

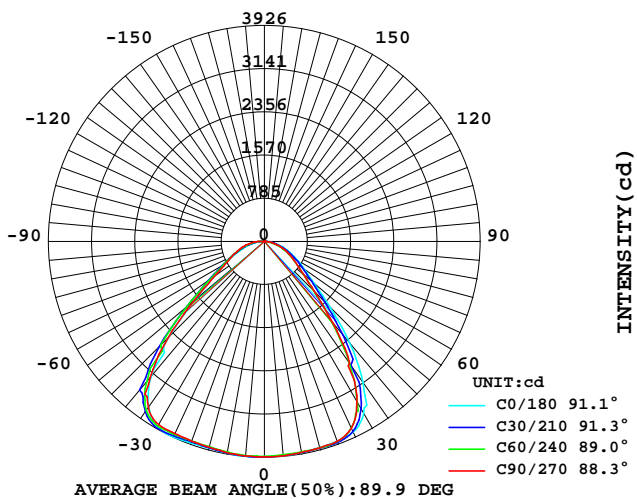
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

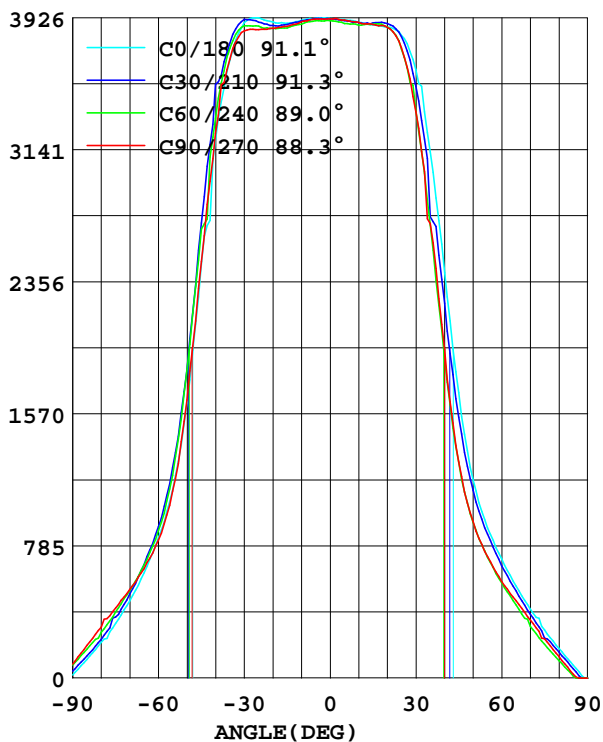
MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	3926	S/MH(C0/180)	1.37
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.37
NOMINAL POWER(W)	58	TOTAL FLUX(lm)	8733.7	Voltage(V)	219.8
RATED VOLTAGE(V)	220	EFFICIENCY(lm/W)	149.2	Current(A)	0.275
NOMINAL FLUX(lm)	8733.8	h up(%)	0.1	Power(W)	58.52
LAMPS QUANTITY	1	h down(%)	99.9	Power Factor(PF)	0.965
TEST VOLTAGE(V)	219.9	Effective Flux(lm)	8371.3	EEI	0.095

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



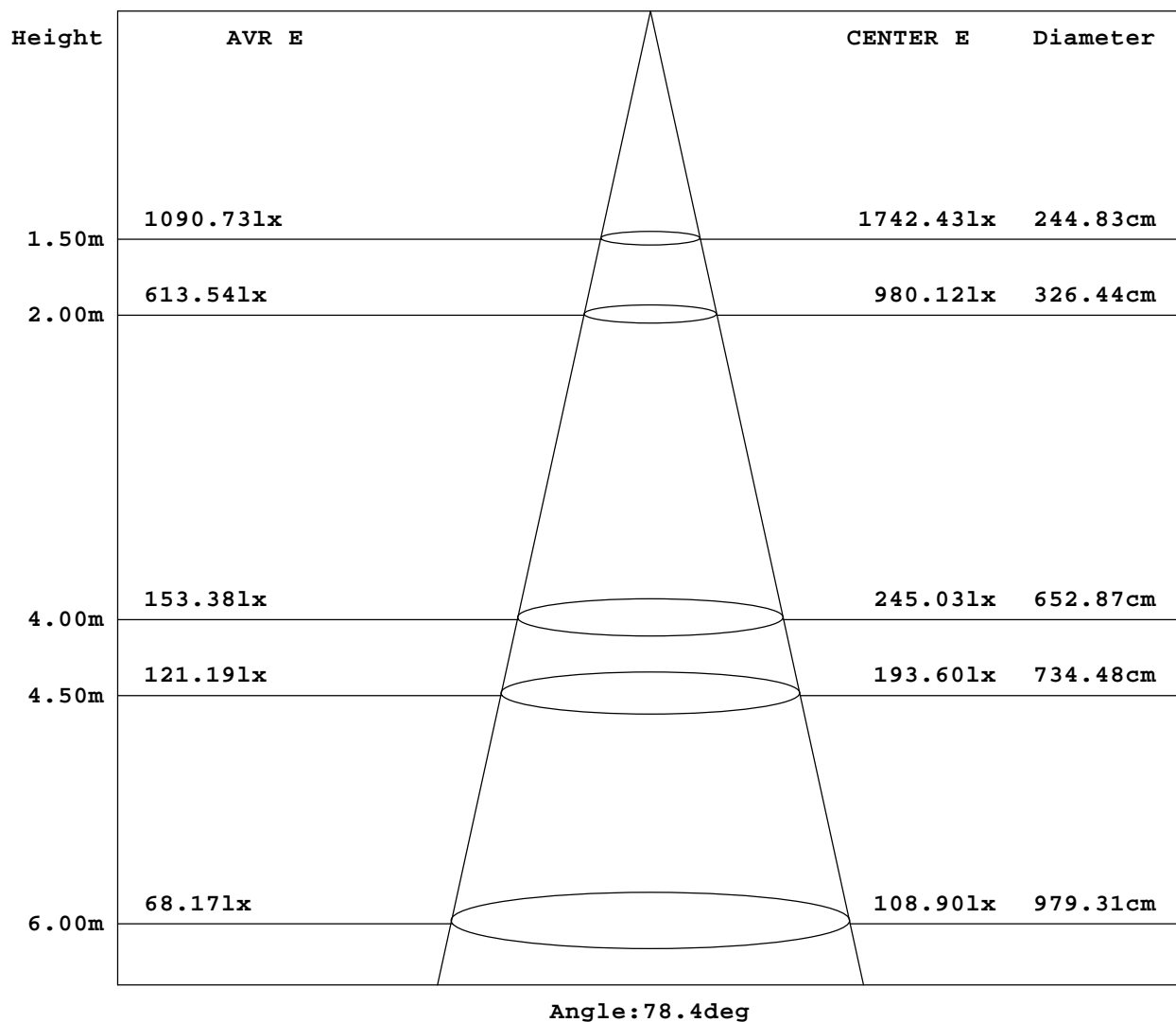
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

AVERAGE AND CENTER E Figure

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity: 65.0%
 Test Distance: 11.000 m
 Remarks:

ZONAL FLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	3922	3914	3917	3900	3915	3899	3912	3899	0- 5	93.47	93.47
10.0	3909	3897	3901	3888	3899	3888	3898	3881	5- 10	279.0	372.4
15.0	3892	3874	3874	3863	3882	3891	3885	3871	10- 15	460.7	833.2
20.0	3901	3871	3863	3851	3869	3881	3868	3881	15- 20	638.7	1472
25.0	3925	3887	3855	3855	3821	3775	3747	3857	20- 25	809.9	2282
30.0	3897	3896	3847	3821	3616	3447	3368	3643	25- 30	956.5	3239
35.0	3673	3759	3680	3594	3127	2717	2701	3163	30- 35	1038	4276
40.0	3200	3428	3239	3059	2411	2062	1952	2431	35- 40	1011	5287
45.0	2462	2687	2475	2314	1697	1416	1284	1649	40- 45	866.8	6154
50.0	1636	1834	1653	1602	1176	1021	928.7	1121	45- 50	675.0	6829
55.0	1116	1228	1110	1122	892.3	786.0	721.3	830.7	50- 55	505.7	7334
60.0	835.5	889.4	821.0	842.8	708.8	616.9	573.8	629.2	55- 60	393.4	7728
65.0	625.7	673.7	650.4	660.3	546.6	476.6	460.1	468.5	60- 65	316.8	8045
70.0	456.9	509.4	525.9	514.5	407.9	341.7	344.0	327.0	65- 70	251.5	8296
75.0	325.3	377.2	416.4	380.3	285.8	218.6	232.8	213.9	70- 75	190.1	8486
80.0	211.5	249.9	302.2	257.8	176.0	129.5	127.8	120.0	75- 80	133.0	8619
85.0	108.6	150.4	192.8	154.8	74.48	32.98	22.21	30.56	80- 85	78.04	8698
90.0	17.61	58.63	82.23	58.63	0	0	0	0	85- 90	31.05	8729
95.0	0	0	0	0	0	0	0	0	90- 95	5.198	8734
100.0	0	0	0	0	0	0	0	0	95-100	0	8734
105.0	0	0	0	0	0	0	0	0	100-105	0	8734
110.0	0	0	0	0	0	0	0	0	105-110	0	8734
115.0	0	0	0	0	0	0	0	0	110-115	0	8734
120.0	0	0	0	0	0	0	0	0	115-120	0	8734
125.0	0	0	0	0	0	0	0	0	120-125	0	8734
130.0	0	0	0	0	0	0	0	0	125-130	0	8734
135.0	0	0	0	0	0	0	0	0	130-135	0	8734
140.0	0	0	0	0	0	0	0	0	135-140	0	8734
145.0	0	0	0	0	0	0	0	0	140-145	0	8734
150.0	0	0	0	0	0	0	0	0	145-150	0	8734
155.0	0	0	0	0	0	0	0	0	150-155	0	8734
160.0	0	0	0	0	0	0	0	0	155-160	0	8734
165.0	0	0	0	0	0	0	0	0	160-165	0	8734
170.0	0	0	0	0	0	0	0	0	165-170	0	8734
175.0	0	0	0	0	0	0	0	0	170-175	0	8734
180.0	0	0	0	0	0	0	0	0	175-180	0	8734
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

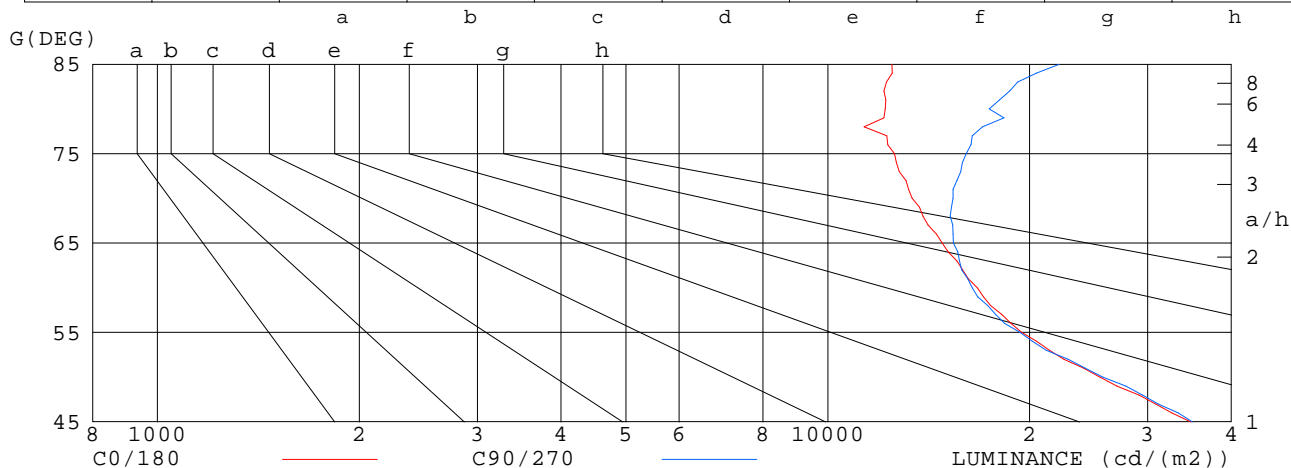
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	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	12462	22124
80	12184	17404
75	12569	16090
70	13361	15377
65	14807	15391
60	16712	16421
55	19452	19354
50	25459	25723
45	34814	34995

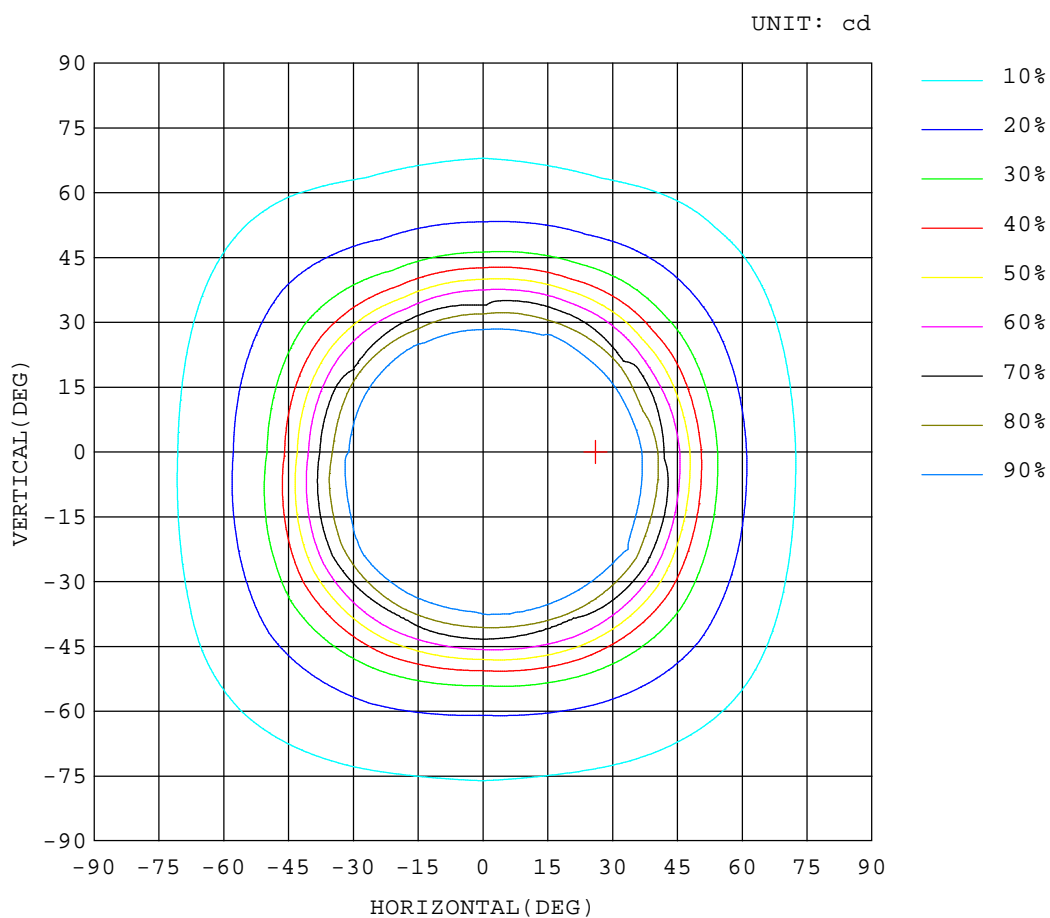
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



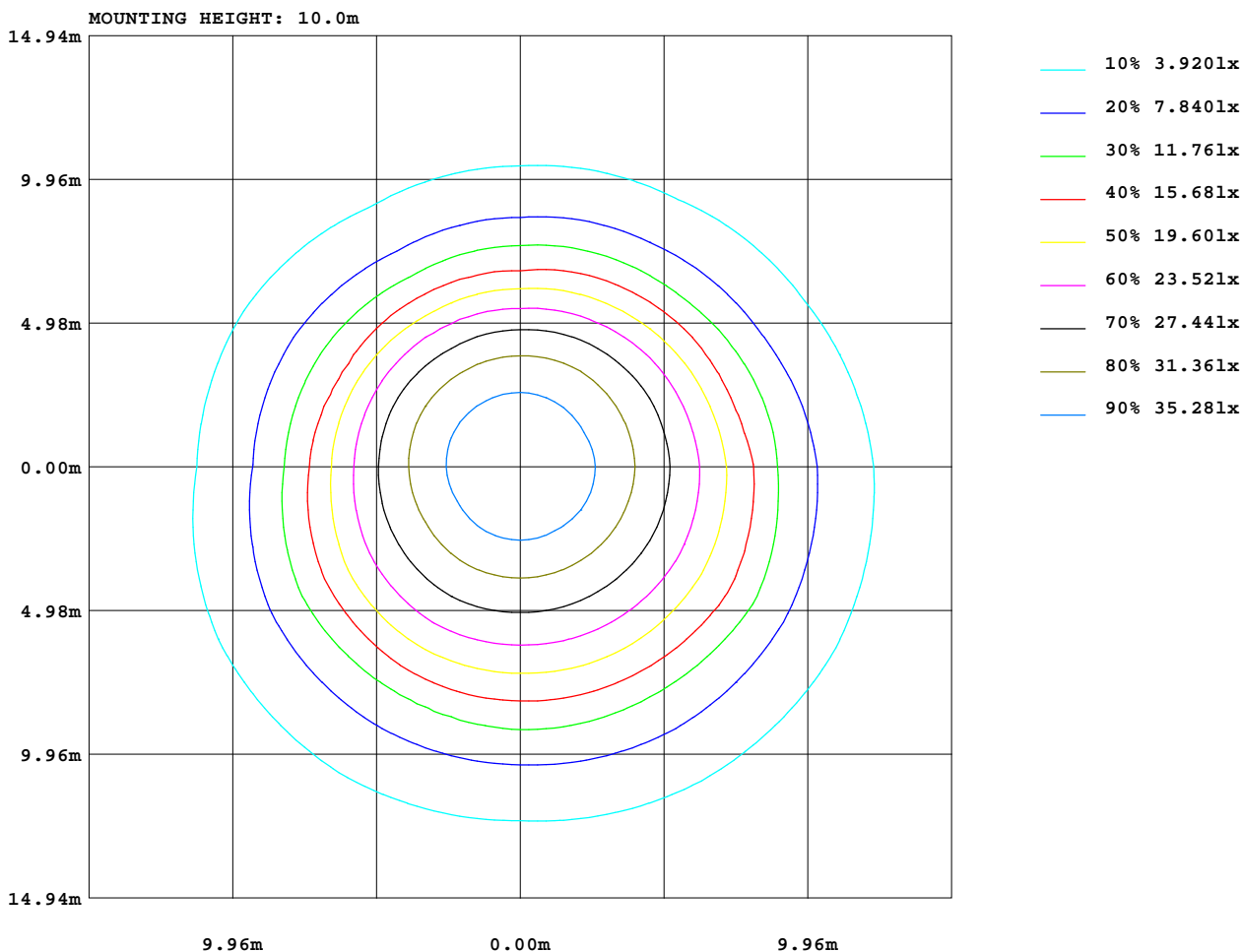
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

AREA LUMINOUS FLUX

Report number:

MANUFACTURER:																			
Address:																			
NAME: 60W										TYPE:					WEIGHT:				
SPECIFICATION:										DIMENSION: 1438*65mm					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			
	0.00	0.03	0.14	0.31	0.46	0.53	0.66	0.92	1.11	1.10	0.92	0.66	0.51	0.42	0.28	0.20	0.16	0.06	8.47	0.00		
	0.02	0.35	1.09	2.07	3.03	3.90	4.87	6.02	6.82	6.79	5.94	4.75	3.73	2.82	1.86	1.07	0.47	0.10	55.7	0.00		
	0.07	0.75	2.14	4.00	6.17	8.34	10.3	12.4	13.6	13.6	12.4	10.3	8.14	5.83	3.70	2.08	0.85	0.15	115	52.6		
	0.13	1.12	3.15	6.26	9.94	13.6	16.8	19.9	21.9	22.1	20.5	17.2	13.7	9.69	5.91	3.10	1.22	0.20	187	166		
	0.18	1.46	4.24	8.59	14.1	20.1	26.4	33.7	39.5	40.7	36.6	28.9	21.3	14.3	8.49	4.25	1.58	0.25	305	294		
	0.22	1.77	5.25	10.8	18.8	30.6	47.6	66.4	79.5	82.0	73.5	55.2	34.9	20.3	11.3	5.42	1.91	0.29	547	539		
	0.25	2.04	6.09	12.9	24.6	47.9	77.7	101	111	112	106	87.2	56.7	29.2	14.3	6.52	2.21	0.33	799	793		
	0.27	2.24	6.73	14.6	31.2	64.5	97.9	113	118	118	114	104	76.7	40.4	17.3	7.44	2.46	0.36	928	923		
	0.29	2.35	7.10	15.7	36.2	75.0	104	114	118	118	114	107	87.7	49.3	19.7	8.08	2.62	0.37	981	976		
	0.29	2.39	7.24	16.3	38.5	78.4	105	114	118	118	114	108	90.6	52.2	20.4	8.26	2.66	0.38	995	990		
	0.29	2.35	7.12	16.0	37.2	76.2	104	113	117	117	114	107	87.7	48.4	19.2	7.97	2.59	0.37	979	974		
	0.27	2.23	6.69	14.7	31.9	65.6	97.7	113	117	117	114	103	77.3	39.2	16.8	7.31	2.43	0.35	926	921		
	0.24	2.01	6.01	12.7	24.7	46.7	76.0	99.1	109	110	102	83.6	54.8	28.2	14.0	6.38	2.19	0.32	779	773		
	0.21	1.73	5.13	10.5	18.1	29.4	45.8	62.4	72.8	74.2	66.1	50.6	32.3	19.6	11.1	5.33	1.87	0.28	508	500		
	0.17	1.41	4.13	8.25	13.4	19.3	25.6	31.2	34.5	35.0	32.2	26.5	19.9	13.7	8.31	4.22	1.53	0.24	280	268		
	0.12	1.05	3.02	6.00	9.49	13.2	16.6	18.8	19.9	19.9	18.8	16.4	13.0	9.38	5.91	3.03	1.16	0.19	176	154		
	0.07	0.68	1.96	3.74	5.82	8.03	10.1	11.6	12.5	12.4	11.5	9.92	7.87	5.67	3.60	1.96	0.79	0.14	109	41.1		
	0.03	0.30	0.93	1.78	2.72	3.70	4.55	5.22	5.69	5.69	5.21	4.54	3.67	2.65	1.71	0.96	0.41	0.09	49.9	0.00		
	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90			
Φ t	3.11	26.3	78.2	166	327	606	872	1036	1117	1125	1062	925	691	392	184	83.6	29.1	4.47	8734			
Φ a	0.00	0.81	52.7	144	306	585	851	1015	1096	1104	1041	904	670	371	162	59.7	3.25	0.00		8371		

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

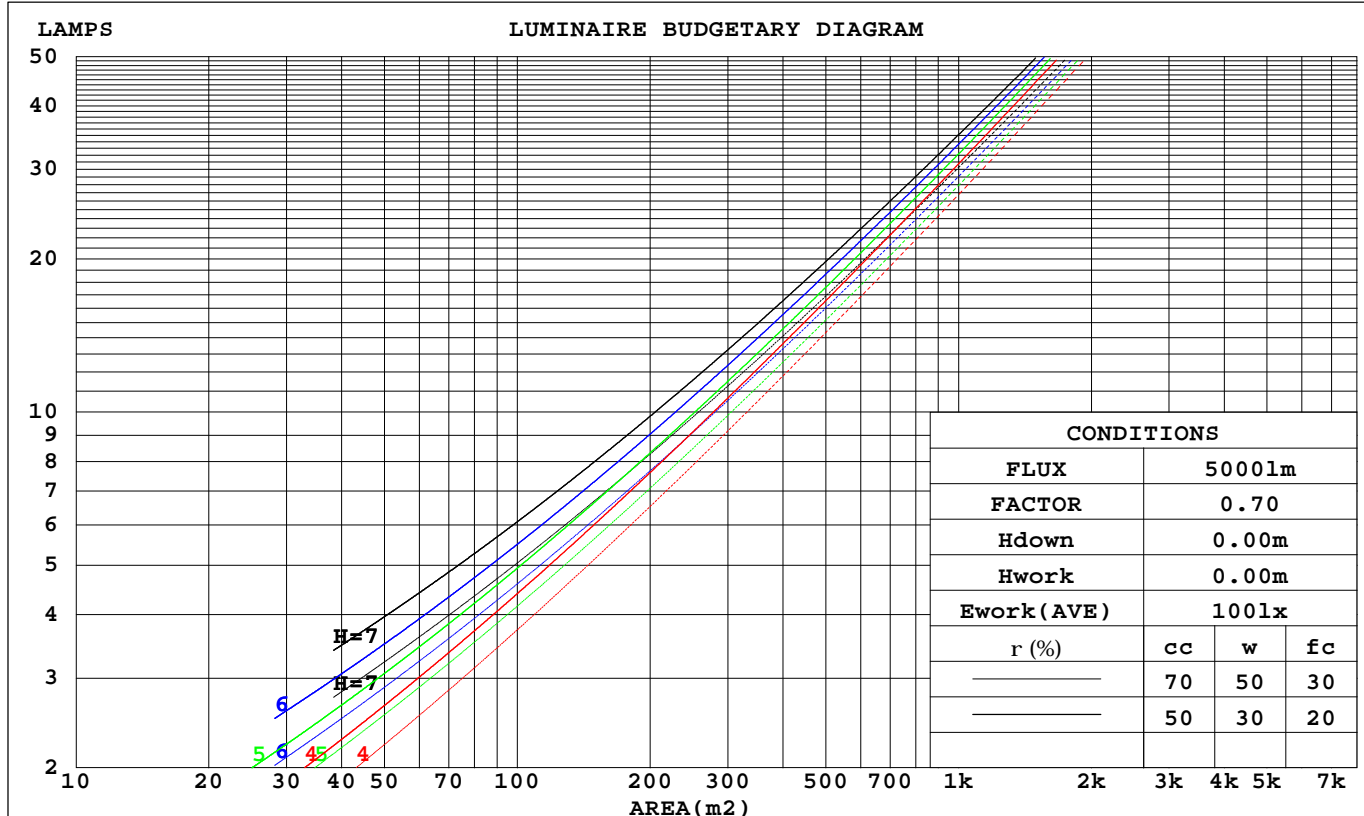
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:															
Address:															
NAME: 60W								TYPE:				WEIGHT:			
SPECIFICATION:								DIMENSION: 1438*65mm				SERIAL No.:			

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r fc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio															



Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

WEC AND CCEC

Report number:

MANUFACTURER:														
Address:														
NAME: 60W							TYPE:					WEIGHT:		
SPECIFICATION:							DIMENSION: 1438*65mm					SERIAL No.:		

rcc	80%			70%			50%			30%			10%			0								
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0								
rfc	20%			20%			20%			20%			20%			0								
RCR	RCR:Room Cavity Ratio															Wall Exitance Coefficients(WEC)								
0.0																								
1.0	.261	.149	.047	.254	.145	.046	.241	.138	.044	.229	.132	.042	.218	.126	.041									
2.0	.248	.136	.042	.242	.133	.041	.231	.128	.040	.220	.124	.039	.211	.119	.038									
3.0	.233	.124	.037	.228	.122	.037	.218	.118	.036	.209	.114	.035	.200	.111	.034									
4.0	.218	.113	.033	.213	.112	.033	.205	.109	.032	.196	.106	.032	.189	.103	.031									
5.0	.204	.104	.030	.200	.103	.030	.192	.100	.029	.185	.098	.029	.178	.095	.029									
6.0	.192	.096	.027	.188	.095	.027	.181	.093	.027	.175	.091	.027	.169	.089	.026									
7.0	.180	.089	.025	.177	.088	.025	.171	.086	.025	.165	.085	.025	.160	.083	.024									
8.0	.170	.083	.023	.167	.082	.023	.161	.081	.023	.156	.079	.023	.151	.078	.023									
9.0	.160	.078	.022	.158	.077	.022	.153	.076	.021	.148	.074	.021	.144	.073	.021									
10.0	.152	.073	.020	.150	.072	.020	.145	.071	.020	.141	.070	.020	.137	.069	.020									

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.191	.191	.191	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.177	.157	.139	.152	.135	.119	.104	.093	.083	.060	.054	.048	.019	.017	.016	
2.0	.167	.133	.104	.143	.114	.090	.098	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.158	.115	.080	.135	.099	.069	.093	.069	.049	.054	.040	.029	.017	.013	.009	
4.0	.150	.101	.063	.128	.087	.055	.088	.061	.039	.051	.036	.023	.016	.012	.008	
5.0	.142	.090	.052	.122	.078	.045	.084	.054	.032	.049	.032	.019	.016	.010	.006	
6.0	.135	.081	.043	.116	.071	.037	.080	.049	.026	.047	.029	.016	.015	.009	.005	
7.0	.129	.074	.036	.111	.064	.032	.077	.045	.022	.044	.027	.013	.014	.009	.004	
8.0	.123	.069	.031	.106	.059	.027	.073	.042	.019	.043	.025	.011	.014	.008	.004	
9.0	.117	.064	.027	.101	.055	.024	.070	.039	.017	.041	.023	.010	.013	.008	.003	
10.0	.112	.059	.024	.097	.052	.021	.067	.036	.015	.039	.021	.009	.013	.007	.003	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

Uncorrected UGR Table

Report number:

MANUFACTURER:											
Address:											
NAME: 60W					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	23.5	24.9	23.8	25.1	25.2	23.5	24.8	23.7	25.0	25.2	
	3H	24.2	25.4	24.5	25.6	25.9	24.3	25.5	24.5	25.7	25.9
	4H	24.5	25.6	24.8	25.9	26.1	24.7	25.9	25.0	26.1	26.4
	6H	24.7	25.8	25.0	26.1	26.3	25.2	26.3	25.5	26.6	26.8
	8H	24.8	25.9	25.1	26.1	26.4	25.4	26.5	25.8	26.8	27.0
	12H	24.9	25.9	25.2	26.2	26.5	25.6	26.7	26.0	26.9	27.2
4H	2H	23.8	24.9	24.1	25.2	25.4	23.7	24.9	24.0	25.1	25.4
	3H	24.6	25.6	25.0	25.9	26.2	24.7	25.8	25.1	26.0	26.3
	4H	25.1	26.0	25.4	26.3	26.6	25.3	26.3	25.7	26.6	26.9
	6H	25.5	26.3	25.8	26.6	27.0	26.0	26.8	26.4	27.2	27.5
	8H	25.6	26.4	26.0	26.7	27.1	26.3	27.1	26.7	27.4	27.8
	12H	25.8	26.4	26.2	26.8	27.2	26.6	27.3	27.1	27.7	28.1
8H	4H	25.3	26.0	25.7	26.4	26.8	25.5	26.3	25.9	26.6	27.0
	6H	25.8	26.4	26.2	26.8	27.3	26.3	27.0	26.8	27.4	27.8
	8H	26.1	26.6	26.5	27.0	27.5	26.8	27.3	27.2	27.8	28.2
	12H	26.3	26.8	26.8	27.2	27.7	27.3	27.7	27.7	28.2	28.6
12H	4H	25.3	26.0	25.7	26.4	26.8	25.5	26.2	26.0	26.6	27.0
	6H	25.9	26.4	26.3	26.9	27.3	26.4	26.9	26.9	27.4	27.8
	8H	26.2	26.7	26.7	27.1	27.6	26.9	27.4	27.4	27.8	28.3
Variations with the observer position at spacings:											
S = 1.0H	+ 0.7 / - 0.7					+ 0.5 / - 0.6					
1.5H	+ 0.4 / - 0.7					+ 0.4 / - 0.4					
2.0H	+ 1.4 / - 0.9					+ 1.2 / - 0.7					

CIE Pub.117 Corrected 8734 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.5)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

UTILIZATION FACTORS TABLE

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	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) $k(RI) \times RCR = 5$									
$k = 0.60$	67	57	51	66	57	51	65	56	51	45
0.80	77	67	61	76	66	61	74	66	60	54
1.00	84	75	69	83	74	69	81	75	68	62
1.25	90	82	76	89	81	76	87	80	75	69
1.50	95	87	81	93	86	81	90	84	79	73
2.00	100	93	88	98	92	87	95	90	86	79
2.50	103	97	92	101	96	91	98	93	89	82
3.00	106	100	96	104	99	95	100	96	92	85
4.00	109	104	101	107	103	99	103	99	96	88
5.00	111	107	104	109	105	102	104	101	99	90
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

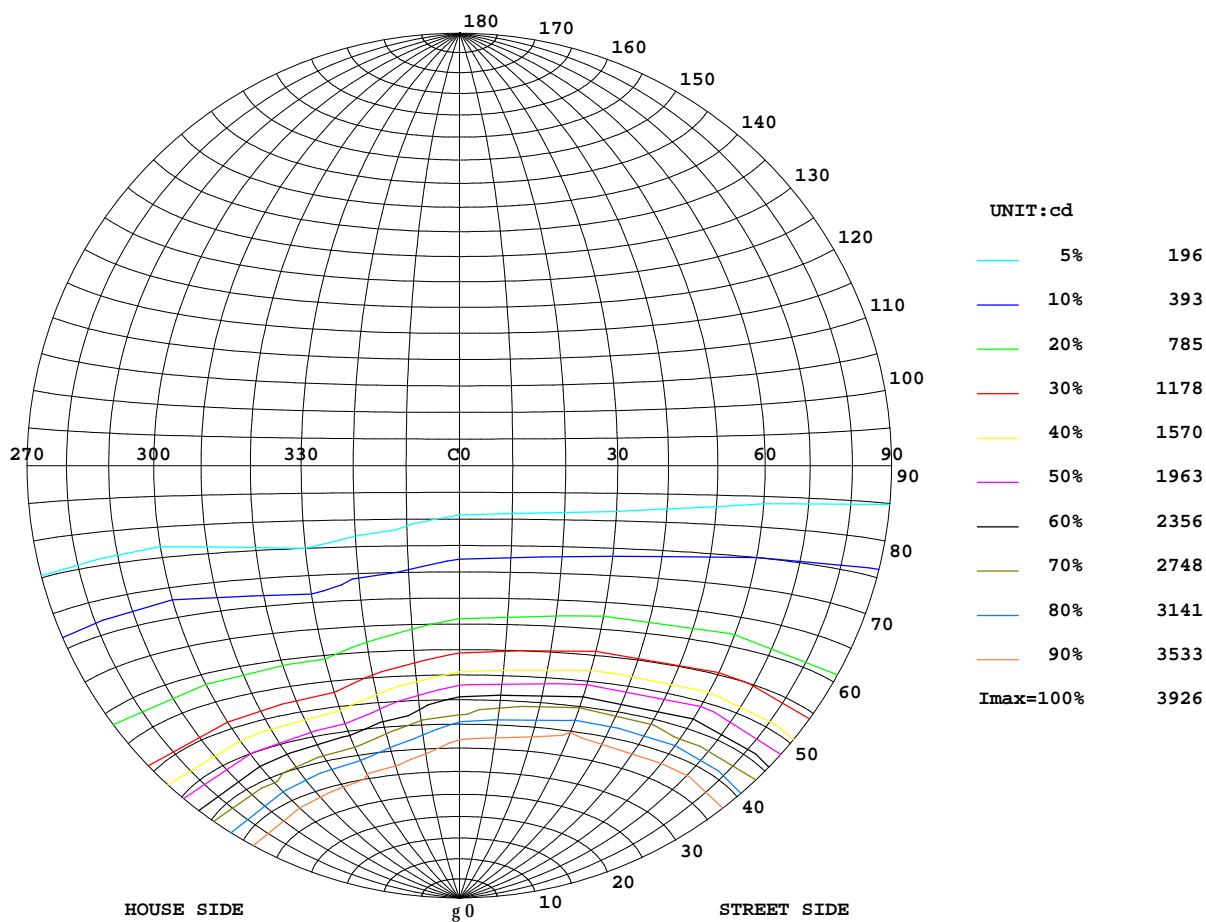
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

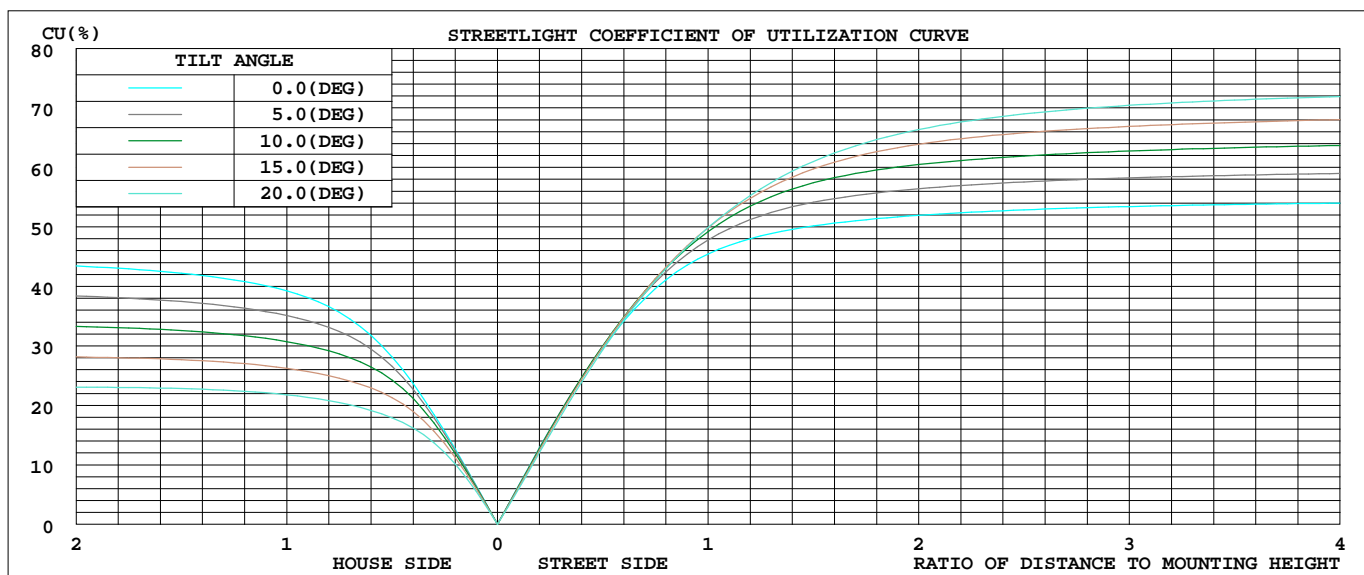
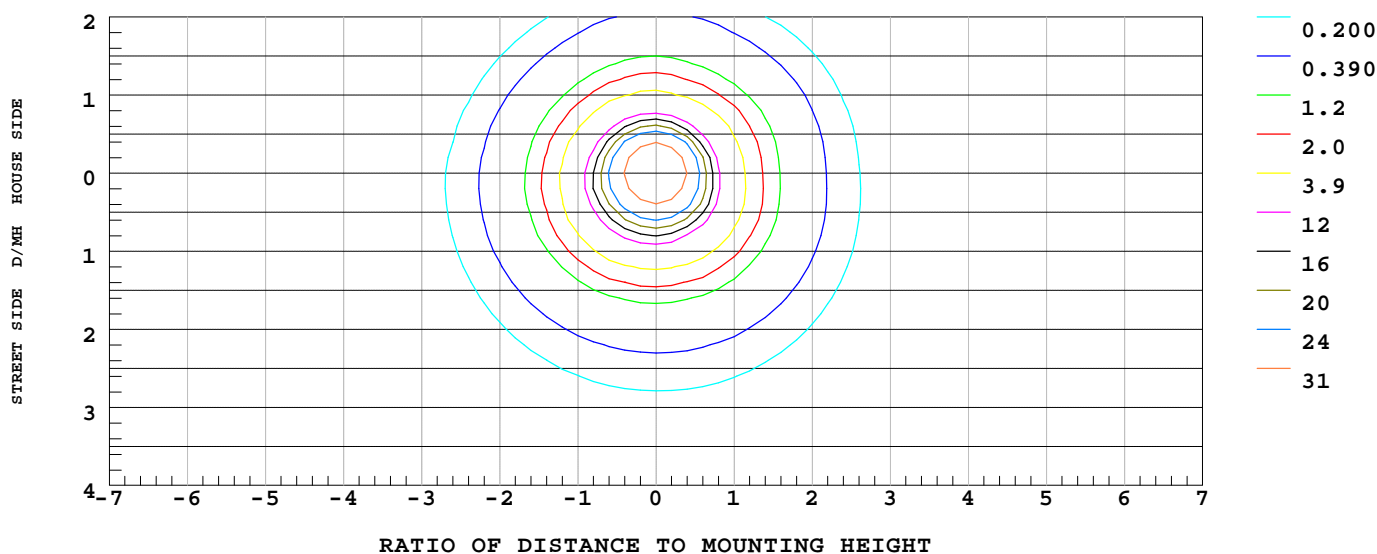
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 39.20 lx



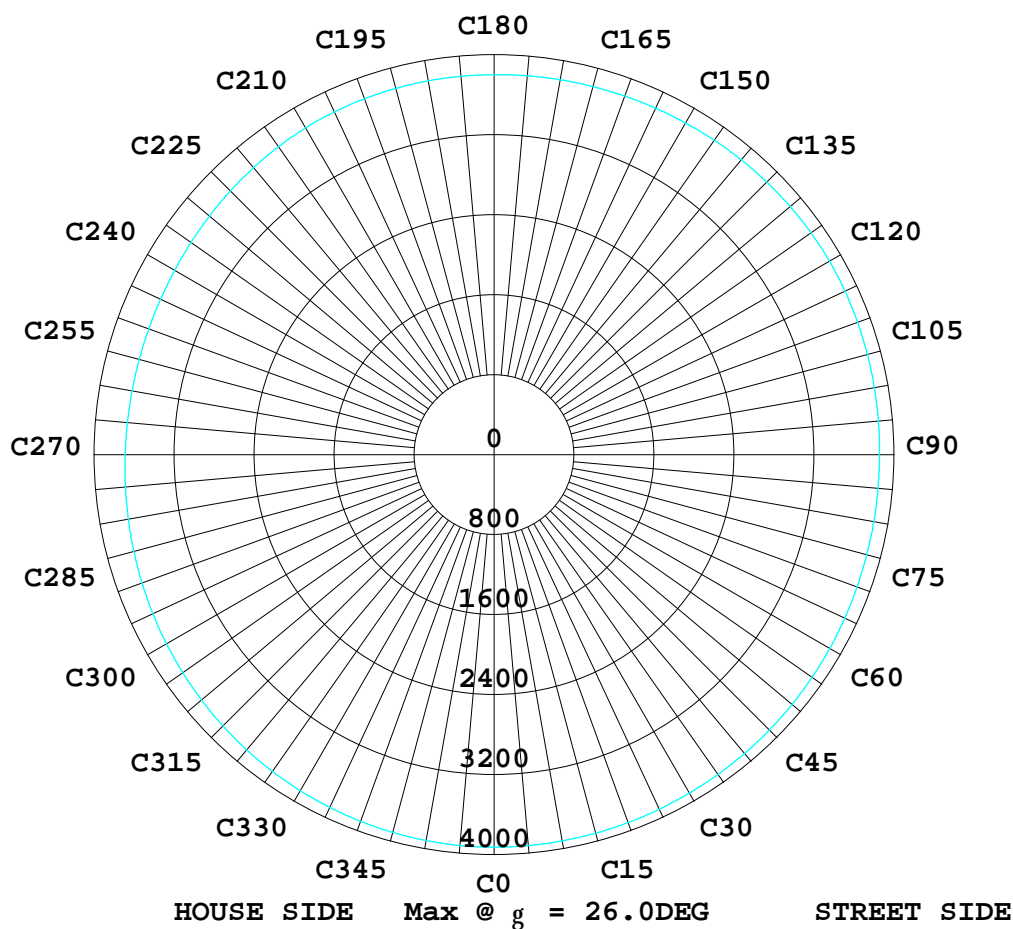
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOCANDELA DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 1438*65mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2020年05月09日

Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks: