

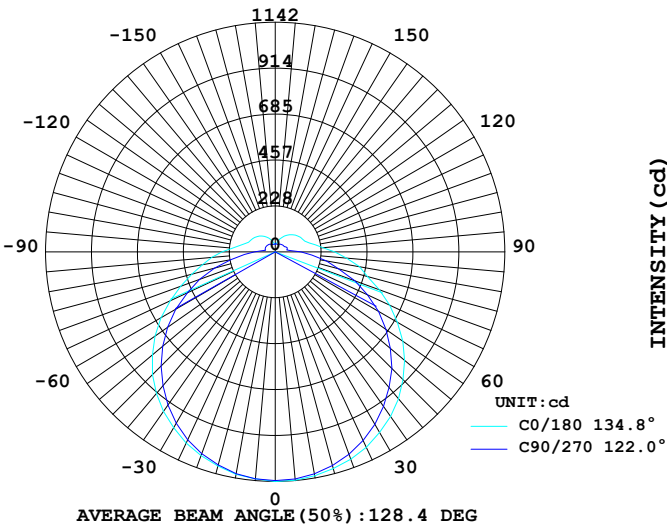
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

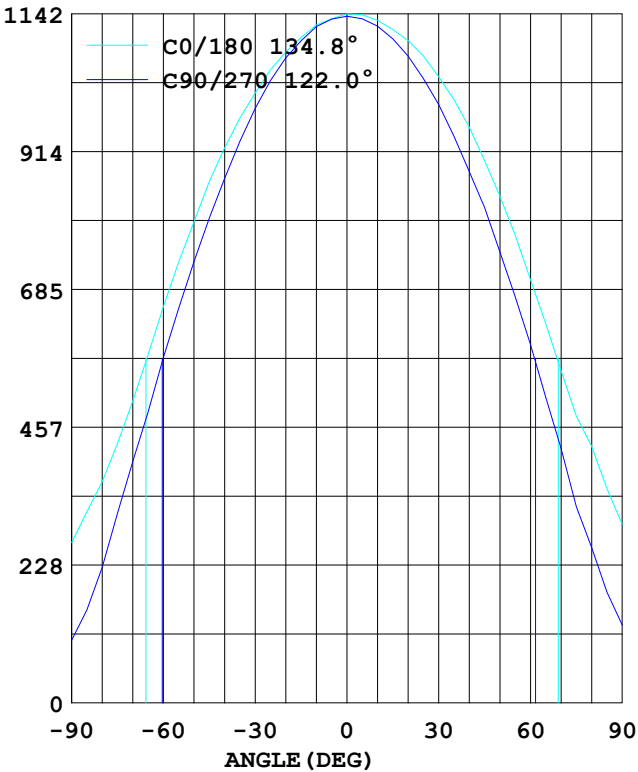
MANUFACTURER:		
Address:		
NAME: 1.2M-35W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	1142	S/MH (C0/180)	1.32
MODEL		EFFICIENCY (%)	100.0	S/MH (C90/270)	1.29
NOMINAL POWER(W)	35	TOTAL FLUX(lm)	4370.3	Voltage(V)	220.0
RATED VOLTAGE (V)	220	EFFICIENCY (lm/W)	127.5	Current(A)	0.158
NOMINAL FLUX(lm)	4370.3	$\eta$ up (%)	11.2	Power (W)	34.27
LAMPS QUANTITY	1	$\eta$ down (%)	88.8	Power Factor (PF)	0.980
TEST VOLTAGE (V)	220.0	Effective Flux(lm)	4090.0	EEI	0.114

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



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

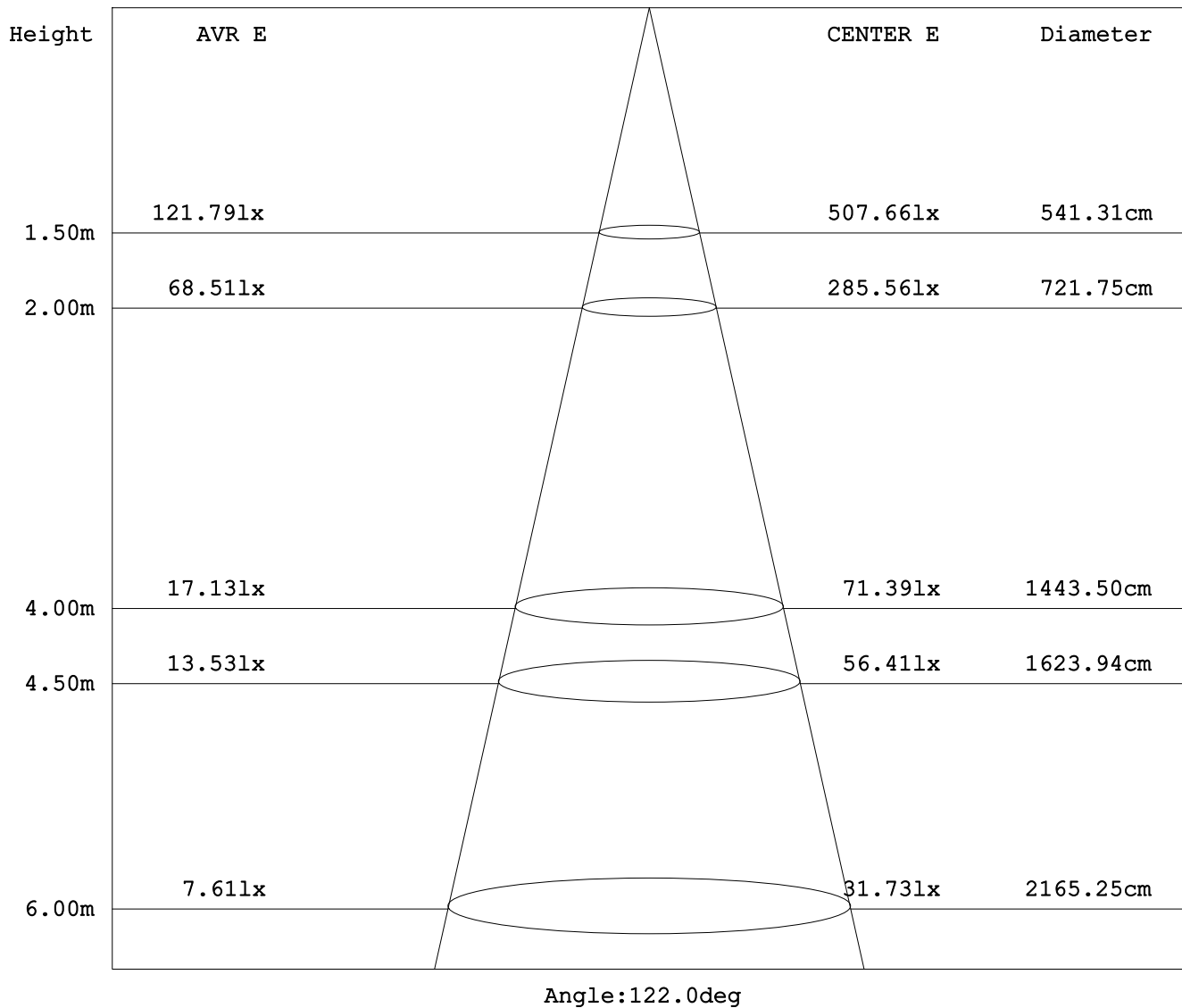
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-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-35W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	1124	1118	1121	1122	1131	1122	1122	1112	0- 10	107.7	107.7
20.0	1079	1070	1069	1074	1098	1077	1072	1057	10- 20	310.8	418.5
30.0	1010	995.5	985.1	998.3	1038	1005	991.5	967.9	20- 30	479.0	897.6
40.0	919.5	890.7	868.7	888.5	954.0	906.8	880.6	853.8	30- 40	593.2	1491
50.0	797.2	761.8	731.3	750.3	839.9	781.1	747.6	710.8	40- 50	640.2	2131
60.0	657.0	611.5	572.2	590.4	701.8	633.8	594.2	546.3	50- 60	613.5	2745
70.0	500.6	442.7	400.2	409.2	551.0	478.3	422.2	374.1	60- 70	518.4	3263
80.0	366.6	294.5	224.8	238.4	425.6	317.2	257.9	205.2	70- 80	380.2	3643
90.0	265.7	177.2	103.9	93.35	295.7	200.9	128.7	73.38	80- 90	236.3	3880
100.0	181.3	100.7	49.36	43.49	203.6	115.3	58.80	36.42	90-100	128.3	4008
110.0	141.6	91.11	52.99	45.19	157.2	101.8	63.04	38.96	100-110	89.97	4098
120.0	131.4	87.36	53.11	45.85	145.3	92.92	53.23	40.59	110-120	78.11	4176
130.0	118.7	80.70	51.54	41.26	130.1	82.27	51.78	41.38	120-130	65.95	4242
140.0	103.6	72.17	48.88	39.26	111.3	68.72	48.03	41.13	130-140	51.72	4294
150.0	85.42	61.77	44.16	38.05	91.11	56.26	44.16	40.23	140-150	37.01	4331
160.0	65.94	49.97	39.80	36.17	68.84	45.61	40.05	39.08	150-160	23.44	4354
170.0	46.10	41.32	38.96	37.14	46.58	39.26	39.68	39.26	160-170	12.28	4367
180.0	42.34	38.59	39.80	39.62	42.22	38.78	40.41	39.80	170-180	3.789	4370
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

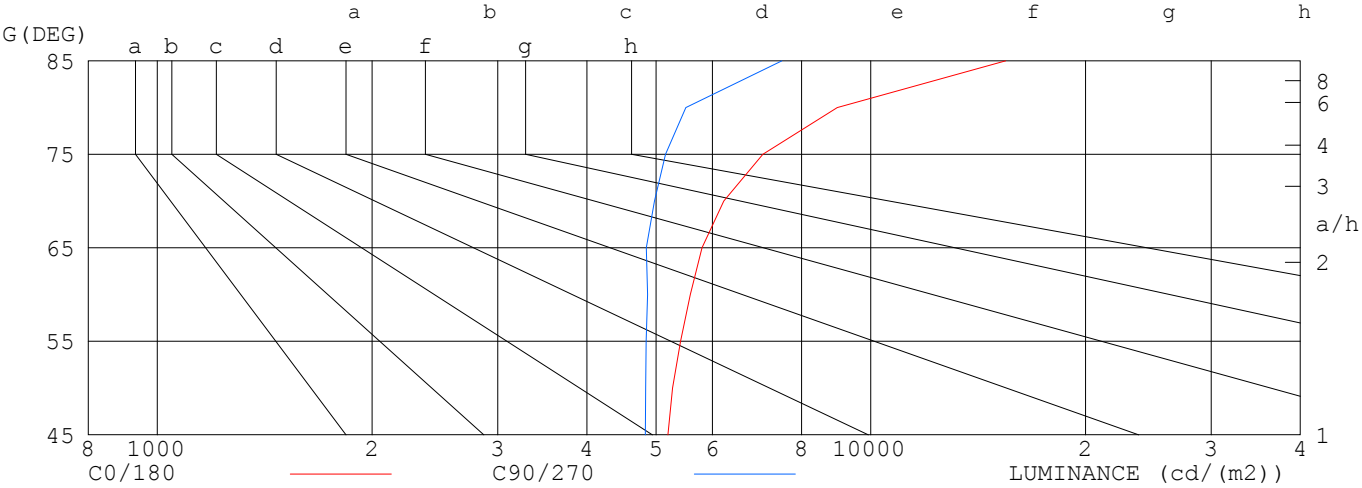
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.2M-35W-4000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1200*152*52mm		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	15458	7508
80	8976	5504
75	7058	5156
70	6224	4975
65	5800	4846
60	5587	4865
55	5412	4844
50	5273	4837
45	5195	4831

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

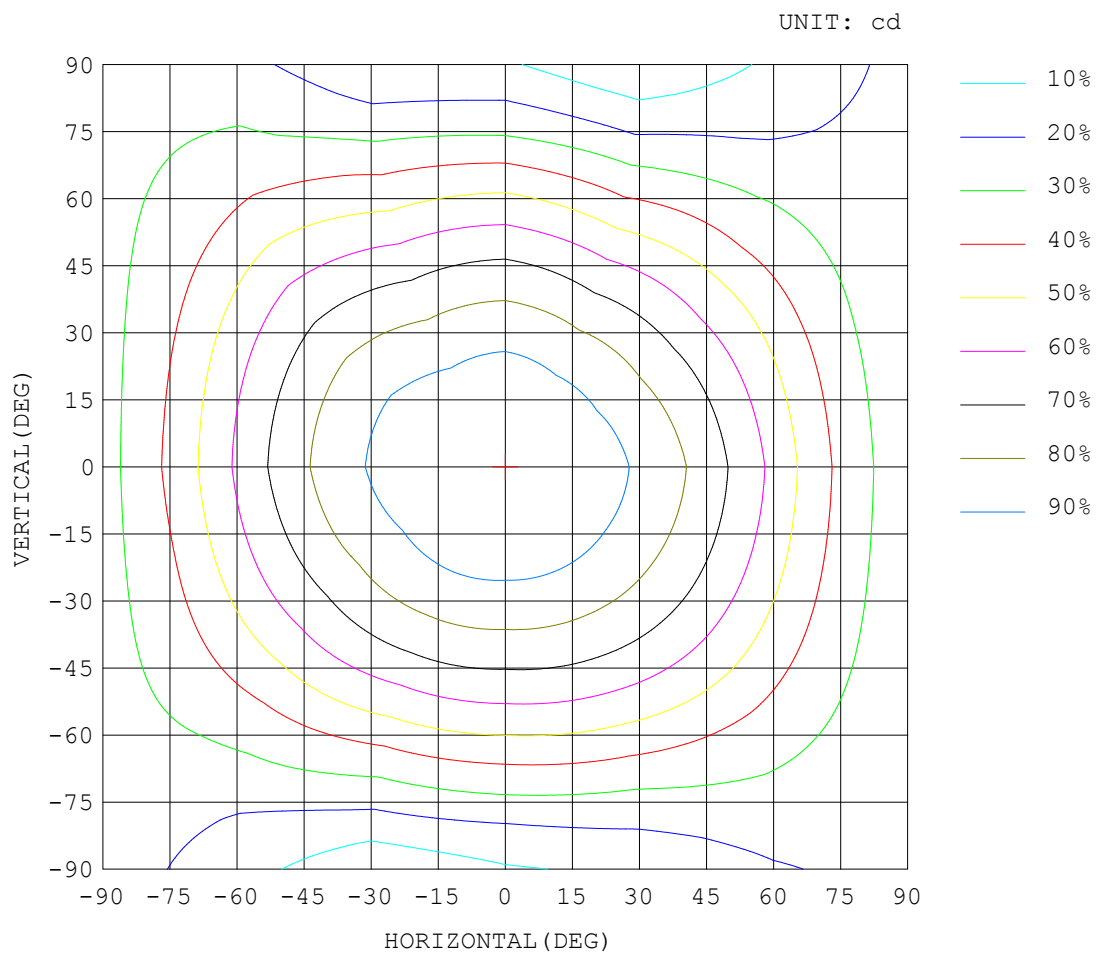
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-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

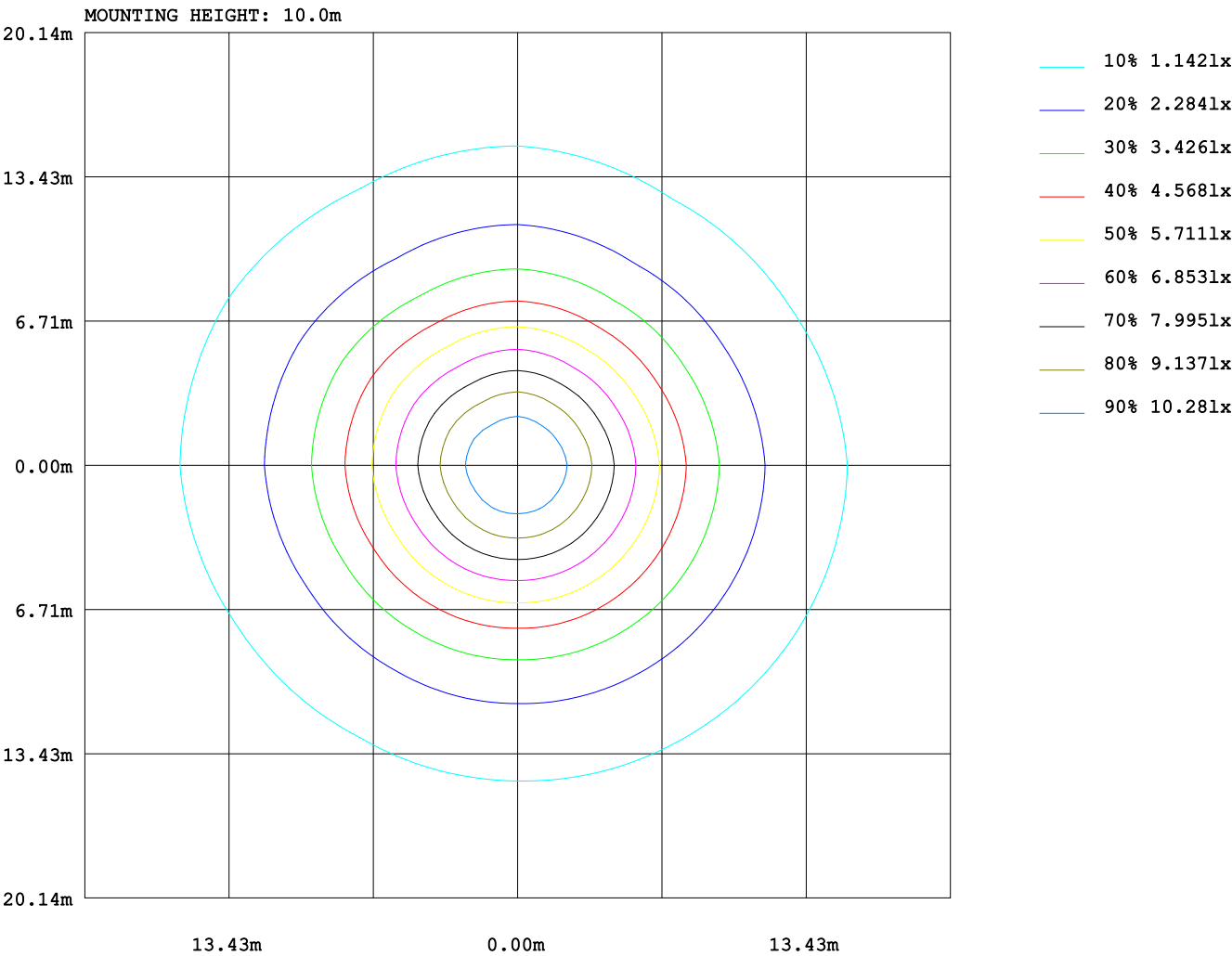
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-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-35W-4000K										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 1200*152*52mm					SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a
	0.78	2.32	3.77	4.81	5.19	5.13	5.20	5.58	5.74	5.18	3.95	2.63	2.22	2.50	2.50	2.25	1.66	0.64	62.1	57.1			
90																							
80	0.82	2.57	4.40	5.99	7.12	7.95	8.77	9.68	10.1	9.62	8.29	6.59	5.47	4.70	3.77	2.87	1.88	0.68	101	101			
70	0.85	2.81	5.04	7.39	9.54	11.3	12.9	14.4	15.3	14.9	13.2	11.0	9.09	7.25	5.36	3.62	2.13	0.71	147	147			
60	0.89	3.05	5.72	8.90	11.9	14.6	16.8	19.0	20.2	19.8	17.9	15.1	12.5	9.72	6.87	4.45	2.38	0.74	191	191			
50	0.92	3.28	6.39	10.2	14.2	17.7	20.6	23.0	24.6	24.3	22.1	19.1	15.8	12.0	8.37	5.20	2.65	0.78	232	232			
40	0.95	3.47	7.00	11.4	16.2	20.5	23.9	26.5	28.2	27.9	25.7	22.5	18.6	14.1	9.81	5.90	2.89	0.81	267	267			
30	0.97	3.63	7.50	12.4	17.6	22.6	26.5	29.3	31.0	30.9	28.6	25.2	20.8	15.9	11.0	6.52	3.11	0.83	295	295			
	0.99	3.75	7.86	13.0	18.6	24.0	28.4	31.4	33.0	32.8	30.7	27.1	22.5	17.3	11.9	7.02	3.28	0.86	315	315			
	1.00	3.82	8.07	13.4	19.2	24.7	29.3	32.5	34.1	33.9	31.9	28.4	23.7	18.2	12.5	7.37	3.40	0.88	327	327			
	1.00	3.79	8.00	13.3	19.0	24.5	29.1	32.4	34.1	34.0	32.1	28.6	23.9	18.4	12.6	7.43	3.43	0.88	327	327			
	0.97	3.66	7.64	12.7	18.1	23.4	27.9	31.2	33.1	33.0	31.1	27.7	23.1	17.8	12.2	7.20	3.35	0.87	316	316			
-30	0.95	3.48	7.13	11.7	16.8	21.7	26.1	29.4	31.1	31.0	29.3	26.1	21.7	16.7	11.5	6.83	3.23	0.86	296	296			
-40	0.91	3.26	6.49	10.5	15.0	19.6	23.5	26.5	28.0	28.0	26.6	23.7	19.8	15.2	10.5	6.32	3.07	0.84	269	269			
-50	0.87	3.01	5.75	9.13	13.0	16.8	20.2	22.8	24.2	24.2	23.1	20.6	17.2	13.3	9.33	5.73	2.87	0.81	233	233			
-60	0.83	2.72	4.97	7.58	10.5	13.5	16.2	18.4	19.6	19.8	18.8	16.9	14.2	11.1	7.97	5.09	2.66	0.79	192	192			
-70	0.80	2.42	4.11	6.00	8.04	9.93	11.7	13.4	14.5	14.7	14.0	12.6	10.8	8.77	6.61	4.41	2.45	0.76	146	146			
-80	0.76	2.13	3.28	4.32	5.42	6.34	7.34	8.55	9.32	9.57	9.28	8.53	7.62	6.56	5.27	3.79	2.23	0.72	101	101			
-90	0.72	1.87	2.59	2.93	3.01	2.79	3.03	3.87	4.56	4.98	5.10	4.99	4.85	4.62	4.10	3.19	2.00	0.69	59.9	55.4			
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90		
Φ t	15.9	55.1	106	166	229	288	338	378	401	399	373	328	275	215	153	95.2	48.7	14.1	4370				
Φ a	15.9	55.1	106	166	229	287	337	377	401	399	372	327	273	214	152	95.2	48.7	14.1		4090			

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:

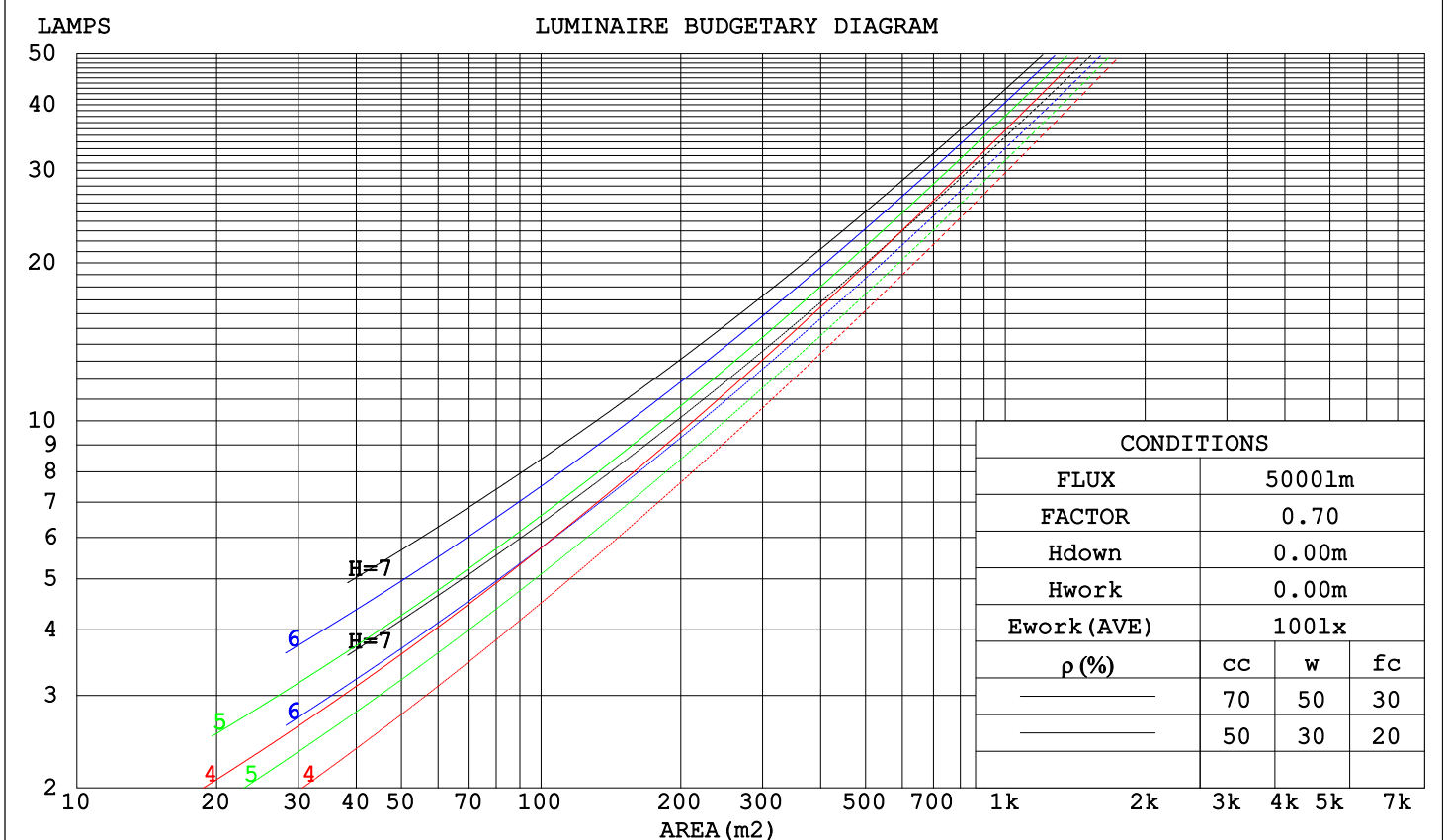
# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.2M-35W-4000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1200*152*52mm				SERIAL No.:			

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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-35W-4000K								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	.359	.204	.065	.348	.199	.063	.328	.188	.060	.310	.179	.057	.293	.170	.055															
2.0	.319	.175	.054	.310	.171	.053	.292	.162	.050	.276	.155	.048	.260	.147	.046															
3.0	.288	.153	.046	.279	.150	.045	.263	.143	.043	.248	.136	.042	.234	.130	.040															
4.0	.261	.136	.040	.254	.133	.039	.239	.127	.038	.226	.121	.037	.213	.116	.035															
5.0	.239	.122	.035	.232	.119	.035	.219	.114	.034	.207	.109	.032	.195	.104	.031															
6.0	.220	.110	.032	.213	.108	.031	.202	.103	.030	.191	.099	.029	.180	.095	.028															
7.0	.203	.100	.028	.198	.098	.028	.187	.094	.027	.177	.091	.026	.167	.087	.026															
8.0	.189	.092	.026	.184	.090	.026	.174	.087	.025	.165	.083	.024	.156	.080	.023															
9.0	.176	.085	.024	.172	.084	.023	.163	.080	.023	.154	.077	.022	.146	.074	.021															
10.0	.165	.079	.022	.161	.078	.022	.153	.075	.021	.145	.072	.020	.138	.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	.276	.276	.276	.236	.236	.236	.161	.161	.161	.092	.092	.092	.030	.030	.030	
1.0	.270	.242	.217	.231	.208	.187	.158	.143	.129	.091	.083	.075	.029	.027	.024	
2.0	.263	.219	.181	.225	.188	.157	.154	.130	.109	.089	.076	.064	.029	.024	.021	
3.0	.255	.202	.159	.219	.174	.138	.150	.121	.097	.087	.071	.057	.028	.023	.019	
4.0	.247	.189	.144	.212	.163	.125	.146	.114	.088	.084	.067	.052	.027	.022	.017	
5.0	.240	.179	.134	.206	.155	.116	.142	.108	.082	.082	.063	.049	.026	.021	.016	
6.0	.233	.171	.126	.200	.148	.110	.138	.104	.078	.080	.061	.046	.026	.020	.015	
7.0	.226	.164	.121	.194	.142	.105	.134	.100	.075	.078	.059	.044	.025	.019	.015	
8.0	.219	.158	.117	.188	.137	.102	.130	.096	.072	.076	.057	.043	.025	.019	.014	
9.0	.213	.154	.114	.183	.133	.099	.127	.094	.070	.074	.055	.042	.024	.018	.014	
10.0	.207	.149	.111	.178	.130	.097	.124	.091	.069	.072	.054	.041	.023	.018	.014	

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-35W-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	18.2	19.6	18.6	20.0	20.5	17.6	19.1	18.1	19.5	19.9	
	3H	20.3	21.6	20.7	22.0	22.5	19.5	20.8	19.9	21.2	21.7
	4H	21.4	22.6	21.8	23.1	23.6	20.3	21.5	20.8	22.0	22.5
	6H	22.6	23.7	23.0	24.2	24.7	21.0	22.2	21.5	22.7	23.2
	8H	23.2	24.4	23.7	24.9	25.4	21.3	22.5	21.8	22.9	23.5
	12H	24.0	25.1	24.5	25.6	26.2	21.7	22.8	22.2	23.3	23.8
4H 2H	18.8	20.1	19.3	20.5	21.0	18.4	19.7	18.9	20.1	20.6	
	3H	21.1	22.2	21.6	22.7	23.2	20.4	21.5	20.9	22.0	22.5
	4H	22.4	23.4	22.9	23.9	24.5	21.4	22.4	21.9	22.9	23.5
	6H	23.7	24.6	24.3	25.2	25.8	22.3	23.2	22.8	23.7	24.3
	8H	24.5	25.4	25.1	25.9	26.6	22.7	23.5	23.2	24.1	24.7
	12H	25.5	26.2	26.1	26.8	27.5	23.1	23.9	23.7	24.5	25.1
8H 4H	22.7	23.6	23.3	24.1	24.7	21.9	22.7	22.4	23.3	23.9	
	6H	24.4	25.1	25.0	25.7	26.3	23.0	23.7	23.6	24.3	25.0
	8H	25.3	26.0	26.0	26.6	27.3	23.6	24.2	24.2	24.8	25.5
	12H	26.5	27.1	27.1	27.7	28.4	24.2	24.7	24.8	25.4	26.1
12H 4H	22.8	23.5	23.3	24.1	24.8	22.0	22.8	22.6	23.3	24.0	
	6H	24.5	25.1	25.1	25.7	26.4	23.2	23.9	23.9	24.5	25.2
	8H	25.6	26.1	26.2	26.7	27.5	23.9	24.4	24.5	25.1	25.8
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 / - 0.3					

CIE Pub.117 Corrected 4370 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.1)

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-35W-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) $k(RI) \times RCR = 5$									
$k = 0.60$	51	39	32	50	39	32	48	38	31	25
0.80	61	48	40	59	48	40	57	46	39	32
1.00	69	56	48	67	56	48	64	56	47	39
1.25	76	64	56	74	63	55	70	61	54	45
1.50	81	70	62	79	68	61	74	65	59	49
2.00	88	78	70	85	76	69	80	73	67	56
2.50	92	83	76	89	81	74	84	77	71	60
3.00	96	88	81	93	85	79	87	81	76	64
4.00	100	93	87	97	91	85	91	86	81	69
5.00	103	97	92	100	94	90	93	89	85	72
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

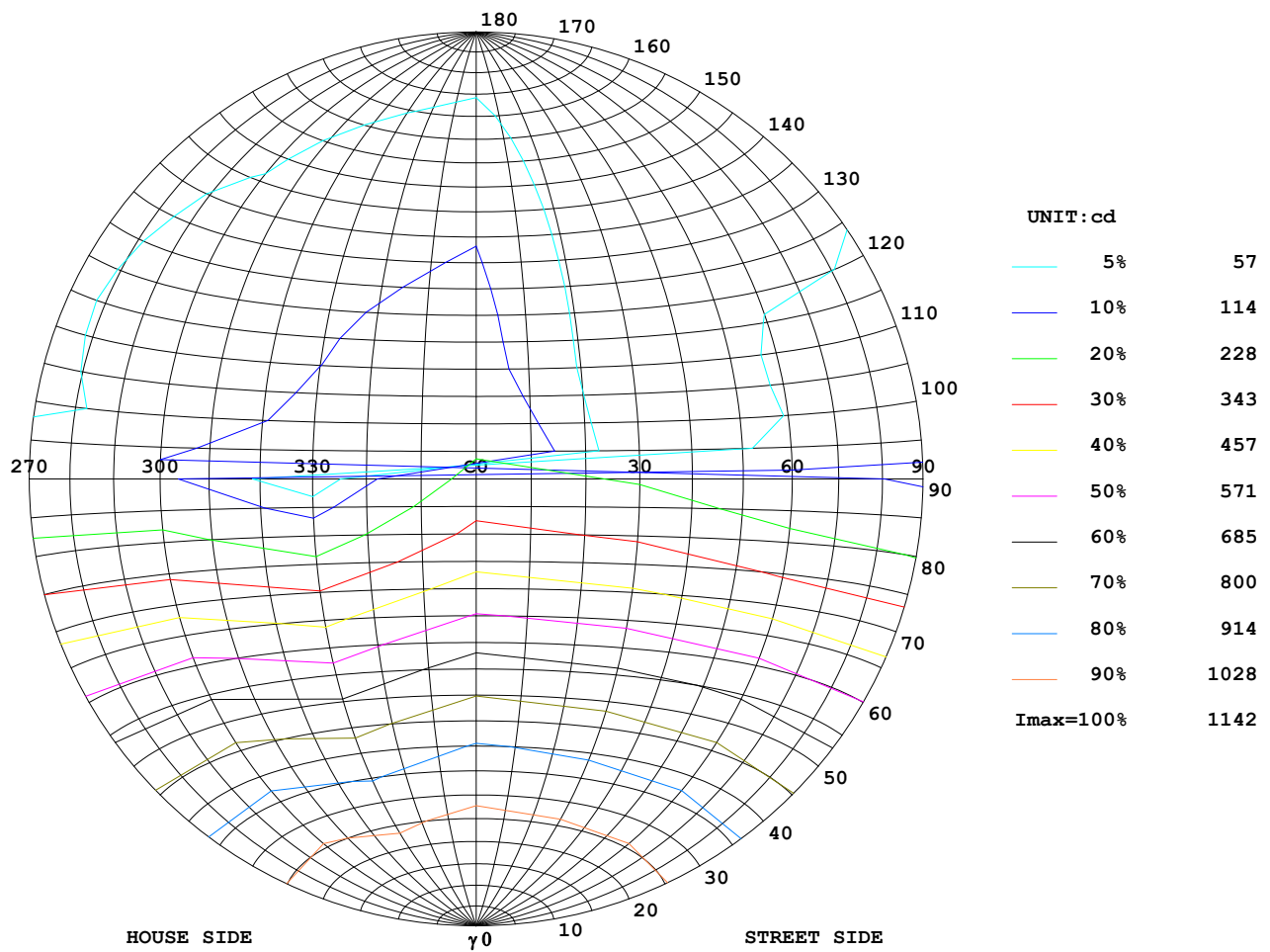
Test Set: 10.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-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

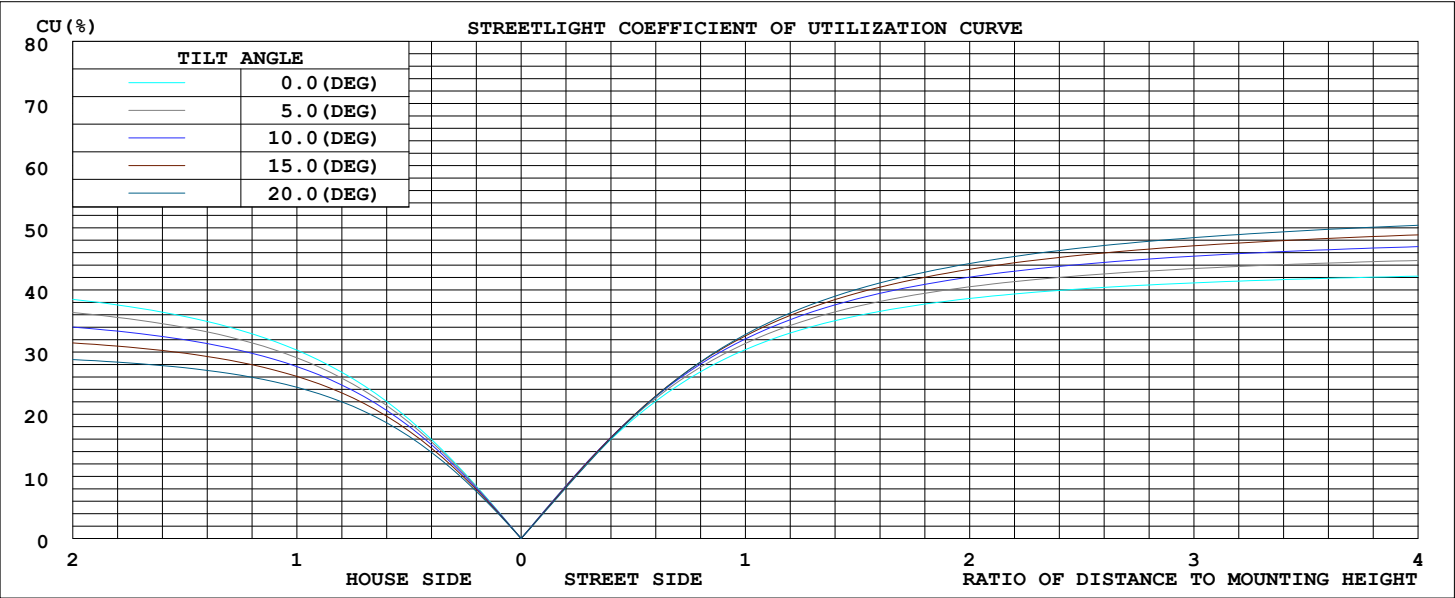
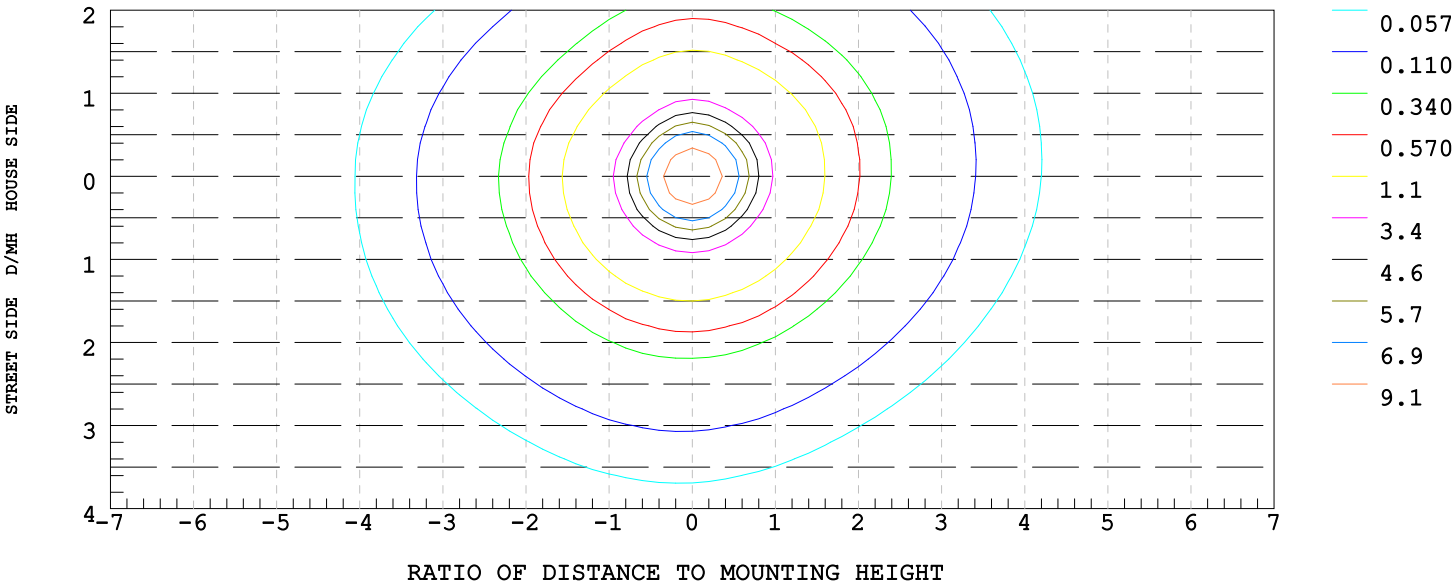
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-4000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1200*152*52mm	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 11.42 lx



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

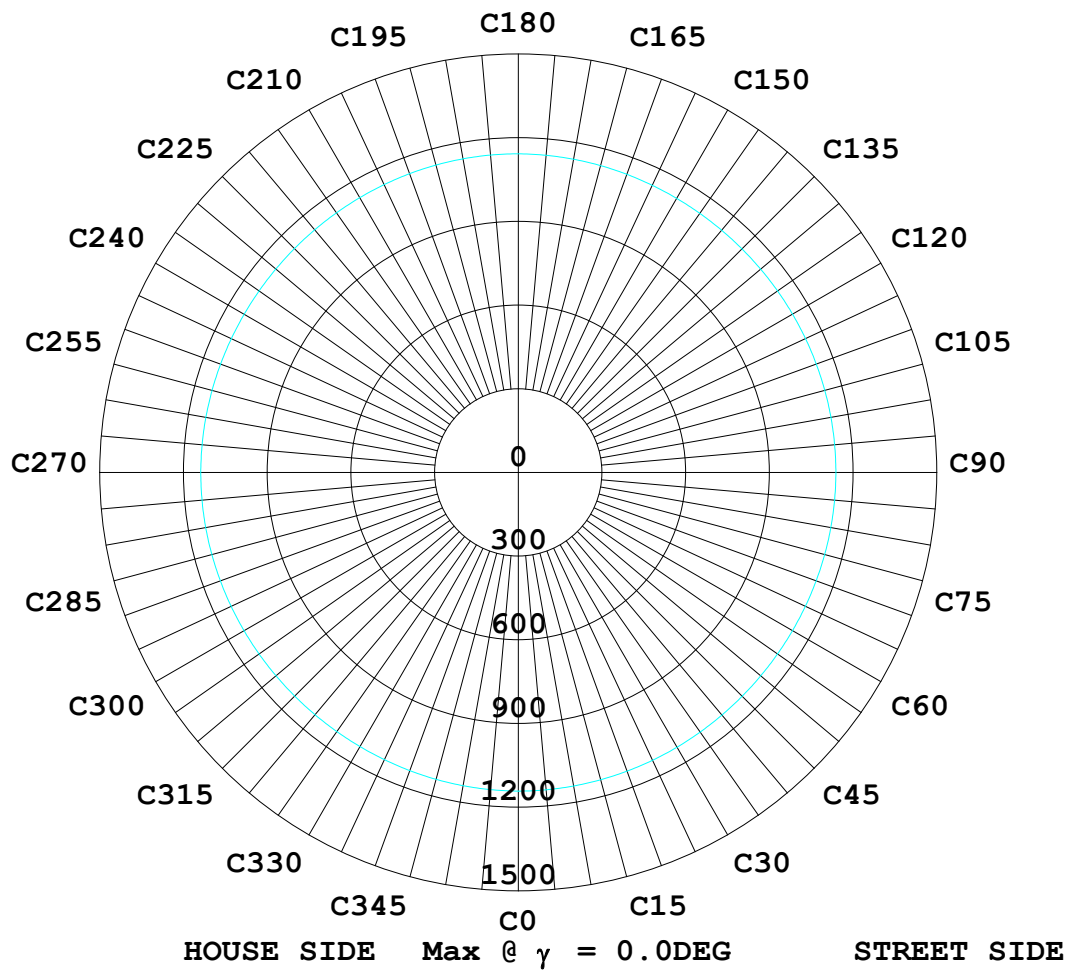
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.2M-35W-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: