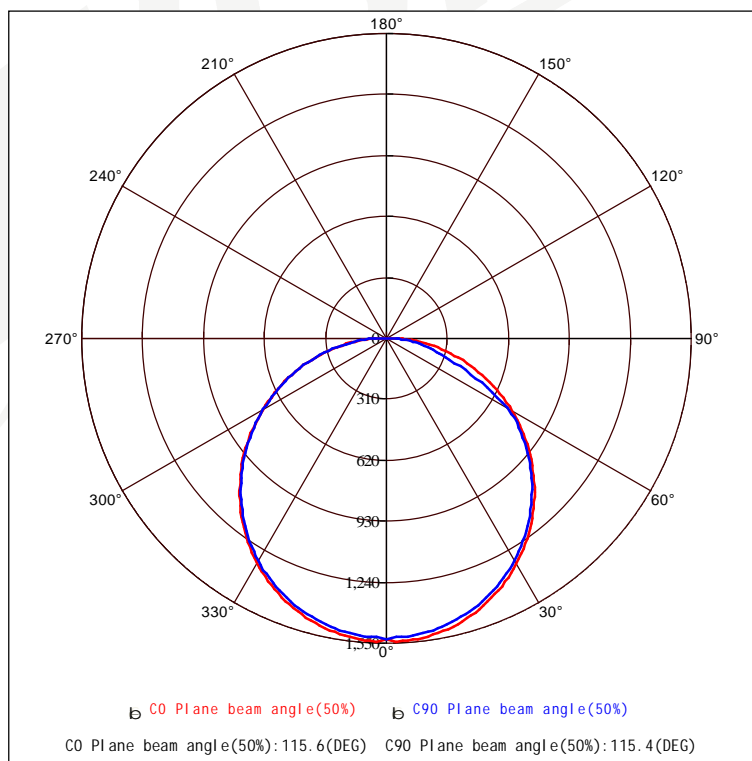


Goniophotometer Test Report

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm						
Lamp Name: LED DOWN LIGHT		Lamp Type:		Weight(kg):		
Lamp ID: LPDL-48ENS01-Y		Lamp Spec: LPDL-48ENS01-Y		Shape Size:		
Manufactory: LIPER		Sur(m ²):		Protect Angle(Deg):		
Light Source Data			Photometric Data			
Model	LPDL-48ENS01-Y		Peak Value(cd)	1543.3	Efficiency(lm/w)	99.8
Nominal P(w)	48.0		Position	0.0,0.0	UP(C0-C180)	0.0
Rated Volt(v)	1.0		Total Flux(lm)	4591.131	Down(C0-C180)	50.4
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)	49.6

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

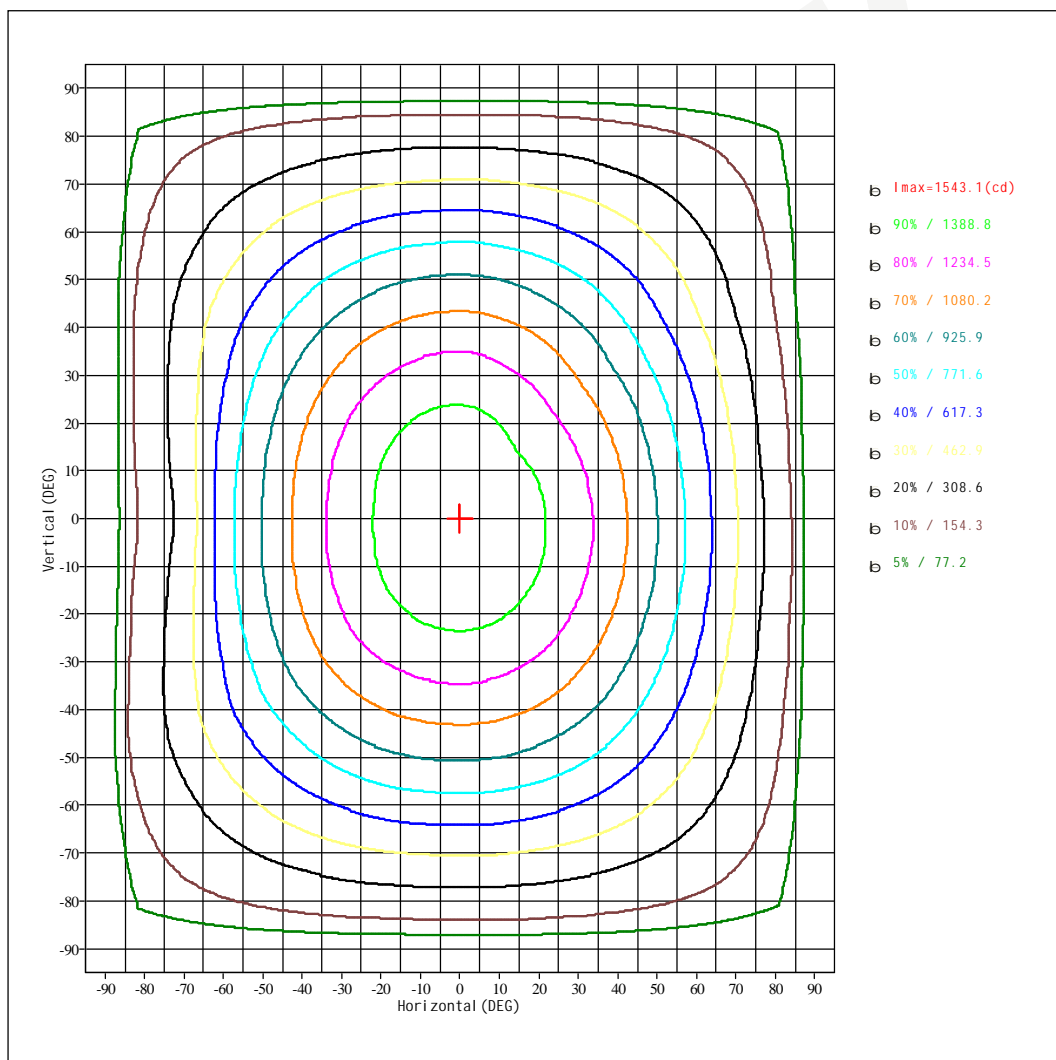
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-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

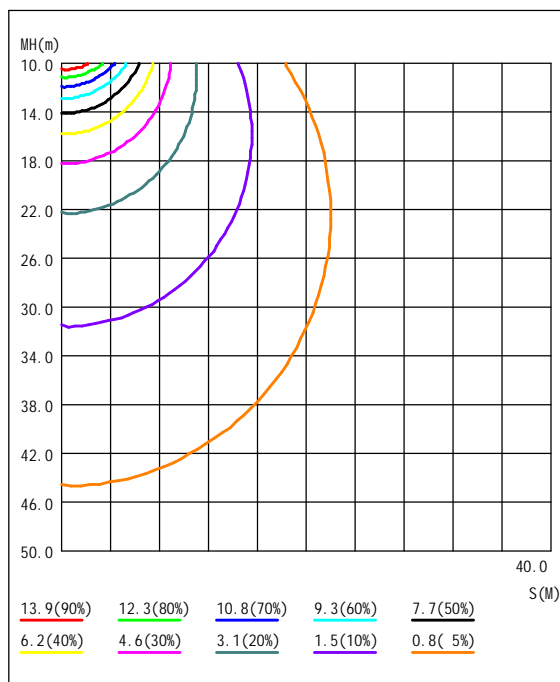
Humi di ty(%): 60

Date: 2026-4-2

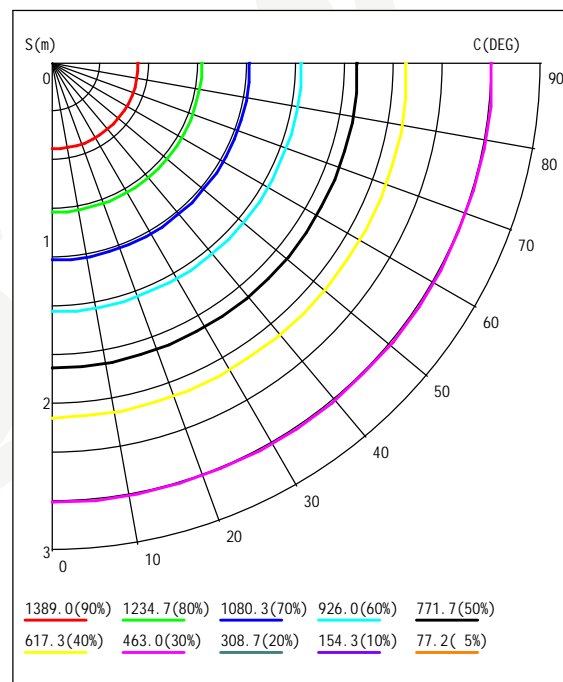
Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m ²):	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: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-Y	Shape Si ze:
Manufactory: LIPER	Sur(m^2):	Protect Angle(Deg):

Luminance Limit Curve

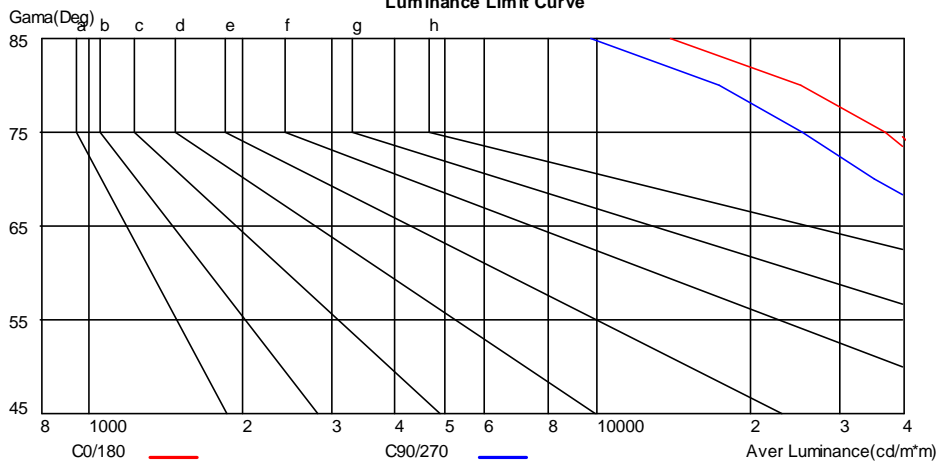
Aver Luminance(cd/m*m)

Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	105520.5	95082.1	84091.8	72578.3	60779.6	48812.8	36901.9	25238.9	13999.3
C90	103655.1	93399.4	82521.4	69296.8	51720.5	35120.8	25402.6	17433.7	9727.0

Glare

Glare	Class	Illuminance(lx)								
		2000	1000	500	<=300					
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	

Luminance Limit 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

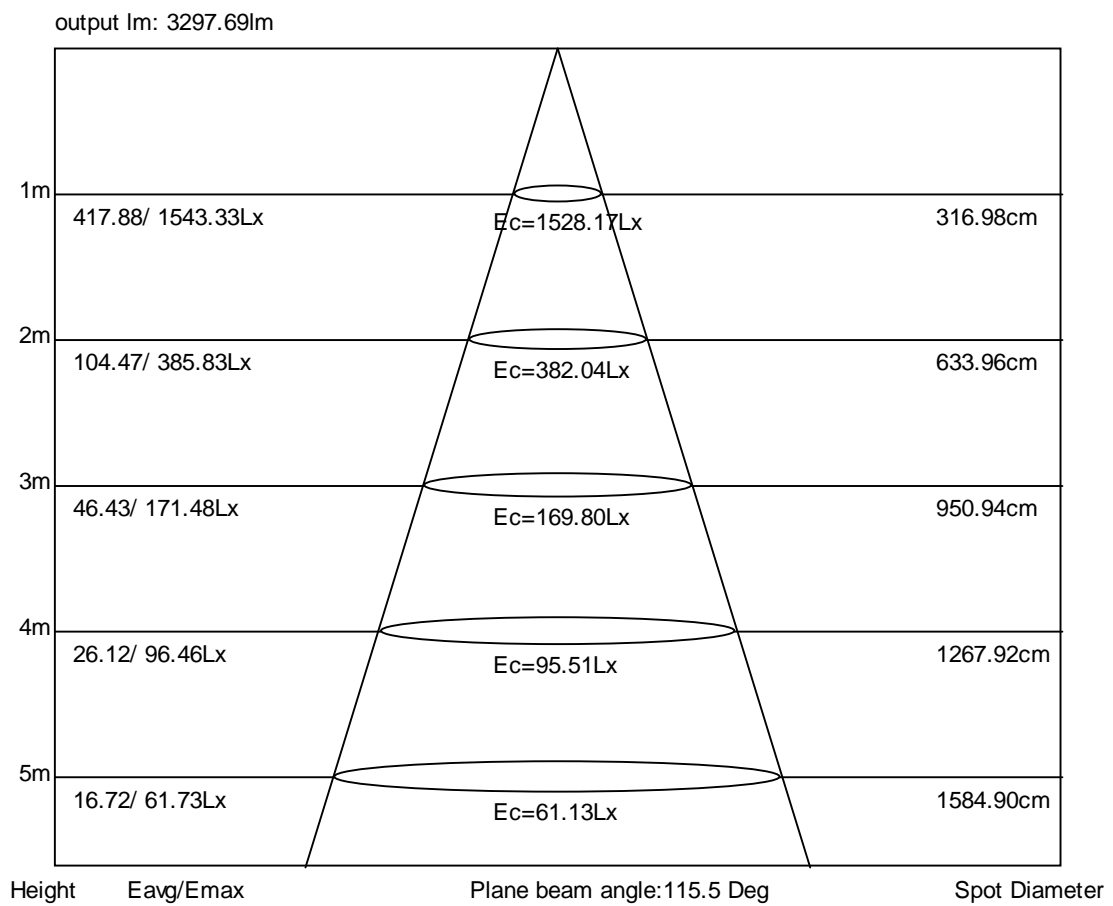
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-Y	Shape Si ze:
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

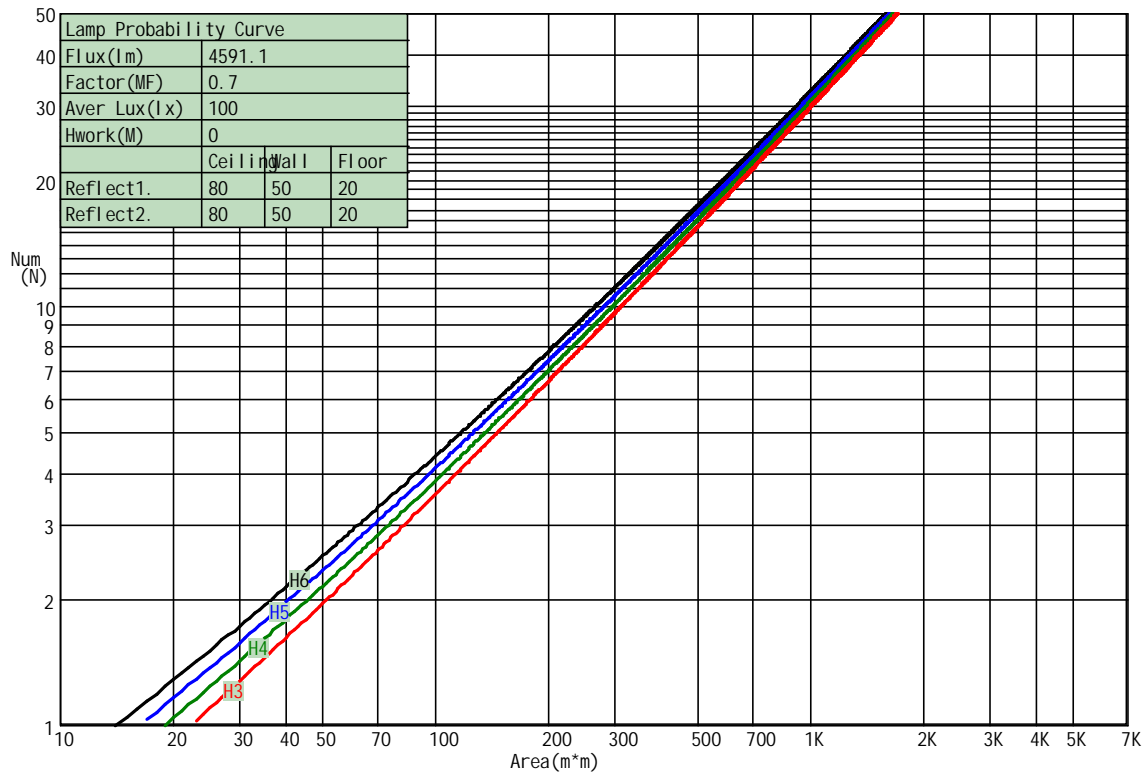
Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-Y	Shape Si ze:
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

Humi di ty(%): 60

Date: 2026-4-2

Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-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	37	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	30	53	39	29
1.25	63	45	32	60	44	31	55	41	30
1.50	65	47	33	62	45	32	56	41	30
2.00	68	49	34	64	47	33	57	43	31
2.50	69	50	34	65	48	33	58	43	30
3.00	71	51	34	66	48	33	58	43	30
4.00	72	52	35	67	49	33	59	44	30
5.00	73	53	35	68	50	33	59	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	1.01	0.96	0.93	0.96	0.93	0.9	0.92	0.89	0.87	0.89	0.86	0.84
2	0.89	0.82	0.76	0.87	0.81	0.75	0.84	0.78	0.73	0.8	0.76	0.72	0.77	0.73	0.7
3	0.78	0.7	0.63	0.76	0.69	0.62	0.73	0.67	0.61	0.71	0.65	0.6	0.68	0.63	0.59
4	0.69	0.6	0.53	0.68	0.59	0.53	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	0.51	0.45	0.56	0.49	0.44	0.54	0.48	0.44
6	0.55	0.46	0.4	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	0.31	0.41	0.35	0.3
9	0.42	0.34	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: 2026-4-2

Remark:

Measured Para U: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-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	0.32	0.18	0.06	0.31	0.18	0.06	0.3	0.17	0.05	0.29	0.17	0.05
2	0.3	0.17	0.05	0.3	0.16	0.05	0.29	0.16	0.05	0.28	0.15	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	0.22	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	0.04	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)

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: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-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	1538	1526	1516	1513	1536	1525	1516	1503	0-5	36.5	36.5
10	1518	1507	1496	1498	1516	1504	1496	1479	5-10	108	145
15	1486	1475	1464	1471	1482	1472	1465	1443	10-15	176	321
20	1442	1431	1420	1431	1436	1427	1420	1394	15-20	239	559
25	1385	1375	1364	1379	1378	1369	1363	1334	20-25	293	852
30	1317	1308	1296	1316	1310	1300	1297	1263	25-30	338	1190
35	1239	1229	1219	1243	1231	1222	1218	1183	30-35	372	1562
40	1151	1142	1132	1159	1142	1134	1132	1093	35-40	393	1955
45	1055	1046	1037	1067	1045	1037	1036	994	40-45	403	2358
50	951	943	934	967	941	933	934	890	45-50	399	2757
55	841	835	825	861	830	823	824	779	50-55	383	3141
60	726	721	693	750	715	707	711	664	55-60	356	3496
65	608	604	517	635	597	589	594	547	60-65	315	3812
70	488	487	351	518	477	470	476	429	65-70	265	4077
75	369	369	254	401	358	351	359	314	70-75	211	4288
80	252	254	174	285	241	239	244	200	75-80	156	4443
85	140	143	97.3	173	129	124	135	98.1	80-85	98.8	4542
90	74.1	58.3	52.5	75.7	48.2	64	54.5	49.4	85-90	48.8	4591
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: zxg

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: 230.4V I: 357.0mA P: 46.00W PF: 0.558 Test LM: 4591.13lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight (kg):
Lamp ID: LPDL-48ENS01-Y	Lamp Spec: LPDL-48ENS01-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	1538	1533	1528	1523	1518	1515	1514	1515	1526	1536	1531	1526	1522	1518	1513	1508	1507	1523
10.0	1518	1513	1508	1503	1499	1497	1498	1500	1508	1516	1511	1506	1502	1498	1492	1485	1484	1501
15.0	1486	1482	1477	1472	1467	1466	1469	1472	1477	1482	1478	1473	1470	1466	1460	1450	1447	1467
20.0	1442	1437	1432	1427	1422	1422	1428	1432	1434	1436	1432	1428	1424	1421	1414	1403	1400	1421
25.0	1385	1381	1376	1371	1366	1367	1374	1379	1379	1378	1374	1370	1367	1364	1357	1344	1340	1363
30.0	1317	1313	1309	1304	1298	1300	1309	1315	1312	1310	1306	1301	1299	1297	1289	1274	1269	1293
35.0	1239	1235	1230	1226	1221	1224	1235	1242	1236	1231	1227	1223	1221	1219	1211	1194	1189	1214
40.0	1151	1147	1143	1139	1134	1138	1150	1157	1150	1142	1139	1135	1133	1132	1123	1105	1099	1125
45.0	1055	1051	1047	1043	1039	1043	1057	1065	1055	1045	1041	1038	1037	1036	1027	1008	1001	1028
50.0	951	947	944	940	936	941	956	965	952	941	937	934	933	933	924	904	896	924
55.0	841	838	835	832	827	833	850	858	844	830	827	824	823	824	814	794	786	814
60.0	726	724	722	712	699	705	731	746	731	715	712	708	708	710	701	679	671	699
65.0	608	606	605	576	536	543	597	631	614	597	594	590	591	593	584	563	554	581
70.0	488	487	487	442	381	388	463	513	495	477	474	470	472	475	466	445	436	462
75.0	369	369	369	331	279	286	352	396	376	358	355	352	353	357	349	329	320	345
80.0	252	253	254	228	192	198	248	280	260	241	240	239	240	243	234	215	206	230
85.0	140	141	143	128	107	114	148	168	148	129	127	125	128	132	127	110	103	122
90.0	74.1	67.2	60	56.4	53.7	57.5	68.1	72.7	60.2	48.2	55.1	62.3	60.9	56.5	53.4	51.1	52.1	63.3
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: zxcg

Date: 2026-4-2

Distance(m): 7.000

Remark:

Test System: ZWL Goniophotometer System V3.0