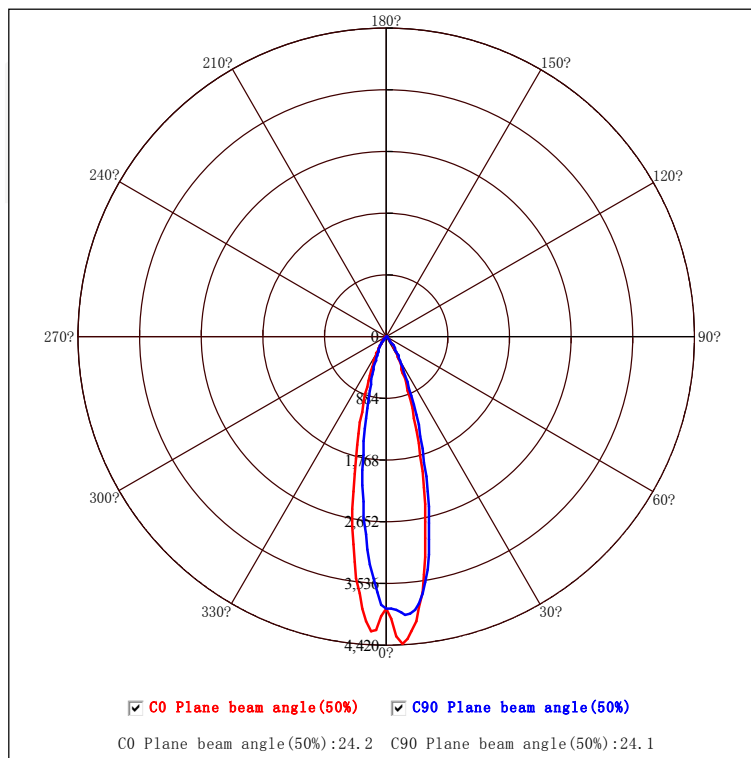


Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm						
Lamp Name: 12W LED COB TRACKLIGHT		Lamp Type: SHOPLINE-B		Weight (kg):		
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021		Lamp Spec:		Shape Size:		
Manufactory:		Sur (m <sup>2</sup> ):		Protect Angle (Deg):		
Light Source Data			Photometric Data			
Model	BD30-01020		Peak Value (cd)	4445.9	Efficiency (lm/w)	94.7
Nominal P(w)	12.0		Position	0.0, 1.0	UP (C0-C180)	0.0
Rated Volt (v)	220.0		Total Flux (lm)	1126.580	Down (C0-C180)	65.5
Rated Flux (lm)	10000.0		Up Flux Rate (%)	0.0	UP (C180-C360)	0.0
Illuminant QTY	1		Dw Flux Rate (%)	100.0	Down (C180-C360)	34.5

### Planar Intensity Distribution Curve



Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

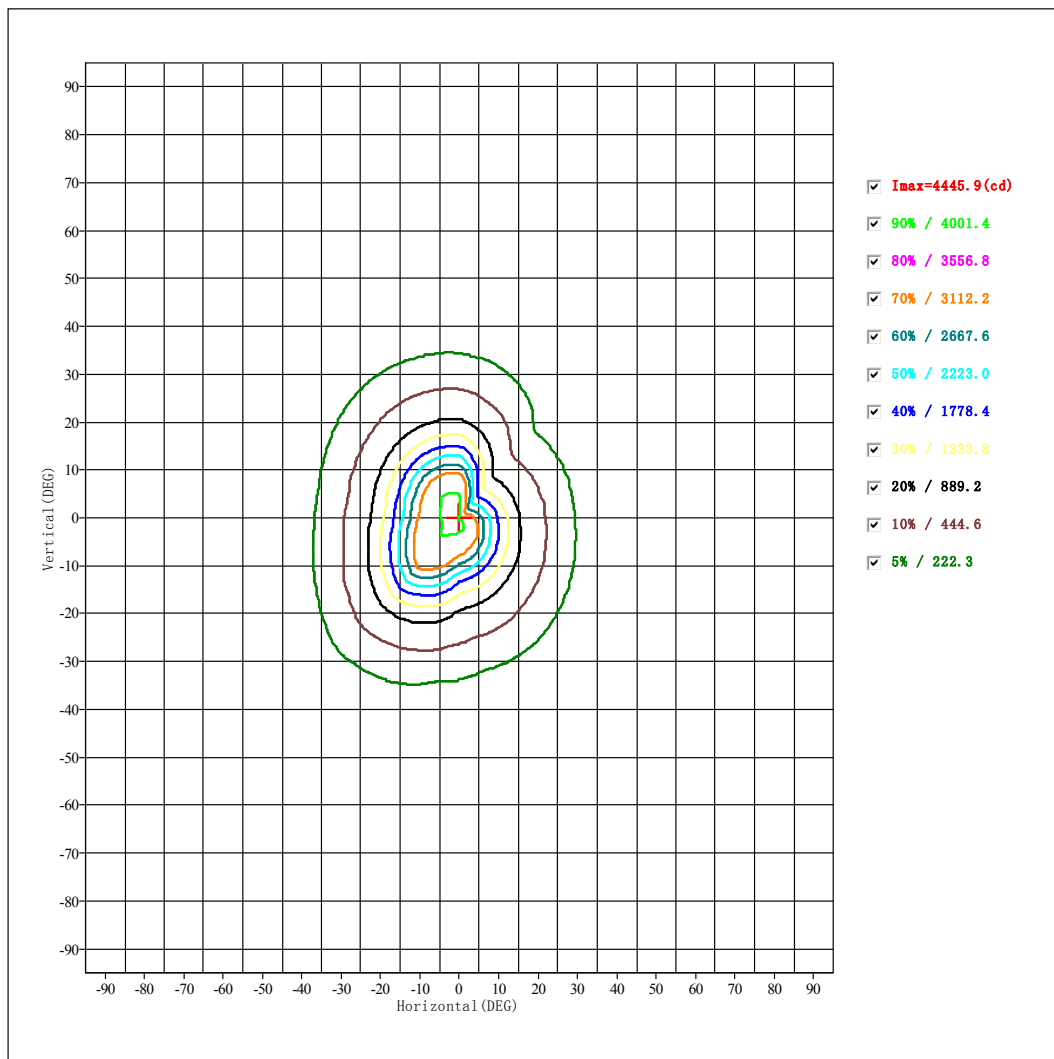
Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ):	Protect Angle (Deg):

### Planar IsoCandela Curve



Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

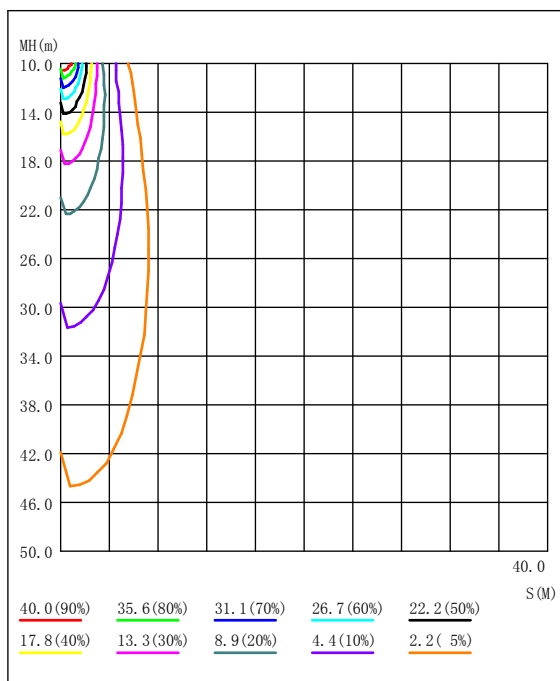
Distance (m): 6.000

Remark:

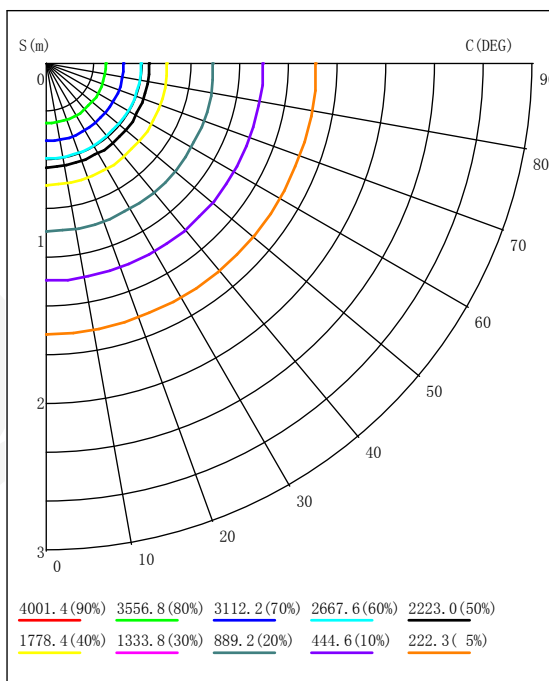
Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg) :
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ) :	Protect Angle (Deg) :

Spacial ISOLUX Curve



Planar ISOLUX Curve



Gama Angle Range: -90 - 90 (Deg)

Gama interval (Deg): 1

Temperature (Deg): 26.5

Tester: z

Distance (m): 6.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180 (Deg)

C interval (Deg): 45

Humidity (%): 60

Date: 2017/9/23

Remark:

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ):	Protect Angle(Deg):

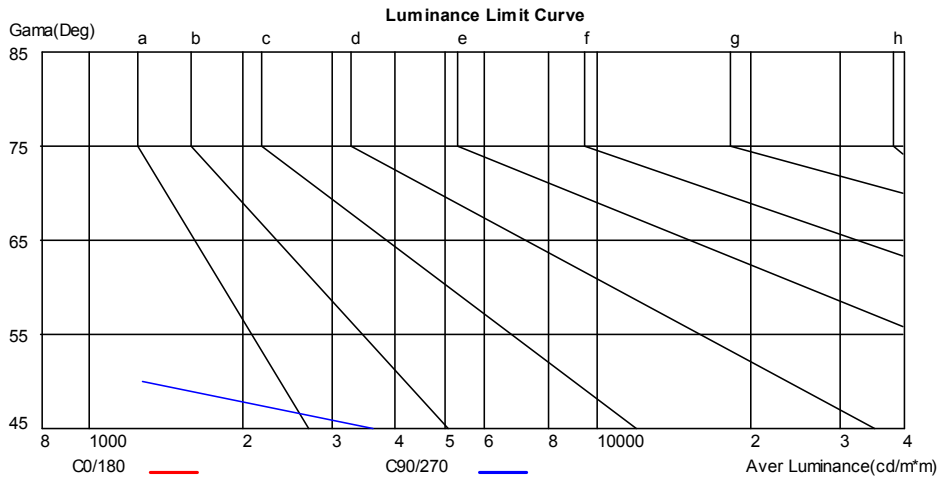
### Luminance Limit Curve

Aver Luminance(cd/m<sup>2</sup>m)

Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	2104.2	637.2	37.1	8.3	0.0	0.0	0.0	0.0	0.0
C90	3611.2	1266.5	131.0	5.0	0.0	0.0	0.0	0.0	0.0

Glare

Glare	Class	Illuminance(lx)								
		2000	1000	500	<=300					
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)

C Angle Range:0 - 180(Deg)

Gama interval(Deg): 1

C interval(Deg): 45

Temperature(Deg): 26.5

Humidity(%): 60

Tester: z

Date: 2017/9/23

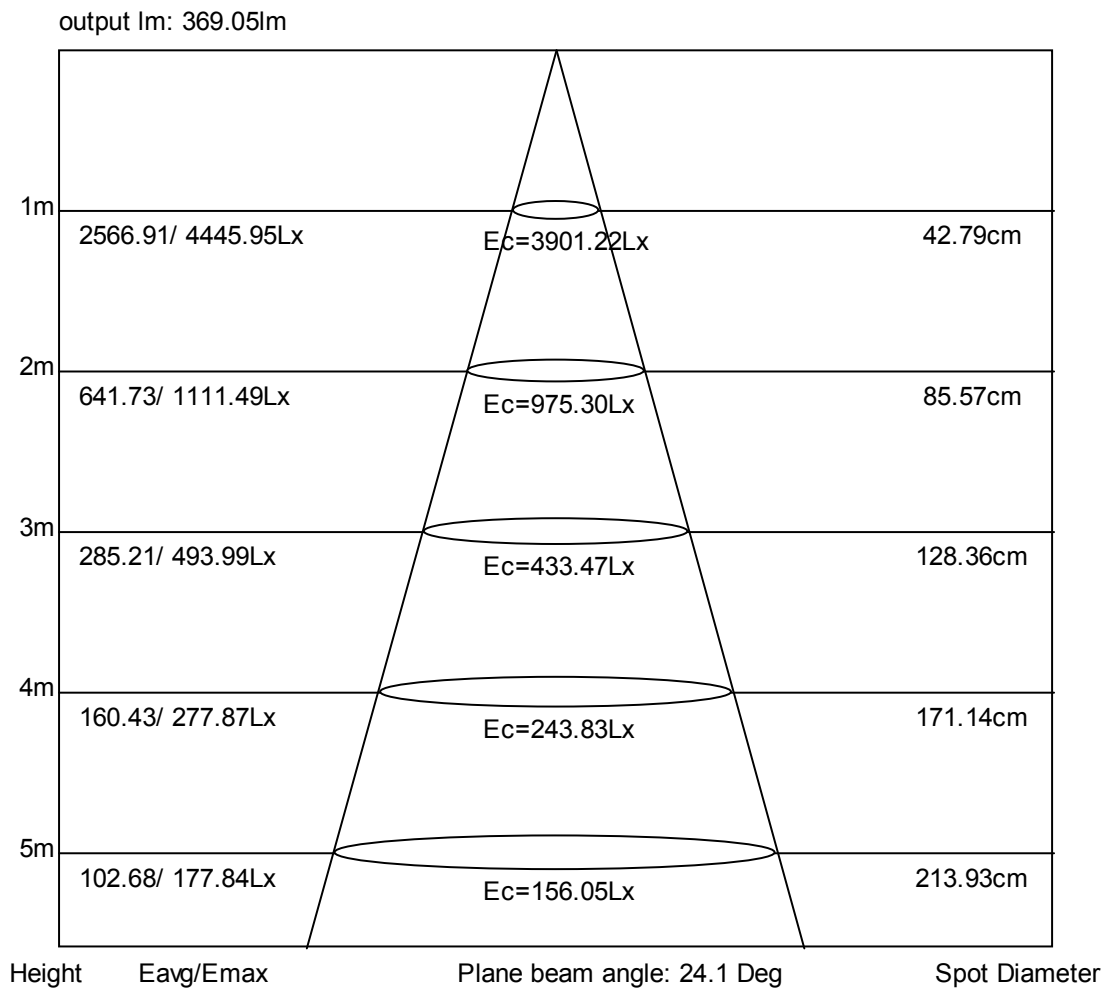
Distance(m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ):	Protect Angle (Deg):

### Average Illumination



Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

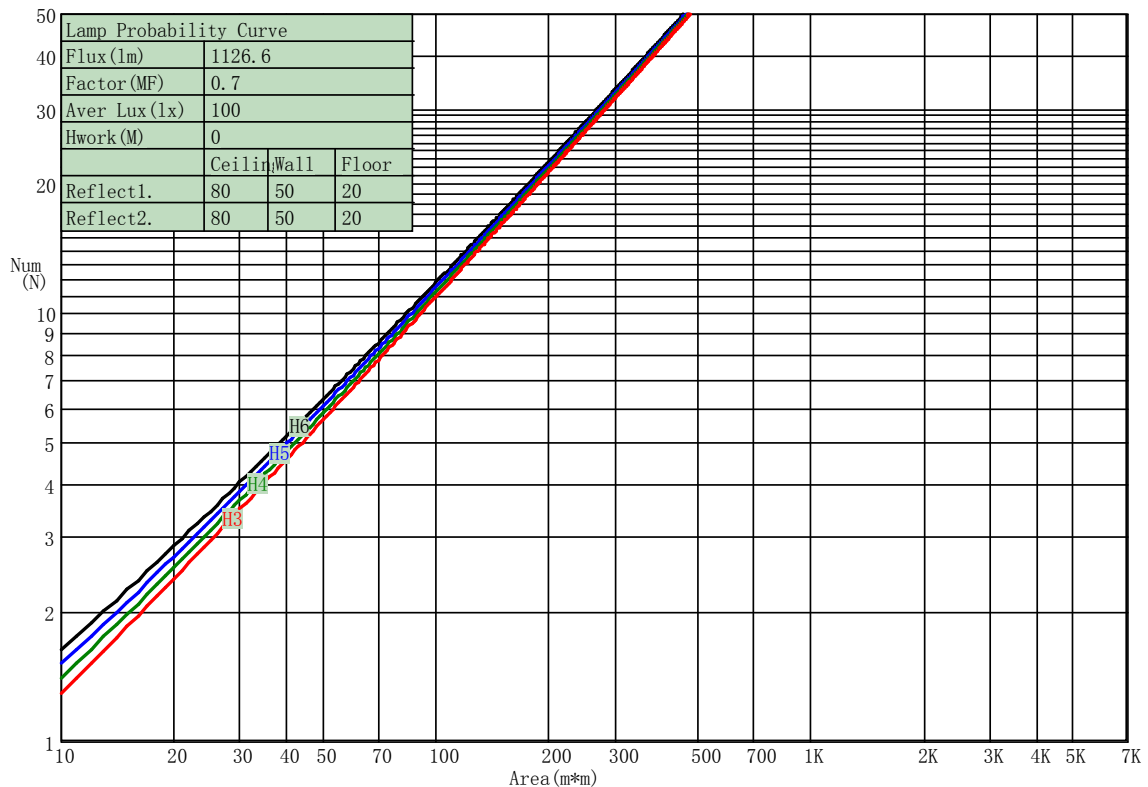
Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ):	Protect Angle (Deg):

### Lamp Probability Curve



Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ):	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	42	25	14	40	24	14	37	23	14
0.80	47	28	16	45	27	15	40	25	15
1.00	51	31	17	48	30	17	43	27	16
1.25	54	34	19	51	32	18	45	29	16
1.50	57	36	20	53	34	19	47	30	17
2.00	61	39	22	57	37	21	49	32	19
2.50	63	41	23	59	39	22	51	34	19
3.00	65	43	24	60	40	23	52	35	20
4.00	67	45	26	62	42	24	53	36	21
5.00	68	47	27	63	43	25	54	37	22

### CoEfficients Utilization

Ceiling(%)		80			70			50			30			10	
Wall (%)	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
Floor (%)		20			20			20			20			20	
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	1.12	1.1	1.08	1.1	1.08	1.07	1.06	1.05	1.03	1.03	1.01	1	0.99	0.98	0.97
2	1.06	1.03	1	1.05	1.02	0.99	1.02	0.99	0.97	0.99	0.97	0.95	0.96	0.94	0.93
3	1.01	0.97	0.94	1	0.96	0.93	0.97	0.94	0.92	0.95	0.92	0.9	0.93	0.91	0.89
4	0.96	0.92	0.89	0.95	0.91	0.88	0.93	0.9	0.87	0.91	0.89	0.86	0.9	0.87	0.85
5	0.92	0.88	0.84	0.91	0.87	0.84	0.9	0.86	0.83	0.88	0.85	0.82	0.87	0.84	0.82
6	0.88	0.84	0.8	0.88	0.83	0.8	0.86	0.82	0.8	0.85	0.82	0.79	0.84	0.81	0.79
7	0.85	0.8	0.77	0.84	0.8	0.77	0.83	0.79	0.76	0.82	0.78	0.76	0.81	0.78	0.76
8	0.82	0.77	0.74	0.81	0.77	0.74	0.8	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.73
9	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.77	0.73	0.7	0.76	0.73	0.7
10	0.76	0.71	0.68	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.7	0.68	0.73	0.7	0.68

Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ):	Protect Angle (Deg):

### Wall Exitance CoEfficients

Ceiling (%)		80			70			50			30			10	
Wall (%)	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
Floor (%)		20			20			20			20			20	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.15	0.08	0.03	0.14	0.08	0.03	0.13	0.07	0.02	0.12	0.07	0.02	0.11	0.06	0.02
2	0.14	0.08	0.02	0.13	0.07	0.02	0.12	0.07	0.02	0.11	0.06	0.02	0.1	0.06	0.02
3	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.1	0.06	0.02
4	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02	0.1	0.05	0.02
5	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02	0.1	0.05	0.02	0.1	0.05	0.02
6	0.11	0.06	0.02	0.11	0.05	0.02	0.1	0.05	0.02	0.1	0.05	0.01	0.09	0.05	0.01
7	0.11	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01	0.09	0.05	0.01	0.09	0.05	0.01
8	0.1	0.05	0.01	0.1	0.05	0.01	0.09	0.05	0.01	0.09	0.05	0.01	0.09	0.04	0.01
9	0.1	0.05	0.01	0.09	0.05	0.01	0.09	0.05	0.01	0.09	0.04	0.01	0.08	0.04	0.01
10	0.09	0.04	0.01	0.09	0.04	0.01	0.09	0.04	0.01	0.08	0.04	0.01	0.08	0.04	0.01

### Ceiling Cavity Exitance CoEfficients

Ceiling (%)		80			70			50			30			10	
Wall (%)	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
Floor (%)		20			20			20			20			20	
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	0.15	0.14	0.14	0.13	0.1	0.09	0.09	0.06	0.05	0.05	0.02	0.02	0.02
2	0.15	0.13	0.12	0.13	0.11	0.1	0.09	0.08	0.07	0.05	0.05	0.04	0.02	0.01	0.01
3	0.14	0.11	0.09	0.12	0.1	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01	0.01
4	0.13	0.1	0.08	0.11	0.08	0.07	0.07	0.06	0.05	0.04	0.03	0.03	0.01	0.01	0.01
5	0.12	0.09	0.06	0.1	0.07	0.06	0.07	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.01
6	0.11	0.08	0.05	0.09	0.07	0.05	0.06	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.1	0.07	0.05	0.09	0.06	0.04	0.06	0.04	0.03	0.03	0.02	0.02	0.01	0.01	0.01
8	0.09	0.06	0.04	0.08	0.05	0.03	0.06	0.04	0.02	0.03	0.02	0.01	0.01	0.01	0
9	0.09	0.06	0.03	0.08	0.05	0.03	0.05	0.03	0.02	0.03	0.02	0.01	0.01	0.01	0
10	0.08	0.05	0.03	0.07	0.04	0.03	0.05	0.03	0.02	0.03	0.02	0.01	0.01	0.01	0

Gama Angle Range: -90 - 90 (Deg)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0



Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg):
Lamp Model: BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec:	Shape Size:
Manufactory:	Sur (m <sup>2</sup> ):	Protect Angle (Deg):

**Ring-shaped Flux Data Table**

Gm\C (Deg)	0	45	90	135	180	225	270	315	Range	Ring	T (lm)
5	4107	4205	3943	4030	3710	3353	2841	1983	0-5	88.7	88.7
10	2942	3214	3183	3991	2517	2100	1724	1071	5-10	217	306
15	1791	2054	2075	3108	1439	1177	924	562	10-15	246	551
20	943	1127	1191	1973	773	623	510	333	15-20	206	757
25	512	593	624	1095	425	354	305	195	20-25	145	902
30	303	337	363	558	246	210	176	88.1	25-30	98.1	1000
35	199	188	206	320	133	105	80.3	29.8	30-35	63.3	1064
40	70.8	95.1	107	192	46.5	33.2	24.8	9.74	35-40	37.8	1101
45	21	32.6	36.1	83.8	11.2	11	7.92	0.85	40-45	17.1	1118
50	6.37	11.2	12.7	27.5	2.69	0.91	0.46	0.05	45-50	6.11	1125
55	0.37	1.02	1.31	9.87	0.2	0	0	0	50-55	1.65	1126
60	0.08	0.06	0.05	0.85	0	0	0.05	0	55-60	0.3	1127
65	0	0	0	0	0	0	0	0	60-65	0.02	1127
70	0	0	0	0	0	0	0	0	65-70	0	1127
75	0	0	0	0	0	0	0	0	70-75	0	1127
80	0	0	0	0	0	0	0	0	75-80	0	1127
85	0	0	0	0	0	0	0	0	80-85	0	1127
90	0	0	0	0	0	0	0	0	85-90	0	1127
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)

C Angle Range: 0 - 180 (Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature (Deg): 26.5

Humidity (%): 60

Tester: z

Date: 2017/9/23

Distance (m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 220.4V I: 111.0mA P: 11.90W PF: 0.486 Test LM: 1126.58lm		
Lamp Name: 12W LED COB TRACKLIGHT	Lamp Type: SHOPLINE-B	Weight (kg) :
Lamp Model : BD30-01000, BD30-01010, BD30-01020 BD30-01001, BD30-01011, BD30-01021	Lamp Spec :	Shape Size :
Manufactory :	Sur (m <sup>2</sup> ) :	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	4107	4150	4194	4119	4000	3962	4001	3995	3850	3710	3554	3392	3185	2953	2653	2265	2216	3178
10.0	2942	3061	3185	3204	3190	3360	3726	3830	3162	2517	2335	2146	1977	1807	1581	1286	1276	2124
15.0	1791	1906	2026	2061	2071	2301	2769	2925	2169	1439	1324	1205	1094	979	845	681	697	1253
20.0	943	1023	1107	1148	1177	1363	1717	1842	1298	773	707	640	586	534	471	391	400	676
25.0	512	547	584	603	617	727	940	1022	718	425	394	362	338	316	281	231	230	373
30.0	303	318	333	346	358	406	494	524	383	246	230	214	199	184	157	117	112	209
35.0	199	194	189	194	202	231	283	299	215	133	120	108	96.6	85.6	69.3	46.4	48.3	125
40.0	70.8	81.4	92.5	98.9	104	125	164	176	110	46.5	40.7	34.7	30.5	26.7	21.5	14.7	16.4	44.1
45.0	21	26.1	31.3	33.7	35.3	46.5	68.2	75.9	43	11.2	11.1	11	9.96	8.59	6.37	3.17	3.06	12.2
50.0	6.37	8.5	10.7	11.7	12.4	15.9	22.6	24.8	13.5	2.69	1.91	1.11	0.77	0.56	0.37	0.18	0.74	3.6
55.0	0.37	0.66	0.95	1.12	1.25	3.18	7.06	8.81	4.43	0.2	0.11	0.02	0	0	0	0	0.04	0.21
60.0	0.08	0.07	0.06	0.06	0.05	0.23	0.59	0.76	0.37	0	0	0	0.02	0.04	0.04	0.02	0.01	0.05
65.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
85.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95.0																		
100.0																		
105.0																		
110.0																		
115.0																		
120.0																		
125.0																		
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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)

C Angle Range:0 - 180(Deg)

Gama interval(Deg): 1

C interval(Deg): 45

Temperature(Deg): 26.5

Humidity(%): 60

Tester: z

Date: 2017/9/23

Distance(m): 6.000

Remark:

Test System: ZWL Goniophotometer System V3.0