

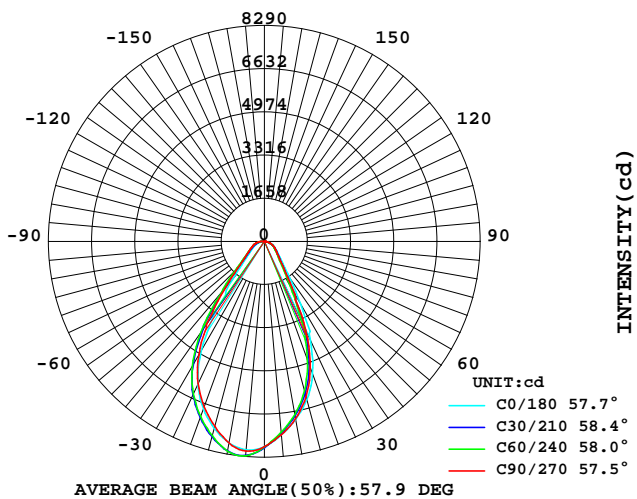
LUMINAIRE PHOTOMETRIC TEST REPORT

Report number:

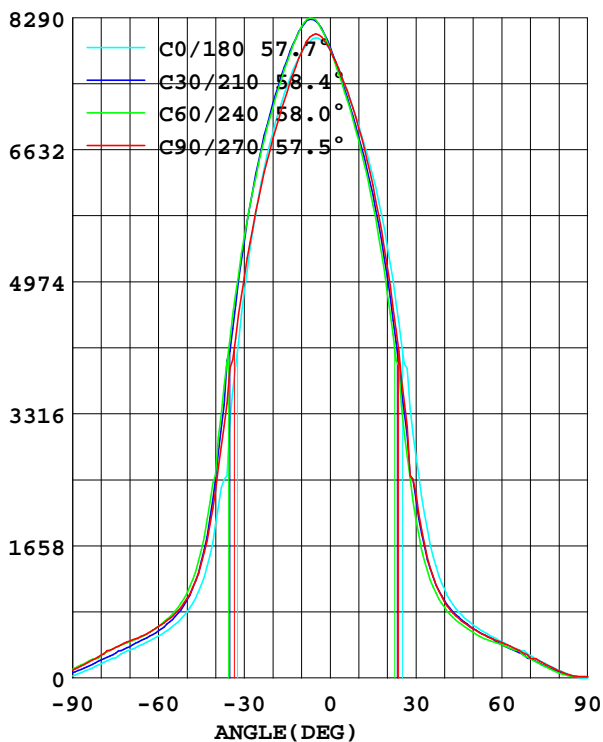
MANUFACTURER:		
Address:		
NAME: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

DATA OF LAMP		I _{max} (cd)	8290	S/MH(C0/180)	0.97
MODEL		EFFICIENCY(%)	100.0	S/MH(C90/270)	1.01
NOMINAL POWER(W)	64	TOTAL FLUX(lm)	8747.5	Voltage(V)	218.6
RATED VOLTAGE(V)	218	EFFICIENCY(lm/W)	135.8	Current(A)	0.303
NOMINAL FLUX(lm)	8747.5	h up(%)	0.4	Power(W)	64.41
LAMPS QUANTITY	1	h down(%)	99.6	Power Factor(PF)	0.972
TEST VOLTAGE(V)	218.6	Effective Flux(lm)	7260.2	EEI	0.121

LUMINOUS INTENSITY DISTRIBUTION



LUMINOUS INTENSITY DISTRIBUTION



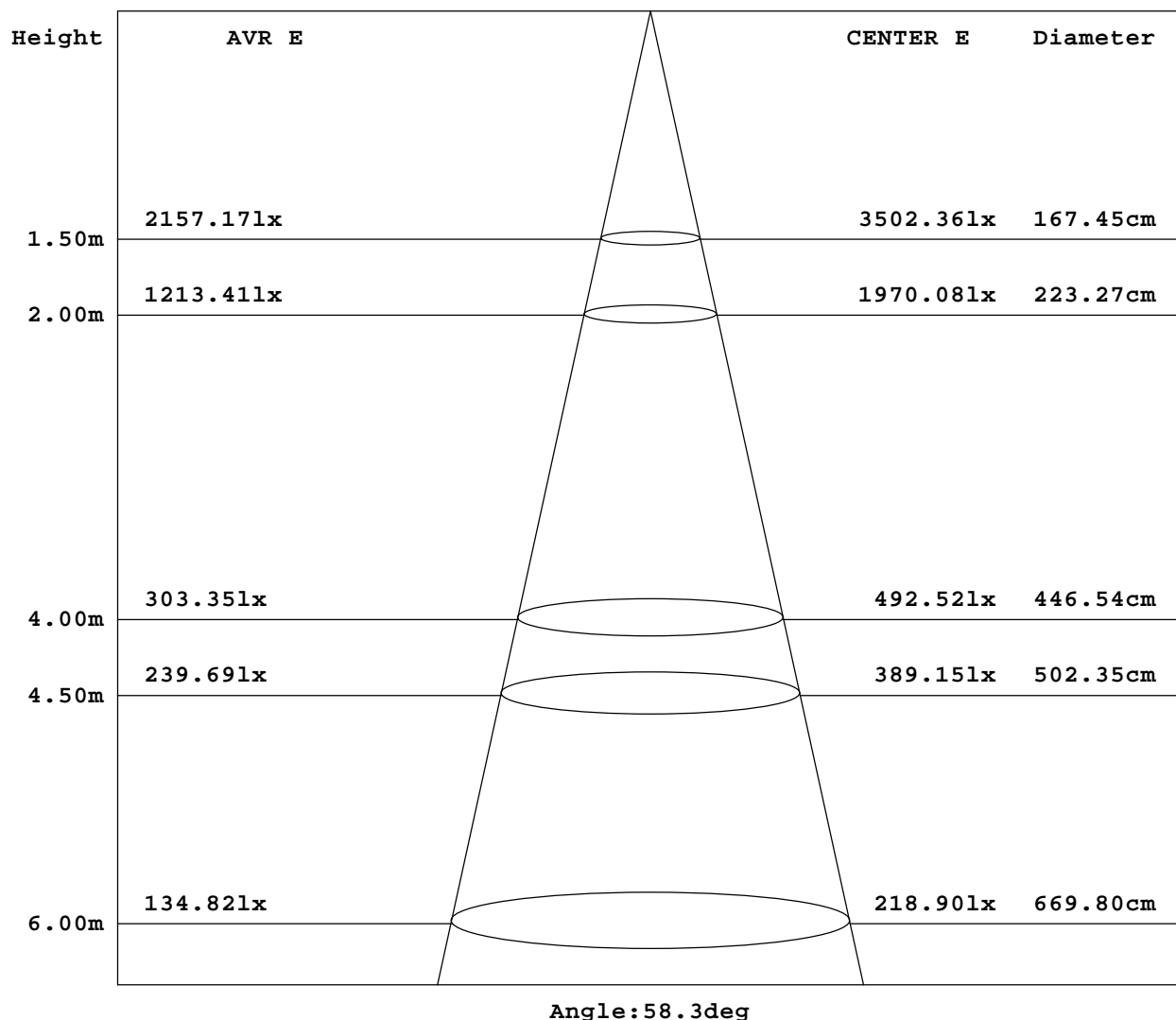
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System: HOPOO HPG1800
 Temperature: 25.3DEG
 Operators:
 Test Date: 2019年08月10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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	Zone	tStal
5.0	8033	8254	8087	7787	7453	7375	7461	7820	0- 5	187.7	187.7
10.0	7860	8174	7855	7353	6944	6774	6910	7470	5- 10	544.3	732.1
15.0	7438	7743	7354	6795	6296	6003	6188	6933	10- 15	846.4	1579
20.0	6838	7179	6766	6098	5409	4928	5156	6152	15- 20	1066	2644
25.0	6051	6476	6022	5158	4206	3511	3754	5070	20- 25	1167	3812
30.0	4844	5507	5026	3892	2804	2127	2338	3629	25- 30	1113	4925
35.0	3237	4173	3888	2376	1671	1299	1382	2122	30- 35	919.5	5845
40.0	1927	2522	2347	1590	1113	926.6	951.9	1319	35- 40	675.4	6520
45.0	1170	1539	1446	1077	829.5	730.8	747.4	906.4	40- 45	479.3	7000
50.0	826.7	1020	996.8	815.1	663.5	596.7	617.8	690.4	45- 50	364.6	7364
55.0	647.5	770.9	775.3	658.5	551.5	499.6	515.8	556.1	50- 55	301.9	7666
60.0	526.9	621.8	647.1	545.4	456.6	420.5	446.1	458.8	55- 60	261.3	7927
65.0	432.7	509.9	537.6	456.1	366.3	343.3	363.7	379.5	60- 65	226.8	8154
70.0	351.0	424.9	463.7	383.0	283.3	242.3	248.3	295.7	65- 70	192.9	8347
75.0	249.3	346.0	384.4	299.5	184.8	149.4	179.6	212.6	70- 75	154.3	8502
80.0	177.9	257.6	286.9	191.5	93.24	69.10	89.00	126.8	75- 80	110.8	8612
85.0	96.87	168.5	185.9	109.8	26.69	17.49	24.87	56.45	80- 85	66.56	8679
90.0	27.17	89.67	97.23	41.27	0	10.90	19.55	17.67	85- 90	32.95	8712
95.0	0.678	30.80	29.23	15.74	0	8.482	17.61	12.05	90- 95	13.70	8726
100.0	0	18.28	19.06	11.74	0	7.211	16.28	9.329	95-100	6.555	8732
105.0	0	12.89	13.14	8.506	0	5.578	13.26	7.998	100-105	5.092	8737
110.0	0	9.934	13.14	5.541	0	5.094	12.41	6.606	105-110	3.799	8741
115.0	0	7.090	12.29	4.150	0	6.485	13.26	5.941	110-115	3.186	8744
120.0	0	5.396	8.300	3.726	0	8.663	14.35	6.667	115-120	2.894	8747
125.0	0	0	0	0	0	0	0	0	120-125	0.282	8748
130.0	0	0	0	0	0	0	0	0	125-130	0	8748
135.0	0	0	0	0	0	0	0	0	130-135	0	8748
140.0	0	0	0	0	0	0	0	0	135-140	0	8748
145.0	0	0	0	0	0	0	0	0	140-145	0	8748
150.0	0	0	0	0	0	0	0	0	145-150	0	8748
155.0	0	0	0	0	0	0	0	0	150-155	0	8748
160.0	0	0	0	0	0	0	0	0	155-160	0	8748
165.0	0	0	0	0	0	0	0	0	160-165	0	8748
170.0	0	0	0	0	0	0	0	0	165-170	0	8748
175.0	0	0	0	0	0	0	0	0	170-175	0	8748
180.0	0	0	0	0	0	0	0	0	175-180	0	8748
DEG	LUMINOUS INTENSITY:cd									UNIT:lm	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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

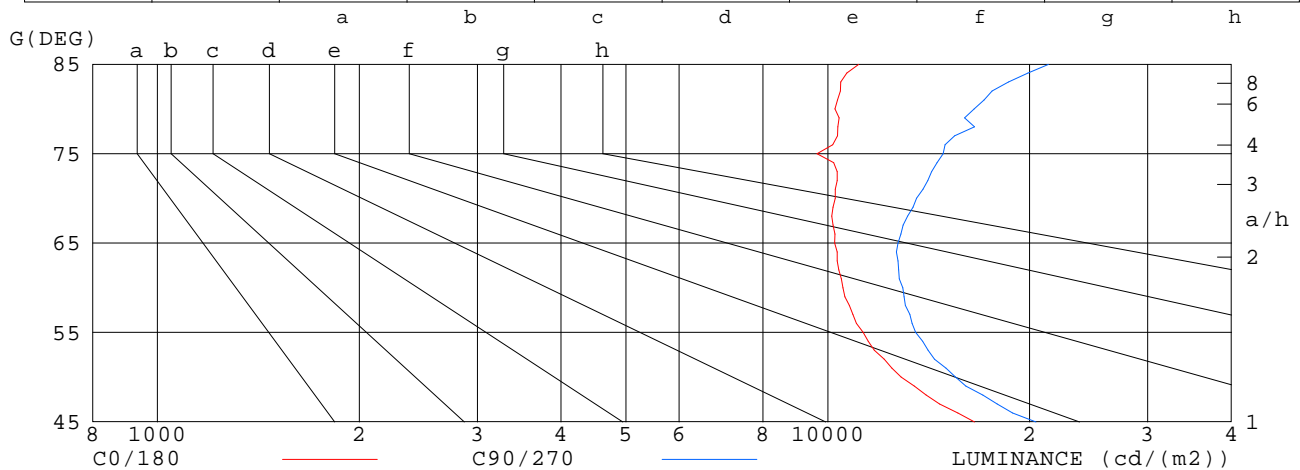
LUMINANCE LIMITATION CURVES

Report number:

MANUFACTURER:		
Address:		
NAME: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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	11115	21333
80	10247	16526
75	9633	14856
70	10265	13559
65	10240	12722
60	10538	12944
55	11290	13517
50	12862	15509
45	16547	20443

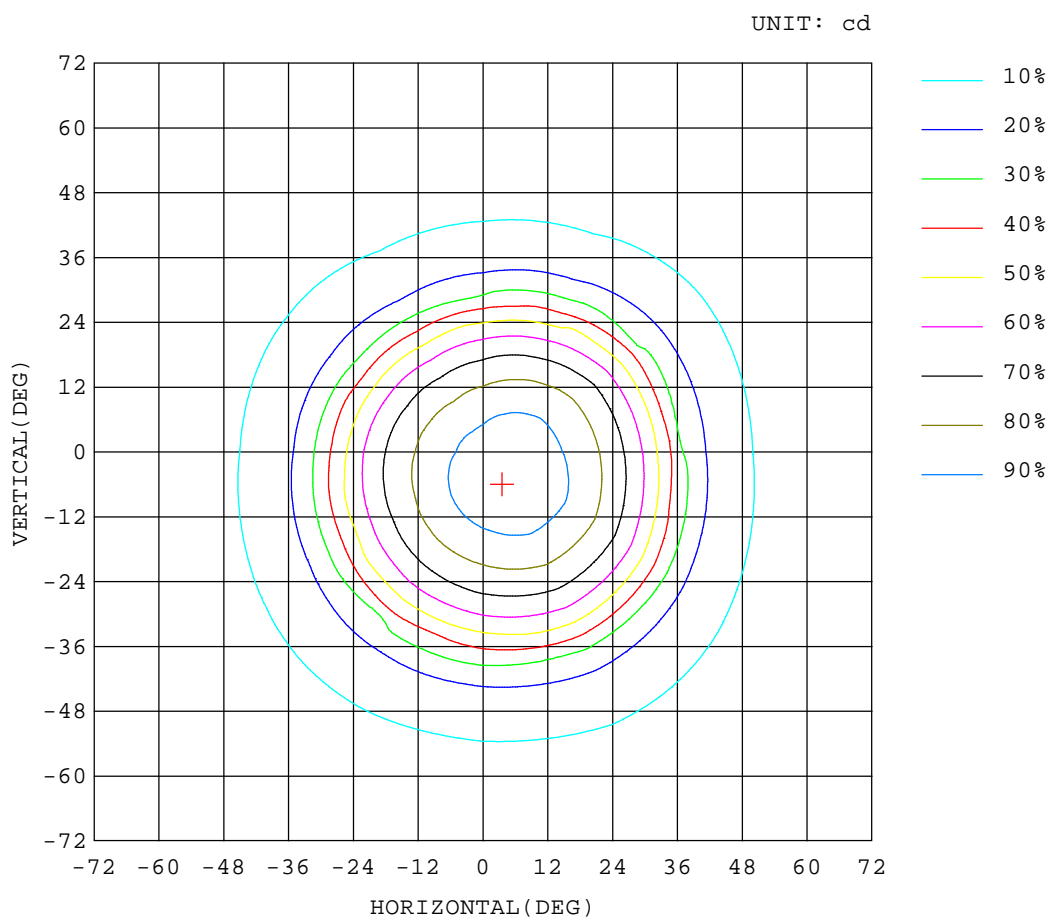
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



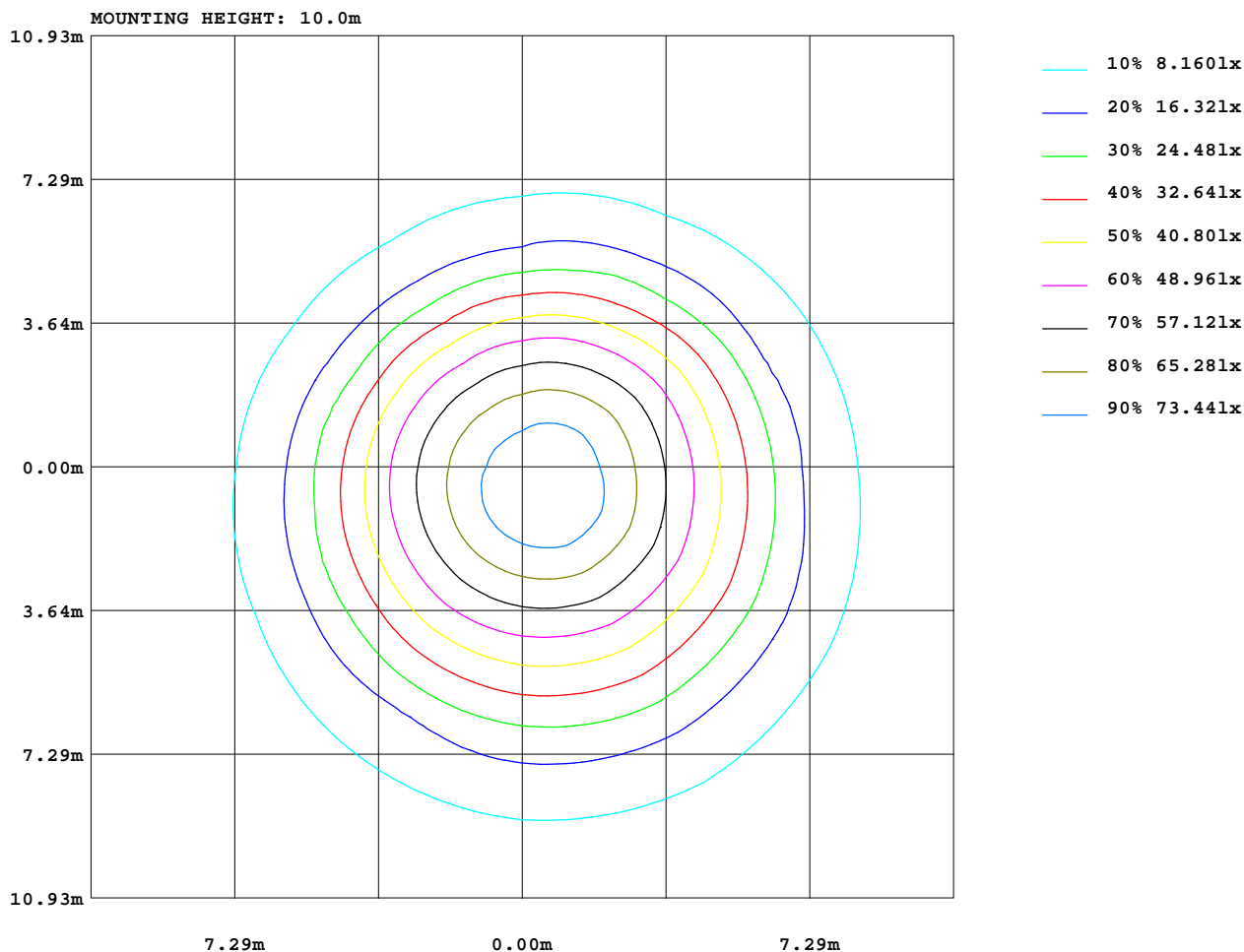
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10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: 60°64W										TYPE:							WEIGHT:			
SPECIFICATION:										DIMENSION: 576*188mm							SERIAL No.:			

72	AREA FLUX DIAGRAM																		UNIT:lm			Φ t	Φ a			
	0.42	0.87	1.49	2.26	3.09	3.92	4.78	5.44	5.82	5.91	5.70	5.26	4.62	3.90	3.12	2.33	1.57	0.91	61.4	0.00						
64	0.70	1.44	2.45	3.68	5.01	6.23	7.23	8.00	8.51	8.56	8.14	7.42	6.56	5.60	4.44	3.25	2.18	1.25	90.7	0.00						
56	1.01	2.07	3.42	5.03	6.57	7.87	9.04	10.2	11.0	11.1	10.6	9.61	8.38	7.14	5.71	4.16	2.75	1.58	117	0.00						
48	1.32	2.67	4.31	6.20	8.08	9.87	11.7	13.6	15.0	15.4	14.8	13.0	11.1	9.07	7.01	5.07	3.31	1.87	154	18.8						
40	1.62	3.21	5.12	7.43	9.95	12.8	16.1	20.4	24.4	26.5	25.0	20.6	16.0	11.8	8.57	5.93	3.81	2.14	222	145						
32	1.89	3.63	5.89	8.67	12.3	17.6	26.2	39.0	51.9	58.1	54.8	41.4	27.1	16.5	10.4	6.79	4.27	2.38	389	337						
24	2.10	3.98	6.53	9.97	15.4	26.5	48.6	75.5	94.8	102	96.6	78.1	48.1	24.5	12.8	7.65	4.65	2.57	661	619						
VERTICAL (DEG)	2.25	4.26	7.04	11.2	19.6	40.6	75.8	106	124	132	126	107	72.6	34.6	15.6	8.41	4.95	2.71	895	859						
	2.33	4.42	7.37	12.1	23.7	54.3	93.9	123	141	150	142	121	87.7	43.5	17.9	8.96	5.13	2.79	1043	1010						
	2.36	4.48	7.51	12.6	25.7	59.7	99.6	129	149	159	149	126	92.8	47.7	19.0	9.20	5.21	2.83	1101	1068						
	2.33	4.44	7.44	12.4	24.4	55.5	94.5	124	143	151	143	123	89.1	45.5	18.3	9.07	5.18	2.81	1055	1023						
	2.24	4.28	7.11	11.4	20.4	43.4	79.7	109	127	133	127	108	75.6	37.0	15.9	8.56	5.01	2.74	918	883						
	2.09	4.01	6.59	10.2	16.3	29.9	54.6	82.8	101	107	101	82.0	51.3	25.4	13.2	7.81	4.73	2.61	703	663						
	1.87	3.65	5.94	8.89	13.1	20.0	32.0	47.7	62.5	68.0	62.1	47.1	29.1	17.1	10.8	6.97	4.37	2.42	444	396						
	1.63	3.19	5.16	7.65	10.6	14.3	19.1	24.8	30.0	31.9	29.4	24.0	17.6	12.6	8.92	6.13	3.94	2.20	254	188						
	1.34	2.68	4.36	6.45	8.68	11.0	13.4	15.5	17.1	17.6	16.8	15.0	12.5	9.84	7.40	5.29	3.44	1.93	171	53.9						
	1.03	2.12	3.62	5.42	7.24	8.93	10.3	11.5	12.3	12.5	12.0	11.0	9.59	7.86	6.13	4.44	2.90	1.64	131	0.00						
-72	0.71	1.50	2.73	4.27	5.95	7.51	8.47	9.12	9.52	9.55	9.19	8.54	7.64	6.37	4.96	3.56	2.31	1.30	103	0.00						
	-72	-64	-56	-48	-40	-32	-24	-16	HORIZONTAL (DEG)										16	24	32	40	48	56	64	72
Φ t	29.3	56.9	94.1	146	237	431	705	955	1128	1199	1135	948	668	367	191	114	69.8	38.7	8748							
Φ a	0.00	0.00	0.00	36.6	154	357	636	890	1065	1138	1074	887	605	299	112	9.46	0.00	0.00		7260						

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

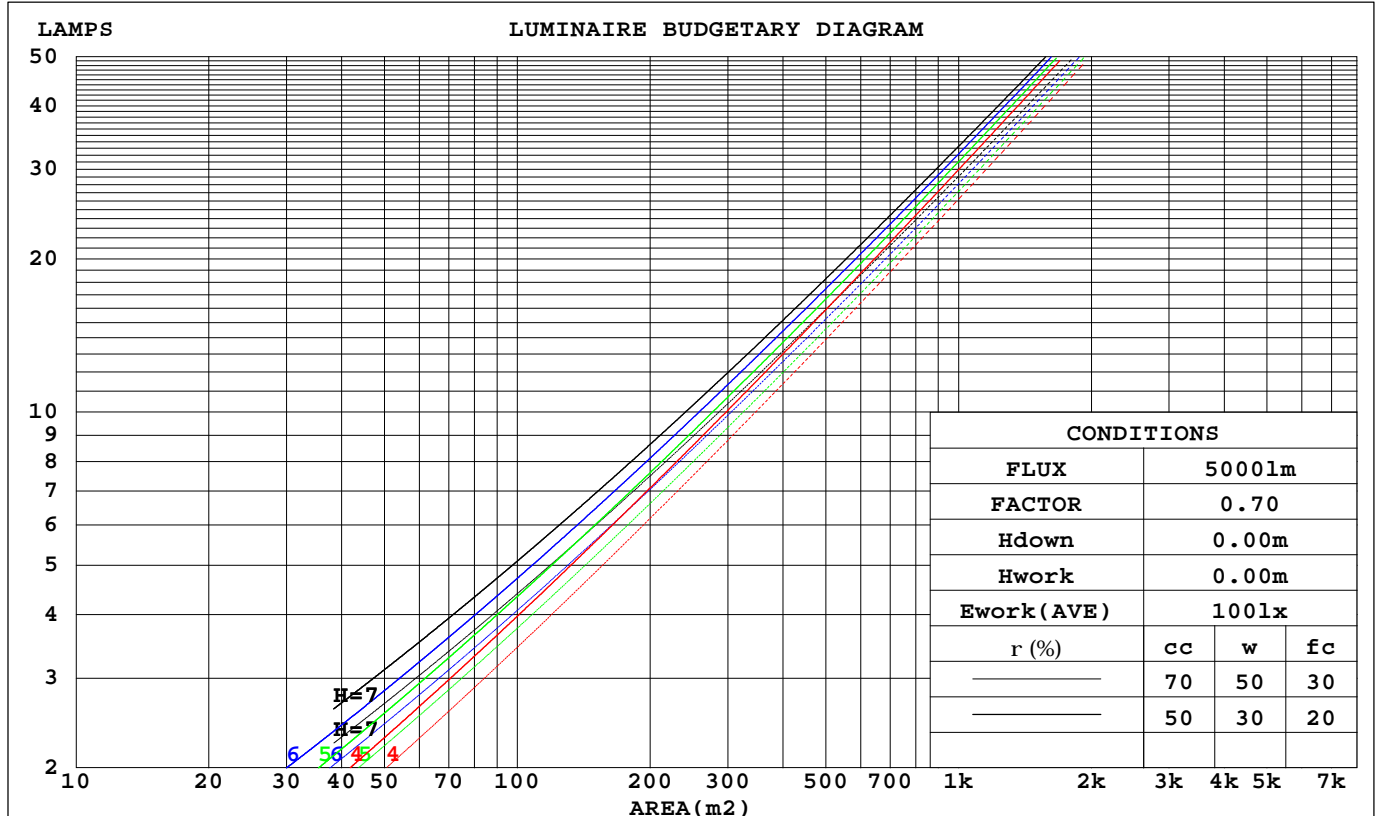
Test Set: 8.0deg/s C-Gamma (TYPE C)
 Humidity:65.0%
 Test Distance:11.000 m
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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:2019年08月10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: 60°64W						TYPE:			WEIGHT:		
SPECIFICATION:						DIMENSION: 576*188mm			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	.231	.132	.042	.224	.128	.041	.211	.121	.039	.199	.115	.037	.188	.109	.035															
2.0	.217	.119	.037	.211	.116	.036	.200	.111	.035	.190	.106	.033	.180	.102	.032															
3.0	.203	.108	.032	.198	.106	.032	.188	.102	.031	.179	.098	.030	.171	.095	.029															
4.0	.190	.099	.029	.185	.097	.029	.177	.094	.028	.169	.091	.027	.162	.088	.027															
5.0	.178	.091	.026	.174	.089	.026	.167	.087	.026	.160	.084	.025	.153	.082	.025															
6.0	.167	.084	.024	.164	.083	.024	.157	.081	.023	.151	.078	.023	.145	.076	.023															
7.0	.158	.078	.022	.155	.077	.022	.149	.075	.022	.143	.073	.021	.138	.072	.021															
8.0	.149	.073	.021	.147	.072	.020	.141	.071	.020	.136	.069	.020	.132	.068	.020															
9.0	.142	.068	.019	.139	.068	.019	.134	.066	.019	.130	.065	.019	.126	.064	.018															
10.0	.135	.065	.018	.132	.064	.018	.128	.063	.018	.124	.062	.018	.120	.060	.017															

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	.194	.194	.194	.165	.165	.165	.113	.113	.113	.065	.065	.065	.021	.021	.021	
1.0	.178	.160	.144	.152	.137	.124	.104	.094	.086	.060	.055	.050	.019	.018	.016	
2.0	.165	.135	.110	.142	.117	.095	.097	.081	.066	.056	.047	.039	.018	.015	.013	
3.0	.155	.117	.087	.133	.101	.075	.091	.070	.053	.053	.041	.031	.017	.013	.010	
4.0	.145	.103	.070	.125	.089	.061	.086	.062	.043	.050	.036	.025	.016	.012	.008	
5.0	.137	.092	.058	.118	.079	.051	.081	.055	.036	.047	.033	.021	.015	.011	.007	
6.0	.130	.083	.049	.112	.072	.043	.077	.050	.030	.045	.030	.018	.014	.010	.006	
7.0	.123	.075	.042	.106	.065	.037	.073	.046	.026	.043	.027	.015	.014	.009	.005	
8.0	.117	.069	.037	.101	.060	.032	.070	.042	.023	.041	.025	.013	.013	.008	.004	
9.0	.112	.064	.032	.096	.056	.028	.067	.039	.020	.039	.023	.012	.013	.008	.004	
10.0	.107	.060	.029	.092	.052	.025	.064	.037	.018	.037	.022	.011	.012	.007	.004	

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10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: 60°64W					TYPE:			WEIGHT:			
SPECIFICATION:					DIMENSION: 576*188mm			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	20.7	21.9	21.0	22.1	22.3	21.5	22.6	21.7	22.8	23.0	
	3H	21.6	22.7	21.9	22.9	23.1	22.5	23.6	22.8	23.8	24.0
	4H	22.0	23.1	22.3	23.3	23.5	23.2	24.2	23.5	24.4	24.7
	6H	22.5	23.4	22.8	23.7	24.0	23.9	24.8	24.2	25.1	25.4
	8H	22.6	23.6	23.0	23.8	24.1	24.2	25.1	24.5	25.4	25.7
	12H	22.8	23.7	23.1	23.9	24.2	24.5	25.4	24.9	25.7	26.0
4H	2H	21.1	22.1	21.4	22.3	22.6	21.7	22.7	22.0	22.9	23.2
	3H	22.2	23.1	22.6	23.4	23.7	23.1	24.0	23.4	24.2	24.5
	4H	22.9	23.7	23.2	24.0	24.3	24.0	24.8	24.3	25.1	25.4
	6H	23.5	24.2	23.9	24.5	24.9	24.9	25.6	25.3	25.9	26.3
	8H	23.7	24.4	24.1	24.8	25.1	25.3	26.0	25.7	26.3	26.7
	12H	23.9	24.5	24.4	24.9	25.3	25.7	26.3	26.2	26.7	27.1
8H	4H	23.3	23.9	23.7	24.3	24.7	24.2	24.9	24.6	25.3	25.6
	6H	24.1	24.6	24.5	25.0	25.5	25.4	25.9	25.8	26.3	26.8
	8H	24.5	25.0	24.9	25.4	25.8	26.0	26.4	26.4	26.9	27.3
	12H	24.8	25.2	25.3	25.7	26.2	26.6	27.0	27.1	27.4	27.9
12H	4H	23.4	24.0	23.8	24.3	24.7	24.2	24.9	24.7	25.2	25.6
	6H	24.3	24.7	24.7	25.2	25.6	25.5	25.9	25.9	26.4	26.8
	8H	24.7	25.1	25.2	25.6	26.1	26.1	26.5	26.6	27.0	27.5
Variations with the observer position at spacings:											
S = 1.0H	+ 0.5 / - 0.6					+ 0.4 / - 0.4					
1.5H	+ 0.9 / - 0.6					+ 0.8 / - 0.4					
2.0H	+ 0.4 / - 0.4					+ 0.4 / - 0.3					

CIE Pub.117 Corrected 8748 lm Total Lamp Luminous Flux.(8log(F/F0) = 7.5)

Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	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) $k(RI) \times RCR = 5$									
$k = 0.60$	76	68	63	75	67	62	74	67	62	58
0.80	84	76	71	83	76	71	82	75	71	66
1.00	90	82	77	89	82	77	87	82	77	71
1.25	95	88	83	94	87	83	92	86	82	77
1.50	99	92	87	97	91	87	95	90	86	80
2.00	103	97	93	101	96	92	98	94	90	84
2.50	106	100	96	104	99	95	100	96	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	105	106	104	101	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

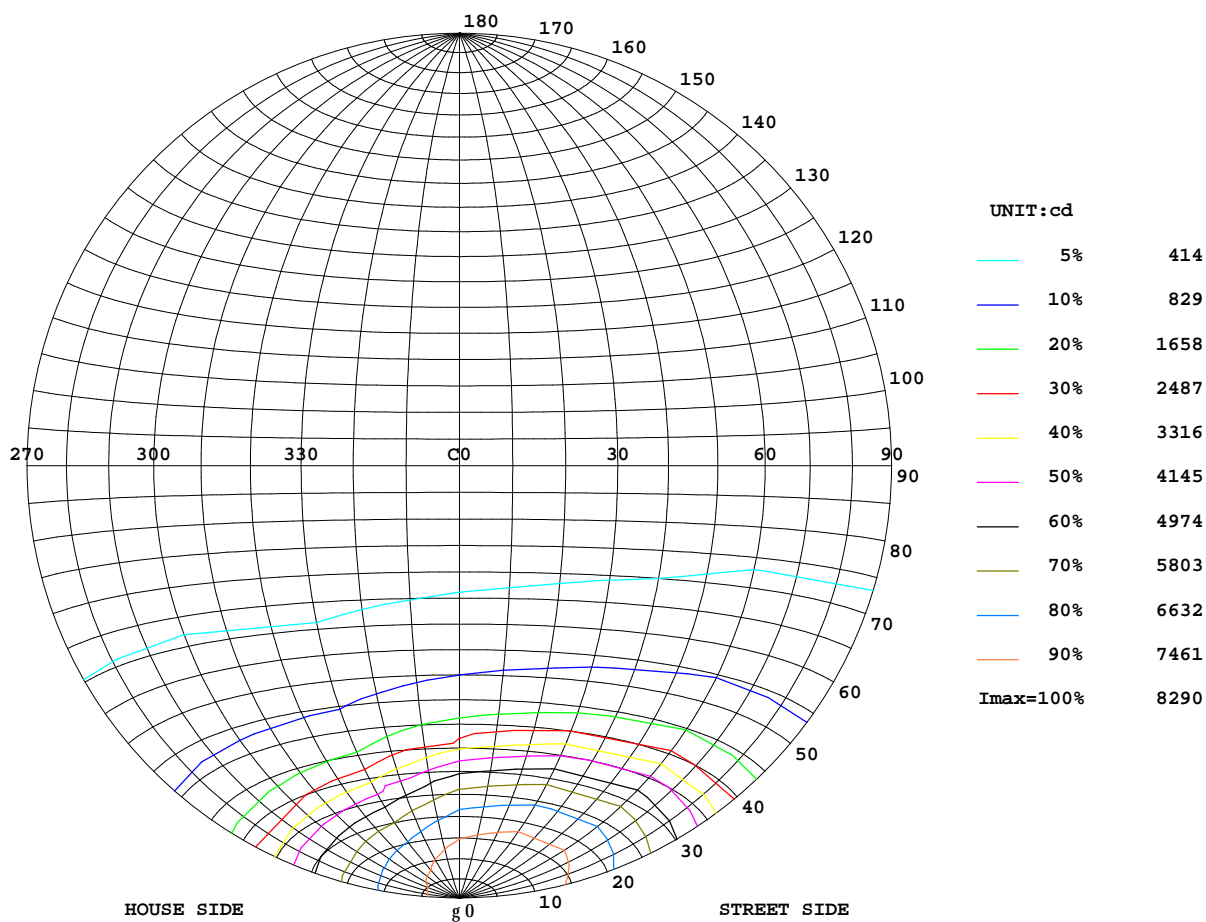
Test System:HOPOO HPG1800
 Temperature:25.3DEG
 Operators:
 Test Date:2019年08月10日

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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

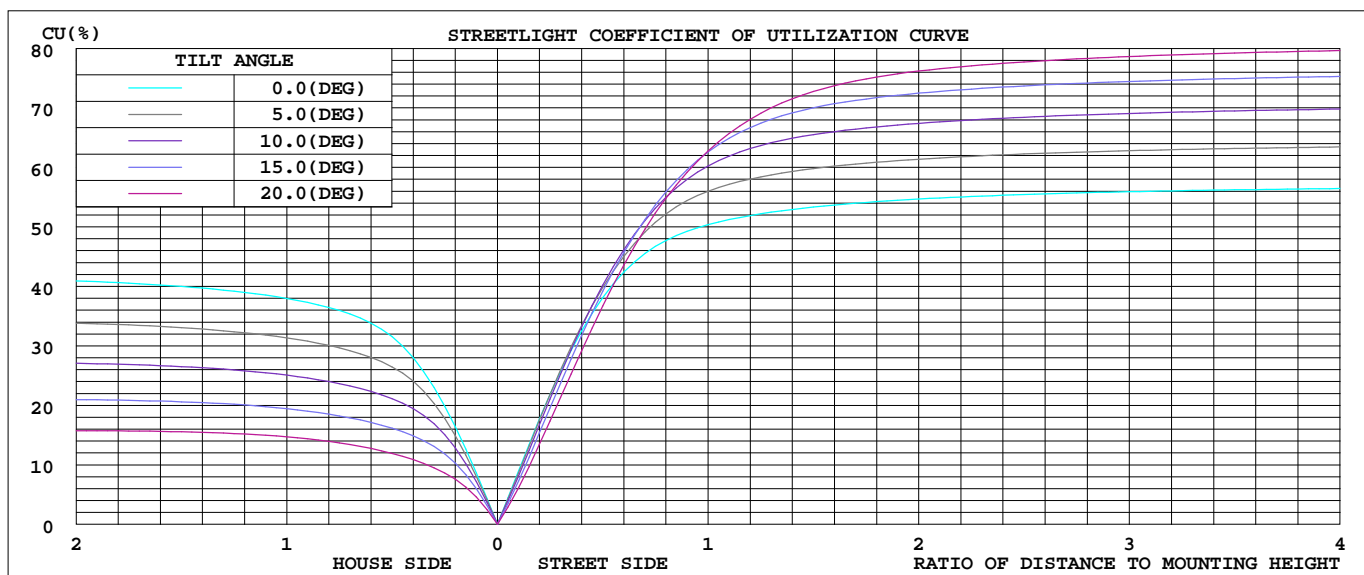
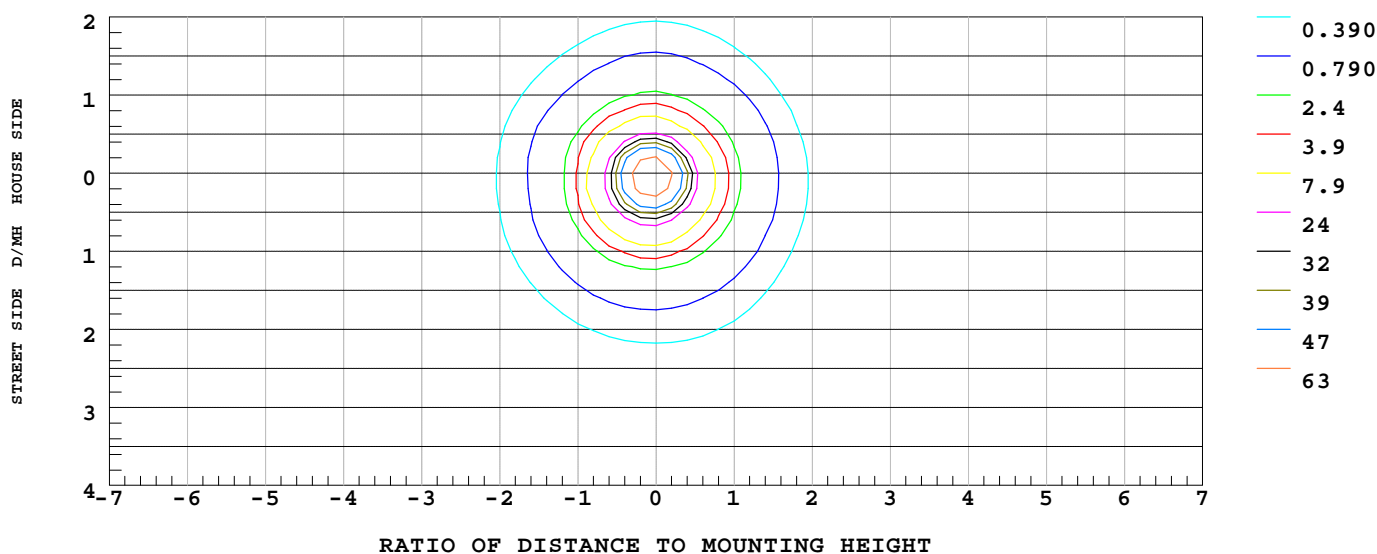
Test Set: 8.0deg/s C-Gamma (TYPE C)
Humidity:65.0%
Test Distance:11.000 m
Remarks:

ISOLUX DIAGRAM

Report number:

MANUFACTURER:		
Address:		
NAME: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:

ILLUMINANCE AT MH=10 m, Enadir = 78.80 lx



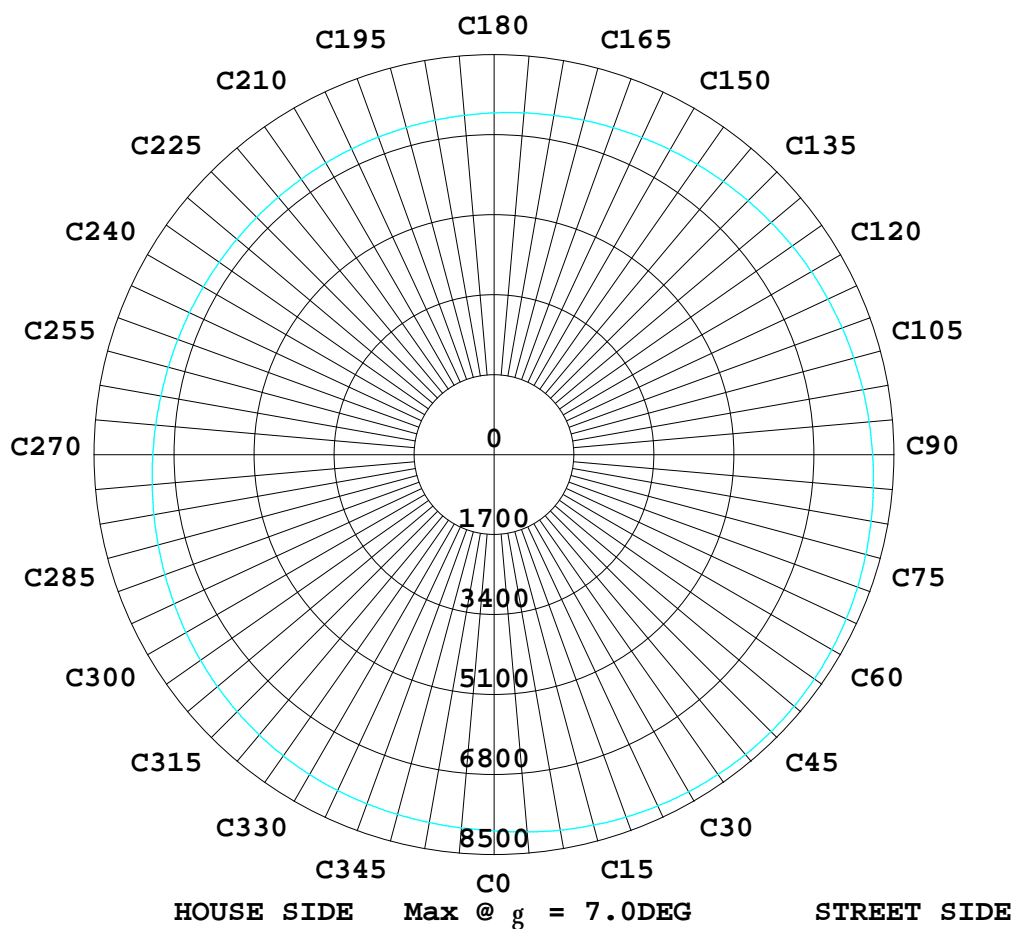
Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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: 60°64W	TYPE:	WEIGHT:
SPECIFICATION:	DIMENSION: 576*188mm	SERIAL No.:



Test System:HOPOO HPG1800
Temperature:25.3DEG
Operators:
Test Date:2019年08月10日

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