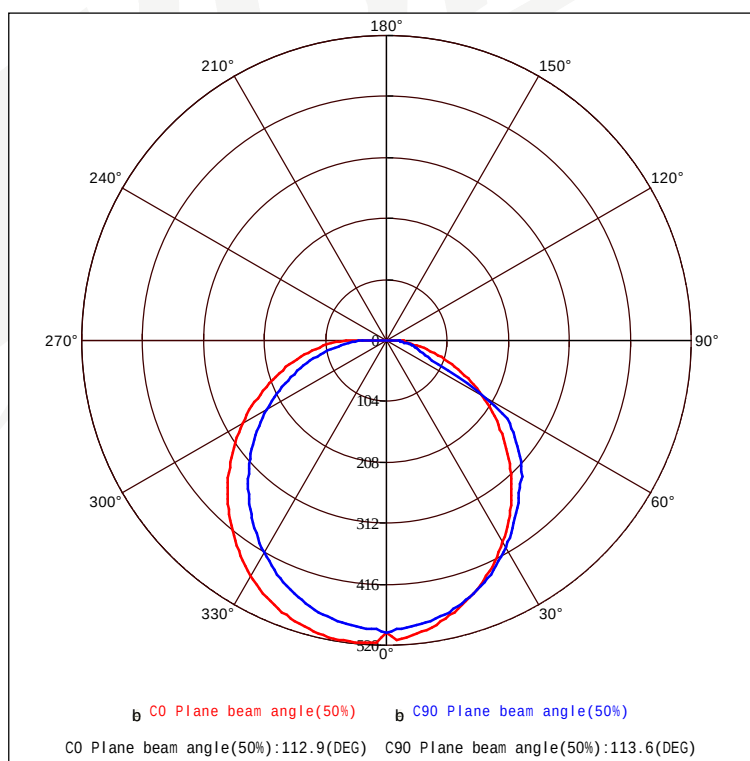


Goniophotometer Test Report

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm						
Lamp Name: LED DOWN LIGHT			Lamp Type:		Weight(kg):	
Lamp ID: LP-DL18EM01-Y			Lamp Spec:		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LP-DL18EM01-Y		Peak Value(cd)	517.6	Efficiency(lm/w)	84.4
Nominal P(w)		1.0	Position	180.0,6.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1533.55	Down(C0-C180)	50.1
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)	49.9

Planar Intensity Distribution Curve



Gama Angle Range:-90 - 90(Deg)

Gama interval(Deg): 1

Temperature(Deg): 30

Tester: zxcg

Distance(m): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

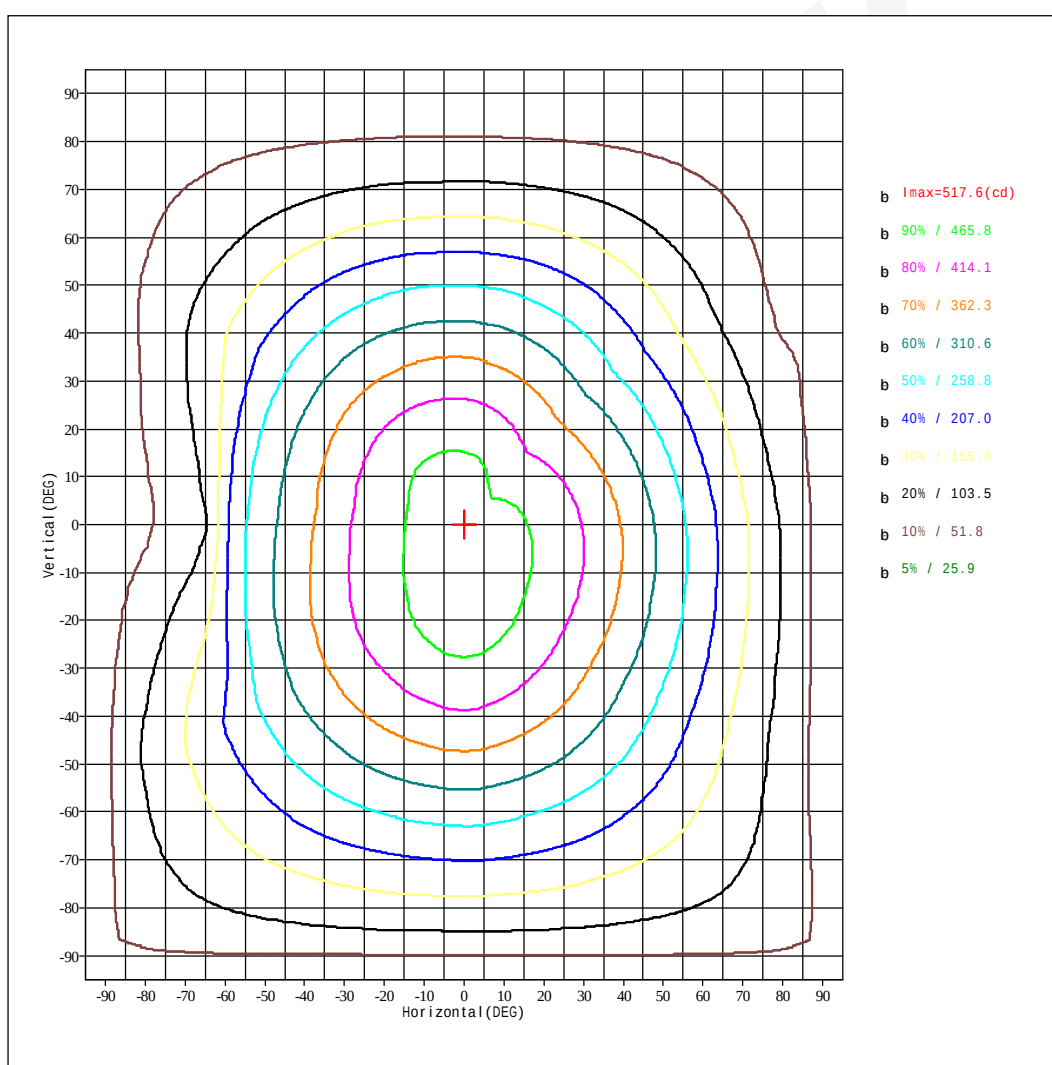
Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

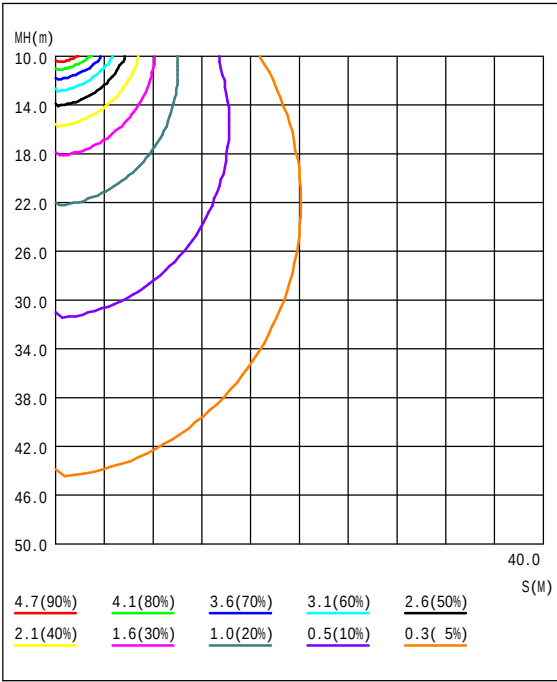
Humidity(%): 60

Date: 2023-3-22

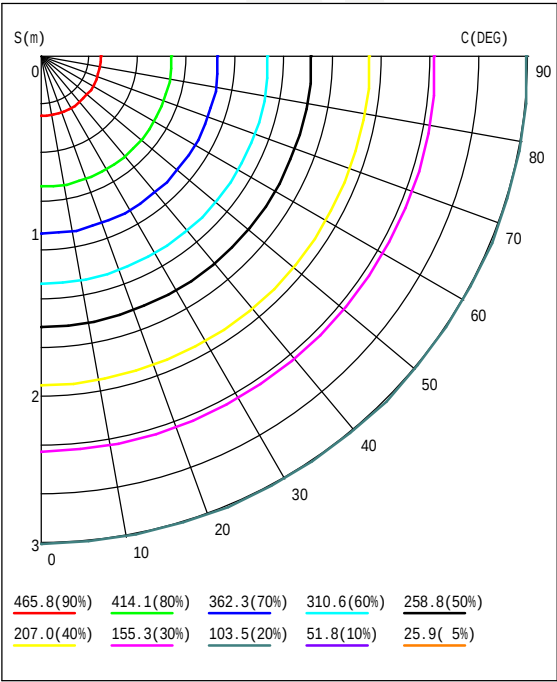
Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	Shape Size:
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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

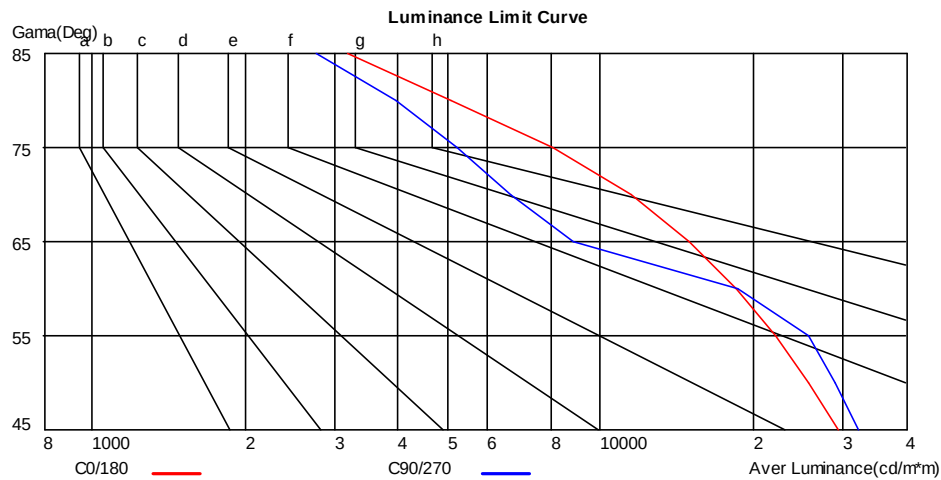
Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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	29388.3	25794.3	22185.5	18558.0	14985.2	11552.5	8099.5	5067.3	3190.0
C90	32405.3	29135.5	25751.3	18658.3	8871.0	6664.5	5228.3	3959.7	2753.8

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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

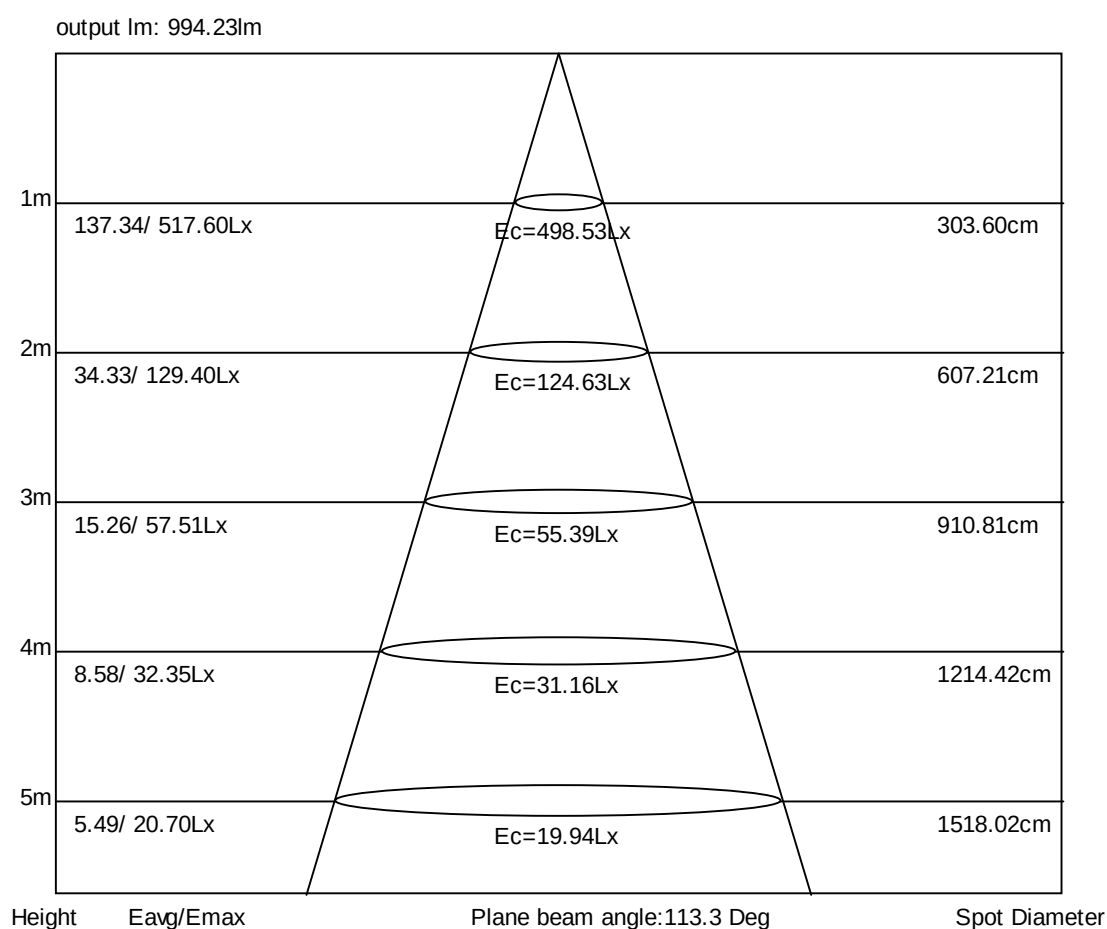
Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 180(Deg)

C interval(Deg): 45

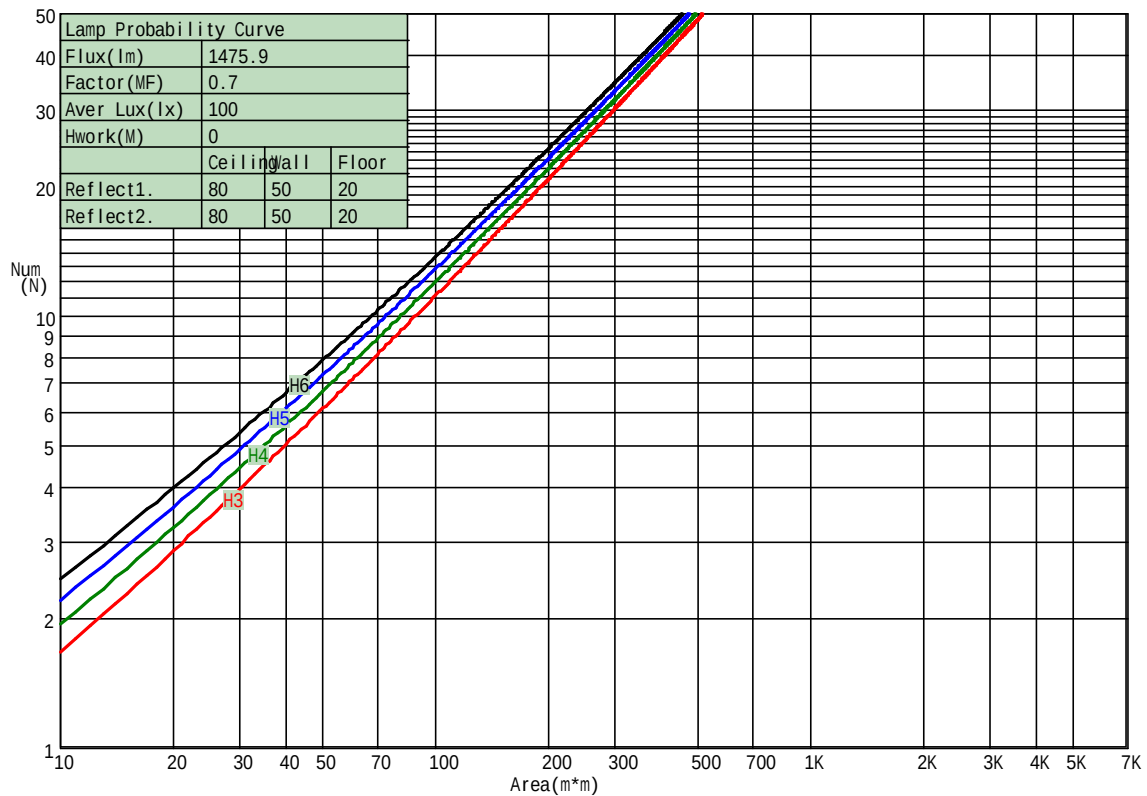
Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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	55	39	28	53	38	27	49	36	26
1.00	59	41	29	56	40	28	51	37	27
1.25	62	43	30	59	42	29	53	39	27
1.50	64	45	30	60	43	29	54	39	28
2.00	67	47	32	63	45	30	56	41	28
2.50	68	48	32	64	46	30	56	41	28
3.00	69	49	32	65	46	31	57	41	28
4.00	71	50	33	66	48	31	58	42	28
5.00	72	51	33	67	48	31	58	42	28

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	1	0.96	0.92	0.96	0.92	0.89	0.92	0.89	0.86	0.88	0.86	0.83
2	0.89	0.81	0.75	0.87	0.8	0.74	0.83	0.77	0.72	0.8	0.75	0.71	0.77	0.73	0.69
3	0.78	0.69	0.62	0.76	0.68	0.62	0.73	0.66	0.6	0.7	0.64	0.59	0.67	0.63	0.58
4	0.69	0.59	0.52	0.67	0.59	0.52	0.65	0.57	0.51	0.62	0.56	0.51	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	0.39	0.51	0.44	0.38	0.49	0.43	0.38
7	0.5	0.41	0.35	0.49	0.41	0.34	0.47	0.4	0.34	0.46	0.39	0.34	0.45	0.38	0.34
8	0.46	0.37	0.31	0.45	0.37	0.31	0.43	0.36	0.31	0.42	0.35	0.3	0.41	0.35	0.3
9	0.42	0.33	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	0.29	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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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	0.31	0.18	0.06	0.3	0.17	0.06
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	0.23	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	0.21	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 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): 30

Tester: zxcg

Distance(m): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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	505	499	490	488	517	503	491	475	0-5	11.9	11.9
10	491	489	481	487	516	497	485	463	5-10	35.2	47.1
15	472	474	468	481	509	487	474	444	10-15	57.2	104
20	449	455	451	470	498	472	458	423	15-20	77.1	181
25	423	432	430	454	481	452	438	398	20-25	94.2	276
30	394	405	405	435	461	429	415	371	25-30	108	384
35	362	376	377	412	437	403	389	341	30-35	118	502
40	329	344	347	386	409	374	361	310	35-40	124	626
45	294	311	324	358	379	343	330	277	40-45	127	752
50	258	277	291	328	347	310	298	243	45-50	125	878
55	222	242	258	296	314	277	266	209	50-55	120	998
60	186	206	187	263	280	242	232	174	55-60	112	1110
65	150	171	88.7	229	244	207	198	141	60-65	97.1	1207
70	116	137	66.6	196	209	172	165	108	65-70	82	1289
75	81	103	52.3	162	173	137	131	75.4	70-75	68	1357
80	50.7	71.2	39.6	128	138	104	98.7	46.7	75-80	53.1	1410
85	31.9	43.3	27.5	95.7	104	71.3	67.9	31.2	80-85	38.7	1449
90	28.7	29.2	20.5	50.2	69.5	59.2	39.9	29.6	85-90	27	1476
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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

Remark:

Measured Para U: 217.6V I: 163.4mA P: 18.17W PF: 0.511 Test LM: 1533.55lm		
Lamp Name: LED DOWN LIGHT	Lamp Type:	Weight(kg):
Lamp ID: LP-DL18EM01-Y	Lamp Spec:	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	505	502	499	496	492	489	488	491	505	517	511	505	499	494	488	481	479	492
10.0	491	490	489	486	483	482	485	490	503	516	508	499	493	488	480	470	466	478
15.0	472	473	474	472	469	471	477	484	497	509	500	489	483	477	467	454	447	460
20.0	449	452	454	453	452	455	464	473	485	498	486	474	467	461	451	435	426	438
25.0	423	427	431	431	430	435	446	457	470	481	469	455	448	441	430	411	401	412
30.0	394	399	404	405	405	411	425	438	450	461	447	432	425	418	406	385	373	384
35.0	362	368	374	376	377	385	401	415	426	437	422	406	398	392	379	357	343	353
40.0	329	335	342	345	347	356	374	389	399	409	394	378	369	364	349	326	312	320
45.0	294	301	309	315	321	331	347	360	370	379	363	347	339	333	319	294	278	286
50.0	258	266	275	281	288	299	316	330	339	347	331	314	306	301	286	261	244	251
55.0	222	231	239	247	254	266	283	298	306	314	298	281	273	268	253	227	210	216
60.0	186	195	204	200	191	203	238	265	272	280	263	246	239	234	219	193	176	181
65.0	150	159	169	144	107	120	183	231	238	244	228	211	204	200	186	160	142	146
70.0	116	125	134	114	81.9	94.8	153	197	203	209	193	176	170	166	152	127	109	112
75.0	81	90.7	101	86.4	63.4	76.2	126	163	168	173	157	141	135	133	119	93.8	76.1	78.6
80.0	50.7	59.6	68.9	60.8	46.5	58.9	99	129	134	138	123	108	102	99.8	87.3	63.7	47.1	48.9
85.0	31.9	36.9	42.1	38.1	31	42.4	73.3	96.6	100	104	89.5	74.8	70.2	68.6	59.9	43.2	31.3	31.6
90.0	28.7	28.9	29.1	26.3	22.4	27	40.4	52.3	61.1	69.5	65	60.3	52.9	44.1	37.6	32.9	29.5	29.1
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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2023-3-22

Remark: