

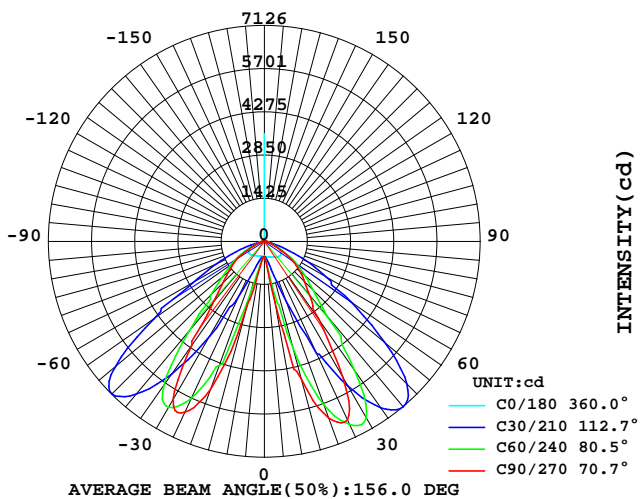
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

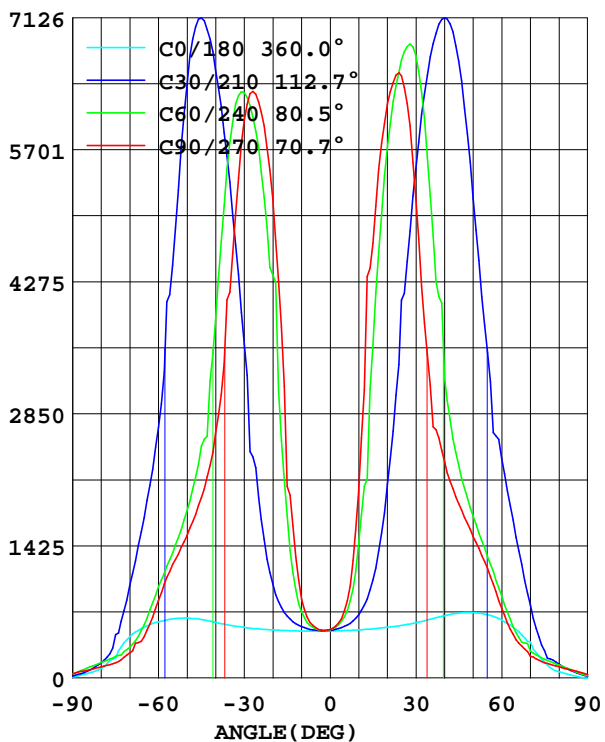
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	7268	S/MH(C0/180)	1.79
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	2.34
NOMINAL POWER(W)	68	TOTAL FLUX(lm)	11156	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	163.2	Current(A)	0.327
NOMINAL FLUX(lm)	11156.2	h up(%)	0.1	Power(W)	68.37
LAMPS QUANTITY	1	h down(%)	99.9	Power Factor(PF)	0.954
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	10143.9	EEI	0.092

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



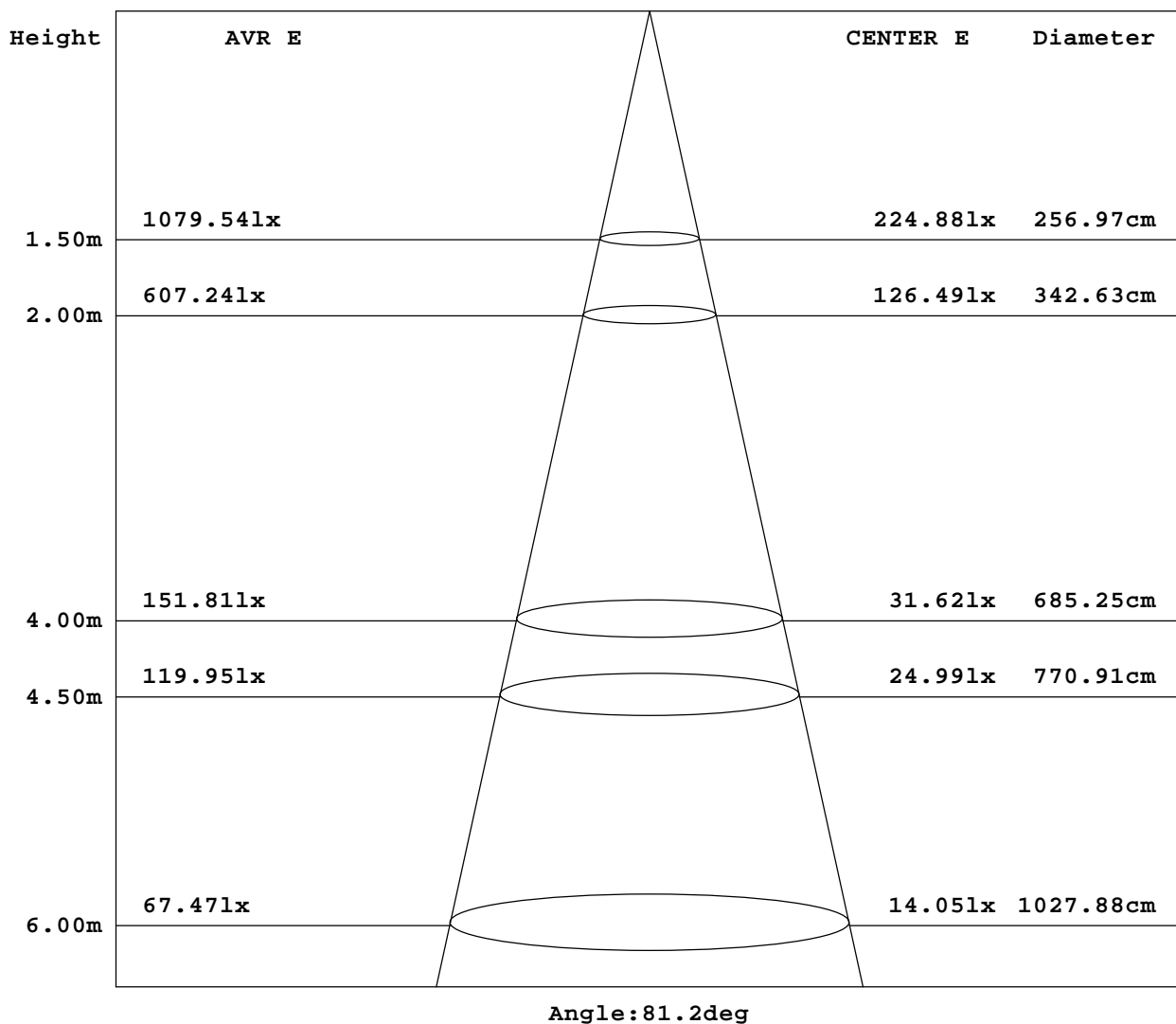
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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08月01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	tTotal
5.0	504.6	522.4	543.3	519.8	511.2	608.4	728.4	629.3	0- 5	12.97	12.97
10.0	505.9	633.4	847.3	628.3	519.4	1059	2002	1148	5- 10	50.89	63.87
15.0	511.4	1210	2066	1222	531.0	2327	4692	2510	10- 15	161.9	225.8
20.0	518.3	2684	5173	2783	546.3	3903	6191	4104	15- 20	434.0	659.9
25.0	529.3	3832	6212	4138	566.8	5374	6498	5304	20- 25	796.1	1456
30.0	545.9	4960	6020	5475	595.7	6109	5174	5957	25- 30	1153	2609
35.0	569.2	5564	4164	6061	633.7	5955	3157	5567	30- 35	1391	4000
40.0	599.9	5209	2633	5443	673.0	5178	2335	5006	35- 40	1434	5434
45.0	629.8	4811	1947	4699	700.9	4475	1881	4452	40- 45	1383	6817
50.0	646.2	4100	1535	3758	705.3	3459	1526	3280	45- 50	1283	8100
55.0	636.5	2900	1223	2742	682.1	2411	1182	2167	50- 55	1040	9140
60.0	607.2	1846	836.1	1748	627.3	1629	755.1	1439	55- 60	765.6	9906
65.0	548.0	1149	444.3	1125	524.3	1004	413.8	918.7	60- 65	531.5	10437
70.0	445.1	664.1	270.7	631.2	389.9	537.4	232.5	485.9	65- 70	341.4	10779
75.0	211.8	350.4	164.9	341.1	173.2	249.7	165.6	208.4	70- 75	186.5	10965
80.0	102.5	164.1	119.2	155.2	67.59	145.8	121.0	140.1	75- 80	96.94	11062
85.0	45.32	88.34	81.50	83.32	25.96	73.64	80.53	71.76	80- 85	55.57	11118
90.0	7.453	32.92	41.93	31.10	0	20.09	34.79	23.12	85- 90	26.09	11144
95.0	0	6.570	13.98	6.630	0	1.427	14.83	2.916	90- 95	6.972	11151
100.0	0	0	7.332	0	0	0.399	9.147	1.125	95-100	1.498	11152
105.0	0	0	0	0	0	1.367	3.823	1.790	100-105	0.623	11153
110.0	0	0	0	0	1.645	2.214	0	3.061	105-110	0.422	11153
115.0	1.887	0.581	0	0	5.517	4.791	0	5.275	110-115	0.790	11154
120.0	4.670	2.855	0	1.706	9.389	8.119	3.097	8.240	115-120	1.706	11156
125.0	0	0	0	0	0	0	0	0	120-125	0.232	11156
130.0	0	0	0	0	0	0	0	0	125-130	0	11156
135.0	0	0	0	0	0	0	0	0	130-135	0	11156
140.0	0	0	0	0	0	0	0	0	135-140	0	11156
145.0	0	0	0	0	0	0	0	0	140-145	0	11156
150.0	0	0	0	0	0	0	0	0	145-150	0	11156
155.0	0	0	0	0	0	0	0	0	150-155	0	11156
160.0	0	0	0	0	0	0	0	0	155-160	0	11156
165.0	0	0	0	0	0	0	0	0	160-165	0	11156
170.0	0	0	0	0	0	0	0	0	165-170	0	11156
175.0	0	0	0	0	0	0	0	0	170-175	0	11156
180.0	0	0	0	0	0	0	0	0	175-180	0	11156
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01日

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

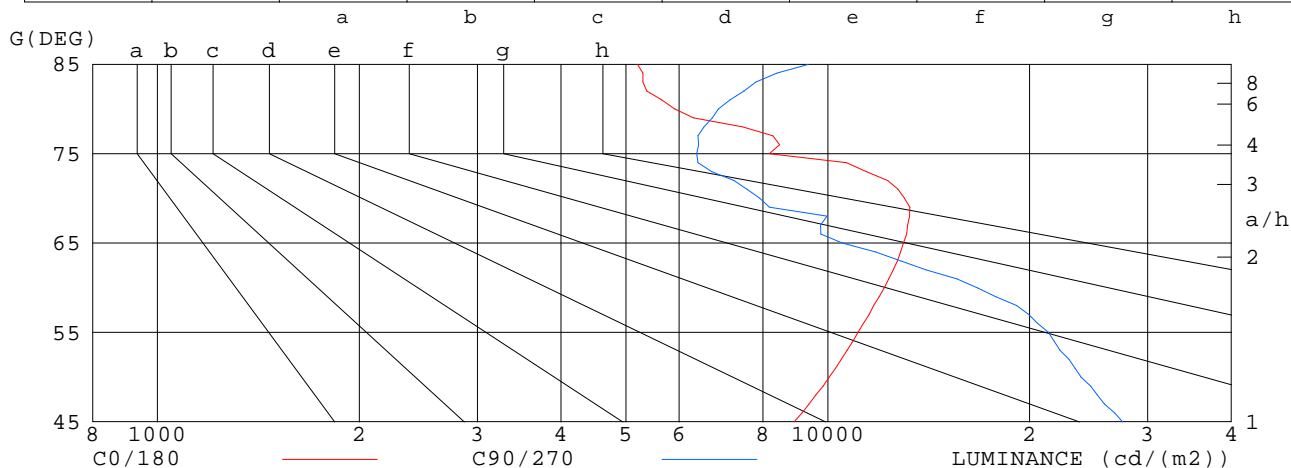
LUMINANCE LIMITATION CURVES

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	5201	9352
80	5906	6868
75	8184	6375
70	13014	7916
65	12969	10515
60	12145	16724
55	11098	21327
50	10053	23876
45	8908	27534

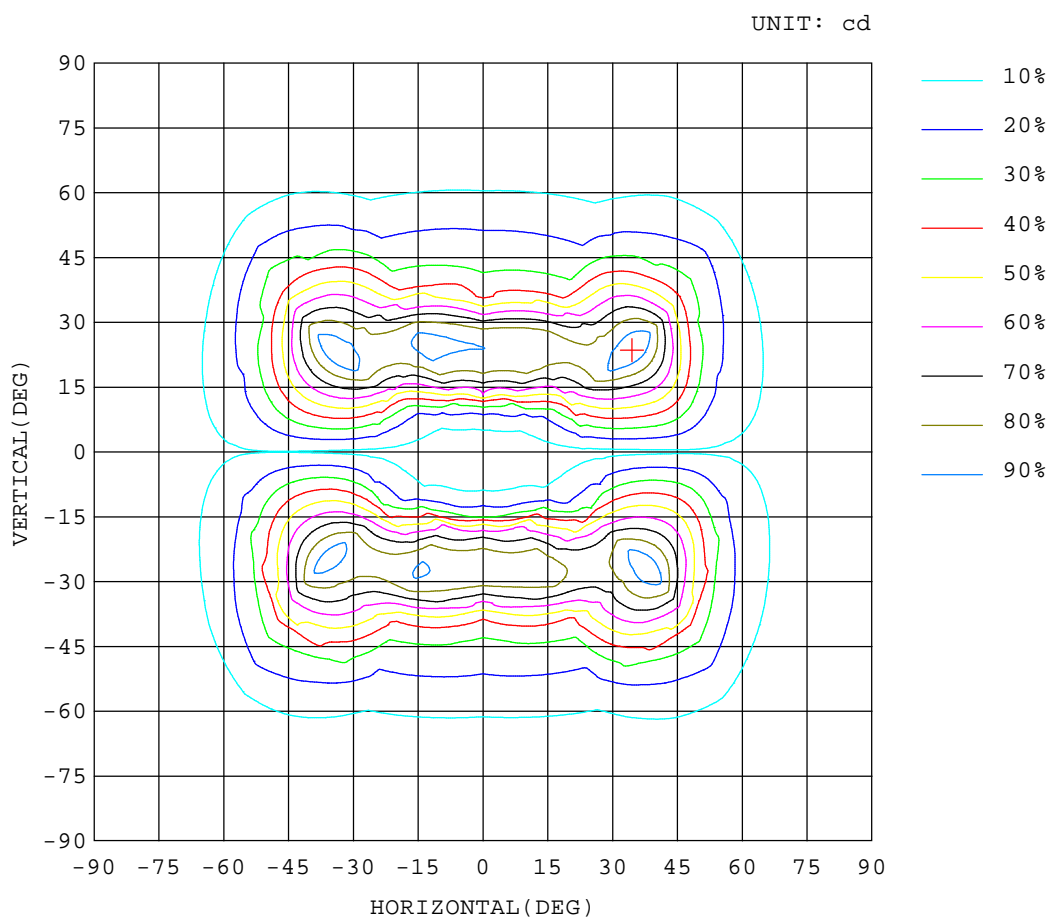
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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.:



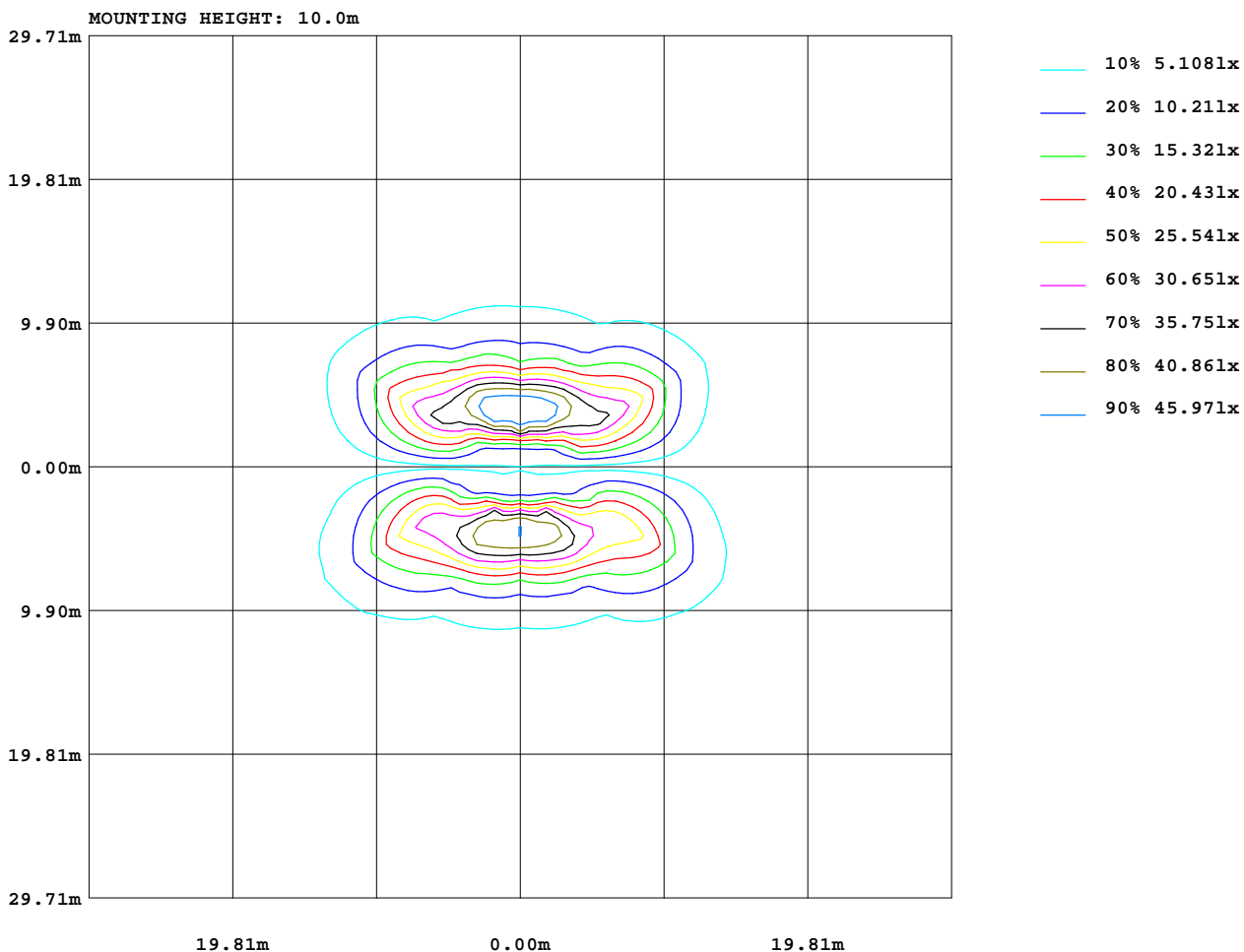
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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08月01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.:

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.01	0.14	0.43	0.83	1.24	1.67	2.04	2.28	2.40	2.42	2.34	2.13	1.72	1.23	0.79	0.44	0.19	0.04	22.3	0.00		
90																						
80	0.03	0.31	1.02	2.17	3.32	4.37	4.99	5.35	5.34	5.34	5.35	5.01	4.28	3.19	1.96	0.95	0.36	0.06	53.4	0.00		
70	0.05	0.50	1.79	4.47	8.58	11.2	11.1	13.0	13.8	13.6	12.5	10.5	10.4	7.71	4.01	1.77	0.55	0.09	126	1.54		
60	0.07	0.71	3.04	11.8	23.2	29.2	29.0	33.4	35.7	35.0	31.8	27.0	26.4	21.0	10.5	2.99	0.79	0.11	322	291		
50	0.08	0.91	5.55	22.4	45.0	61.1	59.2	58.1	59.8	58.0	53.8	54.8	55.6	39.9	20.3	5.41	1.09	0.13	602	589		
40	0.10	1.17	8.15	29.2	74.0	115	114	116	114	108	102	107	113	67.1	26.1	8.03	1.41	0.14	1105	1094		
30	0.11	1.44	9.55	30.8	88.7	159	166	186	191	188	175	160	162	85.8	27.6	9.37	1.79	0.16	1643	1633		
	0.11	1.60	9.33	27.2	71.6	122	133	121	131	133	127	138	122	71.4	24.7	9.19	2.07	0.17	1244	1233		
	0.11	1.62	7.77	17.8	35.8	51.2	48.9	30.5	26.5	27.6	34.7	52.7	50.2	34.9	16.4	7.89	2.18	0.17	448	395		
	0.11	1.66	7.91	18.8	36.2	47.1	35.7	21.0	17.9	17.9	19.8	30.4	42.3	36.1	19.2	8.31	2.25	0.17	363	284		
	0.11	1.70	9.75	29.9	74.4	114	103	87.3	82.3	81.7	82.1	86.9	106	78.4	32.2	10.3	2.26	0.17	982	972		
-30	0.11	1.58	10.2	34.2	95.8	158	162	178	182	179	168	149	157	106	37.2	10.9	2.06	0.16	1633	1623		
-40	0.10	1.32	9.12	31.1	84.2	122	123	138	139	136	132	119	131	94.5	33.4	9.93	1.68	0.15	1306	1296		
-50	0.08	0.97	6.54	24.6	49.3	68.5	63.8	63.0	64.1	63.2	61.0	64.7	74.3	53.7	25.7	7.36	1.24	0.13	693	681		
-60	0.07	0.71	3.76	14.0	25.9	32.3	32.2	35.7	37.3	37.1	35.1	31.7	33.4	26.7	15.0	4.28	0.89	0.11	367	349		
-70	0.05	0.49	1.87	5.64	10.3	12.7	12.5	14.7	15.4	15.3	14.6	12.5	13.0	10.9	6.10	2.14	0.61	0.09	149	20.7		
-80	0.03	0.30	1.00	2.23	3.67	5.00	5.50	5.74	5.59	5.62	5.81	5.61	5.21	3.92	2.39	1.12	0.39	0.06	59.2	0.00		
-90	0.01	0.13	0.42	0.87	1.45	2.09	2.52	2.62	2.57	2.60	2.70	2.64	2.21	1.53	0.93	0.48	0.20	0.04	26.0	0.00		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90	
Φ t	1.32	17.3	97.3	308	733	1117	1109	1113	1127	1110	1067	1060	1110	745	305	101	22.0	2.13	11156			
Φ a	0.00	0.00	42.6	280	705	1082	1064	1055	1063	1044	1009	1013	1071	715	274	44.2	0.00	0.00		10144		

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01日

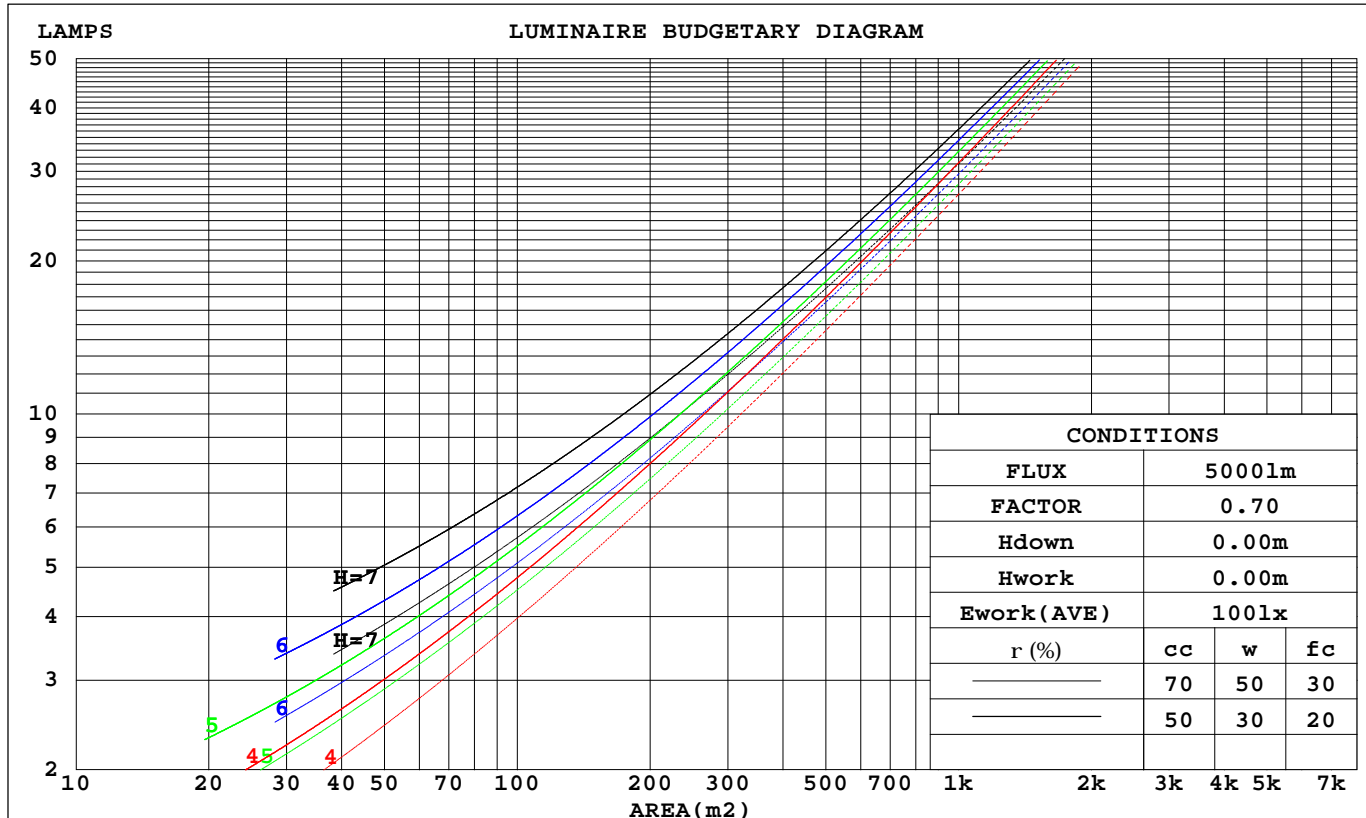
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

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
rfc	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01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	.273	.155	.049	.266	.152	.048	.253	.145	.046	.241	.139	.045	.230	.133	.043															
2.0	.266	.146	.045	.259	.143	.044	.248	.138	.043	.237	.133	.042	.228	.129	.041															
3.0	.252	.134	.040	.247	.132	.040	.237	.128	.039	.227	.125	.038	.219	.121	.037															
4.0	.238	.124	.036	.233	.122	.036	.224	.119	.035	.215	.116	.035	.208	.113	.034															
5.0	.223	.114	.033	.219	.112	.033	.211	.110	.032	.204	.107	.032	.196	.105	.032															
6.0	.210	.105	.030	.206	.104	.030	.199	.102	.030	.192	.100	.029	.186	.098	.029															
7.0	.197	.098	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.091	.027															
8.0	.186	.091	.026	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025															
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023															
10.0	.166	.079	.022	.163	.079	.022	.158	.078	.022	.154	.076	.022	.150	.075	.022															

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	.191	.191	.191	.164	.164	.164	.112	.112	.112	.064	.064	.064	.020	.020	.020	
1.0	.179	.157	.138	.153	.135	.119	.105	.093	.082	.060	.054	.048	.019	.017	.015	
2.0	.170	.133	.102	.145	.114	.088	.100	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.162	.115	.078	.139	.099	.067	.095	.069	.047	.055	.040	.028	.018	.013	.009	
4.0	.155	.102	.061	.133	.088	.053	.091	.061	.037	.053	.036	.022	.017	.012	.007	
5.0	.148	.091	.049	.127	.079	.043	.088	.055	.030	.051	.032	.018	.016	.011	.006	
6.0	.142	.083	.041	.122	.072	.035	.084	.050	.025	.049	.030	.015	.016	.010	.005	
7.0	.136	.076	.034	.117	.066	.030	.081	.046	.021	.047	.027	.013	.015	.009	.004	
8.0	.130	.070	.030	.112	.061	.026	.077	.043	.018	.045	.025	.011	.015	.008	.004	
9.0	.124	.066	.026	.107	.057	.023	.074	.040	.016	.043	.024	.010	.014	.008	.003	
10.0	.119	.061	.023	.103	.053	.020	.071	.038	.014	.042	.022	.009	.013	.007	.003	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01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	27.6	29.1	27.8	29.3	29.5	24.0	25.5	24.3	25.7	26.0	
	3H	27.8	29.2	28.1	29.4	29.6	24.1	25.5	24.4	25.7	26.0
	4H	27.8	29.1	28.1	29.3	29.6	24.1	25.4	24.4	25.7	25.9
	6H	27.7	29.0	28.1	29.2	29.5	24.1	25.3	24.4	25.6	25.9
	8H	27.7	28.9	28.0	29.1	29.4	24.1	25.3	24.5	25.6	25.8
	12H	27.7	28.8	28.0	29.1	29.4	24.1	25.2	24.5	25.5	25.8
4H	2H	27.7	29.0	28.0	29.3	29.5	25.1	26.3	25.4	26.6	26.8
	3H	28.2	29.3	28.5	29.6	29.9	25.2	26.3	25.5	26.6	26.9
	4H	28.3	29.3	28.6	29.6	29.9	25.2	26.2	25.6	26.5	26.8
	6H	28.2	29.1	28.6	29.5	29.8	25.2	26.1	25.6	26.5	26.8
	8H	28.2	29.0	28.6	29.4	29.8	25.3	26.1	25.7	26.5	26.8
	12H	28.2	28.9	28.6	29.3	29.7	25.3	26.1	25.7	26.4	26.8
8H	4H	28.2	29.0	28.6	29.4	29.8	25.3	26.1	25.7	26.5	26.9
	6H	28.2	28.9	28.7	29.3	29.7	25.4	26.1	25.9	26.5	26.9
	8H	28.2	28.8	28.7	29.2	29.7	25.5	26.1	26.0	26.5	27.0
	12H	28.2	28.7	28.7	29.2	29.6	25.6	26.1	26.1	26.6	27.1
12H	4H	28.2	28.9	28.6	29.3	29.7	25.3	26.0	25.7	26.4	26.8
	6H	28.2	28.8	28.7	29.2	29.7	25.4	26.0	25.9	26.5	26.9
	8H	28.2	28.7	28.7	29.2	29.6	25.6	26.1	26.0	26.5	27.0
Variations with the observer position at spacings:											
S = 1.0H	+ 1.5 / - 1.0					+ 1.3 / - 1.7					
1.5H	+ 2.2 / - 4.6					+ 1.6 / - 1.2					
2.0H	+ 3.0 / - 6.6					+ 2.6 / - 2.3					

CIE Pub.117 Corrected 11156 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.4)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01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) $k(RI) \times RCR = 5$									
$k = 0.60$	59	48	41	58	47	41	57	47	41	34
0.80	70	59	52	69	58	52	67	58	51	45
1.00	79	69	62	78	68	62	76	70	61	55
1.25	87	77	71	85	76	70	83	75	69	63
1.50	92	83	76	90	82	76	87	80	75	68
2.00	98	91	85	96	89	84	93	87	83	75
2.50	102	95	89	100	93	88	96	91	87	79
3.00	105	99	94	102	97	93	99	94	90	82
4.00	108	103	99	106	101	97	102	98	95	86
5.00	110	106	102	108	104	100	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

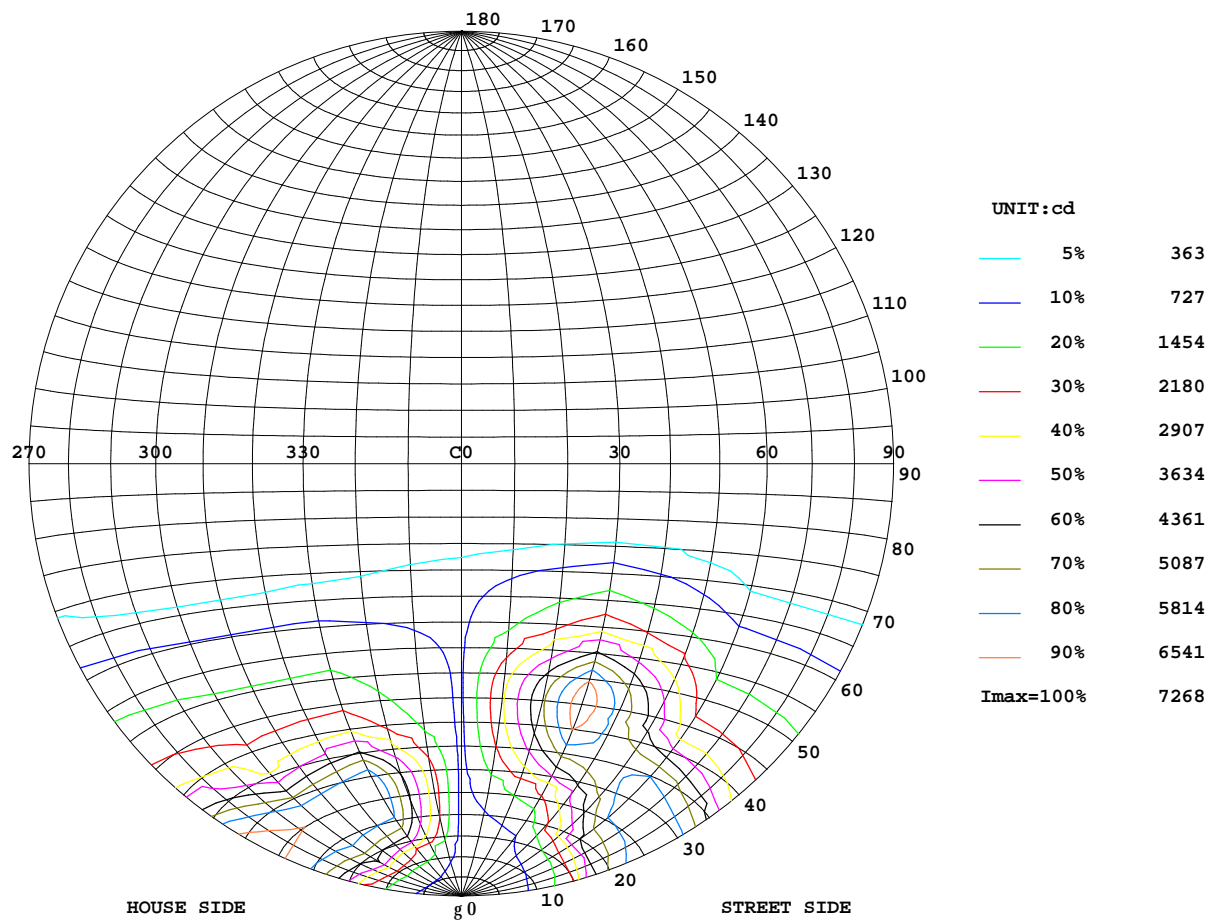
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01日

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08月01日

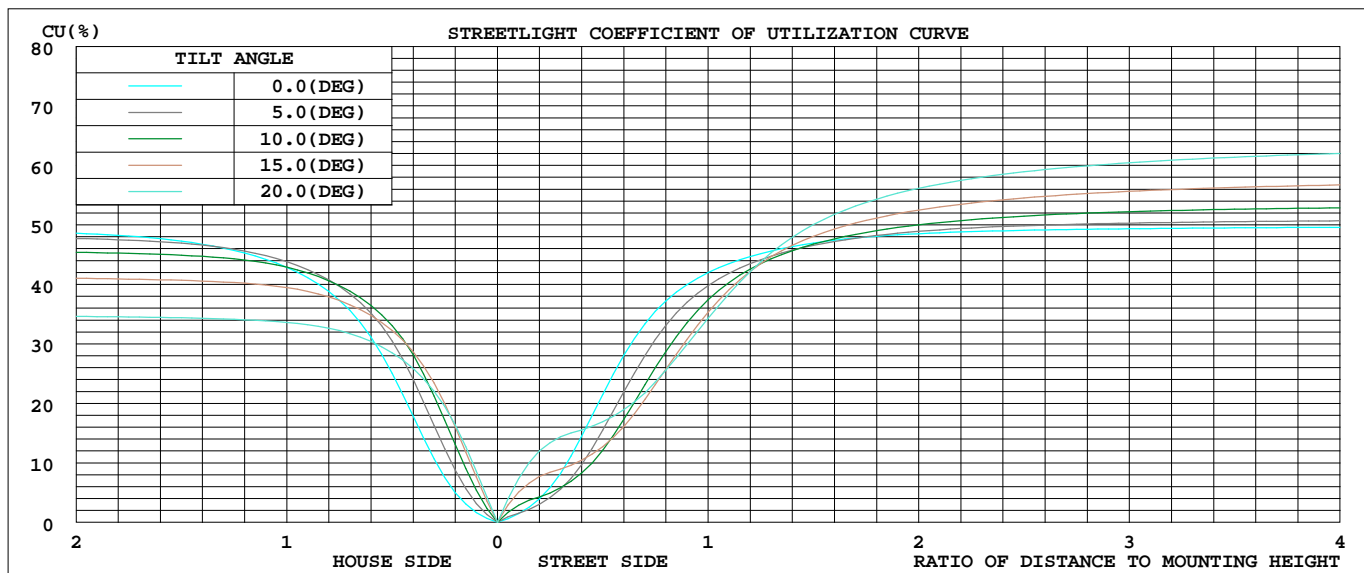
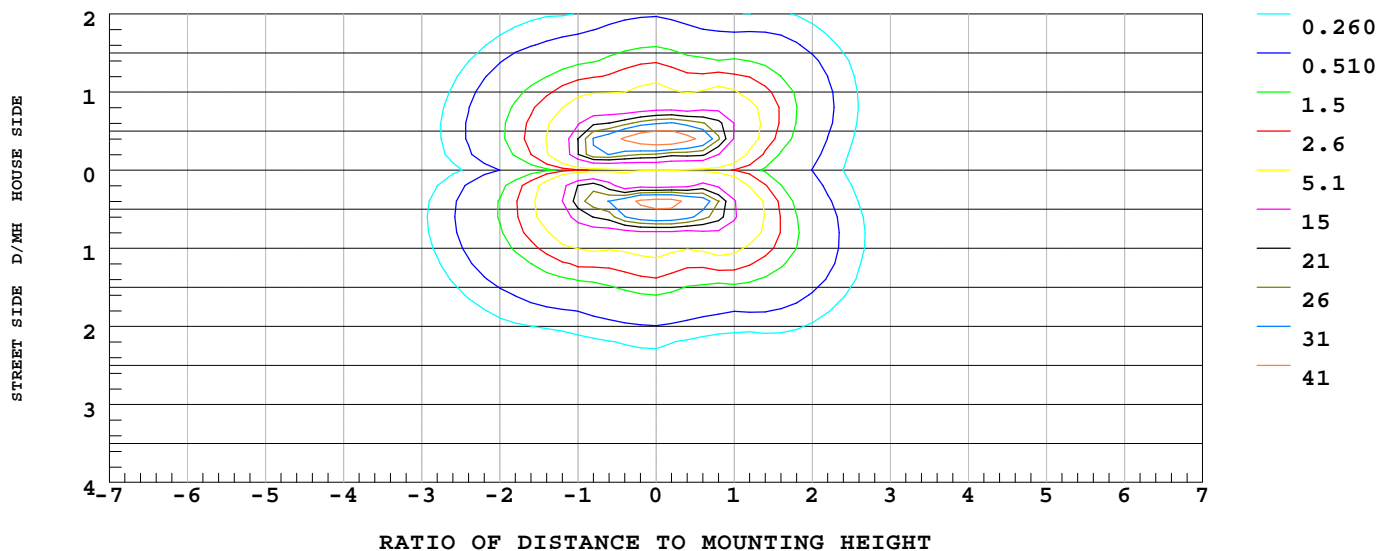
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m,Enadir = 5.06 lx



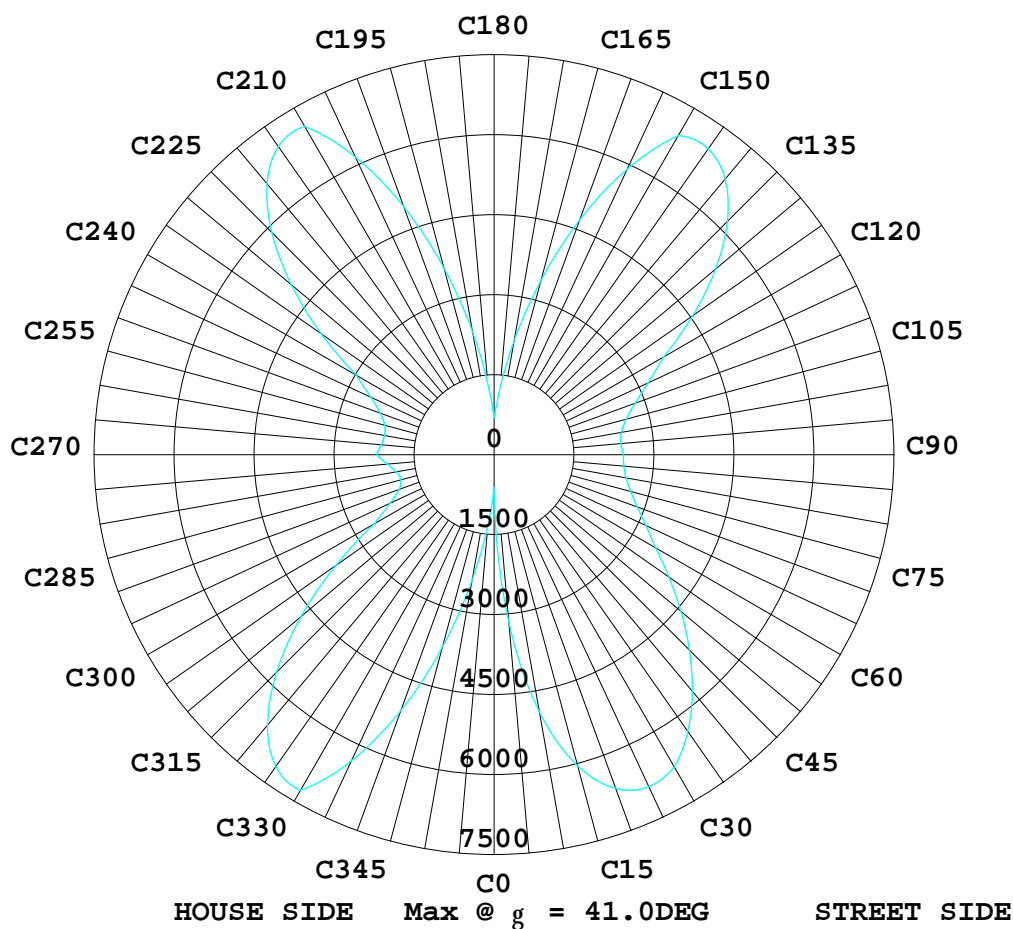
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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08月01日

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