

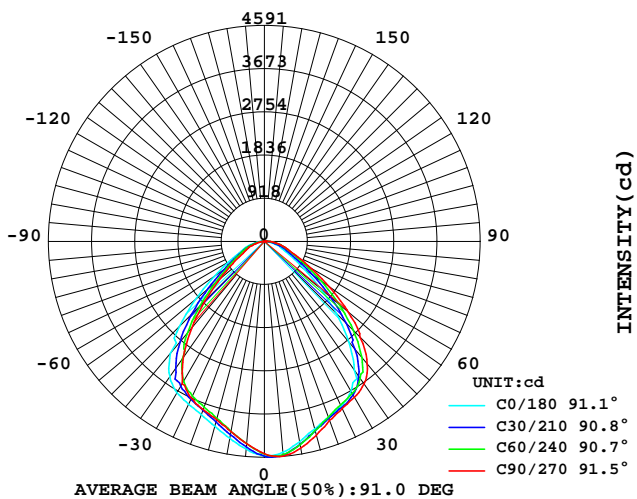
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

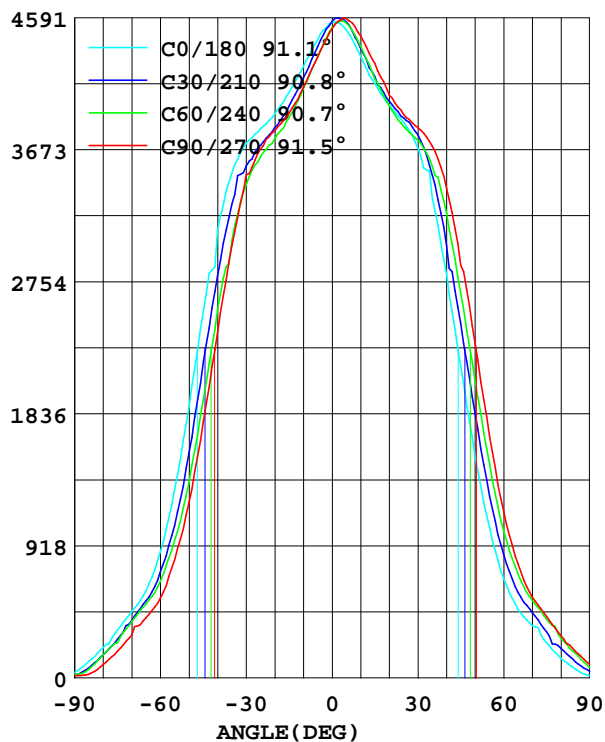
MANUFACTURER:		
Address:		
NAME: 90°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I <sub>max</sub> (cd)	4591	S/MH(C0/180)	1.23
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.16
NOMINAL POWER(W)	70	TOTAL FLUX(lm)	9355.4	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	134.2	Current(A)	0.327
NOMINAL FLUX(lm)	9355.4	h up(%)	0.6	Power(W)	69.73
LAMPS QUANTITY	1	h down(%)	99.4	Power Factor(PF)	0.975
TEST VOLTAGE(V)	218.6	Effective Flux(lm)	8822.9	EEI	0.108

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



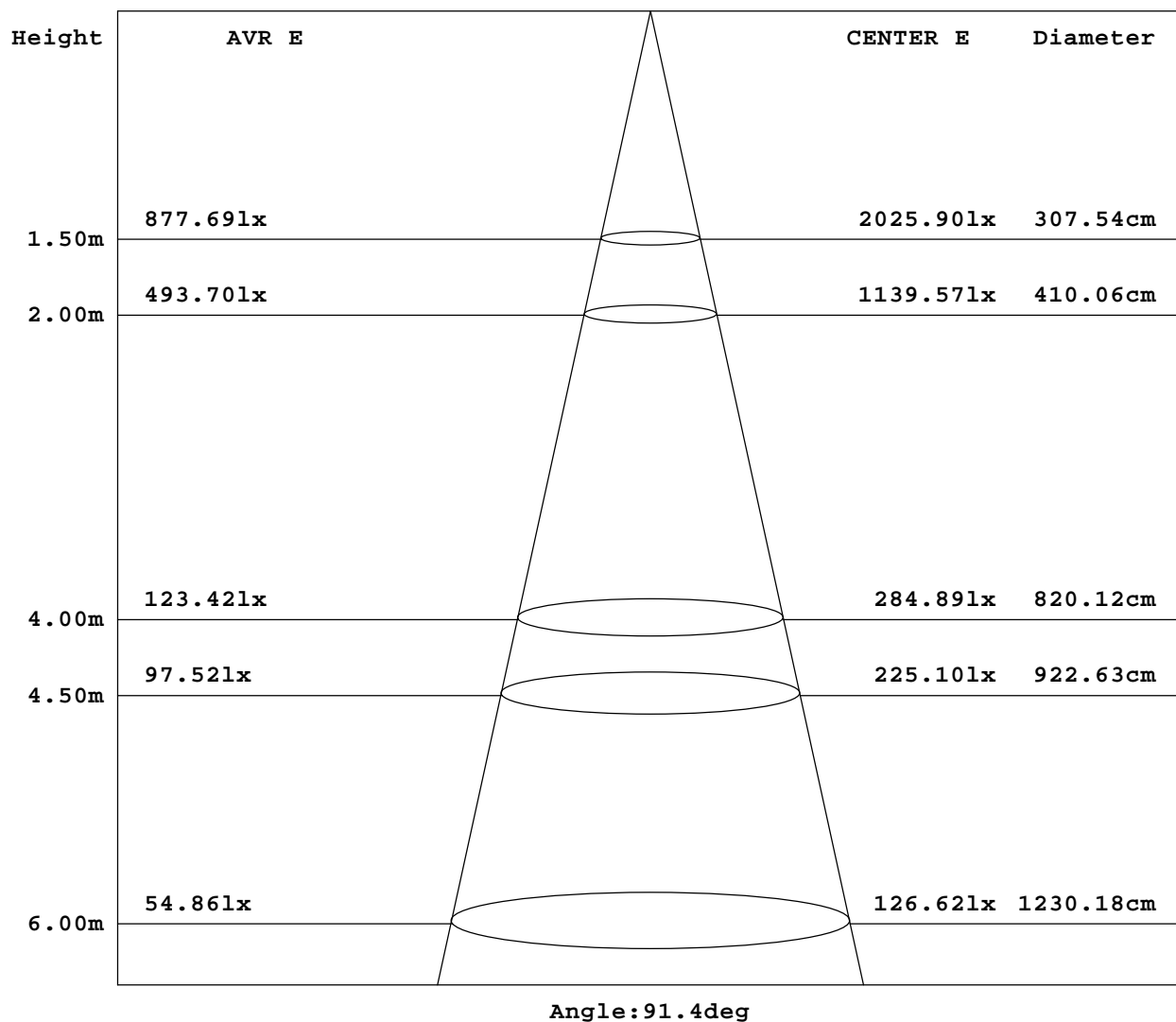
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10日

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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2019年08月10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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	4435	4355	4316	4387	4503	4557	4583	4503	0- 5	107.3	107.3
10.0	4253	4140	4109	4200	4324	4386	4464	4379	5- 10	312.0	419.3
15.0	4070	3937	3925	4029	4131	4171	4270	4205	10- 15	495.5	914.9
20.0	3921	3788	3804	3907	3985	3993	4052	4035	15- 20	660.1	1575
25.0	3820	3666	3679	3778	3867	3865	3920	3907	20- 25	811.4	2387
30.0	3716	3495	3499	3524	3684	3757	3826	3806	25- 30	945.3	3332
35.0	3509	3168	3004	3001	3338	3527	3698	3661	30- 35	1039	4370
40.0	3111	2675	2397	2470	2801	3114	3401	3385	35- 40	1050	5421
45.0	2552	2069	1789	1845	2166	2570	2870	2822	40- 45	969.5	6390
50.0	1882	1461	1221	1288	1539	1949	2324	2138	45- 50	817.1	7208
55.0	1311	1007	819.4	868.7	1046	1378	1681	1502	50- 55	629.5	7837
60.0	881.7	709.5	558.1	594.4	693.2	941.7	1160	1014	55- 60	459.1	8296
65.0	607.4	525.5	420.4	410.3	478.2	658.8	793.3	694.9	60- 65	332.7	8629
70.0	463.8	395.9	296.8	293.9	364.1	496.4	559.2	492.9	65- 70	250.0	8879
75.0	334.2	256.6	188.3	187.9	244.8	365.3	429.1	360.2	70- 75	186.5	9066
80.0	212.1	161.5	94.33	95.05	137.2	242.1	294.8	244.6	75- 80	127.6	9193
85.0	116.9	66.25	25.24	23.84	62.14	142.3	186.1	138.5	80- 85	75.09	9269
90.0	38.55	22.45	16.89	5.239	17.37	59.90	94.21	55.43	85- 90	34.35	9303
95.0	16.28	21.97	15.19	4.634	15.92	27.47	34.79	7.574	90- 95	13.70	9317
100.0	14.83	21.36	15.56	4.392	16.16	26.32	27.29	3.363	95-100	8.633	9325
105.0	13.98	17.49	16.04	4.815	17.25	21.30	24.15	3.787	100-105	7.846	9333
110.0	13.62	16.52	15.07	5.178	16.89	22.45	22.94	4.331	105-110	7.193	9340
115.0	13.74	18.52	16.64	5.602	17.01	23.48	21.00	5.239	110-115	7.141	9347
120.0	12.65	20.88	18.70	4.876	19.55	24.69	20.88	6.727	115-120	7.296	9355
125.0	0	0	0	0	0	0	0	0	120-125	0.733	9355
130.0	0	0	0	0	0	0	0	0	125-130	0	9355
135.0	0	0	0	0	0	0	0	0	130-135	0	9355
140.0	0	0	0	0	0	0	0	0	135-140	0	9355
145.0	0	0	0	0	0	0	0	0	140-145	0	9355
150.0	0	0	0	0	0	0	0	0	145-150	0	9355
155.0	0	0	0	0	0	0	0	0	150-155	0	9355
160.0	0	0	0	0	0	0	0	0	155-160	0	9355
165.0	0	0	0	0	0	0	0	0	160-165	0	9355
170.0	0	0	0	0	0	0	0	0	165-170	0	9355
175.0	0	0	0	0	0	0	0	0	170-175	0	9355
180.0	0	0	0	0	0	0	0	0	175-180	0	9355
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10日

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

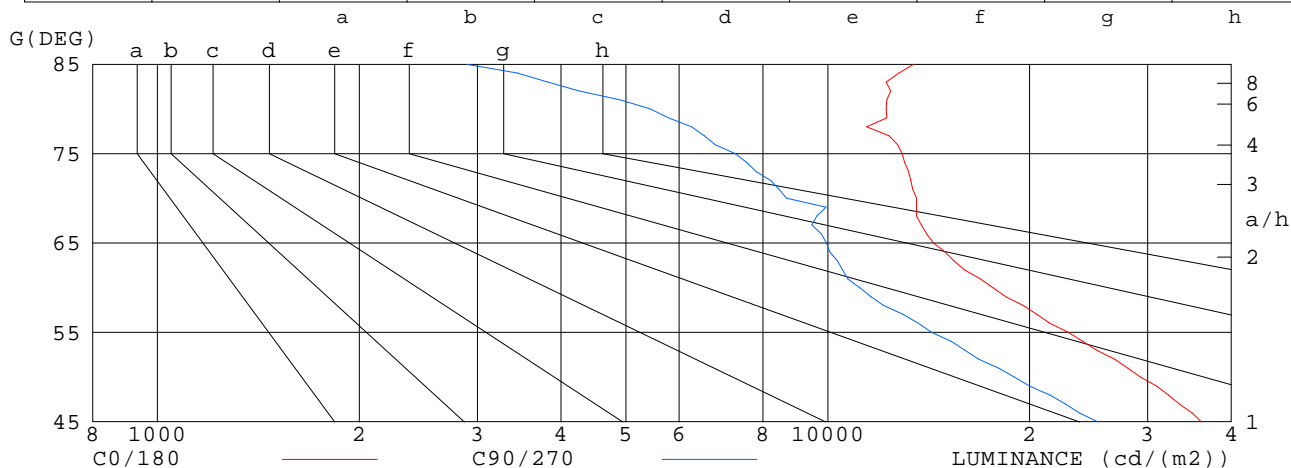
## LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 90°70W	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	13419	2896
80	12219	5432
75	12915	7277
70	13563	8680
65	14374	9948
60	17636	11162
55	22856	14287
50	29284	18993
45	36097	25296

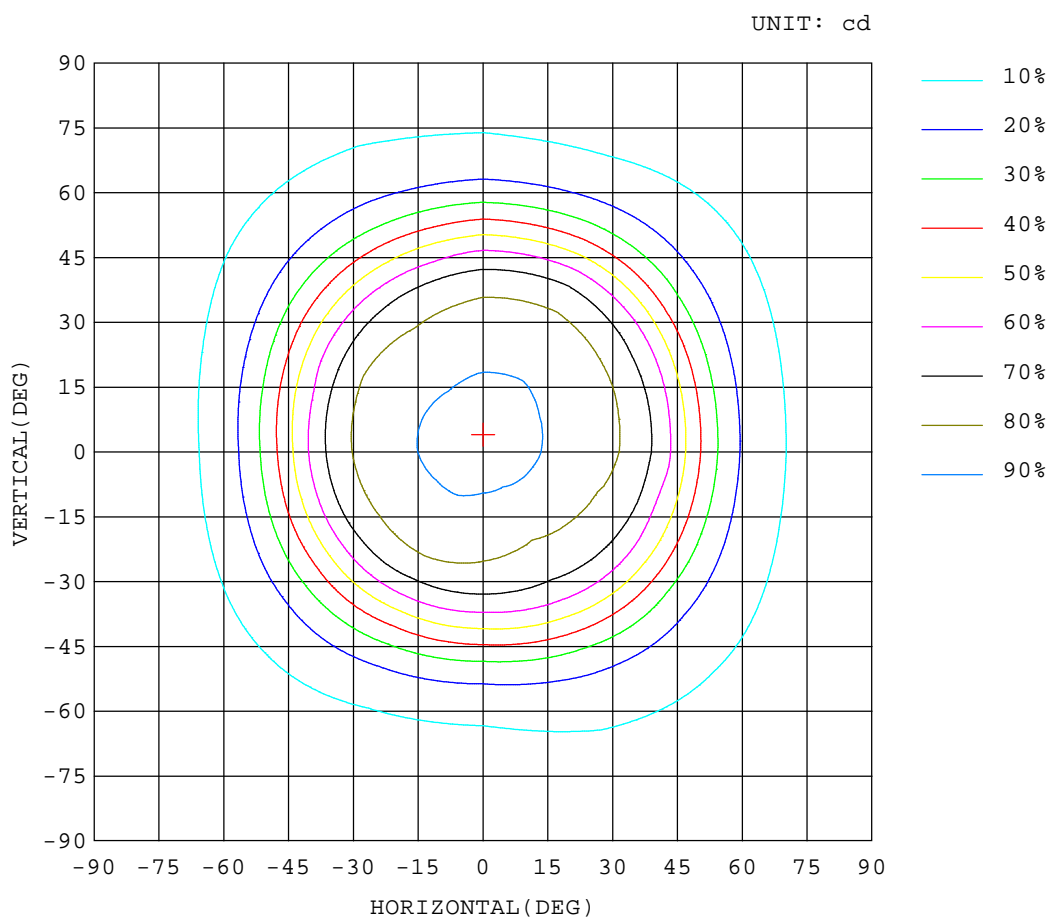
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10日

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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



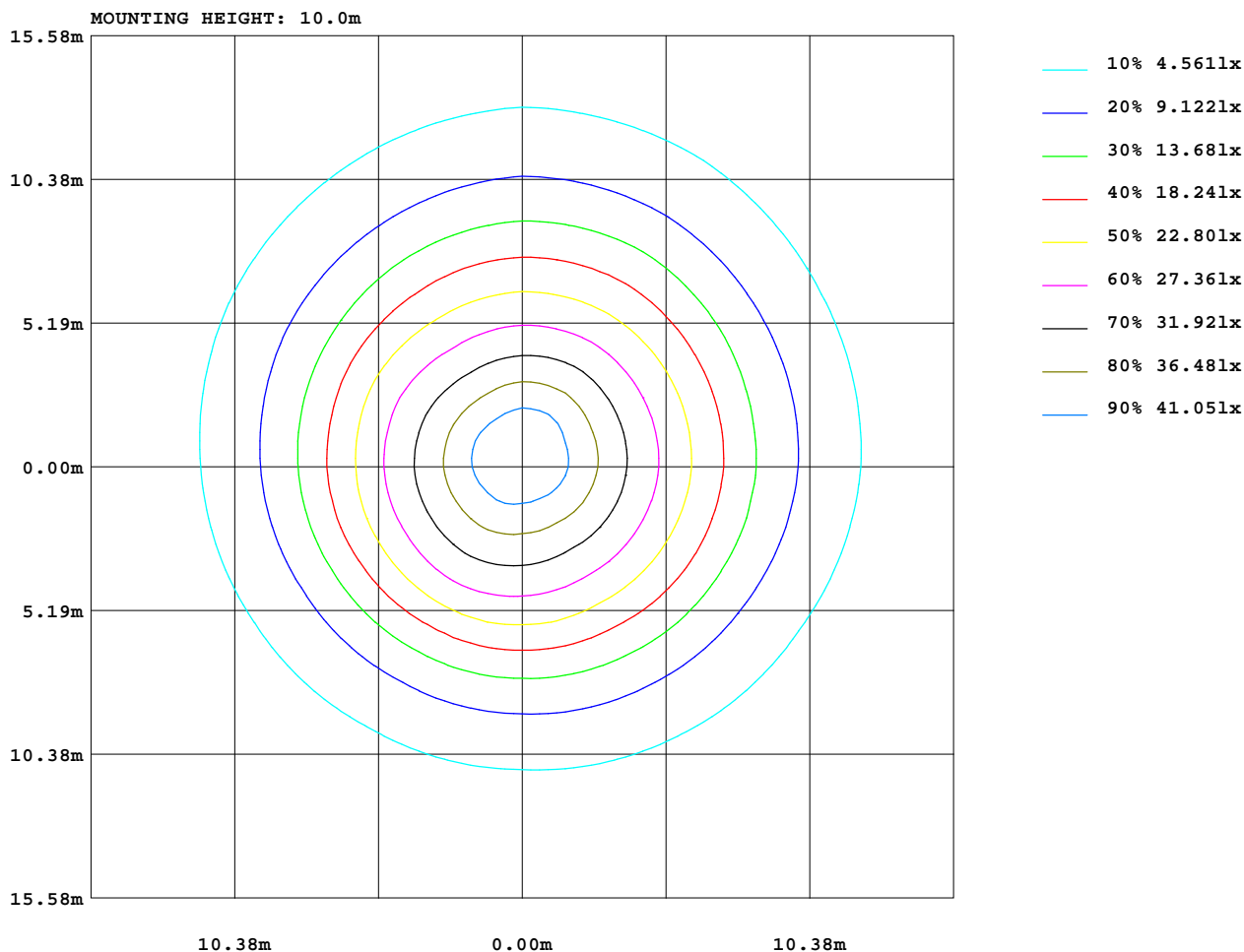
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10日

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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a
	90	80	70	60	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60	-70	-80	-90				
	0.07	0.34	0.85	1.58	2.53	3.60	4.54	5.19	5.62	5.52	4.91	4.11	3.27	2.46	1.68	1.01	0.49	0.13	47.9	0.00			
	0.09	0.58	1.65	3.30	5.46	8.07	10.4	11.9	12.8	12.6	11.3	9.59	7.63	5.55	3.58	1.98	0.82	0.17	108	19.5			
	0.12	0.88	2.51	5.21	9.03	13.1	17.5	21.3	24.0	24.0	21.2	17.1	12.8	9.00	5.71	3.02	1.19	0.21	188	151			
	0.15	1.16	3.52	7.59	13.0	21.2	31.7	42.1	49.7	50.4	43.8	33.4	22.4	13.9	8.07	4.13	1.54	0.26	349	329			
	0.18	1.42	4.62	9.78	19.5	35.8	55.7	73.7	85.2	86.9	78.1	60.7	39.0	21.4	10.9	5.24	1.87	0.30	591	578			
	0.21	1.68	5.43	12.6	28.7	54.1	80.5	99.7	110	111	104	87.0	59.5	31.8	14.4	6.29	2.19	0.33	810	800			
	0.22	1.91	6.05	15.7	38.0	69.4	96.6	110	118	119	113	100	75.3	42.9	18.4	7.20	2.45	0.36	935	927			
	0.23	2.06	6.46	18.1	44.6	79.0	104	117	126	128	118	104	83.7	51.0	21.7	7.90	2.62	0.38	1015	1008			
	0.24	2.10	6.58	19.1	47.2	82.8	106	121	135	134	120	105	86.7	54.2	23.4	8.25	2.71	0.39	1056	1049			
	0.23	2.05	6.40	18.3	45.3	80.7	105	119	130	129	117	104	84.8	52.5	22.7	8.10	2.68	0.39	1028	1021			
	0.22	1.92	5.95	16.1	39.1	72.0	99.3	114	120	118	110	98.9	77.2	45.8	19.8	7.50	2.54	0.37	949	941			
	0.20	1.70	5.27	13.0	30.1	56.6	84.8	104	111	110	102	87.6	63.1	35.3	15.9	6.66	2.32	0.35	830	820			
	0.17	1.42	4.46	9.89	20.7	38.6	60.0	78.0	88.9	89.4	80.6	65.1	43.9	24.2	12.0	5.71	2.01	0.31	626	613			
	0.14	1.12	3.53	7.21	13.3	22.7	34.4	45.9	53.2	54.3	48.9	38.3	26.3	15.9	9.07	4.65	1.66	0.27	381	363			
	0.11	0.82	2.46	5.08	8.51	12.8	17.6	22.3	25.2	25.9	24.4	20.6	15.6	10.8	6.72	3.44	1.31	0.23	204	172			
	0.08	0.52	1.50	3.05	5.14	7.33	9.43	11.4	12.6	13.3	13.3	12.2	9.97	7.07	4.34	2.32	0.95	0.19	115	30.1			
	0.05	0.25	0.65	1.33	2.29	3.31	4.30	5.13	5.66	6.11	6.38	6.12	5.09	3.70	2.34	1.31	0.61	0.14	54.8	0.00			
	0.04	0.09	0.09	0.16	0.37	0.61	0.82	0.99	1.10	1.29	1.53	1.62	1.44	1.10	0.78	0.53	0.32	0.11	13.0	0.00			
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90				
Φ t	2.76	22.0	68.0	167	373	662	923	1103	1214	1219	1120	957	718	429	202	85.3	30.3	4.89	9355				
Φ a	0.00	0.00	23.9	136	344	634	896	1075	1187	1191	1092	929	690	401	173	51.0	0.00	0.00			8823		

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10日

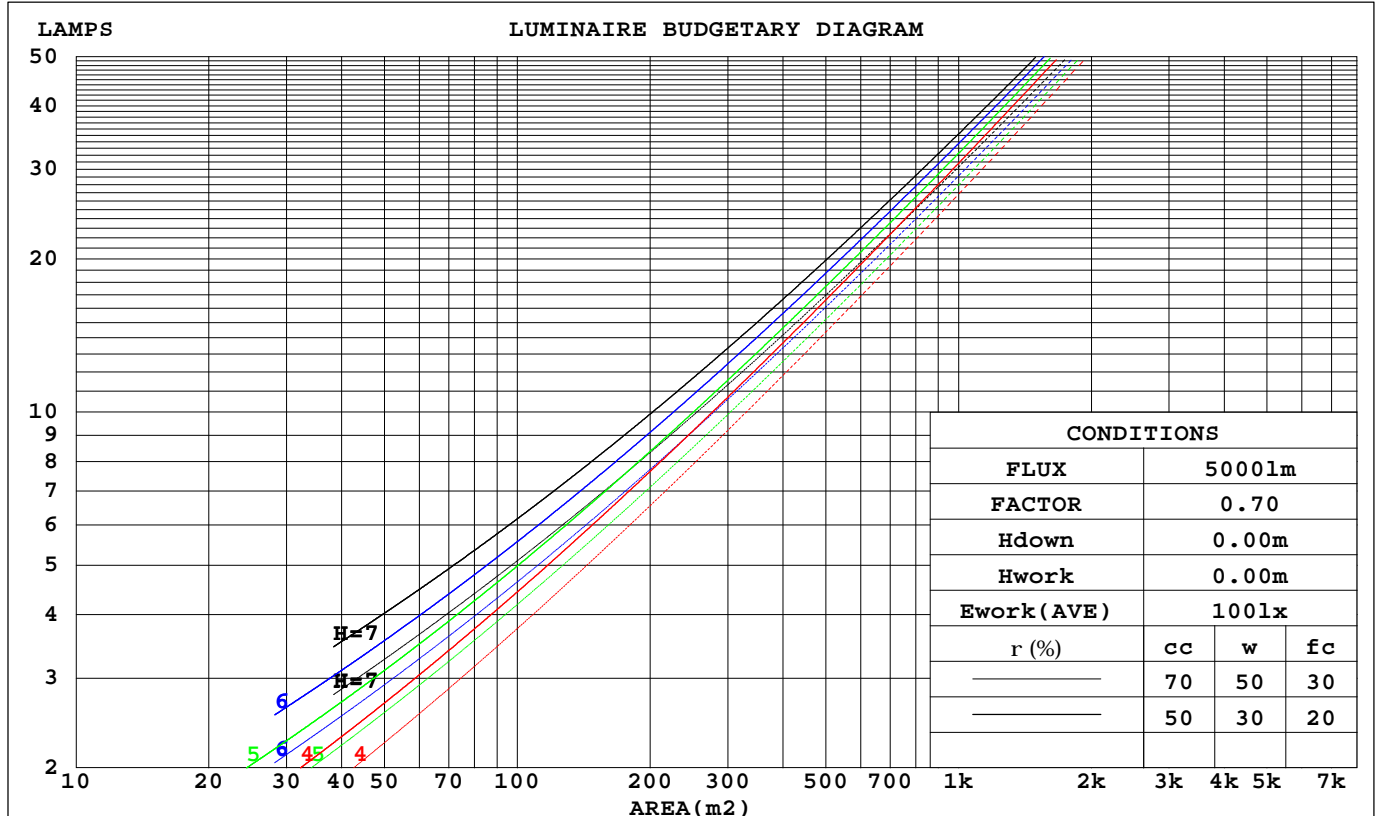
Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 90°70W								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10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°70W						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	.261	.148	.047	.254	.145	.046	.240	.138	.044	.228	.131	.042	.217	.126	.040															
2.0	.249	.136	.042	.242	.134	.041	.231	.128	.040	.220	.124	.039	.210	.119	.037															
3.0	.234	.124	.037	.228	.122	.037	.218	.118	.036	.209	.114	.035	.200	.111	.034															
4.0	.219	.114	.033	.214	.112	.033	.205	.109	.033	.197	.106	.032	.189	.103	.031															
5.0	.205	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.029															
6.0	.193	.097	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	.169	.089	.026															
7.0	.181	.090	.025	.178	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024															
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023															
9.0	.161	.078	.022	.159	.077	.022	.153	.076	.022	.149	.074	.021	.144	.073	.021															
10.0	.153	.073	.020	.150	.073	.020	.146	.071	.020	.141	.070	.020	.137	.069	.020															

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	.049	.020	.018	.016	
2.0	.171	.136	.108	.146	.117	.093	.100	.081	.065	.058	.047	.038	.019	.015	.012	
3.0	.162	.118	.084	.139	.102	.073	.095	.071	.051	.055	.041	.030	.018	.013	.010	
4.0	.154	.105	.067	.132	.090	.058	.091	.063	.041	.053	.037	.024	.017	.012	.008	
5.0	.146	.094	.055	.126	.081	.048	.087	.057	.034	.050	.033	.020	.016	.011	.007	
6.0	.140	.085	.047	.120	.074	.041	.083	.052	.029	.048	.030	.017	.015	.010	.006	
7.0	.133	.078	.040	.115	.068	.035	.079	.048	.025	.046	.028	.015	.015	.009	.005	
8.0	.127	.073	.035	.110	.063	.031	.076	.044	.022	.044	.026	.013	.014	.009	.004	
9.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
10.0	.116	.063	.028	.100	.055	.024	.070	.039	.017	.041	.023	.010	.013	.008	.003	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10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°70W					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	2H	22.7	24.0	22.9	24.2	24.4	21.3	22.7	21.6	22.9	23.1
	3H	23.3	24.6	23.6	24.8	25.0	21.9	23.1	22.2	23.3	23.6
	4H	23.7	24.8	24.0	25.1	25.3	22.1	23.2	22.4	23.5	23.7
	6H	23.9	25.0	24.2	25.3	25.6	22.2	23.3	22.5	23.5	23.8
	8H	24.0	25.1	24.4	25.4	25.7	22.1	23.2	22.5	23.5	23.8
	12H	24.1	25.1	24.5	25.4	25.7	22.1	23.1	22.5	23.4	23.7
4H	2H	22.8	23.9	23.1	24.2	24.5	21.6	22.8	21.9	23.0	23.3
	3H	23.6	24.6	24.0	24.9	25.2	22.4	23.4	22.8	23.7	24.0
	4H	24.1	25.0	24.4	25.3	25.6	22.7	23.6	23.1	24.0	24.3
	6H	24.4	25.2	24.8	25.6	26.0	22.9	23.7	23.3	24.1	24.5
	8H	24.6	25.4	25.0	25.7	26.1	23.0	23.7	23.4	24.1	24.5
	12H	24.8	25.5	25.2	25.8	26.3	22.9	23.6	23.4	24.0	24.4
8H	4H	24.1	24.9	24.5	25.3	25.6	22.9	23.6	23.3	24.0	24.4
	6H	24.6	25.2	25.1	25.6	26.1	23.2	23.9	23.7	24.3	24.7
	8H	24.8	25.4	25.3	25.8	26.3	23.3	23.9	23.8	24.3	24.8
	12H	25.1	25.6	25.6	26.0	26.5	23.4	23.8	23.9	24.3	24.8
12H	4H	24.1	24.8	24.5	25.2	25.6	22.9	23.6	23.3	24.0	24.4
	6H	24.6	25.2	25.1	25.6	26.1	23.3	23.8	23.8	24.3	24.7
	8H	24.9	25.4	25.4	25.8	26.3	23.4	23.9	23.9	24.3	24.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.6					+ 0.7 / - 0.8					
1.5H	+ 0.6 / - 0.7					+ 0.5 / - 0.8					
2.0H	+ 1.7 / - 1.3					+ 1.4 / - 1.4					

CIE Pub.117 Corrected 9355 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.8)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10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°70W	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) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	49	64	55	49	63	54	48	43
0.80	75	65	59	74	65	59	73	64	58	52
1.00	83	74	67	82	73	67	80	74	67	61
1.25	90	81	75	88	80	74	86	79	74	67
1.50	94	86	80	92	85	79	90	83	78	72
2.00	100	93	87	98	91	87	95	89	85	78
2.50	103	96	91	101	95	90	97	92	88	81
3.00	105	100	95	103	98	94	99	95	92	84
4.00	109	104	100	106	102	99	102	99	96	87
5.00	111	106	103	108	105	101	104	101	98	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

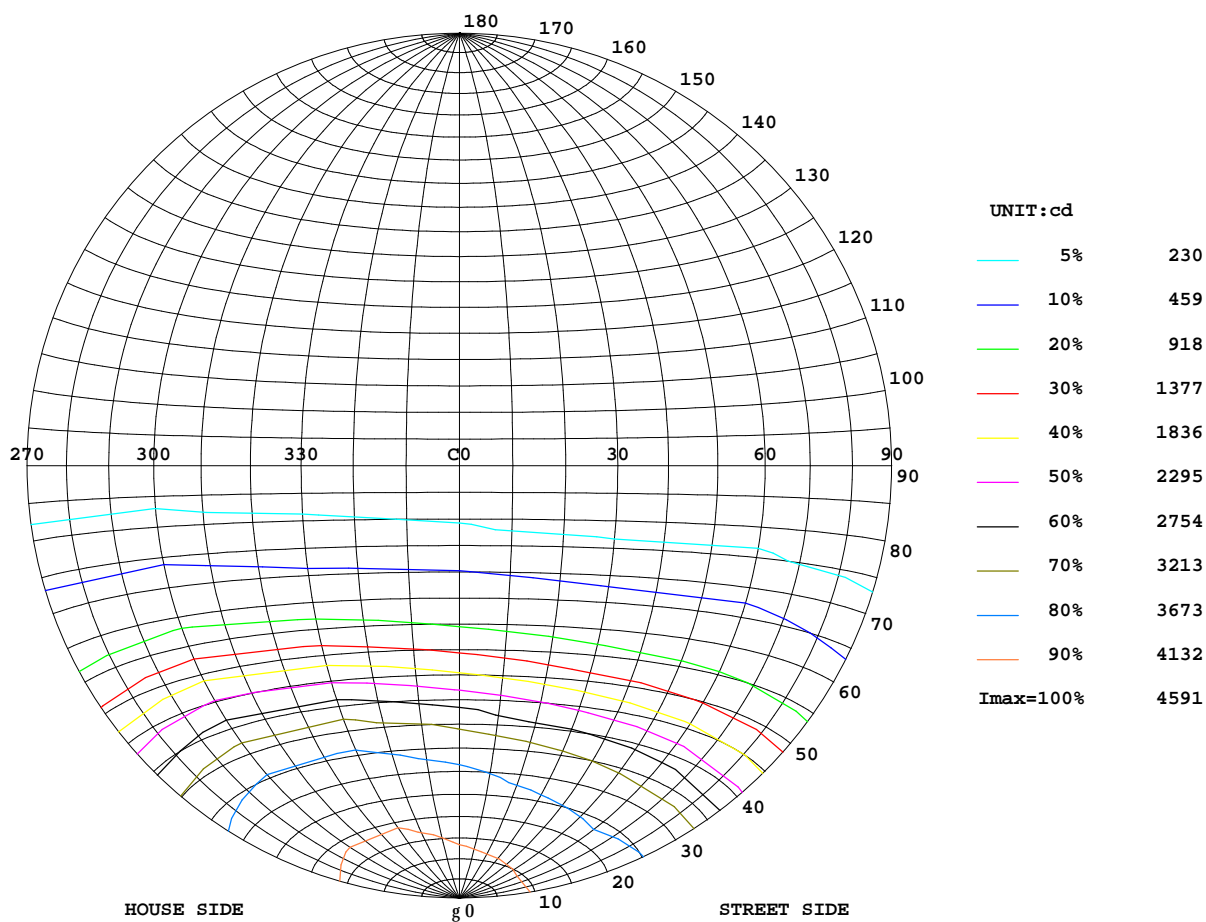
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月10日

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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10日

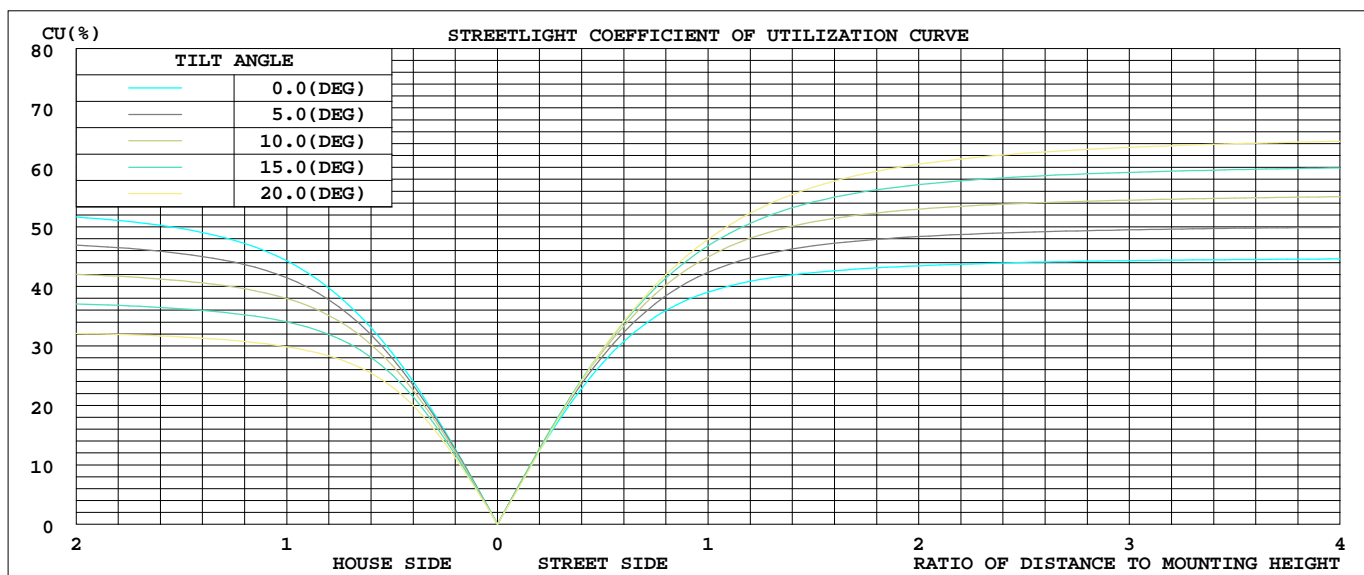
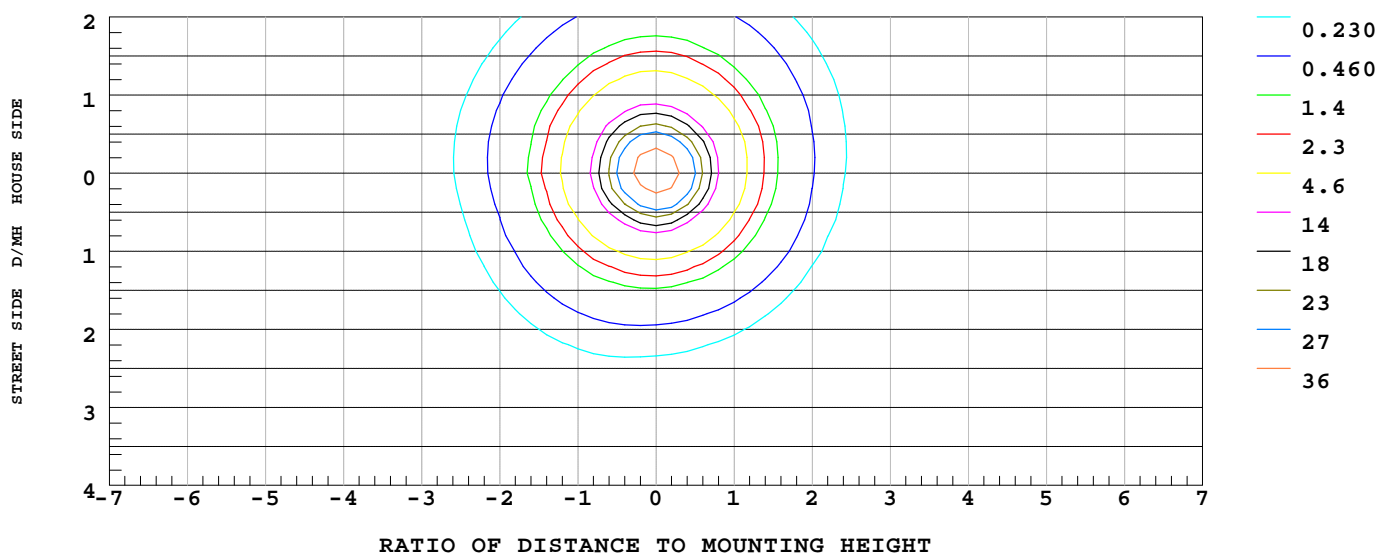
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 45.58 lx



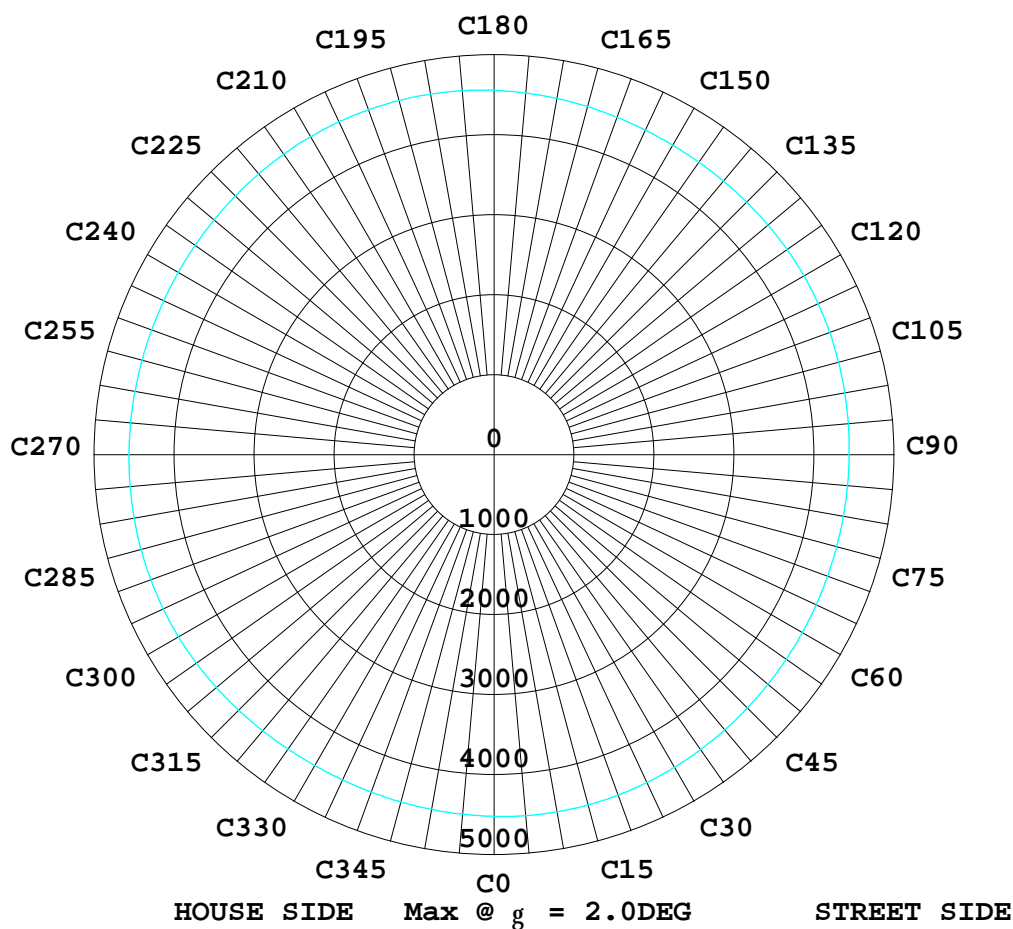
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10日

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°70W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月10日

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