

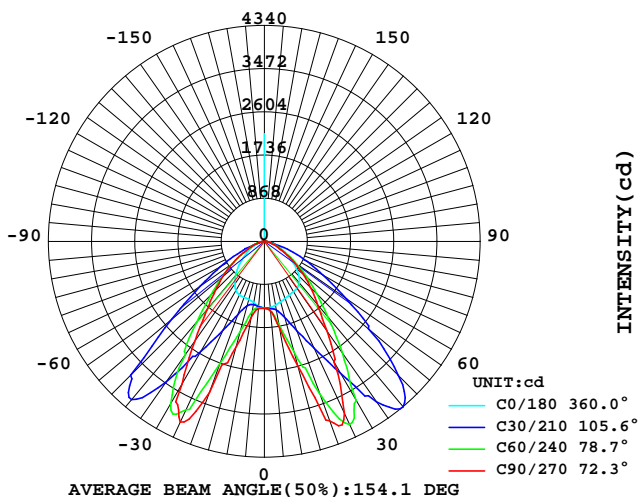
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

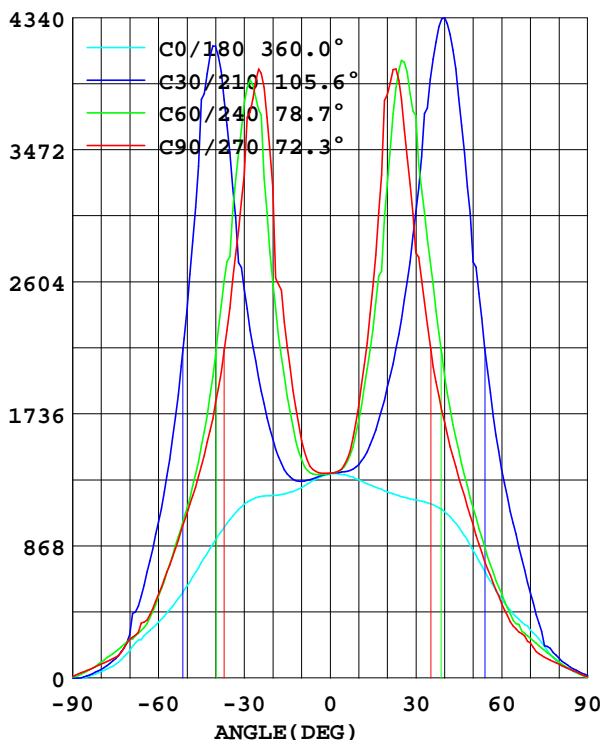
MANUFACTURER:		
Address:		
NAME: 25°+90°+25°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	4340	S/MH(C0/180)	1.26
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.61
NOMINAL POWER(W)	48	TOTAL FLUX(lm)	7012.7	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	144.8	Current(A)	0.231
NOMINAL FLUX(lm)	7012.7	h up(%)	0.0	Power(W)	48.43
LAMPS QUANTITY	1	h down(%)	100.0	Power Factor(PF)	0.958
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	6607.6	EEI	0.100

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



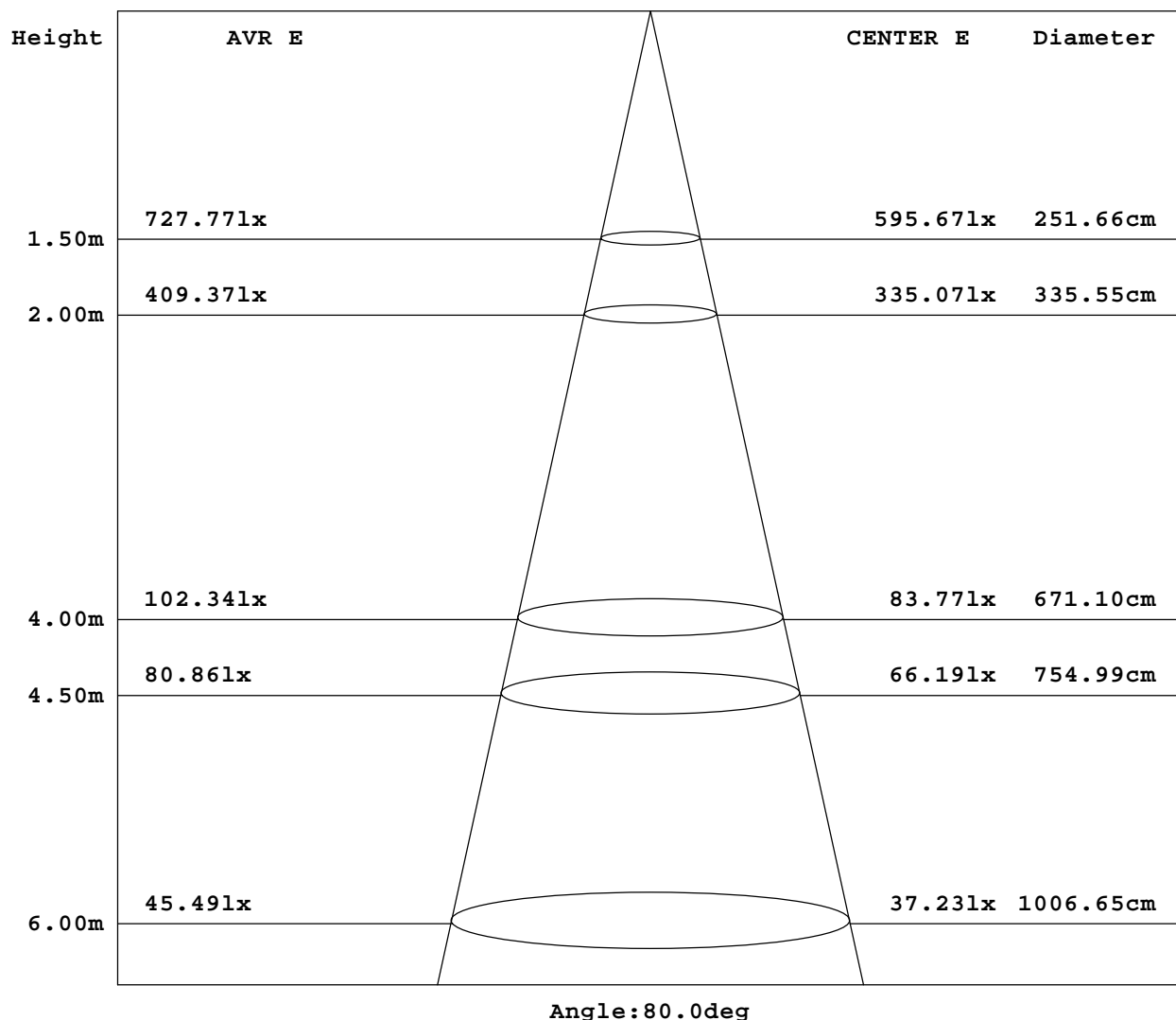
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 25°+90°+25°50W	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: 25°+90°+25°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	1306	1327	1357	1348	1336	1373	1401	1348	0- 5	32.16	32.16
10.0	1251	1364	1560	1402	1303	1544	1780	1460	5- 10	99.60	131.7
15.0	1215	1597	2180	1634	1262	1934	2576	1772	10- 15	190.0	321.7
20.0	1200	2088	3228	2082	1224	2581	3834	2341	15- 20	332.2	654.0
25.0	1190	2851	4002	2836	1193	3207	3805	3042	20- 25	548.0	1202
30.0	1144	3166	3308	3163	1170	3378	2794	3220	25- 30	727.3	1929
35.0	1041	3110	2432	2997	1146	3336	2190	3247	30- 35	815.1	2744
40.0	906.7	3134	1808	3101	1092	3161	1679	3087	35- 40	875.2	3620
45.0	759.9	2665	1394	2961	991.7	2653	1316	2454	40- 45	875.5	4495
50.0	603.9	1766	1080	2322	839.2	1927	1009	1728	45- 50	753.8	5249
55.0	470.5	1191	797.0	1632	666.0	1408	717.2	1131	50- 55	584.4	5834
60.0	366.3	781.6	549.0	1095	519.6	962.3	488.3	755.7	55- 60	428.1	6262
65.0	278.2	470.0	366.0	711.6	402.7	650.6	322.0	484.0	60- 65	301.6	6563
70.0	180.8	268.0	252.9	478.0	313.8	408.7	229.8	251.0	65- 70	205.8	6769
75.0	90.21	151.3	136.6	247.3	208.5	197.0	135.7	143.3	70- 75	125.5	6895
80.0	42.42	80.59	90.70	130.9	96.75	118.7	91.66	73.39	75- 80	69.60	6964
85.0	6.606	28.38	49.56	62.75	42.30	53.37	48.10	23.00	80- 85	35.68	7000
90.0	0	3.242	9.752	15.43	7.453	9.510	7.816	0	85- 90	11.80	7012
95.0	0	0	0	0	0	0	0	0	90- 95	0.918	7013
100.0	0	0	0	0	0	0	0	0	95-100	0	7013
105.0	0	0	0	0	0	0	0	0	100-105	0	7013
110.0	0	0	0	0	0	0	0	0	105-110	0	7013
115.0	0	0	0	0	0	0	0	0	110-115	0	7013
120.0	0	0	0	0	0	0	0	0	115-120	0	7013
125.0	0	0	0	0	0	0	0	0	120-125	0	7013
130.0	0	0	0	0	0	0	0	0	125-130	0	7013
135.0	0	0	0	0	0	0	0	0	130-135	0	7013
140.0	0	0	0	0	0	0	0	0	135-140	0	7013
145.0	0	0	0	0	0	0	0	0	140-145	0	7013
150.0	0	0	0	0	0	0	0	0	145-150	0	7013
155.0	0	0	0	0	0	0	0	0	150-155	0	7013
160.0	0	0	0	0	0	0	0	0	155-160	0	7013
165.0	0	0	0	0	0	0	0	0	160-165	0	7013
170.0	0	0	0	0	0	0	0	0	165-170	0	7013
175.0	0	0	0	0	0	0	0	0	170-175	0	7013
180.0	0	0	0	0	0	0	0	0	175-180	0	7013
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:

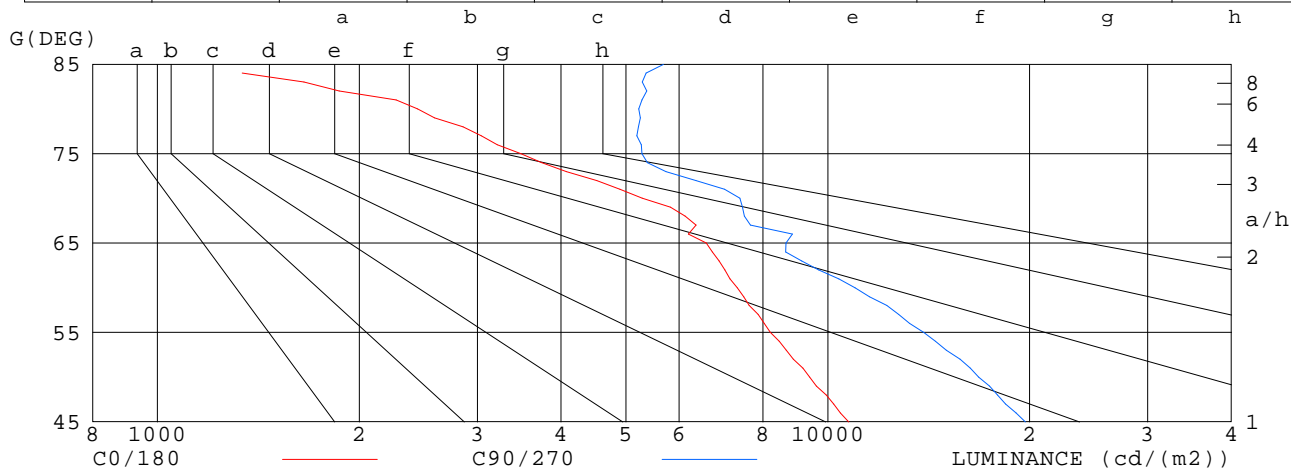
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 25°+90°+25°50W	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	758	5687
80	2443	5223
75	3486	5281
70	5288	7396
65	6584	8663
60	7327	10981
55	8203	13897
50	9396	16798
45	10747	19721

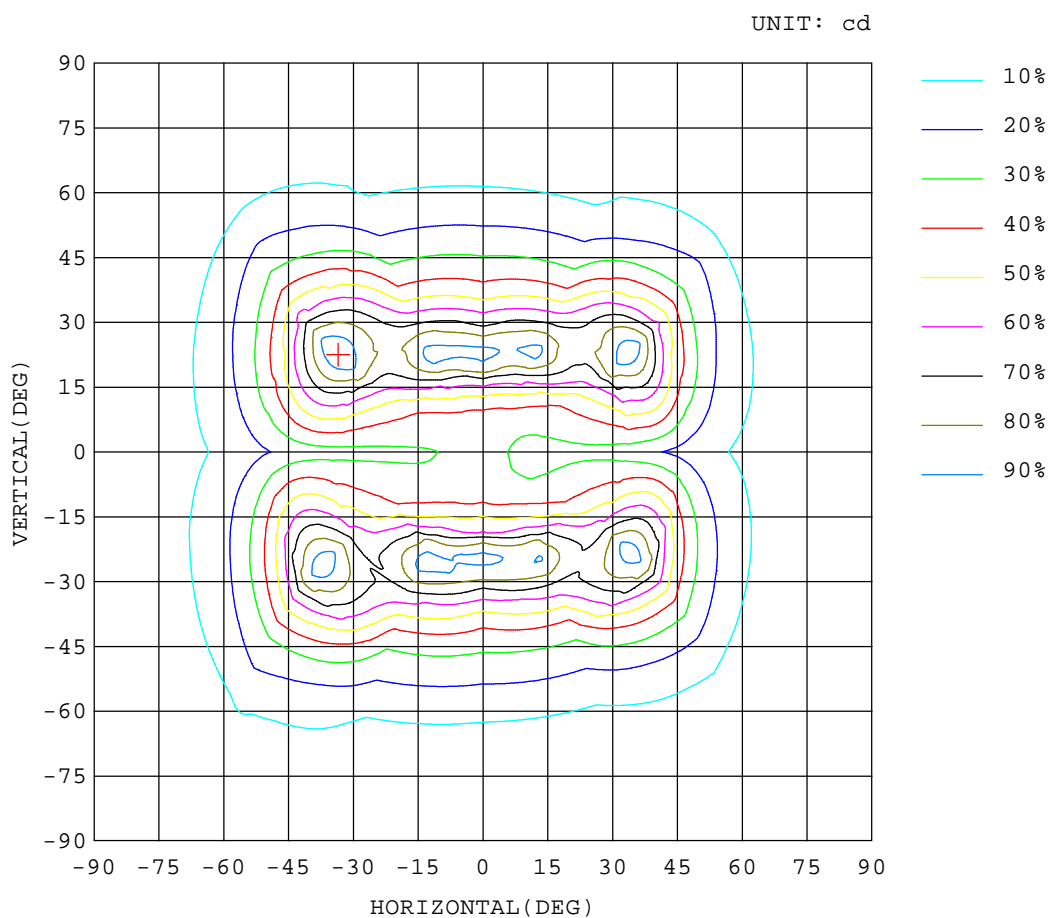
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 25°+90°+25°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



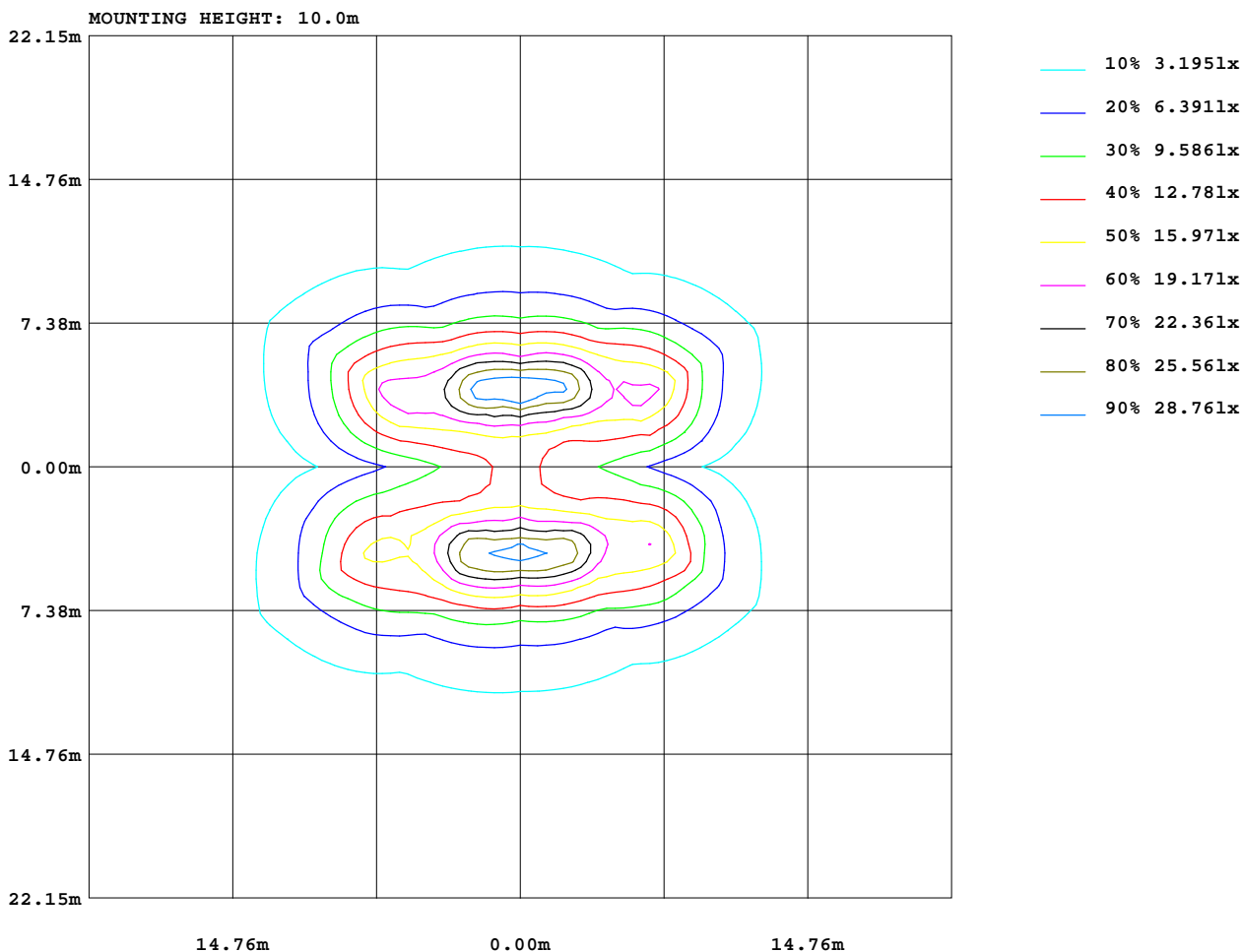
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 25°+90°+25°50W	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: 25°+90°+25°50W										TYPE:					WEIGHT:				
SPECIFICATION:										DIMENSION: 576*188mm					SERIAL No.:				

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a				
	0.03	0.17	0.41	0.67	0.86	1.02	1.19	1.36	1.44	1.34	1.07	0.75	0.50	0.33	0.18	0.07	0.01	0.00								
90																										
80	0.06	0.34	0.94	1.84	2.79	3.67	4.26	4.55	4.50	4.31	4.02	3.44	2.64	1.75	0.98	0.40	0.07	0.00	40.6	0.00						
70	0.08	0.53	1.69	3.84	6.84	8.61	8.59	9.76	10.2	10.0	8.96	7.45	6.22	4.12	2.24	0.90	0.20	0.01	90.4	8.45						
60	0.10	0.76	2.80	8.62	14.9	18.0	17.9	20.7	22.2	21.8	19.3	15.5	14.3	10.3	4.55	1.50	0.35	0.02	194	175						
50	0.12	1.02	4.53	14.1	26.7	36.0	36.4	38.2	40.9	40.3	36.6	32.9	29.5	20.4	9.53	2.30	0.50	0.03	371	362						
40	0.13	1.29	6.02	17.8	42.9	65.5	68.5	66.7	70.2	70.2	66.2	65.7	57.8	33.7	13.2	3.46	0.63	0.04	651	643						
30	0.15	1.55	6.72	19.6	51.5	95.2	94.3	104	111	110	103	90.7	90.4	42.9	14.6	4.32	0.74	0.05	941	934						
	0.16	1.70	6.62	18.6	46.4	78.6	78.1	79.2	80.4	77.2	73.0	71.3	74.5	40.1	13.9	4.49	0.82	0.05	746	739						
	0.16	1.73	5.86	14.6	30.9	44.6	45.2	44.2	44.4	43.0	40.6	42.4	41.2	25.8	10.6	4.02	0.84	0.05	441	432						
	0.16	1.76	5.95	15.2	31.8	39.2	39.8	40.0	41.8	41.0	39.2	41.0	39.8	26.1	10.7	3.99	0.84	0.05	419	410						
	0.16	1.77	6.86	20.2	50.7	65.6	61.4	66.1	65.9	65.4	66.5	66.5	71.6	41.1	14.0	4.42	0.81	0.05	670	663						
-30	0.15	1.65	7.12	21.4	59.5	92.5	84.3	107	113	112	103	88.5	91.0	43.9	14.6	4.26	0.72	0.04	945	939						
-40	0.13	1.36	6.65	19.2	49.3	75.2	73.8	77.7	79.7	77.1	70.9	68.6	60.1	34.2	12.8	3.51	0.60	0.03	711	704						
-50	0.12	1.01	5.25	15.4	29.7	41.7	42.1	43.2	44.5	43.0	39.3	35.1	30.8	20.4	9.21	2.33	0.46	0.02	404	395						
-60	0.10	0.74	3.22	10.2	16.5	20.6	21.6	24.1	25.0	24.0	21.5	17.3	14.7	10.3	4.76	1.38	0.31	0.01	217	201						
-70	0.08	0.52	1.65	4.52	8.23	9.88	9.86	11.2	11.5	11.0	9.85	8.14	6.79	4.39	2.08	0.77	0.17	0.00	101	24.6						
-80	0.05	0.32	0.91	1.85	3.09	4.39	5.00	5.09	4.83	4.64	4.54	4.14	3.15	1.89	0.88	0.30	0.04	0.00	45.1	0.00						
-90	0.03	0.15	0.36	0.67	1.05	1.48	1.75	1.75	1.62	1.48	1.36	1.16	0.81	0.43	0.15	0.02	0.00	0.00	14.3	0.00						
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)										20	30	40	50	60	70	80	90
Φ t	1.95	18.4	73.6	209	474	702	695	745	774	758	709	661	636	363	139	42.4	8.11	0.46	7013							
Φ a	0.00	0.00	44.1	193	456	680	666	717	746	730	681	633	613	343	120	6.64	0.00	0.00		6608						

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

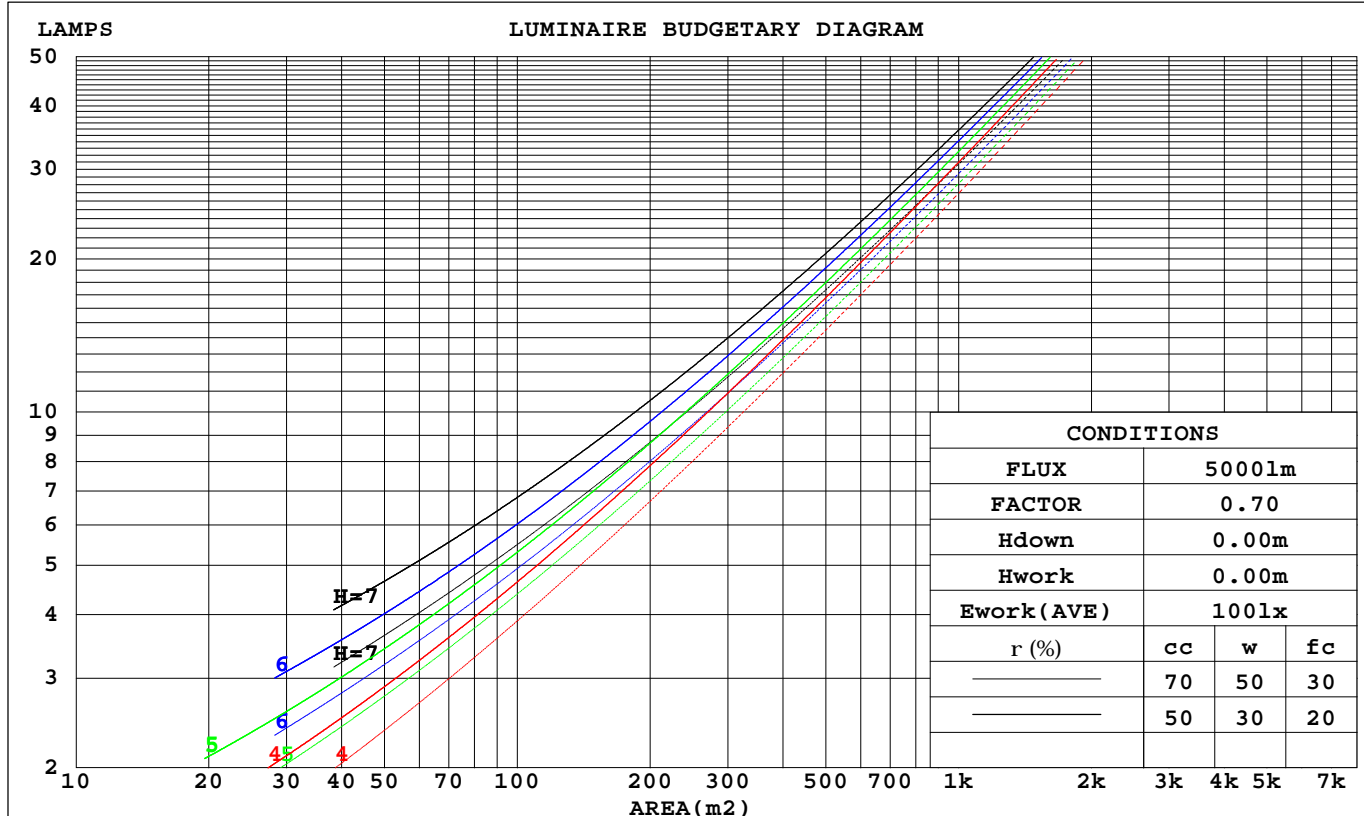
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 25°+90°+25°50W								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: 25°+90°+25°50W						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	.267	.152	.048	.260	.148	.047	.247	.141	.045	.235	.135	.043	.223	.130	.042															
2.0	.259	.142	.044	.253	.139	.043	.241	.134	.042	.231	.129	.041	.221	.125	.039															
3.0	.245	.131	.039	.240	.129	.039	.230	.125	.038	.221	.121	.037	.212	.117	.036															
4.0	.231	.120	.035	.226	.118	.035	.217	.115	.034	.209	.112	.034	.202	.109	.033															
5.0	.217	.111	.032	.213	.109	.032	.205	.107	.031	.198	.104	.031	.191	.102	.031															
6.0	.204	.102	.029	.200	.101	.029	.193	.099	.029	.187	.097	.029	.180	.095	.028															
7.0	.192	.095	.027	.189	.094	.027	.182	.092	.027	.176	.090	.026	.171	.089	.026															
8.0	.181	.088	.025	.178	.088	.025	.172	.086	.025	.167	.084	.024	.162	.083	.024															
9.0	.171	.083	.023	.168	.082	.023	.163	.081	.023	.158	.079	.023	.153	.078	.023															
10.0	.161	.077	.021	.159	.077	.021	.154	.076	.021	.150	.074	.021	.146	.073	.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	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.138	.152	.134	.119	.104	.092	.082	.060	.054	.048	.019	.017	.015	
2.0	.168	.132	.102	.144	.114	.088	.099	.079	.062	.057	.046	.036	.018	.015	.012	
3.0	.160	.114	.078	.137	.099	.068	.094	.068	.047	.054	.040	.028	.017	.013	.009	
4.0	.153	.101	.061	.131	.087	.053	.090	.061	.037	.052	.036	.022	.017	.012	.007	
5.0	.146	.090	.049	.125	.078	.043	.086	.054	.030	.050	.032	.018	.016	.010	.006	
6.0	.139	.082	.041	.120	.071	.035	.082	.050	.025	.048	.029	.015	.015	.010	.005	
7.0	.133	.075	.034	.114	.065	.030	.079	.046	.021	.046	.027	.013	.015	.009	.004	
8.0	.127	.069	.029	.109	.060	.026	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.121	.064	.026	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.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: 25°+90°+25°50W					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	2H	23.5	24.9	23.7	25.1	25.3	21.7	23.1	21.9	23.3	23.5
	3H	23.6	24.9	23.9	25.2	25.4	22.0	23.3	22.3	23.6	23.8
	4H	23.6	24.8	23.9	25.1	25.3	22.1	23.4	22.4	23.6	23.8
	6H	23.5	24.7	23.8	24.9	25.2	22.2	23.3	22.5	23.6	23.9
	8H	23.5	24.6	23.8	24.9	25.1	22.2	23.3	22.5	23.6	23.9
	12H	23.4	24.5	23.8	24.8	25.1	22.2	23.3	22.5	23.6	23.9
4H	2H	23.6	24.8	23.9	25.1	25.3	22.1	23.3	22.4	23.6	23.8
	3H	23.8	24.9	24.2	25.2	25.5	22.5	23.6	22.9	23.9	24.2
	4H	23.8	24.8	24.2	25.1	25.5	22.7	23.7	23.1	24.0	24.3
	6H	23.8	24.7	24.2	25.0	25.4	22.8	23.7	23.2	24.1	24.4
	8H	23.8	24.6	24.2	24.9	25.3	22.9	23.7	23.3	24.1	24.4
	12H	23.7	24.5	24.2	24.8	25.2	23.0	23.7	23.4	24.1	24.5
8H	4H	23.8	24.6	24.2	25.0	25.3	22.7	23.5	23.1	23.9	24.3
	6H	23.8	24.5	24.2	24.9	25.3	23.0	23.6	23.4	24.0	24.4
	8H	23.8	24.4	24.2	24.8	25.2	23.1	23.7	23.5	24.1	24.5
	12H	23.8	24.2	24.2	24.7	25.2	23.2	23.7	23.7	24.1	24.6
12H	4H	23.8	24.5	24.2	24.9	25.3	22.7	23.4	23.1	23.8	24.2
	6H	23.8	24.4	24.2	24.8	25.2	23.0	23.5	23.4	23.9	24.4
	8H	23.8	24.3	24.3	24.7	25.2	23.1	23.6	23.6	24.0	24.5
Variations with the observer position at spacings:											
S = 1.0H	+ 2.6 / - 1.9					+ 1.0 / - 1.2					
1.5H	+ 1.6 / - 4.5					+ 1.2 / - 0.8					
2.0H	+ 3.2 / - 5.0					+ 1.1 / - 2.1					

CIE Pub.117 Corrected 7013 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.8)

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: 25°+90°+25°50W	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	61	50	43	60	50	43	59	49	43	37
0.80	72	61	54	71	60	54	69	60	54	47
1.00	81	71	64	79	70	64	77	71	63	57
1.25	88	78	72	86	78	72	84	76	71	64
1.50	92	84	78	91	83	77	88	81	76	69
2.00	99	91	86	97	90	85	94	88	84	77
2.50	102	95	90	100	94	89	97	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	104	101	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

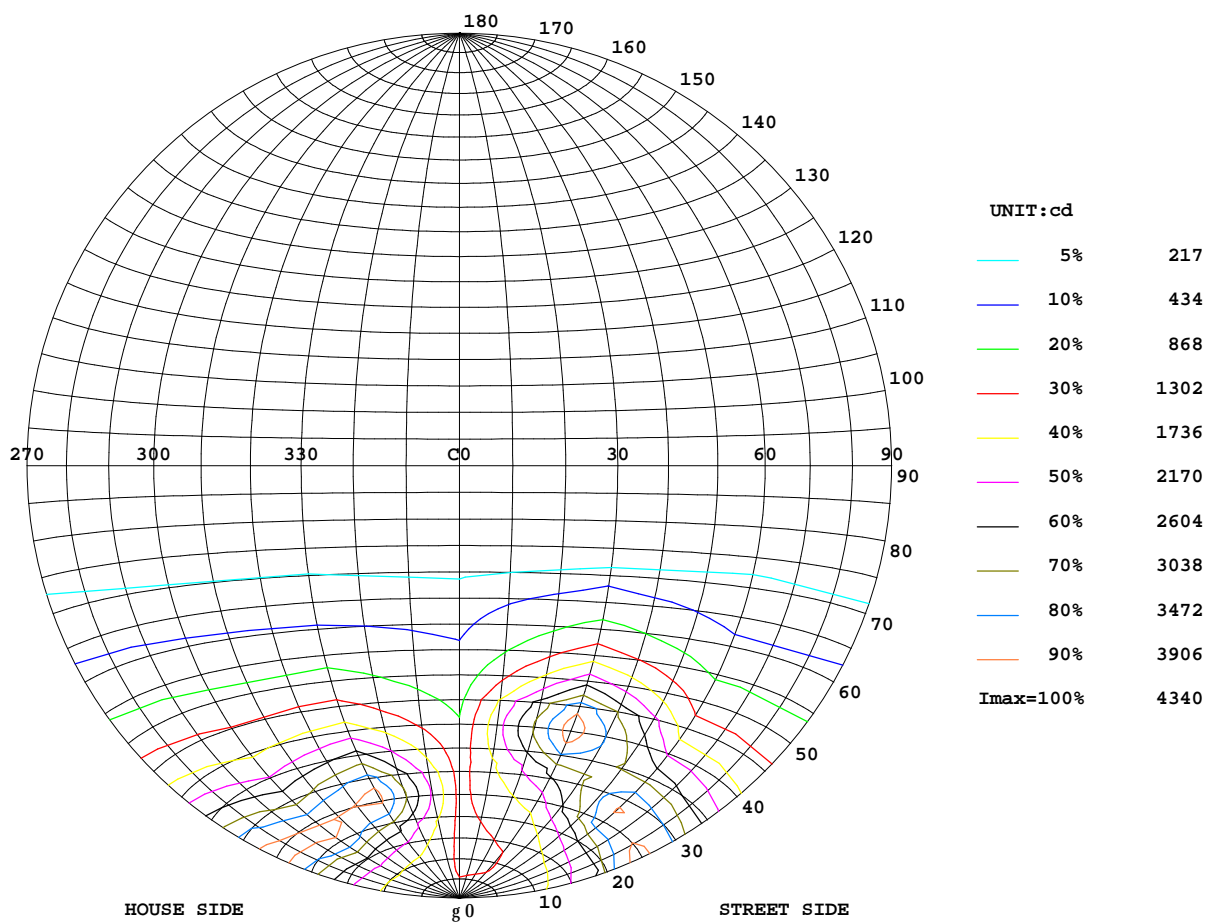
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 25°+90°+25°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



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

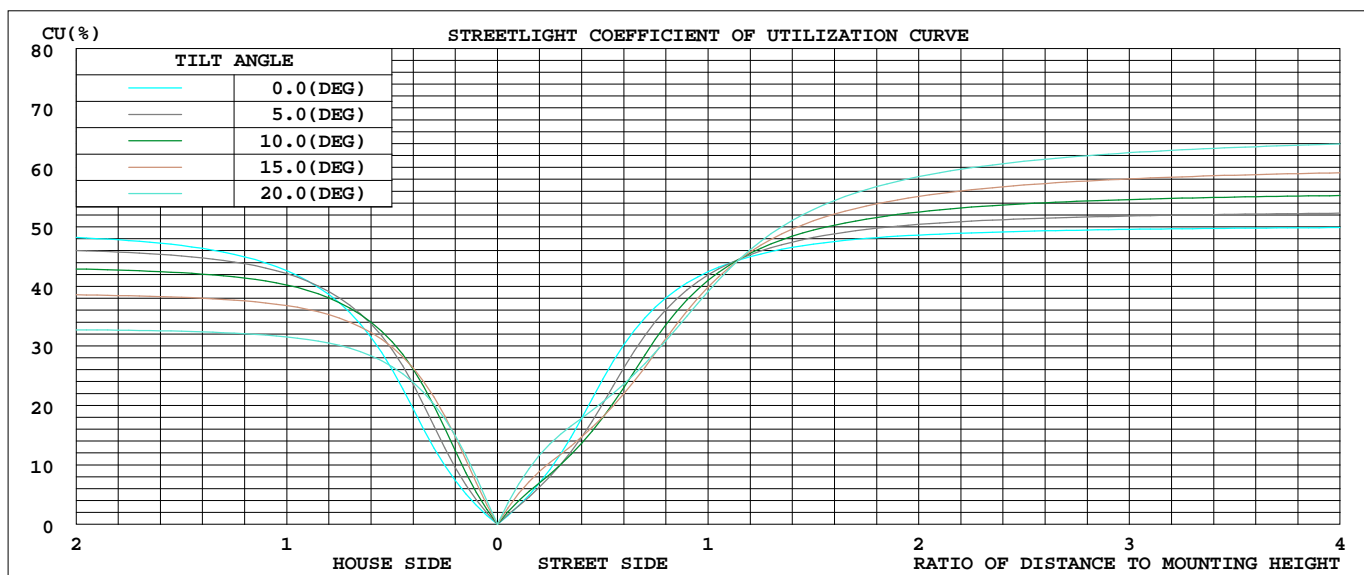
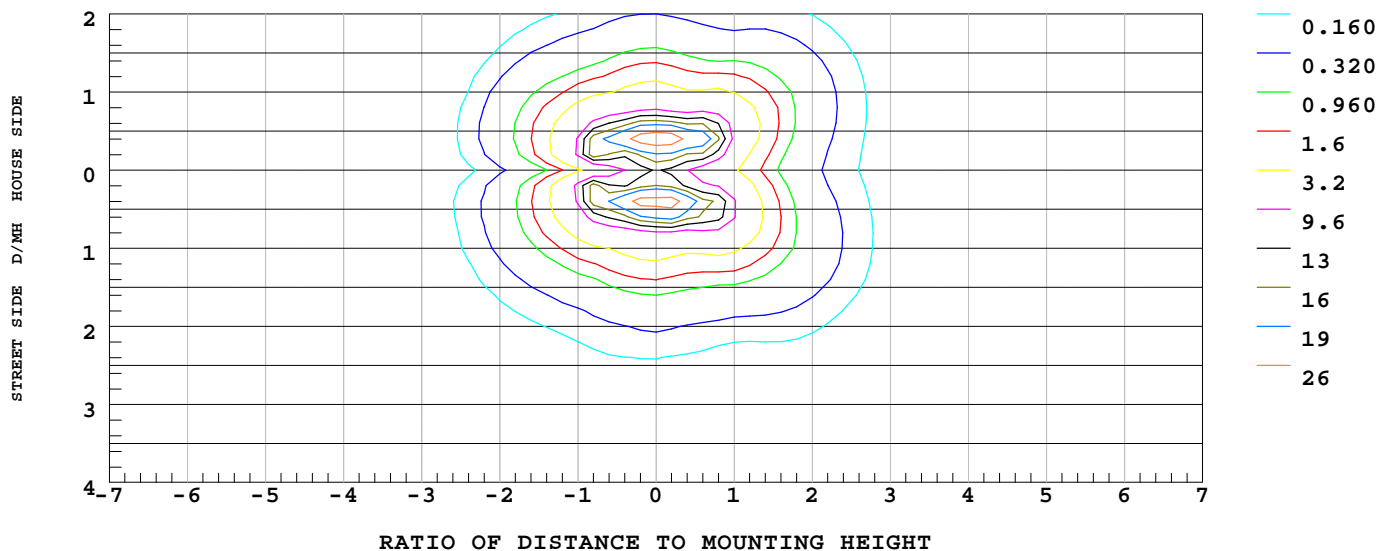
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 25°+90°+25°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 13.40 lx



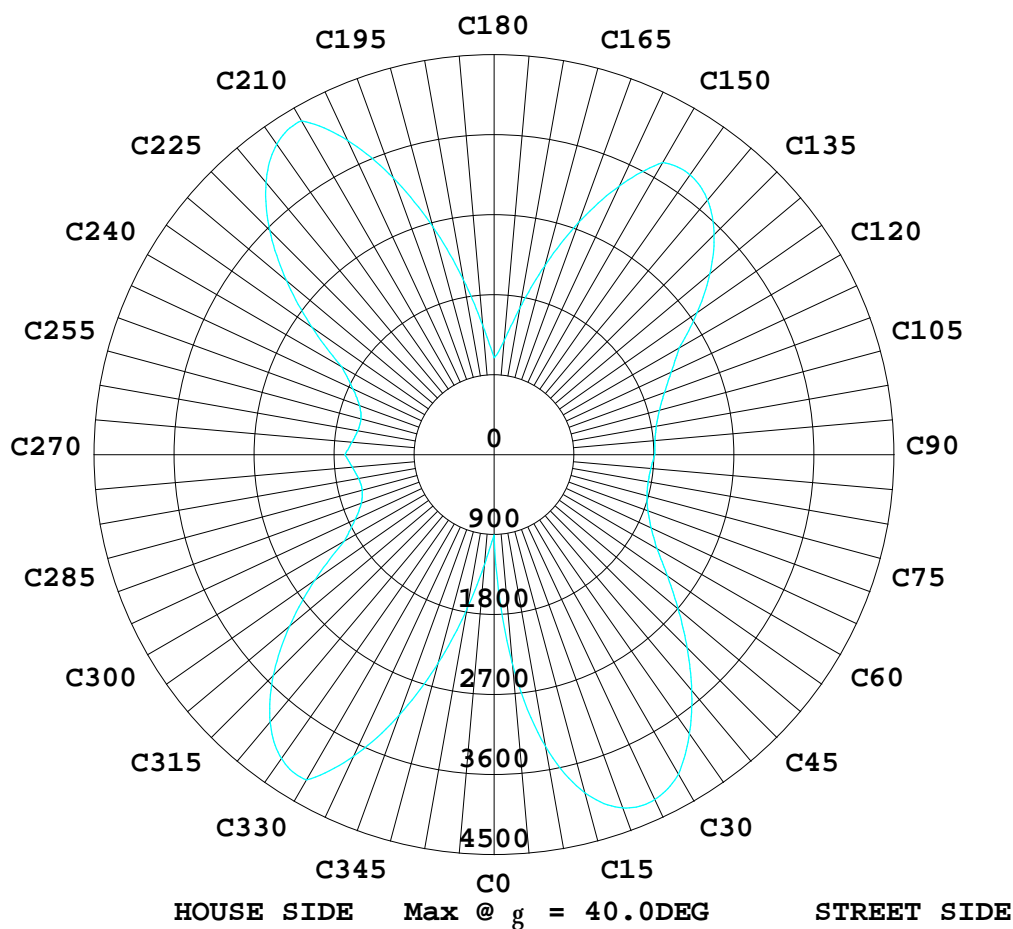
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 25°+90°+25°50W	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: