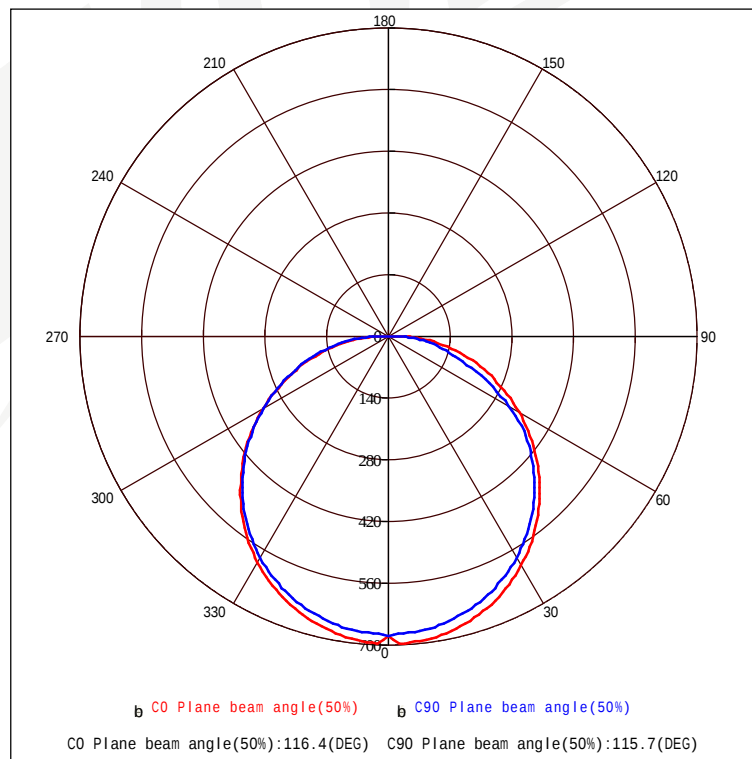


Goniophotometer Test Report

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPDL-24EMS01-F			Lamp Spec: LPDL-24A-Y		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPDL-24A-Y		Peak Value(cd)	697.4	Efficiency(lm/w)	88.9
Nominal P(w)		1.0	Position	0.0,1.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	2082.439	Down(C0-C180)	50.3
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)	49.7

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

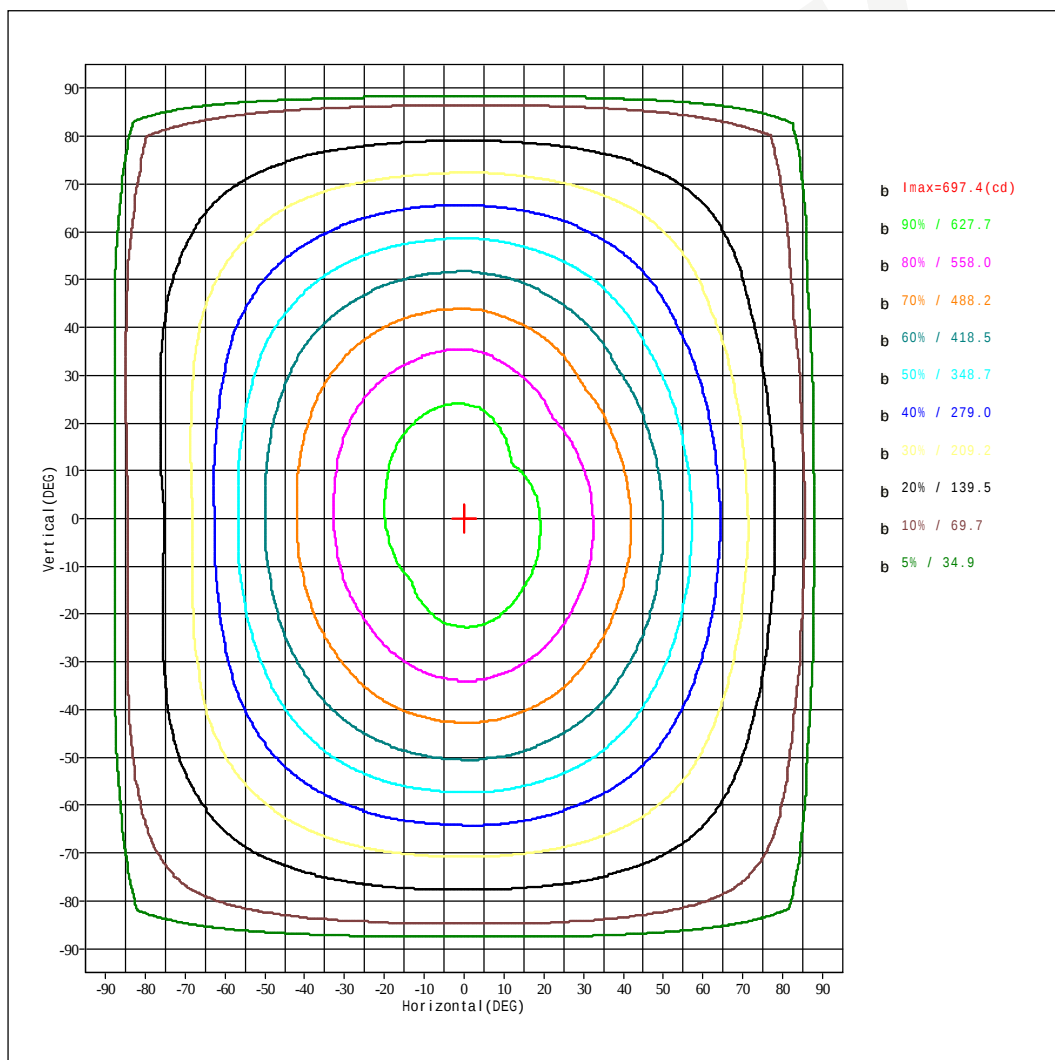
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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

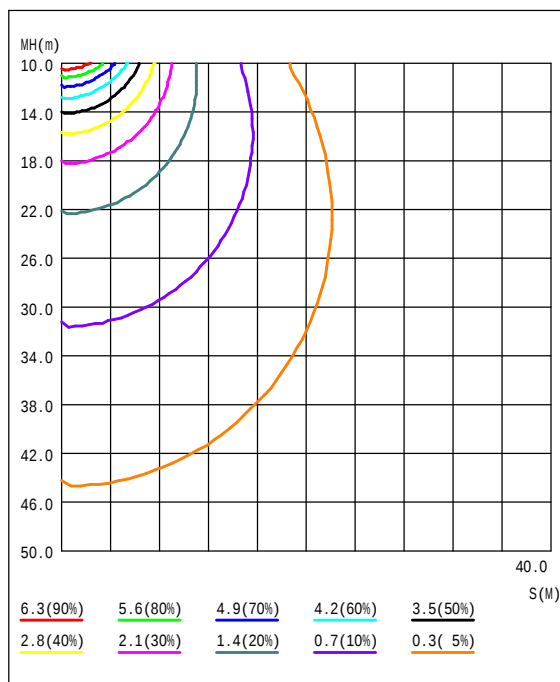
Humidity(%): 60

Date: 2025-2-26

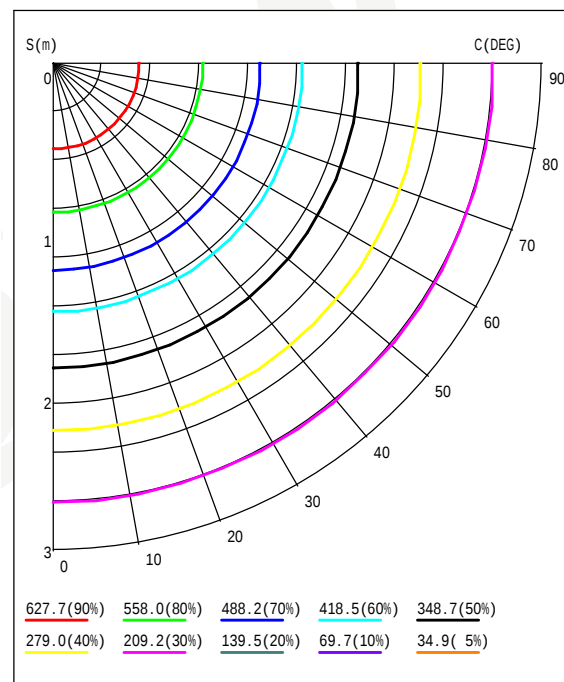
Remark:

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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

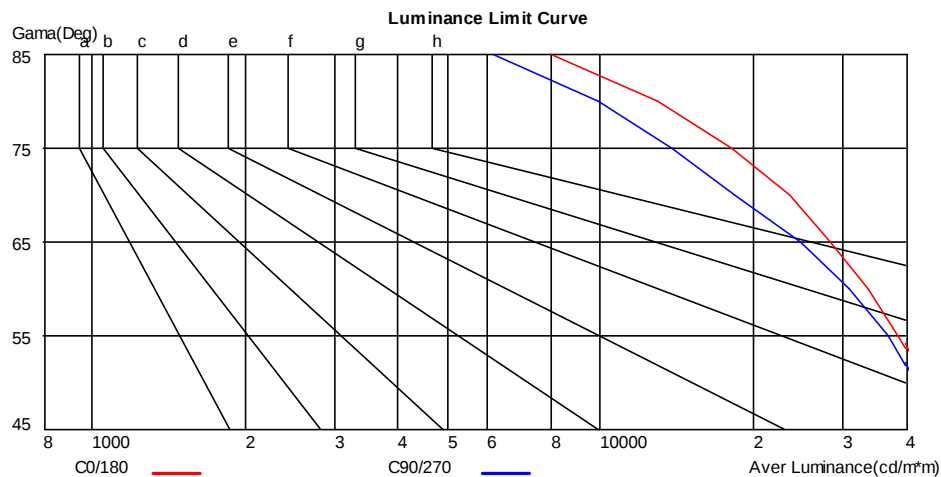
Remark:

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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	48178.8	43556.1	38722.7	33663.0	28453.8	23573.4	18201.5	13023.7	8011.0
C90	46363.8	41864.6	37036.2	30860.7	24844.5	18390.7	13885.6	9911.7	6139.2

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

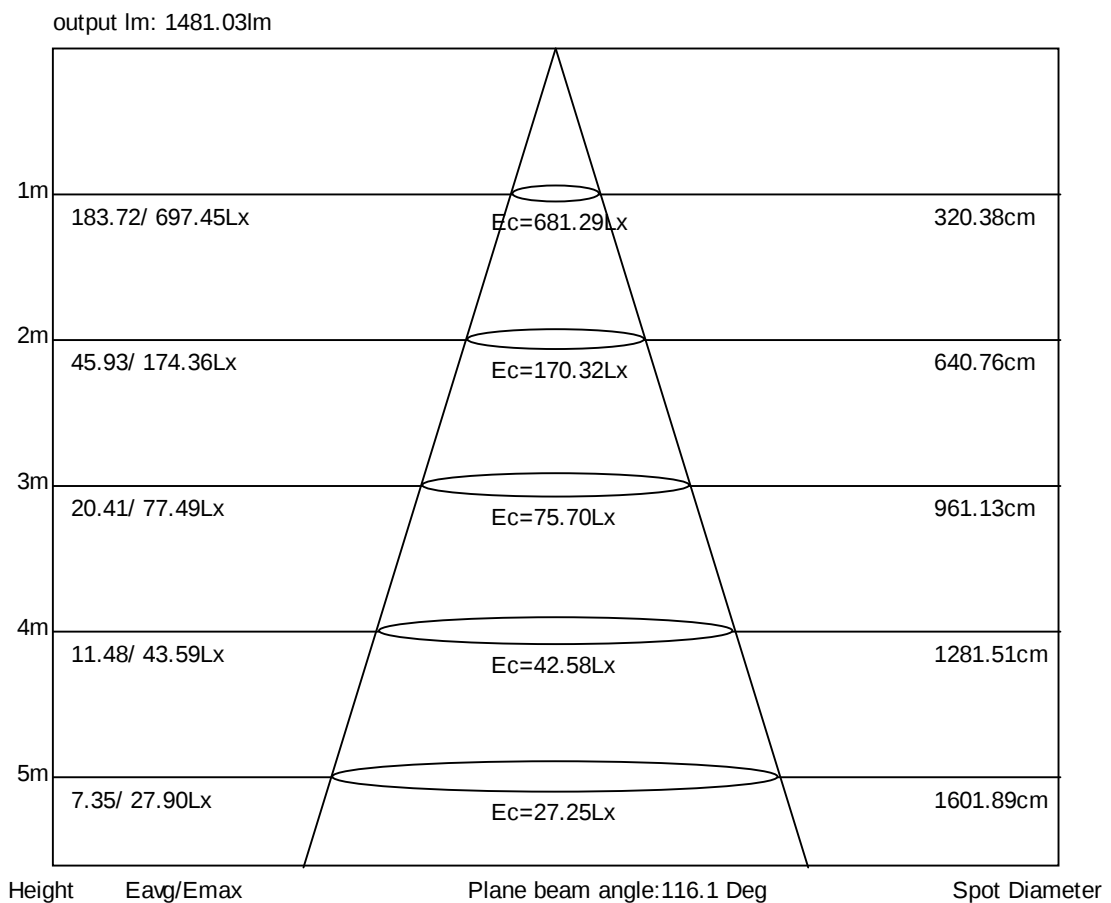
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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

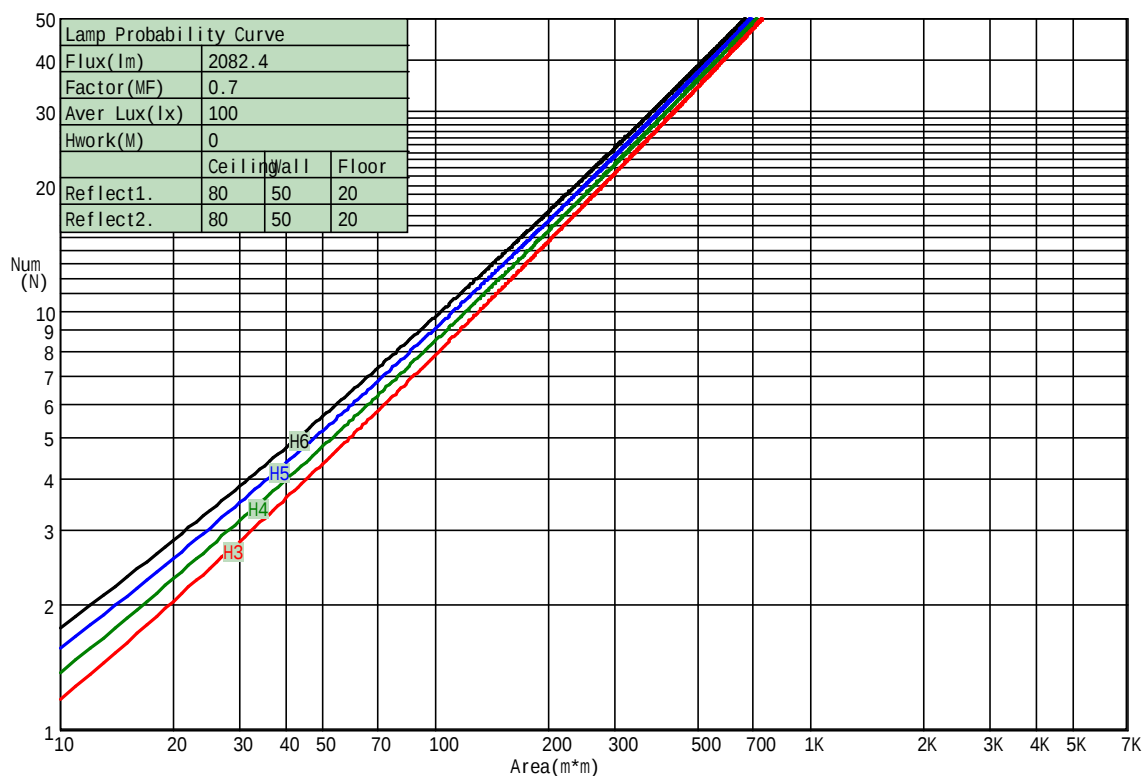
Humidity(%): 60

Date: 2025-2-26

Remark:

Measured Para U: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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	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	67	49	33	59	44	31
4.00	72	52	35	68	50	34	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	1.02	0.98	0.93	1	0.96	0.92	0.96	0.92	0.89	0.92	0.89	0.86	0.88	0.86	0.84
2	0.89	0.81	0.75	0.87	0.8	0.74	0.83	0.77	0.73	0.8	0.75	0.71	0.77	0.73	0.69
3	0.77	0.69	0.62	0.76	0.68	0.61	0.73	0.66	0.6	0.7	0.64	0.59	0.67	0.62	0.58
4	0.68	0.59	0.52	0.67	0.59	0.52	0.65	0.57	0.51	0.62	0.56	0.5	0.6	0.54	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	0.38	0.5	0.43	0.38	0.49	0.43	0.38
7	0.5	0.41	0.34	0.49	0.4	0.34	0.47	0.4	0.34	0.46	0.39	0.34	0.44	0.38	0.33
8	0.45	0.37	0.31	0.45	0.36	0.3	0.43	0.36	0.3	0.42	0.35	0.3	0.41	0.35	0.3
9	0.42	0.33	0.27	0.41	0.33	0.27	0.4	0.32	0.27	0.39	0.32	0.27	0.38	0.31	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	0.24

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: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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	0.34	0.19	0.06	0.33	0.19	0.06	0.32	0.18	0.06	0.3	0.18	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	0.28	0.15	0.04	0.27	0.14	0.04	0.26	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	0.24	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	0.22	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	0.03	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)

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: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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	695	683	673	665	693	680	673	663	0-5	16.2	16.2
10	687	675	664	658	682	670	664	653	5-10	48.2	64.4
15	673	662	650	644	667	654	650	638	10-15	78.5	143
20	653	643	631	626	646	633	631	617	15-20	106	249
25	628	620	607	602	620	608	606	591	20-25	131	380
30	598	592	578	573	589	577	577	560	25-30	151	531
35	563	558	543	540	554	541	544	526	30-35	166	696
40	524	521	506	503	514	503	506	487	35-40	176	872
45	482	479	464	461	470	460	464	446	40-45	180	1053
50	436	434	419	416	423	414	420	402	45-50	179	1232
55	387	386	370	368	374	365	372	354	50-55	172	1404
60	337	336	309	318	323	314	323	305	55-60	160	1564
65	285	284	248	268	270	261	272	256	60-65	143	1707
70	236	232	184	217	217	212	220	209	65-70	123	1829
75	182	183	139	170	167	159	172	158	70-75	100	1929
80	130	130	99.1	120	115	108	122	108	75-80	75.5	2005
85	80.1	79.9	61.4	72	66.9	60.3	73.4	62.3	80-85	50.3	2055
90	45.5	36.9	36.5	32.9	32.2	35	34.1	36.3	85-90	27.4	2082
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: 226.2V I: 166.7mA P: 23.42W PF: 0.621 Test LM: 2082.44lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-24A-Y	Lamp Spec: LPDL-24A-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	695	690	684	680	675	671	668	668	681	693	687	681	677	674	671	666	667	681
10.0	687	682	677	672	667	663	660	660	672	682	677	671	668	665	662	657	657	672
15.0	673	668	663	658	653	649	646	647	657	667	661	655	653	651	647	642	642	658
20.0	653	649	644	639	634	630	627	628	637	646	641	635	633	631	628	621	621	637
25.0	628	625	621	616	610	606	604	604	612	620	615	609	607	607	603	596	595	612
30.0	598	595	593	587	581	577	575	575	582	589	584	579	577	577	574	566	565	582
35.0	563	561	559	553	547	543	541	541	548	554	548	542	542	543	540	532	530	547
40.0	524	523	521	516	509	505	504	504	509	514	509	504	504	505	502	493	492	508
45.0	482	481	480	474	467	463	462	462	466	470	466	461	462	463	460	452	450	466
50.0	436	435	434	429	422	418	417	417	420	423	419	415	416	418	416	407	405	421
55.0	387	387	386	381	374	370	369	369	371	374	370	366	367	371	368	360	358	373
60.0	337	336	336	327	315	311	315	318	321	323	319	315	317	321	319	311	309	323
65.0	285	284	284	273	256	253	261	268	269	270	266	262	265	270	268	261	260	272
70.0	236	234	232	216	194	191	206	217	217	217	215	213	215	219	218	213	212	224
75.0	182	182	183	169	149	146	160	170	168	167	164	160	163	169	169	163	160	171
80.0	130	130	130	120	106	104	113	120	117	115	112	108	112	118	119	112	110	120
85.0	80.1	80	80	73.9	65.4	63.7	68.5	71.4	69.1	66.9	64	61	64.6	70.6	71	65.9	64.2	72.3
90.0	45.5	41.7	37.8	36.8	36.6	35.7	34.1	32.8	32.5	32.2	33.4	34.7	34.7	34.3	34.6	35.6	37.3	41.5
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)

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: