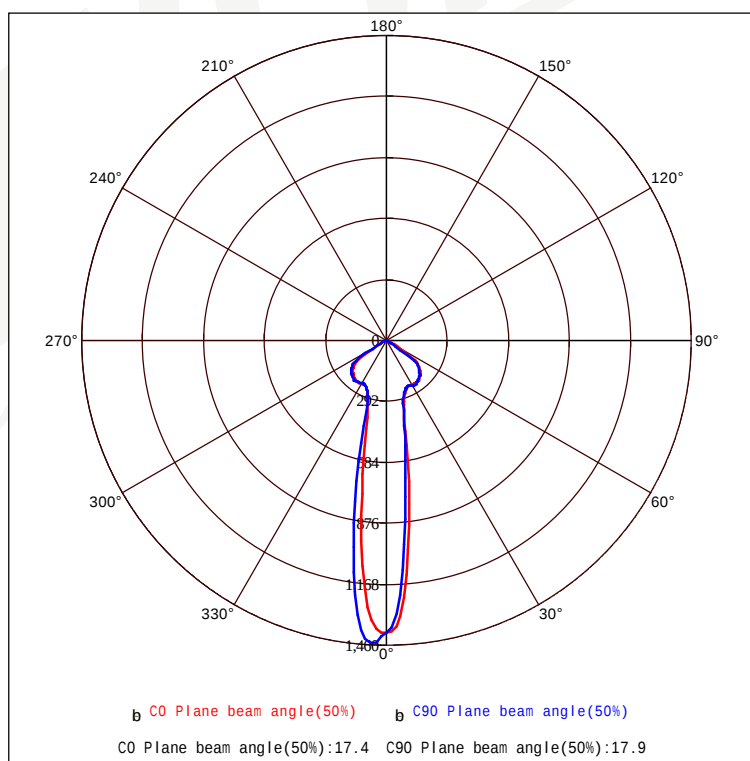


Goniophotometer Test Report

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm						
Lamp Name: LP-COB15BX			Lamp Type: Class I		Weight(kg):	
Lamp ID: LP-COB15BX			Lamp Spec:		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model			Peak Value(cd)	1454.0	Efficiency(lm/w)	69.6
Nominal P(w)		1.0	Position	270.0,2.0	UP(C0-C180)	0.0
Rated Volt(v)		220.0	Total Flux(lm)	765.910	Down(C0-C180)	51.8
Rated Flux(lm)		1.0	Up Flux Rate(%)	0.0	UP(C180-C360)	0.0
Illuminant QTY		1	Dw Flux Rate(%)	100.0	Down(C180-C360)	48.2

Planar Intensity Distribution Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

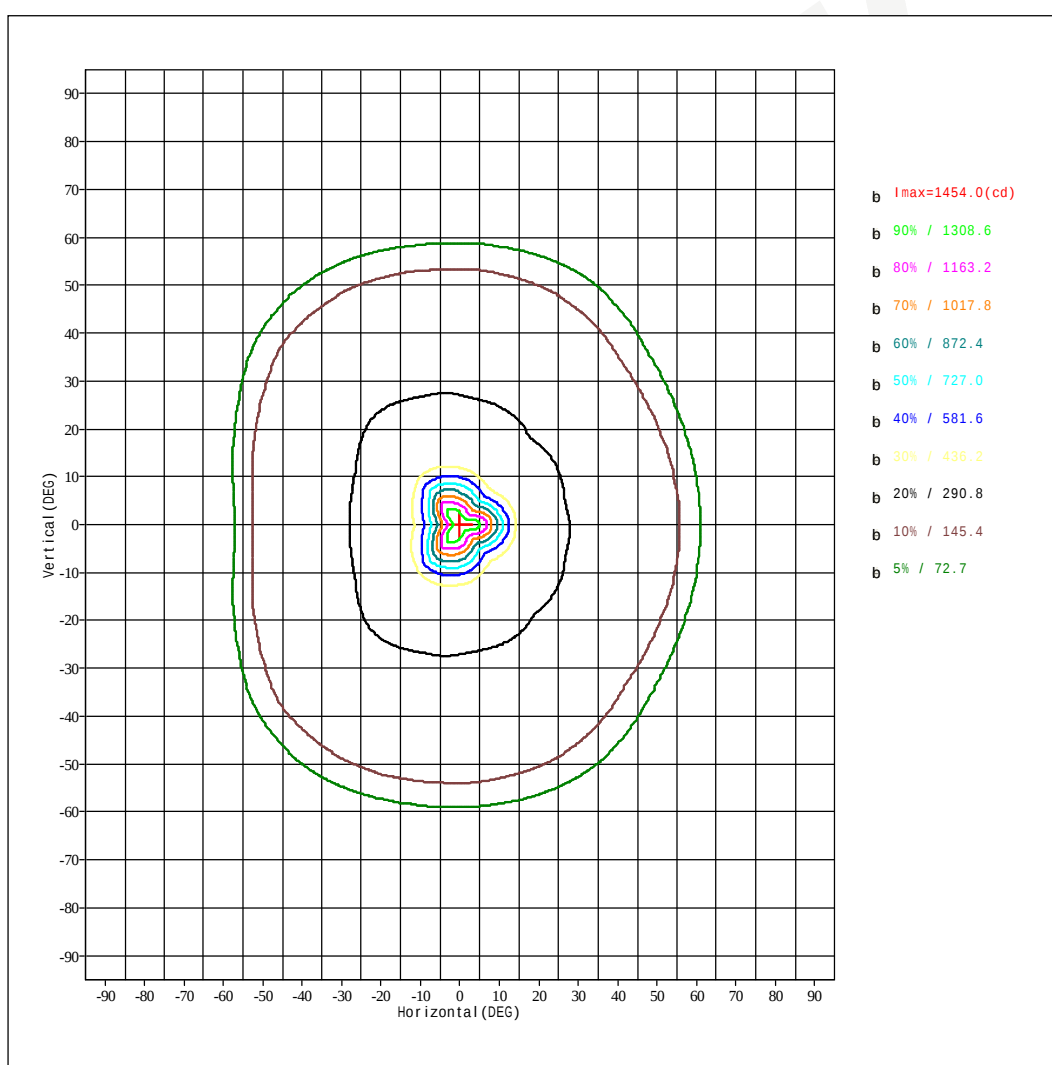
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Planar IsoCandela Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

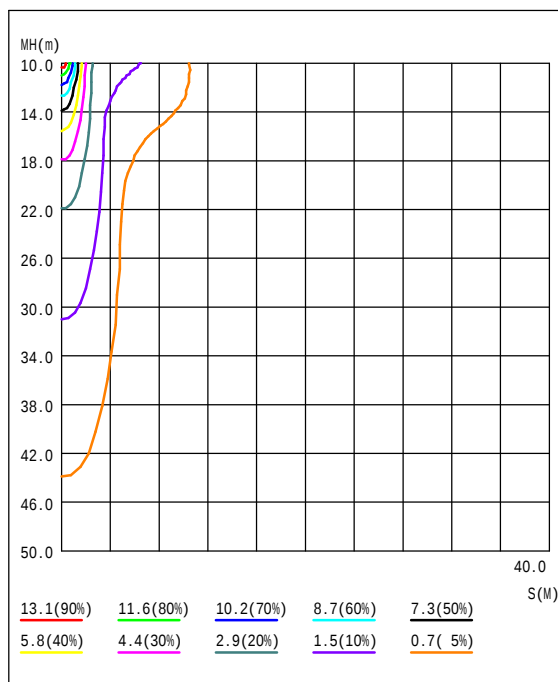
Humidity(%): 60

Date: 2018-8-3

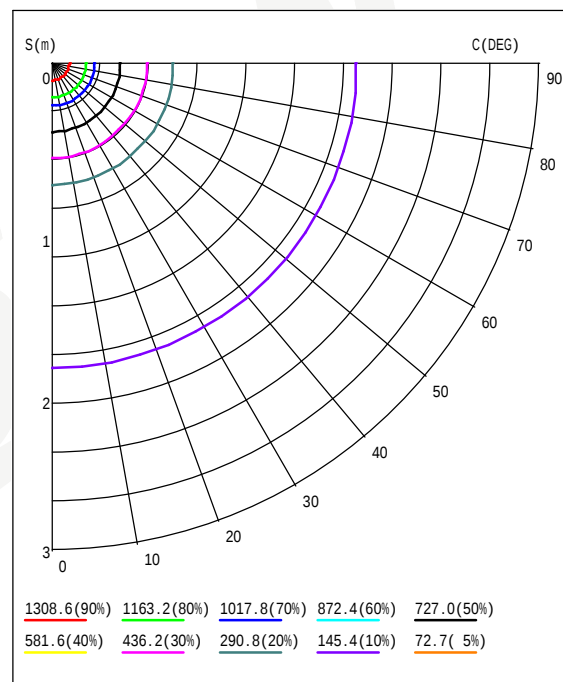
Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Spacial ISOLUX Curve



Planar ISOLUX Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

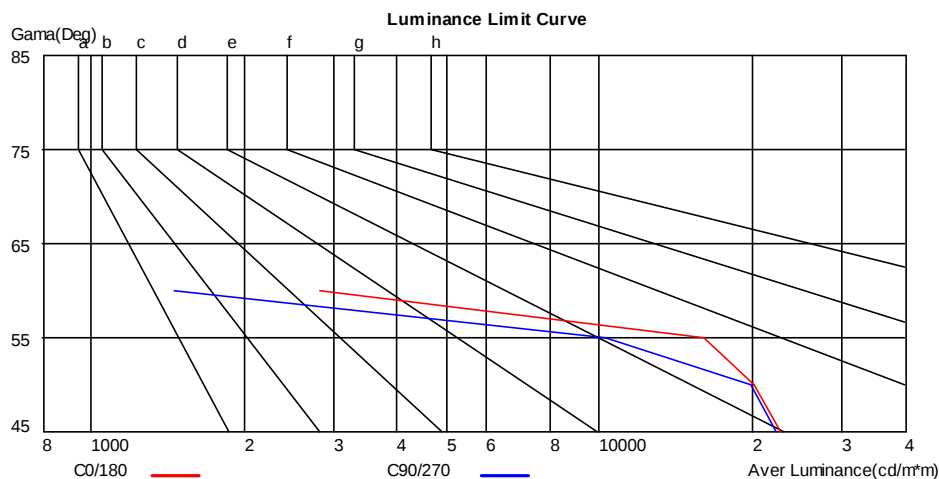
Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Luminance Limit Curve

Aver Luminance(cd/m²m)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	22735.1	20270.4	16077.1	2816.1	581.3	432.4	414.4	403.4	400.4
C90	22395.7	19912.0	10268.9	1454.1	421.9	353.4	336.9	332.9	329.4

Glare									
Glare	Class	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



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

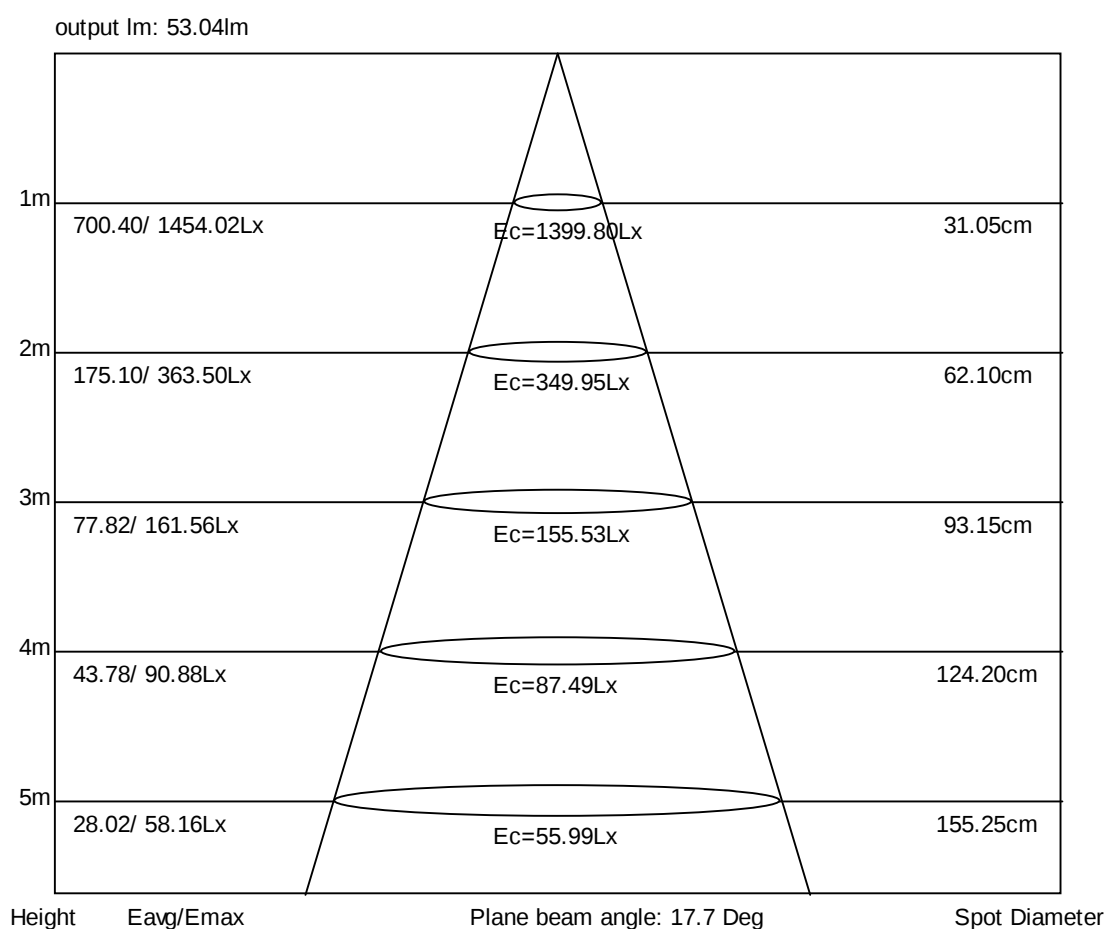
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Average Illumination



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

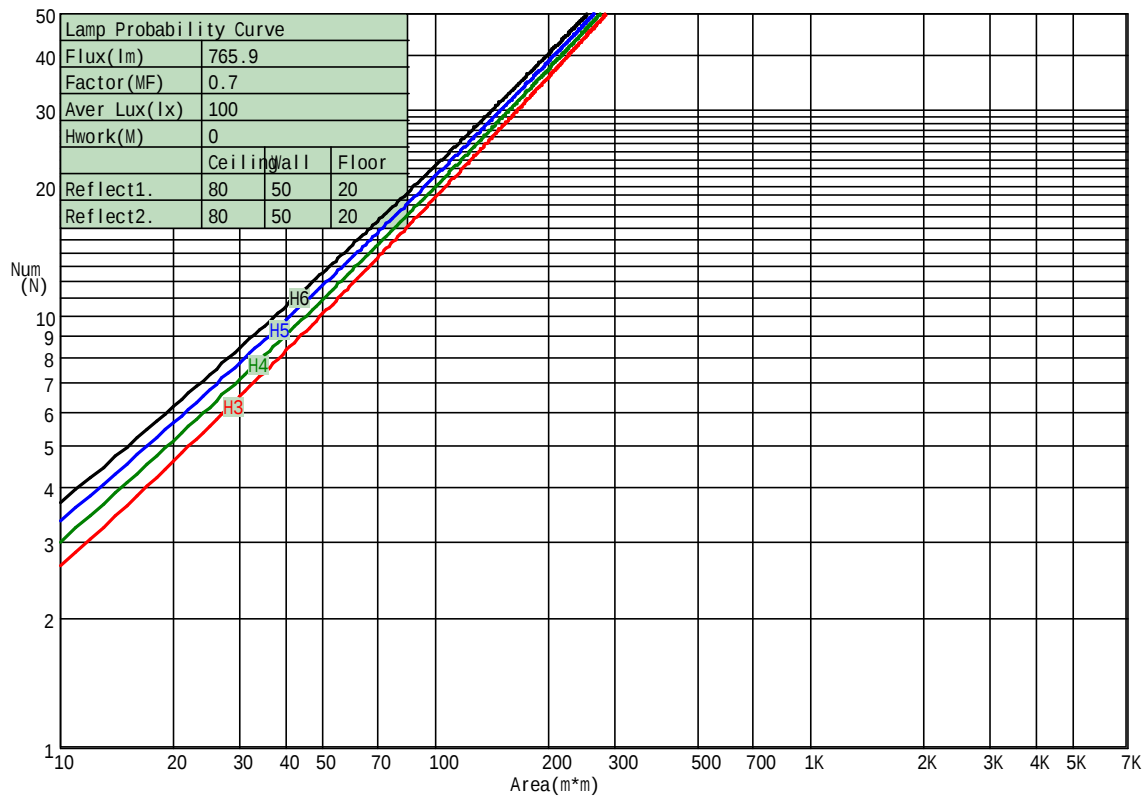
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.9lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Lamp Probability Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

UF Table

Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5
Wall	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3
Floor	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.60	59	45	37	57	44	36	54	43	36
0.80	60	44	34	58	43	34	54	42	33
1.00	62	45	33	59	43	32	54	41	31
1.25	63	45	32	60	43	31	54	40	29
1.50	64	45	31	61	43	30	55	40	28
2.00	66	47	31	62	44	30	55	40	28
2.50	67	47	31	63	45	29	56	40	27
3.00	69	48	31	64	46	30	56	40	27
4.00	70	50	32	66	47	30	57	41	27
5.00	71	51	32	67	48	31	58	42	27

CoEfficients Utilization

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
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	1.08	1.05	1.02	1.06	1.03	1.01	1.02	1	0.98	0.98	0.96	0.95	0.95	0.93	0.92
2	0.98	0.93	0.89	0.96	0.92	0.88	0.93	0.89	0.86	0.9	0.87	0.84	0.87	0.84	0.82
3	0.89	0.82	0.77	0.87	0.81	0.77	0.84	0.79	0.75	0.82	0.78	0.74	0.8	0.76	0.73
4	0.81	0.74	0.68	0.79	0.73	0.68	0.77	0.71	0.67	0.75	0.7	0.66	0.73	0.69	0.65
5	0.73	0.66	0.61	0.72	0.65	0.6	0.7	0.64	0.6	0.69	0.63	0.59	0.67	0.62	0.59
6	0.67	0.6	0.54	0.66	0.59	0.54	0.65	0.58	0.54	0.63	0.58	0.53	0.62	0.57	0.53
7	0.62	0.55	0.49	0.61	0.54	0.49	0.6	0.53	0.49	0.59	0.53	0.49	0.57	0.52	0.48
8	0.57	0.5	0.45	0.57	0.5	0.45	0.56	0.49	0.45	0.54	0.49	0.44	0.53	0.48	0.44
9	0.53	0.46	0.41	0.53	0.46	0.41	0.52	0.46	0.41	0.51	0.45	0.41	0.5	0.45	0.41
10	0.5	0.43	0.38	0.49	0.43	0.38	0.49	0.42	0.38	0.48	0.42	0.38	0.47	0.42	0.38

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Wall Exitance CoEfficients

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.22	0.13	0.04	0.22	0.12	0.04	0.2	0.12	0.04	0.19	0.11	0.04	0.18	0.11	0.03
2	0.22	0.12	0.04	0.21	0.12	0.04	0.2	0.11	0.03	0.19	0.11	0.03	0.18	0.1	0.03
3	0.21	0.11	0.03	0.2	0.11	0.03	0.2	0.11	0.03	0.19	0.1	0.03	0.18	0.1	0.03
4	0.2	0.1	0.03	0.19	0.1	0.03	0.19	0.1	0.03	0.18	0.1	0.03	0.17	0.09	0.03
5	0.19	0.1	0.03	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.16	0.09	0.03
6	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.16	0.08	0.02	0.16	0.08	0.02
7	0.17	0.08	0.02	0.17	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.08	0.02
8	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	0.02	0.14	0.07	0.02
9	0.15	0.07	0.02	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02
10	0.14	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.06	0.02

Ceiling Cavity Exitance CoEfficients

Ceiling(%)		0			0			0			0			0	
Wall(%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor (%)		0			0			0			0			0	
0	0.19	0.19	0.19	0.16	0.16	0.16	0.11	0.11	0.11	0.06	0.06	0.06	0.02	0.02	0.02
1	0.17	0.16	0.14	0.15	0.13	0.12	0.1	0.09	0.08	0.06	0.05	0.05	0.02	0.02	0.02
2	0.16	0.13	0.11	0.14	0.11	0.09	0.1	0.08	0.06	0.06	0.05	0.04	0.02	0.01	0.01
3	0.15	0.11	0.08	0.13	0.1	0.07	0.09	0.07	0.05	0.05	0.04	0.03	0.02	0.01	0.01
4	0.14	0.1	0.07	0.12	0.09	0.06	0.09	0.06	0.04	0.05	0.04	0.02	0.02	0.01	0.01
5	0.14	0.09	0.05	0.12	0.08	0.05	0.08	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01
6	0.13	0.08	0.04	0.11	0.07	0.04	0.08	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.12	0.07	0.04	0.11	0.06	0.03	0.07	0.04	0.02	0.04	0.03	0.01	0.01	0.01	0
8	0.12	0.07	0.03	0.1	0.06	0.03	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
9	0.11	0.06	0.03	0.1	0.05	0.02	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
10	0.11	0.06	0.02	0.09	0.05	0.02	0.06	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Ring-shaped Flux Data Table

Gm\C(Deg)	0	45	90	135	180	225	270	315	Range	Ring	T(lm)
5	1066	1316	922	1331	1144	927	1363	915	0-5	30	30
10	550	759	487	781	608	458	835	447	5-10	59.7	89.7
15	310	384	302	398	328	281	385	274	10-15	52.6	142
20	260	275	254	278	261	241	262	244	15-20	47.2	190
25	244	247	243	245	239	236	239	240	20-25	51.9	241
30	243	241	251	244	240	241	237	243	25-30	61	302
35	247	248	250	249	244	243	241	243	30-35	72.1	375
40	241	249	239	248	237	232	243	228	35-40	81.3	456
45	227	234	224	234	224	216	232	213	40-45	86.2	542
50	203	219	199	220	206	191	216	186	45-50	87.3	629
55	161	186	103	191	171	93.1	187	87	50-55	80	709
60	28.2	52.7	14.5	55.9	30.4	12.4	61.2	11.6	55-60	40.6	750
65	5.81	10.1	4.22	9.05	4.15	2.26	8.12	2.55	60-65	7.8	758
70	4.32	4.65	3.53	4.33	1.94	1.8	2.56	2.21	65-70	2.04	760
75	4.14	4.36	3.37	3.98	1.72	1.67	2.25	2.03	70-75	1.59	761
80	4.03	4.15	3.33	3.86	1.6	1.6	2.05	1.91	75-80	1.54	763
85	4	4.06	3.29	3.74	1.53	1.59	1.92	1.88	80-85	1.51	764
90	3.93	3.89	3.21	3.63	1.14	1.54	1.76	1.75	85-90	1.48	766
95									90-95		
100									95-100		
105									100-105		
110									105-110		
115									110-115		
120									115-120		
125									120-125		
130									125-130		
135									130-135		
140									135-140		
145									140-145		
150									145-150		
155									150-155		
160									155-160		
165									160-165		
170									165-170		
175									170-175		
180									175-180		

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 217.3V I: 114.0mA P: 11.00W PF: 0.443 Test LM: 765.91lm		
Lamp Name: LP-COB15BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB15BX	Lamp Spec:	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

CD Table

Gm\C(Deg)	0	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340
5.0	1066	1175	1288	1187	1008	1012	1197	1311	1226	1144	1049	951	1070	1267	1265	1062	931	1000
10.0	550	641	736	670	547	552	685	762	684	608	542	475	582	753	750	574	458	505
15.0	310	343	376	357	320	323	367	391	359	328	308	286	315	362	361	311	278	295
20.0	260	267	274	268	259	259	270	276	268	261	252	243	248	257	258	250	245	253
25.0	244	245	247	246	244	243	244	244	241	239	238	237	237	238	239	240	241	242
30.0	243	242	241	244	249	250	246	244	242	240	241	241	240	238	238	241	243	243
35.0	247	248	248	249	250	250	249	248	246	244	244	243	242	242	242	242	243	245
40.0	241	245	249	246	242	241	245	247	242	237	235	232	235	240	240	233	229	236
45.0	227	230	234	231	226	226	230	233	228	224	221	217	221	229	228	219	215	221
50.0	203	210	217	212	203	204	213	219	212	206	199	192	199	210	209	196	188	196
55.0	161	172	184	159	121	122	162	188	179	171	137	102	124	167	165	120	95	128
60.0	28.2	38.9	50	40.2	22.9	23.6	42.4	53.1	41.6	30.4	22.5	14.4	28.4	50.5	50.3	27.9	13.4	20.9
65.0	5.81	7.71	9.67	8.2	5.52	5.28	7.47	8.52	6.3	4.15	3.32	2.47	4.18	6.84	6.9	4.38	2.91	4.39
70.0	4.32	4.47	4.62	4.29	3.78	3.71	4.07	4.07	2.99	1.94	1.88	1.82	2.05	2.39	2.48	2.33	2.45	3.4
75.0	4.14	4.24	4.34	4.04	3.59	3.5	3.78	3.73	2.71	1.72	1.7	1.68	1.86	2.12	2.2	2.1	2.27	3.22
80.0	4.03	4.08	4.14	3.88	3.51	3.44	3.68	3.61	2.59	1.6	1.6	1.6	1.75	1.95	2.02	1.96	2.14	3.1
85.0	4	4.03	4.06	3.81	3.46	3.39	3.59	3.5	2.5	1.53	1.56	1.58	1.7	1.85	1.91	1.9	2.12	3.08
90.0	3.93	3.91	3.89	3.67	3.36	3.31	3.5	3.36	2.23	1.14	1.32	1.5	1.61	1.72	1.76	1.75	1.99	2.98
95.0																		
100.0																		
105.0																		
110.0																		
115.0																		
120.0																		
125.0																		
130.0																		
135.0																		
140.0																		
145.0																		
150.0																		
155.0																		
160.0																		
165.0																		
170.0																		
175.0																		
180.0																		

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: WH

Distance(m): 7.070

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2018-8-3

Remark: