

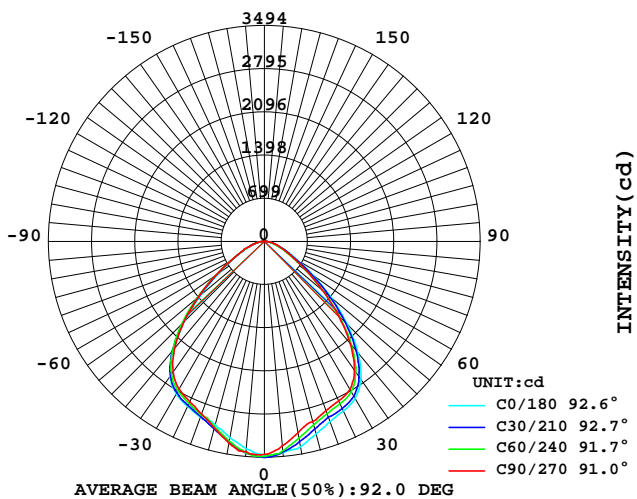
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

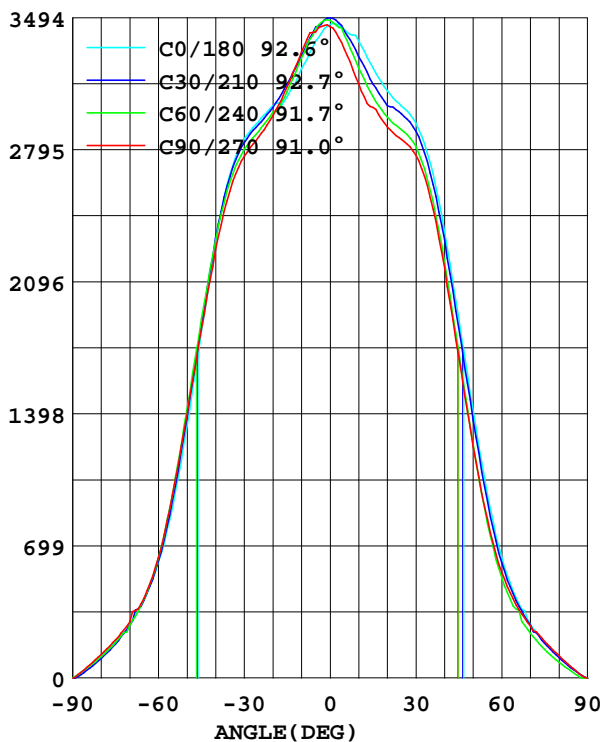
MANUFACTURER:		
Address:		
NAME: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	3494	S/MH(C0/180)	1.24
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.20
NOMINAL POWER(W)	48	TOTAL FLUX(lm)	7079.0	Voltage(V)	218.8
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	148.7	Current(A)	0.227
NOMINAL FLUX(lm)	7079.1	h up(%)	0.0	Power(W)	47.61
LAMPS QUANTITY	1	h down(%)	100.0	Power Factor(PF)	0.955
TEST VOLTAGE(V)	218.8	Effective Flux(lm)	6747.6	EEI	0.096

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



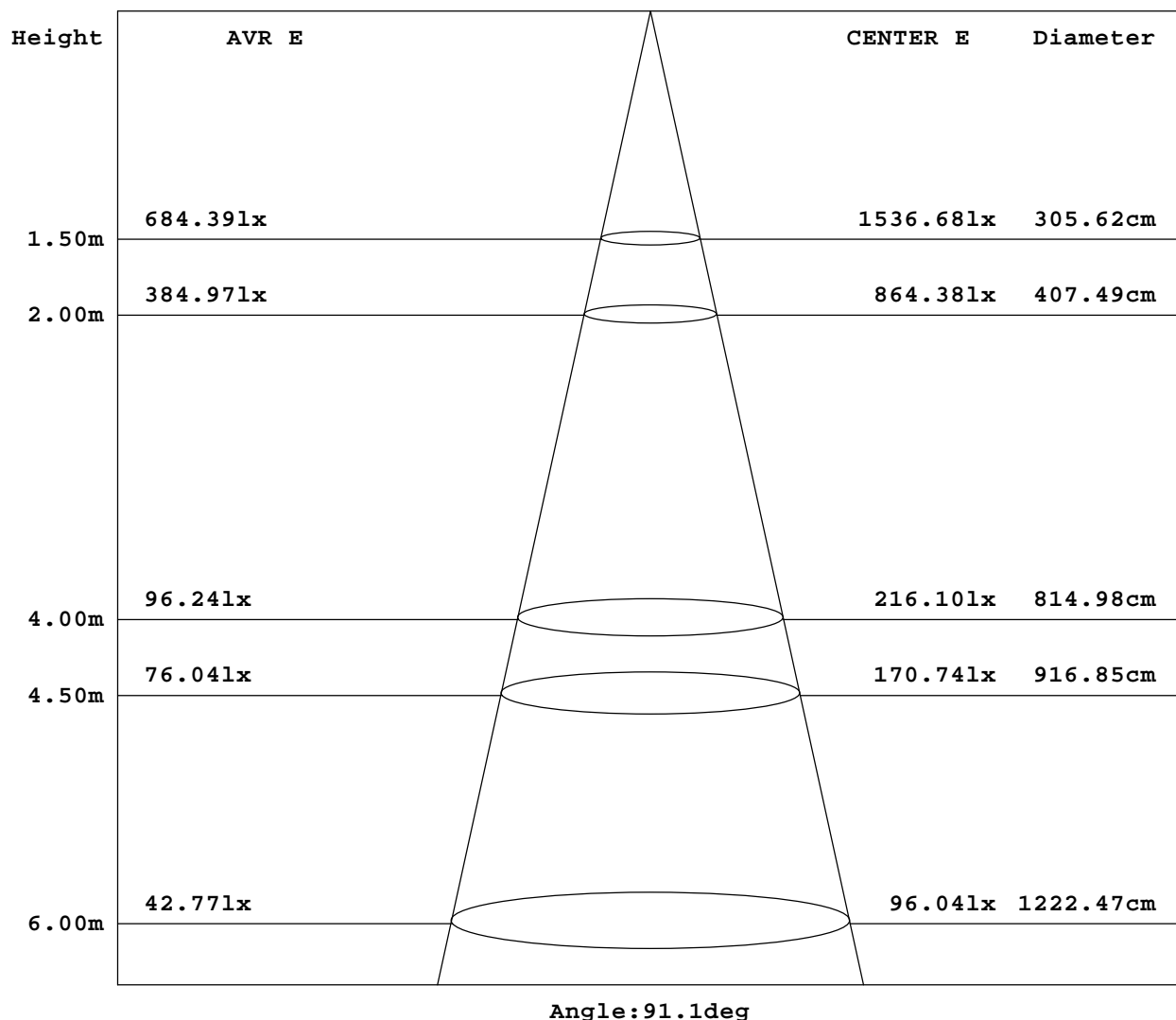
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年08月07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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	3369	3439	3418	3456	3430	3411	3325	3370	0- 5	82.21	82.21
10.0	3226	3288	3314	3346	3371	3259	3146	3205	5- 10	238.6	320.8
15.0	3075	3123	3129	3179	3228	3110	3019	3058	10- 15	377.9	698.8
20.0	3027	3005	2974	3034	3106	2997	2916	2967	15- 20	503.1	1202
25.0	2944	2910	2863	2958	3026	2942	2850	2895	20- 25	621.2	1823
30.0	2852	2814	2760	2870	2937	2853	2766	2808	25- 30	729.4	2553
35.0	2662	2637	2574	2680	2726	2625	2541	2607	30- 35	808.0	3361
40.0	2299	2320	2266	2333	2357	2256	2170	2239	35- 40	823.2	4184
45.0	1833	1882	1845	1891	1905	1791	1699	1762	40- 45	760.8	4945
50.0	1333	1398	1392	1424	1415	1300	1224	1264	45- 50	639.3	5584
55.0	904.3	957.4	975.2	984.3	964.8	874.6	838.4	852.9	50- 55	488.8	6073
60.0	615.1	629.6	639.1	644.7	641.9	573.7	561.5	568.2	55- 60	346.9	6420
65.0	417.2	415.7	423.3	418.9	424.0	386.9	387.7	386.1	60- 65	242.0	6662
70.0	281.1	279.5	296.2	277.9	282.4	258.1	274.9	261.4	65- 70	171.7	6834
75.0	196.6	184.9	202.7	182.3	188.8	168.4	193.3	171.4	70- 75	117.6	6951
80.0	118.7	107.8	124.4	105.7	112.8	96.57	119.0	97.78	75- 80	76.96	7028
85.0	50.04	45.99	56.70	44.90	46.77	36.43	49.44	36.55	80- 85	40.77	7069
90.0	0	0.157	0	0	0	0	0	0	85- 90	9.879	7079
95.0	0	0	0	0	0	0	0	0	90- 95	0.001	7079
100.0	0	0	0	0	0	0	0	0	95-100	0	7079
105.0	0	0	0	0	0	0	0	0	100-105	0	7079
110.0	0	0	0	0	0	0	0	0	105-110	0	7079
115.0	0	0	0	0	0	0	0	0	110-115	0	7079
120.0	0	0	0	0	0	0	0	0	115-120	0	7079
125.0	0	0	0	0	0	0	0	0	120-125	0	7079
130.0	0	0	0	0	0	0	0	0	125-130	0	7079
135.0	0	0	0	0	0	0	0	0	130-135	0	7079
140.0	0	0	0	0	0	0	0	0	135-140	0	7079
145.0	0	0	0	0	0	0	0	0	140-145	0	7079
150.0	0	0	0	0	0	0	0	0	145-150	0	7079
155.0	0	0	0	0	0	0	0	0	150-155	0	7079
160.0	0	0	0	0	0	0	0	0	155-160	0	7079
165.0	0	0	0	0	0	0	0	0	160-165	0	7079
170.0	0	0	0	0	0	0	0	0	165-170	0	7079
175.0	0	0	0	0	0	0	0	0	170-175	0	7079
180.0	0	0	0	0	0	0	0	0	175-180	0	7079
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月07日

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

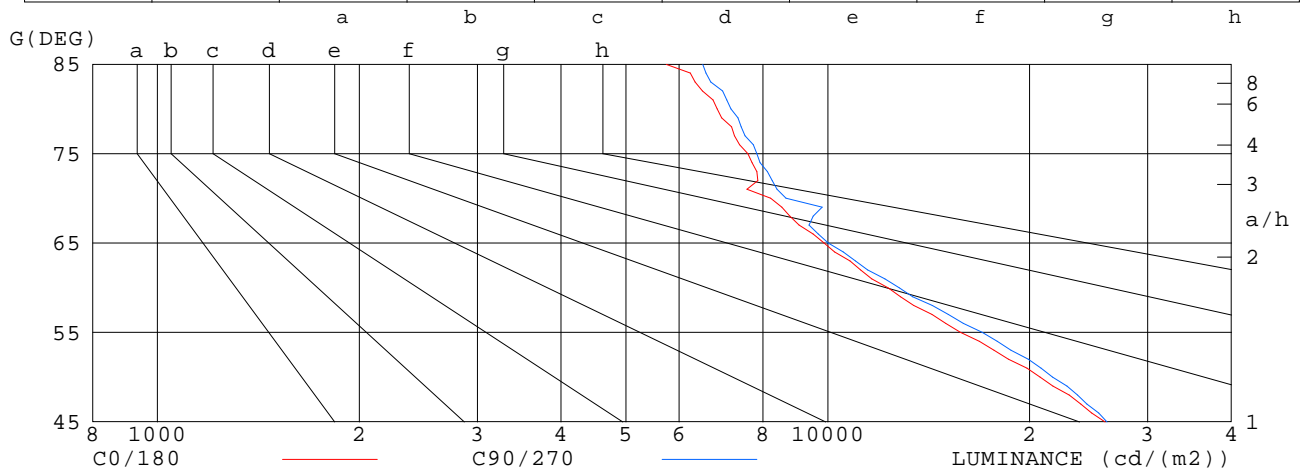
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 48W	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	5742	6506
80	6840	7167
75	7600	7834
70	8220	8663
65	9874	10017
60	12302	12784
55	15766	17002
50	20732	21653
45	25929	26092

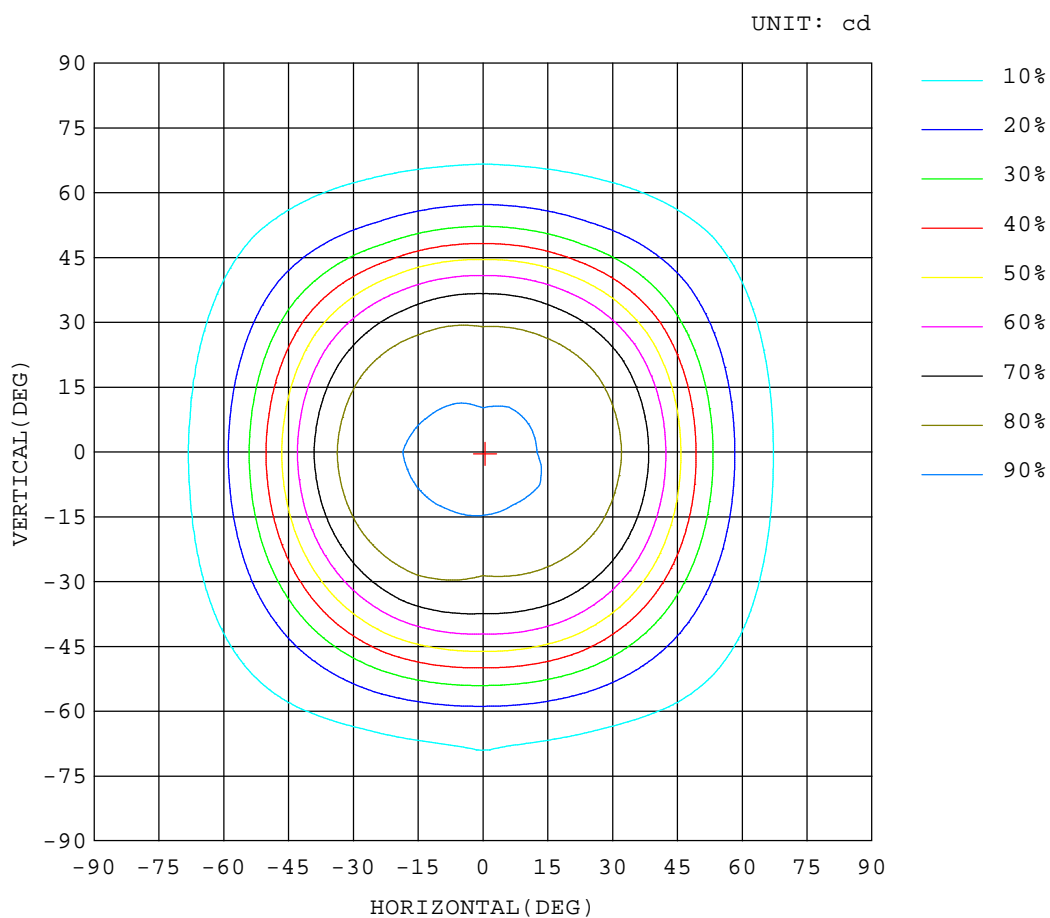
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:



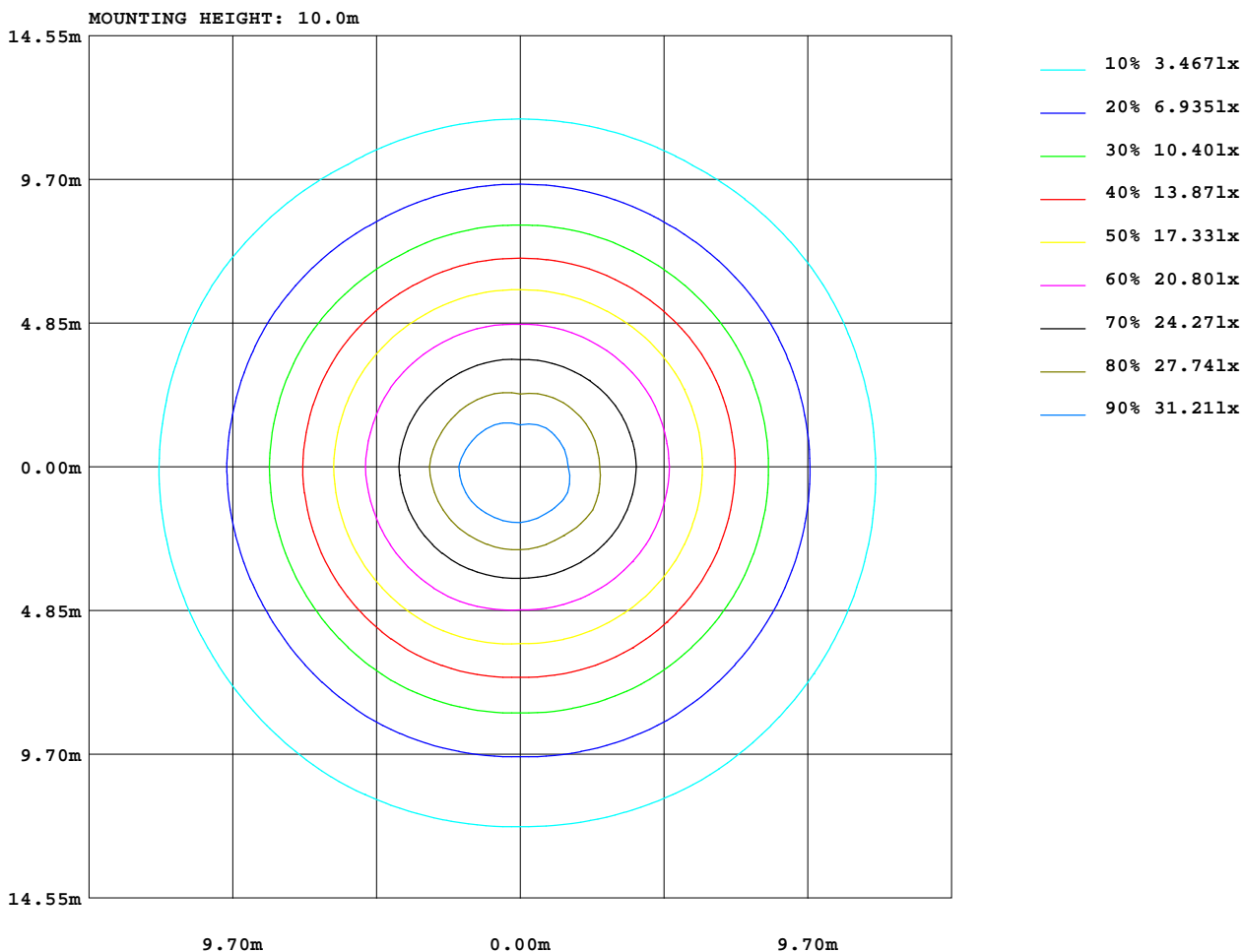
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07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: 48W										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	Φ t	Φ a		
	0.00	0.05	0.19	0.36	0.51	0.61	0.82	1.15	1.44	1.44	1.16	0.84	0.63	0.51	0.36	0.19	0.06	0.00	10.3	0.00			
	0.02	0.27	0.79	1.50	2.26	2.97	3.81	4.86	5.64	5.66	4.91	3.88	3.04	2.29	1.51	0.80	0.28	0.03	44.5	0.00			
	0.06	0.51	1.48	2.92	4.58	6.43	8.39	10.4	11.8	11.8	10.5	8.50	6.52	4.64	2.96	1.50	0.53	0.06	93.7	38.6			
	0.09	0.75	2.22	4.59	7.95	12.1	16.9	22.1	25.4	25.3	22.1	17.0	12.1	7.96	4.60	2.27	0.78	0.09	185	164			
	0.12	0.98	2.99	6.78	13.1	22.8	34.3	44.8	50.8	50.7	44.6	33.9	22.3	12.8	6.73	3.01	1.01	0.12	352	341			
	0.14	1.19	3.82	9.48	21.0	38.2	56.0	69.3	75.8	75.7	69.1	55.5	37.2	20.1	9.26	3.79	1.23	0.15	547	539			
	0.16	1.36	4.62	12.5	29.6	52.6	72.3	82.9	86.5	86.2	82.1	71.6	51.7	28.3	12.0	4.54	1.41	0.17	681	675			
	0.17	1.49	5.29	15.4	36.4	62.0	79.9	87.9	91.9	91.3	86.7	78.3	61.0	35.1	14.6	5.18	1.52	0.19	755	749			
	0.18	1.56	5.69	17.1	40.3	66.4	82.7	92.7	101	99.2	90.0	80.6	65.0	38.8	16.2	5.54	1.58	0.19	805	800			
	0.18	1.56	5.71	17.2	40.4	66.6	82.7	93.7	103	101	91.0	80.7	65.1	39.0	16.3	5.55	1.58	0.19	812	807			
	0.17	1.48	5.32	15.6	36.8	62.4	80.0	88.9	94.4	93.6	87.6	78.4	61.4	35.7	14.9	5.21	1.52	0.18	764	759			
-30	0.16	1.35	4.66	12.9	30.3	53.4	73.5	83.9	87.2	86.7	82.6	72.4	53.0	29.4	12.3	4.59	1.40	0.17	690	684			
-40	0.14	1.17	3.86	9.72	22.0	40.3	59.0	72.2	77.5	77.2	71.6	58.7	39.8	21.2	9.47	3.84	1.22	0.15	570	562			
-50	0.11	0.96	2.97	6.94	14.0	25.6	39.1	49.9	55.3	55.3	49.7	38.6	25.0	13.7	6.88	3.00	1.00	0.12	389	379			
-60	0.08	0.73	2.16	4.65	8.51	13.8	20.4	26.3	29.6	29.4	26.0	20.1	13.6	8.44	4.69	2.21	0.76	0.09	212	195			
-70	0.05	0.49	1.41	2.86	4.86	7.24	9.72	11.9	13.2	13.2	11.9	9.67	7.25	4.91	2.92	1.45	0.51	0.06	104	56.2			
-80	0.02	0.25	0.73	1.47	2.46	3.56	4.61	5.49	6.07	6.08	5.51	4.65	3.60	2.51	1.50	0.75	0.26	0.03	49.6	0.00			
-90	0.00	0.04	0.15	0.35	0.65	0.99	1.30	1.54	1.69	1.70	1.55	1.32	1.01	0.67	0.36	0.15	0.05	0.00	13.5	0.00			
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90				
Φ t	1.87	16.2	54.1	143	316	539	726	851	918	913	839	715	530	307	138	53.6	16.7	2.00	7079				
Φ a	0.00	0.00	27.9	122	297	519	707	831	898	893	819	696	510	287	117	24.9	0.00	0.00			6748		

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月07日

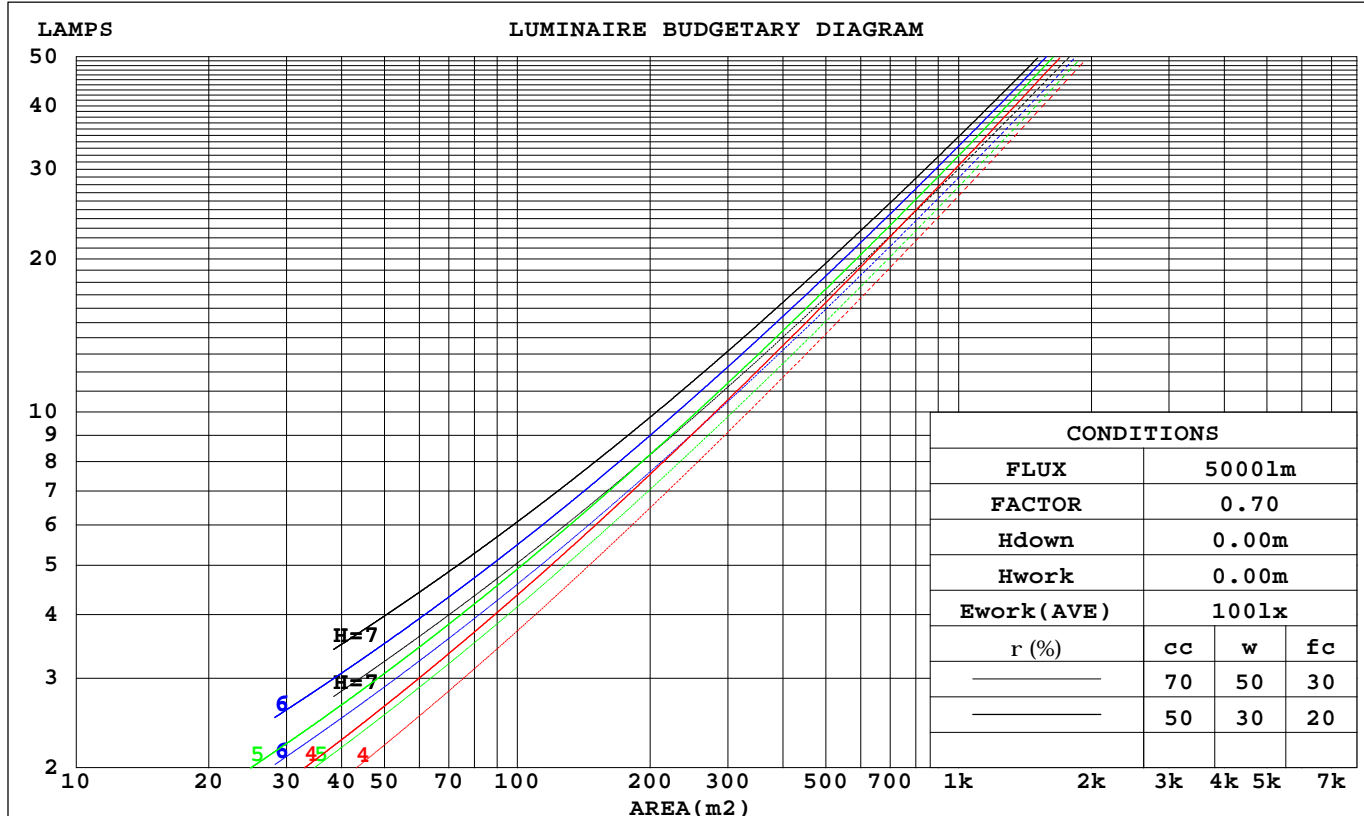
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 48W								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07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: 48W						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	.252	.143	.045	.245	.140	.044	.232	.133	.043	.220	.127	.041	.209	.121	.039															
2.0	.243	.133	.041	.237	.131	.040	.226	.126	.039	.215	.121	.038	.206	.116	.037															
3.0	.230	.122	.037	.225	.120	.036	.215	.116	.035	.206	.113	.035	.197	.109	.034															
4.0	.216	.112	.033	.212	.111	.033	.203	.108	.032	.195	.105	.032	.187	.102	.031															
5.0	.203	.104	.030	.199	.102	.030	.192	.100	.029	.184	.097	.029	.178	.095	.029															
6.0	.191	.096	.027	.188	.095	.027	.181	.093	.027	.174	.091	.027	.168	.089	.026															
7.0	.180	.089	.025	.177	.088	.025	.171	.086	.025	.165	.085	.025	.160	.083	.024															
8.0	.170	.083	.023	.167	.082	.023	.162	.081	.023	.156	.079	.023	.152	.078	.023															
9.0	.161	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021															
10.0	.152	.073	.020	.150	.072	.020	.145	.071	.020	.141	.070	.020	.137	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.139	.151	.134	.120	.103	.092	.083	.059	.054	.048	.019	.017	.016	
2.0	.166	.132	.104	.142	.114	.090	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.157	.114	.080	.134	.098	.069	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.149	.100	.063	.128	.087	.055	.088	.060	.039	.051	.035	.023	.016	.012	.008	
5.0	.141	.090	.051	.121	.077	.045	.084	.054	.031	.048	.032	.019	.016	.010	.006	
6.0	.135	.081	.042	.116	.070	.037	.080	.049	.026	.046	.029	.016	.015	.009	.005	
7.0	.128	.074	.036	.110	.064	.031	.076	.045	.022	.044	.026	.013	.014	.009	.004	
8.0	.122	.068	.031	.105	.059	.027	.073	.041	.019	.042	.024	.011	.014	.008	.004	
9.0	.117	.063	.027	.101	.055	.023	.070	.039	.017	.041	.023	.010	.013	.007	.003	
10.0	.112	.059	.024	.096	.051	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月07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: 48W					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	22.1	23.4	22.3	23.6	23.8	22.2	23.6	22.5	23.8	24.0	
	22.5	23.7	22.8	24.0	24.2	22.7	23.9	22.9	24.1	24.3	
	22.7	23.8	23.0	24.1	24.3	22.8	24.0	23.1	24.2	24.5	
	22.8	23.9	23.1	24.2	24.4	23.0	24.1	23.3	24.3	24.6	
	22.8	23.9	23.2	24.2	24.4	23.0	24.1	23.4	24.3	24.6	
	22.9	23.9	23.2	24.1	24.4	23.0	24.1	23.4	24.3	24.6	
4H	2H	22.2	23.4	22.5	23.6	23.9	22.4	23.5	22.7	23.8	24.0
	3H	22.8	23.8	23.1	24.1	24.4	22.9	23.9	23.3	24.2	24.5
	4H	23.1	24.0	23.4	24.3	24.6	23.2	24.1	23.6	24.4	24.8
	6H	23.3	24.1	23.7	24.4	24.8	23.4	24.2	23.8	24.6	25.0
	8H	23.4	24.1	23.8	24.5	24.9	23.5	24.3	23.9	24.6	25.0
	12H	23.4	24.1	23.8	24.5	24.9	23.6	24.3	24.0	24.7	25.1
8H	4H	23.1	23.9	23.5	24.2	24.6	23.2	24.0	23.7	24.4	24.7
	6H	23.4	24.0	23.9	24.4	24.9	23.6	24.2	24.0	24.6	25.0
	8H	23.6	24.1	24.0	24.5	25.0	23.7	24.3	24.2	24.7	25.1
	12H	23.6	24.1	24.1	24.6	25.0	23.9	24.3	24.3	24.8	25.2
12H	4H	23.1	23.8	23.5	24.2	24.6	23.2	23.9	23.6	24.3	24.7
	6H	23.4	24.0	23.9	24.4	24.8	23.6	24.1	24.0	24.5	25.0
	8H	23.6	24.0	24.1	24.5	25.0	23.8	24.2	24.2	24.7	25.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.7 / - 0.9					+ 0.6 / - 0.7					
1.5H	+ 0.4 / - 0.6					+ 0.4 / - 0.5					
2.0H	+ 1.6 / - 1.4					+ 1.6 / - 1.5					

CIE Pub.117 Corrected 7079 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.8)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月07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: 48W	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) $k(RI) \times RCR = 5$									
$k = 0.60$	66	56	49	65	55	49	64	55	49	44
0.80	76	66	60	75	66	60	73	65	59	53
1.00	84	75	69	83	74	68	81	75	68	62
1.25	90	82	76	89	81	76	87	80	75	69
1.50	95	87	81	93	86	81	91	84	80	73
2.00	100	94	89	99	93	88	96	90	86	79
2.50	103	97	92	102	96	92	98	93	90	82
3.00	106	101	96	104	99	95	100	96	93	85
4.00	109	105	101	107	103	100	103	100	97	89
5.00	111	107	104	109	105	102	104	102	99	91
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

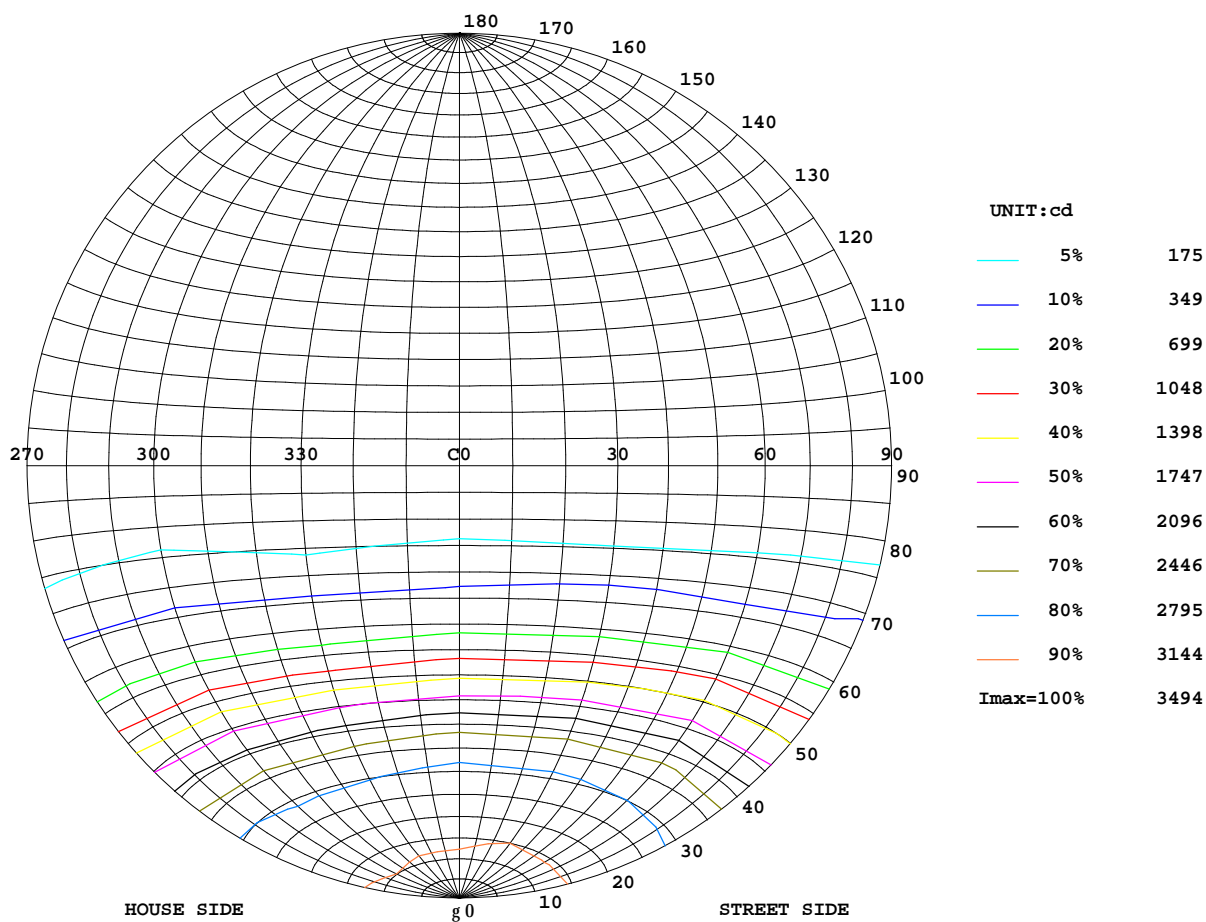
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月07日

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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

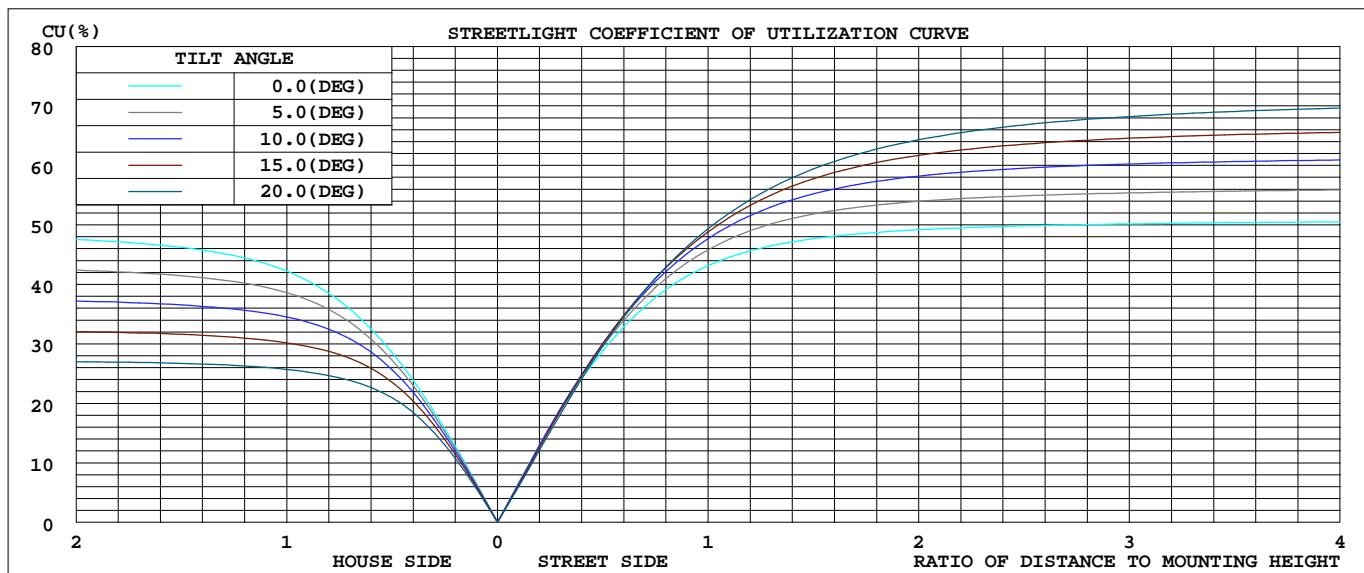
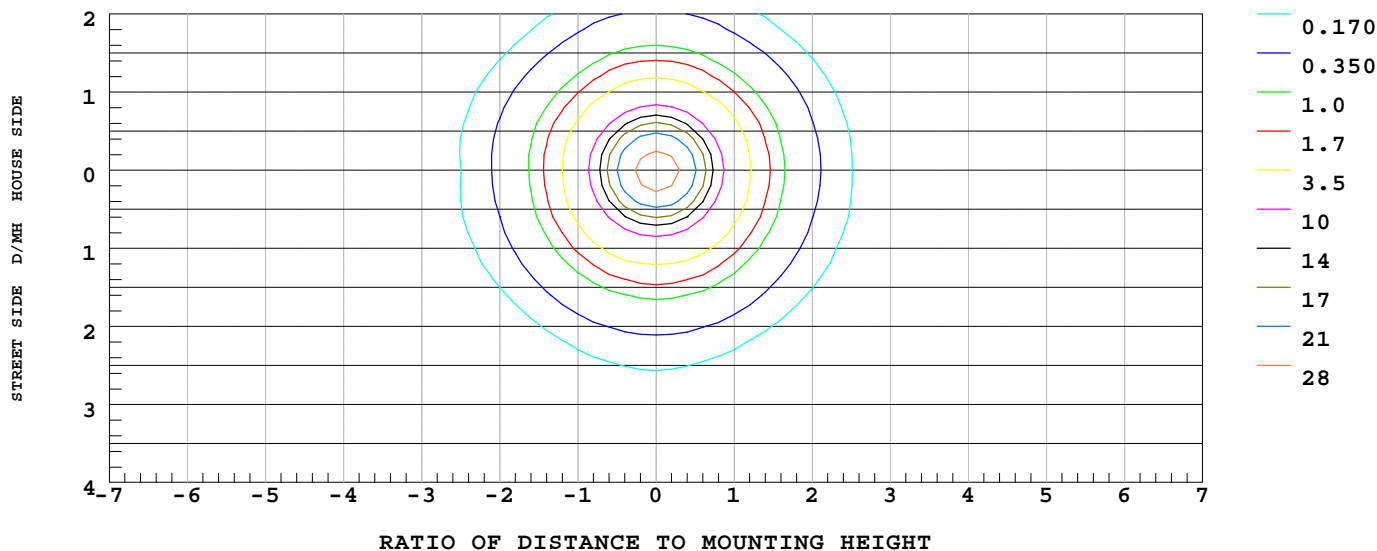
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 34.58 lx



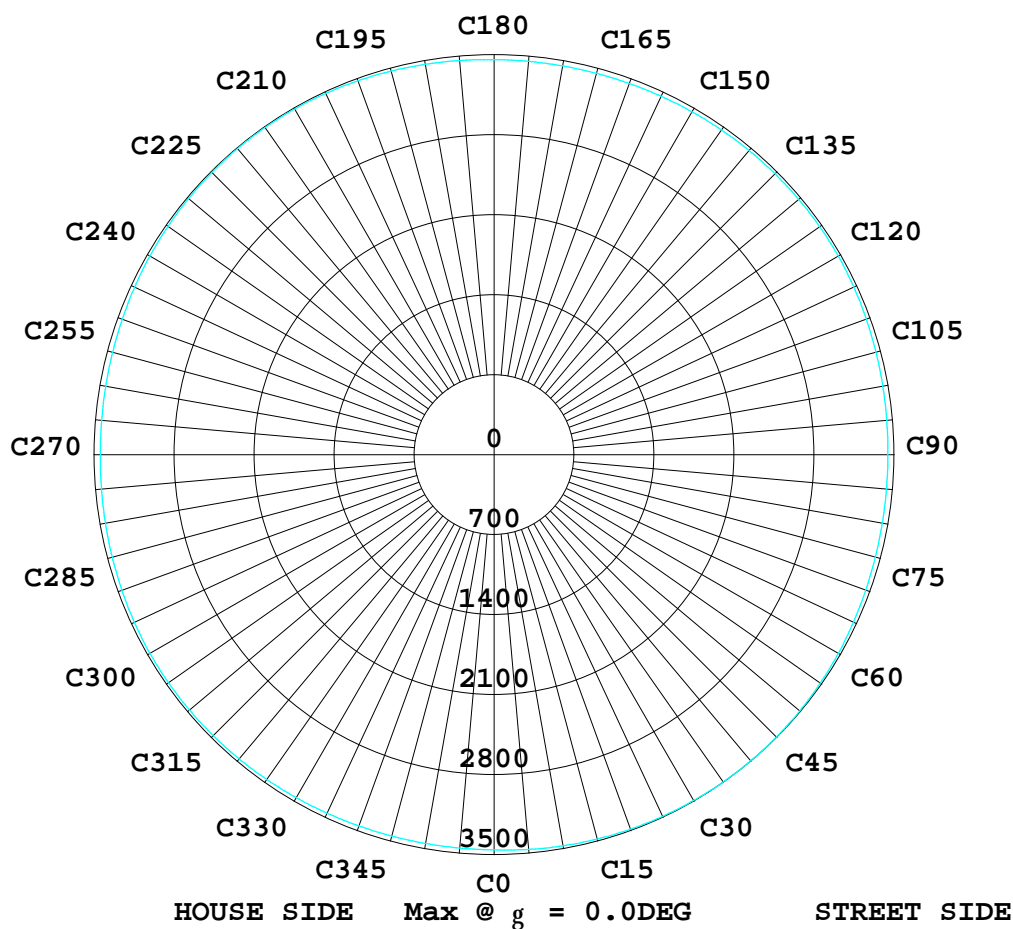
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

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: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月07日

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