

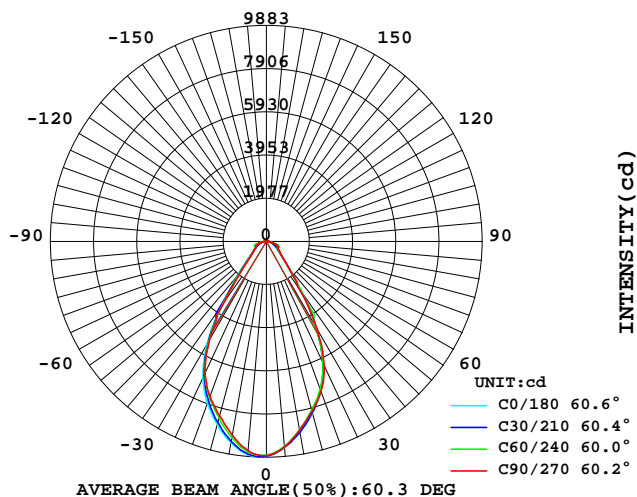
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

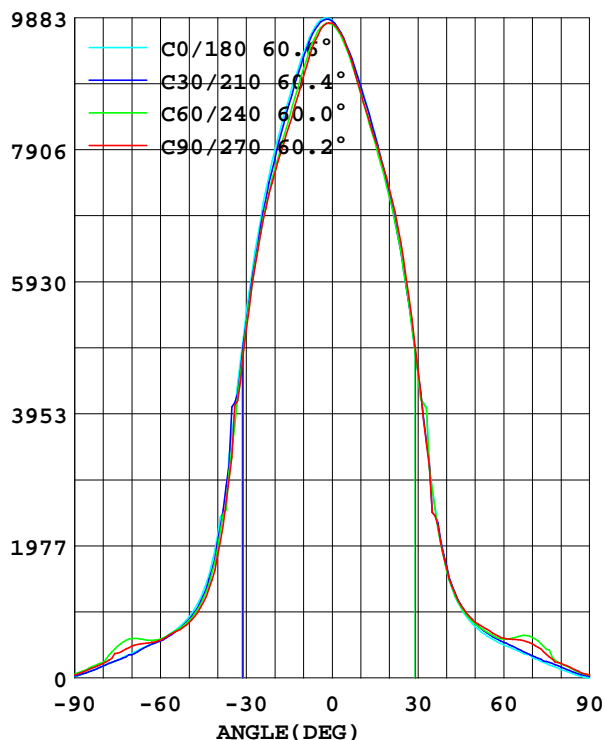
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	9883	S/MH(C0/180)	0.94
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.92
NOMINAL POWER(W)	68	TOTAL FLUX(lm)	10673	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	156.9	Current(A)	0.326
NOMINAL FLUX(lm)	10672.9	h up(%)	0.8	Power(W)	68.01
LAMPS QUANTITY	1	h down(%)	99.2	Power Factor(PF)	0.954
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	8799.6	EEI	0.105

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



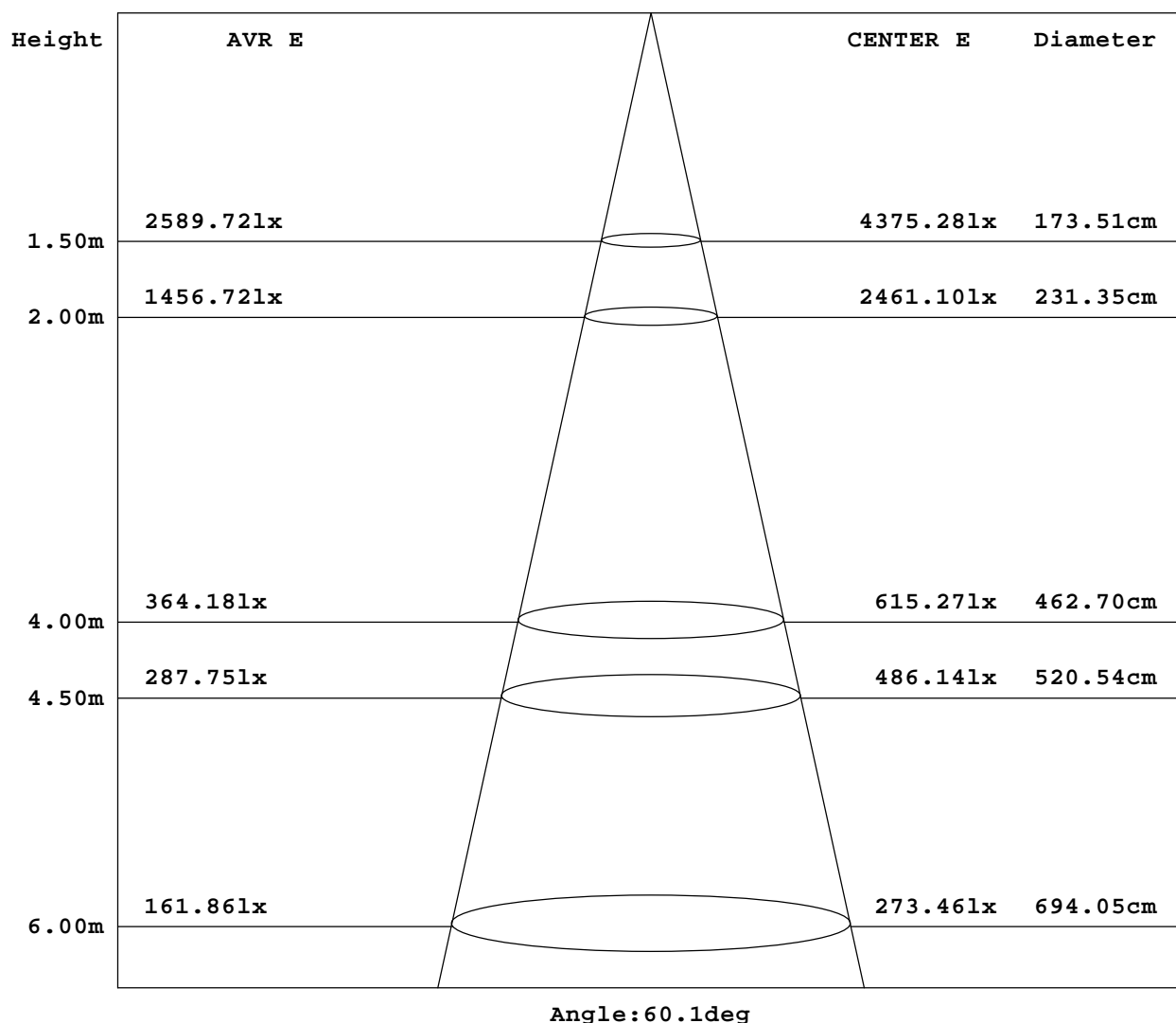
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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	9804	9716	9606	9549	9470	9440	9448	9504	0- 5	231.4	231.4
10.0	9357	9210	9013	8967	8865	8807	8775	8893	5- 10	662.4	893.8
15.0	8684	8479	8268	8239	8153	8068	8061	8182	10- 15	1020	1914
20.0	7895	7684	7546	7466	7255	7215	7316	7374	15- 20	1294	3208
25.0	6863	6707	6658	6514	6105	6124	6277	6286	20- 25	1460	4668
30.0	5478	5305	5213	5143	4586	4588	4631	4697	25- 30	1443	6112
35.0	3661	3737	3307	3312	2837	2648	2481	2689	30- 35	1198	7309
40.0	2125	1979	1829	1854	1607	1641	1648	1668	35- 40	789.7	8099
45.0	1307	1214	1132	1156	1054	1083	1095	1101	40- 45	524.4	8623
50.0	914.4	864.8	825.1	833.5	770.4	810.9	836.7	826.2	45- 50	391.5	9015
55.0	705.0	689.6	686.0	671.9	606.1	655.7	705.6	673.1	50- 55	325.2	9340
60.0	575.0	569.8	567.4	550.1	497.8	558.1	594.3	563.5	55- 60	282.6	9623
65.0	473.5	516.3	519.2	489.9	406.3	526.9	571.7	516.7	60- 65	257.6	9880
70.0	366.7	469.5	475.2	435.3	303.6	468.3	508.6	451.9	65- 70	242.1	10123
75.0	273.8	371.3	370.2	341.2	216.4	337.1	352.3	346.9	70- 75	204.1	10327
80.0	181.2	204.1	216.5	206.8	128.9	188.7	217.9	190.0	75- 80	138.3	10465
85.0	92.63	119.0	126.5	117.5	50.77	93.96	122.1	96.75	80- 85	81.11	10546
90.0	19.79	45.56	44.23	45.32	0	35.82	47.02	38.42	85- 90	36.05	10582
95.0	0	37.94	58.87	42.05	0	25.42	61.90	35.46	90- 95	18.96	10601
100.0	0	25.11	53.55	29.77	0	23.30	58.03	32.86	95-100	16.22	10617
105.0	0	24.09	50.04	30.02	0	24.09	55.85	32.07	100-105	14.69	10632
110.0	0	24.57	46.89	29.89	0	24.09	54.03	31.71	105-110	14.13	10646
115.0	0	22.57	44.84	28.08	0	24.39	52.10	31.23	110-115	13.27	10659
120.0	0	19.73	41.69	26.57	3.097	25.96	49.31	30.38	115-120	12.23	10672
125.0	0	0	0	0	0	0	0	0	120-125	1.178	10673
130.0	0	0	0	0	0	0	0	0	125-130	0	10673
135.0	0	0	0	0	0	0	0	0	130-135	0	10673
140.0	0	0	0	0	0	0	0	0	135-140	0	10673
145.0	0	0	0	0	0	0	0	0	140-145	0	10673
150.0	0	0	0	0	0	0	0	0	145-150	0	10673
155.0	0	0	0	0	0	0	0	0	150-155	0	10673
160.0	0	0	0	0	0	0	0	0	155-160	0	10673
165.0	0	0	0	0	0	0	0	0	160-165	0	10673
170.0	0	0	0	0	0	0	0	0	165-170	0	10673
175.0	0	0	0	0	0	0	0	0	170-175	0	10673
180.0	0	0	0	0	0	0	0	0	175-180	0	10673
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:

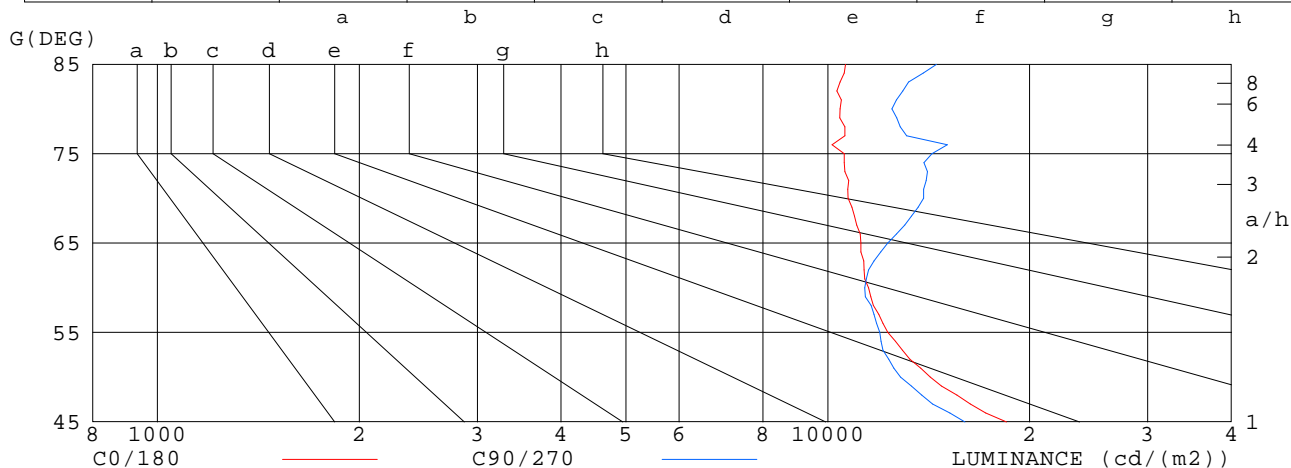
LUMINANCE LIMITATION CURVES

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	10629	14516
80	10435	12470
75	10583	14304
70	10722	13895
65	11205	12287
60	11501	11349
55	12292	11960
50	14227	12837
45	18482	16009

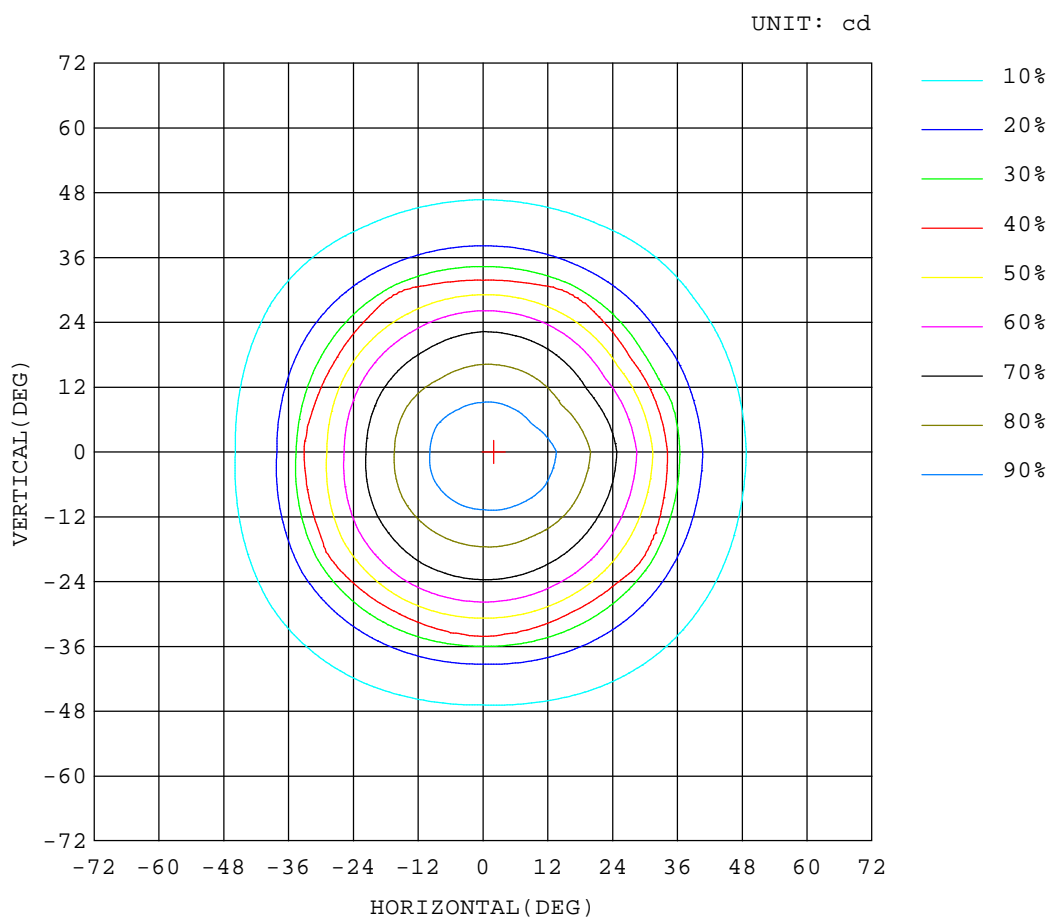
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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.:



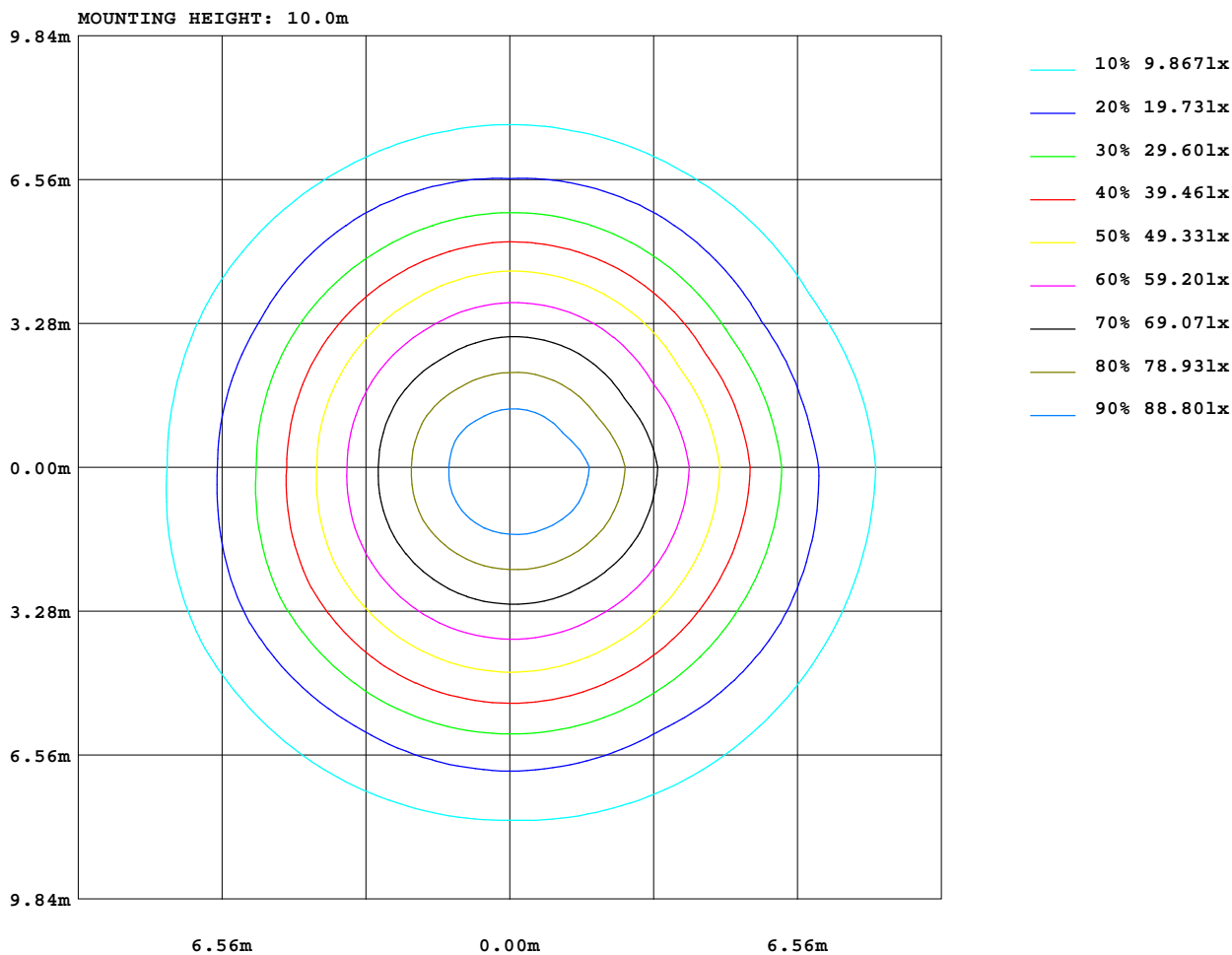
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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		
	0.89	1.73	2.97	4.89	7.33	9.70	10.5	10.7	10.5	10.3	9.95	9.25	8.18	6.59	4.80	3.20	2.00	1.10	115	0.00					
64	1.22	2.29	3.96	6.41	8.70	10.2	10.8	11.3	11.7	11.6	11.0	10.2	9.39	8.14	6.41	4.52	2.79	1.48	133	0.00					
56	1.52	2.83	4.73	7.07	8.92	10.6	12.4	14.0	15.0	15.0	14.1	12.5	10.6	8.93	7.27	5.35	3.50	1.86	157	0.00					
48	1.78	3.40	5.54	7.95	10.6	13.7	17.1	20.6	23.0	23.0	20.7	17.2	13.9	10.9	8.25	6.07	4.02	2.21	210	81.9					
40	2.03	3.93	6.33	9.38	13.5	19.7	29.1	40.6	48.6	48.7	40.8	29.4	20.0	13.8	9.77	6.81	4.49	2.49	350	276					
32	2.25	4.34	7.05	11.1	18.3	32.9	59.7	85.8	100	101	87.2	60.4	33.4	18.8	11.7	7.63	4.89	2.71	650	595					
24	2.42	4.64	7.72	13.1	25.7	54.9	95.1	124	139	140	127	97.4	56.1	27.3	14.3	8.51	5.22	2.87	946	901					
VERTICAL (DEG)	2.53	4.83	8.24	15.0	33.9	77.2	119	147	162	164	150	123	82.1	38.5	17.3	9.31	5.47	2.98	1162	1122					
	2.57	4.89	8.49	16.2	41.0	88.1	131	161	181	183	166	139	99.1	48.8	20.0	9.87	5.62	3.03	1308	1271					
	2.59	4.90	8.51	16.4	42.4	89.8	132	162	183	186	170	142	102	50.8	20.3	9.90	5.62	3.01	1331	1295					
	2.57	4.85	8.30	15.4	37.2	83.0	124	151	167	168	156	130	89.9	43.5	18.0	9.38	5.45	2.93	1216	1177					
	2.49	4.69	7.81	13.5	28.2	64.1	104	131	144	145	133	107	68.9	31.3	14.9	8.56	5.17	2.79	1018	974					
	2.36	4.44	7.14	11.4	19.6	37.9	68.2	96.0	110	111	97.0	70.5	40.6	20.9	12.1	7.63	4.80	2.58	725	673					
	2.18	4.11	6.41	9.58	14.0	21.3	33.0	47.4	57.9	58.3	48.5	34.5	22.4	14.6	9.90	6.72	4.32	2.33	398	329					
	1.97	3.67	5.77	8.02	10.8	14.1	18.0	21.8	24.3	24.5	22.3	18.5	14.6	11.1	8.25	5.88	3.71	2.05	220	101					
	1.70	3.20	5.02	6.94	8.75	10.7	12.6	14.0	14.8	14.9	14.2	12.9	11.0	9.07	7.18	4.95	3.10	1.76	157	0.00					
	1.37	2.69	4.30	6.10	7.72	8.95	9.91	10.7	11.1	11.2	10.9	10.4	9.69	8.35	6.42	4.19	2.51	1.43	128	0.00					
	1.01	2.02	3.31	4.91	6.64	8.18	8.96	9.39	9.58	9.79	10.0	10.0	9.59	7.58	5.25	3.25	1.90	1.06	113	0.00					
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)										16	24	32	40	48	56	64
Φ t	35.5	67.5	112	184	344	656	995	1259	1413	1426	1289	1035	702	380	203	122	74.6	40.7	10673						
Φ a	0.00	0.00	0.00	60.3	247	566	910	1178	1334	1347	1208	950	613	285	94.2	1.81	0.00	0.00		8800					

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

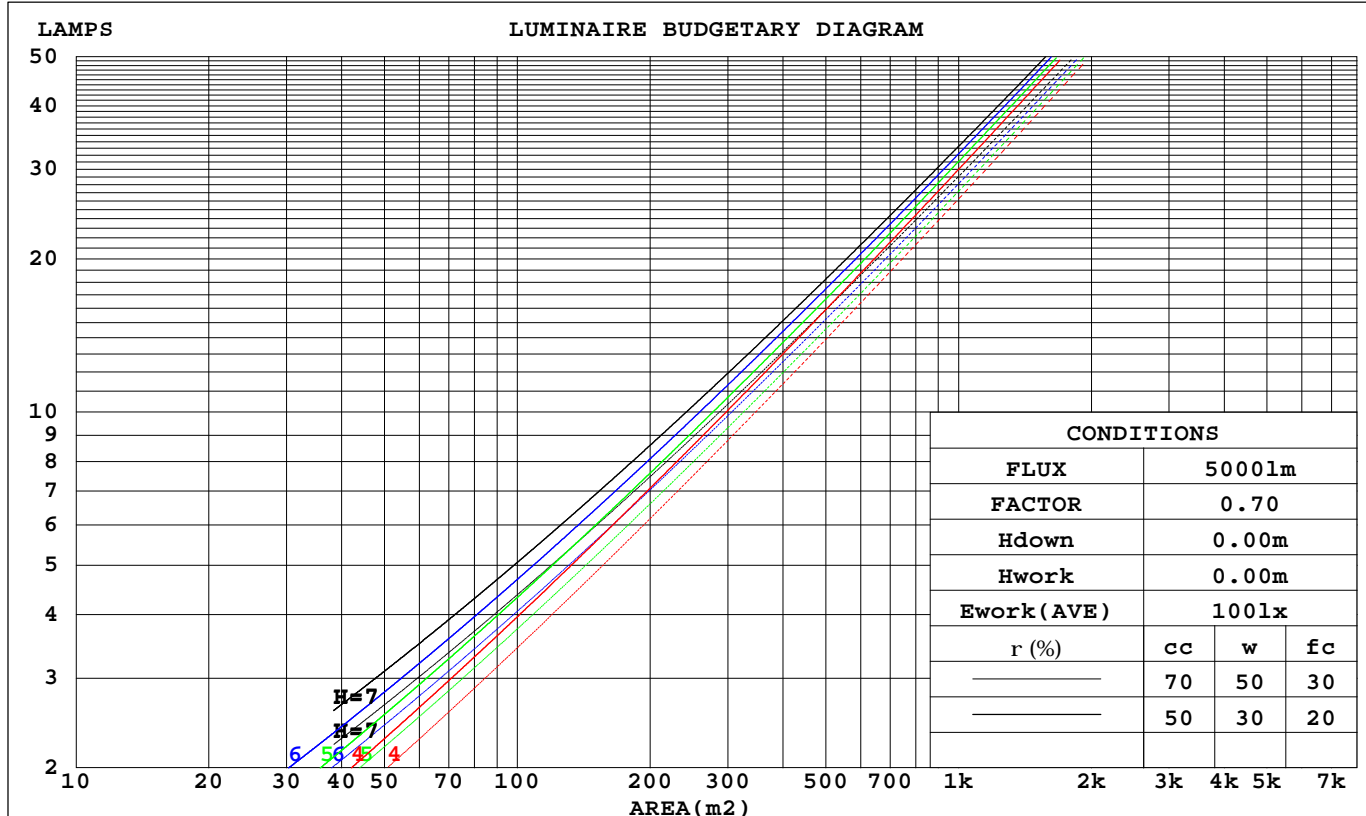
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

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/c	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	.173	.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	.136	.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	.127	.106	.096	.088	.061	.056	.051	.020	.018	.016	
2.0	.169	.139	.114	.144	.120	.098	.099	.083	.069	.057	.048	.040	.018	.016	.013	
3.0	.158	.120	.091	.135	.104	.079	.093	.072	.055	.054	.042	.032	.017	.014	.011	
4.0	.149	.106	.074	.127	.092	.064	.088	.064	.045	.051	.037	.027	.016	.012	.009	
5.0	.140	.095	.062	.120	.082	.054	.083	.057	.038	.048	.034	.023	.015	.011	.007	
6.0	.133	.086	.053	.114	.075	.046	.079	.052	.032	.046	.031	.019	.015	.010	.006	
7.0	.126	.079	.046	.109	.068	.040	.075	.048	.028	.044	.028	.017	.014	.009	.006	
8.0	.120	.073	.040	.103	.063	.035	.072	.044	.025	.042	.026	.015	.013	.009	.005	
9.0	.115	.068	.036	.099	.059	.031	.069	.041	.022	.040	.024	.013	.013	.008	.004	
10.0	.110	.063	.032	.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	2H	19.8	20.9	20.0	21.1	21.3	19.5	20.7	19.8	20.8	21.0
	3H	20.7	21.8	21.0	22.0	22.2	21.2	22.3	21.5	22.5	22.7
	4H	21.2	22.2	21.5	22.4	22.7	22.1	23.1	22.4	23.4	23.6
	6H	21.6	22.5	21.9	22.8	23.1	22.7	23.6	23.0	23.9	24.1
	8H	21.8	22.7	22.1	22.9	23.2	22.9	23.8	23.2	24.0	24.3
	12H	21.9	22.8	22.2	23.0	23.3	23.0	23.9	23.4	24.2	24.5
4H	2H	20.1	21.1	20.4	21.4	21.6	20.0	21.0	20.3	21.2	21.5
	3H	21.3	22.2	21.7	22.5	22.8	22.2	23.1	22.5	23.4	23.7
	4H	21.9	22.7	22.3	23.0	23.4	23.3	24.1	23.7	24.4	24.8
	6H	22.5	23.2	22.9	23.5	23.9	24.0	24.7	24.4	25.0	25.4
	8H	22.7	23.4	23.1	23.7	24.1	24.2	24.9	24.6	25.2	25.6
	12H	22.9	23.5	23.3	23.9	24.3	24.5	25.1	24.9	25.4	25.9
8H	4H	22.4	23.0	22.8	23.4	23.8	23.6	24.3	24.0	24.6	25.0
	6H	23.1	23.6	23.5	24.0	24.5	24.4	25.0	24.9	25.4	25.8
	8H	23.4	23.9	23.8	24.3	24.8	24.8	25.3	25.3	25.7	26.2
	12H	23.7	24.1	24.1	24.5	25.0	25.2	25.6	25.7	26.0	26.5
12H	4H	22.4	23.0	22.9	23.4	23.8	23.6	24.2	24.0	24.6	25.0
	6H	23.2	23.7	23.7	24.1	24.6	24.5	25.0	24.9	25.4	25.9
	8H	23.5	24.0	24.0	24.4	24.9	24.9	25.3	25.4	25.8	26.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.5					+ 0.3 / - 0.4					
1.5H	+ 0.8 / - 0.4					+ 0.5 / - 0.4					
2.0H	+ 0.5 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 10673 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.2)

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	63	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	98	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		

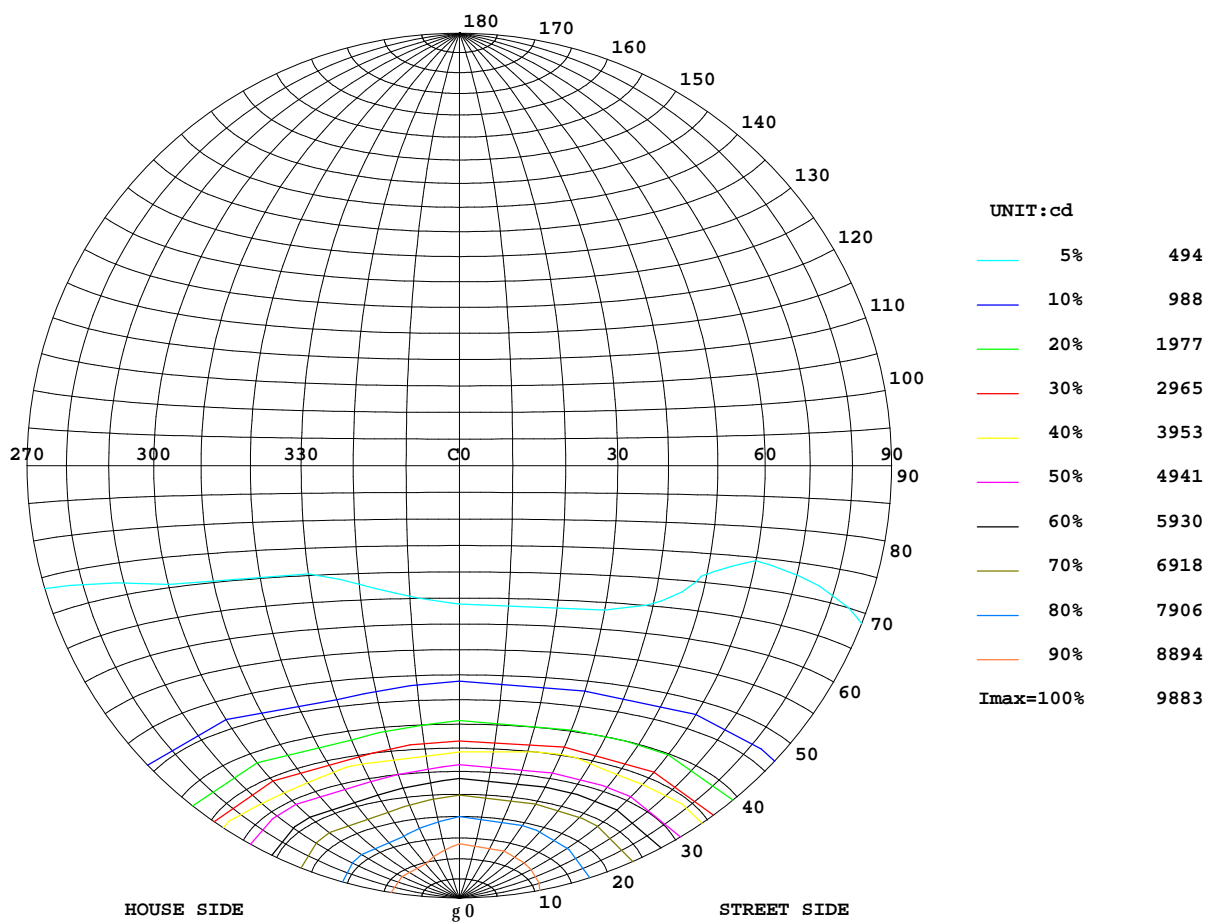
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年07月31日

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

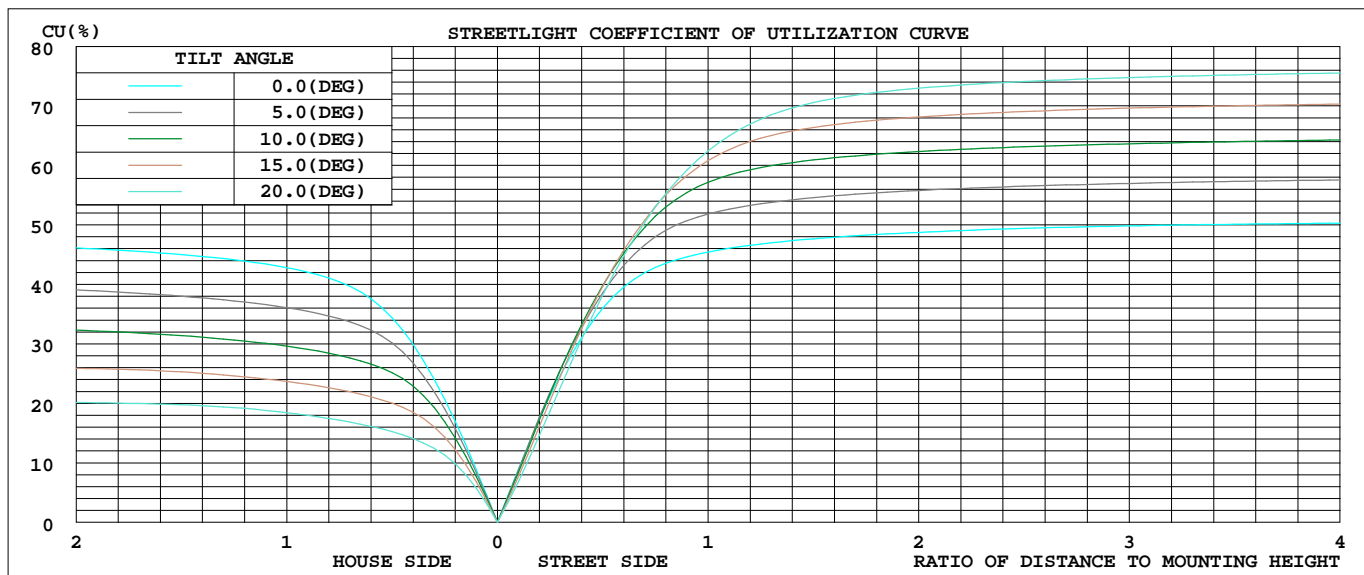
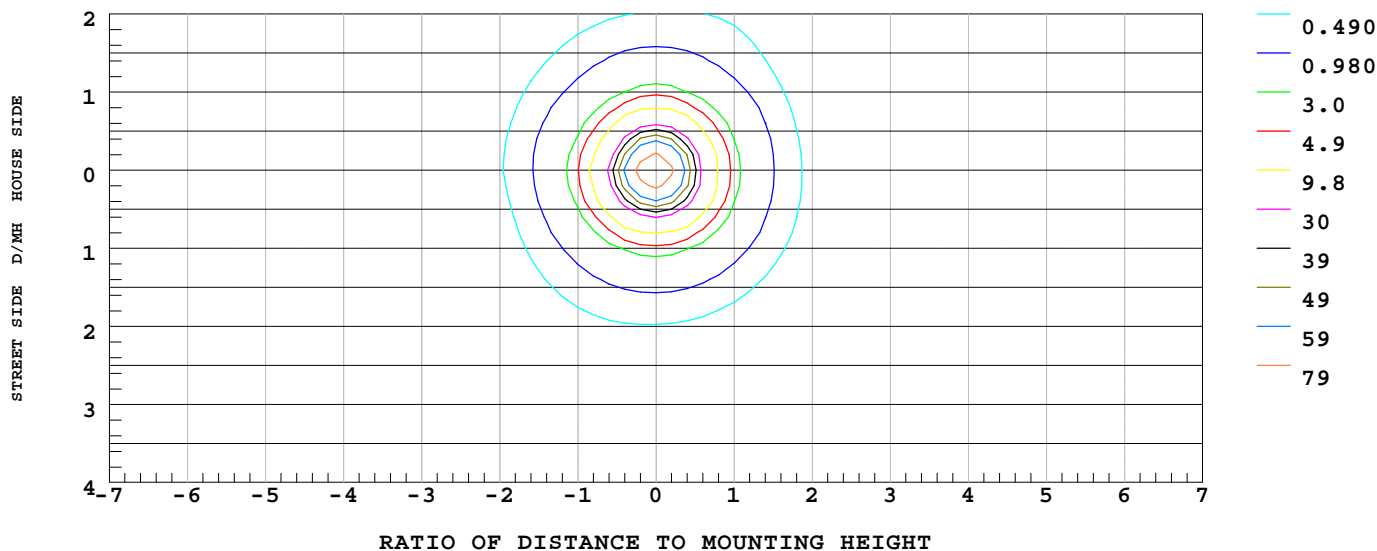
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 98.44 lx



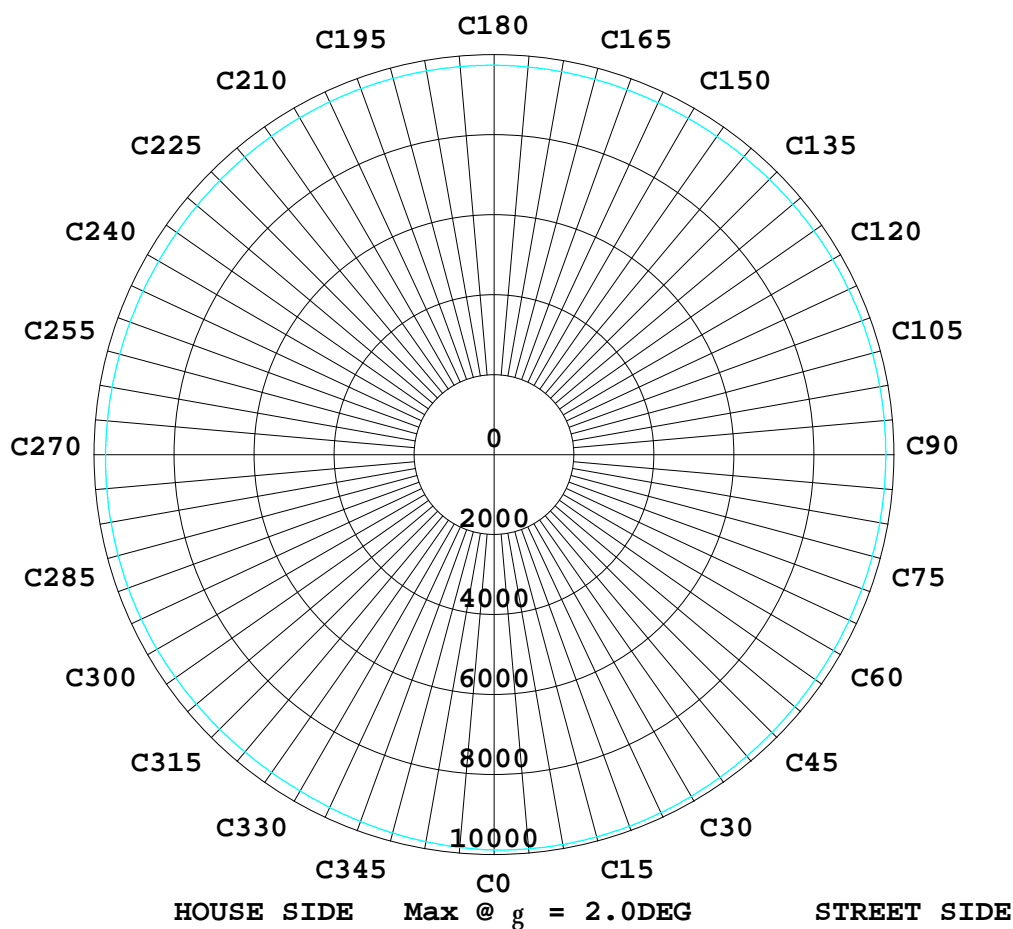
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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: