

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

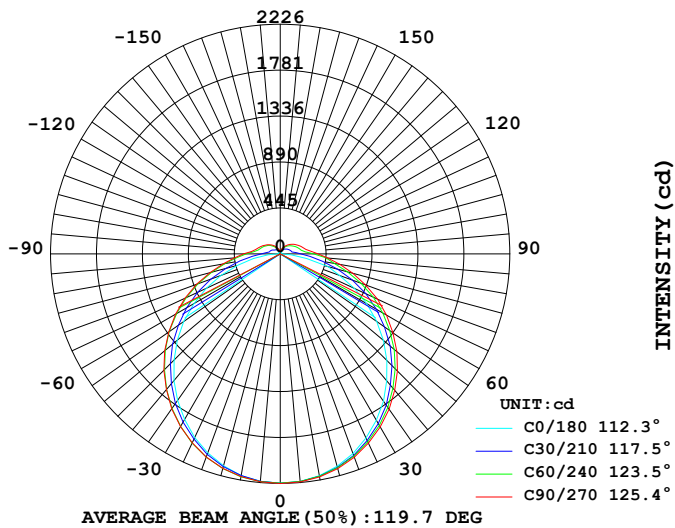
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

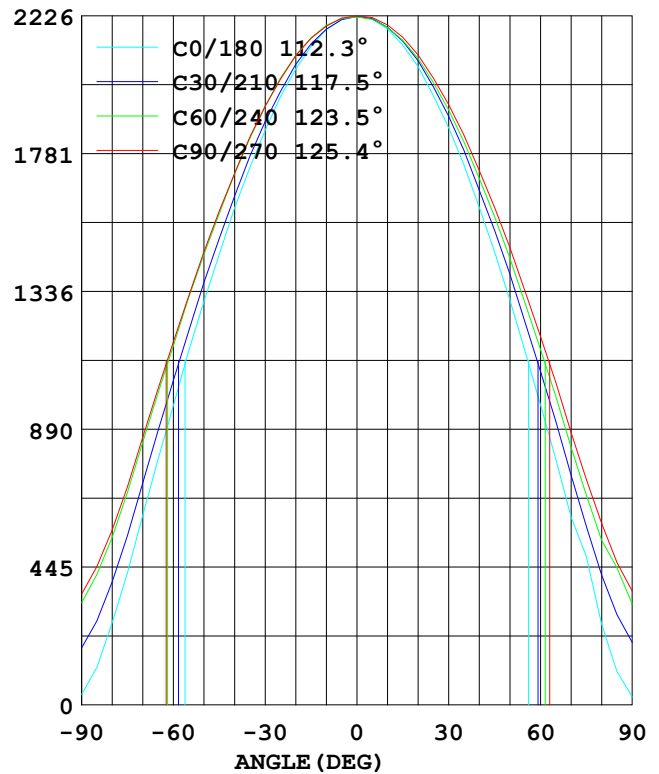
MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:

DATA OF LAMP		Imax(cd)	2226	S/MH(C0/180)	1.24
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.29
NOMINAL POWER(W)	58	TOTAL FLUX(lm)	7695.2	Voltage(V)	220.1
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	133.7	Current(A)	0.269
NOMINAL FLUX(lm)	7695.2	η up(%)	8.5	Power(W)	57.54
LAMPS QUANTITY	1	η down(%)	91.5	Power Factor(PF)	0.971
TEST VOLTAGE(V)	220.2	Effective Flux(lm)	7149.8	EEI	0.110

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

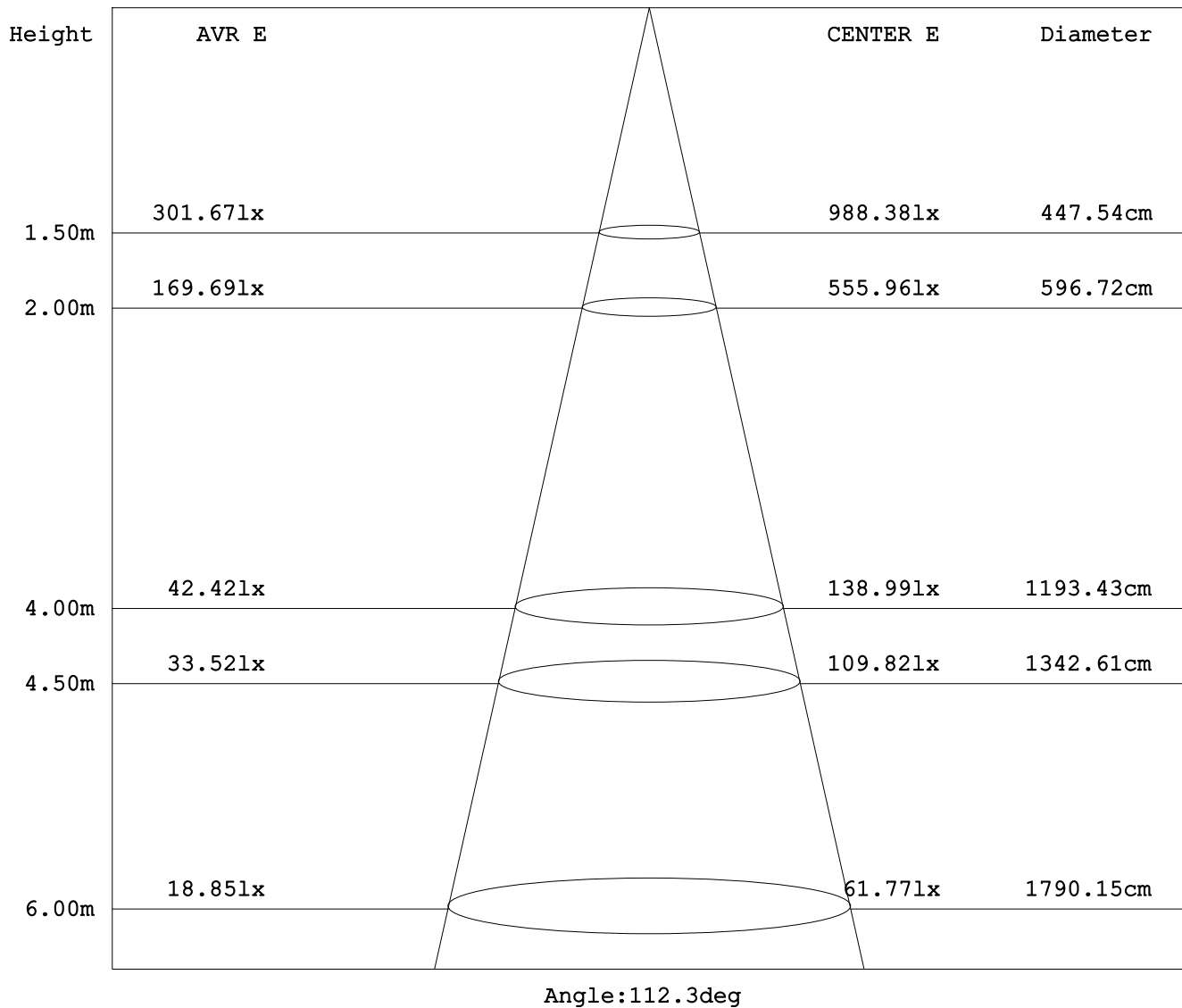
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2022年09月23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: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	2182	2189	2192	2184	2184	2189	2196	2181	0- 10	210.4	210.4
20.0	2054	2083	2097	2074	2061	2084	2099	2072	10- 20	604.4	814.9
30.0	1855	1908	1934	1894	1864	1911	1939	1892	20- 30	920.3	1735
40.0	1605	1679	1716	1659	1607	1682	1726	1656	30- 40	1121	2856
50.0	1303	1410	1464	1382	1308	1418	1478	1385	40- 50	1185	4041
60.0	966.7	1104	1173	1069	970.1	1113	1191	1074	50- 60	1111	5153
70.0	613.4	783.2	865.0	740.9	607.5	788.0	880.8	740.6	60- 70	914.0	6067
80.0	265.9	469.9	565.1	417.7	261.2	476.3	587.2	420.7	70- 80	628.4	6695
90.0	33.75	257.2	358.0	204.4	25.04	263.5	366.8	208.3	80- 90	349.0	7044
100.0	18.15	162.5	242.8	122.5	12.58	161.3	253.6	124.8	90-100	189.8	7234
110.0	18.87	141.8	204.3	108.0	14.64	141.5	213.2	109.9	100-110	137.6	7372
120.0	18.75	116.8	170.4	92.32	16.69	119.8	178.9	91.71	110-120	111.0	7483
130.0	19.84	95.40	138.7	77.68	18.39	99.22	146.2	71.99	120-130	83.61	7566
140.0	21.05	71.75	107.8	63.40	19.35	79.25	114.8	57.11	130-140	58.67	7625
150.0	21.65	52.57	78.16	49.54	20.57	60.19	85.06	45.85	140-150	37.53	7662
160.0	22.14	39.44	52.63	36.66	21.41	42.59	58.56	35.45	150-160	21.00	7683
170.0	22.62	27.89	30.85	26.43	21.90	28.61	33.15	25.71	160-170	9.361	7693
180.0	22.62	21.90	21.53	21.90	22.50	21.84	23.23	21.71	170-180	2.363	7695
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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

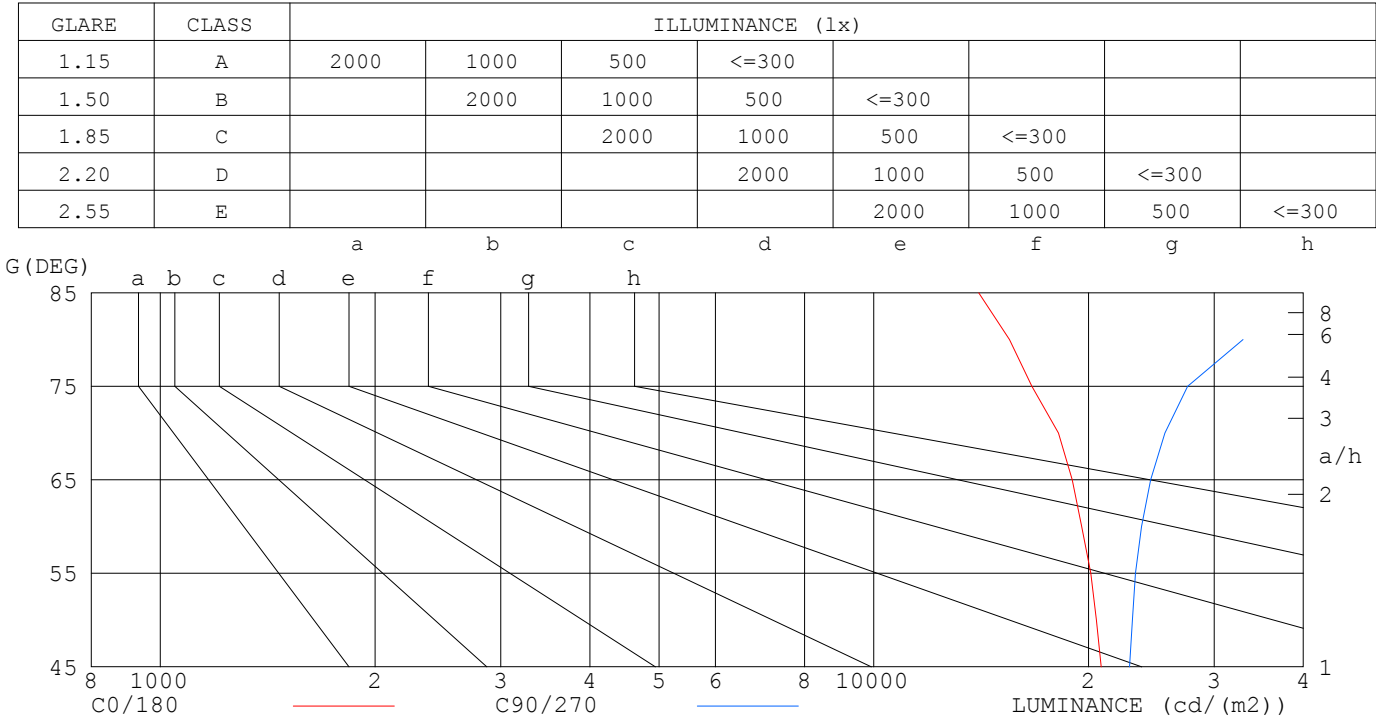
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:

LUMINANCE LIMITATION CURVES



LUMINANCE cd/ (m2)

G (DEG)	C0/180	C90/270
85	14032	51872
80	15496	32930
75	16659	27542
70	18147	25589
65	18971	24442
60	19563	23727
55	20146	23275
50	20512	23041
45	20831	22834

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

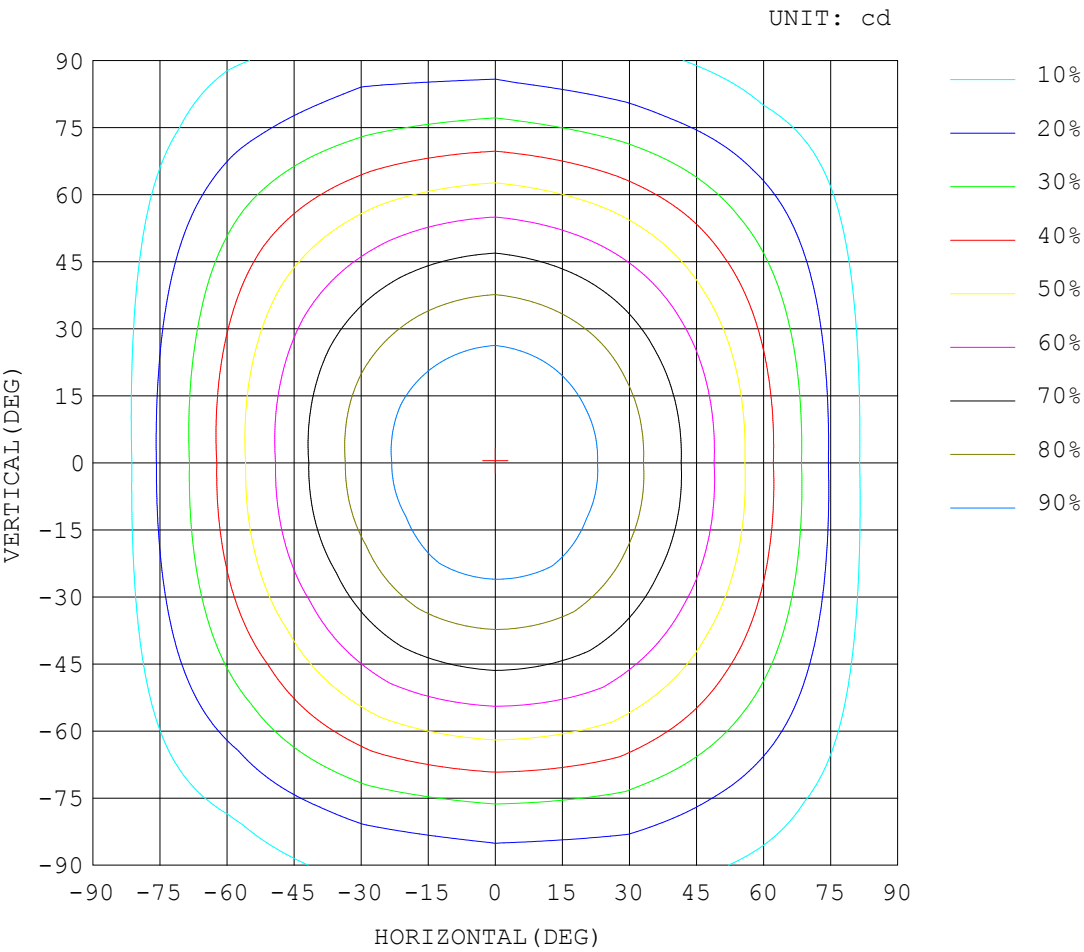
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

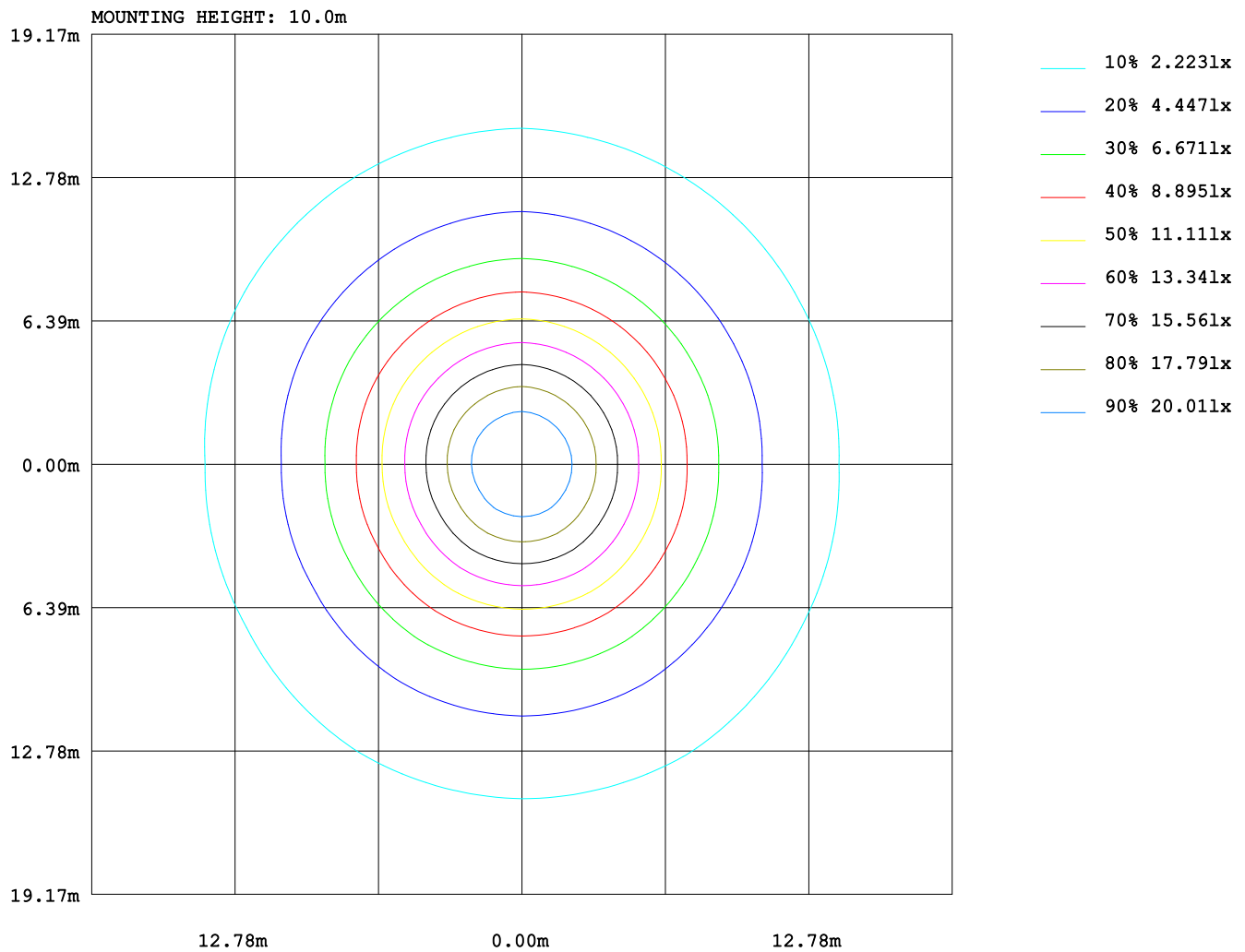
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23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: RE-T015S3-60WCFF-B41-TL										TYPE:					WEIGHT:					
SPECIFICATION:										DIMENSION: 1510*85MM					SERIAL No.:					

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.20	1.09	2.71	4.84	7.25	9.84	11.9	13.1	14.0	13.7	12.2	10.4	8.27	5.86	3.69	2.02	0.87	0.18	122	114		
90																						
80	0.24	1.44	3.78	7.01	10.6	14.4	17.7	20.2	21.8	21.6	19.6	16.7	13.2	9.42	5.87	3.10	1.22	0.23	189	185		
70	0.29	1.86	5.14	9.72	14.9	20.4	25.3	28.9	31.1	30.9	28.3	24.4	19.3	13.8	8.67	4.47	1.66	0.27	270	268		
60	0.33	2.34	6.64	12.5	19.4	26.4	32.6	37.3	40.0	39.8	36.8	31.8	25.4	18.4	11.5	5.95	2.13	0.32	350	349		
50	0.37	2.82	7.94	15.1	23.4	31.8	39.3	45.0	48.1	48.0	44.5	38.6	30.9	22.4	14.2	7.35	2.59	0.36	423	423		
40	0.41	3.25	8.97	17.2	26.8	36.5	45.0	51.6	55.2	55.0	51.1	44.3	35.6	25.9	16.5	8.57	2.98	0.41	486	485		
30	0.43	3.56	9.76	18.7	29.3	40.0	49.6	56.8	60.8	60.6	56.4	49.0	39.2	28.6	18.3	9.50	3.29	0.44	535	535		
	0.44	3.73	10.2	19.7	30.9	42.4	52.8	60.5	64.7	64.6	60.1	52.2	41.9	30.5	19.4	10.0	3.49	0.46	569	568		
	0.44	3.76	10.3	20.0	31.5	43.4	54.1	62.3	66.6	66.5	62.0	53.8	43.1	31.3	19.9	10.3	3.56	0.46	584	584		
	0.44	3.73	10.3	19.9	31.3	43.2	53.9	62.0	66.5	66.6	62.1	53.9	43.2	31.3	20.0	10.3	3.57	0.47	583	583		
	0.43	3.64	10.0	19.3	30.4	41.7	52.1	60.2	64.6	64.8	60.5	52.4	42.0	30.6	19.5	10.1	3.52	0.46	567	566		
-30	0.41	3.41	9.40	18.1	28.4	39.0	49.0	56.7	60.7	60.8	57.0	49.5	39.6	28.9	18.4	9.62	3.35	0.45	533	533		
-40	0.38	3.06	8.48	16.3	25.5	35.5	44.5	51.4	55.0	55.1	51.8	45.1	36.1	26.2	16.8	8.75	3.07	0.42	484	483		
-50	0.33	2.58	7.32	13.9	22.1	30.9	38.9	44.6	47.8	48.0	45.1	39.6	31.6	22.9	14.6	7.60	2.71	0.38	422	421		
-60	0.28	2.06	5.89	11.3	18.2	25.4	32.1	36.8	39.5	39.7	37.4	32.9	26.3	19.1	12.0	6.26	2.28	0.34	348	347		
-70	0.24	1.55	4.32	8.38	13.7	19.5	24.6	28.3	30.5	30.7	28.8	25.5	20.5	14.7	9.30	4.90	1.83	0.30	268	266		
-80	0.20	1.10	2.89	5.65	9.30	13.3	16.9	19.4	21.1	21.3	20.0	17.9	14.4	10.4	6.68	3.58	1.40	0.25	186	182		
-90	0.15	0.76	1.80	3.44	5.73	8.32	10.5	12.1	13.3	13.6	12.8	11.6	9.55	6.93	4.53	2.53	1.05	0.20	119	110		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)				20	30	40	50	60	70	80	90		
Φ t	6.00	45.8	126	242	380	523	652	748	802	802	748	651	521	378	241	125	44.6	6.40	7695			
Φ a	0.79	39.2	121	239	379	523	652	748	802	802	748	651	521	377	238	120	38.0	1.16			7150	

Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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

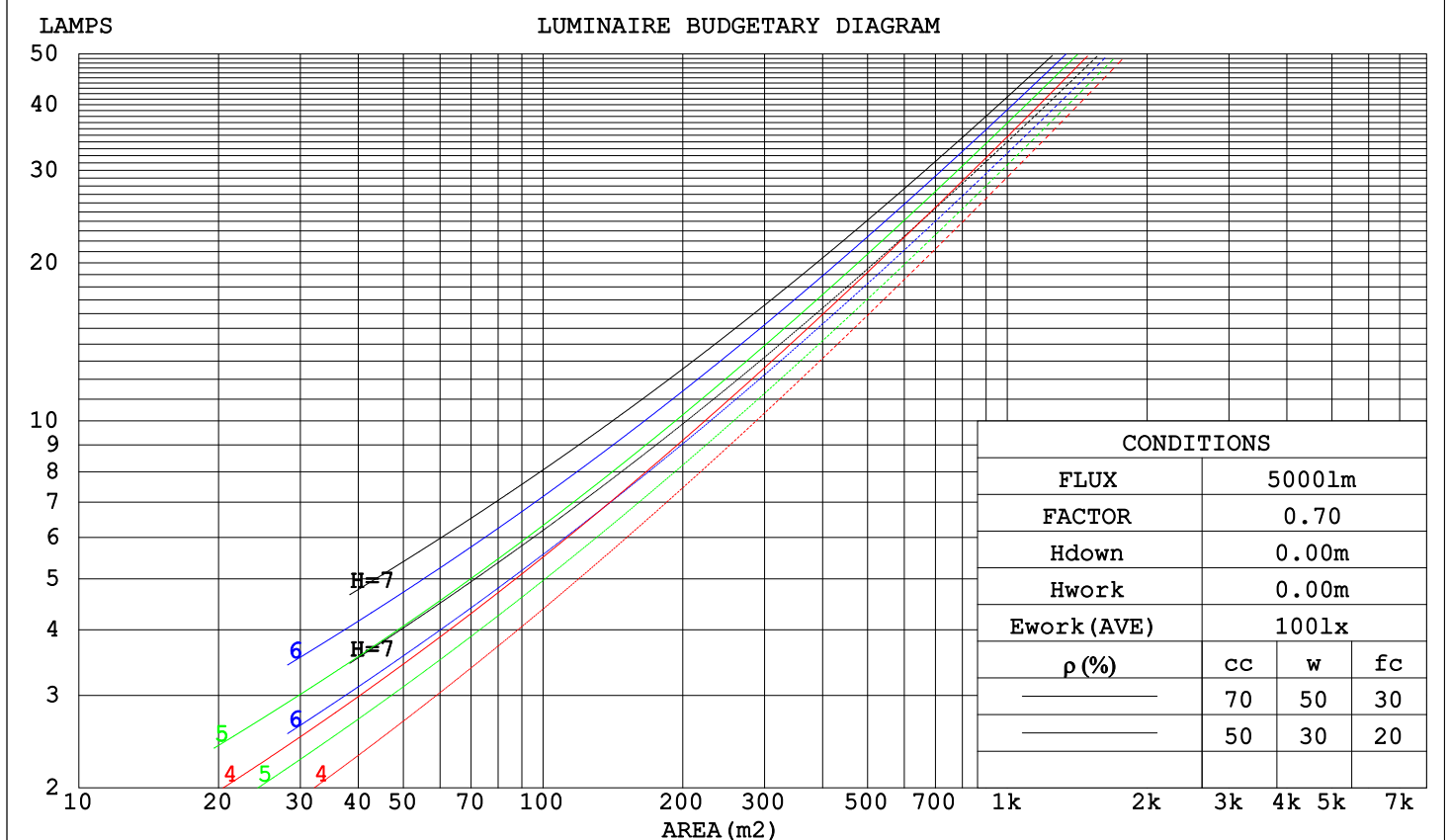
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: RE-T015S3-60WCFF-B41-TL								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1510*85MM				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09月23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: RE-T015S3-60WCFF-B41-TL								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1510*85MM				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															Wall Exitance Coefficients (WEC)														
0.0																														
1.0	.345	.196	.062	.336	.191	.061	.317	.182	.058	.301	.173	.056	.285	.165	.053															
2.0	.311	.171	.052	.303	.167	.051	.286	.159	.049	.271	.152	.048	.257	.146	.046															
3.0	.282	.150	.045	.275	.147	.044	.260	.141	.043	.246	.135	.041	.234	.129	.040															
4.0	.257	.134	.039	.250	.131	.039	.237	.126	.038	.225	.121	.036	.214	.116	.035															
5.0	.236	.120	.035	.230	.118	.034	.218	.113	.033	.207	.109	.032	.197	.105	.032															
6.0	.218	.109	.031	.212	.107	.031	.201	.103	.030	.191	.099	.029	.182	.096	.028															
7.0	.202	.100	.028	.197	.098	.028	.187	.094	.027	.178	.091	.027	.169	.088	.026															
8.0	.188	.092	.026	.183	.090	.025	.174	.087	.025	.166	.084	.024	.158	.081	.024															
9.0	.175	.085	.024	.171	.083	.023	.163	.081	.023	.156	.078	.022	.148	.075	.022															
10.0	.165	.079	.022	.161	.078	.022	.153	.075	.021	.146	.073	.021	.140	.070	.020															

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						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.255	.255	.255	.218	.218	.218	.149	.149	.149	.085	.085	.085	.027	.027	.027	
1.0	.248	.221	.197	.212	.190	.169	.145	.130	.117	.083	.075	.068	.027	.024	.022	
2.0	.240	.197	.161	.206	.170	.139	.141	.117	.097	.081	.068	.057	.026	.022	.019	
3.0	.233	.180	.138	.199	.155	.120	.137	.108	.084	.079	.063	.050	.025	.020	.016	
4.0	.225	.167	.123	.193	.145	.107	.133	.101	.075	.077	.059	.045	.025	.019	.015	
5.0	.217	.157	.113	.187	.136	.098	.129	.095	.069	.075	.056	.041	.024	.018	.014	
6.0	.210	.149	.105	.181	.129	.092	.125	.090	.065	.072	.053	.038	.023	.017	.013	
7.0	.203	.142	.099	.175	.123	.087	.121	.086	.061	.070	.051	.037	.023	.017	.012	
8.0	.197	.137	.095	.169	.118	.083	.117	.083	.059	.068	.049	.035	.022	.016	.012	
9.0	.190	.132	.092	.164	.114	.080	.114	.080	.057	.066	.047	.034	.021	.016	.011	
10.0	.185	.127	.089	.159	.111	.078	.110	.078	.055	.064	.046	.033	.021	.015	.011	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年09月23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: RE-T015S3-60WCFF-B41-TL					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 1510*85MM			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	22.7	24.2	23.1	24.5	24.9	23.5	25.0	23.9	25.3	25.7	
	3H	24.3	25.6	24.7	26.0	26.4	25.5	26.8	25.9	27.2	27.6
	4H	24.9	26.2	25.3	26.6	27.0	26.4	27.7	26.9	28.1	28.6
	6H	25.3	26.5	25.8	26.9	27.4	27.4	28.6	27.9	29.0	29.5
	8H	25.4	26.6	25.9	27.0	27.5	27.9	29.1	28.4	29.5	30.0
	12H	25.5	26.6	26.0	27.1	27.6	28.5	29.6	29.0	30.0	30.5
4H 2H	23.5	24.8	24.0	25.2	25.6	24.1	25.4	24.6	25.8	26.2	
	3H	25.3	26.4	25.7	26.8	27.3	26.3	27.4	26.8	27.9	28.4
	4H	26.0	27.0	26.5	27.5	28.0	27.4	28.5	27.9	28.9	29.4
	6H	26.6	27.5	27.1	28.0	28.6	28.6	29.5	29.1	30.0	30.5
	8H	26.8	27.6	27.3	28.2	28.7	29.2	30.0	29.7	30.5	31.1
	12H	26.9	27.7	27.5	28.2	28.8	29.9	30.7	30.4	31.2	31.8
8H 4H	26.5	27.4	27.1	27.9	28.5	27.8	28.6	28.3	29.1	29.7	
	6H	27.4	28.1	27.9	28.6	29.2	29.2	29.9	29.7	30.4	31.0
	8H	27.7	28.3	28.3	28.9	29.5	29.9	30.6	30.5	31.1	31.8
	12H	28.0	28.5	28.6	29.1	29.8	30.9	31.4	31.5	32.0	32.7
12H 4H	26.7	27.4	27.2	28.0	28.6	27.8	28.6	28.3	29.1	29.7	
	6H	27.6	28.2	28.2	28.8	29.4	29.2	29.9	29.8	30.5	31.1
	8H	28.0	28.6	28.6	29.2	29.8	30.1	30.7	30.7	31.3	31.9
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 7695 lm Total Lamp Luminous Flux. (8log(F/F0) = 7.1)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年09月23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: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	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) $k(RI) \times RCR = 5$									
$k = 0.60$	53	41	34	52	41	34	50	40	33	27
0.80	63	50	43	61	50	42	59	49	42	34
1.00	71	59	51	69	58	50	66	59	50	42
1.25	78	66	58	76	65	58	72	63	57	48
1.50	83	72	64	81	71	63	77	68	62	53
2.00	90	80	73	87	78	72	83	75	70	60
2.50	94	85	78	91	83	77	86	80	74	64
3.00	98	90	83	95	87	82	89	83	79	68
4.00	102	95	90	99	93	88	93	88	84	73
5.00	105	99	94	101	96	92	95	91	88	76
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

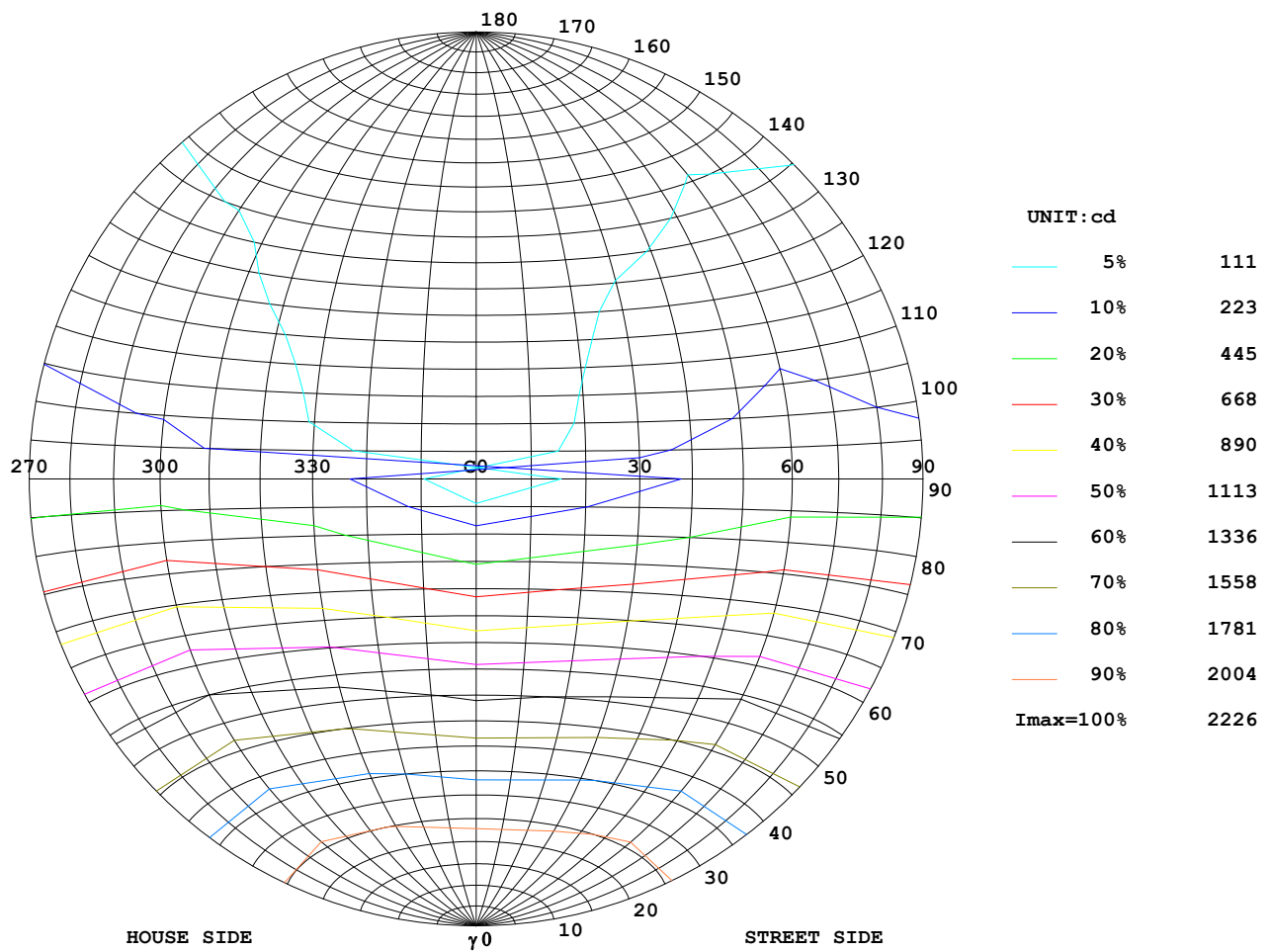
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年09月23日

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: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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

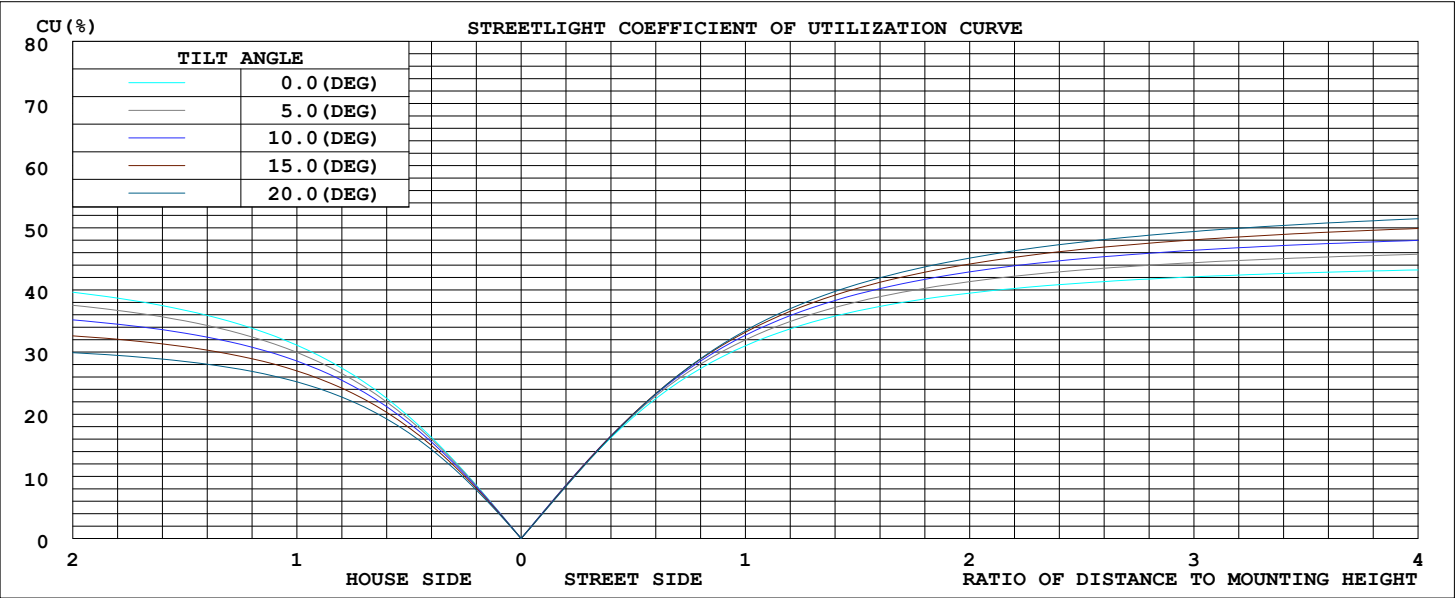
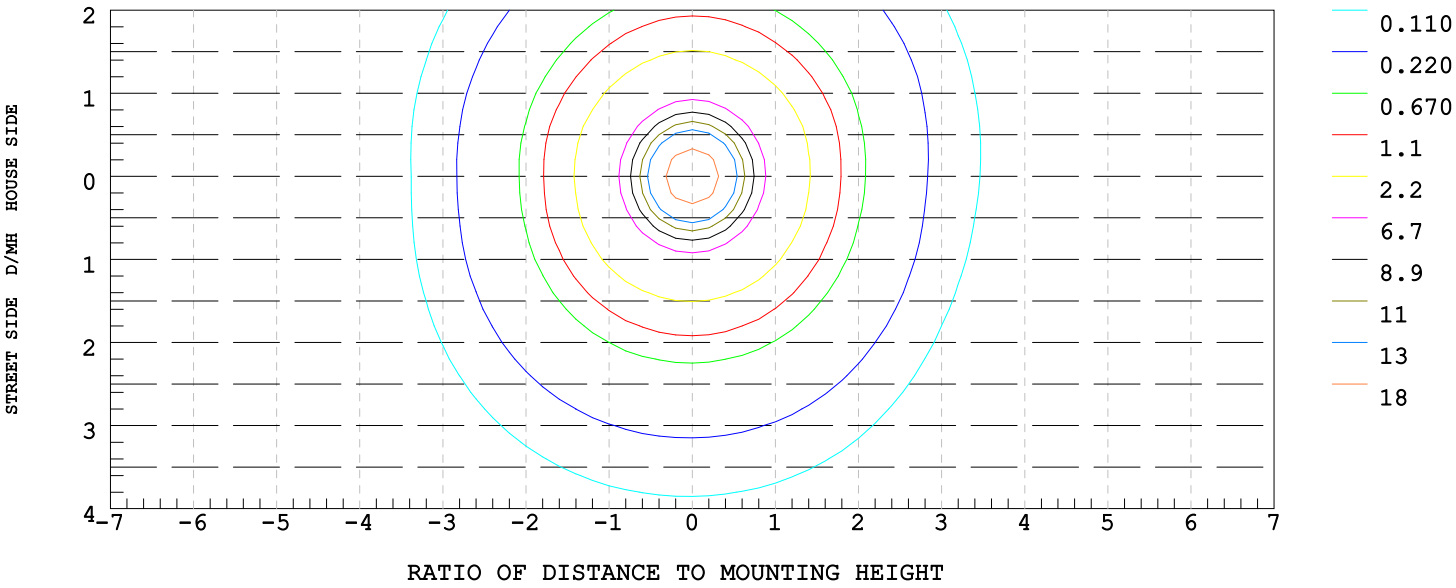
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 22.24 lx



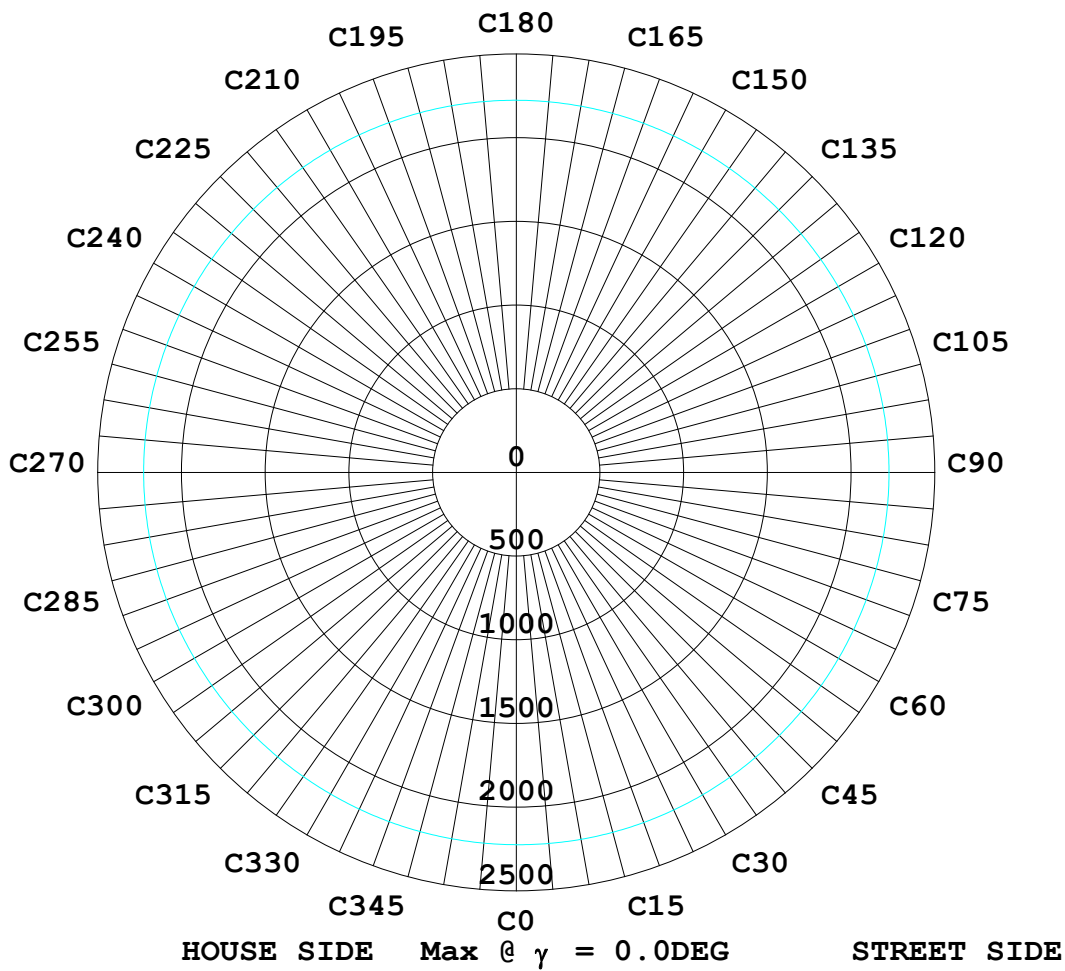
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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