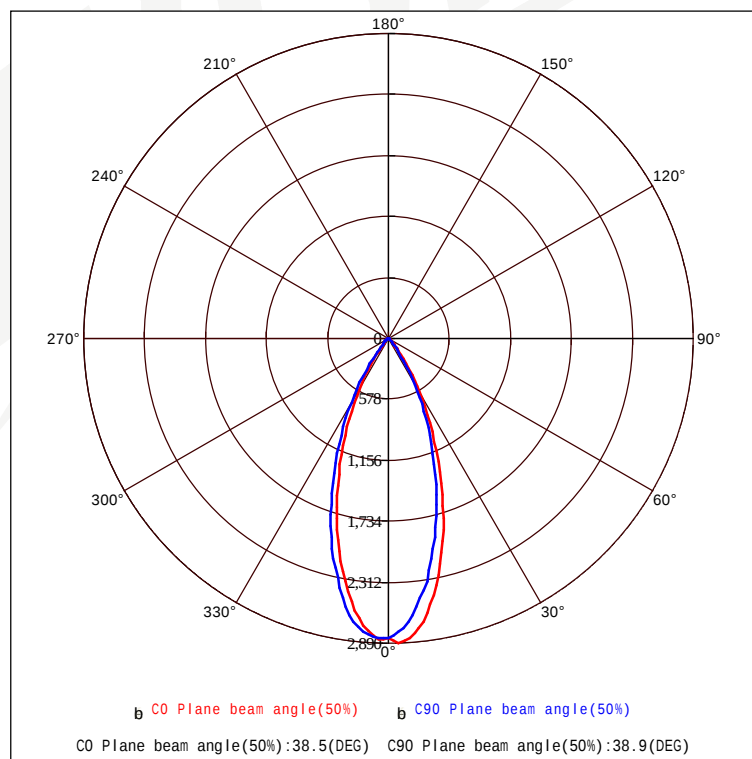


Goniophotometer Test Report

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPCL-20A01-YB			Lamp Spec: LPCL-20A01-YB		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPCL-20A01-YB		Peak Value(cd)	2890.9	Efficiency(lm/w)	75.9
Nominal P(w)		1.0	Position	0.0,1.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1396.238	Down(C0-C180)	48.7
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)	51.3

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

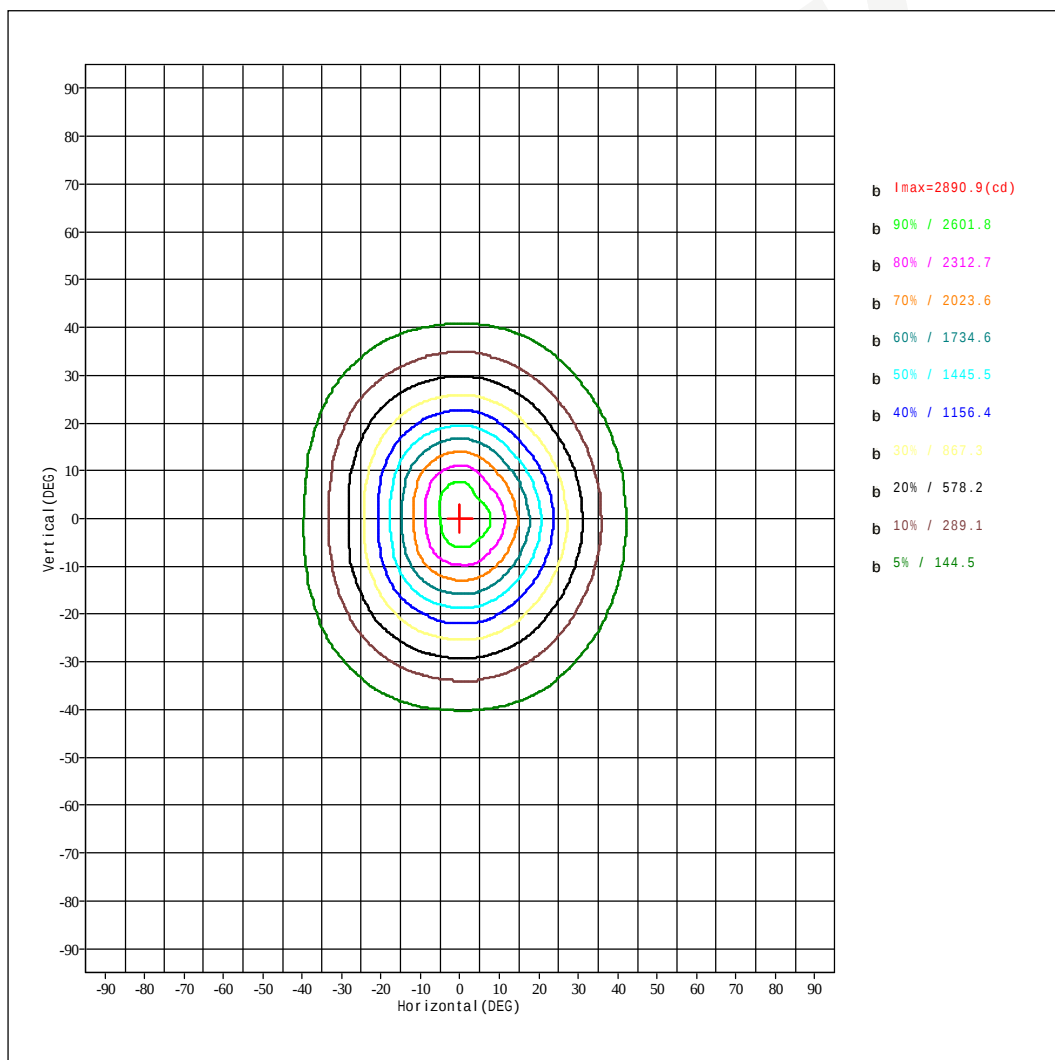
Humidity(%): 60

Date: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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

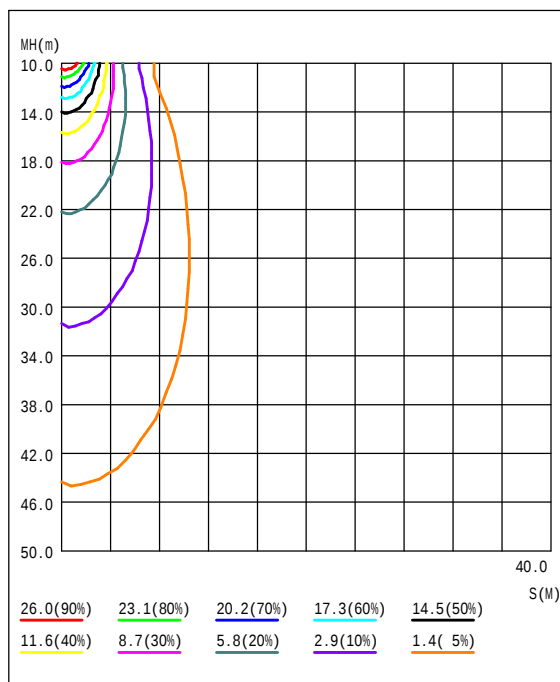
Humidity(%): 60

Date: 2026-7-8

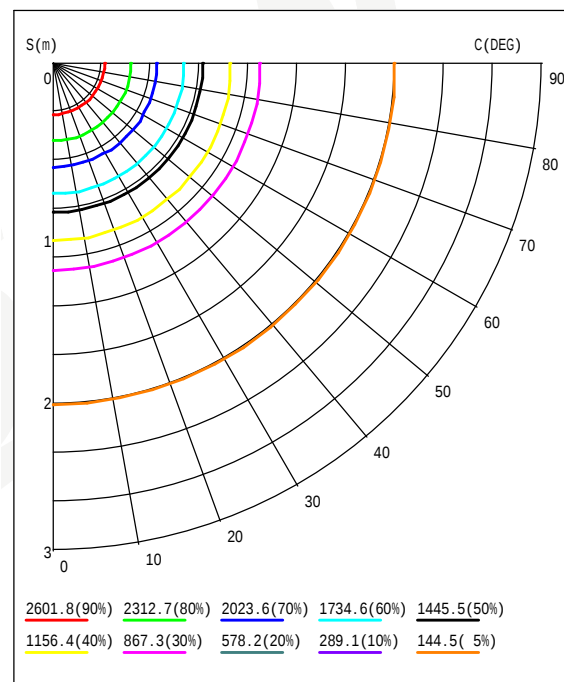
Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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: zxg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2026-7-8

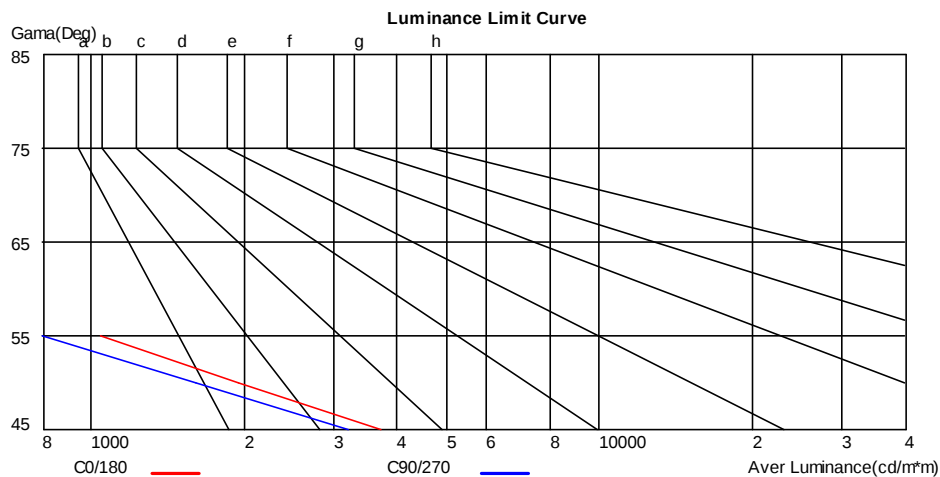
Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	Shape Size:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Luminance Limit Curve

Aver Luminance(cd/m²m)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	3726.9	1943.3	1042.2	512.0	226.4	253.8	283.2	300.4	308.7
C90	3191.9	1601.8	802.6	356.2	233.7	263.6	288.6	308.2	328.8

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

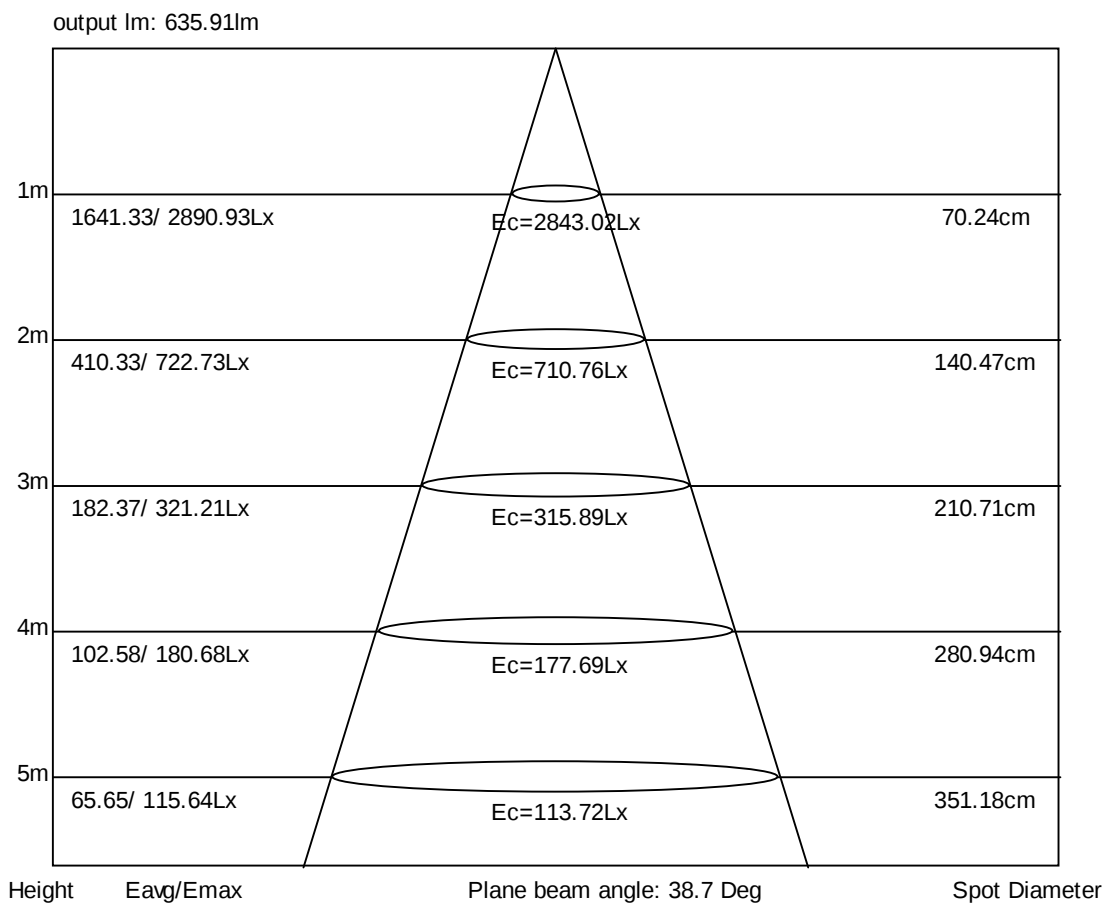
Humidity(%): 60

Date: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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

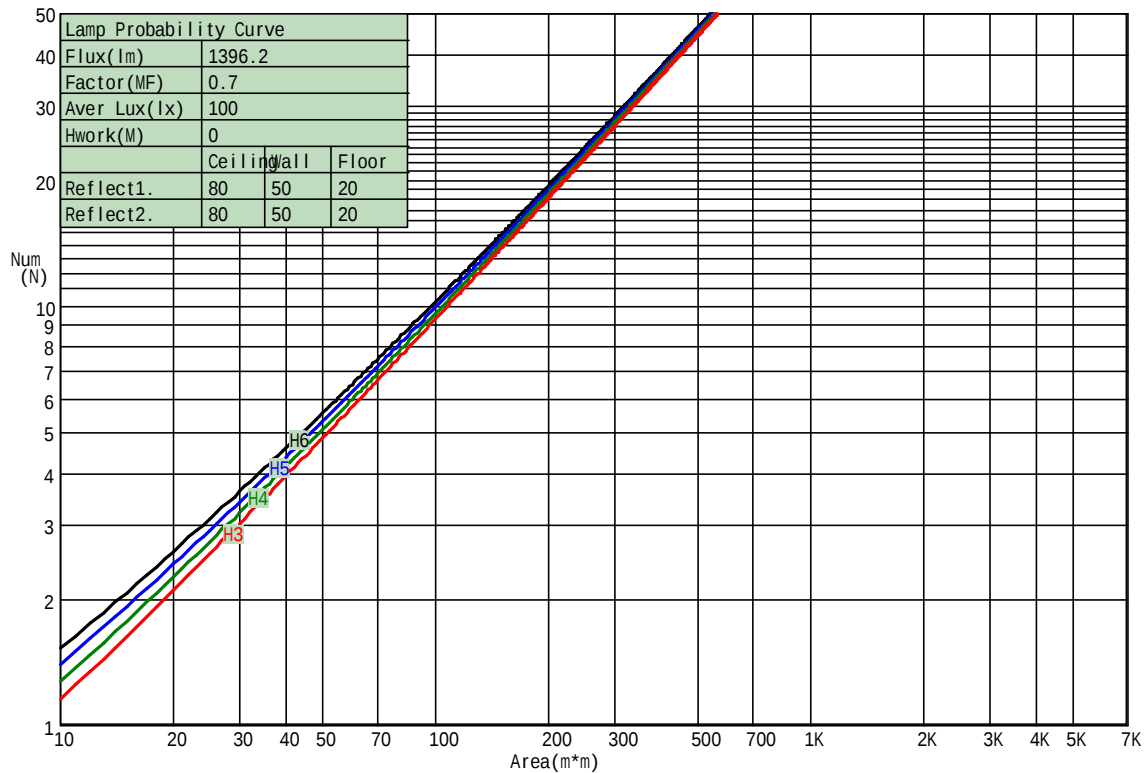
Humidity(%): 60

Date: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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	42	25	15	40	24	14	37	23	14
0.80	47	29	16	45	27	16	41	25	15
1.00	51	31	18	48	30	17	43	27	16
1.25	55	34	19	51	32	18	45	29	17
1.50	57	36	20	54	34	19	47	30	17
2.00	61	39	22	57	37	21	49	33	19
2.50	63	41	23	59	39	22	51	34	20
3.00	65	43	24	60	40	23	52	35	20
4.00	67	45	26	62	42	24	53	36	21
5.00	69	47	27	64	43	25	54	37	22

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	1.11	1.09	1.07	1.09	1.07	1.05	1.05	1.04	1.02	1.02	1	0.99	0.98	0.97	0.96
2	1.05	1.01	0.98	1.03	1	0.97	1	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91
3	0.99	0.94	0.91	0.97	0.93	0.9	0.95	0.91	0.89	0.92	0.9	0.87	0.9	0.88	0.86
4	0.93	0.88	0.85	0.92	0.88	0.84	0.9	0.86	0.83	0.88	0.85	0.82	0.86	0.84	0.81
5	0.89	0.83	0.8	0.88	0.83	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.8	0.77
6	0.84	0.79	0.75	0.83	0.78	0.75	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73
7	0.8	0.75	0.71	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.7	0.76	0.72	0.7
8	0.76	0.71	0.67	0.76	0.71	0.67	0.75	0.7	0.67	0.74	0.7	0.67	0.73	0.69	0.67
9	0.73	0.68	0.64	0.72	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.7	0.66	0.64
10	0.7	0.65	0.61	0.69	0.64	0.61	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61

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: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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	0.16	0.09	0.03	0.16	0.09	0.03	0.15	0.08	0.03	0.13	0.08	0.02	0.12	0.07	0.02
2	0.15	0.08	0.03	0.15	0.08	0.03	0.14	0.08	0.02	0.13	0.07	0.02	0.12	0.07	0.02
3	0.15	0.08	0.02	0.14	0.08	0.02	0.13	0.07	0.02	0.12	0.07	0.02	0.12	0.06	0.02
4	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02	0.11	0.06	0.02
5	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02
6	0.12	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.06	0.02
7	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02	0.11	0.05	0.02	0.1	0.05	0.02
8	0.11	0.06	0.02	0.11	0.05	0.02	0.11	0.05	0.02	0.1	0.05	0.02	0.1	0.05	0.01
9	0.11	0.05	0.01	0.11	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01
10	0.1	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01	0.1	0.05	0.01	0.09	0.05	0.01

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	0.17	0.16	0.15	0.15	0.14	0.13	0.1	0.09	0.09	0.06	0.05	0.05	0.02	0.02	0.02
2	0.15	0.13	0.11	0.13	0.11	0.1	0.09	0.08	0.07	0.05	0.05	0.04	0.02	0.01	0.01
3	0.14	0.11	0.09	0.12	0.1	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01	0.01
4	0.13	0.1	0.07	0.11	0.09	0.07	0.08	0.06	0.05	0.04	0.03	0.03	0.01	0.01	0.01
5	0.12	0.09	0.06	0.1	0.07	0.05	0.07	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.01
6	0.11	0.08	0.05	0.1	0.07	0.05	0.07	0.05	0.03	0.04	0.03	0.02	0.01	0.01	0.01
7	0.11	0.07	0.04	0.09	0.06	0.04	0.06	0.04	0.03	0.04	0.02	0.02	0.01	0.01	0.01
8	0.1	0.06	0.04	0.09	0.05	0.03	0.06	0.04	0.02	0.03	0.02	0.01	0.01	0.01	0
9	0.09	0.06	0.03	0.08	0.05	0.03	0.06	0.04	0.02	0.03	0.02	0.01	0.01	0.01	0
10	0.09	0.05	0.03	0.08	0.05	0.03	0.05	0.03	0.02	0.03	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: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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	2792	2741	2596	2652	2704	2700	2775	2681	0-5	66.3	66.3
10	2425	2360	2181	2270	2297	2330	2456	2322	5-10	180	246
15	1937	1883	1689	1813	1824	1849	2008	1836	10-15	247	493
20	1408	1384	1217	1335	1331	1363	1515	1344	15-20	263	756
25	935	937	806	905	888	917	1059	903	20-25	237	992
30	564	582	478	552	529	554	664	546	25-30	184	1176
35	263	271	187	238	218	248	327	247	30-35	116	1292
40	90.7	93.4	68.5	85	77.9	83.5	120	84	35-40	51	1343
45	37.3	37.8	31.9	38.2	35.4	37.1	51.2	36.3	40-45	21.5	1365
50	19.4	20.1	16	21	19.5	18.6	26.3	18.7	45-50	11.3	1376
55	10.4	10.4	8.03	11	9.7	9.5	12.8	9.75	50-55	6.37	1383
60	5.12	5.12	3.56	5.32	4.61	4.43	6.28	4.72	55-60	3.38	1386
65	2.26	2.42	2.34	2.75	2.54	2.35	2.83	2.35	60-65	1.65	1388
70	2.54	2.7	2.64	3.03	3.02	2.91	2.86	2.92	65-70	1.33	1389
75	2.83	2.91	2.89	3.23	3.52	3.41	3.36	3.45	70-75	1.58	1391
80	3	3.06	3.08	3.38	3.89	3.8	3.78	3.85	75-80	1.79	1392
85	3.09	3.09	3.29	3.4	4.1	4.01	4.04	4.09	80-85	1.94	1394
90	3.08	3.05	3.03	3.37	4.07	4.06	4.11	4.13	85-90	1.98	1396
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: 2026-7-8

Remark:

Measured Para U: 230.4V I: 139.0mA P: 18.40W PF: 0.574 Test LM: 1396.24lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPCL-20A01-YB	Lamp Spec: LPCL-20A01-YB	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	2792	2770	2746	2693	2628	2608	2634	2658	2681	2704	2702	2700	2724	2758	2754	2712	2693	2743
10.0	2425	2397	2367	2302	2221	2201	2241	2273	2285	2297	2311	2326	2371	2428	2427	2366	2334	2380
15.0	1937	1913	1889	1819	1732	1716	1773	1814	1819	1824	1835	1847	1901	1973	1971	1892	1847	1893
20.0	1408	1398	1387	1329	1253	1243	1296	1335	1333	1331	1345	1359	1413	1482	1478	1400	1351	1380
25.0	935	936	937	894	834	827	872	903	895	888	900	914	963	1028	1025	954	907	921
30.0	564	572	580	548	501	494	528	549	539	529	540	551	590	640	638	585	548	556
35.0	263	266	270	243	205	198	221	236	227	218	231	245	274	309	309	273	249	256
40.0	90.7	91.9	93.1	85.2	74	72.1	79.6	84.2	81	77.9	80.3	82.9	95.5	112	112	95.8	84.7	87.8
45.0	37.3	37.5	37.8	35.9	33.2	33.3	36.1	37.9	36.6	35.4	36.1	36.9	41.7	48.1	47.9	41.1	36.4	36.8
50.0	19.4	19.7	20.1	18.8	16.9	17.1	19.4	20.8	20.2	19.5	19.1	18.7	21.1	24.6	24.7	21.2	18.8	19.1
55.0	10.4	10.4	10.4	9.64	8.55	8.68	10	10.9	10.3	9.7	9.61	9.52	10.6	12.1	12.1	10.8	9.82	10.1
60.0	5.12	5.12	5.12	4.61	3.9	3.95	4.74	5.24	4.92	4.61	4.53	4.45	5.04	5.88	5.94	5.23	4.76	4.94
65.0	2.26	2.33	2.4	2.39	2.36	2.43	2.62	2.73	2.64	2.54	2.46	2.37	2.51	2.72	2.72	2.51	2.34	2.3
70.0	2.54	2.61	2.68	2.68	2.65	2.72	2.9	3.03	3.03	3.02	2.97	2.92	2.89	2.87	2.87	2.9	2.88	2.71
75.0	2.83	2.86	2.9	2.9	2.89	2.96	3.12	3.26	3.39	3.52	3.47	3.42	3.39	3.37	3.38	3.42	3.38	3.1
80.0	3	3.03	3.05	3.07	3.08	3.15	3.28	3.44	3.67	3.89	3.85	3.81	3.79	3.78	3.79	3.82	3.75	3.37
85.0	3.09	3.09	3.09	3.15	3.24	3.31	3.36	3.47	3.79	4.1	4.06	4.02	4.02	4.04	4.05	4.08	3.98	3.53
90.0	3.08	3.07	3.06	3.05	3.04	3.11	3.26	3.44	3.76	4.07	4.06	4.06	4.07	4.1	4.12	4.12	4.02	3.54
95.0																		
100.0																		
105.0																		
110.0																		
115.0																		
120.0																		
125.0																		
130.0																		
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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: 2026-7-8

Remark: