

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

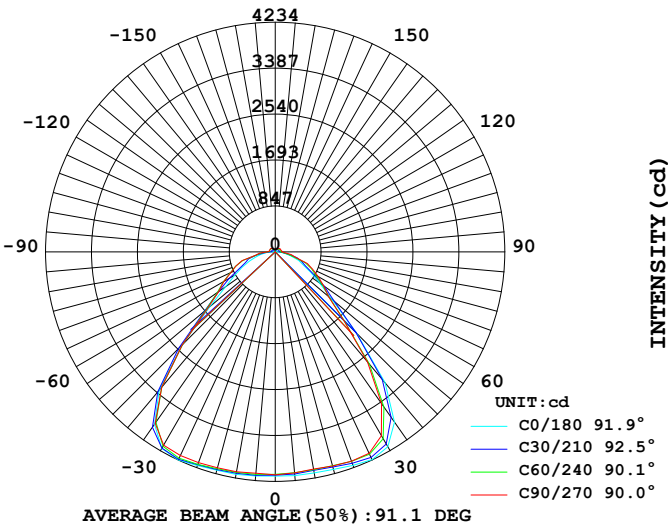
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

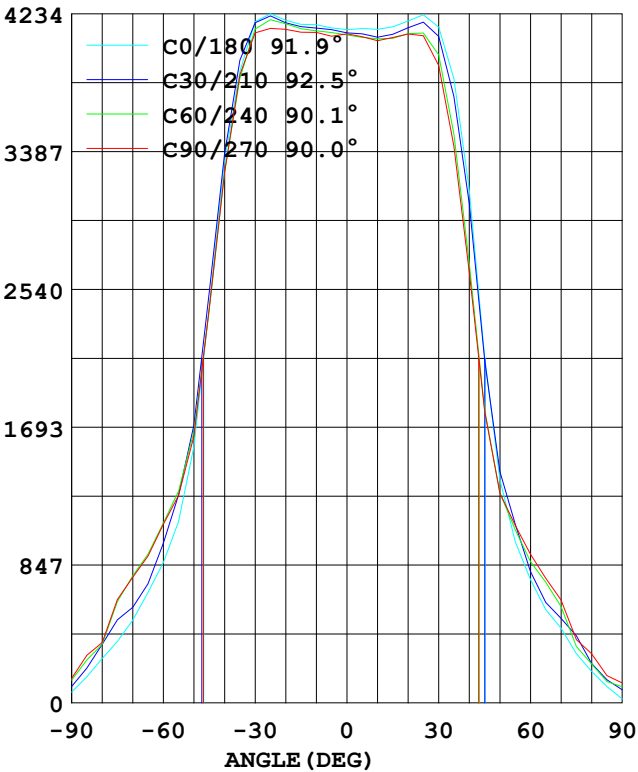
MANUFACTURER:		
Address:		
NAME: RE-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		Imax(cd)	4234	S/MH(C0/180)	1.35
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.34
NOMINAL POWER(W)	66	TOTAL FLUX(lm)	10386	Voltage(V)	219.8
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	155.9	Current(A)	0.306
NOMINAL FLUX(lm)	10386.5	$\eta$ up(%)	4.0	Power(W)	66.61
LAMPS QUANTITY	1	$\eta$ down(%)	96.0	Power Factor(PF)	0.987
TEST VOLTAGE(V)	219.8	Effective Flux(lm)	9623.9	EEI	0.094

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

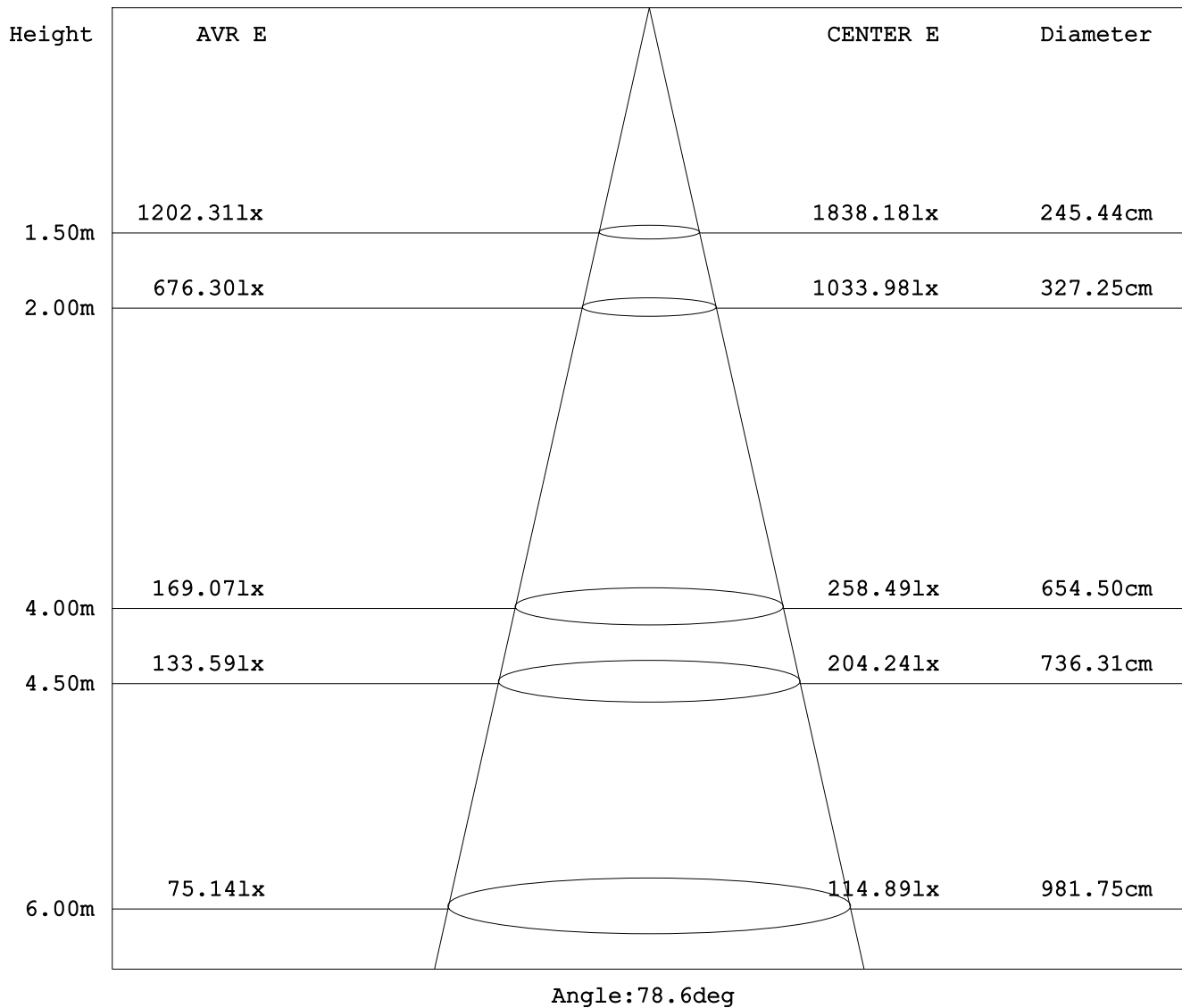
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: RE-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System: HOPOO HPG1800  
 Temperature: 25.3DEG  
 Operators:  
 Test Date: 2022年09月24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-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total
10.0	4167	4137	4119	4092	4137	4085	4068	4070	0- 10	391.6	391.6
20.0	4194	4175	4137	4125	4189	4130	4109	4133	10- 20	1168	1560
30.0	4184	4159	4117	4146	4152	4037	3915	4004	20- 30	1917	3477
40.0	3330	3315	3255	3427	3150	2884	2647	2809	30- 40	2292	5770
50.0	1576	1688	1640	1749	1373	1356	1290	1334	40- 50	1742	7511
60.0	862.7	1044	1098	994.3	758.5	837.8	914.2	801.7	50- 60	1058	8569
70.0	508.6	684.1	772.7	615.0	459.9	555.9	632.9	508.8	60- 70	733.7	9303
80.0	272.6	360.0	370.8	327.3	193.7	240.4	302.3	229.2	70- 80	465.2	9768
90.0	65.94	120.4	150.5	102.8	24.44	89.47	122.2	75.02	80- 90	200.8	9969
100.0	26.61	83.48	115.9	64.00	20.81	86.21	119.1	68.90	90-100	87.62	10056
110.0	26.86	88.45	108.2	67.33	24.20	86.15	110.2	70.11	100-110	78.89	10135
120.0	27.46	83.67	106.9	66.67	27.83	82.27	109.3	65.82	110-120	73.17	10208
130.0	31.70	73.56	100.1	60.13	33.15	72.59	98.73	55.90	120-130	62.32	10271
140.0	35.81	58.56	77.68	50.39	38.11	58.98	76.35	47.12	130-140	46.82	10318
150.0	38.71	45.67	56.62	42.95	41.62	48.88	58.92	43.31	140-150	31.72	10349
160.0	42.34	41.50	43.56	40.83	44.28	44.10	48.64	42.83	150-160	20.63	10370
170.0	45.13	43.92	42.47	43.07	45.85	45.31	47.18	44.40	160-170	12.33	10382
180.0	46.10	45.79	45.25	45.13	46.22	45.43	46.22	44.83	170-180	4.294	10386
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

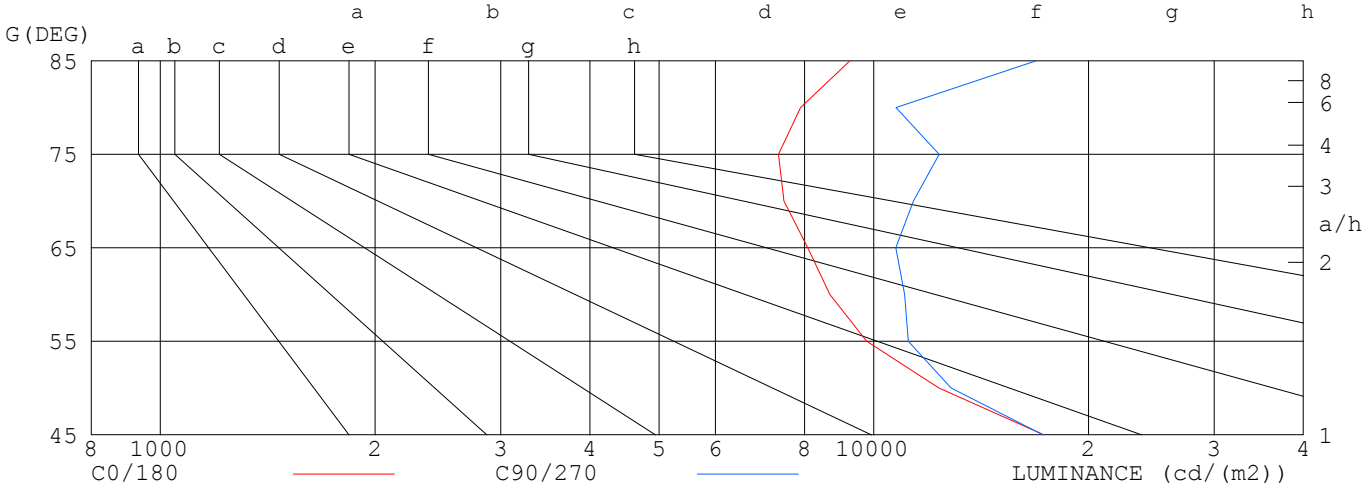
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: RE-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	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	9260	16886
80	7897	10743
75	7354	12349
70	7481	11364
65	8081	10735
60	8679	11046
55	9775	11179
50	12336	12833
45	17317	17268

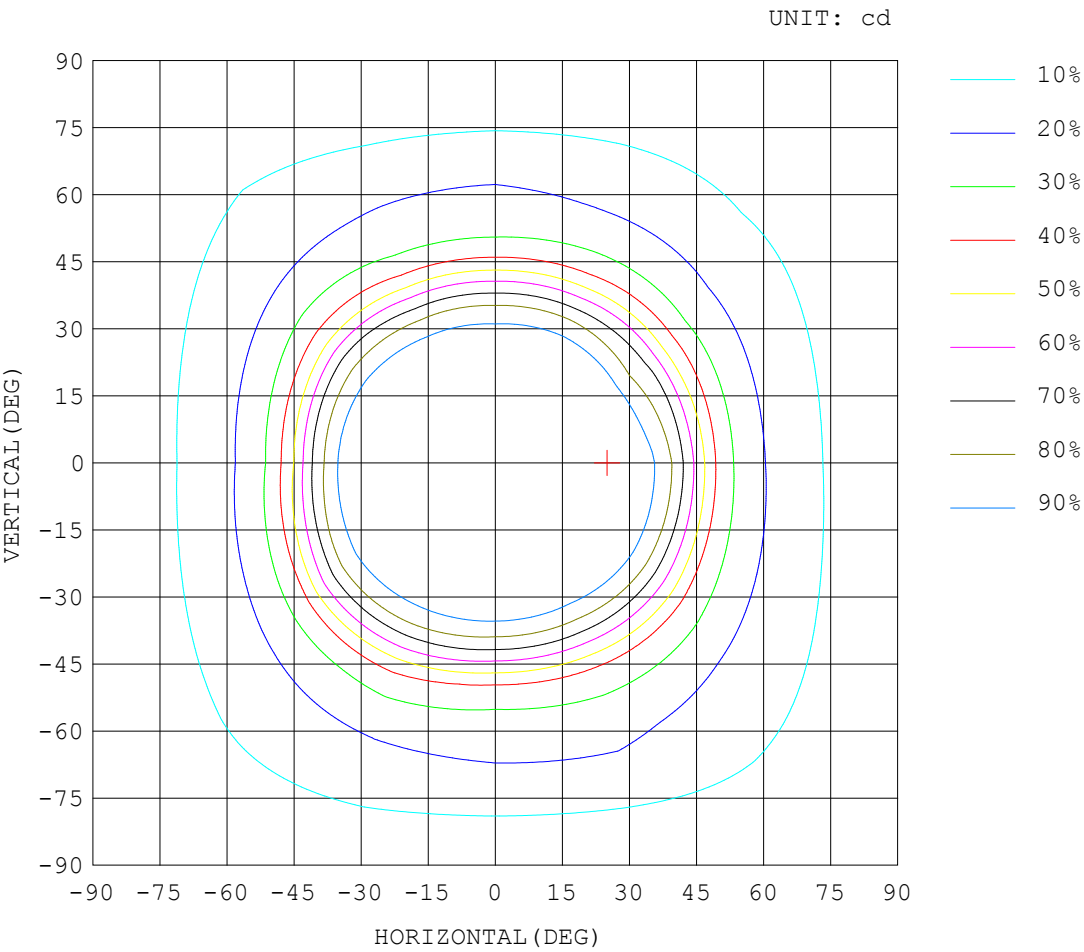
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

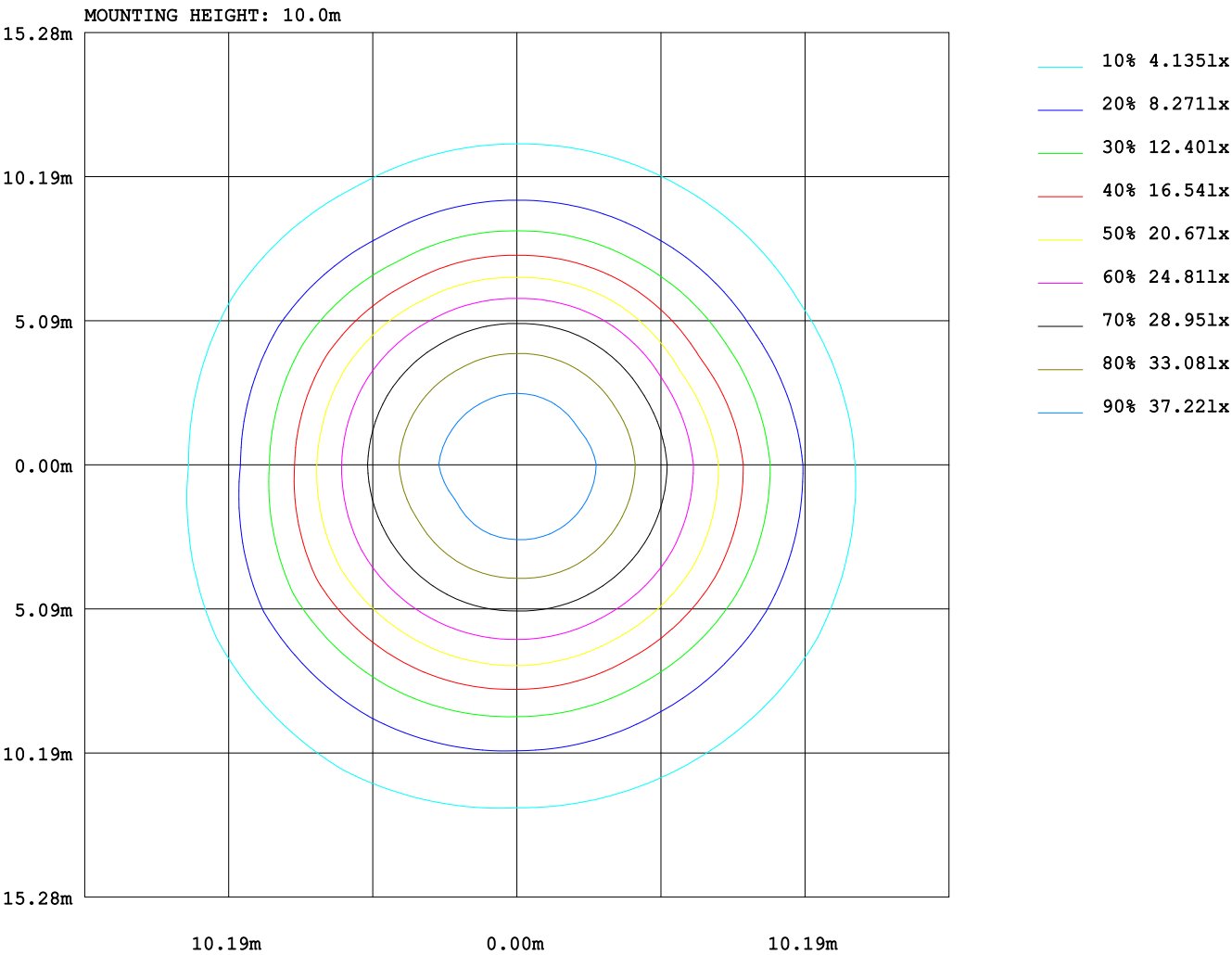
Test Set: 10.0deg/s C-Gamma (TYPE C)  
Humidity:65.0%  
Test Distance:11.000 m  
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: RE-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24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-RSL5S3-68N1WD-PC-00										TYPE:					WEIGHT:				
SPECIFICATION:										DIMENSION: 1438*65mm					SERIAL No.:				

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
	0.12	0.56	1.26	2.03	2.71	3.35	4.07	4.88	5.53	5.49	4.77	3.89	3.11	2.43	1.75	1.17	0.67	0.20	48.0	0.00		
90																						
80	0.16	0.84	2.07	3.74	5.60	7.37	9.29	11.2	12.6	12.6	11.3	9.43	7.25	5.21	3.42	2.04	1.00	0.25	106	27.3		
70	0.20	1.17	3.20	6.48	9.98	14.1	18.3	21.2	23.0	22.7	20.4	17.1	13.1	8.95	5.37	3.09	1.38	0.30	190	162		
60	0.24	1.52	4.53	8.76	13.7	19.7	25.5	30.1	32.8	32.8	30.0	24.8	18.7	12.8	7.75	4.13	1.77	0.35	270	256		
50	0.28	1.88	5.56	10.4	17.9	27.5	37.4	48.1	55.9	56.0	48.5	37.7	26.8	17.2	10.1	5.30	2.13	0.40	410	400		
40	0.31	2.19	6.36	12.7	24.2	41.8	66.8	88.8	101	101	88.8	65.8	40.3	22.9	12.8	6.44	2.45	0.44	685	678		
30	0.33	2.41	6.99	15.2	31.8	65.6	98.7	117	123	123	116	95.1	62.5	31.4	15.6	7.45	2.74	0.48	916	910		
	0.35	2.55	7.48	17.1	40.5	83.8	112	121	124	124	121	110	81.1	42.1	18.2	8.26	2.95	0.51	1018	1014		
	0.35	2.60	7.70	18.1	46.5	91.9	115	122	124	124	121	115	92.2	50.6	20.0	8.77	3.09	0.52	1064	1059		
	0.35	2.61	7.77	18.4	48.1	93.4	115	121	124	125	122	116	94.7	52.3	20.6	8.92	3.15	0.53	1075	1070		
	0.35	2.58	7.67	17.9	44.9	89.3	114	121	125	126	123	115	89.3	46.9	19.7	8.69	3.13	0.52	1054	1050		
-30	0.34	2.47	7.23	16.2	36.9	76.8	107	121	125	126	121	106	74.5	37.6	17.7	8.11	3.04	0.51	988	983		
-40	0.32	2.28	6.56	13.8	27.5	53.3	84.1	105	114	113	102	80.4	51.3	28.6	15.1	7.34	2.85	0.48	809	803		
-50	0.29	2.00	5.75	11.3	20.5	33.4	50.4	65.7	73.5	72.4	62.8	47.8	33.5	21.7	12.3	6.55	2.58	0.44	524	516		
-60	0.25	1.65	4.85	9.21	15.3	23.2	31.5	37.3	40.0	39.8	37.0	31.8	24.4	16.5	10.2	5.72	2.21	0.39	332	322		
-70	0.21	1.29	3.59	7.35	11.7	16.7	21.6	25.2	27.4	27.7	26.2	23.3	18.3	13.0	8.47	4.52	1.76	0.34	239	224		
-80	0.17	0.93	2.40	4.61	7.56	10.9	14.0	16.3	17.9	18.1	16.9	14.8	11.7	8.45	5.60	3.11	1.31	0.28	156	108		
-90	0.12	0.59	1.38	2.46	3.77	5.22	6.54	7.52	8.20	8.26	7.73	6.90	5.75	4.39	3.03	1.82	0.88	0.23	74.8	0.00		
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)					20	30	40	50	60	70	80	90	
Φ t	4.74	32.1	92.4	196	410	758	1032	1185	1257	1258	1183	1021	749	424	208	102	39.1	7.17	10386			
Φ a	0.00	1.87	66.0	175	389	738	1012	1164	1236	1236	1162	1001	729	403	186	76.5	7.52	0.00		9624		

Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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

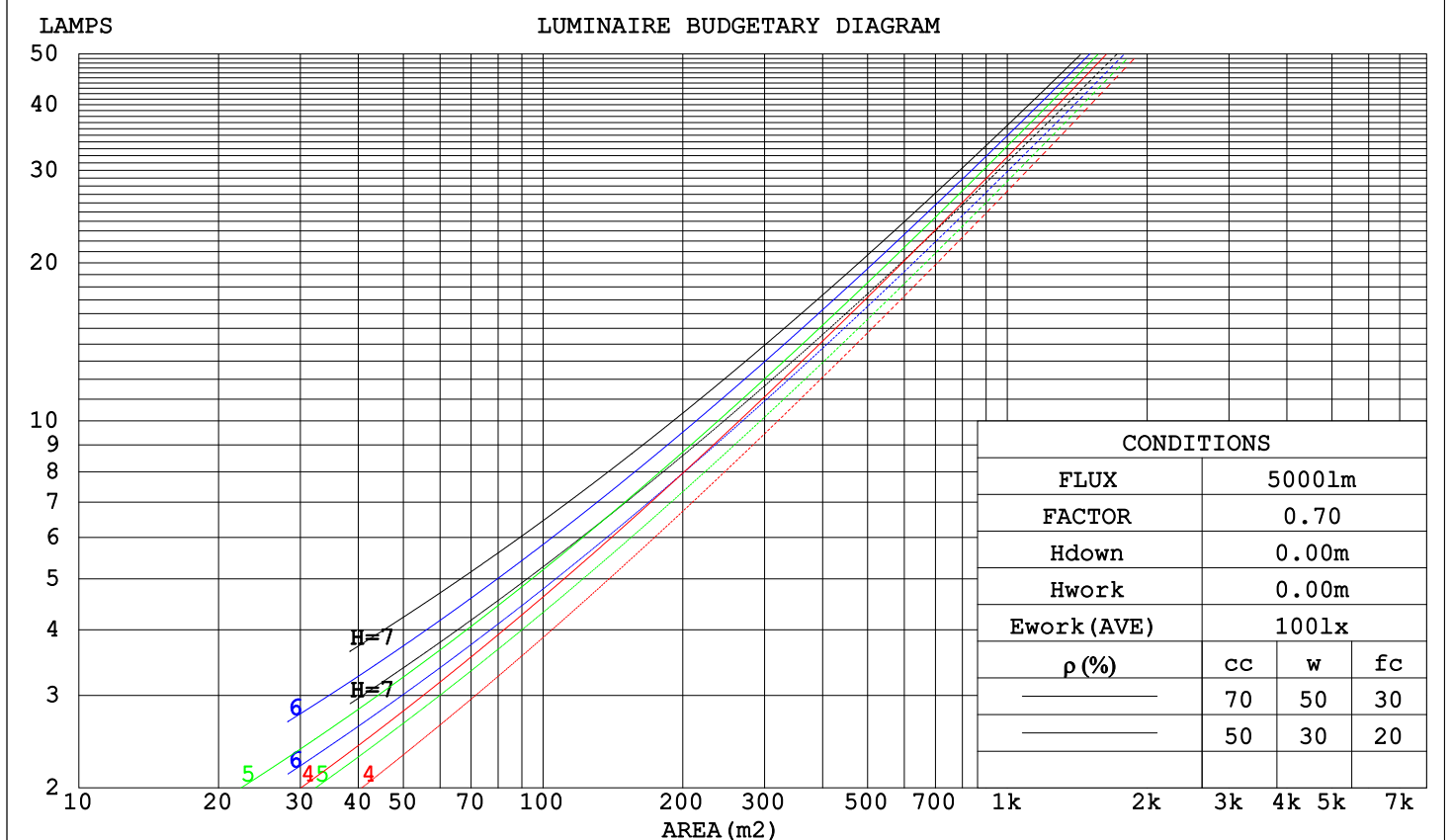
# HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

## CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: RE-RSL5S3-68N1WD-PC-00								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1438*65mm				SERIAL No.:			

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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24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-RSL5S3-68N1WD-PC-00								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1438*65mm				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	.277	.157	.050	.269	.153	.049	.253	.145	.046	.239	.138	.044	.226	.131	.042	
2.0	.259	.142	.044	.252	.139	.043	.238	.133	.041	.226	.127	.040	.214	.121	.038	
3.0	.241	.128	.038	.235	.126	.038	.223	.121	.037	.212	.116	.036	.201	.112	.035	
4.0	.224	.117	.034	.219	.114	.034	.208	.110	.033	.198	.106	.032	.189	.103	.031	
5.0	.209	.107	.031	.204	.105	.031	.195	.101	.030	.186	.098	.029	.177	.095	.028	
6.0	.196	.098	.028	.191	.096	.028	.182	.094	.027	.174	.091	.027	.167	.088	.026	
7.0	.183	.091	.026	.179	.089	.025	.172	.087	.025	.164	.084	.025	.158	.082	.024	
8.0	.172	.084	.024	.169	.083	.023	.162	.081	.023	.155	.079	.023	.149	.077	.022	
9.0	.163	.079	.022	.159	.078	.022	.153	.076	.021	.147	.074	.021	.141	.072	.021	
10.0	.154	.074	.020	.151	.073	.020	.145	.071	.020	.139	.069	.020	.134	.068	.019	

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	.221	.221	.221	.189	.189	.189	.129	.129	.129	.074	.074	.074	.024	.024	.024	
1.0	.209	.187	.168	.179	.161	.144	.122	.111	.100	.070	.064	.058	.023	.021	.019	
2.0	.199	.163	.133	.170	.140	.115	.117	.097	.080	.067	.057	.047	.022	.018	.015	
3.0	.190	.145	.110	.163	.125	.095	.112	.087	.067	.065	.051	.039	.021	.017	.013	
4.0	.182	.132	.093	.156	.114	.081	.107	.079	.057	.062	.047	.034	.020	.015	.011	
5.0	.175	.121	.082	.150	.105	.071	.103	.073	.050	.060	.043	.030	.019	.014	.010	
6.0	.168	.113	.073	.144	.098	.064	.099	.068	.045	.058	.040	.027	.019	.013	.009	
7.0	.161	.106	.067	.139	.092	.058	.096	.064	.041	.056	.038	.025	.018	.012	.008	
8.0	.155	.100	.062	.134	.087	.054	.092	.061	.038	.054	.036	.023	.017	.012	.008	
9.0	.150	.095	.058	.129	.083	.051	.089	.058	.036	.052	.034	.022	.017	.011	.007	
10.0	.144	.091	.055	.124	.079	.048	.086	.056	.034	.050	.033	.020	.016	.011	.007	

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022年09月24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-RSL5S3-68N1WD-PC-00					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 1438*65mm			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	20.4	21.7	20.7	22.0	22.3	20.8	22.2	21.2	22.4	22.7	
	21.2	22.4	21.6	22.7	23.0	22.4	23.6	22.7	23.9	24.2	
	21.7	22.8	22.0	23.1	23.5	23.1	24.3	23.5	24.6	24.9	
	22.1	23.2	22.5	23.5	23.9	23.5	24.6	23.9	25.0	25.3	
	22.3	23.3	22.6	23.6	24.0	23.9	24.9	24.3	25.3	25.6	
	22.4	23.4	22.8	23.8	24.1	24.2	25.2	24.6	25.6	25.9	
4H	2H	20.8	21.9	21.2	22.3	22.6	21.2	22.4	21.6	22.7	23.0
	3H	21.9	22.9	22.3	23.3	23.7	23.1	24.1	23.5	24.4	24.8
	4H	22.6	23.5	23.0	23.9	24.3	23.9	24.8	24.3	25.2	25.6
	6H	23.2	24.0	23.6	24.4	24.9	24.5	25.3	25.0	25.7	26.2
	8H	23.4	24.2	23.9	24.6	25.1	24.9	25.7	25.4	26.1	26.6
	12H	23.6	24.3	24.1	24.8	25.3	25.3	26.0	25.8	26.5	27.0
8H	4H	23.0	23.8	23.5	24.2	24.7	24.1	24.9	24.6	25.3	25.8
	6H	23.8	24.4	24.3	24.9	25.4	24.9	25.5	25.4	26.0	26.5
	8H	24.2	24.7	24.7	25.2	25.8	25.5	26.0	26.0	26.5	27.1
	12H	24.5	25.0	25.0	25.5	26.1	26.1	26.5	26.6	27.0	27.6
12H	4H	23.1	23.7	23.5	24.2	24.7	24.1	24.8	24.6	25.3	25.8
	6H	23.9	24.5	24.5	25.0	25.5	25.0	25.6	25.5	26.0	26.6
	8H	24.4	24.9	24.9	25.4	25.9	25.6	26.1	26.2	26.6	27.2
Variations with the observer position at spacings:											
S = 1.0H	+ 0.4 / - 0.6					+ 0.3 / - 0.4					
1.5H	+ 0.4 / - 0.5					+ 0.2 / - 0.3					
2.0H	+ 0.8 / - 0.5					+ 0.6 / - 0.6					

CIE Pub.117 Corrected 10386 lm Total Lamp Luminous Flux. (8log(F/F0) = 8.1)

Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022年09月24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-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	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) $k(RI) \times RCR = 5$									
$k = 0.60$	64	54	48	63	53	47	62	53	47	42
0.80	74	63	57	72	63	57	71	62	56	50
1.00	81	71	65	80	71	65	77	71	64	57
1.25	87	78	72	86	77	72	83	76	71	64
1.50	92	83	77	90	82	76	87	80	75	68
2.00	97	90	84	95	89	83	92	86	82	74
2.50	101	94	89	99	92	87	94	89	85	77
3.00	104	97	93	101	96	91	97	92	89	80
4.00	107	102	98	104	100	96	100	96	93	83
5.00	109	105	101	106	102	99	101	98	96	86
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

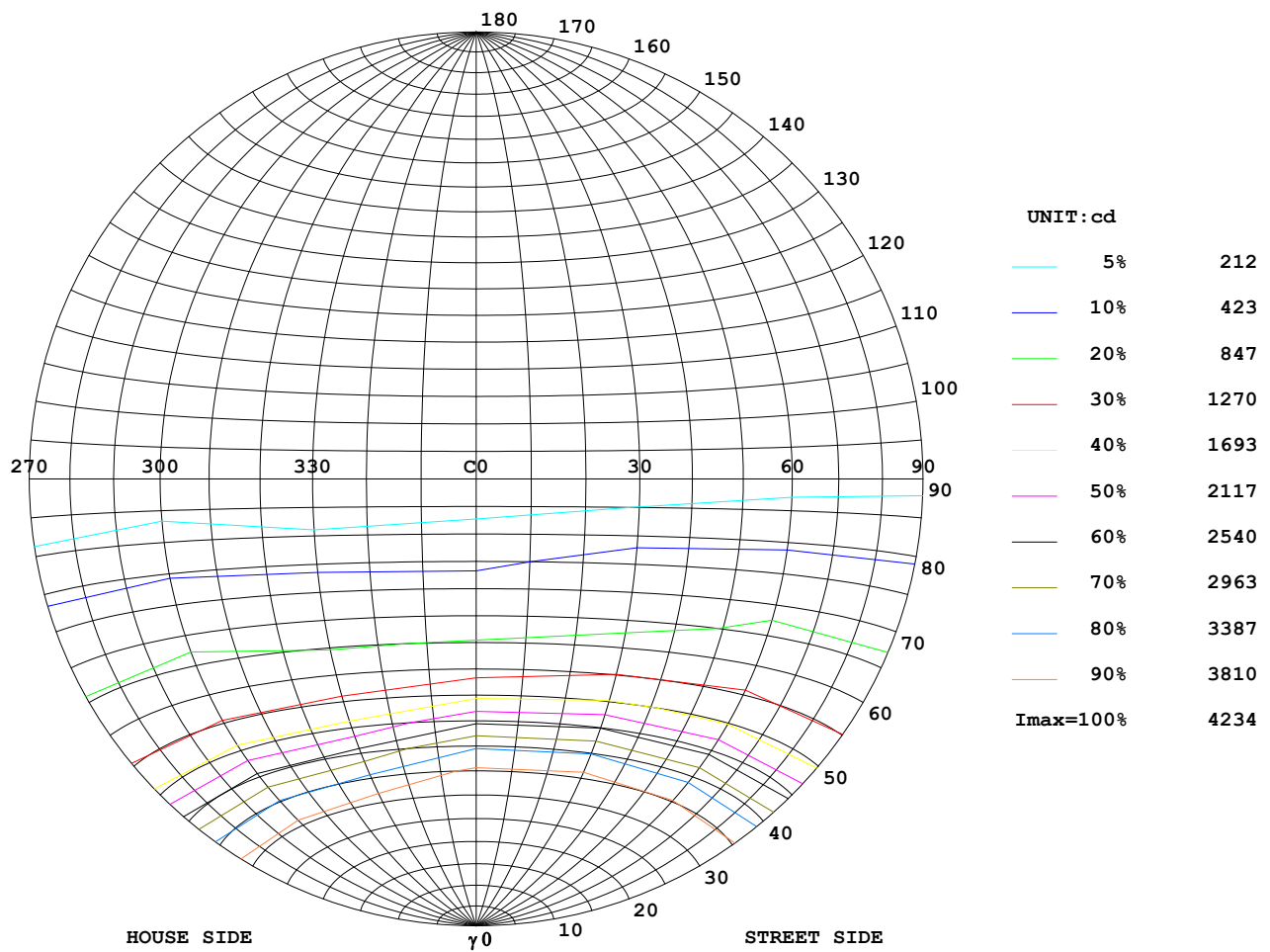
Test System:HOPOO HPG1800  
 Temperature:25.3DEG  
 Operators:  
 Test Date:2022年09月24日

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-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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

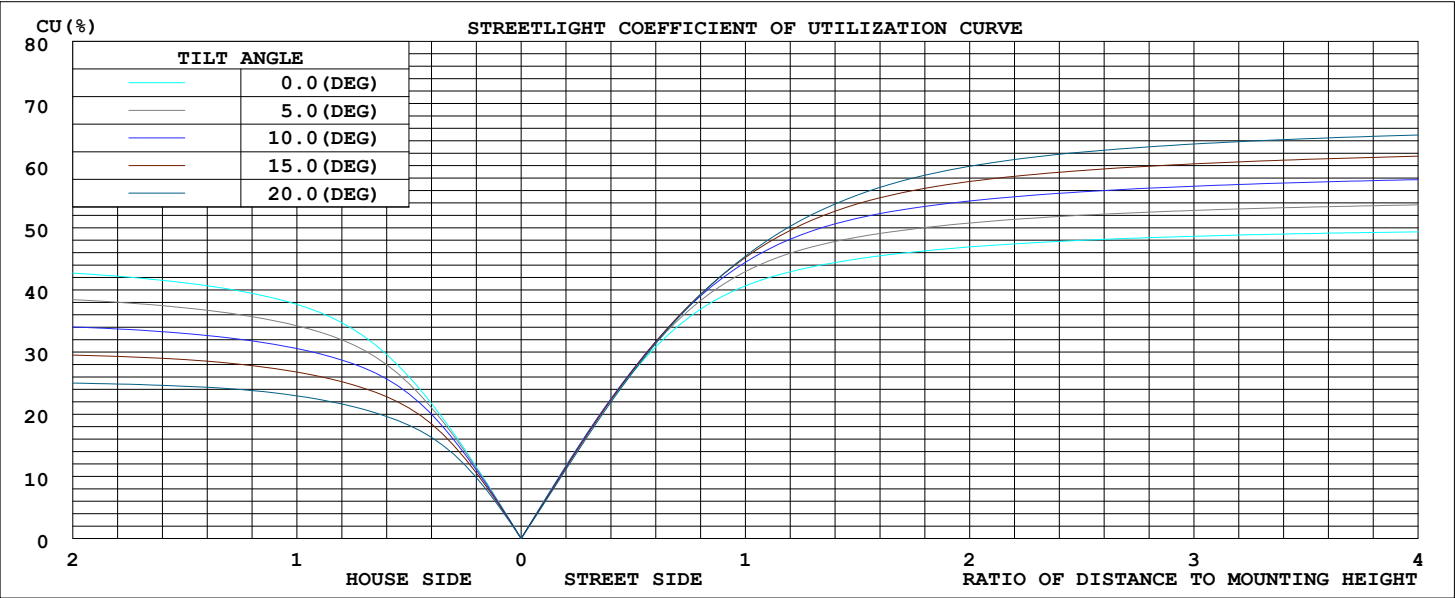
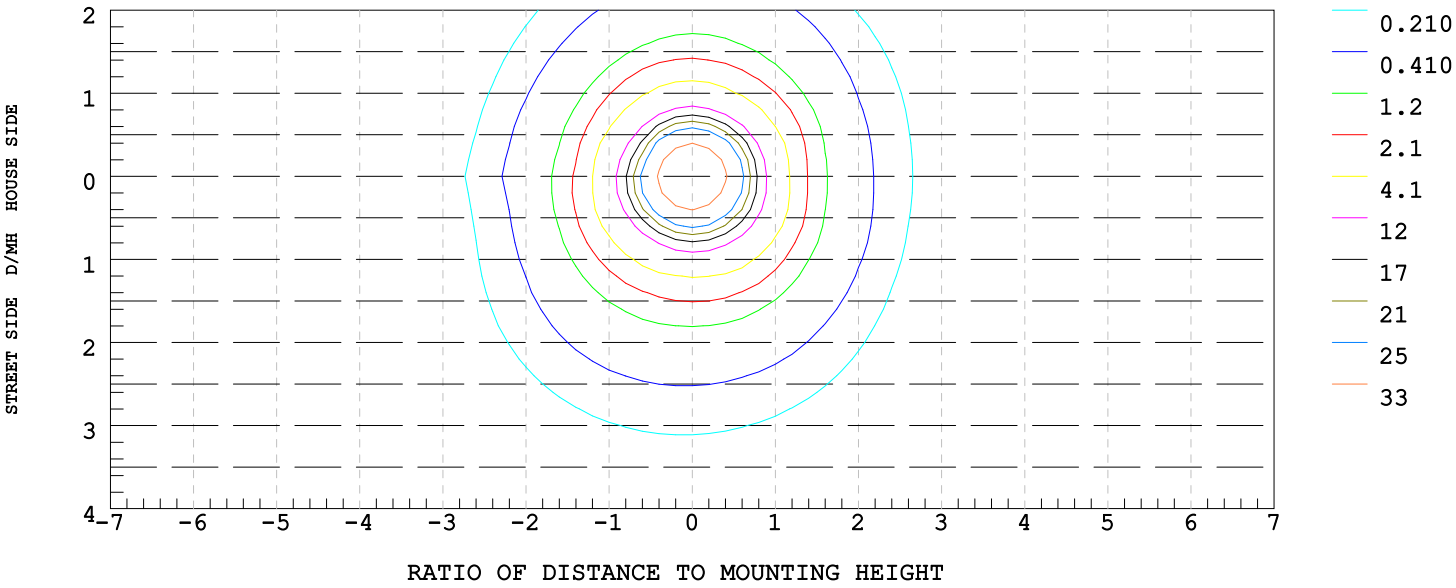
HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: RE-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 41.36 lx



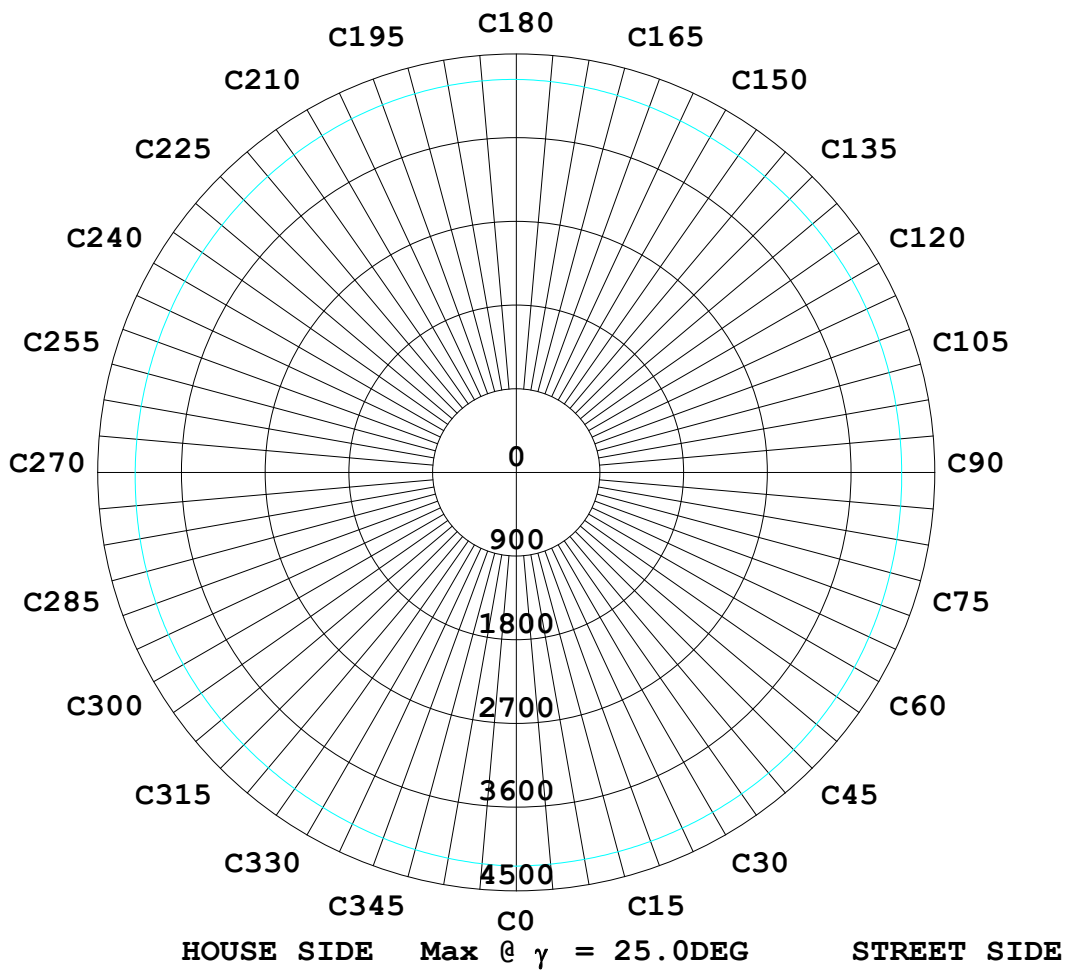
Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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-RSL5S3-68N1WD-PC-00	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800  
Temperature:25.3DEG  
Operators:  
Test Date:2022年09月24日

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