

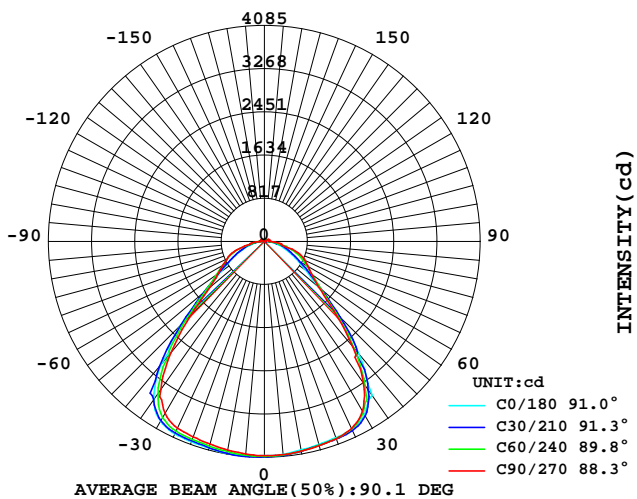
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

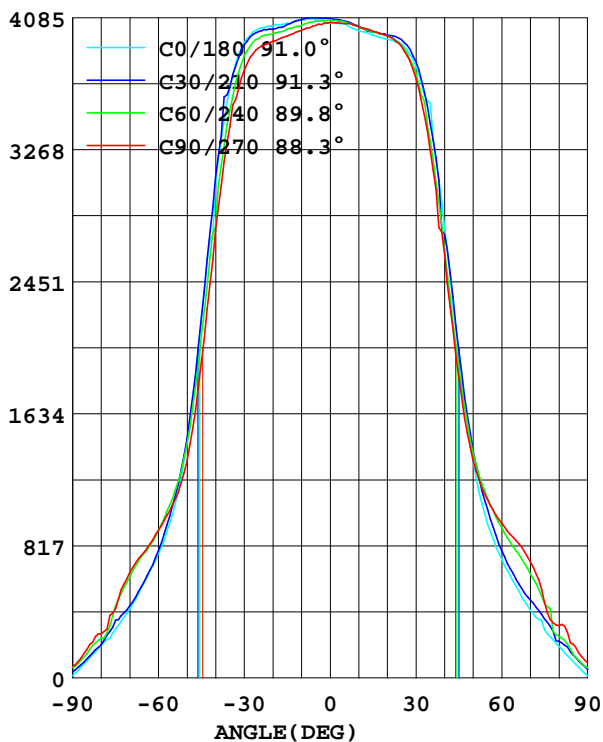
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	4085	S/MH(C0/180)	1.32
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.27
NOMINAL POWER(W)	60	TOTAL FLUX(lm)	9446.2	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	156.4	Current(A)	0.291
NOMINAL FLUX(lm)	9446.2	h up(%)	1.6	Power(W)	60.38
LAMPS QUANTITY	1	h down(%)	98.4	Power Factor(PF)	0.946
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	8947.4	EEI	0.092

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



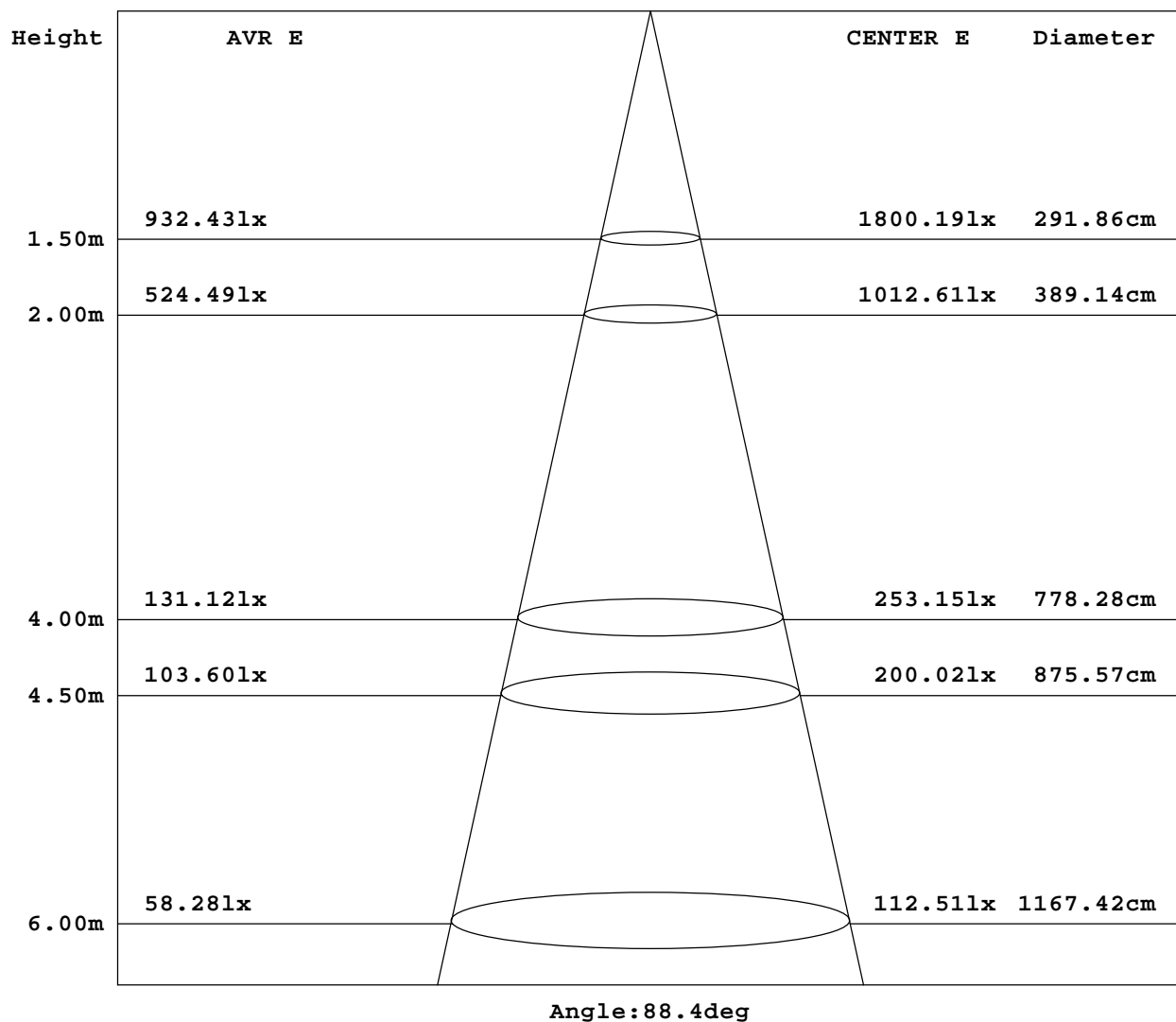
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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	tStal
5.0	4072	4073	4035	4034	4044	4062	4048	4063	0- 5	97.04	97.04
10.0	4068	4054	4007	3995	4005	4031	4029	4060	5- 10	289.3	386.4
15.0	4051	4029	3970	3963	3977	3995	4001	4045	10- 15	476.6	863.0
20.0	4032	4000	3939	3932	3950	3973	3974	4029	15- 20	657.9	1521
25.0	4015	3977	3897	3892	3922	3930	3908	3991	20- 25	831.6	2353
30.0	3930	3884	3759	3764	3791	3779	3711	3858	25- 30	984.0	3337
35.0	3651	3582	3410	3406	3558	3374	3261	3505	30- 35	1077	4414
40.0	3053	2941	2767	2781	2781	2692	2616	2878	35- 40	1053	5467
45.0	2243	2173	1954	2002	2003	1982	1861	2095	40- 45	898.5	6366
50.0	1458	1463	1341	1387	1337	1399	1343	1455	45- 50	685.7	7051
55.0	1012	1090	1074	1073	953.6	1077	1104	1114	50- 55	531.0	7582
60.0	771.8	852.7	913.9	845.5	737.2	860.6	958.5	880.7	55- 60	442.3	8025
65.0	589.2	682.8	776.8	680.2	567.0	699.2	849.4	715.6	60- 65	373.9	8399
70.0	426.1	534.8	651.6	550.8	419.7	562.1	716.8	583.8	65- 70	317.2	8716
75.0	304.6	403.0	428.5	409.1	298.3	413.5	467.8	431.6	70- 75	253.6	8969
80.0	201.2	225.6	273.7	231.6	194.8	241.7	323.0	238.1	75- 80	166.0	9135
85.0	104.2	132.6	175.5	140.8	99.53	143.2	208.1	148.9	80- 85	107.7	9243
90.0	15.31	51.61	71.82	54.82	12.05	57.54	94.57	61.60	85- 90	51.99	9295
95.0	0	49.62	88.16	52.28	0	49.98	102.6	62.75	90- 95	28.14	9323
100.0	0	43.02	76.78	45.62	0	46.77	95.05	60.57	95-100	26.14	9349
105.0	0	42.96	74.12	47.86	0	47.62	90.33	61.78	100-105	25.20	9375
110.0	0.557	42.54	67.34	48.10	0	48.35	86.58	61.35	105-110	24.38	9399
115.0	2.976	42.30	68.55	47.14	2.371	47.68	84.77	58.69	110-115	23.33	9422
120.0	3.823	38.91	68.43	45.26	6.122	44.29	82.35	53.25	115-120	21.76	9444
125.0	0	0	0	0	0	0	0	0	120-125	2.063	9446
130.0	0	0	0	0	0	0	0	0	125-130	0	9446
135.0	0	0	0	0	0	0	0	0	130-135	0	9446
140.0	0	0	0	0	0	0	0	0	135-140	0	9446
145.0	0	0	0	0	0	0	0	0	140-145	0	9446
150.0	0	0	0	0	0	0	0	0	145-150	0	9446
155.0	0	0	0	0	0	0	0	0	150-155	0	9446
160.0	0	0	0	0	0	0	0	0	155-160	0	9446
165.0	0	0	0	0	0	0	0	0	160-165	0	9446
170.0	0	0	0	0	0	0	0	0	165-170	0	9446
175.0	0	0	0	0	0	0	0	0	170-175	0	9446
180.0	0	0	0	0	0	0	0	0	175-180	0	9446
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:

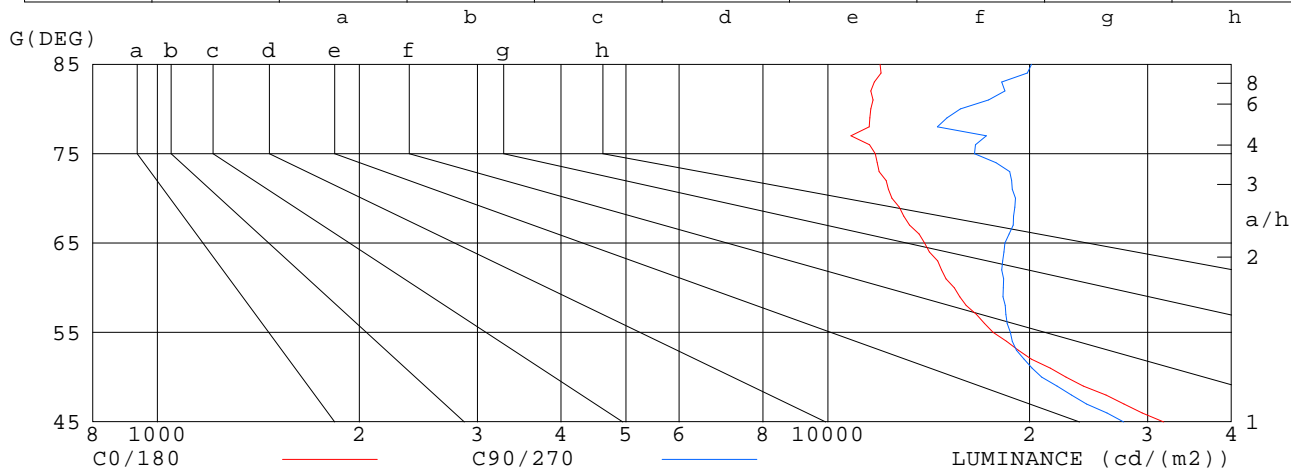
LUMINANCE LIMITATION CURVES

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	11962	20139
80	11592	15766
75	11770	16557
70	12459	19053
65	13942	18383
60	15436	18280
55	17648	18717
50	22677	20857
45	31716	27635

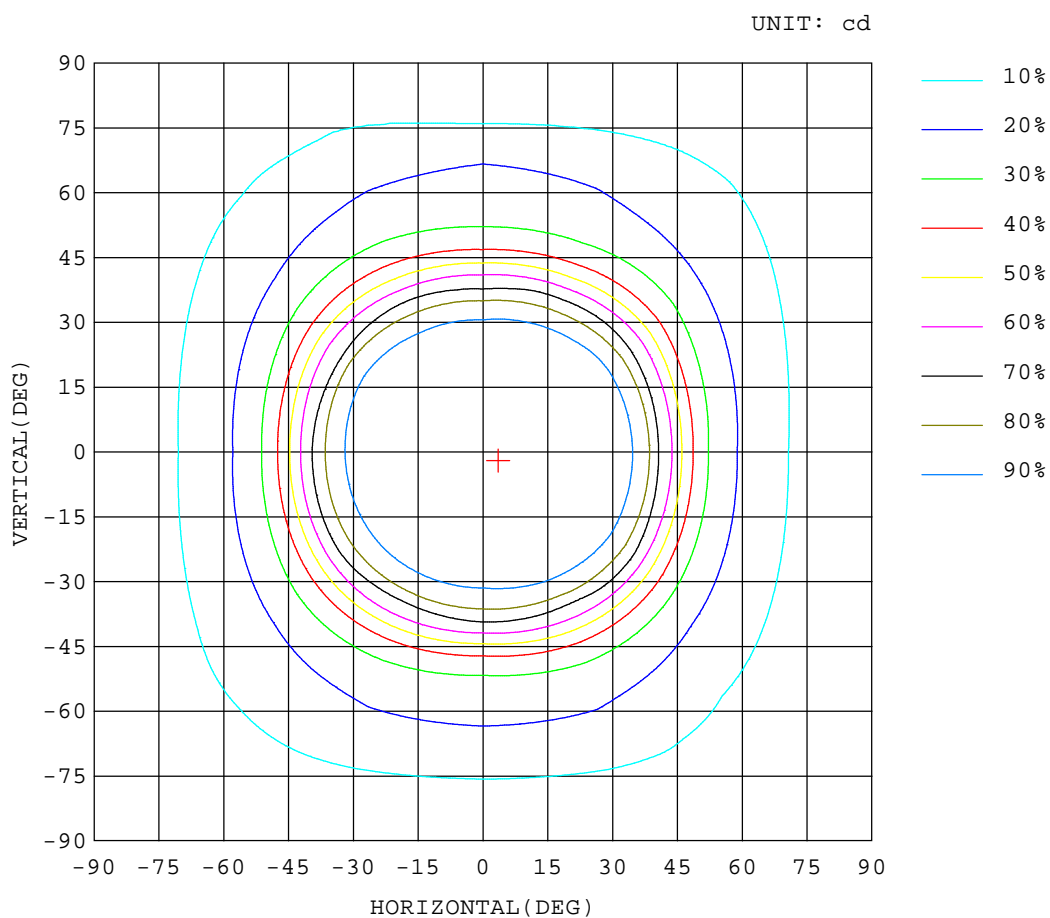
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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.:



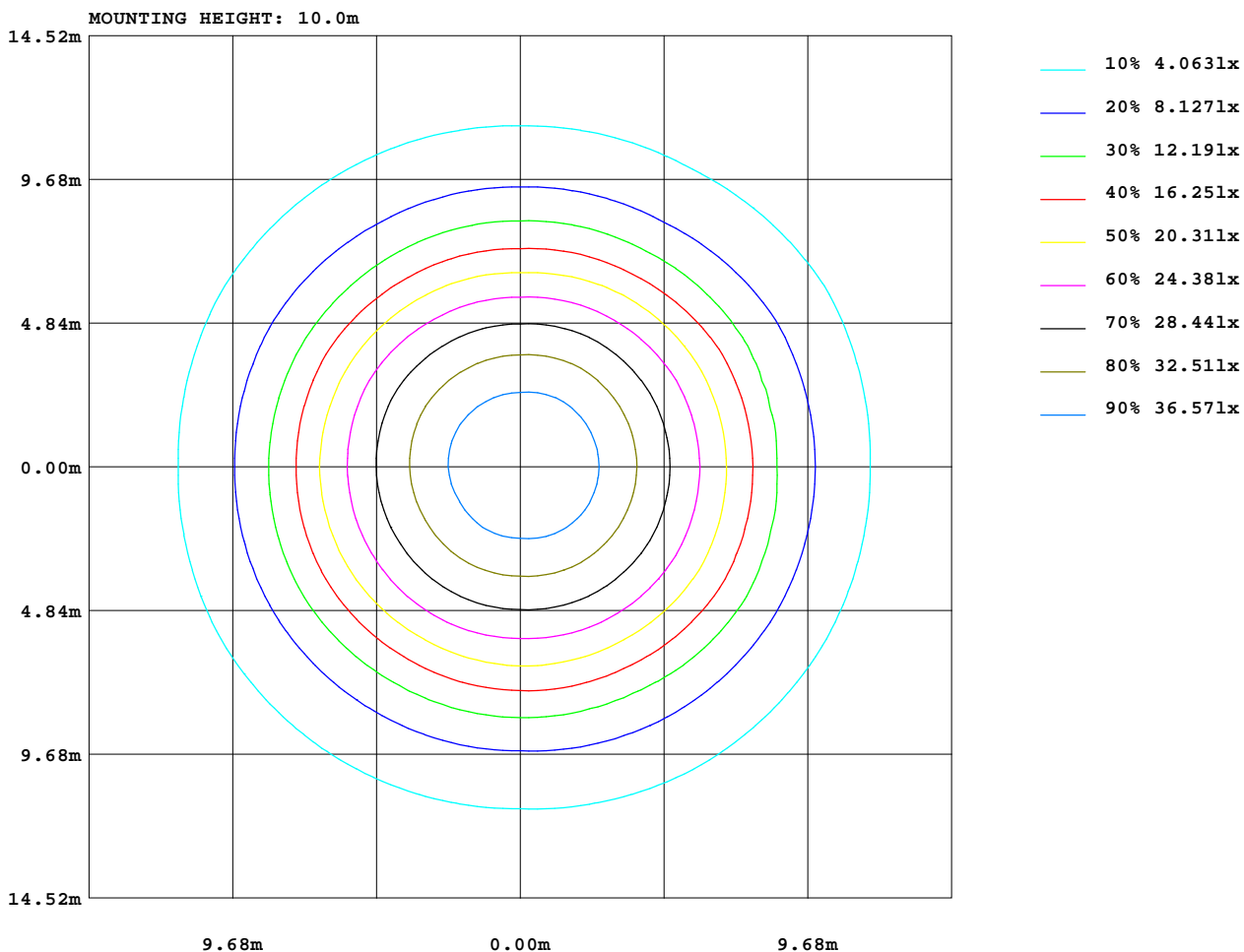
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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.:

		AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
VERTICAL (DEG)	90	0.08	0.44	1.06	1.80	2.57	3.37	4.30	5.34	6.18	6.17	5.31	4.26	3.38	2.65	1.90	1.13	0.47	0.09	50.5	0.00		
	80	0.13	0.80	2.08	3.69	5.83	8.50	11.2	13.2	14.5	14.4	12.9	10.7	8.17	5.84	3.84	2.18	0.85	0.14	119	61.4		
	70	0.18	1.17	2.99	6.09	10.2	15.1	19.8	23.1	25.1	25.2	23.3	20.2	15.5	10.8	6.75	3.21	1.23	0.19	211	192		
	60	0.23	1.48	4.20	8.20	13.7	20.4	26.8	31.3	33.6	33.5	31.0	26.6	20.7	14.1	8.82	4.62	1.55	0.24	282	270		
	50	0.27	1.81	5.19	10.1	17.7	27.6	39.0	50.0	56.9	57.1	50.3	39.3	28.5	18.5	10.5	5.54	1.91	0.28	421	413		
	40	0.30	2.11	5.99	12.3	23.2	41.3	65.5	86.2	96.7	97.5	88.3	68.3	44.0	25.0	13.0	6.23	2.20	0.32	679	672		
	30	0.33	2.34	6.69	14.6	30.5	61.1	92.6	111	117	118	113	96.5	66.3	33.3	15.5	6.93	2.40	0.34	888	883		
		0.34	2.48	7.20	16.3	38.3	76.5	105	116	121	122	118	108	81.8	42.1	17.4	7.47	2.51	0.36	983	978		
		0.35	2.52	7.43	17.3	43.1	83.7	108	117	122	123	119	110	88.7	47.3	18.4	7.73	2.52	0.36	1019	1014		
		0.35	2.52	7.42	17.3	43.0	83.8	107	116	122	123	119	110	89.0	47.3	18.3	7.68	2.49	0.36	1017	1012		
		0.34	2.49	7.17	16.3	38.1	76.9	104	115	120	121	117	108	83.1	41.9	17.1	7.34	2.43	0.35	980	974		
	-30	0.33	2.36	6.64	14.6	30.4	61.5	93.2	111	117	118	113	98.5	67.6	32.6	15.0	6.70	2.28	0.33	892	886		
	-40	0.30	2.14	5.95	12.2	23.2	41.2	66.9	88.7	100	101	92.1	71.7	44.3	23.9	12.4	5.84	2.06	0.31	695	688		
	-50	0.26	1.83	5.21	9.96	17.5	27.4	38.9	51.1	59.1	60.0	53.2	40.8	28.1	17.6	9.88	4.93	1.76	0.27	428	419		
	-60	0.22	1.45	4.33	8.14	13.4	19.8	26.2	30.6	32.8	33.0	30.9	26.5	20.0	13.3	7.67	3.97	1.43	0.23	274	261		
	-70	0.17	1.11	3.00	6.25	10.1	14.8	19.2	21.9	23.4	23.5	22.0	19.2	14.6	9.69	5.65	2.81	1.09	0.18	199	177		
-80	0.12	0.75	1.91	3.48	5.53	7.86	10.2	12.2	13.4	13.4	12.2	10.3	7.80	5.29	3.30	1.80	0.73	0.13	111	49.5			
-90	0.07	0.39	0.93	1.64	2.46	3.32	4.12	4.76	5.22	5.21	4.74	4.07	3.23	2.32	1.50	0.85	0.37	0.08	45.3	0.00			
-90 -80 -70 -60 -50 -40 -30 -20 HORIZONTAL (DEG) 20 30 40 50 60 70 80 90																							
Φ t	4.39	30.2	85.4	181	369	675	943	1105	1188	1196	1126	973	715	394	187	87.0	30.3	4.55	9446				
Φ a	0.00	0.79	58.2	159	350	658	926	1087	1168	1176	1107	956	699	376	166	60.5	1.30	0.00		8947			

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

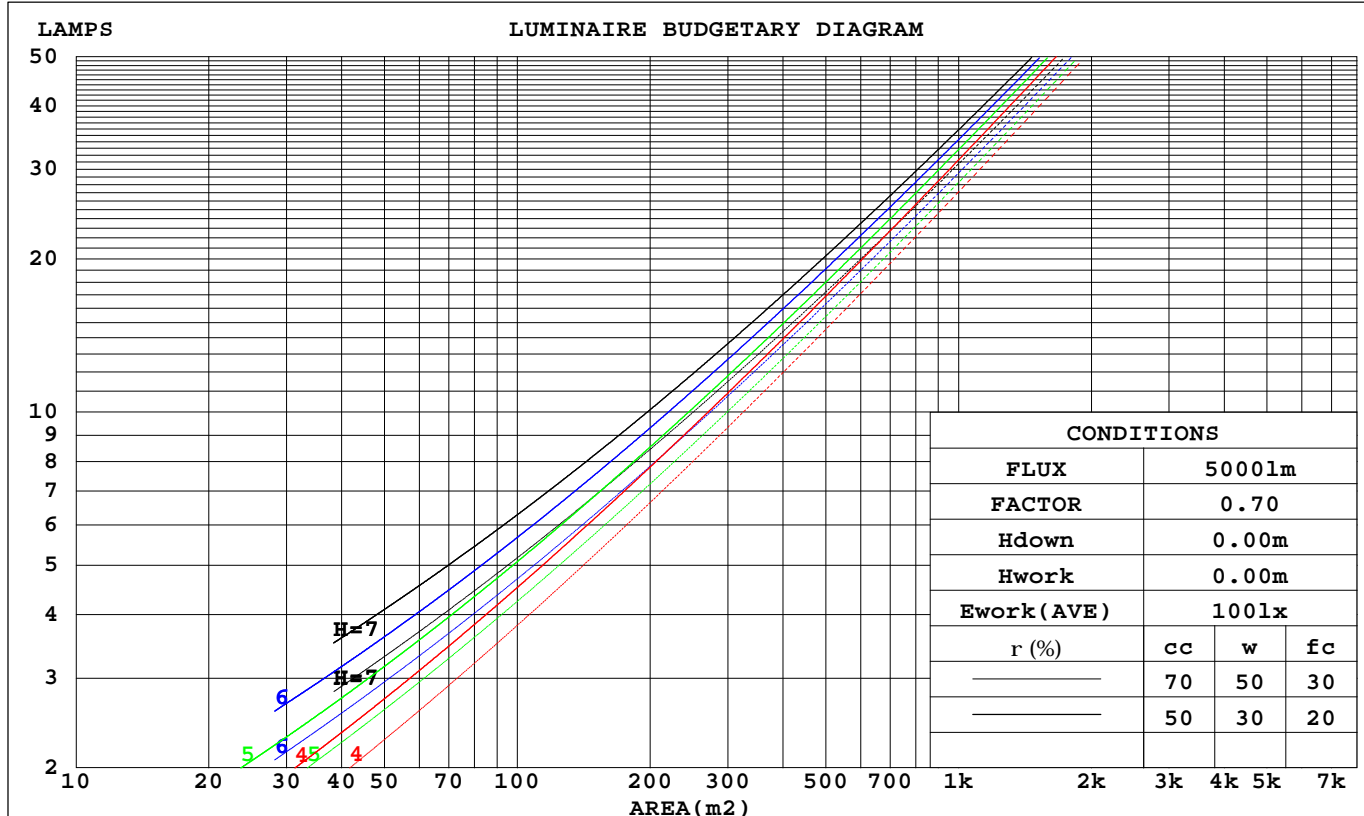
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

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	.238	.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	.233	.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	.173	.173	.173	.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	.144	.115	.154	.124	.099	.106	.086	.069	.061	.050	.041	.020	.016	.013	
3.0	.171	.127	.091	.147	.109	.079	.101	.076	.055	.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	.155	.102	.063	.133	.088	.055	.092	.062	.039	.053	.036	.023	.017	.012	.008	
6.0	.148	.094	.054	.128	.081	.047	.088	.057	.034	.051	.033	.020	.016	.011	.007	
7.0	.142	.087	.048	.122	.075	.042	.084	.053	.030	.049	.031	.018	.016	.010	.006	
8.0	.136	.081	.043	.117	.070	.038	.081	.049	.027	.047	.029	.016	.015	.010	.005	
9.0	.130	.076	.039	.112	.066	.034	.078	.046	.024	.045	.027	.015	.015	.009	.005	
10.0	.125	.072	.036	.108	.062	.032	.075	.044	.022	.044	.026	.013	.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	22.4	23.8	22.7	24.0	24.2	22.6	24.0	22.9	24.2	24.4	
	3H	23.1	24.3	23.4	24.6	24.9	24.0	25.2	24.3	25.4	25.7
	4H	23.4	24.6	23.8	24.9	25.2	24.5	25.7	24.9	26.0	26.3
	6H	23.7	24.8	24.1	25.1	25.4	24.9	26.0	25.2	26.3	26.6
	8H	23.8	24.9	24.2	25.2	25.5	25.1	26.2	25.5	26.5	26.8
	12H	23.9	24.9	24.3	25.2	25.6	25.3	26.3	25.7	26.6	27.0
4H	2H	22.7	23.9	23.1	24.2	24.5	22.9	24.1	23.3	24.4	24.7
	3H	23.6	24.7	24.0	25.0	25.3	24.5	25.6	24.9	25.9	26.2
	4H	24.1	25.0	24.5	25.4	25.7	25.3	26.2	25.7	26.6	26.9
	6H	24.5	25.3	24.9	25.7	26.1	25.8	26.6	26.2	27.0	27.3
	8H	24.7	25.5	25.1	25.9	26.3	26.0	26.8	26.5	27.2	27.6
	12H	24.8	25.5	25.3	26.0	26.4	26.3	27.0	26.8	27.4	27.9
8H	4H	24.4	25.2	24.8	25.6	26.0	25.4	26.2	25.9	26.6	27.0
	6H	24.9	25.6	25.4	26.0	26.5	26.0	26.7	26.5	27.1	27.6
	8H	25.2	25.8	25.7	26.2	26.7	26.4	27.0	26.9	27.5	27.9
	12H	25.4	25.9	25.9	26.4	26.9	26.8	27.3	27.3	27.8	28.3
12H	4H	24.4	25.1	24.9	25.5	26.0	25.4	26.1	25.9	26.5	27.0
	6H	25.0	25.6	25.5	26.0	26.5	26.1	26.6	26.6	27.1	27.6
	8H	25.3	25.8	25.8	26.3	26.8	26.5	27.0	27.0	27.5	28.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.6 / - 0.7					+ 0.4 / - 0.5					
1.5H	+ 0.6 / - 0.5					+ 0.4 / - 0.4					
2.0H	+ 1.2 / - 0.6					+ 0.6 / - 0.4					

CIE Pub.117 Corrected 9446 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.8)

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	65	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	106	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		

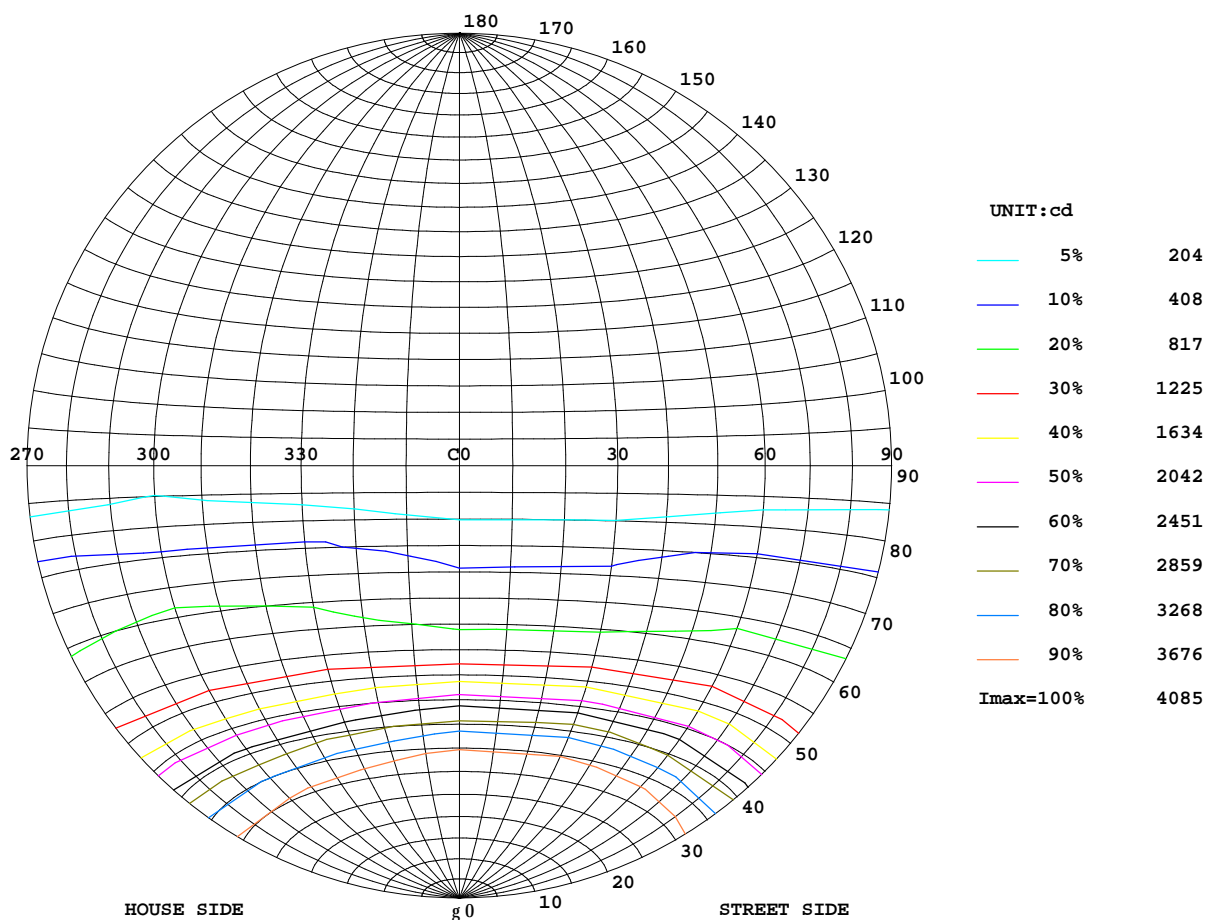
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月01日

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

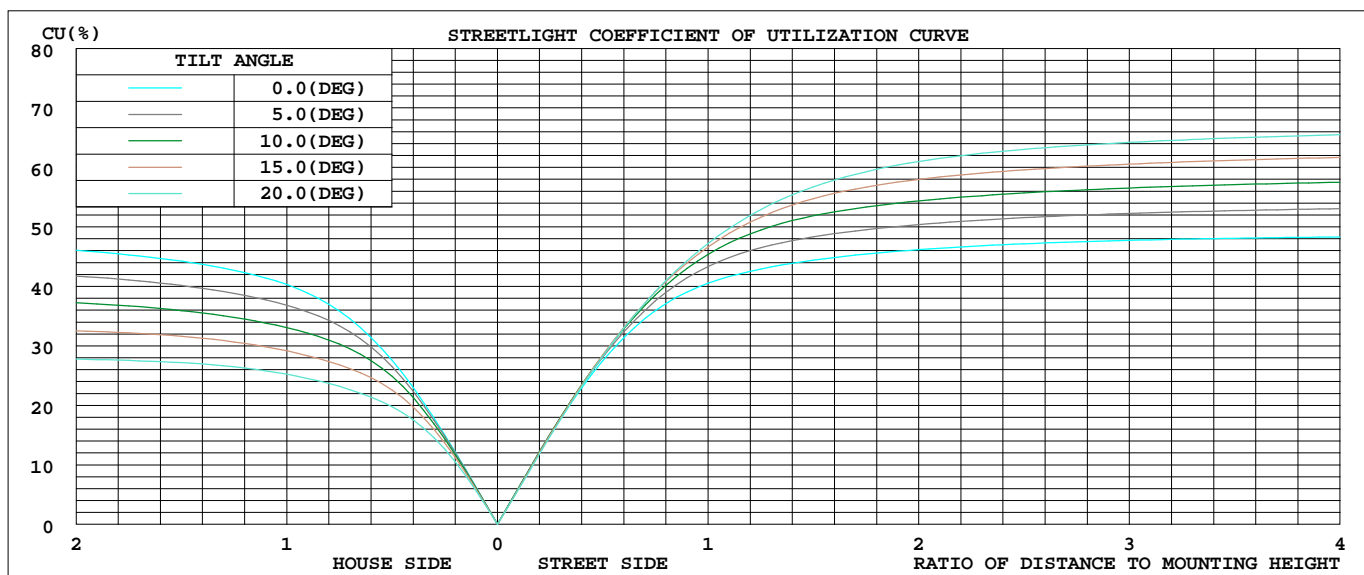
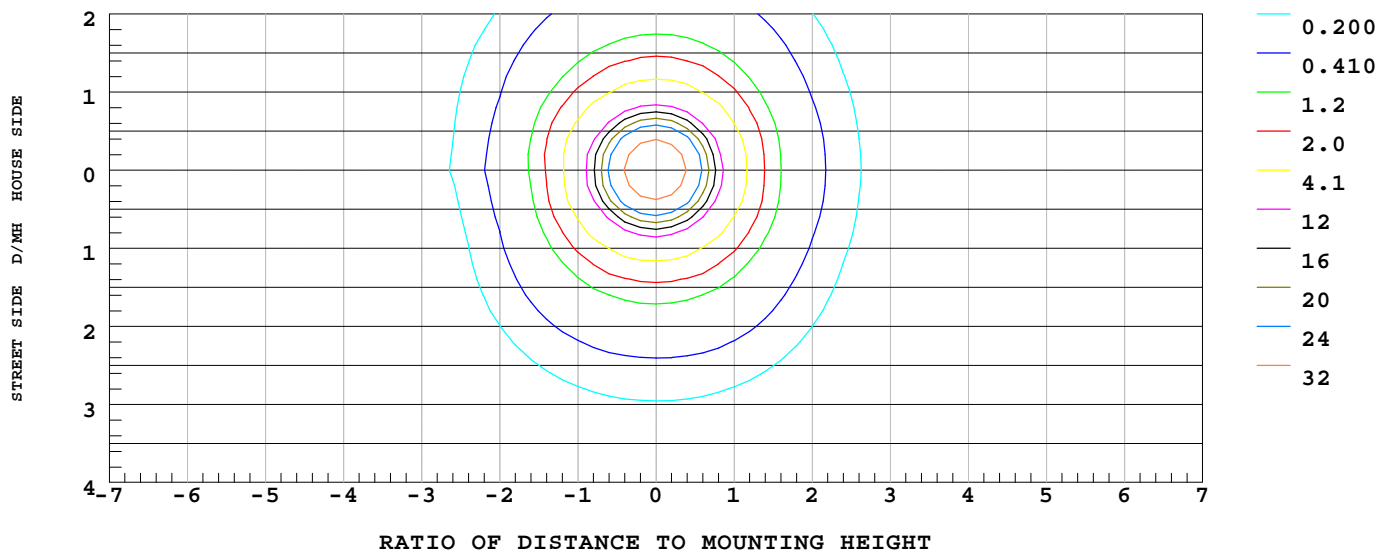
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 40.50 lx



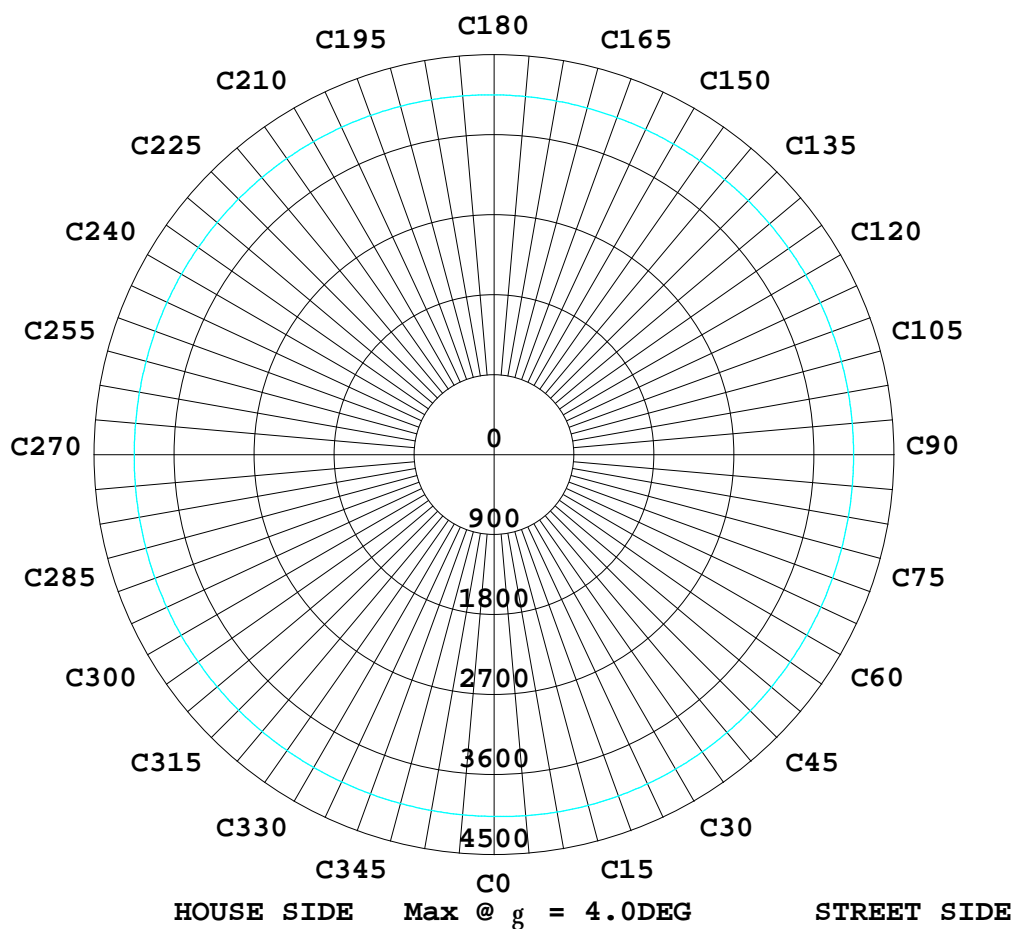
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月01日

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: