

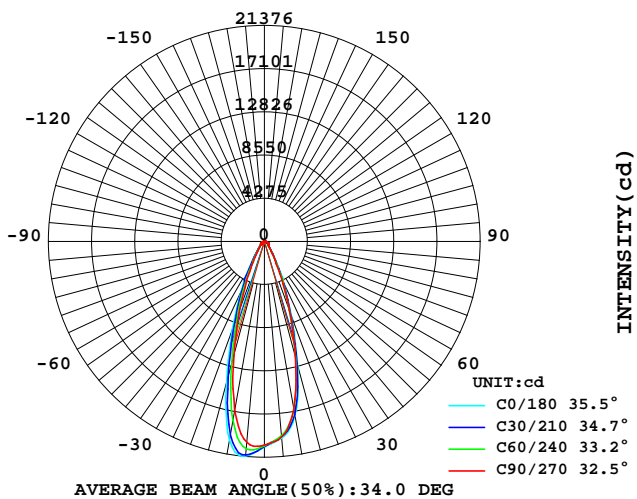
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

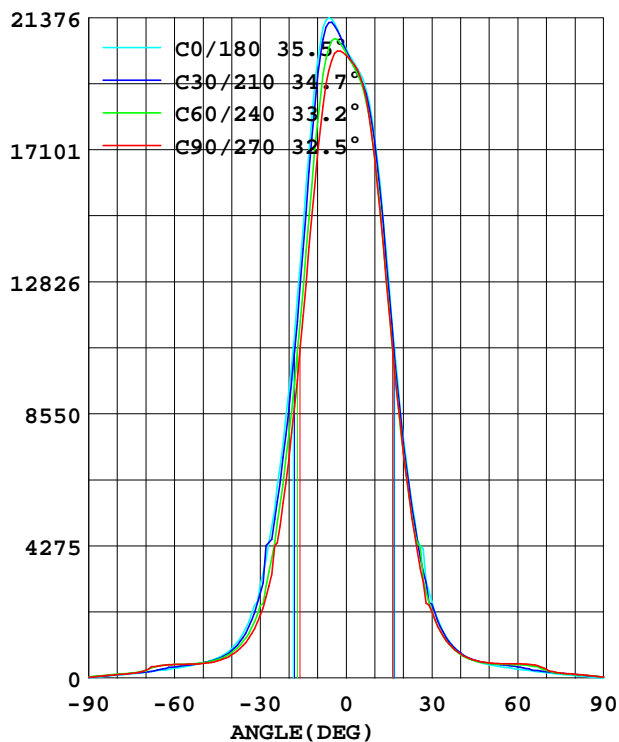
MANUFACTURER:		
Address:		
NAME:	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	21376	S/MH(C0/180)	0.61
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.55
NOMINAL POWER(W)	60	TOTAL FLUX(lm)	9676.8	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	160.6	Current(A)	0.291
NOMINAL FLUX(lm)	9676.9	h up(%)	0.2	Power(W)	60.25
LAMPS QUANTITY	1	h down(%)	99.8	Power Factor(PF)	0.946
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	7519.5	EEI	0.109

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



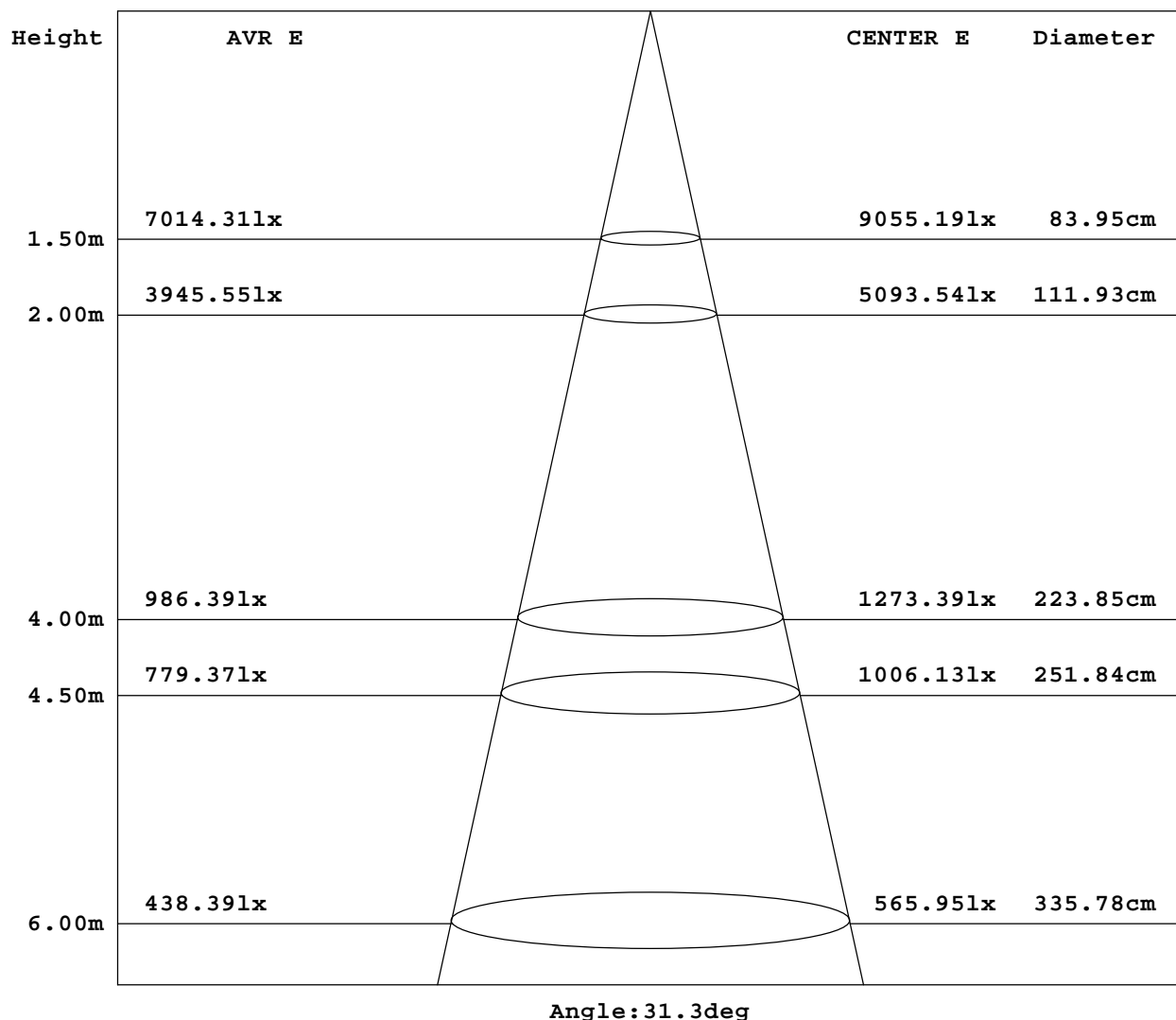
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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	2133	2093	1998	1960	1956	1936	1943	2021	0- 5	481.9	481.9
10.0	1996	1873	1698	1707	1747	1712	1686	1829	5- 10	1364	1846
15.0	1456	1323	1173	1186	1280	1226	1192	1321	10- 15	1804	3650
20.0	926.3	824.9	703.7	719.2	778.0	743.6	727.1	819.7	15- 20	1649	5299
25.0	546.8	475.0	427.0	411.4	446.3	439.8	407.7	472.8	20- 25	1255	6554
30.0	302.1	254.7	203.1	218.5	247.7	228.0	214.6	237.5	25- 30	844.0	7398
35.0	161.9	138.0	114.8	120.7	133.3	124.8	120.7	137.3	30- 35	521.6	7920
40.0	94.41	85.10	74.90	76.21	79.74	78.15	78.20	84.78	35- 40	343.3	8263
45.0	64.85	60.62	55.02	55.37	55.89	56.62	57.27	60.05	40- 45	252.2	8516
50.0	49.08	48.95	46.70	45.55	43.31	47.10	48.66	48.52	45- 50	210.1	8726
55.0	38.89	43.53	44.61	41.23	35.01	43.07	46.33	43.21	50- 55	193.7	8919
60.0	31.37	39.84	43.79	38.19	28.85	39.54	45.68	39.18	55- 60	186.7	9106
65.0	25.12	33.51	39.81	30.41	22.81	31.90	43.43	31.83	60- 65	174.0	9280
70.0	18.66	20.91	25.32	20.38	16.93	22.02	28.67	22.24	65- 70	139.6	9420
75.0	13.59	15.61	14.63	15.07	12.15	15.27	16.01	15.51	70- 75	93.32	9513
80.0	9.118	11.26	10.66	10.71	7.920	11.36	12.17	11.48	75- 80	68.49	9582
85.0	4.568	7.073	6.650	6.644	3.576	7.224	7.969	7.128	80- 85	47.53	9629
90.0	0.261	2.953	2.342	2.524	0	2.983	3.189	2.832	85- 90	24.07	9653
95.0	0	1.556	1.882	0.941	0	1.047	2.221	1.096	90- 95	8.502	9662
100.0	0	1.023	1.677	0.687	0	0.679	1.979	0.655	95-100	4.846	9667
105.0	0	0.748	1.447	0.584	0	0.528	1.592	0.449	100-105	3.907	9671
110.0	0	0.560	1.023	0.421	0	0.358	1.265	0.276	105-110	2.833	9673
115.0	0	0.421	0.636	0.294	0	0.304	0.903	0.179	110-115	1.945	9675
120.0	0	0.276	0.467	0.161	0	0.376	0.636	0.203	115-120	1.383	9677
125.0	0	0	0	0	0	0	0	0	120-125	0.123	9677
130.0	0	0	0	0	0	0	0	0	125-130	0	9677
135.0	0	0	0	0	0	0	0	0	130-135	0	9677
140.0	0	0	0	0	0	0	0	0	135-140	0	9677
145.0	0	0	0	0	0	0	0	0	140-145	0	9677
150.0	0	0	0	0	0	0	0	0	145-150	0	9677
155.0	0	0	0	0	0	0	0	0	150-155	0	9677
160.0	0	0	0	0	0	0	0	0	155-160	0	9677
165.0	0	0	0	0	0	0	0	0	160-165	0	9677
170.0	0	0	0	0	0	0	0	0	165-170	0	9677
175.0	0	0	0	0	0	0	0	0	170-175	0	9677
180.0	0	0	0	0	0	0	0	0	175-180	0	9677
DEG	LUMINOUS INTENSITY:×10cd									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:

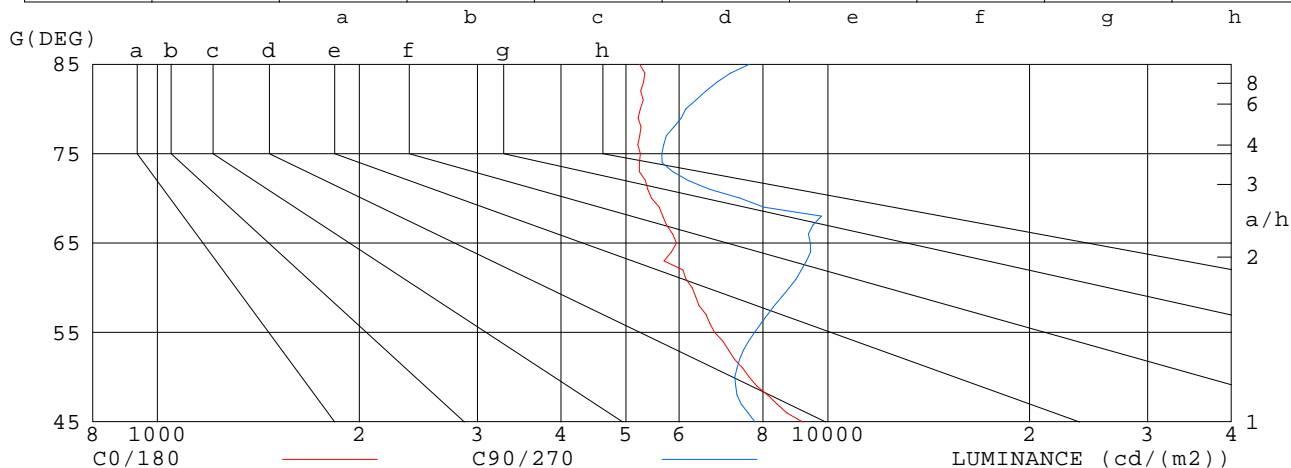
LUMINANCE LIMITATION CURVES

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	5242	7630
80	5251	6143
75	5253	5655
70	5457	7403
65	5946	9421
60	6274	8759
55	6781	7779
50	7636	7265
45	9171	7782

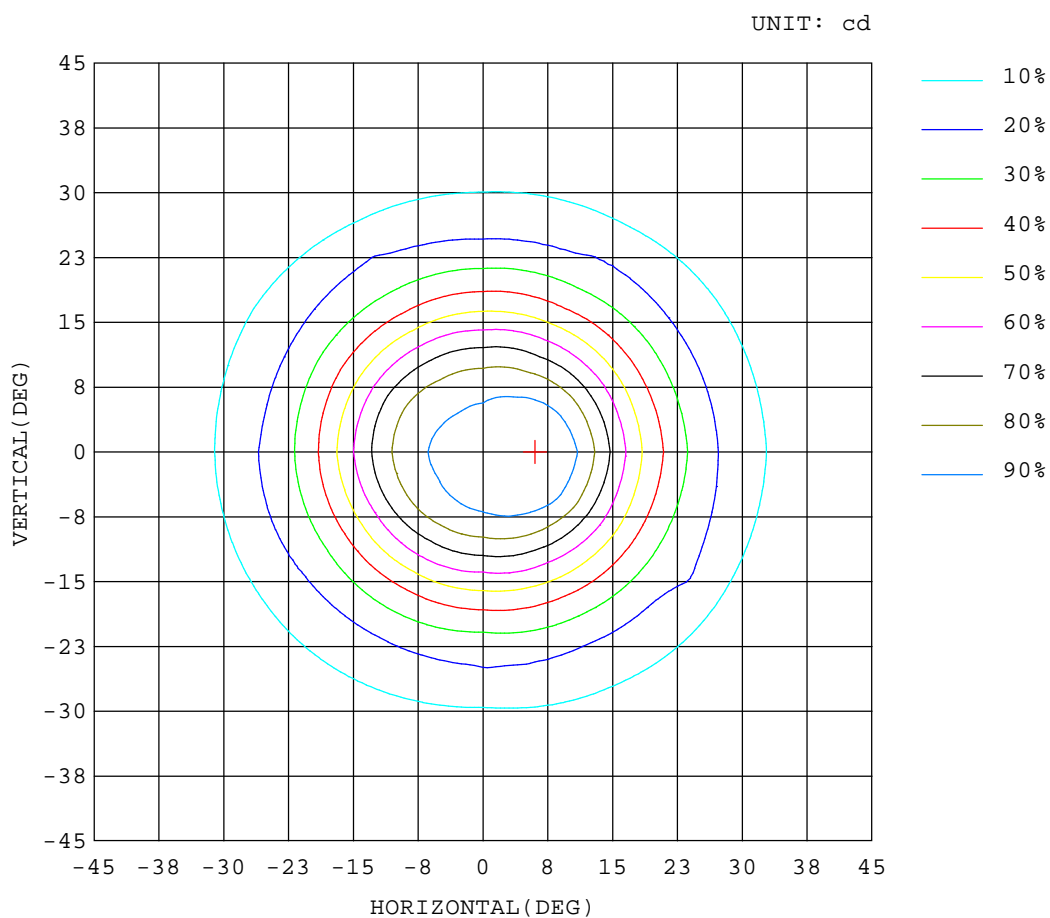
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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.:



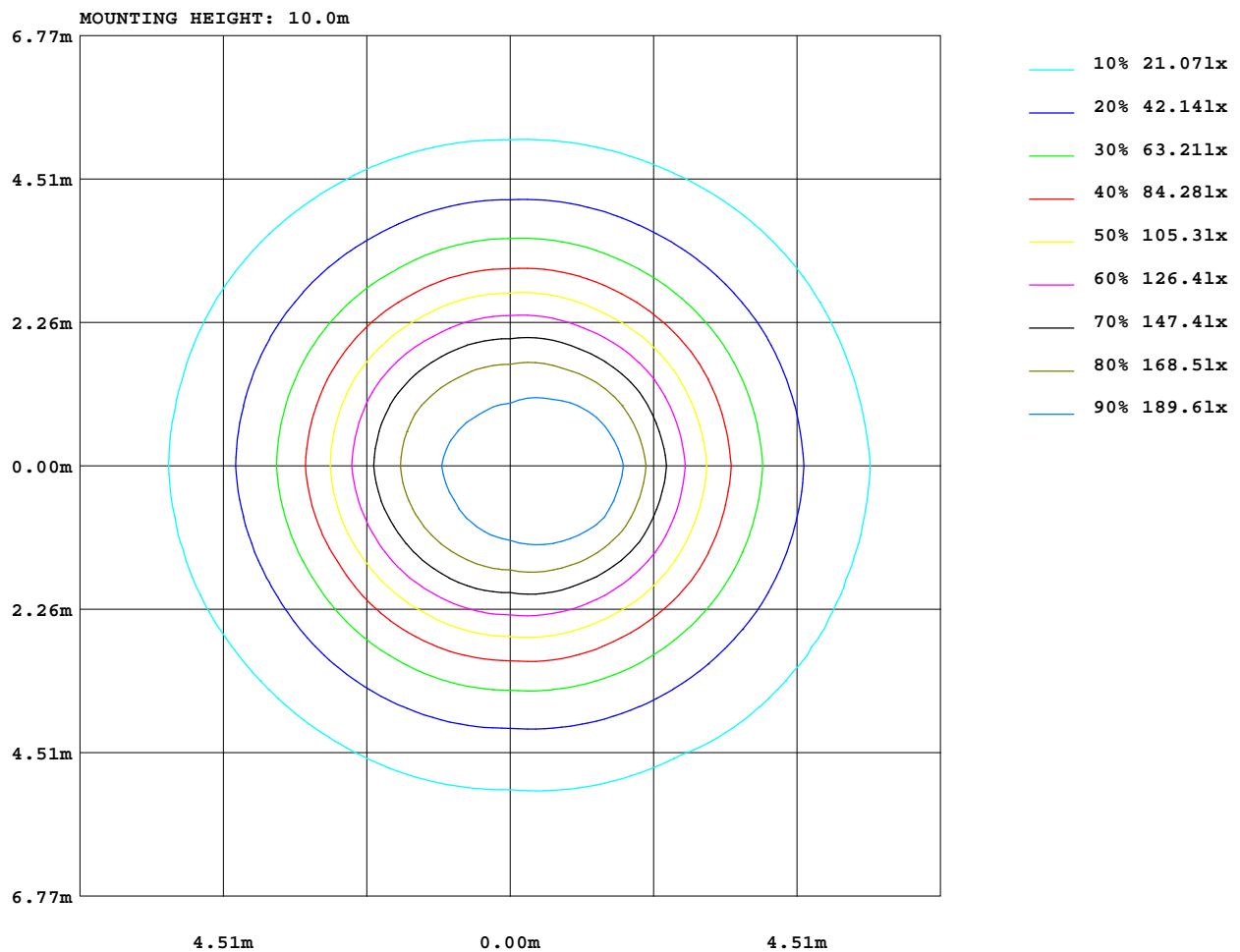
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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.:				

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	2.28	2.62	2.93	3.25	3.59	4.01	4.43	4.77	4.99	5.02	4.85	4.54	4.13	3.71	3.34	2.98	2.64	2.27	66.4	0.00		
45	2.41	2.79	3.22	3.77	4.44	5.23	6.10	6.84	7.29	7.35	7.01	6.33	5.48	4.68	3.97	3.37	2.87	2.43	85.6	0.00		
40	2.55	3.06	3.74	4.72	6.03	7.63	9.49	11.1	12.1	12.3	11.5	9.96	8.13	6.48	5.08	4.00	3.22	2.63	124	0.00		
35	2.72	3.45	4.57	6.32	8.89	12.2	16.1	20.0	22.0	22.2	20.6	17.1	13.2	9.72	6.94	5.00	3.73	2.88	198	106		
30	2.92	3.97	5.77	8.83	13.6	20.7	30.1	37.2	41.6	42.2	38.4	31.3	22.6	14.9	9.88	6.44	4.38	3.18	338	276		
25	3.16	4.59	7.30	12.3	20.5	33.5	47.3	61.4	70.7	71.8	64.5	51.3	36.9	23.3	13.8	8.32	5.18	3.51	540	490		
20	3.41	5.25	9.02	16.2	29.3	47.7	71.1	93.7	108	110	98.7	77.5	53.9	33.7	18.6	10.5	6.05	3.85	796	754		
15	3.61	5.84	10.5	20.5	36.8	62.0	95.8	124	137	141	133	106	70.7	43.2	23.7	12.4	6.85	4.15	1038	999		
10	3.72	6.19	11.5	23.4	41.5	71.6	111	139	149	154	153	125	82.5	49.6	27.2	13.8	7.39	4.33	1174	1138		
5	3.70	6.16	11.4	23.4	41.1	70.8	110	139	151	158	155	126	82.6	49.7	27.5	13.8	7.38	4.33	1181	1145		
0	3.56	5.73	10.3	20.2	36.0	60.1	93.1	123	139	144	136	107	71.0	43.3	24.7	12.5	6.82	4.13	1041	1002		
-5	3.33	5.10	8.69	15.7	28.7	45.7	68.8	92.0	107	110	99.3	77.9	54.2	34.7	19.6	10.4	6.01	3.83	791	749		
-10	3.06	4.42	6.95	11.6	19.8	31.9	46.0	59.9	69.0	70.7	64.3	51.6	37.0	25.0	14.1	8.27	5.13	3.49	533	483		
-15	2.80	3.78	5.48	8.40	13.0	19.4	27.7	35.6	40.3	41.2	38.0	30.8	22.9	15.3	9.87	6.37	4.33	3.15	329	267		
-20	2.56	3.28	4.38	6.11	8.64	12.0	15.5	19.0	21.4	21.8	20.2	16.9	13.3	9.80	6.95	4.97	3.69	2.86	194	98.2		
-25	2.37	2.91	3.62	4.62	5.96	7.60	9.33	10.8	11.6	11.8	11.2	9.97	8.26	6.56	5.12	4.01	3.21	2.62	122	0.00		
-30	2.23	2.65	3.12	3.71	4.43	5.24	6.03	6.67	7.02	7.10	6.90	6.34	5.59	4.78	4.03	3.39	2.88	2.43	84.6	0.00		
-35	2.10	2.48	2.84	3.20	3.60	4.01	4.38	4.67	4.82	4.86	4.79	4.55	4.21	3.81	3.40	3.02	2.65	2.28	65.7	0.00		
-40																						
-45																						
-45 -40 -35 -30 -25 -20 -15 -10 HORIZONTAL (DEG) 10 15 20 25 30 35 40 45																						
Φ t	52.5	74.3	116	197	326	522	773	990	1104	1135	1067	859	597	383	228	134	84.4	58.4	9677			
Φ a	0.00	0.00	6.49	116	260	464	719	939	1055	1087	1017	806	540	320	152	27.3	0.00	0.00		7519		

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

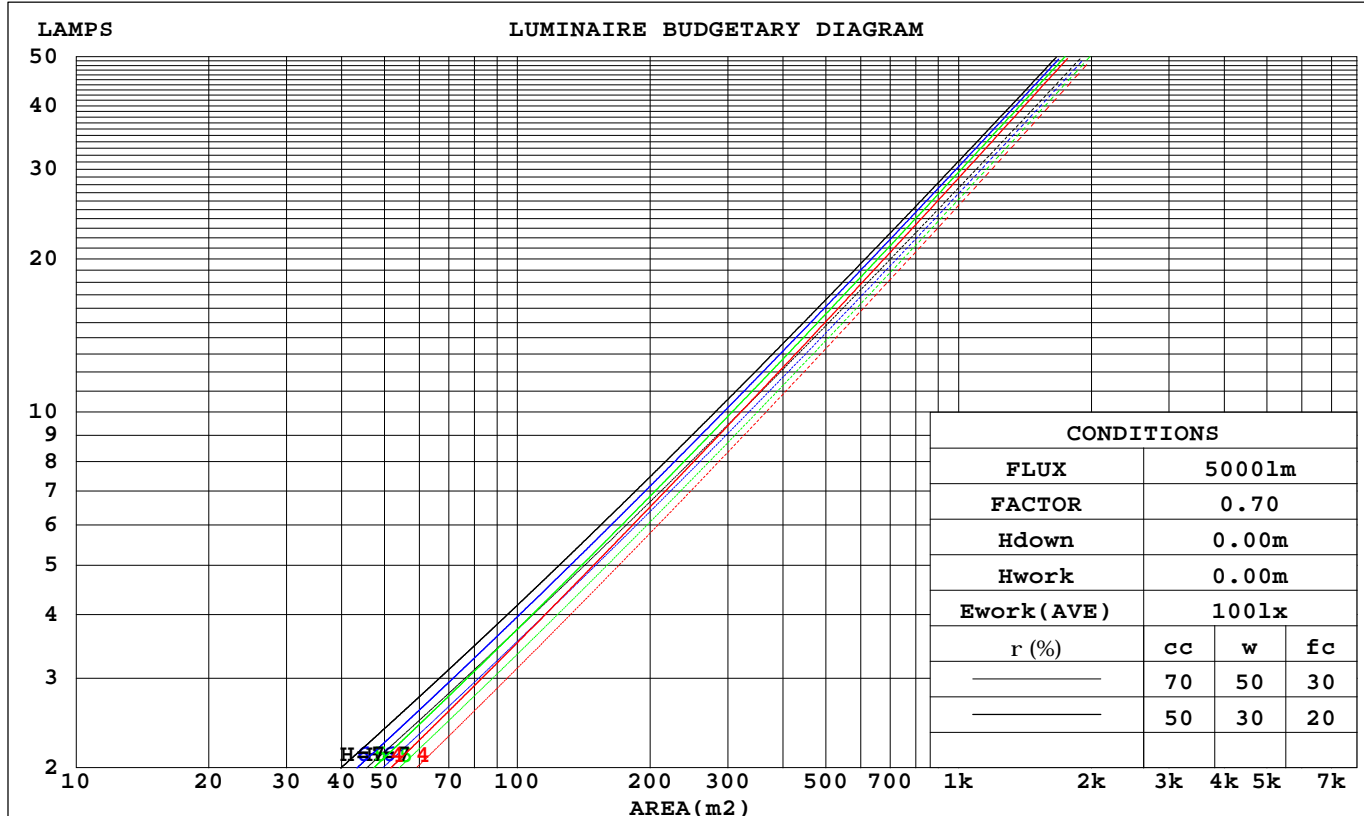
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

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 fc	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	.190	.108	.034	.183	.104	.033	.170	.098	.031	.159	.091	.029	.148	.086	.028															
2.0	.177	.097	.030	.171	.094	.029	.160	.089	.028	.151	.084	.026	.141	.080	.025															
3.0	.165	.088	.026	.160	.086	.026	.151	.082	.025	.142	.078	.024	.134	.074	.023															
4.0	.154	.080	.024	.150	.078	.023	.142	.075	.022	.134	.072	.022	.128	.069	.021															
5.0	.144	.074	.021	.141	.072	.021	.134	.070	.021	.127	.067	.020	.121	.065	.020															
6.0	.136	.068	.019	.133	.067	.019	.127	.065	.019	.121	.063	.018	.116	.061	.018															
7.0	.128	.063	.018	.126	.063	.018	.120	.061	.018	.115	.059	.017	.111	.057	.017															
8.0	.122	.059	.017	.119	.059	.017	.114	.057	.016	.110	.056	.016	.106	.054	.016															
9.0	.116	.056	.016	.113	.055	.016	.109	.054	.015	.105	.053	.015	.102	.052	.015															
10.0	.110	.053	.015	.108	.052	.015	.104	.051	.014	.101	.050	.014	.098	.049	.014															

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	.192	.192	.192	.164	.164	.164	.112	.112	.112	.064	.064	.064	.021	.021	.021	
1.0	.174	.159	.146	.149	.137	.125	.102	.094	.087	.059	.054	.050	.019	.017	.016	
2.0	.159	.134	.114	.136	.116	.098	.093	.080	.069	.054	.047	.040	.017	.015	.013	
3.0	.146	.115	.091	.125	.100	.079	.086	.069	.055	.050	.040	.033	.016	.013	.011	
4.0	.135	.101	.074	.116	.087	.065	.080	.061	.046	.046	.036	.027	.015	.012	.009	
5.0	.126	.089	.062	.108	.077	.054	.074	.054	.038	.043	.032	.023	.014	.010	.007	
6.0	.118	.080	.052	.101	.069	.045	.070	.048	.032	.041	.028	.019	.013	.009	.006	
7.0	.111	.072	.045	.095	.062	.039	.066	.044	.028	.038	.026	.016	.012	.008	.005	
8.0	.104	.066	.039	.090	.057	.034	.062	.040	.024	.036	.024	.014	.012	.008	.005	
9.0	.099	.060	.034	.085	.052	.030	.059	.037	.021	.034	.022	.013	.011	.007	.004	
10.0	.094	.056	.030	.081	.048	.026	.056	.034	.019	.033	.020	.011	.011	.007	.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	15.7	16.6	15.9	16.8	17.0	16.3	17.2	16.5	17.4	17.5	
	3H	16.7	17.5	16.9	17.7	17.9	18.0	18.9	18.3	19.1	19.3
	4H	17.1	17.9	17.4	18.2	18.4	18.4	19.2	18.7	19.4	19.6
	6H	17.5	18.3	17.8	18.5	18.8	18.7	19.5	19.0	19.8	20.0
	8H	17.7	18.4	18.0	18.7	19.0	18.9	19.7	19.2	19.9	20.2
	12H	17.8	18.5	18.1	18.8	19.1	19.1	19.8	19.4	20.1	20.4
4H	2H	16.4	17.2	16.6	17.4	17.6	16.9	17.7	17.2	17.9	18.2
	3H	17.5	18.2	17.8	18.5	18.7	18.7	19.4	19.0	19.7	20.0
	4H	18.1	18.7	18.4	19.0	19.3	19.2	19.8	19.5	20.1	20.4
	6H	18.6	19.2	19.0	19.5	19.9	19.7	20.2	20.0	20.6	20.9
	8H	18.8	19.4	19.2	19.7	20.1	19.9	20.5	20.3	20.8	21.2
	12H	19.0	19.5	19.4	19.9	20.3	20.2	20.7	20.6	21.0	21.4
8H	4H	18.3	18.9	18.7	19.2	19.6	19.3	19.9	19.7	20.2	20.6
	6H	19.1	19.5	19.5	19.9	20.3	20.0	20.5	20.5	20.9	21.3
	8H	19.4	19.8	19.9	20.2	20.7	20.4	20.8	20.9	21.2	21.7
	12H	19.7	20.0	20.2	20.5	20.9	20.8	21.2	21.3	21.6	22.1
12H	4H	18.4	18.9	18.8	19.3	19.6	19.3	19.8	19.7	20.2	20.6
	6H	19.2	19.6	19.6	20.0	20.4	20.1	20.5	20.5	20.9	21.3
	8H	19.6	19.9	20.0	20.4	20.8	20.6	20.9	21.0	21.3	21.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.3 / - 0.4					+ 0.2 / - 0.3					
1.5H	+ 0.5 / - 0.3					+ 0.5 / - 0.4					
2.0H	+ 0.2 / - 0.6					+ 0.7 / - 0.6					

CIE Pub.117 Corrected 9677 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.9)

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) $k(RI) \times RCR = 5$									
$k = 0.60$	83	75	71	82	75	71	81	75	71	67
0.80	90	83	79	90	83	79	88	82	79	74
1.00	95	89	84	94	88	84	93	88	84	79
1.25	100	93	89	98	93	89	96	92	88	83
1.50	103	97	93	101	96	92	99	95	91	86
2.00	106	101	97	104	100	96	102	98	95	89
2.50	108	103	100	106	102	99	103	100	97	91
3.00	110	106	103	108	104	101	104	102	99	92
4.00	112	109	106	110	107	105	106	104	102	95
5.00	114	111	109	112	109	107	107	106	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

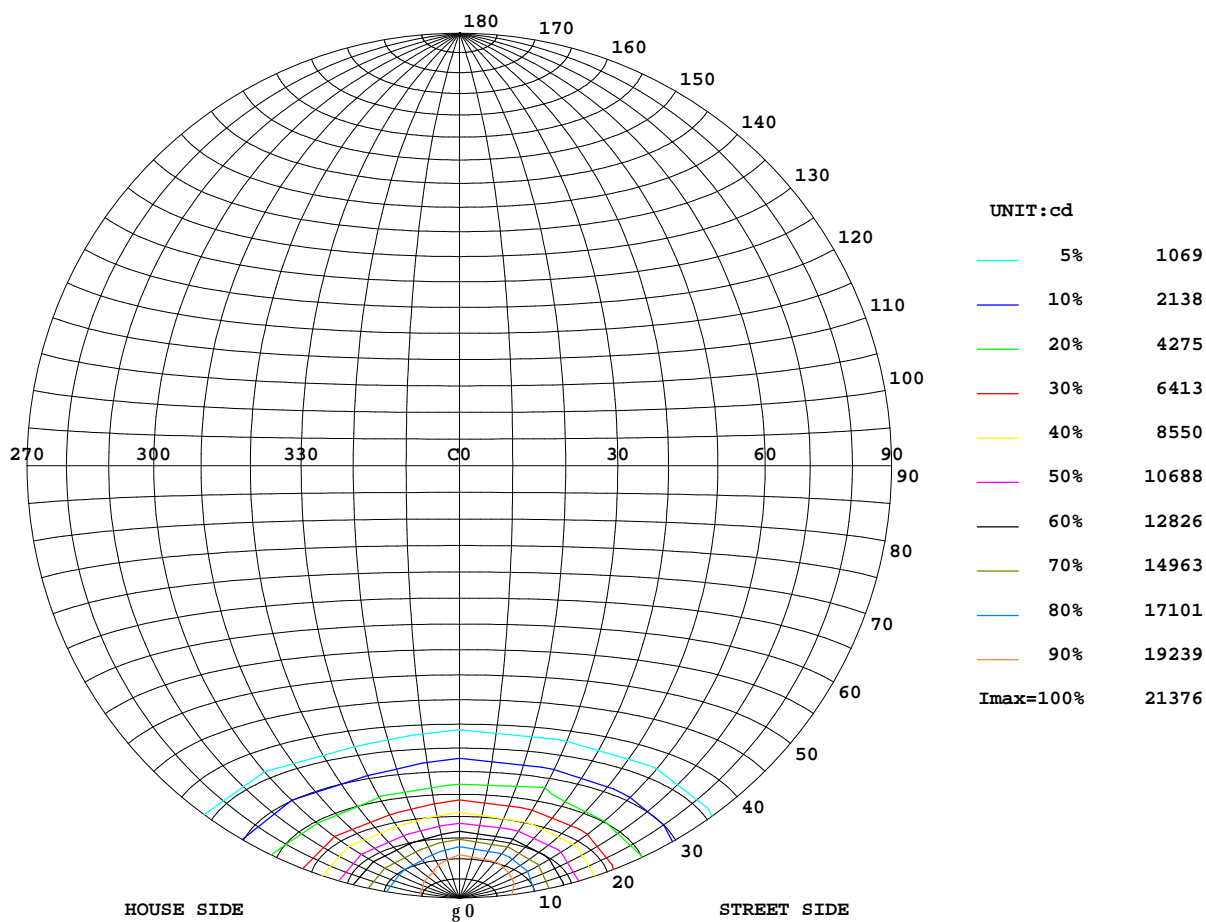
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年07月31日

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

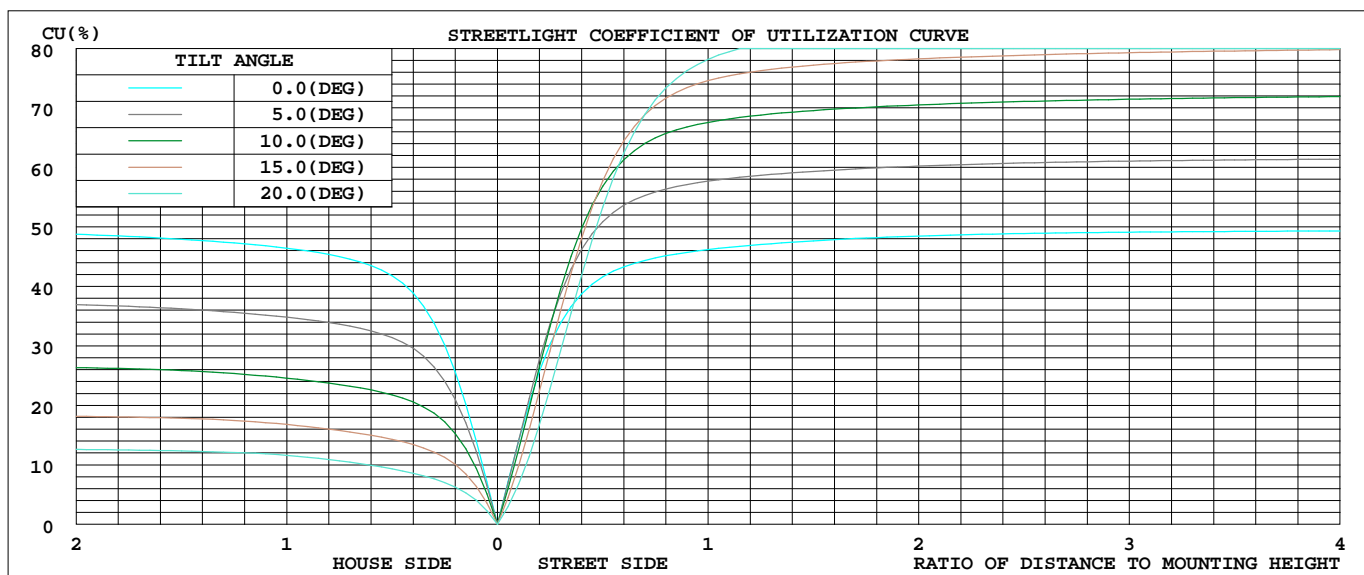
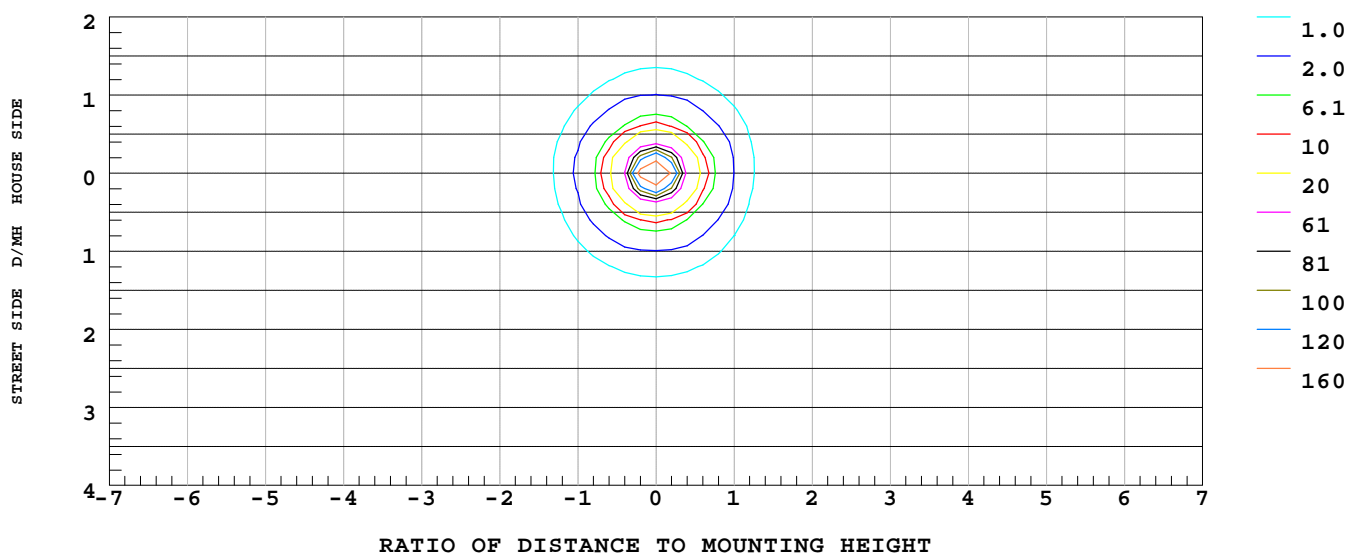
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 203.74 lx



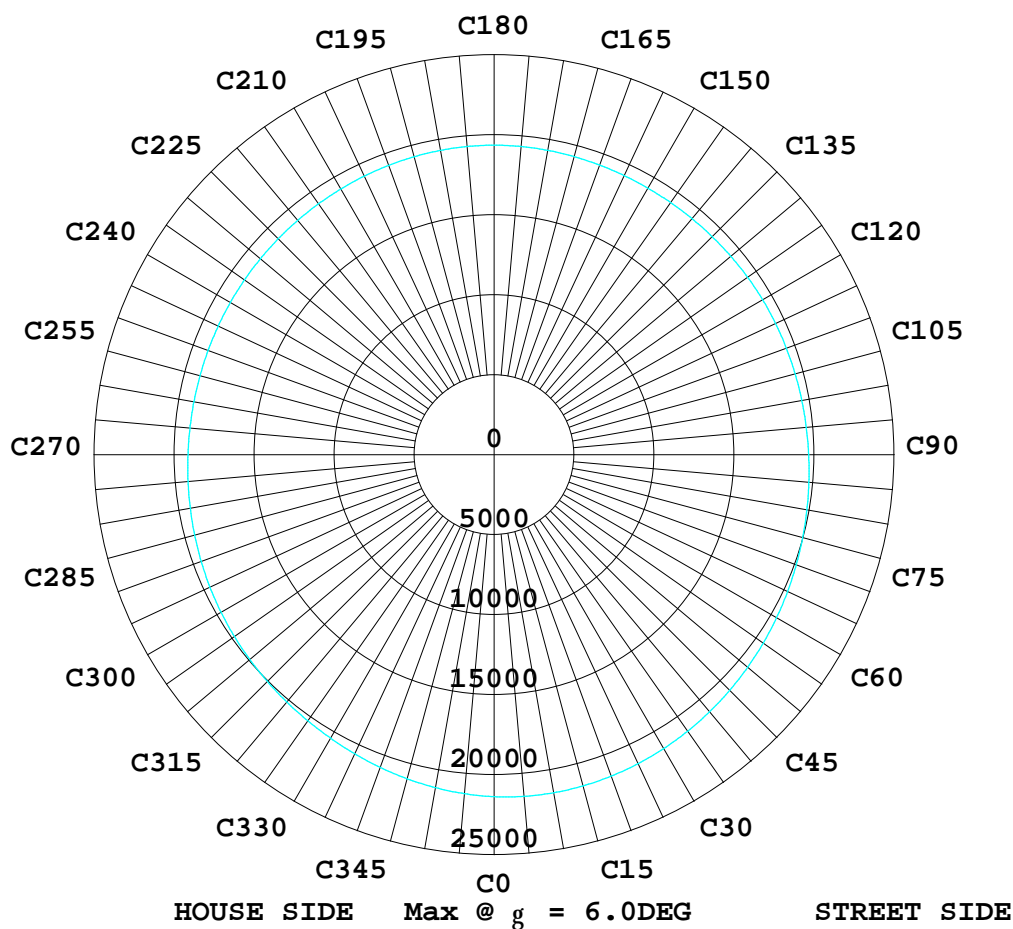
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年07月31日

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: