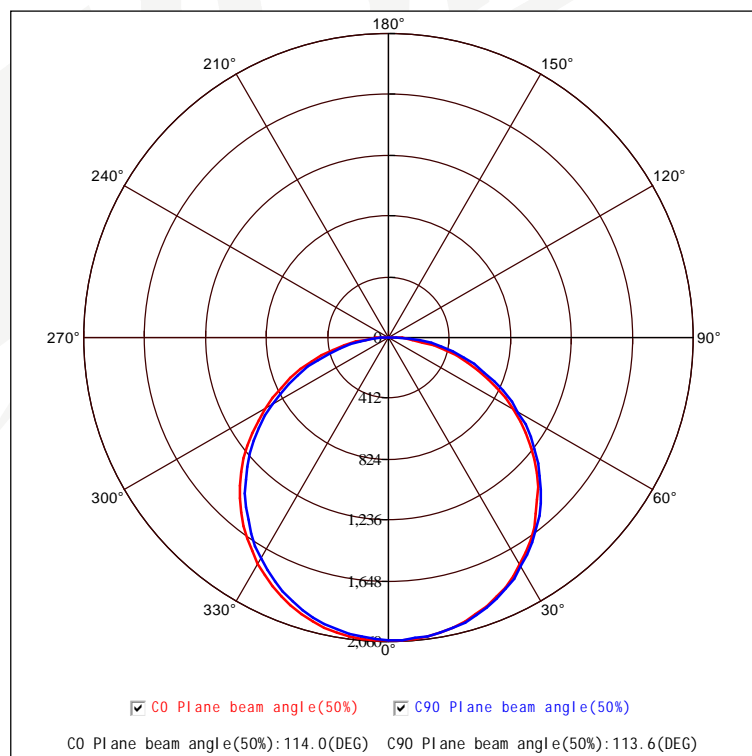


## Goniophotometer Test Report

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm						
Lamp Name: 1200600-45ww-1150ma			Lamp Type:		Weight(kg):	
Lamp ID:			Lamp Spec:		Shape Size:	
Manufactory:			Sur(m^2): 0.638		Protect Angle(Deg):	
Light Source Data			Photometric Data			
Model			Peak Value(cd)	2056.2	Efficiency(lm/w)	130.3
Nominal P(w)	1.0	Position	0.0, 2.5	UP(C0-C180)	0.0	
Rated Volt(v)	230.0	Total Flux(lm)	5992.643	Down(C0-C180)	52.0	
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)	48.0	

## 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

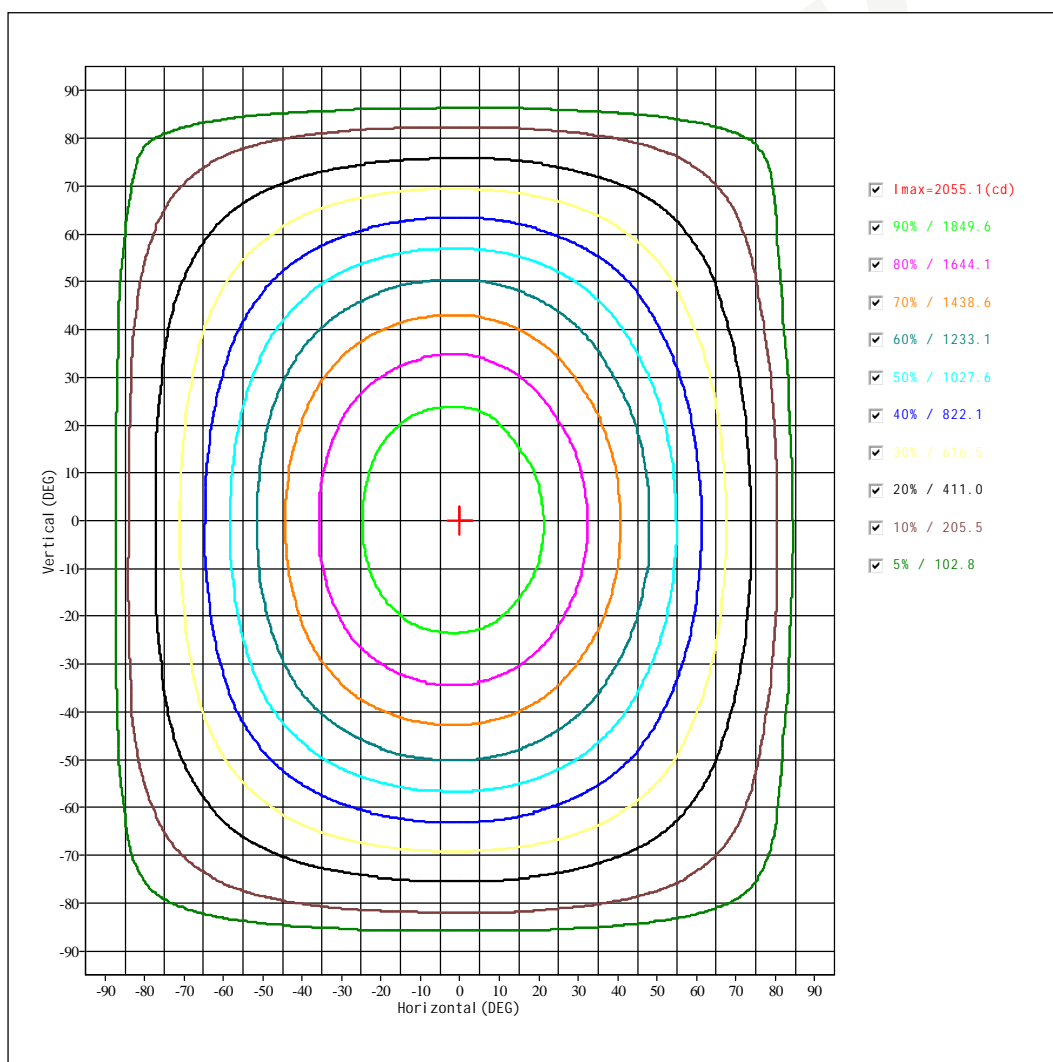
Humidity(%): 60

Date: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	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

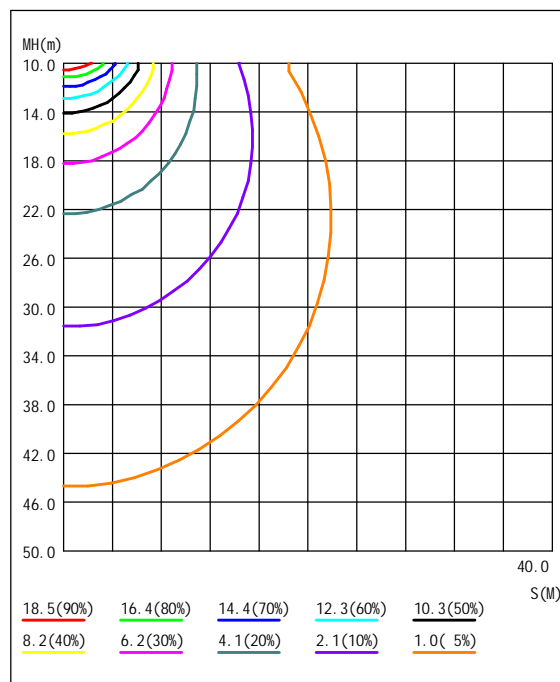
Humidity(%): 60

Date: 2020-04-27

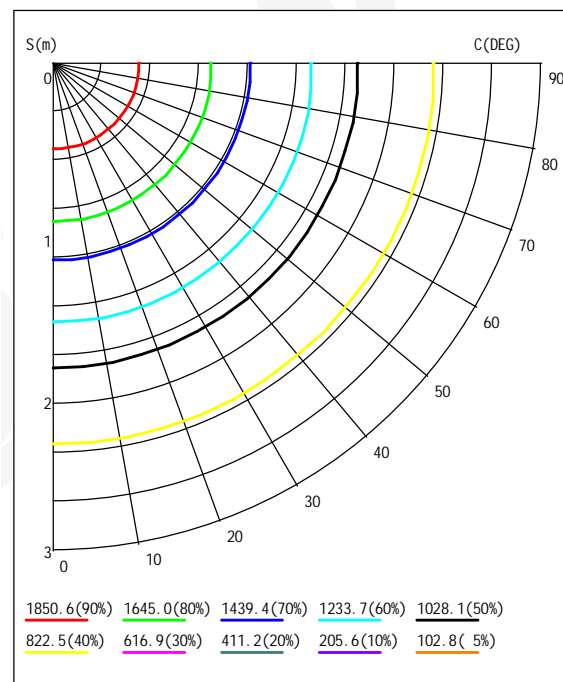
Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	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: 2020-04-27

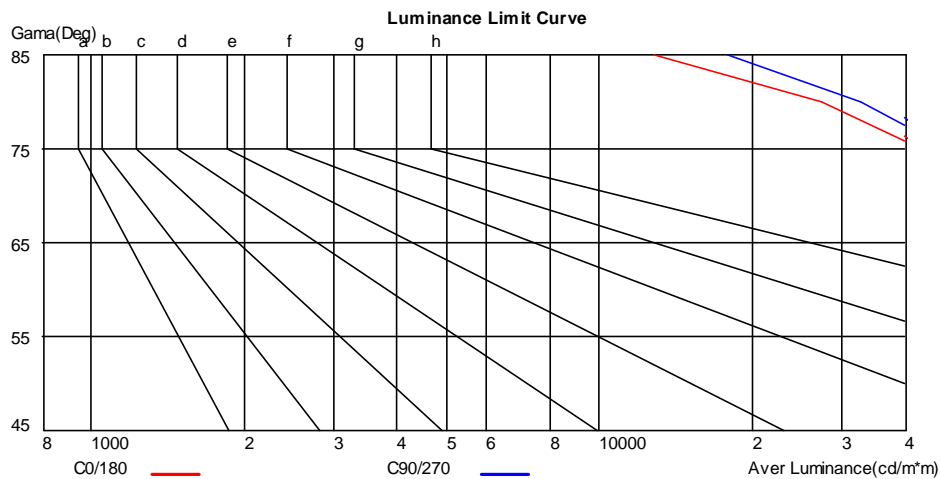
Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	Protect Angle(Deg):

## Luminance Limit Curve

Aver Luminance(cd/m²)									
Gm(Deg)	45	50	55	60	65	70	75	80	85
C0	139271.0	124723.0	109383.0	93415.0	76735.0	60083.0	43519.0	27358.0	12824.0
C90	142321.0	128231.0	113370.0	97753.0	81232.0	64872.0	48526.0	32710.0	17866.0

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

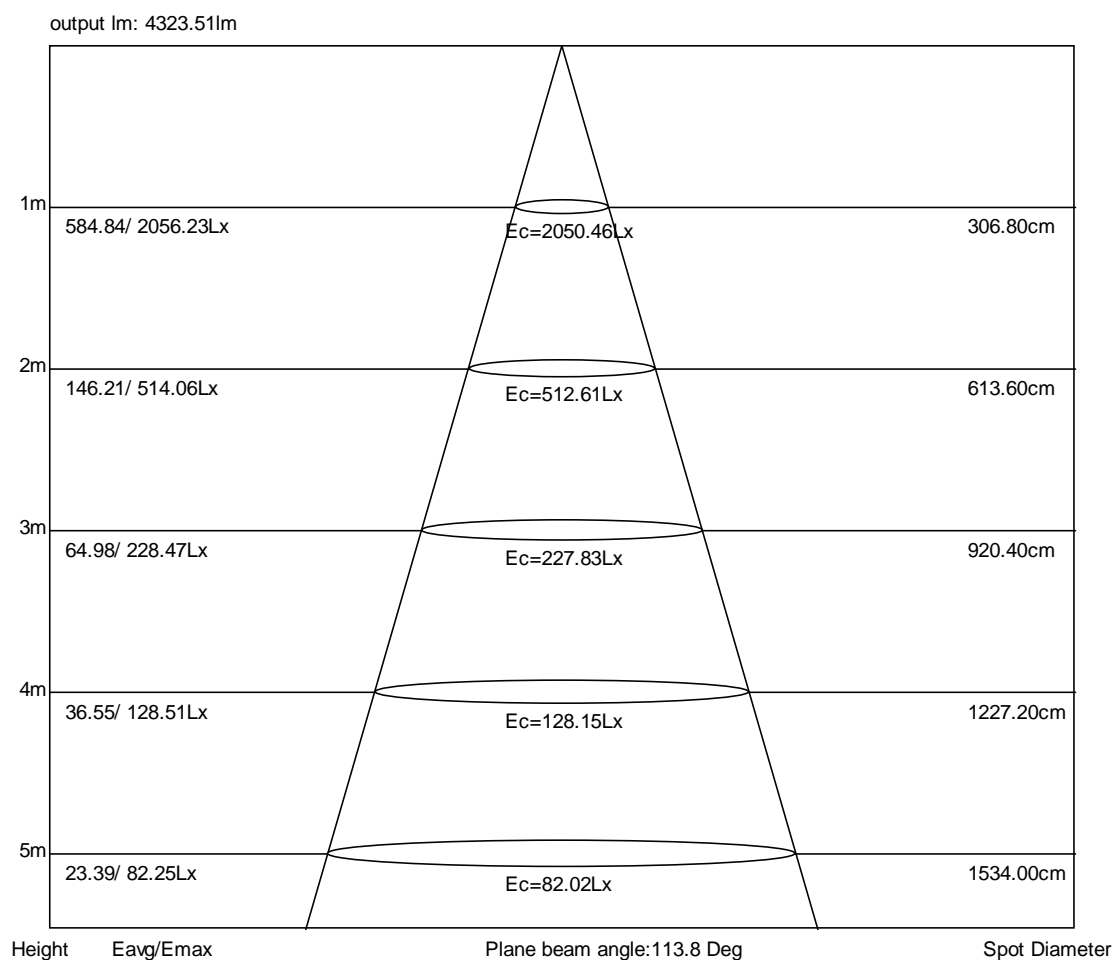
Humidity(%): 60

Date: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	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

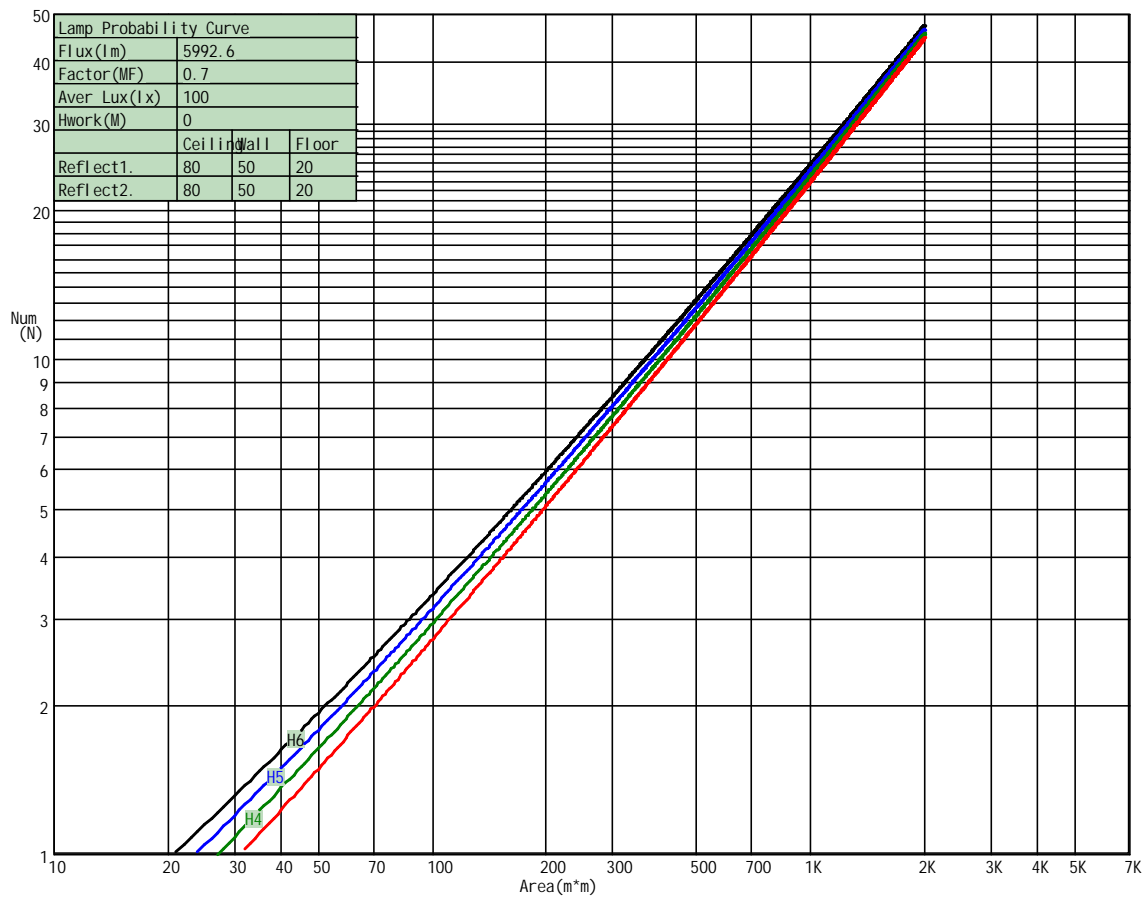
Humidity(%): 60

Date: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ): 0.638	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: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	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	53	38	29	51	37	28	48	36	28
0.80	57	41	30	55	40	29	51	38	29
1.00	60	43	31	58	42	31	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	30
2.50	69	50	34	65	47	32	58	43	30
3.00	70	51	34	66	48	32	58	43	30
4.00	72	52	34	67	49	32	59	43	29
5.00	72	52	34	68	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	1.03	0.99	0.95	1.01	0.97	0.93	0.97	0.93	0.9	0.93	0.9	0.88	0.89	0.87	0.85
2	0.9	0.83	0.77	0.88	0.81	0.76	0.84	0.79	0.74	0.81	0.76	0.72	0.78	0.74	0.71
3	0.79	0.7	0.64	0.77	0.69	0.63	0.74	0.67	0.62	0.71	0.66	0.61	0.69	0.64	0.6
4	0.7	0.61	0.54	0.68	0.6	0.53	0.66	0.58	0.53	0.63	0.57	0.52	0.61	0.56	0.51
5	0.62	0.53	0.46	0.61	0.52	0.46	0.59	0.51	0.45	0.57	0.5	0.45	0.55	0.49	0.44
6	0.56	0.47	0.4	0.55	0.46	0.4	0.53	0.45	0.4	0.51	0.45	0.39	0.5	0.44	0.39
7	0.51	0.42	0.36	0.5	0.41	0.35	0.48	0.41	0.35	0.47	0.4	0.35	0.45	0.39	0.35
8	0.46	0.38	0.32	0.45	0.37	0.32	0.44	0.37	0.31	0.43	0.36	0.31	0.42	0.36	0.31
9	0.42	0.34	0.28	0.42	0.34	0.28	0.41	0.33	0.28	0.39	0.33	0.28	0.38	0.32	0.28
10	0.39	0.31	0.26	0.39	0.31	0.26	0.38	0.3	0.26	0.37	0.3	0.25	0.36	0.3	0.25

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: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Si ze:
Manufactory:	Sur(m^2): 0.638	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	0.32	0.18	0.06	0.31	0.18	0.06	0.3	0.17	0.05	0.29	0.17	0.05	0.28	0.16	0.05
2	0.3	0.16	0.05	0.29	0.16	0.05	0.28	0.16	0.05	0.27	0.15	0.05	0.26	0.15	0.05
3	0.27	0.15	0.04	0.27	0.14	0.04	0.26	0.14	0.04	0.25	0.14	0.04	0.24	0.13	0.04
4	0.25	0.13	0.04	0.25	0.13	0.04	0.24	0.13	0.04	0.23	0.12	0.04	0.22	0.12	0.04
5	0.23	0.12	0.03	0.23	0.12	0.03	0.22	0.11	0.03	0.21	0.11	0.03	0.21	0.11	0.03
6	0.22	0.11	0.03	0.21	0.11	0.03	0.2	0.1	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	0.18	0.09	0.03	0.18	0.09	0.03
8	0.19	0.09	0.03	0.18	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	0.08	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	0.16	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	0.15	0.07	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	0.13	0.15	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	0.08	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	0.04	0.03	0.01	0.01	0.01	0
9	0.12	0.06	0.03	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): 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: 2020-04-27

Remark:



Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight (kg):
Lamp ID:	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ): 0.638	Protect Angle(Deg):

Ring-shaped Flux Data Table

Gm\C(Deg)	0	45	90	135	180	225	270	315	Range	Ring	T(lm)
5	2049	2049	2043	2042	2049	2035	2033	2028	0-5	48.9	48.9
10	2025	2028	2024	2022	2020	2002	2000	1994	5-10	145	194
15	1980	1990	1986	1984	1975	1952	1948	1942	10-15	236	430
20	1921	1934	1929	1929	1914	1885	1881	1875	15-20	320	750
25	1845	1859	1859	1858	1835	1802	1800	1791	20-25	392	1142
30	1752	1774	1768	1772	1744	1704	1703	1693	25-30	452	1594
35	1646	1670	1668	1671	1636	1592	1589	1580	30-35	496	2090
40	1522	1555	1553	1555	1514	1465	1464	1453	35-40	524	2614
45	1393	1425	1423	1427	1382	1328	1328	1316	40-45	535	3149
50	1247	1284	1282	1287	1237	1181	1182	1167	45-50	527	3676
55	1094	1133	1134	1139	1085	1025	1027	1013	50-55	503	4179
60	934	976	978	983	923	863	866	849	55-60	463	4642
65	767	813	812	819	758	697	703	684	60-65	408	5050
70	601	648	649	656	591	533	537	522	65-70	341	5391
75	435	495	485	491	423	374	376	359	70-75	267	5658
80	274	346	327	349	265	219	223	209	75-80	189	5846
85	128	180	179	194	117	75.9	78.1	65.3	80-85	109	5955
90	16	42.3	52	52.7	3.2	2.53	2.79	2.22	85-90	37.2	5993
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: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight (kg):
Lamp ID:	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ): 0.638	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	2049	2049	2049	2047	2045	2043	2042	2042	2046	2049	2043	2037	2034	2034	2032	2030	2030	2040
10.0	2025	2026	2028	2027	2025	2024	2023	2022	2021	2020	2012	2004	2001	2000	1999	1996	1997	2011
15.0	1980	1984	1989	1989	1987	1986	1985	1983	1979	1975	1965	1955	1951	1949	1947	1944	1946	1964
20.0	1921	1927	1933	1933	1930	1929	1929	1927	1920	1914	1901	1889	1884	1882	1880	1877	1880	1901
25.0	1845	1851	1857	1859	1859	1859	1859	1856	1845	1835	1821	1806	1801	1800	1798	1794	1797	1821
30.0	1752	1762	1772	1772	1770	1769	1771	1769	1756	1744	1726	1708	1703	1703	1700	1696	1699	1726
35.0	1646	1656	1667	1669	1669	1669	1670	1667	1651	1636	1616	1596	1591	1590	1587	1583	1587	1617
40.0	1522	1536	1551	1554	1553	1554	1554	1551	1532	1514	1493	1471	1465	1465	1462	1457	1461	1492
45.0	1393	1407	1421	1424	1424	1424	1426	1422	1402	1382	1358	1334	1328	1328	1325	1320	1324	1359
50.0	1247	1263	1280	1284	1283	1283	1285	1281	1259	1237	1212	1187	1181	1182	1179	1172	1176	1212
55.0	1094	1111	1129	1133	1134	1135	1137	1133	1108	1085	1058	1031	1026	1027	1024	1017	1022	1058
60.0	934	953	972	977	977	979	981	976	949	923	897	870	864	866	863	855	858	897
65.0	767	787	808	813	813	814	817	813	785	758	731	703	699	702	699	690	693	731
70.0	601	621	643	648	648	650	654	649	619	591	565	539	534	536	534	527	531	566
75.0	435	462	489	492	487	487	489	484	453	423	402	379	374	375	372	365	368	402
80.0	274	305	338	340	331	332	342	340	301	265	244	224	220	222	220	213	216	245
85.0	128	151	175	180	179	182	189	185	151	117	99.1	80.4	76.6	77.6	75.3	69.5	72.2	101
90.0	16	27.5	39.4	45.5	49.9	52.2	52.5	47.3	24.9	3.2	2.91	2.6	2.62	2.73	2.67	2.41	3.73	9.98
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: 2020-04-27

Remark:

Measured Para U: 231.0V I: 206.0mA P: 45.98W PF: 0.965 Test LM: 5992.64lm		
Lamp Name: 1200600-45ww-1150ma	Lamp Type:	Weight(kg):
Lamp ID:	Lamp Spec:	Shape Size:
Manufactory:	Sur(m <sup>2</sup> ): 0.638	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	16.7	18.1	17.0	18.3	18.5	16.8	18.2	17.1	18.4	18.6
3H	17.6	18.9	17.9	19.1	19.3	17.8	19.1	18.1	19.3	19.5
4H	18.0	19.3	18.3	19.5	19.7	18.3	19.5	18.6	19.7	19.9
6H	18.4	19.5	18.7	19.8	20.0	18.7	19.8	19.0	20.1	20.3
8H	18.5	19.6	18.8	19.9	20.1	18.9	20.0	19.2	20.2	20.5
12H	18.6	19.6	18.9	19.9	20.2	19.0	20.1	19.3	20.3	20.6
4H 2H	17.1	18.2	17.4	18.5	18.7	17.2	18.3	17.5	18.5	18.8
3H	18.2	19.2	18.5	19.5	19.8	18.4	19.3	18.7	19.6	19.9
4H	18.8	19.7	19.1	20.0	20.3	19.0	19.9	19.3	20.2	20.5
6H	19.3	20.1	19.7	20.4	20.8	19.6	20.4	20.0	20.7	21.1
8H	19.5	20.2	19.9	20.6	20.9	19.8	20.6	20.2	20.9	21.3
12H	19.6	20.3	20.0	20.7	21.1	20.0	20.8	20.4	21.1	21.5
8H 4H	20.1	20.8	20.5	21.2	21.6	20.3	21.0	20.7	21.4	21.8
6H	20.8	21.4	21.3	21.8	22.3	21.1	21.7	21.5	22.1	22.5
8H	21.1	21.7	21.6	22.1	22.5	21.5	22.0	21.9	22.4	22.9
12H	21.4	21.8	21.8	22.3	22.7	21.8	22.3	22.3	22.7	23.2
12H 4H	20.1	20.7	20.6	21.1	21.6	20.3	20.9	20.7	21.3	21.7
6H	20.9	21.4	21.4	21.8	22.3	21.2	21.7	21.6	22.1	22.6
8H	21.3	21.7	21.7	22.1	22.6	21.6	22.0	22.1	22.5	23.0
Variations with the observer position at spacings:										
S = 1.0H	0.3/-0.4					0.3/-0.4				
1.5H	0.4/-0.4					0.4/-0.4				
2.0H	0.1/-0.4					0.1/-0.3				

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: 2020-04-27

Remark: