

LUMINAIRE PHOTOMETRIC TEST REPORT

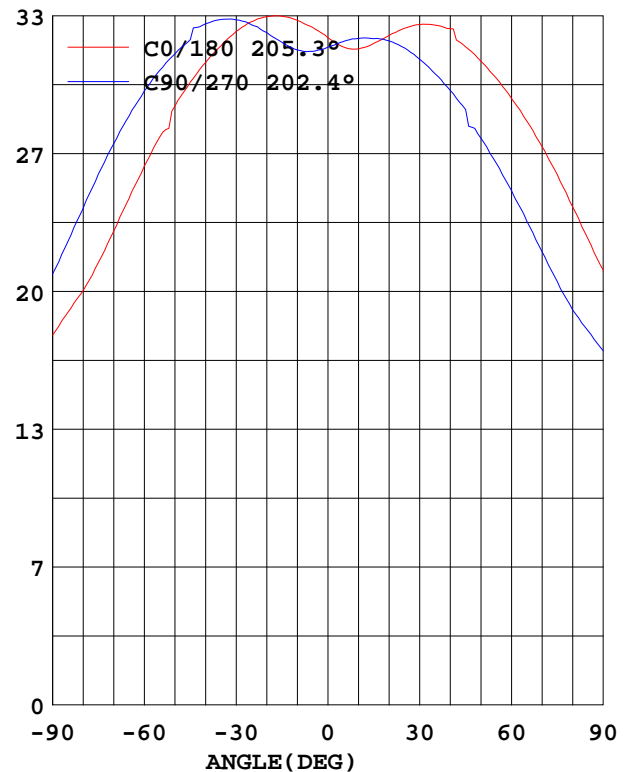
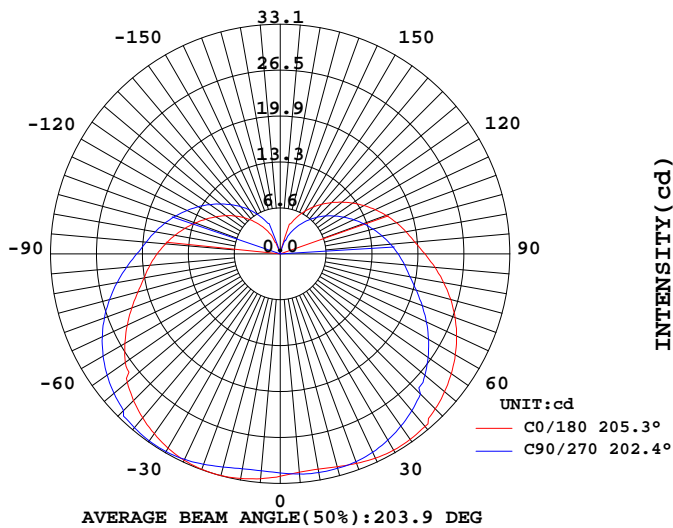
Report number:

MANUFACTURER:					
Address:					
NAME:			TYPE:		WEIGHT:
SPECIFICATION:	CCT(K): 0		DIMENSION:		SERIAL No.:

DATA OF LAMP		Imax(cd)	33.13	S/MH(C0/180)	1.51
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.59
NOMINAL POWER(W)	2	TOTAL FLUX(lm)	241.6	Voltage(V)	12.03
RATED VOLTAGE(V)	12	EFFICIENCY(lm/W)	109.3	Current(A)	0.224
NOMINAL FLUX(lm)	241.6	η up(%)	30.1	Power(W)	2.210
LAMPS QUANTITY	1	η down(%)	69.9	Power Factor(PF)	0.817
TEST VOLTAGE(V)	12.0	Effective Flux(lm)	58.7	EEI	0.230

LUMINOUS INTENSITY DISTRIBUTION

LUMINOUS INTENSITY DISTRIBUTION



Test System:HOP00 HP880D
Temperature:25.3DEG
Operators:
Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:1.000 m
Remarks:

Color Temperature Data List

Report number:

MANUFACTURER:			
Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:

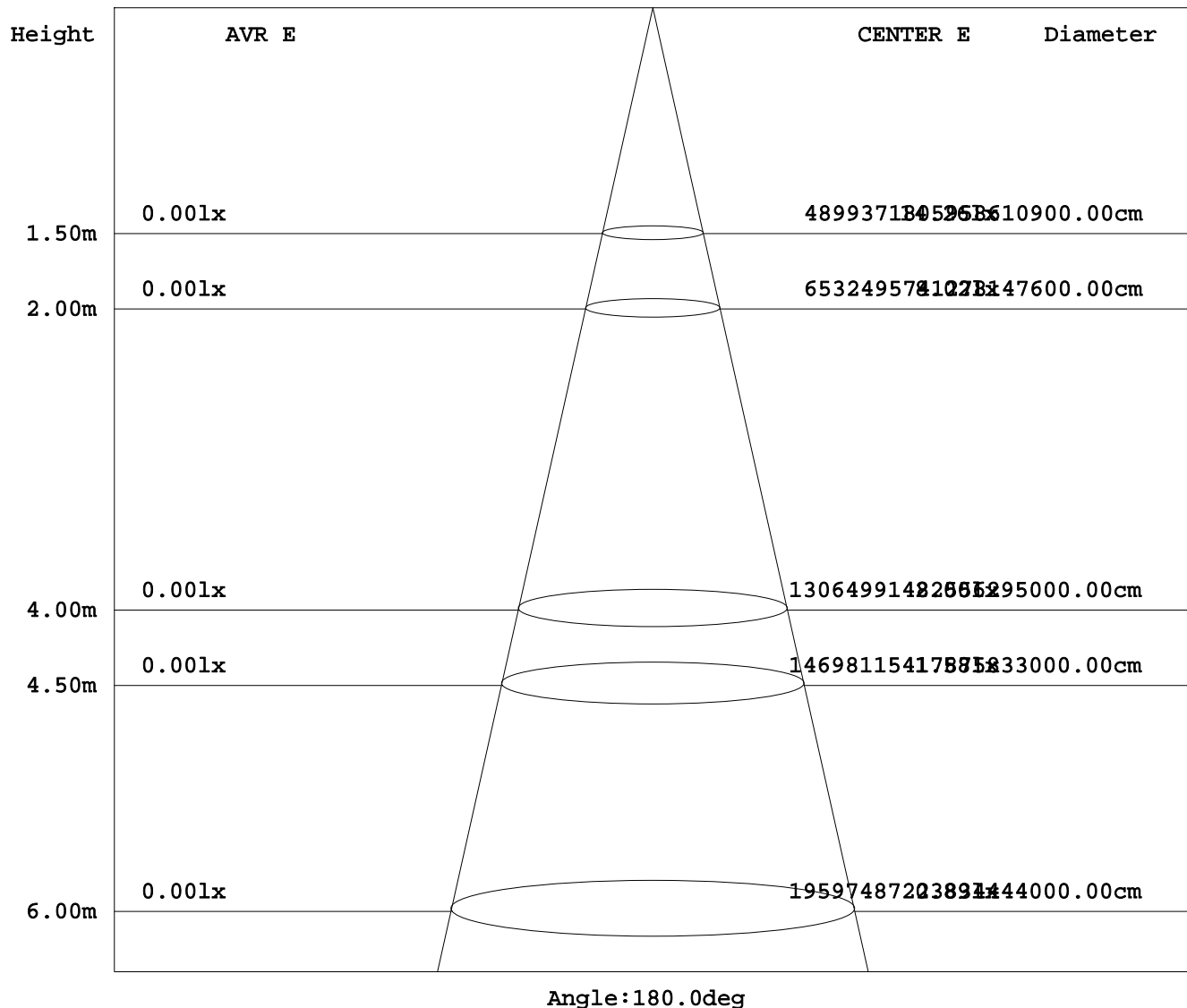
Test System:HOP00 HP880D
Temperature:25.3DEG
Operators:
Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:1.000 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:			
Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:



Test System:HOPPO HP880D
Temperature:25.3DEG
Operators:
Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:1.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:			
Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:

γ	C0	C90	C180	C270					γ	zone	total
5.0	32.57	31.41	31.62	31.88					0- 5	0.762	0.762
10.0	32.90	31.48	31.53	32.03					5- 10	2.284	3.046
15.0	33.10	31.84	31.80	32.02					10- 15	3.808	6.854
20.0	33.08	32.32	32.17	31.91					15- 20	5.323	12.17
25.0	32.83	32.69	32.52	31.58					20- 25	6.798	18.97
30.0	32.37	32.93	32.70	31.03					25- 30	8.188	27.16
35.0	31.67	32.94	32.68	30.34					30- 35	9.454	36.61
40.0	30.87	32.74	32.51	29.54					35- 40	10.56	47.18
45.0	29.94	31.97	31.63	28.62					40- 45	11.48	58.67
50.0	28.78	31.29	30.95	27.24					45- 50	12.12	70.80
55.0	27.28	30.49	30.13	26.04					50- 55	12.61	83.41
60.0	25.90	29.51	29.15	24.73					55- 60	12.90	96.31
65.0	24.33	28.30	28.06	23.25					60- 65	12.96	109.2
70.0	22.78	26.98	26.84	21.79					65- 70	12.81	122.0
75.0	21.27	25.52	25.48	20.34					70- 75	12.47	134.5
80.0	19.91	23.87	23.94	18.99					75- 80	11.99	146.5
85.0	18.86	22.26	22.41	17.99					80- 85	11.43	158.0
90.0	17.77	20.72	20.89	17.02					85- 90	10.80	168.8
95.0	16.59	19.40	19.49	15.97					90- 95	10.11	178.9
100.0	15.43	18.33	18.44	14.94					95-100	9.421	188.3
105.0	14.25	17.21	17.39	13.88					100-105	8.690	197.0
110.0	13.07	16.01	16.25	12.76					105-110	7.901	204.9
115.0	11.86	14.84	15.13	11.68					110-115	7.070	212.0
120.0	10.73	13.65	13.98	10.61					115-120	6.229	218.2
125.0	9.657	12.39	12.77	9.531					120-125	5.395	223.6
130.0	8.512	11.20	11.62	8.516					125-130	4.582	228.2
135.0	7.398	10.05	10.49	7.487					130-135	3.805	232.0
140.0	6.271	8.940	9.346	6.382					135-140	3.073	235.0
145.0	5.084	7.760	8.254	5.319					140-145	2.396	237.4
150.0	3.964	6.609	7.139	4.259					145-150	1.784	239.2
155.0	2.873	5.440	5.947	3.174					150-155	1.249	240.5
160.0	0.522	4.660	4.783	2.124					155-160	0.764	241.2
165.0	0.187	0.130	1.704	0.362					160-165	0.292	241.5
170.0	0.126	0.077	0.145	0.179					165-170	0.029	241.6
175.0	0.094	0.057	0.094	0.123					170-175	0.008	241.6
180.0	0.077	0.051	0.073	0.073					175-180	0.002	241.6
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPPO HP880D
 Temperature:25.3DEG
 Operators:
 Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:1.000 m
 Remarks:

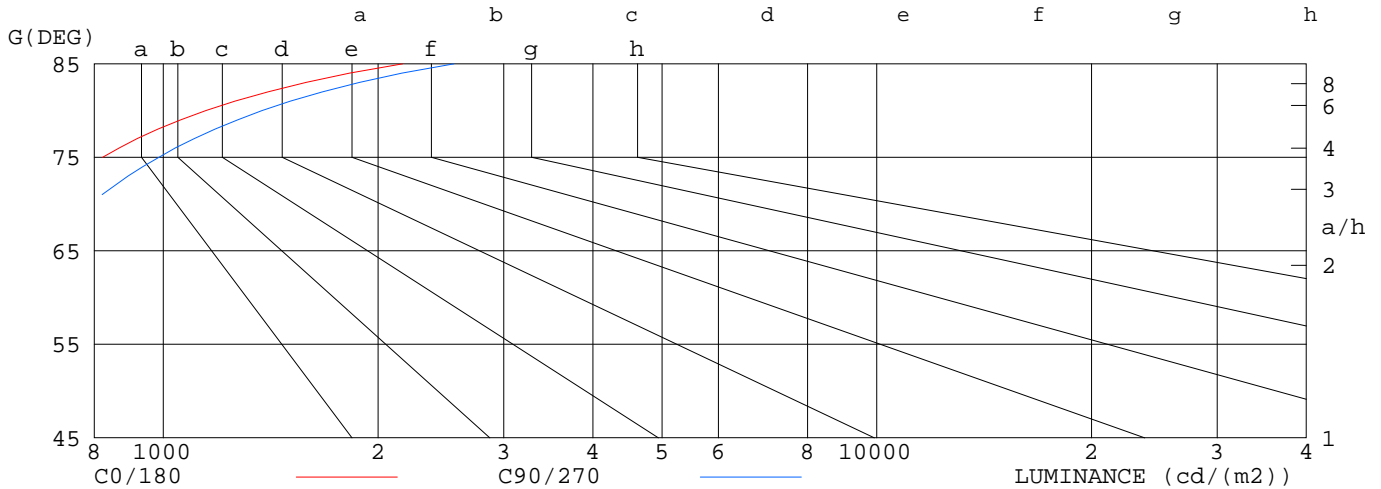
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:			
Address:			
NAME:		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	2165	2555
80	1147	1375
75	822	986
70	666	789
65	576	670
60	518	590
55	476	532
50	448	487
45	423	452

Test System:HOP00 HP880D
 Temperature:25.3DEG
 Operators:
 Test Date:06-30-2023

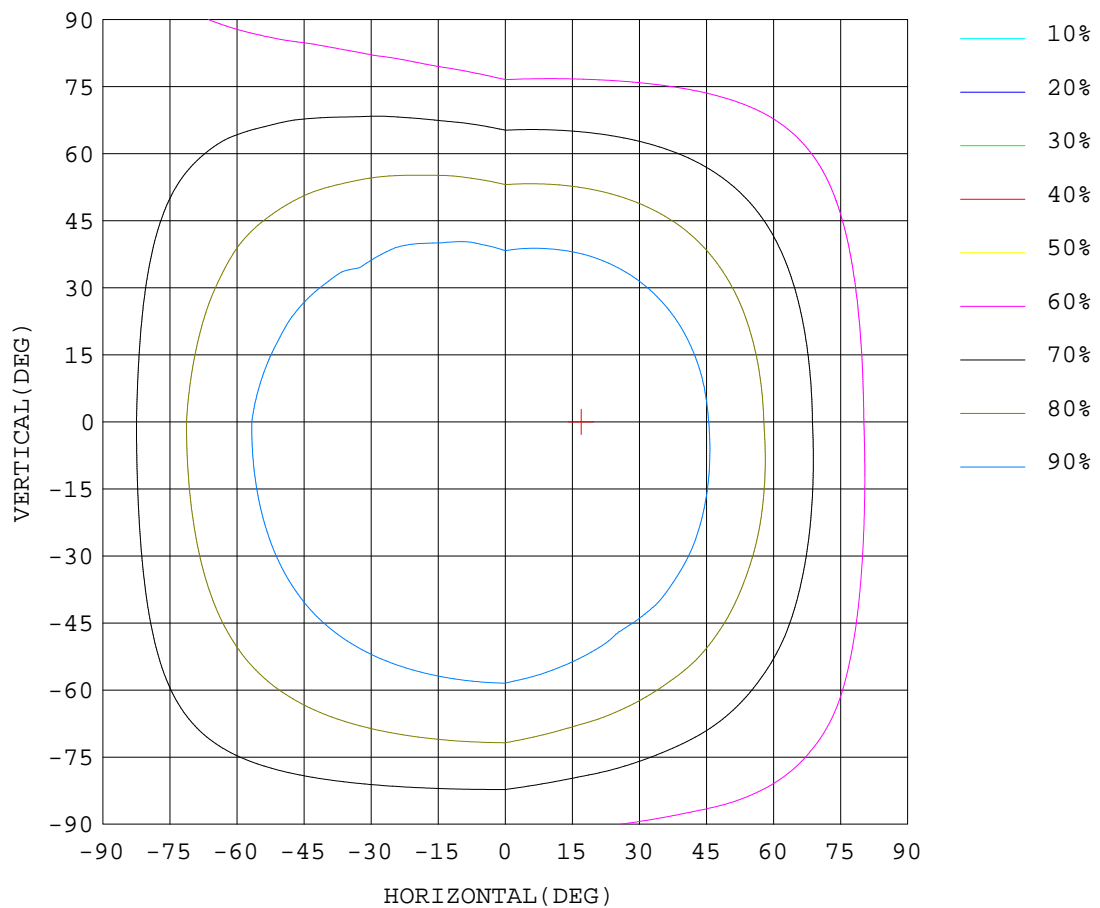
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ISOCANDELA DIAGRAM

Report number:

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Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:

UNIT: cd



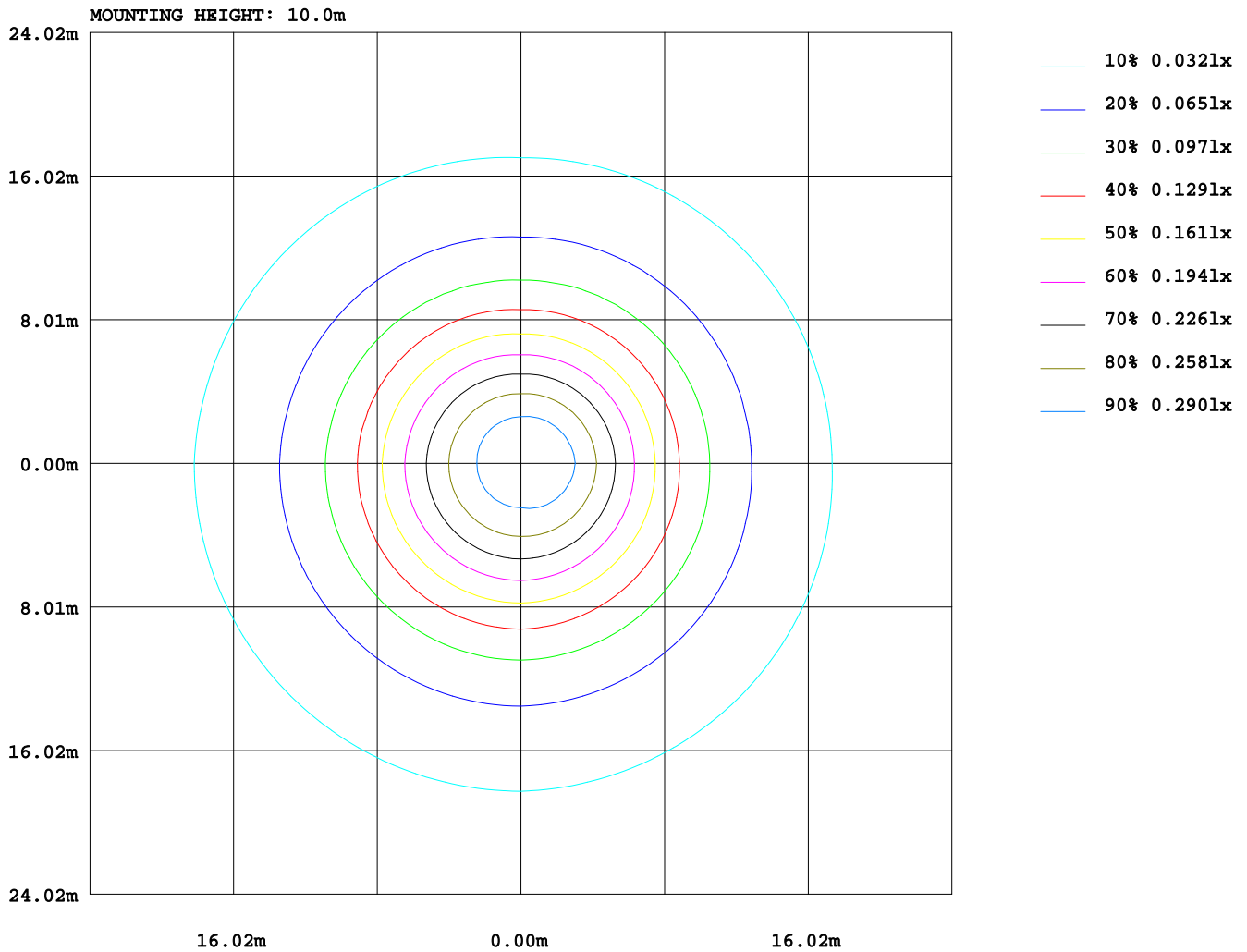
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ISOLUX DIAGRAM

Report number:

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Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:



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Temperature:25.3DEG
Operators:
Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:1.000 m
Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																			
Address:																			
NAME:										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			
90 80 70 60 50 40 30 <																						

Test System:HOP00 HP880D
 Temperature:25.3DEG
 Operators:
 Test Date:06-30-2023

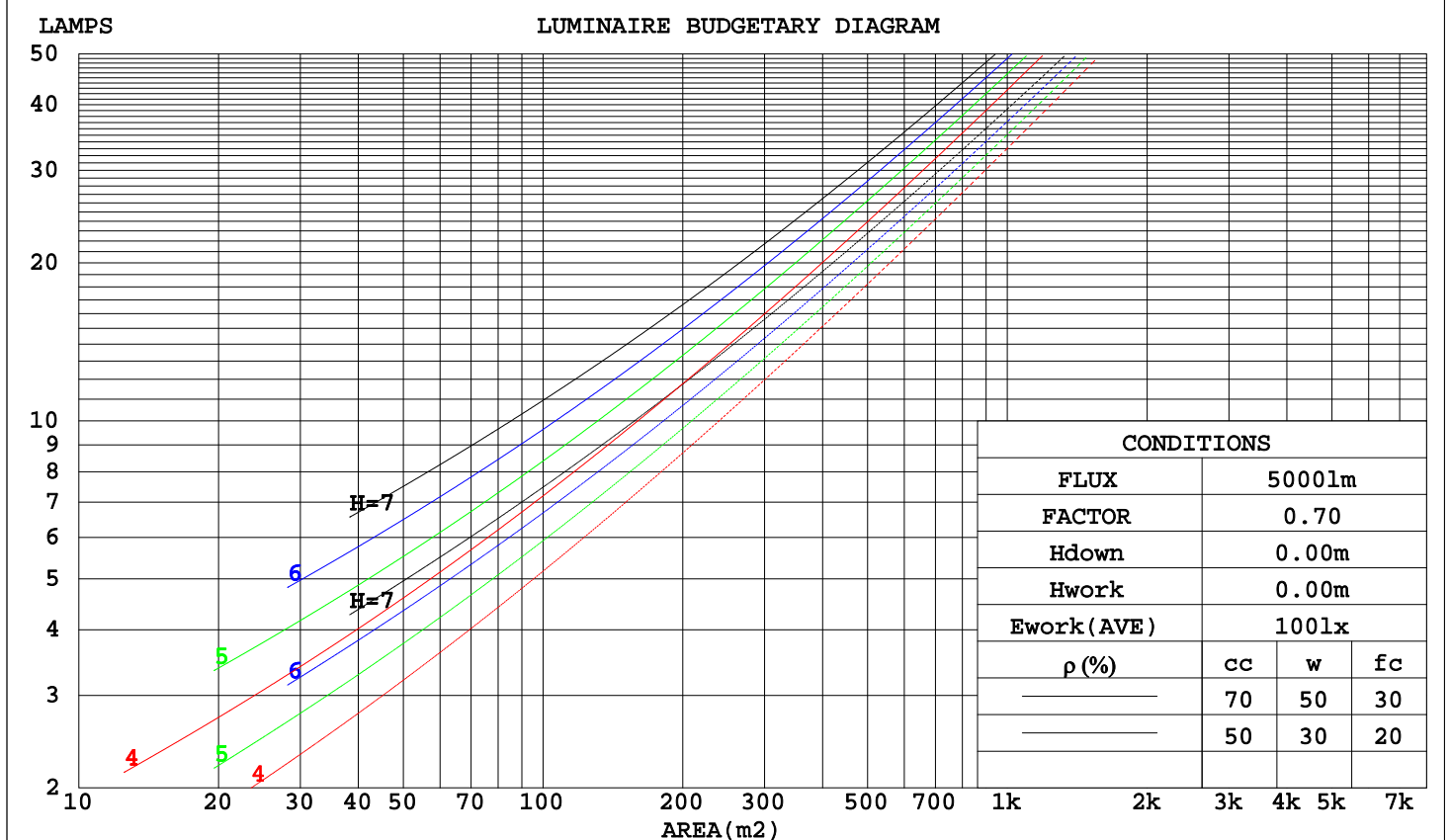
Test Set: 10.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:1.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME:								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															



Test System:HOP00 HP880D
 Temperature:25.3DEG
 Operators:
 Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
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 Remarks:

HONGPU GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

Report number:

MANUFACTURER:															
Address:															
NAME:								TYPE:				WEIGHT:			
SPECIFICATION:				CCT(K): 0				DIMENSION:				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	.410	.233	.074	.394	.225	.071	.363	.208	.066	.334	.193	.062	.308	.179	.058	
2.0	.347	.190	.058	.332	.183	.056	.304	.169	.052	.278	.156	.049	.254	.144	.045	
3.0	.304	.162	.049	.291	.156	.047	.265	.144	.044	.242	.132	.041	.220	.122	.038	
4.0	.272	.141	.042	.259	.136	.040	.236	.125	.037	.215	.115	.035	.194	.106	.032	
5.0	.246	.125	.036	.234	.120	.035	.213	.111	.033	.193	.102	.030	.175	.093	.028	
6.0	.224	.112	.032	.214	.108	.031	.194	.100	.029	.176	.092	.027	.159	.084	.025	
7.0	.206	.102	.029	.197	.098	.028	.179	.090	.026	.162	.083	.024	.146	.076	.022	
8.0	.191	.093	.026	.182	.090	.025	.165	.083	.024	.150	.076	.022	.135	.069	.020	
9.0	.177	.086	.024	.169	.082	.023	.154	.076	.022	.139	.070	.020	.126	.064	.018	
10.0	.166	.079	.022	.158	.076	.021	.144	.070	.020	.130	.065	.018	.118	.059	.017	

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	.420	.420	.420	.359	.359	.359	.245	.245	.245	.141	.141	.141	.045	.045	.045	
1.0	.419	.387	.358	.358	.332	.308	.245	.228	.213	.141	.132	.124	.045	.043	.040	
2.0	.413	.365	.324	.353	.314	.280	.242	.217	.196	.140	.126	.115	.045	.041	.037	
3.0	.405	.349	.304	.348	.301	.263	.239	.209	.185	.138	.122	.109	.044	.040	.036	
4.0	.398	.337	.290	.341	.291	.252	.235	.203	.178	.136	.119	.105	.044	.039	.035	
5.0	.390	.327	.281	.335	.283	.245	.231	.198	.173	.134	.116	.102	.043	.038	.034	
6.0	.383	.320	.274	.329	.277	.239	.227	.194	.169	.132	.114	.101	.042	.037	.033	
7.0	.376	.313	.270	.323	.272	.235	.223	.190	.167	.130	.112	.099	.042	.037	.033	
8.0	.369	.308	.266	.318	.267	.232	.220	.188	.165	.128	.111	.098	.041	.036	.032	
9.0	.363	.303	.263	.312	.263	.230	.216	.185	.163	.126	.109	.097	.041	.036	.032	
10.0	.357	.299	.261	.308	.260	.228	.213	.183	.162	.124	.108	.097	.040	.036	.032	

Test System:HOPPO HP880D
 Temperature:25.3DEG
 Operators:
 Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
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 Test Distance:1.000 m
 Remarks:

UGR Table

Report number:

MANUFACTURER:											
Address:											
NAME:						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	8.5	9.8	9.2	10.5	11.3	9.0	10.3	9.7	11.0	11.8
	3H	11.1	12.3	11.8	13.0	13.8	11.8	13.0	12.5	13.7	14.6
	4H	12.6	13.7	13.3	14.4	15.3	13.4	14.5	14.1	15.2	16.1
	6H	14.2	15.2	14.9	16.0	16.8	15.1	16.2	15.8	16.9	17.8
	8H	15.1	16.1	15.8	16.8	17.7	16.1	17.1	16.8	17.8	18.7
	12H	16.1	17.1	16.9	17.9	18.8	17.2	18.1	17.9	18.9	19.8
4H	2H	9.5	10.6	10.2	11.3	12.2	9.8	10.9	10.5	11.6	12.5
	3H	12.3	13.2	13.0	14.0	14.9	12.8	13.8	13.5	14.5	15.4
	4H	13.8	14.7	14.6	15.5	16.4	14.5	15.4	15.3	16.2	17.1
	6H	15.6	16.4	16.4	17.2	18.2	16.4	17.2	17.2	18.0	19.0
	8H	16.6	17.4	17.4	18.2	19.2	17.5	18.2	18.3	19.0	20.0
	12H	17.8	18.5	18.6	19.3	20.3	18.7	19.4	19.5	20.2	21.2
8H	4H	14.5	15.3	15.3	16.1	17.1	15.1	15.8	15.9	16.6	17.6
	6H	16.6	17.2	17.4	18.1	19.1	17.2	17.9	18.1	18.7	19.7
	8H	17.8	18.4	18.6	19.2	20.2	18.5	19.1	19.3	19.9	20.9
	12H	19.2	19.7	20.0	20.5	21.6	19.9	20.4	20.8	21.3	22.4
12H	4H	14.7	15.4	15.5	16.2	17.2	15.2	15.9	16.0	16.7	17.7
	6H	16.9	17.5	17.7	18.3	19.4	17.5	18.1	18.3	18.9	19.9
	8H	18.2	18.7	19.1	19.6	20.6	18.8	19.3	19.7	20.2	21.3
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		+ 0.3 / - 0.4					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 241.6 lm Total Lamp Luminous Flux.(8log(F/F0) = -4.9)

Test System:HOPPO HP880D
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 Operators:
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Test Set: 10.0deg/s C-Gamma (TYPE C)
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UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:										
Address:										
NAME:					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) x RCR = 5									
k = 0.60	42	29	22	41	29	22	38	27	21	14
0.80	51	37	29	49	36	28	45	34	27	19
1.00	58	45	36	56	43	35	51	43	33	23
1.25	65	52	42	62	50	41	57	46	39	28
1.50	70	57	48	67	55	46	61	51	44	31
2.00	78	66	57	74	63	55	67	58	51	37
2.50	83	72	63	79	68	60	71	62	56	40
3.00	87	76	68	82	73	65	74	66	60	44
4.00	92	83	76	87	79	72	78	71	66	48
5.00	95	87	81	90	83	77	80	75	70	51
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

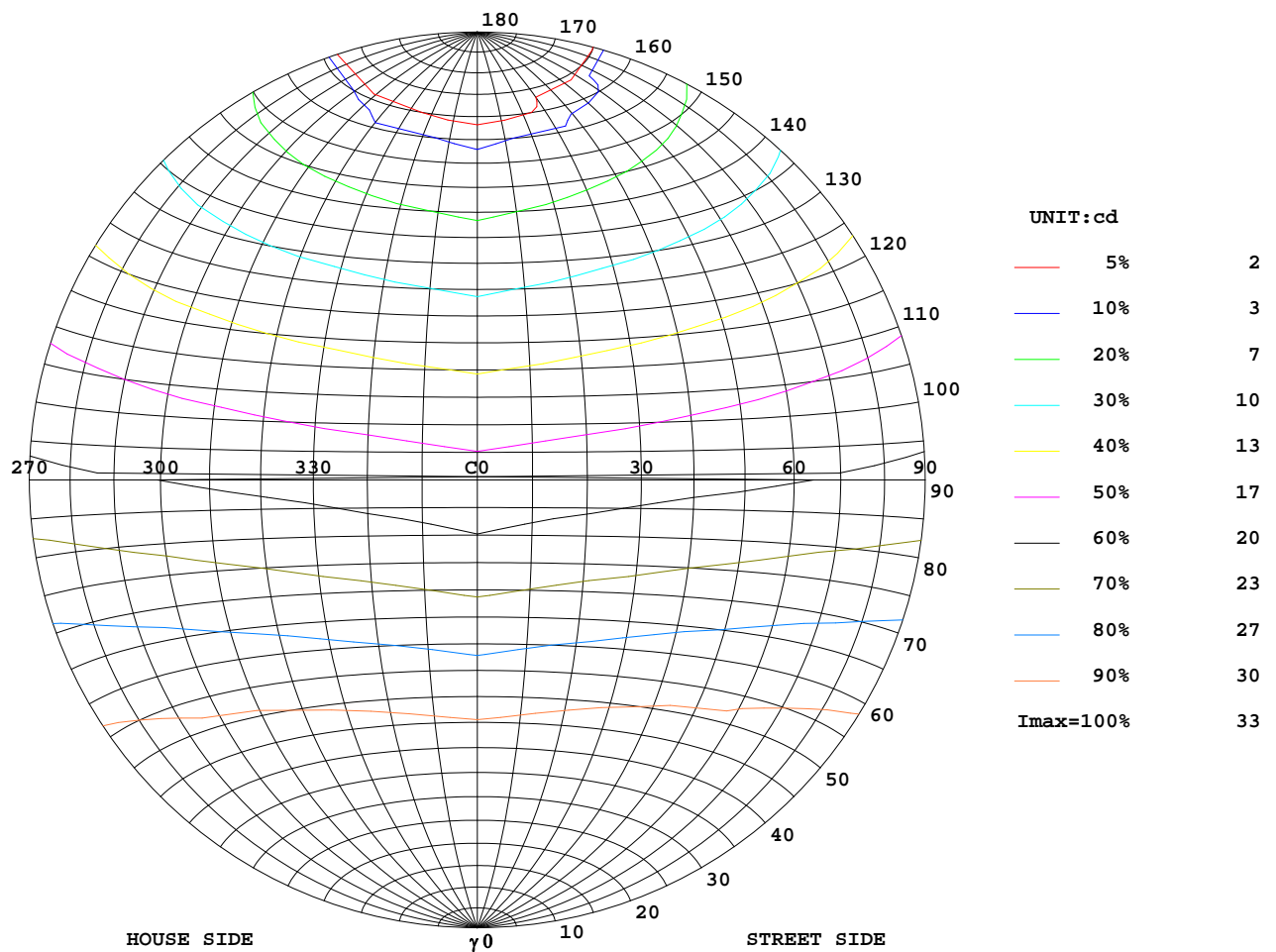
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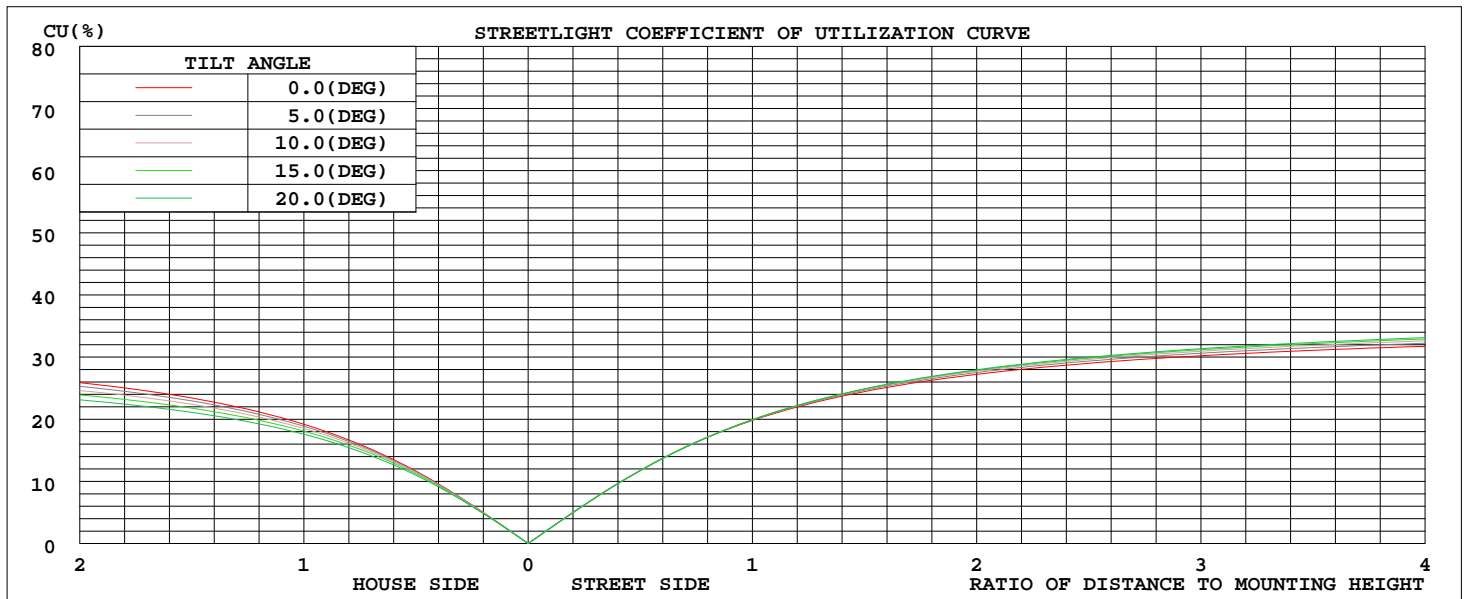
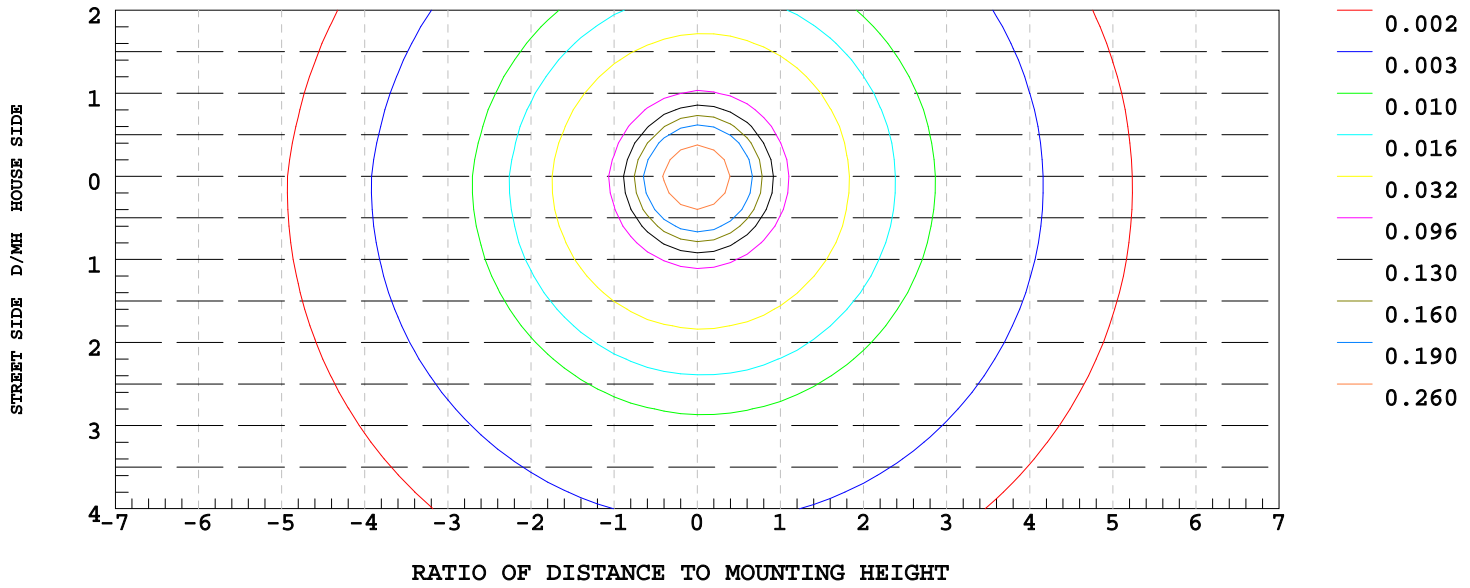
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Remarks:

ISOLUX DIAGRAM

Report number:

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Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:

ILLUMINANCE AT MH=10 m,Enadir = 0.32 lx



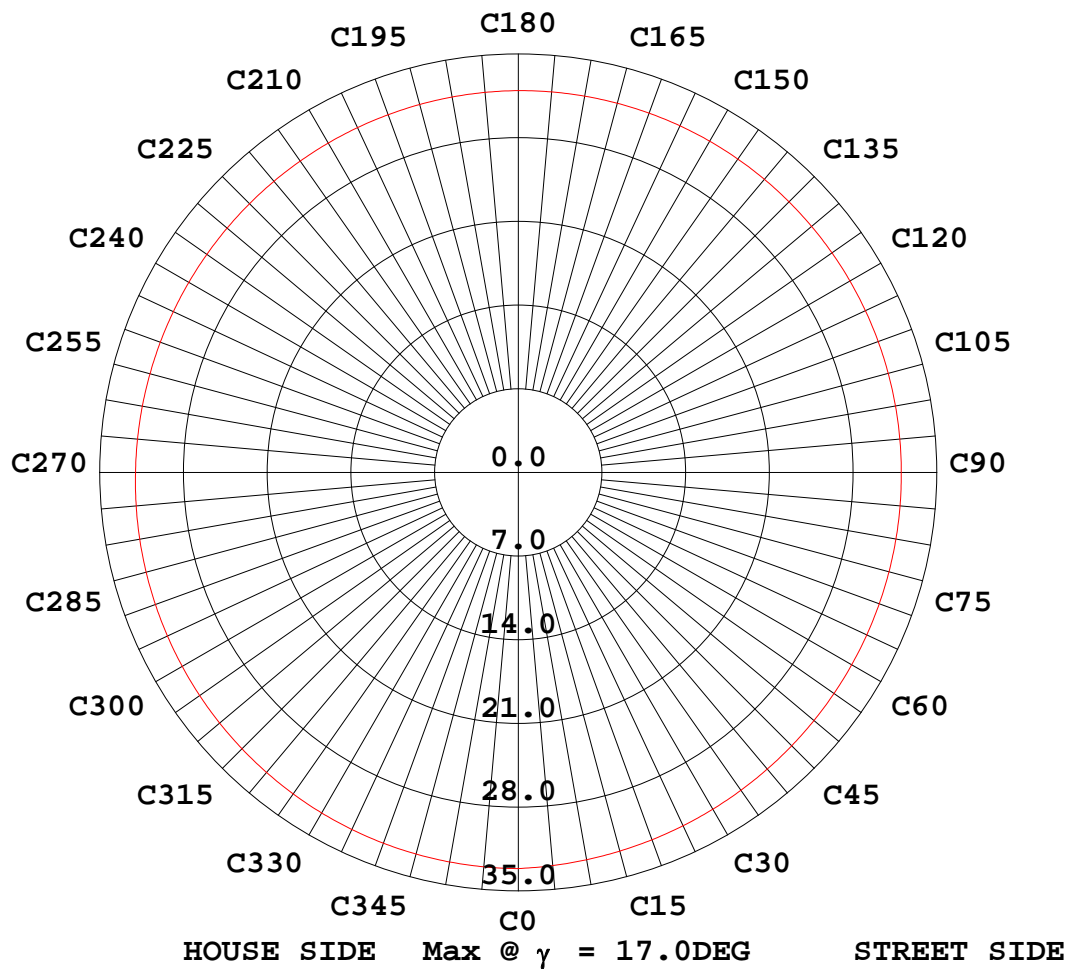
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LUMINOUS DISTRIBUTION INTENSITY DATA

Report number:

MANUFACTURER:			
Address:			
NAME:		TYPE:	WEIGHT:
SPECIFICATION:	CCT(K): 0	DIMENSION:	SERIAL No.:

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270
0.0	32.0	31.6	32.0	31.6
5.0	32.5	31.4	31.6	31.8
10.0	32.9	31.4	31.5	32.0
15.0	33.1	31.8	31.8	32.0
20.0	33.0	32.3	32.1	31.9
25.0	32.8	32.6	32.5	31.5
30.0	32.3	32.9	32.7	31.0
35.0	31.6	32.9	32.6	30.3
40.0	30.8	32.7	32.5	29.5
45.0	29.9	31.9	31.6	28.6
50.0	28.7	31.2	30.9	27.2
55.0	27.2	30.4	30.1	26.0
60.0	25.9	29.5	29.1	24.7
65.0	24.3	28.3	28.0	23.2
70.0	22.7	26.9	26.8	21.7
75.0	21.2	25.5	25.4	20.3
80.0	19.9	23.8	23.9	18.9
85.0	18.8	22.2	22.4	17.9
90.0	17.7	20.7	20.8	17.0
95.0	16.5	19.4	19.4	15.9
100.0	15.4	18.3	18.4	14.9
105.0	14.2	17.2	17.3	13.8
110.0	13.0	16.0	16.2	12.7
115.0	11.8	14.8	15.1	11.6
120.0	10.7	13.6	13.9	10.6
125.0	9.65	12.3	12.7	9.53
130.0	8.51	11.2	11.6	8.51
135.0	7.39	10.0	10.4	7.48
140.0	6.27	8.94	9.34	6.38
145.0	5.08	7.76	8.25	5.31
150.0	3.96	6.60	7.13	4.25
155.0	2.87	5.44	5.94	3.17
160.0	0.52	4.66	4.78	2.12
165.0	0.19	0.13	1.70	0.36
170.0	0.13	0.08	0.14	0.18
175.0	0.09	0.06	0.09	0.12
180.0	0.08	0.05	0.07	0.07

Test System:HOPPO HP880D
Temperature:25.3DEG
Operators:
Test Date:06-30-2023

Test Set: 10.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:1.000 m
Remarks: