

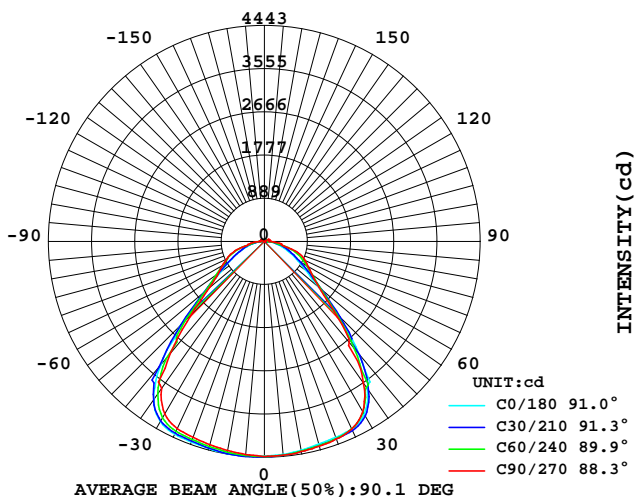
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

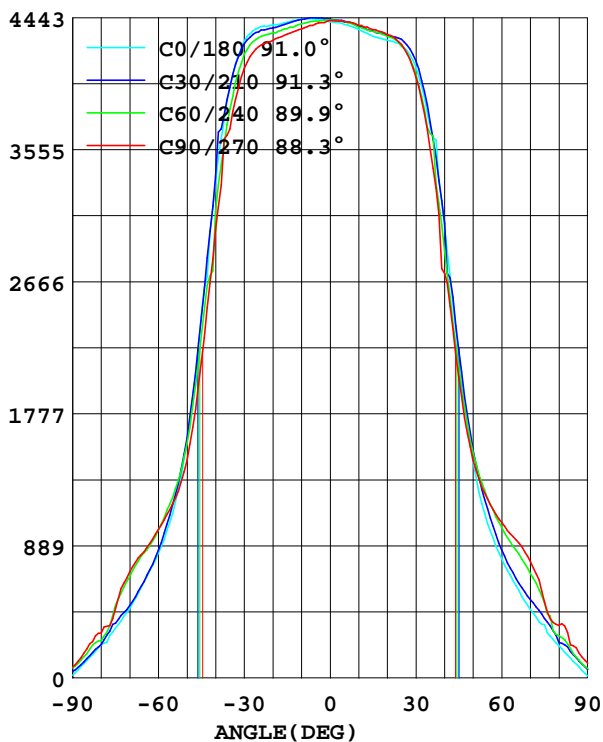
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	4443	S/MH(C0/180)	1.30
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.27
NOMINAL POWER(W)	68	TOTAL FLUX(lm)	10306	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	153.8	Current(A)	0.321
NOMINAL FLUX(lm)	10305.7	h up(%)	1.7	Power(W)	67.01
LAMPS QUANTITY	1	h down(%)	98.3	Power Factor(PF)	0.953
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	9753.5	EEI	0.094

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



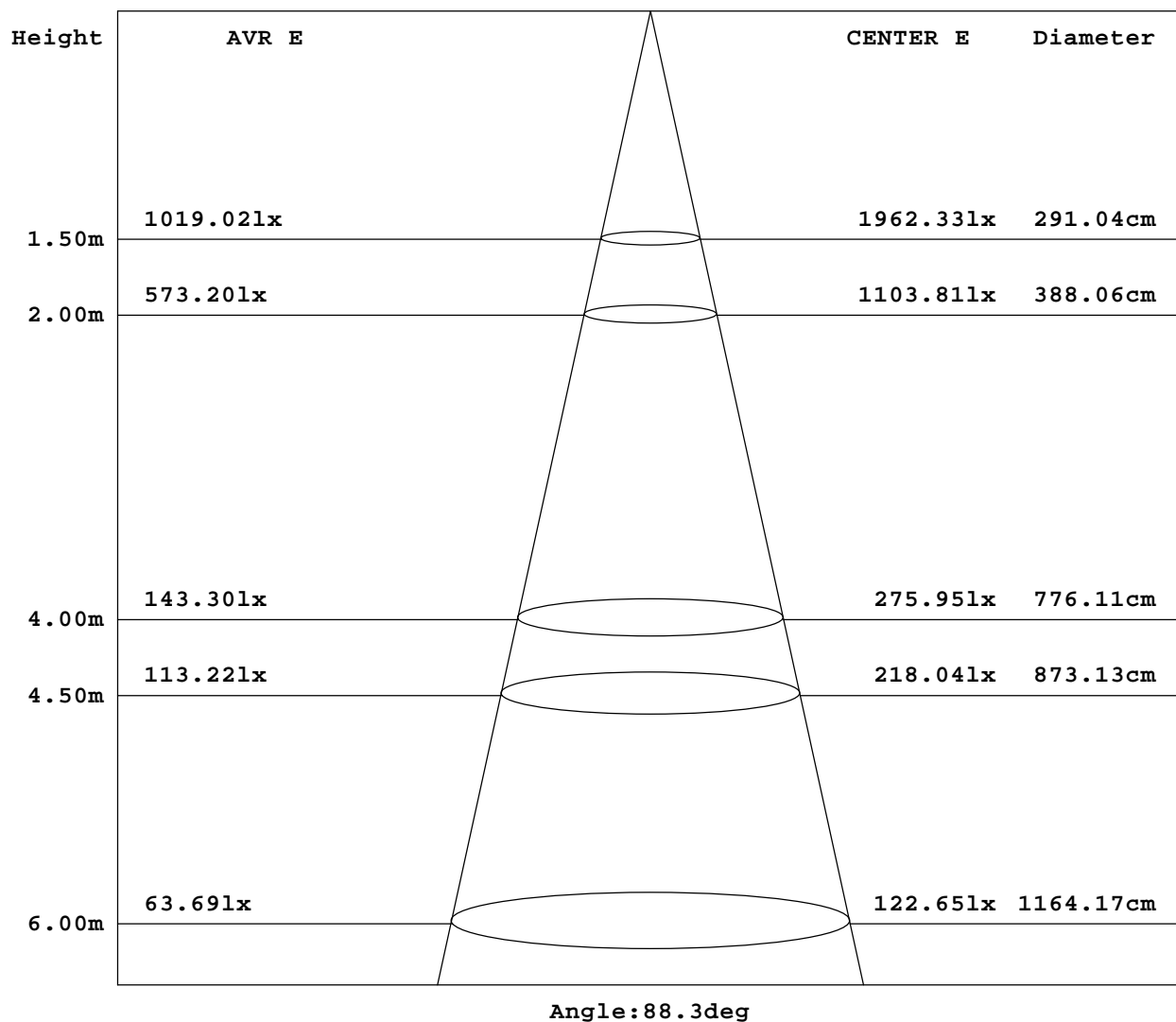
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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	tStal
5.0	4434	4432	4401	4406	4398	4418	4415	4438	0- 5	105.7	105.7
10.0	4436	4416	4368	4366	4365	4384	4391	4434	5- 10	315.3	421.1
15.0	4411	4386	4333	4325	4317	4353	4363	4419	10- 15	519.6	940.7
20.0	4393	4356	4289	4294	4292	4323	4328	4397	15- 20	717.1	1658
25.0	4377	4328	4249	4249	4254	4274	4263	4356	20- 25	906.0	2564
30.0	4285	4232	4102	4104	4112	4109	4046	4214	25- 30	1072	3636
35.0	3970	3900	3692	3706	3706	3699	3554	3825	30- 35	1172	4808
40.0	3326	3253	3015	2904	3028	2965	2722	3141	35- 40	1152	5960
45.0	2446	2370	2130	2184	2174	2154	2025	2287	40- 45	972.9	6933
50.0	1591	1596	1463	1514	1451	1523	1464	1590	45- 50	747.5	7681
55.0	1105	1190	1173	1174	1039	1175	1206	1220	50- 55	579.7	8260
60.0	843.9	931.7	1000	926.0	804.7	939.3	1047	964.6	55- 60	483.4	8744
65.0	646.9	746.1	850.7	745.0	621.0	763.8	928.8	784.2	60- 65	409.0	9153
70.0	468.4	584.6	714.4	605.6	459.7	614.1	783.6	640.2	65- 70	347.5	9500
75.0	336.0	431.4	471.4	450.6	357.6	452.4	512.5	475.3	70- 75	277.7	9778
80.0	222.7	238.3	301.6	245.5	215.9	260.3	354.3	254.9	75- 80	181.3	9959
85.0	116.4	146.6	194.6	156.5	111.9	158.8	216.9	164.5	80- 85	118.1	10078
90.0	18.34	55.30	75.21	59.30	13.98	60.87	99.29	65.83	85- 90	57.24	10135
95.0	0.194	56.15	98.80	59.48	0	55.49	113.0	70.85	90- 95	31.04	10166
100.0	0	48.77	85.98	52.46	0	52.04	105.7	67.59	95-100	29.42	10195
105.0	0.920	48.83	83.32	54.40	0	55.06	103.8	70.43	100-105	28.57	10224
110.0	2.492	48.65	75.69	54.94	1.040	55.67	95.78	69.64	105-110	27.86	10252
115.0	5.154	48.17	77.39	54.03	4.428	54.88	95.90	66.56	110-115	26.65	10278
120.0	5.759	44.11	77.02	51.73	8.663	50.83	91.79	60.69	115-120	24.89	10303
125.0	0	0	0	0	0	0	0	0	120-125	2.354	10306
130.0	0	0	0	0	0	0	0	0	125-130	0	10306
135.0	0	0	0	0	0	0	0	0	130-135	0	10306
140.0	0	0	0	0	0	0	0	0	135-140	0	10306
145.0	0	0	0	0	0	0	0	0	140-145	0	10306
150.0	0	0	0	0	0	0	0	0	145-150	0	10306
155.0	0	0	0	0	0	0	0	0	150-155	0	10306
160.0	0	0	0	0	0	0	0	0	155-160	0	10306
165.0	0	0	0	0	0	0	0	0	160-165	0	10306
170.0	0	0	0	0	0	0	0	0	165-170	0	10306
175.0	0	0	0	0	0	0	0	0	170-175	0	10306
180.0	0	0	0	0	0	0	0	0	175-180	0	10306
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:

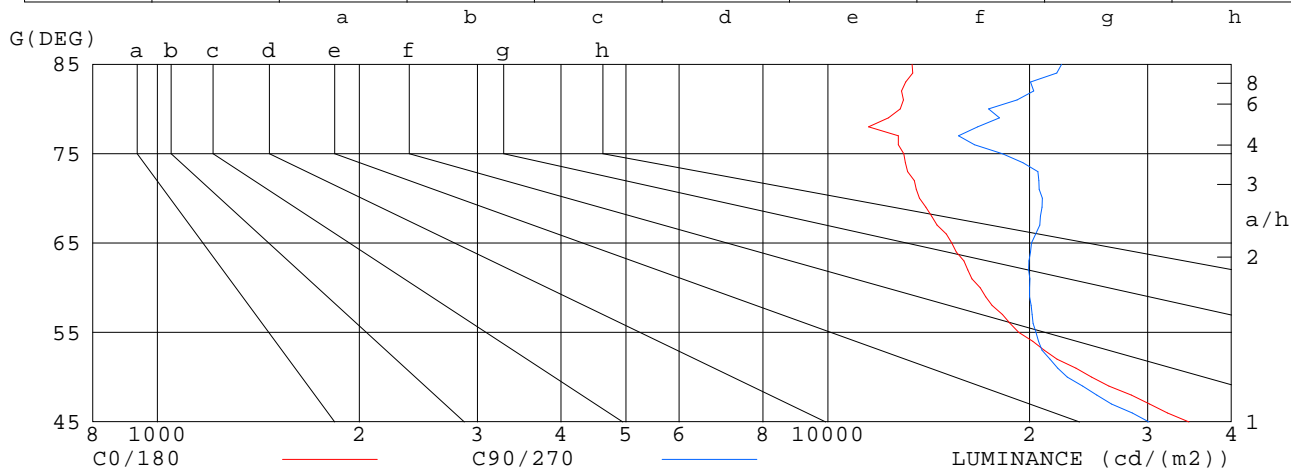
LUMINANCE LIMITATION CURVES

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	13364	22333
80	12826	17369
75	12986	18217
70	13697	20889
65	15308	20129
60	16879	20008
55	19266	20451
50	24753	22765
45	34593	30128

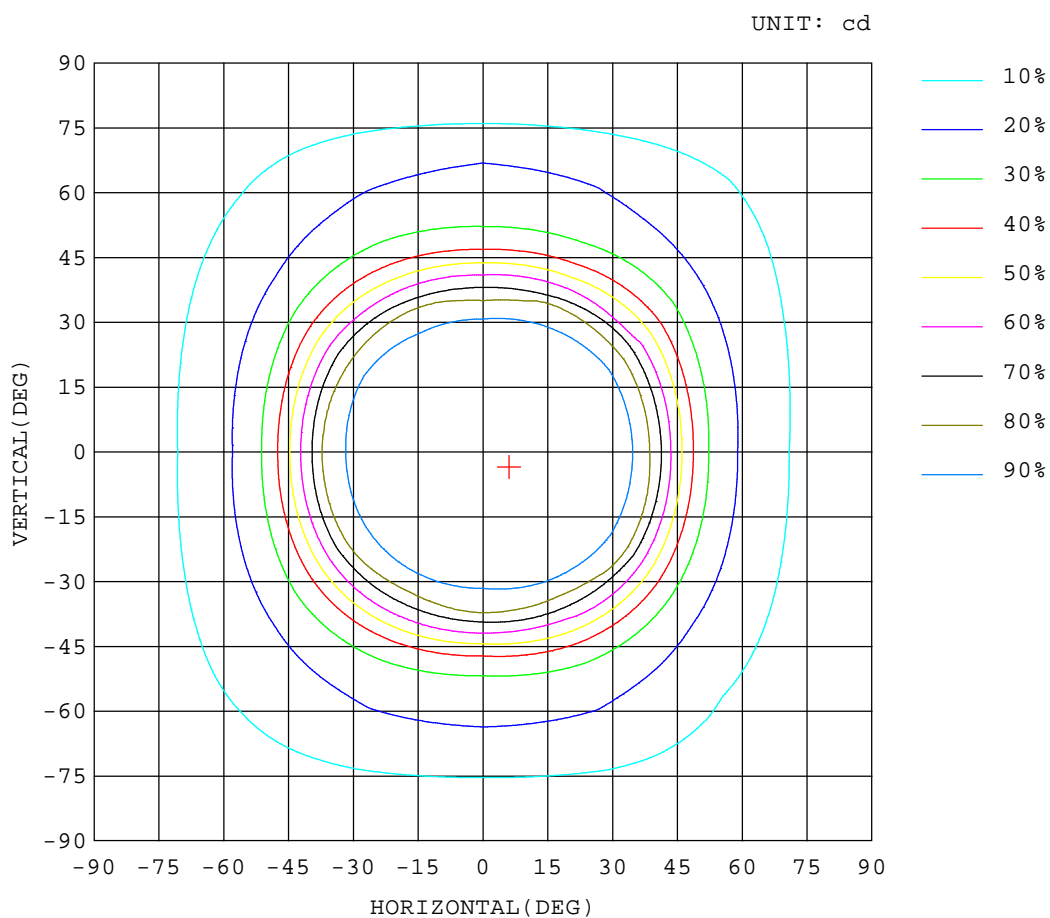
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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.:



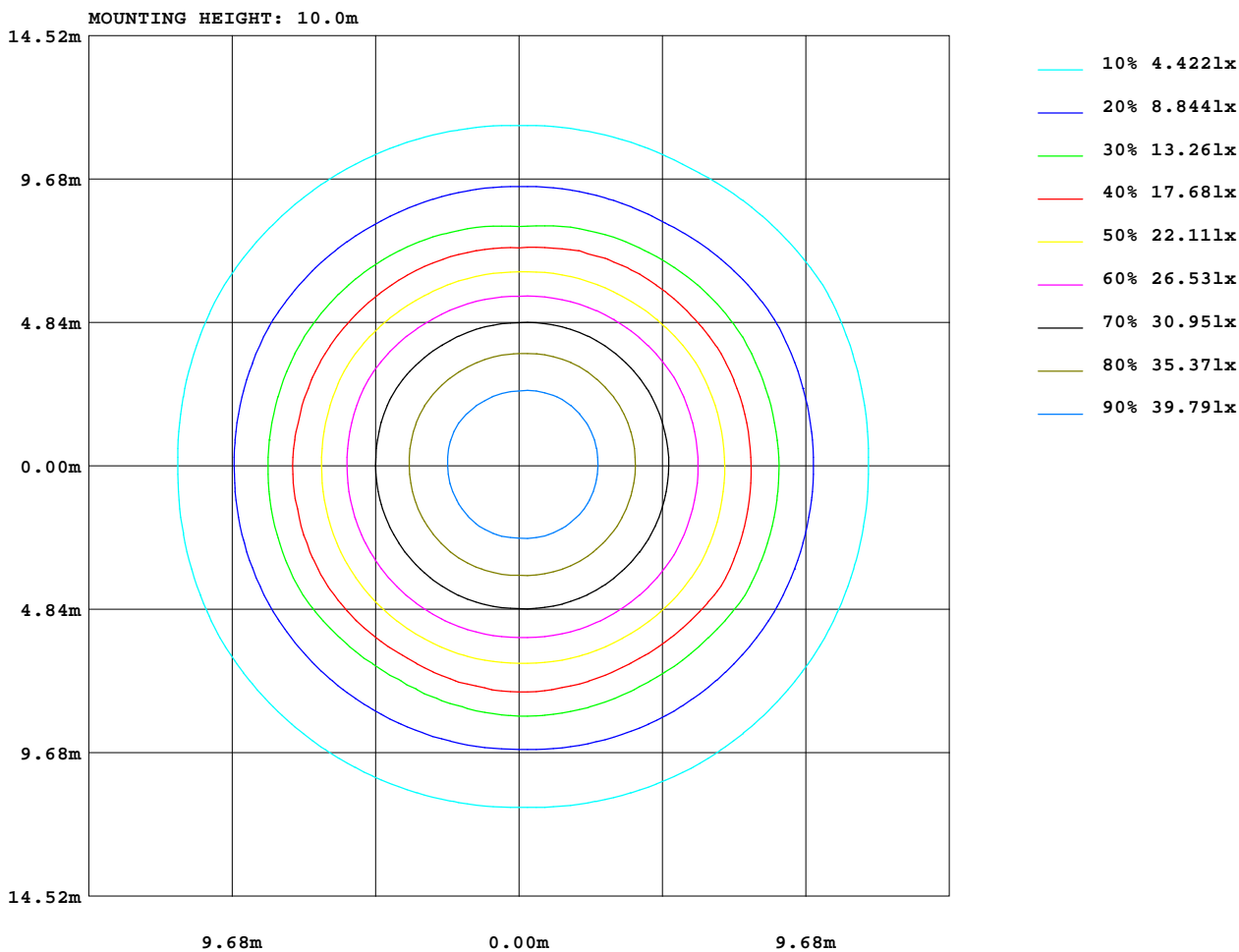
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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					
	0.09	0.48	1.17	1.98	2.83	3.71	4.72	5.82	6.70	6.69	5.78	4.67	3.72	2.91	2.09	1.24	0.52	0.10	55.2	0.00								
90																												
80	0.15	0.89	2.29	4.08	6.33	9.08	11.9	14.3	15.8	15.8	14.2	11.8	9.07	6.46	4.17	2.40	0.95	0.16	130	60.7								
70	0.20	1.30	3.34	6.68	11.2	16.5	21.7	25.3	27.5	27.6	25.5	22.1	17.0	11.9	7.46	3.48	1.36	0.22	231	210								
60	0.26	1.65	4.63	8.98	15.0	22.2	29.2	34.1	36.7	36.6	33.9	29.1	22.6	15.5	9.72	5.09	1.69	0.27	308	296								
50	0.30	2.01	5.68	11.1	19.3	30.1	42.5	54.4	61.8	62.1	54.9	42.9	31.2	20.3	11.5	6.11	2.08	0.32	459	450								
40	0.34	2.34	6.55	13.5	25.3	44.9	71.2	94.0	105	106	96.7	74.5	47.9	27.4	14.2	6.86	2.42	0.35	740	733								
30	0.37	2.57	7.33	15.9	33.2	66.4	101	120	128	129	123	106	71.6	36.4	17.0	7.61	2.64	0.38	968	962								
	0.38	2.71	7.88	17.8	41.6	83.4	114	127	132	133	129	118	89.3	45.7	19.1	8.20	2.76	0.40	1072	1066								
	0.39	2.75	8.13	18.8	46.7	90.9	117	127	133	134	130	120	96.6	51.6	20.2	8.47	2.77	0.40	1110	1104								
	0.39	2.76	8.12	18.8	46.8	90.9	116	127	133	134	129	120	97.0	51.8	20.0	8.42	2.74	0.40	1108	1102								
	0.38	2.72	7.85	17.8	41.5	83.9	113	126	131	132	128	118	90.7	45.7	18.7	8.05	2.67	0.39	1068	1062								
-30	0.36	2.58	7.28	15.9	33.1	67.1	102	121	128	129	123	107	73.7	35.5	16.4	7.35	2.50	0.37	972	966								
-40	0.33	2.35	6.52	13.4	25.4	45.0	72.4	96.1	110	111	99.8	77.5	48.3	26.1	13.6	6.41	2.26	0.34	757	749								
-50	0.30	2.01	5.72	10.9	19.2	30.0	42.5	55.7	64.3	65.1	57.9	44.5	30.7	19.3	10.8	5.40	1.93	0.30	467	457								
-60	0.25	1.61	4.73	8.97	14.7	21.7	28.6	33.4	35.9	36.0	33.7	28.9	21.9	14.5	8.38	4.35	1.58	0.25	300	285								
-70	0.20	1.24	3.30	6.80	11.1	16.2	21.0	24.0	25.7	25.7	24.0	21.0	16.0	10.5	6.20	3.09	1.21	0.20	218	194								
-80	0.14	0.85	2.13	3.85	6.04	8.59	11.2	13.3	14.5	14.5	13.3	11.3	8.51	5.80	3.62	1.98	0.81	0.14	121	51.8								
-90	0.08	0.44	1.04	1.83	2.73	3.67	4.53	5.24	5.75	5.73	5.20	4.47	3.56	2.56	1.65	0.94	0.41	0.09	49.9	0.00								
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)												20	30	40	50	60	70	80	90
Φ t	4.91	33.3	93.7	198	403	735	1026	1204	1294	1303	1228	1061	780	431	205	95.5	33.3	5.08	10306									
Φ a	0.00	1.27	64.3	174	382	715	1007	1183	1272	1281	1207	1042	761	410	182	67.3	1.66	0.00		9753								

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

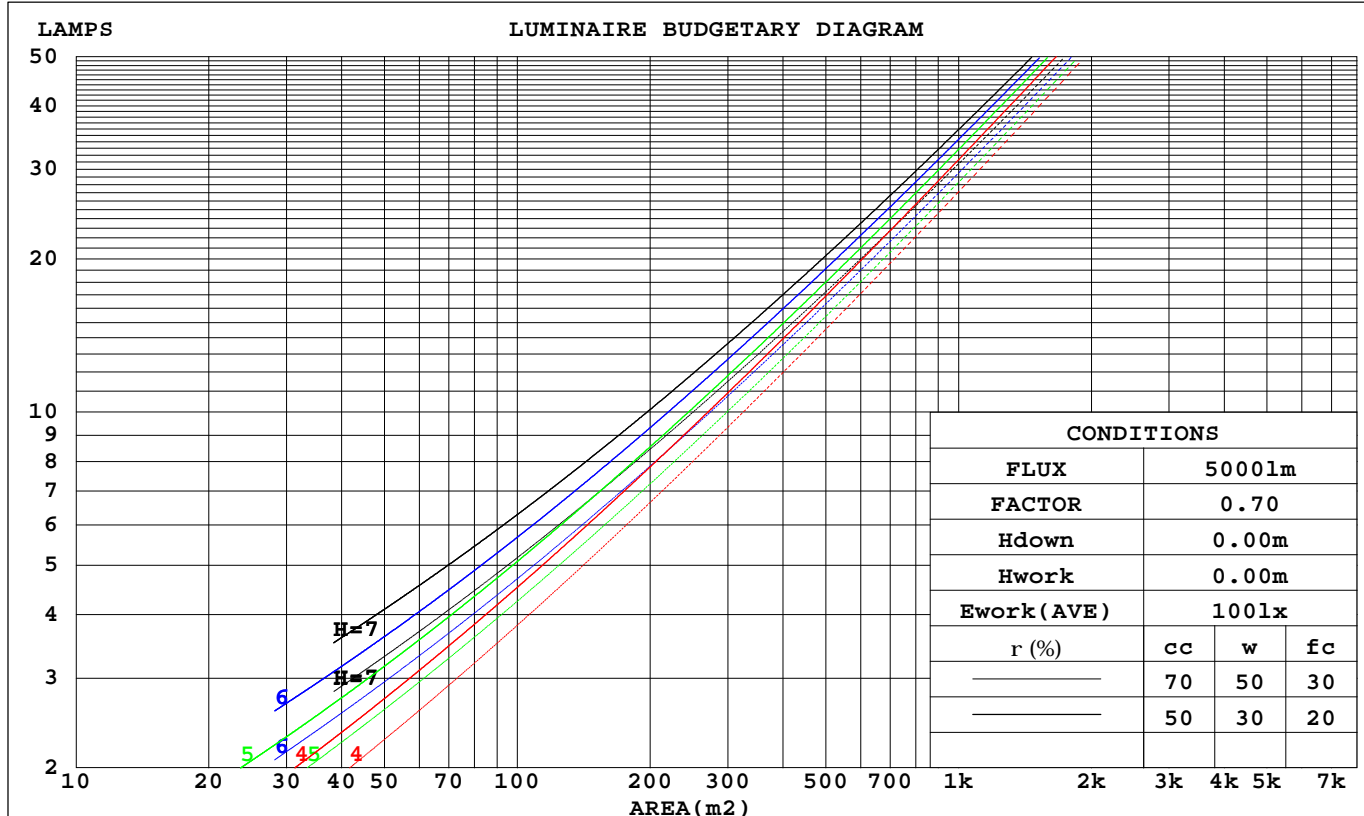
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

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
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	.265	.151	.048	.251	.144	.046	.239	.138	.044	.227	.131	.042															
2.0	.257	.141	.043	.250	.138	.042	.238	.132	.041	.227	.127	.040	.216	.122	.039															
3.0	.239	.127	.038	.234	.125	.038	.223	.121	.037	.213	.117	.036	.204	.113	.035															
4.0	.223	.116	.034	.218	.114	.034	.208	.110	.033	.199	.107	.032	.191	.104	.032															
5.0	.208	.106	.031	.203	.104	.030	.195	.102	.030	.187	.099	.029	.180	.096	.029															
6.0	.195	.098	.028	.191	.096	.028	.183	.094	.027	.176	.091	.027	.169	.089	.026															
7.0	.183	.090	.026	.179	.089	.025	.172	.087	.025	.166	.085	.025	.160	.083	.024															
8.0	.172	.084	.024	.169	.083	.023	.162	.081	.023	.157	.079	.023	.151	.078	.023															
9.0	.162	.078	.022	.159	.078	.022	.154	.076	.022	.148	.074	.021	.143	.073	.021															
10.0	.153	.073	.020	.151	.073	.020	.146	.071	.020	.141	.070	.020	.136	.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	.203	.203	.203	.174	.174	.174	.118	.118	.118	.068	.068	.068	.022	.022	.022	
1.0	.190	.169	.150	.163	.145	.129	.111	.100	.089	.064	.058	.052	.021	.019	.017	
2.0	.180	.145	.115	.155	.125	.099	.106	.086	.069	.061	.050	.041	.020	.016	.013	
3.0	.171	.127	.092	.147	.110	.079	.101	.076	.056	.058	.044	.033	.019	.014	.011	
4.0	.163	.113	.075	.140	.098	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
5.0	.156	.103	.063	.134	.089	.055	.092	.062	.039	.053	.036	.023	.017	.012	.008	
6.0	.149	.094	.055	.128	.082	.048	.088	.057	.034	.051	.034	.020	.017	.011	.007	
7.0	.142	.087	.048	.122	.076	.042	.085	.053	.030	.049	.031	.018	.016	.010	.006	
8.0	.136	.081	.044	.117	.071	.038	.081	.050	.027	.047	.029	.016	.015	.010	.005	
9.0	.131	.076	.040	.113	.066	.035	.078	.047	.025	.045	.028	.015	.015	.009	.005	
10.0	.125	.072	.037	.108	.063	.032	.075	.044	.023	.044	.026	.014	.014	.009	.004	

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	2H	22.7	24.0	23.0	24.3	24.5	22.9	24.2	23.2	24.5	24.7
	3H	23.4	24.6	23.7	24.9	25.2	24.3	25.5	24.6	25.7	26.0
	4H	23.7	24.9	24.1	25.2	25.5	24.8	26.0	25.2	26.3	26.6
	6H	24.0	25.1	24.3	25.4	25.7	25.2	26.3	25.5	26.6	26.9
	8H	24.1	25.2	24.5	25.5	25.8	25.4	26.5	25.8	26.8	27.1
	12H	24.2	25.2	24.6	25.6	25.9	25.6	26.6	26.0	26.9	27.3
4H	2H	23.0	24.2	23.4	24.5	24.8	23.2	24.4	23.5	24.7	24.9
	3H	23.9	25.0	24.3	25.3	25.6	24.9	25.9	25.2	26.2	26.5
	4H	24.4	25.4	24.8	25.7	26.1	25.6	26.5	26.0	26.9	27.2
	6H	24.8	25.6	25.2	26.0	26.4	26.0	26.9	26.5	27.3	27.6
	8H	25.0	25.8	25.4	26.2	26.6	26.3	27.1	26.8	27.5	27.9
	12H	25.2	25.9	25.6	26.3	26.7	26.6	27.3	27.1	27.7	28.2
8H	4H	24.7	25.5	25.1	25.9	26.3	25.7	26.5	26.2	26.9	27.3
	6H	25.2	25.9	25.7	26.3	26.8	26.3	27.0	26.8	27.4	27.9
	8H	25.5	26.1	26.0	26.5	27.0	26.7	27.3	27.2	27.8	28.2
	12H	25.8	26.2	26.3	26.7	27.2	27.2	27.6	27.7	28.1	28.6
12H	4H	24.7	25.4	25.2	25.8	26.3	25.7	26.4	26.2	26.8	27.3
	6H	25.3	25.9	25.8	26.3	26.8	26.4	26.9	26.9	27.4	27.9
	8H	25.6	26.1	26.1	26.6	27.1	26.8	27.3	27.3	27.8	28.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.4 / - 0.5					
1.5H	+ 0.7 / - 0.6					+ 0.4 / - 0.4					
2.0H	+ 1.2 / - 0.7					+ 0.7 / - 0.5					

CIE Pub.117 Corrected 10306 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.1)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	65	55	49	65	55	49	64	55	49	43
0.80	75	65	59	74	64	58	72	64	58	52
1.00	82	73	67	81	72	66	79	73	66	60
1.25	89	80	74	87	79	73	85	78	72	66
1.50	93	85	79	91	84	78	88	82	77	70
2.00	99	91	86	97	90	85	93	88	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	102	97	93	98	94	90	82
4.00	108	103	99	105	101	97	101	98	95	86
5.00	110	106	102	107	104	101	103	100	97	88
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

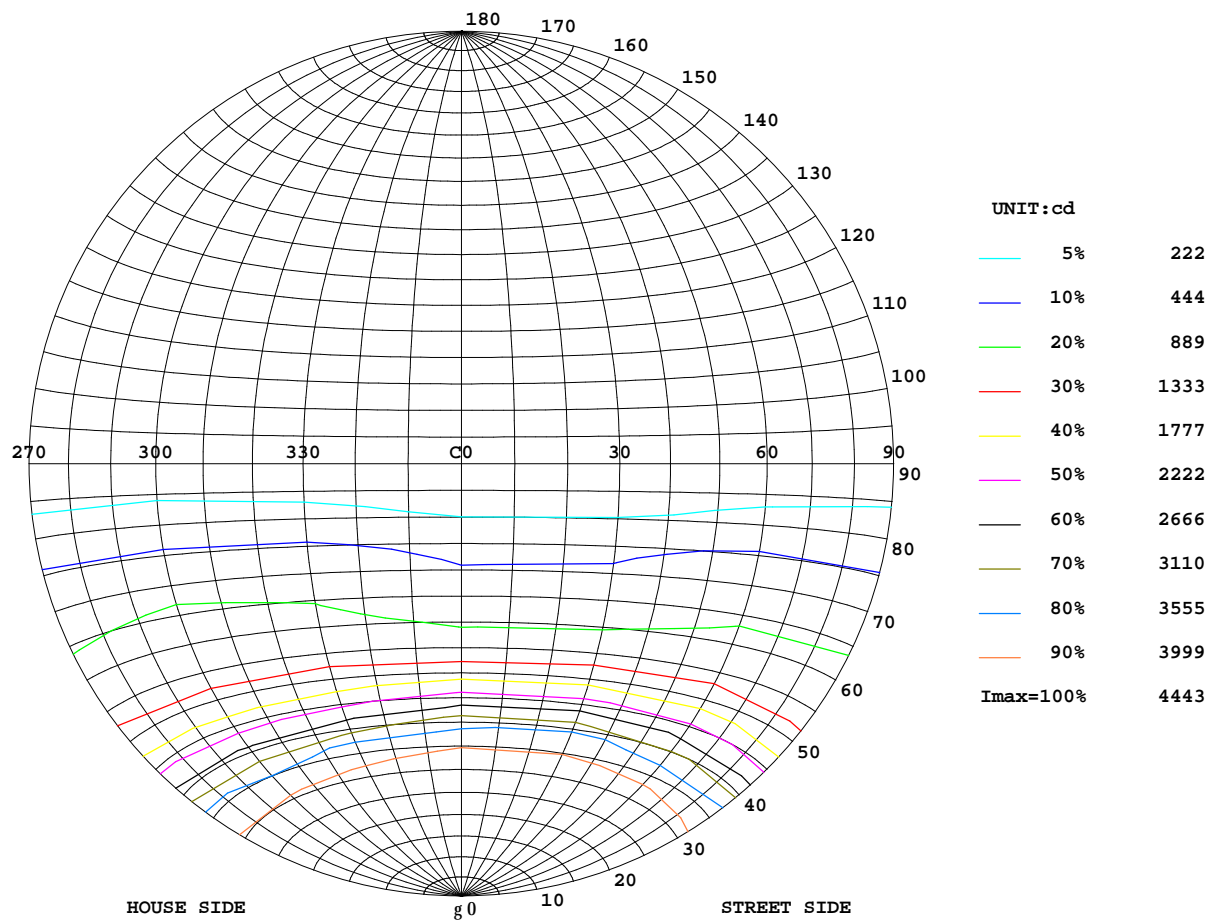
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01日

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

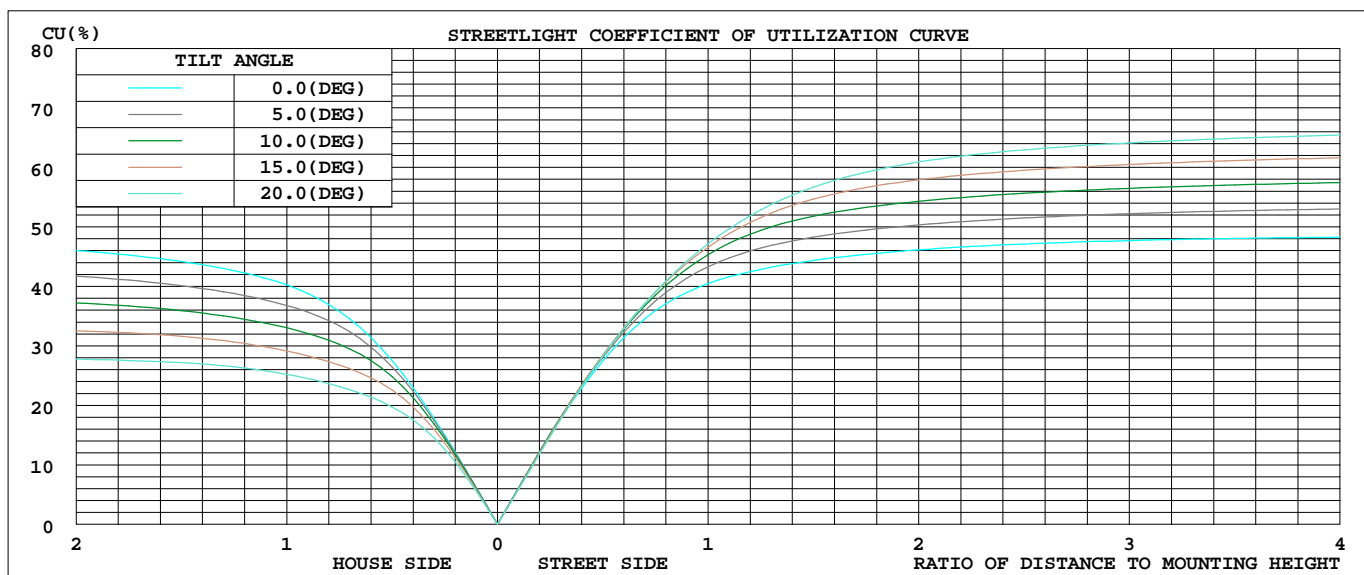
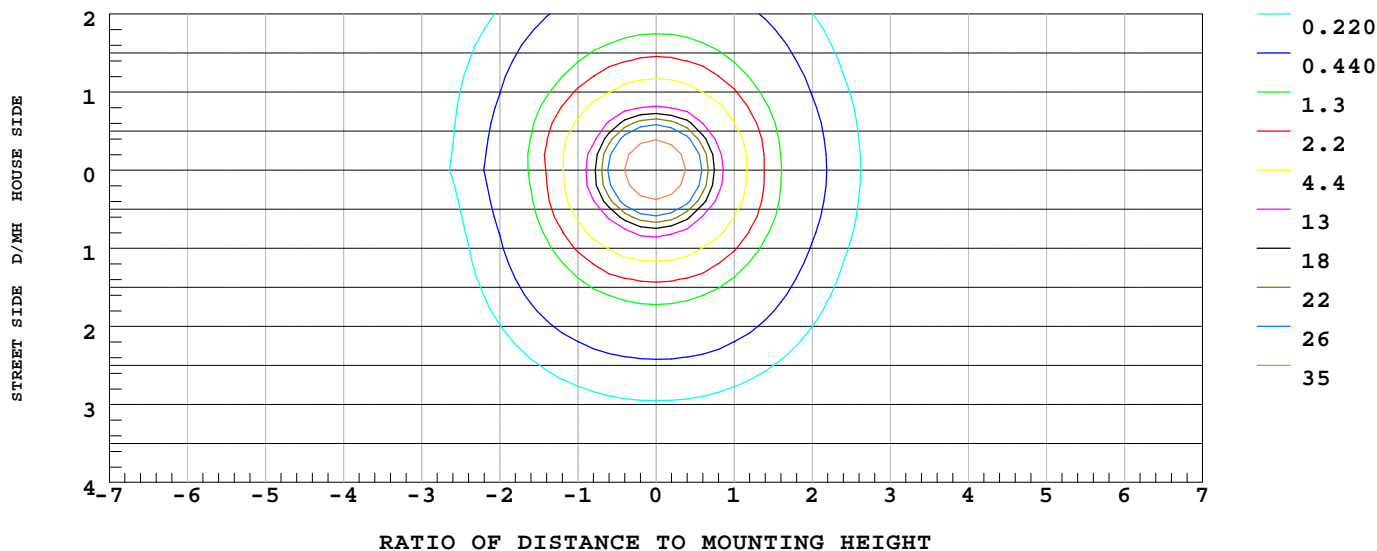
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 44.15 lx



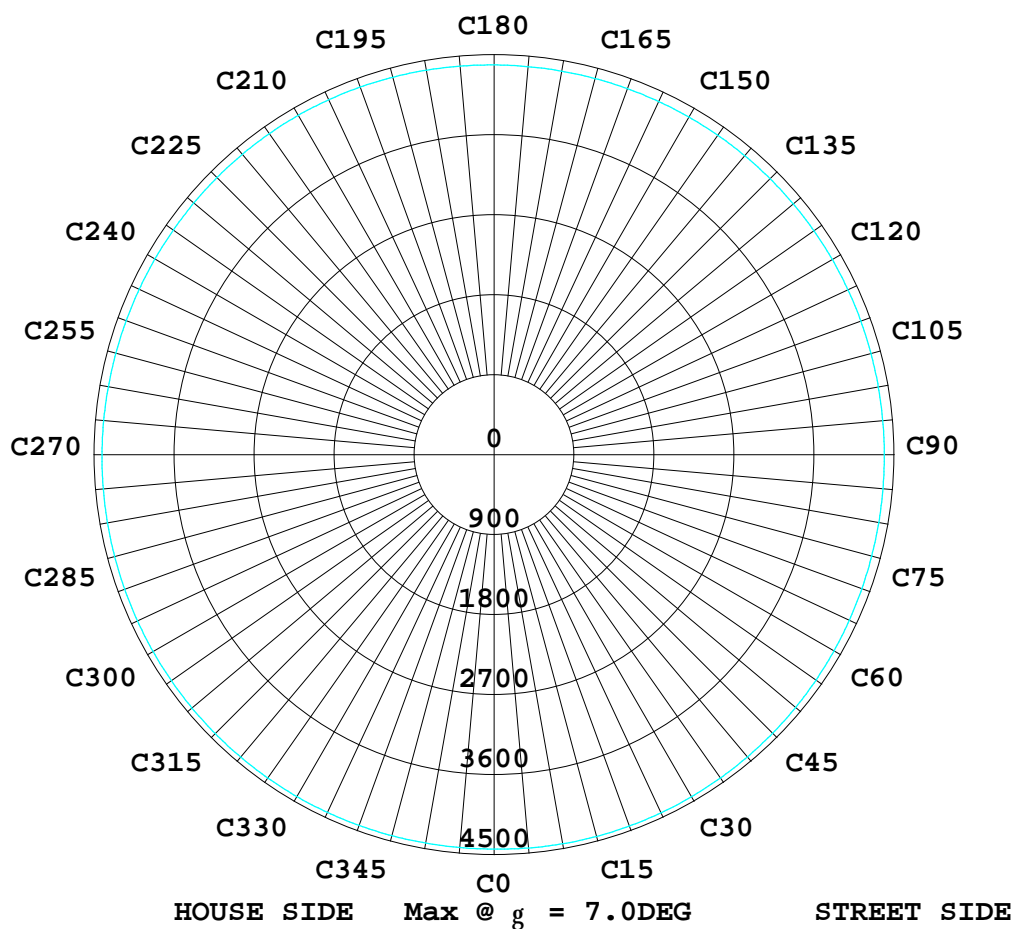
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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: