

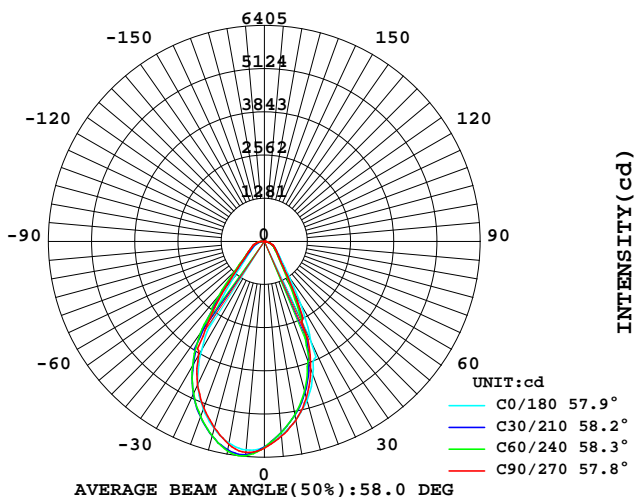
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

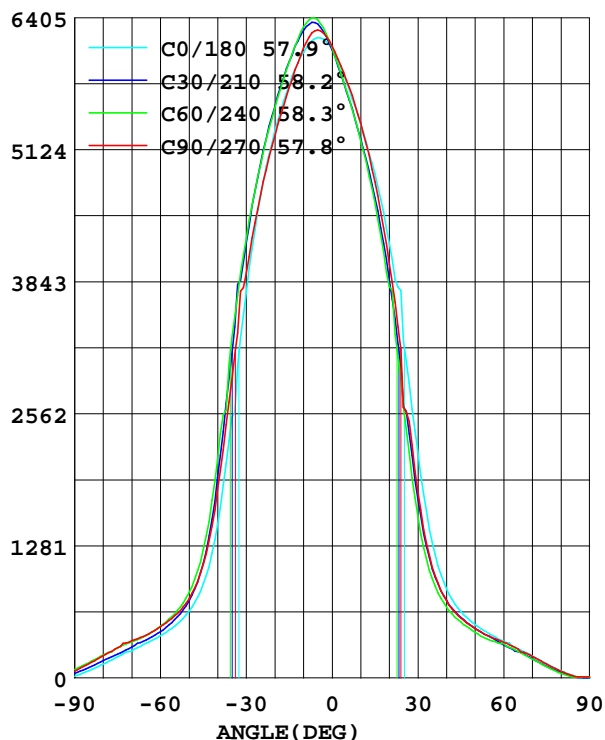
MANUFACTURER:		
Address:		
NAME: 60°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	6405	S/MH(C0/180)	0.95
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.01
NOMINAL POWER(W)	48	TOTAL FLUX(lm)	6755.7	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	139.6	Current(A)	0.231
NOMINAL FLUX(lm)	6755.8	h up(%)	0.2	Power(W)	48.38
LAMPS QUANTITY	1	h down(%)	99.8	Power Factor(PF)	0.958
TEST VOLTAGE(V)	218.7	Effective Flux(lm)	5632.9	EEI	0.117

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



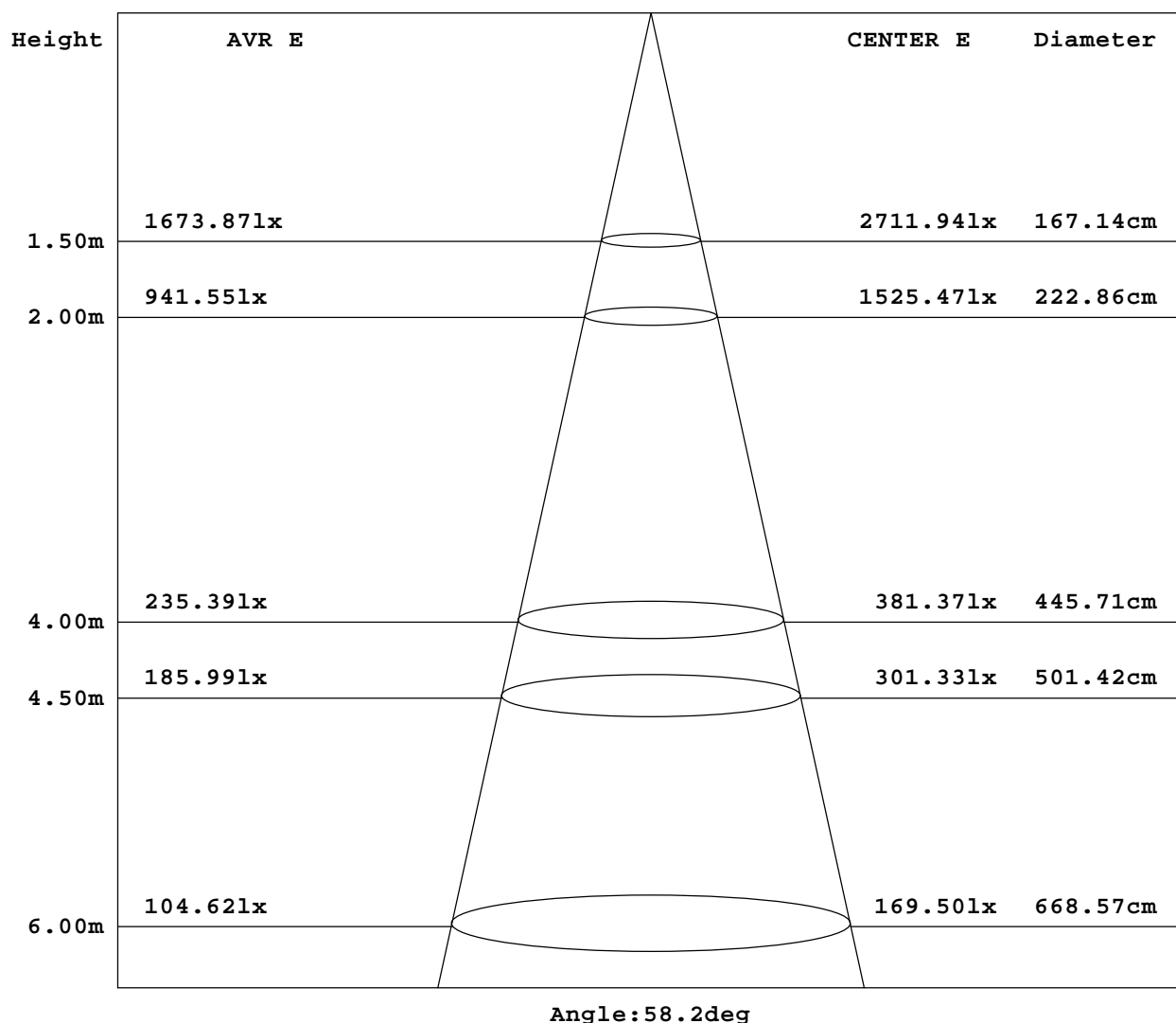
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 60°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: 60°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	6210	6364	6285	6025	5779	5692	5796	6056	0- 5	145.3	145.3
10.0	6070	6299	6114	5698	5373	5225	5387	5780	5- 10	421.1	566.4
15.0	5750	5976	5728	5257	4893	4632	4814	5368	10- 15	655.0	1221
20.0	5305	5533	5253	4718	4213	3825	4014	4761	15- 20	825.0	2047
25.0	4678	4990	4694	4007	3267	2628	2626	4043	20- 25	905.5	2952
30.0	3736	4242	3925	3011	2196	1657	1810	2820	25- 30	863.3	3815
35.0	2529	3221	2891	1995	1314	1010	1073	1710	30- 35	714.8	4530
40.0	1484	2026	1824	1226	860.2	718.4	749.4	1029	35- 40	525.6	5056
45.0	917.4	1187	1106	834.4	647.9	565.4	582.3	701.9	40- 45	371.6	5428
50.0	646.6	786.2	766.8	629.8	516.9	460.7	480.3	533.7	45- 50	282.2	5710
55.0	501.6	593.0	602.6	507.3	425.3	384.4	404.0	428.6	50- 55	233.3	5943
60.0	410.2	476.8	499.4	419.2	353.9	326.9	347.5	353.9	55- 60	201.5	6145
65.0	336.6	389.8	414.7	348.1	282.6	257.6	281.7	290.3	60- 65	174.8	6320
70.0	258.2	324.3	360.2	291.7	213.0	185.5	210.8	226.1	65- 70	147.4	6467
75.0	206.3	263.1	292.2	225.9	139.8	111.8	134.6	161.1	70- 75	117.8	6585
80.0	134.8	194.9	214.4	149.1	68.55	48.71	64.56	93.72	75- 80	83.26	6668
85.0	69.28	124.4	139.1	79.26	14.71	8.179	15.07	39.03	80- 85	49.18	6717
90.0	17.25	63.65	67.71	26.81	0	3.460	11.20	8.300	85- 90	22.78	6740
95.0	0	17.79	15.43	8.748	0	1.669	9.389	4.791	90- 95	8.144	6748
100.0	0	8.663	9.752	6.207	0	1.246	8.300	2.069	95-100	2.986	6751
105.0	0	4.973	5.033	4.210	0	0.218	5.880	1.161	100-105	1.984	6753
110.0	0	2.940	5.154	1.851	0	0	4.912	0.581	105-110	1.105	6754
115.0	0	2.032	4.307	0.520	0	0.339	5.396	0	110-115	0.729	6755
120.0	0	0.883	1.645	0.157	0	1.706	6.485	1.004	115-120	0.625	6756
125.0	0	0	0	0	0	0	0	0	120-125	0.062	6756
130.0	0	0	0	0	0	0	0	0	125-130	0	6756
135.0	0	0	0	0	0	0	0	0	130-135	0	6756
140.0	0	0	0	0	0	0	0	0	135-140	0	6756
145.0	0	0	0	0	0	0	0	0	140-145	0	6756
150.0	0	0	0	0	0	0	0	0	145-150	0	6756
155.0	0	0	0	0	0	0	0	0	150-155	0	6756
160.0	0	0	0	0	0	0	0	0	155-160	0	6756
165.0	0	0	0	0	0	0	0	0	160-165	0	6756
170.0	0	0	0	0	0	0	0	0	165-170	0	6756
175.0	0	0	0	0	0	0	0	0	170-175	0	6756
180.0	0	0	0	0	0	0	0	0	175-180	0	6756
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:

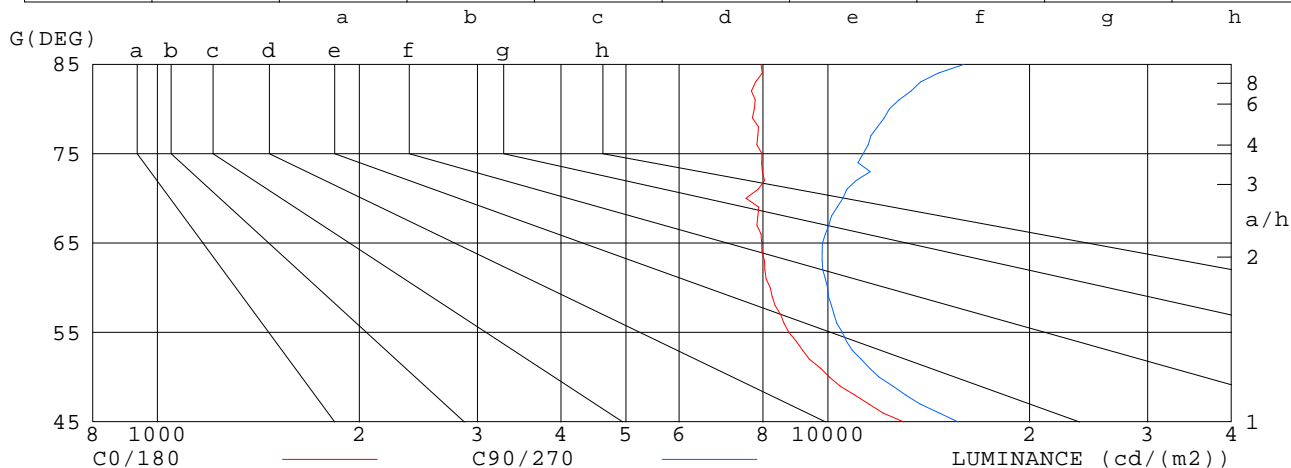
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 60°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	7950	15960
80	7767	12352
75	7974	11293
70	7552	10534
65	7967	9814
60	8205	9989
55	8745	10507
50	10061	11930
45	12975	15648

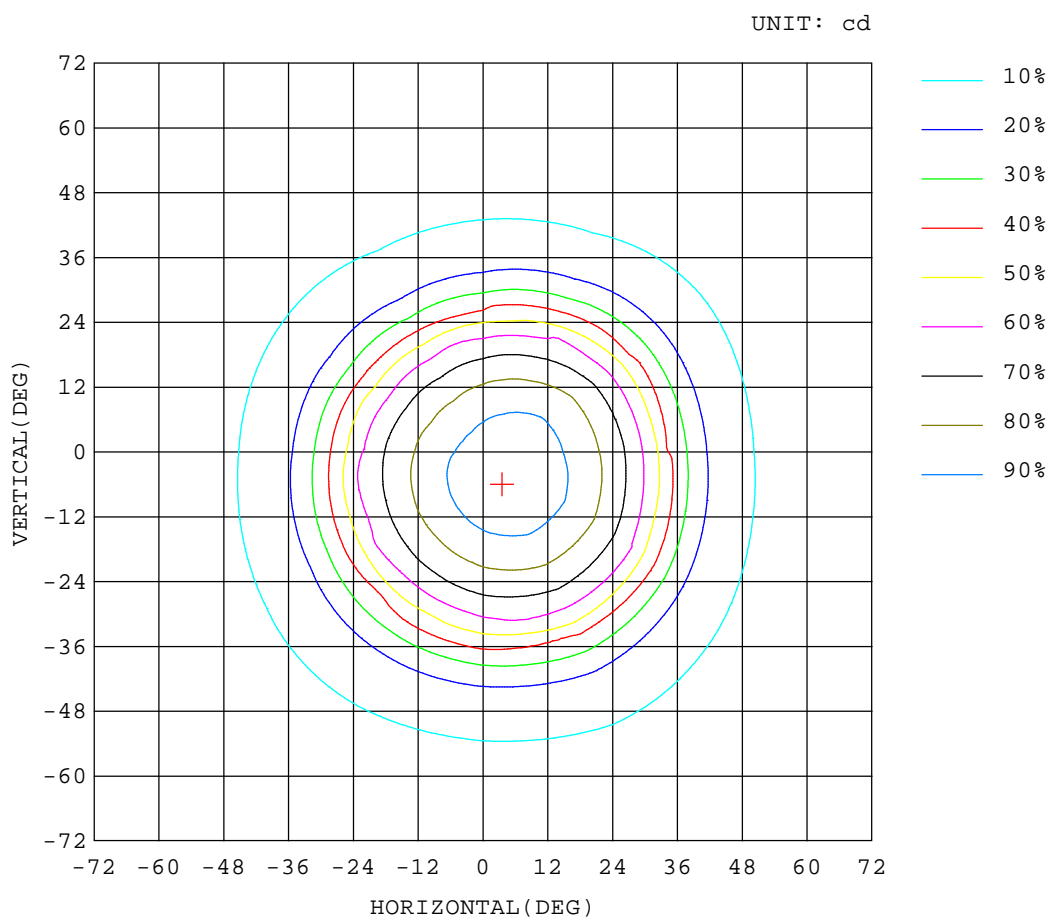
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



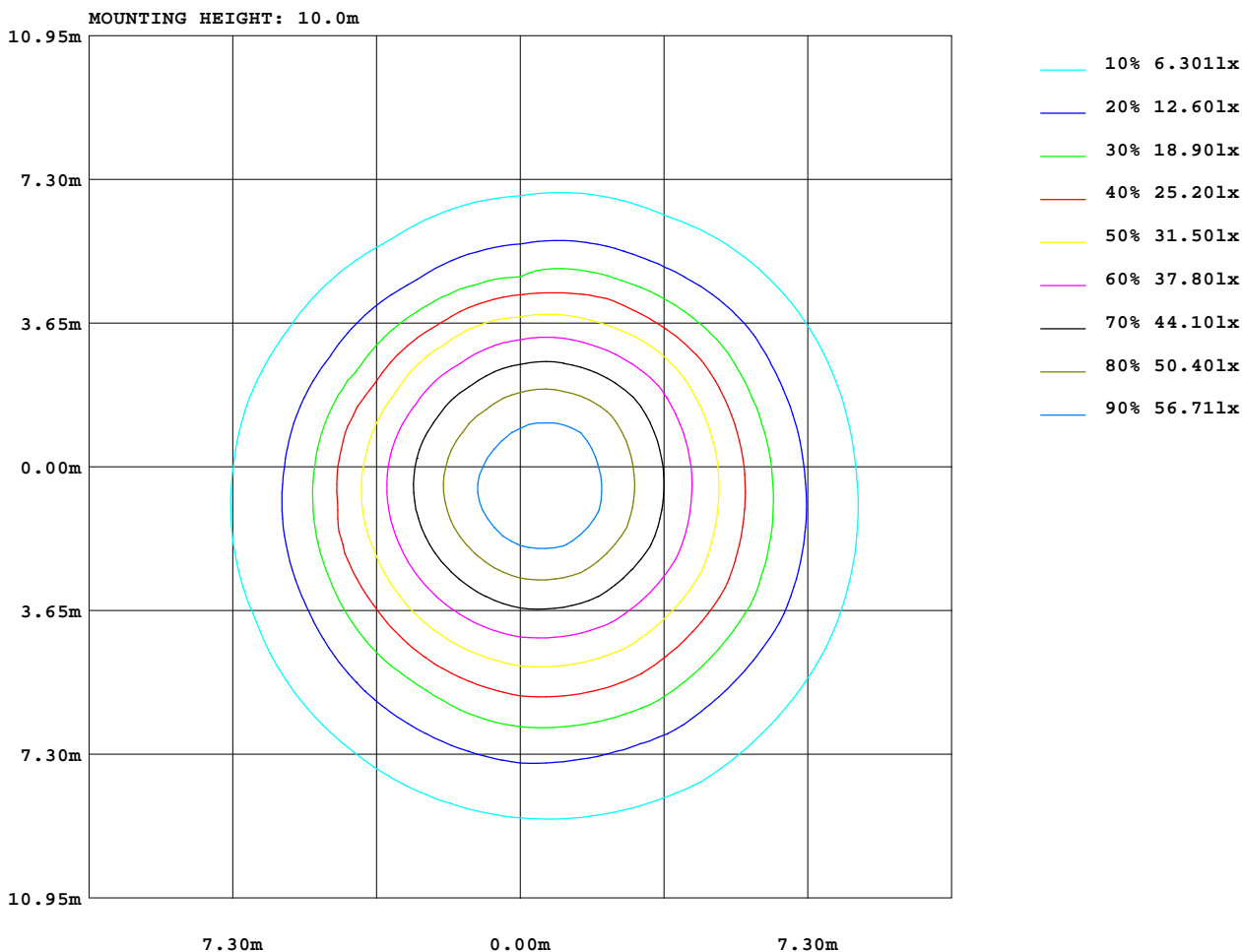
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°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: 60°50W										TYPE:					WEIGHT:				
SPECIFICATION:										DIMENSION: 576*188mm					SERIAL No.:				

72	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a
	0.29	0.63	1.10	1.69	2.34	2.98	3.63	4.16	4.50	4.58	4.39	4.02	3.51	2.97	2.37	1.76	1.17	0.67	46.8	0.00			
64	0.51	1.07	1.86	2.82	3.78	4.70	5.56	6.21	6.62	6.65	6.30	5.72	5.02	4.27	3.38	2.50	1.67	0.94	69.6	0.00			
56	0.75	1.57	2.65	3.81	5.05	6.08	6.99	7.92	8.57	8.70	8.24	7.39	6.43	5.51	4.39	3.18	2.13	1.20	90.6	0.00			
48	1.00	2.06	3.27	4.75	6.22	7.62	9.07	10.6	11.7	12.0	11.5	10.1	8.62	7.00	5.41	3.90	2.53	1.45	119	15.2			
40	1.23	2.45	3.92	5.71	7.67	9.95	12.5	15.9	19.0	20.6	19.5	16.0	12.4	9.20	6.64	4.59	2.93	1.65	172	113			
32	1.43	2.79	4.53	6.68	9.50	13.6	20.4	30.6	40.4	45.3	42.5	32.5	21.2	12.8	8.12	5.27	3.30	1.83	303	263			
24	1.59	3.08	5.04	7.71	11.9	20.6	37.9	58.5	73.8	79.3	75.3	60.5	38.1	19.1	9.99	5.94	3.60	1.97	514	483			
VERTICAL (DEG)	1.70	3.30	5.44	8.71	15.2	31.8	58.3	82.0	96.1	102	97.7	83.0	56.3	27.5	12.1	6.54	3.84	2.08	694	667			
	1.77	3.44	5.71	9.48	18.5	42.1	73.2	95.0	109	116	110	93.9	67.9	34.3	14.0	6.97	3.99	2.15	808	783			
	1.79	3.49	5.82	9.84	20.1	46.4	77.9	99.7	116	123	115	97.4	71.7	37.4	14.8	7.15	4.04	2.17	853	828			
	1.76	3.45	5.76	9.64	19.0	43.0	74.0	95.9	111	117	110	94.4	68.9	35.3	14.1	7.02	4.00	2.16	817	792			
	1.69	3.32	5.50	8.89	15.9	33.8	61.7	84.4	98.1	103	98.2	83.1	58.4	28.4	12.3	6.59	3.85	2.10	710	682			
	1.57	3.10	5.09	7.90	12.6	23.4	42.5	63.4	78.3	83.3	78.5	63.1	39.3	19.5	10.1	5.99	3.63	1.99	544	513			
	1.41	2.79	4.59	6.86	10.1	15.5	24.7	37.4	48.5	52.5	47.8	36.5	22.5	13.2	8.27	5.32	3.34	1.85	344	306			
	1.23	2.40	4.00	5.88	8.19	11.0	14.7	19.1	23.1	24.6	22.7	18.6	13.6	9.69	6.81	4.65	3.00	1.67	195	145			
	1.00	2.02	3.30	4.98	6.67	8.51	10.3	12.0	13.2	13.6	13.0	11.6	9.69	7.55	5.65	4.03	2.59	1.46	132	41.6			
	0.76	1.59	2.73	4.11	5.54	6.84	7.93	8.87	9.53	9.68	9.29	8.50	7.38	6.03	4.69	3.34	2.17	1.22	100	0.00			
-24	0.51	1.11	2.05	3.22	4.50	5.72	6.48	7.01	7.34	7.37	7.09	6.59	5.87	4.86	3.74	2.66	1.72	0.97	78.8	0.00			
-32																							
-40																							
-48																							
-56																							
-64																							
-72																							
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)				16	24	32	40	48	56	64	72			
Φ t	22.0	43.7	72.4	113	183	334	548	739	875	929	878	733	517	285	147	87.5	53.5	29.6	6756				
Φ a	0.00	0.00	0.00	28.9	120	278	495	689	826	882	831	686	469	233	86.8	7.46	0.00	0.00		5633			

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

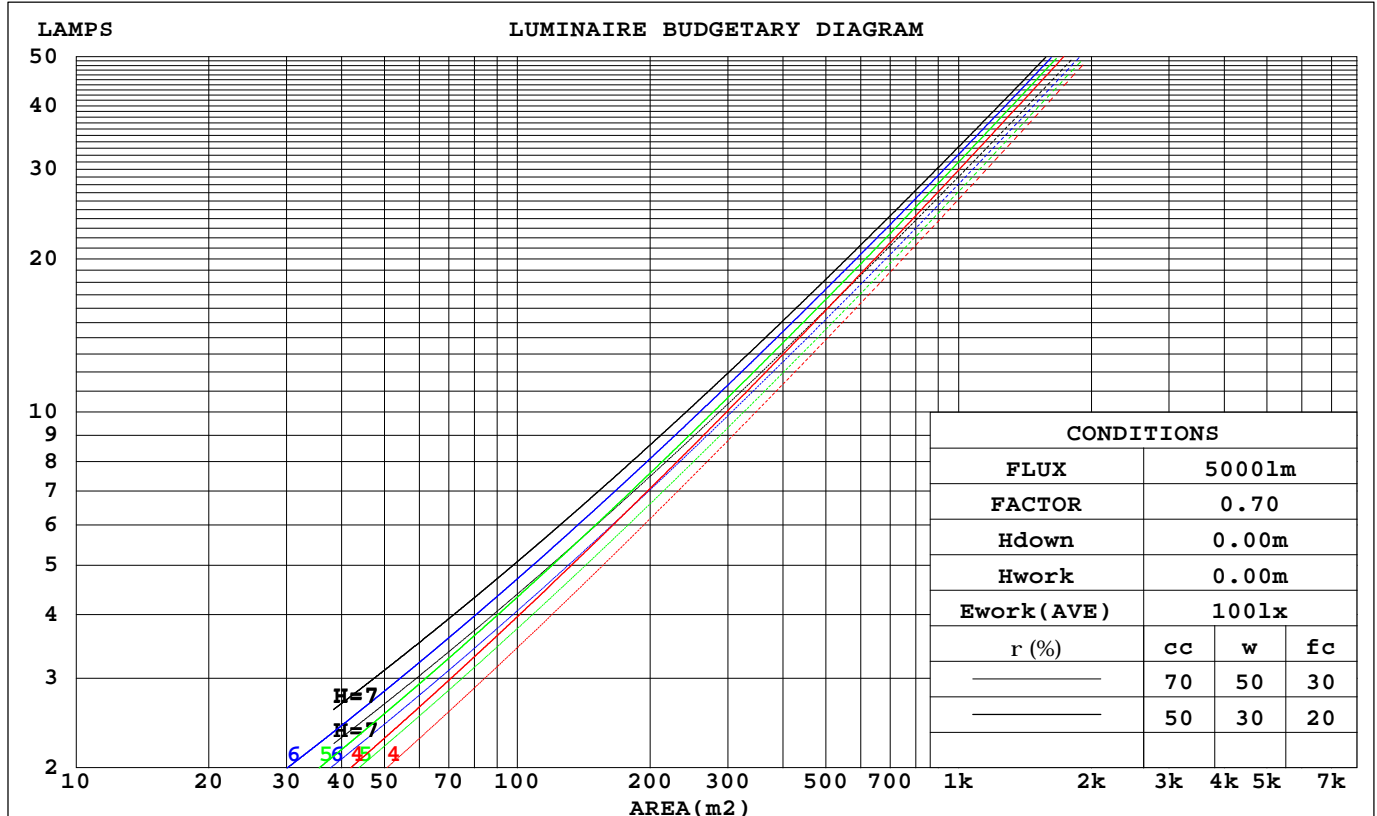
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 60°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: 60°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	.230	.131	.041	.223	.127	.040	.210	.121	.039	.198	.114	.037	.187	.109	.035															
2.0	.217	.119	.036	.211	.116	.036	.199	.111	.034	.189	.106	.033	.180	.102	.032															
3.0	.202	.108	.032	.197	.106	.032	.188	.102	.031	.179	.098	.030	.171	.094	.029															
4.0	.189	.098	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.161	.088	.027															
5.0	.178	.091	.026	.174	.089	.026	.166	.087	.025	.159	.084	.025	.153	.082	.025															
6.0	.167	.084	.024	.164	.083	.024	.157	.081	.023	.151	.078	.023	.145	.076	.023															
7.0	.158	.078	.022	.155	.077	.022	.149	.075	.022	.143	.073	.021	.138	.072	.021															
8.0	.149	.073	.020	.146	.072	.020	.141	.071	.020	.136	.069	.020	.132	.068	.020															
9.0	.141	.068	.019	.139	.068	.019	.134	.066	.019	.130	.065	.019	.126	.064	.018															
10.0	.134	.064	.018	.132	.064	.018	.128	.063	.018	.124	.062	.018	.120	.061	.017															

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	.177	.159	.142	.151	.136	.123	.103	.094	.085	.059	.054	.049	.019	.017	.016	
2.0	.164	.134	.109	.140	.115	.094	.096	.080	.066	.056	.046	.038	.018	.015	.013	
3.0	.153	.116	.086	.131	.100	.074	.090	.069	.052	.052	.040	.031	.017	.013	.010	
4.0	.144	.101	.069	.124	.088	.060	.085	.061	.042	.049	.036	.025	.016	.012	.008	
5.0	.136	.090	.057	.117	.078	.049	.080	.055	.035	.046	.032	.021	.015	.010	.007	
6.0	.128	.081	.048	.110	.070	.042	.076	.049	.029	.044	.029	.017	.014	.009	.006	
7.0	.122	.074	.041	.105	.064	.035	.072	.045	.025	.042	.027	.015	.014	.009	.005	
8.0	.116	.068	.035	.100	.059	.031	.069	.041	.022	.040	.024	.013	.013	.008	.004	
9.0	.110	.063	.031	.095	.055	.027	.066	.038	.019	.038	.023	.011	.012	.007	.004	
10.0	.105	.059	.027	.091	.051	.024	.063	.036	.017	.037	.021	.010	.012	.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: 60°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	19.9	21.1	20.2	21.2	21.4	20.5	21.6	20.7	21.8	22.0
	20.7	21.8	21.0	22.0	22.2	21.5	22.6	21.8	22.8	23.0
	21.2	22.2	21.5	22.4	22.7	22.2	23.3	22.5	23.5	23.7
	21.6	22.5	21.9	22.8	23.0	22.9	23.9	23.2	24.1	24.4
	21.7	22.6	22.1	22.9	23.2	23.2	24.1	23.6	24.4	24.7
	21.9	22.7	22.2	23.0	23.3	23.5	24.4	23.9	24.7	25.0
4H 2H	20.2	21.2	20.5	21.5	21.7	20.7	21.7	21.0	22.0	22.2
	21.3	22.2	21.7	22.5	22.8	22.1	23.0	22.4	23.3	23.6
	22.0	22.8	22.3	23.1	23.4	23.0	23.8	23.4	24.1	24.4
	22.5	23.2	22.9	23.6	23.9	23.9	24.6	24.3	25.0	25.3
	22.8	23.4	23.2	23.8	24.2	24.3	25.0	24.7	25.3	25.7
	23.0	23.6	23.4	23.9	24.3	24.7	25.3	25.2	25.7	26.1
8H 4H	22.3	23.0	22.7	23.4	23.7	23.3	23.9	23.7	24.3	24.7
	23.1	23.7	23.6	24.1	24.5	24.4	25.0	24.8	25.4	25.8
	23.5	24.0	23.9	24.4	24.8	25.0	25.5	25.4	25.9	26.4
	23.8	24.2	24.3	24.7	25.1	25.6	26.0	26.1	26.4	26.9
12H 4H	22.4	23.0	22.8	23.4	23.8	23.3	23.9	23.7	24.3	24.7
	23.3	23.8	23.8	24.2	24.7	24.5	25.0	24.9	25.4	25.9
	23.7	24.1	24.2	24.6	25.1	25.2	25.6	25.6	26.0	26.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.5				
1.5H	+ 0.9 / - 0.6					+ 0.8 / - 0.4				
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.3				

CIE Pub.117 Corrected 6756 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.6)

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: 60°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) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	75	68	63	75	67	63	58
0.80	84	76	71	84	76	71	82	75	71	66
1.00	90	83	78	89	82	77	88	83	77	72
1.25	95	88	83	94	88	83	92	86	82	77
1.50	99	92	88	98	92	87	95	90	86	80
2.00	103	97	93	102	96	92	99	94	91	84
2.50	106	100	96	104	99	95	101	97	93	87
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	104	109	105	102	105	102	100	92
5.00	112	109	106	110	107	105	106	104	102	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

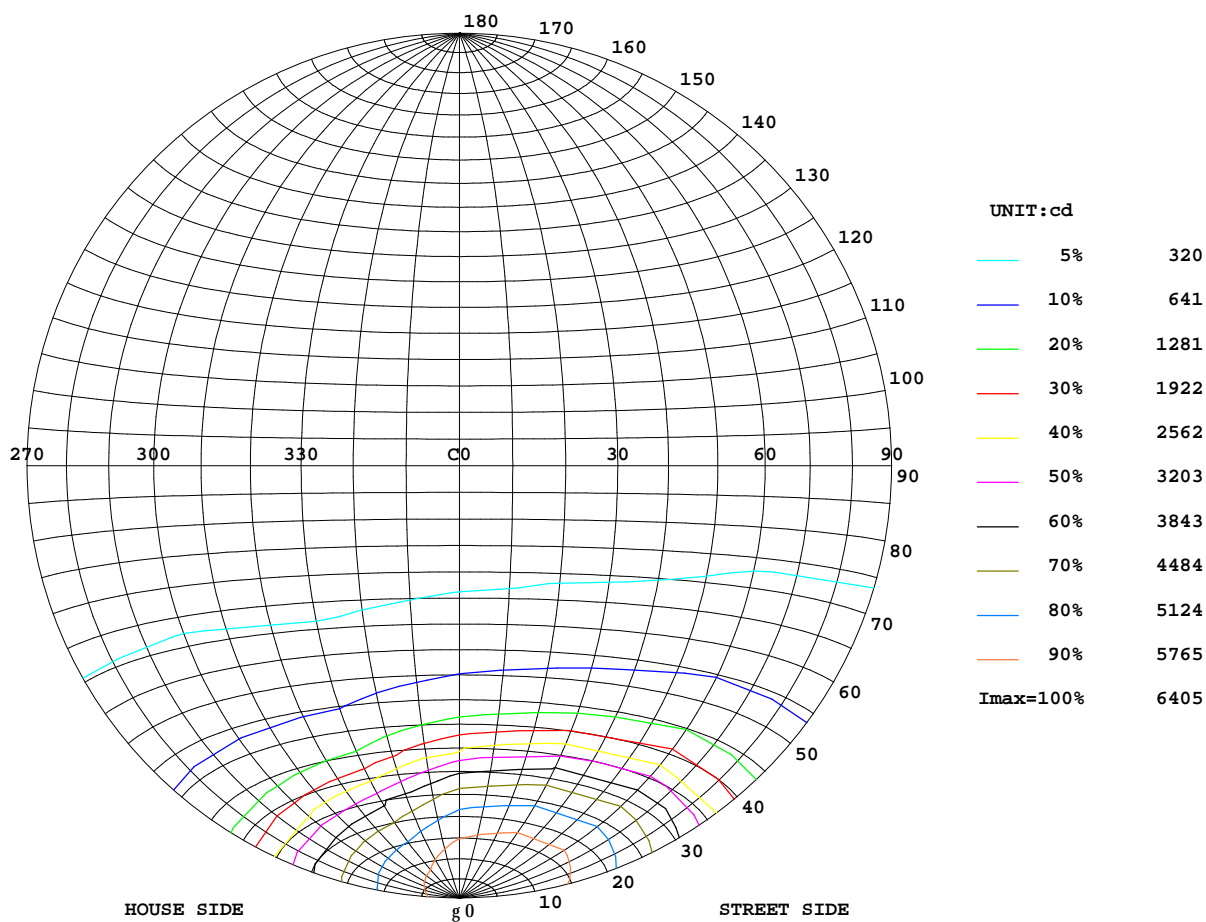
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 60°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

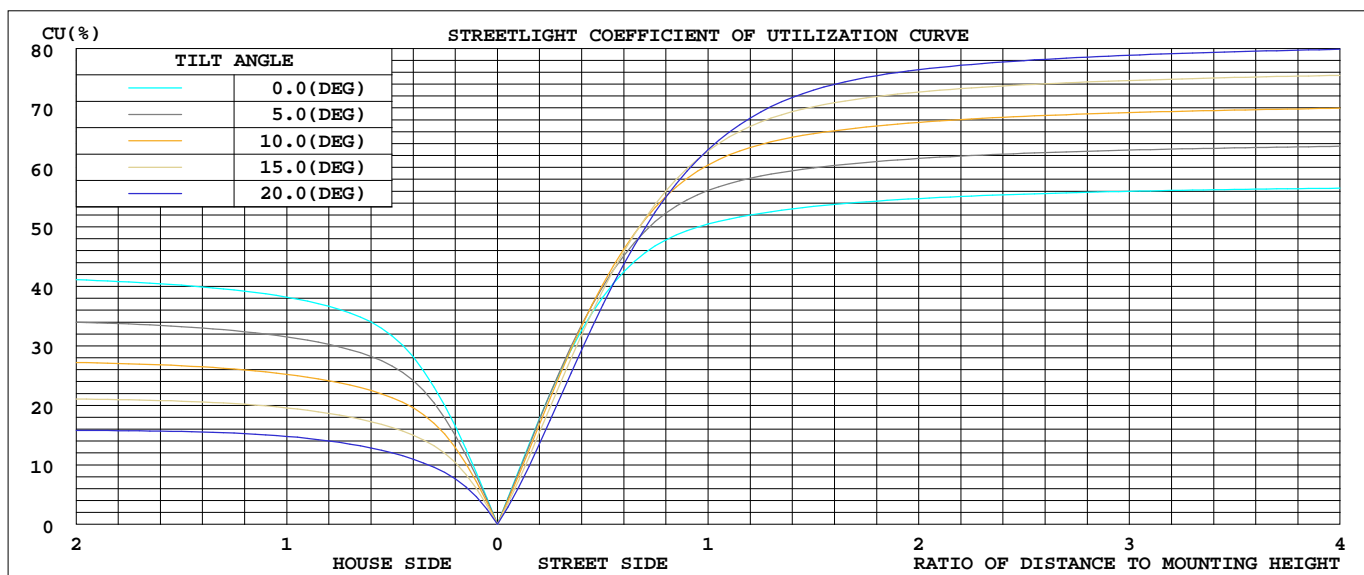
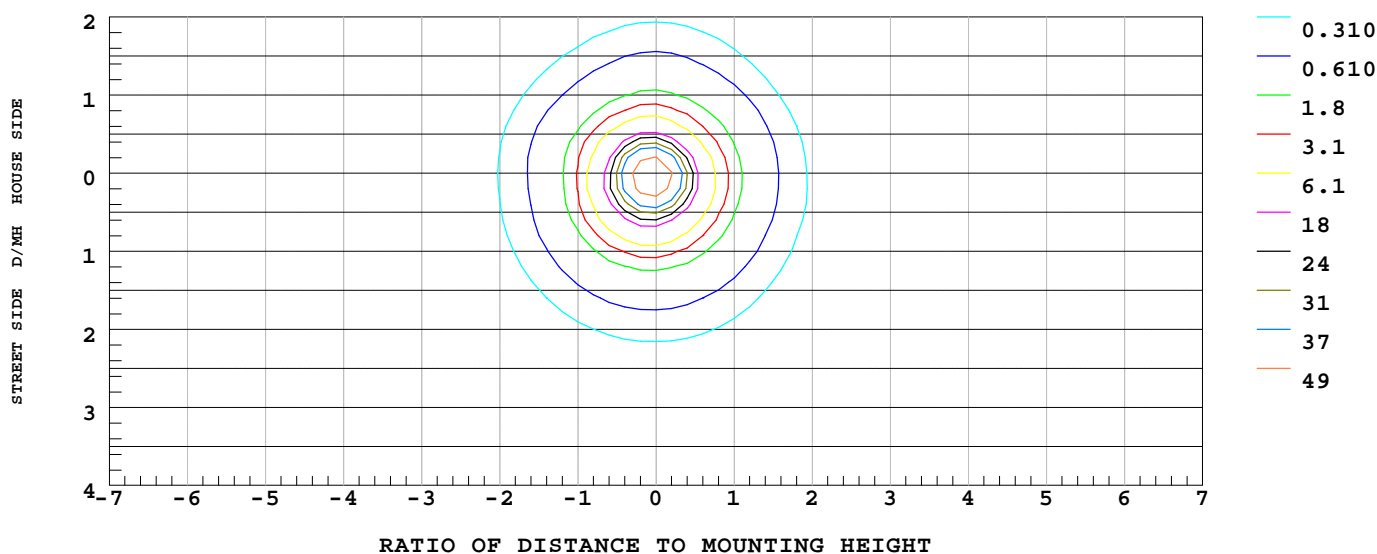
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60°50W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 61.02 lx



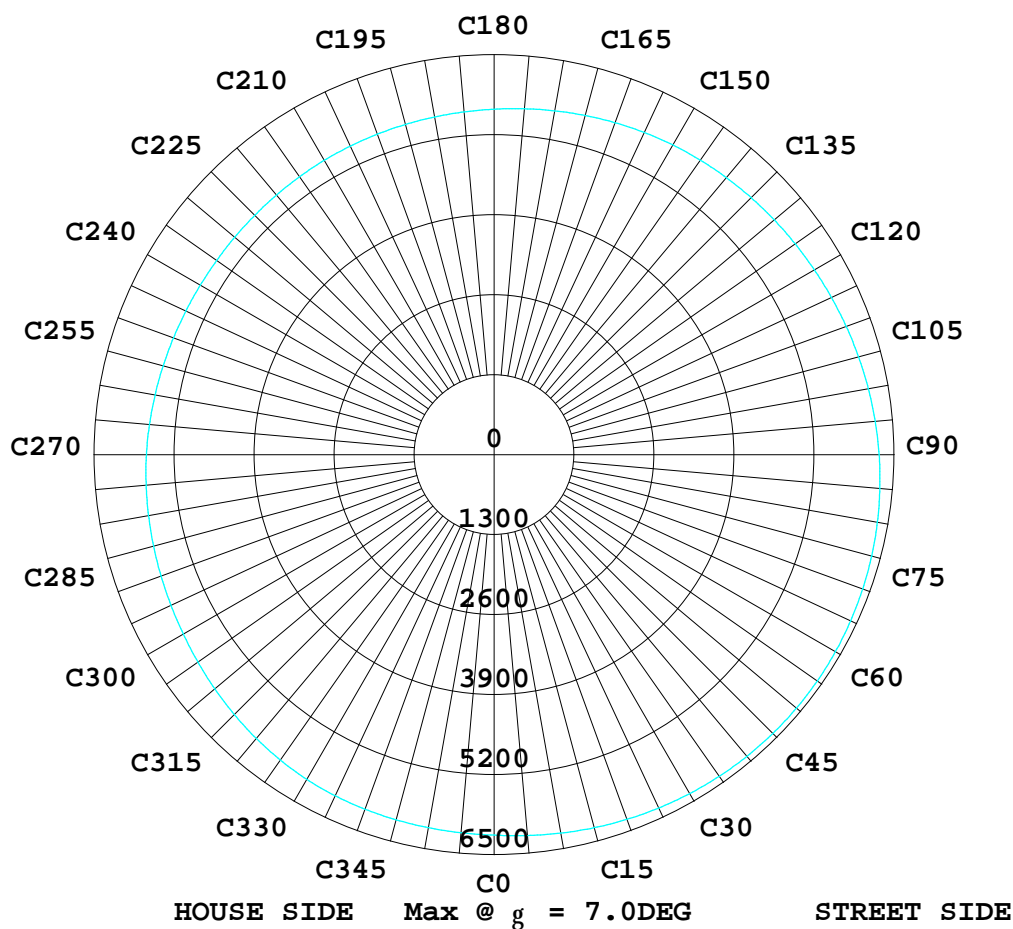
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°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: