

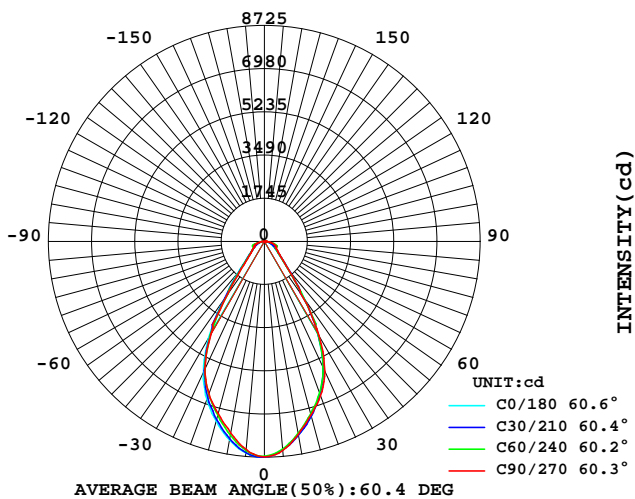
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

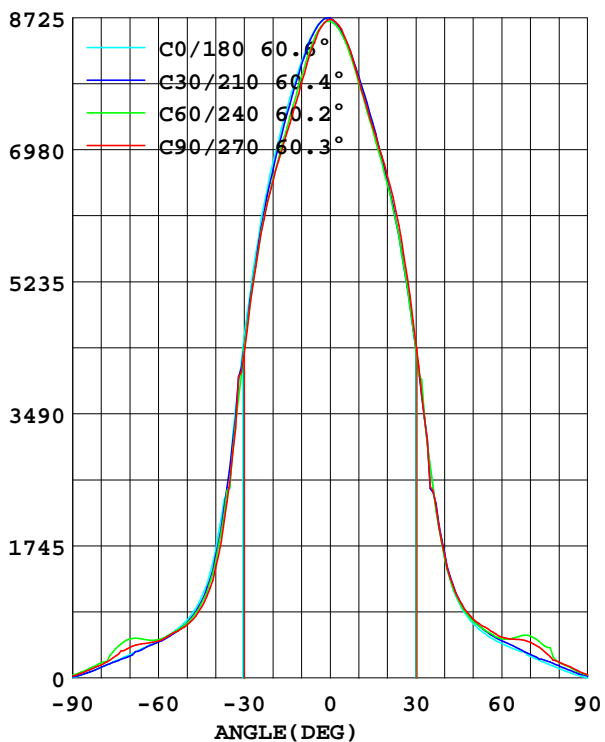
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I <sub>max</sub> (cd)	8725	S/MH(C0/180)	0.91
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.90
NOMINAL POWER(W)	60	TOTAL FLUX(lm)	9439.4	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	158.1	Current(A)	0.288
NOMINAL FLUX(lm)	9439.5	h up(%)	0.8	Power(W)	59.70
LAMPS QUANTITY	1	h down(%)	99.2	Power Factor(PF)	0.946
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	7783.5	EEI	0.104

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



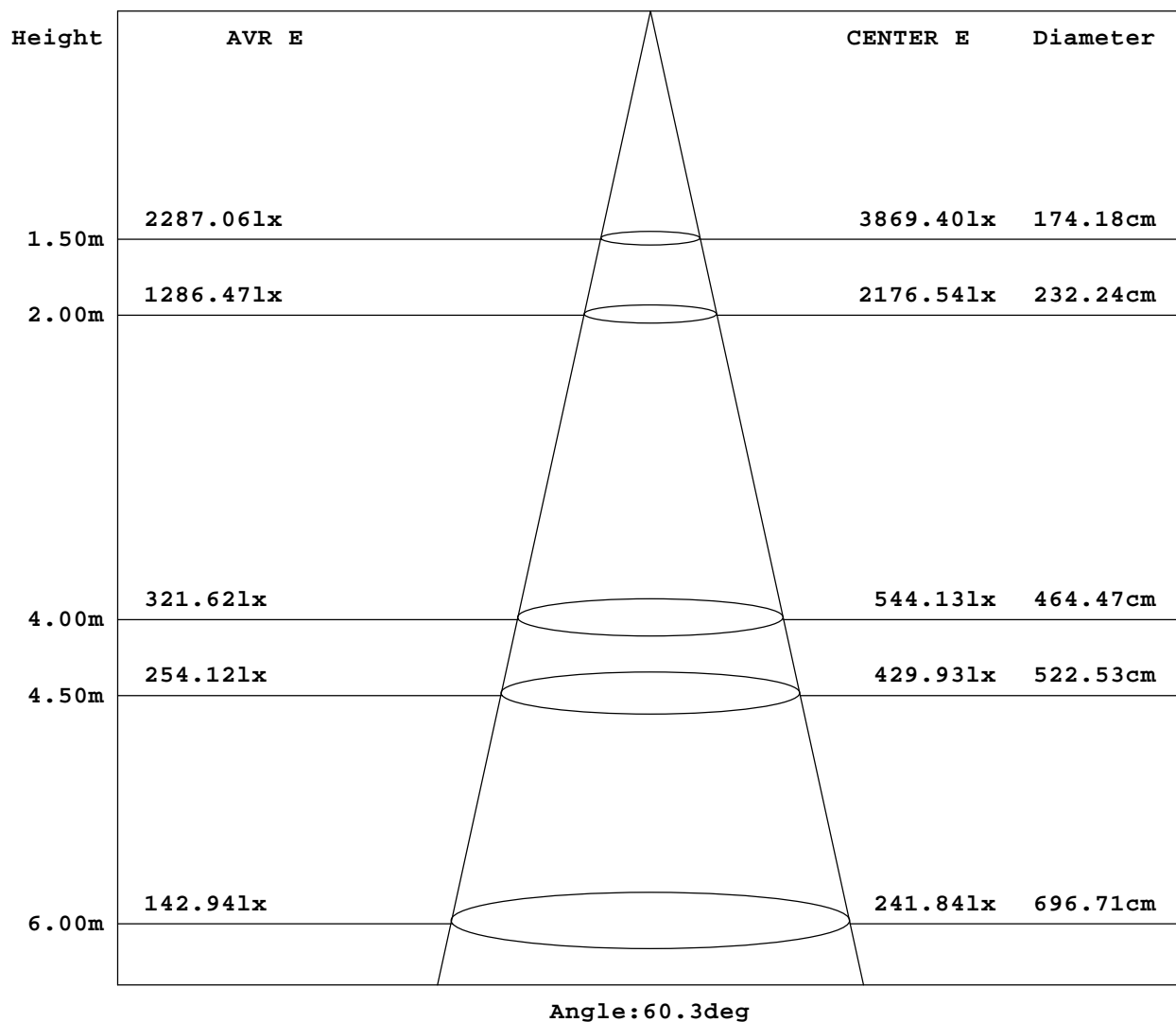
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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	8583	8533	8441	8405	8439	8446	8477	8530	0- 5	205.2	205.2
10.0	8147	8029	7869	7852	7931	7914	7921	8031	5- 10	587.2	792.5
15.0	7527	7368	7212	7191	7324	7276	7272	7398	10- 15	904.0	1697
20.0	6800	6643	6551	6486	6562	6541	6633	6710	15- 20	1147	2843
25.0	5825	5713	5691	5579	5602	5634	5791	5812	20- 25	1294	4137
30.0	4526	4382	4297	4262	4336	4354	4428	4485	25- 30	1279	5416
35.0	2507	2658	2607	2525	2796	2648	2525	2678	30- 35	1051	6467
40.0	1681	1566	1449	1475	1578	1613	1621	1646	35- 40	697.9	7165
45.0	1068	995.4	932.6	953.6	1004	1032	1044	1053	40- 45	463.1	7628
50.0	765.2	727.1	698.9	703.6	719.4	755.7	779.3	772.1	45- 50	346.7	7975
55.0	596.9	585.8	589.7	574.7	559.0	606.5	651.7	625.0	50- 55	288.6	8264
60.0	489.7	490.9	489.2	474.1	456.9	505.9	539.9	515.2	55- 60	250.6	8514
65.0	401.5	450.1	455.3	427.8	374.4	469.9	511.0	468.4	60- 65	228.0	8742
70.0	306.8	402.1	403.6	381.4	284.7	431.3	469.7	421.5	65- 70	215.4	8958
75.0	227.7	303.1	291.3	283.8	205.0	328.5	348.3	335.7	70- 75	182.0	9140
80.0	142.6	170.3	172.6	166.5	126.5	184.6	211.4	188.7	75- 80	122.9	9263
85.0	65.17	86.95	94.69	87.61	54.88	97.35	125.0	101.9	80- 85	71.38	9334
90.0	3.944	28.08	26.08	27.84	0	31.83	41.21	32.98	85- 90	30.27	9364
95.0	0	28.93	49.44	32.98	0	23.42	54.88	33.28	90- 95	15.64	9380
100.0	0	20.70	44.35	25.66	0	19.00	51.73	27.90	95-100	13.44	9394
105.0	0	19.61	42.78	25.05	0	19.13	48.35	26.69	100-105	12.31	9406
110.0	0	19.19	39.03	24.33	0	18.82	46.89	26.75	105-110	11.75	9418
115.0	0	17.37	37.34	23.00	0	19.79	44.84	26.20	110-115	10.95	9429
120.0	0	15.19	34.79	21.42	0	20.03	42.30	25.66	115-120	10.01	9439
125.0	0	0	0	0	0	0	0	0	120-125	0.952	9439
130.0	0	0	0	0	0	0	0	0	125-130	0	9439
135.0	0	0	0	0	0	0	0	0	130-135	0	9439
140.0	0	0	0	0	0	0	0	0	135-140	0	9439
145.0	0	0	0	0	0	0	0	0	140-145	0	9439
150.0	0	0	0	0	0	0	0	0	145-150	0	9439
155.0	0	0	0	0	0	0	0	0	150-155	0	9439
160.0	0	0	0	0	0	0	0	0	155-160	0	9439
165.0	0	0	0	0	0	0	0	0	160-165	0	9439
170.0	0	0	0	0	0	0	0	0	165-170	0	9439
175.0	0	0	0	0	0	0	0	0	170-175	0	9439
180.0	0	0	0	0	0	0	0	0	175-180	0	9439
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:

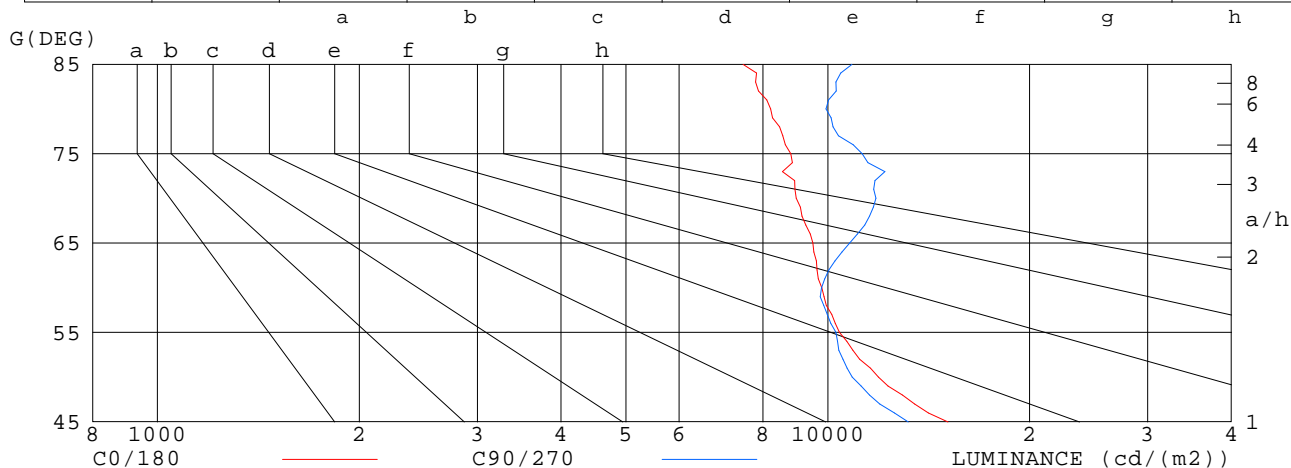
## LUMINANCE LIMITATION CURVES

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	7477	10865
80	8213	9941
75	8801	11256
70	8970	11801
65	9501	10776
60	9795	9786
55	10408	10281
50	11906	10874
45	15104	13189

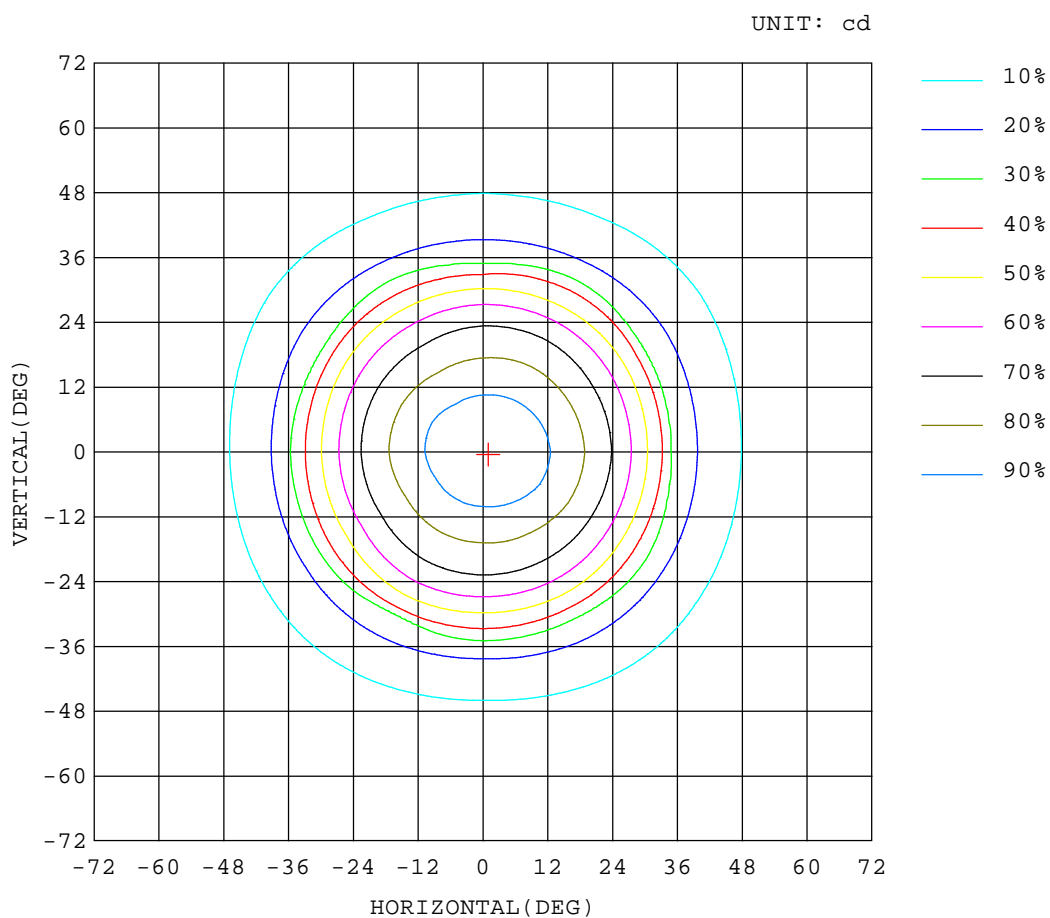
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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.:



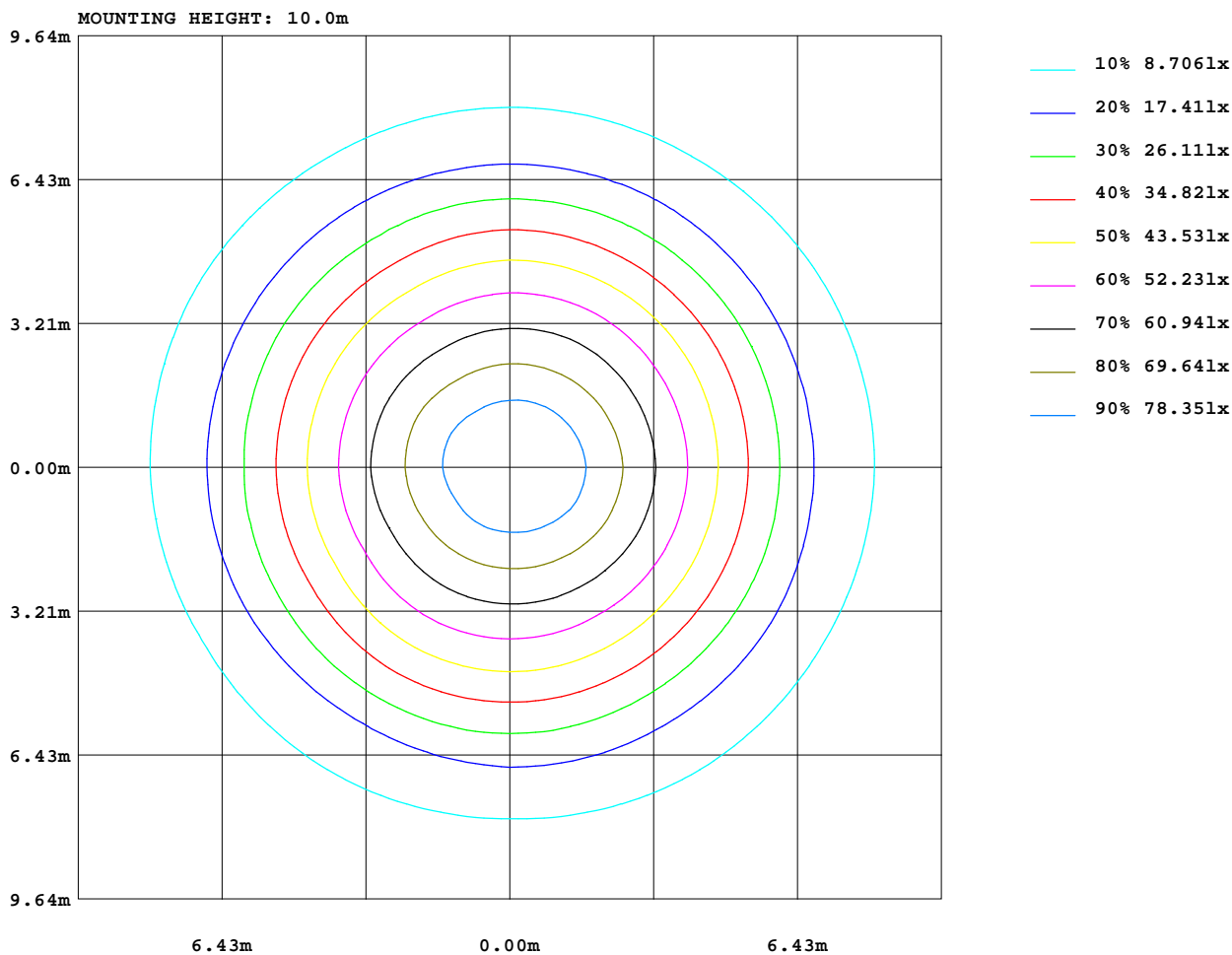
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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		
	0.88	1.68	2.91	4.73	6.87	8.91	9.55	9.71	9.61	9.40	9.07	8.47	7.58	6.23	4.66	3.20	2.01	1.03	107	0.00					
64	1.18	2.18	3.69	5.85	7.74	8.98	9.60	10.1	10.6	10.5	10.0	9.25	8.39	7.37	5.95	4.32	2.72	1.40	120	0.00					
56	1.45	2.65	4.38	6.41	8.07	9.76	11.4	13.0	13.9	13.9	13.0	11.5	9.83	8.16	6.64	4.99	3.28	1.74	145	0.00					
48	1.68	3.18	5.12	7.29	9.83	12.7	16.1	19.6	22.1	22.1	19.8	16.2	12.9	10.1	7.61	5.59	3.68	2.02	198	96.1					
40	1.90	3.65	5.83	8.70	12.7	18.9	28.6	40.2	48.0	48.5	40.6	28.9	19.3	13.0	9.08	6.19	4.04	2.22	341	279					
32	2.10	4.01	6.51	10.4	17.6	32.5	57.3	80.9	94.3	95.1	83.6	59.4	33.2	18.1	10.8	6.88	4.34	2.37	620	574					
24	2.26	4.26	7.15	12.4	25.2	53.4	88.9	113	126	128	117	91.8	54.8	26.0	12.9	7.56	4.58	2.48	878	839					
VERTICAL (DEG)	2.36	4.43	7.65	14.4	33.5	72.8	109	133	146	148	136	112	75.1	34.2	15.1	8.10	4.75	2.55	1059	1024					
	2.40	4.49	7.89	15.6	39.5	82.3	118	145	162	163	148	122	85.2	40.2	16.5	8.39	4.82	2.56	1168	1136					
	2.40	4.47	7.83	15.4	39.2	81.8	118	143	161	163	148	122	84.9	40.2	16.4	8.32	4.78	2.53	1164	1131					
	2.37	4.38	7.49	13.8	32.4	71.6	107	132	145	147	135	111	74.3	34.0	14.7	7.90	4.64	2.46	1047	1012					
	2.28	4.20	6.92	11.7	23.2	51.9	87.6	113	125	126	114	89.8	54.4	24.9	12.3	7.24	4.40	2.33	862	822					
	2.14	3.95	6.24	9.75	16.1	30.0	53.7	79.0	93.0	93.2	80.1	56.2	31.9	17.0	10.1	6.47	4.07	2.15	596	548					
	1.96	3.64	5.58	8.17	11.7	17.5	26.5	36.9	45.2	45.8	38.3	27.7	18.2	12.2	8.37	5.72	3.65	1.93	320	255					
	1.75	3.24	4.99	6.88	9.27	11.9	15.0	18.0	19.9	20.0	18.3	15.4	12.3	9.49	7.04	4.99	3.12	1.70	184	69.6					
	1.49	2.81	4.34	6.03	7.55	9.23	10.8	12.0	12.6	12.7	12.1	11.0	9.49	7.83	6.19	4.21	2.56	1.44	135	0.00					
	1.17	2.30	3.71	5.31	6.77	7.88	8.65	9.26	9.63	9.71	9.51	9.13	8.60	7.35	5.53	3.48	2.07	1.13	111	0.00					
0.84	1.65	2.73	4.08	5.62	7.01	7.74	8.13	8.28	8.48	8.73	8.74	8.27	6.38	4.31	2.61	1.51	0.82	96.0	0.00						
-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)										16	24	32	40	48	56	64	72
Φ t	32.7	61.2	101	167	313	590	884	1116	1253	1264	1140	912	609	323	175	106	65.0	34.9	9439						
Φ a	0.00	0.00	0.00	63.1	229	510	809	1044	1184	1195	1069	837	531	240	75.2	0.00	0.00	0.00		7784					

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

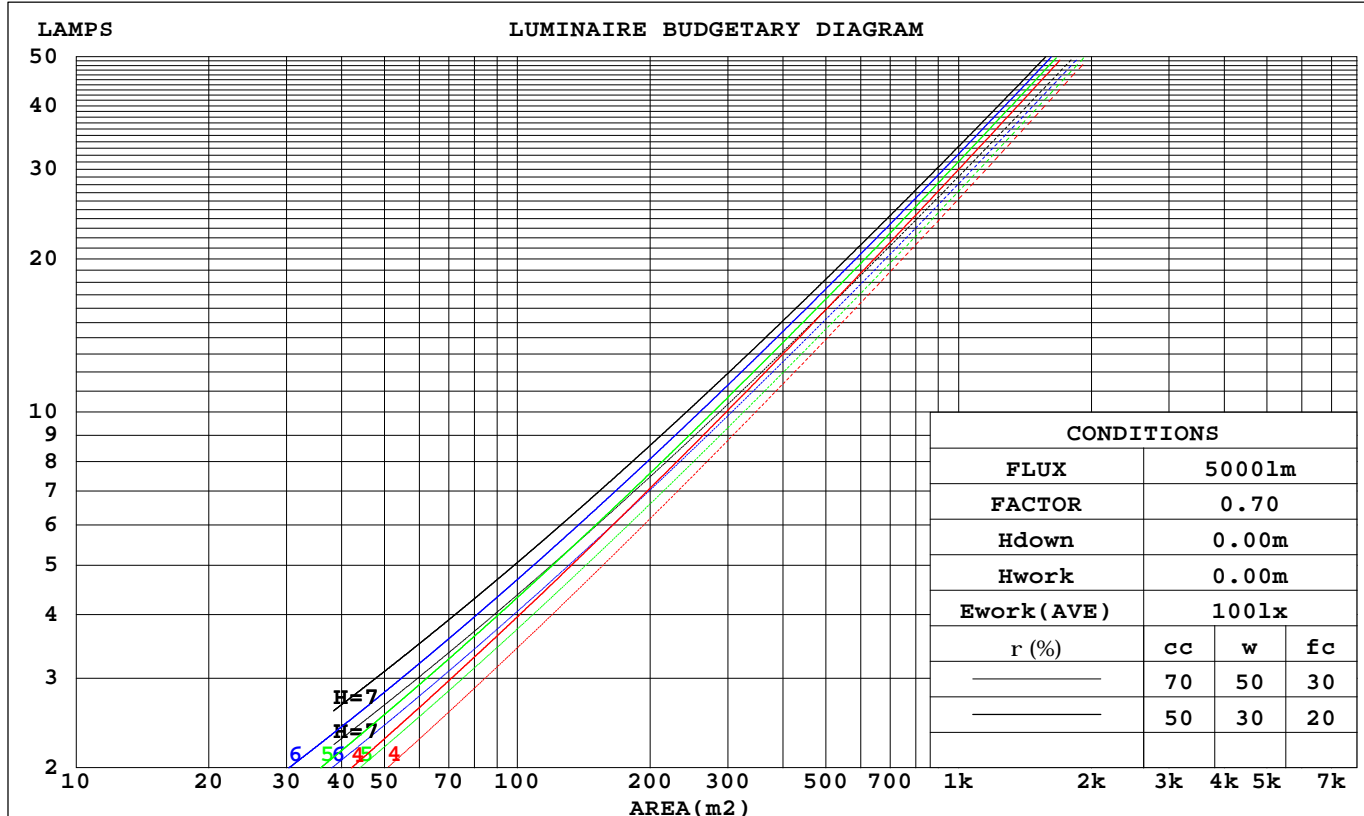
Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

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	.230	.131	.041	.223	.127	.040	.210	.120	.038	.197	.114	.037	.186	.108	.035															
2.0	.216	.118	.036	.210	.116	.036	.198	.110	.034	.188	.105	.033	.178	.101	.032															
3.0	.202	.107	.032	.196	.105	.032	.186	.101	.031	.177	.097	.030	.169	.093	.029															
4.0	.188	.098	.029	.184	.096	.028	.175	.093	.028	.167	.090	.027	.160	.087	.026															
5.0	.177	.090	.026	.172	.089	.026	.165	.086	.025	.158	.083	.025	.151	.081	.024															
6.0	.166	.083	.024	.162	.082	.024	.156	.080	.023	.149	.078	.023	.143	.076	.022															
7.0	.157	.077	.022	.153	.076	.022	.147	.075	.021	.142	.073	.021	.137	.071	.021															
8.0	.148	.072	.020	.145	.072	.020	.140	.070	.020	.135	.068	.020	.130	.067	.019															
9.0	.141	.068	.019	.138	.067	.019	.133	.066	.019	.129	.064	.018	.124	.063	.018															
10.0	.134	.064	.018	.131	.063	.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	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.181	.163	.147	.155	.140	.126	.106	.096	.087	.061	.056	.051	.020	.018	.016	
2.0	.168	.138	.113	.144	.119	.098	.099	.082	.068	.057	.048	.040	.018	.016	.013	
3.0	.157	.120	.090	.135	.104	.078	.093	.072	.055	.054	.042	.032	.017	.014	.011	
4.0	.148	.106	.074	.127	.091	.064	.087	.064	.045	.051	.037	.027	.016	.012	.009	
5.0	.140	.095	.061	.120	.082	.053	.083	.057	.038	.048	.034	.022	.015	.011	.007	
6.0	.132	.086	.052	.114	.074	.045	.078	.052	.032	.046	.031	.019	.015	.010	.006	
7.0	.126	.078	.045	.108	.068	.039	.075	.048	.028	.043	.028	.017	.014	.009	.005	
8.0	.120	.072	.040	.103	.063	.035	.071	.044	.025	.041	.026	.015	.013	.009	.005	
9.0	.114	.067	.035	.098	.058	.031	.068	.041	.022	.040	.024	.013	.013	.008	.004	
10.0	.109	.063	.032	.094	.055	.028	.065	.038	.020	.038	.023	.012	.012	.007	.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	18.9	20.0	19.1	20.2	20.4	18.8	20.0	19.1	20.2	20.3
3H	19.8	20.9	20.1	21.1	21.4	20.6	21.6	20.9	21.9	22.1
4H	20.3	21.3	20.6	21.5	21.8	21.4	22.4	21.7	22.6	22.9
6H	20.7	21.6	21.0	21.9	22.2	21.9	22.8	22.2	23.1	23.3
8H	20.8	21.7	21.2	22.0	22.3	22.0	22.9	22.4	23.2	23.5
12H	20.9	21.8	21.3	22.1	22.4	22.2	23.0	22.5	23.3	23.6
4H 2H	19.3	20.3	19.6	20.5	20.8	19.3	20.3	19.6	20.6	20.8
3H	20.5	21.4	20.8	21.7	22.0	21.6	22.4	21.9	22.7	23.0
4H	21.1	21.9	21.4	22.2	22.5	22.6	23.4	23.0	23.7	24.0
6H	21.6	22.3	22.0	22.7	23.0	23.1	23.8	23.5	24.2	24.5
8H	21.8	22.4	22.2	22.8	23.2	23.3	24.0	23.8	24.4	24.8
12H	21.9	22.5	22.4	22.9	23.3	23.5	24.1	24.0	24.5	24.9
8H 4H	21.5	22.2	21.9	22.6	22.9	22.8	23.5	23.2	23.8	24.2
6H	22.2	22.7	22.6	23.1	23.5	23.5	24.1	24.0	24.5	24.9
8H	22.4	22.9	22.9	23.3	23.8	23.9	24.4	24.3	24.8	25.2
12H	22.6	23.0	23.1	23.5	24.0	24.2	24.6	24.7	25.0	25.5
12H 4H	21.6	22.2	22.0	22.6	23.0	22.8	23.4	23.2	23.8	24.2
6H	22.3	22.7	22.7	23.2	23.6	23.6	24.0	24.0	24.5	24.9
8H	22.5	23.0	23.0	23.4	23.9	24.0	24.4	24.5	24.8	25.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.5					+ 0.2 / - 0.3				
1.5H	+ 1.0 / - 0.4					+ 0.5 / - 0.4				
2.0H	+ 0.4 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 9439 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.8)

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	69	64	76	68	64	75	68	64	59
0.80	85	77	72	84	77	72	83	76	72	67
1.00	91	83	78	90	83	78	88	83	77	72
1.25	96	88	84	94	88	83	92	87	82	77
1.50	99	92	88	98	92	87	95	90	86	80
2.00	103	97	93	102	96	92	99	94	91	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	104	108	105	102	104	102	99	91
5.00	112	109	106	110	107	105	106	104	102	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

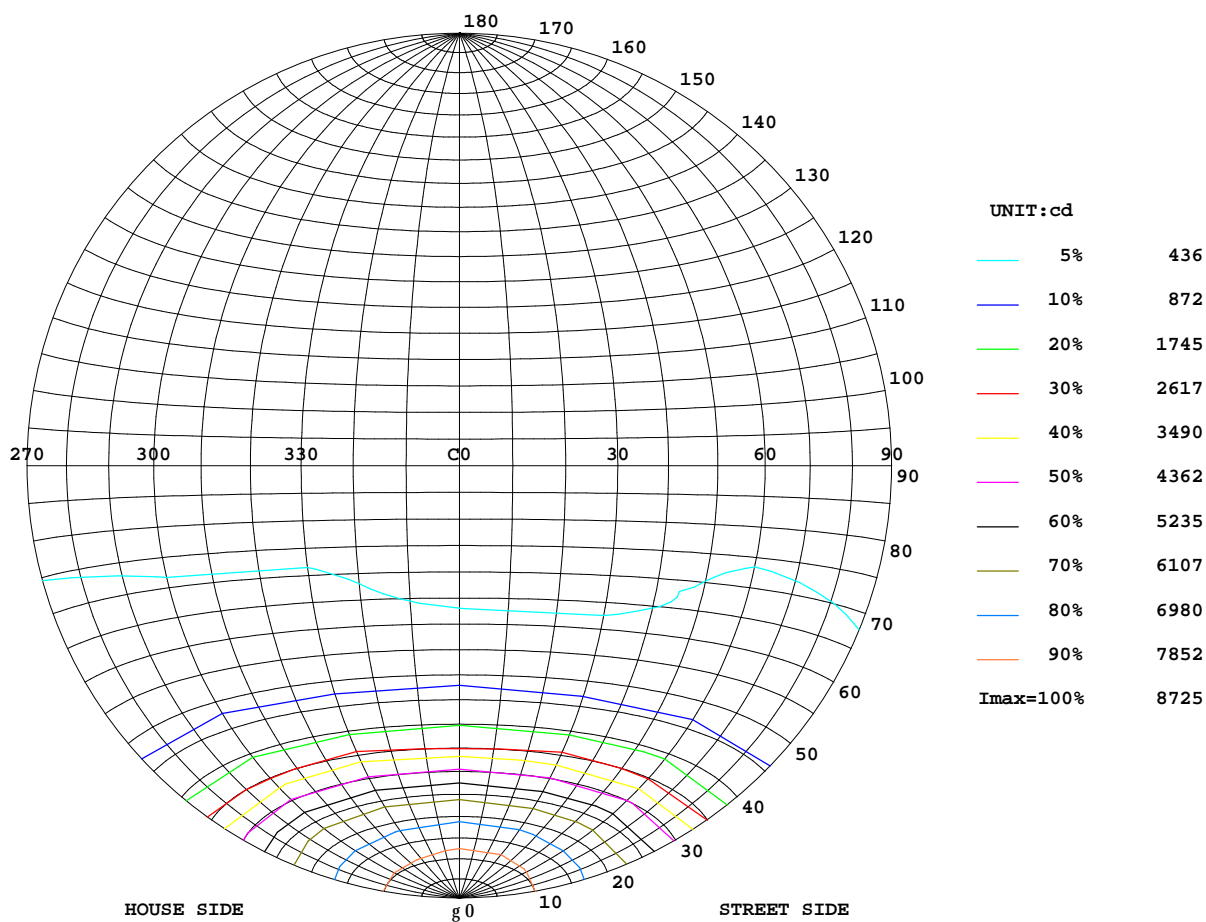
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年07月31日

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

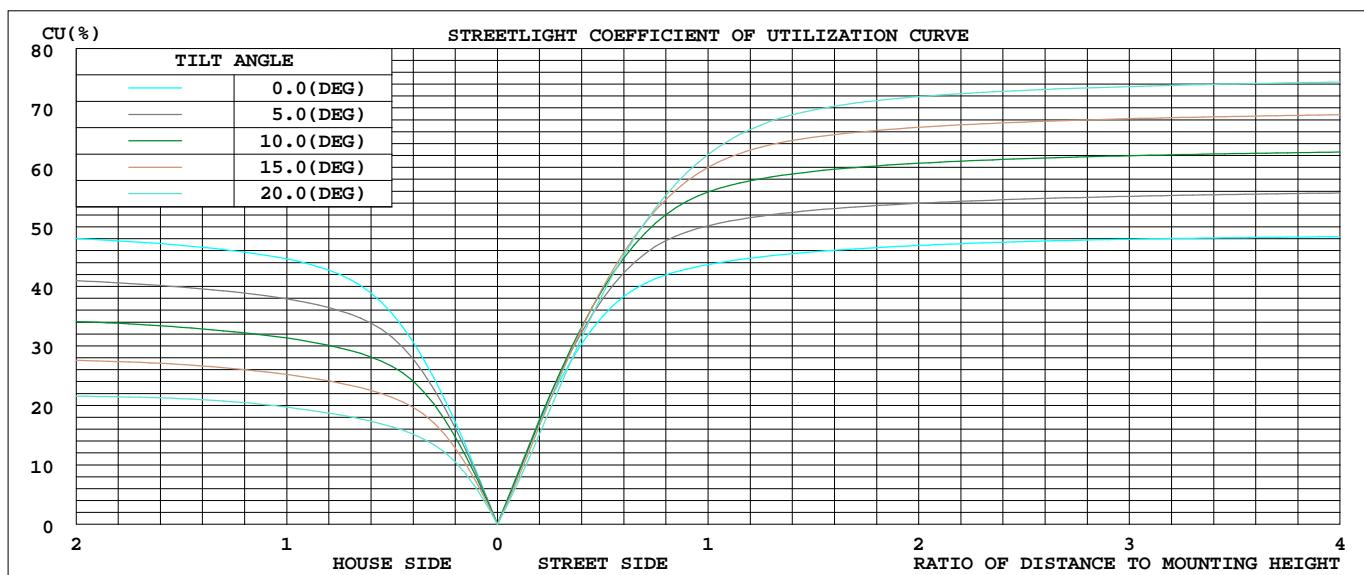
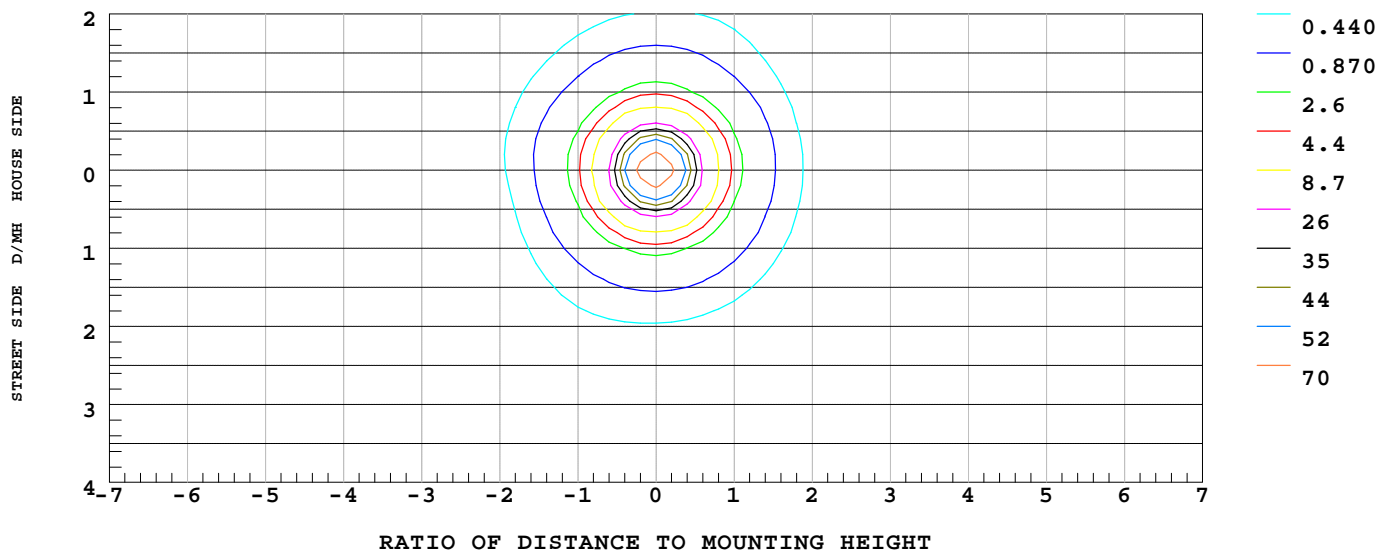
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 87.06 lx



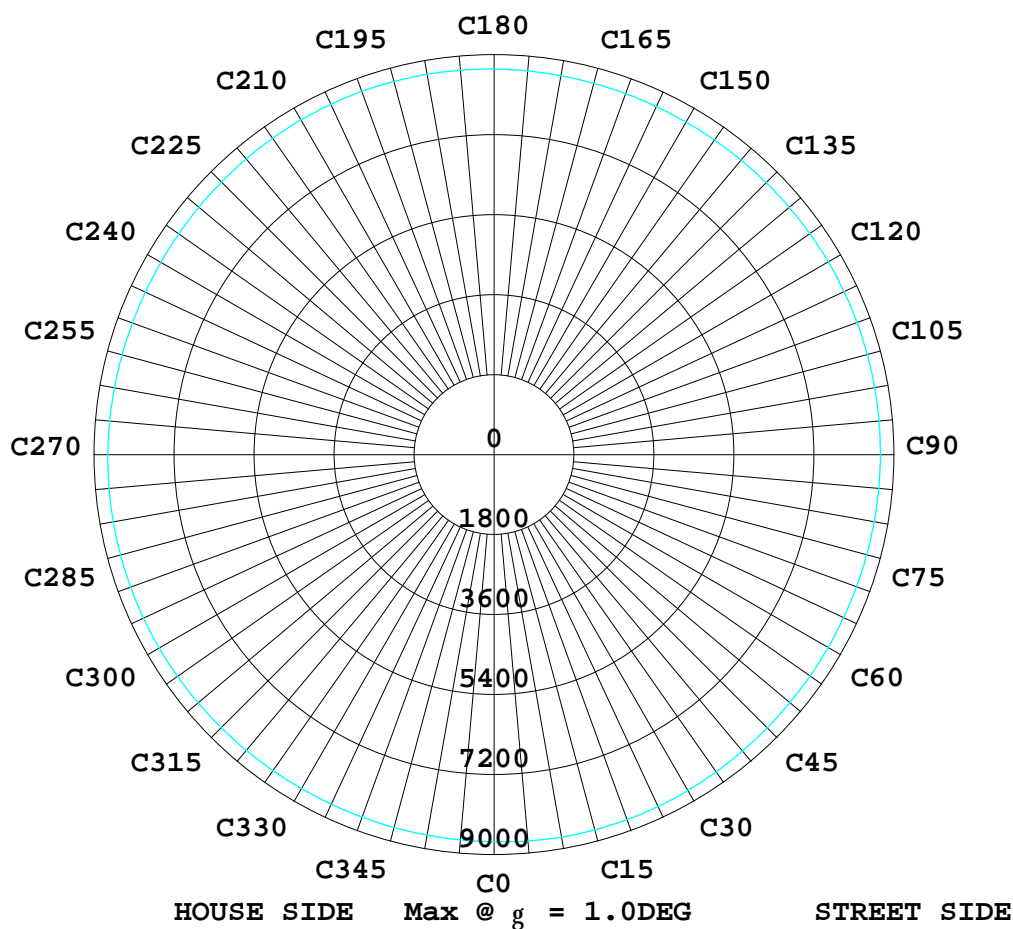
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年07月31日

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)  
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