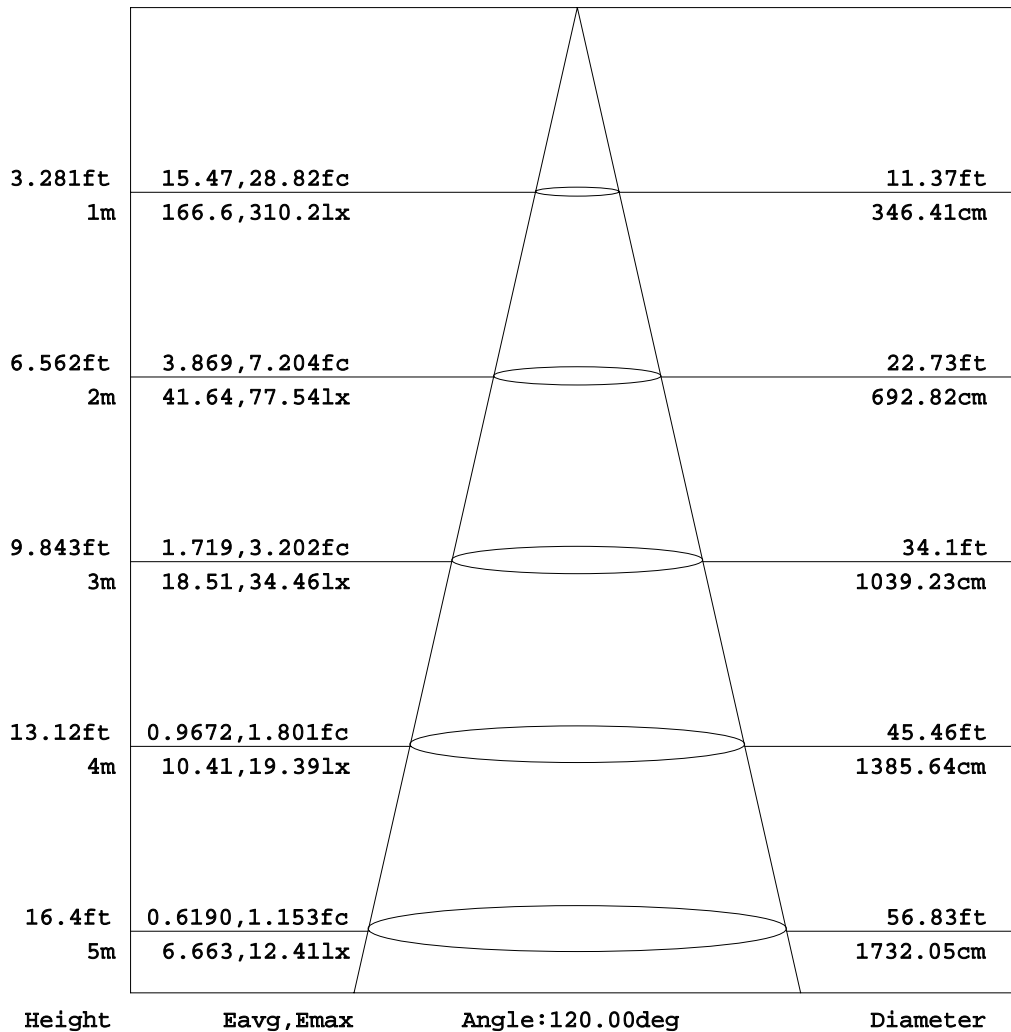
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

AAI Figure

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

Flux out:1570 lm



Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

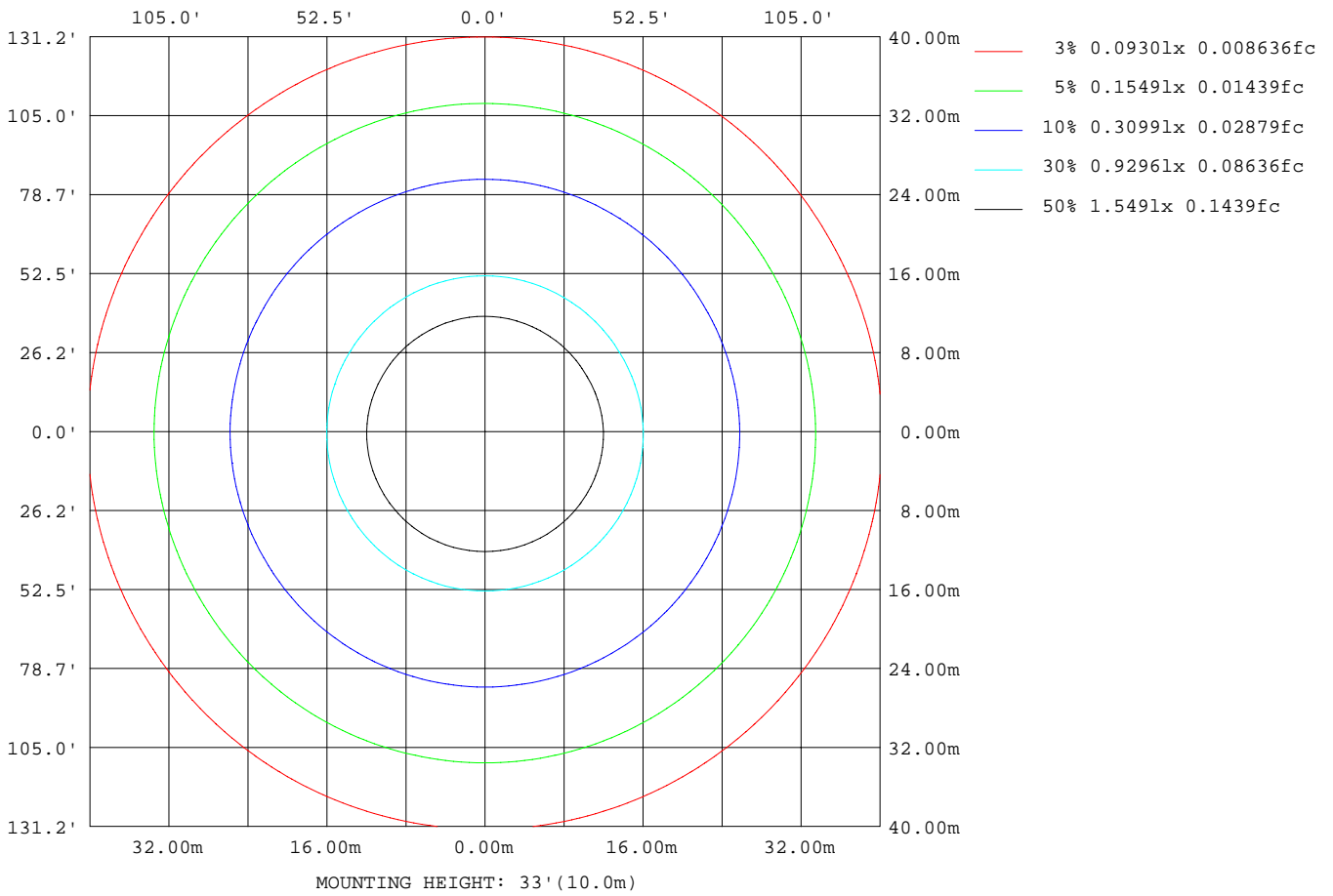
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:



ISOLUX DIAGRAM

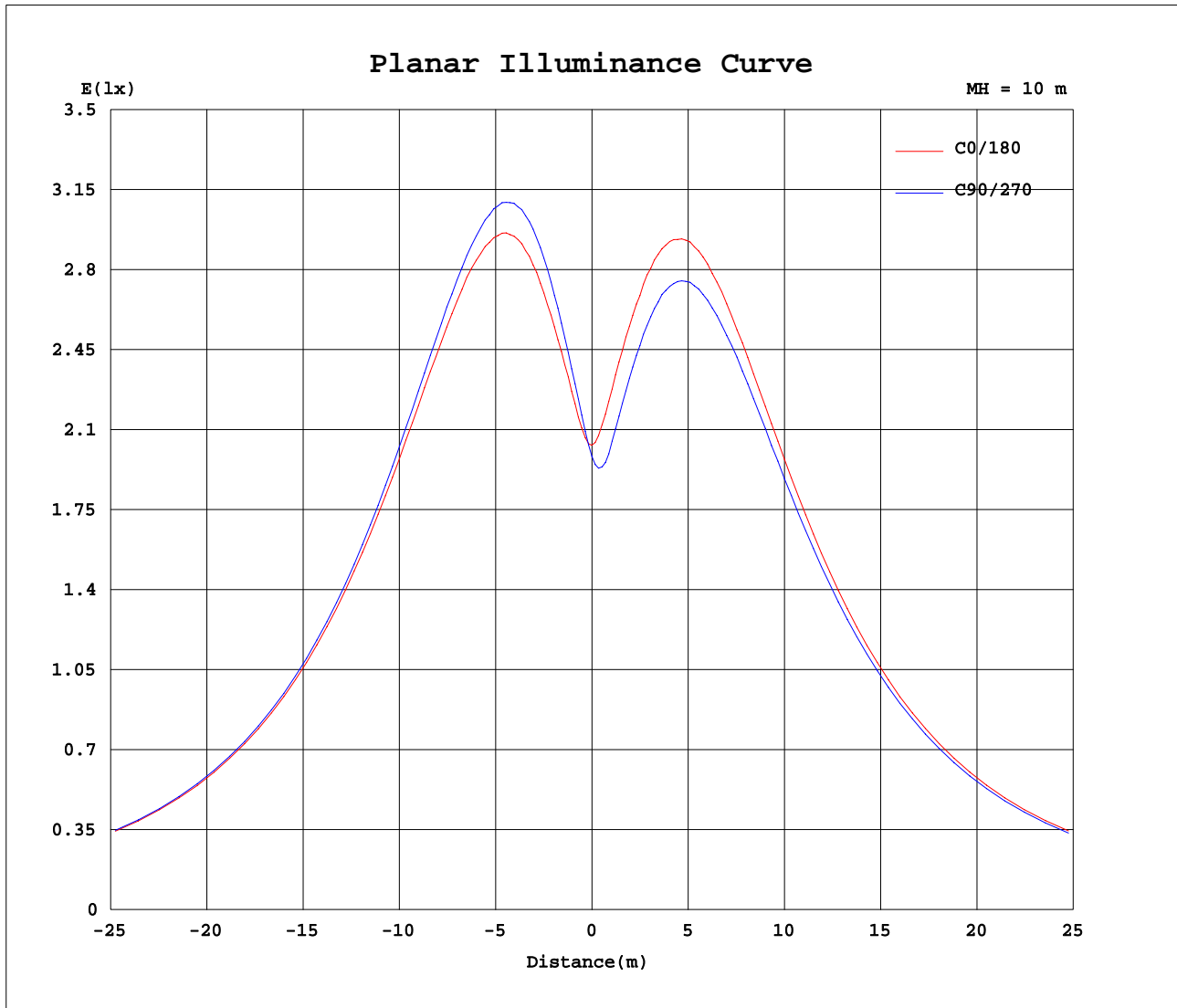
Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: Nic  
 Test Date: 2012-06-16

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity: 65.0%  
 Test Distance: 10.000m [K=1.0330]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:231.2V I:0.2720A P:62.00W PF:0.9540 Lamp Flux:6697.2x1 lm		
NAME: BB-HJD-60W14S	TYPE:LED Corn Light	WEIGHT:440g
DIM.: Dia90*235mm	SPEC.:	SERIAL No.:
MFR.: BBier Manufacturing CO.,LTD	SUR.:0.01	PROTECTION ANGLE:

Table--1

UNIT: cd

C( DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	203	202	201	198	196	193	203	202	201	198	196	193							
5	224	230	235	233	231	224	225	214	205	202	200	205							
10	261	270	276	276	274	266	262	250	239	238	237	244							
15	304	315	322	321	320	311	304	291	279	279	279	287							
20	351	362	370	369	367	358	348	336	324	324	323	332							
25	398	408	416	416	414	404	394	381	371	370	369	377							
30	442	452	461	459	459	449	440	425	415	414	414	421							
35	485	495	502	501	500	491	482	469	459	457	457	464							
40	524	532	539	539	538	529	522	509	499	497	497	503							
45	558	567	572	573	571	563	557	544	535	533	533	538							
50	589	596	601	602	601	593	587	575	567	565	564	570							
55	614	621	624	625	624	617	613	602	594	593	591	595							
60	633	639	642	643	642	636	634	624	616	614	613	617							
65	648	652	655	656	655	649	648	639	633	630	630	632							
70	657	661	662	664	661	657	658	650	644	642	641	643							
75	662	664	665	665	664	660	663	655	651	649	648	650							
80	662	663	663	664	663	658	663	656	653	651	650	650							
85	658	660	659	659	657	654	660	655	652	651	649	649							
90	655	655	655	654	651	648	655	650	648	647	645	645							
95	651	651	650	649	646	644	652	648	646	644	644	644							
100	643	641	639	639	636	634	644	641	640	639	638	638							
105	629	625	623	622	620	619	630	628	629	628	627	626							
110	606	602	598	597	596	597	609	610	612	610	609	607							
115	578	571	566	566	565	568	582	583	586	584	584	579							
120	546	538	533	532	531	533	550	551	554	553	553	547							
125	511	503	497	497	495	498	514	517	521	519	520	515							
130	472	464	456	456	455	459	475	480	485	483	484	478							
135	428	418	409	409	408	414	432	437	443	442	442	436							
140	379	368	359	360	358	364	383	389	396	395	395	387							
145	330	318	310	310	310	315	333	341	348	346	347	340							
150	278	266	256	256	255	262	281	290	299	297	297	288							
155	226	214	204	203	204	211	228	238	245	245	244	236							
160	174	162	152	152	151	159	175	185	193	193	192	183							
165	126	114	104	103	103	110	124	135	142	141	140	133							
170	81.3	70.0	60.5	59.2	59.2	64.8	78.8	87.9	92.9	90.4	89.1	84.1							
175	41.6	33.9	27.8	25.5	25.4	28.7	40.6	46.9	49.2	46.8	43.4	41.5							
180	25.0	24.9	24.7	24.6	24.5	24.4	25.1	24.8	24.8	24.6	24.5	24.4							

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:Nic  
 Test Date:2012-06-16

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000B\_V1 SYSTEM V2.0.274  
 Humidity:65.0%  
 Test Distance:10.000m [K=1.0330]  
 Remarks: