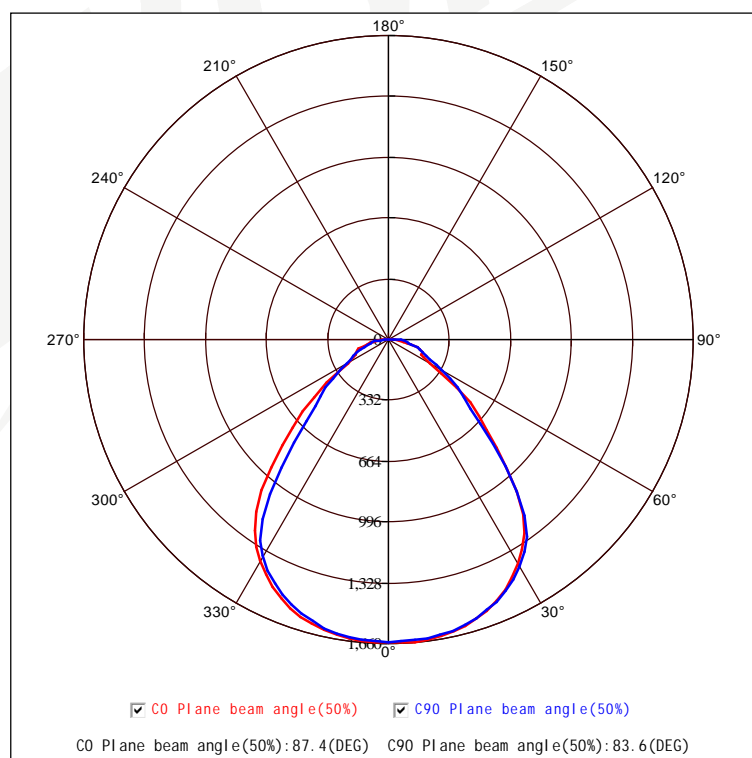


## Goniophotometer Test Report

Measured Para   U: 230.5V   I: 134.0mA   P: 29.23W   PF: 0.945   Test LM: 3359.05lm						
Lamp Name: 30W			Lamp Type:		Weight(kg):	
Lamp ID:			Lamp Spec:		Shape Size: 620*620	
Manufactory:			Sur(m^2): 0.306		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model			Peak Value(cd)	1658.1	Effici ency(lm/w)	114.9
Nominal P(w)	30.0		Position	0.0, 2.5	UP(C0-C180)	0.0
Rated Volt(v)	230.0		Total Flux(lm)	3359.045	Down(C0-C180)	52.5
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)	47.5

## Planar Intensity Distribution Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval(Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval(Deg): 45

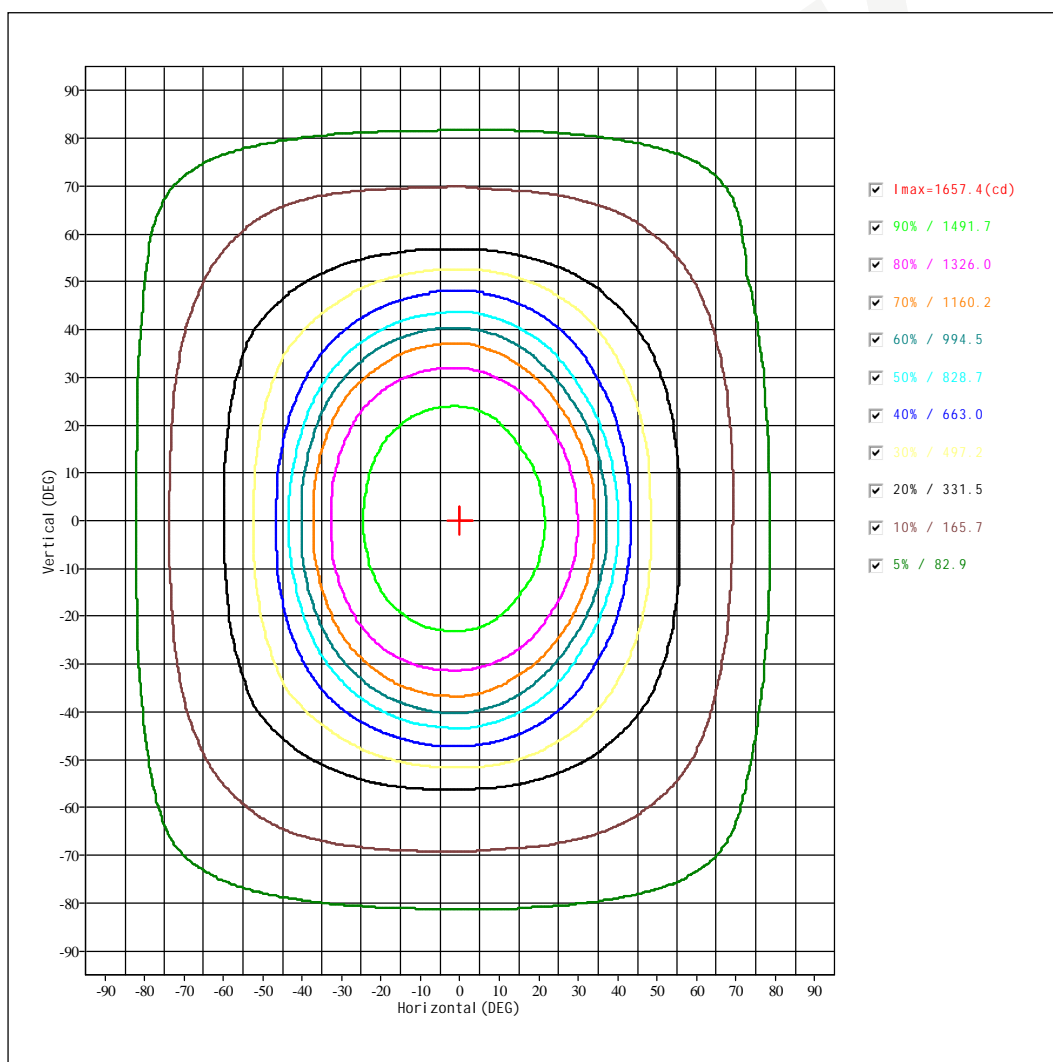
Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Size: 620*620
Manufactory:	Sur(m <sup>2</sup> ): 0.306	Protect Angle(Deg):

Planar IsoCandela Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

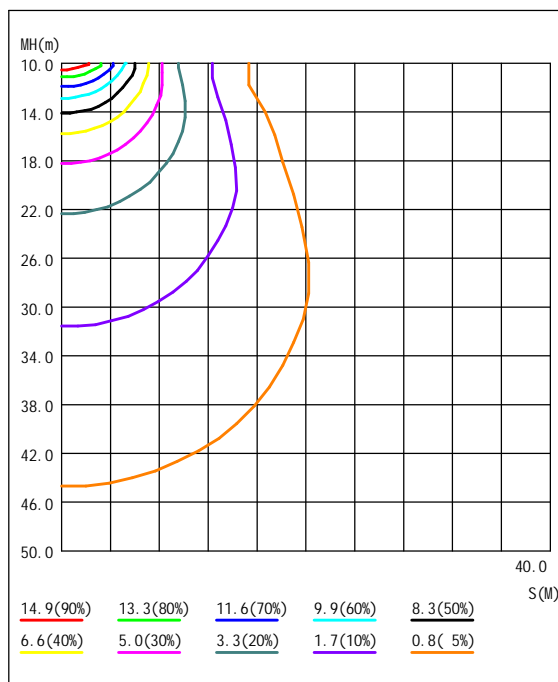
Humidity(%): 60

Date: 2020-04-15

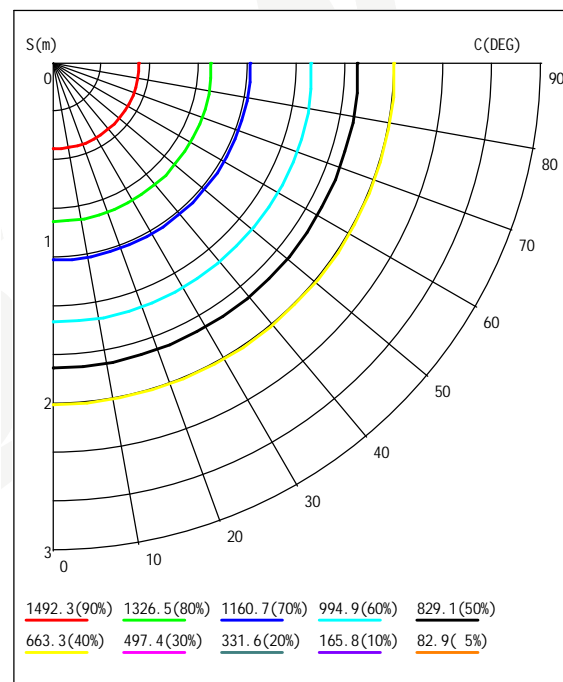
Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	Protect Angle(Deg):

Spacial ISOLUX Curve



Planar ISOLUX Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

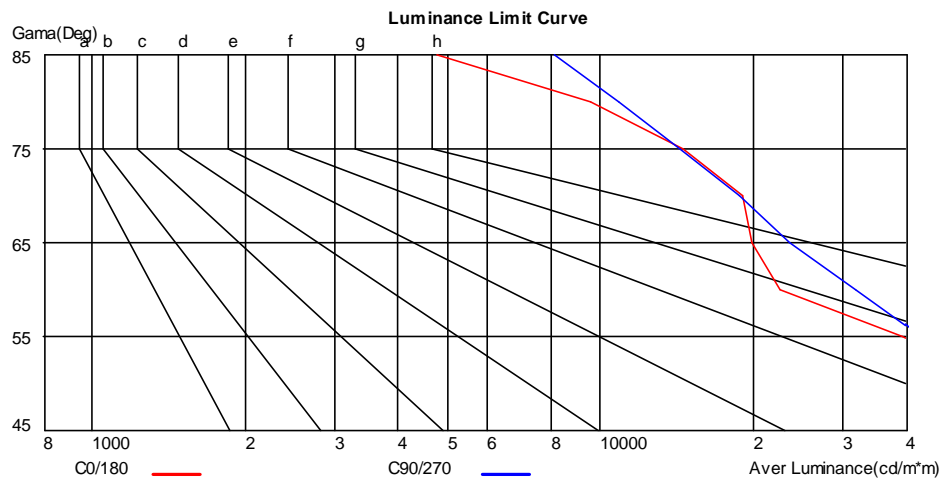
Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	Protect Angle(Deg):

## Luminance Limit Curve

Aver Luminance(cd/m²)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	77084.0	60935.0	39494.0	22698.0	19863.0	19039.0	14589.0	9601.0	4778.0
C90	73256.0	54778.0	42770.0	31751.0	23644.0	18848.0	14346.0	10900.0	8121.0

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): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

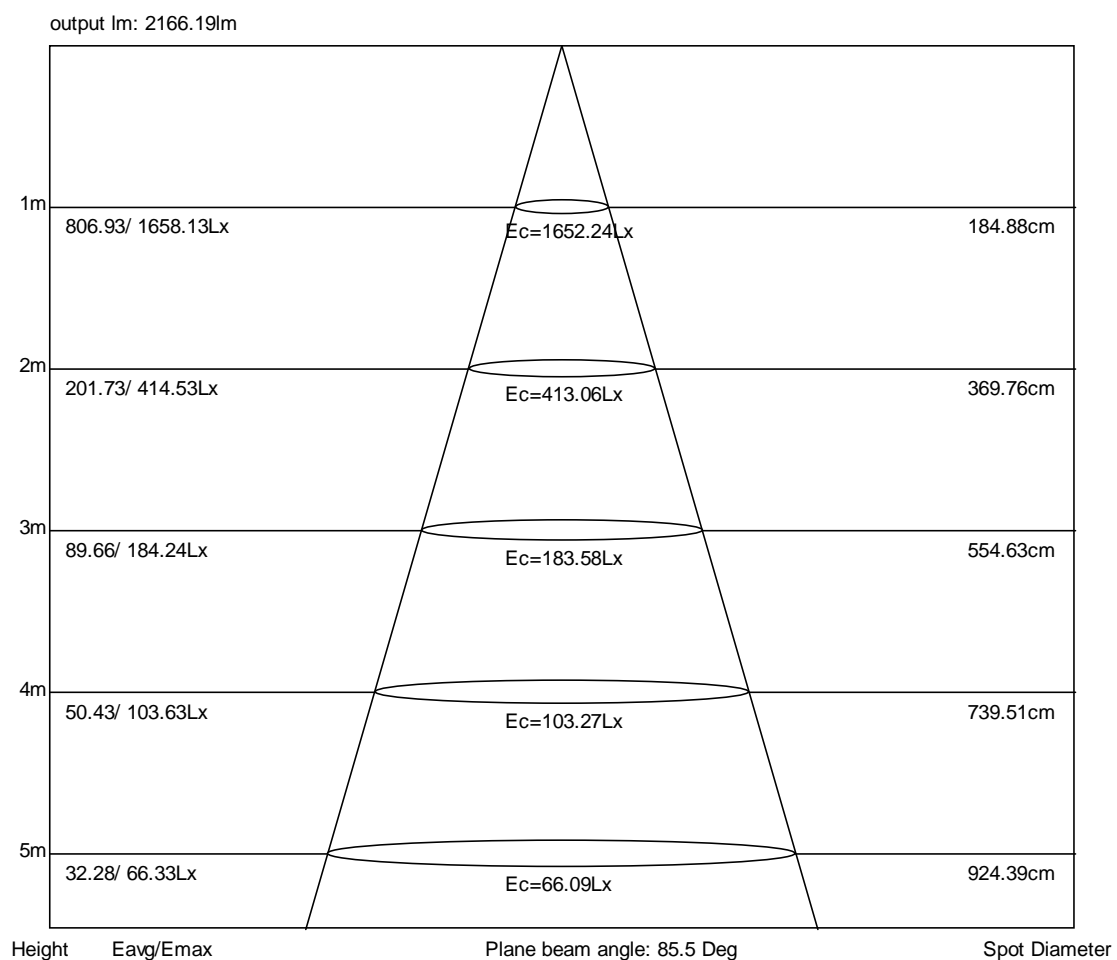
Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	Protect Angle(Deg):

## Average Illumination



Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

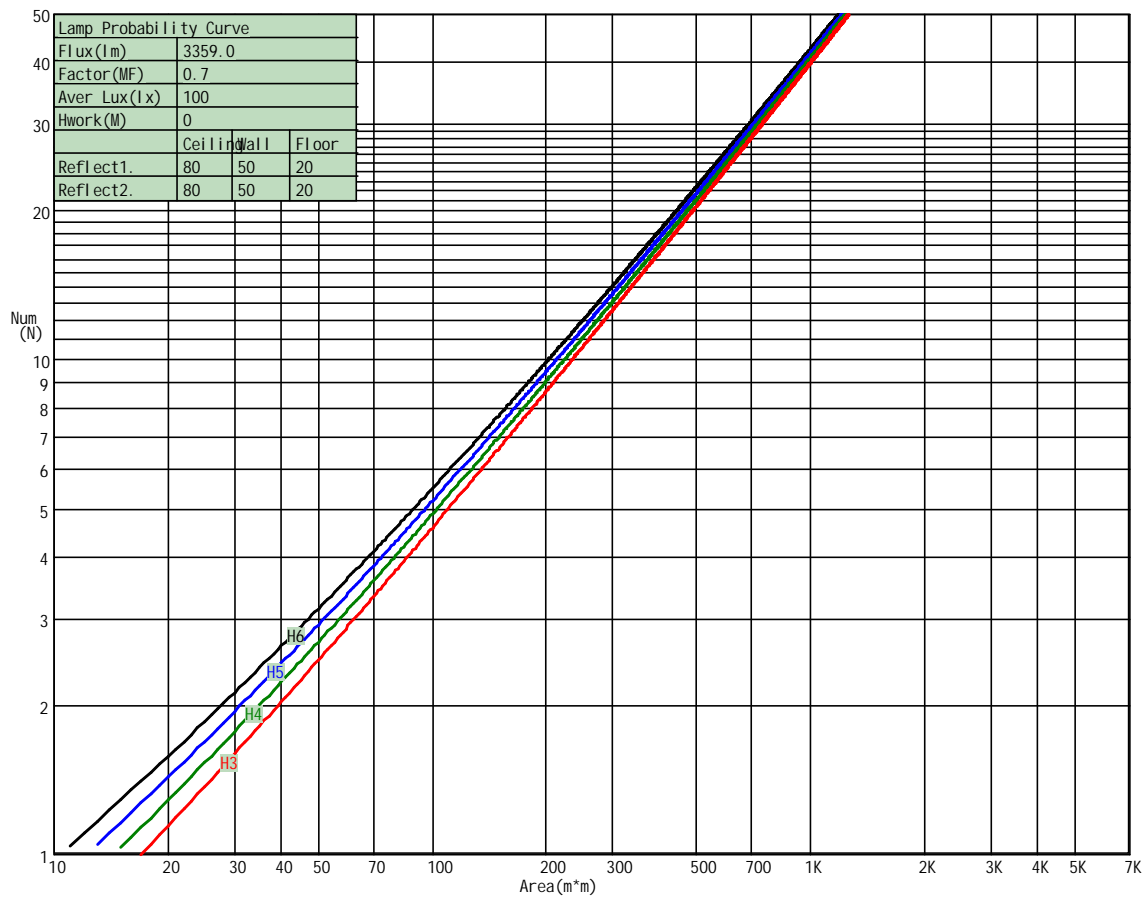
Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	Protect Angle(Deg):

Lamp Probability Curve



Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	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	57	43	34	55	42	34	52	41	33
0.80	59	43	32	57	42	32	53	40	31
1.00	61	44	32	58	43	32	54	40	30
1.25	63	45	32	60	43	31	54	40	29
1.50	64	46	31	61	44	30	55	40	29
2.00	67	47	32	63	45	31	56	41	29
2.50	68	48	32	64	46	31	56	41	28
3.00	69	49	32	65	47	31	57	42	28
4.00	71	51	33	66	48	31	58	42	28
5.00	72	52	34	67	49	32	59	43	29

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	1.06	1.02	0.99	1.04	1	0.97	1	0.97	0.94	0.96	0.94	0.92	0.92	0.9	0.89
2	0.95	0.89	0.84	0.93	0.87	0.83	0.89	0.85	0.81	0.86	0.82	0.79	0.83	0.8	0.77
3	0.85	0.78	0.72	0.83	0.77	0.71	0.8	0.75	0.7	0.78	0.73	0.69	0.75	0.71	0.68
4	0.77	0.69	0.63	0.75	0.68	0.62	0.73	0.67	0.62	0.71	0.65	0.61	0.69	0.64	0.6
5	0.69	0.61	0.56	0.68	0.61	0.55	0.66	0.6	0.55	0.64	0.59	0.54	0.63	0.58	0.54
6	0.63	0.55	0.49	0.62	0.55	0.49	0.61	0.54	0.49	0.59	0.53	0.48	0.58	0.52	0.48
7	0.58	0.5	0.44	0.57	0.5	0.44	0.56	0.49	0.44	0.54	0.48	0.44	0.53	0.48	0.43
8	0.53	0.46	0.4	0.53	0.45	0.4	0.52	0.45	0.4	0.5	0.44	0.4	0.49	0.44	0.4
9	0.49	0.42	0.37	0.49	0.42	0.37	0.48	0.41	0.36	0.47	0.41	0.36	0.46	0.4	0.36
10	0.46	0.39	0.34	0.45	0.38	0.34	0.44	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.33

Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze: 620*620
Manufactory:	Sur(m^2): 0.306	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	0.27	0.15	0.05	0.26	0.15	0.05	0.25	0.14	0.05	0.24	0.14	0.04	0.22	0.13	0.04
2	0.25	0.14	0.04	0.25	0.14	0.04	0.23	0.13	0.04	0.22	0.13	0.04	0.21	0.12	0.04
3	0.23	0.12	0.04	0.23	0.12	0.04	0.22	0.12	0.04	0.21	0.12	0.04	0.2	0.11	0.03
4	0.22	0.11	0.03	0.21	0.11	0.03	0.21	0.11	0.03	0.2	0.11	0.03	0.19	0.1	0.03
5	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	0.1	0.03
6	0.19	0.1	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
7	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.02	0.16	0.08	0.02	0.16	0.08	0.02
8	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
9	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	0.02	0.14	0.07	0.02
10	0.15	0.07	0.02	0.15	0.07	0.02	0.14	0.07	0.02	0.14	0.07	0.02	0.14	0.07	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	0.14	0.15	0.13	0.12	0.1	0.09	0.08	0.06	0.05	0.05	0.02	0.02	0.02
2	0.17	0.13	0.1	0.14	0.11	0.09	0.1	0.08	0.06	0.06	0.05	0.04	0.02	0.01	0.01
3	0.16	0.11	0.08	0.14	0.1	0.07	0.09	0.07	0.05	0.05	0.04	0.03	0.02	0.01	0.01
4	0.15	0.1	0.06	0.13	0.09	0.05	0.09	0.06	0.04	0.05	0.04	0.02	0.02	0.01	0.01
5	0.14	0.09	0.05	0.12	0.08	0.04	0.08	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01
6	0.13	0.08	0.04	0.12	0.07	0.04	0.08	0.05	0.03	0.05	0.03	0.02	0.01	0.01	0.01
7	0.13	0.07	0.04	0.11	0.06	0.03	0.08	0.04	0.02	0.04	0.03	0.01	0.01	0.01	0
8	0.12	0.07	0.03	0.11	0.06	0.03	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
9	0.12	0.06	0.03	0.1	0.05	0.02	0.07	0.04	0.02	0.04	0.02	0.01	0.01	0.01	0
10	0.11	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): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark:



Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight (kg):
Lamp ID:	Lamp Spec:	Shape Size: 620*620
Manufactory:	Sur(m <sup>2</sup> ): 0.306	Protect Angle(Deg):

Ring-shaped Flux Data Table

Gm\C(Deg)	0	45	90	135	180	225	270	315	Range	Ring	T(lm)
5	1654	1651	1645	1643	1651	1645	1645	1640	0-5	39.4	39.4
10	1640	1639	1634	1630	1630	1620	1622	1618	5-10	117	157
15	1609	1612	1604	1602	1598	1581	1583	1581	10-15	191	348
20	1560	1568	1561	1558	1549	1522	1528	1522	15-20	259	607
25	1485	1503	1498	1493	1470	1437	1445	1436	20-25	317	923
30	1384	1415	1407	1402	1369	1325	1336	1330	25-30	360	1283
35	1257	1290	1274	1274	1235	1124	1140	1120	30-35	382	1665
40	1018	1052	1011	1034	1017	819	834	827	35-40	362	2027
45	771	770	733	772	755	630	577	637	40-45	304	2331
50	609	586	548	596	567	499	459	513	45-50	251	2582
55	395	480	428	469	357	384	340	357	50-55	206	2788
60	227	368	318	356	229	282	242	283	55-60	157	2946
65	199	273	236	256	194	191	199	182	60-65	122	3067
70	190	177	188	164	178	149	155	147	65-70	96	3163
75	146	149	143	140	140	106	103	115	70-75	78.8	3242
80	96	107	109	108	87.8	81.8	87.1	75.2	75-80	59	3301
85	47.8	70.2	81.2	72.9	48.9	42.4	36.1	36.4	80-85	40.8	3342
90	6.52	29.4	24.2	30.3	1.21	1.84	2.16	1.48	85-90	17.1	3359
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): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight (kg):
Lamp ID:	Lamp Spec:	Shape Size: 620*620
Manufactory:	Sur(m^2): 0.306	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	1654	1653	1651	1649	1646	1645	1644	1644	1648	1651	1649	1646	1645	1645	1644	1641	1641	1648
10.0	1640	1640	1640	1638	1635	1633	1631	1630	1630	1630	1626	1621	1621	1621	1621	1619	1620	1630
15.0	1609	1610	1611	1609	1605	1603	1602	1601	1600	1598	1591	1583	1582	1582	1582	1581	1584	1597
20.0	1560	1563	1567	1565	1562	1560	1559	1557	1553	1549	1537	1525	1524	1527	1526	1524	1526	1543
25.0	1485	1493	1501	1501	1499	1497	1494	1490	1480	1470	1456	1441	1440	1443	1443	1439	1441	1463
30.0	1384	1397	1411	1412	1408	1406	1404	1398	1383	1369	1350	1330	1329	1334	1335	1332	1336	1360
35.0	1257	1271	1286	1285	1277	1274	1274	1270	1252	1235	1186	1136	1129	1137	1136	1126	1135	1197
40.0	1018	1033	1048	1039	1020	1016	1026	1032	1024	1017	930	841	824	831	833	829	848	935
45.0	771	771	770	758	741	741	759	771	763	755	700	643	612	589	590	618	652	712
50.0	609	599	588	573	556	558	580	593	579	567	537	507	486	468	471	496	524	567
55.0	395	432	471	463	439	437	455	457	406	357	369	381	370	350	344	351	361	378
60.0	227	289	353	352	329	326	344	342	284	229	252	276	269	251	251	269	277	252
65.0	199	231	265	261	245	241	250	249	221	194	193	191	193	197	195	187	183	191
70.0	190	185	179	181	186	183	172	166	172	178	165	152	151	154	153	150	152	171
75.0	146	147	148	147	145	143	141	140	140	140	125	110	105	104	106	111	119	133
80.0	96	101	106	108	109	109	108	105	96.5	87.8	85.2	82.4	83.5	85.9	84.5	79.1	77.5	86.9
85.0	47.8	57.6	67.8	73.8	78.8	79.4	75.6	70.3	59.4	48.9	46.1	43.1	40.3	37.5	36.1	36.3	37.6	42.8
90.0	6.52	16.5	26.9	27.7	25.3	25.6	28.3	27.1	13.9	1.21	1.49	1.77	1.94	2.09	2.01	1.7	2.03	4.31
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): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark:

Measured Para U: 230.5V I: 134.0mA P: 29.23W PF: 0.945 Test LM: 3359.05lm		
Lamp Name: 30W	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Size: 620*620
Manufactory:	Sur(m <sup>2</sup> ): 0.306	Protect Angle(Deg):

## UGR

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
X = 2H Y = 2H	16.3	17.5	16.5	17.7	17.8	16.4	17.6	16.6	17.7	17.9
3H	16.6	17.7	16.8	17.9	18.1	16.7	17.8	16.9	18.0	18.2
4H	16.8	17.8	17.0	18.0	18.3	16.9	17.9	17.1	18.1	18.4
6H	17.0	18.0	17.2	18.2	18.4	17.1	18.1	17.4	18.3	18.5
8H	17.0	18.0	17.3	18.2	18.5	17.2	18.2	17.5	18.4	18.7
12H	17.1	18.0	17.4	18.3	18.5	17.4	18.3	17.7	18.6	18.9
4H 2H	16.3	17.3	16.6	17.5	17.8	16.4	17.3	16.7	17.6	17.8
3H	16.8	17.6	17.1	17.9	18.2	16.9	17.7	17.2	18.0	18.3
4H	17.1	17.9	17.5	18.2	18.5	17.2	18.0	17.5	18.3	18.6
6H	17.5	18.2	17.8	18.5	18.8	17.6	18.3	17.9	18.6	18.9
8H	17.6	18.3	18.0	18.6	19.0	17.8	18.5	18.2	18.8	19.2
12H	17.8	18.4	18.2	18.7	19.1	18.1	18.7	18.5	19.1	19.5
8H 4H	18.2	18.7	18.6	19.1	19.5	18.2	18.8	18.6	19.2	19.6
6H	18.7	19.2	19.1	19.6	20.0	18.8	19.3	19.2	19.7	20.1
8H	19.0	19.4	19.4	19.8	20.3	19.2	19.7	19.7	20.1	20.5
12H	19.2	19.6	19.7	20.0	20.5	19.7	20.1	20.2	20.5	21.0
12H 4H	18.2	18.7	18.6	19.1	19.5	18.2	18.7	18.6	19.1	19.6
6H	18.8	19.2	19.2	19.6	20.1	18.9	19.3	19.3	19.7	20.2
8H	19.1	19.4	19.6	19.9	20.4	19.3	19.7	19.8	20.1	20.6
Variations with the observer position at spacings:										
S = 1.0H	0.9/-1.2					0.8/-1.1				
1.5H	1.4/-0.7					1.4/-0.8				
2.0H	0.7/-1.4					0.3/-0.7				

Gama Angle Range: -90 - 90(Deg)

Gama interval (Deg): 2.5

Temperature(Deg): 26

Tester: 01

Distance(m): 8.97

Test System: ZWL Goniophotometer System V3.0

C Angle Range: 0 - 360(Deg)

C interval (Deg): 45

Humidity(%): 60

Date: 2020-04-15

Remark: