

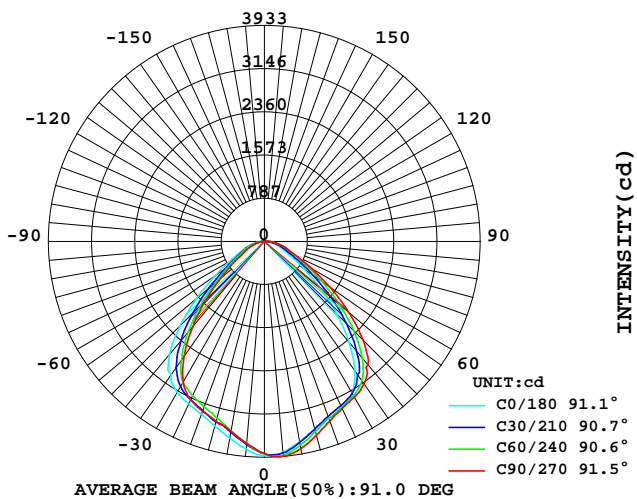
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

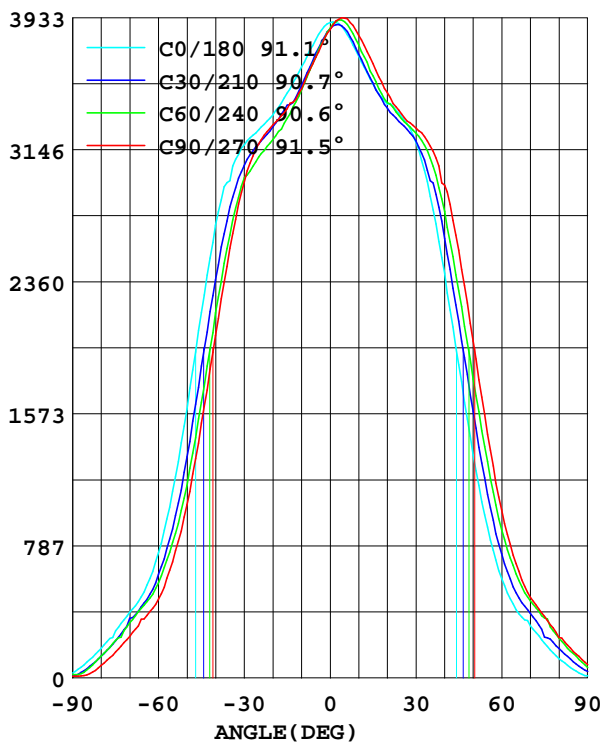
MANUFACTURER:		
Address:		
NAME: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	3933	S/MH(C0/180)	1.23
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.15
NOMINAL POWER(W)	58	TOTAL FLUX(lm)	7991.5	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	139.2	Current(A)	0.271
NOMINAL FLUX(lm)	7991.6	h up(%)	0.4	Power(W)	57.41
LAMPS QUANTITY	1	h down(%)	99.6	Power Factor(PF)	0.967
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	7545.4	EEI	0.104

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



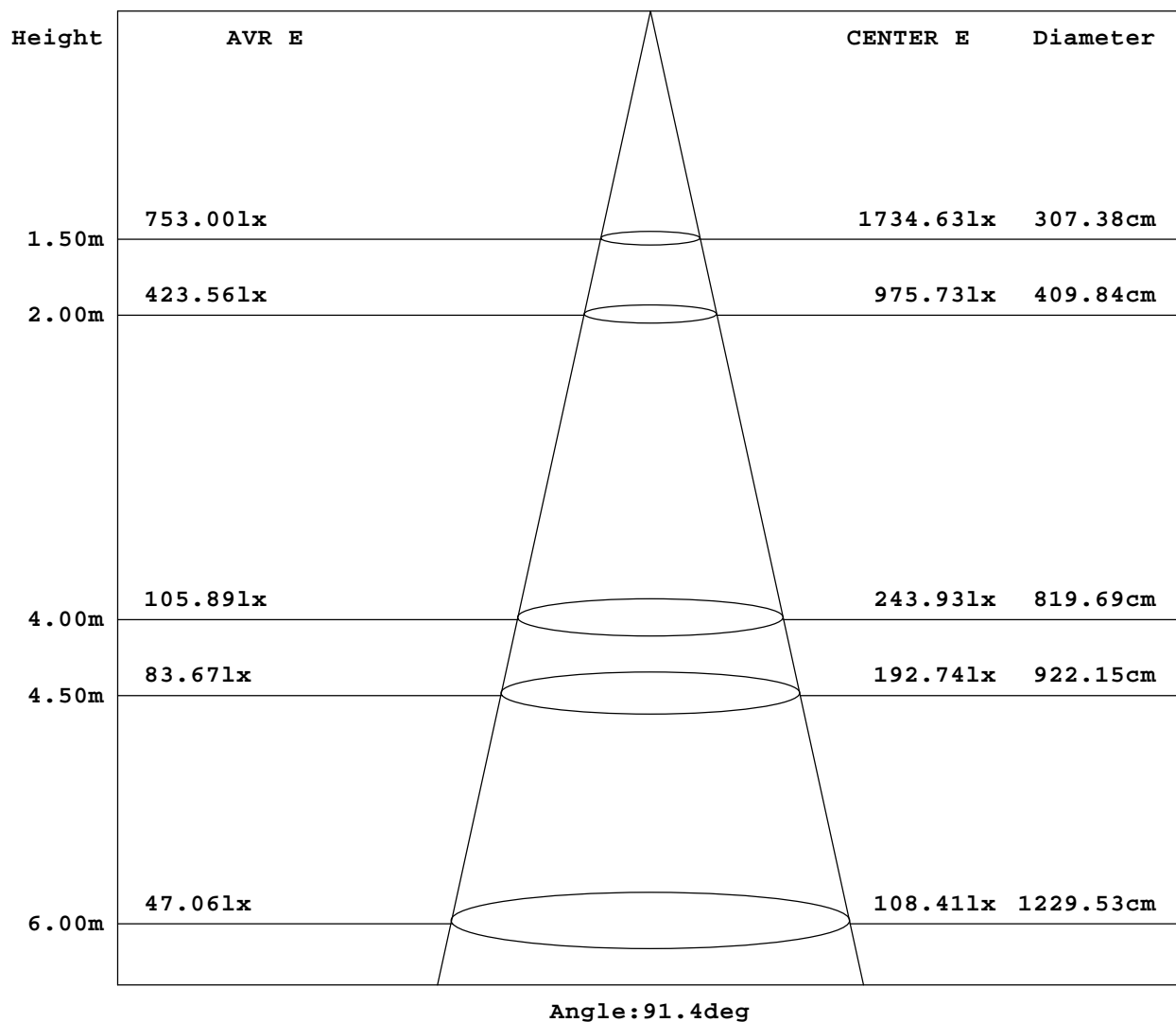
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年08月10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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	3800	3707	3695	3738	3859	3890	3930	3837	0- 5	91.63	91.63
10.0	3641	3516	3509	3580	3706	3745	3829	3733	5- 10	266.3	358.0
15.0	3483	3372	3390	3430	3538	3565	3659	3578	10- 15	423.1	781.1
20.0	3352	3244	3294	3343	3418	3411	3486	3438	15- 20	564.5	1346
25.0	3264	3142	3180	3234	3345	3315	3360	3356	20- 25	695.7	2041
30.0	3175	3016	2954	3015	3192	3223	3277	3269	25- 30	811.3	2853
35.0	2962	2721	2559	2642	2869	3028	3168	3145	30- 35	890.7	3744
40.0	2696	2272	2039	2107	2411	2698	2935	2888	35- 40	901.7	4645
45.0	2176	1750	1519	1573	1865	2215	2547	2417	40- 45	833.7	5479
50.0	1601	1232	1032	1094	1327	1684	2006	1832	45- 50	699.2	6178
55.0	1112	846.7	690.7	735.2	899.2	1191	1452	1285	50- 55	538.0	6716
60.0	746.7	592.8	469.3	499.9	593.5	812.9	1003	864.9	55- 60	391.5	7108
65.0	512.5	439.9	352.6	346.0	407.9	563.5	681.6	589.7	60- 65	282.6	7391
70.0	391.1	341.8	246.9	248.7	310.1	421.6	478.7	415.1	65- 70	211.2	7602
75.0	280.7	223.2	155.0	156.1	207.1	300.8	367.4	303.4	70- 75	156.9	7759
80.0	176.1	130.8	75.09	77.21	115.1	206.3	241.2	205.5	75- 80	106.9	7866
85.0	94.93	50.83	17.25	16.52	51.25	120.6	157.3	115.2	80- 85	62.41	7928
90.0	28.87	16.04	10.96	2.637	11.93	50.10	79.08	44.05	85- 90	27.84	7956
95.0	10.84	15.43	9.510	2.032	9.873	20.40	27.66	3.787	90- 95	10.21	7966
100.0	9.631	14.59	9.873	1.911	10.35	18.76	19.91	0.944	95-100	5.805	7972
105.0	9.026	11.38	10.11	2.214	10.72	14.59	17.13	1.185	100-105	5.120	7977
110.0	8.542	10.41	9.026	2.395	10.72	15.68	16.64	1.488	105-110	4.592	7982
115.0	8.542	12.17	10.96	2.819	11.08	16.16	14.22	2.637	110-115	4.568	7986
120.0	7.937	14.16	12.29	2.516	13.62	17.25	14.35	2.819	115-120	4.728	7991
125.0	0	0	0	0	0	0	0	0	120-125	0.479	7992
130.0	0	0	0	0	0	0	0	0	125-130	0	7992
135.0	0	0	0	0	0	0	0	0	130-135	0	7992
140.0	0	0	0	0	0	0	0	0	135-140	0	7992
145.0	0	0	0	0	0	0	0	0	140-145	0	7992
150.0	0	0	0	0	0	0	0	0	145-150	0	7992
155.0	0	0	0	0	0	0	0	0	150-155	0	7992
160.0	0	0	0	0	0	0	0	0	155-160	0	7992
165.0	0	0	0	0	0	0	0	0	160-165	0	7992
170.0	0	0	0	0	0	0	0	0	165-170	0	7992
175.0	0	0	0	0	0	0	0	0	170-175	0	7992
180.0	0	0	0	0	0	0	0	0	175-180	0	7992
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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

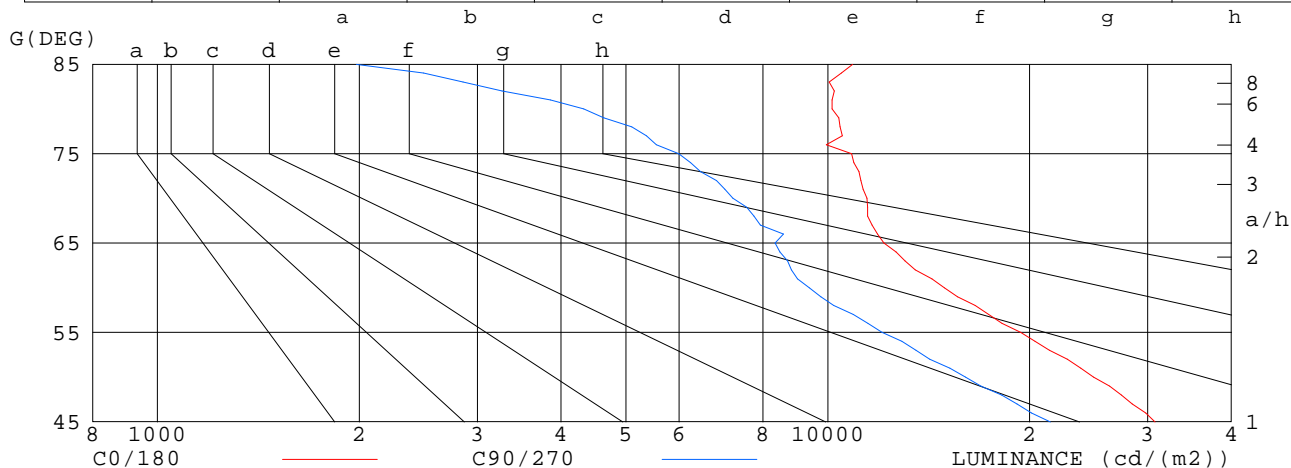
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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	10893	1980
80	10143	4324
75	10849	5992
70	11436	7219
65	12127	8345
60	14935	9386
55	19386	12043
50	24908	16049
45	30768	21482

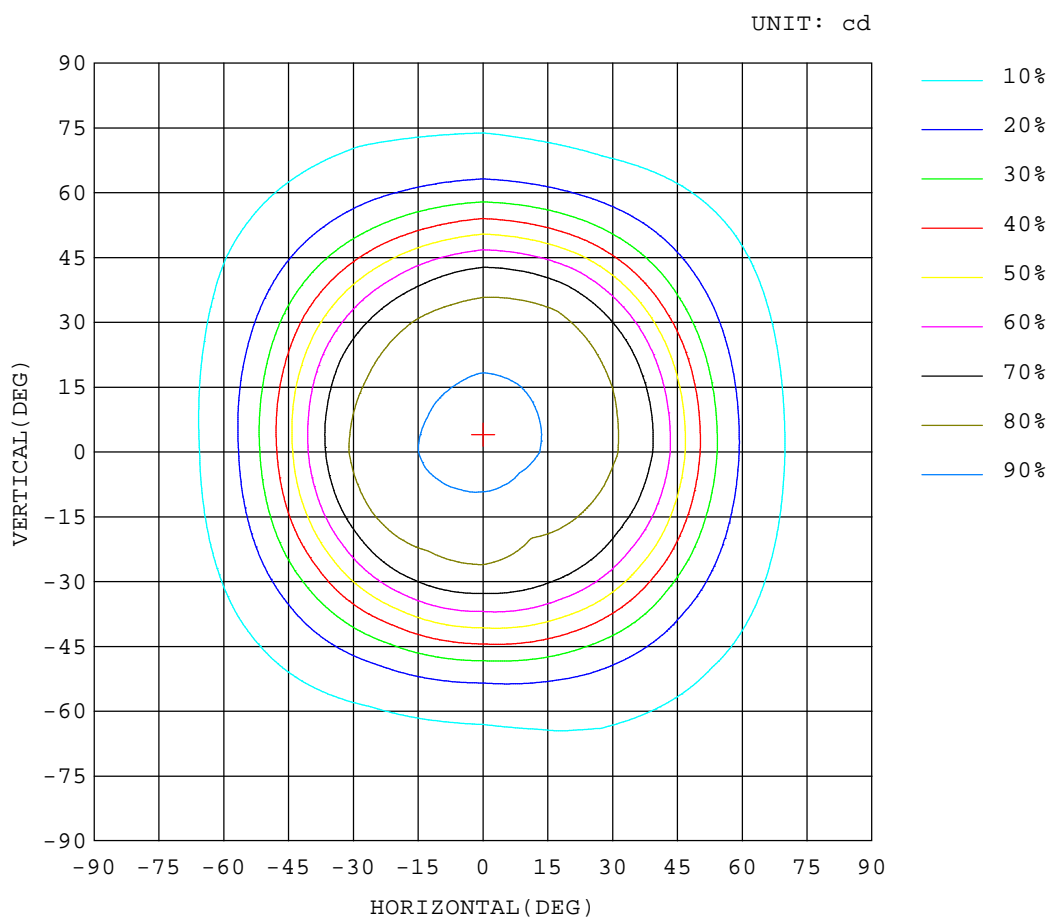
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



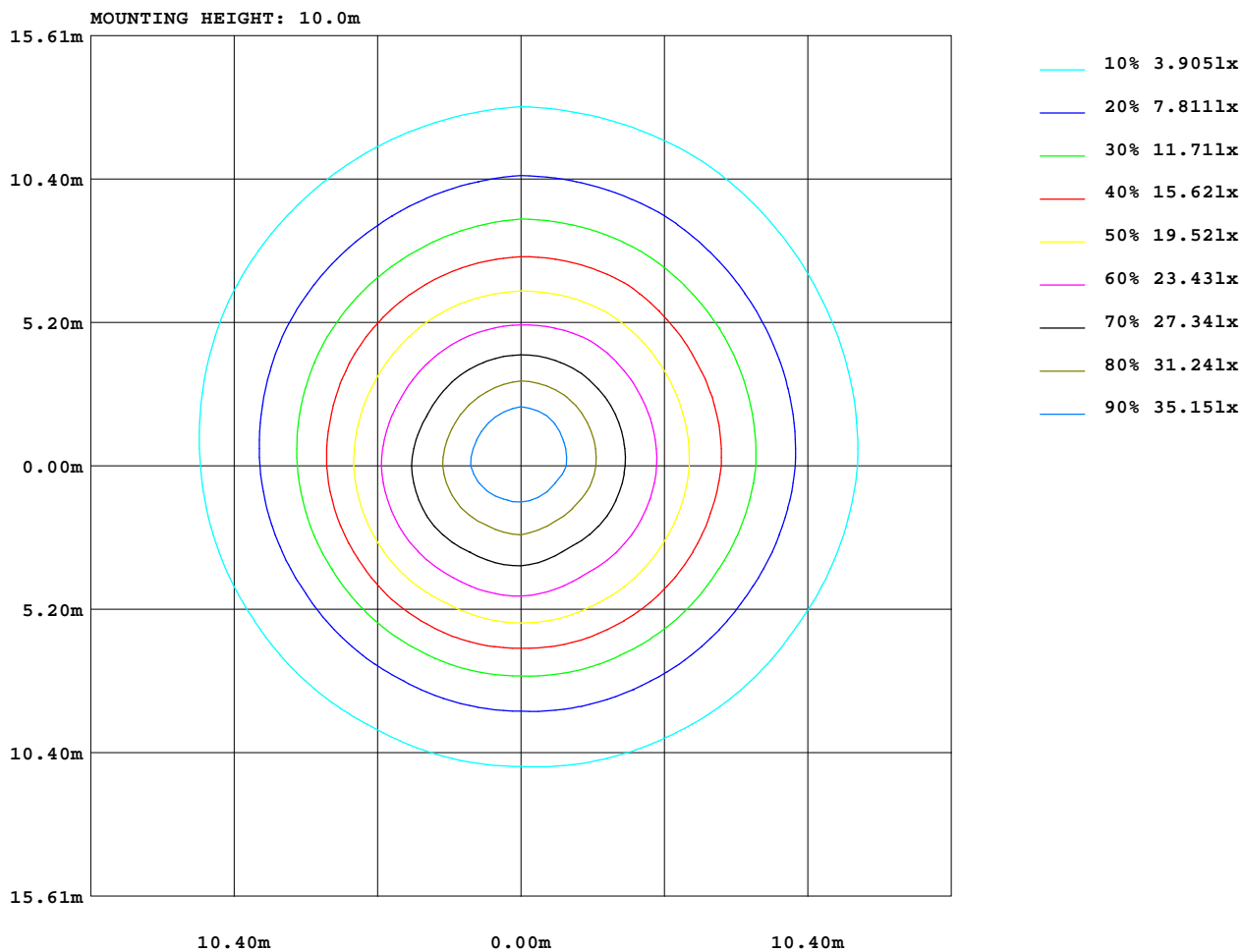
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10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: 90°57W										TYPE:							WEIGHT:			
SPECIFICATION:										DIMENSION: 576*188mm							SERIAL No.:			

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.05	0.28	0.70	1.33	2.14	3.05	3.86	4.43	4.80	4.71	4.16	3.45	2.72	2.04	1.38	0.82	0.39	0.10	40.4	0.00		
90	0.07	0.49	1.39	2.81	4.69	6.89	8.88	10.1	10.9	10.7	9.59	8.03	6.35	4.62	3.02	1.64	0.67	0.13	91.1	15.9		
80	0.10	0.74	2.18	4.44	7.64	11.2	15.0	18.3	20.6	20.6	18.1	14.5	10.8	7.56	4.72	2.55	0.99	0.17	160	128		
70	0.12	0.99	2.97	6.40	11.1	18.3	27.4	36.4	42.9	43.4	37.6	28.6	19.1	11.8	6.83	3.43	1.29	0.21	299	283		
60	0.15	1.22	3.86	8.33	16.8	30.9	48.1	63.7	73.9	75.2	67.2	52.0	33.4	18.2	9.32	4.40	1.57	0.24	509	498		
50	0.17	1.42	4.59	10.8	24.7	46.7	69.5	86.1	94.1	95.0	89.5	74.6	51.0	27.2	12.2	5.32	1.83	0.27	696	687		
40	0.19	1.60	5.14	13.5	32.8	60.1	83.1	95.6	101	102	97.2	85.9	65.1	36.7	15.6	6.09	2.05	0.30	805	797		
30	0.19	1.71	5.52	15.6	38.5	68.0	88.5	99.6	109	109	100	89.4	72.2	43.7	18.5	6.68	2.20	0.31	869	862		
	0.20	1.74	5.64	16.4	40.6	71.0	91.2	103	116	115	103	90.2	74.4	46.8	19.9	6.97	2.28	0.32	904	898		
	0.19	1.70	5.48	15.7	38.9	69.2	90.8	102	111	110	100	88.8	72.6	45.1	19.3	6.84	2.26	0.32	881	874		
	0.18	1.59	5.08	13.8	33.6	61.6	85.6	97.3	102	101	94.6	84.8	66.0	38.9	16.7	6.32	2.13	0.30	812	805		
	0.16	1.41	4.47	11.1	25.7	48.3	72.9	88.4	95.1	94.4	87.7	75.0	53.5	29.8	13.3	5.60	1.94	0.28	710	701		
-30	0.14	1.19	3.75	8.41	17.6	32.8	51.2	67.2	75.9	76.4	69.3	55.3	37.0	20.3	10.0	4.79	1.68	0.25	534	523		
-40	0.12	0.94	2.93	6.14	11.3	19.2	29.1	38.9	45.1	46.0	41.4	32.4	22.1	13.2	7.56	3.87	1.39	0.22	323	306		
-50	0.09	0.68	2.06	4.22	7.16	10.7	14.7	18.8	21.2	21.9	20.6	17.4	13.0	9.04	5.60	2.85	1.08	0.19	172	143		
-60	0.06	0.42	1.23	2.53	4.30	6.11	7.83	9.50	10.5	11.1	11.1	10.2	8.29	5.87	3.57	1.90	0.77	0.15	95.6	22.4		
-70	0.04	0.19	0.51	1.07	1.86	2.72	3.55	4.26	4.68	5.04	5.29	5.09	4.25	3.02	1.87	1.04	0.48	0.11	45.1	0.00		
-80	0.03	0.07	0.06	0.11	0.26	0.43	0.60	0.73	0.82	0.98	1.18	1.26	1.11	0.84	0.57	0.39	0.24	0.08	9.76	0.00		
-90																						
-90 -80 -70 -60 -50 -40 -30 -20 HORIZONTAL(DEG) 20 30 40 50 60 70 80 90																						
Φ t	2.25	18.3	57.6	143	320	568	792	945	1040	1042	958	818	614	365	170	71.5	25.2	3.96	7992			
Φ a	0.00	0.00	20.0	116	295	544	769	922	1016	1019	934	793	589	340	145	41.8	0.00	0.00		7545		

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

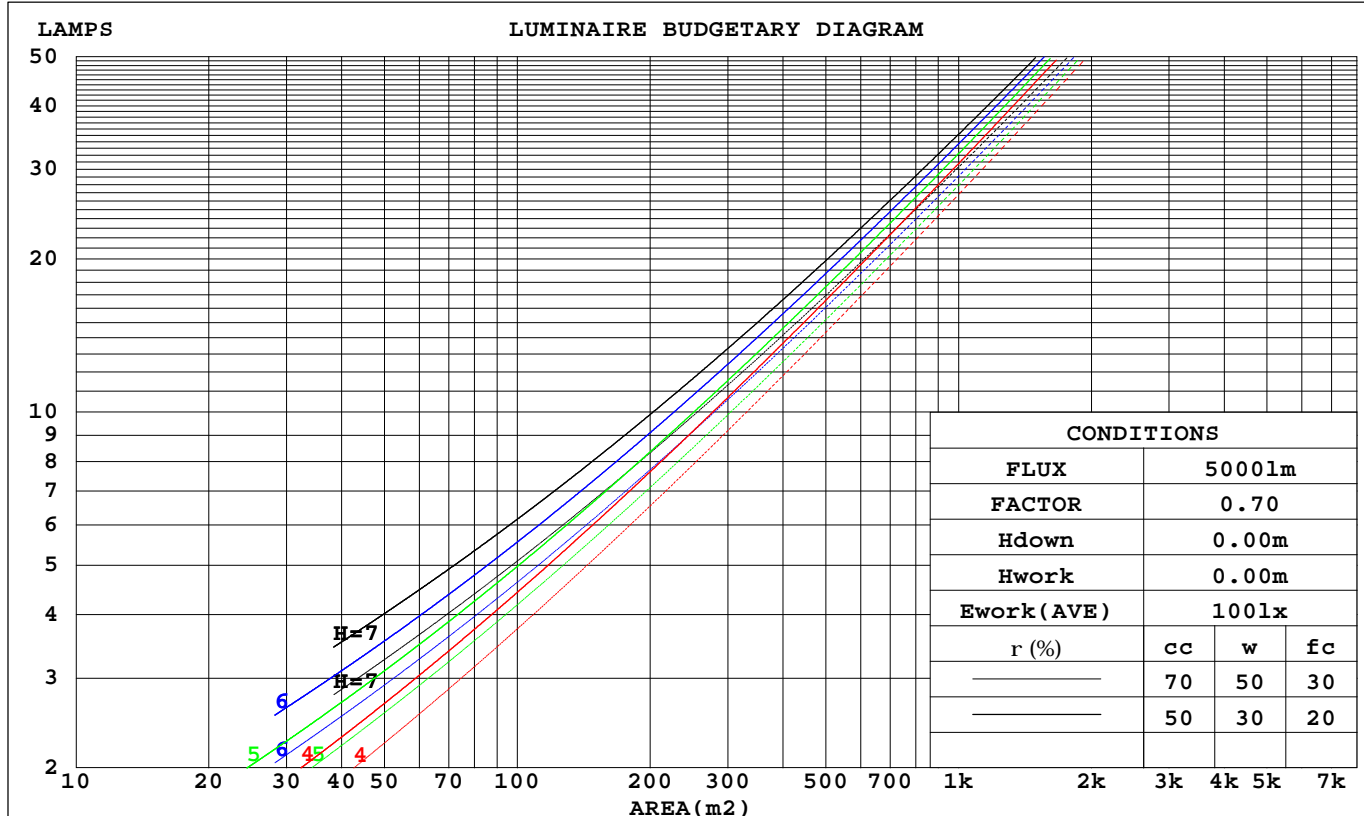
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 90°57W								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 576*188mm				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10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: 90°57W						TYPE:			WEIGHT:		
SPECIFICATION:						DIMENSION: 576*188mm			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	.260	.148	.047	.253	.144	.046	.239	.137	.044	.227	.131	.042	.216	.125	.040															
2.0	.248	.136	.042	.242	.133	.041	.230	.128	.040	.220	.123	.039	.210	.119	.037															
3.0	.233	.124	.037	.228	.122	.037	.218	.118	.036	.209	.114	.035	.200	.111	.034															
4.0	.219	.114	.033	.214	.112	.033	.205	.109	.032	.197	.106	.032	.189	.103	.031															
5.0	.205	.105	.030	.201	.103	.030	.193	.101	.030	.186	.098	.029	.179	.096	.029															
6.0	.193	.097	.028	.189	.095	.027	.182	.093	.027	.175	.091	.027	.169	.089	.026															
7.0	.181	.090	.025	.178	.089	.025	.171	.087	.025	.166	.085	.025	.160	.083	.024															
8.0	.171	.083	.023	.168	.083	.023	.162	.081	.023	.157	.079	.023	.152	.078	.023															
9.0	.161	.078	.022	.159	.077	.022	.153	.076	.022	.149	.075	.021	.144	.073	.021															
10.0	.153	.073	.020	.150	.073	.020	.146	.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	.194	.194	.194	.166	.166	.166	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.180	.160	.142	.154	.137	.122	.105	.094	.084	.061	.055	.049	.019	.018	.016	
2.0	.170	.136	.107	.145	.117	.092	.100	.081	.064	.057	.047	.038	.018	.015	.012	
3.0	.161	.118	.083	.138	.101	.072	.095	.070	.050	.055	.041	.030	.018	.013	.010	
4.0	.153	.104	.066	.131	.090	.058	.090	.062	.041	.052	.037	.024	.017	.012	.008	
5.0	.145	.093	.054	.125	.081	.047	.086	.056	.033	.050	.033	.020	.016	.011	.007	
6.0	.139	.084	.046	.119	.073	.040	.082	.051	.028	.048	.030	.017	.015	.010	.006	
7.0	.132	.077	.039	.114	.067	.034	.079	.047	.024	.046	.028	.014	.015	.009	.005	
8.0	.126	.072	.034	.109	.062	.030	.075	.044	.021	.044	.026	.013	.014	.008	.004	
9.0	.121	.067	.030	.104	.058	.026	.072	.041	.019	.042	.024	.011	.014	.008	.004	
10.0	.116	.062	.027	.100	.054	.024	.069	.038	.017	.040	.023	.010	.013	.007	.003	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10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: 90°57W					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 576*188mm			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	20.7	22.1	21.0	22.3	22.5	
	3H	22.7	24.0	23.0	24.2	24.4	21.3	22.5	21.5	22.7	23.0
	4H	23.0	24.2	23.3	24.4	24.7	21.4	22.6	21.7	22.9	23.1
	6H	23.3	24.4	23.6	24.7	24.9	21.5	22.6	21.8	22.9	23.2
	8H	23.4	24.4	23.7	24.7	25.0	21.5	22.6	21.8	22.8	23.1
	12H	23.5	24.5	23.8	24.8	25.1	21.5	22.5	21.8	22.8	23.1
4H	2H	22.2	23.3	22.5	23.6	23.8	21.0	22.2	21.3	22.4	22.7
	3H	23.0	24.0	23.3	24.3	24.6	21.8	22.8	22.1	23.1	23.4
	4H	23.4	24.3	23.8	24.7	25.0	22.1	23.0	22.4	23.3	23.7
	6H	23.8	24.6	24.2	25.0	25.3	22.3	23.1	22.7	23.4	23.8
	8H	24.0	24.7	24.4	25.1	25.5	22.3	23.0	22.7	23.4	23.8
	12H	24.1	24.8	24.5	25.2	25.6	22.3	23.0	22.7	23.4	23.8
8H	4H	23.5	24.2	23.9	24.6	25.0	22.2	23.0	22.7	23.4	23.8
	6H	24.0	24.6	24.4	25.0	25.4	22.6	23.2	23.0	23.6	24.0
	8H	24.2	24.7	24.6	25.2	25.6	22.7	23.2	23.1	23.6	24.1
	12H	24.4	24.9	24.9	25.3	25.8	22.7	23.1	23.2	23.6	24.1
12H	4H	23.5	24.2	23.9	24.5	25.0	22.2	22.9	22.7	23.3	23.7
	6H	24.0	24.5	24.4	24.9	25.4	22.6	23.2	23.1	23.6	24.0
	8H	24.2	24.7	24.7	25.1	25.6	22.7	23.2	23.2	23.6	24.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.5					+ 0.7 / - 0.9					
1.5H	+ 0.6 / - 0.7					+ 0.6 / - 1.0					
2.0H	+ 1.8 / - 1.4					+ 1.5 / - 1.3					

CIE Pub.117 Corrected 7992 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.2)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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	63	54	49	43
0.80	75	65	59	74	65	59	73	64	58	52
1.00	83	74	68	82	73	67	80	74	67	61
1.25	90	81	75	88	80	75	86	79	74	68
1.50	94	86	80	93	85	80	90	83	79	72
2.00	100	93	87	98	92	87	95	89	85	78
2.50	103	96	91	101	95	91	97	92	89	81
3.00	106	100	95	103	98	94	100	95	92	84
4.00	109	104	100	106	102	99	102	99	96	88
5.00	111	107	103	108	105	102	104	101	98	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

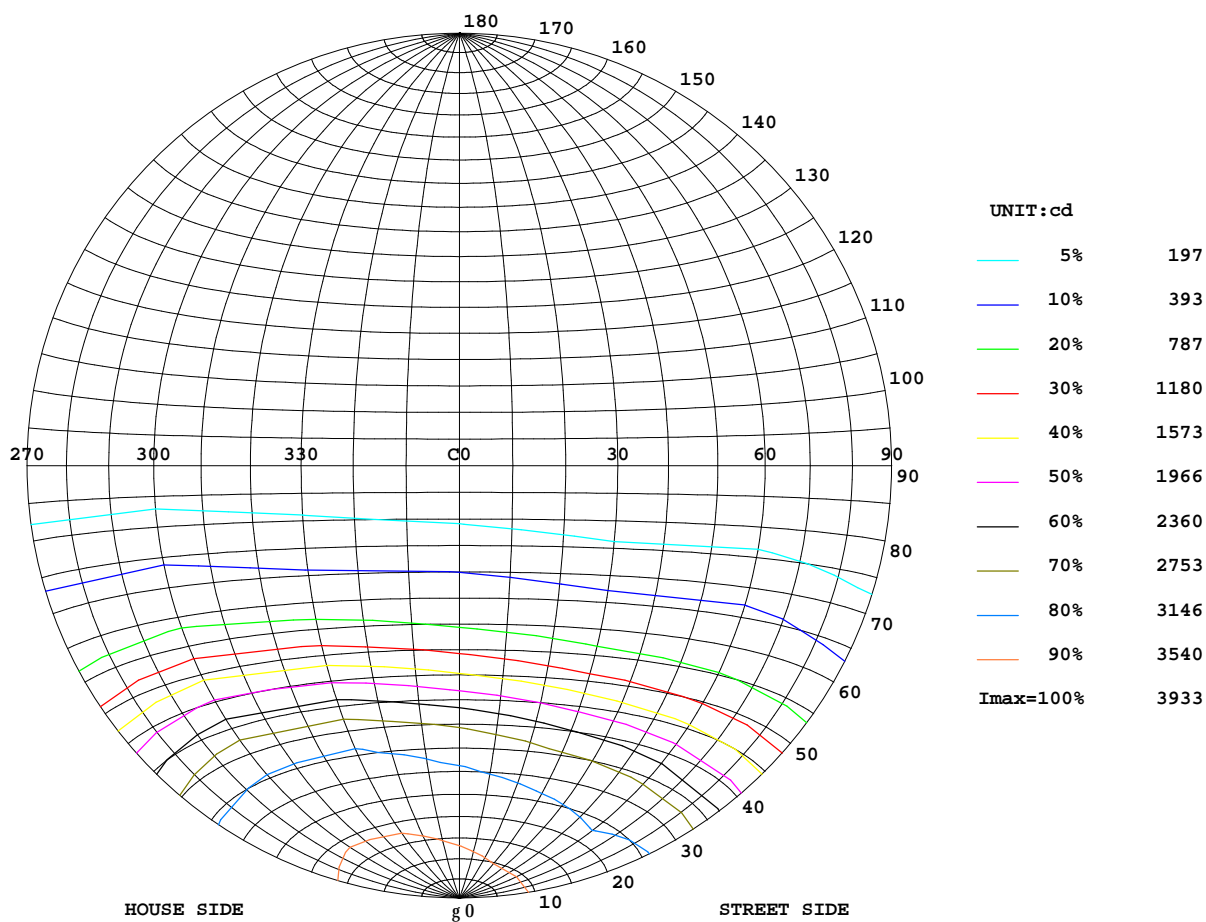
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

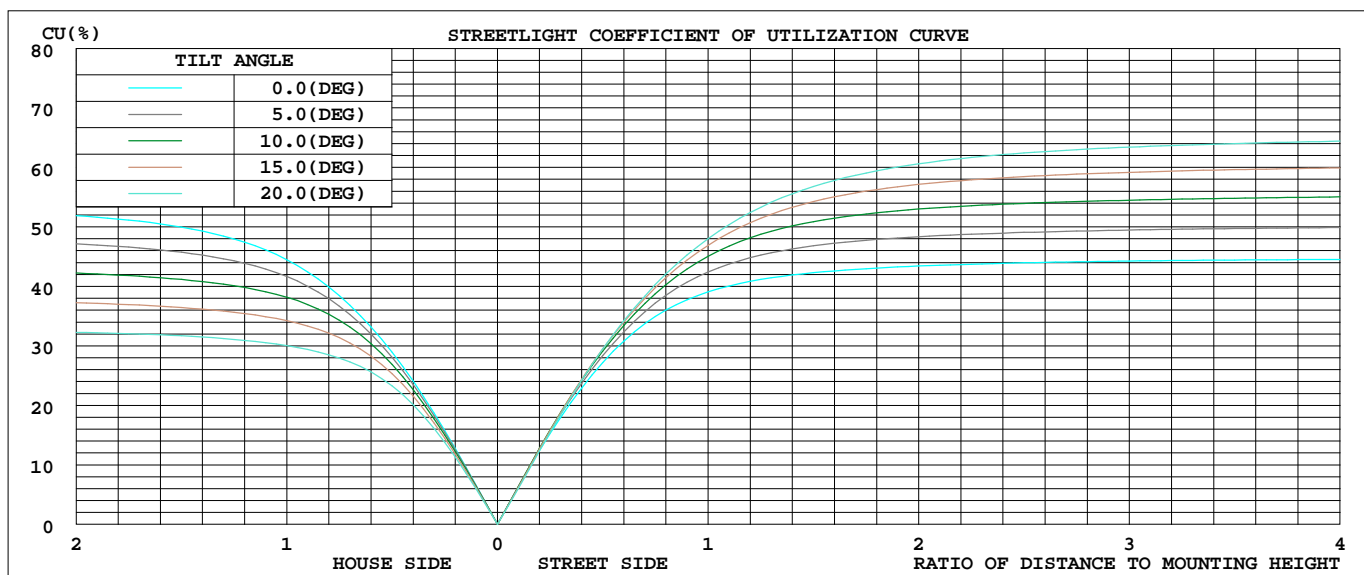
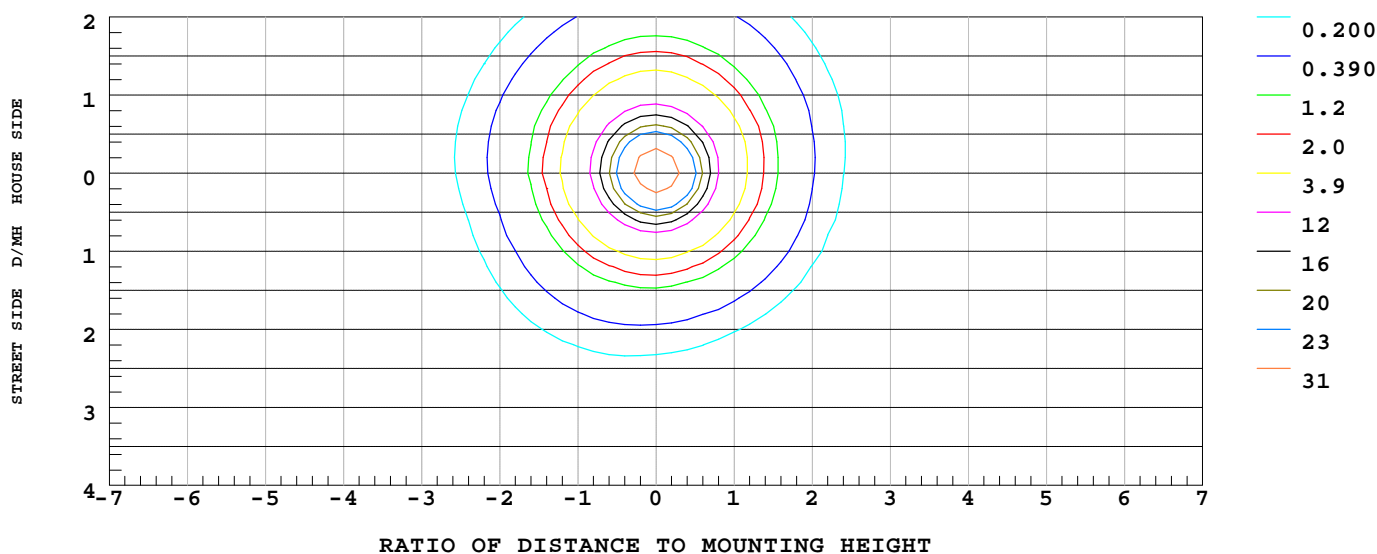
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 39.03 lx



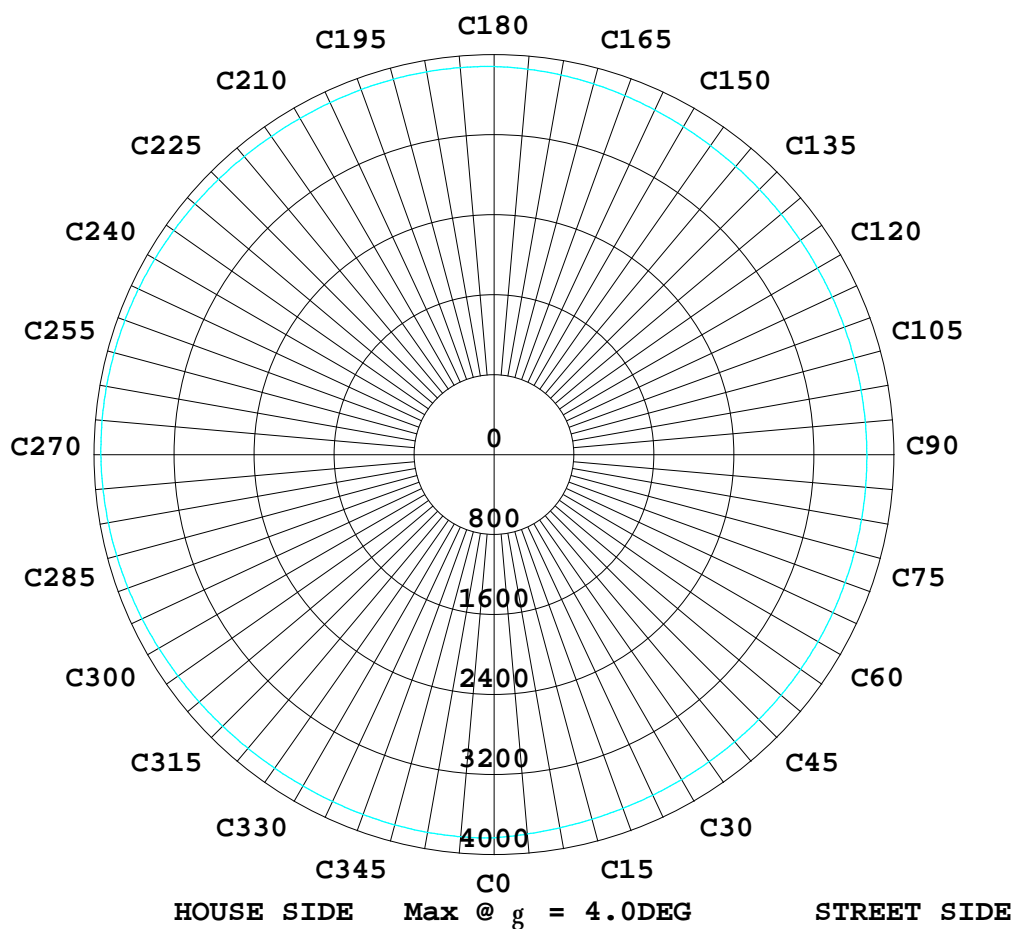
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 90°57W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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