

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

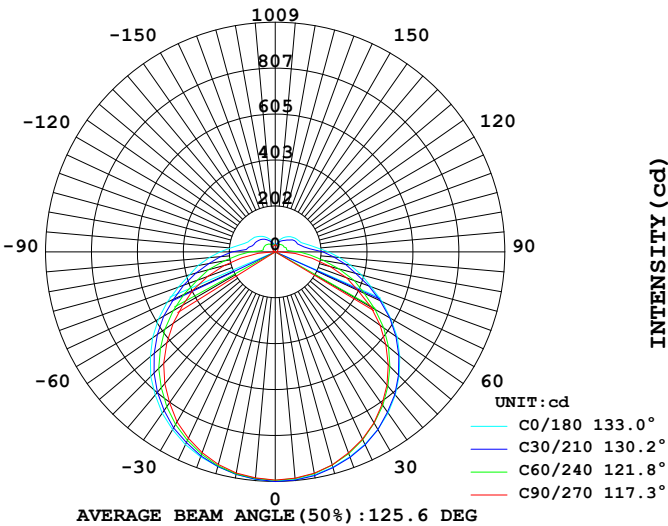
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

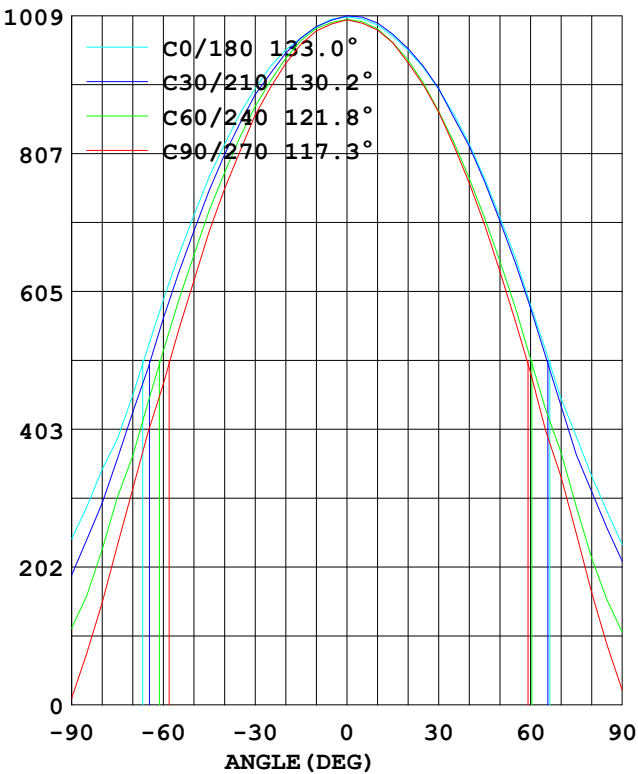
MANUFACTURER:		
Address:		
NAME: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	1009	S/MH(C0/180)	1.34
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.28
NOMINAL POWER(W)	28	TOTAL FLUX(lm)	4066.5	Voltage(V)	220.1
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	142.9	Current(A)	0.138
NOMINAL FLUX(lm)	4066.5	η up(%)	12.9	Power(W)	28.45
LAMPS QUANTITY	1	η down(%)	87.1	Power Factor(PF)	0.934
TEST VOLTAGE(V)	220.1	Effective Flux(lm)	3855.3	EEI	0.101

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

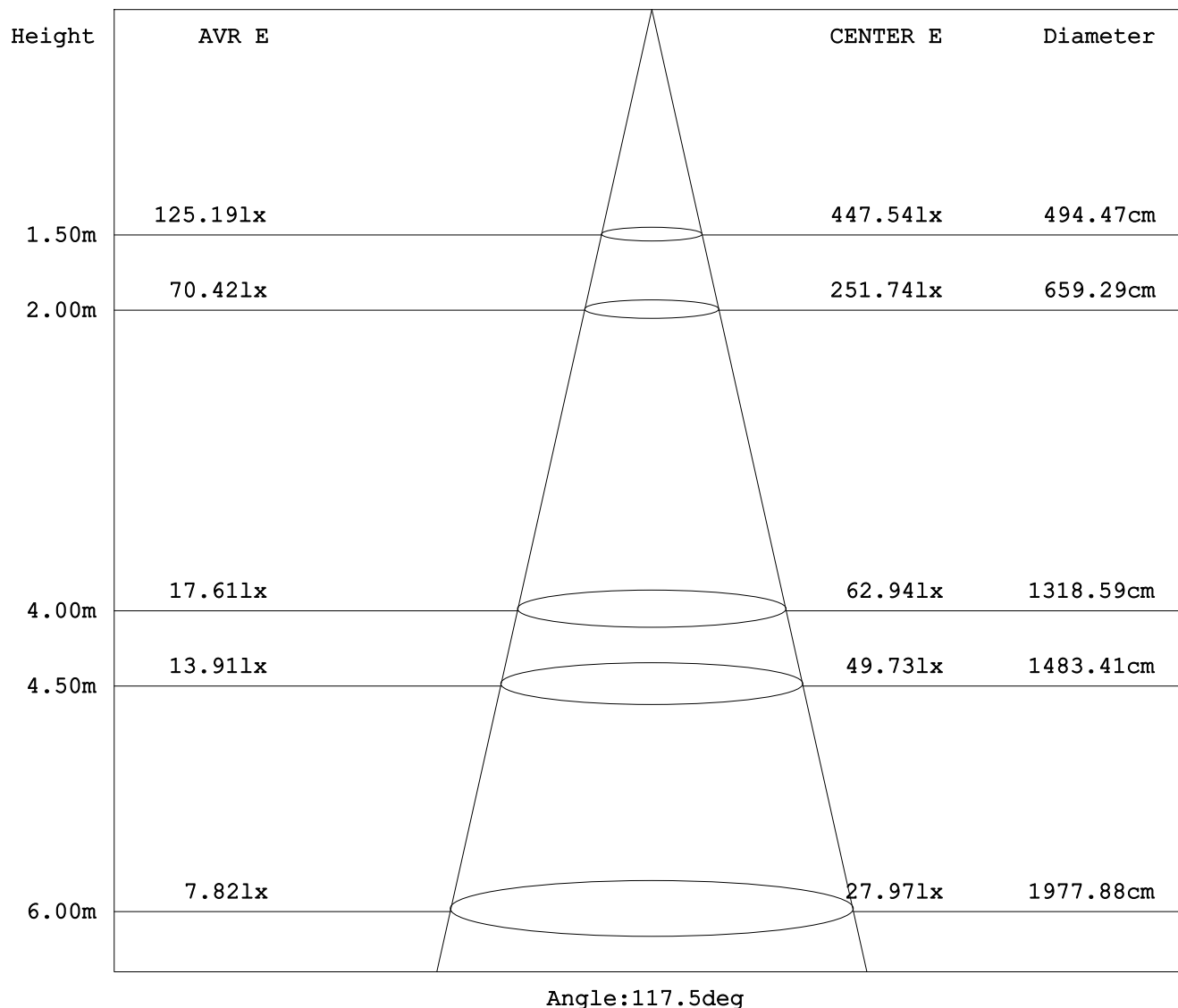
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14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: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	992.3	991.2	986.3	994.6	995.1	993.7	987.7	995.3	0- 10	95.37	95.37
20.0	958.4	950.0	938.8	957.7	958.0	952.0	939.6	956.7	10- 20	275.6	370.9
30.0	902.0	884.3	862.9	900.1	901.2	885.3	867.5	902.2	20- 30	426.3	797.3
40.0	820.2	792.0	755.1	815.6	820.9	794.0	763.7	819.2	30- 40	530.8	1328
50.0	716.4	676.0	621.2	708.3	714.1	679.2	634.7	712.9	40- 50	576.3	1905
60.0	592.6	542.0	469.7	581.5	585.6	544.3	486.7	586.1	50- 60	556.7	2461
70.0	453.2	396.5	316.2	440.1	448.5	403.8	334.2	444.9	60- 70	477.1	2938
80.0	344.7	261.5	149.7	323.5	335.2	264.0	164.9	327.4	70- 80	363.0	3301
90.0	242.8	151.1	9.679	222.4	234.2	158.0	21.17	225.7	80- 90	242.2	3544
100.0	165.8	86.21	2.299	146.5	159.8	90.32	8.107	148.0	90-100	142.9	3687
110.0	127.8	76.89	5.687	115.1	121.2	78.46	10.28	116.8	100-110	101.0	3788
120.0	116.5	73.20	9.559	106.7	110.8	71.51	12.94	108.2	110-120	83.14	3871
130.0	104.4	67.09	13.79	94.19	100.5	63.16	15.97	97.40	120-130	69.39	3940
140.0	89.66	58.86	17.90	77.13	87.48	54.08	19.11	84.21	130-140	53.10	3993
150.0	71.63	48.94	21.90	61.28	72.23	47.31	22.14	69.45	140-150	36.86	4030
160.0	53.23	38.96	26.25	46.88	55.41	39.14	25.53	52.45	150-160	22.42	4053
170.0	36.17	32.66	29.16	32.97	37.14	31.82	29.28	37.20	160-170	10.87	4064
180.0	32.06	30.67	30.73	30.37	31.58	30.67	31.45	31.21	170-180	3.032	4067
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

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

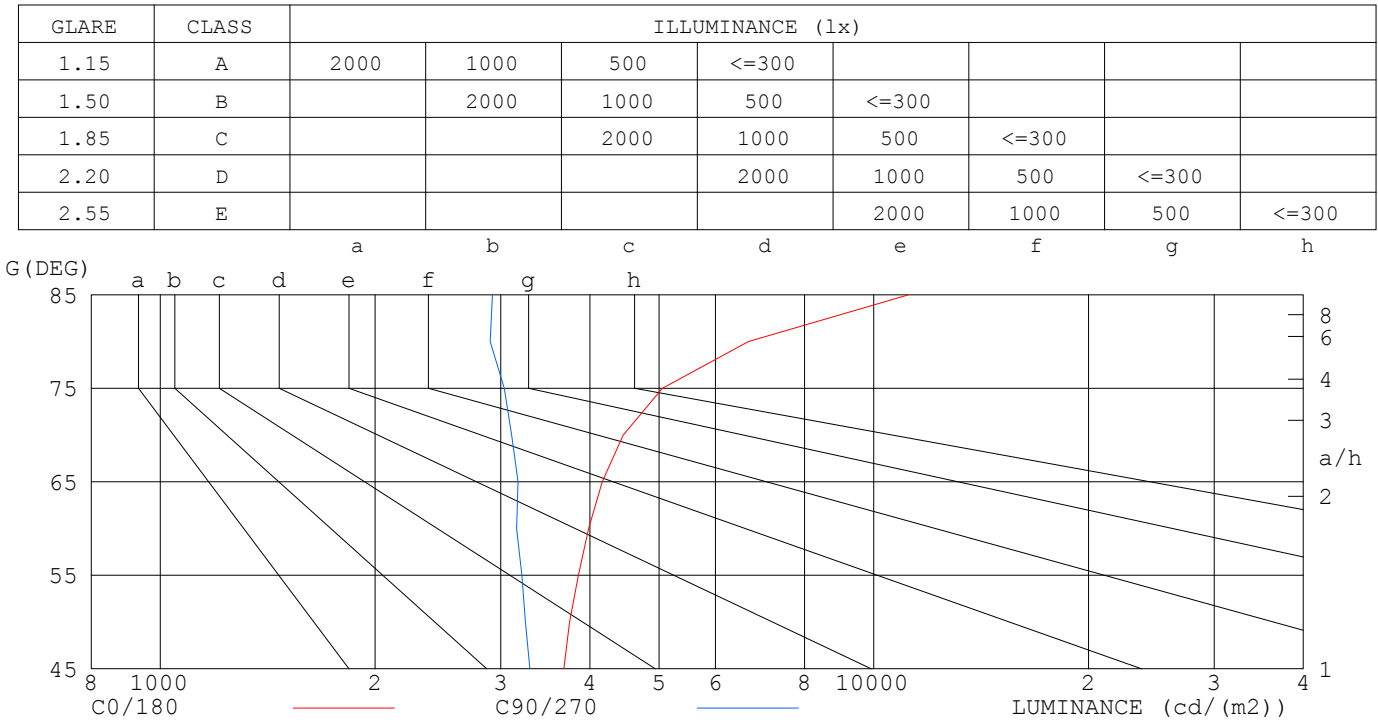
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.5M-28W-4000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1500*152*52mm		SERIAL No.:	

LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	11185	2921
80	6672	2899
75	5056	3034
70	4454	3108
65	4164	3172
60	3984	3157
55	3855	3213
50	3746	3248
45	3677	3296

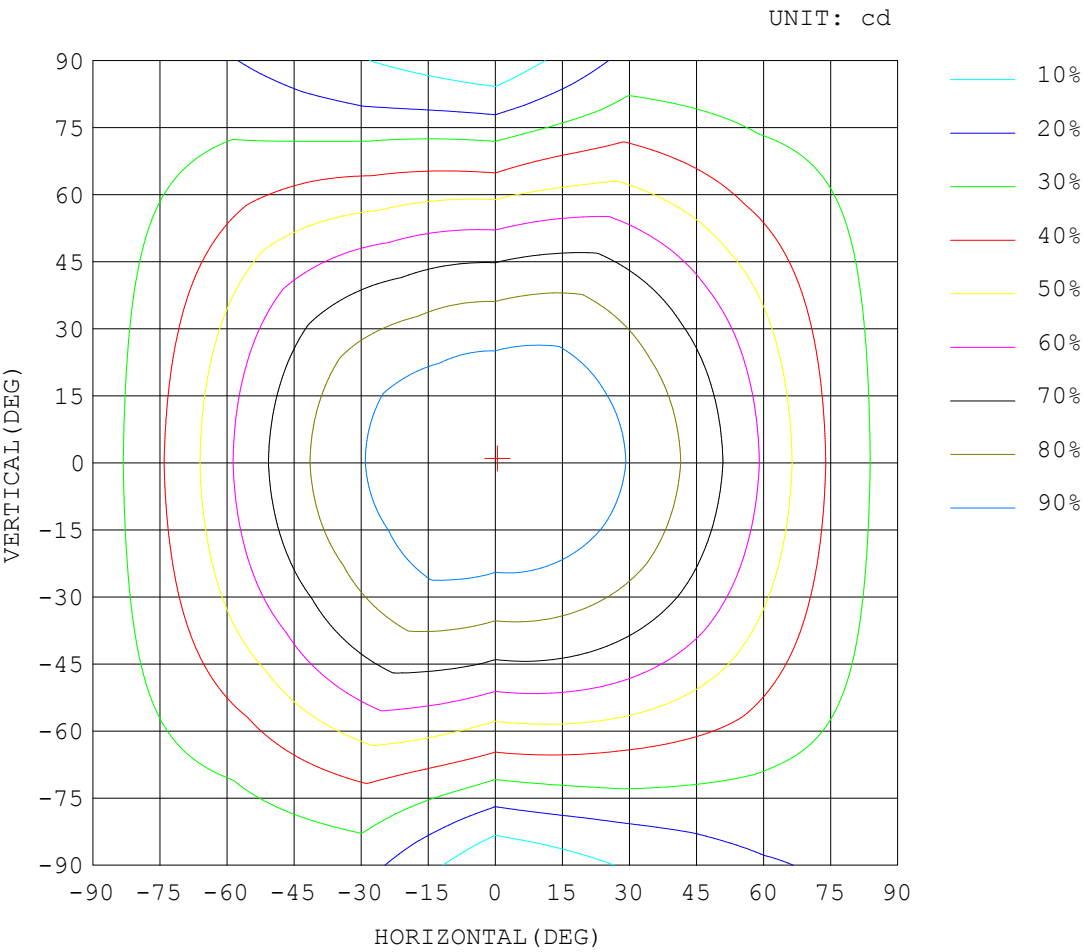
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

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: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

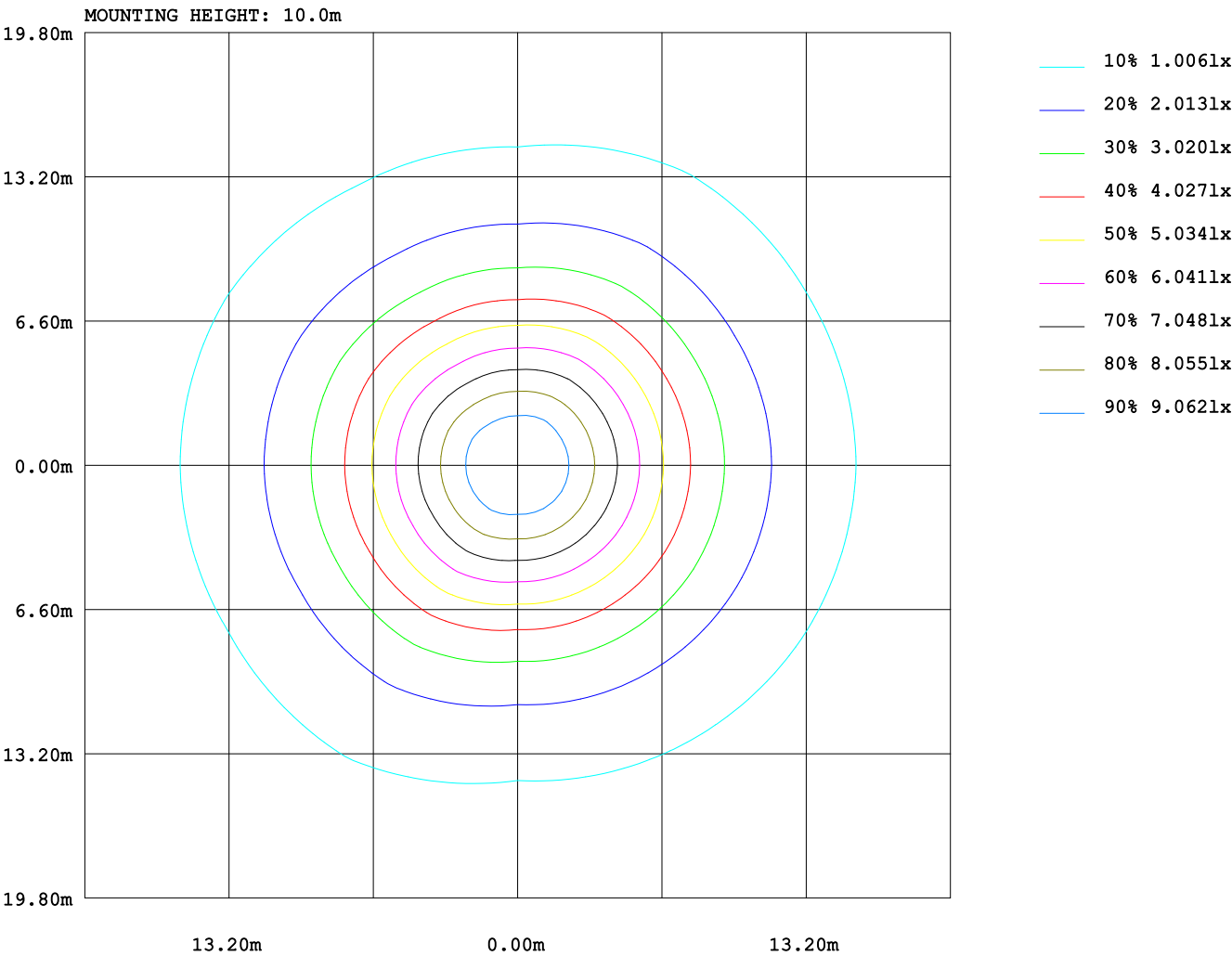
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14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: 1.5M-28W-4000K										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 1500*152*52mm					SERIAL No.:					

90 80 70 60 50 40 30 <

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

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

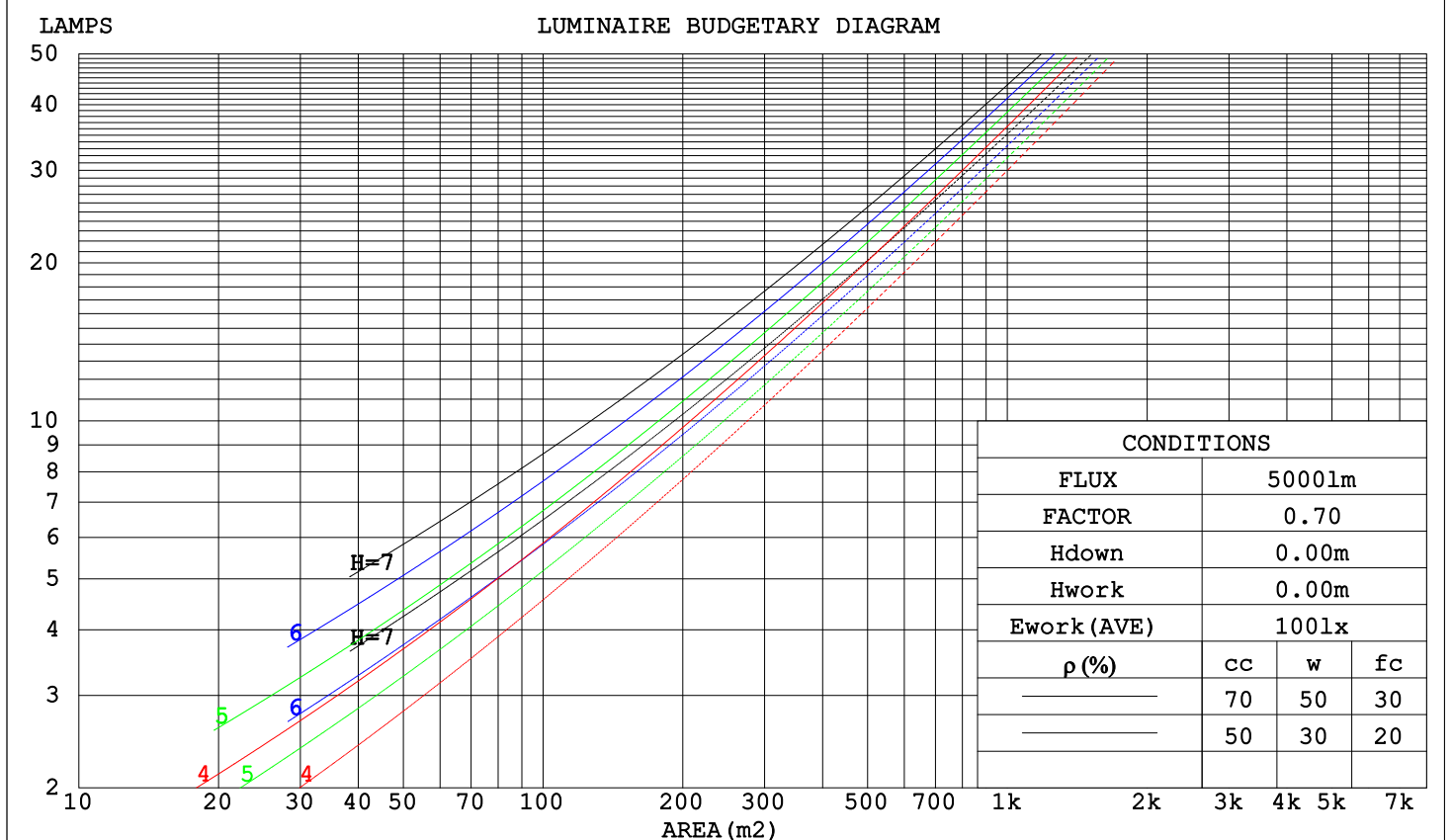
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.5M-28W-4000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1500*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11月14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: 1.5M-28W-4000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1500*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	.366	.208	.066	.355	.202	.064	.334	.192	.061	.315	.182	.058	.297	.172	.056	
2.0	.323	.177	.054	.313	.173	.053	.295	.164	.051	.277	.156	.049	.261	.148	.047	
3.0	.290	.154	.046	.281	.151	.045	.264	.143	.044	.249	.136	.042	.234	.130	.040	
4.0	.263	.137	.040	.255	.133	.039	.240	.127	.038	.225	.121	.037	.212	.115	.035	
5.0	.240	.122	.035	.233	.119	.035	.219	.114	.034	.206	.109	.032	.194	.104	.031	
6.0	.221	.111	.032	.214	.108	.031	.201	.103	.030	.190	.099	.029	.179	.094	.028	
7.0	.204	.101	.029	.198	.099	.028	.186	.094	.027	.176	.090	.026	.166	.086	.025	
8.0	.189	.093	.026	.184	.091	.026	.173	.087	.025	.164	.083	.024	.154	.079	.023	
9.0	.177	.085	.024	.172	.084	.023	.162	.080	.023	.153	.077	.022	.145	.073	.021	
10.0	.166	.079	.022	.161	.078	.022	.152	.075	.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	.288	.288	.288	.247	.247	.247	.168	.168	.168	.097	.097	.097	.031	.031	.031	
1.0	.283	.254	.229	.242	.218	.197	.166	.150	.136	.095	.087	.079	.031	.028	.026	
2.0	.276	.231	.194	.236	.199	.167	.162	.138	.117	.093	.080	.068	.030	.026	.022	
3.0	.268	.214	.171	.230	.185	.149	.158	.128	.104	.091	.075	.061	.029	.024	.020	
4.0	.261	.202	.157	.224	.174	.136	.154	.121	.096	.089	.071	.057	.029	.023	.019	
5.0	.253	.192	.147	.217	.166	.127	.150	.116	.090	.087	.068	.053	.028	.022	.018	
6.0	.246	.184	.139	.211	.159	.121	.146	.111	.086	.085	.066	.051	.027	.021	.017	
7.0	.239	.177	.134	.205	.153	.117	.142	.108	.083	.082	.063	.049	.027	.021	.016	
8.0	.232	.171	.130	.200	.149	.113	.138	.104	.080	.080	.062	.048	.026	.020	.016	
9.0	.226	.167	.127	.194	.145	.110	.135	.102	.078	.078	.060	.047	.025	.020	.015	
10.0	.220	.162	.124	.190	.141	.108	.132	.099	.077	.077	.059	.046	.025	.019	.015	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14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: 1.5M-28W-4000K					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 1500*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	16.8	18.3	17.3	18.7	19.2	16.0	17.5	16.5	17.9	18.4	
	3H	19.0	20.3	19.4	20.7	21.2	17.7	19.0	18.2	19.5	20.0
	4H	20.1	21.3	20.6	21.8	22.3	18.4	19.7	18.9	20.2	20.7
	6H	21.3	22.5	21.8	23.0	23.5	19.0	20.2	19.5	20.7	21.2
	8H	22.0	23.1	22.5	23.6	24.2	19.2	20.3	19.7	20.8	21.4
	12H	22.8	23.9	23.3	24.4	25.0	19.3	20.4	19.9	20.9	21.5
4H 2H	17.4	18.7	17.9	19.2	19.7	16.8	18.1	17.3	18.5	19.1	
	3H	19.8	20.9	20.3	21.4	22.0	18.7	19.8	19.3	20.4	20.9
	4H	21.1	22.1	21.6	22.6	23.2	19.6	20.6	20.2	21.2	21.8
	6H	22.5	23.4	23.1	24.0	24.6	20.4	21.3	21.0	21.8	22.5
	8H	23.3	24.1	23.9	24.7	25.4	20.6	21.5	21.2	22.1	22.7
	12H	24.2	25.0	24.8	25.6	26.3	20.8	21.6	21.5	22.2	22.9
8H 4H	21.4	22.2	22.0	22.8	23.5	20.2	21.1	20.8	21.6	22.3	
	6H	23.1	23.8	23.7	24.4	25.1	21.2	21.9	21.8	22.5	23.2
	8H	24.1	24.7	24.7	25.3	26.1	21.6	22.3	22.3	22.9	23.6
	12H	25.2	25.8	25.9	26.4	27.2	22.0	22.6	22.7	23.2	24.0
12H 4H	21.4	22.2	22.0	22.8	23.5	20.4	21.1	21.0	21.7	22.4	
	6H	23.2	23.8	23.8	24.5	25.2	21.5	22.1	22.1	22.7	23.5
	8H	24.3	24.8	24.9	25.5	26.2	22.0	22.6	22.7	23.2	24.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4					

CIE Pub.117 Corrected 4067 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.9)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14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: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*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	47	37	30	23
0.80	60	47	39	58	46	39	56	45	38	30
1.00	68	55	47	66	54	47	63	55	46	37
1.25	75	63	55	73	61	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	74	88	80	73	83	76	70	58
3.00	95	86	79	92	84	78	86	79	74	62
4.00	100	92	86	96	89	84	90	84	80	67
5.00	102	96	91	99	93	88	92	87	83	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11月14日

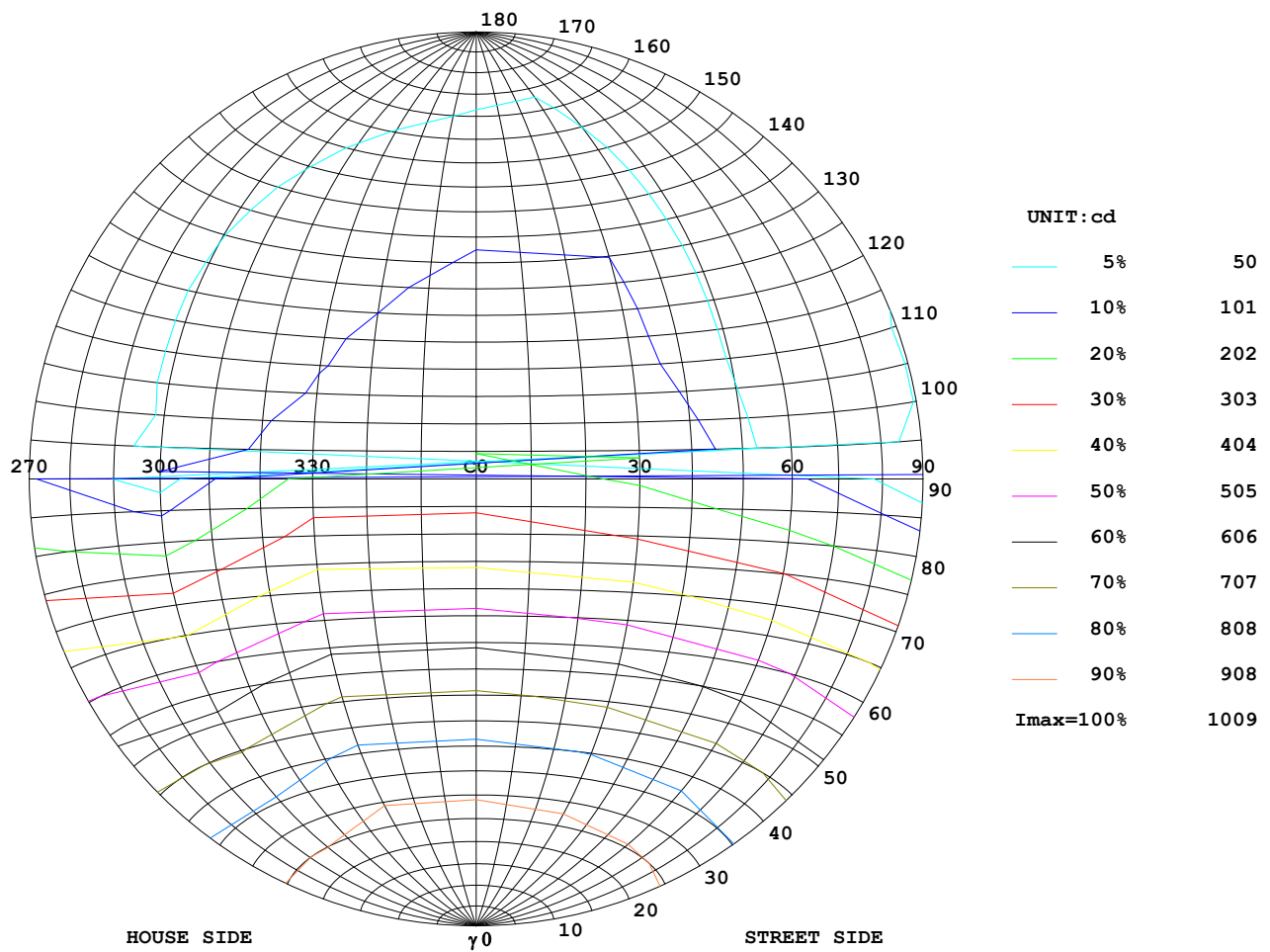
Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

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

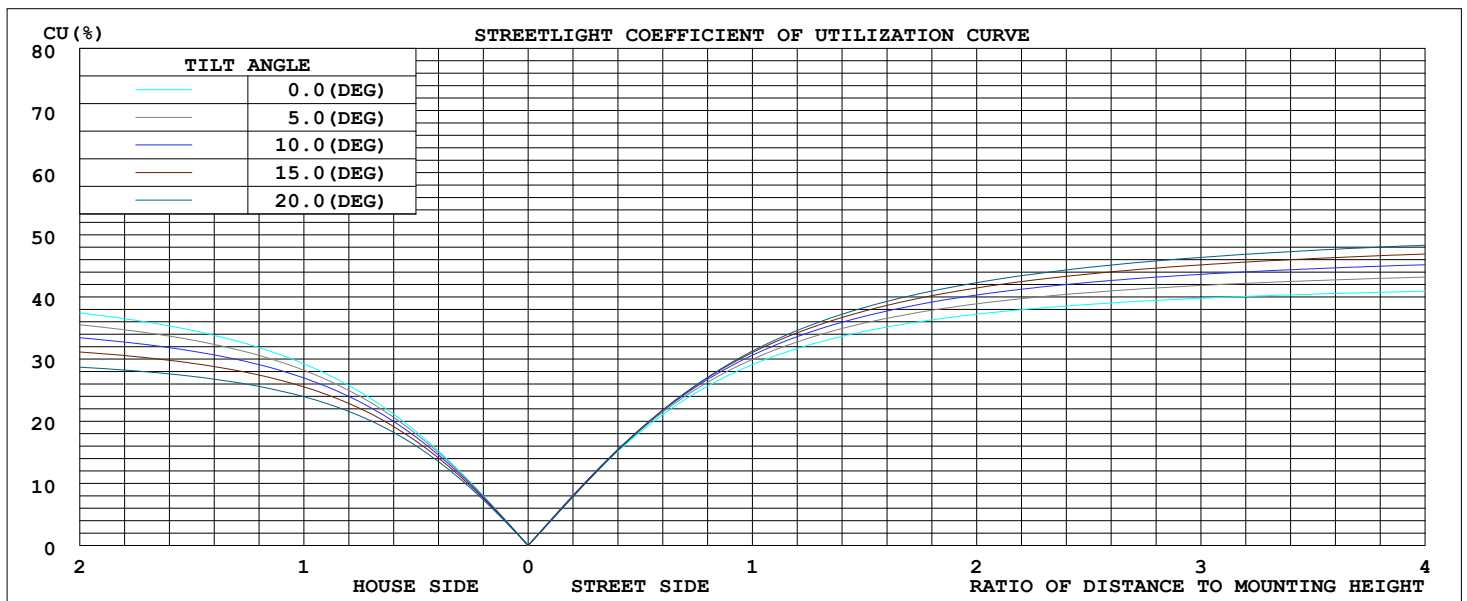
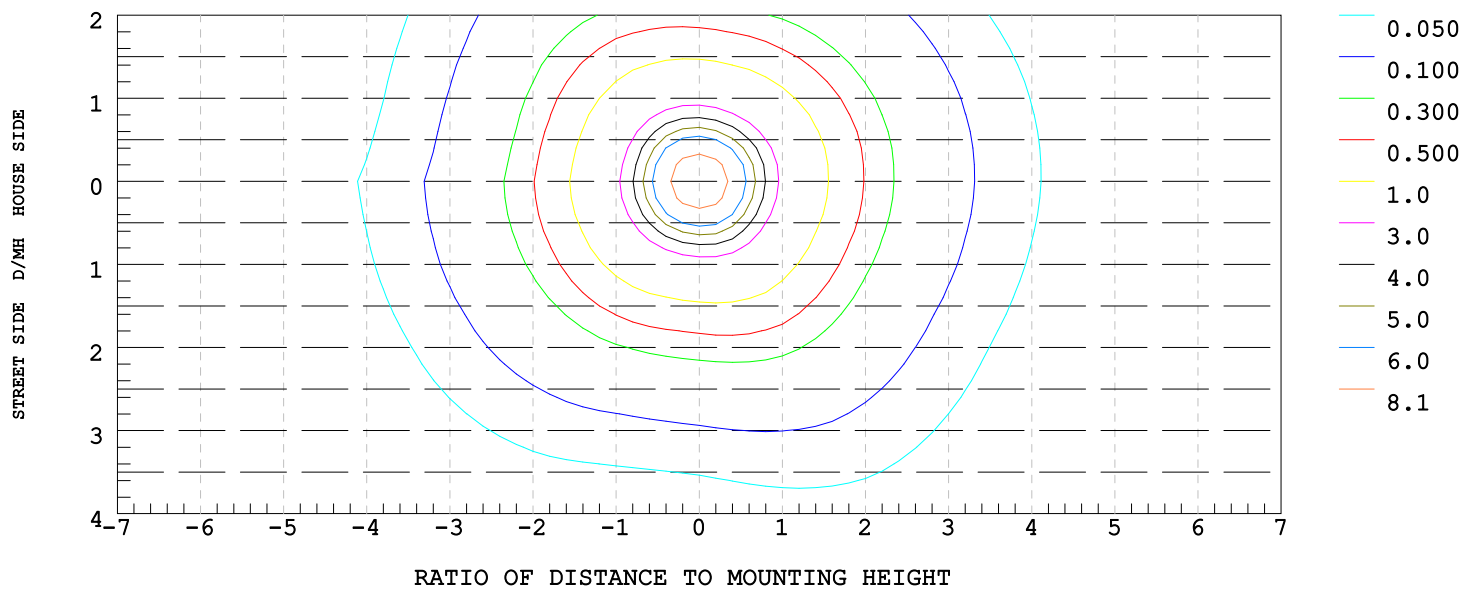
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 10.07 lx



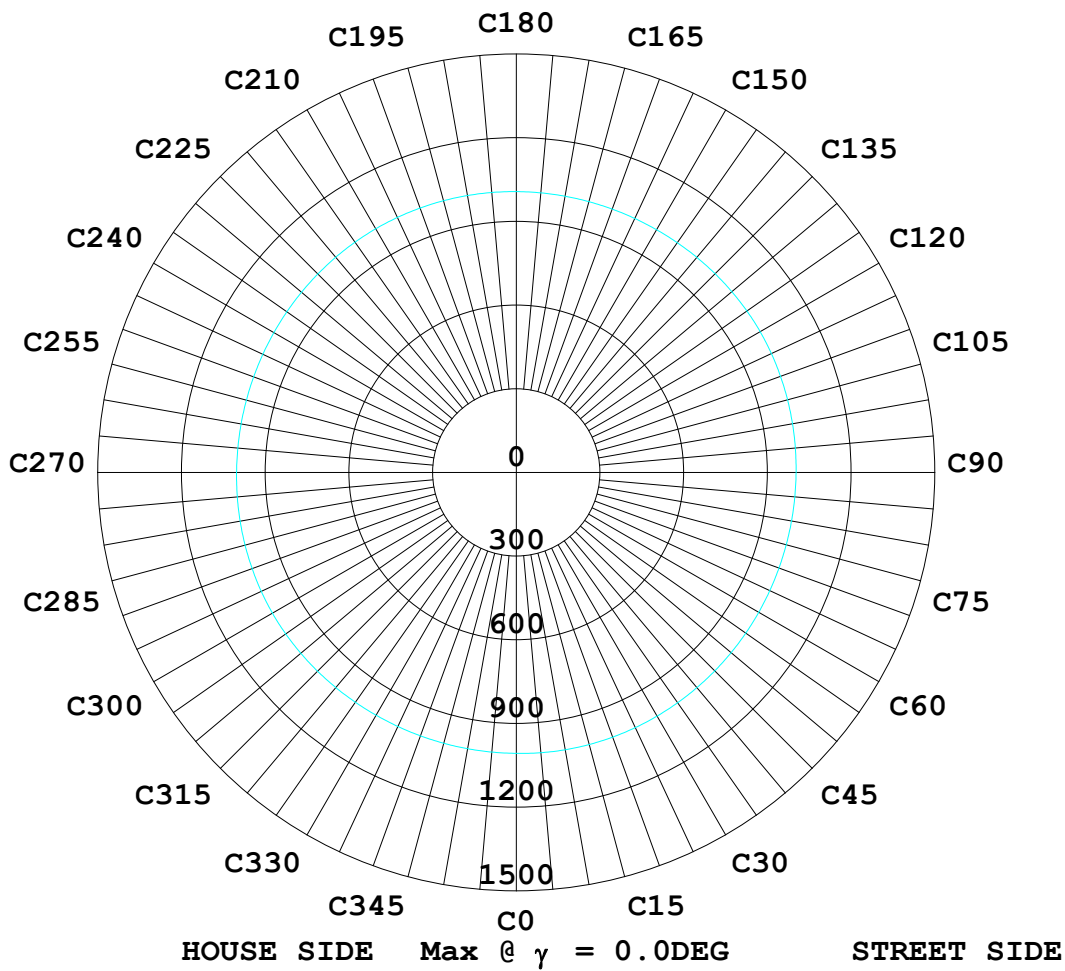
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14日

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: 1.5M-28W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

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