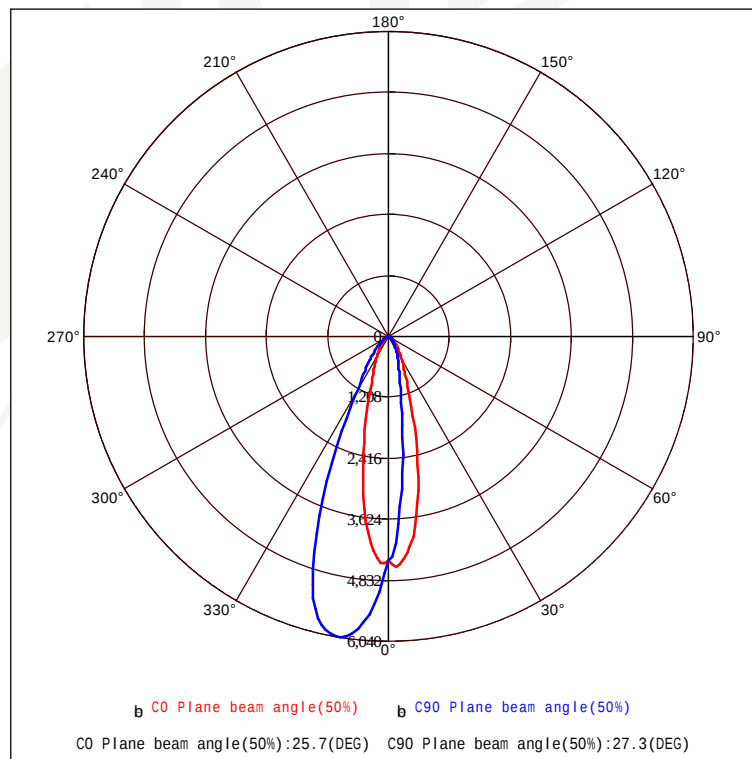


Goniophotometer Test Report

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm						
Lamp Name: LED GRASS LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LPGSL-20B01			Lamp Spec: LPGSL-20B01		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPGSL-20B01		Peak Value(cd)	6037.1	Efficiency(lm/w)	98.0
Nominal P(w)		1.0	Position	270.0,9.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1931.581	Down(C0-C180)	32.5
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)	67.5

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

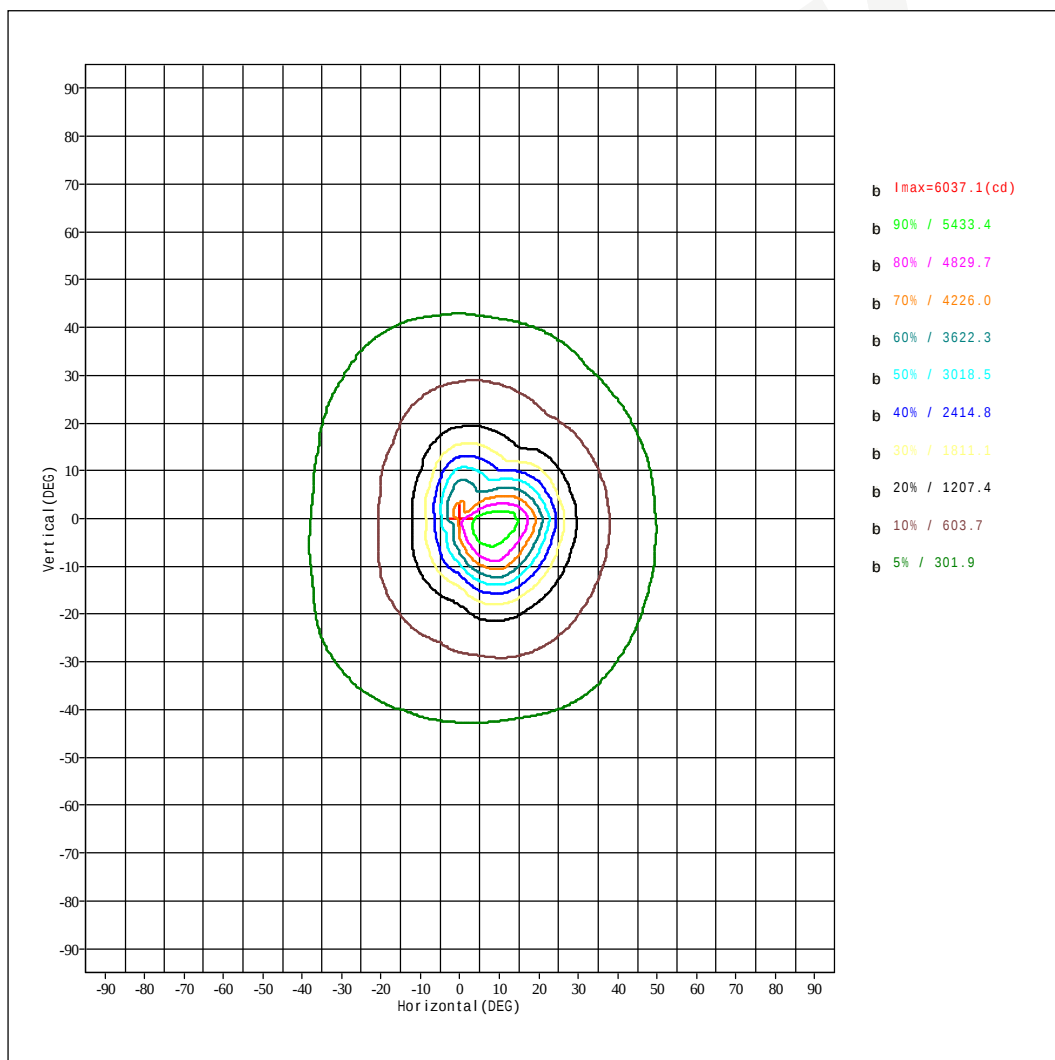
Humidity(%): 60

Date: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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: zyg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

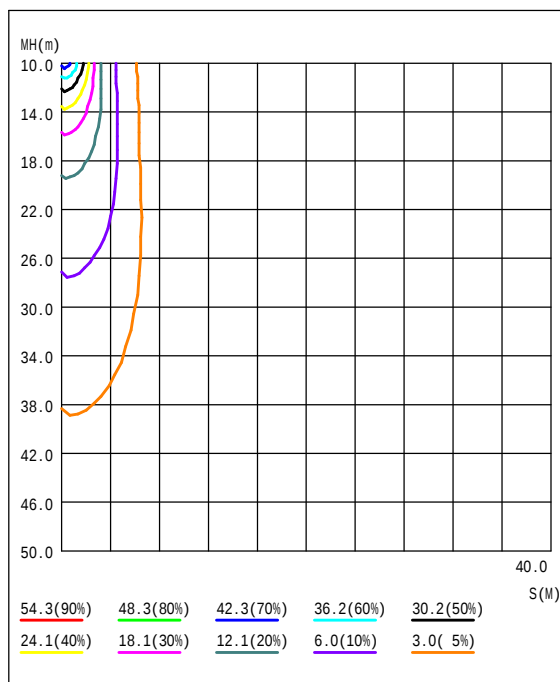
Humidity(%): 60

Date: 2026-1-28

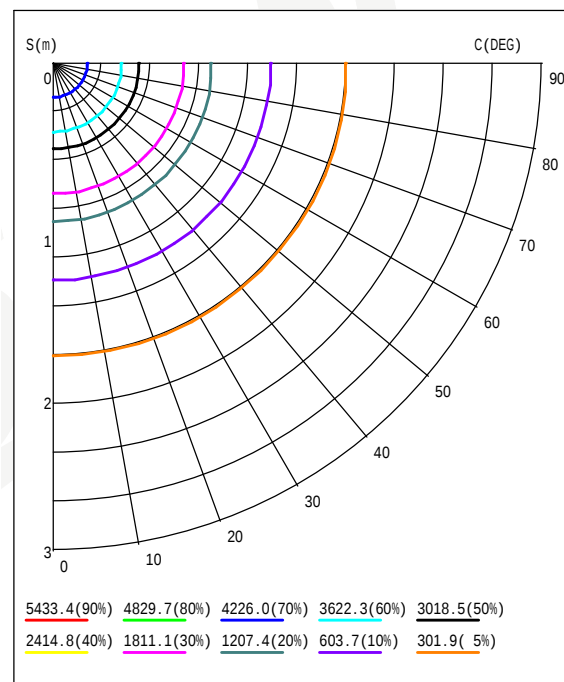
Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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: 2026-1-28

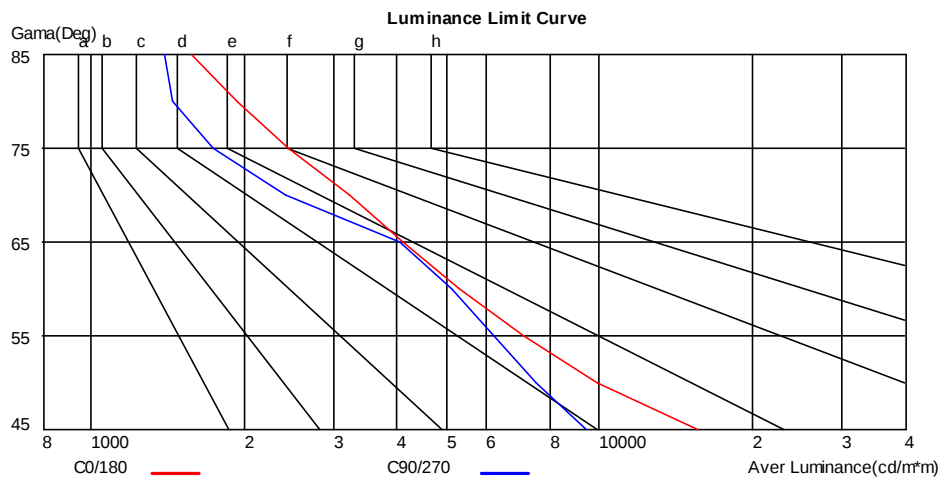
Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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	15694.7	9923.5	7099.6	5322.4	4105.7	3218.8	2443.6	1931.6	1570.4
C90	9457.0	7529.8	6213.7	5116.6	4043.0	2417.7	1732.2	1448.4	1396.0

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: zxg

Distance(m): 7.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

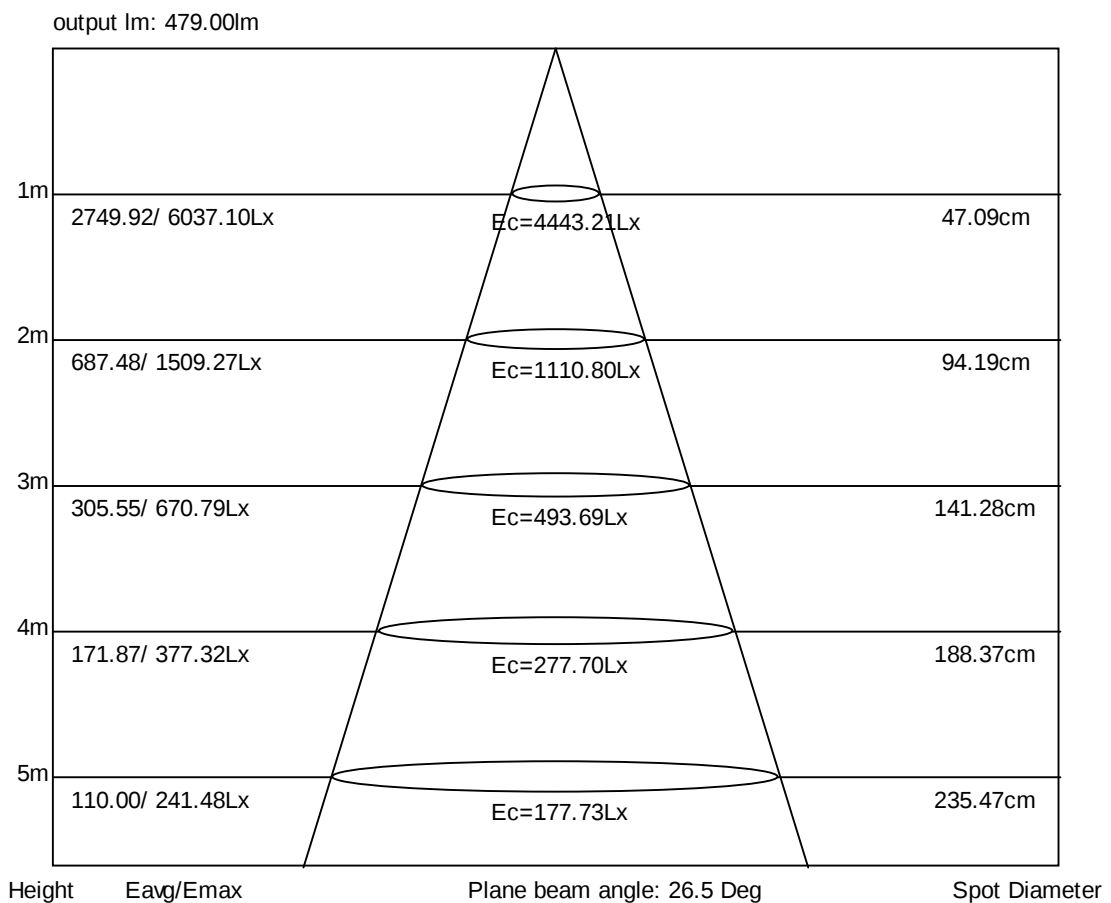
Humidity(%): 60

Date: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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

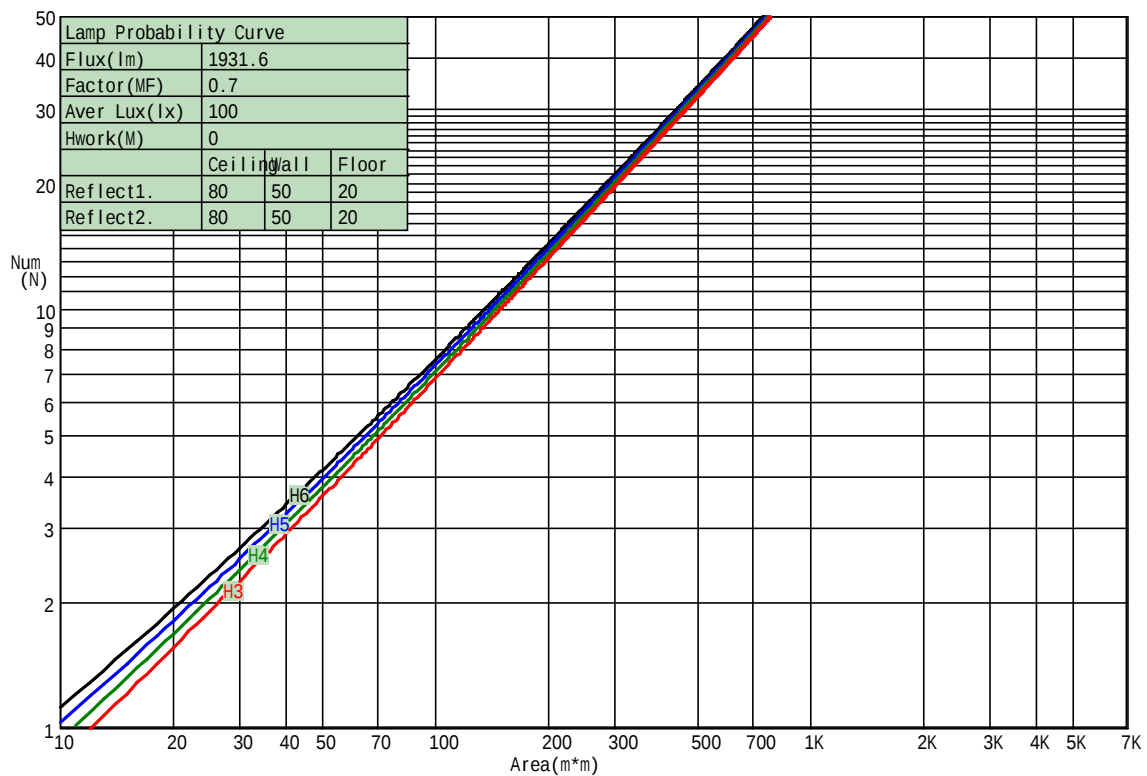
Humidity(%): 60

Date: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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	46	30	20	44	29	19	41	28	19
0.80	50	32	21	48	31	20	44	29	19
1.00	54	35	22	51	33	21	46	31	20
1.25	57	37	22	54	35	22	48	32	20
1.50	59	39	23	56	37	22	49	33	21
2.00	62	42	25	58	39	24	51	35	22
2.50	65	43	26	60	41	25	52	36	22
3.00	66	45	27	62	42	25	53	37	22
4.00	68	47	28	63	44	26	55	38	23
5.00	70	48	29	65	45	27	55	39	24

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	1.1	1.08	1.05	1.08	1.06	1.04	1.04	1.02	1	1	0.99	0.97	0.97	0.96	0.95
2	1.02	0.98	0.95	1.01	0.97	0.94	0.97	0.94	0.92	0.94	0.92	0.9	0.92	0.9	0.88
3	0.96	0.91	0.87	0.94	0.9	0.86	0.92	0.88	0.85	0.89	0.86	0.83	0.87	0.84	0.82
4	0.9	0.84	0.8	0.89	0.84	0.8	0.87	0.82	0.79	0.85	0.81	0.78	0.83	0.8	0.77
5	0.85	0.79	0.75	0.84	0.78	0.74	0.82	0.77	0.74	0.8	0.76	0.73	0.79	0.75	0.72
6	0.8	0.74	0.7	0.79	0.74	0.7	0.78	0.73	0.69	0.76	0.72	0.69	0.75	0.71	0.68
7	0.76	0.7	0.66	0.75	0.7	0.66	0.74	0.69	0.66	0.73	0.68	0.65	0.72	0.68	0.65
8	0.72	0.67	0.63	0.72	0.66	0.62	0.71	0.66	0.62	0.7	0.65	0.62	0.69	0.65	0.62
9	0.69	0.63	0.6	0.68	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59
10	0.66	0.6	0.57	0.65	0.6	0.57	0.65	0.6	0.57	0.64	0.6	0.56	0.63	0.59	0.56

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: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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	0.19	0.11	0.03	0.18	0.1	0.03	0.17	0.1	0.03	0.16	0.09	0.03	0.15	0.09	0.03
2	0.18	0.1	0.03	0.17	0.09	0.03	0.16	0.09	0.03	0.15	0.08	0.03	0.14	0.08	0.03
3	0.17	0.09	0.03	0.16	0.09	0.03	0.15	0.08	0.02	0.14	0.08	0.02	0.13	0.07	0.02
4	0.15	0.08	0.02	0.15	0.08	0.02	0.14	0.08	0.02	0.14	0.07	0.02	0.13	0.07	0.02
5	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.13	0.07	0.02	0.12	0.07	0.02
6	0.14	0.07	0.02	0.13	0.07	0.02	0.13	0.07	0.02	0.12	0.06	0.02	0.12	0.06	0.02
7	0.13	0.06	0.02	0.13	0.06	0.02	0.12	0.06	0.02	0.12	0.06	0.02	0.11	0.06	0.02
8	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
9	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
10	0.11	0.05	0.01	0.11	0.05	0.01	0.11	0.05	0.01	0.1	0.05	0.01	0.1	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	0.14	0.15	0.13	0.12	0.1	0.09	0.09	0.06	0.05	0.05	0.02	0.02	0.02
2	0.16	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	0.05	0.05	0.04	0.03	0.02	0.01	0.01
4	0.13	0.1	0.07	0.11	0.09	0.06	0.08	0.06	0.04	0.05	0.03	0.03	0.01	0.01	0.01
5	0.12	0.09	0.06	0.11	0.08	0.05	0.07	0.05	0.04	0.04	0.03	0.02	0.01	0.01	0.01
6	0.12	0.08	0.05	0.1	0.07	0.04	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	0.07	0.04	0.03	0.04	0.03	0.02	0.01	0.01	0.01
8	0.1	0.06	0.04	0.09	0.06	0.03	0.06	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
9	0.1	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	0.02	0.06	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: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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	4243	3430	2856	2954	4016	5580	5774	3796	0-5	102	102
10	3225	1905	1445	1895	2801	5390	6026	3173	5-10	260	362
15	1965	1021	831	1113	1603	4201	5504	2148	10-15	324	686
20	1117	665	566	735	934	2514	3994	1265	15-20	305	991
25	736	471	392	520	638	1286	2243	811	20-25	241	1232
30	524	339	266	368	452	779	1144	575	25-30	177	1409
35	371	241	183	259	311	541	734	407	30-35	135	1544
40	246	165	128	181	205	363	513	265	35-40	105	1650
45	157	113	94.6	126	130	236	318	173	40-45	77.7	1728
50	99.2	82.4	75.3	91	88	143	186	102	45-50	54.5	1782
55	71	65.7	62.1	72.3	65.6	91.6	114	68.5	50-55	39.5	1822
60	53.2	54.4	51.2	60.3	51.8	58.6	73.2	44	55-60	30.2	1852
65	41.1	44.2	40.4	50.5	40.3	38.1	49.5	32	60-65	23.6	1875
70	32.2	33.8	24.2	40.8	30.7	26.9	32.3	20.1	65-70	18.2	1894
75	24.4	24.1	17.3	30.9	22.6	16.4	22.8	12.6	70-75	13.3	1907
80	19.3	17.1	14.5	21.9	16.5	10.9	14.1	11.4	75-80	9.75	1917
85	15.7	14.1	14	15.7	12.7	10.8	10.9	12.8	80-85	7.75	1924
90	14.1	13.8	13.8	14.2	11.7	11.2	12	13.7	85-90	7.18	1932
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: 2026-1-28

Remark:

Measured Para U: 233.0V I: 149.0mA P: 19.70W PF: 0.568 Test LM: 1931.58lm		
Lamp Name: LED GRASS LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LPGSL-20B01	Lamp Spec: LPGSL-20B01	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	4243	3887	3519	3242	2982	2878	2922	3070	3551	4016	4700	5409	5644	5732	5342	4445	3845	4047
10.0	3225	2647	2049	1754	1546	1544	1747	1994	2405	2801	3934	5107	5599	5887	5402	4109	3179	3202
15.0	1965	1552	1124	958	873	893	1020	1166	1389	1603	2740	3917	4629	5219	4770	3249	2128	2045
20.0	1117	919	715	633	588	603	680	757	847	934	1625	2341	2999	3670	3397	2160	1249	1182
25.0	736	620	500	445	409	420	478	533	587	638	921	1215	1600	2034	1930	1281	803	769
30.0	524	443	359	315	282	288	335	377	415	452	595	743	899	1064	1019	762	570	547
35.0	371	314	255	222	195	199	234	264	288	311	412	516	605	692	663	515	403	387
40.0	246	211	174	153	136	139	164	184	195	205	274	345	412	480	459	346	263	254
45.0	157	138	118	107	98.6	101	116	127	129	130	176	224	263	300	286	220	171	164
50.0	99.2	91.9	84.2	80.1	76.9	78.7	85.8	90.6	89.3	88	112	137	157	176	167	130	102	101
55.0	71	68.7	66.3	64.5	62.9	64.4	68.9	71.5	68.5	65.6	77	88.7	98.9	109	104	83.4	68.8	69.9
60.0	53.2	53.7	54.3	53.3	51.9	53.2	57.3	59.4	55.5	51.8	54.7	57.8	63.4	70	66.8	53.6	45	49.2
65.0	41.1	42.4	43.8	42.9	41.2	42.6	47.2	49.4	44.8	40.3	39.3	38.3	41.8	47	45.7	37.7	33	37.1
70.0	32.2	32.9	33.6	30.6	26.3	27.8	35.3	39.7	35.1	30.7	29	27.3	28.7	31.1	29.7	24.1	21.5	26.9
75.0	24.4	24.3	24.2	21.9	18.8	20.3	26.4	30	26.2	22.6	19.9	17.1	18.5	21.4	20.6	15.9	13.9	19.3
80.0	19.3	18.3	17.3	16.2	15	16.1	19.5	21.3	18.9	16.5	14.1	11.5	11.9	13.4	13.5	12.3	12.3	15.9
85.0	15.7	15	14.3	14.1	14	14.3	15.2	15.4	14	12.7	11.9	11	10.9	10.9	11.3	12.2	13.1	14.4
90.0	14.1	13.9	13.8	13.8	13.8	13.9	14.1	14	12.8	11.7	11.5	11.3	11.5	11.8	12.4	13.2	13.8	13.9
95.0																		
100.0																		
105.0																		
110.0																		
115.0																		
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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: 2026-1-28

Remark: