

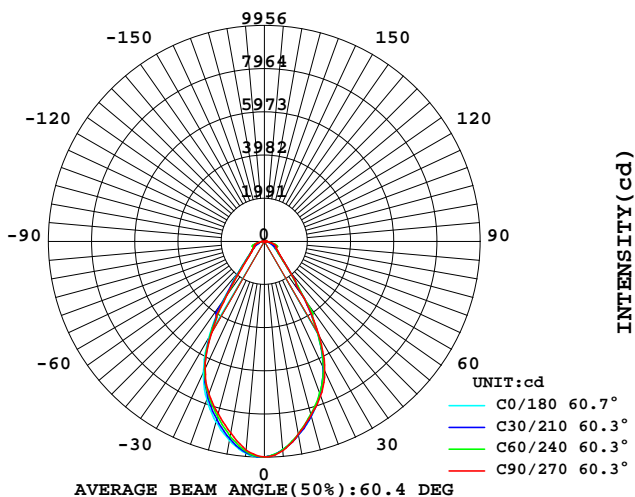
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

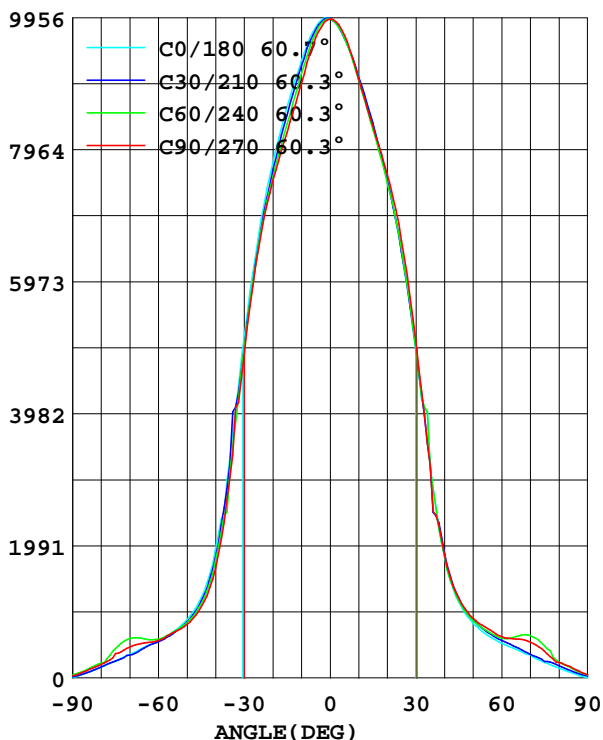
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I <sub>max</sub> (cd)	9956	S/MH(C0/180)	0.91
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.90
NOMINAL POWER(W)	70	TOTAL FLUX(lm)	10824	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	154.8	Current(A)	0.334
NOMINAL FLUX(lm)	10823.9	h up(%)	0.9	Power(W)	69.91
LAMPS QUANTITY	1	h down(%)	99.1	Power Factor(PF)	0.956
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	8910.0	EEI	0.107

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



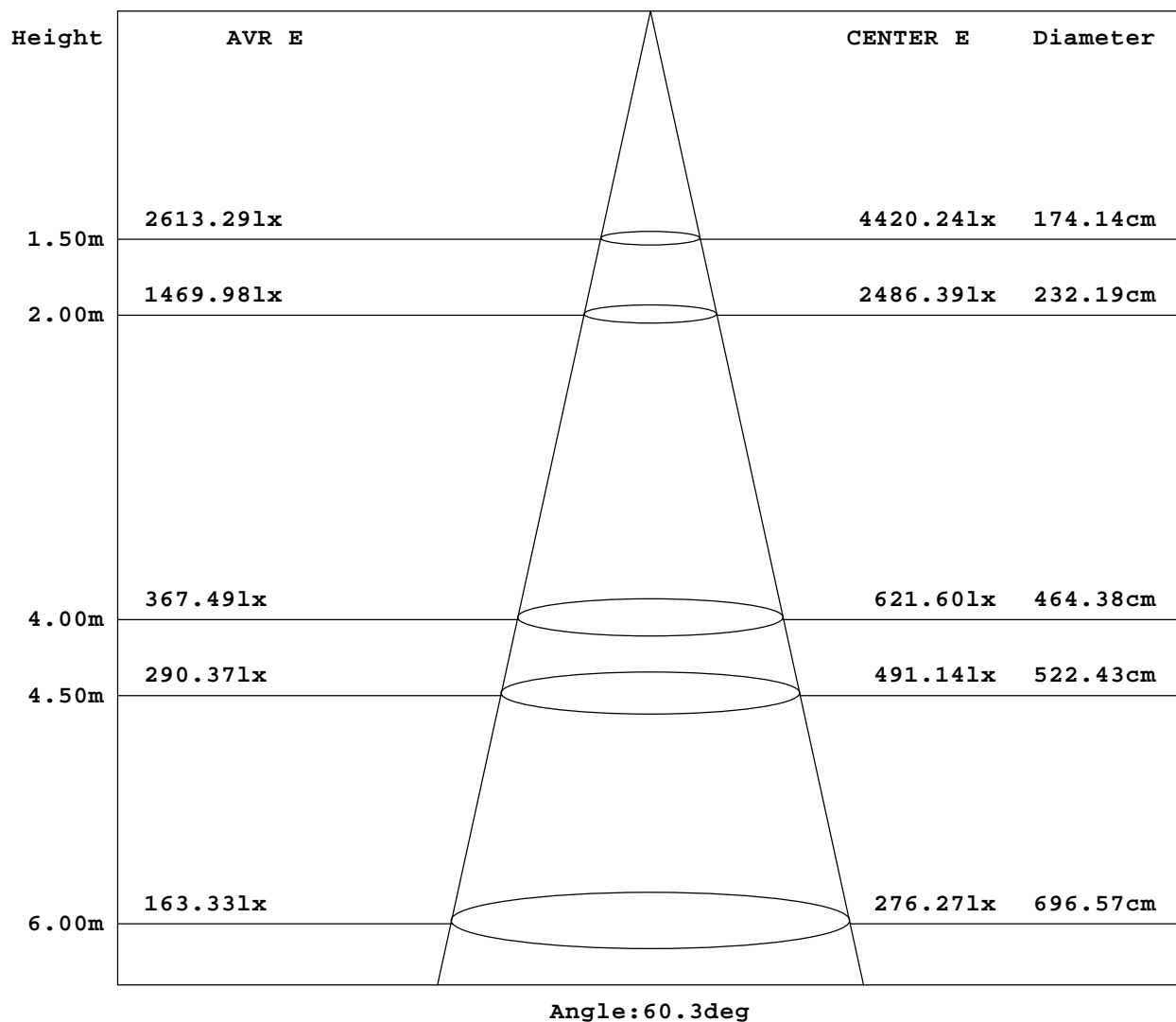
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2019年07月31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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	zone	tStal
5.0	9809	9744	9654	9595	9634	9648	9691	9741	0- 5	234.4	234.4
10.0	9318	9178	8966	8967	9075	9041	9028	9169	5- 10	670.8	905.3
15.0	8615	8423	8225	8217	8353	8313	8318	8454	10- 15	1033	1938
20.0	7756	7595	7496	7412	7484	7475	7588	7665	15- 20	1310	3249
25.0	6688	6534	6482	6376	6429	6440	6592	6641	20- 25	1478	4726
30.0	5146	4981	4885	4842	4927	4979	5091	5125	25- 30	1461	6187
35.0	3304	3156	3020	2998	3166	3193	3195	3266	30- 35	1212	7399
40.0	1945	1797	1645	1691	1828	1848	1836	1883	35- 40	794.5	8194
45.0	1216	1144	1079	1096	1145	1185	1204	1208	40- 45	531.1	8725
50.0	874.1	838.1	807.0	810.1	823.9	869.8	898.8	888.5	45- 50	398.5	9123
55.0	689.4	675.4	677.5	662.8	646.5	698.2	746.2	720.5	50- 55	332.4	9456
60.0	562.8	567.8	565.9	547.8	525.0	584.1	623.1	594.7	55- 60	288.9	9745
65.0	460.5	521.4	526.1	495.6	430.3	544.8	587.7	542.1	60- 65	263.2	10008
70.0	355.9	469.8	463.8	436.6	348.5	497.4	538.5	488.9	65- 70	248.4	10256
75.0	247.5	350.4	368.2	328.5	236.2	367.3	403.6	376.2	70- 75	210.7	10467
80.0	164.0	196.1	202.8	194.8	146.9	212.3	234.3	217.6	75- 80	142.0	10609
85.0	78.96	103.2	109.9	104.0	67.95	114.7	144.1	120.4	80- 85	83.33	10693
90.0	6.485	33.34	31.29	33.65	2.129	38.36	50.16	40.00	85- 90	36.22	10729
95.0	0	36.43	60.93	41.15	0	31.59	65.29	41.27	90- 95	19.17	10748
100.0	0	27.11	54.28	33.04	0	24.81	62.50	35.88	95-100	16.98	10765
105.0	0	26.26	52.82	32.07	0	24.99	58.51	34.92	100-105	15.67	10781
110.0	0	25.54	48.47	31.41	0	25.60	56.94	34.67	105-110	15.02	10796
115.0	0	23.18	46.17	30.02	0	26.14	54.40	33.46	110-115	14.11	10810
120.0	0	20.82	43.14	28.14	2.734	26.99	51.61	32.68	115-120	12.92	10823
125.0	0	0	0	0	0	0	0	0	120-125	1.239	10824
130.0	0	0	0	0	0	0	0	0	125-130	0	10824
135.0	0	0	0	0	0	0	0	0	130-135	0	10824
140.0	0	0	0	0	0	0	0	0	135-140	0	10824
145.0	0	0	0	0	0	0	0	0	140-145	0	10824
150.0	0	0	0	0	0	0	0	0	145-150	0	10824
155.0	0	0	0	0	0	0	0	0	150-155	0	10824
160.0	0	0	0	0	0	0	0	0	155-160	0	10824
165.0	0	0	0	0	0	0	0	0	160-165	0	10824
170.0	0	0	0	0	0	0	0	0	165-170	0	10824
175.0	0	0	0	0	0	0	0	0	170-175	0	10824
180.0	0	0	0	0	0	0	0	0	175-180	0	10824
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31日

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

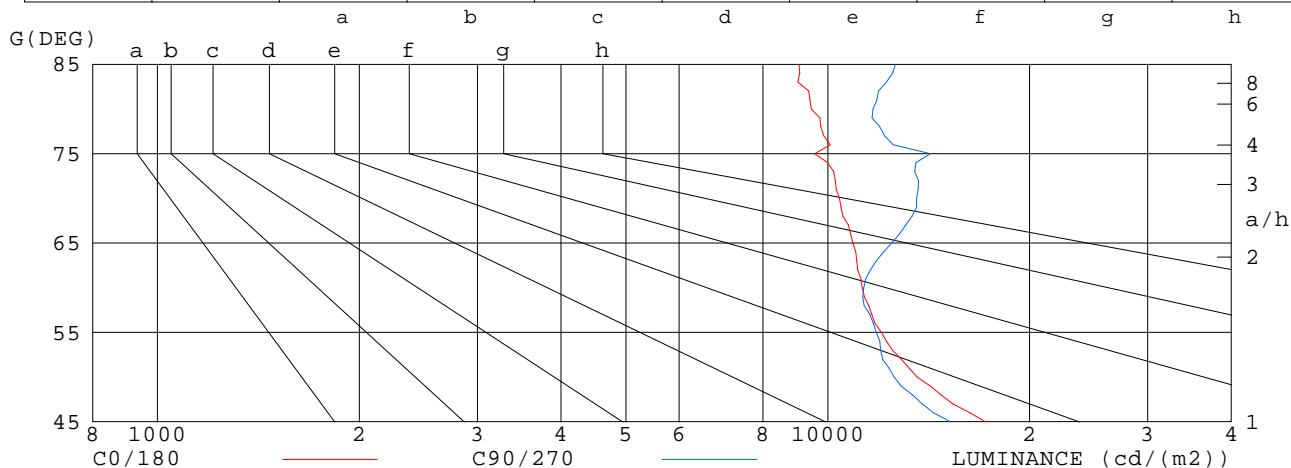
## LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	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	9060	12614
80	9446	11683
75	9563	14229
70	10407	13563
65	10899	12450
60	11257	11320
55	12019	11813
50	13600	12555
45	17197	15261

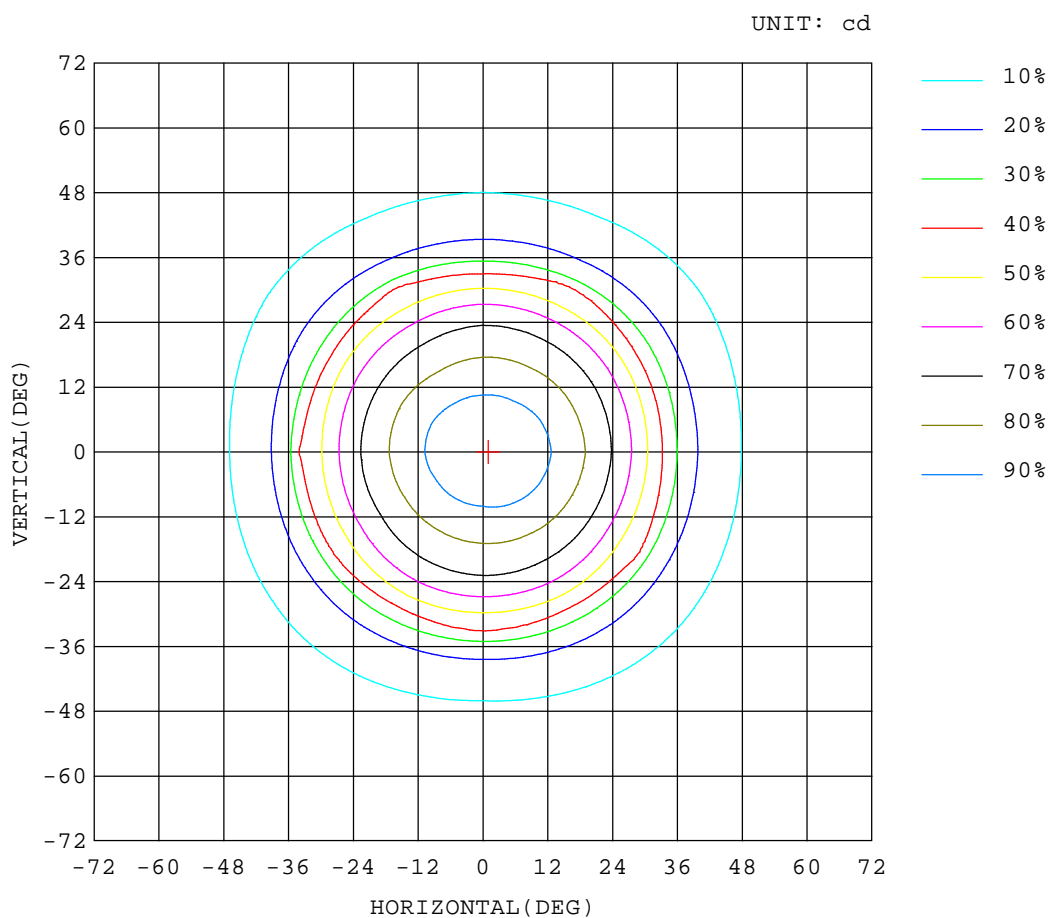
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



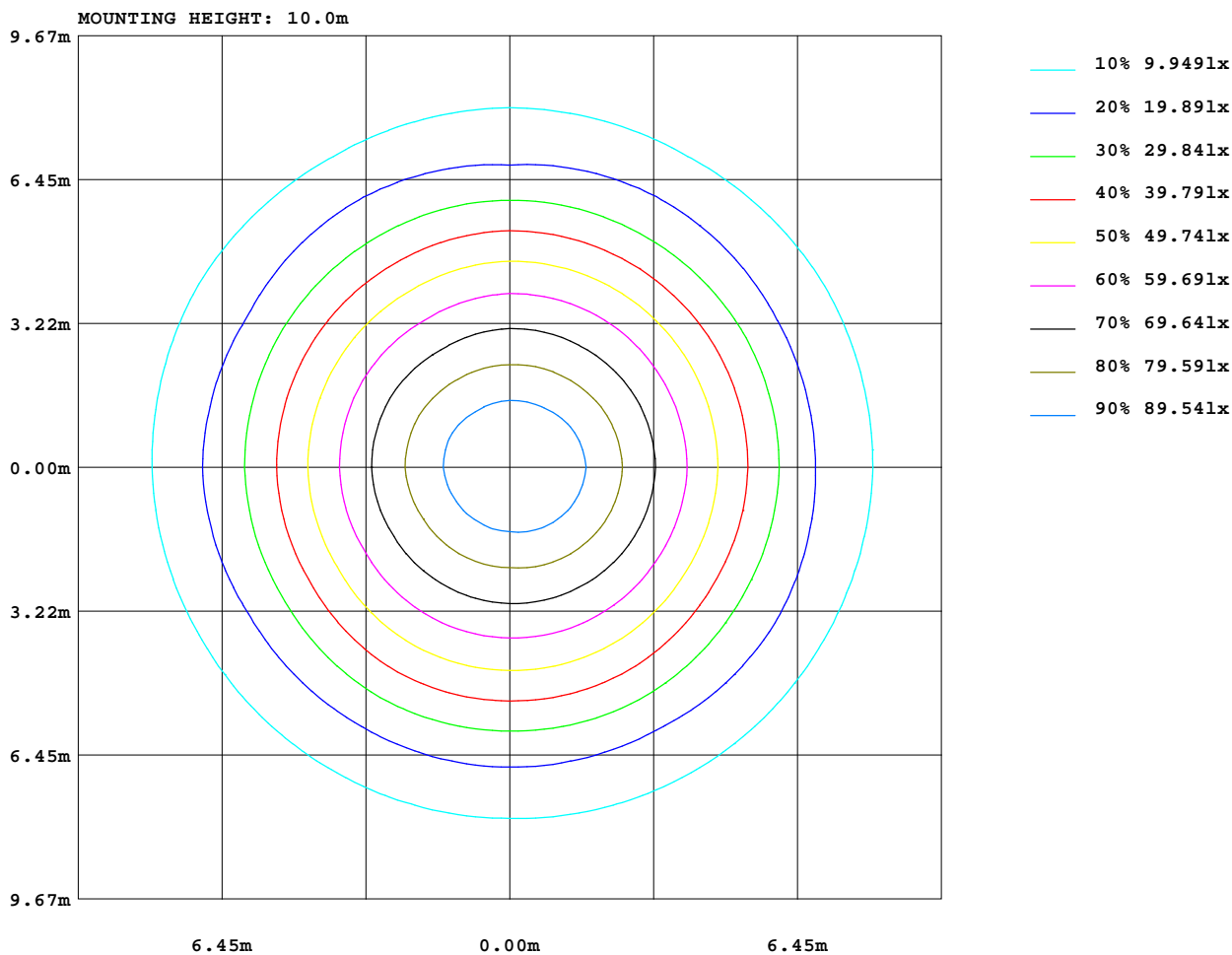
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31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:									TYPE:					WEIGHT:				
SPECIFICATION:									DIMENSION: 1438*65mm					SERIAL No.:				

72	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	1.02	1.93	3.27	5.36	7.92	10.3	11.0	11.2	11.0	10.8	10.4	9.75	8.71	7.15	5.44	3.75	2.31	1.20	123	0.00		
64	1.37	2.46	4.26	6.76	8.95	10.4	11.1	11.7	12.2	12.1	11.5	10.6	9.67	8.51	6.91	5.04	3.20	1.62	139	0.00		
56	1.65	3.06	5.04	7.39	9.32	11.2	13.2	14.9	16.0	16.0	15.0	13.3	11.3	9.41	7.69	5.82	3.84	2.03	167	0.00		
48	1.93	3.65	5.89	8.40	11.3	14.7	18.5	22.5	25.3	25.4	22.7	18.6	14.9	11.6	8.79	6.48	4.29	2.35	228	112		
40	2.20	4.19	6.71	10.0	14.6	21.7	32.7	46.2	55.0	55.2	46.5	33.0	22.1	15.0	10.4	7.16	4.68	2.58	390	320		
32	2.42	4.61	7.49	11.9	20.2	37.0	66.4	92.9	108	108	94.4	67.9	38.2	20.8	12.5	7.94	5.02	2.76	709	657		
24	2.60	4.91	8.23	14.2	28.7	61.2	102	130	144	146	133	105	64.0	29.8	14.8	8.71	5.29	2.88	1004	960		
VERTICAL (DEG)	2.71	5.11	8.80	16.5	38.3	83.3	124	152	167	168	155	128	86.2	40.0	17.3	9.32	5.47	2.95	1212	1172		
	2.75	5.18	9.08	17.9	46.0	93.7	135	165	185	187	169	140	97.5	46.9	18.9	9.64	5.55	2.95	1336	1300		
	2.76	5.16	9.02	17.7	45.7	93.0	134	164	184	187	169	139	96.9	46.8	18.8	9.56	5.50	2.91	1331	1293		
	2.72	5.06	8.63	15.9	37.3	81.5	123	150	166	168	154	127	84.9	39.5	16.9	9.08	5.34	2.84	1198	1158		
	2.63	4.86	7.99	13.5	26.7	59.2	99.7	129	143	144	131	103	63.1	28.5	14.2	8.33	5.07	2.69	986	940		
	2.48	4.58	7.23	11.2	18.5	34.4	62.2	90.3	106	106	91.8	64.6	36.5	19.6	11.7	7.46	4.69	2.49	682	627		
-24	2.29	4.21	6.47	9.46	13.6	20.0	30.2	42.5	52.4	52.8	43.6	31.5	21.0	14.1	9.66	6.60	4.19	2.25	367	294		
-32	2.05	3.76	5.81	7.97	10.6	13.7	17.2	20.6	22.9	23.0	21.1	17.7	14.1	10.9	8.13	5.75	3.60	1.97	211	81.4		
-40	1.74	3.29	5.06	6.98	8.71	10.6	12.4	13.8	14.5	14.6	14.0	12.7	10.9	9.05	7.14	4.82	3.02	1.66	155	0.00		
-48	1.38	2.70	4.34	6.14	7.80	9.05	9.93	10.6	11.1	11.2	10.9	10.5	9.95	8.48	6.39	4.09	2.40	1.33	129	0.00		
-56	1.00	1.94	3.19	4.76	6.48	8.05	8.90	9.37	9.56	9.80	10.1	10.1	9.56	7.40	5.01	3.05	1.77	0.96	111	0.00		
-64																						
-72																						
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)				16	24	32	40	48	56	64	72		
Φ t	37.7	70.7	117	192	361	674	1012	1277	1433	1445	1303	1042	700	374	201	123	75.3	40.4	10824			
Φ a	0.00	0.00	0.00	73.0	264	583	926	1195	1353	1365	1222	957	610	278	88.4	0.00	0.00	0.00		8910		

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31日

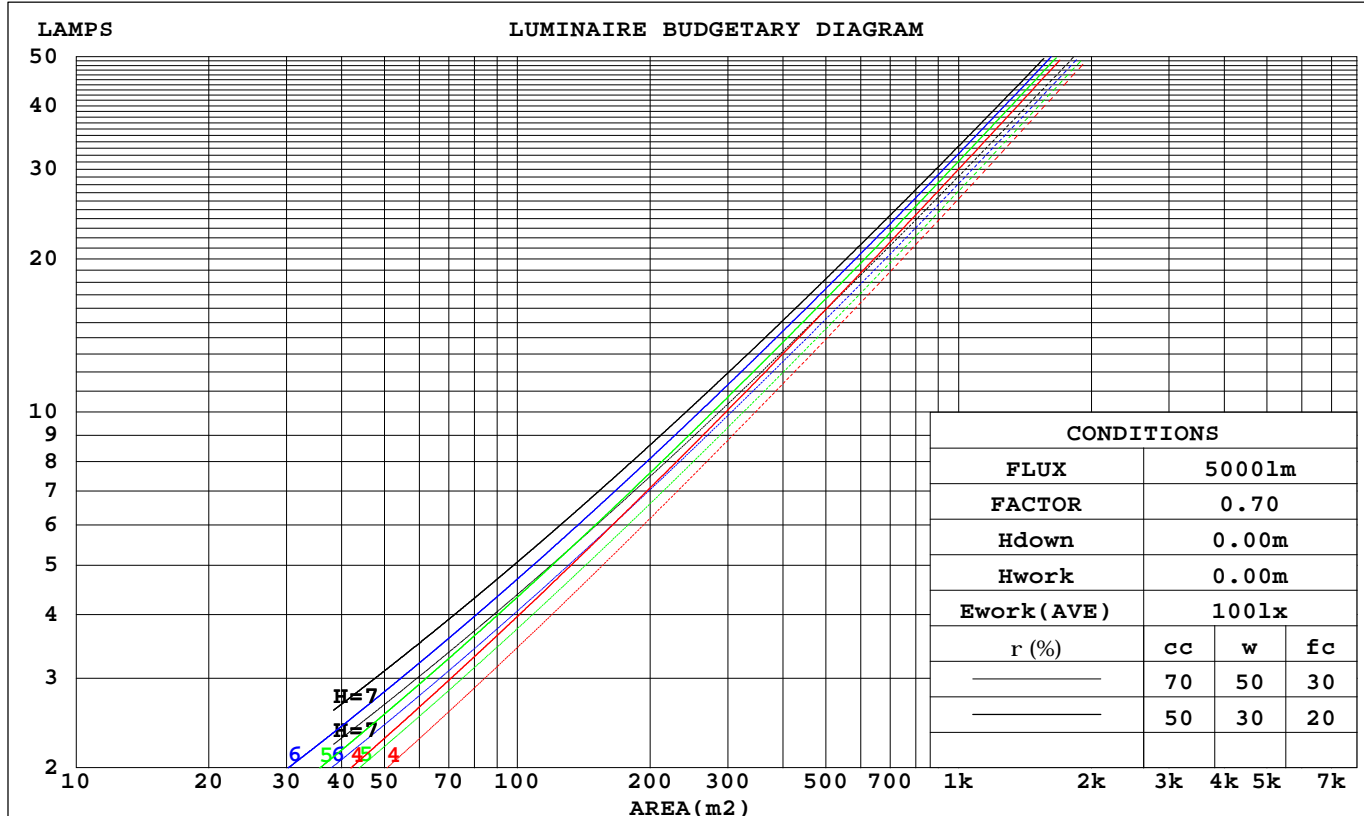
Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	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07月31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:						TYPE:			WEIGHT:		
SPECIFICATION:						DIMENSION: 1438*65mm			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	.231	.131	.042	.224	.128	.041	.210	.121	.039	.198	.114	.037	.187	.108	.035															
2.0	.216	.119	.036	.210	.116	.036	.199	.111	.034	.188	.106	.033	.178	.101	.032															
3.0	.202	.107	.032	.197	.105	.032	.187	.101	.031	.178	.097	.030	.169	.094	.029															
4.0	.189	.098	.029	.184	.096	.028	.175	.093	.028	.167	.090	.027	.160	.087	.026															
5.0	.177	.090	.026	.173	.089	.026	.165	.086	.025	.158	.083	.025	.151	.081	.024															
6.0	.166	.083	.024	.163	.082	.024	.156	.080	.023	.150	.078	.023	.144	.076	.022															
7.0	.157	.078	.022	.154	.077	.022	.148	.075	.021	.142	.073	.021	.137	.071	.021															
8.0	.148	.072	.020	.146	.072	.020	.140	.070	.020	.135	.068	.020	.130	.067	.019															
9.0	.141	.068	.019	.138	.067	.019	.133	.066	.019	.129	.065	.018	.124	.063	.018															
10.0	.134	.064	.018	.132	.064	.018	.127	.062	.018	.123	.061	.017	.119	.060	.017															

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	.197	.197	.197	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.182	.164	.147	.155	.140	.127	.106	.097	.088	.061	.056	.051	.020	.018	.016	
2.0	.169	.139	.114	.145	.120	.098	.099	.083	.069	.057	.048	.040	.018	.016	.013	
3.0	.158	.121	.091	.136	.104	.079	.093	.072	.055	.054	.042	.033	.017	.014	.011	
4.0	.149	.107	.074	.128	.092	.064	.088	.064	.045	.051	.038	.027	.016	.012	.009	
5.0	.141	.095	.062	.121	.082	.054	.083	.058	.038	.048	.034	.023	.016	.011	.007	
6.0	.133	.086	.053	.114	.075	.046	.079	.052	.033	.046	.031	.019	.015	.010	.006	
7.0	.126	.079	.046	.109	.069	.040	.075	.048	.028	.044	.028	.017	.014	.009	.006	
8.0	.121	.073	.040	.104	.063	.035	.072	.044	.025	.042	.026	.015	.014	.009	.005	
9.0	.115	.068	.036	.099	.059	.031	.069	.041	.022	.040	.024	.013	.013	.008	.004	
10.0	.110	.064	.033	.095	.055	.028	.066	.039	.020	.038	.023	.012	.012	.008	.004	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31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:					TYPE:			WEIGHT:		
SPECIFICATION:					DIMENSION: 1438*65mm			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	19.4	20.5	19.6	20.7	20.9	19.4	20.5	19.7	20.7	20.9
3H	20.3	21.4	20.6	21.6	21.8	21.2	22.2	21.4	22.4	22.7
4H	20.8	21.8	21.1	22.0	22.3	22.0	23.0	22.3	23.2	23.5
6H	21.2	22.1	21.5	22.4	22.7	22.4	23.4	22.7	23.6	23.9
8H	21.3	22.2	21.7	22.5	22.8	22.6	23.5	22.9	23.8	24.1
12H	21.4	22.3	21.8	22.6	22.9	22.7	23.6	23.1	23.9	24.2
4H 2H	19.8	20.8	20.1	21.0	21.3	19.9	20.9	20.2	21.1	21.4
3H	21.0	21.9	21.3	22.1	22.5	22.1	23.0	22.5	23.3	23.6
4H	21.6	22.4	22.0	22.7	23.0	23.1	23.9	23.5	24.2	24.6
6H	22.1	22.8	22.5	23.2	23.5	23.7	24.4	24.1	24.7	25.1
8H	22.3	23.0	22.7	23.3	23.7	23.9	24.6	24.3	24.9	25.3
12H	22.5	23.1	22.9	23.4	23.9	24.1	24.7	24.5	25.1	25.5
8H 4H	22.0	22.7	22.5	23.1	23.5	23.4	24.0	23.8	24.4	24.8
6H	22.7	23.2	23.1	23.6	24.1	24.1	24.6	24.5	25.1	25.5
8H	22.9	23.4	23.4	23.9	24.3	24.4	24.9	24.9	25.4	25.8
12H	23.2	23.6	23.7	24.0	24.5	24.7	25.2	25.2	25.6	26.1
12H 4H	22.1	22.7	22.5	23.1	23.5	23.4	24.0	23.8	24.4	24.8
6H	22.8	23.3	23.3	23.7	24.2	24.1	24.6	24.6	25.1	25.5
8H	23.1	23.5	23.6	24.0	24.5	24.5	24.9	25.0	25.4	25.9
Variations with the observer position at spacings:										
S = 1.0H	+ 0.4 / - 0.5					+ 0.2 / - 0.3				
1.5H	+ 0.7 / - 0.4					+ 0.4 / - 0.3				
2.0H	+ 0.4 / - 0.3					+ 0.2 / - 0.5				

CIE Pub.117 Corrected 10824 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.3)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	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) $k(RI) \times RCR = 5$									
$k = 0.60$	77	68	64	76	68	63	75	68	63	59
0.80	85	77	72	84	77	72	83	76	71	67
1.00	91	83	78	90	82	78	88	83	77	72
1.25	96	88	84	94	88	83	92	86	82	77
1.50	99	92	88	98	91	87	95	90	86	80
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	88
4.00	111	107	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	105	106	103	101	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

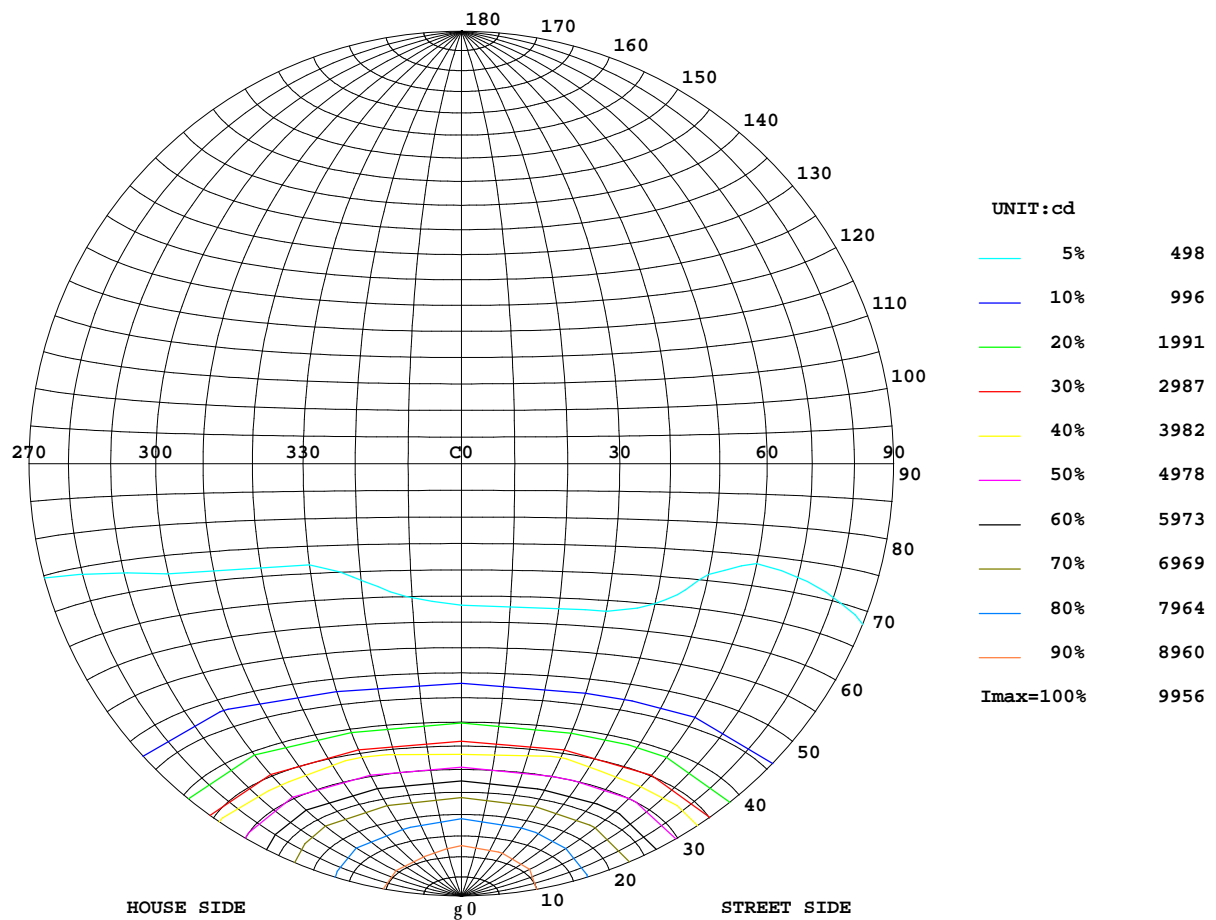
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31日

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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

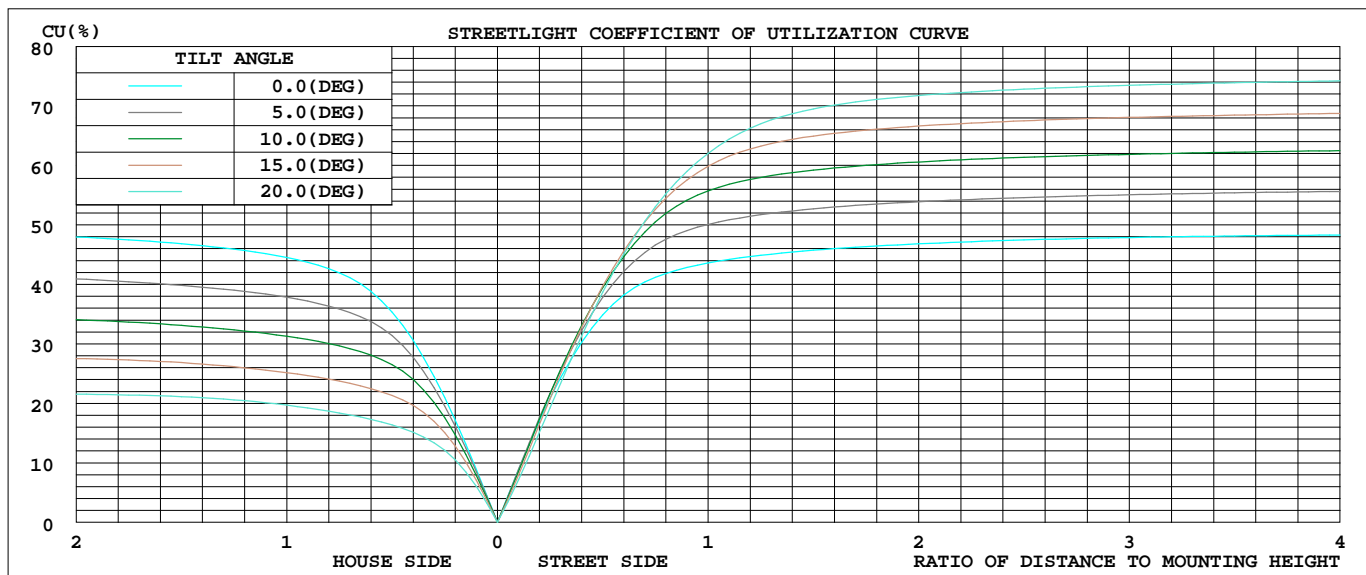
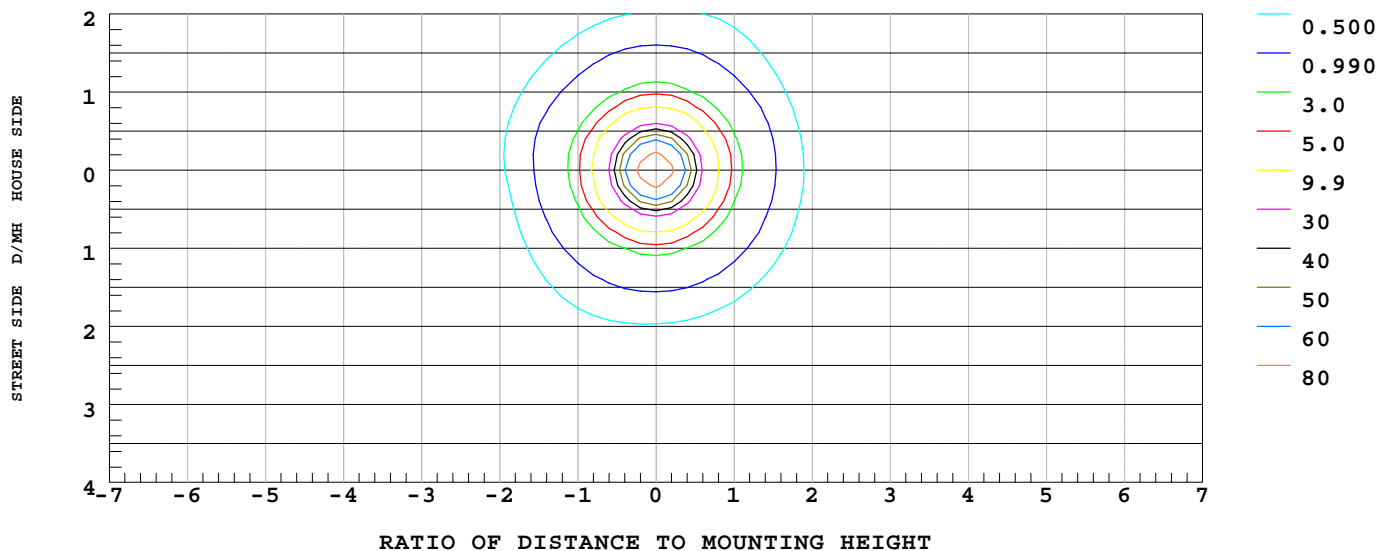
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 99.46 lx



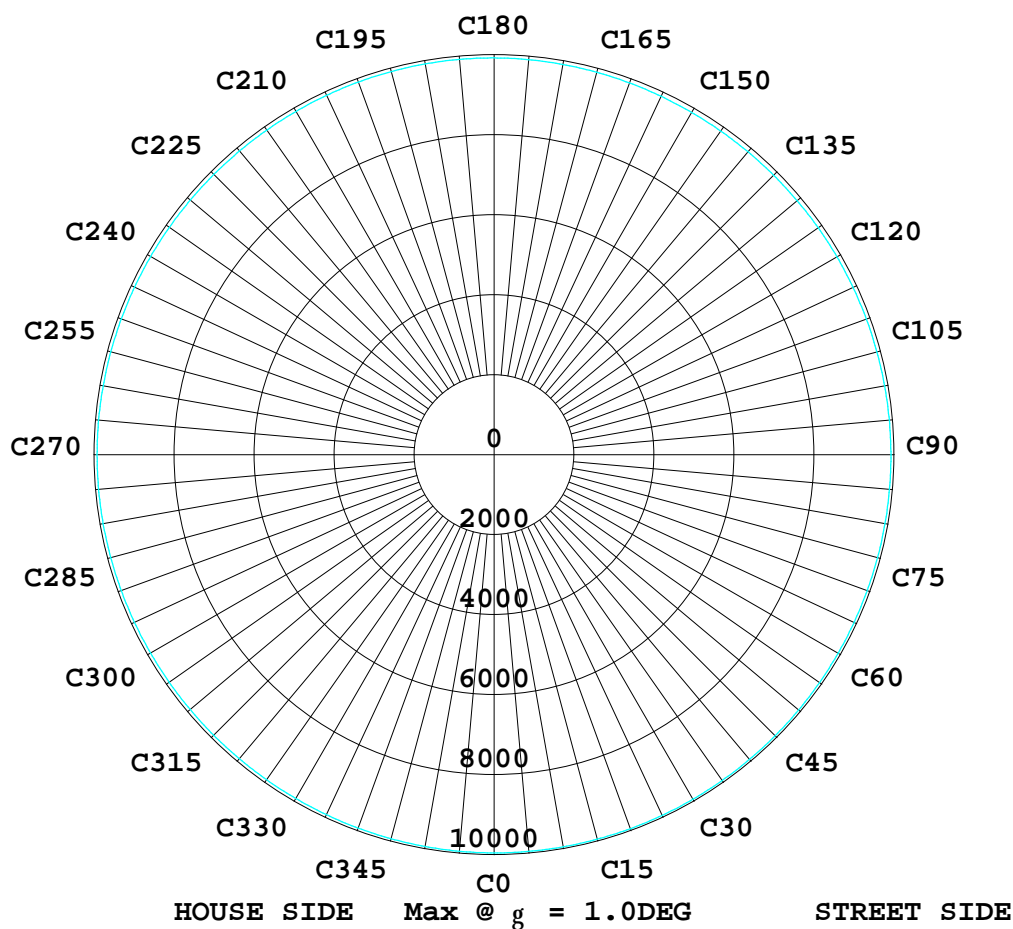
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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