

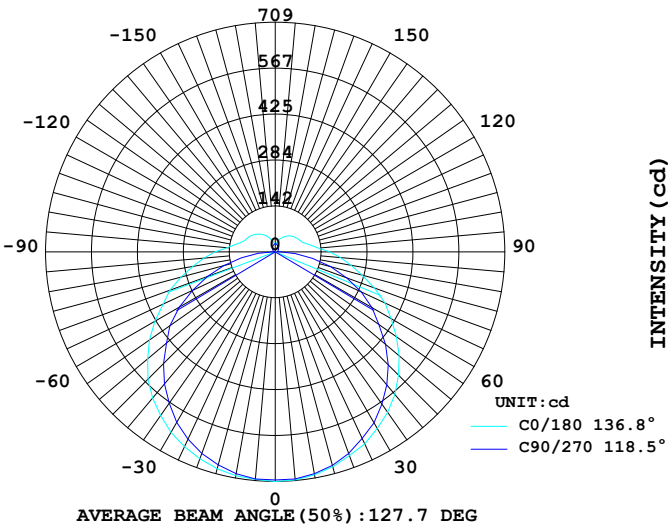
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

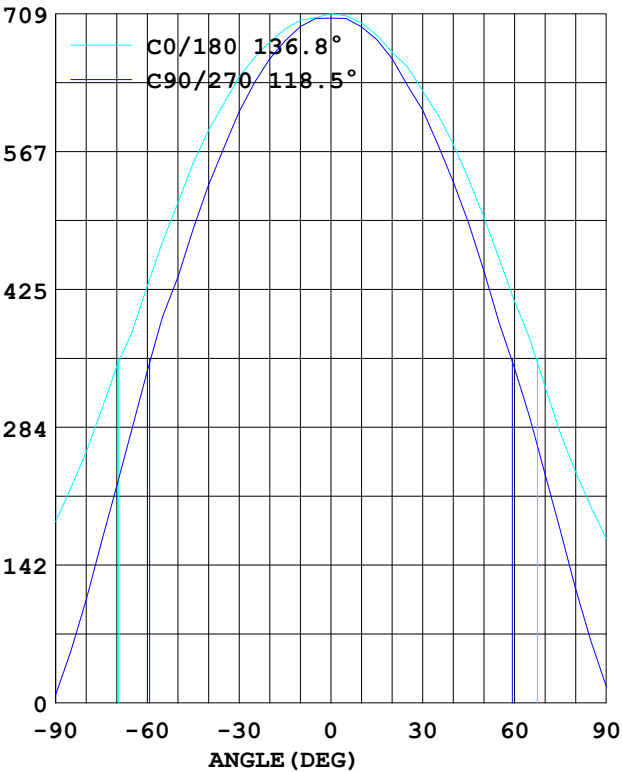
MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	711.7	S/MH(C0/180)	1.35
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.28
NOMINAL POWER(W)	22	TOTAL FLUX(lm)	2806.0	Voltage(V)	220.1
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	121.2	Current(A)	0.108
NOMINAL FLUX(lm)	2806.1	η up(%)	12.2	Power(W)	23.15
LAMPS QUANTITY	1	η down(%)	87.8	Power Factor(PF)	0.969
TEST VOLTAGE(V)	220.1	Effective Flux(lm)	2645.1	EEI	0.119

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



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

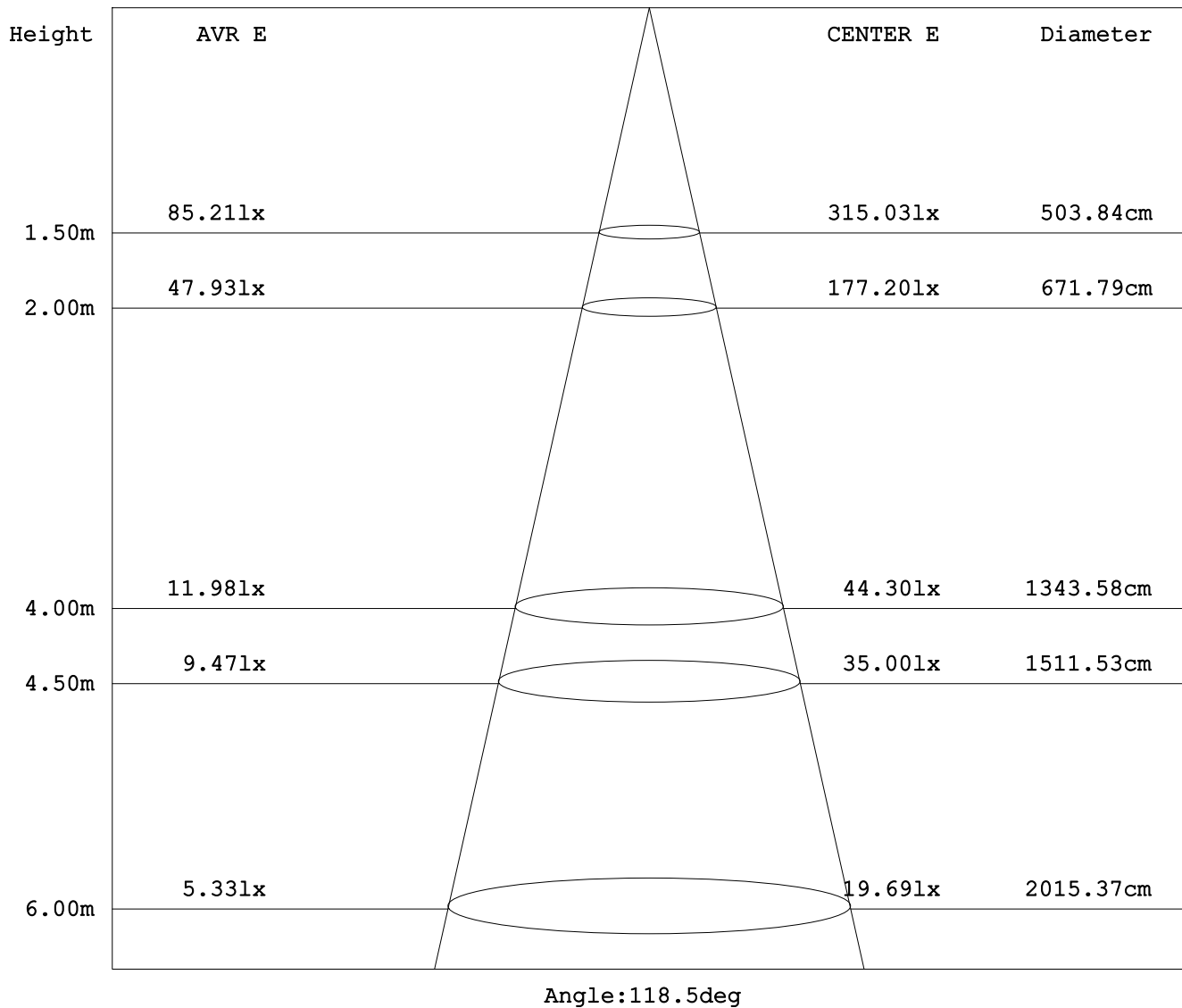
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	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-22W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	702.1	700.7	695.6	699.8	699.1	698.0	695.2	697.0	0- 10	67.14	67.14
20.0	679.7	672.0	662.3	670.9	669.2	666.8	662.7	668.1	10- 20	193.9	261.0
30.0	643.8	626.8	608.0	624.3	629.3	618.4	609.5	623.6	20- 30	299.1	560.1
40.0	588.9	563.3	532.5	560.9	574.7	553.8	535.9	560.4	30- 40	371.1	931.3
50.0	514.4	480.3	437.8	479.4	499.6	471.8	444.4	480.0	40- 50	401.3	1333
60.0	428.9	391.4	341.7	394.1	413.2	382.1	344.6	390.6	50- 60	387.1	1720
70.0	346.0	292.7	223.2	292.3	325.6	285.0	235.4	294.2	60- 70	334.3	2054
80.0	258.0	190.3	106.1	191.1	237.4	183.7	117.3	194.8	70- 80	250.2	2304
90.0	186.2	112.1	8.349	116.4	168.9	110.4	17.06	121.9	80- 90	159.2	2464
100.0	127.8	64.49	2.783	66.67	114.8	60.86	7.018	69.63	90-100	89.88	2554
110.0	101.1	59.41	5.445	58.62	88.69	54.87	8.591	63.82	100-110	63.45	2617
120.0	93.77	56.99	7.744	55.84	81.55	52.02	11.13	60.92	110-120	54.82	2672
130.0	83.36	52.21	10.89	50.03	74.05	47.19	13.79	55.53	120-130	46.35	2718
140.0	71.99	46.40	14.15	43.56	64.85	40.29	15.97	48.82	130-140	36.16	2754
150.0	58.20	39.14	17.06	35.39	53.72	33.94	18.39	40.95	140-150	25.48	2780
160.0	43.07	31.45	20.44	28.97	42.22	28.55	21.17	32.66	150-160	15.76	2796
170.0	29.52	26.74	23.11	24.01	29.03	24.92	23.95	27.34	160-170	8.056	2804
180.0	25.65	25.04	25.65	24.92	25.77	25.22	26.01	24.86	170-180	2.428	2806
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:

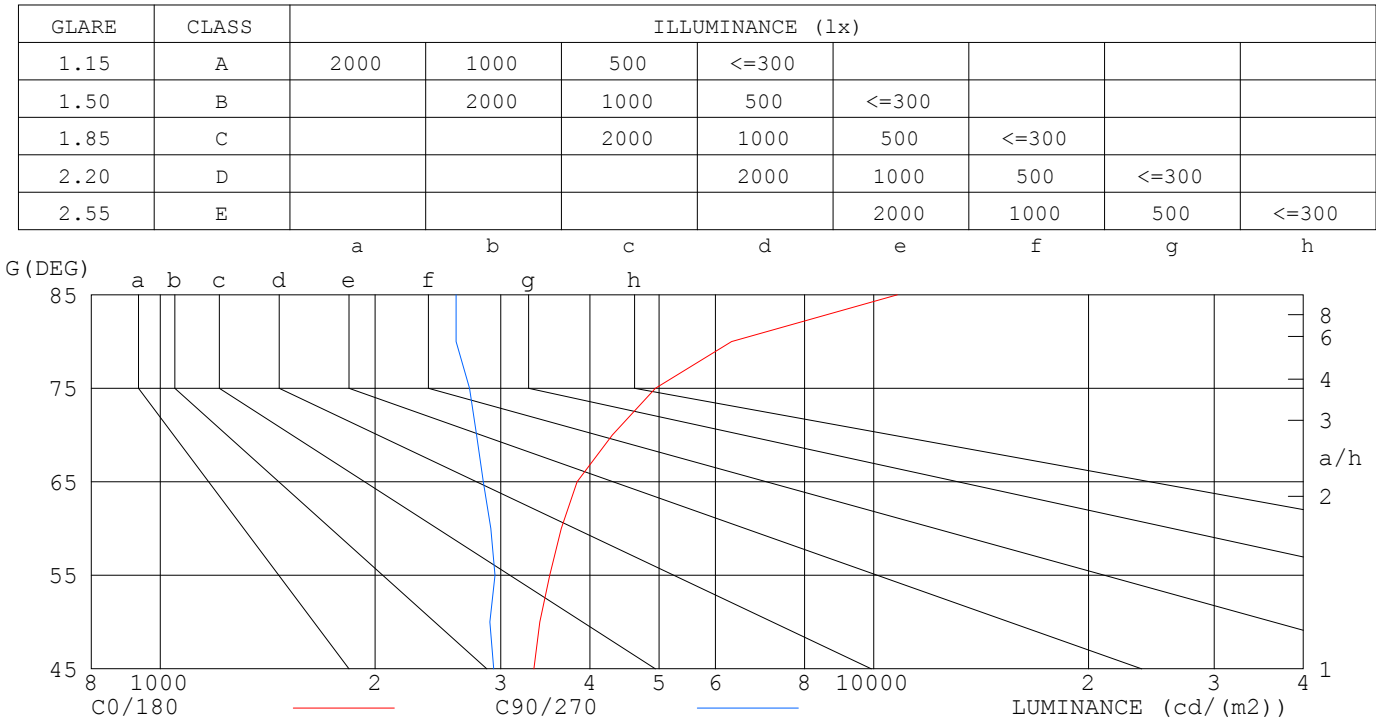
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.2M-22W-3000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1200*152*52mm		SERIAL No.:	

LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	10789	2597
80	6319	2598
75	4943	2713
70	4302	2775
65	3838	2836
60	3647	2905
55	3515	2944
50	3403	2896
45	3339	2933

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

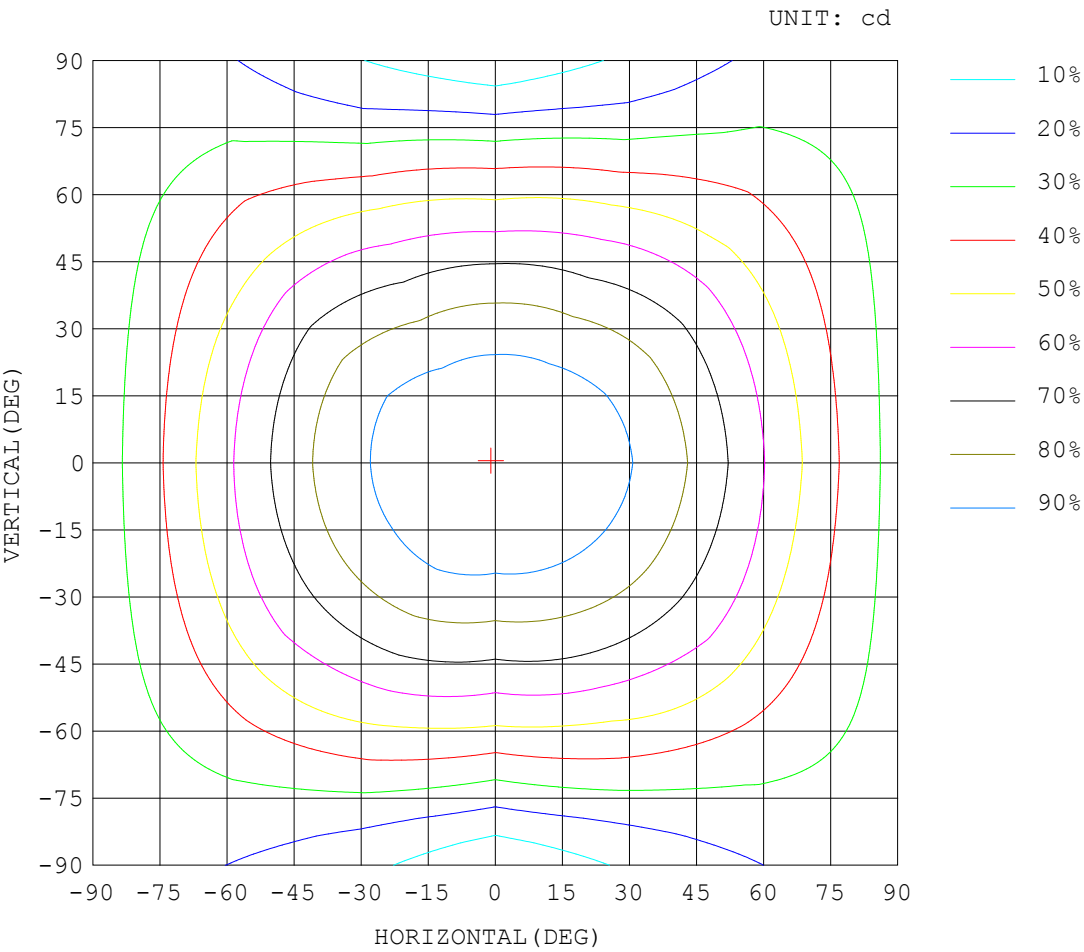
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	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

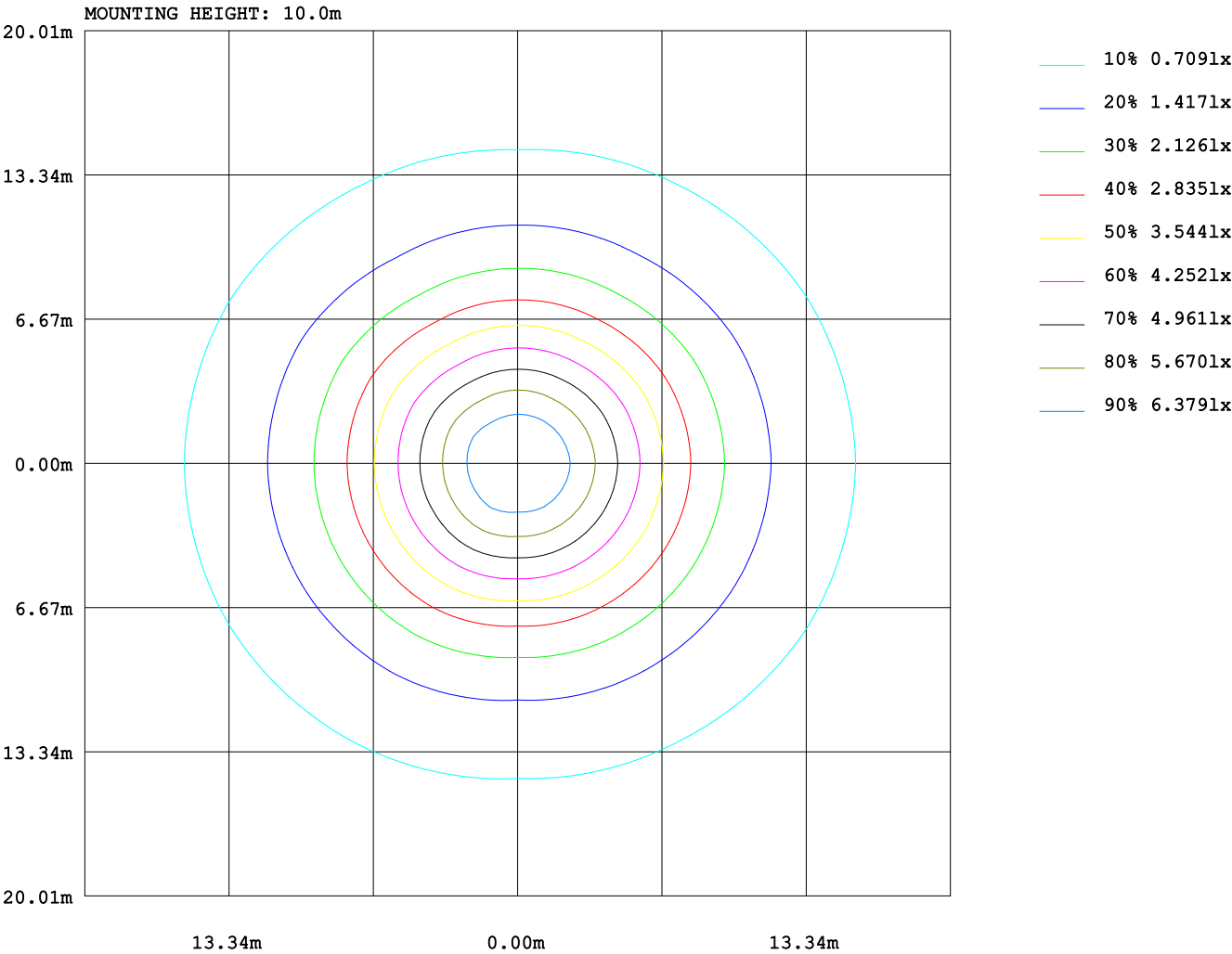
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	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-22W-3000K										TYPE:					WEIGHT:			
SPECIFICATION:										DIMENSION: 1200*152*52mm					SERIAL No.:			

90	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a							
	0.45	1.31	2.13	2.69	2.88	2.80	2.65	2.48	2.18	2.23	2.65	2.91	3.09	3.13	2.90	2.29	1.43	0.49	40.7	37.9										
80	0.47	1.45	2.51	3.46	4.13	4.60	5.00	5.37	5.45	5.50	5.51	5.21	4.85	4.37	3.67	2.69	1.57	0.51	66.4	66.4										
70	0.49	1.60	2.92	4.37	5.66	6.76	7.73	8.54	8.89	8.93	8.67	7.93	6.99	5.88	4.58	3.11	1.72	0.53	95.3	95.3										
60	0.50	1.74	3.36	5.29	7.05	8.82	10.3	11.4	11.9	11.9	11.5	10.5	9.05	7.30	5.50	3.56	1.87	0.55	122	122										
50	0.52	1.88	3.79	6.01	8.47	10.7	12.5	13.9	14.8	14.8	14.1	12.7	10.9	8.69	6.25	3.98	2.02	0.57	147	147										
40	0.54	2.00	4.14	6.74	9.71	12.4	14.5	16.2	17.2	17.3	16.4	14.7	12.5	9.90	6.95	4.33	2.15	0.59	169	169										
30	0.55	2.10	4.42	7.33	10.6	13.7	16.2	18.0	19.1	19.2	18.2	16.4	13.9	10.8	7.54	4.60	2.26	0.60	186	186										
VERTICAL (DEG)	0.56	2.18	4.64	7.73	11.2	14.6	17.4	19.4	20.4	20.5	19.4	17.5	14.7	11.4	7.97	4.81	2.34	0.61	198	198										
	0.57	2.22	4.78	7.95	11.5	14.9	17.9	20.1	21.2	21.2	20.1	18.1	15.2	11.8	8.22	4.94	2.39	0.62	204	204										
	0.56	2.22	4.78	7.94	11.5	14.9	17.8	20.0	21.2	21.2	20.2	18.1	15.2	11.8	8.21	4.94	2.39	0.62	204	204										
	0.56	2.17	4.67	7.73	11.1	14.5	17.3	19.5	20.6	20.6	19.5	17.5	14.7	11.4	7.95	4.80	2.33	0.61	198	198										
	0.55	2.09	4.44	7.37	10.5	13.7	16.4	18.4	19.3	19.3	18.3	16.4	13.8	10.7	7.54	4.58	2.24	0.60	187	187										
-30	0.54	1.99	4.13	6.87	9.65	12.4	14.9	16.6	17.3	17.3	16.5	14.9	12.5	9.82	6.97	4.27	2.12	0.58	170	170										
-40	0.52	1.86	3.74	6.11	8.67	10.9	12.9	14.3	14.8	14.8	14.2	12.8	10.9	8.72	6.21	3.88	1.98	0.56	148	148										
-50	0.50	1.72	3.31	5.23	7.28	9.18	10.6	11.7	12.0	12.0	11.5	10.5	9.12	7.32	5.33	3.44	1.83	0.54	123	123										
-60	0.48	1.58	2.87	4.31	5.78	7.16	8.22	8.74	8.76	8.73	8.66	8.12	7.11	5.80	4.39	2.98	1.68	0.52	95.9	95.9										
-70	0.46	1.43	2.46	3.44	4.28	5.01	5.47	5.54	5.27	5.24	5.46	5.35	4.92	4.27	3.49	2.55	1.52	0.50	66.7	66.7										
-80	0.44	1.29	2.07	2.68	3.03	3.19	3.05	2.62	2.02	1.99	2.51	2.88	3.04	2.97	2.68	2.12	1.36	0.48	40.4	37.7										
-90																														
HORIZONTAL (DEG)																					20	30	40	50	60	70	80	90		
Φ t	9.25	32.9	65.2	103	143	181	212	233	243	243	234	213	183	146	106	67.9	35.2	10.0	2806											
Φ a	9.25	32.9	65.2	103	143	181	211	232	242	242	233	213	183	146	106	67.9	35.2	10.0		2645										

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:

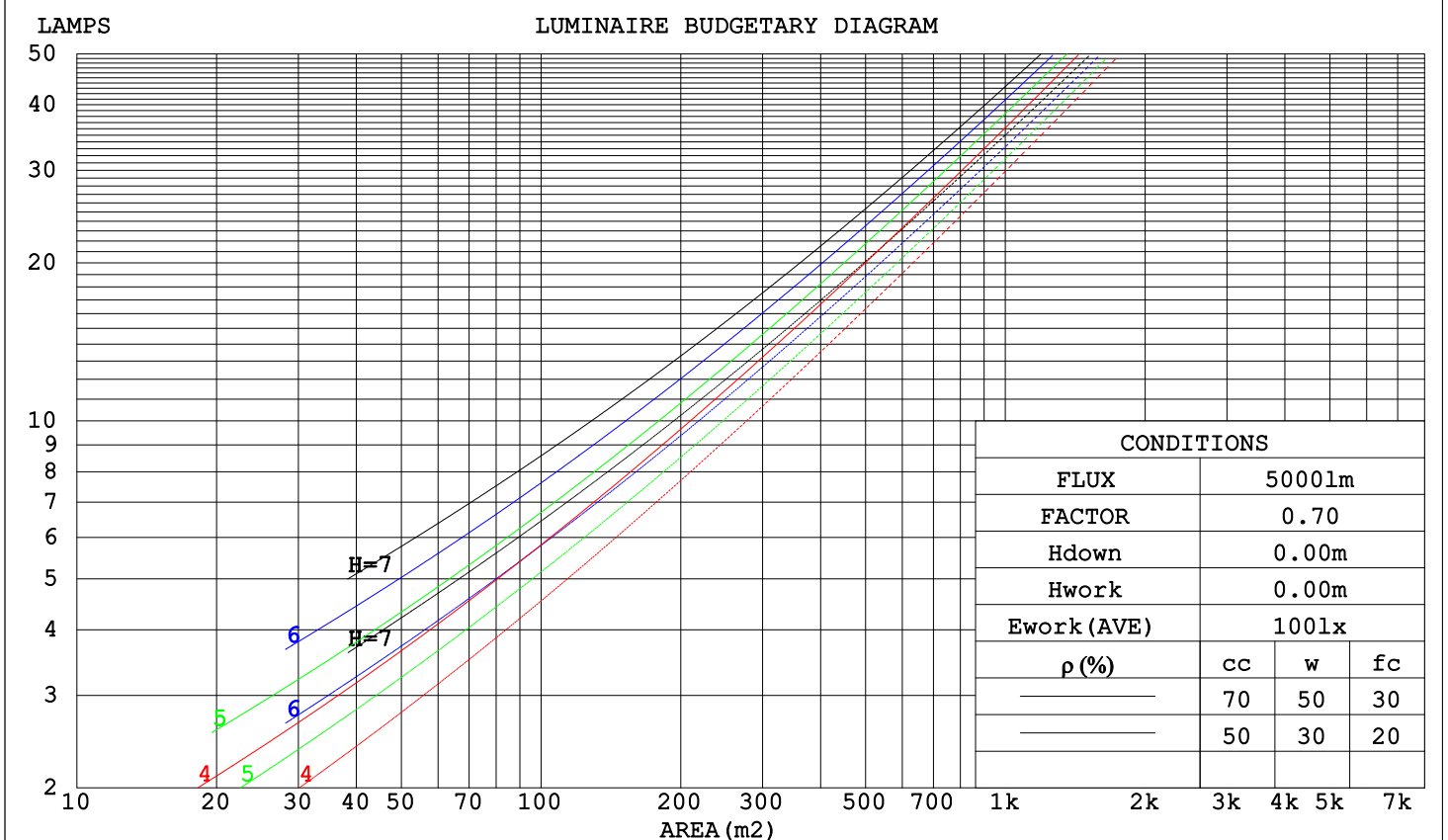
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.2M-22W-3000K								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-22W-3000K								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	.206	.065	.352	.201	.064	.332	.190	.061	.313	.181	.058	.296	.171	.055	
2.0	.322	.176	.054	.312	.172	.053	.294	.163	.051	.277	.155	.049	.261	.148	.047	
3.0	.289	.154	.046	.281	.150	.045	.264	.143	.043	.249	.136	.042	.235	.130	.040	
4.0	.262	.136	.040	.254	.133	.039	.240	.127	.038	.226	.121	.037	.213	.116	.035	
5.0	.240	.122	.035	.233	.119	.035	.219	.114	.034	.206	.109	.032	.195	.104	.031	
6.0	.220	.110	.032	.214	.108	.031	.202	.103	.030	.190	.099	.029	.179	.094	.028	
7.0	.204	.101	.029	.198	.099	.028	.187	.094	.027	.176	.090	.026	.166	.086	.025	
8.0	.189	.092	.026	.184	.091	.026	.174	.087	.025	.164	.083	.024	.155	.080	.023	
9.0	.177	.085	.024	.172	.084	.023	.162	.080	.023	.154	.077	.022	.145	.074	.021	
10.0	.166	.079	.022	.161	.078	.022	.152	.075	.021	.144	.072	.020	.137	.069	.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	.283	.283	.283	.242	.242	.242	.165	.165	.165	.095	.095	.095	.030	.030	.030	
1.0	.278	.249	.224	.238	.214	.193	.163	.147	.133	.094	.085	.077	.030	.027	.025	
2.0	.271	.226	.189	.232	.195	.163	.159	.135	.114	.092	.078	.067	.029	.025	.022	
3.0	.263	.209	.166	.226	.181	.144	.155	.125	.101	.089	.073	.060	.029	.024	.020	
4.0	.255	.197	.152	.219	.170	.132	.151	.118	.093	.087	.069	.055	.028	.023	.018	
5.0	.248	.187	.141	.213	.161	.123	.147	.113	.087	.085	.066	.052	.027	.022	.017	
6.0	.240	.179	.134	.207	.155	.117	.143	.108	.083	.083	.064	.049	.027	.021	.016	
7.0	.233	.172	.129	.201	.149	.112	.139	.104	.079	.081	.062	.047	.026	.020	.016	
8.0	.227	.166	.125	.195	.144	.109	.135	.101	.077	.079	.060	.046	.025	.020	.015	
9.0	.221	.161	.121	.190	.140	.106	.132	.098	.075	.077	.058	.045	.025	.019	.015	
10.0	.215	.157	.119	.185	.136	.104	.128	.096	.074	.075	.057	.044	.024	.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-22W-3000K					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	16.7	18.1	17.1	18.5	19.0	15.8	17.3	16.3	17.7	18.1
	19.0	20.3	19.4	20.7	21.2	17.5	18.9	18.0	19.3	19.8
	20.1	21.4	20.6	21.9	22.4	18.3	19.5	18.7	20.0	20.5
	21.4	22.6	21.9	23.1	23.6	18.8	20.0	19.3	20.5	21.0
	22.1	23.2	22.6	23.7	24.3	19.0	20.1	19.5	20.6	21.2
	22.9	24.0	23.4	24.5	25.1	19.1	20.2	19.6	20.7	21.3
4H 2H	17.3	18.6	17.8	19.0	19.6	16.7	17.9	17.2	18.4	18.9
	19.8	20.9	20.3	21.4	21.9	18.6	19.7	19.1	20.2	20.8
	21.1	22.1	21.7	22.6	23.2	19.5	20.5	20.0	21.0	21.6
	22.6	23.5	23.1	24.0	24.6	20.2	21.1	20.8	21.6	22.3
	23.4	24.2	24.0	24.8	25.4	20.5	21.3	21.0	21.9	22.5
	24.3	25.1	24.9	25.7	26.4	20.7	21.4	21.3	22.0	22.7
8H 4H	21.4	22.3	22.0	22.8	23.5	20.1	20.9	20.7	21.5	22.1
	23.1	23.9	23.8	24.5	25.1	21.0	21.7	21.7	22.4	23.0
	24.2	24.8	24.8	25.4	26.1	21.5	22.1	22.1	22.7	23.4
	25.3	25.9	26.0	26.5	27.3	21.8	22.4	22.5	23.0	23.8
12H 4H	21.5	22.2	22.1	22.8	23.5	20.2	21.0	20.8	21.6	22.3
	23.3	23.9	23.9	24.5	25.2	21.3	22.0	22.0	22.6	23.3
	24.4	24.9	25.0	25.6	26.3	21.9	22.4	22.5	23.1	23.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 2806 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.6)

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-22W-3000K	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) $k(RI) \times RCR = 5$									
$k = 0.60$	51	38	31	50	38	31	48	37	31	24
0.80	60	48	40	59	47	39	56	46	39	31
1.00	68	56	48	66	55	47	63	56	46	38
1.25	75	63	55	73	62	54	69	60	53	44
1.50	80	69	61	78	67	60	73	65	58	48
2.00	87	77	69	85	75	68	80	72	66	55
2.50	92	82	75	89	80	73	83	76	70	59
3.00	95	87	80	92	84	78	86	80	75	63
4.00	100	93	87	96	90	85	90	85	80	68
5.00	103	96	91	99	94	89	92	88	84	71
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

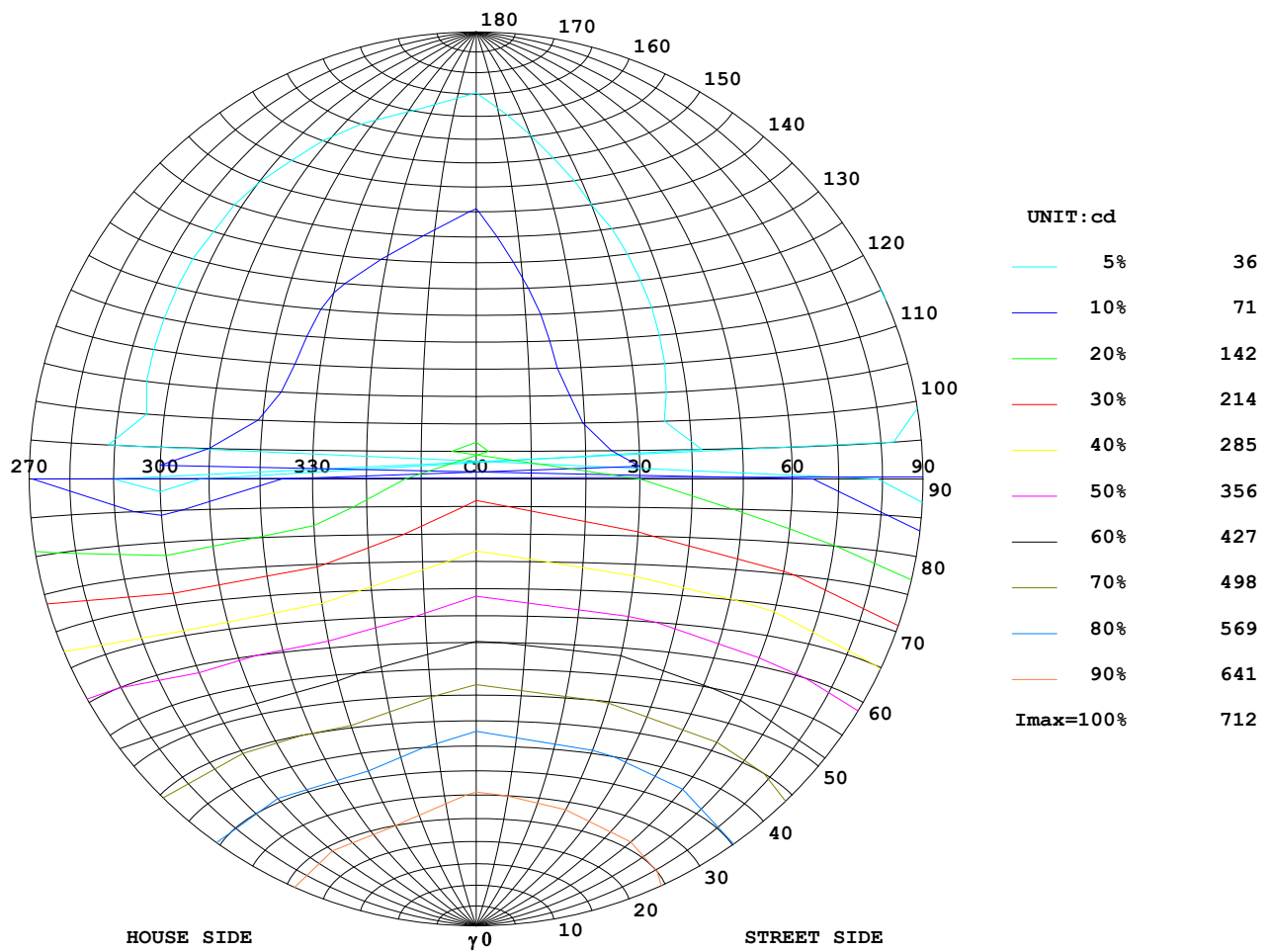
Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	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

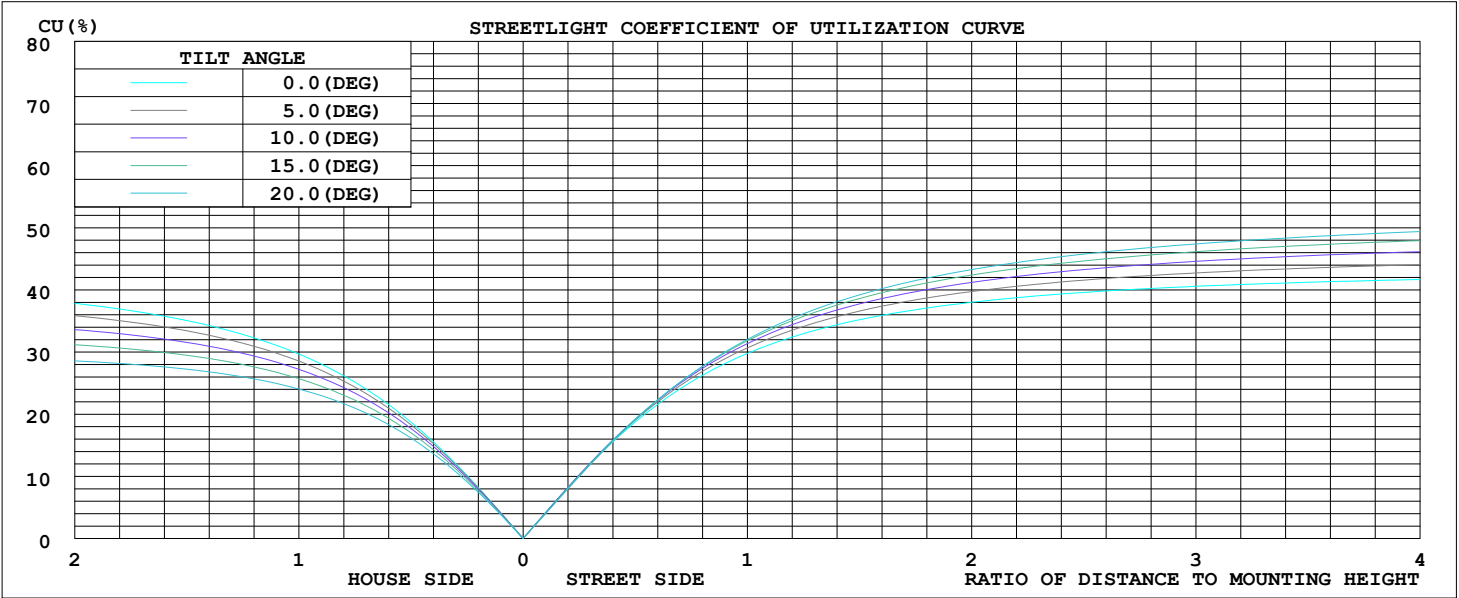
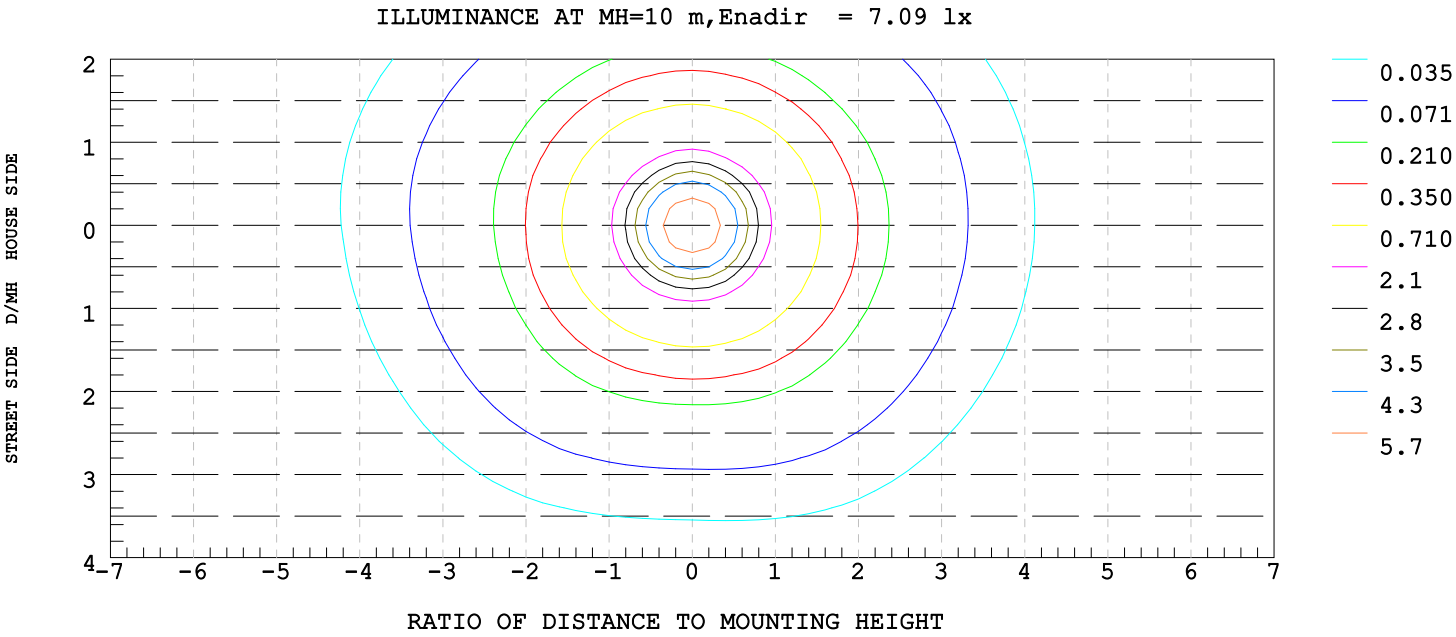
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:



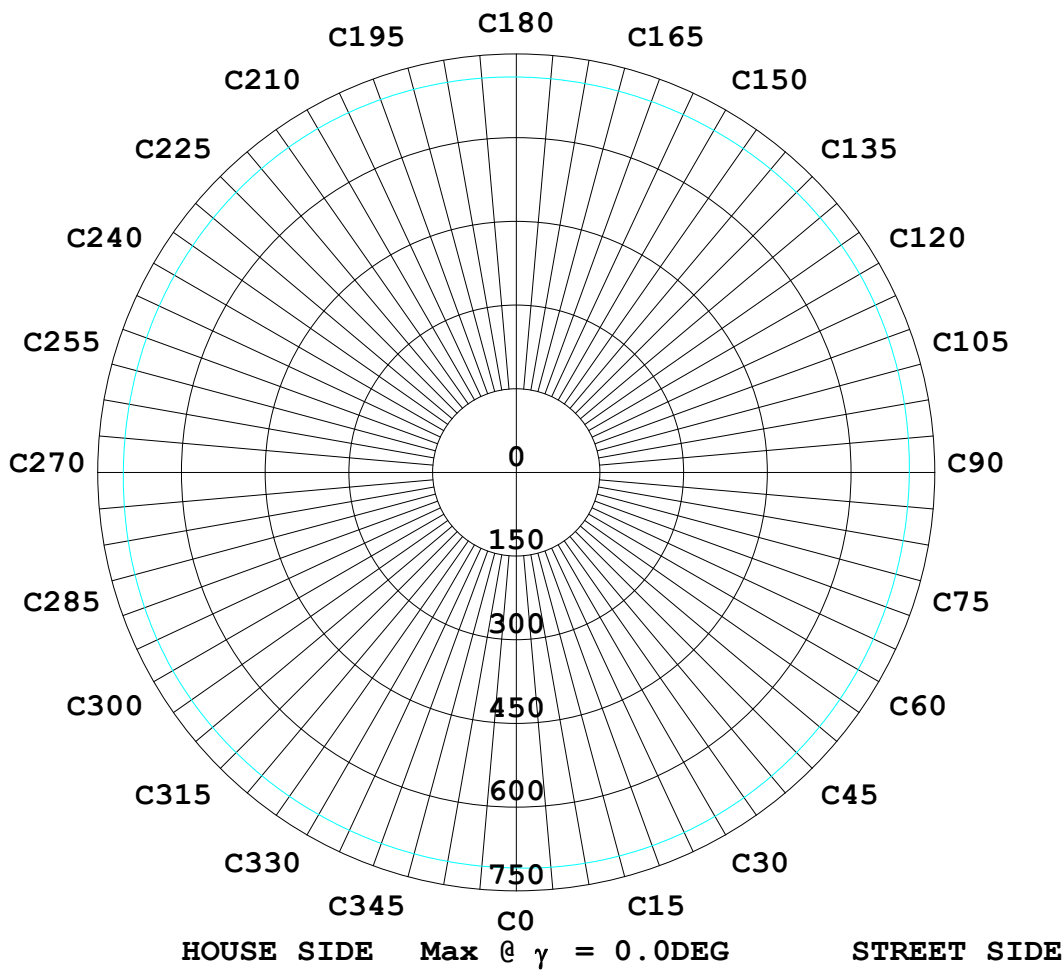
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

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

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-22W-3000K	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: