

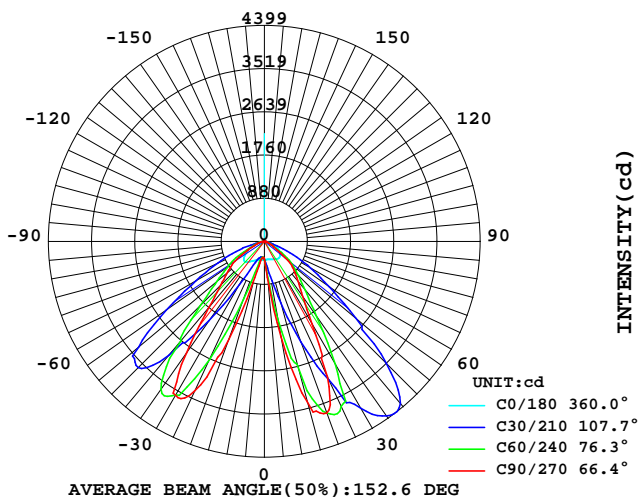
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

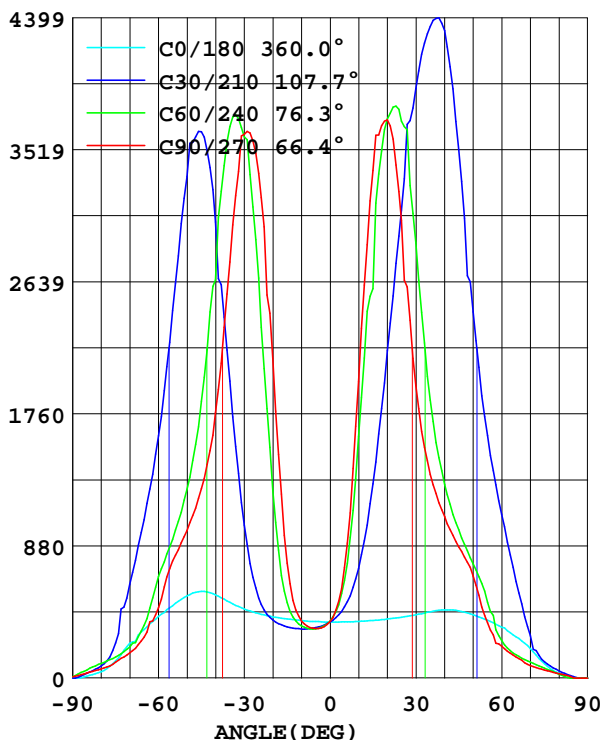
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	4399	S/MH(C0/180)	2.00
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	2.25
NOMINAL POWER(W)	40	TOTAL FLUX(lm)	5977.1	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	151.9	Current(A)	0.190
NOMINAL FLUX(lm)	5977.1	h up(%)	0.0	Power(W)	39.34
LAMPS QUANTITY	1	h down(%)	100.0	Power Factor(PF)	0.945
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	5499.6	EEI	0.097

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



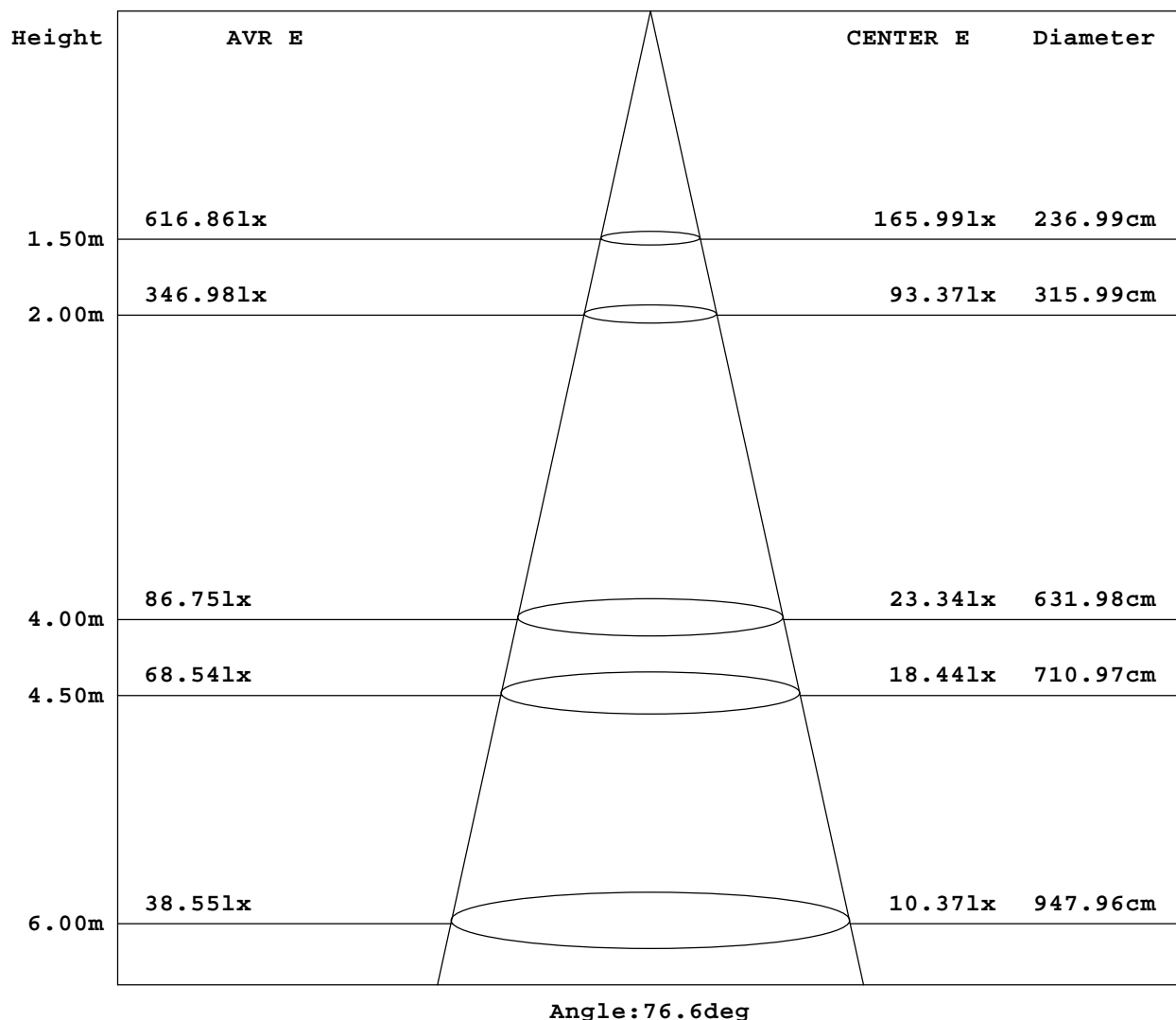
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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: 1150*65mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年08月09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: 1150*65mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	zone	tStal
5.0	376.2	331.3	328.4	331.2	373.5	562.2	737.3	575.3	0- 5	9.827	9.827
10.0	382.4	336.5	379.0	340.8	376.5	1169	1972	1224	5- 10	43.24	53.07
15.0	392.9	421.1	764.3	445.2	382.3	1943	3380	2020	10- 15	120.8	173.9
20.0	406.7	818.8	2128	919.4	392.9	2952	3719	3030	15- 20	257.5	431.4
25.0	428.8	1598	3362	1786	404.9	3414	3047	3480	20- 25	440.4	871.9
30.0	459.5	2311	3622	2560	420.9	3413	1947	3309	25- 30	615.0	1487
35.0	504.6	2826	2770	3101	441.1	3095	1355	2939	30- 35	722.4	2209
40.0	554.3	2844	1769	3135	452.3	2800	1076	2572	35- 40	774.8	2984
45.0	575.7	2741	1261	2819	447.5	2254	873.6	1970	40- 45	766.2	3751
50.0	546.5	2299	981.8	2252	421.2	1600	678.3	1372	45- 50	680.9	4432
55.0	480.5	1684	780.1	1579	384.0	1060	368.3	924.5	50- 55	544.7	4976
60.0	410.7	1144	468.5	1036	338.3	670.6	211.7	607.0	55- 60	395.9	5372
65.0	323.0	702.1	271.8	657.8	274.8	398.8	139.7	372.0	60- 65	272.8	5645
70.0	230.3	414.6	166.4	373.2	194.2	192.4	82.95	149.8	65- 70	171.3	5816
75.0	113.9	187.3	106.0	153.5	94.81	86.70	52.94	85.55	70- 75	93.00	5909
80.0	42.30	88.34	60.69	81.38	33.34	36.85	28.26	38.61	75- 80	43.40	5953
85.0	11.08	41.39	32.86	34.79	5.154	4.573	1.887	5.178	80- 85	19.44	5972
90.0	0	4.634	6.848	3.242	0	0	0	0	85- 90	4.695	5977
95.0	0	0	0	0	0	0	0	0	90- 95	0.123	5977
100.0	0	0	0	0	0	0	0	0	95-100	0	5977
105.0	0	0	0	0	0	0	0	0	100-105	0	5977
110.0	0	0	0	0	0	0	0	0	105-110	0	5977
115.0	0	0	0	0	0	0	0	0	110-115	0	5977
120.0	0	0	0	0	0	0	0	0	115-120	0	5977
125.0	0	0	0	0	0	0	0	0	120-125	0	5977
130.0	0	0	0	0	0	0	0	0	125-130	0	5977
135.0	0	0	0	0	0	0	0	0	130-135	0	5977
140.0	0	0	0	0	0	0	0	0	135-140	0	5977
145.0	0	0	0	0	0	0	0	0	140-145	0	5977
150.0	0	0	0	0	0	0	0	0	145-150	0	5977
155.0	0	0	0	0	0	0	0	0	150-155	0	5977
160.0	0	0	0	0	0	0	0	0	155-160	0	5977
165.0	0	0	0	0	0	0	0	0	160-165	0	5977
170.0	0	0	0	0	0	0	0	0	165-170	0	5977
175.0	0	0	0	0	0	0	0	0	170-175	0	5977
180.0	0	0	0	0	0	0	0	0	175-180	0	5977
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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

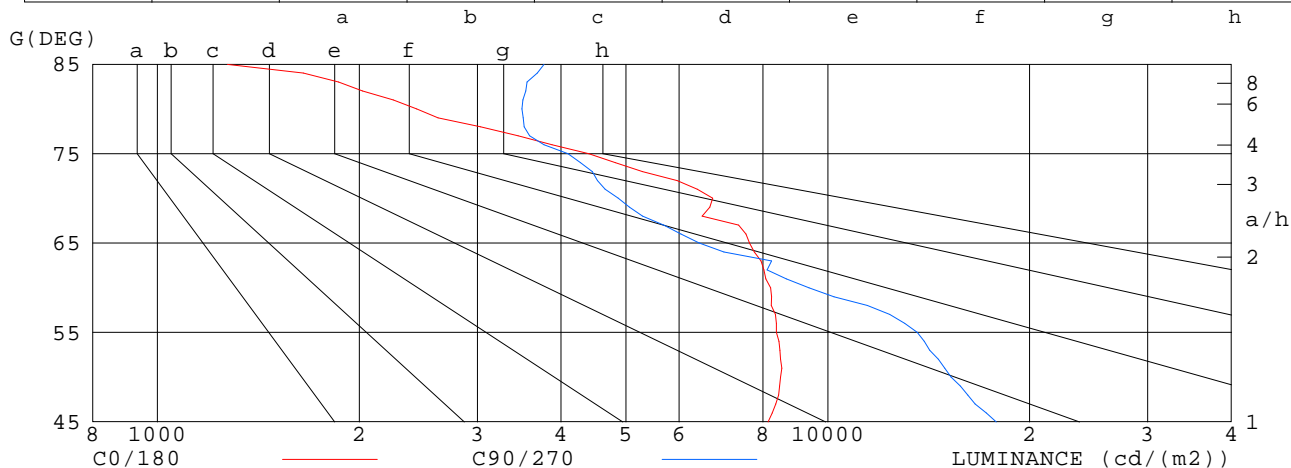
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*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	1272	3771
80	2436	3495
75	4402	4098
70	6735	4867
65	7643	6432
60	8215	9372
55	8378	13602
50	8502	15275
45	8143	17837

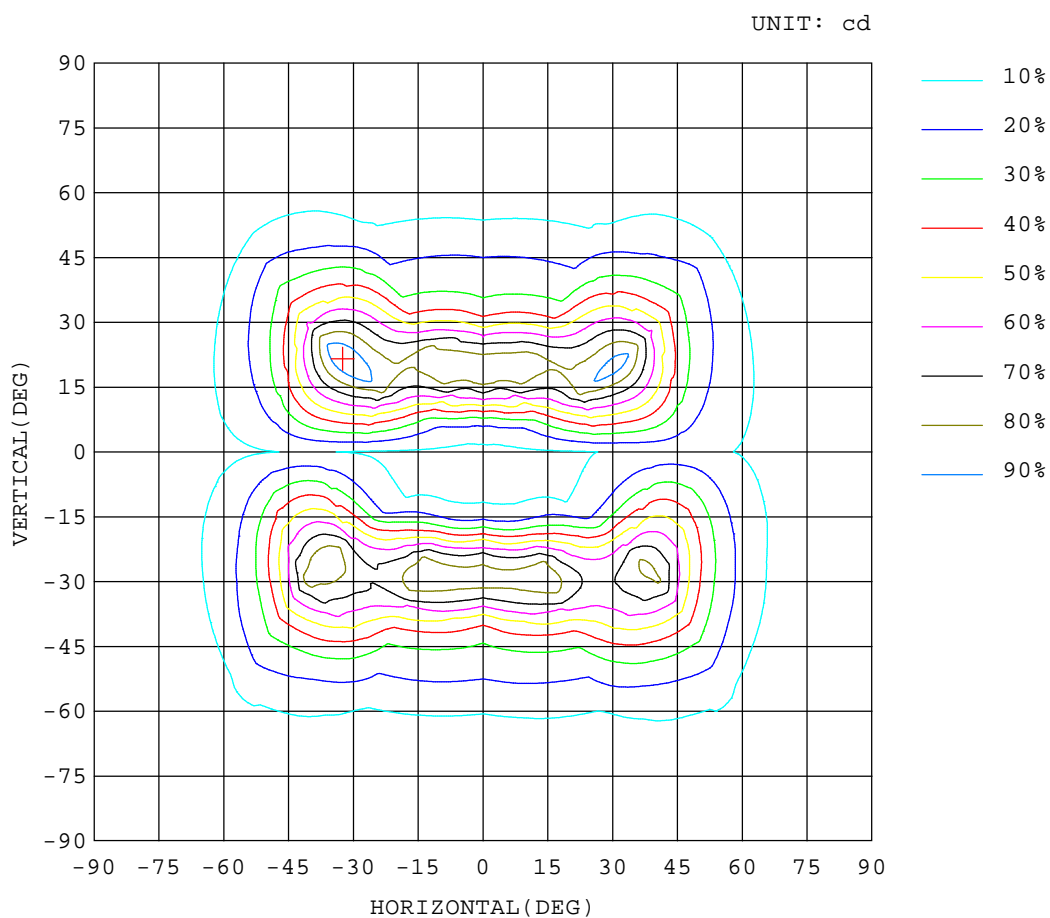
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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: 1150*65mm	SERIAL No.:



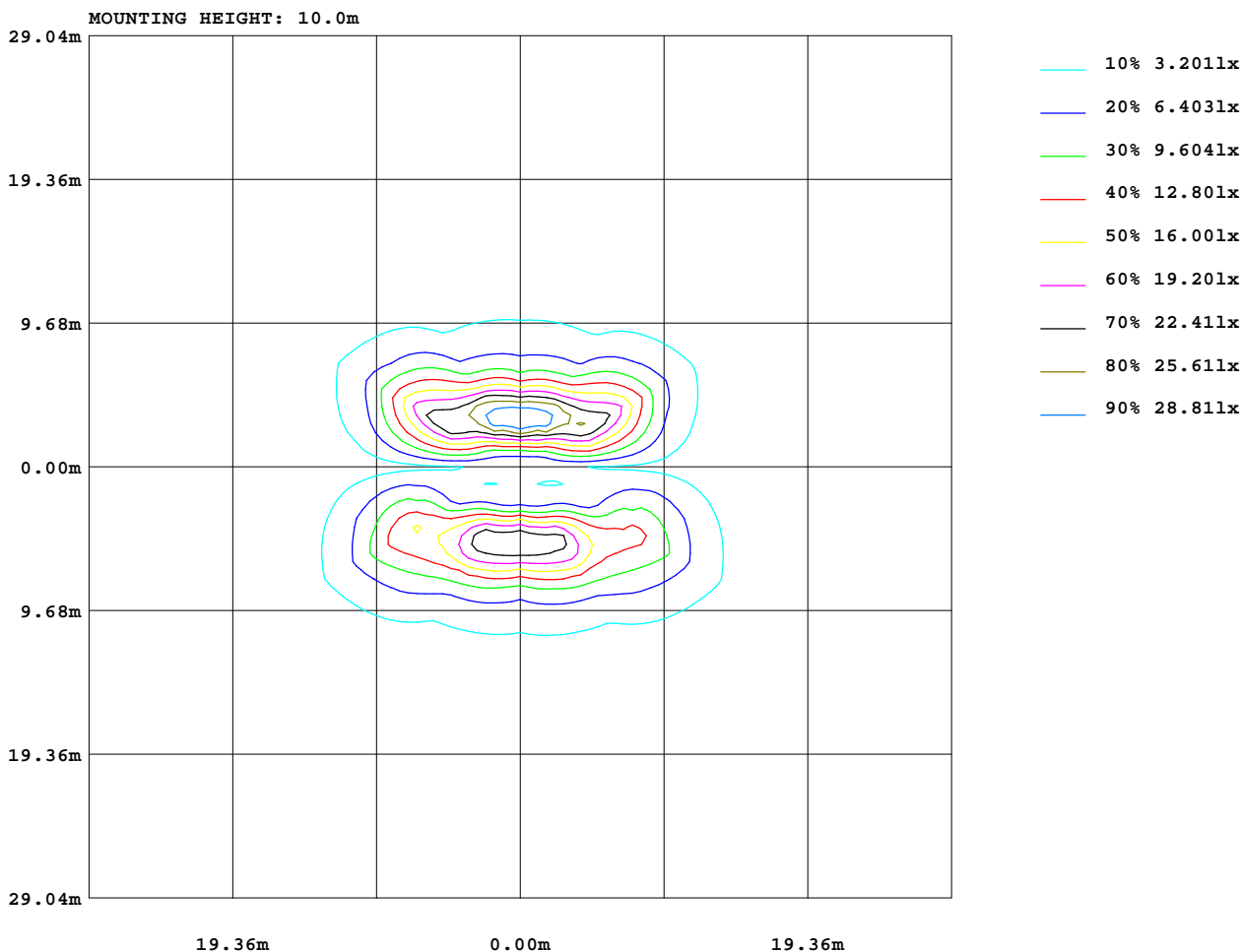
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09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: 1150*65mm	SERIAL No.:

VERTICAL (DEG)	AREA FLUX DIAGRAM																	UNIT:lm		Φ t	Φ a
	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90		
	0.00	0.00	0.01	0.04	0.07	0.06	0.09	0.16	0.23	0.24	0.18	0.11	0.08	0.07	0.05	0.02	0.00	0.00	1.40	0.00	
	0.00	0.03	0.23	0.58	0.93	1.23	1.45	1.64	1.67	1.68	1.69	1.52	1.29	0.96	0.58	0.24	0.05	0.00	15.8	0.00	
	0.00	0.13	0.64	1.64	2.96	3.97	3.63	4.11	4.35	4.34	4.11	3.64	3.74	2.73	1.58	0.66	0.16	0.01	42.4	0.00	
	0.01	0.25	1.21	4.25	9.30	11.3	9.89	11.5	12.3	12.2	11.2	9.40	10.5	8.44	3.70	1.24	0.29	0.02	117	56.3	
	0.02	0.39	2.17	9.46	20.3	27.3	26.1	25.4	27.0	26.7	24.7	24.2	23.9	18.1	8.64	2.11	0.44	0.03	268	258	
	0.03	0.54	3.45	13.4	34.5	55.5	55.2	44.6	46.0	44.6	41.9	50.3	47.8	29.4	12.5	3.35	0.61	0.04	484	477	
	0.03	0.69	4.32	14.8	42.5	90.3	91.8	91.1	94.3	92.3	86.0	87.3	80.5	36.8	13.9	4.36	0.79	0.05	833	825	
	0.04	0.81	4.47	13.4	37.4	76.3	94.2	88.3	94.1	94.3	90.5	94.8	72.3	33.9	13.1	4.71	0.94	0.05	814	806	
	0.04	0.86	3.97	9.35	20.3	33.7	38.6	31.3	27.0	27.9	34.0	40.5	33.9	20.8	10.3	4.45	1.02	0.06	339	322	
	0.04	0.91	4.30	10.6	21.6	23.8	15.1	11.1	10.4	10.4	11.0	13.8	21.5	22.7	12.5	4.95	1.09	0.06	196	137	
	0.04	0.94	5.45	16.9	43.5	56.1	37.8	32.9	27.8	26.5	29.4	29.4	46.6	42.9	19.0	6.12	1.14	0.06	423	411	
-30	0.04	0.84	5.88	19.2	56.2	87.8	80.6	94.5	94.8	92.5	89.8	71.8	77.7	56.6	21.5	6.49	1.05	0.05	858	853	
-40	0.03	0.65	5.31	18.0	48.1	72.6	74.3	85.1	87.5	88.0	88.0	73.5	71.2	51.1	19.9	5.92	0.83	0.05	791	785	
-50	0.02	0.47	3.74	14.5	28.5	40.2	40.0	41.2	41.9	42.8	43.4	41.7	42.7	31.4	15.7	4.43	0.58	0.04	434	427	
-60	0.01	0.32	1.82	8.41	15.2	19.0	19.8	22.4	23.4	23.7	23.1	21.0	20.7	16.4	9.51	2.40	0.39	0.03	228	220	
-70	0.01	0.19	0.87	2.71	5.95	7.50	7.19	8.53	9.04	9.22	8.99	7.71	8.18	6.92	3.53	1.04	0.25	0.01	87.8	12.7	
-80	0.00	0.07	0.38	1.02	1.90	2.81	3.31	3.46	3.38	3.41	3.53	3.40	3.02	2.13	1.18	0.49	0.11	0.00	33.6	0.00	
-90	0.00	0.00	0.05	0.22	0.54	0.94	1.19	1.18	1.08	1.10	1.24	1.28	1.05	0.65	0.31	0.10	0.02	0.00	10.9	0.00	
HORIZONTAL (DEG)																					
Φ t	0.37	8.09	48.3	159	390	611	601	599	607	603	593	576	567	383	168	53.1	9.77	0.55	5977		
Φ a	0.00	0.00	14.8	142	375	591	575	564	568	564	558	549	547	367	153	21.0	0.00	0.00		5500	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月09日

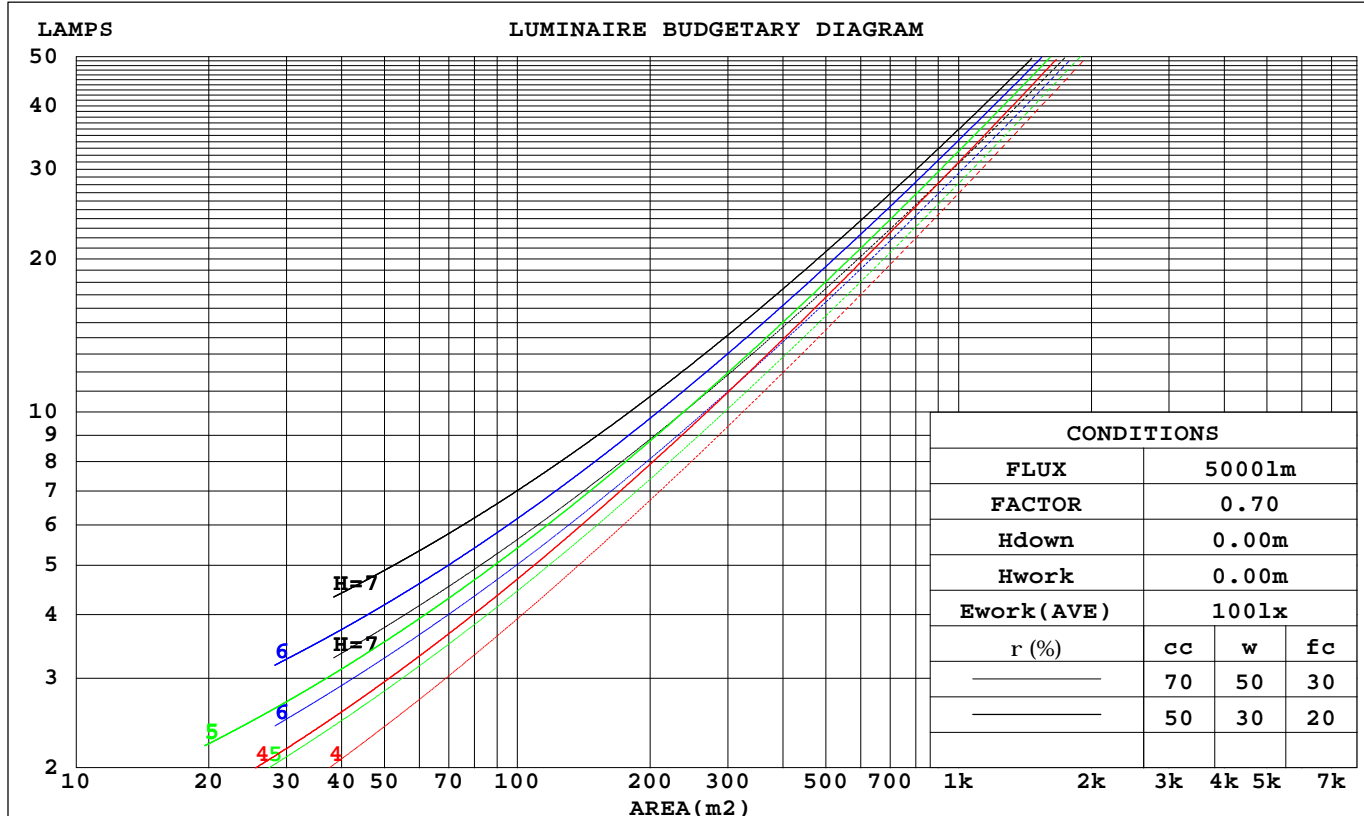
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME:								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1150*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09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: 1150*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	.266	.151	.048	.259	.148	.047	.246	.141	.045	.234	.135	.043	.223	.129	.042															
2.0	.260	.143	.044	.254	.140	.043	.243	.135	.042	.232	.130	.041	.222	.126	.040															
3.0	.248	.132	.040	.243	.130	.039	.232	.126	.038	.223	.122	.038	.214	.119	.037															
4.0	.234	.122	.036	.229	.120	.035	.220	.117	.035	.212	.114	.034	.204	.111	.034															
5.0	.220	.112	.033	.216	.111	.032	.208	.108	.032	.201	.106	.031	.194	.103	.031															
6.0	.207	.104	.030	.203	.103	.030	.196	.101	.029	.190	.099	.029	.183	.097	.029															
7.0	.195	.096	.027	.192	.095	.027	.185	.094	.027	.179	.092	.027	.174	.090	.026															
8.0	.184	.090	.025	.181	.089	.025	.175	.087	.025	.170	.086	.025	.164	.084	.025															
9.0	.173	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023															
10.0	.164	.079	.022	.162	.078	.022	.157	.077	.022	.152	.076	.022	.148	.075	.021															

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.053	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.061	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.077	.137	.098	.067	.094	.068	.047	.054	.040	.028	.018	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.126	.078	.042	.087	.055	.030	.050	.032	.018	.016	.010	.006	
6.0	.140	.082	.040	.120	.071	.035	.083	.050	.025	.048	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.115	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月09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: 1150*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	25.6	27.1	25.9	27.3	27.5	23.0	24.5	23.3	24.7	24.9
	3H	25.9	27.3	26.2	27.5	27.7	23.0	24.4	23.3	24.6	24.9
	4H	25.9	27.2	26.2	27.4	27.7	23.0	24.3	23.4	24.6	24.8
	6H	25.8	27.0	26.2	27.3	27.6	23.0	24.2	23.3	24.5	24.7
	8H	25.8	26.9	26.1	27.2	27.5	23.0	24.1	23.3	24.4	24.7
	12H	25.7	26.8	26.1	27.1	27.4	23.0	24.1	23.3	24.4	24.7
4H	2H	25.9	27.1	26.2	27.4	27.6	23.9	25.1	24.2	25.4	25.6
	3H	26.5	27.6	26.8	27.9	28.2	24.0	25.1	24.3	25.4	25.7
	4H	26.5	27.5	26.9	27.8	28.2	24.0	25.0	24.4	25.3	25.6
	6H	26.5	27.3	26.9	27.7	28.1	24.0	24.9	24.4	25.2	25.6
	8H	26.5	27.3	26.9	27.6	28.0	24.0	24.8	24.4	25.2	25.6
	12H	26.4	27.1	26.8	27.5	27.9	24.0	24.8	24.5	25.2	25.6
8H	4H	26.5	27.3	26.9	27.6	28.0	24.1	24.9	24.5	25.3	25.7
	6H	26.5	27.1	26.9	27.5	27.9	24.2	24.9	24.7	25.3	25.7
	8H	26.4	27.0	26.9	27.4	27.9	24.3	24.8	24.7	25.3	25.7
	12H	26.4	26.9	26.9	27.4	27.8	24.3	24.8	24.8	25.3	25.7
12H	4H	26.4	27.2	26.9	27.6	28.0	24.1	24.8	24.5	25.2	25.6
	6H	26.4	27.0	26.9	27.4	27.9	24.2	24.8	24.7	25.2	25.7
	8H	26.4	26.9	26.9	27.4	27.8	24.3	24.8	24.8	25.2	25.7
Variations with the observer position at spacings:											
S = 1.0H	+ 1.3 / - 0.7					+ 1.2 / - 1.6					
1.5H	+ 2.2 / - 4.3					+ 1.0 / - 1.2					
2.0H	+ 2.7 / - 6.2					+ 2.1 / - 2.5					

CIE Pub.117 Corrected 5977 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.2)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月09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: 1150*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) $k(RI) \times RCR = 5$									
$k = 0.60$	60	48	42	59	48	42	58	48	41	35
0.80	71	60	53	70	59	53	68	59	52	46
1.00	80	70	63	79	69	63	77	70	62	56
1.25	87	78	72	86	77	71	83	76	70	64
1.50	92	83	77	91	83	77	88	81	76	69
2.00	99	91	86	97	90	85	94	88	83	76
2.50	102	95	90	100	94	89	96	91	87	80
3.00	105	99	94	103	98	93	99	95	91	83
4.00	108	103	99	106	102	98	102	98	95	87
5.00	110	106	103	108	104	101	103	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

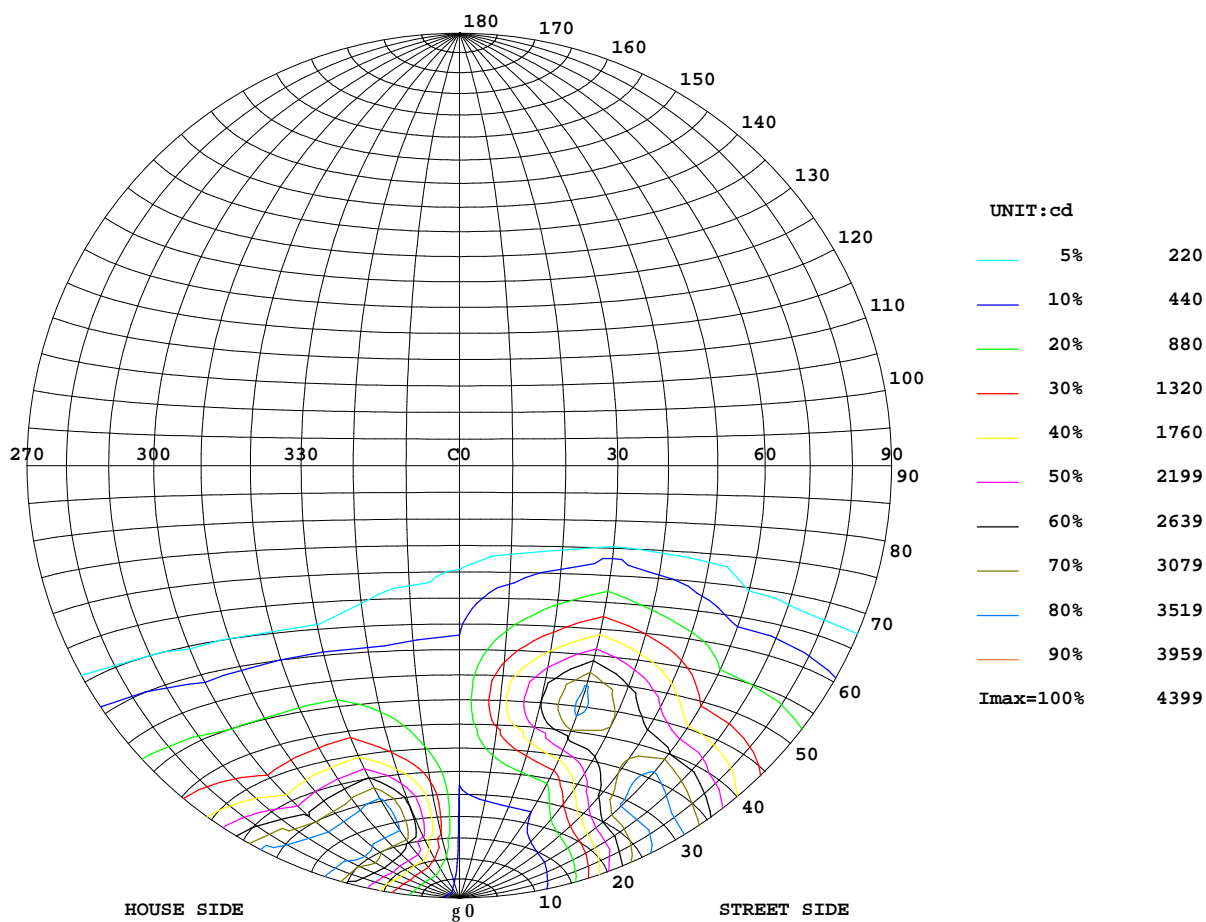
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月09日

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: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

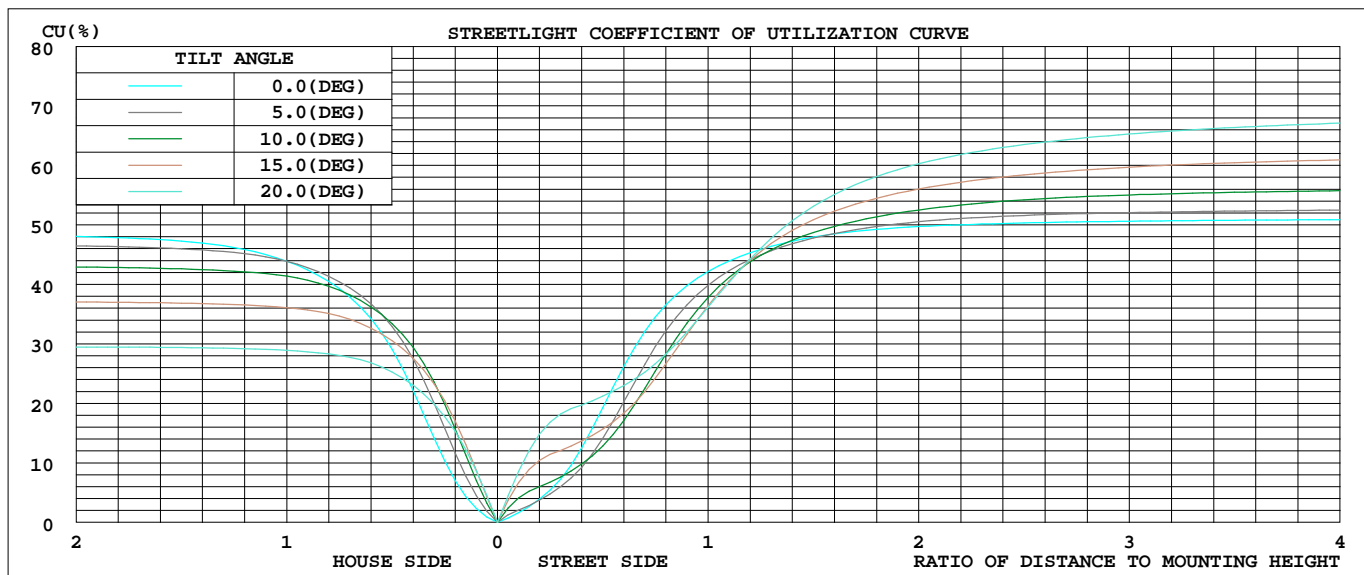
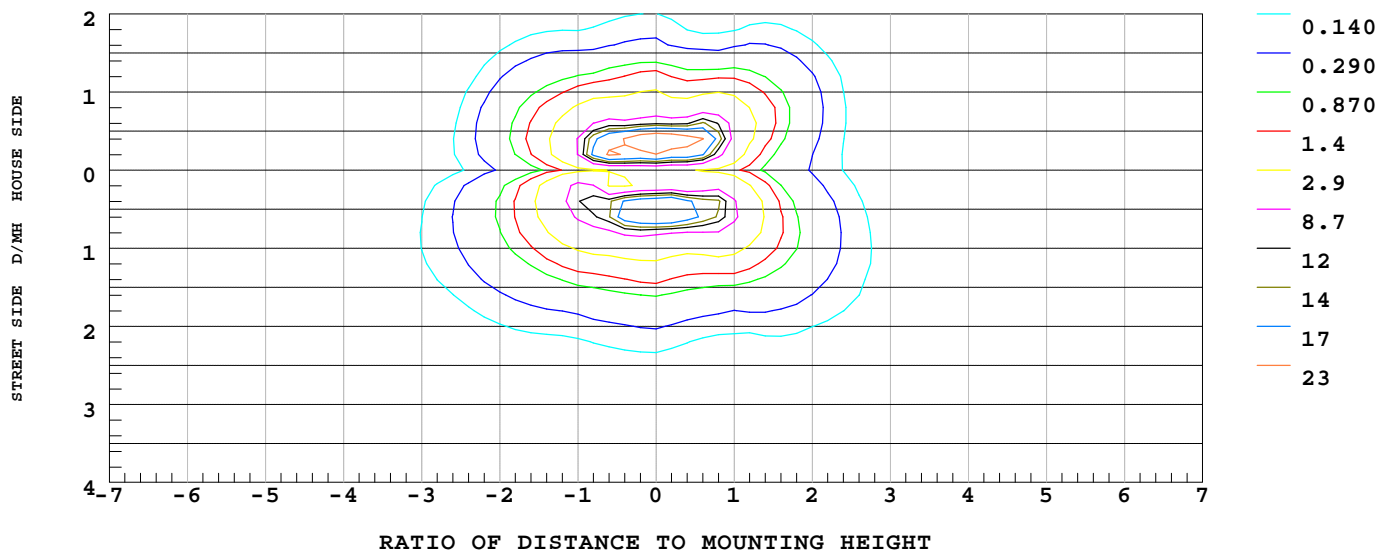
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 3.73 lx



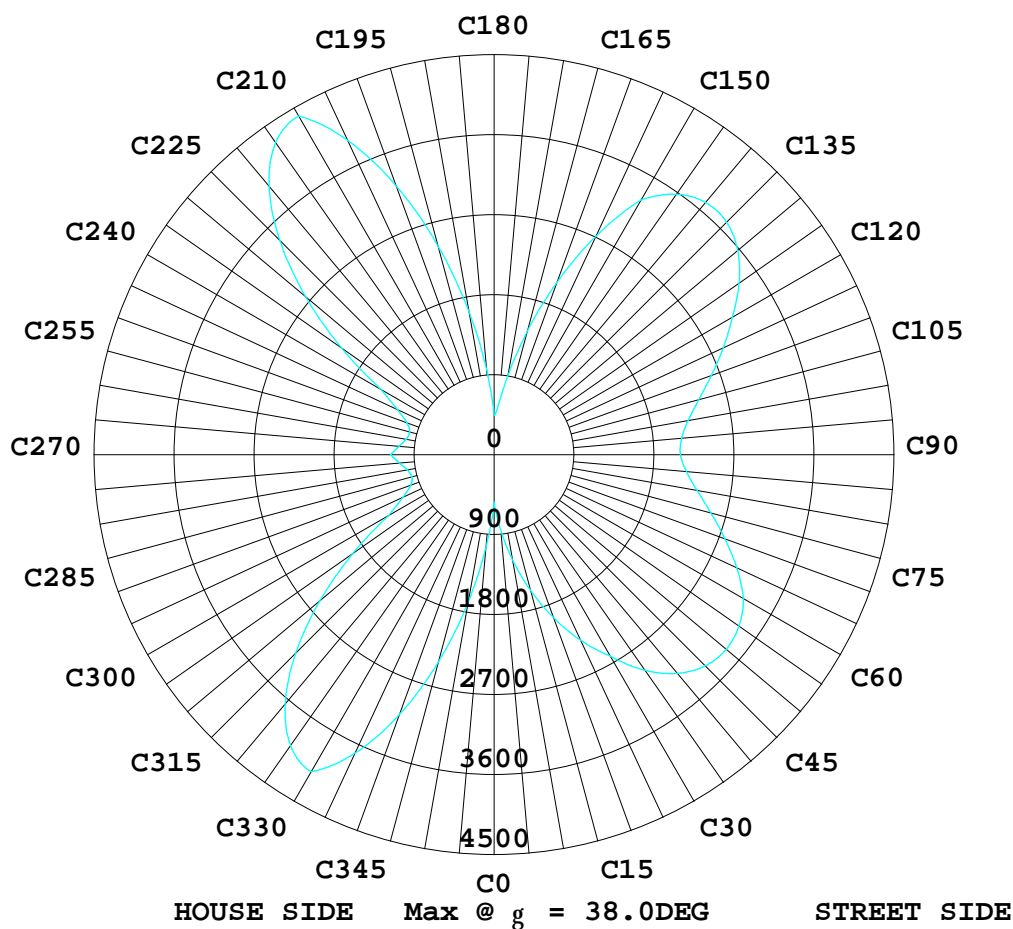
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月09日

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