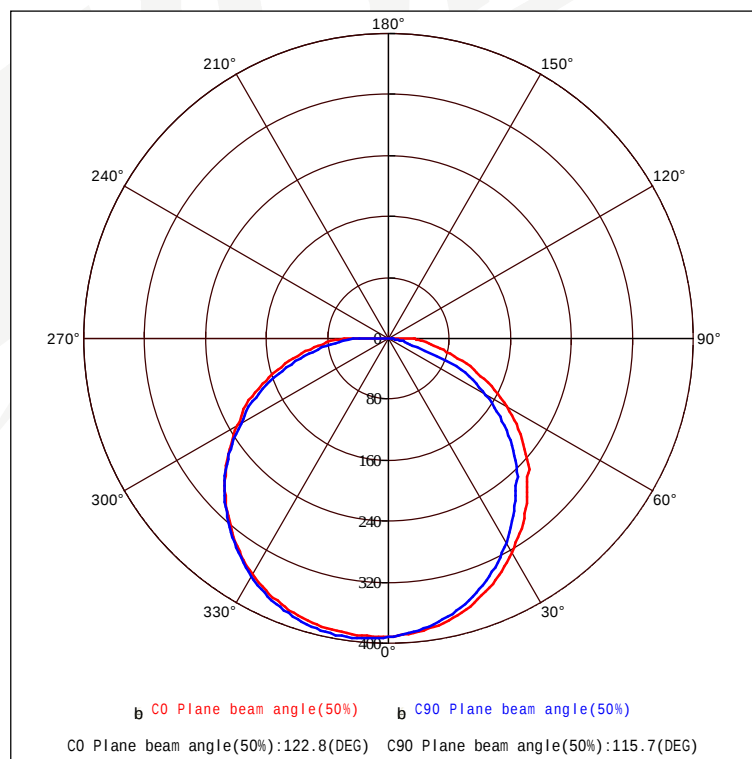


Goniophotometer Test Report

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPDL-20MF01-TB-C			Lamp Spec: LPDL-20MF01-TB-C		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPDL-20MF01-TB-C		Peak Value(cd)	396.1	Efficiency(lm/w)	59.5
Nominal P(w)		1.0	Position	225.0,6.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1242.882	Down(C0-C180)	45.6
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)	54.4

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

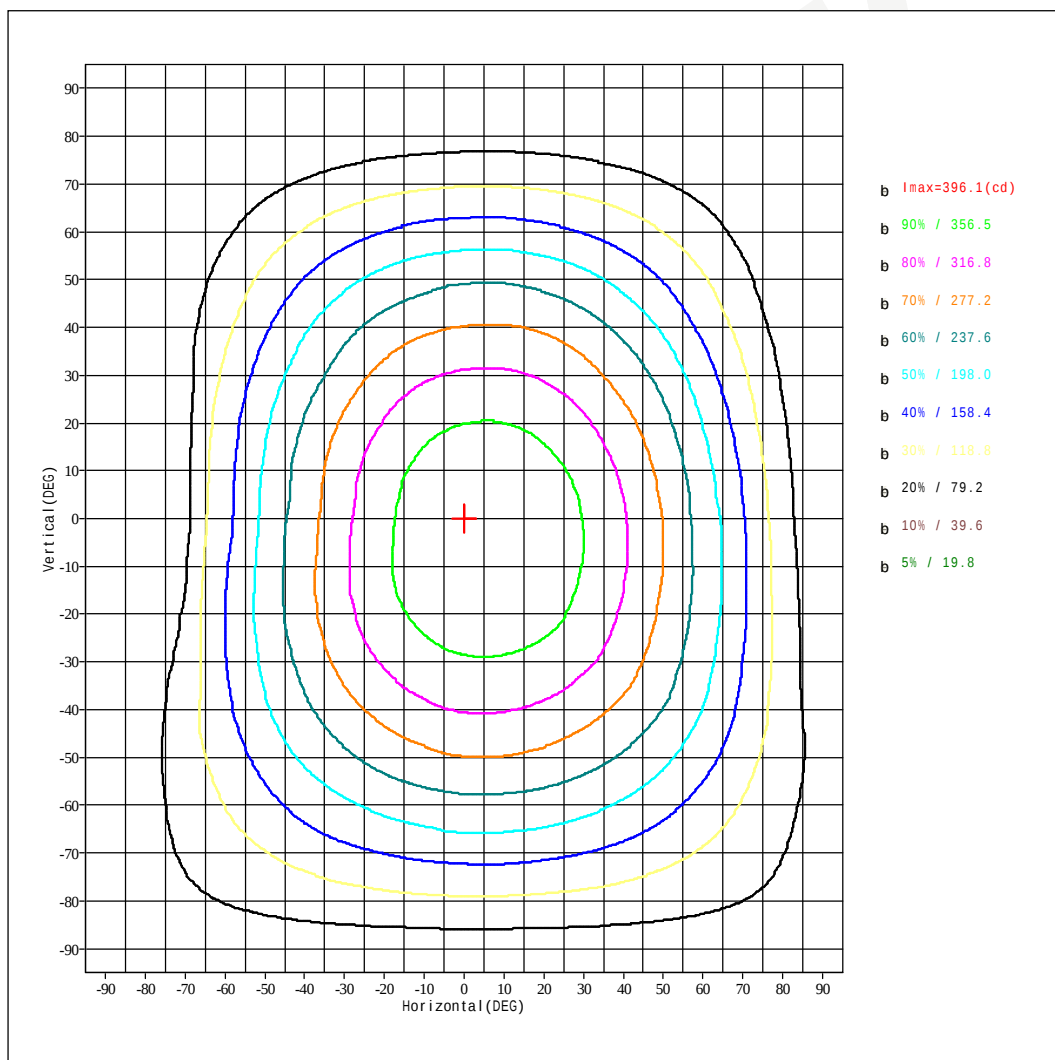
Humidity(%): 60

Date: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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

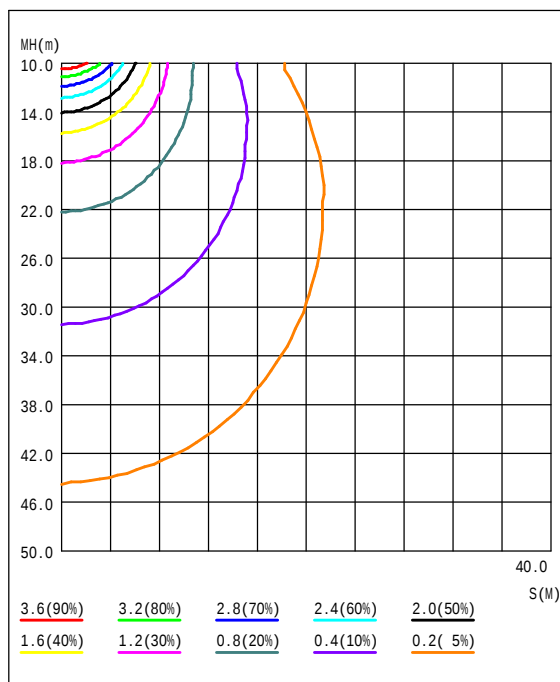
Humidity(%): 60

Date: 2026-7-15

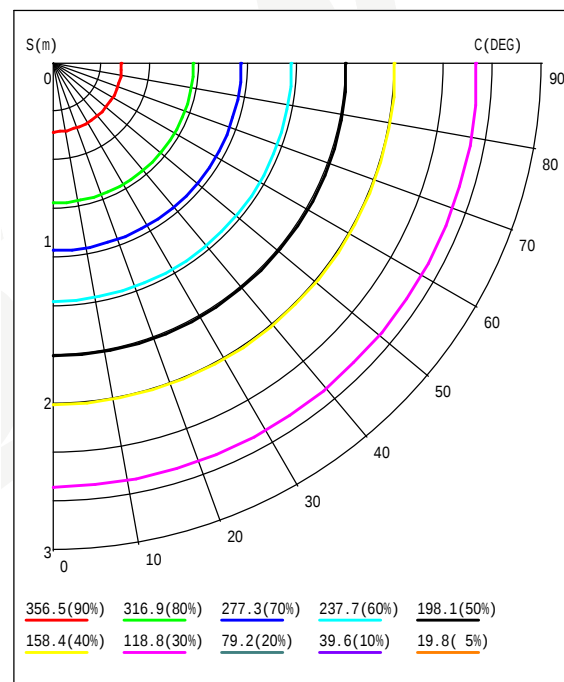
Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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: 2026-7-15

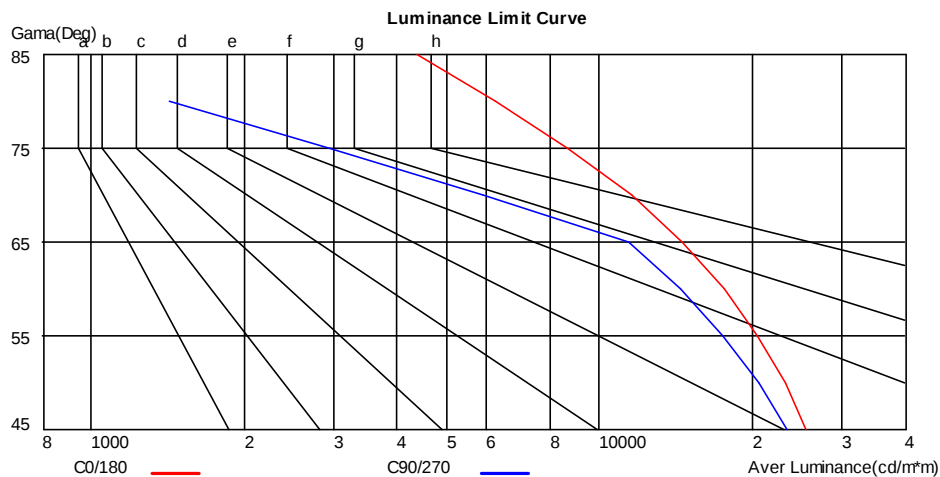
Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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	25497.1	23349.0	20546.2	17628.7	14606.4	11604.2	8697.5	6266.6	4369.3
C90	23492.1	20590.3	17559.6	14491.3	11420.4	5913.3	2946.4	1422.5	554.7

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

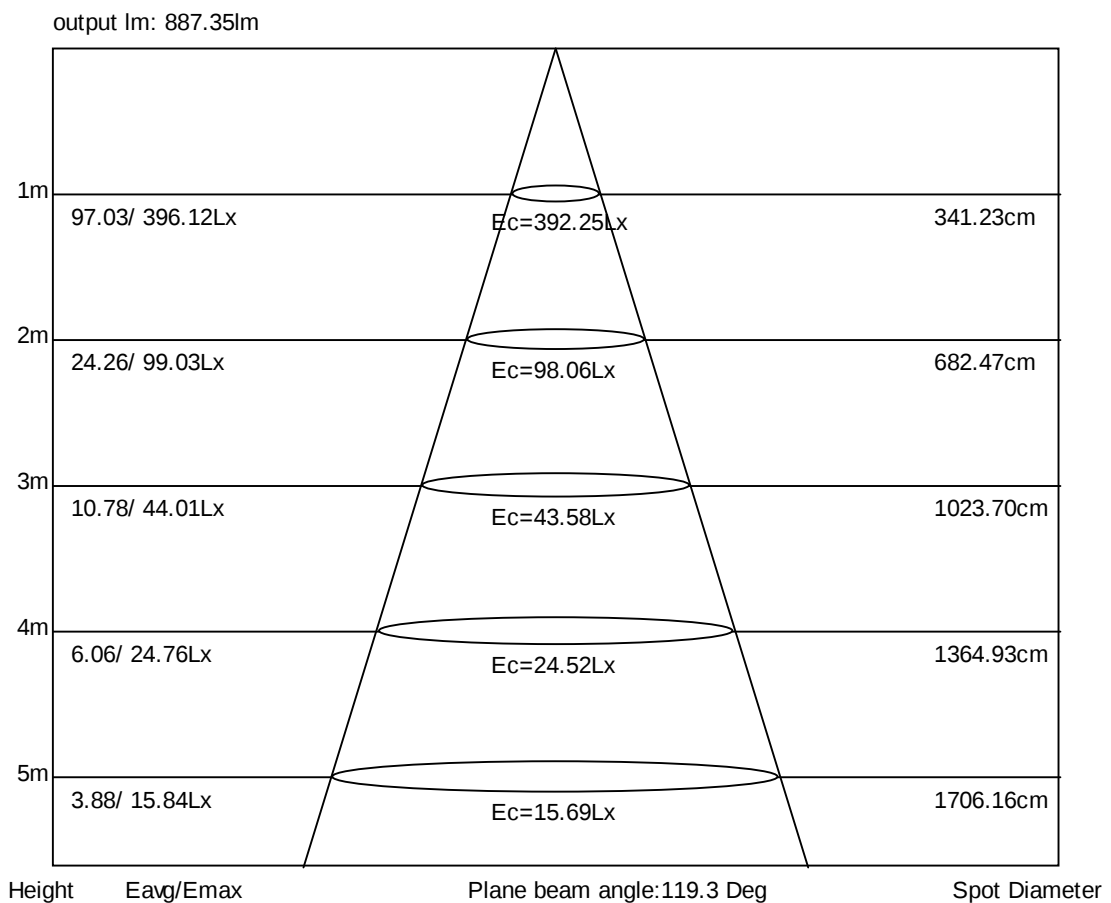
Humidity(%): 60

Date: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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

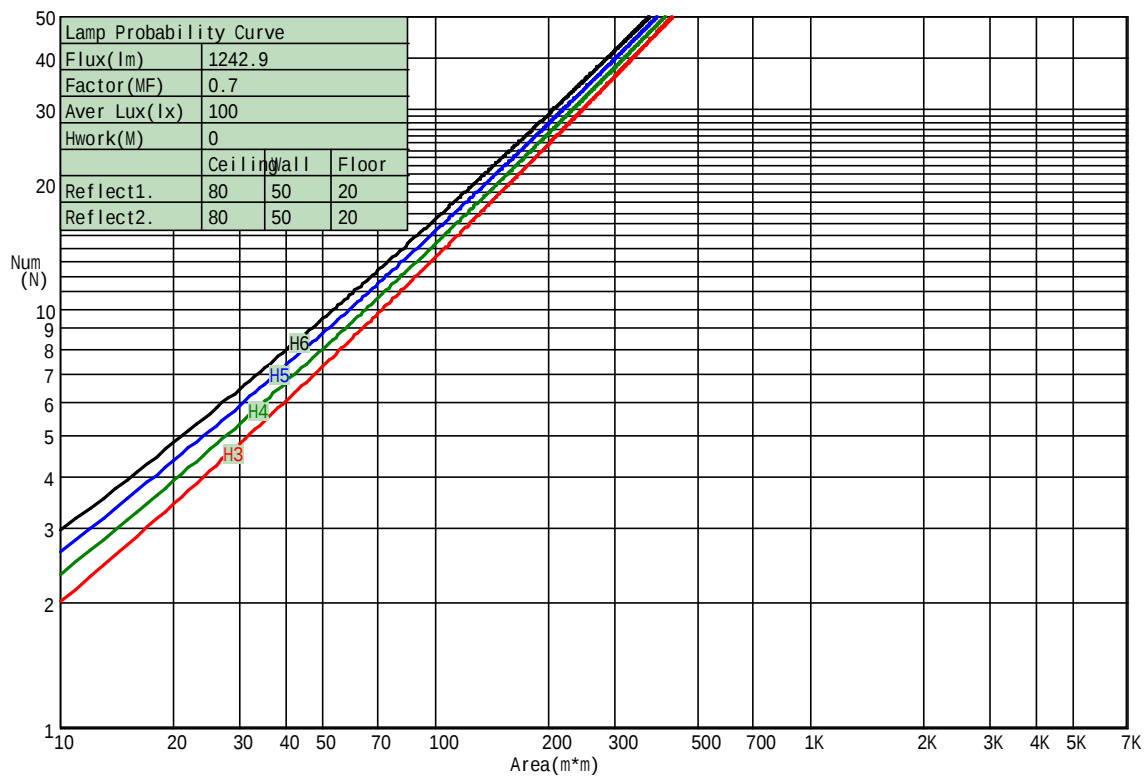
Humidity(%): 60

Date: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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	51	36	26	49	35	26	46	34	25
0.80	56	39	28	53	38	27	49	36	27
1.00	59	42	29	56	40	29	52	38	28
1.25	62	44	30	59	42	30	53	39	28
1.50	64	45	31	61	44	30	55	40	28
2.00	67	48	32	63	46	31	56	41	29
2.50	69	49	33	65	46	31	57	42	29
3.00	70	50	33	66	47	32	58	42	29
4.00	71	51	34	67	48	32	58	43	29
5.00	72	52	34	68	49	32	59	43	29

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	0.97	0.93	0.99	0.95	0.91	0.95	0.91	0.88	0.91	0.88	0.85	0.88	0.85	0.83
2	0.88	0.8	0.74	0.86	0.79	0.73	0.82	0.77	0.72	0.79	0.74	0.7	0.76	0.72	0.68
3	0.77	0.68	0.61	0.75	0.67	0.6	0.72	0.65	0.59	0.69	0.63	0.58	0.67	0.62	0.57
4	0.68	0.58	0.51	0.66	0.58	0.51	0.64	0.56	0.5	0.61	0.55	0.49	0.59	0.53	0.49
5	0.6	0.51	0.44	0.59	0.5	0.44	0.57	0.49	0.43	0.55	0.48	0.43	0.53	0.47	0.42
6	0.54	0.45	0.38	0.53	0.44	0.38	0.51	0.43	0.38	0.5	0.43	0.37	0.48	0.42	0.37
7	0.49	0.4	0.34	0.48	0.4	0.33	0.47	0.39	0.33	0.45	0.38	0.33	0.44	0.37	0.33
8	0.45	0.36	0.3	0.44	0.36	0.3	0.43	0.35	0.3	0.41	0.34	0.29	0.4	0.34	0.29
9	0.41	0.32	0.27	0.4	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.26	0.37	0.31	0.26
10	0.38	0.3	0.24	0.37	0.29	0.24	0.36	0.29	0.24	0.35	0.29	0.24	0.34	0.28	0.24

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: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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	0.35	0.2	0.06	0.34	0.2	0.06	0.33	0.19	0.06	0.32	0.18	0.06	0.31	0.18	0.06
2	0.32	0.17	0.05	0.31	0.17	0.05	0.3	0.17	0.05	0.29	0.16	0.05	0.28	0.16	0.05
3	0.29	0.15	0.05	0.28	0.15	0.05	0.27	0.15	0.04	0.26	0.14	0.04	0.25	0.14	0.04
4	0.26	0.14	0.04	0.26	0.13	0.04	0.25	0.13	0.04	0.24	0.13	0.04	0.23	0.13	0.04
5	0.24	0.12	0.04	0.24	0.12	0.04	0.23	0.12	0.03	0.22	0.12	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	0.11	0.03	0.2	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	0.18	0.09	0.03	0.17	0.09	0.03
9	0.18	0.09	0.02	0.18	0.09	0.02	0.17	0.08	0.02	0.17	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	0.16	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	0.18	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	0.07	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: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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	387	386	386	391	392	396	396	393	0-5	9.36	9.36
10	381	378	377	386	389	395	395	389	5-10	27.8	37.2
15	372	365	365	378	386	392	391	381	10-15	45.4	82.5
20	358	350	348	366	379	386	383	370	15-20	61.5	144
25	342	331	329	352	369	376	372	357	20-25	75.6	220
30	322	310	307	335	355	364	359	340	25-30	87.3	307
35	302	287	283	315	339	349	342	321	30-35	96.3	403
40	280	262	258	294	320	331	322	299	35-40	102	505
45	255	236	235	270	300	311	301	275	40-45	105	611
50	233	213	206	244	277	288	277	252	45-50	105	716
55	205	184	176	218	252	264	250	226	50-55	102	819
60	176	154	145	193	226	242	221	195	55-60	96.2	915
65	146	125	114	164	203	212	194	164	60-65	87.4	1002
70	116	95.1	59.1	135	173	181	162	132	65-70	75.5	1078
75	87	67.7	29.5	106	143	149	129	102	70-75	60.4	1138
80	62.7	44	14.2	78.3	113	117	97.1	72.6	75-80	47	1185
85	43.7	26.8	5.55	52.6	83.9	86.9	67.1	50.2	80-85	34.3	1219
90	33.6	17.2	3.65	31.5	57.8	65.8	38.7	38	85-90	23.5	1243
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: 2026-7-15

Remark:

Measured Para U: 235.2V I: 171.0mA P: 20.90W PF: 0.519 Test LM: 1242.88lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-20MF01-TB-C	Lamp Spec: LPDL-20MF01-TB-C	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	387	387	386	386	386	387	390	391	392	392	393	395	396	396	395	394	392	390
10.0	381	380	378	377	377	379	383	387	388	389	392	395	395	395	394	391	388	384
15.0	372	369	366	365	365	367	373	378	382	386	388	391	392	391	389	384	380	376
20.0	358	354	351	349	349	352	360	368	373	379	382	385	385	384	380	374	369	363
25.0	342	337	332	331	330	334	345	354	362	369	372	376	375	373	369	362	355	348
30.0	322	317	312	309	308	313	326	337	347	355	359	363	362	360	354	346	338	330
35.0	302	296	289	286	284	290	305	318	329	339	343	348	346	343	337	328	319	310
40.0	280	272	264	261	259	265	282	296	309	320	325	330	328	324	317	307	297	288
45.0	255	247	238	236	235	243	258	273	287	300	304	309	307	303	295	284	273	264
50.0	233	225	215	211	207	214	231	248	262	277	282	287	284	279	271	260	250	242
55.0	205	196	186	181	177	185	204	221	237	252	257	263	259	253	245	234	224	215
60.0	176	167	157	151	147	155	177	197	212	226	233	240	235	225	215	204	193	185
65.0	146	137	127	121	117	125	148	169	186	203	207	211	206	198	187	173	162	154
70.0	116	107	97.4	83.3	67	75.8	110	139	157	173	176	180	174	166	155	142	130	123
75.0	87	78.6	69.8	55.2	37.8	46.3	81.1	110	127	143	145	148	142	133	123	111	99.9	93.3
80.0	62.7	54.5	46	34.2	20.7	28.2	57.3	82.1	97.6	113	114	116	110	101	91.7	80.7	71.5	67
85.0	43.7	36.3	28.6	19.8	10.2	15.8	37.2	56	70.2	83.9	85.2	86.6	80.4	71.4	63.4	55.7	49.5	46.5
90.0	33.6	26.4	19	12.7	6.61	9.74	22.4	34.4	46.3	57.8	61.3	65	56.9	44.6	38.5	38.2	37.5	35.6
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: 2026-7-15

Remark: