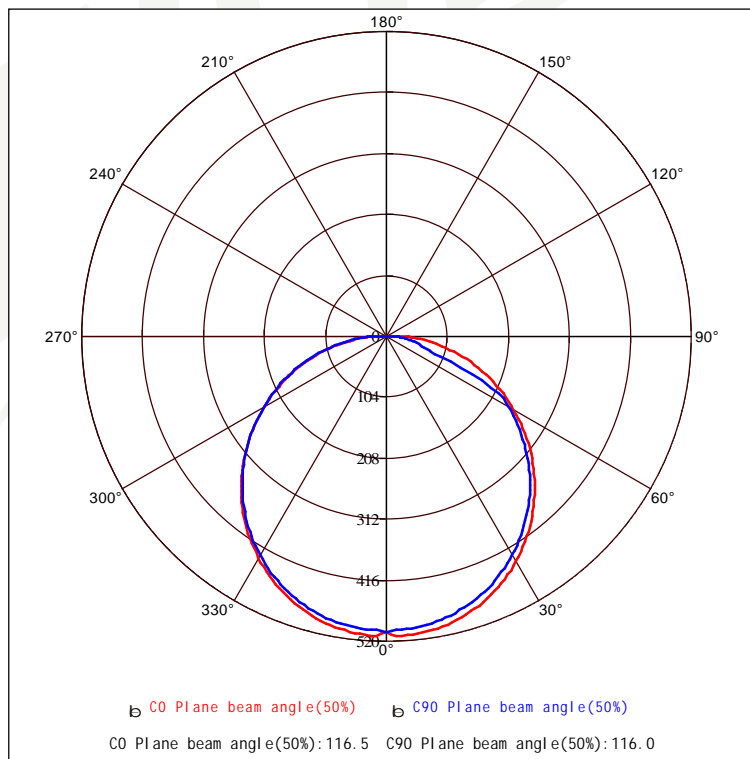


### Goniophotometer Test Report

Measured Para U: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm						
Lamp Name: LED DOWN LIGHT		Lamp Type:		Weight(kg):		
Lamp ID: LPDL-18ENS01-Y		Lamp Spec: LPDL-18ENS01-Y		Shape Size:		
Manufactory: LIPER		Sur(m <sup>2</sup> ):		Protect Angle(Deg):		
Light Source Data			Photometric Data			
Model	LPDL-18ENS01-Y		Peak Value(cd)	512.3	Efficiency(lm/w)	90.1
Nominal P(w)	18.0		Position	0.0, 1.0	UP(C0-C180)	0.0
Rated Volt(v)	1.0		Total Flux(lm)	1531.865	Down(C0-C180)	50.1
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)	49.9

### 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

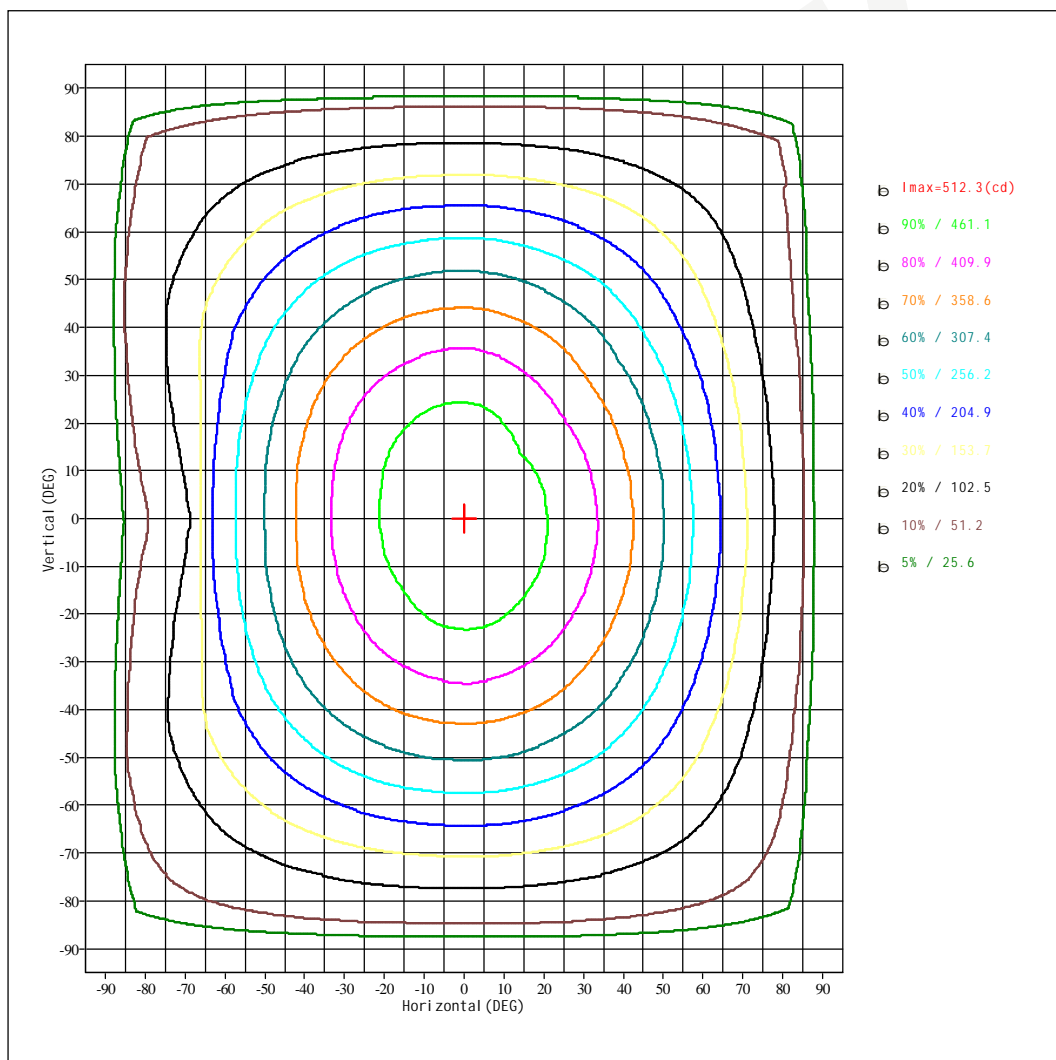
Humidity(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-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

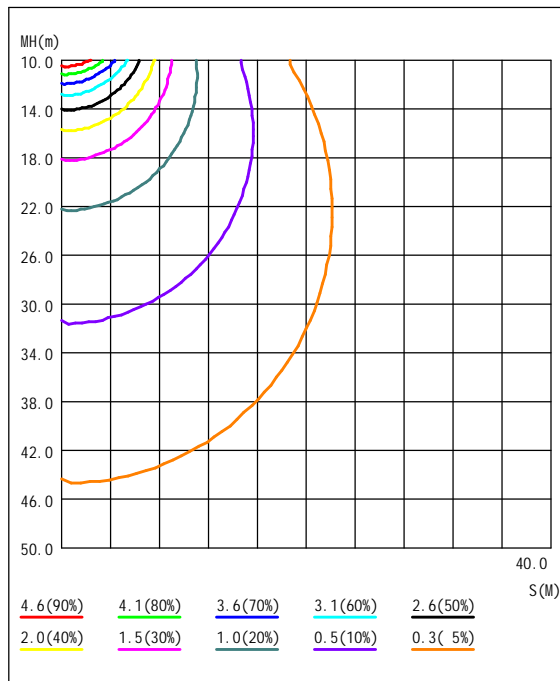
Humi di ty(%): 60

Date: 2026-4-2

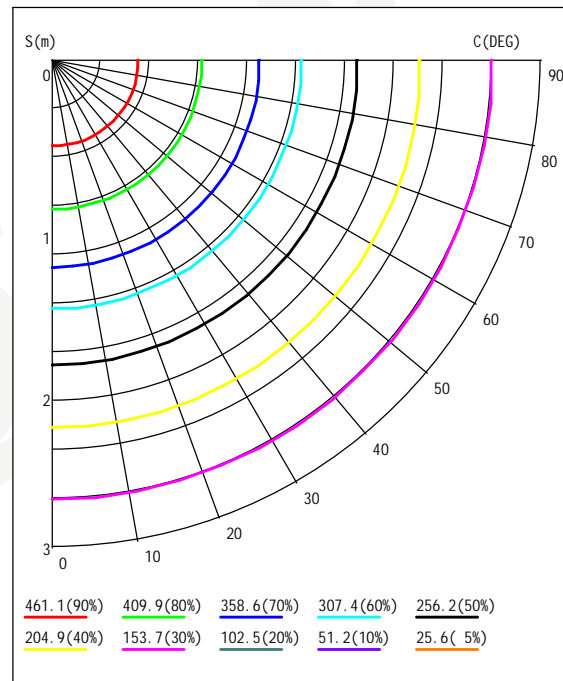
Remark:

Measured Para U: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-Y	Shape Si ze:
Manufactory: LIPER	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): 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: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m <sup>2</sup> ):	Protect Angle(Deg):

Luminance Limit Curve

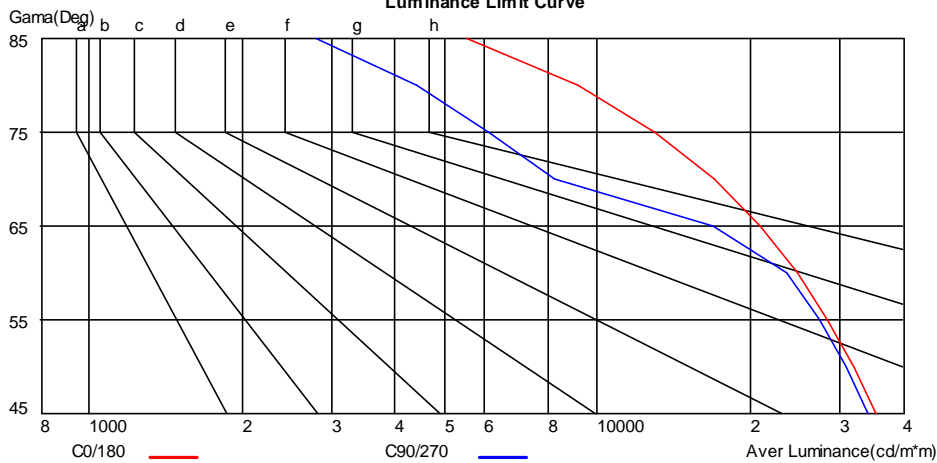
Aver Luminance(cd/m<sup>2</sup>m)

Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	35523.0	32133.7	28464.1	24766.6	20933.3	17025.1	12994.8	9171.8	5528.7
C90	34251.5	30876.4	27375.3	23663.6	16959.9	8217.8	6134.8	4396.8	2794.5

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: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

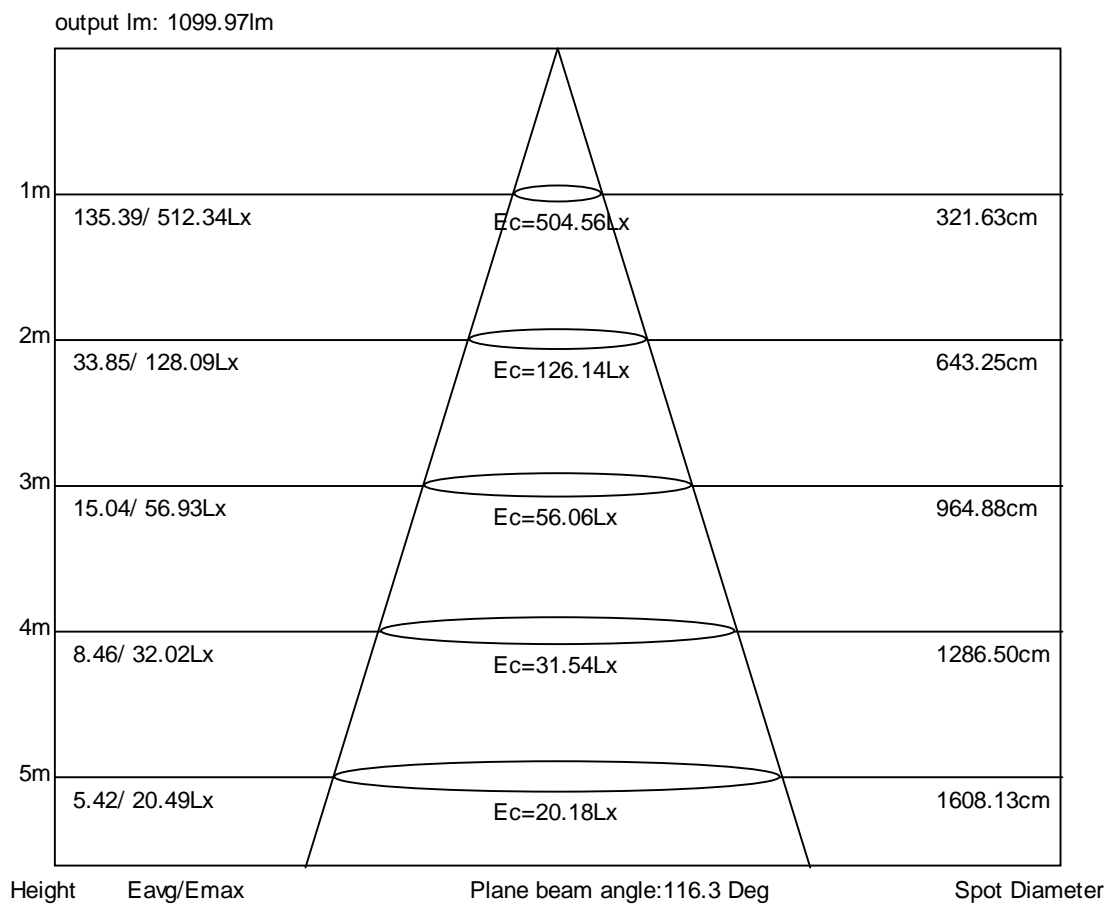
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m <sup>2</sup> ):	Protect Angle(Deg):

Average Illumination



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

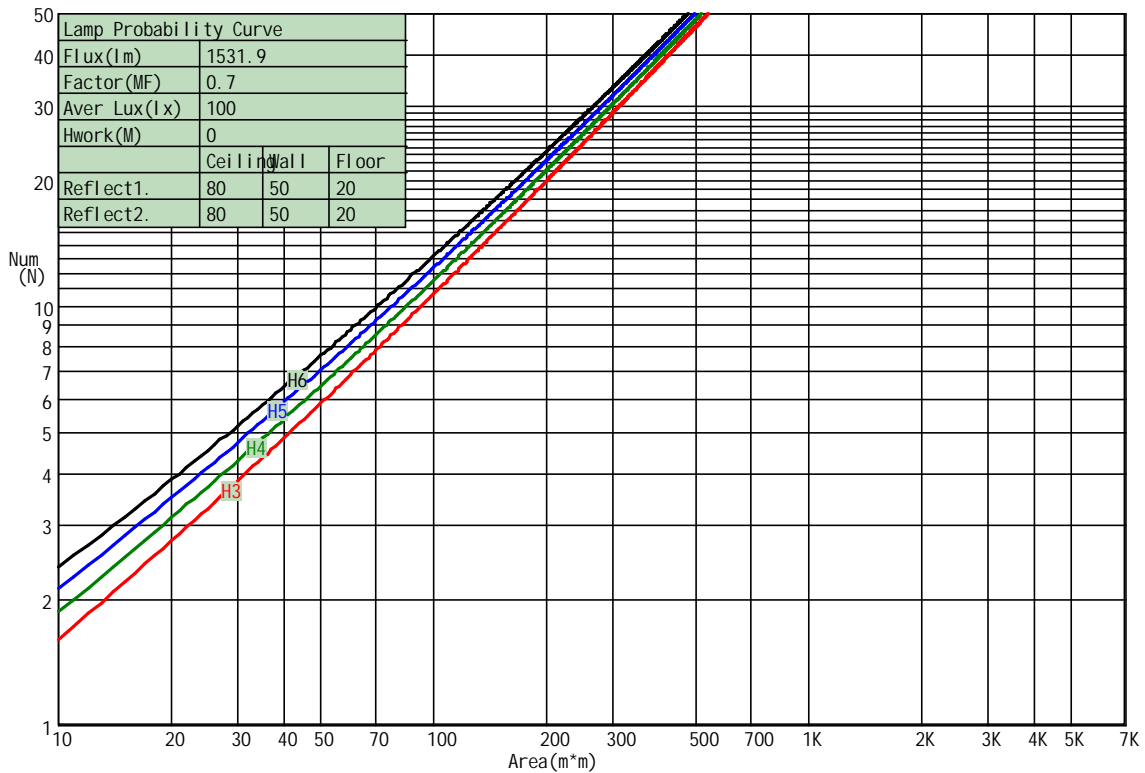
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m <sup>2</sup> ):	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: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-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	52	38	28	51	37	28	48	35	27
0.80	57	41	30	55	40	29	51	38	28
1.00	60	43	31	58	42	31	53	39	29
1.25	63	45	32	60	44	31	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	34	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	0.96	0.92	0.96	0.93	0.89	0.92	0.89	0.87	0.88	0.86	0.84
2	0.89	0.82	0.76	0.87	0.8	0.75	0.83	0.78	0.73	0.8	0.75	0.71	0.77	0.73	0.7
3	0.78	0.69	0.62	0.76	0.68	0.62	0.73	0.66	0.61	0.7	0.65	0.6	0.68	0.63	0.59
4	0.69	0.6	0.53	0.67	0.59	0.52	0.65	0.57	0.51	0.62	0.56	0.51	0.6	0.55	0.5
5	0.61	0.52	0.45	0.6	0.51	0.45	0.58	0.5	0.44	0.56	0.49	0.44	0.54	0.48	0.43
6	0.55	0.46	0.39	0.54	0.45	0.39	0.52	0.44	0.39	0.51	0.44	0.38	0.49	0.43	0.38
7	0.5	0.41	0.35	0.49	0.41	0.34	0.47	0.4	0.34	0.46	0.39	0.34	0.45	0.38	0.34
8	0.45	0.37	0.31	0.45	0.36	0.31	0.43	0.36	0.3	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	0.27	0.39	0.32	0.27	0.38	0.32	0.27
10	0.38	0.3	0.25	0.38	0.3	0.25	0.37	0.3	0.25	0.36	0.29	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: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.871m		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-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	0.33	0.19	0.06	0.31	0.18	0.06	0.3	0.17	0.06	0.29	0.17	0.05
2	0.31	0.17	0.05	0.3	0.17	0.05	0.29	0.16	0.05	0.28	0.16	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	0.25	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	0.23	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	0.03	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: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.87lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-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	511	505	500	496	509	504	500	495	0-5	12	12
10	505	499	493	491	503	496	494	488	5-10	35.7	47.8
15	495	489	483	481	491	485	483	477	10-15	58.2	106
20	481	476	468	468	476	470	469	462	15-20	78.8	185
25	462	458	450	450	457	451	451	443	20-25	96.9	282
30	441	436	427	429	434	428	429	421	25-30	112	393
35	415	411	402	404	408	402	404	395	30-35	123	517
40	386	383	374	376	378	373	375	367	35-40	130	647
45	355	352	343	346	346	340	344	335	40-45	134	781
50	321	319	309	313	312	306	311	302	45-50	133	913
55	285	284	274	279	275	270	275	266	50-55	128	1041
60	248	247	237	242	237	234	238	230	55-60	119	1160
65	209	210	170	205	197	194	200	192	60-65	106	1266
70	170	172	82.2	168	160	154	162	153	65-70	88.1	1354
75	130	133	61.3	130	120	115	123	114	70-75	70.1	1424
80	91.7	95.4	44	92.2	81.7	76.1	85.2	76.7	75-80	52.4	1477
85	55.3	60.1	27.9	57.5	47.8	44.2	51.7	45	80-85	34.8	1512
90	35.5	32.7	18.3	30.7	24.1	27.2	26.9	28	85-90	20.2	1532
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: 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: 229.7V I: 124.0mA P: 17.00W PF: 0.597 Test LM: 1531.871m		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-18ENS01-Y	Lamp Spec: LPDL-18ENS01-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	511	508	506	503	501	499	497	498	504	509	507	504	502	501	499	497	497	504
10.0	505	503	500	497	494	493	492	492	498	503	500	497	495	494	492	490	490	498
15.0	495	492	490	487	484	482	482	482	487	491	489	486	484	484	482	479	479	487
20.0	481	478	476	473	470	468	468	469	472	476	473	471	470	469	467	464	464	472
25.0	462	460	458	455	451	450	450	451	454	457	454	451	451	451	449	446	445	454
30.0	441	439	437	433	429	428	428	429	432	434	431	429	428	429	427	424	423	432
35.0	415	413	412	408	404	402	403	405	406	408	405	402	402	403	402	398	397	406
40.0	386	385	383	380	376	374	375	377	378	378	376	373	373	374	373	369	369	378
45.0	355	354	353	349	345	343	345	346	346	346	344	341	342	343	342	338	337	347
50.0	321	320	319	316	311	310	311	313	312	312	309	306	307	309	309	305	304	313
55.0	285	284	284	281	276	275	277	278	277	275	273	270	271	274	273	269	268	277
60.0	248	247	247	244	239	238	240	242	239	237	236	234	235	237	236	233	232	240
65.0	209	210	210	197	178	177	193	204	200	197	195	194	196	199	198	195	194	202
70.0	170	171	172	142	102	101	140	167	163	160	157	155	157	160	160	156	155	163
75.0	130	131	133	110	77.1	76.3	107	129	124	120	118	115	117	121	121	117	116	123
80.0	91.7	93.3	95	78.5	55.2	54.5	76.4	91.1	86.3	81.7	79.2	76.7	79.1	83.2	83.3	79.5	78.4	85.2
85.0	55.3	57.4	59.6	49.6	35	34.4	47.8	56.4	52	47.8	46.2	44.6	46.6	50	50.2	47.2	46.1	50.8
90.0	35.5	34.3	33	28	21.5	21	26.7	30	27	24.1	25.4	26.8	27.1	26.9	27.1	27.6	28.8	32.2
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: zxg

Date: 2026-4-2

Distance(m): 7.000

Remark:

Test System: ZWL Goniophotometer System V3.0