

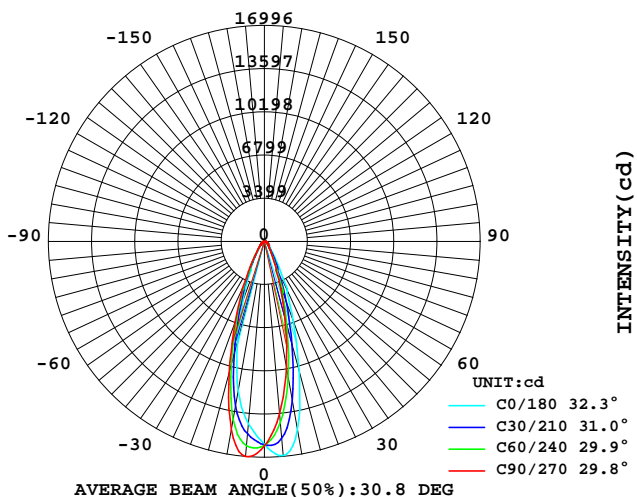
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

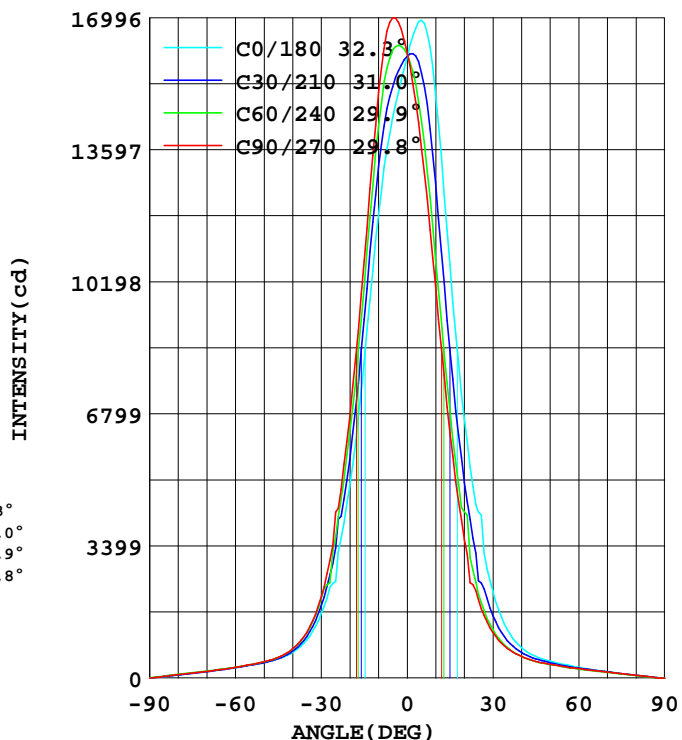
MANUFACTURER:		
Address:		
NAME: 48W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1150*65mm	SERIAL No.:

DATA OF LAMP		I <sub>max</sub> (cd)	17634	S/MH(C0/180)	0.51
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	0.59
NOMINAL POWER(W)	48	TOTAL FLUX(lm)	7074.3	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	149.4	Current(A)	0.226
NOMINAL FLUX(lm)	7074.4	h up(%)	0.0	Power(W)	47.34
LAMPS QUANTITY	1	h down(%)	100.0	Power Factor(PF)	0.955
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	5344.2	EEI	0.121

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



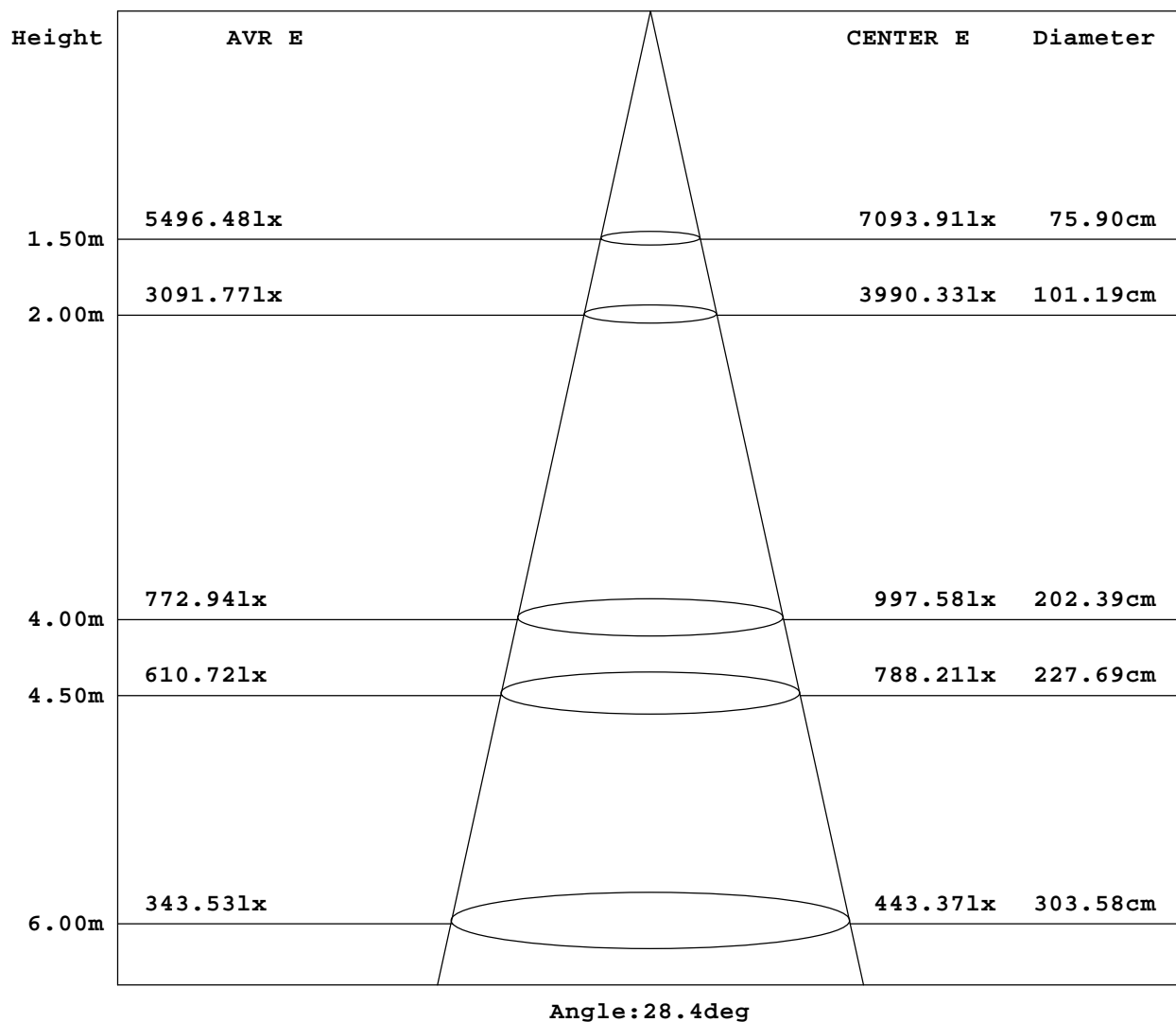
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月07日

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	1443	1569	1700	1760	1693	1495	1363	1366	0- 5	377.3	377.3
10.0	1194	1370	1508	1608	1501	1176	1010	1056	5- 10	1024	1401
15.0	811.7	964.0	1073	1148	1065	766.0	630.9	686.3	10- 15	1291	2692
20.0	495.0	596.9	671.0	733.0	666.5	465.7	356.4	421.6	15- 20	1158	3849
25.0	248.7	349.3	427.0	438.9	427.5	232.9	201.5	223.7	20- 25	883.1	4732
30.0	166.4	195.6	208.9	246.1	224.0	143.4	117.3	130.5	25- 30	607.1	5340
35.0	98.69	111.5	117.6	135.4	125.2	87.56	76.10	81.70	30- 35	401.9	5742
40.0	65.55	71.50	75.28	82.86	77.50	60.53	55.38	57.85	35- 40	280.3	6022
45.0	49.59	51.60	53.45	57.66	55.59	45.89	42.78	44.68	40- 45	215.0	6237
50.0	39.93	40.31	41.65	43.97	43.11	36.65	35.18	35.87	45- 50	179.0	6416
55.0	32.99	33.49	33.99	34.77	34.31	29.85	29.39	29.76	50- 55	155.2	6571
60.0	25.85	27.01	27.28	27.69	27.20	24.32	24.19	24.58	55- 60	134.2	6705
65.0	21.71	21.74	21.62	22.03	21.00	19.33	19.52	19.88	60- 65	113.7	6819
70.0	16.75	17.12	17.05	16.94	15.80	14.93	15.42	15.47	65- 70	93.49	6913
75.0	12.43	12.79	12.72	12.45	11.44	10.71	11.26	11.23	70- 75	73.13	6986
80.0	7.932	8.489	8.465	8.114	7.182	6.559	7.097	6.995	75- 80	51.93	7038
85.0	3.431	4.163	4.121	3.842	2.826	2.282	2.620	2.608	80- 85	29.47	7067
90.0	0	0.221	0	0.076	0	0	0	0	85- 90	7.175	7074
95.0	0	0	0	0	0	0	0	0	90- 95	0.027	7074
100.0	0	0	0	0	0	0	0	0	95-100	0	7074
105.0	0	0	0	0	0	0	0	0	100-105	0	7074
110.0	0	0	0	0	0	0	0	0	105-110	0	7074
115.0	0	0	0	0	0	0	0	0	110-115	0	7074
120.0	0	0	0	0	0	0	0	0	115-120	0	7074
125.0	0	0	0	0	0	0	0	0	120-125	0	7074
130.0	0	0	0	0	0	0	0	0	125-130	0	7074
135.0	0	0	0	0	0	0	0	0	130-135	0	7074
140.0	0	0	0	0	0	0	0	0	135-140	0	7074
145.0	0	0	0	0	0	0	0	0	140-145	0	7074
150.0	0	0	0	0	0	0	0	0	145-150	0	7074
155.0	0	0	0	0	0	0	0	0	150-155	0	7074
160.0	0	0	0	0	0	0	0	0	155-160	0	7074
165.0	0	0	0	0	0	0	0	0	160-165	0	7074
170.0	0	0	0	0	0	0	0	0	165-170	0	7074
175.0	0	0	0	0	0	0	0	0	170-175	0	7074
180.0	0	0	0	0	0	0	0	0	175-180	0	7074
DEG	LUMINOUS INTENSITY:×10cd									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:

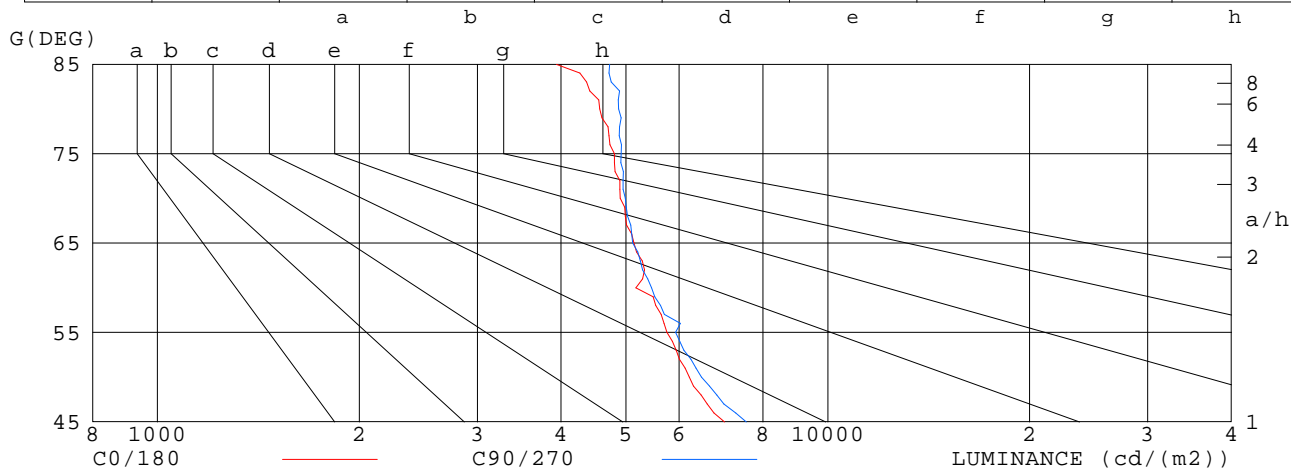
## LUMINANCE LIMITATION CURVES

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	3937	4729
80	4568	4875
75	4804	4916
70	4898	4987
65	5138	5118
60	5171	5456
55	5752	5927
50	6213	6480
45	7014	7559

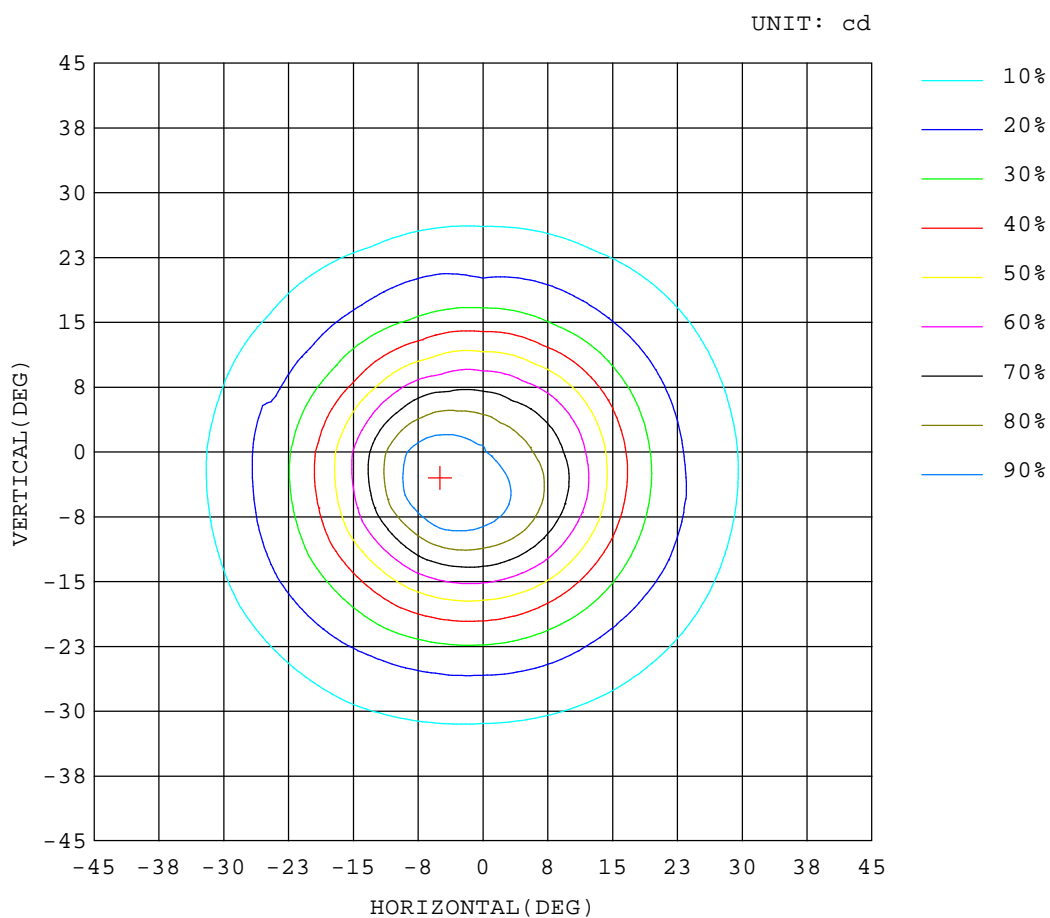
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月07日

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.:



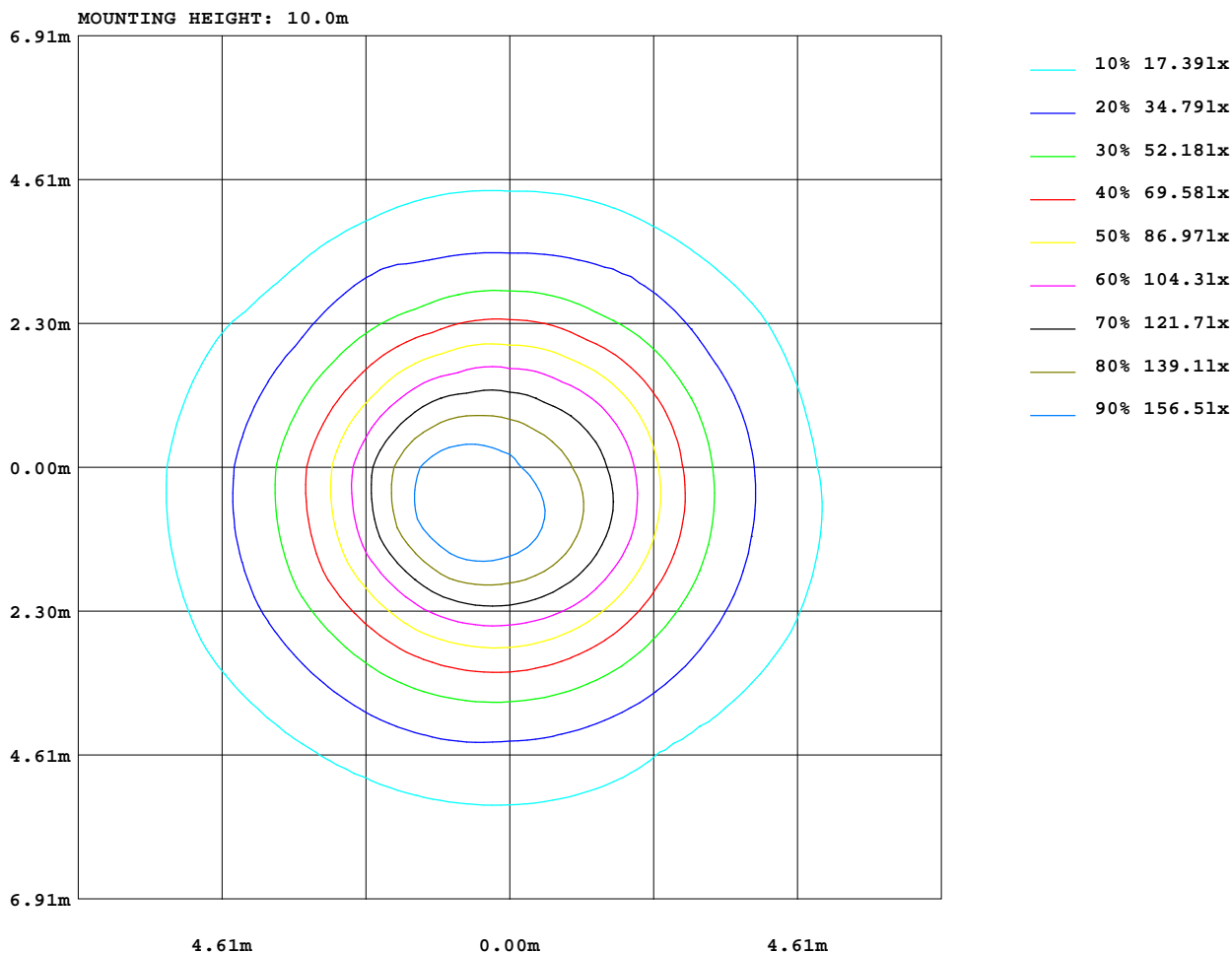
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月07日

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.:				

45	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	1.57	1.89	2.21	2.49	2.74	3.04	3.33	3.55	3.67	3.66	3.54	3.32	3.02	2.71	2.44	2.16	1.87	1.59	48.8	0.00		
40	1.80	2.19	2.59	2.99	3.41	3.86	4.33	4.71	4.91	4.89	4.68	4.29	3.82	3.36	2.93	2.52	2.14	1.79	61.2	0.00		
35	2.05	2.53	3.07	3.71	4.43	5.19	6.07	6.80	7.18	7.14	6.70	5.93	5.05	4.28	3.58	2.97	2.46	2.00	81.2	0.00		
30	2.31	2.93	3.71	4.77	6.12	7.64	9.29	10.9	11.6	11.5	10.6	8.97	7.26	5.75	4.48	3.52	2.81	2.23	117	7.89		
25	2.59	3.40	4.58	6.37	8.95	12.1	15.4	18.8	20.3	19.8	17.9	14.6	11.1	8.14	5.81	4.22	3.18	2.45	180	109		
20	2.87	3.97	5.76	8.72	13.3	19.3	27.8	33.9	36.9	36.4	32.1	24.9	17.2	11.7	7.67	5.12	3.60	2.67	294	243		
15	3.15	4.62	7.29	12.0	19.1	30.9	43.9	55.1	61.9	60.4	51.4	39.1	26.2	16.1	10.0	6.17	4.05	2.87	455	413		
VERTICAL (DEG)	3.42	5.27	8.94	16.1	27.4	44.2	65.4	84.3	91.4	87.7	75.8	56.3	36.1	21.1	12.4	7.21	4.47	3.04	651	614		
	3.61	5.80	10.3	20.0	34.4	57.0	87.3	112	117	109	94.6	70.6	44.2	25.4	14.0	8.00	4.78	3.16	822	788		
	3.67	5.98	10.8	21.6	37.3	62.1	96.7	126	131	120	103	76.5	47.4	27.1	14.7	8.26	4.86	3.18	901	868		
	3.59	5.77	10.3	20.1	35.3	57.6	88.3	116	126	118	99.0	71.1	44.2	25.8	14.2	7.90	4.70	3.11	852	819		
	3.40	5.29	9.13	16.7	30.4	46.9	68.2	89.1	98.8	94.3	78.4	56.2	36.5	22.1	12.3	7.07	4.35	2.96	683	647		
	3.15	4.67	7.58	13.0	22.4	34.0	47.5	59.6	65.6	63.2	53.4	40.0	27.0	16.4	9.88	5.98	3.90	2.76	481	440		
	2.86	4.03	6.04	9.44	14.7	21.9	30.2	37.0	40.0	38.7	33.4	24.9	17.2	11.7	7.49	4.92	3.43	2.53	311	262		
	2.57	3.44	4.74	6.74	9.68	13.5	17.3	20.5	22.2	21.4	18.4	15.1	11.4	8.06	5.64	4.03	2.99	2.29	190	124		
	2.29	2.95	3.80	4.96	6.52	8.40	10.2	11.5	12.1	11.8	10.8	9.20	7.39	5.69	4.34	3.35	2.62	2.07	120	11.5		
	2.03	2.54	3.13	3.84	4.68	5.59	6.39	6.99	7.21	7.09	6.66	5.94	5.10	4.24	3.47	2.84	2.31	1.89	82.0	0.00		
-45	1.81	2.19	2.63	3.10	3.60	4.06	4.45	4.72	4.81	4.75	4.56	4.23	3.80	3.34	2.87	2.44	2.05	1.69	61.2	0.00		
-45    -40    -35    -30    -25    -20    -15    -10    HORIZONTAL (DEG)    10    15    20    25    30    35    40    45																						
Φ t	48.8	69.5	107	177	285	438	633	802	863	821	706	532	355	223	139	88.7	60.6	44.3	7074			
Φ a	0.00	0.00	14.6	111	229	388	586	757	818	775	660	483	302	164	55.9	0.00	0.00	0.00		5344		

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

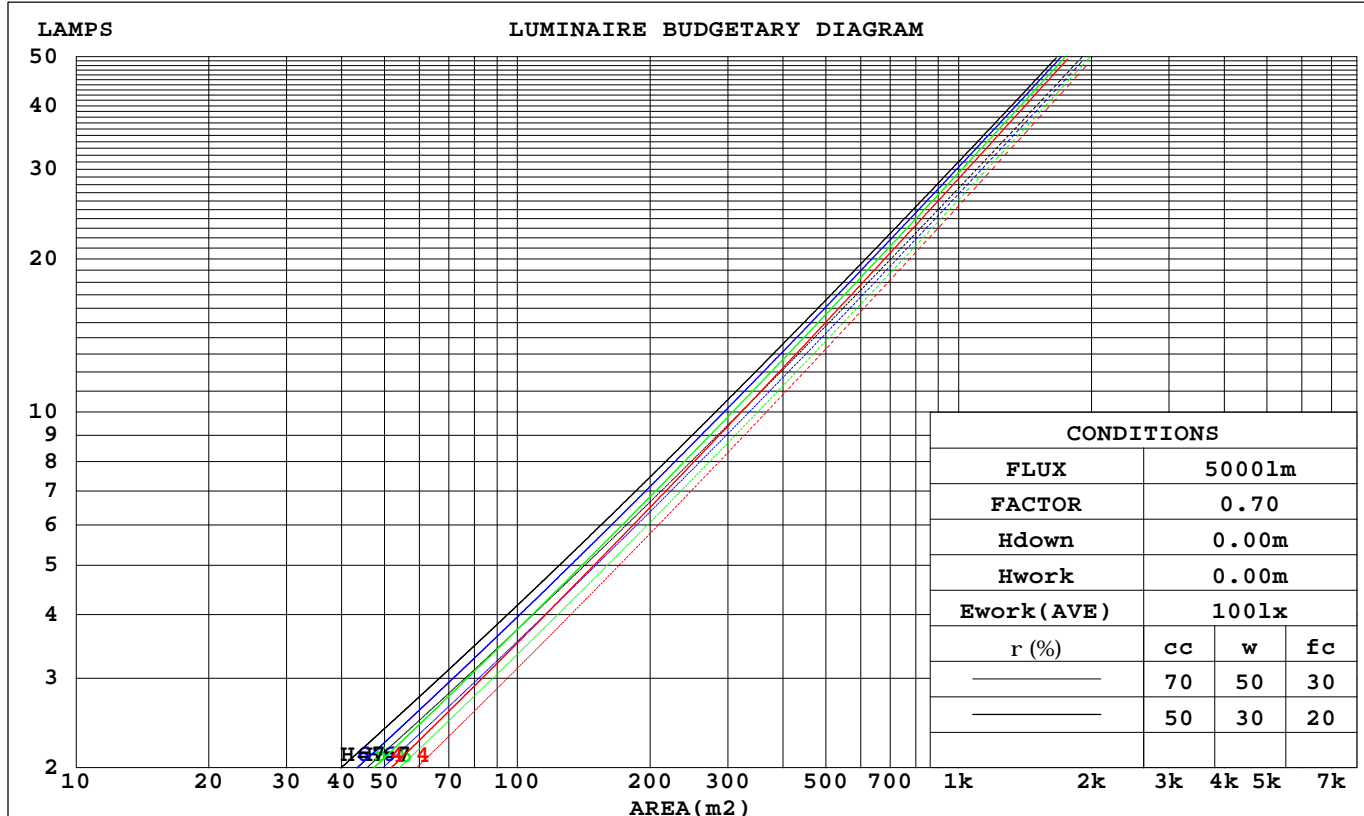
Test Set: 8.0deg/s C-Gamma (TYPE C)  
 Humidity:65.0%  
 Test Distance:11.000 m  
 Remarks:

## 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	.188	.107	.034	.181	.103	.033	.168	.097	.031	.157	.090	.029	.146	.085	.027															
2.0	.176	.097	.030	.170	.094	.029	.160	.089	.028	.150	.084	.026	.141	.080	.025															
3.0	.164	.088	.026	.160	.085	.026	.151	.082	.025	.142	.078	.024	.134	.074	.023															
4.0	.154	.080	.023	.150	.078	.023	.142	.075	.022	.135	.072	.022	.128	.069	.021															
5.0	.144	.074	.021	.141	.072	.021	.134	.070	.021	.128	.067	.020	.122	.065	.020															
6.0	.136	.068	.020	.133	.067	.019	.127	.065	.019	.121	.063	.019	.116	.061	.018															
7.0	.128	.064	.018	.126	.063	.018	.121	.061	.018	.116	.059	.017	.111	.058	.017															
8.0	.122	.059	.017	.119	.059	.017	.115	.057	.016	.110	.056	.016	.106	.055	.016															
9.0	.116	.056	.016	.114	.055	.016	.109	.054	.015	.106	.053	.015	.102	.052	.015															
10.0	.110	.053	.015	.108	.052	.015	.105	.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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.086	.058	.054	.050	.019	.017	.016	
2.0	.157	.132	.112	.134	.114	.097	.092	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.144	.114	.089	.124	.098	.077	.085	.068	.054	.049	.040	.032	.016	.013	.010	
4.0	.133	.099	.073	.114	.085	.063	.079	.060	.044	.046	.035	.026	.015	.011	.009	
5.0	.124	.087	.060	.107	.075	.052	.073	.053	.037	.043	.031	.022	.014	.010	.007	
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006	
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.103	.064	.037	.088	.055	.032	.061	.039	.023	.036	.023	.014	.012	.007	.004	
9.0	.097	.058	.032	.084	.051	.028	.058	.036	.020	.034	.021	.012	.011	.007	.004	
10.0	.092	.054	.028	.079	.047	.025	.055	.033	.017	.032	.019	.010	.010	.006	.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	2H	15.0	15.9	15.2	16.0	16.2	15.3	16.2	15.5	16.4	16.6
	3H	16.2	17.0	16.4	17.2	17.4	16.5	17.4	16.8	17.5	17.8
	4H	16.7	17.6	17.0	17.8	18.0	17.1	17.9	17.3	18.1	18.3
	6H	17.2	18.0	17.5	18.2	18.5	17.6	18.3	17.9	18.6	18.8
	8H	17.4	18.1	17.7	18.4	18.6	17.8	18.5	18.1	18.8	19.0
	12H	17.5	18.2	17.8	18.5	18.7	17.9	18.6	18.2	18.9	19.2
4H	2H	15.5	16.3	15.7	16.5	16.7	15.7	16.6	16.0	16.8	17.0
	3H	16.9	17.6	17.2	17.9	18.1	17.2	17.9	17.5	18.2	18.5
	4H	17.6	18.2	17.9	18.5	18.8	17.9	18.6	18.3	18.9	19.2
	6H	18.2	18.7	18.5	19.1	19.4	18.6	19.2	19.0	19.5	19.8
	8H	18.4	18.9	18.8	19.3	19.7	18.8	19.4	19.2	19.7	20.1
	12H	18.5	19.0	19.0	19.4	19.8	19.0	19.5	19.4	19.9	20.3
8H	4H	17.9	18.4	18.3	18.8	19.1	18.2	18.7	18.6	19.1	19.4
	6H	18.6	19.0	19.0	19.4	19.9	19.0	19.5	19.5	19.9	20.3
	8H	18.9	19.3	19.4	19.7	20.2	19.4	19.8	19.9	20.2	20.7
	12H	19.1	19.5	19.6	19.9	20.4	19.7	20.0	20.2	20.5	21.0
12H	4H	17.9	18.4	18.3	18.8	19.1	18.2	18.7	18.6	19.1	19.4
	6H	18.7	19.1	19.1	19.5	19.9	19.1	19.5	19.5	19.9	20.3
	8H	19.0	19.4	19.5	19.8	20.3	19.5	19.9	20.0	20.3	20.8
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4					
1.5H	+ 0.2 / - 0.2					+ 0.3 / - 0.2					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 7074 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) $k(RI) \times RCR = 5$									
$k = 0.60$	82	75	71	82	75	71	81	75	71	67
0.80	90	83	79	89	83	79	88	82	78	74
1.00	95	89	84	94	88	84	93	88	84	79
1.25	100	94	89	99	93	89	96	92	88	83
1.50	103	97	93	101	96	93	99	95	91	86
2.00	106	101	97	105	100	97	102	98	95	89
2.50	108	104	100	106	102	99	103	100	97	91
3.00	110	106	103	108	105	102	105	102	99	93
4.00	112	109	106	110	107	105	107	104	102	95
5.00	114	111	109	112	109	107	108	106	104	96
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

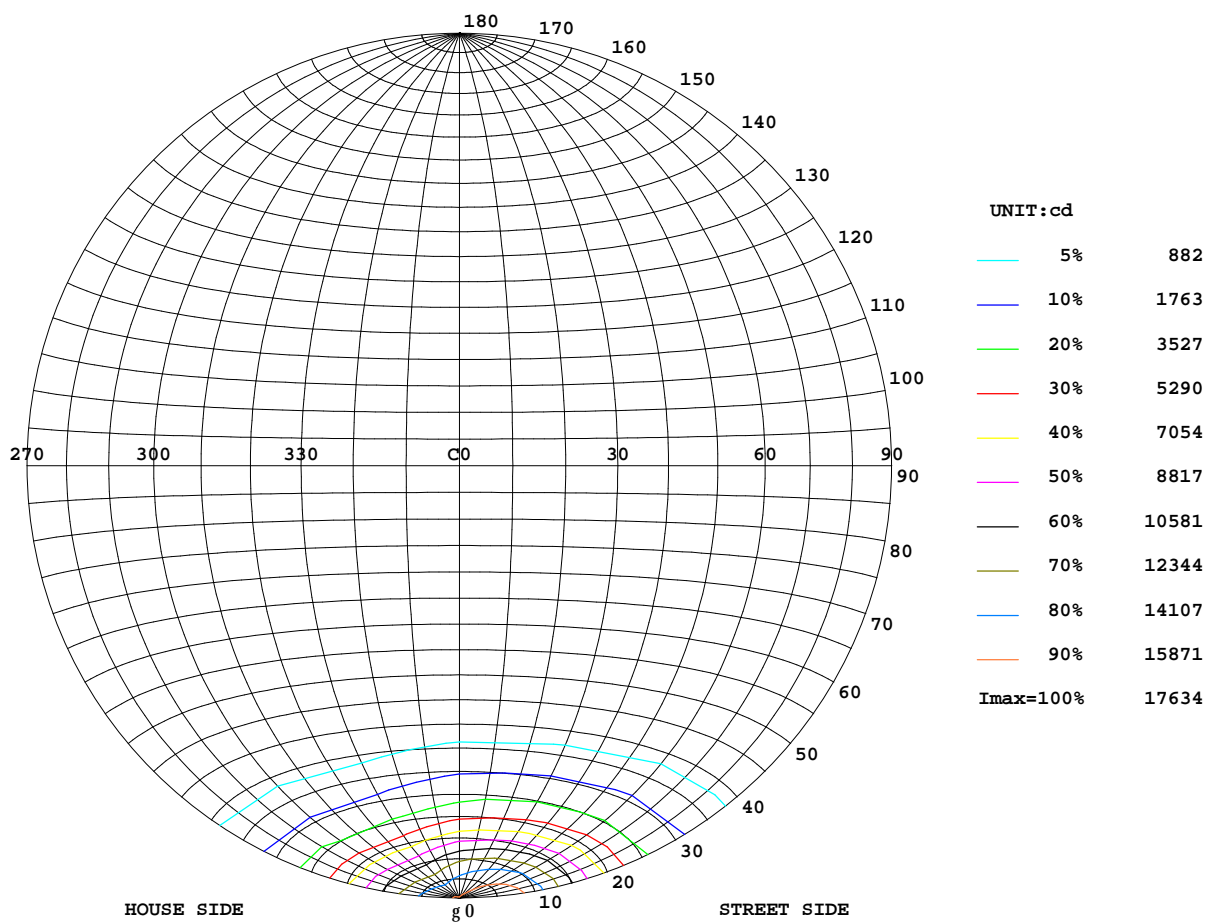
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2019年08月07日

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

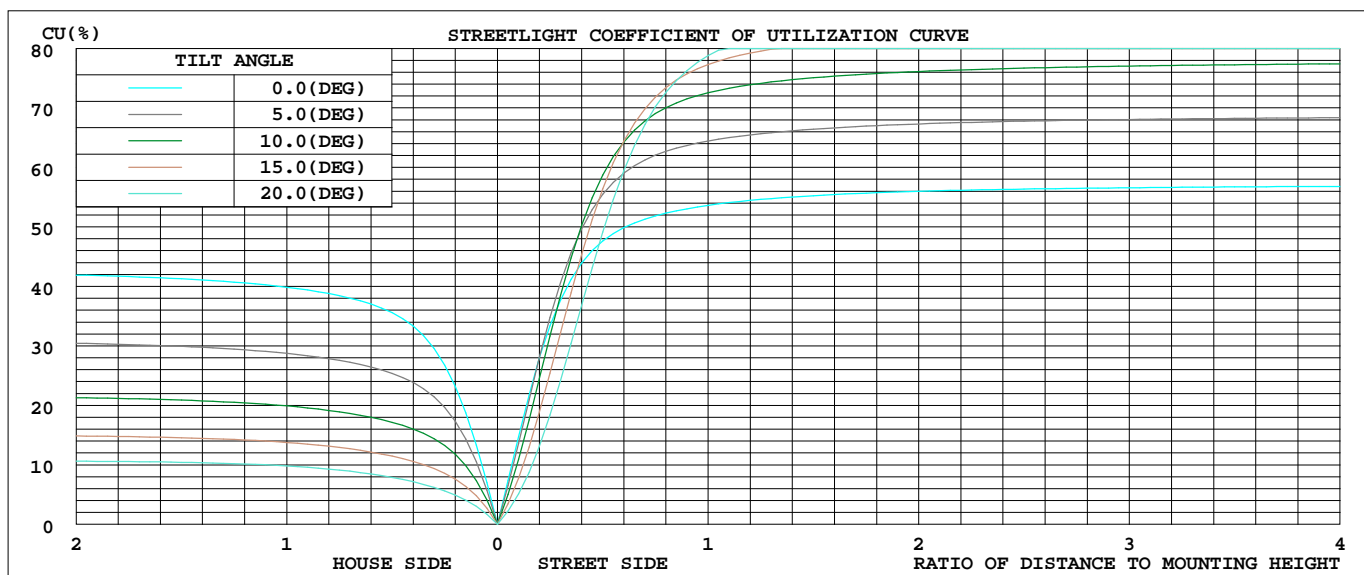
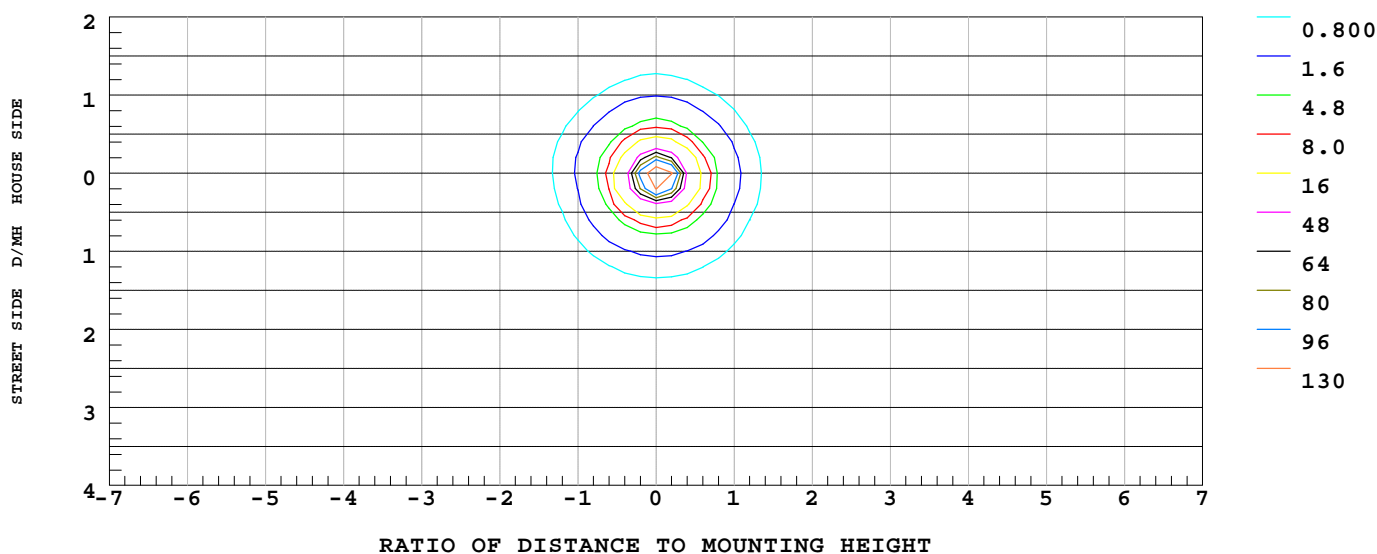
Test Set: 8.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

ISOLUX DIAGRAM

Report number:

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

ILLUMINANCE AT MH=10 m, Enadir = 159.61 lx



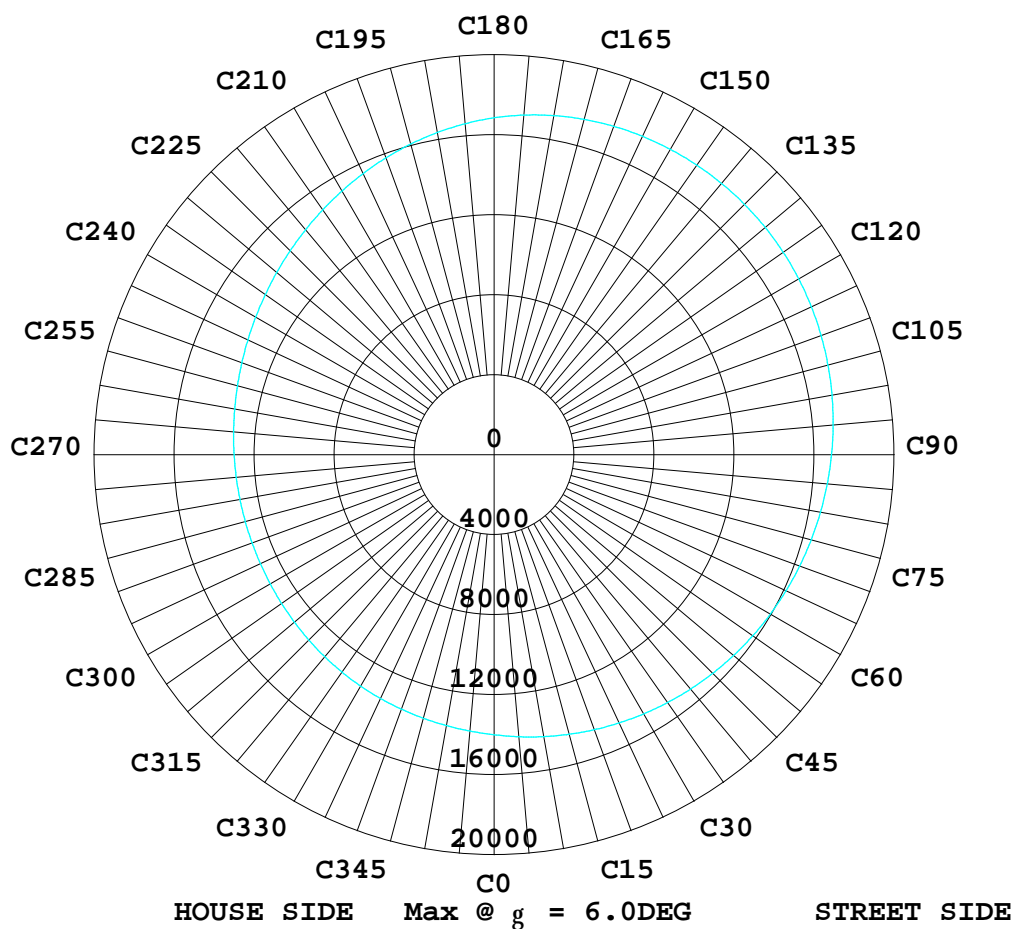
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2019年08月07日

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: