

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

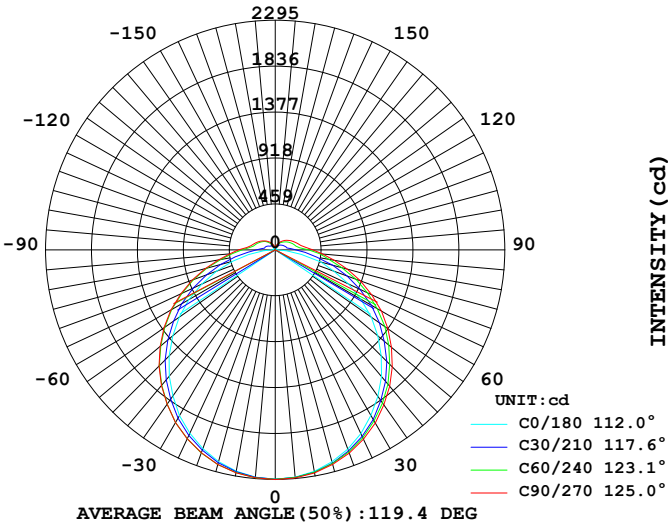
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

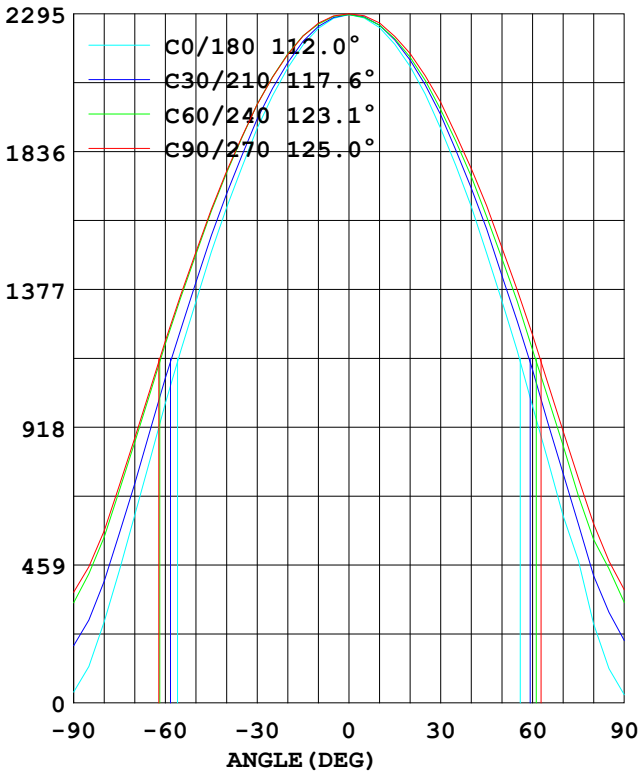
MANUFACTURER:		
Address:		
NAME: RE-T015S3-60WCFF-B41-TL	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1510*85MM	SERIAL No.:

DATA OF LAMP		Imax(cd)	2295	S/MH(C0/180)	1.24
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.29
NOMINAL POWER(W)	56	TOTAL FLUX(lm)	7906.8	Voltage(V)	220.1
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	141.4	Current(A)	0.262
NOMINAL FLUX(lm)	7906.9	η up(%)	8.4	Power(W)	55.91
LAMPS QUANTITY	1	η down(%)	91.6	Power Factor(PF)	0.966
TEST VOLTAGE(V)	220.2	Effective Flux(lm)	7338.8	EEI	0.104

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



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

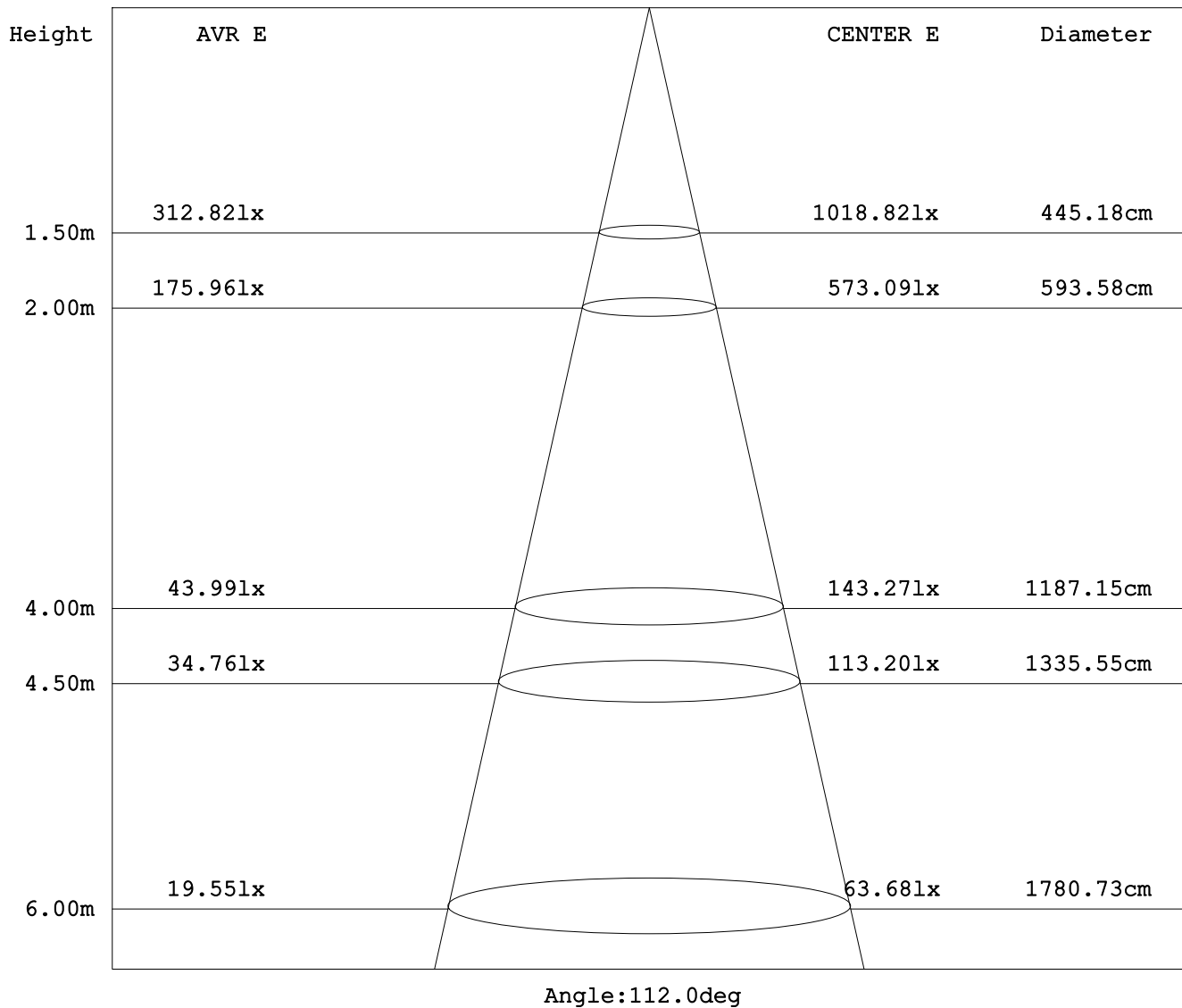
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

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	2246	2257	2263	2252	2249	2257	2265	2252	0- 10	217.0	217.0
20.0	2114	2147	2159	2136	2119	2146	2163	2136	10- 20	623.0	840.0
30.0	1913	1969	1993	1953	1913	1967	2000	1951	20- 30	948.5	1789
40.0	1649	1730	1770	1708	1653	1734	1779	1710	30- 40	1154	2942
50.0	1336	1448	1502	1418	1339	1452	1517	1422	40- 50	1219	4162
60.0	997.8	1139	1206	1100	989.4	1144	1227	1105	50- 60	1143	5304
70.0	625.9	799.6	882.4	756.3	624.6	812.0	906.6	765.3	60- 70	936.6	6241
80.0	270.3	478.9	573.5	424.7	263.6	484.1	596.7	430.3	70- 80	643.8	6885
90.0	36.05	261.7	368.5	210.8	26.74	271.2	376.4	215.2	80- 90	356.5	7241
100.0	18.51	166.1	247.5	124.9	12.22	165.2	258.9	128.0	90-100	194.1	7435
110.0	18.75	145.1	208.3	110.4	15.12	144.4	218.2	112.0	100-110	140.7	7576
120.0	18.99	119.5	174.6	94.44	16.94	122.7	183.6	93.83	110-120	113.4	7690
130.0	19.84	97.46	141.0	79.25	18.87	101.4	149.4	73.56	120-130	85.40	7775
140.0	21.90	73.26	109.7	64.91	19.72	80.70	117.1	58.08	130-140	59.98	7835
150.0	21.78	54.02	80.10	50.57	21.05	61.58	87.36	47.43	140-150	38.32	7873
160.0	22.74	39.99	53.48	37.44	21.65	43.56	59.53	36.11	150-160	21.45	7895
170.0	22.74	28.67	31.70	27.34	22.02	29.10	34.24	26.74	160-170	9.605	7904
180.0	22.99	22.50	22.38	22.74	22.86	22.50	23.95	22.38	170-180	2.422	7907
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:

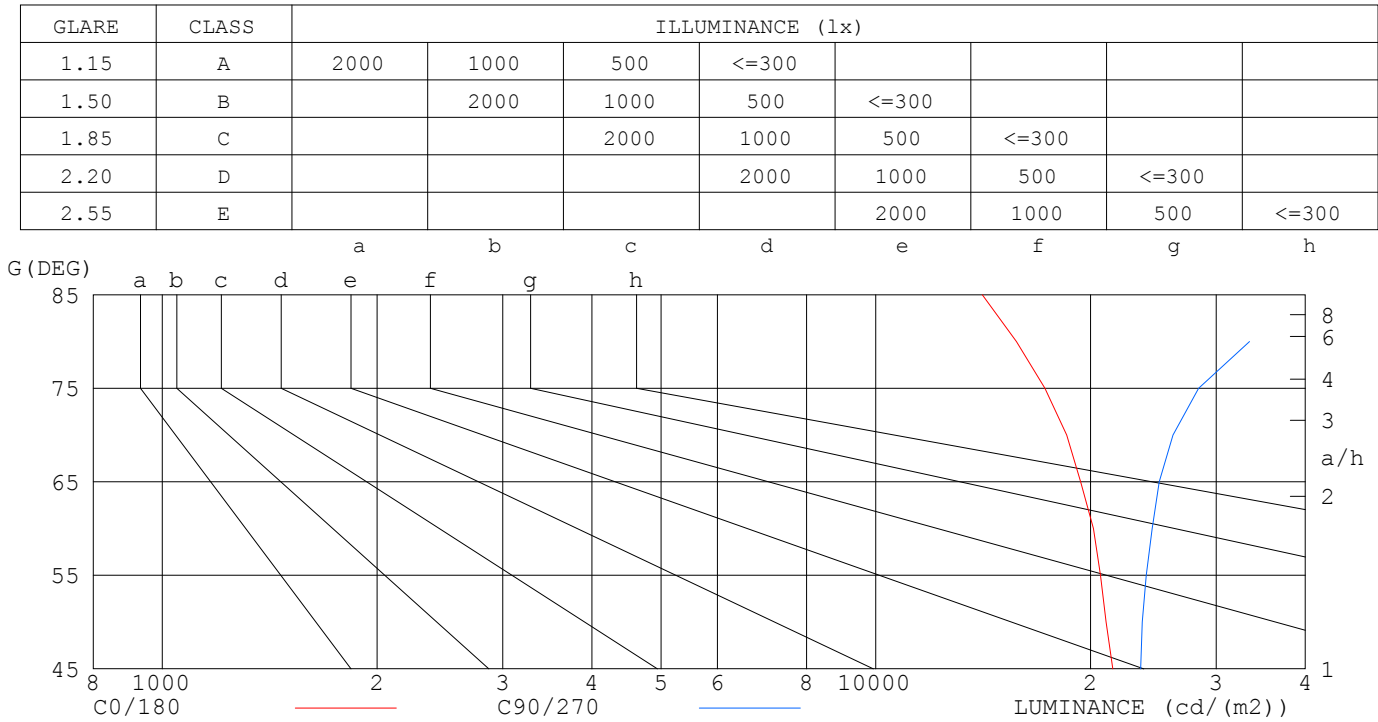
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

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	14102	52617
80	15749	33416
75	17260	28351
70	18516	26104
65	19373	24961
60	20192	24401
55	20647	23941
50	21033	23635
45	21485	23518

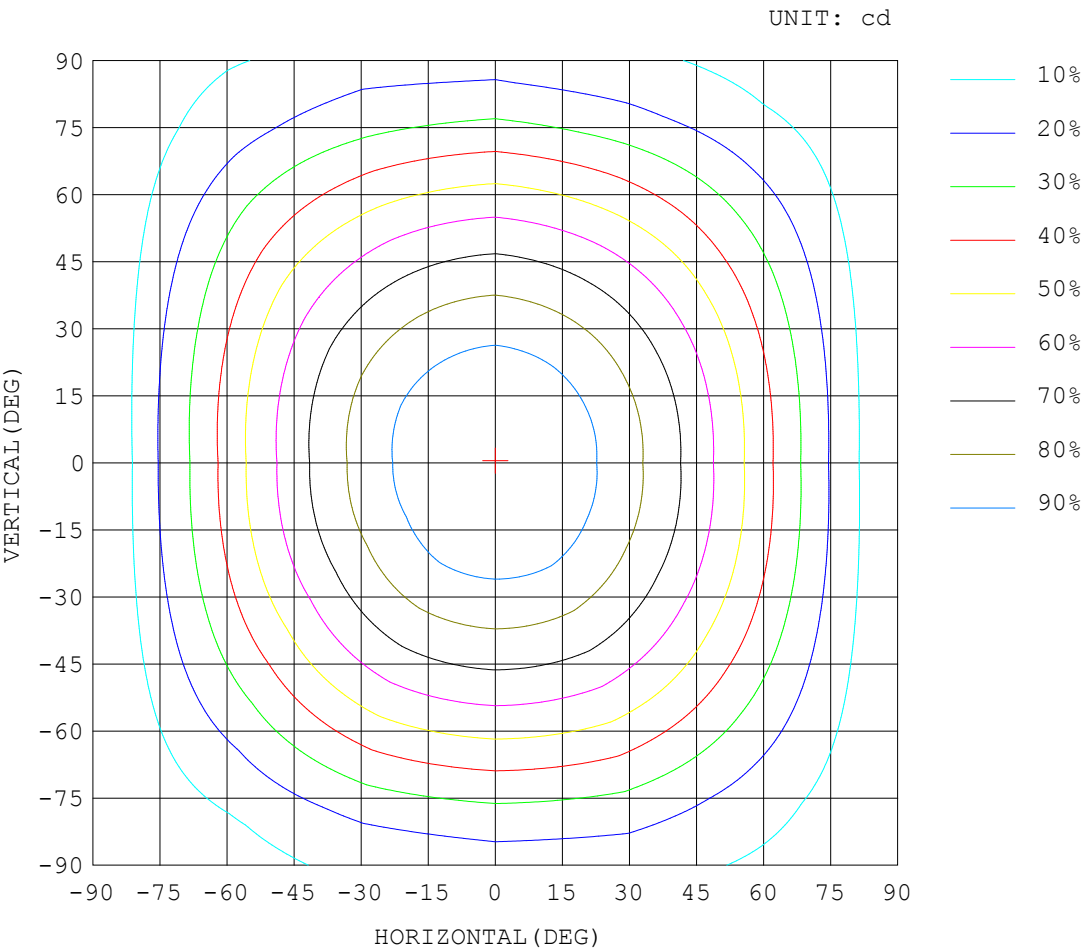
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2022年09月23日

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

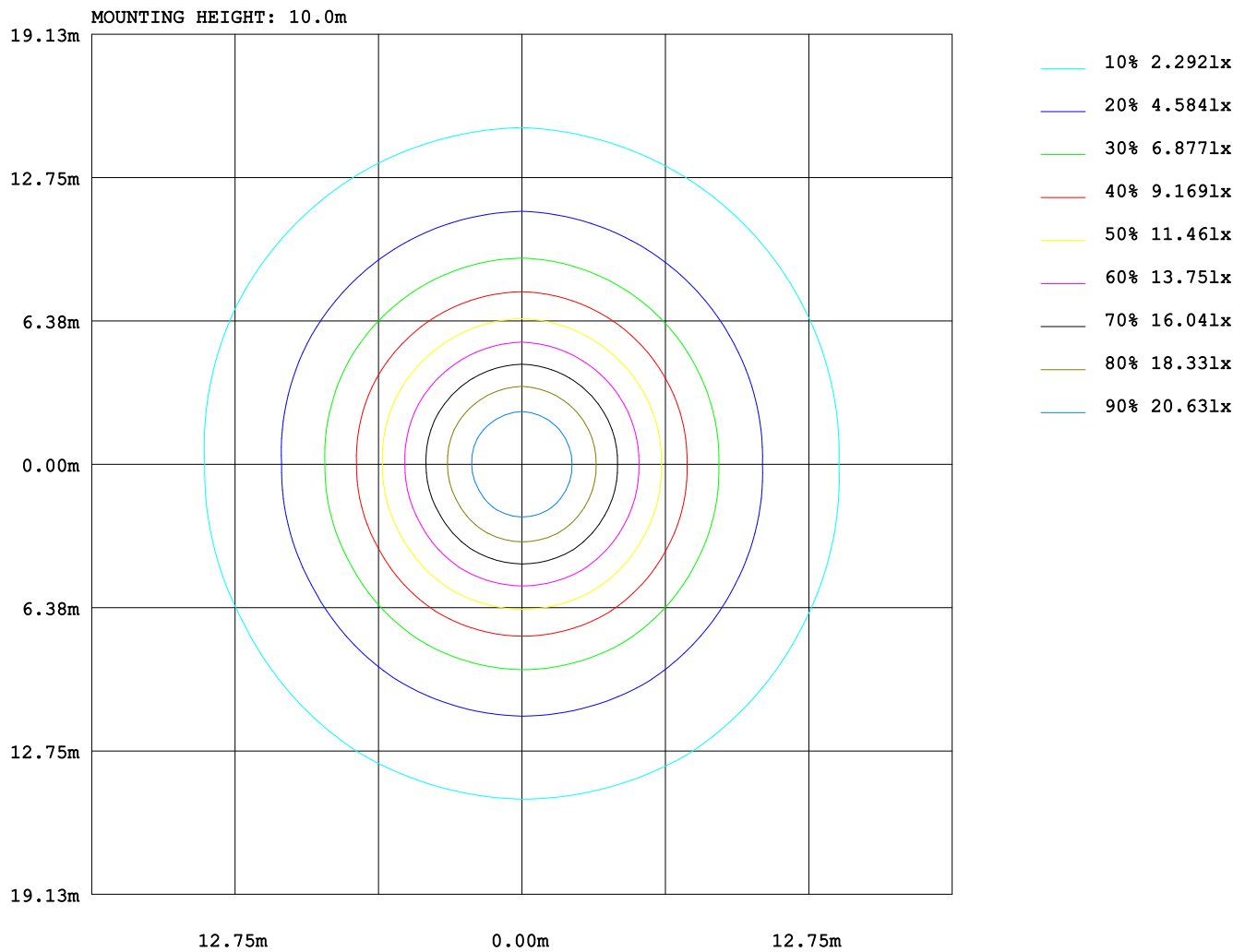
Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

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.:



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	1.13	2.81	4.98	7.41	10.0	12.1	13.4	14.3	14.0	12.6	10.7	8.53	6.06	3.83	2.10	0.90	0.18	126	116		
90																						
80	0.25	1.49	3.88	7.13	10.8	14.7	18.1	20.7	22.3	22.1	20.0	17.1	13.5	9.65	6.04	3.19	1.26	0.23	193	189		
70	0.30	1.91	5.21	9.98	15.3	20.9	25.9	29.6	31.9	31.7	29.1	25.0	19.9	14.3	8.96	4.60	1.69	0.28	277	275		
60	0.34	2.37	6.78	12.8	19.9	27.1	33.5	38.4	41.2	41.0	37.8	32.7	26.1	18.9	11.9	6.16	2.18	0.32	360	359		
50	0.38	2.86	8.13	15.4	24.1	32.7	40.4	46.2	49.5	49.4	45.8	39.7	31.8	23.1	14.6	7.59	2.66	0.37	435	435		
40	0.42	3.28	9.19	17.6	27.5	37.5	46.4	53.1	56.8	56.7	52.7	45.7	36.7	26.7	17.0	8.80	3.07	0.41	500	499		
30	0.44	3.59	9.98	19.2	30.1	41.2	51.1	58.5	62.6	62.5	58.2	50.5	40.5	29.5	18.8	9.73	3.39	0.44	551	550		
	0.46	3.76	10.4	20.2	31.7	43.6	54.4	62.3	66.6	66.6	62.0	53.9	43.1	31.4	20.0	10.3	3.59	0.46	586	585		
	0.45	3.79	10.5	20.5	32.3	44.6	55.7	64.2	68.7	68.6	63.9	55.5	44.4	32.2	20.5	10.5	3.66	0.47	601	600		
	0.45	3.76	10.5	20.4	32.1	44.3	55.4	63.9	68.6	68.7	64.0	55.5	44.4	32.3	20.5	10.5	3.67	0.47	600	600		
	0.44	3.67	10.2	19.8	31.2	42.9	53.6	62.0	66.6	66.8	62.3	54.0	43.3	31.5	20.1	10.4	3.62	0.47	584	583		
-30	0.42	3.44	9.60	18.6	29.2	40.2	50.4	58.4	62.5	62.7	58.8	50.9	40.8	29.7	19.0	9.83	3.44	0.46	549	548		
-40	0.39	3.08	8.66	16.7	26.3	36.4	45.8	52.9	56.6	56.7	53.3	46.5	37.2	27.0	17.3	8.94	3.15	0.43	498	497		
-50	0.34	2.61	7.46	14.2	22.7	31.7	39.9	45.9	49.2	49.4	46.4	40.7	32.5	23.6	15.0	7.79	2.77	0.39	433	432		
-60	0.30	2.09	6.00	11.5	18.6	26.1	33.0	37.8	40.6	40.8	38.4	33.9	27.1	19.5	12.3	6.45	2.32	0.35	358	356		
-70	0.25	1.58	4.39	8.60	14.0	19.9	25.2	28.9	31.2	31.4	29.5	26.1	20.9	15.1	9.56	5.00	1.86	0.30	274	272		
-80	0.20	1.13	2.93	5.74	9.50	13.6	17.3	19.9	21.6	21.8	20.5	18.3	14.8	10.6	6.81	3.65	1.43	0.26	191	186		
-90	0.15	0.78	1.84	3.50	5.84	8.50	10.7	12.4	13.6	13.8	13.0	11.8	9.72	7.06	4.62	2.59	1.08	0.21	122	112		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90	
Φ t	6.20	46.4	129	248	389	537	670	769	825	825	769	670	536	389	247	128	45.8	6.52	7907			
Φ a	0.77	39.5	124	245	389	537	670	769	825	825	769	670	536	388	245	123	38.8	0.84		7339		

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:

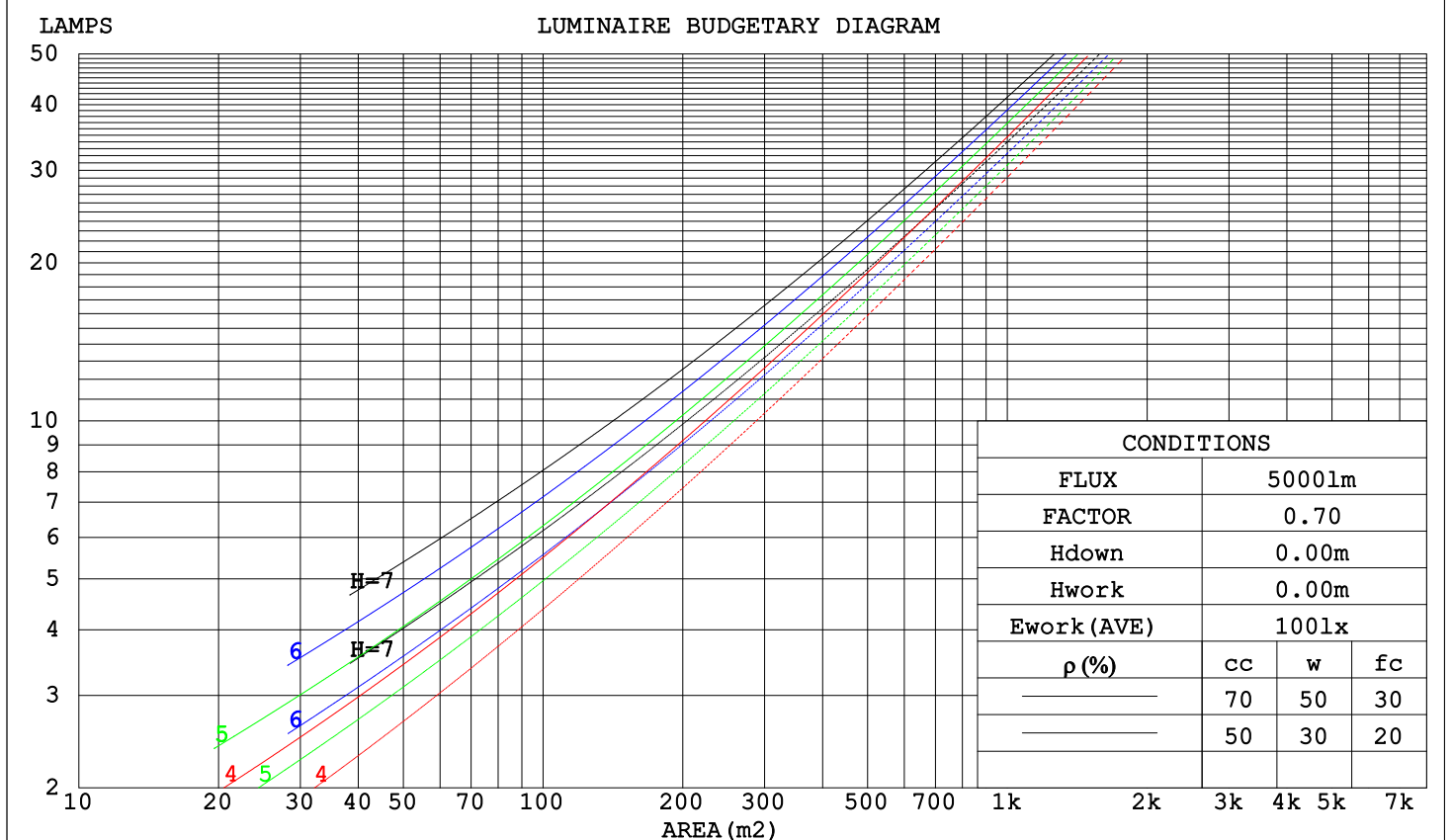
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

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	.335	.191	.061	.317	.182	.058	.300	.173	.056	.285	.165	.053															
2.0	.311	.170	.052	.302	.167	.051	.286	.159	.049	.271	.152	.048	.257	.145	.046															
3.0	.282	.150	.045	.274	.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	.196	.105	.032															
6.0	.217	.109	.031	.212	.107	.031	.201	.103	.030	.191	.099	.029	.182	.096	.028															
7.0	.202	.100	.028	.196	.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	.155	.078	.022	.148	.075	.022															
10.0	.164	.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	.247	.220	.196	.212	.189	.169	.145	.130	.117	.083	.075	.068	.027	.024	.022	
2.0	.240	.197	.161	.205	.170	.139	.141	.117	.097	.081	.068	.057	.026	.022	.019	
3.0	.232	.180	.138	.199	.155	.120	.137	.108	.084	.079	.063	.049	.025	.020	.016	
4.0	.225	.167	.123	.193	.144	.107	.133	.101	.075	.077	.059	.044	.025	.019	.015	
5.0	.217	.157	.112	.186	.136	.098	.128	.095	.069	.074	.056	.041	.024	.018	.013	
6.0	.210	.149	.105	.180	.129	.091	.124	.090	.065	.072	.053	.038	.023	.017	.013	
7.0	.203	.142	.099	.174	.123	.086	.121	.086	.061	.070	.051	.036	.023	.017	.012	
8.0	.196	.136	.095	.169	.118	.083	.117	.083	.059	.068	.049	.035	.022	.016	.012	
9.0	.190	.131	.092	.164	.114	.080	.113	.080	.057	.066	.047	.034	.021	.016	.011	
10.0	.184	.127	.089	.159	.110	.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	22.8	24.3	23.2	24.6	25.0	23.6	25.1	24.0	25.4	25.8	
3H	24.4	25.7	24.8	26.1	26.5	25.6	26.9	26.0	27.3	27.7	
4H	25.0	26.2	25.4	26.7	27.1	26.5	27.8	27.0	28.2	28.6	
6H	25.4	26.6	25.9	27.0	27.5	27.5	28.7	27.9	29.1	29.6	
8H	25.5	26.7	26.0	27.1	27.6	28.0	29.1	28.4	29.5	30.0	
12H	25.6	26.7	26.1	27.1	27.6	28.5	29.6	29.0	30.1	30.6	
4H	2H	23.6	24.9	24.1	25.3	25.7	24.2	25.5	24.6	25.9	26.3
	3H	25.4	26.5	25.8	26.9	27.4	26.4	27.5	26.9	28.0	28.5
	4H	26.1	27.1	26.6	27.6	28.1	27.5	28.5	28.0	29.0	29.5
	6H	26.7	27.6	27.2	28.1	28.7	28.7	29.6	29.2	30.1	30.6
	8H	26.9	27.7	27.4	28.2	28.8	29.2	30.1	29.8	30.6	31.2
12H	27.0	27.8	27.6	28.3	28.9	29.9	30.7	30.5	31.3	31.8	
8H	4H	26.6	27.5	27.2	28.0	28.6	27.8	28.7	28.4	29.2	29.8
	6H	27.4	28.2	28.0	28.7	29.3	29.2	29.9	29.8	30.5	31.1
	8H	27.8	28.4	28.3	29.0	29.6	30.0	30.6	30.6	31.2	31.8
	12H	28.0	28.6	28.6	29.2	29.8	30.9	31.5	31.5	32.1	32.7
12H	4H	26.7	27.5	27.3	28.1	28.6	27.9	28.6	28.4	29.2	29.8
	6H	27.7	28.3	28.3	28.9	29.5	29.3	30.0	29.9	30.5	31.2
	8H	28.1	28.6	28.7	29.2	29.9	30.2	30.7	30.8	31.3	32.0
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 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 7907 lm Total Lamp Luminous Flux. (8log(F/F0) = 7.2)

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	51	40	33	27
0.80	63	50	43	61	50	42	59	49	42	34
1.00	71	59	51	69	58	51	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	79	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	84	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		

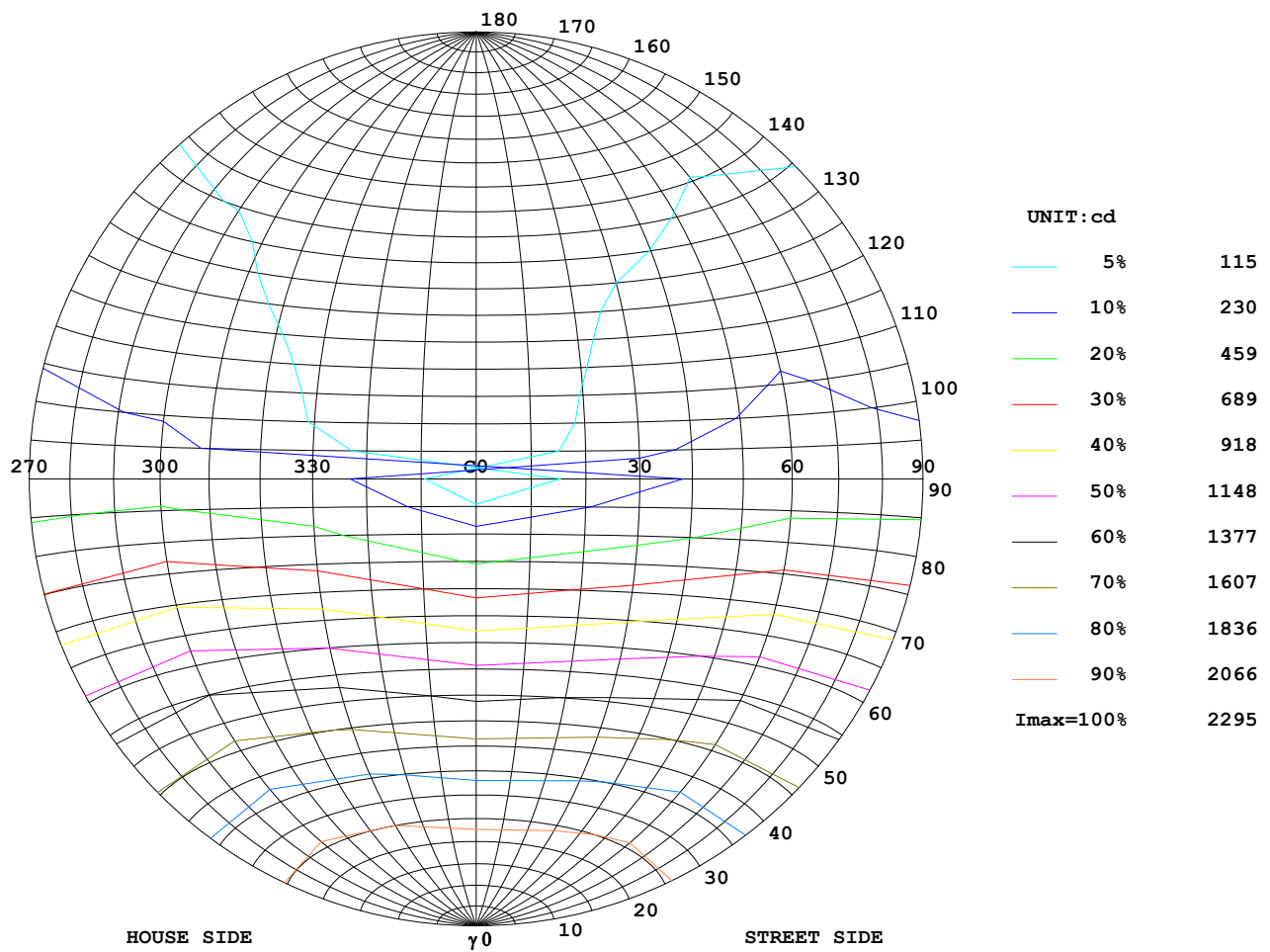
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年09月23日

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:

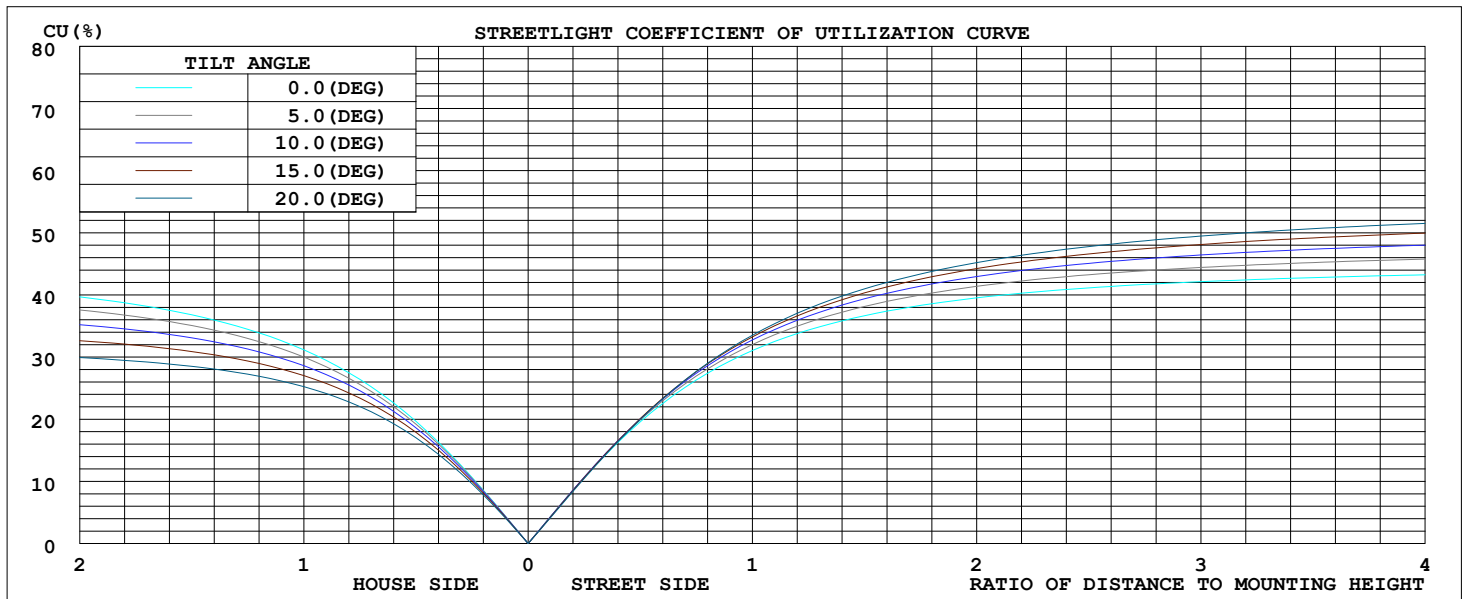
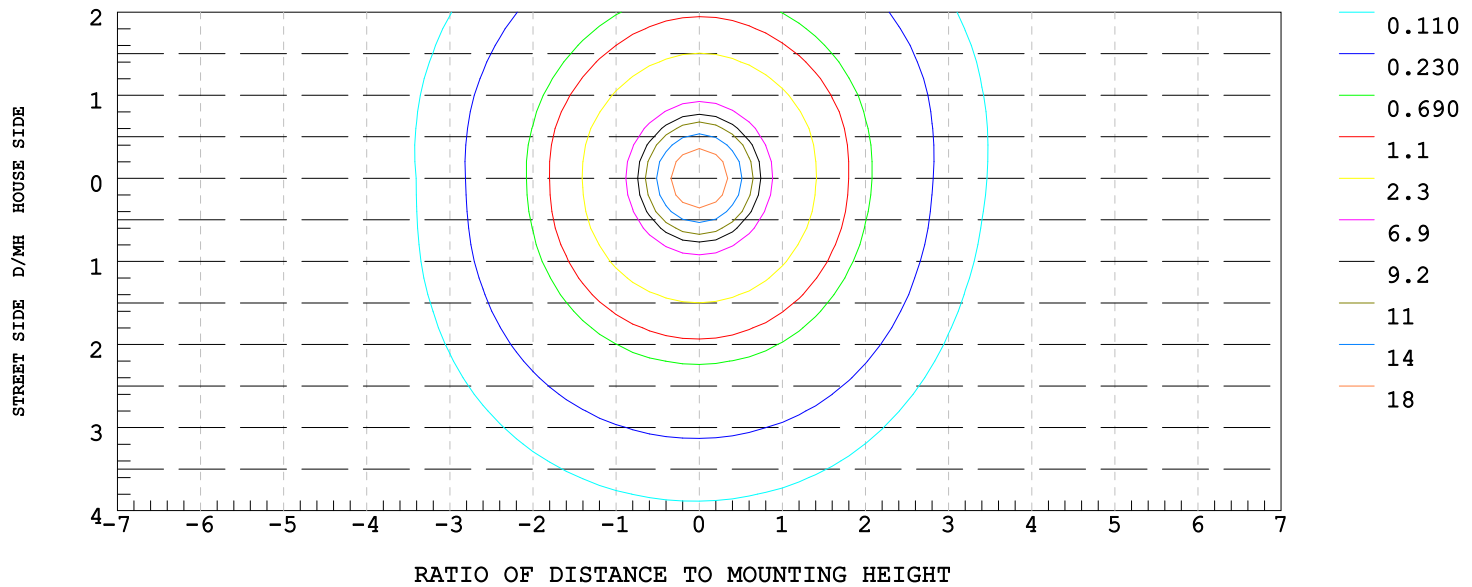
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

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 = 22.92 lx



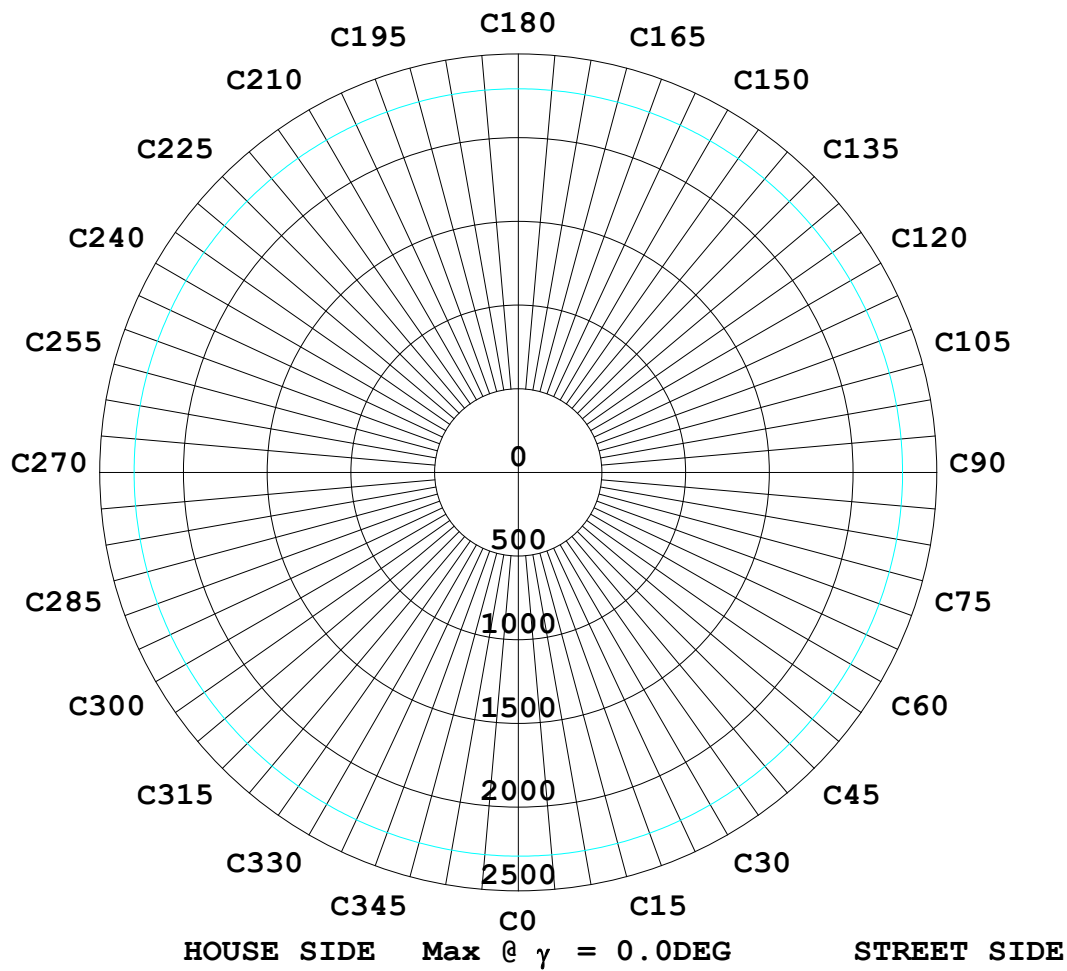
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2022年09月23日

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: