

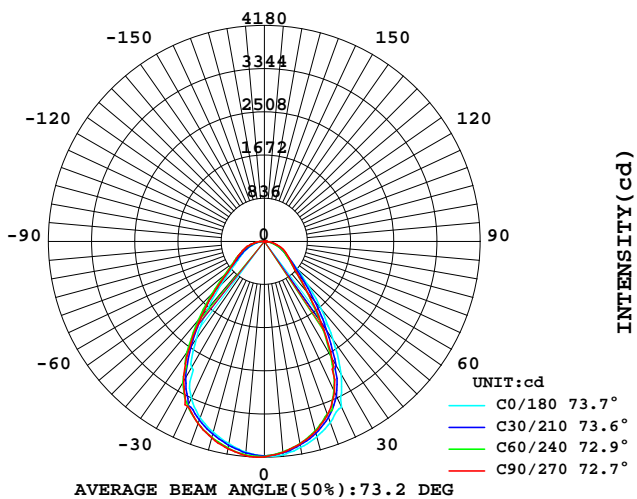
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

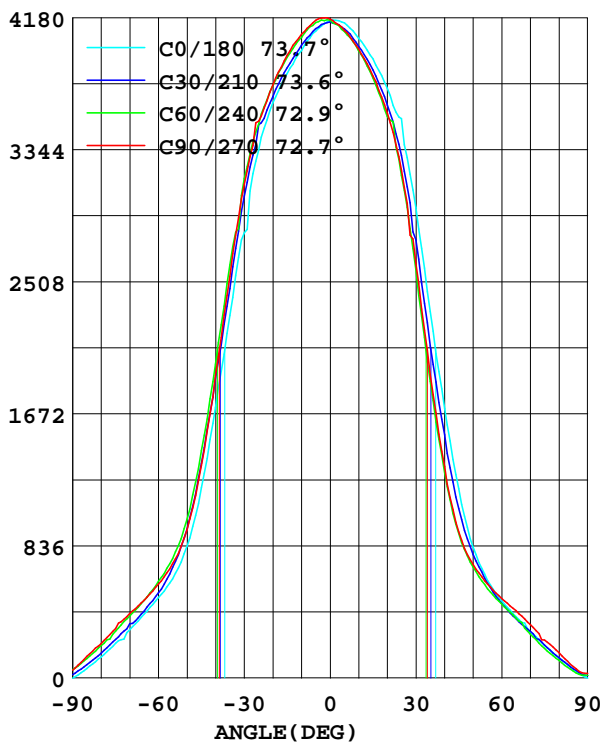
MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I <sub>max</sub> (cd)	4181	S/MH(C0/180)	1.07
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.11
NOMINAL POWER(W)	48	TOTAL FLUX(lm)	6750.8	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	139.2	Current(A)	0.231
NOMINAL FLUX(lm)	6750.8	h up(%)	0.6	Power(W)	48.48
LAMPS QUANTITY	1	h down(%)	99.4	Power Factor(PF)	0.958
TEST VOLTAGE(V)	218.6	Effective Flux(lm)	6190.4	EEI	0.107

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



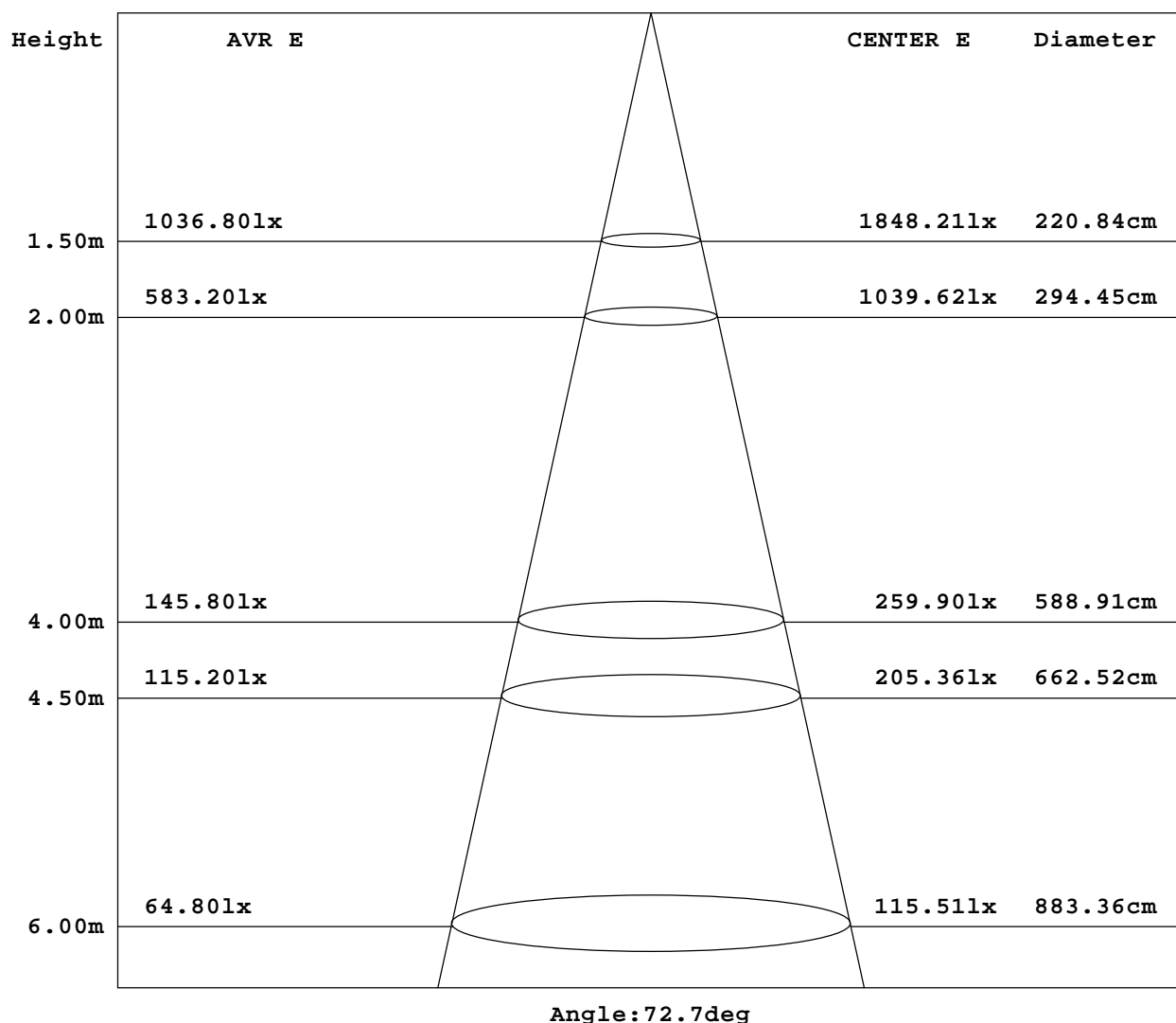
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

### AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity: 65.0%  
 Test Distance: 11.000 m  
 Remarks:

## ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	4094	4130	4162	4152	4147	4101	4098	4097	0- 5	99.02	99.02
10.0	3972	4032	4077	4050	4050	3984	3982	3981	5- 10	290.9	389.9
15.0	3827	3897	3943	3914	3919	3824	3810	3832	10- 15	467.4	857.4
20.0	3639	3714	3752	3724	3731	3590	3575	3628	15- 20	621.1	1479
25.0	3342	3505	3524	3487	3540	3244	3215	3336	20- 25	741.4	2220
30.0	2818	3106	3125	3020	2979	2681	2624	2812	25- 30	797.1	3017
35.0	2295	2541	2543	2412	2319	1989	1917	2205	30- 35	762.6	3780
40.0	1713	1943	1916	1798	1705	1418	1337	1603	35- 40	657.8	4438
45.0	1205	1400	1347	1279	1198	993.8	924.1	1114	40- 45	525.7	4963
50.0	833.6	971.8	936.2	897.5	827.3	741.8	718.3	799.9	45- 50	403.6	5367
55.0	627.2	727.6	723.4	680.5	617.5	582.3	594.6	626.8	50- 55	321.7	5689
60.0	509.8	575.9	594.0	536.1	489.2	469.8	503.1	499.6	55- 60	268.6	5958
65.0	403.2	457.0	490.7	427.4	388.2	377.1	426.3	402.5	60- 65	228.2	6186
70.0	304.7	367.7	407.3	330.3	291.6	285.4	336.6	307.8	65- 70	189.2	6375
75.0	218.9	271.1	313.2	232.9	208.6	197.7	239.4	221.9	70- 75	146.7	6522
80.0	133.6	180.7	218.3	158.5	127.7	120.0	161.0	138.6	75- 80	103.8	6625
85.0	58.99	103.4	137.2	83.98	56.33	50.71	71.46	64.74	80- 85	62.27	6688
90.0	0	37.03	50.28	23.24	0	16.64	29.71	15.43	85- 90	25.33	6713
95.0	0	11.32	17.73	11.87	0	16.46	29.59	14.04	90- 95	8.214	6721
100.0	0	12.35	19.91	11.80	0	16.52	28.62	13.38	95-100	7.108	6728
105.0	0	11.08	14.59	11.14	0	15.50	21.24	13.44	100-105	6.696	6735
110.0	0	8.966	12.29	9.389	0	13.20	20.64	10.90	105-110	5.528	6741
115.0	0	8.482	11.68	8.905	0	13.38	19.91	12.05	110-115	4.962	6746
120.0	0	7.998	12.05	8.603	0	13.20	21.12	12.35	115-120	4.760	6750
125.0	0	0	0	0	0	0	0	0	120-125	0.463	6751
130.0	0	0	0	0	0	0	0	0	125-130	0	6751
135.0	0	0	0	0	0	0	0	0	130-135	0	6751
140.0	0	0	0	0	0	0	0	0	135-140	0	6751
145.0	0	0	0	0	0	0	0	0	140-145	0	6751
150.0	0	0	0	0	0	0	0	0	145-150	0	6751
155.0	0	0	0	0	0	0	0	0	150-155	0	6751
160.0	0	0	0	0	0	0	0	0	155-160	0	6751
165.0	0	0	0	0	0	0	0	0	160-165	0	6751
170.0	0	0	0	0	0	0	0	0	165-170	0	6751
175.0	0	0	0	0	0	0	0	0	170-175	0	6751
180.0	0	0	0	0	0	0	0	0	175-180	0	6751
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

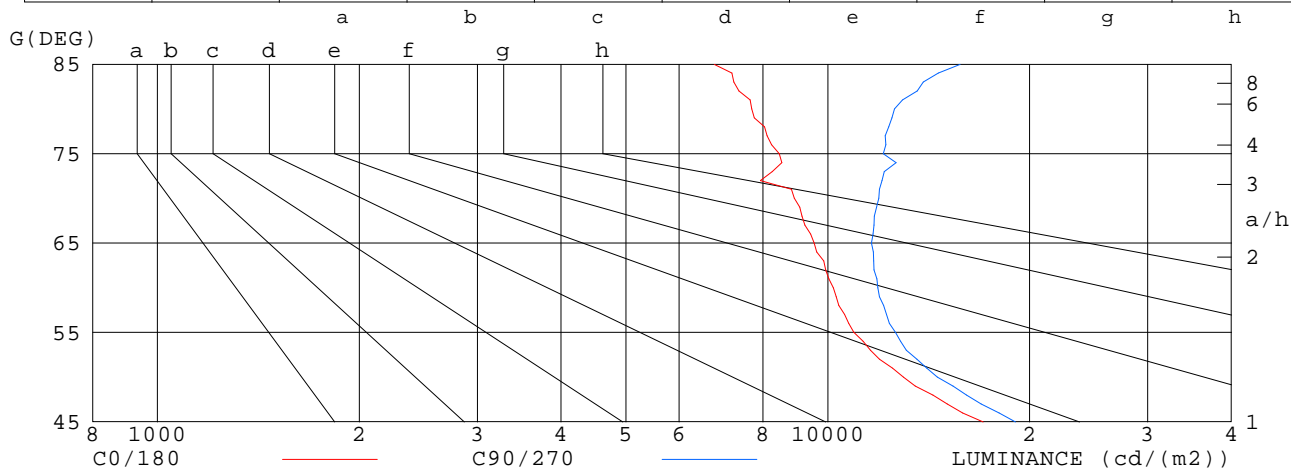
# LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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	6769	15752
80	7697	12575
75	8460	12102
70	8910	11910
65	9542	11612
60	10197	11881
55	10935	12612
50	12969	14565
45	17043	19045

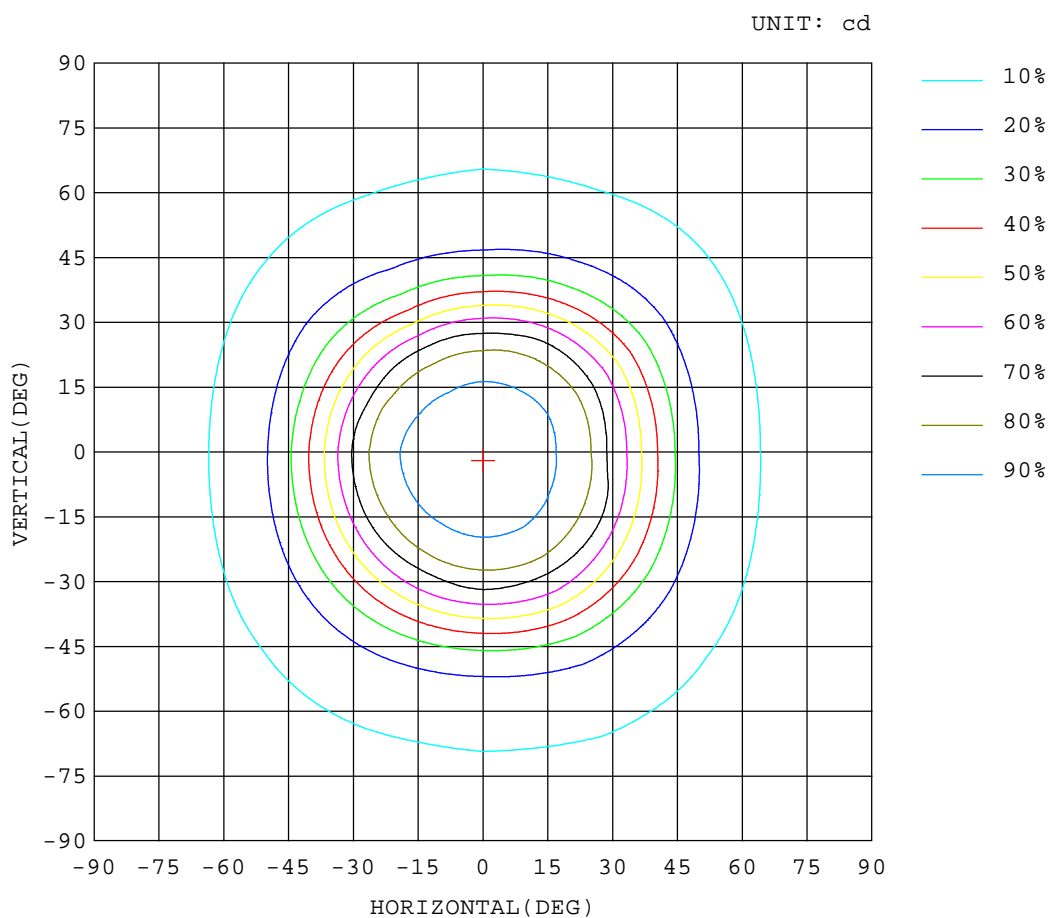
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



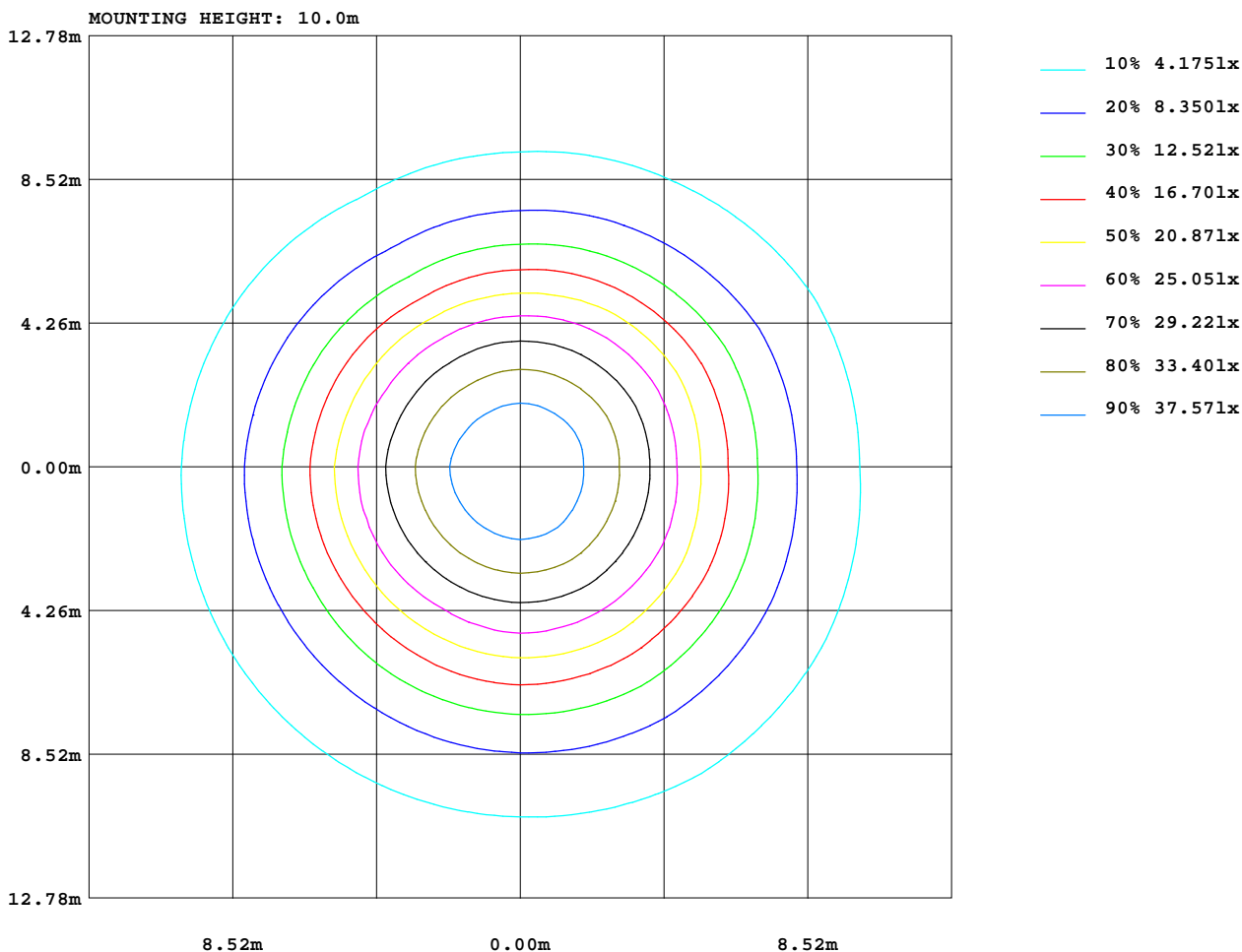
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																				
Address:																				
NAME: 90°+60°+90°50W										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 576*188mm					SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																	UNIT:lm			Φ t	Φ a
	0.02	0.13	0.35	0.60	0.83	1.01	1.33	1.80	2.22	2.29	2.02	1.65	1.33	1.05	0.76	0.44	0.16	0.02	18.0	0.00		
90																						
80																						
70																						
60																						
50																						
40																						
30																						
												</										

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月14日

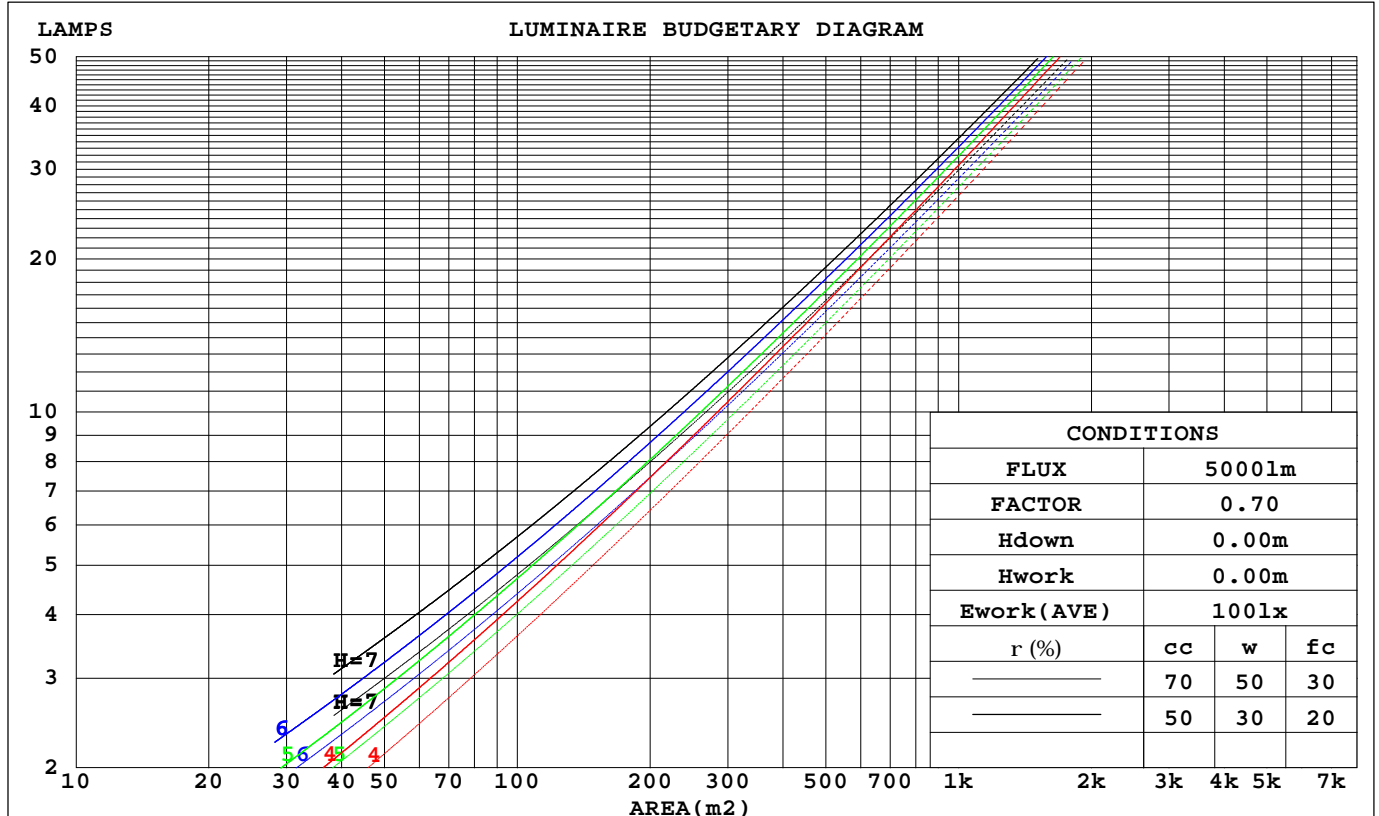
Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 90°+60°+90°50W								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 576*188mm				SERIAL No.:			

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:



WEC AND CCEC

Report number:

MANUFACTURER:											
Address:											
NAME: 90°+60°+90°50W						TYPE:			WEIGHT:		
SPECIFICATION:						DIMENSION: 576*188mm			SERIAL No.:		

rcc	80%			70%			50%			30%			10%			0														
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0														
rfc	20%			20%			20%			20%			20%			0														
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)														
0.0																														
1.0	.253	.144	.045	.245	.140	.044	.232	.133	.043	.220	.127	.041	.209	.121	.039															
2.0	.238	.131	.040	.232	.128	.039	.221	.123	.038	.210	.118	.037	.200	.113	.036															
3.0	.223	.119	.036	.217	.116	.035	.207	.112	.034	.198	.109	.033	.189	.105	.032															
4.0	.208	.108	.032	.203	.106	.031	.195	.103	.031	.186	.100	.030	.179	.097	.030															
5.0	.195	.099	.029	.191	.098	.028	.183	.095	.028	.175	.093	.028	.169	.090	.027															
6.0	.183	.092	.026	.179	.090	.026	.172	.088	.026	.166	.086	.025	.159	.084	.025															
7.0	.172	.085	.024	.169	.084	.024	.162	.082	.024	.157	.080	.023	.151	.079	.023															
8.0	.162	.079	.022	.159	.078	.022	.154	.077	.022	.148	.075	.022	.143	.074	.021															
9.0	.153	.074	.021	.151	.073	.021	.146	.072	.020	.141	.071	.020	.136	.069	.020															
10.0	.145	.070	.019	.143	.069	.019	.138	.068	.019	.134	.067	.019	.130	.065	.019															

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio                      Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.195	.195	.195	.166	.166	.166	.114	.114	.114	.065	.065	.065	.021	.021	.021	
1.0	.181	.161	.143	.155	.138	.123	.106	.095	.085	.061	.055	.050	.019	.018	.016	
2.0	.169	.136	.109	.145	.117	.094	.099	.081	.066	.057	.047	.038	.018	.015	.013	
3.0	.160	.118	.085	.137	.102	.074	.094	.071	.052	.054	.041	.031	.017	.013	.010	
4.0	.151	.104	.069	.130	.090	.060	.089	.063	.042	.052	.037	.025	.017	.012	.008	
5.0	.143	.094	.057	.123	.081	.049	.085	.057	.035	.049	.033	.021	.016	.011	.007	
6.0	.136	.085	.048	.117	.073	.042	.081	.051	.030	.047	.030	.018	.015	.010	.006	
7.0	.130	.078	.041	.112	.067	.036	.077	.047	.025	.045	.028	.015	.014	.009	.005	
8.0	.124	.072	.036	.106	.062	.031	.074	.044	.022	.043	.026	.013	.014	.008	.004	
9.0	.118	.067	.032	.102	.058	.028	.070	.041	.020	.041	.024	.012	.013	.008	.004	
10.0	.113	.062	.029	.097	.054	.025	.068	.038	.018	.039	.023	.011	.013	.007	.004	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

## Uncorrected UGR Table

Report number:

MANUFACTURER:										
Address:										
NAME: 90°+60°+90°50W						TYPE:		WEIGHT:		
SPECIFICATION:						DIMENSION: 576*188mm		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	20.5	21.8	20.8	22.0	22.2	21.1	22.4	21.4	22.6	22.8
3H	21.4	22.6	21.7	22.8	23.0	22.3	23.5	22.6	23.7	23.9
4H	21.8	22.9	22.1	23.1	23.4	22.9	24.0	23.2	24.3	24.5
6H	22.1	23.2	22.4	23.4	23.7	23.5	24.5	23.8	24.8	25.1
8H	22.2	23.2	22.6	23.5	23.8	23.7	24.7	24.1	25.0	25.3
12H	22.3	23.3	22.6	23.5	23.9	24.0	24.9	24.3	25.2	25.5
4H 2H	20.9	22.0	21.2	22.3	22.5	21.4	22.6	21.8	22.8	23.1
3H	22.0	23.0	22.4	23.3	23.6	22.9	23.8	23.2	24.1	24.4
4H	22.6	23.5	23.0	23.8	24.1	23.7	24.5	24.0	24.9	25.2
6H	23.1	23.8	23.5	24.2	24.6	24.4	25.2	24.8	25.5	25.9
8H	23.2	23.9	23.6	24.3	24.7	24.7	25.5	25.2	25.8	26.2
12H	23.3	24.0	23.8	24.4	24.8	25.1	25.7	25.5	26.1	26.5
8H 4H	22.9	23.6	23.3	24.0	24.4	23.9	24.6	24.3	25.0	25.3
6H	23.5	24.1	24.0	24.6	25.0	24.8	25.4	25.2	25.8	26.2
8H	23.8	24.3	24.3	24.8	25.2	25.3	25.8	25.7	26.2	26.7
12H	24.0	24.5	24.5	24.9	25.4	25.7	26.2	26.2	26.7	27.1
12H 4H	23.0	23.6	23.4	24.0	24.4	23.9	24.5	24.3	24.9	25.3
6H	23.7	24.2	24.1	24.6	25.1	24.8	25.4	25.3	25.8	26.3
8H	24.0	24.4	24.5	24.9	25.4	25.4	25.8	25.8	26.3	26.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.5					+ 0.3 / - 0.4				
1.5H	+ 0.5 / - 0.5					+ 0.4 / - 0.4				
2.0H	+ 0.6 / - 0.5					+ 0.6 / - 0.4				

CIE Pub.117 Corrected 6751 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.6)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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) $k(RI) \times RCR = 5$									
$k = 0.60$	70	61	55	70	61	55	69	60	55	50
0.80	79	70	65	79	70	64	77	69	64	58
1.00	86	78	72	85	77	72	83	78	71	65
1.25	92	84	78	91	83	78	88	82	77	71
1.50	96	88	83	94	88	82	92	86	81	75
2.00	101	94	89	99	93	89	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	106	101	97	104	99	96	100	97	93	86
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	106	103	105	102	100	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

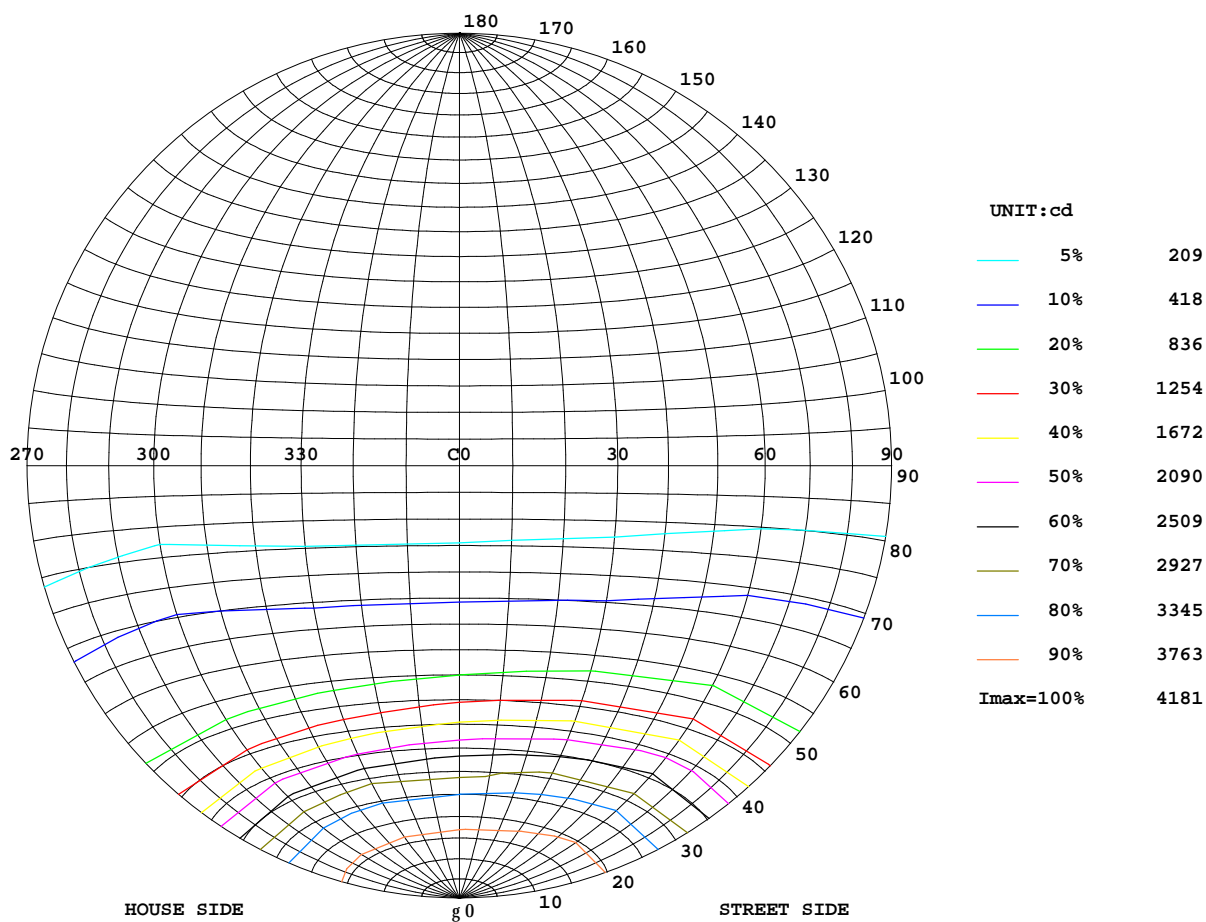
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 Temperature:25.3DEG  
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 Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

### ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

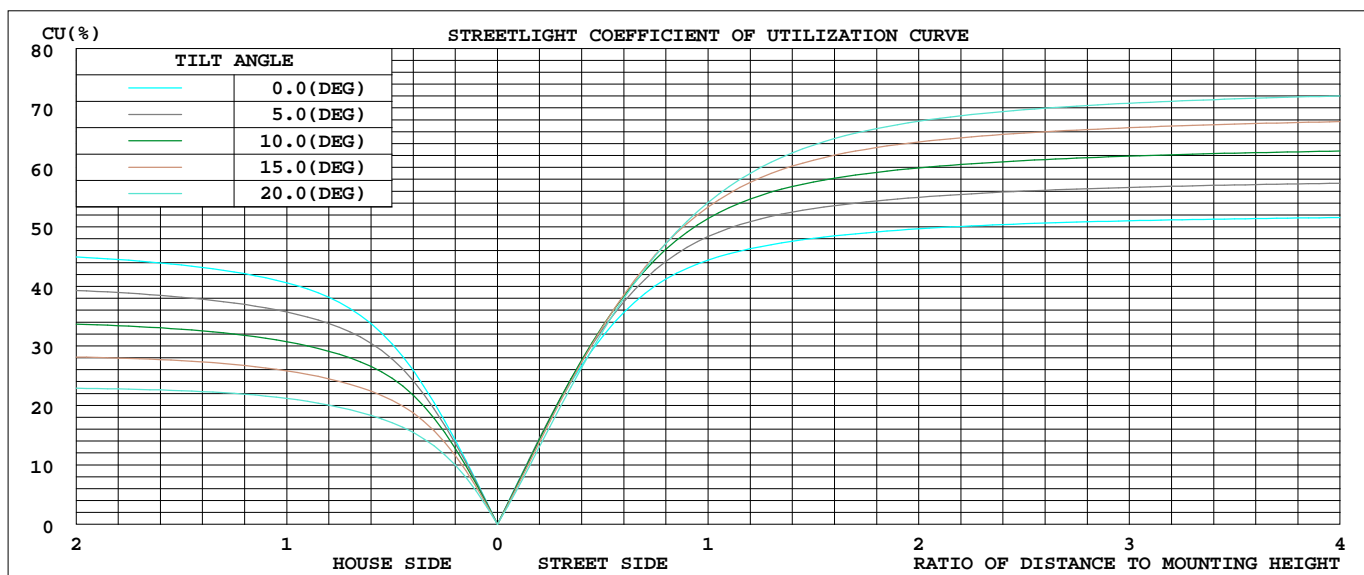
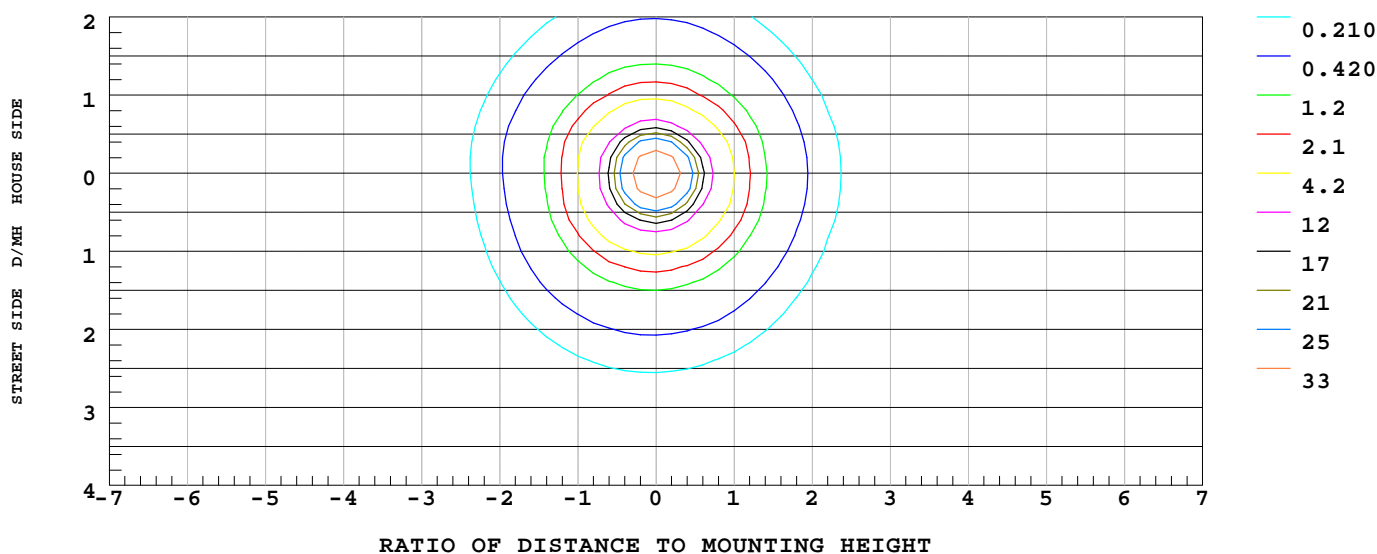
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 41.58 lx



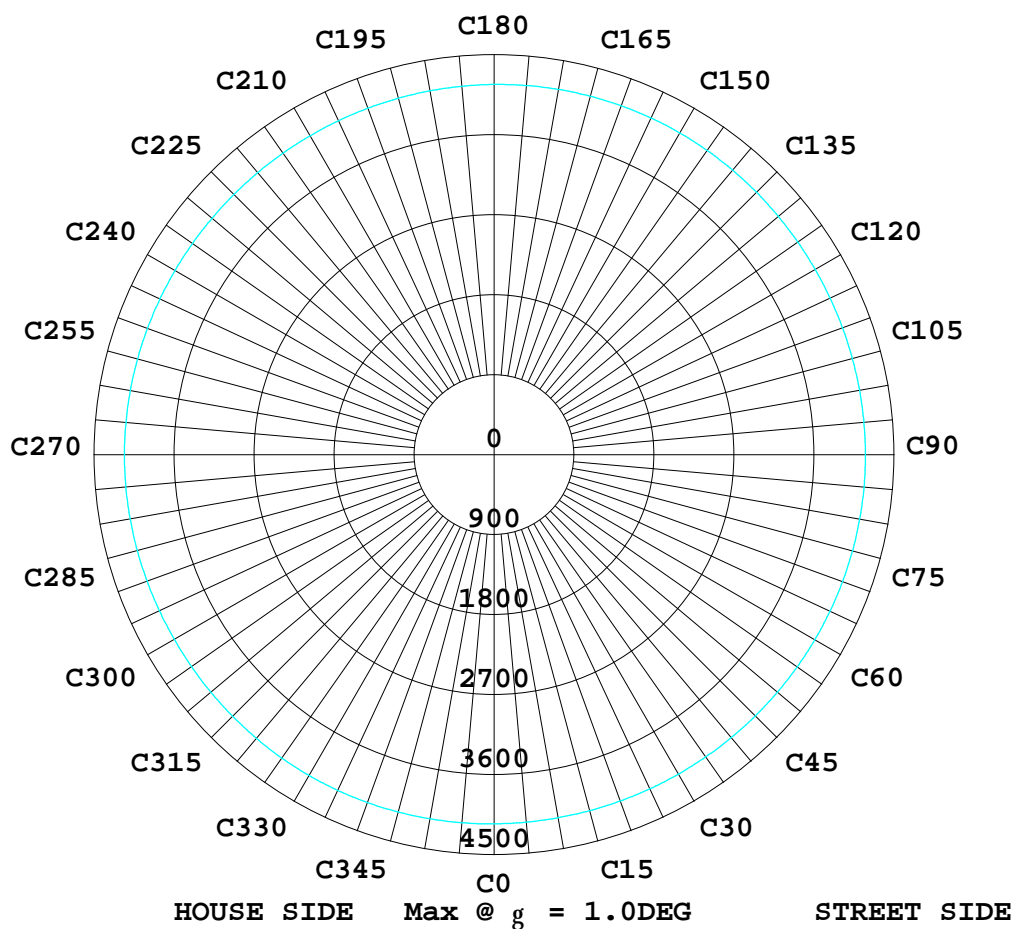
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°+60°+90°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月14日

Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks: