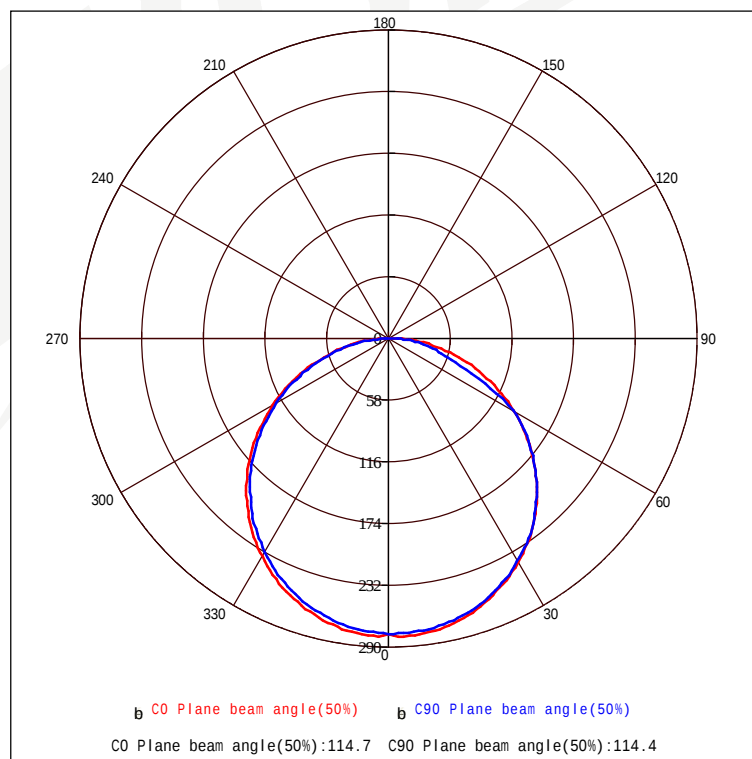


Goniophotometer Test Report

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPDL-12EMS01-F			Lamp Spec: LPDL-12A-Y		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPDL-12A-Y		Peak Value(cd)	280.6	Efficiency(lm/w)	83.4
Nominal P(w)		1.0	Position	0.0,2.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	984.12	Down(C0-C180)	51.9
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)	48.1

Planar Intensity Distribution Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

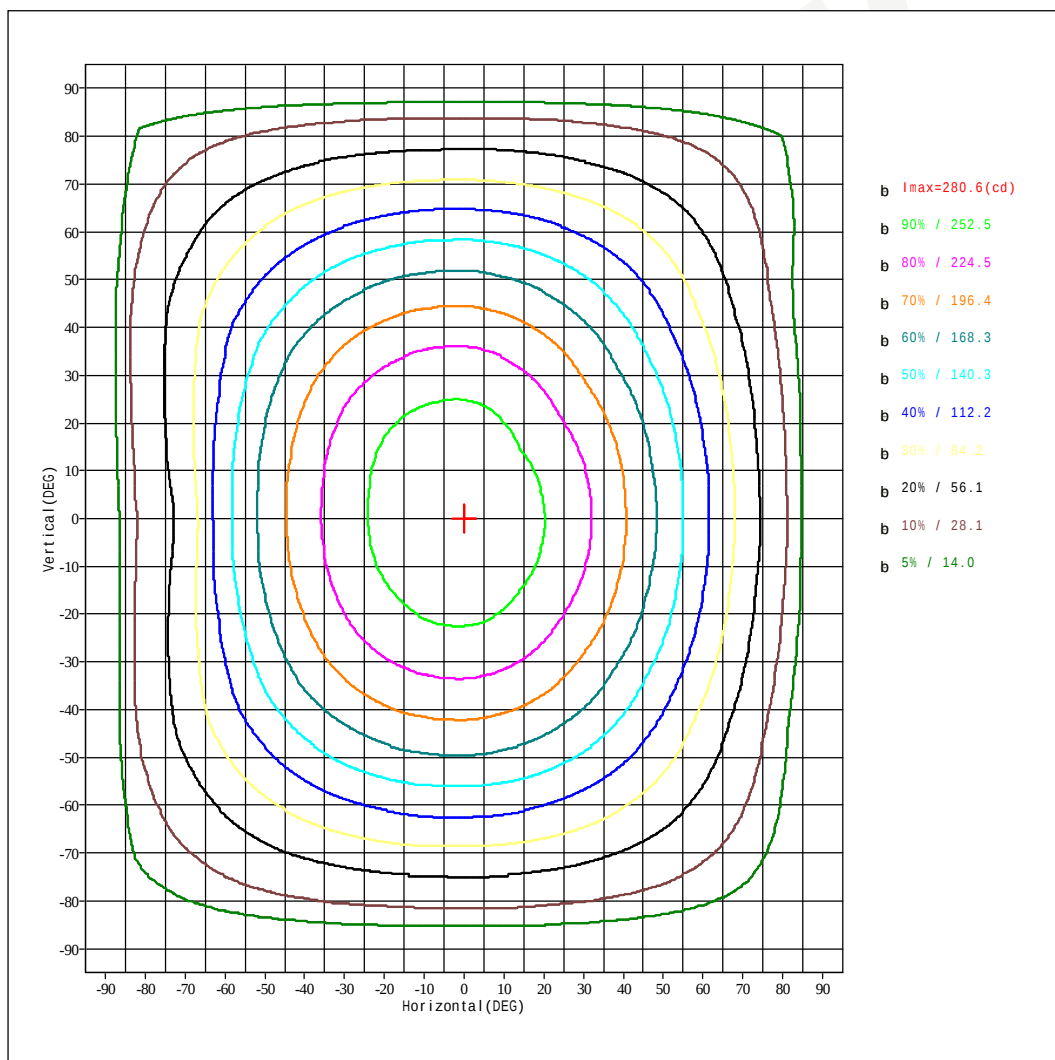
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

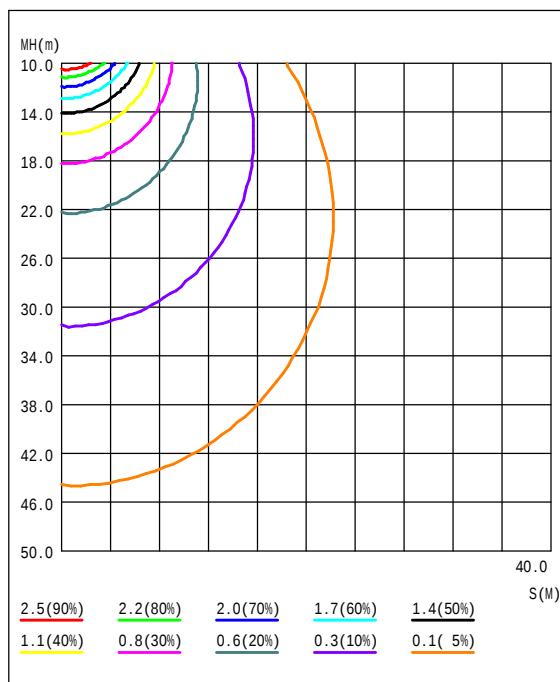
Humidity(%): 60

Date: 2025-2-26

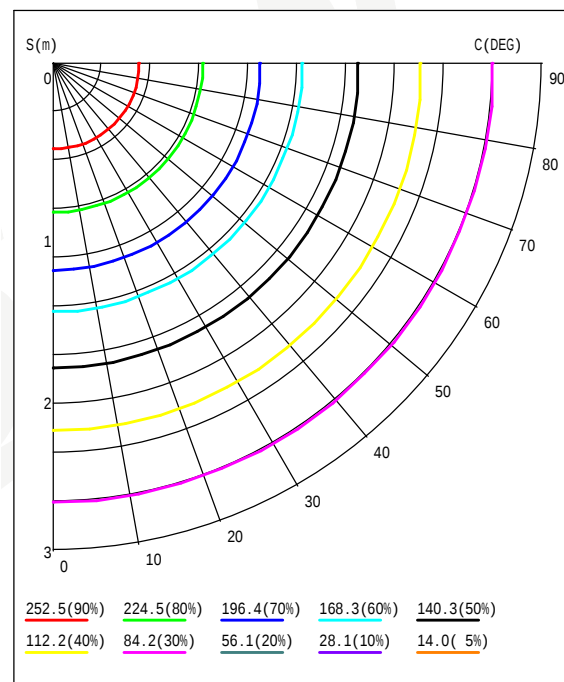
Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Spatial ISOLUX Curve



Planar ISOLUX Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

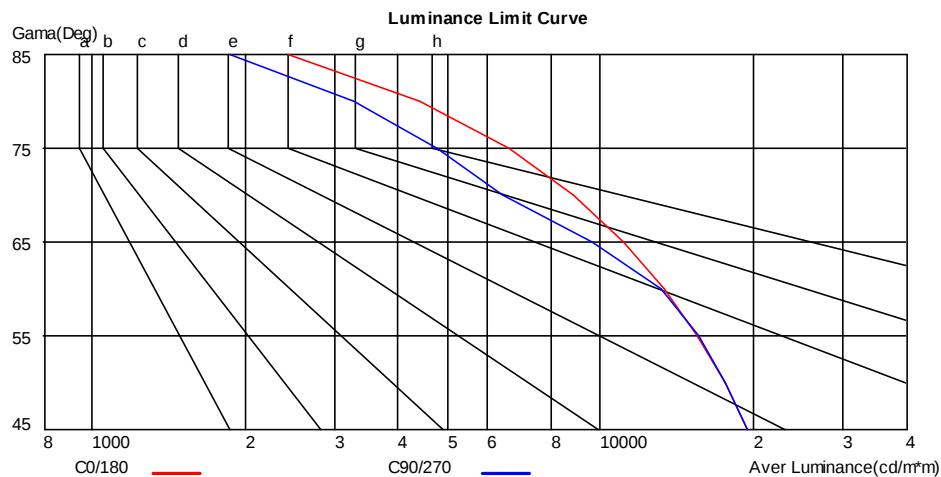
Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Luminance Limit Curve

Aver Luminance(cd/m ² m)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	19555.9	17604.7	15548.2	13375.5	11134.8	8871.5	6608.1	4406.1	2422.6
C90	19548.1	17641.0	15621.7	13209.4	9646.6	6413.1	4755.5	3271.2	1871.3

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): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

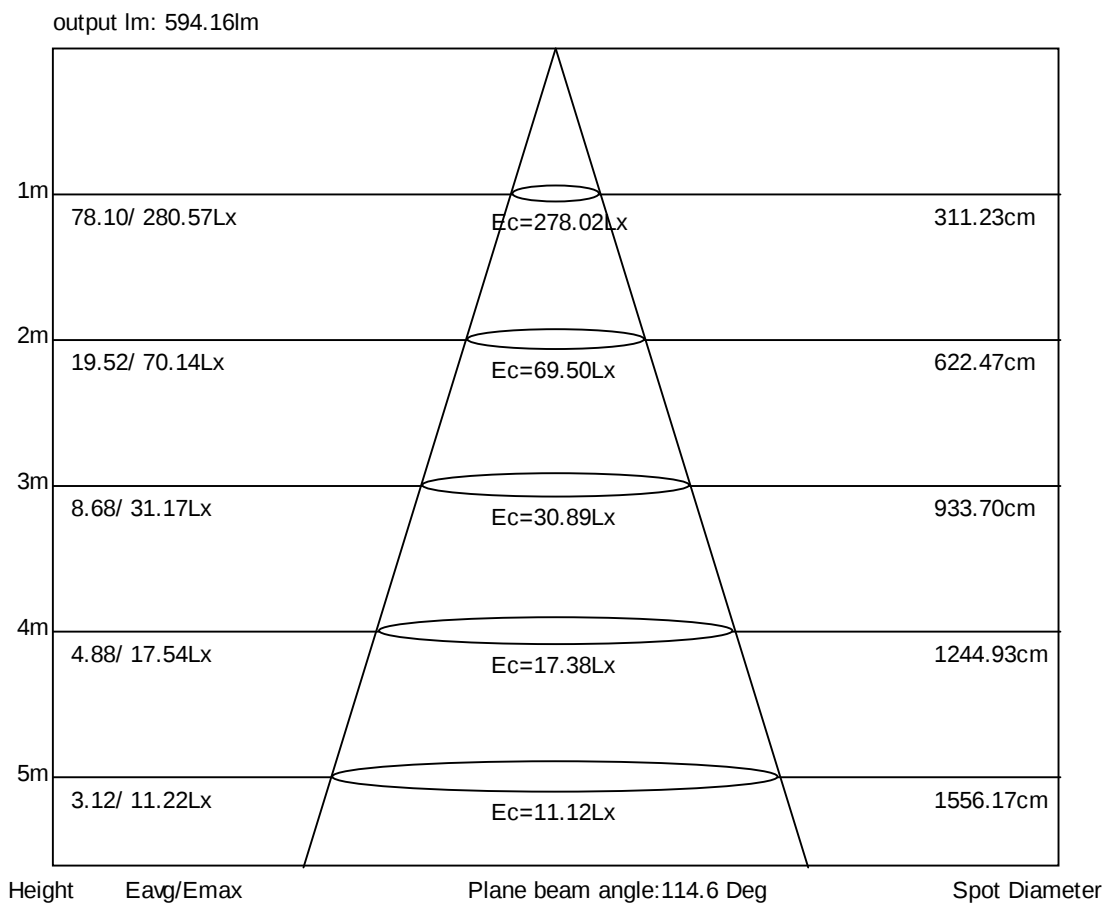
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	Shape Size:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Average Illumination



Gama Angle Range: -90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

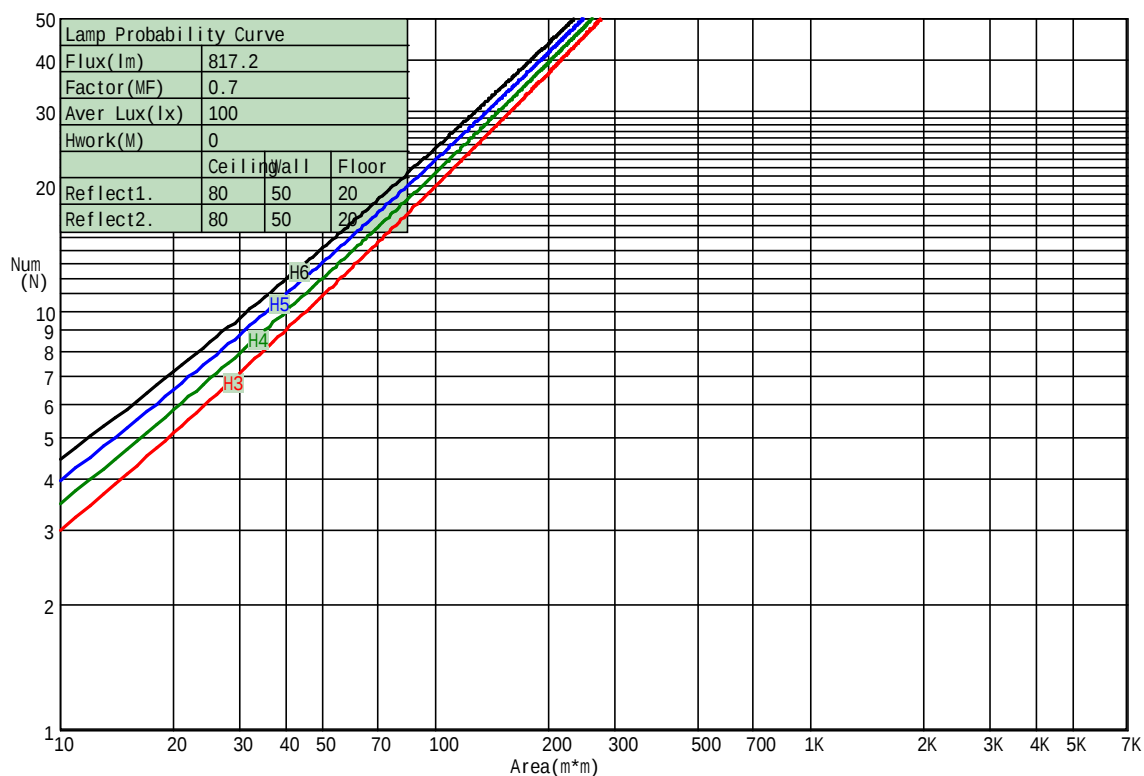
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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	53	38	29	51	37	29	48	36	28
0.80	57	41	30	55	40	30	51	38	29
1.00	61	44	32	58	42	31	53	40	30
1.25	64	46	33	61	44	32	55	41	30
1.50	65	47	33	62	45	32	56	42	31
2.00	68	49	34	65	47	33	58	43	31
2.50	70	50	34	66	48	33	58	43	31
3.00	71	51	35	66	49	33	59	44	30
4.00	72	52	35	68	49	33	59	44	30
5.00	73	53	35	68	50	33	59	44	30

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	1.03	0.99	0.95	1.01	0.97	0.93	0.97	0.94	0.9	0.93	0.9	0.88	0.89	0.87	0.85
2	0.9	0.83	0.77	0.88	0.81	0.76	0.84	0.79	0.74	0.81	0.77	0.73	0.78	0.74	0.71
3	0.79	0.7	0.64	0.77	0.69	0.63	0.74	0.67	0.62	0.71	0.66	0.61	0.69	0.64	0.6
4	0.7	0.61	0.54	0.68	0.6	0.53	0.66	0.58	0.53	0.63	0.57	0.52	0.61	0.56	0.51
5	0.62	0.53	0.46	0.61	0.52	0.46	0.59	0.51	0.45	0.57	0.5	0.45	0.55	0.49	0.44
6	0.56	0.47	0.4	0.55	0.46	0.4	0.53	0.45	0.4	0.51	0.45	0.39	0.5	0.44	0.39
7	0.51	0.42	0.35	0.5	0.41	0.35	0.48	0.41	0.35	0.47	0.4	0.35	0.45	0.39	0.35
8	0.46	0.38	0.32	0.45	0.37	0.31	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.35	0.31
9	0.42	0.34	0.28	0.42	0.34	0.28	0.41	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28
10	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.3	0.26	0.37	0.3	0.25	0.36	0.3	0.25

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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	0.32	0.18	0.06	0.31	0.18	0.06	0.3	0.17	0.05	0.29	0.17	0.05	0.27	0.16	0.05
2	0.3	0.16	0.05	0.29	0.16	0.05	0.28	0.16	0.05	0.27	0.15	0.05	0.26	0.15	0.05
3	0.27	0.15	0.04	0.27	0.14	0.04	0.26	0.14	0.04	0.25	0.14	0.04	0.24	0.13	0.04
4	0.25	0.13	0.04	0.25	0.13	0.04	0.24	0.13	0.04	0.23	0.12	0.04	0.22	0.12	0.04
5	0.23	0.12	0.03	0.23	0.12	0.03	0.22	0.11	0.03	0.21	0.11	0.03	0.21	0.11	0.03
6	0.22	0.11	0.03	0.21	0.11	0.03	0.2	0.1	0.03	0.2	0.1	0.03	0.19	0.1	0.03
7	0.2	0.1	0.03	0.2	0.1	0.03	0.19	0.1	0.03	0.18	0.09	0.03	0.18	0.09	0.03
8	0.19	0.09	0.03	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.03	0.17	0.09	0.03
9	0.18	0.08	0.02	0.17	0.08	0.02	0.17	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02
10	0.16	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	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	0.18	0.16	0.13	0.15	0.13	0.12	0.11	0.09	0.08	0.06	0.05	0.05	0.02	0.02	0.01
2	0.17	0.13	0.1	0.15	0.11	0.08	0.1	0.08	0.06	0.06	0.05	0.03	0.02	0.01	0.01
3	0.17	0.11	0.07	0.14	0.1	0.06	0.1	0.07	0.04	0.06	0.04	0.03	0.02	0.01	0.01
4	0.16	0.1	0.06	0.14	0.09	0.05	0.09	0.06	0.04	0.05	0.04	0.02	0.02	0.01	0.01
5	0.15	0.09	0.05	0.13	0.08	0.04	0.09	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01
6	0.14	0.08	0.04	0.12	0.07	0.03	0.08	0.05	0.02	0.05	0.03	0.01	0.02	0.01	0
7	0.14	0.08	0.03	0.12	0.07	0.03	0.08	0.05	0.02	0.05	0.03	0.01	0.02	0.01	0
8	0.13	0.07	0.03	0.11	0.06	0.02	0.08	0.04	0.02	0.04	0.03	0.01	0.01	0.01	0
9	0.12	0.06	0.03	0.11	0.06	0.02	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
10	0.12	0.06	0.02	0.1	0.05	0.02	0.07	0.04	0.01	0.04	0.02	0.01	0.01	0.01	0

Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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	280	279	277	275	279	276	275	274	0-5	6.63	6.63
10	277	277	274	272	275	271	271	269	5-10	19.7	26.3
15	272	272	269	267	268	264	264	263	10-15	32.1	58.4
20	264	265	262	260	260	254	255	254	15-20	43.4	102
25	254	256	252	250	249	242	244	243	20-25	53.3	155
30	242	245	241	239	236	230	231	231	25-30	61.4	216
35	229	232	228	226	221	214	216	216	30-35	67.6	284
40	213	217	213	210	204	197	200	199	35-40	71.6	356
45	196	200	195	193	186	178	182	181	40-45	73.2	429
50	176	182	176	175	166	158	162	161	45-50	72.4	501
55	155	162	156	155	145	136	141	140	50-55	69.2	571
60	134	141	132	133	123	114	119	118	55-60	63.8	634
65	111	119	96.5	111	101	91.4	97.2	95.9	60-65	55.8	690
70	88.7	95.9	64.1	89.1	78.1	68.6	74.9	73.5	65-70	46	736
75	66.1	73.4	47.6	66.9	55.8	46.4	53	51.5	70-75	35.6	772
80	44.1	51.1	32.7	45.1	34.3	25.4	32	30.4	75-80	25.2	797
85	24.2	30.1	18.7	24.6	13.6	6.63	12.5	11	80-85	14.8	812
90	8.48	9.1	8.03	5.15	1.79	1.64	1.72	1.61	85-90	5.41	817
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): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 225.7V I: 87.4mA P: 11.80W PF: 0.598 Test LM: 984.12lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-12A-Y	Lamp Spec: LPDL-12A-Y	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	280	279	279	278	277	276	276	276	277	279	278	276	276	275	275	274	274	277
10.0	277	277	277	276	275	274	273	273	274	275	273	271	271	271	270	270	270	274
15.0	272	272	272	271	270	269	268	267	268	268	266	264	264	264	264	263	264	268
20.0	264	264	265	264	263	262	261	260	260	260	257	255	254	255	255	254	255	259
25.0	254	255	256	255	253	252	251	250	249	249	246	243	243	244	244	243	244	249
30.0	242	243	245	244	242	241	239	238	237	236	233	230	230	231	231	231	232	237
35.0	229	230	232	231	229	228	227	225	223	221	218	215	215	216	216	216	217	223
40.0	213	215	217	216	214	212	211	209	207	204	201	198	198	199	200	199	201	207
45.0	196	197	199	198	196	195	194	193	189	186	183	179	179	181	181	181	182	189
50.0	176	179	181	180	178	176	175	174	170	166	163	159	159	161	162	161	163	169
55.0	155	158	161	160	157	156	155	154	149	145	141	137	138	140	141	140	142	149
60.0	134	137	140	138	134	132	133	132	128	123	119	115	116	118	119	119	120	127
65.0	111	114	118	111	101	99.7	107	110	105	101	96.7	92.4	93.3	95.9	96.9	96.3	97.6	105
70.0	88.7	91.9	95.1	85.5	71.1	69.6	80.9	87.9	82.9	78.1	73.9	69.6	70.6	73.5	74.6	74	75.2	82.1
75.0	66.1	69.3	72.6	64.9	53.2	51.8	60.6	65.7	60.7	55.8	51.7	47.4	48.5	51.6	52.7	52	53.1	59.7
80.0	44.1	47.1	50.3	45.1	36.7	35.4	41	43.9	39	34.3	30.4	26.3	27.5	30.6	31.7	30.9	31.9	38.1
85.0	24.2	26.8	29.5	26.4	21.2	20	22.7	23.4	18.4	13.6	10.5	7.39	8.55	11.2	12.2	11.5	12.5	18.5
90.0	8.48	8.75	9.03	8.75	8.26	7.4	6.1	4.79	3.26	1.79	1.72	1.66	1.67	1.71	1.7	1.65	2.36	5.47
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): 25

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2025-2-26

Remark: