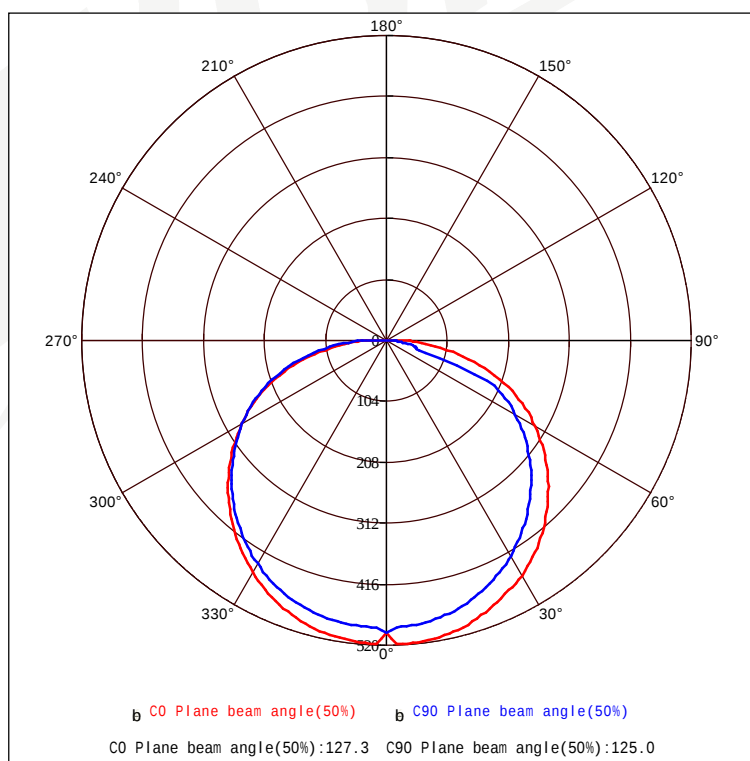


LED LAMP

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm						
Lamp Name: LPQP20W			Lamp Type:		Weight(kg):	
Lamp ID: LPUF-20AS-02			Lamp Spec: LPQP20W		Shape Size:	
Manufactory: LIPER			Sur(m^2):		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model	LPQP20W		Peak Value(cd)	518.9	Efficiency(lm/w)	82.4
Nominal P(w)		1.0	Position	0.0,1.0	UP(C0-C180)	0.0
Rated Volt(v)		1.0	Total Flux(lm)	1647.633	Down(C0-C180)	48.8
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)	51.2

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

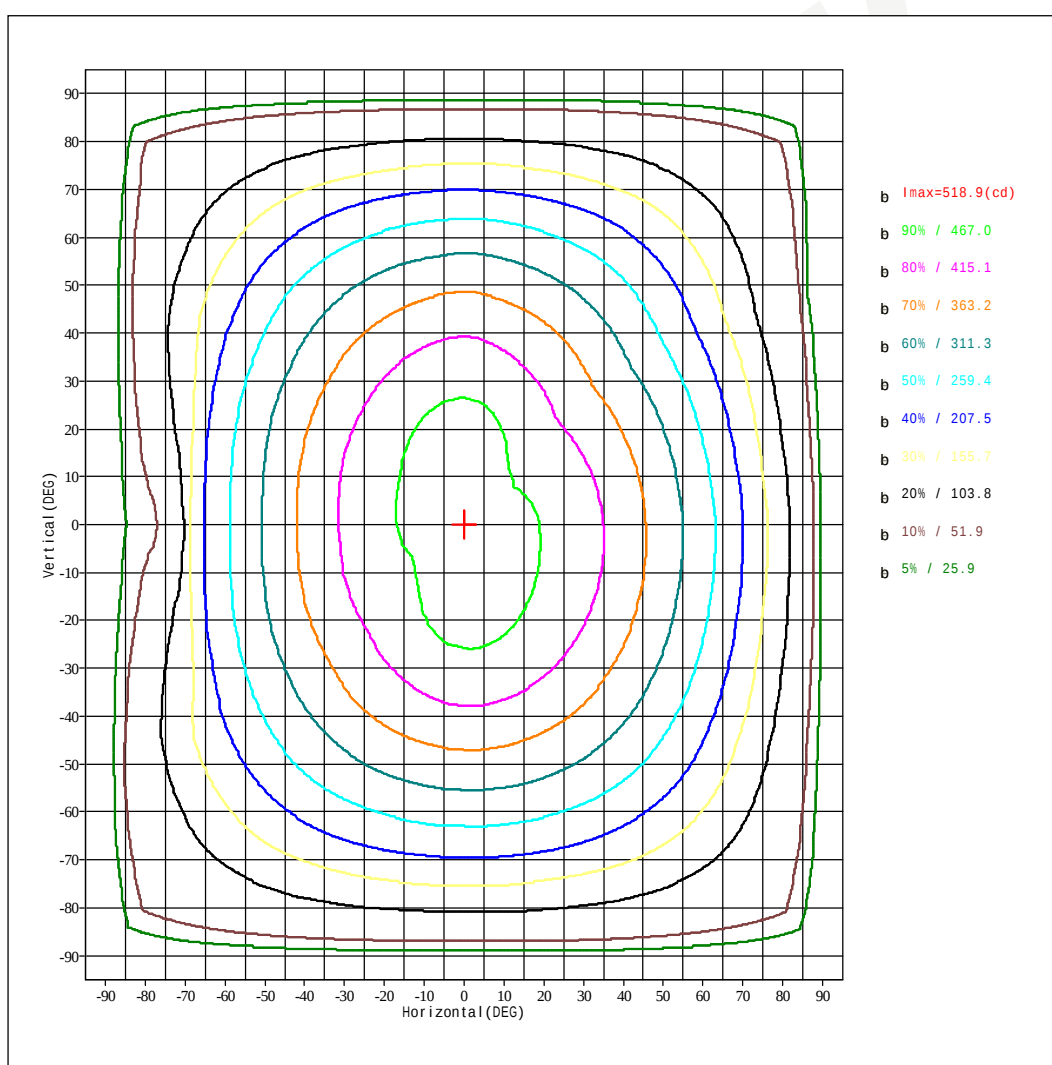
Humidity(%): 60

Date: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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

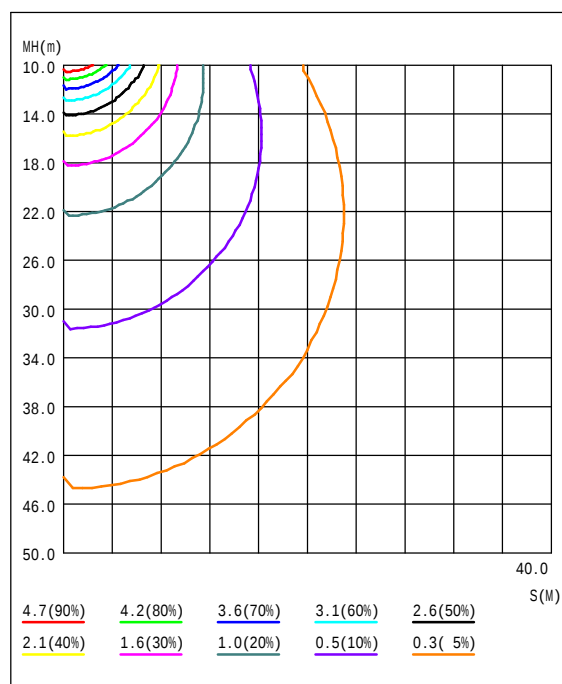
Humidity(%): 60

Date: 2021-4-1

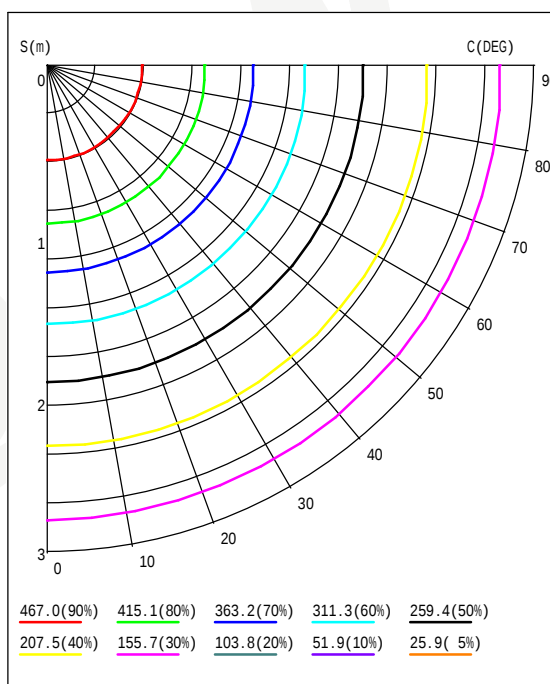
Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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: 2021-4-1

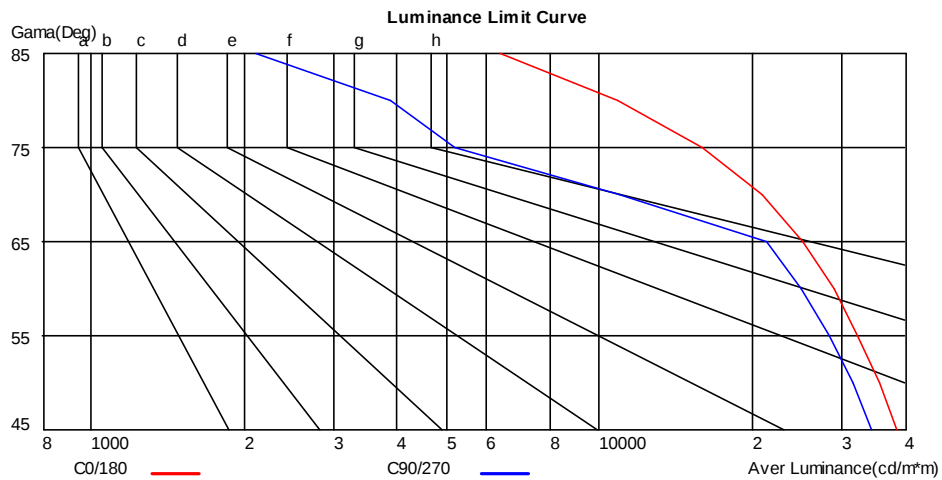
Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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	38656.5	35646.5	32424.5	28999.5	25226.5	20885.8	15946.5	10881.3	6367.0
C90	34554.3	31585.0	28455.8	25066.8	21322.3	10951.8	5186.0	3877.3	2110.0

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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

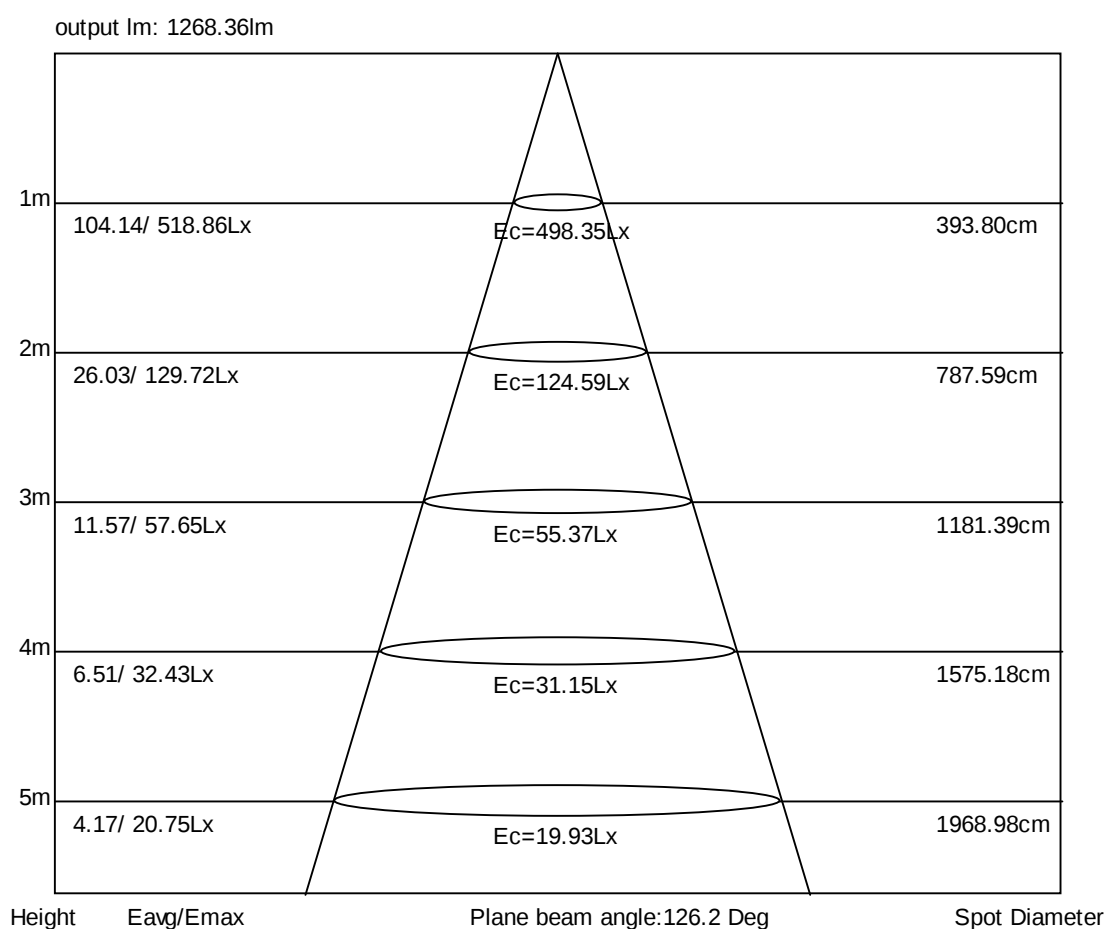
Humidity(%): 60

Date: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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

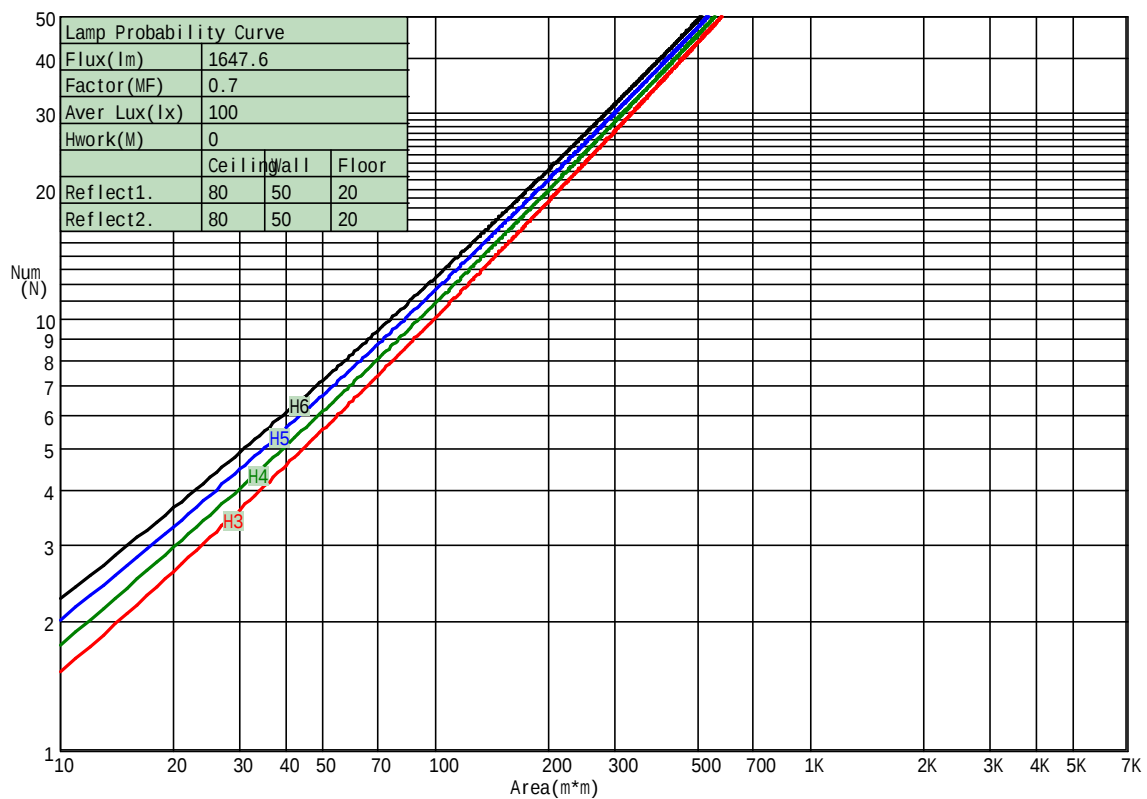
Humidity(%): 60

Date: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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	52	37	28	51	37	28	48	35	27
0.80	57	41	30	55	40	29	51	38	29
1.00	61	43	32	58	42	31	53	40	30
1.25	64	46	33	61	44	32	55	41	30
1.50	66	47	34	62	46	33	56	42	31
2.00	69	50	35	65	48	34	58	44	32
2.50	70	51	35	66	48	34	59	44	31
3.00	71	52	35	67	49	34	59	44	31
4.00	72	53	36	68	50	34	60	44	31
5.00	73	54	36	69	50	34	60	45	31

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	0.95	0.91	0.95	0.92	0.88	0.91	0.88	0.86	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	0.66	0.61	0.57
4	0.67	0.58	0.51	0.66	0.57	0.51	0.63	0.56	0.5	0.61	0.54	0.49	0.59	0.53	0.48
5	0.6	0.5	0.43	0.59	0.5	0.43	0.57	0.49	0.43	0.55	0.48	0.42	0.53	0.47	0.42
6	0.54	0.44	0.38	0.53	0.44	0.37	0.51	0.43	0.37	0.49	0.42	0.37	0.48	0.41	0.36
7	0.49	0.39	0.33	0.48	0.39	0.33	0.46	0.38	0.33	0.45	0.38	0.32	0.43	0.37	0.32
8	0.44	0.35	0.29	0.44	0.35	0.29	0.42	0.35	0.29	0.41	0.34	0.29	0.4	0.33	0.29
9	0.41	0.32	0.26	0.4	0.32	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.3	0.26
10	0.37	0.29	0.24	0.37	0.29	0.24	0.36	0.29	0.24	0.35	0.28	0.23	0.34	0.28	0.23

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: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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	0.19	0.06	0.33	0.19	0.06	0.31	0.18	0.06	0.3	0.17	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	0.14	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	0.04	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	0.21	0.1	0.03	0.2	0.1	0.03	0.2	0.1	0.03	0.19	0.1	0.03	0.18	0.1	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	0.17	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	0.06	0.03	0.05	0.03	0.02	0.02	0.01	0.01
6	0.15	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	0.13	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): 5.000

Test System: ZWL Goniophotometer System V3.0

C Angle Range:0 - 180(Deg)

C interval(Deg): 45

Humidity(%): 60

Date: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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	518	500	488	482	517	500	490	482	0-5	11.9	11.9
10	514	495	482	478	513	497	487	477	5-10	35.4	47.3
15	505	486	472	471	504	489	480	469	10-15	58	105
20	492	472	459	459	491	477	470	457	15-20	78.8	184
25	476	456	442	444	474	462	456	441	20-25	97.4	282
30	461	435	422	425	454	443	438	422	25-30	113	395
35	439	412	399	404	432	421	418	400	30-35	126	520
40	415	386	373	380	406	397	394	375	35-40	135	655
45	387	358	346	354	378	370	369	348	40-45	140	794
50	356	328	316	325	348	341	341	319	45-50	141	935
55	324	296	285	296	315	310	312	288	50-55	139	1074
60	290	262	251	264	282	277	281	255	55-60	133	1207
65	252	225	213	230	245	241	248	218	60-65	123	1329
70	209	183	110	192	205	202	211	176	65-70	107	1437
75	159	136	51.9	149	159	157	168	129	70-75	83.9	1520
80	109	91	38.8	100	111	109	121	83.6	75-80	62.7	1583
85	63.7	50.8	21.1	62	67.7	66.3	77.3	46.1	80-85	41	1624
90	37.7	24.4	13.5	30.9	34.5	43.3	40.4	34.8	85-90	23.4	1648
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: 2021-4-1

Remark:

Measured Para U: 217.5V I: 146.0mA P: 20.00W PF: 0.628 Test LM: 1647.63lm		
Lamp Name: LPQP20W	Lamp Type:	Weight(kg):
Lamp ID: LPUF-20AS-02	Lamp Spec: LPQP20W	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	518	510	502	496	491	487	484	486	502	517	510	502	497	492	488	484	486	502
10.0	514	506	497	491	485	482	480	482	498	513	506	498	493	489	485	480	481	498
15.0	505	497	488	481	475	472	471	474	489	504	497	490	486	482	478	473	473	489
20.0	492	484	475	468	462	459	459	462	477	491	485	479	475	471	467	461	461	477
25.0	476	467	458	451	445	442	443	447	461	474	469	463	460	457	452	446	445	461
30.0	461	450	438	431	425	423	424	428	442	454	449	444	441	439	435	427	426	444
35.0	439	428	415	408	402	400	402	407	419	432	427	423	420	418	414	406	404	422
40.0	415	402	389	382	376	375	378	383	394	406	402	398	396	395	390	381	379	397
45.0	387	374	361	354	348	347	351	356	367	378	374	371	369	369	364	355	352	370
50.0	356	344	331	324	318	318	322	328	338	348	345	341	341	341	336	326	323	340
55.0	324	312	299	292	287	287	292	298	307	315	313	310	311	312	307	296	292	308
60.0	290	278	265	258	253	254	260	266	274	282	280	277	278	280	275	264	259	275
65.0	252	240	228	221	216	217	225	232	239	245	243	242	243	246	241	228	222	237
70.0	209	198	186	159	126	128	165	193	199	205	203	202	205	209	203	187	179	194
75.0	159	149	138	108	70.2	73.1	117	150	155	159	158	157	160	165	159	142	132	146
80.0	109	101	93	73.9	50.2	52.3	80.2	102	106	111	110	109	113	119	113	96	86.4	97.8
85.0	63.7	58	52.2	41.1	27.6	30	48.6	62.6	65.2	67.7	67.1	66.5	69.9	74.9	70.5	56.3	48	56
90.0	37.7	31.9	25.9	20.8	15.9	17.3	25.2	31.3	32.9	34.5	38.4	42.4	42.4	41	39.2	36.7	35.2	36.5
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: 2021-4-1

Remark: