

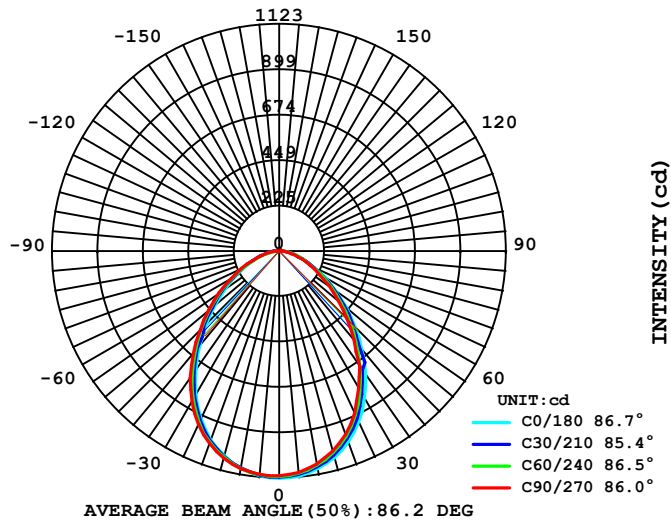
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

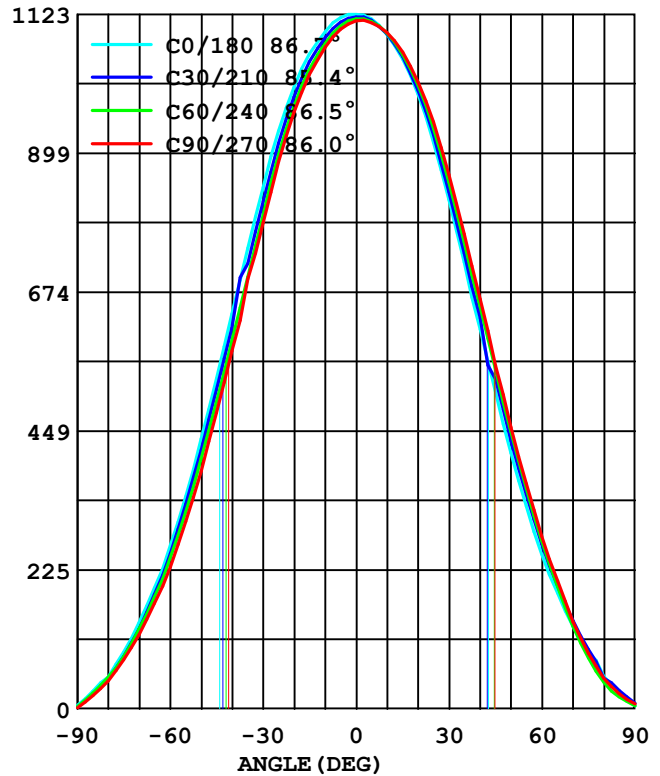
MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:

DATA OF LAMP		Imax (cd)	1123	S/MH (C0/180)	1.14
MODEL	KAS-DL03-D-620 20W 3000K 90°8V0190423		100.0	S/MH (C90/270)	1.09
NOMINAL POWER (W)	20	TOTAL FLUX (lm)	2305.8	Voltage (V)	219.0
RATED VOLTAGE (V)	220	EFFICIENCY (lm/W)	113.5	Current (A)	0.096
NOMINAL FLUX (lm)	2305.8	η up (%)	0.9	Power (W)	20.32
LAMPS QUANTITY	1	η down (%)	99.1	Power Factor (PF)	0.952
TEST VOLTAGE (V)	219.0	Effective Flux (lm)	2186.3	EEL	0.127

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



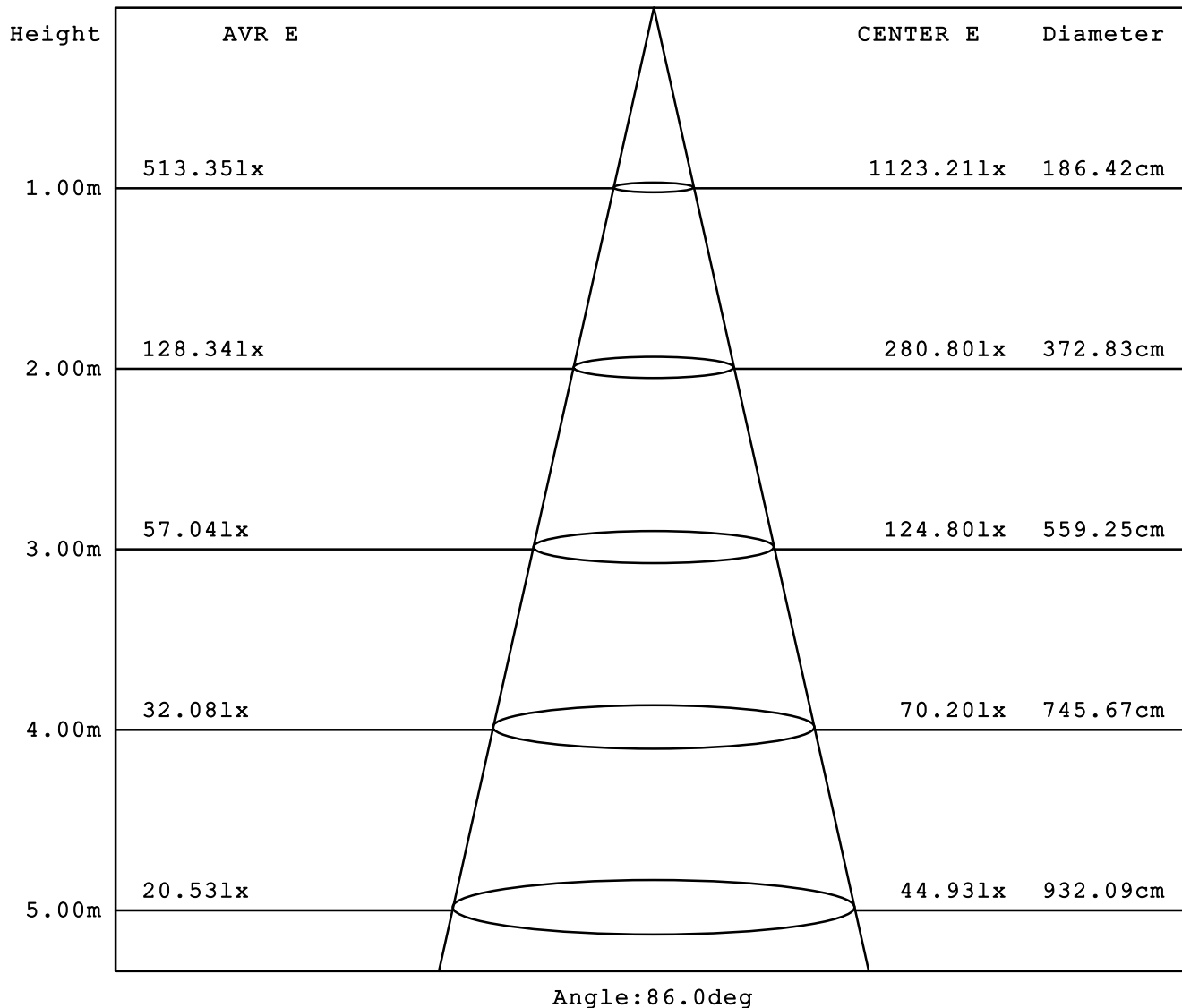
Test System: HOPOO HPG1600
Temperature: 25.3 DEG
Operators:
Test Date: 2019年04月23日

Test Set: 7.0 deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 3.500 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:



Test System: HOPOO HPG1600
Temperature: 25.3DEG
Operators:
Test Date: 2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity: 65.0%
Test Distance: 3.500 m
Remarks:

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Zone	total
5.0	1118	1107	1099	1093	1115	1113	1110	1105	0- 5	26.54	26.54
10.0	1095	1081	1070	1065	1091	1092	1093	1088	5- 10	78.33	104.8
15.0	1058	1040	1026	1021	1050	1056	1062	1057	10- 15	126.2	231.1
20.0	1004	981.5	964.1	959.0	993.6	1004	1013	1010	15- 20	167.7	398.9
25.0	933.8	905.0	884.3	879.4	916.0	932.9	948.8	945.8	20- 25	200.1	599.1
30.0	843.6	809.6	786.7	781.3	823.1	843.4	864.2	863.0	25- 30	220.5	819.7
35.0	744.9	709.5	695.5	686.3	721.9	745.5	767.8	766.4	30- 35	228.6	1048
40.0	637.8	605.0	577.6	564.6	613.2	640.6	662.0	658.9	35- 40	224.9	1273
45.0	533.9	506.1	478.5	474.4	511.6	540.3	554.2	554.4	40- 45	210.1	1484
50.0	435.8	410.9	383.1	381.1	413.5	440.5	454.8	451.9	45- 50	189.8	1673
55.0	342.7	324.5	302.2	298.7	327.6	351.5	363.5	360.9	50- 55	163.7	1837
60.0	264.1	248.0	229.4	227.2	250.2	269.0	279.3	276.9	55- 60	135.8	1973
65.0	194.8	182.6	170.5	167.9	186.9	198.0	206.8	207.0	60- 65	107.6	2081
70.0	139.4	128.7	119.8	120.2	132.8	137.6	140.7	147.1	65- 70	81.30	2162
75.0	91.82	84.55	78.97	79.71	89.37	88.92	90.04	99.61	70- 75	57.49	2219
80.0	50.72	50.22	45.48	47.13	52.34	45.96	49.48	59.95	75- 80	37.00	2256
85.0	28.05	24.27	21.57	22.61	26.60	24.05	24.68	31.73	80- 85	20.55	2277
90.0	5.978	3.411	1.911	2.394	4.520	6.566	7.582	8.562	85- 90	8.271	2285
95.0	2.119	1.610	1.274	1.715	0.858	1.353	1.825	1.353	90- 95	1.383	2287
100.0	1.776	1.188	0.882	1.476	0.919	1.274	1.629	1.194	95-100	0.752	2287
105.0	1.715	1.267	0.980	1.421	1.114	1.365	1.641	1.218	100-105	0.696	2288
110.0	1.862	1.519	1.335	1.580	1.445	1.635	1.813	1.365	105-110	0.750	2289
115.0	2.266	1.990	1.898	2.058	1.996	2.045	2.156	1.702	110-115	0.893	2290
120.0	2.707	2.511	2.499	2.590	2.572	2.535	2.633	2.125	115-120	1.088	2291
125.0	3.246	3.080	3.160	3.172	3.123	3.074	3.160	2.652	120-125	1.281	2292
130.0	3.797	3.668	3.797	3.766	3.773	3.607	3.711	3.178	125-130	1.450	2294
135.0	4.385	4.287	4.471	4.403	4.446	4.165	4.312	3.748	130-135	1.587	2295
140.0	4.985	4.863	5.071	4.979	5.047	4.722	4.900	4.330	135-140	1.675	2297
145.0	5.549	5.414	5.671	5.481	5.610	5.267	5.451	4.881	140-145	1.697	2298
150.0	6.051	5.929	6.137	5.959	6.100	5.757	5.929	5.408	145-150	1.652	2300
155.0	6.455	6.419	6.553	6.486	6.455	6.223	6.333	5.910	150-155	1.540	2302
160.0	6.884	6.860	6.945	6.890	6.811	6.713	6.713	6.437	155-160	1.371	2303
165.0	7.374	7.282	7.411	7.264	7.374	7.178	7.178	6.909	160-165	1.150	2304
170.0	7.864	7.705	7.913	7.656	7.901	7.613	7.717	7.368	165-170	0.882	2305
175.0	8.305	7.980	8.244	7.974	8.305	7.931	8.158	7.772	170-175	0.561	2306
180.0	8.428	8.097	8.403	8.072	8.464	8.103	8.403	8.054	175-180	0.194	2306
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

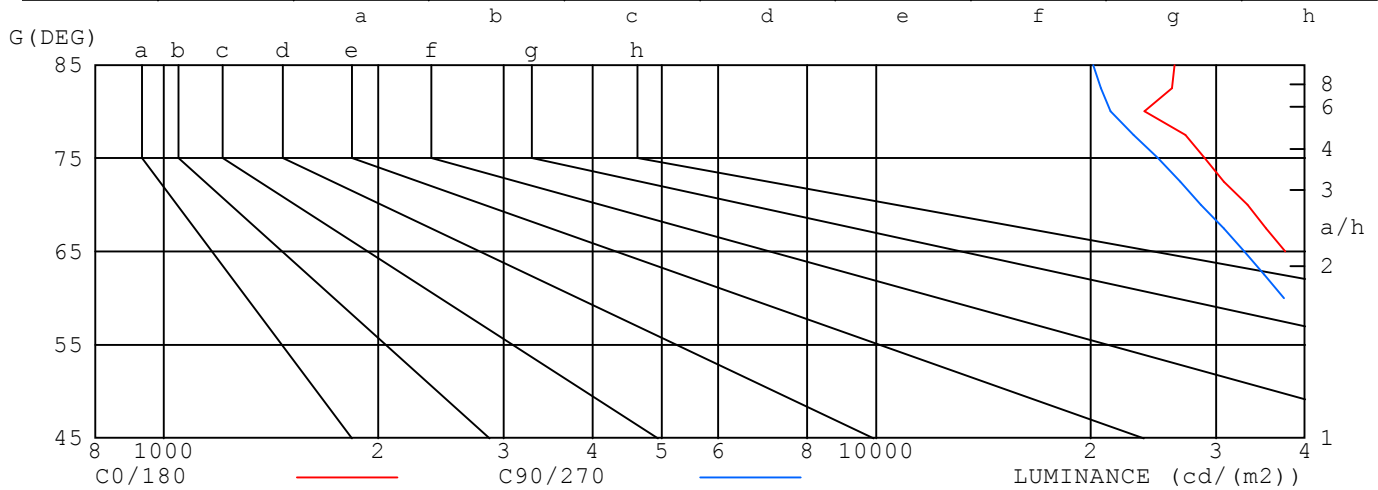
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	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	26232	20172
80	23808	21347
75	28915	24869
70	33233	28551
65	37580	32884
60	43054	37405
55	48697	42953
50	55261	48581
45	61539	55162

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

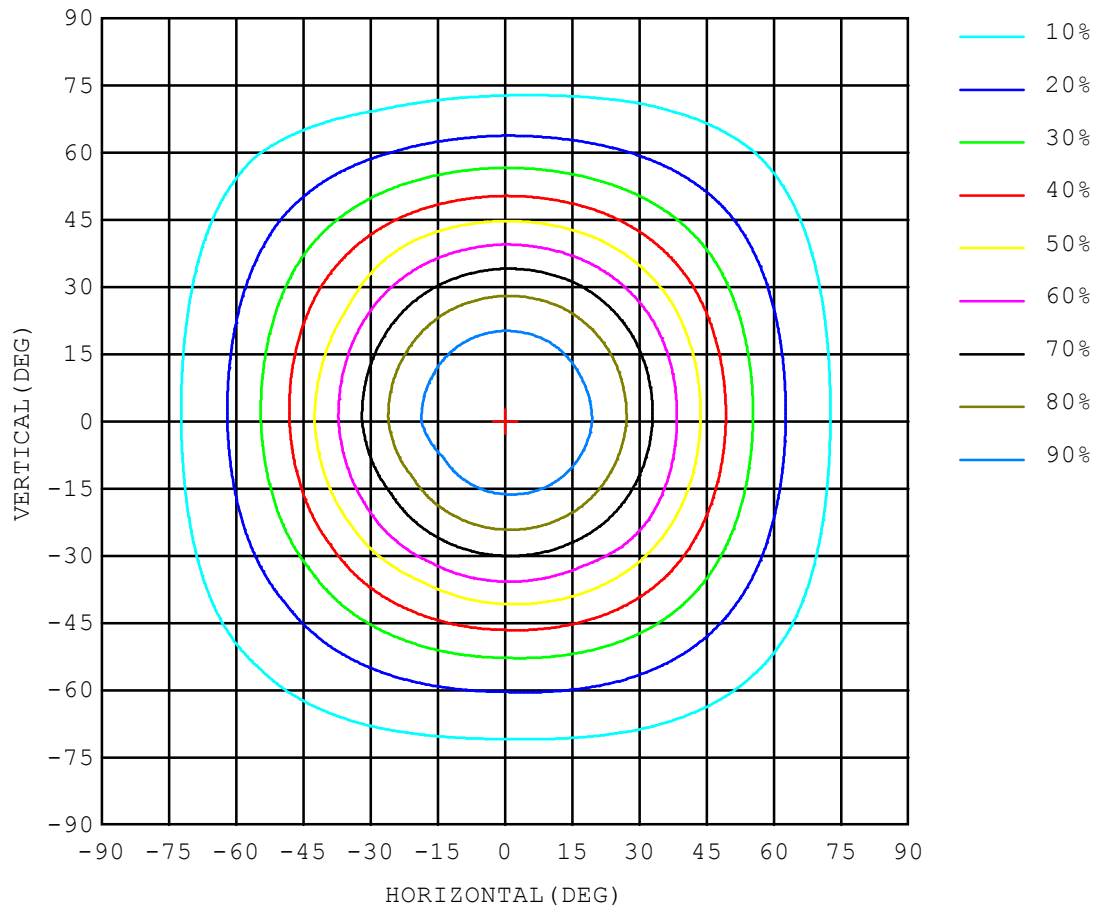
Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:

UNIT: cd



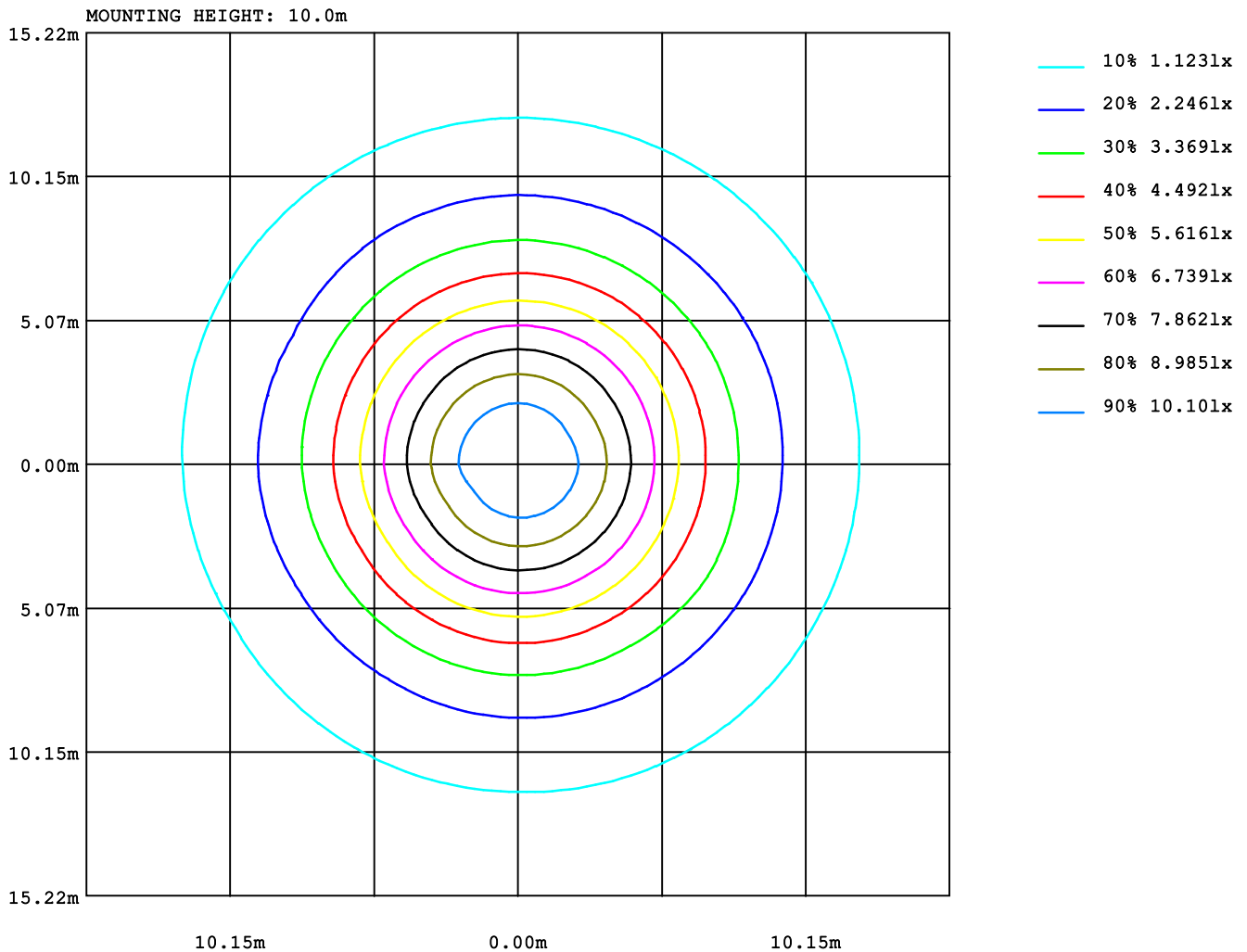
Test System:HOPOO HPG1600
Temperature:25.3DEG
Operators:
Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:3.500 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:



Test System:HOPOO HPG1600
Temperature:25.3DEG
Operators:
Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:3.500 m
Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																			
Address:																			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423										TYPE:					WEIGHT:				
SPECIFICATION:					CCT (K) : 0					DIMENSION:					SERIAL No.:				

VERTICAL (DEG)	AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a				
	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90							
	0.02	0.10	0.21	0.33	0.41	0.46	0.54	0.66	0.76	0.81	0.82	0.78	0.68	0.54	0.39	0.24	0.11	0.02	7.88	0.00						
	0.03	0.19	0.46	0.78	1.16	1.56	1.99	2.43	2.72	2.80	2.68	2.38	1.93	1.40	0.92	0.50	0.20	0.04	24.2	4.25						
	0.05	0.28	0.73	1.51	2.43	3.48	4.59	5.59	6.20	6.25	5.76	4.87	3.77	2.63	1.61	0.81	0.30	0.05	50.9	43.5						
	0.06	0.37	1.13	2.35	4.00	6.02	8.12	9.87	10.9	10.9	9.98	8.28	6.22	4.18	2.45	1.17	0.40	0.06	86.5	83.2						
	0.07	0.49	1.49	3.25	5.79	8.95	12.2	15.0	16.6	16.7	15.1	12.4	9.18	5.99	3.39	1.55	0.50	0.07	129	127						
	0.08	0.59	1.84	4.14	7.62	11.9	16.5	20.5	22.8	22.9	20.8	16.9	12.3	7.90	4.31	1.92	0.60	0.08	174	172						
	0.09	0.67	2.14	4.93	9.24	14.5	20.5	25.4	28.2	28.3	25.8	21.1	15.2	9.60	5.14	2.24	0.68	0.09	214	213						
	0.09	0.73	2.36	5.50	10.3	16.7	23.5	28.9	31.7	31.7	29.1	24.0	17.4	10.8	5.75	2.46	0.74	0.09	242	241						
	0.09	0.76	2.46	5.77	10.9	17.8	25.0	30.5	33.3	33.2	30.6	25.4	18.4	11.5	6.05	2.57	0.77	0.10	256	255						
	0.09	0.75	2.42	5.67	10.8	17.5	24.5	29.9	32.7	33.1	30.4	25.2	18.2	11.3	5.99	2.55	0.76	0.10	252	251						
	0.09	0.71	2.26	5.22	9.85	15.8	22.2	27.5	30.5	30.8	28.2	23.1	16.8	10.5	5.59	2.40	0.72	0.09	233	232						
-30	0.08	0.64	2.00	4.52	8.36	13.3	18.8	23.5	26.2	26.4	24.0	19.8	14.3	9.08	4.89	2.14	0.65	0.09	199	198						
-40	0.08	0.56	1.68	3.66	6.62	10.5	14.5	18.1	20.4	20.6	18.7	15.4	11.3	7.29	4.00	1.80	0.57	0.08	156	154						
-50	0.07	0.46	1.33	2.79	4.91	7.62	10.4	12.8	14.3	14.4	13.3	11.1	8.27	5.42	3.06	1.42	0.46	0.07	113	110						
-60	0.05	0.35	0.99	1.98	3.39	5.08	6.80	8.25	9.10	9.22	8.58	7.26	5.50	3.70	2.15	1.03	0.36	0.06	73.9	69.6						
-70	0.04	0.25	0.65	1.27	2.12	3.08	4.01	4.74	5.16	5.22	4.91	4.23	3.29	2.27	1.36	0.69	0.26	0.05	43.6	34.3						
-80	0.03	0.15	0.37	0.68	1.10	1.55	1.97	2.27	2.42	2.44	2.32	2.05	1.63	1.17	0.74	0.40	0.17	0.03	21.5	1.00						
-90	0.02	0.07	0.13	0.23	0.36	0.50	0.61	0.67	0.69	0.69	0.69	0.64	0.53	0.39	0.26	0.16	0.08	0.02	6.70	0.00						
	-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)										20	30	40	50	60	70	80	90
Φ t	1.12	8.10	24.7	54.6	99.6	157	217	267	295	297	272	225	165	106	58.1	26.0	8.33	1.19	2306							
Φ a	0.00	0.95	18.2	48.8	94.0	151	212	262	290	292	267	220	160	100	52.4	19.8	1.32	0.00		2186						

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

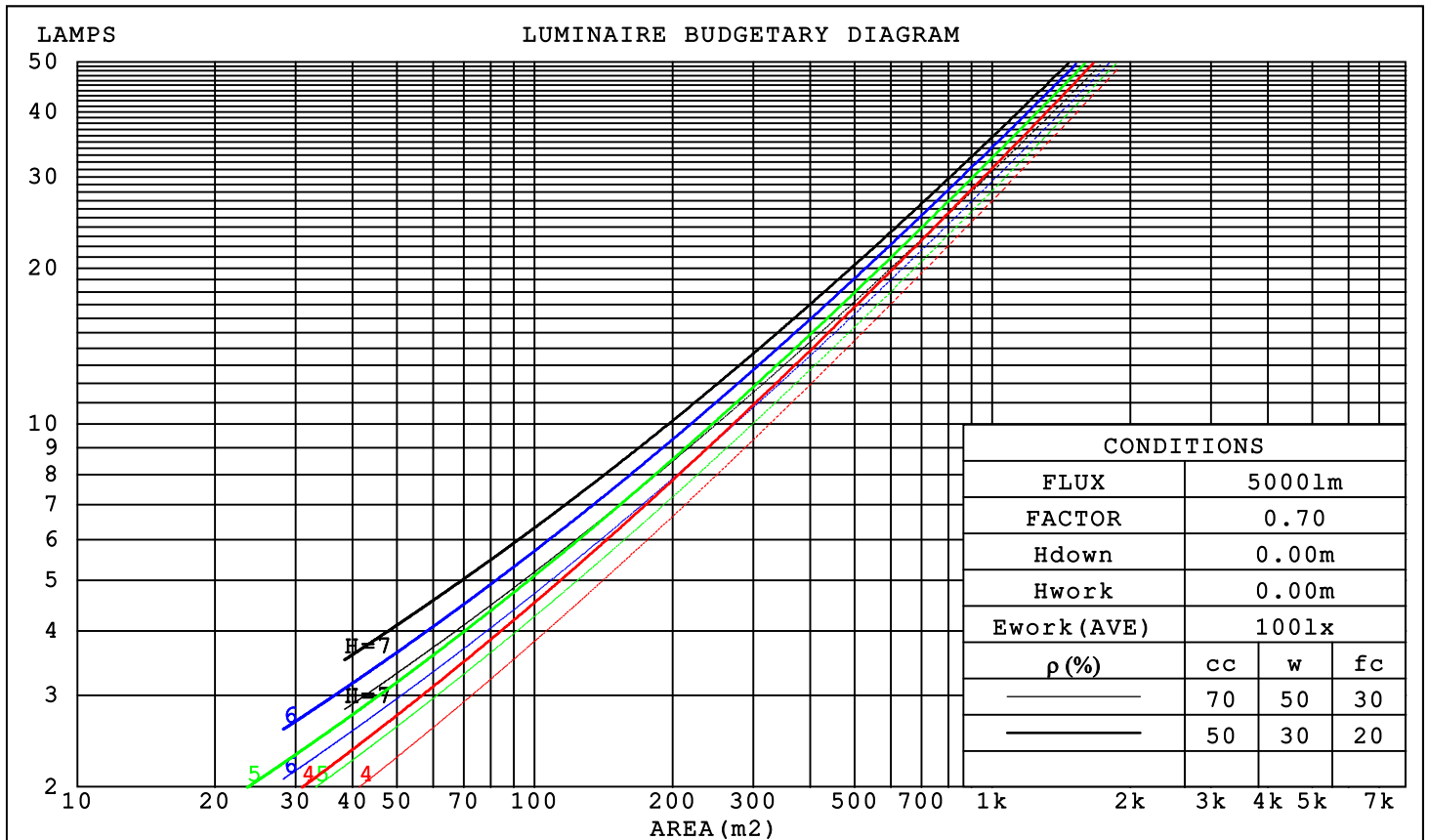
Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423								TYPE:				WEIGHT:			
SPECIFICATION:				CCT (K): 0				DIMENSION:				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						Coefficients of Utilization(CU)									
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.06	1.02	.99	1.03	.99	.97	.99	.96	.94	.95	.93	.91	.91	.90	.88	.86
2.0	.94	.88	.83	.92	.86	.82	.88	.84	.80	.85	.81	.78	.82	.79	.76	.74
3.0	.84	.76	.71	.82	.75	.70	.79	.73	.69	.76	.71	.67	.74	.70	.66	.64
4.0	.75	.67	.61	.74	.66	.61	.71	.65	.60	.69	.63	.59	.67	.62	.58	.56
5.0	.68	.60	.54	.67	.59	.53	.65	.58	.53	.63	.57	.52	.61	.56	.51	.49
6.0	.62	.53	.47	.61	.53	.47	.59	.52	.47	.57	.51	.46	.56	.50	.46	.44
7.0	.56	.48	.43	.56	.48	.42	.54	.47	.42	.53	.46	.42	.51	.46	.41	.39
8.0	.52	.44	.38	.51	.44	.38	.50	.43	.38	.48	.42	.38	.47	.42	.37	.36
9.0	.48	.40	.35	.47	.40	.35	.46	.39	.35	.45	.39	.34	.44	.38	.34	.32
10.0	.44	.37	.32	.44	.37	.32	.43	.36	.32	.42	.36	.31	.41	.35	.31	.30



Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

HOPOO GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:											
Address:											
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423						TYPE:			WEIGHT:		
SPECIFICATION:				CCT (K): 0			DIMENSION:			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	.270	.154	.049	.263	.150	.048	.250	.143	.046	.237	.137	.044	.226	.131	.042	
2.0	.257	.141	.043	.251	.138	.043	.239	.133	.041	.228	.128	.040	.218	.123	.039	
3.0	.241	.128	.038	.235	.126	.038	.225	.122	.037	.215	.118	.036	.206	.114	.035	
4.0	.225	.117	.034	.220	.115	.034	.211	.112	.033	.202	.108	.033	.194	.105	.032	
5.0	.210	.107	.031	.205	.105	.031	.197	.103	.030	.190	.100	.030	.182	.097	.029	
6.0	.196	.098	.028	.192	.097	.028	.185	.095	.028	.178	.093	.027	.172	.090	.027	
7.0	.184	.091	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025	.162	.084	.025	
8.0	.173	.084	.024	.170	.084	.024	.164	.082	.023	.158	.080	.023	.153	.079	.023	
9.0	.163	.079	.022	.160	.078	.022	.155	.077	.022	.150	.075	.021	.145	.074	.021	
10.0	.154	.074	.020	.151	.073	.020	.147	.072	.020	.142	.071	.020	.138	.069	.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	.197	.197	.197	.169	.169	.169	.115	.115	.115	.066	.066	.066	.021	.021	.021	
1.0	.184	.163	.144	.158	.140	.124	.108	.096	.086	.062	.056	.050	.020	.018	.016	
2.0	.175	.139	.109	.150	.120	.094	.102	.083	.066	.059	.048	.039	.019	.016	.013	
3.0	.166	.121	.085	.142	.104	.074	.098	.073	.052	.056	.042	.031	.018	.014	.010	
4.0	.158	.107	.069	.135	.093	.060	.093	.065	.042	.054	.038	.025	.017	.012	.008	
5.0	.150	.097	.057	.129	.084	.050	.089	.058	.035	.052	.034	.021	.017	.011	.007	
6.0	.143	.088	.049	.123	.076	.042	.085	.053	.030	.049	.031	.018	.016	.010	.006	
7.0	.137	.081	.042	.118	.070	.037	.081	.049	.026	.047	.029	.016	.015	.010	.005	
8.0	.131	.075	.037	.113	.065	.033	.078	.046	.023	.045	.027	.014	.015	.009	.005	
9.0	.125	.070	.034	.108	.061	.029	.075	.043	.021	.043	.025	.012	.014	.008	.004	
10.0	.120	.066	.031	.103	.057	.027	.072	.040	.019	.042	.024	.011	.014	.008	.004	

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

UGR Table

Report number:

MANUFACTURER:										
Address:										
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423						TYPE:		WEIGHT:		
SPECIFICATION:		CCT (K) : 0				DIMENSION:		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	25.7	27.0	25.9	27.3	27.5	25.2	26.6	25.5	26.8	27.0
3H	26.6	27.9	26.9	28.1	28.3	26.1	27.3	26.4	27.6	27.8
4H	26.9	28.1	27.3	28.4	28.7	26.4	27.6	26.7	27.8	28.1
6H	27.2	28.3	27.5	28.6	28.8	26.6	27.7	26.9	28.0	28.3
8H	27.2	28.3	27.6	28.6	28.9	26.7	27.7	27.0	28.0	28.3
12H	27.3	28.4	27.7	28.7	29.0	26.7	27.7	27.1	28.0	28.4
4H 2H	26.0	27.2	26.3	27.5	27.7	25.6	26.8	25.9	27.1	27.3
3H	27.1	28.1	27.4	28.4	28.7	26.7	27.7	27.0	28.0	28.3
4H	27.5	28.5	27.9	28.8	29.2	27.1	28.0	27.5	28.4	28.7
6H	27.9	28.7	28.3	29.1	29.4	27.4	28.2	27.8	28.6	29.0
8H	28.0	28.8	28.4	29.2	29.6	27.5	28.3	27.9	28.7	29.1
12H	28.1	28.8	28.6	29.2	29.6	27.6	28.3	28.0	28.7	29.1
8H 4H	27.7	28.4	28.1	28.8	29.2	27.2	28.0	27.7	28.4	28.8
6H	28.1	28.7	28.5	29.1	29.6	27.7	28.3	28.1	28.8	29.2
8H	28.3	28.9	28.8	29.3	29.8	27.9	28.5	28.4	28.9	29.4
12H	28.5	29.0	29.0	29.4	29.9	28.0	28.5	28.5	29.0	29.5
12H 4H	27.6	28.4	28.1	28.8	29.2	27.2	28.0	27.7	28.3	28.8
6H	28.1	28.7	28.6	29.1	29.6	27.7	28.3	28.2	28.7	29.2
8H	28.4	28.8	28.8	29.3	29.8	28.0	28.4	28.4	28.9	29.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4				
1.5H	+ 0.2 / - 0.2					+ 0.1 / - 0.3				
2.0H	+ 0.6 / - 0.5					+ 0.5 / - 0.7				

CIE Pub.117 Corrected 2306 lm Total Lamp Luminous Flux. (8log(F/F0) = 2.9)

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K): 0	DIMENSION:	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	53	47	63	53	47	62	52	47	41
0.80	74	63	57	73	63	56	71	62	56	50
1.00	81	72	65	80	71	65	78	72	64	58
1.25	88	79	73	87	78	72	84	77	71	65
1.50	93	84	78	91	83	77	88	81	76	69
2.00	98	91	86	97	90	85	93	88	83	76
2.50	102	95	90	100	94	89	96	91	87	79
3.00	105	99	94	102	97	93	98	94	91	82
4.00	108	103	99	106	101	98	101	98	95	86
5.00	110	106	102	108	104	101	103	100	98	89
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

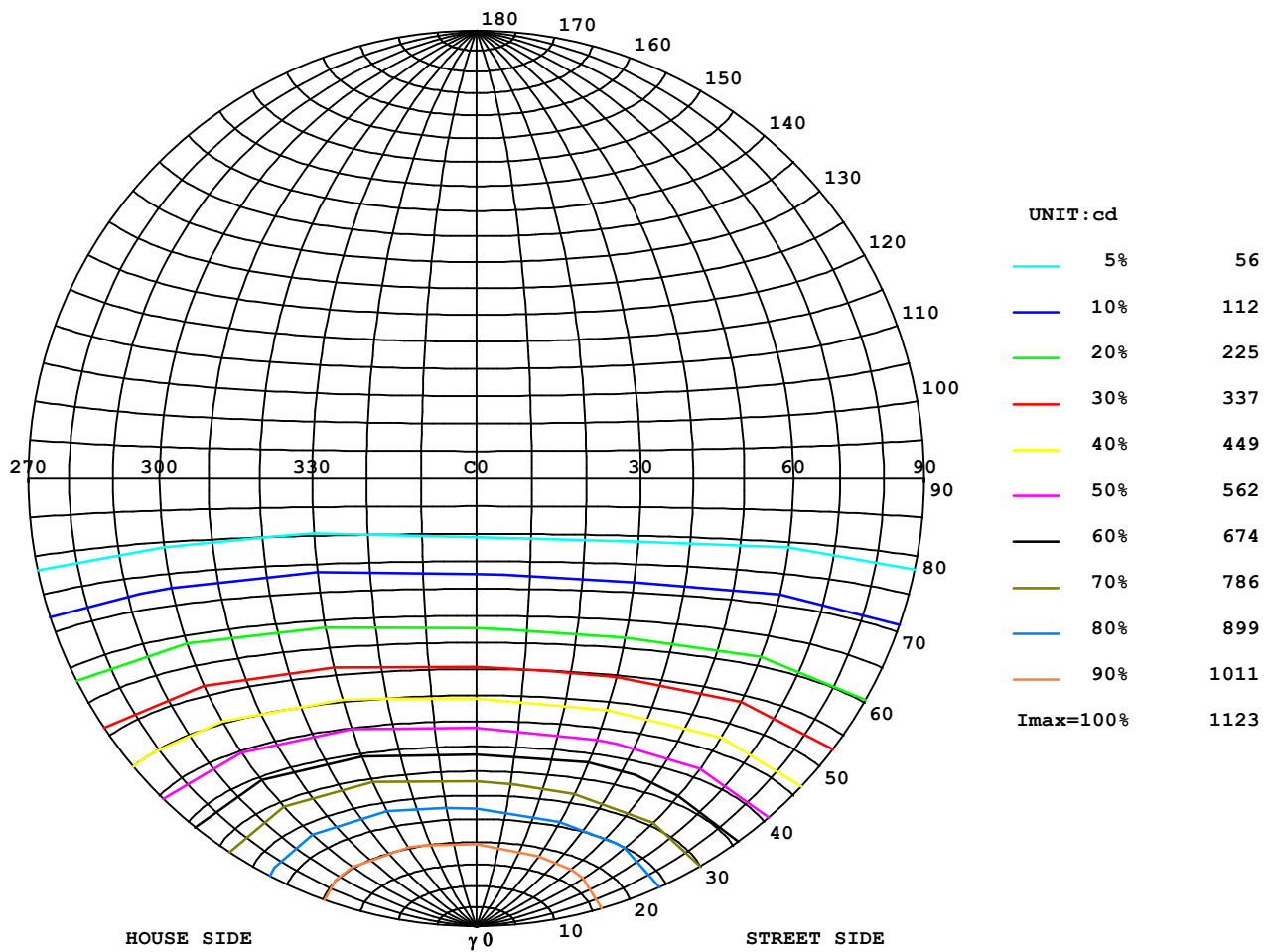
Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:



Test System:HOPOO HPG1600
Temperature:25.3DEG
Operators:
Test Date:2019年04月23日

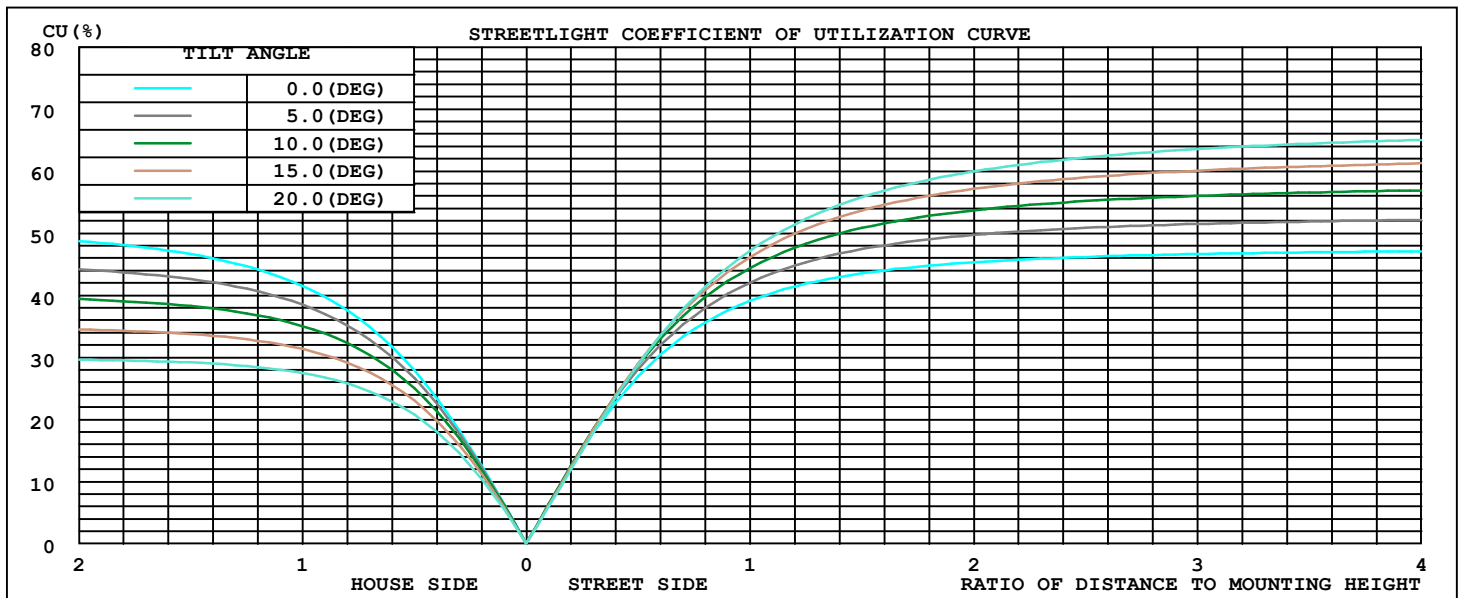
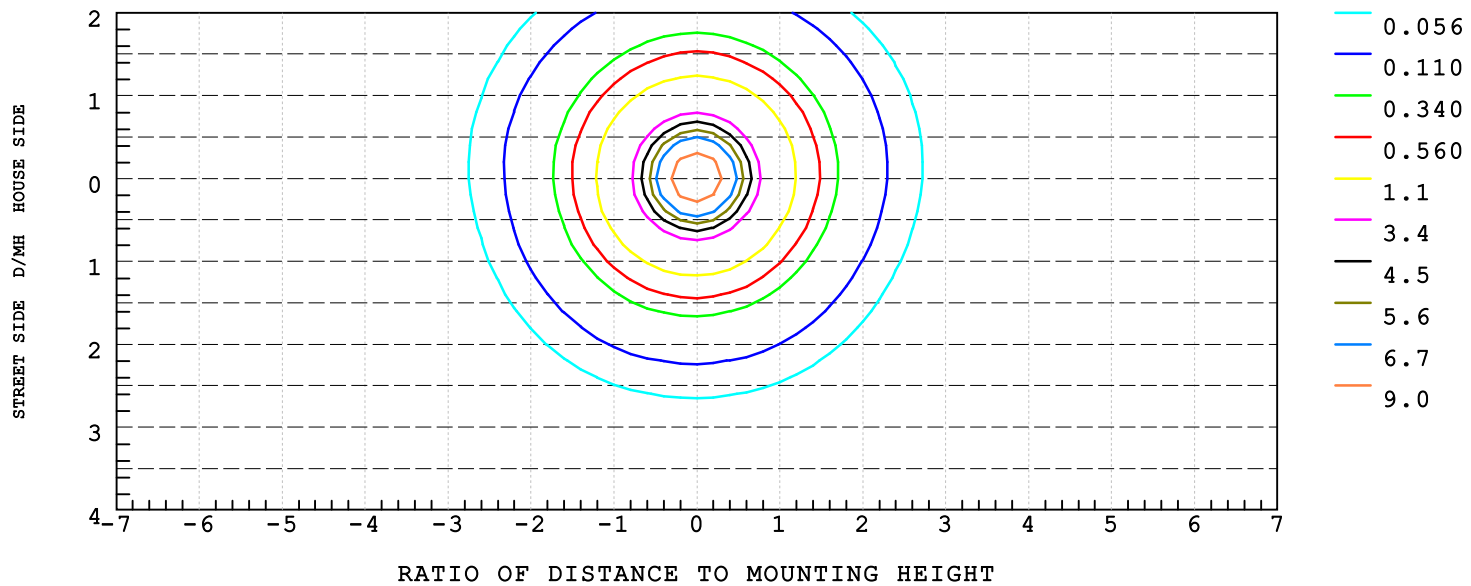
Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:3.500 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K): 0	DIMENSION:	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 11.23 lx



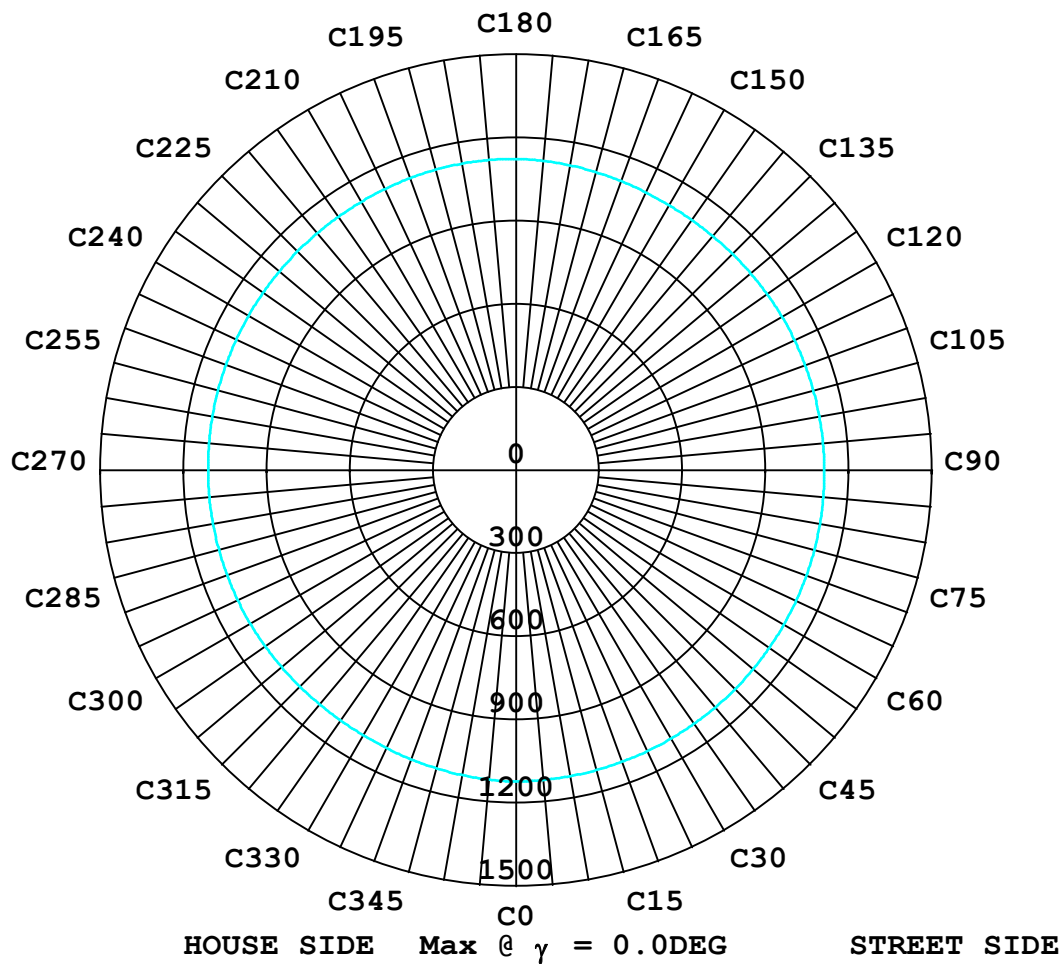
Test System:HOPOO HPG1600
Temperature:25.3DEG
Operators:
Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:3.500 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No.:



Test System:HOPOO HPG1600
Temperature:25.3DEG
Operators:
Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:3.500 m
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER:			
Address:			
NAME: KAS-DL03-D-620 20W 3000K 90°8V0190423		TYPE:	WEIGHT:
SPECIFICATION:	CCT (K) : 0	DIMENSION:	SERIAL No. :

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330
0.0	1123	1119	1116	1112	1108	1104	1123	1119	1116	1112	1108	1104
5.0	1118	1110	1104	1099	1094	1092	1115	1114	1111	1110	1107	1103
10.0	1095	1086	1076	1070	1065	1064	1091	1091	1093	1093	1091	1086
15.0	1058	1046	1034	1026	1021	1021	1050	1054	1058	1062	1059	1054
20.0	1004	989	974	964	959	960	994	1000	1008	1013	1013	1006
25.0	934	914	896	884	878	881	916	928	938	949	949	943
30.0	844	821	799	787	780	783	823	835	851	864	867	859
35.0	745	720	699	696	678	695	722	736	755	768	771	762
40.0	638	616	594	578	555	574	613	632	649	662	662	656
45.0	534	516	496	479	473	475	512	532	548	554	558	551
50.0	436	418	404	383	382	380	414	433	448	455	455	449
55.0	343	331	318	302	298	299	328	346	357	364	363	359
60.0	264	251	245	229	228	226	250	266	272	279	278	276
65.0	195	185	180	171	169	167	187	199	197	207	207	207
70.0	139	129	129	120	122	119	133	142	133	141	147	147
75.0	91.8	84.6	84.4	78.9	80.8	78.6	89.3	95.8	81.9	90.0	99.2	100
80.0	50.7	49.6	50.8	45.4	48.8	45.3	52.3	49.4	42.4	49.4	58.5	61.3
85.0	28.0	23.6	24.9	21.5	23.6	21.5	26.6	29.4	18.6	24.6	30.6	32.7
90.0	5.97	2.96	3.85	1.91	3.11	1.67	4.52	8.35	4.77	7.58	7.54	9.57
95.0	2.11	1.09	2.13	1.27	2.33	1.09	0.86	1.88	0.82	1.82	0.86	1.84
100.0	1.77	0.81	1.56	0.88	1.99	0.96	0.92	1.72	0.82	1.62	0.78	1.60
105.0	1.71	0.96	1.58	0.98	1.86	0.98	1.11	1.72	1.00	1.64	0.88	1.55
110.0	1.86	1.23	1.80	1.33	1.84	1.31	1.44	1.94	1.32	1.81	1.09	1.64
115.0	2.26	1.75	2.22	1.89	2.29	1.82	1.99	2.31	1.77	2.15	1.44	1.96
120.0	2.70	2.30	2.71	2.49	2.78	2.40	2.57	2.74	2.32	2.63	1.89	2.35
125.0	3.24	2.89	3.27	3.16	3.34	3.00	3.12	3.27	2.87	3.16	2.48	2.81
130.0	3.79	3.51	3.82	3.79	3.90	3.62	3.77	3.76	3.45	3.71	3.02	3.33
135.0	4.38	4.15	4.42	4.47	4.53	4.27	4.44	4.26	4.06	4.31	3.62	3.87
140.0	4.98	4.74	4.98	5.07	5.10	4.85	5.04	4.82	4.61	4.90	4.22	4.43
145.0	5.54	5.31	5.51	5.67	5.53	5.42	5.61	5.34	5.19	5.45	4.78	4.97
150.0	6.05	5.86	5.99	6.13	6.00	5.91	6.10	5.79	5.72	5.92	5.31	5.50
155.0	6.45	6.40	6.43	6.55	6.48	6.49	6.45	6.19	6.24	6.33	5.83	5.99
160.0	6.88	6.89	6.82	6.94	6.94	6.83	6.81	6.67	6.74	6.71	6.35	6.51
165.0	7.37	7.32	7.23	7.41	7.33	7.19	7.37	7.15	7.20	7.17	6.83	6.98
170.0	7.86	7.70	7.70	7.91	7.69	7.61	7.90	7.63	7.59	7.71	7.33	7.39
175.0	8.30	7.95	8.01	8.24	7.96	7.98	8.30	7.93	7.92	8.15	7.79	7.75
180.0	8.42	8.07	8.12	8.40	8.04	8.09	8.46	8.09	8.10	8.40	8.01	8.09

Test System:HOPOO HPG1600
 Temperature:25.3DEG
 Operators:
 Test Date:2019年04月23日

Test Set: 7.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:3.500 m
 Remarks: