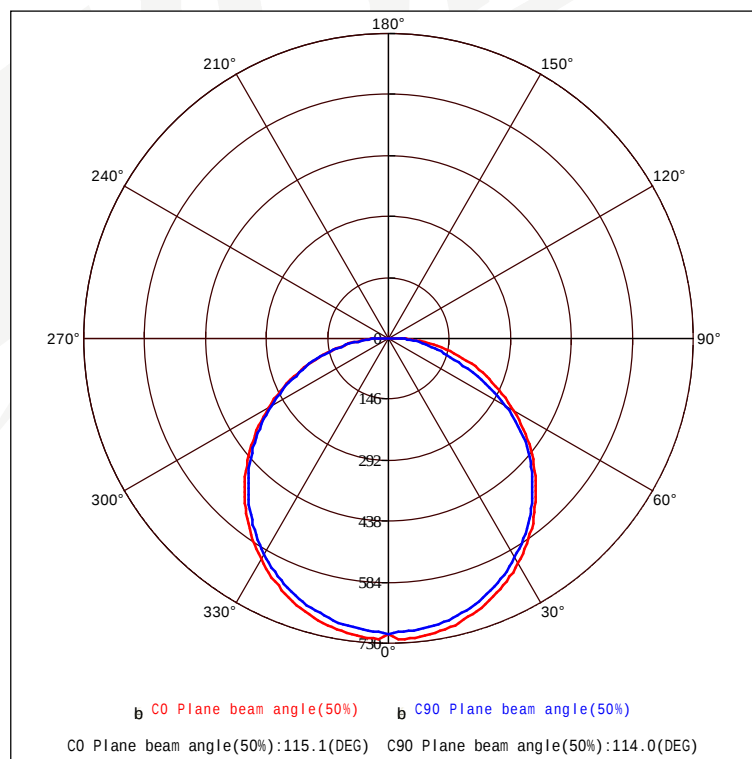


Goniophotometer Test Report

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPDL-24EMS01-Y			Lamp Spec: LPDL-24EMS01-Y		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPDL-24EMS01-Y		Peak Value(cd)	721.2	Efficiency(lm/w)	92.1
Nominal P(w)		1.0	Position	0.0,1.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	2128.074	Down(C0-C180)	50.9
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)	49.1

Planar Intensity Distribution Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: zyg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

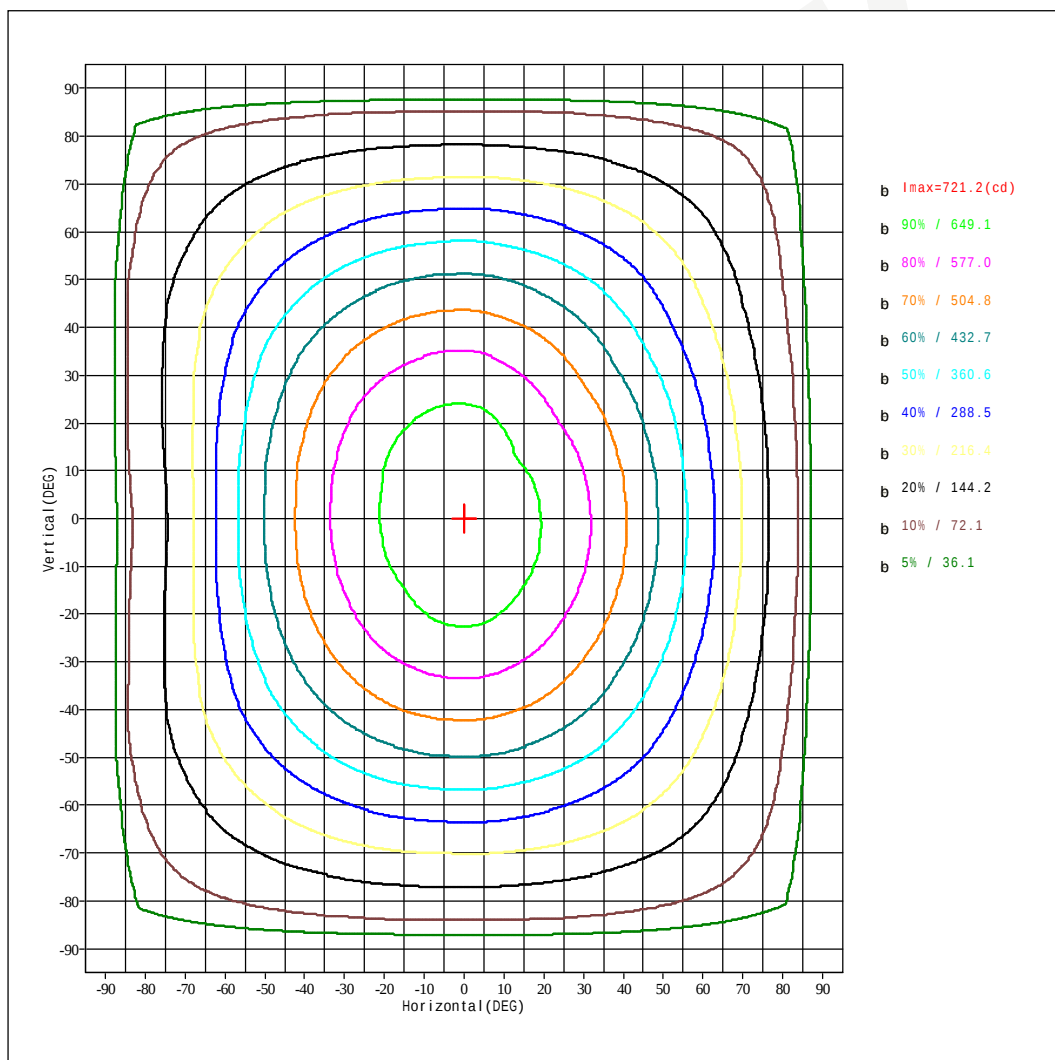
Humidity(%): 60

Date: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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): 30

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

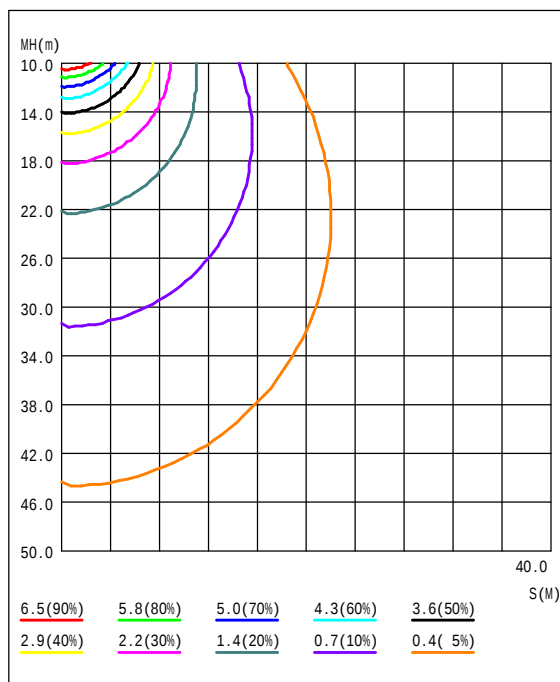
Humidity(%): 60

Date: 2026-1-26

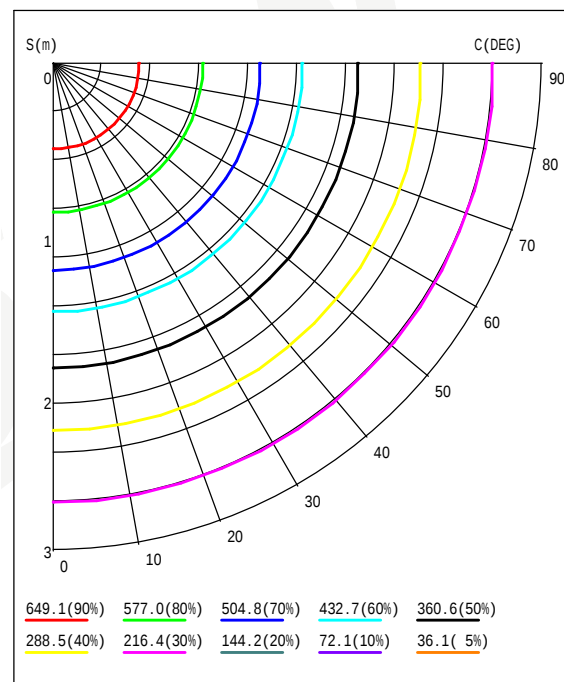
Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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): 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: 2026-1-26

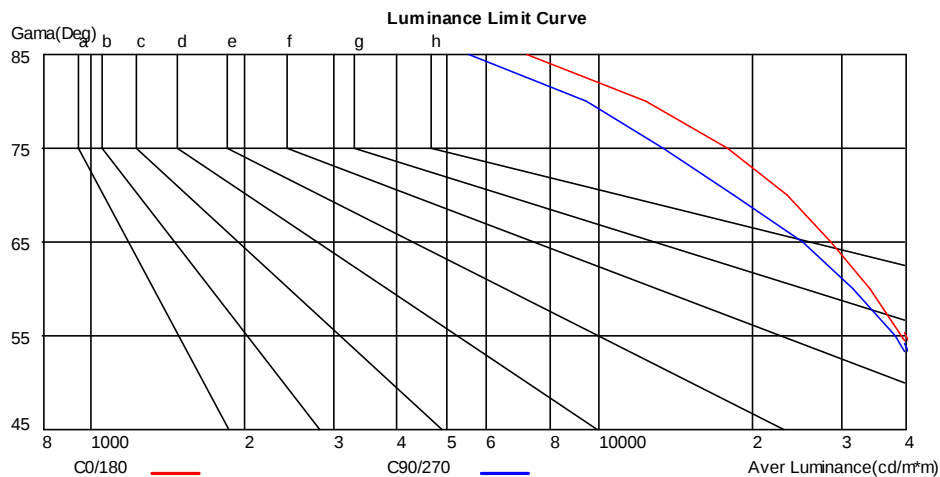
Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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	49505.7	44641.5	39473.4	34120.7	28680.2	23501.4	17889.9	12397.0	7181.4
C90	48287.0	43556.1	38244.5	31652.5	25175.2	18375.5	13358.4	9408.0	5556.1

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: zyg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

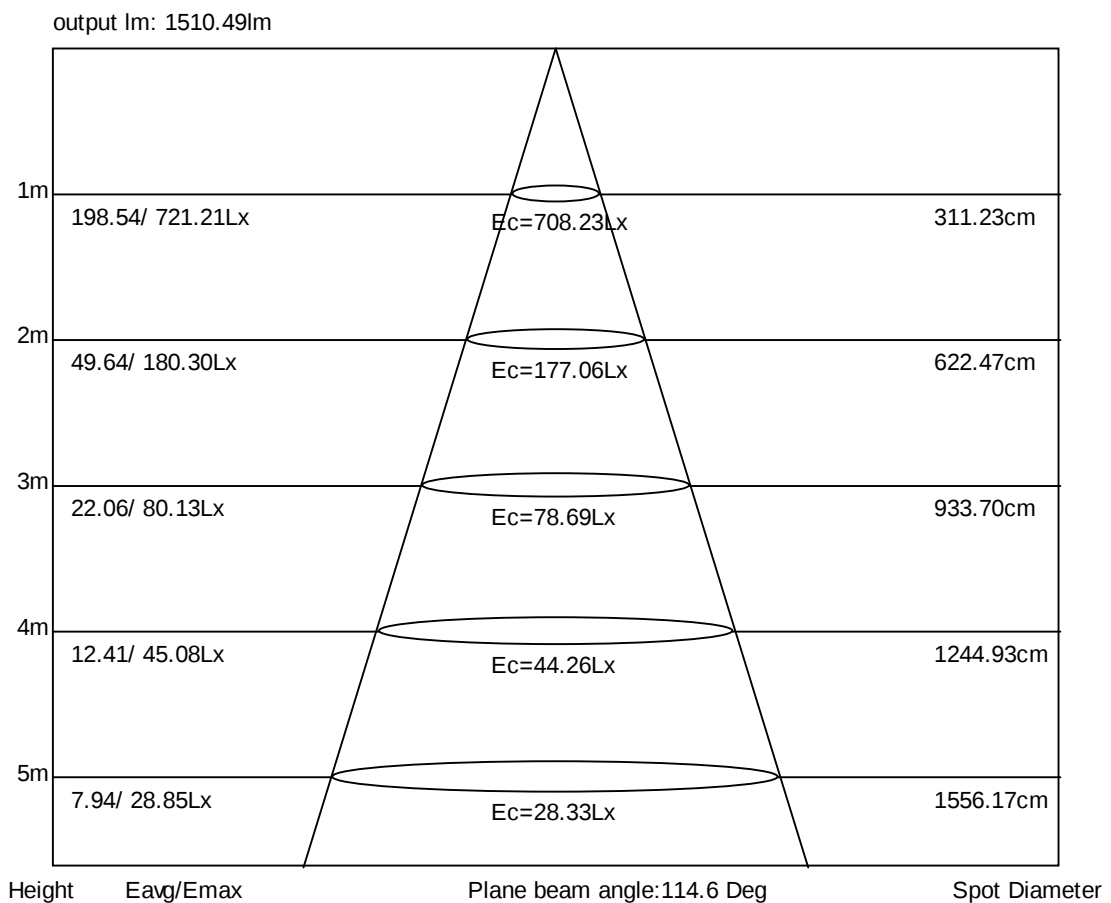
Humidity(%): 60

Date: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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): 30

Tester: zxcg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

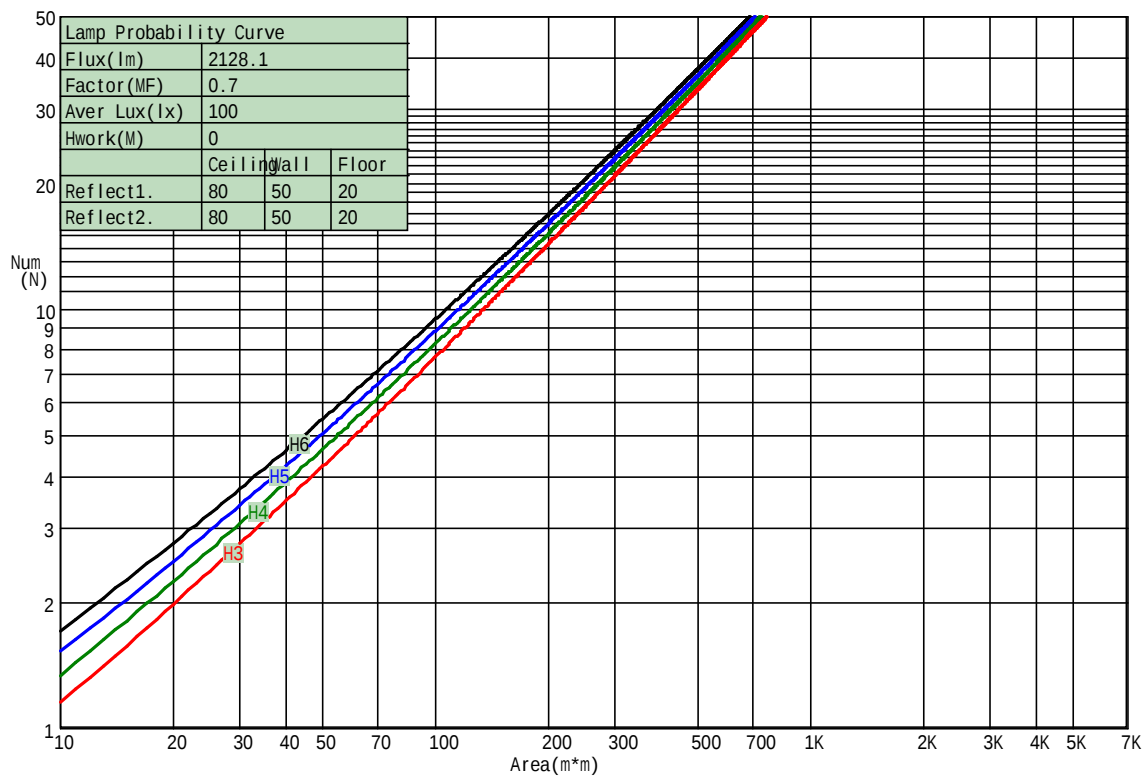
Humidity(%): 60

Date: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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	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	43	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	0.96	0.92	0.96	0.93	0.89	0.92	0.89	0.87	0.89	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	0.63	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	0.58	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

Humidity(%): 60

Date: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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	0.33	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	0.16	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	0.24	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	0.23	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 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	0.16	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)

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: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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	719	709	702	697	716	705	700	693	0-5	16.9	16.9
10	711	702	693	689	707	694	689	683	5-10	50.1	67
15	696	689	679	676	690	677	673	666	10-15	81.7	149
20	676	669	660	656	668	654	652	644	15-20	110	259
25	649	644	634	631	640	626	625	616	20-25	136	395
30	618	614	603	602	607	593	593	584	25-30	156	551
35	581	579	567	567	569	555	556	546	30-35	172	723
40	540	539	527	527	527	512	515	505	35-40	182	904
45	495	495	483	484	481	466	470	460	40-45	186	1090
50	446	448	436	438	432	418	422	412	45-50	184	1274
55	395	398	382	388	380	366	372	362	50-55	177	1450
60	341	346	317	337	327	313	320	310	55-60	163	1614
65	287	292	252	285	273	259	266	257	60-65	145	1759
70	235	238	184	231	218	208	214	206	65-70	124	1882
75	179	187	134	182	166	153	162	152	70-75	99.6	1982
80	124	134	94.1	129	113	99.4	109	99.7	75-80	74	2056
85	71.8	81	55.6	77.7	61.3	51.5	59.3	52.4	80-85	47.6	2104
90	40.1	37.3	30.8	35.2	25.4	26.6	24.2	27	85-90	24.5	2128
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

Humidity(%): 60

Date: 2026-1-26

Remark:

Measured Para U: 227.9V I: 169.0mA P: 23.10W PF: 0.599 Test LM: 2128.07lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24EMS01-Y	Lamp Spec: LPDL-24EMS01-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	719	715	710	707	703	701	698	699	708	716	712	706	703	701	698	695	696	708
10.0	711	707	703	699	695	693	691	691	699	707	701	695	693	690	688	685	686	698
15.0	696	693	689	686	681	678	677	677	684	690	684	679	676	674	672	668	669	683
20.0	676	673	670	666	662	659	657	658	663	668	662	655	653	652	650	646	647	662
25.0	649	647	645	641	636	633	632	632	636	640	634	627	625	625	623	619	620	635
30.0	618	616	615	610	605	603	602	602	605	607	601	594	593	593	591	586	587	603
35.0	581	580	579	575	570	567	567	567	568	569	563	556	555	555	554	549	550	566
40.0	540	539	539	535	529	527	527	527	527	527	520	514	513	514	513	508	509	524
45.0	495	495	495	491	486	483	484	484	482	481	474	468	467	469	468	463	464	480
50.0	446	447	448	444	438	436	437	437	434	432	426	419	419	421	420	415	416	431
55.0	395	396	397	393	386	384	386	387	384	380	374	368	368	371	370	365	365	380
60.0	341	343	345	336	323	321	330	336	331	327	321	315	315	318	318	313	313	327
65.0	287	289	292	279	261	259	274	283	278	273	267	260	261	265	264	260	260	274
70.0	235	236	238	220	196	194	216	230	224	218	213	209	210	213	212	209	209	222
75.0	179	183	187	170	145	144	166	180	173	166	161	155	156	160	160	156	155	167
80.0	124	128	133	121	103	102	118	127	120	113	107	101	103	107	107	103	102	113
85.0	71.8	75.8	80	72.7	61.1	60.4	70.4	75.9	68.5	61.3	57	52.6	54.1	57.6	57.8	54.7	54.5	63.3
90.0	40.1	38.9	37.6	35.2	32.2	31.8	33.8	34.1	29.7	25.4	25.9	26.4	25.8	24.7	24.9	26.1	28.5	34.4
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: 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: 2026-1-26

Remark: