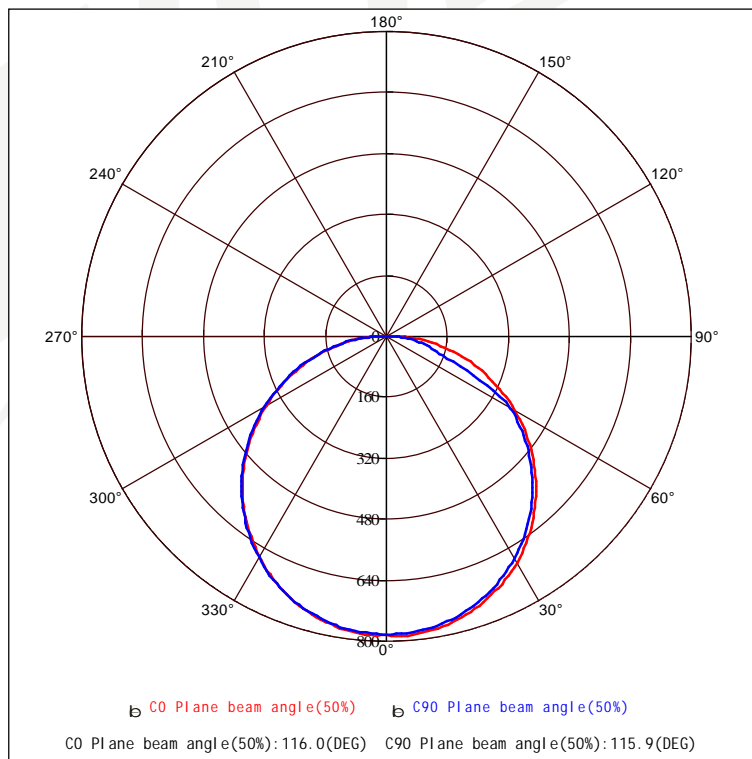


Goniophotometer Test Report

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm						
Lamp Name: LED DOWN LIGHT		Lamp Type:		Weight(kg):		
Lamp ID: LPDL-24ENS01-Y		Lamp Spec: LPDL-24ENS01-Y		Shape Size:		
Manufactory: LIPER		Sur(m ²):		Protect Angle(Deg):		
Light Source Data			Photometric Data			
Model	LPDL-24ENS01-Y		Peak Value(cd)	789.6	Efficiency(lm/w)	103.1
Nominal P(w)	24.0		Position	0.0, 2.0	UP(C0-C180)	0.0
Rated Volt(v)	1.0		Total Flux(lm)	2361.895	Down(C0-C180)	50.6
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)	49.4

Planar Intensity Distribution Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

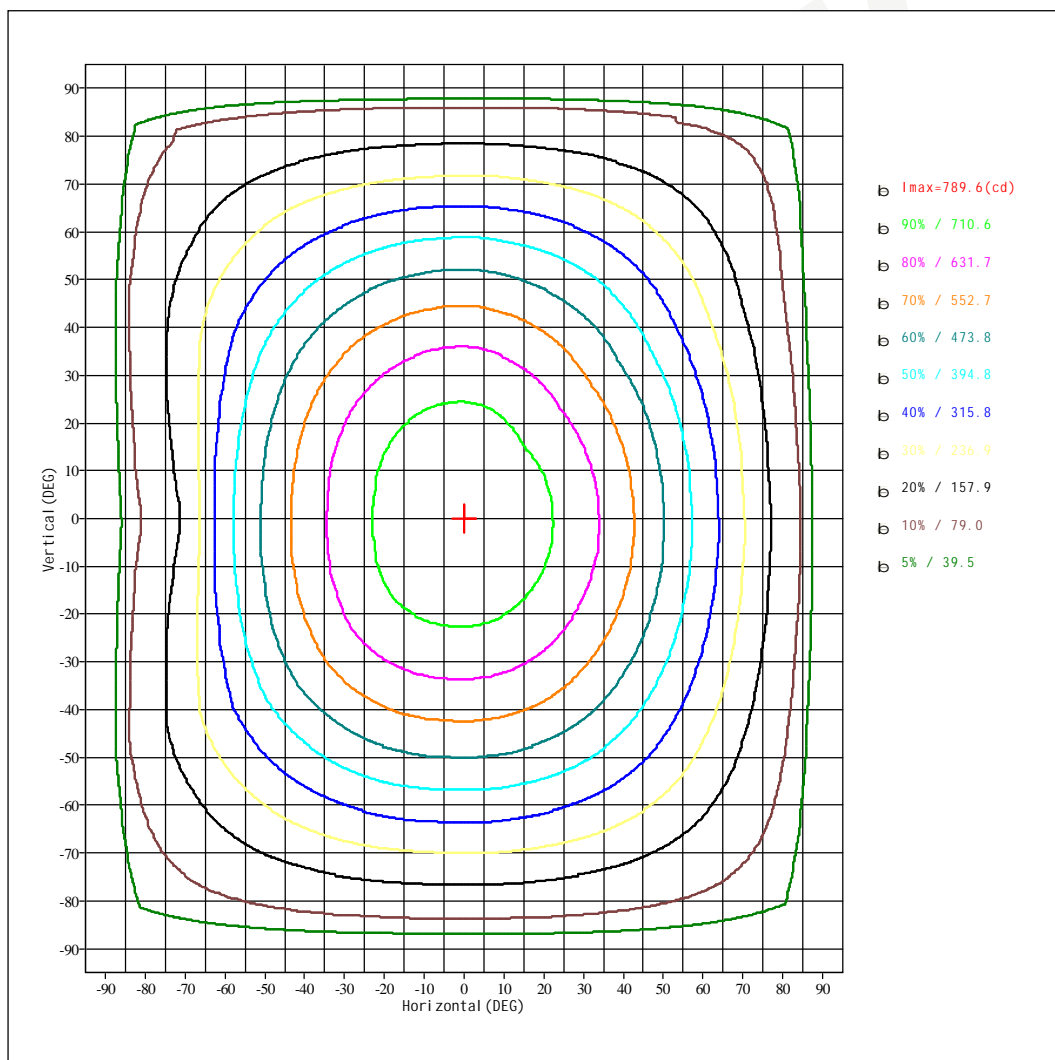
Humidity(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
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: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval (Deg): 45

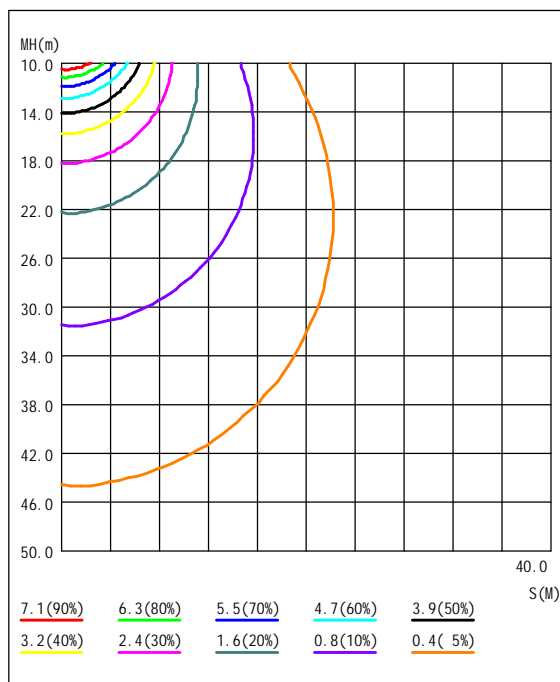
Humi di ty(%): 60

Date: 2026-4-2

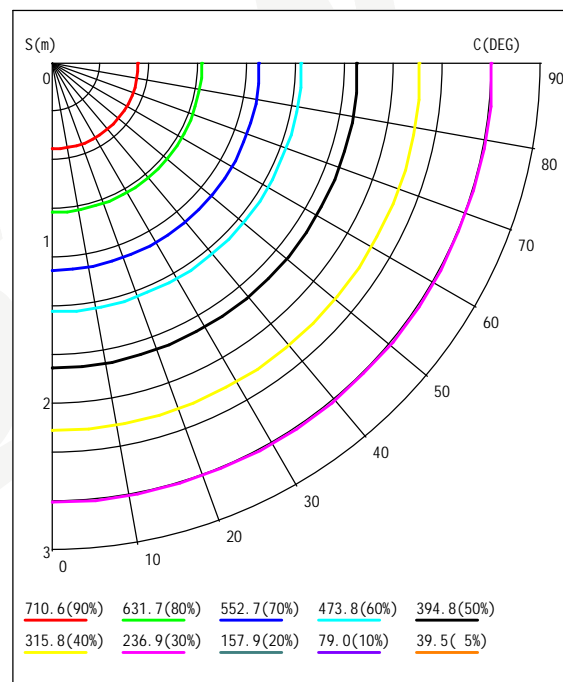
Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
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: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval (Deg): 45

Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Luminance Limit Curve

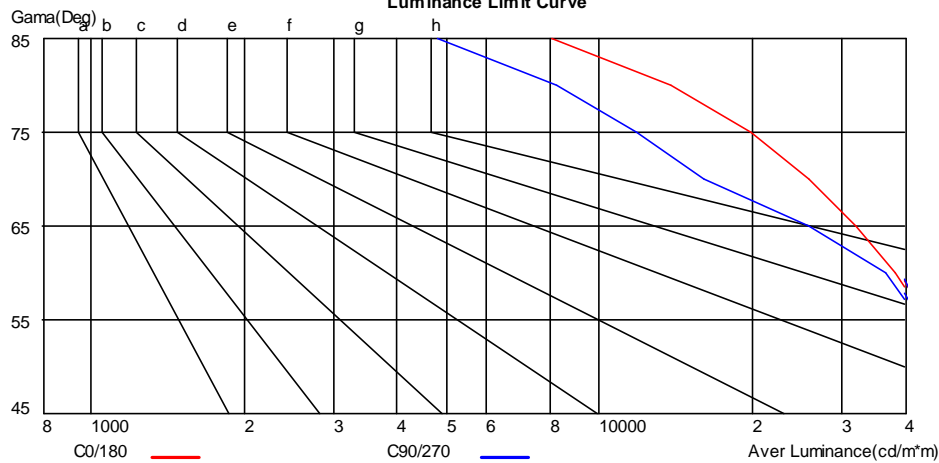
Aver Luminance(cd/m*m)

Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	55062.8	49804.1	44231.8	38402.8	32185.2	25977.4	19918.5	13851.8	8076.7
C90	53665.3	48420.3	42904.4	36663.8	25958.7	16138.1	11861.9	8223.2	4807.9

Glare

Glare	Class	Illuminance(lx)							
		a	b	c	d	e	f	g	h
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

Luminance Limit Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: zxg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

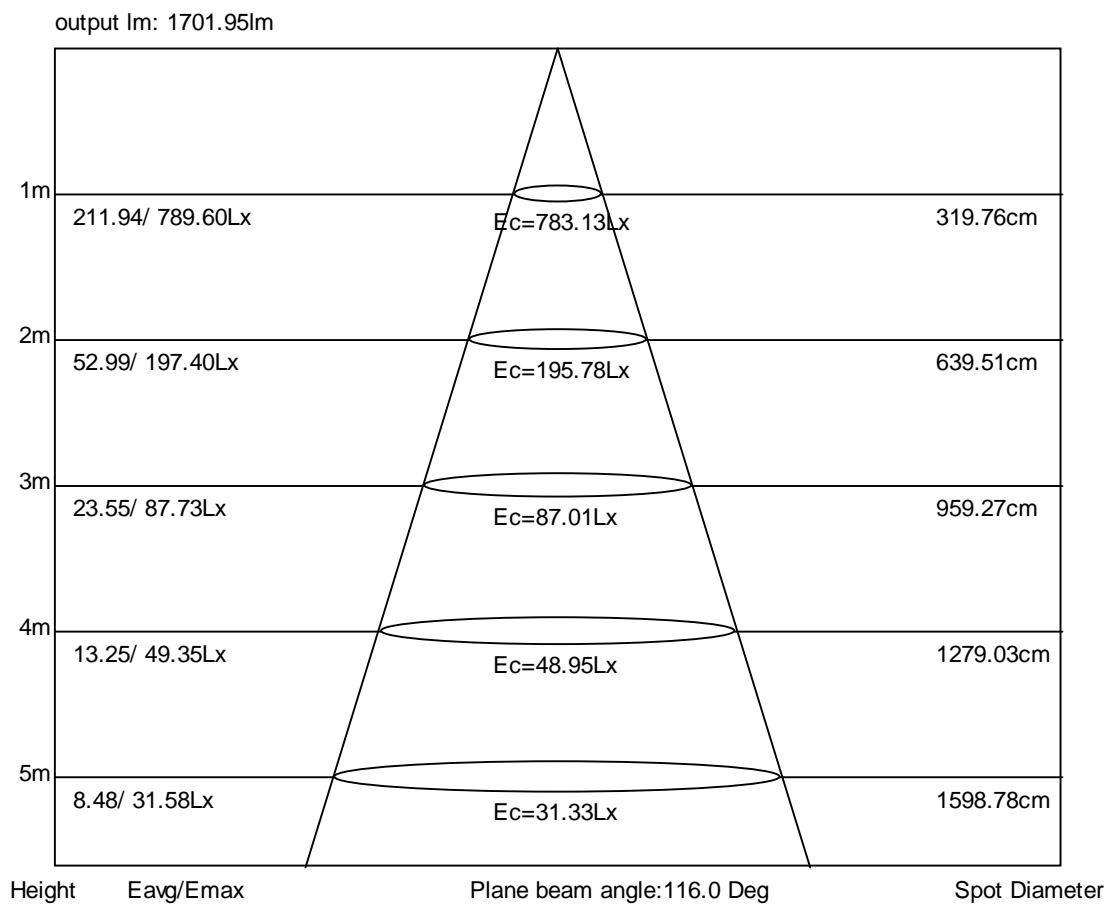
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m ²):	Protect Angle(Deg):

Average Illumination



Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 1

Temperature(Deg): 30

Tester: zxg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval (Deg): 45

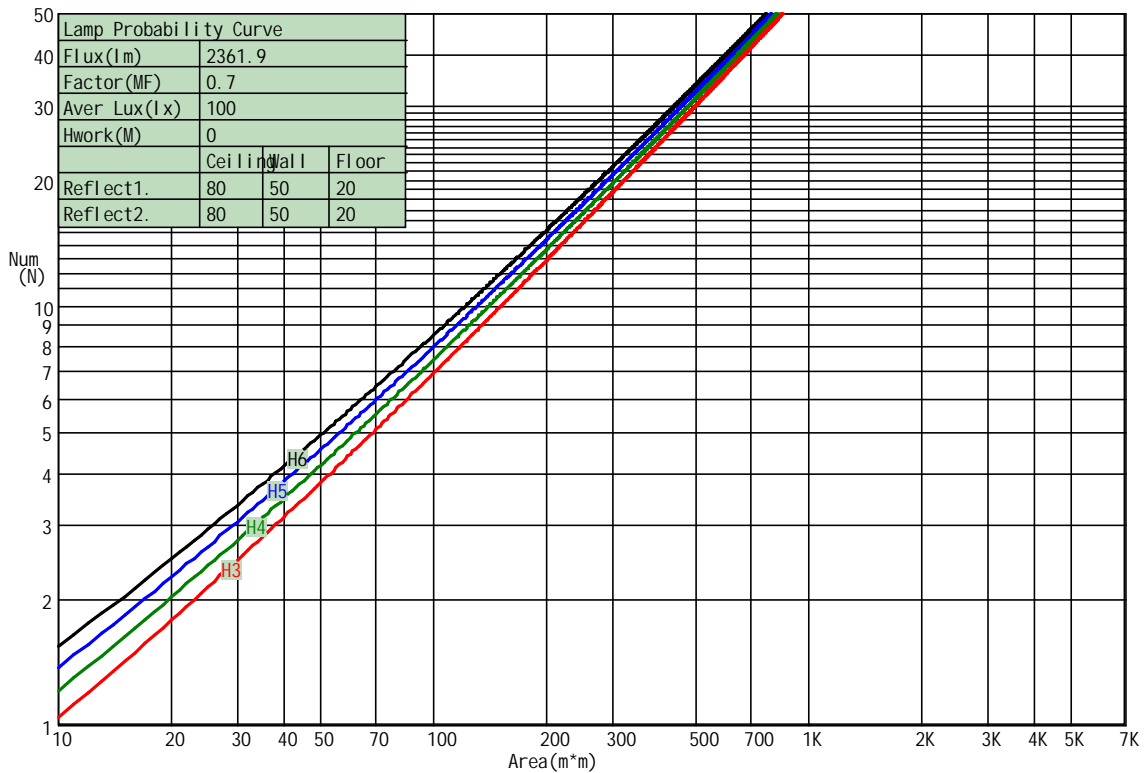
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-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): 30

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: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
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	28	51	37	28	48	36	28
0.80	57	41	30	55	40	29	51	38	29
1.00	60	43	31	58	42	31	53	40	30
1.25	63	45	32	60	44	32	55	41	30
1.50	65	47	33	62	45	32	56	42	30
2.00	68	49	34	64	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	60	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	0.98	0.94	1.01	0.96	0.93	0.96	0.93	0.9	0.92	0.89	0.87	0.89	0.86	0.84
2	0.89	0.82	0.76	0.87	0.81	0.75	0.84	0.78	0.73	0.8	0.76	0.72	0.77	0.73	0.7
3	0.78	0.69	0.63	0.76	0.68	0.62	0.73	0.67	0.61	0.71	0.65	0.6	0.68	0.63	0.59
4	0.69	0.6	0.53	0.68	0.59	0.52	0.65	0.58	0.52	0.63	0.56	0.51	0.6	0.55	0.5
5	0.61	0.52	0.45	0.6	0.52	0.45	0.58	0.5	0.45	0.56	0.49	0.44	0.54	0.48	0.44
6	0.55	0.46	0.39	0.54	0.46	0.39	0.52	0.45	0.39	0.51	0.44	0.39	0.49	0.43	0.38
7	0.5	0.41	0.35	0.49	0.41	0.35	0.48	0.4	0.34	0.46	0.39	0.34	0.45	0.39	0.34
8	0.46	0.37	0.31	0.45	0.37	0.31	0.44	0.36	0.31	0.42	0.35	0.3	0.41	0.35	0.3
9	0.42	0.33	0.28	0.41	0.33	0.28	0.4	0.33	0.28	0.39	0.32	0.27	0.38	0.32	0.27
10	0.39	0.31	0.25	0.38	0.3	0.25	0.37	0.3	0.25	0.36	0.3	0.25	0.35	0.29	0.25

Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 1

Temperature(Deg): 30

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval (Deg): 45

Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Wall Exi tance 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	0.33	0.19	0.06	0.32	0.18	0.06	0.31	0.18	0.06	0.3	0.17	0.06	0.29	0.17	0.05
2	0.3	0.17	0.05	0.3	0.16	0.05	0.29	0.16	0.05	0.28	0.15	0.05	0.27	0.15	0.05
3	0.28	0.15	0.04	0.27	0.15	0.04	0.26	0.14	0.04	0.25	0.14	0.04	0.24	0.14	0.04
4	0.26	0.13	0.04	0.25	0.13	0.04	0.24	0.13	0.04	0.23	0.13	0.04	0.22	0.12	0.04
5	0.24	0.12	0.03	0.23	0.12	0.03	0.22	0.12	0.03	0.22	0.11	0.03	0.21	0.11	0.03
6	0.22	0.11	0.03	0.21	0.11	0.03	0.21	0.11	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	0.19	0.1	0.03	0.18	0.09	0.03
8	0.19	0.09	0.03	0.19	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	0.09	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	0.17	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.08	0.02

Ceiling Cavi ty Exi tance 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	0.16	0.13	0.11	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	0.09	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	0.05	0.03	0.01	0.01	0.01	0
9	0.12	0.06	0.02	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)

C Angle Range: 0 - 180(Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature(Deg): 30

Humi di ty(%): 60

Tester: zxcg

Date: 2026-4-2

Distance(m): 7.000

Remark:

Test System: ZWL Goni ophotometer System V3.0

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
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	787	782	779	779	782	779	779	775	0-5	18.7	18.7
10	777	774	769	771	771	768	769	763	5-10	55.5	74.2
15	762	759	753	757	753	750	752	745	10-15	90.4	165
20	740	737	731	736	729	727	730	720	15-20	122	287
25	714	710	702	709	699	696	701	690	20-25	150	437
30	682	676	668	677	663	661	666	654	25-30	174	611
35	643	638	629	639	622	620	626	613	30-35	191	802
40	600	594	585	596	577	574	581	567	35-40	202	1004
45	551	546	537	548	527	524	532	516	40-45	207	1211
50	498	494	484	497	473	470	479	463	45-50	206	1417
55	442	439	429	443	417	414	423	406	50-55	198	1615
60	384	381	367	385	358	354	364	347	55-60	184	1798
65	322	322	260	326	298	294	304	286	60-65	163	1961
70	260	261	161	265	237	237	243	226	65-70	136	2097
75	199	200	119	205	176	172	183	165	70-75	108	2205
80	139	141	82.2	145	117	112	123	106	75-80	79.6	2284
85	80.8	83.7	48.1	85.9	62.5	60.7	69.4	56	80-85	51	2335
90	47.7	40.1	27.9	36.9	27	33.9	31.1	31.2	85-90	26.7	2362
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): 30

Humi di ty(%): 60

Tester: zxg

Date: 2026-4-2

Distance(m): 7.000

Remark:

Test System: ZWL Goniophotometer System V3.0

Measured Para U: 230.8V I: 169.0mA P: 22.90W PF: 0.585 Test LM: 2361.89lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-24ENS01-Y	Lamp Spec: LPDL-24ENS01-Y	Shape Si ze:
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	787	785	783	781	780	779	779	779	781	782	781	780	779	779	778	776	776	781
10.0	777	776	774	772	770	770	770	771	771	771	770	769	768	769	768	765	764	771
15.0	762	761	759	757	754	754	756	756	755	753	752	751	751	752	751	747	747	755
20.0	740	739	738	735	732	732	734	735	732	729	728	727	728	729	728	723	723	731
25.0	714	712	710	707	704	704	707	708	703	699	698	697	698	700	698	693	692	704
30.0	682	680	677	674	670	670	674	675	669	663	662	661	662	665	663	658	657	670
35.0	643	641	638	635	631	631	635	637	630	622	621	620	622	625	623	617	616	630
40.0	600	597	595	591	587	587	592	594	585	577	576	575	577	580	578	572	570	585
45.0	551	549	547	543	539	539	545	546	536	527	526	524	527	530	529	522	520	536
50.0	498	496	495	491	486	487	493	495	484	473	472	471	473	477	475	468	466	483
55.0	442	441	440	436	431	432	438	440	428	417	415	414	417	421	419	411	410	426
60.0	384	383	382	376	370	371	379	382	370	358	356	355	358	362	360	352	351	368
65.0	322	322	322	301	273	274	304	323	310	298	296	294	297	302	300	292	290	306
70.0	260	260	261	228	183	184	231	262	249	237	237	237	239	242	239	232	230	245
75.0	199	200	200	173	136	137	176	202	188	176	174	173	176	181	179	171	169	184
80.0	139	140	141	122	95	96.1	125	142	129	117	115	113	116	121	120	112	109	124
85.0	80.8	82	83.3	72	55.9	56.4	73.5	83.3	72.7	62.5	61.7	60.9	63.6	67.5	66.5	60.4	58.8	70
90.0	47.7	44.4	40.9	36.1	30.5	29.8	33.9	35.8	31.3	27	30	33.1	33	31.8	31.2	31.2	33	40.5
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)

C Angle Range: 0 - 180(Deg)

Gama interval (Deg): 1

C interval (Deg): 45

Temperature(Deg): 30

Humi di ty(%): 60

Tester: zxcg

Date: 2026-4-2

Distance(m): 7.000

Remark:

Test System: ZWL Goniophotometer System V3.0