

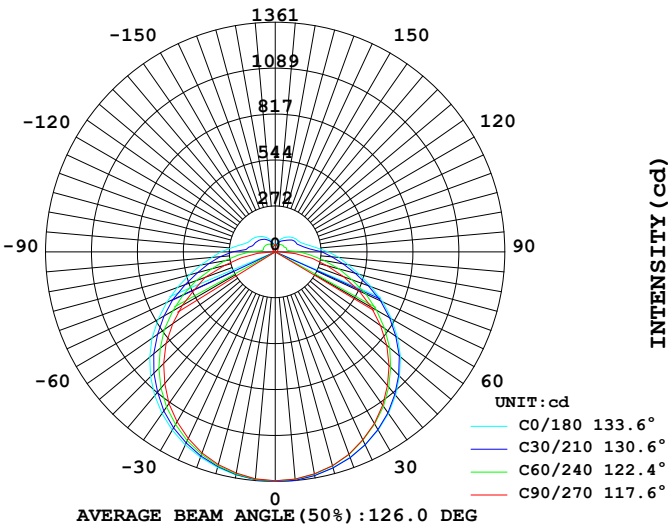
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

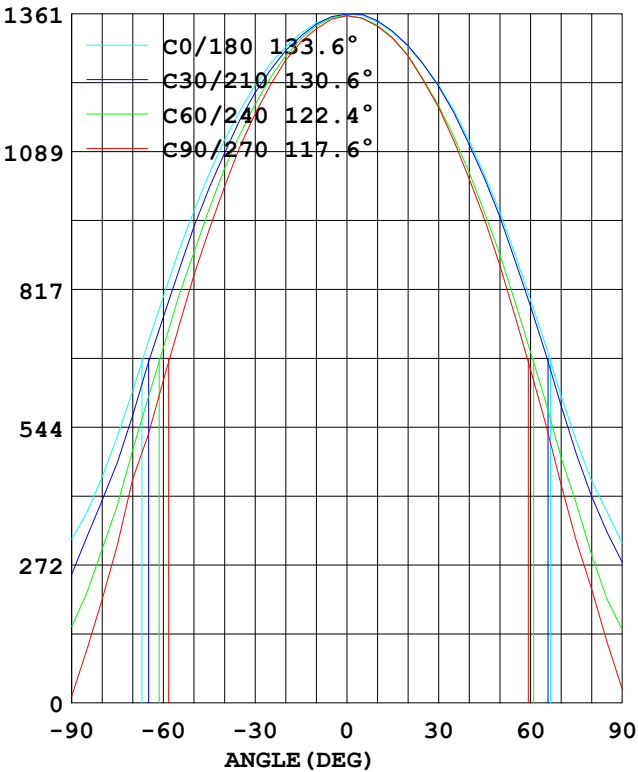
MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	1361	S/MH(C0/180)	1.34
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.28
NOMINAL POWER(W)	44	TOTAL FLUX(lm)	5286.1	Voltage(V)	220.0
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	119.5	Current(A)	0.208
NOMINAL FLUX(lm)	5286.2	η up(%)	11.4	Power(W)	44.25
LAMPS QUANTITY	1	η down(%)	88.6	Power Factor(PF)	0.966
TEST VOLTAGE(V)	220.0	Effective Flux(lm)	4952.3	EEI	0.122

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

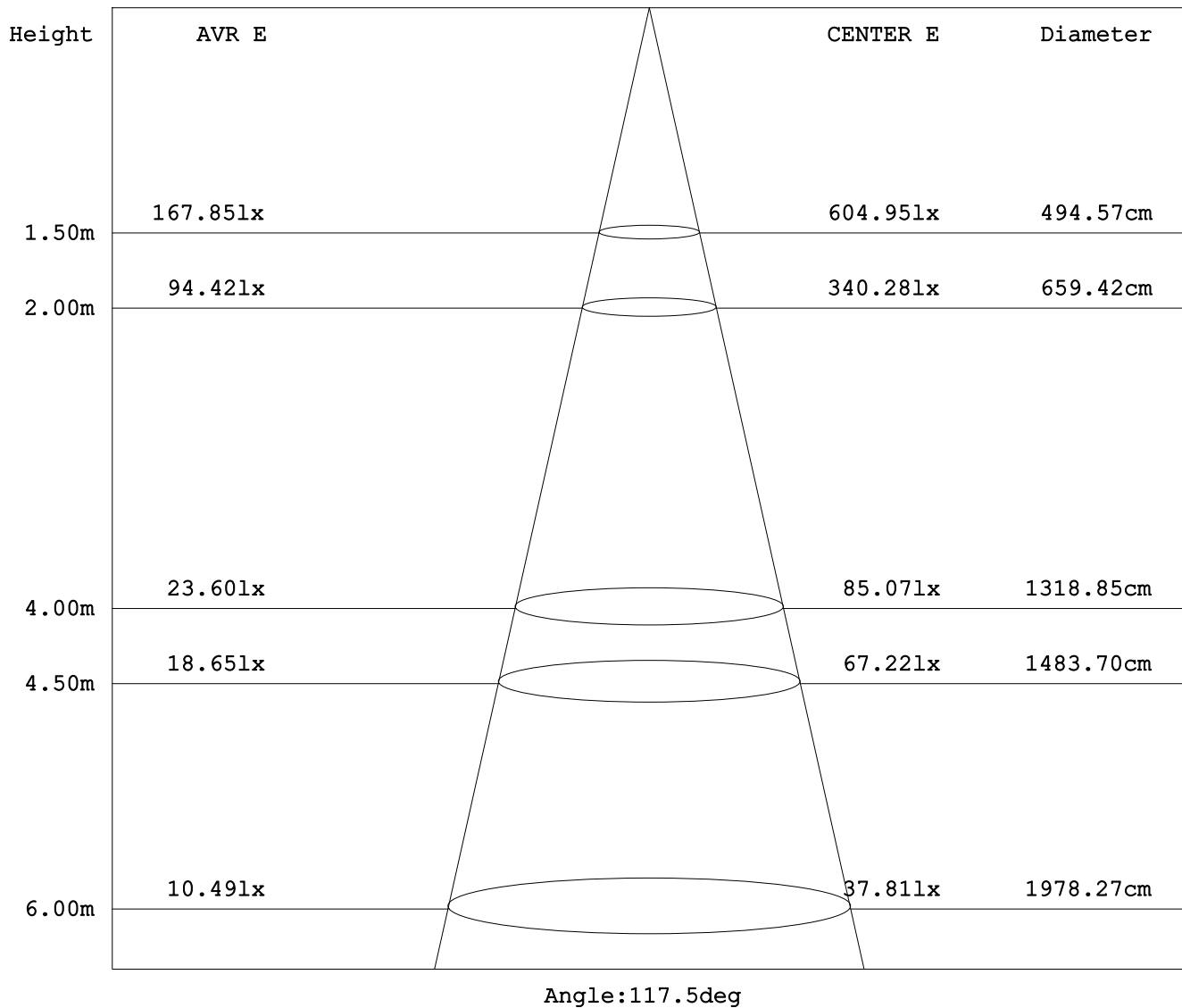
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
10.0	1343	1339	1331	1342	1345	1343	1336	1339	0- 10	128.8	128.8
20.0	1295	1283	1269	1288	1297	1288	1278	1285	10- 20	372.1	500.9
30.0	1220	1193	1163	1197	1220	1199	1176	1197	20- 30	574.2	1075
40.0	1112	1070	1019	1077	1110	1075	1035	1076	30- 40	713.0	1788
50.0	971.6	915.0	844.7	922.5	969.6	922.9	864.1	923.1	40- 50	770.8	2559
60.0	802.4	732.0	637.1	738.5	796.5	738.5	658.9	739.1	50- 60	740.3	3299
70.0	616.8	534.2	442.6	540.4	606.4	536.6	431.8	536.9	60- 70	628.0	3928
80.0	446.7	352.3	204.8	370.2	438.8	350.5	225.3	353.3	70- 80	461.2	4389
90.0	323.6	202.1	12.82	214.4	314.7	210.7	26.61	216.4	80- 90	293.1	4682
100.0	222.3	116.0	4.114	124.5	212.1	120.6	10.64	126.4	90-100	161.8	4844
110.0	170.4	103.0	8.349	106.8	161.5	104.2	13.43	110.7	100-110	114.4	4958
120.0	155.8	97.76	12.82	96.01	147.0	95.22	17.66	105.2	110-120	96.26	5054
130.0	139.8	89.96	18.63	87.11	132.8	84.57	21.05	95.71	120-130	80.77	5135
140.0	119.1	79.07	24.32	72.78	116.1	72.29	25.77	83.61	130-140	62.31	5198
150.0	95.83	65.40	29.88	61.28	95.46	62.79	30.61	68.78	140-150	43.82	5241
160.0	70.66	52.15	34.36	51.18	73.32	52.02	34.84	55.05	150-160	27.20	5269
170.0	48.03	43.80	38.47	41.80	50.33	42.16	38.84	44.95	160-170	13.65	5282
180.0	42.34	41.01	41.01	40.89	42.47	41.13	42.10	40.95	170-180	4.011	5286
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

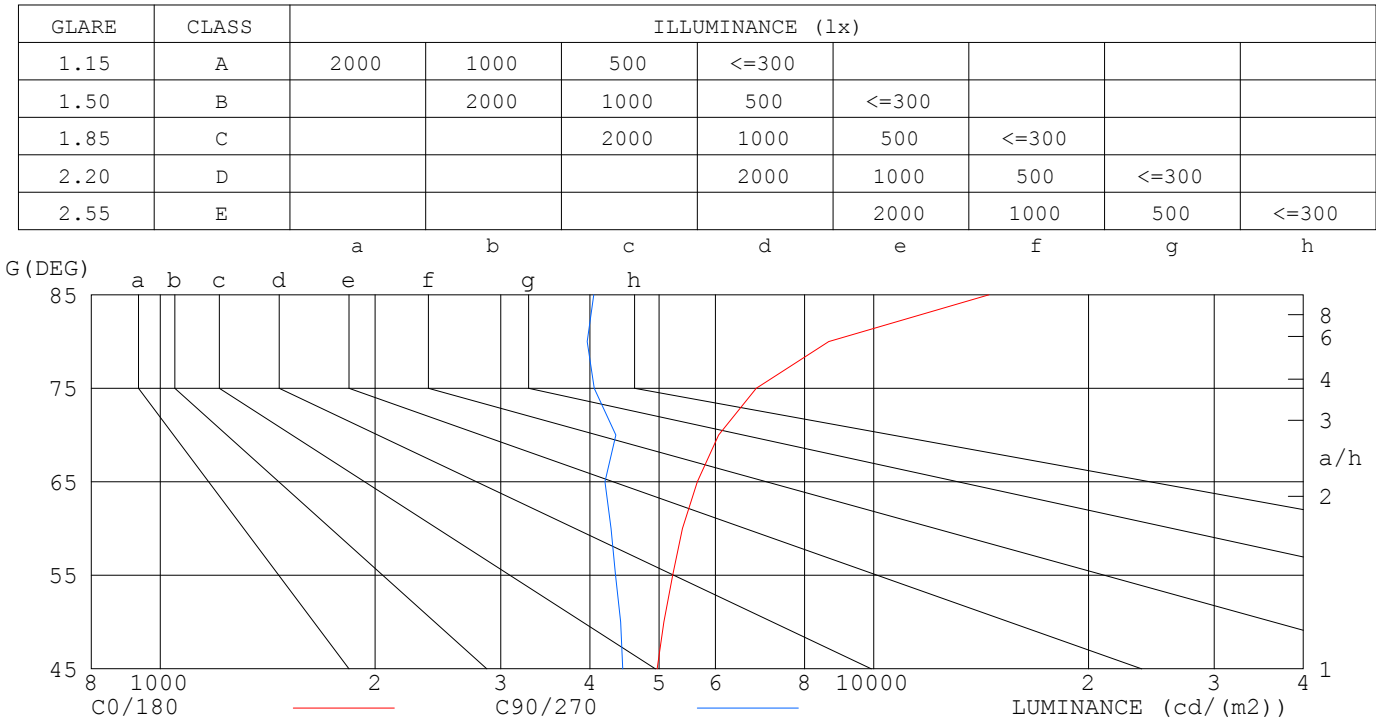
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:					
Address:					
NAME: 1.5M-40W-3000K		TYPE:		WEIGHT:	
SPECIFICATION:		DIMENSION: 1500*152*52mm		SERIAL No.:	

LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)		
G (DEG)	C0/180	C90/270
85	14498	4050
80	8647	3965
75	6845	4057
70	6062	4350
65	5659	4200
60	5394	4283
55	5226	4345
50	5080	4417
45	4971	4447

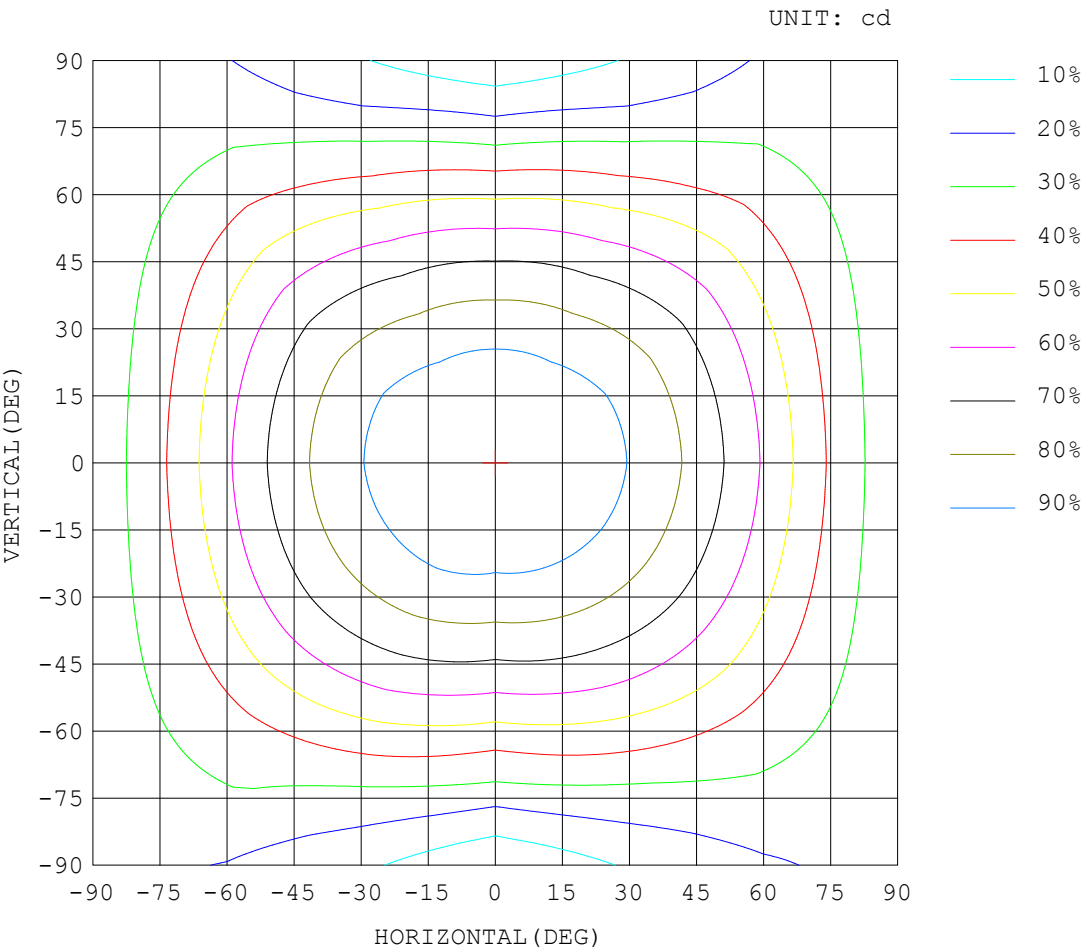
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

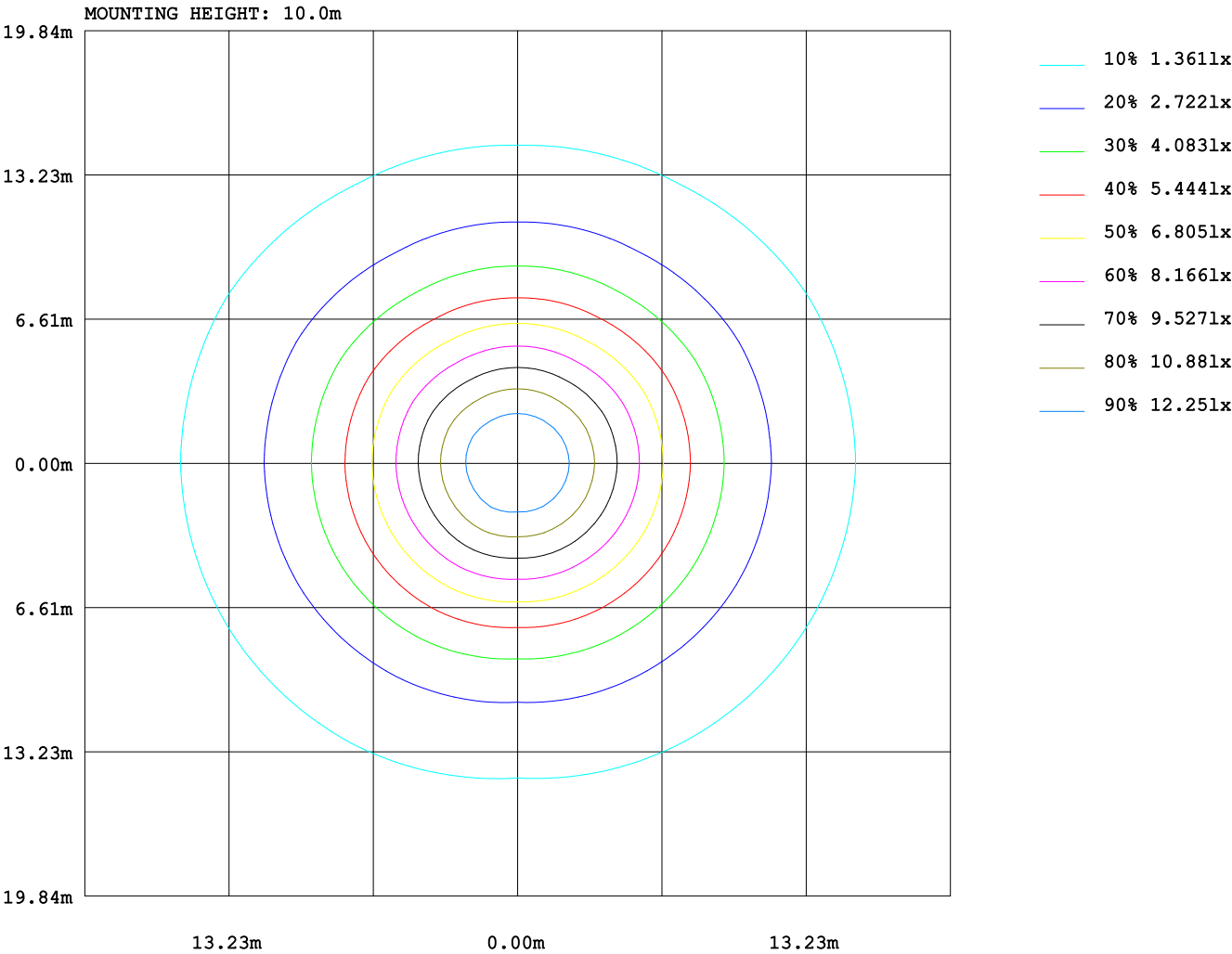
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																				
Address:																				
NAME: 1.5M-40W-3000K									TYPE:						WEIGHT:					
SPECIFICATION:									DIMENSION: 1500*152*52mm						SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.83	2.45	3.97	5.05	5.48	5.46	5.21	4.83	4.17	4.17	4.85	5.24	5.52	5.56	5.15	4.06	2.51	0.85	75.4	69.8		
90																						
80	0.87	2.71	4.67	6.48	7.86	8.95	9.75	10.2	10.1	10.1	10.2	9.72	8.96	7.93	6.56	4.73	2.74	0.89	124	124		
70	0.91	2.98	5.43	8.15	10.6	12.9	14.7	16.2	16.7	16.7	16.2	14.7	12.9	10.7	8.26	5.52	3.00	0.92	178	178		
60	0.94	3.23	6.25	9.96	13.6	17.0	19.8	22.0	23.1	23.1	22.1	19.9	17.1	13.7	10.0	6.35	3.28	0.95	233	233		
50	0.97	3.49	7.07	11.6	16.5	20.8	24.5	27.3	28.8	28.8	27.3	24.5	20.8	16.5	11.7	7.15	3.54	0.98	283	283		
40	1.00	3.72	7.81	13.1	18.8	24.1	28.4	31.6	33.4	33.4	31.6	28.4	24.1	18.8	13.1	7.88	3.78	1.00	325	325		
30	1.02	3.91	8.41	14.2	20.6	26.6	31.5	35.0	37.0	37.0	35.0	31.5	26.6	20.6	14.2	8.49	3.98	1.03	357	357		
	1.04	4.06	8.83	14.9	21.7	28.2	33.7	37.5	39.5	39.5	37.4	33.6	28.2	21.7	15.0	8.91	4.13	1.04	379	379		
	1.05	4.14	9.06	15.4	22.3	28.9	34.6	38.7	40.8	40.7	38.6	34.5	28.9	22.3	15.4	9.15	4.21	1.05	390	390		
	1.05	4.14	9.04	15.3	22.2	28.9	34.5	38.6	40.8	40.7	38.5	34.5	28.9	22.3	15.4	9.13	4.21	1.05	390	390		
	1.04	4.05	8.78	14.8	21.5	28.0	33.4	37.5	39.5	39.4	37.3	33.4	27.9	21.5	14.9	8.85	4.11	1.04	378	378		
-30	1.02	3.90	8.32	14.0	20.3	26.3	31.5	35.2	37.0	36.9	35.0	31.4	26.3	20.3	14.0	8.38	3.94	1.02	355	355		
-40	1.00	3.71	7.69	12.8	18.5	24.0	28.6	31.9	33.3	33.2	31.7	28.4	23.8	18.4	12.8	7.74	3.74	1.00	323	323		
-50	0.98	3.51	6.94	11.4	16.2	20.9	24.8	27.4	28.5	28.4	27.2	24.5	20.7	16.1	11.4	6.97	3.49	0.97	281	281		
-60	0.94	3.28	6.18	9.71	13.5	17.2	20.2	22.1	22.7	22.6	22.0	20.0	17.0	13.4	9.68	6.15	3.23	0.94	231	231		
-70	0.91	3.00	5.54	8.08	10.6	13.1	15.2	16.3	16.5	16.4	16.2	15.0	13.0	10.5	7.94	5.36	2.95	0.91	178	178		
-80	0.87	2.71	4.73	6.70	8.14	9.27	10.0	10.3	10.0	9.99	10.1	9.82	9.00	7.83	6.37	4.57	2.67	0.87	124	124		
-90	0.83	2.42	3.91	5.05	5.68	5.91	5.64	4.91	3.86	3.81	4.75	5.38	5.62	5.43	4.85	3.79	2.39	0.83	75.1	69.7		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)						20	30	40	50	60	70	80	90
Φ t	17.2	61.5	123	197	275	347	407	448	466	466	447	405	346	274	197	123	61.9	17.3	5286			
Φ a	17.2	61.5	123	197	275	347	406	446	463	463	445	405	346	274	197	123	61.9	17.3		4952		

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

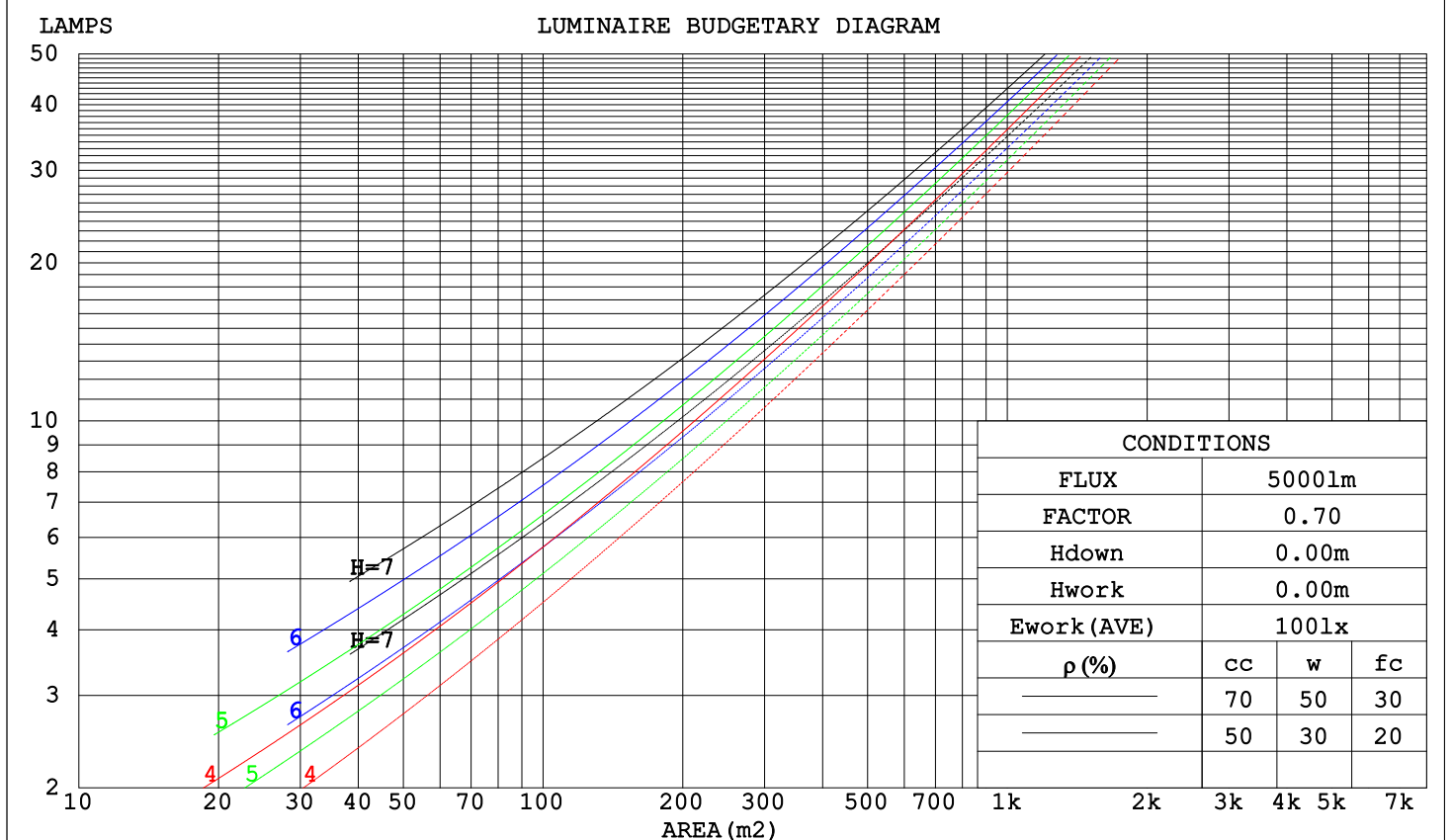
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 1.5M-40W-3000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1500*152*52mm				SERIAL No.:			

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:															
Address:															
NAME: 1.5M-40W-3000K								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1500*152*52mm				SERIAL No.:			

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.360	.205	.065	.350	.200	.063	.330	.189	.060	.311	.180	.058	.295	.171	.055		
2.0	.320	.176	.054	.311	.171	.053	.293	.163	.051	.276	.155	.049	.261	.148	.047		
3.0	.288	.153	.046	.280	.150	.045	.264	.143	.043	.249	.136	.042	.235	.130	.040		
4.0	.262	.136	.040	.254	.133	.039	.239	.127	.038	.226	.121	.037	.213	.116	.035		
5.0	.239	.122	.035	.232	.119	.035	.219	.114	.034	.207	.109	.032	.195	.104	.031		
6.0	.220	.110	.032	.214	.108	.031	.202	.103	.030	.191	.099	.029	.180	.095	.028		
7.0	.203	.101	.029	.198	.099	.028	.187	.094	.027	.177	.091	.026	.167	.087	.026		
8.0	.189	.092	.026	.184	.091	.026	.174	.087	.025	.165	.083	.024	.156	.080	.023		
9.0	.177	.085	.024	.172	.084	.023	.163	.080	.023	.154	.077	.022	.146	.074	.021		
10.0	.165	.079	.022	.161	.078	.022	.153	.075	.021	.145	.072	.020	.137	.069	.020		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.278	.278	.278	.237	.237	.237	.162	.162	.162	.093	.093	.093	.030	.030	.030	
1.0	.272	.244	.218	.232	.209	.188	.159	.144	.130	.092	.083	.076	.029	.027	.024	
2.0	.264	.220	.183	.227	.190	.158	.155	.131	.110	.090	.076	.065	.029	.025	.021	
3.0	.257	.203	.161	.220	.175	.139	.151	.122	.098	.087	.071	.058	.028	.023	.019	
4.0	.249	.191	.146	.214	.165	.127	.147	.115	.089	.085	.067	.053	.027	.022	.017	
5.0	.242	.181	.135	.208	.156	.118	.143	.109	.083	.083	.064	.049	.027	.021	.016	
6.0	.234	.172	.128	.201	.149	.112	.139	.105	.079	.081	.061	.047	.026	.020	.015	
7.0	.227	.166	.123	.195	.144	.107	.135	.101	.076	.078	.059	.045	.025	.019	.015	
8.0	.221	.160	.119	.190	.139	.103	.131	.097	.073	.076	.058	.044	.025	.019	.014	
9.0	.214	.155	.115	.185	.135	.101	.128	.095	.071	.075	.056	.043	.024	.018	.014	
10.0	.209	.151	.113	.180	.131	.098	.125	.092	.070	.073	.055	.042	.024	.018	.014	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

Uncorrected UGR Table

Report number:

MANUFACTURER:										
Address:										
NAME: 1.5M-40W-3000K					TYPE:			WEIGHT:		
SPECIFICATION:					DIMENSION: 1500*152*52mm			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	18.1	19.5	18.5	19.9	20.4	17.2	18.7	17.7	19.1	19.5
	20.2	21.5	20.6	21.9	22.4	19.0	20.3	19.4	20.7	21.2
	21.3	22.5	21.8	23.0	23.5	19.7	20.9	20.1	21.4	21.9
	22.5	23.6	23.0	24.1	24.6	20.2	21.4	20.7	21.9	22.4
	23.1	24.2	23.6	24.7	25.3	20.4	21.6	20.9	22.1	22.6
	23.9	25.0	24.4	25.5	26.0	20.6	21.7	21.1	22.2	22.7
4H 2H	18.7	19.9	19.2	20.4	20.9	18.0	19.3	18.5	19.8	20.3
	21.0	22.1	21.5	22.6	23.1	20.0	21.1	20.5	21.6	22.1
	22.2	23.3	22.8	23.8	24.4	20.8	21.8	21.4	22.4	22.9
	23.6	24.5	24.2	25.1	25.7	21.6	22.5	22.1	23.0	23.6
	24.4	25.2	25.0	25.8	26.4	21.9	22.7	22.4	23.3	23.9
	25.3	26.1	25.9	26.6	27.3	22.1	22.9	22.7	23.4	24.1
8H 4H	22.6	23.4	23.2	24.0	24.6	21.4	22.2	22.0	22.8	23.4
	24.2	25.0	24.9	25.5	26.2	22.4	23.1	23.0	23.7	24.4
	25.2	25.8	25.8	26.4	27.1	22.8	23.5	23.5	24.1	24.8
	26.3	26.9	27.0	27.5	28.2	23.2	23.8	23.9	24.4	25.1
12H 4H	22.6	23.4	23.2	24.0	24.6	21.5	22.3	22.1	22.9	23.5
	24.4	25.0	25.0	25.6	26.3	22.7	23.3	23.3	23.9	24.6
	25.4	26.0	26.0	26.6	27.3	23.2	23.8	23.9	24.4	25.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 5286 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.8)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	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) $k(RI) \times RCR = 5$									
$k = 0.60$	51	39	32	50	38	31	48	38	31	24
0.80	61	48	40	59	47	40	57	46	39	31
1.00	69	56	48	67	55	48	64	56	47	38
1.25	76	64	56	73	63	55	70	60	54	45
1.50	81	69	61	78	68	60	74	65	59	49
2.00	88	78	70	85	76	69	80	72	66	56
2.50	92	83	76	89	81	74	84	77	71	60
3.00	96	87	81	93	85	79	87	81	76	64
4.00	100	93	87	97	90	85	91	86	81	69
5.00	103	97	92	100	94	89	93	89	85	72
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

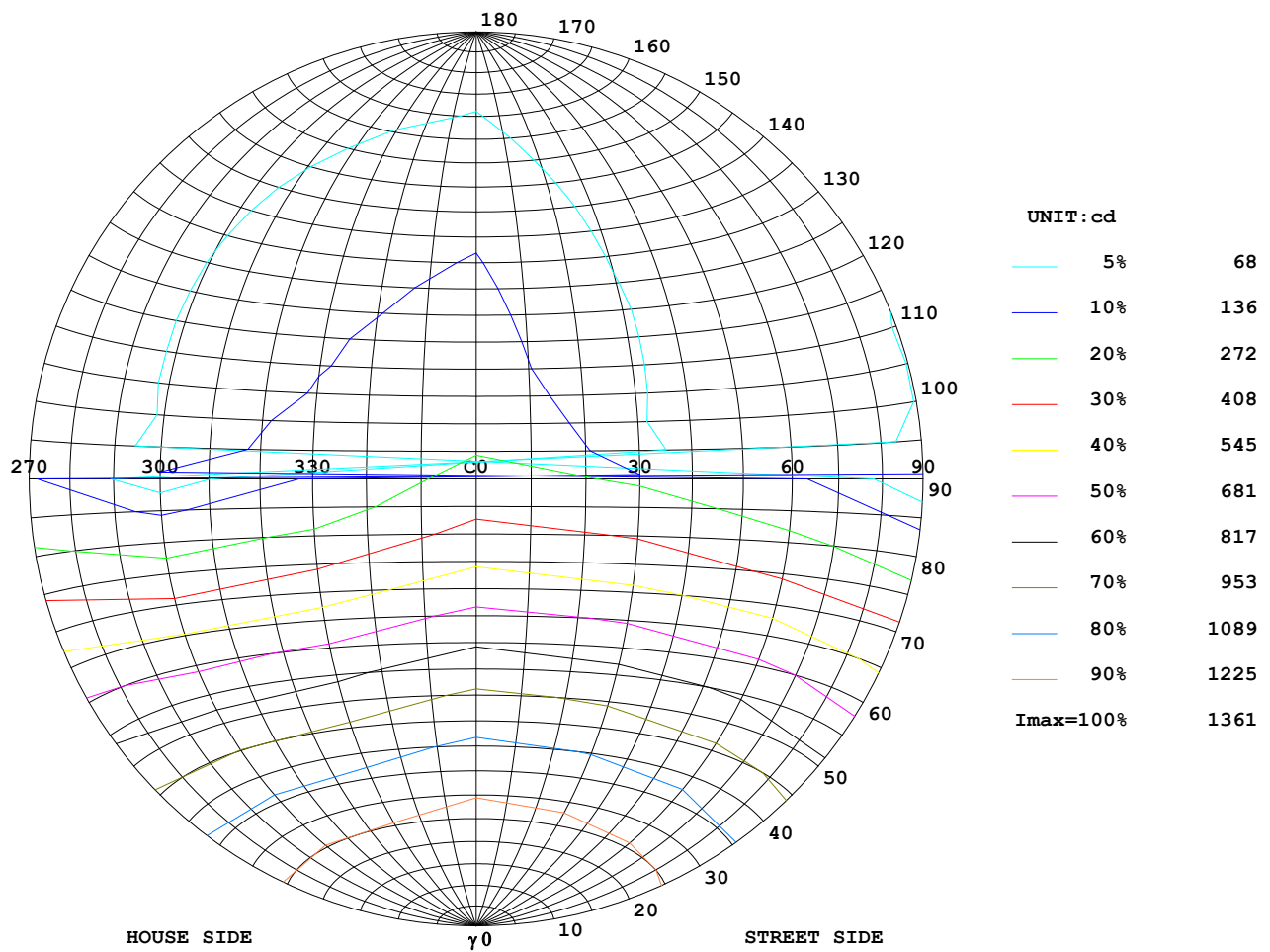
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

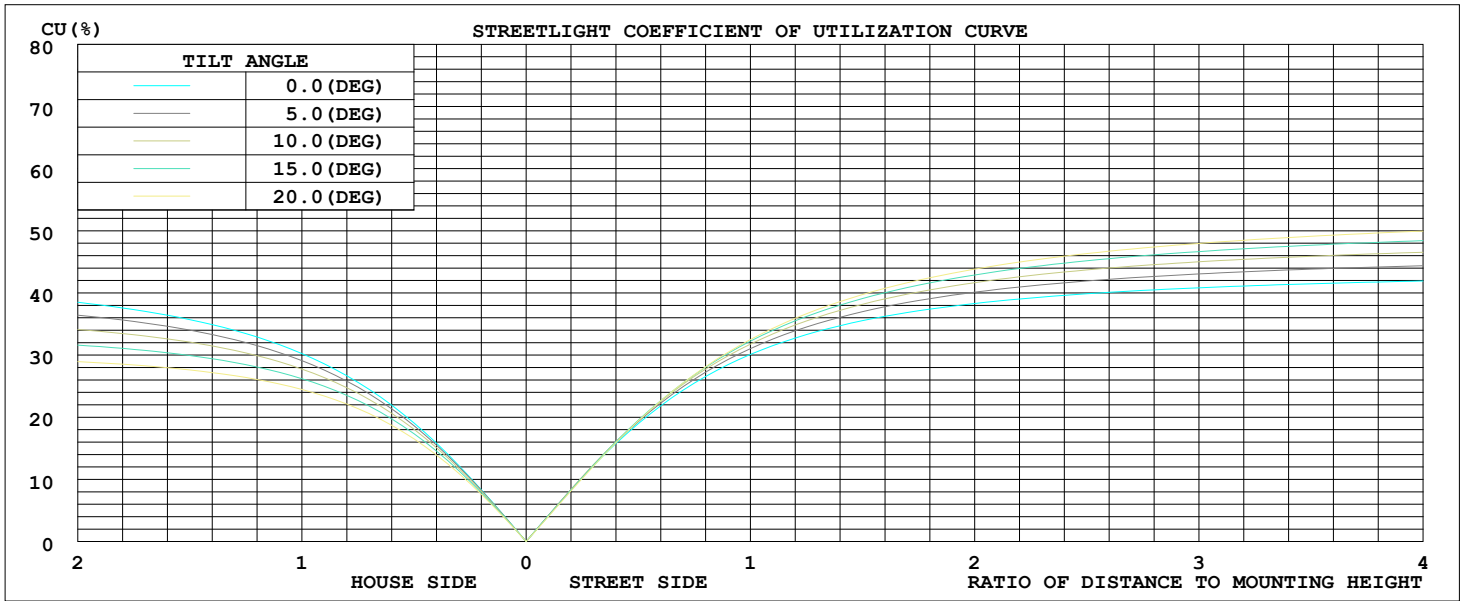
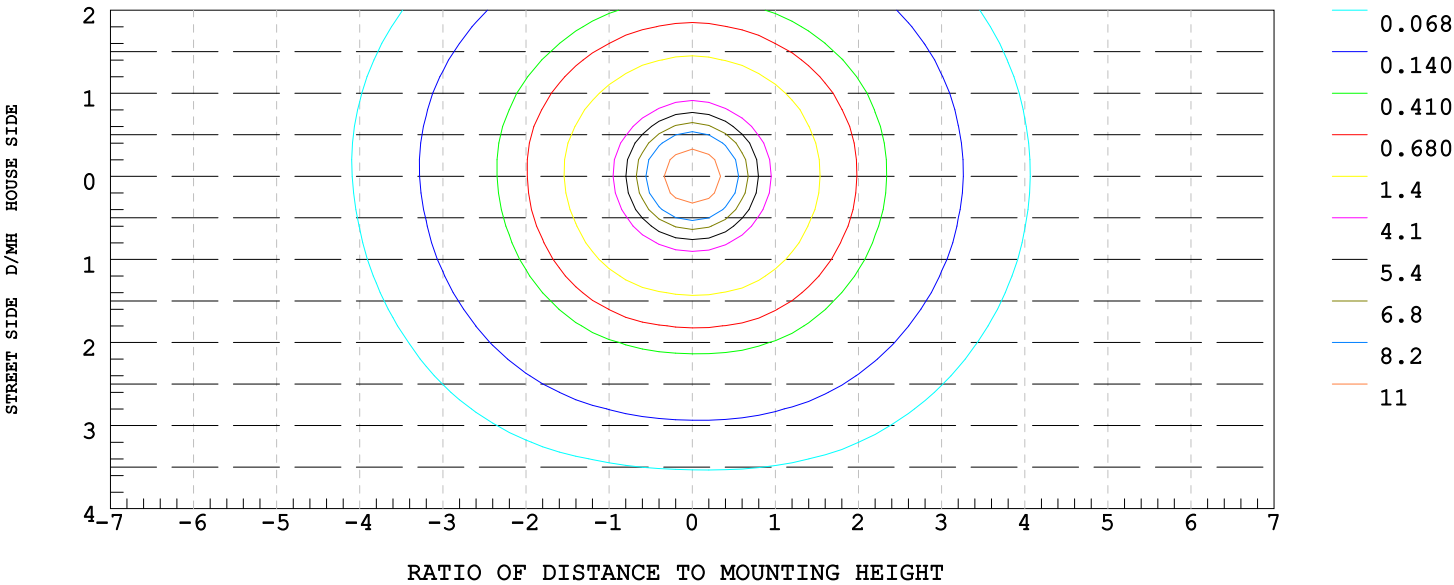
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 13.61 lx



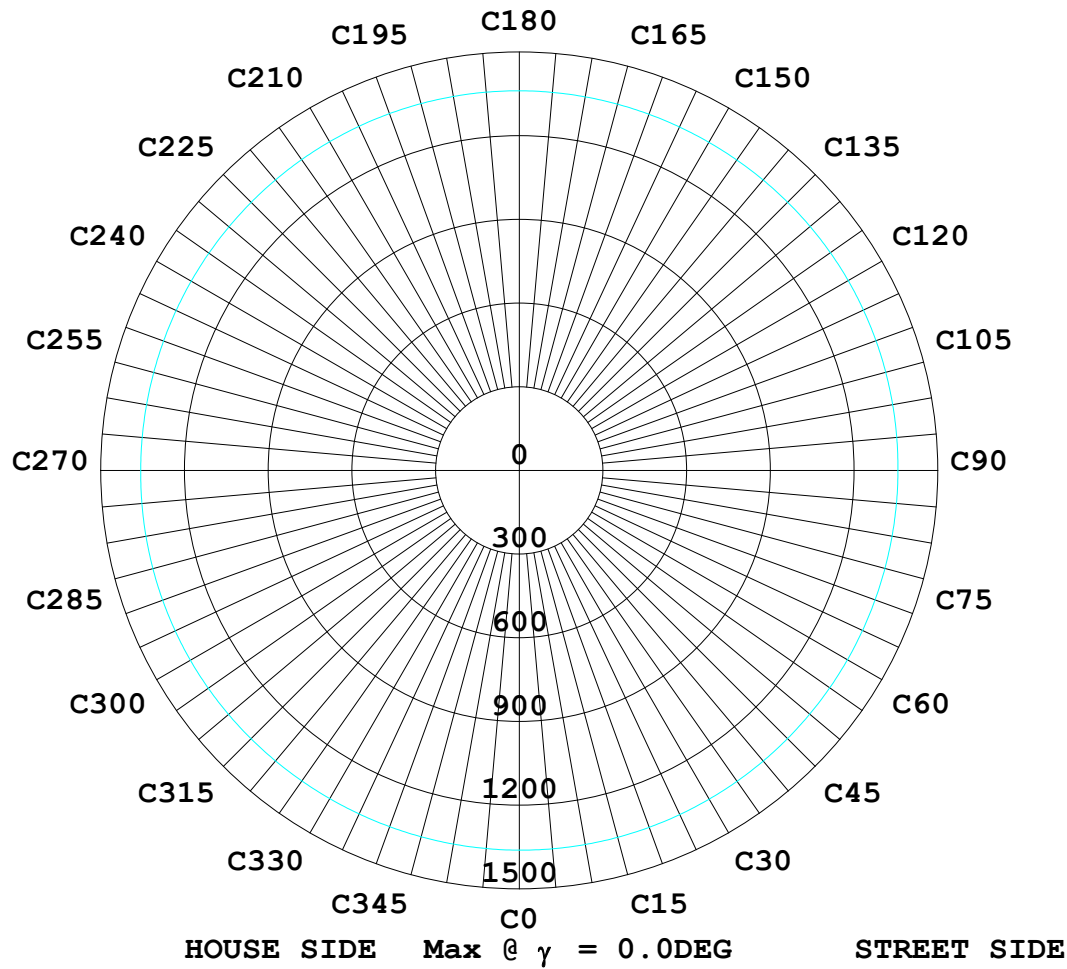
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 1.5M-40W-3000K	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1500*152*52mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年11月14日

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks: