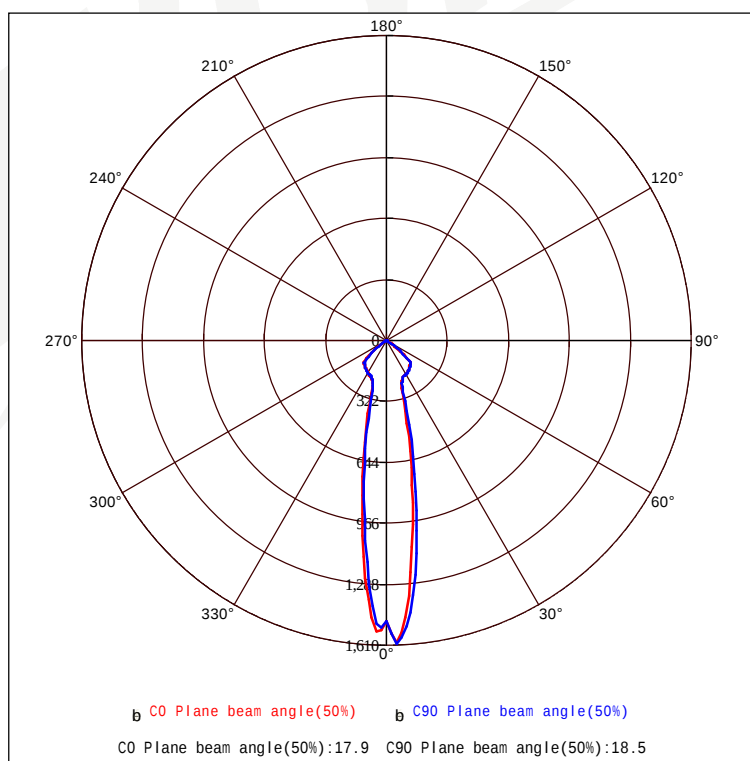


Goniophotometer Test Report

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm						
Lamp Name: LP-COB10BX			Lamp Type: Class I		Weight(kg):	
Lamp ID: LP-COB10BX			Lamp Spec:		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model			Peak Value(cd)	1641.6	Efficiency(lm/w)	60.1
Nominal P(w)		1.0	Position	45.0,5.0	UP(C0-C180)	0.0
Rated Volt(v)		220.0	Total Flux(lm)	589.127	Down(C0-C180)	58.2
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)	41.8

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

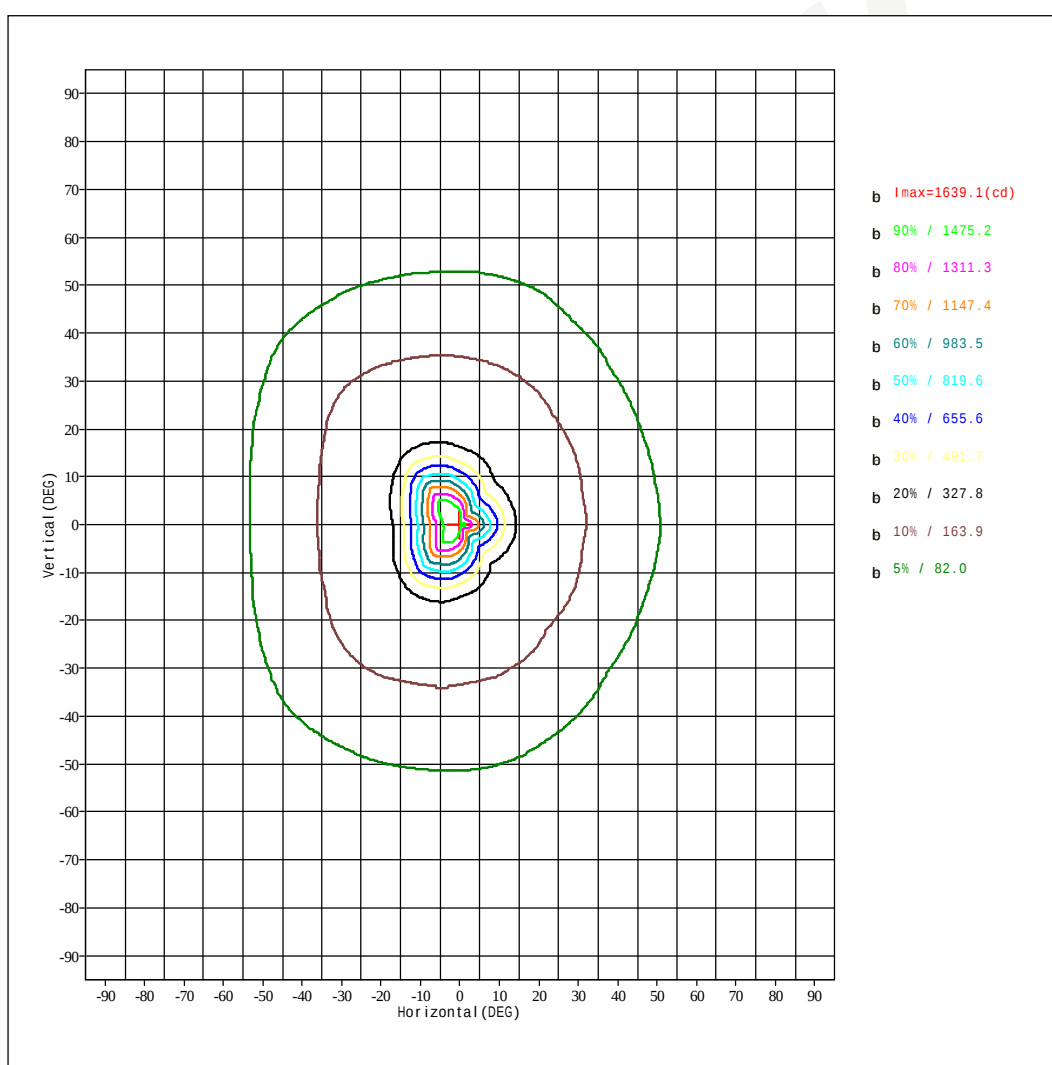
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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

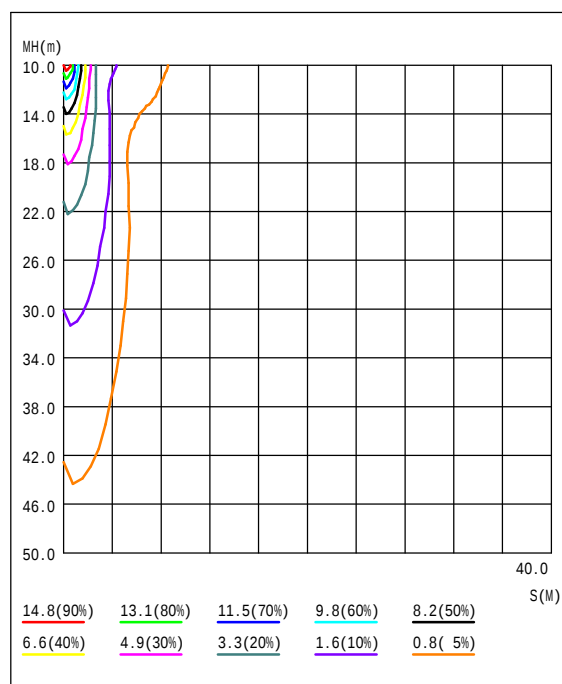
Humidity(%): 60

Date: 2018-8-3

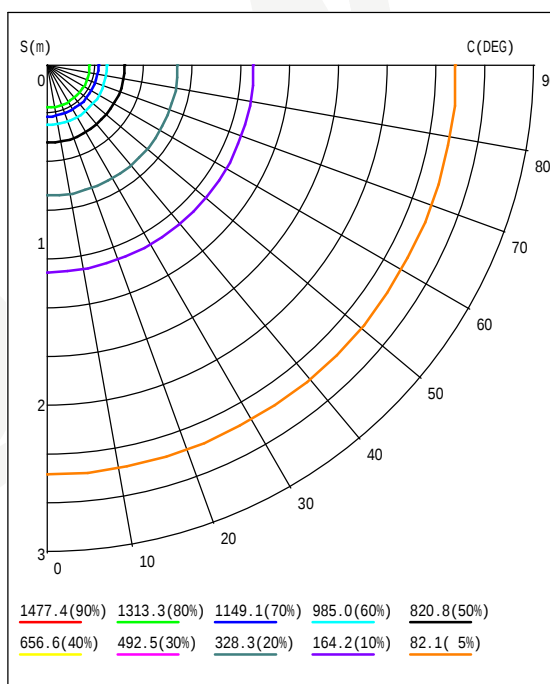
Remark:

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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

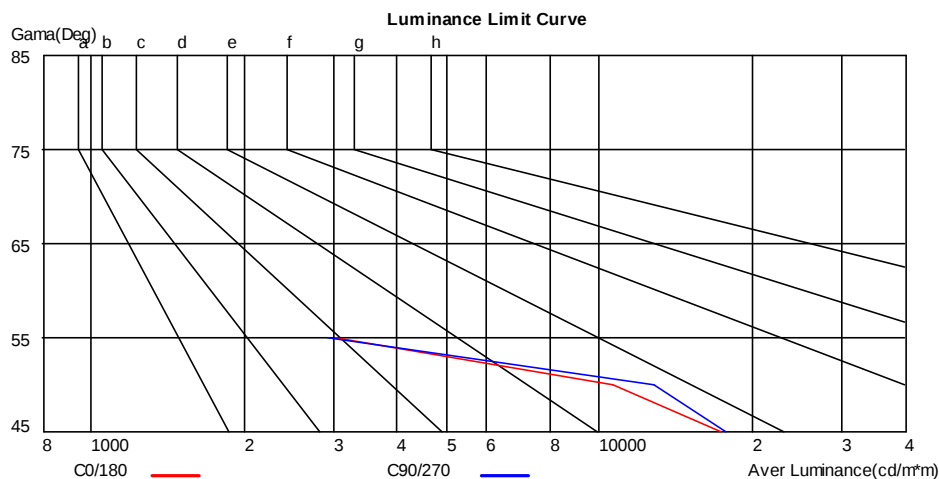
Remark:

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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	17394.2	10656.3	3023.6	580.3	259.4	238.4	237.4	239.9	248.4
C90	17827.1	12840.1	2920.1	441.9	218.9	193.9	193.9	201.4	206.9

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

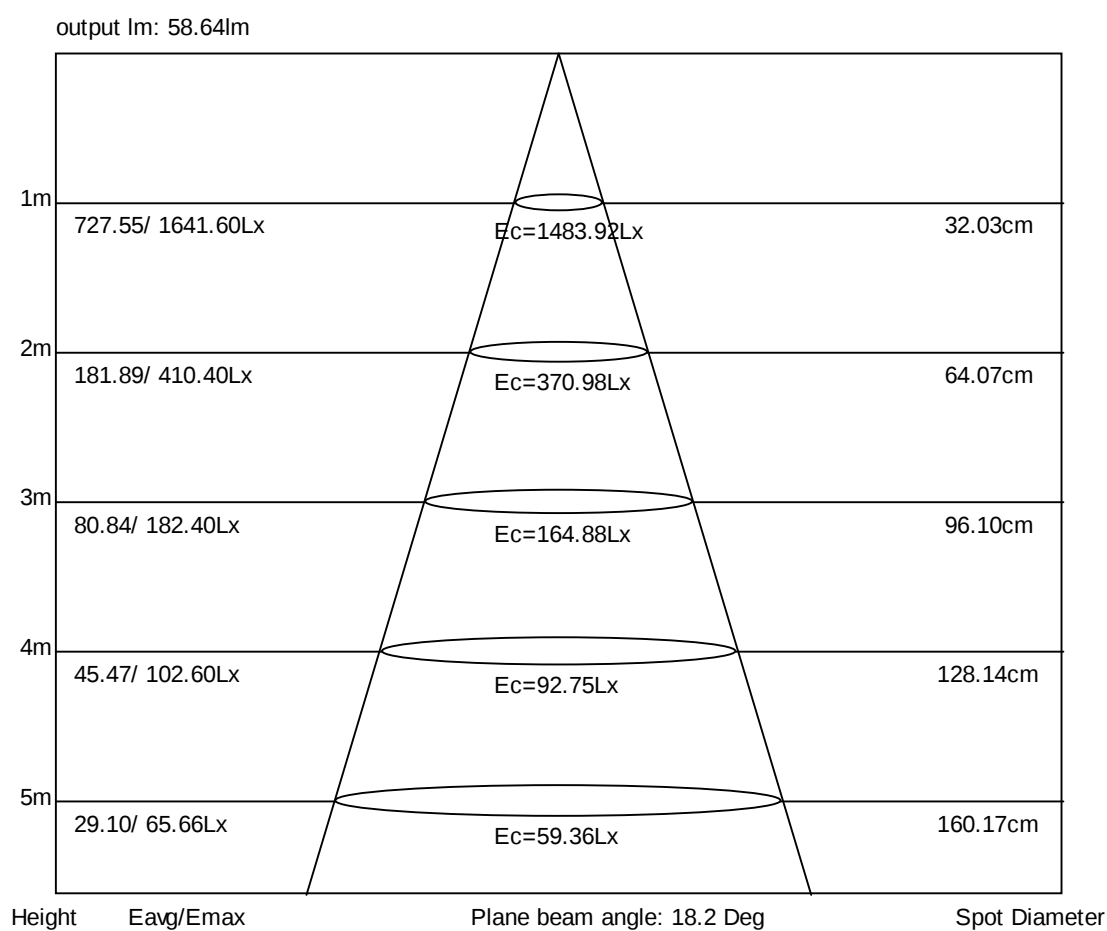
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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

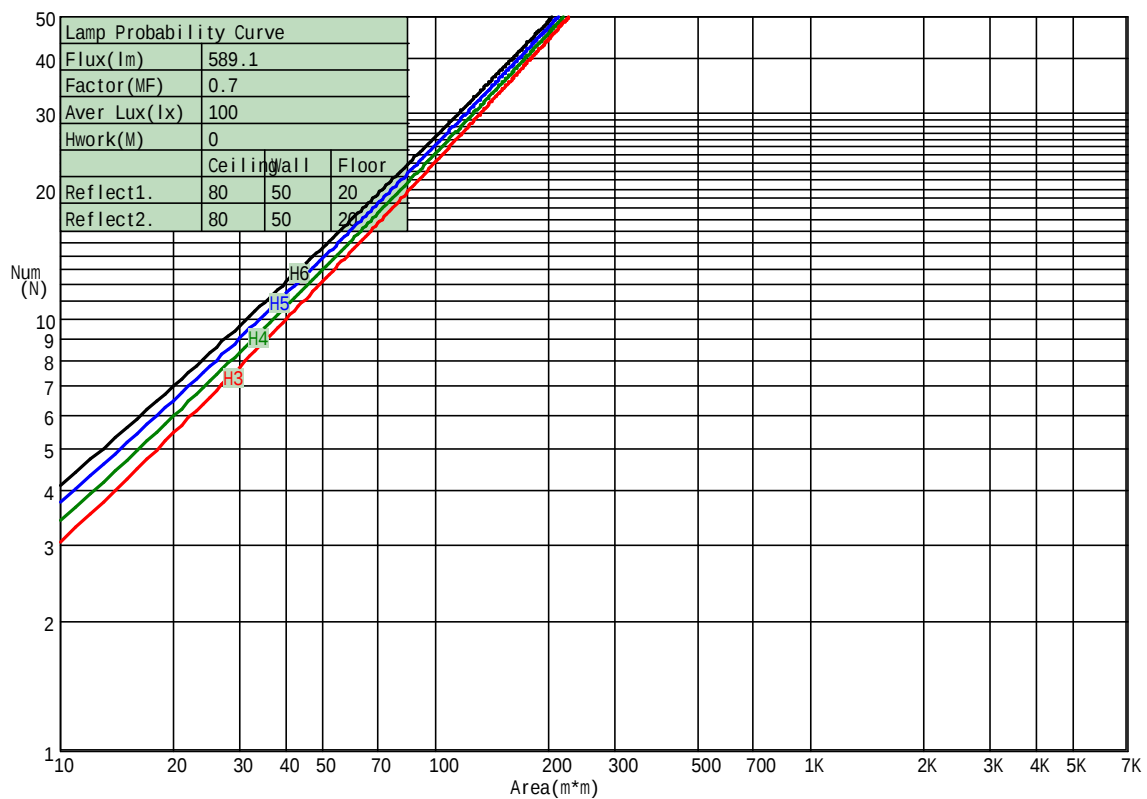
Humidity(%): 60

Date: 2018-8-3

Remark:

Measured Para U: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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	46	37	58	45	37	55	44	37
0.80	60	44	34	58	43	34	54	42	33
1.00	61	44	33	59	43	32	54	41	31
1.25	62	44	31	60	43	30	54	40	29
1.50	64	45	30	60	43	29	54	39	28
2.00	66	46	31	62	44	29	55	40	27
2.50	67	47	30	63	44	29	55	40	26
3.00	68	48	31	64	45	29	56	40	26
4.00	70	50	32	66	47	30	57	41	27
5.00	72	51	33	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	1.1	1.07	1.05	1.08	1.05	1.03	1.04	1.02	1	1	0.98	0.97	0.96	0.95	0.94
2	1.01	0.97	0.93	0.99	0.95	0.92	0.96	0.93	0.9	0.93	0.9	0.88	0.9	0.88	0.86
3	0.93	0.88	0.83	0.92	0.87	0.83	0.89	0.85	0.81	0.87	0.83	0.8	0.84	0.81	0.79
4	0.86	0.8	0.75	0.85	0.79	0.75	0.83	0.78	0.74	0.81	0.77	0.73	0.79	0.75	0.72
5	0.8	0.74	0.69	0.79	0.73	0.68	0.77	0.72	0.68	0.75	0.71	0.67	0.74	0.7	0.67
6	0.74	0.68	0.63	0.74	0.67	0.63	0.72	0.67	0.63	0.71	0.66	0.62	0.69	0.65	0.62
7	0.7	0.63	0.59	0.69	0.63	0.58	0.68	0.62	0.58	0.66	0.61	0.58	0.65	0.61	0.57
8	0.65	0.59	0.54	0.65	0.59	0.54	0.64	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.54
9	0.62	0.55	0.51	0.61	0.55	0.51	0.6	0.55	0.51	0.59	0.54	0.5	0.58	0.54	0.5
10	0.58	0.52	0.48	0.58	0.52	0.48	0.57	0.51	0.48	0.56	0.51	0.48	0.55	0.51	0.47

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: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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	0.2	0.11	0.04	0.19	0.11	0.03	0.18	0.1	0.03	0.17	0.1	0.03	0.15	0.09	0.03
2	0.19	0.1	0.03	0.18	0.1	0.03	0.17	0.1	0.03	0.16	0.09	0.03	0.15	0.09	0.03
3	0.18	0.1	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.16	0.09	0.03	0.15	0.08	0.03
4	0.17	0.09	0.03	0.17	0.09	0.03	0.16	0.08	0.03	0.15	0.08	0.02	0.15	0.08	0.02
5	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.08	0.02	0.14	0.07	0.02
6	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02
7	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02
8	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.06	0.02	0.12	0.06	0.02
9	0.13	0.06	0.02	0.13	0.06	0.02	0.13	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02
10	0.13	0.06	0.02	0.13	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02	0.11	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	0.09	0.06	0.05	0.05	0.02	0.02	0.02
2	0.16	0.13	0.11	0.14	0.11	0.1	0.09	0.08	0.07	0.05	0.05	0.04	0.02	0.01	0.01
3	0.15	0.11	0.09	0.13	0.1	0.08	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	0.08	0.06	0.04	0.05	0.04	0.03	0.02	0.01	0.01
5	0.13	0.09	0.06	0.11	0.08	0.05	0.08	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.01
6	0.12	0.08	0.05	0.11	0.07	0.04	0.07	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.12	0.07	0.04	0.1	0.06	0.04	0.07	0.04	0.02	0.04	0.03	0.01	0.01	0.01	0
8	0.11	0.07	0.03	0.09	0.06	0.03	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
9	0.1	0.06	0.03	0.09	0.05	0.03	0.06	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
10	0.1	0.06	0.03	0.09	0.05	0.02	0.06	0.03	0.02	0.03	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: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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	1294	1642	1398	1533	1205	775	1116	842	0-5	32.2	32.2
10	729	1224	861	1067	676	362	621	437	5-10	68.8	101
15	354	686	422	574	310	222	290	244	10-15	64	165
20	234	318	236	268	220	201	217	209	15-20	48.4	213
25	209	229	211	214	207	200	203	204	20-25	46	259
30	206	213	207	205	194	185	197	193	25-30	51.8	311
35	197	208	199	200	185	173	187	183	30-35	57.8	369
40	189	197	189	190	175	164	175	174	35-40	62.3	431
45	174	186	178	177	168	101	164	133	40-45	64	495
50	107	175	128	165	89.7	20.7	75.7	35.8	45-50	53.8	549
55	30.2	88.7	29.2	59.8	21.4	2.93	19.1	4.19	50-55	27.2	576
60	5.8	22.7	4.42	9.88	1.77	1.02	2.08	1.05	55-60	7.31	583
65	2.59	3.39	2.19	2.77	1.03	0.91	1.3	0.89	60-65	1.49	585
70	2.38	2.47	1.94	2.33	0.85	0.89	1.16	0.82	65-70	0.87	586
75	2.37	2.28	1.94	2.18	0.78	0.84	1.06	0.87	70-75	0.82	587
80	2.4	2.24	2.01	2.15	0.77	0.87	1.01	0.86	75-80	0.83	587
85	2.48	2.27	2.07	2.21	0.84	0.85	1	0.84	80-85	0.85	588
90	2.47	2.32	2.07	2.15	0.71	0.64	0.63	0.6	85-90	0.83	589
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: 216.2V I: 85.0mA P: 9.80W PF: 0.531 Test LM: 589.13lm		
Lamp Name: LP-COB10BX	Lamp Type: Class I	Weight(kg):
Lamp ID: LP-COB10BX	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	1294	1446	1604	1562	1451	1427	1489	1497	1349	1205	1017	822	887	1042	1056	932	892	1096
10.0	729	946	1170	1105	940	906	999	1024	847	676	539	397	447	565	581	498	469	601
15.0	354	499	650	599	480	455	524	545	425	310	272	232	244	275	280	259	256	306
20.0	234	271	309	291	254	243	258	263	241	220	212	203	207	214	215	212	212	223
25.0	209	218	227	223	215	212	213	213	210	207	204	201	201	202	203	204	204	207
30.0	206	209	212	211	208	206	205	203	199	194	190	186	189	194	196	194	194	200
35.0	197	202	207	205	201	199	200	199	192	185	180	175	178	184	186	185	185	191
40.0	189	192	196	195	191	189	189	188	181	175	170	165	168	173	175	174	176	182
45.0	174	179	184	183	180	178	178	176	172	168	139	109	122	150	157	143	137	156
50.0	107	137	168	160	139	136	153	157	123	89.7	59.6	28.3	38.8	63.7	67	48.9	43.5	75.6
55.0	30.2	55.8	82.3	69.2	42.2	35.9	49.8	55.6	38.2	21.4	13.3	4.95	8.25	15.6	15.9	9.09	7.04	18.8
60.0	5.8	13.2	20.8	16.7	8.41	5.61	8.09	8.99	5.32	1.77	1.44	1.1	1.37	1.85	1.86	1.39	1.57	3.73
65.0	2.59	2.94	3.3	3	2.45	2.32	2.58	2.58	1.79	1.03	0.98	0.93	1.04	1.22	1.21	1.02	1.08	1.85
70.0	2.38	2.42	2.46	2.3	2.06	2.02	2.2	2.17	1.5	0.85	0.87	0.89	0.98	1.1	1.09	0.93	1	1.7
75.0	2.37	2.33	2.29	2.17	2.01	1.99	2.1	2.03	1.39	0.78	0.81	0.83	0.91	1.02	1.02	0.93	1.03	1.72
80.0	2.4	2.33	2.26	2.17	2.06	2.05	2.11	2	1.38	0.77	0.82	0.86	0.92	0.98	0.98	0.91	1.03	1.73
85.0	2.48	2.39	2.29	2.2	2.11	2.1	2.17	2.06	1.44	0.84	0.84	0.85	0.9	0.97	0.97	0.89	1.02	1.76
90.0	2.47	2.41	2.34	2.24	2.13	2.09	2.13	2	1.34	0.71	0.68	0.65	0.64	0.64	0.63	0.61	0.81	1.66
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: