

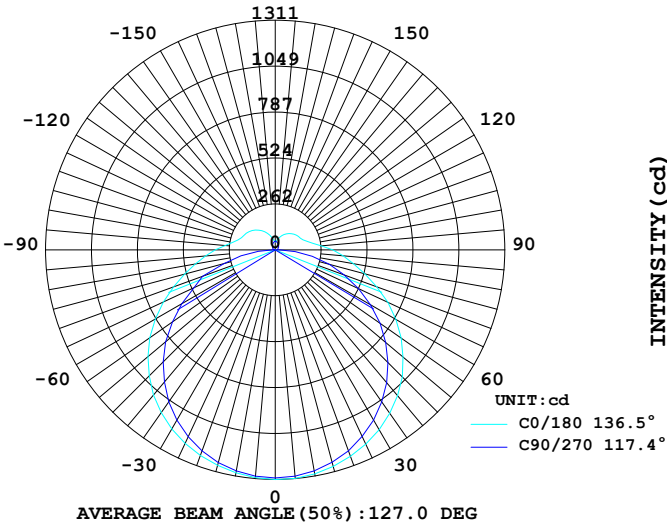
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

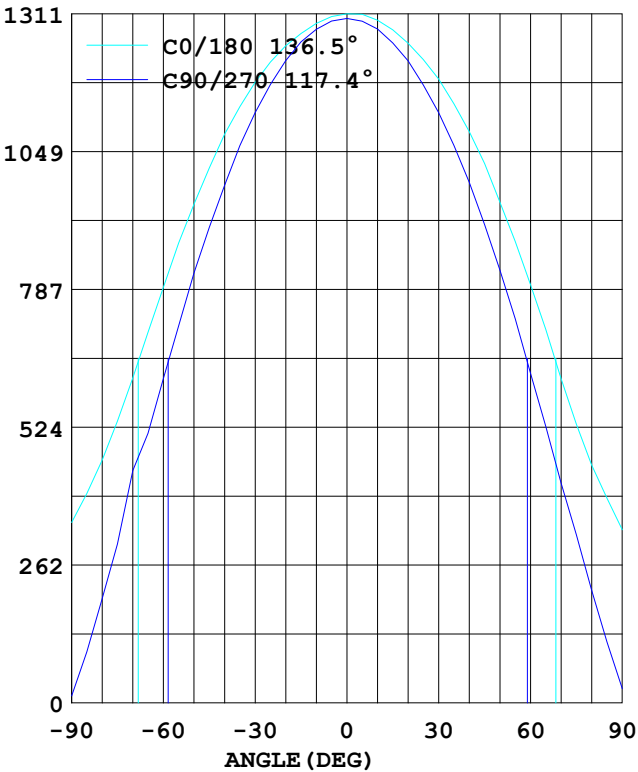
MANUFACTURER:		
Address:		
NAME: 1.2M-40W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	1311	S/MH(C0/180)	1.34
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.28
NOMINAL POWER(W)	40	TOTAL FLUX(lm)	5257.5	Voltage(V)	220.0
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	129.7	Current(A)	0.187
NOMINAL FLUX(lm)	5257.5	η up(%)	13.0	Power(W)	40.54
LAMPS QUANTITY	1	η down(%)	87.0	Power Factor(PF)	0.985
TEST VOLTAGE(V)	220.0	Effective Flux(lm)	4981.8	EEI	0.111

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



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

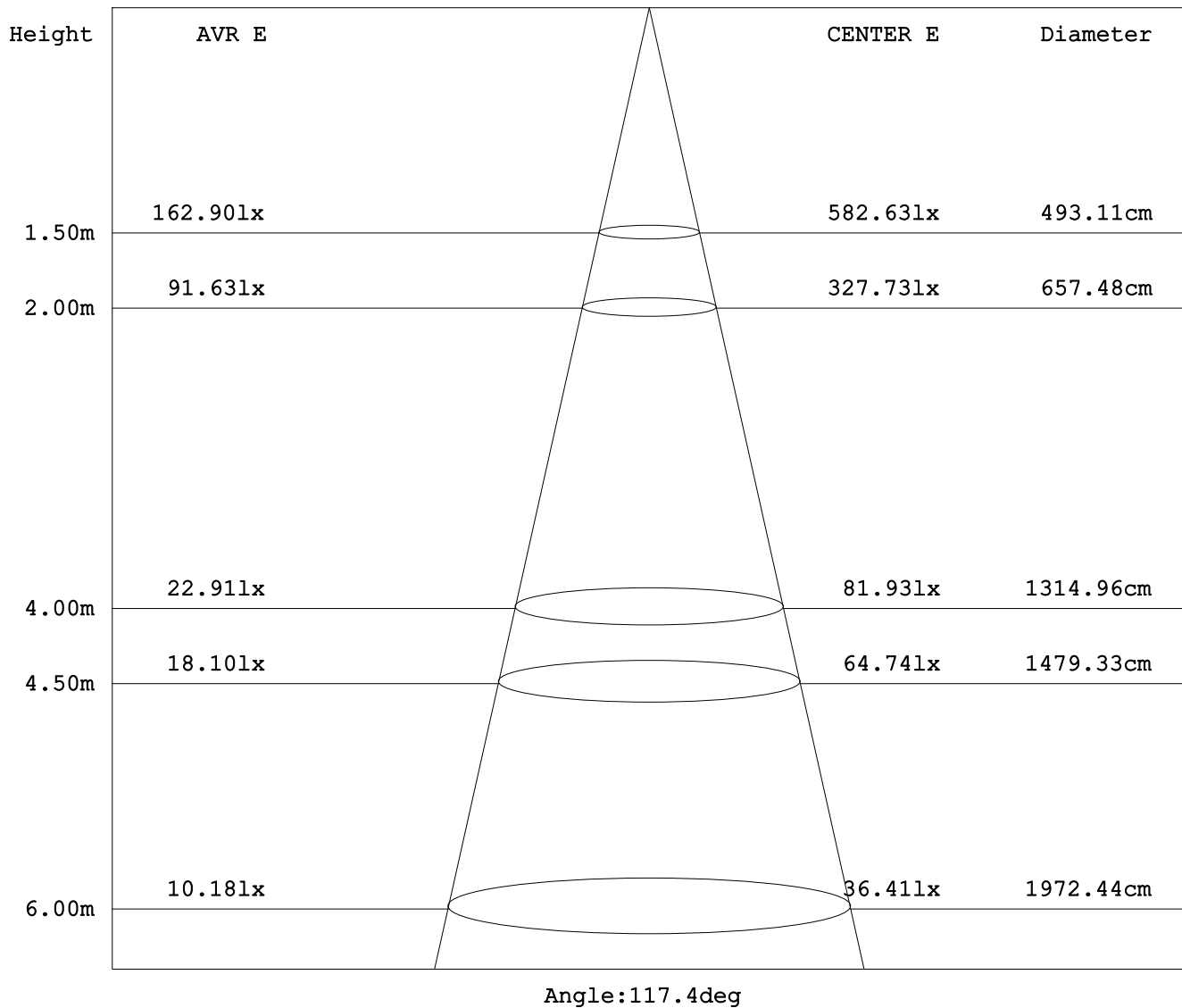
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-4000K	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-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	1293	1287	1281	1289	1299	1291	1282	1278	0- 10	123.7	123.7
20.0	1250	1236	1222	1241	1255	1240	1221	1223	10- 20	357.5	481.2
30.0	1180	1153	1123	1160	1187	1158	1123	1137	20- 30	552.5	1034
40.0	1082	1039	984.0	1047	1087	1046	990.2	1020	30- 40	687.9	1722
50.0	948.3	895.1	817.4	904.2	952.7	902.5	823.5	874.4	40- 50	746.7	2468
60.0	790.6	723.0	616.9	731.8	796.0	734.5	627.7	701.6	50- 60	722.0	3191
70.0	618.1	535.1	441.8	542.0	617.0	548.4	418.7	513.8	60- 70	619.4	3810
80.0	462.0	370.3	198.5	372.8	452.9	368.3	214.8	340.3	70- 80	463.5	4274
90.0	343.1	236.4	13.18	220.2	329.1	233.5	26.98	218.7	80- 90	302.8	4576
100.0	247.4	142.5	5.808	120.1	218.2	131.2	11.01	129.0	90-100	176.7	4753
110.0	205.4	132.2	10.89	104.9	168.9	113.8	15.60	125.4	100-110	125.7	4879
120.0	190.9	128.5	15.60	99.76	153.7	107.2	19.60	120.8	110-120	109.8	4989
130.0	172.0	117.9	20.69	90.81	140.1	97.46	25.28	111.1	120-130	92.97	5082
140.0	147.6	103.0	25.28	77.98	122.6	85.06	29.88	97.64	130-140	72.76	5154
150.0	119.9	85.54	32.30	64.00	101.8	68.66	35.93	81.37	140-150	51.03	5205
160.0	89.29	68.00	39.56	55.35	78.64	54.99	41.62	64.79	150-160	31.43	5237
170.0	56.86	55.05	45.85	46.76	56.26	45.98	47.06	53.90	160-170	15.90	5253
180.0	45.98	47.43	49.36	48.21	45.85	47.55	49.73	48.27	170-180	4.707	5258
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:

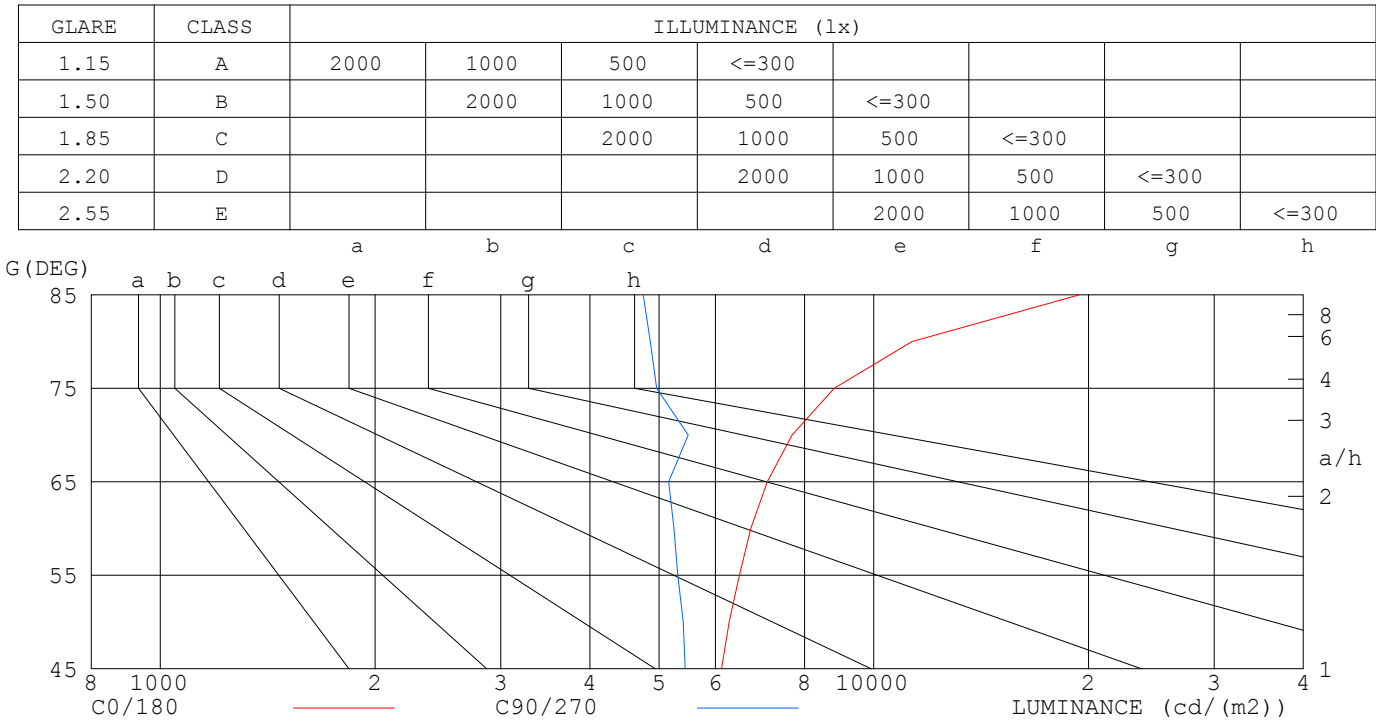
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.2M-40W-4000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1200*152*52mm		SERIAL No.:	

LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	19424	4751
80	11313	4861
75	8803	4963
70	7684	5493
65	7091	5157
60	6722	5246
55	6482	5314
50	6273	5407
45	6118	5439

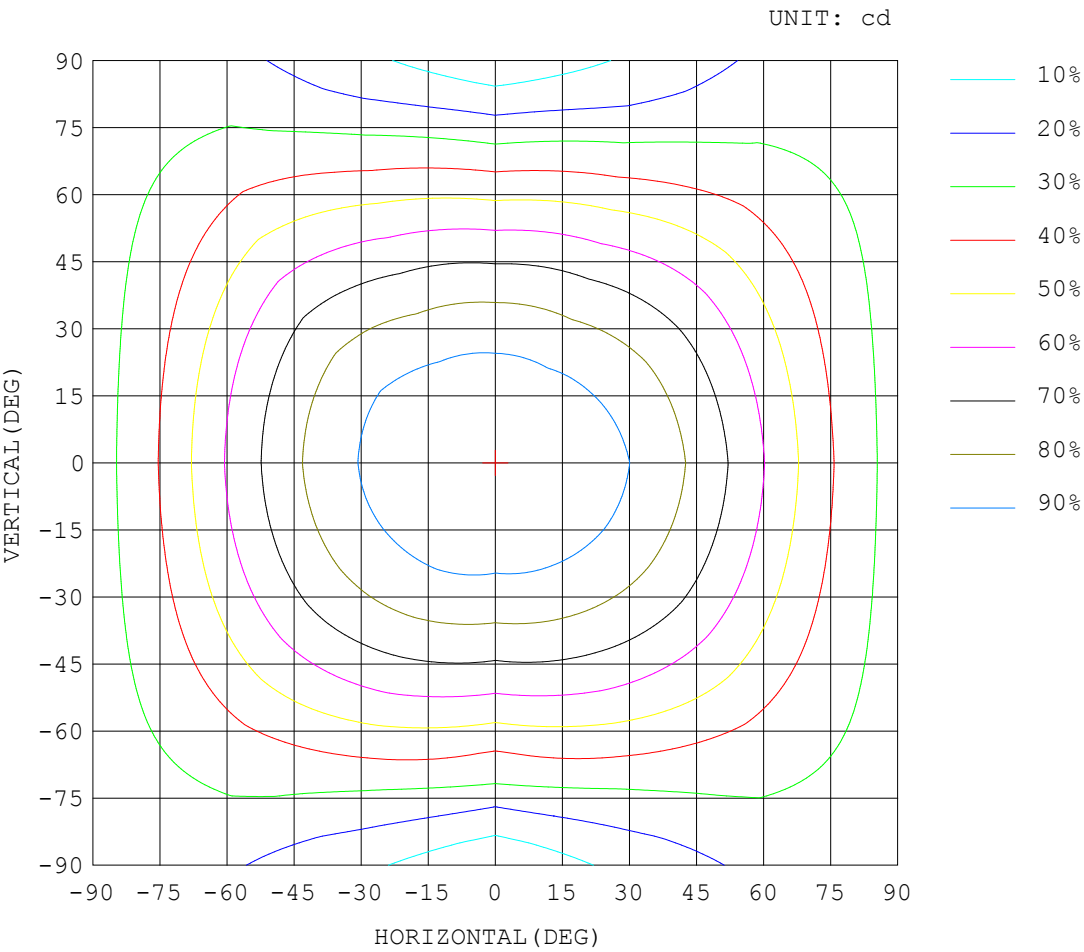
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

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-4000K	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

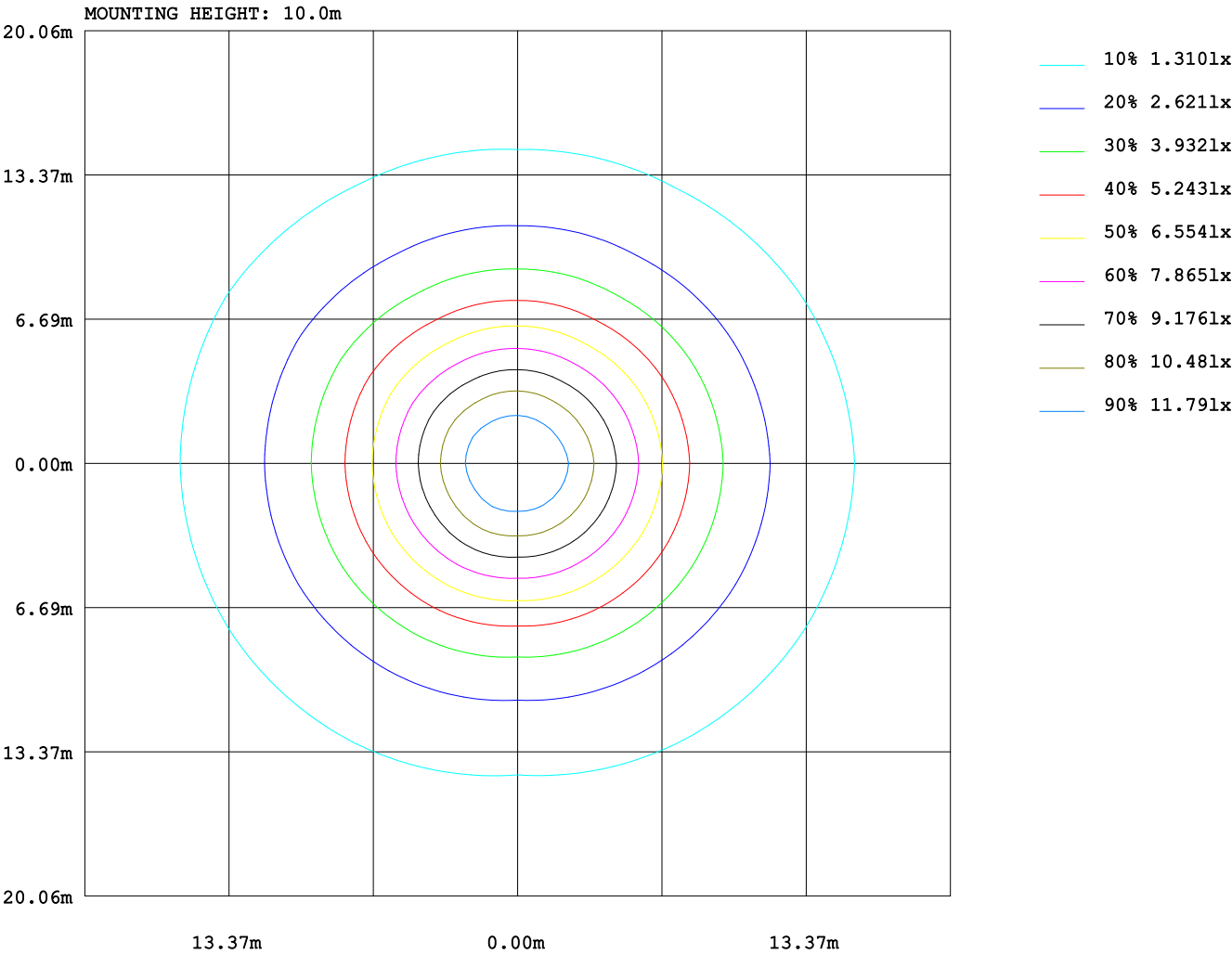
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-4000K	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-4000K										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 1200*152*52mm					SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.88	2.61	4.27	5.45	5.93	5.93	5.60	5.02	4.13	4.03	4.71	5.13	5.44	5.53	5.15	4.11	2.59	0.90	77.4	72.8		
90																						
80	0.91	2.85	4.93	6.83	8.24	9.28	9.97	10.2	10.0	9.88	9.87	9.33	8.59	7.64	6.38	4.72	2.82	0.93	124	124		
70	0.95	3.11	5.68	8.48	10.9	13.1	14.7	15.9	16.1	16.0	15.4	14.1	12.3	10.2	7.91	5.41	3.06	0.96	175	175		
60	0.98	3.36	6.48	10.2	13.8	17.0	19.5	21.4	22.2	22.0	21.0	18.9	16.2	13.0	9.59	6.19	3.31	0.99	227	227		
50	1.01	3.61	7.27	11.8	16.4	20.5	23.8	26.3	27.6	27.4	25.9	23.2	19.8	15.6	11.2	6.98	3.57	1.02	274	274		
40	1.03	3.84	7.97	13.1	18.7	23.6	27.6	30.4	32.0	31.9	30.0	26.9	22.8	17.9	12.6	7.71	3.80	1.05	314	314		
30	1.06	4.03	8.52	14.1	20.3	26.0	30.6	33.7	35.5	35.3	33.3	29.9	25.2	19.6	13.7	8.31	4.01	1.07	345	345		
	1.07	4.16	8.92	14.8	21.3	27.5	32.6	36.1	37.9	37.7	35.6	32.0	26.9	20.9	14.6	8.76	4.16	1.09	367	367		
	1.08	4.24	9.13	15.2	21.9	28.2	33.5	37.3	39.2	38.9	36.9	33.2	27.9	21.6	15.1	9.04	4.27	1.10	379	379		
	1.08	4.23	9.11	15.2	21.8	28.1	33.4	37.2	39.2	39.1	37.1	33.3	28.0	21.7	15.1	9.06	4.27	1.11	379	379		
	1.07	4.14	8.85	14.7	21.2	27.3	32.4	36.1	38.0	37.9	36.0	32.3	27.1	21.0	14.6	8.80	4.18	1.09	367	367		
-30	1.05	4.00	8.42	14.0	20.0	25.7	30.6	34.0	35.6	35.5	33.8	30.4	25.6	19.8	13.8	8.37	4.04	1.08	346	346		
-40	1.03	3.81	7.81	12.9	18.3	23.5	27.8	30.8	32.1	32.0	30.6	27.6	23.3	18.1	12.7	7.78	3.85	1.05	316	316		
-50	1.00	3.59	7.08	11.5	16.1	20.5	24.2	26.6	27.5	27.5	26.4	23.9	20.3	16.0	11.4	7.07	3.63	1.03	276	276		
-60	0.97	3.35	6.33	9.87	13.6	17.0	19.8	21.6	22.0	22.0	21.4	19.6	16.8	13.4	9.78	6.34	3.39	1.00	229	229		
-70	0.94	3.06	5.64	8.24	10.7	13.1	15.0	16.1	16.1	16.1	15.9	14.8	12.9	10.6	8.22	5.66	3.13	0.97	178	178		
-80	0.90	2.77	4.79	6.76	8.21	9.30	10.0	10.2	9.86	9.83	10.1	9.91	9.24	8.19	6.80	4.90	2.87	0.93	126	126		
-90	0.86	2.51	4.02	5.14	5.73	5.91	5.60	4.82	3.72	3.76	4.92	5.76	6.13	5.99	5.40	4.23	2.63	0.90	78.1	73.3		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)				20	30	40	50	60	70	80	90		
Φ t	17.9	63.3	125	199	274	342	397	435	450	448	430	391	335	267	194	124	63.6	18.3	5258			
Φ a	17.9	63.3	125	199	274	342	397	433	447	445	428	391	335	267	194	124	63.6	18.3		4982		

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:

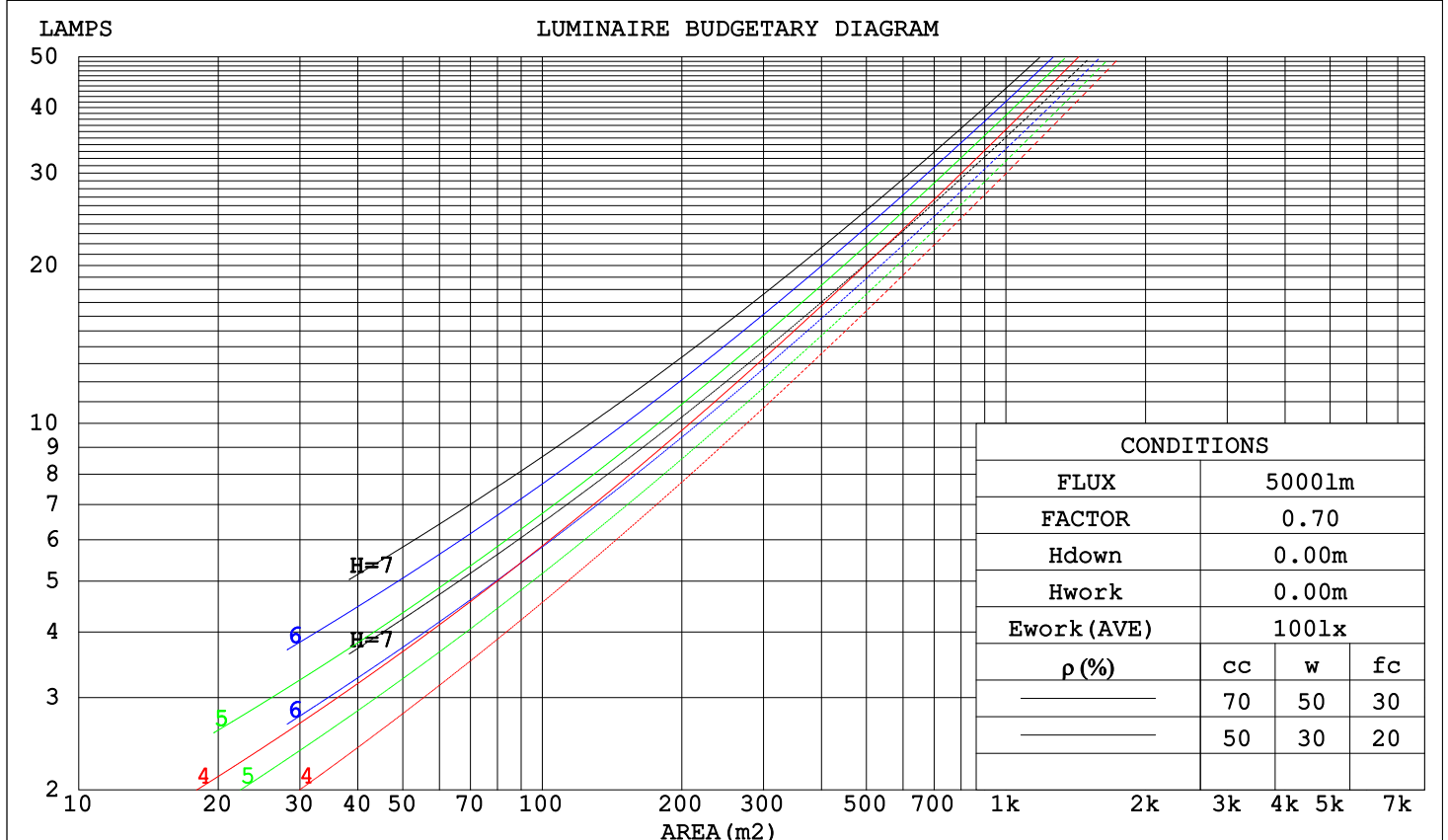
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.2M-40W-4000K								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-4000K								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															Wall Exitance Coefficients (WEC)														
0.0																														
1.0	.364	.207	.065	.352	.201	.064	.332	.190	.061	.312	.180	.058	.295	.171	.055															
2.0	.322	.176	.054	.312	.172	.053	.293	.163	.051	.276	.155	.048	.260	.147	.046															
3.0	.289	.154	.046	.280	.150	.045	.263	.143	.043	.248	.136	.042	.233	.129	.040															
4.0	.262	.136	.040	.254	.133	.039	.239	.127	.038	.225	.121	.036	.211	.115	.035															
5.0	.240	.122	.035	.232	.119	.035	.218	.114	.033	.205	.108	.032	.193	.103	.031															
6.0	.220	.110	.032	.214	.108	.031	.201	.103	.030	.189	.098	.029	.178	.094	.028															
7.0	.204	.101	.029	.198	.098	.028	.186	.094	.027	.175	.090	.026	.165	.086	.025															
8.0	.189	.092	.026	.184	.090	.026	.173	.087	.025	.163	.083	.024	.154	.079	.023															
9.0	.177	.085	.024	.172	.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															

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	.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	.079	.031	.028	.026	
2.0	.276	.232	.195	.237	.200	.168	.162	.138	.117	.094	.080	.069	.030	.026	.022	
3.0	.269	.215	.172	.231	.186	.149	.158	.129	.105	.091	.075	.062	.029	.024	.020	
4.0	.261	.202	.158	.224	.175	.137	.154	.122	.096	.089	.071	.057	.029	.023	.019	
5.0	.254	.192	.147	.218	.167	.128	.150	.116	.091	.087	.068	.054	.028	.022	.018	
6.0	.246	.184	.140	.212	.160	.122	.146	.112	.086	.085	.066	.051	.027	.021	.017	
7.0	.239	.178	.135	.206	.154	.117	.142	.108	.083	.083	.064	.049	.027	.021	.016	
8.0	.233	.172	.131	.200	.149	.114	.139	.105	.081	.081	.062	.048	.026	.020	.016	
9.0	.226	.167	.127	.195	.145	.111	.135	.102	.079	.079	.060	.047	.026	.020	.016	
10.0	.221	.163	.125	.190	.142	.109	.132	.100	.077	.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-4000K					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	19.6	21.0	20.1	21.4	21.9	
4H	22.1	23.3	22.6	23.8	24.3	20.3	21.6	20.8	22.1	22.6	
6H	23.3	24.5	23.9	25.0	25.6	20.9	22.1	21.4	22.6	23.1	
8H	24.0	25.2	24.6	25.7	26.2	21.1	22.2	21.6	22.7	23.3	
12H	24.8	25.9	25.4	26.4	27.0	21.2	22.3	21.8	22.8	23.4	
4H 2H	19.4	20.6	19.9	21.1	21.6	18.7	19.9	19.2	20.4	20.9	
3H	21.7	22.8	22.3	23.4	23.9	20.7	21.8	21.2	22.3	22.9	
4H	23.1	24.1	23.6	24.6	25.2	21.5	22.5	22.1	23.1	23.7	
6H	24.5	25.4	25.1	26.0	26.7	22.3	23.2	22.9	23.7	24.4	
8H	25.3	26.2	25.9	26.8	27.4	22.5	23.4	23.1	24.0	24.6	
12H	26.3	27.1	26.9	27.7	28.3	22.8	23.5	23.4	24.1	24.8	
8H 4H	23.4	24.3	24.0	24.9	25.5	22.1	23.0	22.7	23.6	24.2	
6H	25.2	25.9	25.8	26.5	27.2	23.2	23.9	23.8	24.5	25.2	
8H	26.2	26.8	26.8	27.4	28.2	23.6	24.3	24.3	24.9	25.6	
12H	27.4	27.9	28.0	28.6	29.3	24.0	24.6	24.7	25.2	26.0	
12H 4H	23.5	24.2	24.1	24.8	25.5	22.3	23.1	22.9	23.7	24.4	
6H	25.3	25.9	25.9	26.6	27.3	23.5	24.1	24.1	24.7	25.5	
8H	26.4	26.9	27.1	27.6	28.3	24.1	24.6	24.7	25.3	26.0	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.2					+ 0.1 / - 0.2					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117 Corrected 5258 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.8)

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-4000K	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) $k(RI) \times RCR = 5$									
$k = 0.60$	50	38	31	49	38	31	48	37	30	24
0.80	60	47	39	58	47	39	56	45	38	30
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	57	48
2.00	87	77	69	84	75	68	79	71	65	54
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		

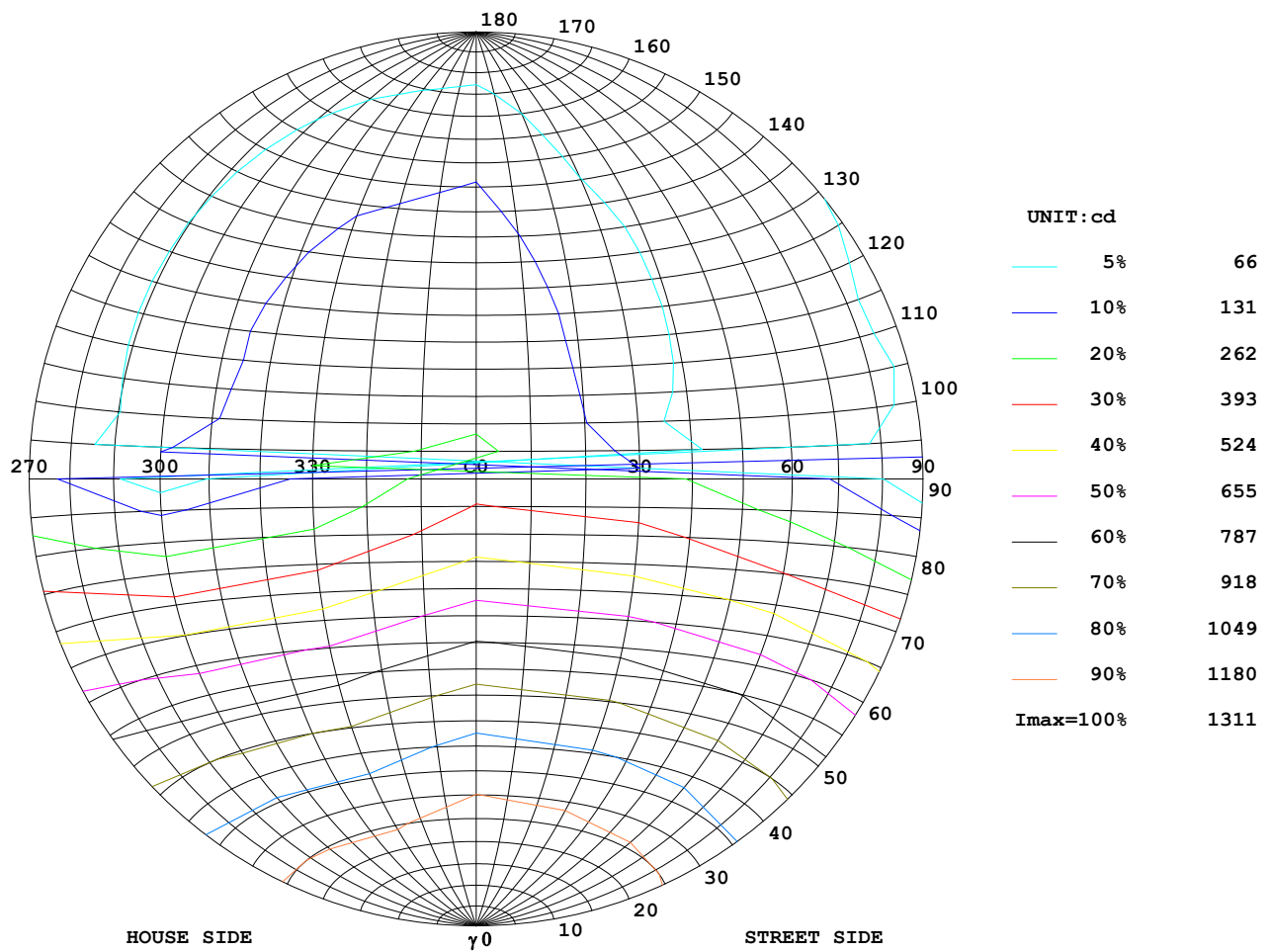
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年12月1日

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-4000K	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:

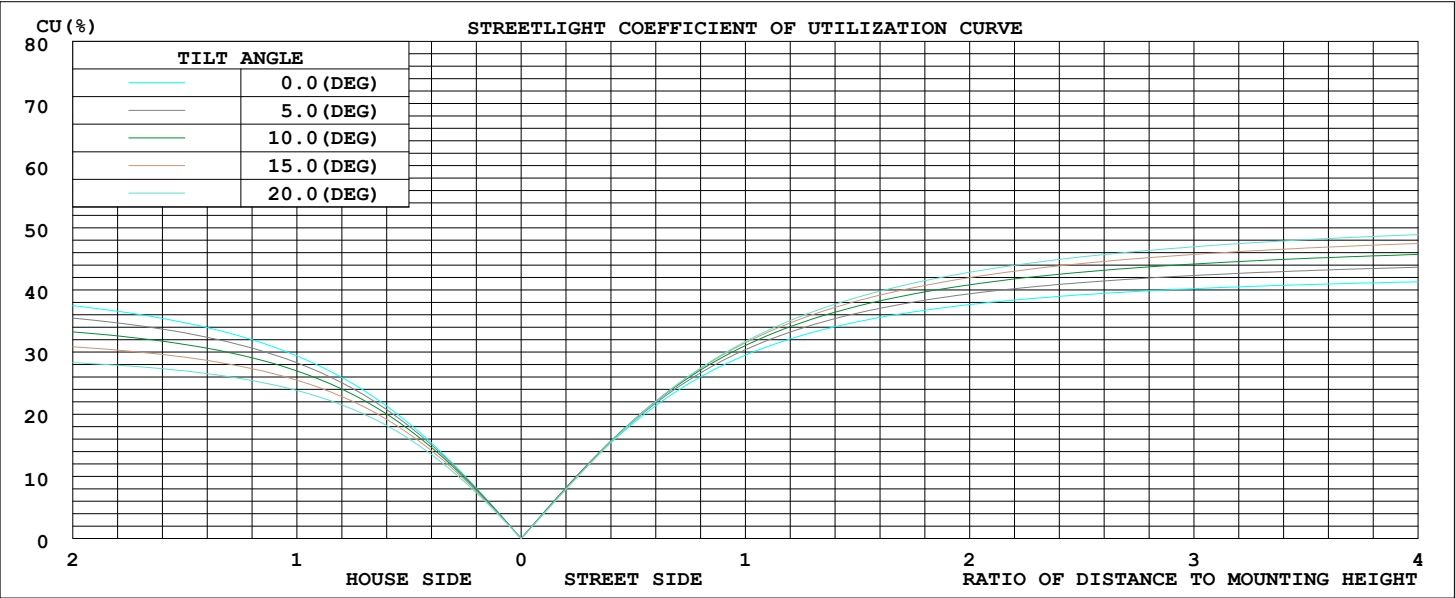
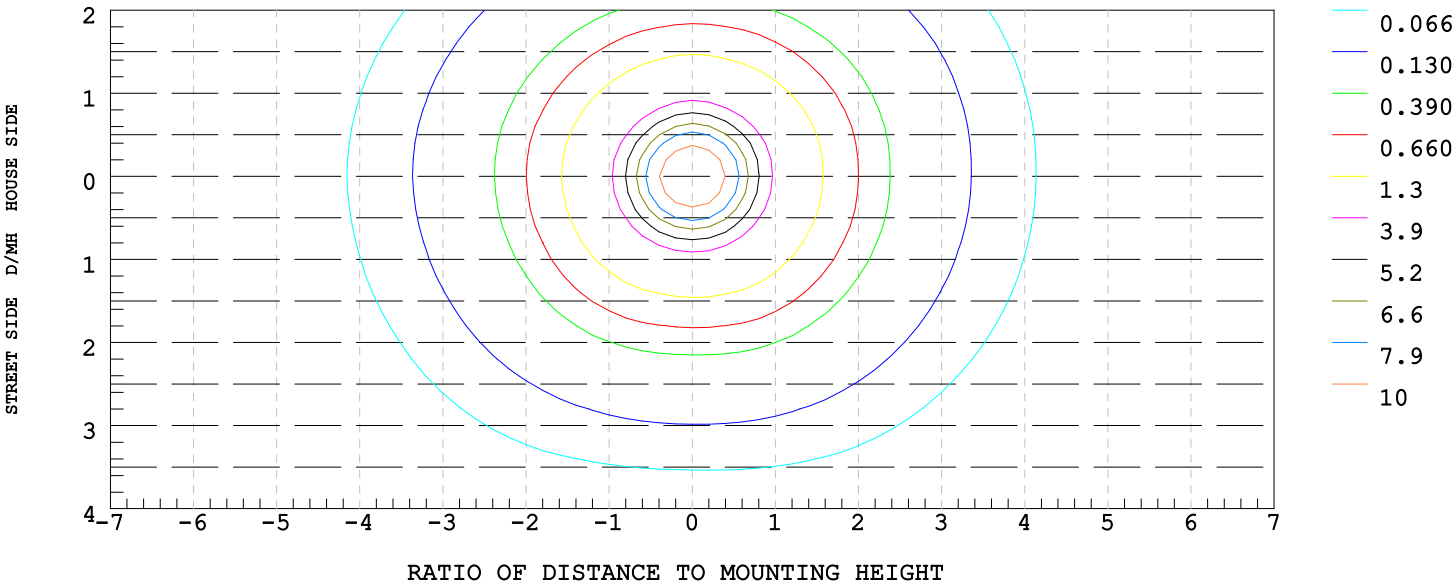
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 13.11 lx



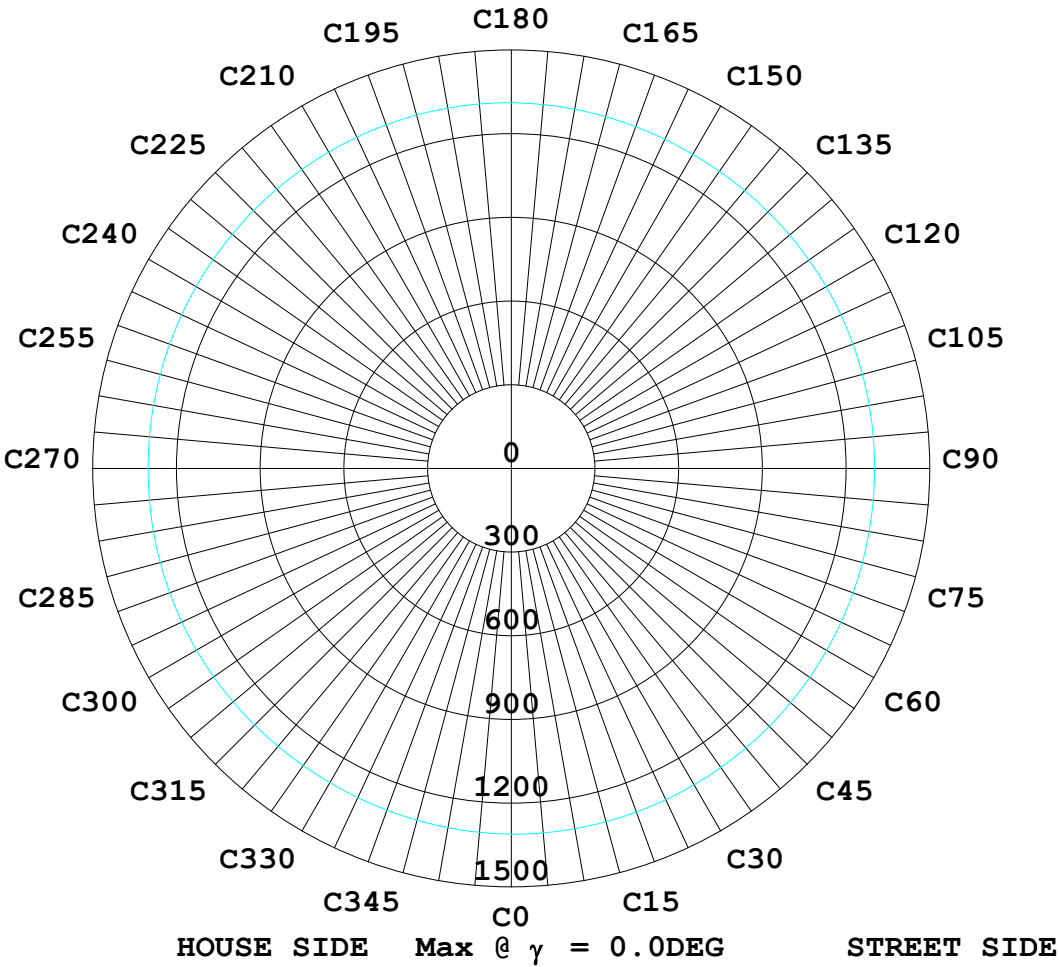
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年12月1日

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

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-40W-4000K	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: