

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

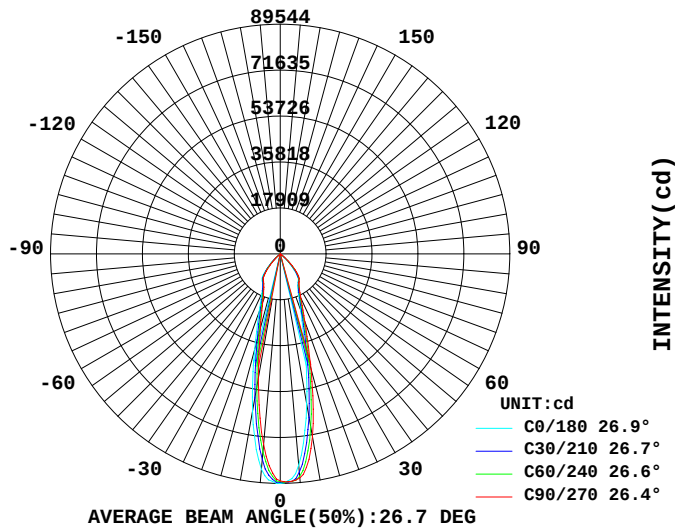
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

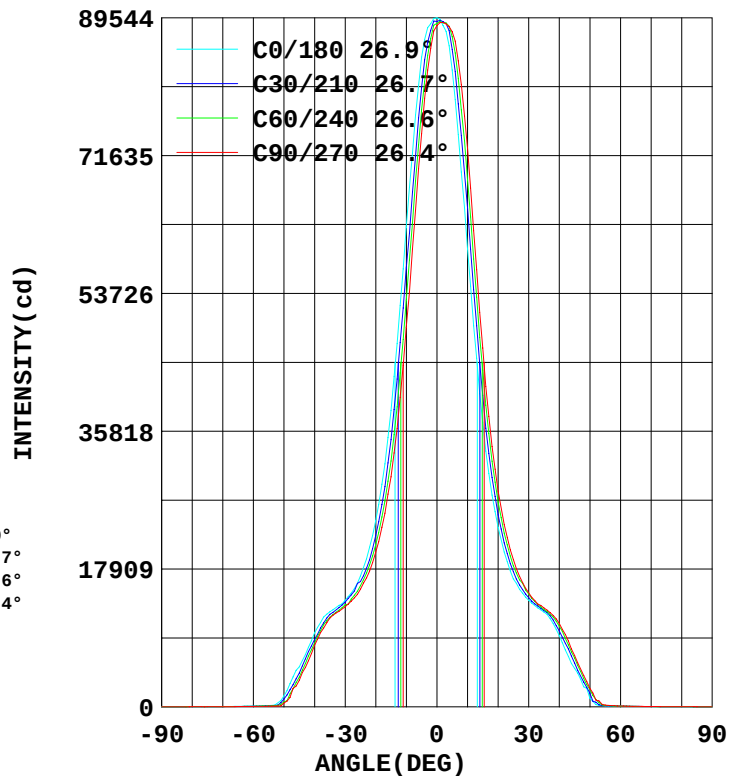
MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax(cd)	89544	S/MH(C0/180)	0.45
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.37
NOMINAL POWER(W)	300	TOTAL FLUX(lm)	37625	Voltage(V)	218.0
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	125.8	Current(A)	1.409
NOMINAL FLUX(lm)	37624.8	η up(%)	0.0	Power(W)	299.1
LAMPS QUANTITY	1	η down(%)	100.0	Power Factor(PF)	0.974
TEST VOLTAGE(V)	218.0	Effective Flux(lm)	37624.9	EEI	0.108

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

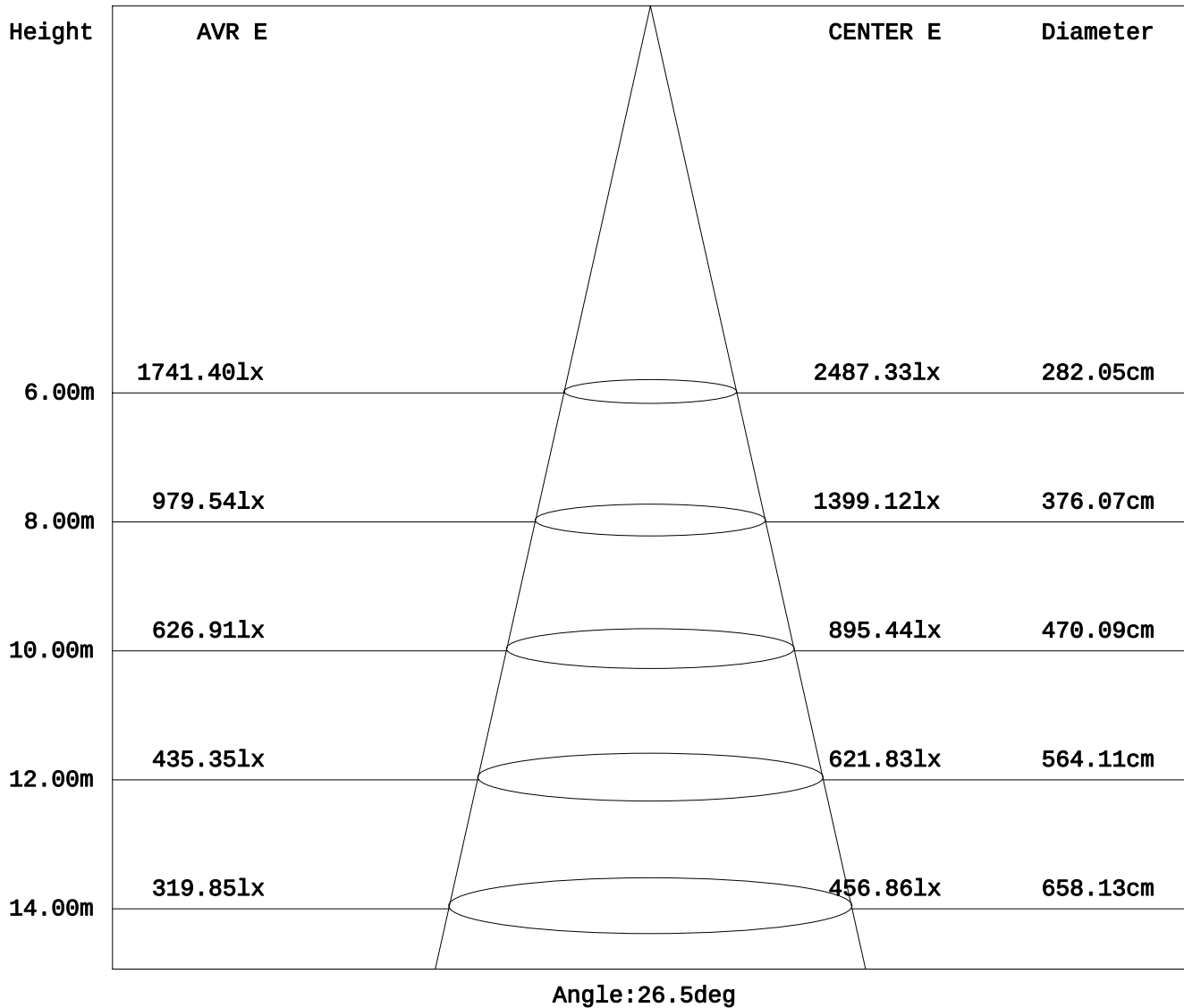
Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System: HOP00 HPG1900
Temperature: 25.3DEG
Operators:
Test Date: 2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 6.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
5.0	8442	7906	7448	7515	8276	8626	8773	8753	0- 5	2047	2047
10.0	6234	5492	4932	5010	5945	6663	7254	7169	5- 10	5084	7131
15.0	3852	3334	2990	3019	3692	4212	4663	4639	10- 15	5715	12846
20.0	2418	2165	2008	2004	2333	2579	2801	2783	15- 20	4923	17769
25.0	1702	1603	1529	1563	1662	1795	1917	1890	20- 25	4185	21955
30.0	1384	1344	1300	1303	1386	1443	1481	1481	25- 30	3861	25815
35.0	1236	1183	1156	1148	1232	1259	1285	1277	30- 35	3826	29641
40.0	961.4	852.5	798.6	791.1	926.1	1018	1084	1077	35- 40	3648	33288
45.0	519.9	414.1	345.4	341.3	499.5	601.5	665.5	682.1	40- 45	2670	35958
50.0	142.5	83.91	51.64	41.43	113.0	203.4	241.4	252.9	45- 50	1271	37229
55.0	17.04	13.07	8.708	9.730	14.07	16.58	23.30	19.49	50- 55	239.2	37468
60.0	10.19	8.231	5.864	6.273	8.517	9.865	11.92	9.871	55- 60	52.37	37520
65.0	6.832	5.666	4.208	4.356	5.832	6.607	7.369	6.350	60- 65	34.75	37555
70.0	4.806	4.050	3.006	3.074	4.262	4.676	5.007	4.404	65- 70	24.90	37580
75.0	3.369	2.863	2.120	2.298	3.092	3.290	3.452	3.079	70- 75	18.19	37598
80.0	2.880	2.566	2.160	2.352	2.905	2.673	2.746	2.417	75- 80	14.37	37612
85.0	1.062	0.400	0.148	0.236	0.450	1.153	1.936	1.825	80- 85	10.09	37623
90.0	0.385	0.349	0.310	0.353	0.198	0.149	0.227	0.139	85- 90	2.267	37625
95.0									90- 95		
100.0									95-100		
105.0									100-105		
110.0									105-110		
115.0									110-115		
120.0									115-120		
125.0									120-125		
130.0									125-130		
135.0									130-135		
140.0									135-140		
145.0									140-145		
150.0									145-150		
155.0									150-155		
160.0									155-160		
165.0									160-165		
170.0									165-170		
175.0									170-175		
180.0									175-180		
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm	

Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

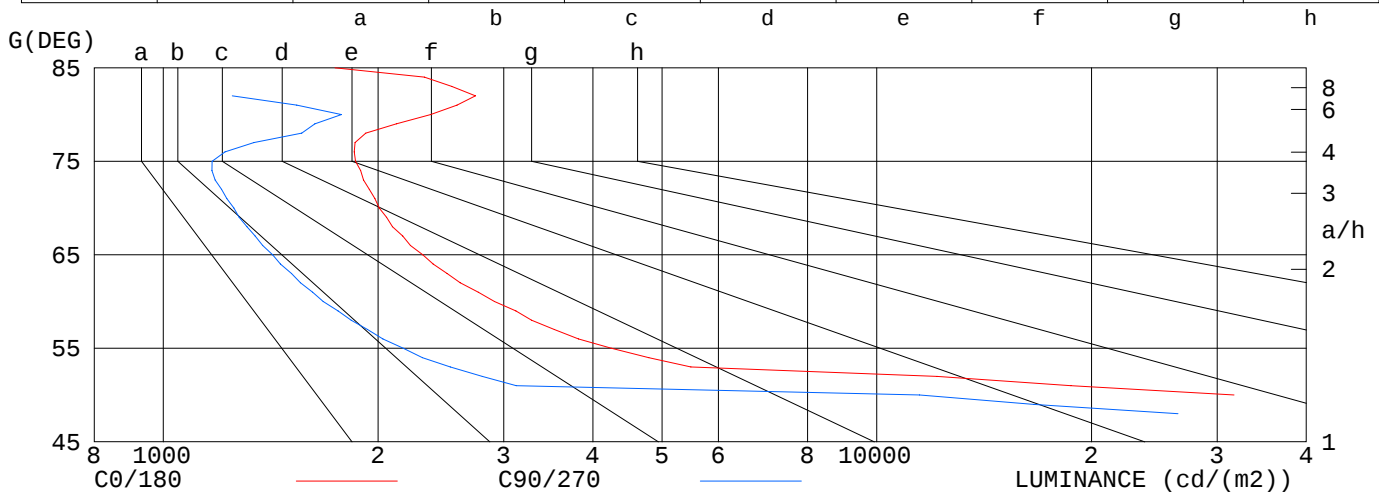
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

LUMINANCE LIMITATION CURVES

GLARE	CLASS	ILLUMINANCE (lx)							
1.15	A	2000	1000	500	<=300				
1.50	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.20	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1741	242
80	2369	1777
75	1860	1170
70	2007	1256
65	2310	1423
60	2912	1676
55	4246	2169
50	31686	11479
45	105044	69792

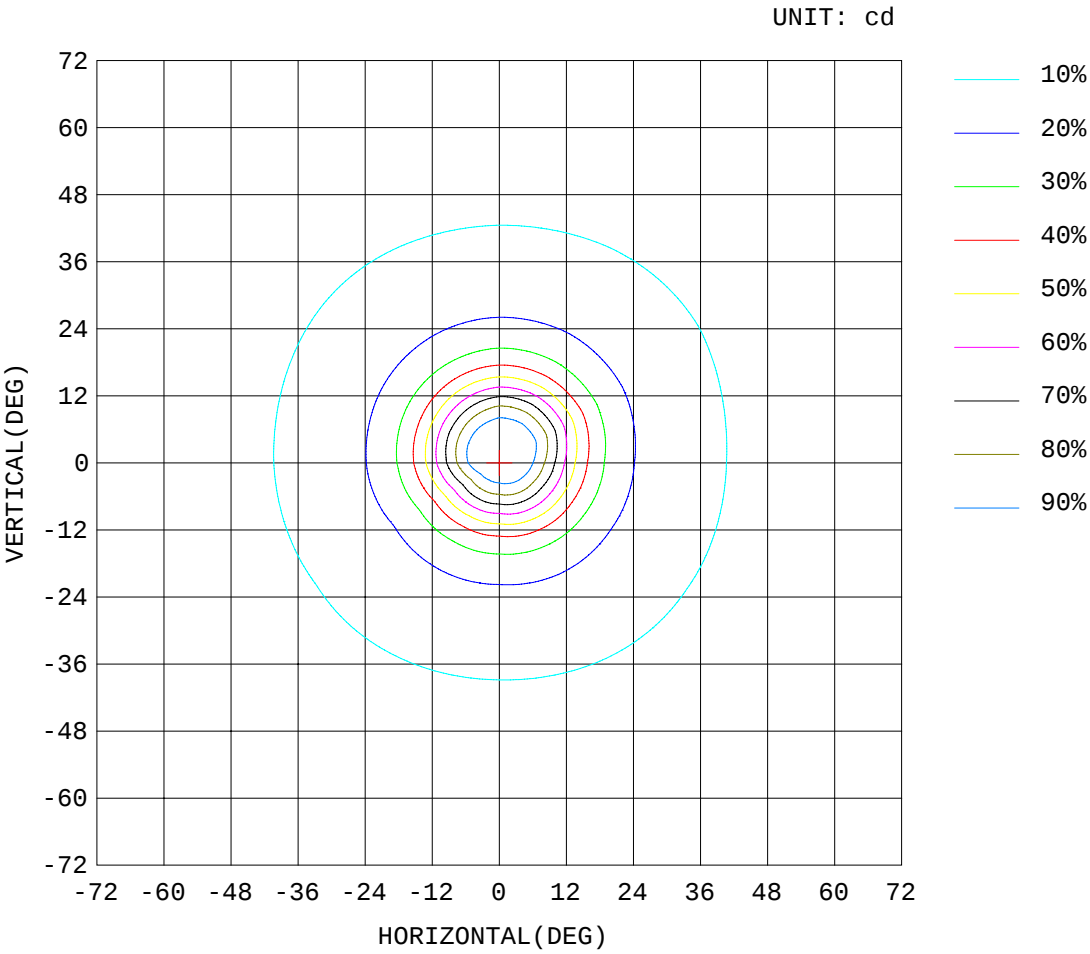
Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System:HOP00 HPG1900
Temperature:25.3DEG
Operators:
Test Date:2018年10月10日

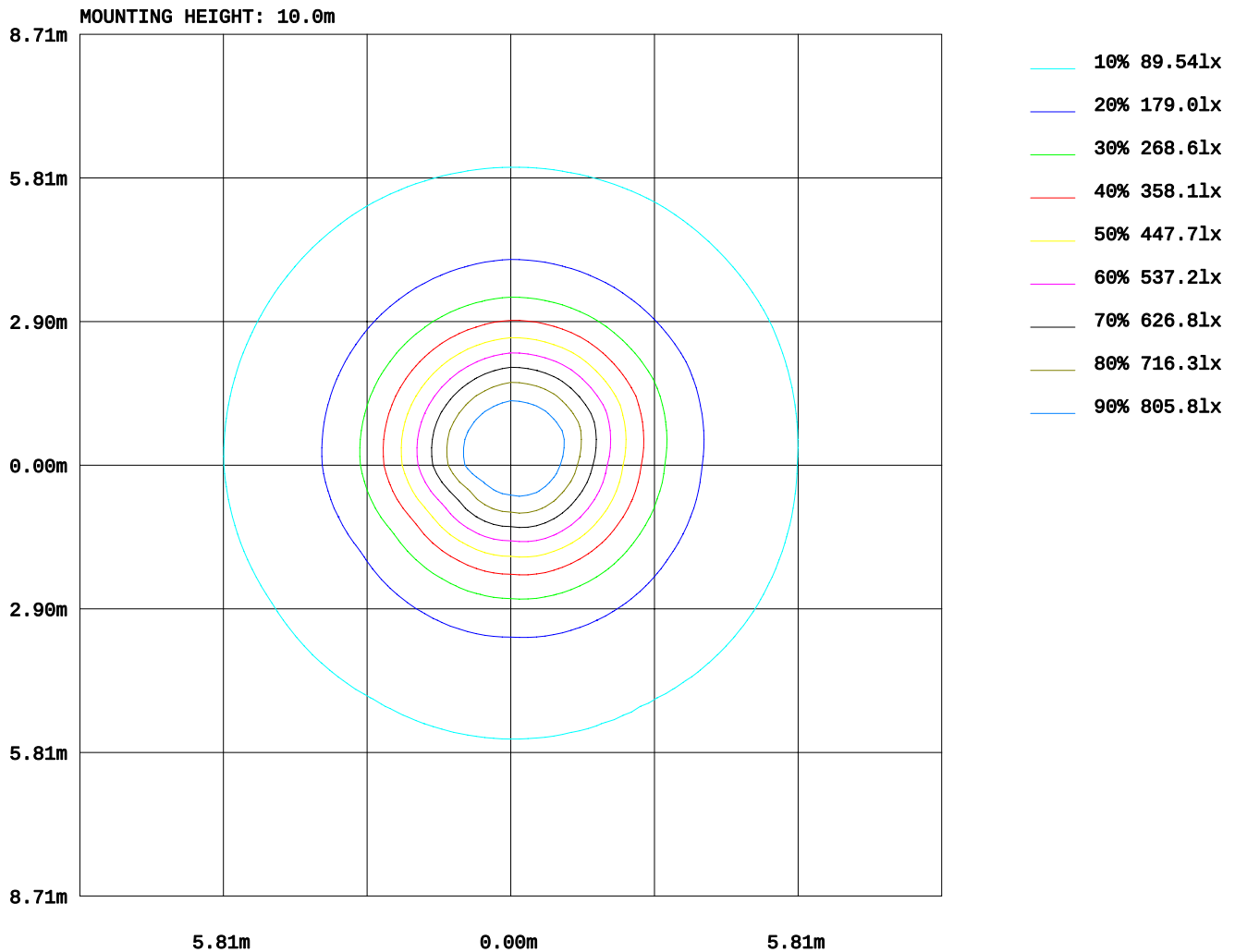
Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:6.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System:HOP00 HPG1900
Temperature:25.3DEG
Operators:
Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:6.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER :	Address :	
NAME :	TYPE :	WEIGHT :
SPECIFICATION :	DIMENSION :	SERIAL No. :

72	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a
	0.18	0.28	0.37	0.49	0.62	0.76	0.91	1.03	1.12	1.12	1.03	0.89	0.74	0.59	0.45	0.33	0.25	0.18	11.3	11.3			
64	0.21	0.32	0.50	0.71	0.97	1.26	1.62	2.00	2.31	2.32	2.04	1.66	1.27	0.94	0.67	0.46	0.30	0.19	19.7	19.7			
56	0.22	0.40	0.67	1.03	1.57	2.73	8.06	18.2	26.7	27.7	20.6	10.1	3.22	1.59	0.99	0.62	0.38	0.21	125	125			
48	0.25	0.49	0.89	1.55	5.72	32.3	77.5	118	142	144	124	85.9	40.1	8.24	1.54	0.83	0.47	0.25	784	784			
40	0.29	0.59	1.15	4.25	41.1	113	180	221	240	241	225	188	124	51.9	6.73	1.14	0.59	0.29	1641	1641			
32	0.32	0.68	1.54	21.7	98.7	184	238	280	313	315	286	242	193	113	29.8	1.82	0.71	0.33	2318	2318			
24	0.34	0.77	3.00	49.8	146	221	288	402	530	542	421	299	226	156	58.9	4.45	0.84	0.37	3347	3347			
VERTICAL (DEG)	0.36	0.84	6.63	72.0	173	243	367	669	1080	1126	733	394	248	178	79.4	8.75	0.95	0.39	5380	5380			
	0.36	0.87	9.72	82.1	184	257	435	937	1575	1616	1015	461	260	186	87.6	11.1	1.02	0.41	7119	7119			
	0.35	0.84	8.89	78.1	180	251	404	806	1359	1421	878	426	255	183	83.6	10.0	1.01	0.41	6346	6346			
	0.33	0.76	4.98	60.5	160	229	315	497	738	773	545	335	236	167	67.8	6.34	0.93	0.39	4136	4136			
	0.30	0.65	2.00	34.0	120	202	254	321	387	394	334	264	210	132	41.7	2.78	0.81	0.36	2700	2700			
	0.27	0.54	1.10	10.0	65.0	151	213	246	266	268	250	219	162	78.4	15.1	1.51	0.68	0.32	1948	1948			
	0.23	0.44	0.79	1.75	16.7	68.8	133	182	205	206	186	143	80.6	24.4	2.80	1.07	0.56	0.28	1253	1253			
	0.20	0.35	0.57	0.97	1.89	8.94	32.3	62.9	82.9	85.0	68.6	39.5	13.4	2.86	1.34	0.78	0.45	0.24	403	403			
	0.19	0.27	0.42	0.67	1.00	1.44	1.99	3.57	5.52	5.88	4.32	2.61	1.84	1.30	0.89	0.58	0.36	0.21	33.1	33.1			
	0.18	0.24	0.31	0.46	0.65	0.85	1.02	1.13	1.17	1.22	1.26	1.20	1.05	0.83	0.61	0.43	0.28	0.20	13.1	13.1			
	0.11	0.23	0.29	0.34	0.43	0.53	0.61	0.66	0.68	0.70	0.73	0.72	0.66	0.55	0.43	0.33	0.26	0.15	8.41	8.41			
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)					16	24	32	40	48	56	64	72		
Φ t	4.69	9.53	43.8	421	1196	1967	2952	4767	6955	7170	5094	3115	2056	1286	481	53.4	10.8	5.20	37625				
Φ a	4.69	9.53	43.8	421	1196	1967	2952	4767	6955	7170	5094	3115	2056	1286	481	53.4	10.8	5.20		37625			

Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

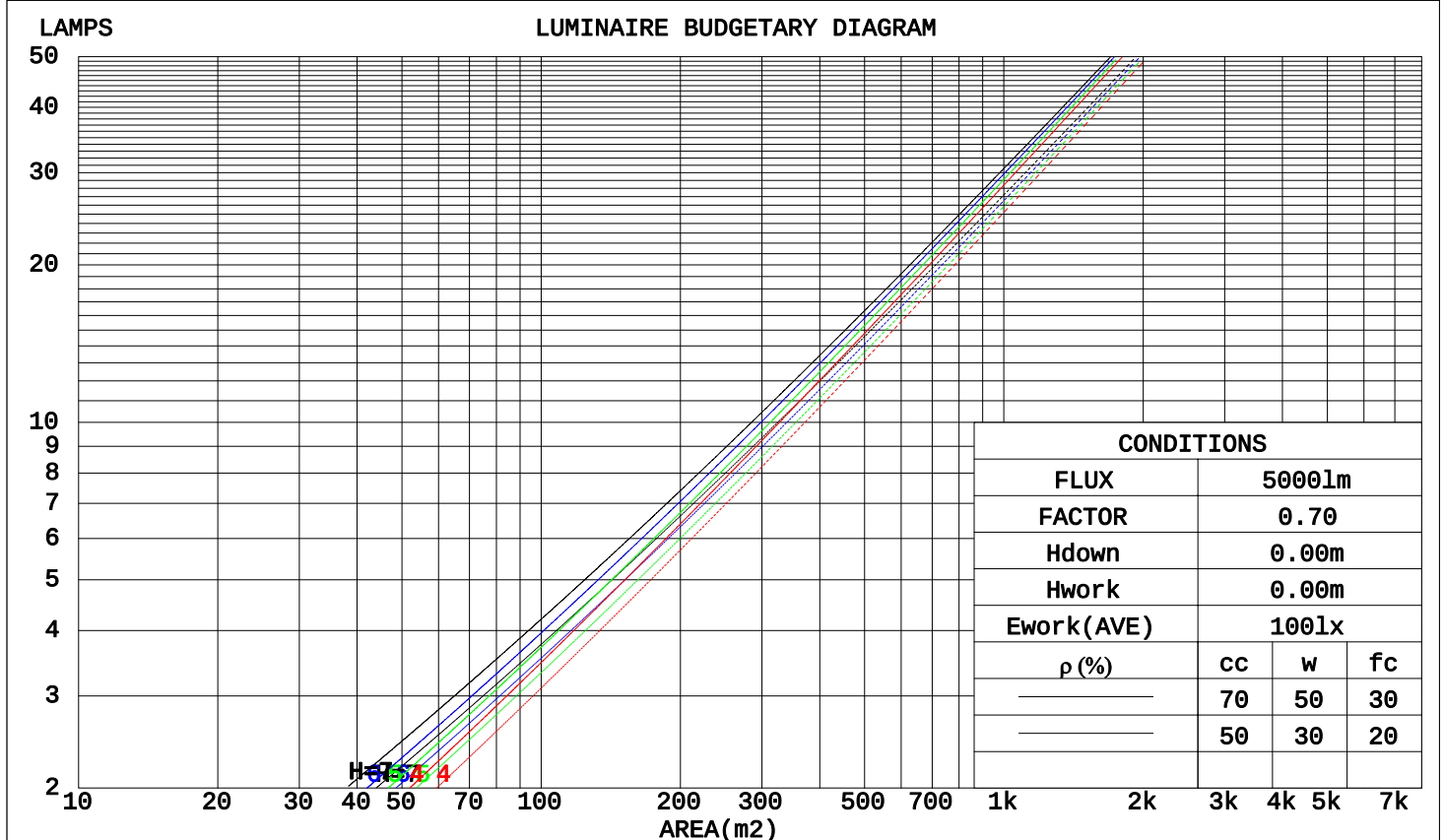
HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:	Address:				
NAME:	TYPE:			WEIGHT:	
SPECIFICATION:	DIMENSION:			SERIAL No.:	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:	Address:					
NAME:	TYPE:			WEIGHT:		
SPECIFICATION:	DIMENSION:			SERIAL No.:		

ρ_{CC}	80%			70%			50%			30%			10%			0														
ρ_W	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
ρ_{fc}	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.172	.098	.031	.165	.094	.030	.153	.088	.028	.141	.082	.026	.131	.076	.024															
2.0	.165	.090	.028	.159	.088	.027	.149	.083	.026	.139	.078	.024	.130	.074	.023															
3.0	.157	.084	.025	.152	.082	.025	.143	.078	.024	.135	.074	.023	.127	.070	.022															
4.0	.149	.078	.023	.145	.076	.022	.138	.073	.022	.130	.070	.021	.124	.067	.020															
5.0	.142	.072	.021	.139	.071	.021	.132	.069	.020	.126	.066	.020	.120	.064	.019															
6.0	.136	.068	.019	.132	.067	.019	.127	.065	.019	.121	.063	.018	.116	.061	.018															
7.0	.129	.064	.018	.127	.063	.018	.121	.061	.018	.116	.060	.017	.112	.058	.017															
8.0	.124	.060	.017	.121	.060	.017	.116	.058	.017	.112	.057	.016	.108	.055	.016															
9.0	.118	.057	.016	.116	.056	.016	.112	.055	.016	.108	.054	.015	.104	.053	.015															
10.0	.113	.054	.015	.111	.054	.015	.107	.053	.015	.104	.052	.015	.101	.051	.015															

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016	
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.132	.099	.073	.113	.085	.064	.078	.059	.045	.045	.035	.026	.015	.011	.009	
5.0	.123	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.089	.055	.032	.062	.039	.023	.036	.023	.014	.012	.008	.004	
9.0	.098	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.093	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003	

Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

Uncorrected UGR Table

Report number:

MANUFACTURER:					Address:					
NAME:					TYPE:			WEIGHT:		
SPECIFICATION:					DIMENSION:			SERIAL No.:		
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	23.2	24.1	23.5	24.3	24.5	22.5	23.4	22.8	23.6	23.8
3H	23.1	23.9	23.3	24.1	24.3	22.4	23.2	22.6	23.4	23.6
4H	23.0	23.8	23.3	24.0	24.2	22.3	23.1	22.6	23.3	23.5
6H	22.9	23.6	23.2	23.9	24.1	22.2	22.9	22.5	23.2	23.4
8H	22.8	23.6	23.2	23.8	24.1	22.1	22.9	22.5	23.1	23.4
12H	22.8	23.5	23.1	23.8	24.0	22.1	22.8	22.4	23.1	23.3
4H 2H	23.0	23.8	23.2	24.0	24.2	22.3	23.1	22.6	23.3	23.5
3H	22.8	23.5	23.1	23.8	24.0	22.1	22.8	22.4	23.1	23.3
4H	22.7	23.3	23.1	23.6	23.9	22.0	22.6	22.4	22.9	23.2
6H	22.6	23.2	23.0	23.5	23.8	21.9	22.5	22.3	22.8	23.1
8H	22.6	23.1	23.0	23.4	23.8	21.9	22.4	22.3	22.7	23.1
12H	22.5	23.0	22.9	23.4	23.7	21.8	22.3	22.2	22.6	23.0
8H 4H	22.6	23.1	23.0	23.4	23.8	21.9	22.4	22.3	22.7	23.1
6H	22.5	22.9	22.9	23.3	23.7	21.8	22.2	22.2	22.6	23.0
8H	22.4	22.8	22.9	23.2	23.6	21.7	22.1	22.2	22.5	22.9
12H	22.4	22.7	22.8	23.1	23.6	21.7	22.0	22.1	22.4	22.9
12H 4H	22.5	23.0	22.9	23.3	23.7	21.8	22.3	22.2	22.6	23.0
6H	22.4	22.8	22.9	23.2	23.6	21.7	22.1	22.2	22.5	22.9
8H	22.4	22.7	22.8	23.1	23.6	21.7	22.0	22.1	22.4	22.9
Variations with the observer position at spacings:										
S = 1.0H	+ 2.7 / -16.8					+ 2.6 / -18.0				
1.5H	+ 4.5 / -17.1					+ 4.7 / -17.7				
2.0H	+ 8.1 / -13.2					+ 8.2 / -12.1				

CIE Pub.117 Corrected 37625 lm Total Lamp Luminous Flux.(8log(F/F0) = 12.6)

Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:	Address:		
NAME:	TYPE:	WEIGHT:	
SPECIFICATION:	DIMENSION:	SERIAL No.:	

REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	84	77	73	84	77	73	83	77	73	69
0.80	92	86	82	92	86	82	90	85	81	77
1.00	98	92	88	97	91	87	95	91	87	83
1.25	102	96	93	101	96	92	99	95	92	87
1.50	105	100	96	104	99	96	101	98	95	90
2.00	108	104	100	106	103	99	104	101	98	93
2.50	110	106	103	108	104	102	105	102	100	94
3.00	111	108	105	110	106	104	106	104	102	95
4.00	113	110	108	111	109	107	108	106	104	97
5.00	115	112	110	112	110	109	108	107	105	98
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

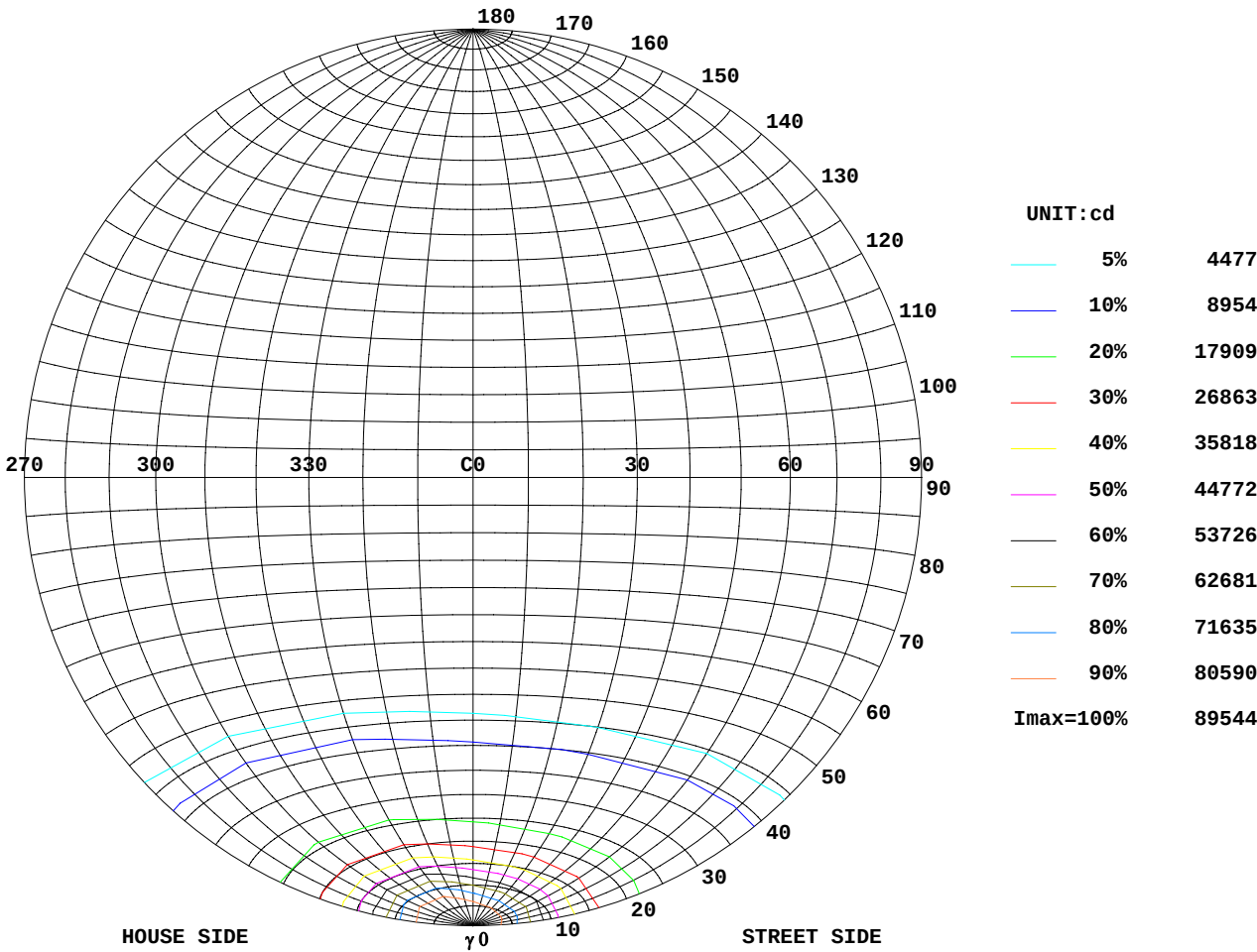
Test System:HOP00 HPG1900
 Temperature:25.3DEG
 Operators:
 Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:6.000 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



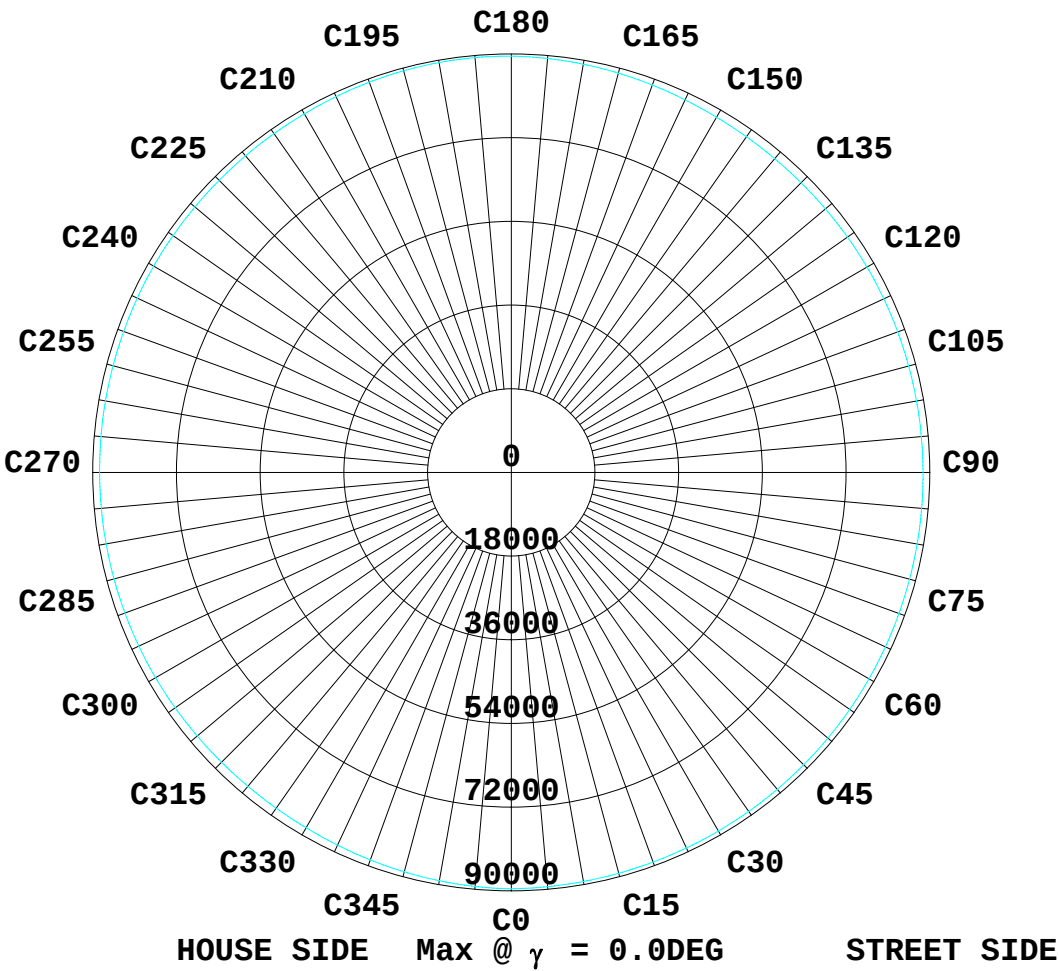
Test System:HOP00 HPG1900
Temperature:25.3DEG
Operators:
Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:6.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:



Test System:HOP00 HPG1900
Temperature:25.3DEG
Operators:
Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:6.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER:	Address:	
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION:	SERIAL No.:

UNIT: ×10cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330
0.0	8954	8905	8880	8854	8834	8823	8954	8905	8880	8854	8834	8823
5.0	8442	8049	7763	7448	7490	7539	8276	8543	8708	8773	8763	8742
10.0	6234	5704	5280	4932	4920	5100	5945	6480	6845	7254	7271	7067
15.0	3852	3472	3196	2990	2971	3066	3692	4048	4376	4663	4722	4556
20.0	2418	2224	2106	2008	2000	2008	2333	2495	2662	2801	2820	2745
25.0	1702	1630	1576	1529	1524	1603	1662	1758	1833	1917	1906	1873
30.0	1384	1361	1327	1300	1296	1310	1386	1420	1467	1481	1498	1464
35.0	1236	1202	1165	1156	1145	1152	1232	1252	1265	1285	1282	1273
40.0	961	874	831	799	783	799	926	987	1050	1084	1094	1061
45.0	520	440	389	345	334	348	500	569	634	666	691	673
50.0	143	103	65.0	51.6	39.8	42.9	113	180	227	241	254	251
55.0	17.0	14.1	11.9	8.70	9.99	9.47	14.0	15.6	17.5	23.3	22.8	16.1
60.0	10.1	8.47	7.98	5.86	6.50	6.04	8.51	9.73	9.99	11.9	10.5	9.24
65.0	6.83	5.76	5.56	4.20	4.53	4.17	5.83	6.68	6.52	7.36	6.54	6.15
70.0	4.80	4.07	4.02	3.00	3.21	2.93	4.26	4.78	4.56	5.00	4.46	4.34
75.0	3.36	2.86	2.85	2.12	2.35	2.23	3.09	3.38	3.19	3.45	3.07	3.08
80.0	2.88	2.63	2.49	2.16	2.44	2.26	2.90	2.89	2.45	2.74	2.34	2.48
85.0	1.06	0.35	0.45	0.15	0.35	0.12	0.45	1.10	1.20	1.93	1.77	1.87
90.0	0.39	0.26	0.44	0.31	0.44	0.27	0.20	0.24	0.06	0.23	0.05	0.22

Test System:HOP00 HPG1900
Temperature:25.3DEG
Operators:
Test Date:2018年10月10日

Test Set: 5.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:6.000 m
Remarks: