

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

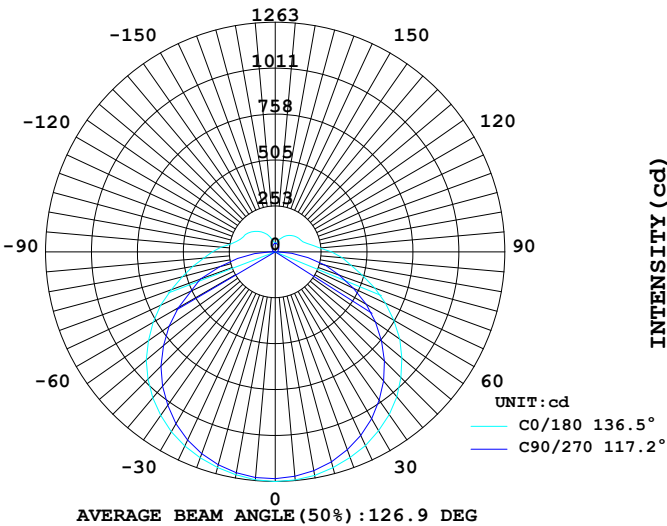
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

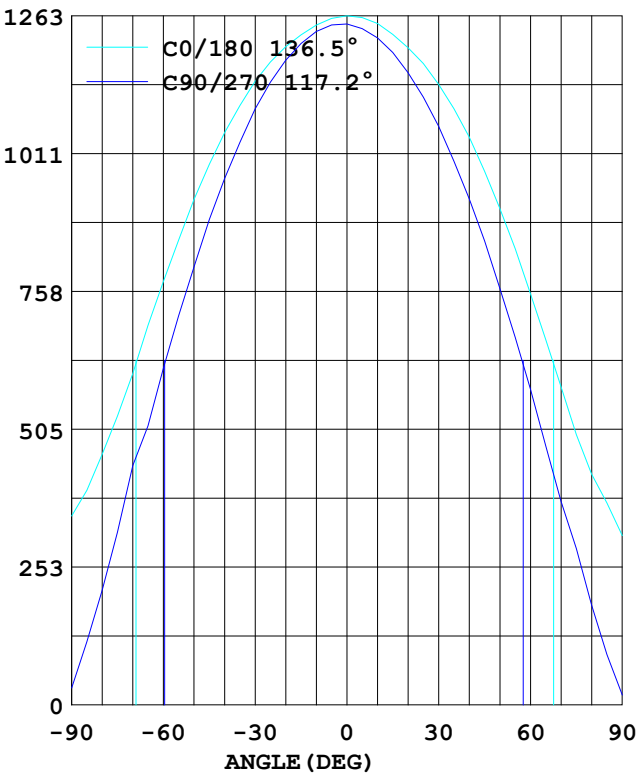
MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	1263	S/MH(C0/180)	1.35
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.30
NOMINAL POWER(W)	40	TOTAL FLUX(lm)	5027.6	Voltage(V)	219.8
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	118.9	Current(A)	0.195
NOMINAL FLUX(lm)	5027.6	η up(%)	13.0	Power(W)	42.27
LAMPS QUANTITY	1	η down(%)	87.0	Power Factor(PF)	0.986
TEST VOLTAGE(V)	219.9	Effective Flux(lm)	4753.2	EEI	0.121

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

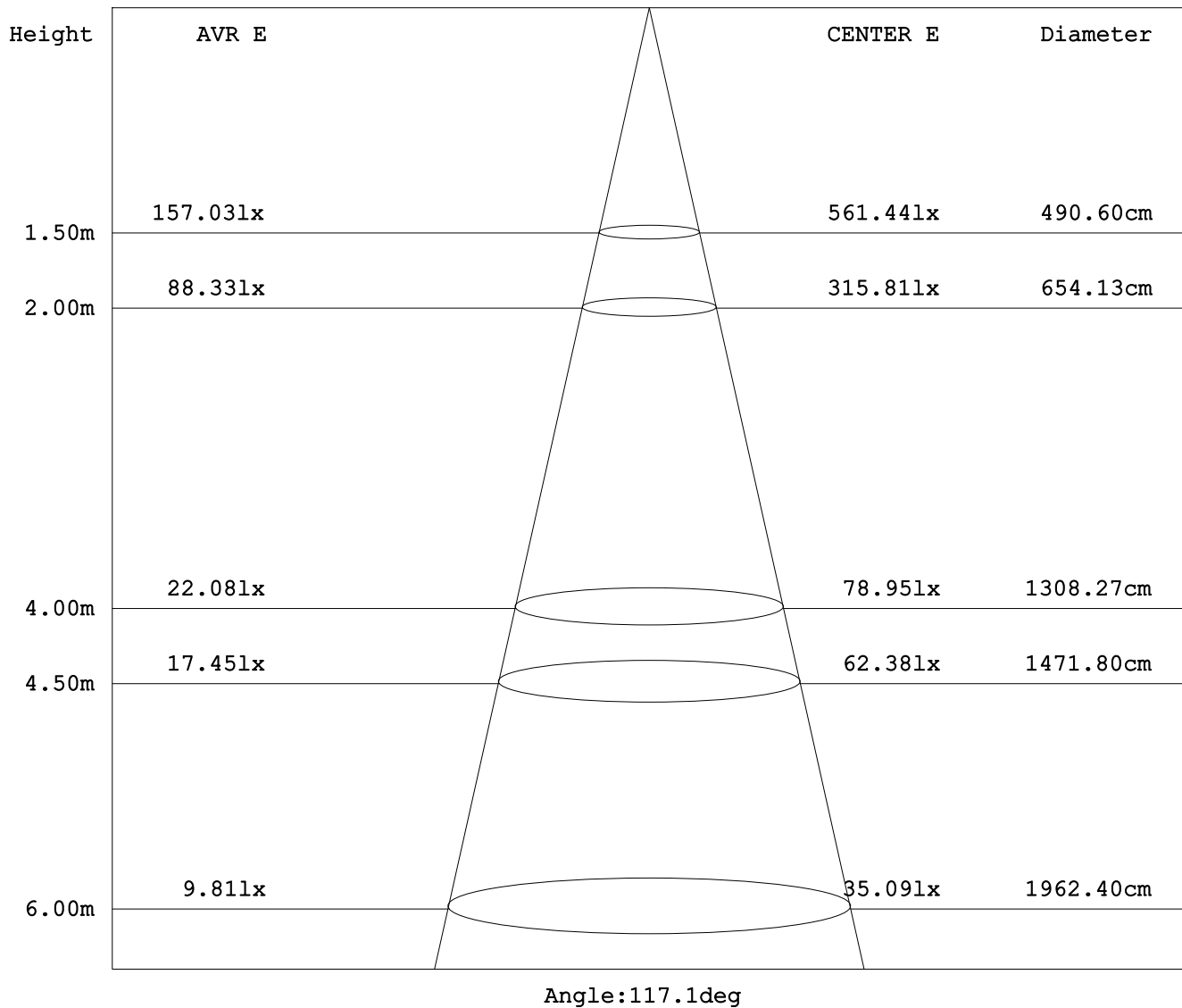
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	1246	1237	1234	1238	1249	1235	1223	1218	0- 10	118.6	118.6
20.0	1206	1190	1182	1195	1204	1182	1159	1159	10- 20	342.5	461.1
30.0	1143	1115	1092	1121	1137	1100	1060	1073	20- 30	529.5	990.7
40.0	1049	1007	964.4	1015	1041	989.0	927.3	956.4	30- 40	658.5	1649
50.0	926.3	870.5	802.5	878.4	909.9	848.3	763.3	810.9	40- 50	714.6	2364
60.0	776.2	708.2	616.9	716.3	753.7	685.4	579.1	643.7	50- 60	689.9	3054
70.0	607.2	526.2	438.6	531.4	583.4	506.5	373.1	475.1	60- 70	590.3	3644
80.0	459.5	370.0	210.5	361.4	423.2	336.0	183.3	299.5	70- 80	441.4	4086
90.0	346.4	235.7	30.85	216.1	310.2	214.5	17.90	193.1	80- 90	289.2	4375
100.0	249.0	137.7	6.292	111.0	210.0	122.4	12.22	117.9	90-100	168.6	4544
110.0	204.9	127.9	10.40	97.82	162.7	108.5	16.57	116.4	100-110	120.1	4664
120.0	190.3	124.6	16.69	94.44	150.4	101.8	19.84	112.0	110-120	105.1	4769
130.0	171.6	114.3	22.38	85.72	136.2	92.98	26.01	102.9	120-130	89.47	4858
140.0	147.7	100.5	26.25	74.35	118.5	79.37	31.09	90.26	130-140	69.91	4928
150.0	120.3	83.79	30.37	62.25	98.37	64.00	36.30	74.95	140-150	49.03	4977
160.0	89.41	66.54	37.26	53.66	75.26	53.72	41.38	60.56	150-160	30.38	5008
170.0	59.29	52.87	44.77	45.61	52.39	44.70	46.22	51.06	160-170	15.43	5023
180.0	49.61	46.16	48.40	46.58	49.36	46.52	49.00	46.70	170-180	4.571	5028
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

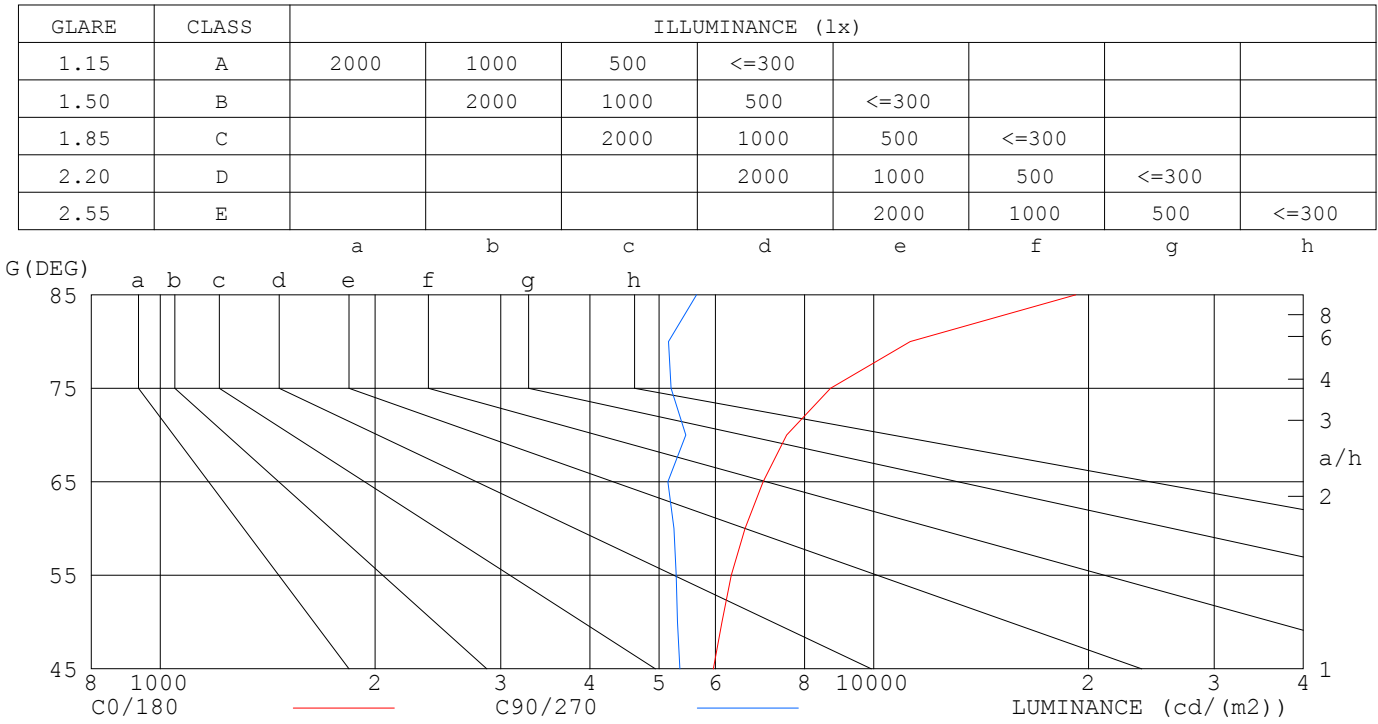
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.2M-40W-5000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1200*152*52mm		SERIAL No.:	

LUMINANCE LIMITATION CURVES



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	19188	5643
80	11251	5155
75	8697	5197
70	7549	5452
65	6998	5145
60	6600	5246
55	6314	5286
50	6127	5308
45	5957	5348

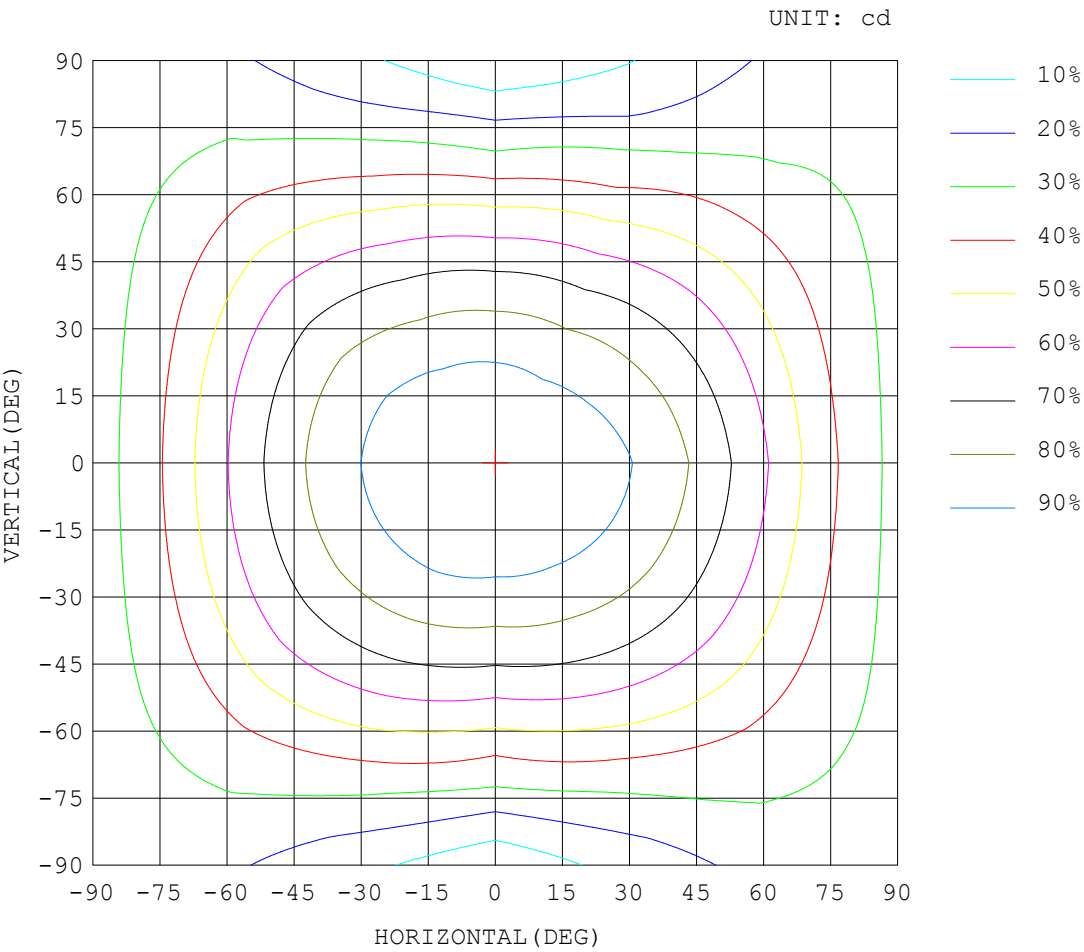
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

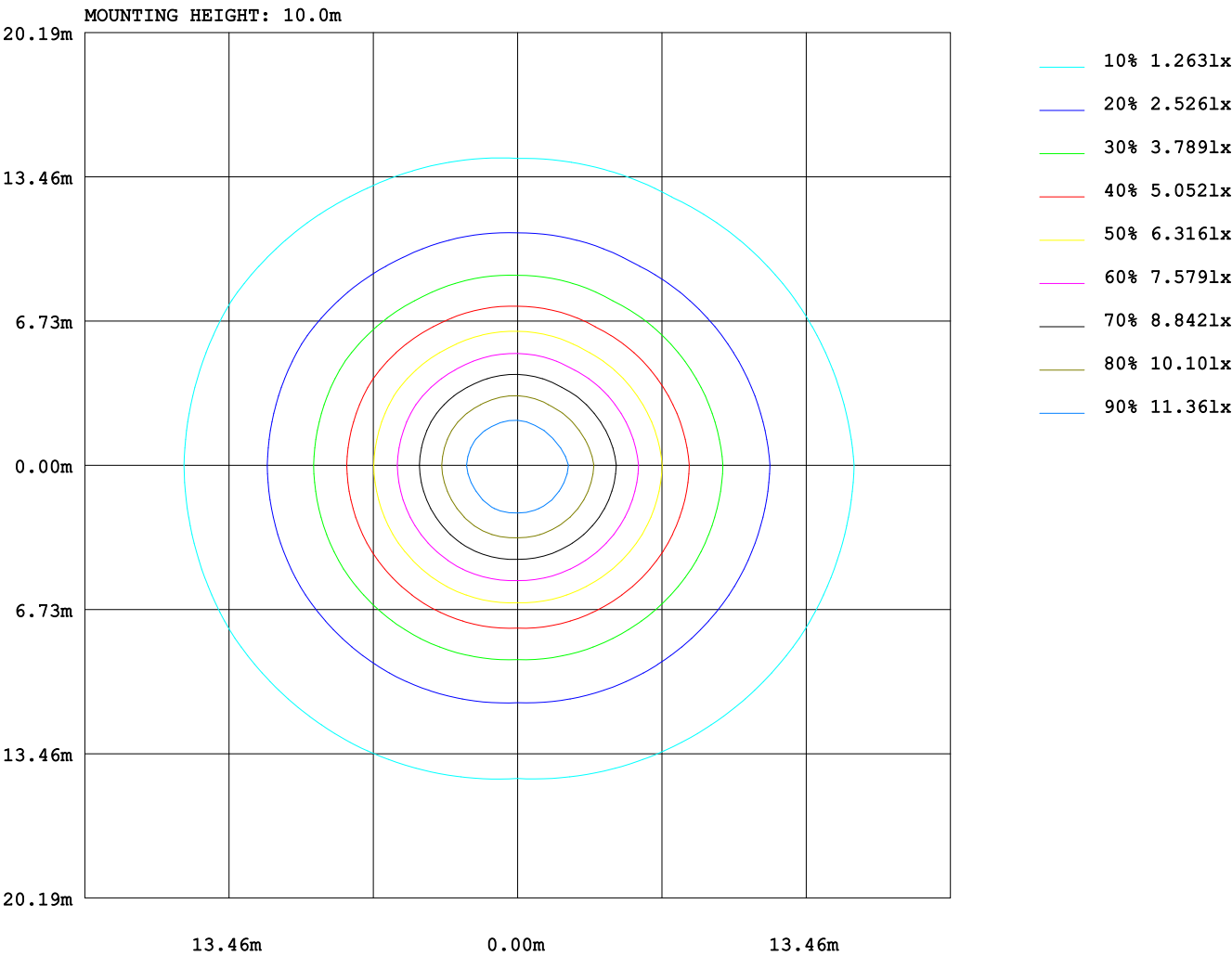
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																				
Address:																				
NAME: 1.2M-40W-5000K										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 1200*152*52mm					SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.82	2.44	3.98	5.07	5.50	5.48	5.10	4.44	3.49	3.30	3.90	4.28	4.66	4.92	4.71	3.85	2.50	0.89	69.4	63.2		
90																						
80	0.86	2.68	4.59	6.28	7.55	8.53	9.14	9.33	8.96	8.76	8.71	8.15	7.50	6.78	5.78	4.41	2.71	0.92	112	112		
70	0.89	2.91	5.22	7.80	10.1	12.1	13.6	14.5	14.7	14.5	14.0	12.8	11.3	9.35	7.20	5.03	2.94	0.95	160	160		
60	0.93	3.13	5.99	9.46	12.8	15.8	18.2	19.9	20.5	20.3	19.2	17.1	14.7	11.9	8.81	5.80	3.18	0.98	209	209		
50	0.96	3.36	6.75	11.0	15.3	19.2	22.4	24.7	25.8	25.5	24.0	21.4	18.3	14.4	10.4	6.59	3.44	1.00	255	255		
40	0.98	3.57	7.43	12.3	17.5	22.2	26.0	28.8	30.2	29.9	28.1	25.1	21.3	16.7	11.8	7.33	3.68	1.03	295	295		
30	1.00	3.76	7.98	13.3	19.1	24.6	29.0	32.0	33.6	33.4	31.3	28.1	23.8	18.6	13.1	7.99	3.90	1.06	326	326		
	1.01	3.89	8.38	14.0	20.2	26.1	31.1	34.4	36.1	35.7	33.7	30.3	25.6	20.0	14.0	8.50	4.07	1.08	349	349		
	1.02	3.98	8.61	14.5	20.9	27.0	32.1	35.7	37.6	37.2	35.3	31.9	26.9	20.9	14.6	8.86	4.20	1.09	363	363		
	1.02	3.98	8.62	14.5	20.9	27.0	32.1	35.7	37.6	37.6	35.7	32.2	27.1	21.1	14.7	8.91	4.22	1.10	365	365		
	1.01	3.90	8.41	14.1	20.3	26.3	31.2	34.8	36.6	36.5	34.7	31.2	26.3	20.4	14.3	8.65	4.13	1.09	354	354		
-30	1.00	3.77	8.03	13.4	19.3	24.9	29.5	32.9	34.5	34.4	32.7	29.4	24.8	19.3	13.5	8.22	3.99	1.07	335	335		
-40	0.98	3.59	7.48	12.4	17.8	22.8	27.0	29.9	31.3	31.2	29.7	26.8	22.6	17.7	12.4	7.64	3.80	1.05	307	307		
-50	0.95	3.38	6.80	11.1	15.7	20.0	23.6	26.0	27.0	26.9	25.8	23.3	19.8	15.6	11.1	6.96	3.60	1.02	269	269		
-60	0.92	3.16	6.05	9.60	13.2	16.7	19.5	21.2	21.8	21.7	21.1	19.2	16.5	13.1	9.62	6.25	3.36	0.99	224	224		
-70	0.89	2.92	5.32	7.97	10.5	12.9	14.8	15.9	16.0	16.0	15.8	14.6	12.7	10.4	8.09	5.59	3.09	0.96	175	175		
-80	0.86	2.66	4.60	6.46	7.99	9.25	10.0	10.3	10.0	10.0	10.2	9.95	9.23	8.15	6.73	4.84	2.84	0.93	125	125		
-90	0.82	2.41	3.91	5.04	5.64	5.86	5.67	5.07	4.14	4.19	5.20	5.89	6.16	5.96	5.34	4.18	2.62	0.90	79.0	75.5		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90	
Φ t	16.9	59.5	118	189	261	327	381	417	431	428	410	372	320	256	187	120	62.3	18.1	5028			
Φ a	16.9	59.5	118	189	261	327	381	415	428	425	408	372	320	256	187	120	62.3	18.1		4753		

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

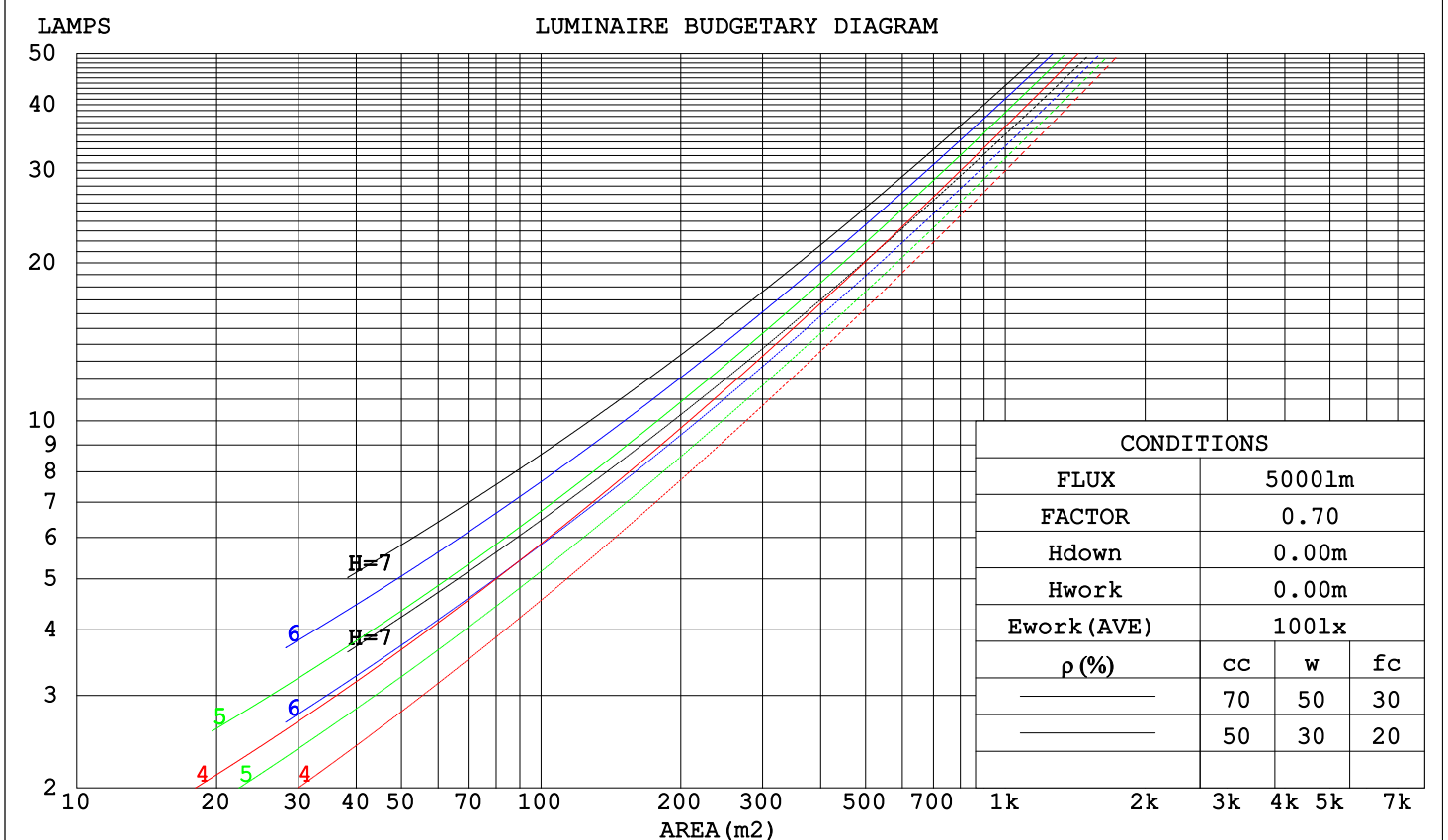
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.2M-40W-5000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1200*152*52mm				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:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:															
Address:															
NAME: 1.2M-40W-5000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1200*152*52mm				SERIAL No.:			

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.363	.207	.065	.352	.201	.064	.331	.190	.061	.312	.180	.058	.294	.171	.055	
2.0	.322	.176	.054	.312	.172	.053	.293	.163	.051	.275	.155	.048	.259	.147	.046	
3.0	.289	.154	.046	.280	.150	.045	.263	.143	.043	.247	.136	.042	.233	.129	.040	
4.0	.262	.136	.040	.254	.133	.039	.239	.127	.038	.224	.121	.036	.211	.115	.035	
5.0	.239	.122	.035	.232	.119	.035	.218	.114	.033	.205	.108	.032	.193	.103	.031	
6.0	.220	.110	.032	.213	.108	.031	.201	.103	.030	.189	.098	.029	.178	.094	.028	
7.0	.203	.101	.029	.197	.098	.028	.186	.094	.027	.175	.090	.026	.165	.086	.025	
8.0	.189	.092	.026	.184	.090	.026	.173	.086	.025	.163	.083	.024	.154	.079	.023	
9.0	.176	.085	.024	.171	.084	.023	.162	.080	.023	.153	.077	.022	.144	.073	.021	
10.0	.165	.079	.022	.161	.078	.022	.152	.074	.021	.144	.071	.020	.136	.068	.020	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.289	.289	.289	.247	.247	.247	.169	.169	.169	.097	.097	.097	.031	.031	.031	
1.0	.284	.255	.230	.243	.219	.198	.166	.151	.137	.096	.087	.080	.031	.028	.026	
2.0	.277	.232	.195	.237	.200	.168	.162	.138	.117	.094	.080	.069	.030	.026	.022	
3.0	.269	.215	.173	.231	.186	.150	.158	.129	.105	.091	.075	.062	.029	.024	.020	
4.0	.261	.203	.158	.224	.175	.137	.154	.122	.097	.089	.071	.057	.029	.023	.019	
5.0	.254	.193	.148	.218	.167	.128	.150	.116	.091	.087	.068	.054	.028	.022	.018	
6.0	.246	.185	.140	.212	.160	.122	.146	.112	.086	.085	.066	.051	.027	.022	.017	
7.0	.239	.178	.135	.206	.154	.118	.142	.108	.083	.083	.064	.050	.027	.021	.016	
8.0	.233	.172	.131	.200	.149	.114	.139	.105	.081	.081	.062	.048	.026	.020	.016	
9.0	.227	.168	.128	.195	.145	.111	.135	.102	.079	.079	.060	.047	.026	.020	.016	
10.0	.221	.163	.125	.190	.142	.109	.132	.100	.078	.077	.059	.046	.025	.019	.015	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

Uncorrected UGR Table

Report number:

MANUFACTURER:											
Address:											
NAME: 1.2M-40W-5000K					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 1200*152*52mm			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	18.8	20.2	19.2	20.6	21.1	17.9	19.3	18.3	19.7	20.2	
	3H	20.9	22.2	21.4	22.7	23.2	19.7	21.0	20.2	21.5	22.0
	4H	22.1	23.4	22.6	23.8	24.4	20.5	21.7	21.0	22.2	22.7
	6H	23.4	24.6	23.9	25.1	25.6	21.1	22.2	21.6	22.7	23.3
	8H	24.1	25.2	24.6	25.7	26.3	21.3	22.4	21.8	22.9	23.5
	12H	24.9	26.0	25.4	26.5	27.1	21.5	22.6	22.0	23.1	23.7
4H 2H	19.4	20.6	19.9	21.1	21.6	18.7	20.0	19.2	20.5	21.0	
	3H	21.8	22.8	22.3	23.4	23.9	20.7	21.8	21.3	22.3	22.9
	4H	23.1	24.1	23.7	24.7	25.3	21.6	22.6	22.2	23.2	23.8
	6H	24.6	25.5	25.2	26.1	26.7	22.4	23.3	23.0	23.9	24.6
	8H	25.4	26.2	26.0	26.8	27.5	22.8	23.6	23.4	24.2	24.8
	12H	26.3	27.1	27.0	27.7	28.4	23.0	23.8	23.7	24.4	25.1
8H 4H	23.5	24.3	24.1	24.9	25.6	22.3	23.1	22.9	23.7	24.3	
	6H	25.2	25.9	25.9	26.6	27.3	23.3	24.0	24.0	24.7	25.4
	8H	26.2	26.9	26.9	27.5	28.2	23.8	24.5	24.5	25.1	25.8
	12H	27.4	28.0	28.1	28.6	29.4	24.3	24.8	25.0	25.5	26.2
12H 4H	23.5	24.3	24.1	24.9	25.6	22.4	23.2	23.0	23.8	24.5	
	6H	25.4	26.0	26.0	26.6	27.4	23.6	24.3	24.3	24.9	25.6
	8H	26.5	27.0	27.1	27.7	28.4	24.3	24.8	24.9	25.5	26.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117 Corrected 5028 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.6)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:										
Address:										
NAME: 1.2M-40W-5000K					TYPE:			WEIGHT:		
SPECIFICATION:					DIMENSION: 1200*152*52mm			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) x RCR = 5									
k = 0.60	50	38	31	49	38	31	48	37	30	24
0.80	60	47	39	58	47	39	56	45	38	31
1.00	68	55	47	66	54	47	63	55	46	37
1.25	75	63	55	73	62	54	69	59	52	43
1.50	80	68	60	77	67	59	73	64	58	48
2.00	87	77	69	84	75	68	79	71	65	55
2.50	91	82	75	88	80	73	83	76	70	58
3.00	95	87	80	92	84	78	86	80	74	62
4.00	100	92	86	96	90	84	90	84	80	67
5.00	102	96	91	99	93	88	92	88	84	70
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

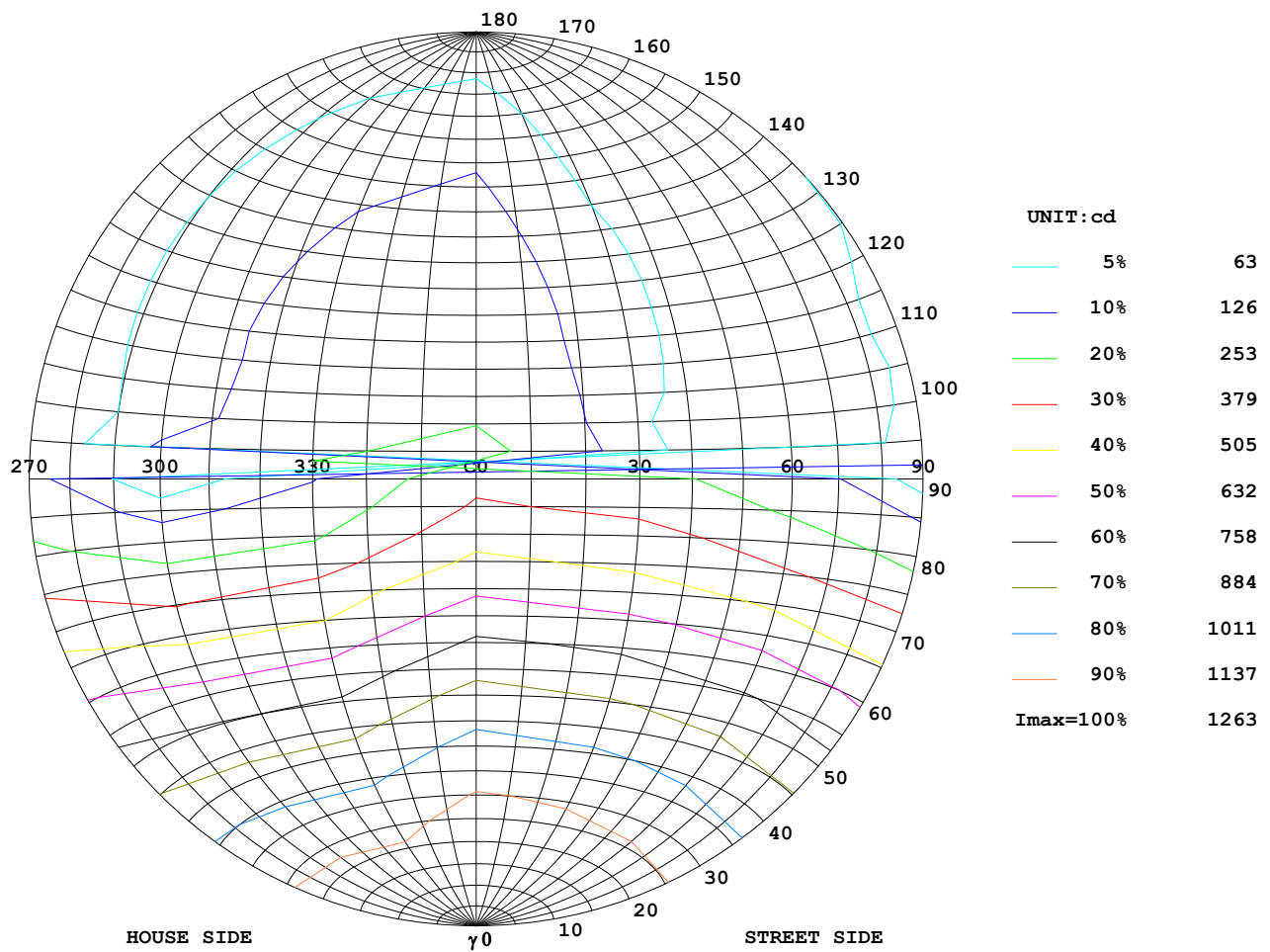
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

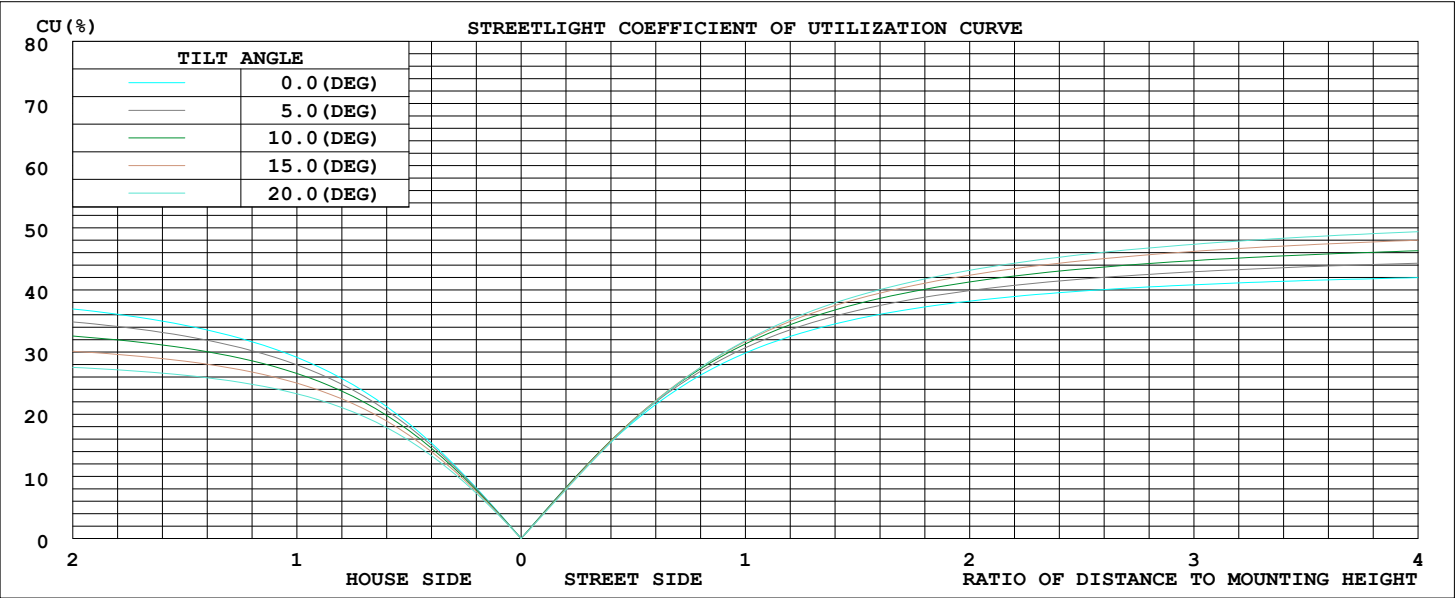
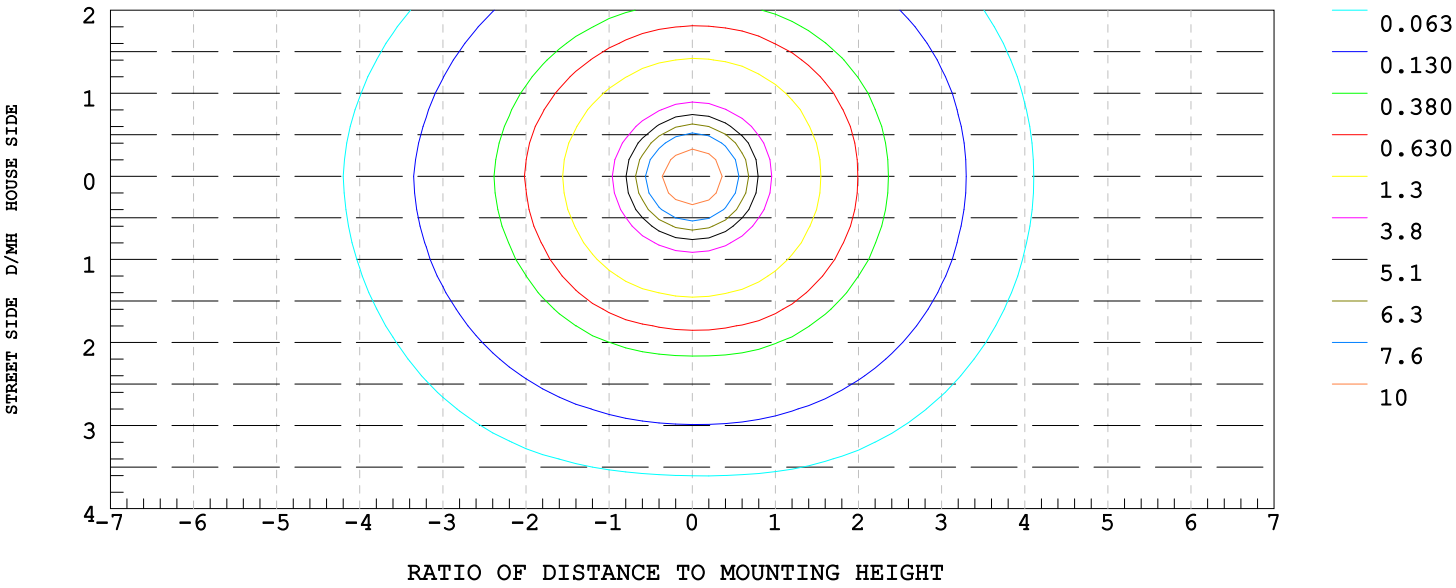
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 12.63 lx



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

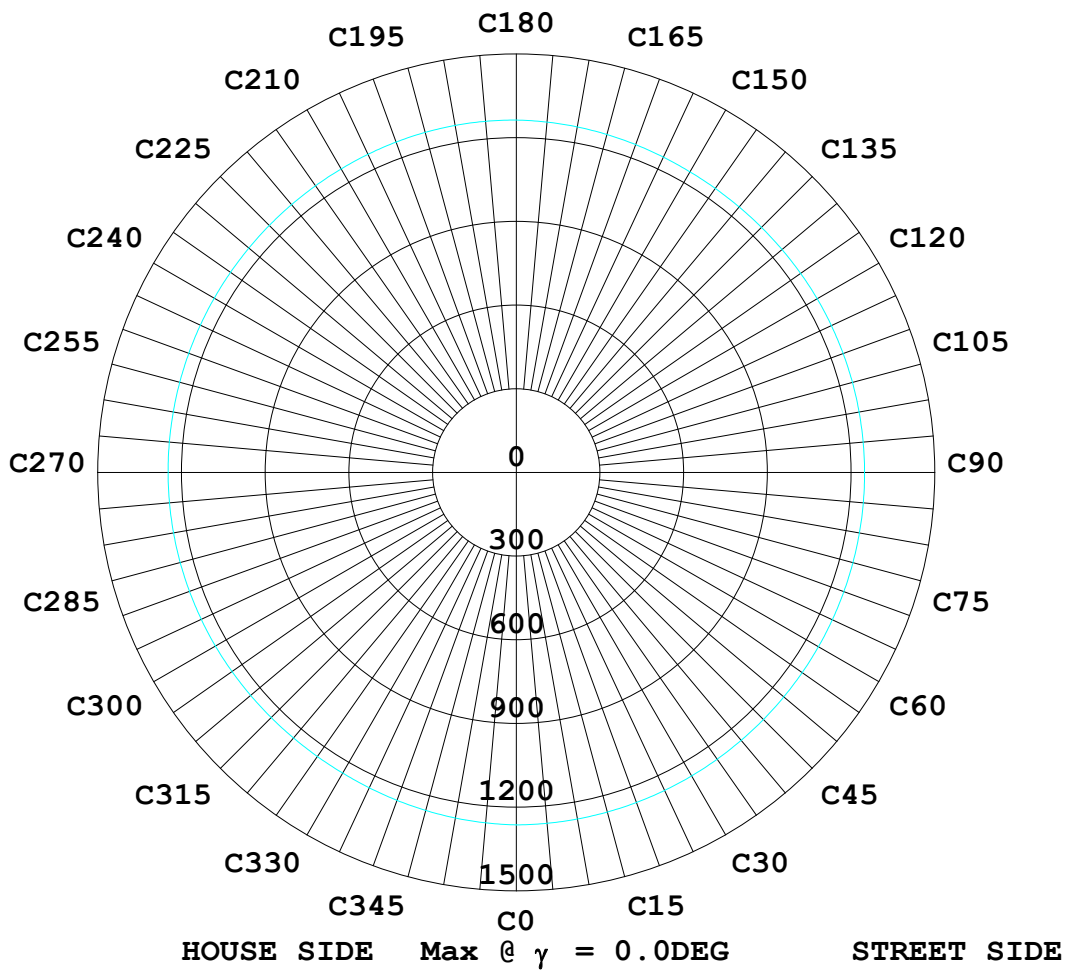
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-5000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks: