Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Email:assitant@bellingtest.com
Tel:0755-29351191 Fax:0755-29351120
Address:1 F,No.1 building,Meibaohe industrial park,Dalang street,Longhua district,Shenzhen,China

LumCAT:
Luminaire:
Report No: N/A
Test No: N/A
LampCAT:
Lamp flux(lm): 20733.7
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 120.16
Current(A): 1.3085
Power (W): 156.1300
PF: 0.9928
Ballast type:
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 20733.71
Efficiency(%): 100.00%
Lumens(lm)/Power(W): 132.80
Central intensity(cd): 14629.910
Maximum intensity(cd): 14744.680
Angle of maximum intensity: C=180.0 γ=10.0
Beam Angle(50%Imax): [C0/180]Total=83.0
[C90/270]Total=65.4
Field angle(10%Imax): [C0/180]Total=122.5
[C90/270]Total=95.4
Maximum s/h(1/2): C0_180=1.20 C90_270=0.96
Maximum s/h(1/4): C0_180=1.71 C90_270=0.96
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 100.00%
Up flux rate of LUM(%): 0.00%
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.179%

Zonal flux distribution table

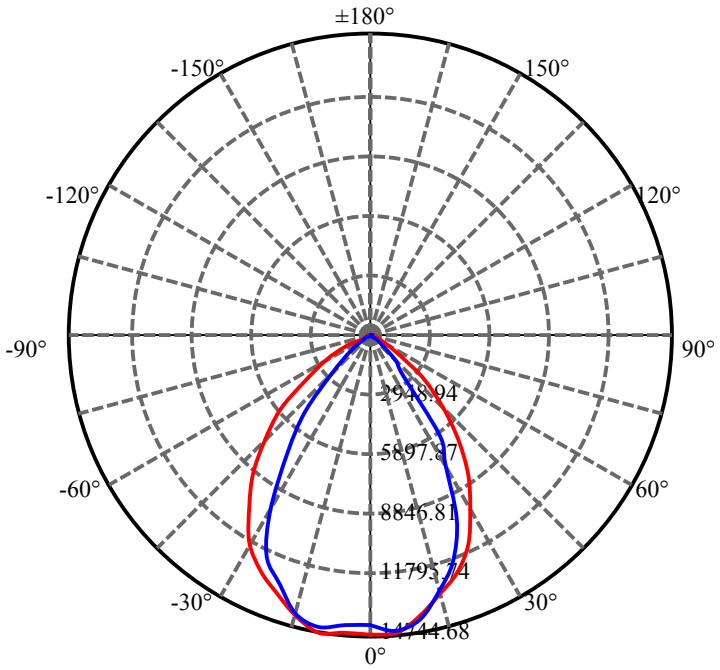
γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14288.470	.000	.000	.000%	.000%
5.0	14375.510	342.670	342.670	1.653%	1.653%
10.0	14228.380	1023.251	1365.921	4.935%	6.588%
15.0	13567.030	1648.805	3014.726	7.952%	14.540%
20.0	12688.090	2163.791	5178.517	10.436%	24.976%
25.0	11634.300	2550.970	7729.486	12.303%	37.280%
30.0	10084.130	2748.485	10477.970	13.256%	50.536%
35.0	8273.018	2703.218	13181.190	13.038%	63.574%
40.0	6233.487	2420.300	15601.490	11.673%	75.247%
45.0	4382.368	1965.611	17567.100	9.480%	84.727%
50.0	2696.388	1430.366	18997.460	6.899%	91.626%
55.0	1388.506	888.192	19885.660	4.284%	95.910%
60.0	646.975	470.496	20356.150	2.269%	98.179%
65.0	271.427	223.265	20579.420	1.077%	99.256%
70.0	101.044	94.312	20673.730	.455%	99.711%
75.0	44.839	38.132	20711.860	.184%	99.895%
80.0	16.211	16.335	20728.200	.079%	99.973%
85.0	1.833	4.903	20733.100	.024%	99.997%
90.0	.000	.502	20733.600	.002%	99.999%
95.0	.000	.000	20733.600	.000%	99.999%
100.0	.000	.000	20733.600	.000%	99.999%
105.0	.000	.000	20733.600	.000%	99.999%
110.0	.000	.000	20733.600	.000%	99.999%
115.0	.000	.000	20733.600	.000%	99.999%
120.0	.000	.000	20733.600	.000%	99.999%
125.0	.000	.000	20733.600	.000%	99.999%
130.0	.000	.000	20733.600	.000%	99.999%
135.0	.000	.000	20733.600	.000%	99.999%
140.0	.000	.000	20733.600	.000%	99.999%
145.0	.000	.000	20733.600	.000%	99.999%
150.0	.000	.000	20733.600	.000%	99.999%
155.0	.048	.006	20733.610	.000%	100.000%
160.0	.096	.015	20733.620	.000%	100.000%
165.0	.143	.020	20733.640	.000%	100.000%
170.0	.335	.028	20733.670	.000%	100.000%
175.0	.478	.029	20733.700	.000%	100.000%
180.0	.478	.011	20733.710	.000%	100.000%

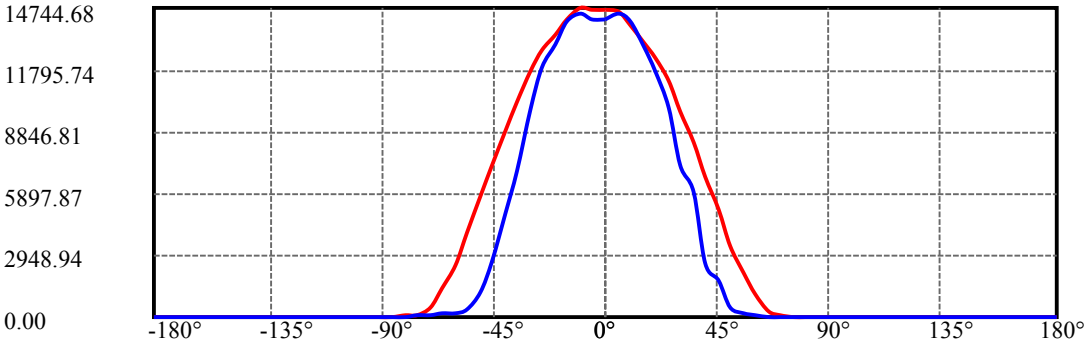
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	10477.97	50.54%	50.54%
0-40	15601.49	75.25%	75.25%
0-60	20356.15	98.18%	98.18%
0-90	20733.60	100.00%	100.00%
0-120	20733.60	100.00%	100.00%
0-180	20733.71	100.00%	100.00%
60-90	847.95	4.09%	4.09%
90-120	0.50	0.00%	0.00%
90-130	0.50	0.00%	0.00%
90-150	0.50	0.00%	0.00%
90-180	0.60	0.00%	0.00%
0-42.51	16586.97	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1365.92
10-20	3812.60
20-30	5299.46
30-40	5123.52
40-50	3395.98
50-60	1358.69
60-70	317.58
70-80	54.47
80-90	5.40
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.02
160-170	0.05
170-180	0.03



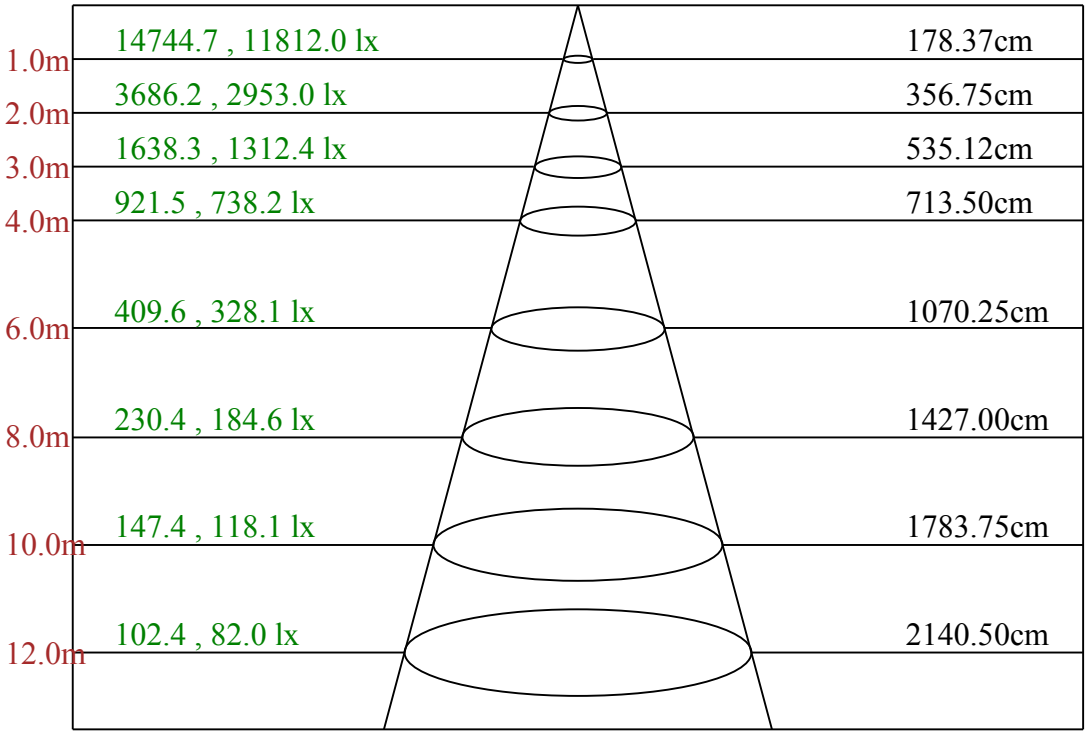


C0/C180:

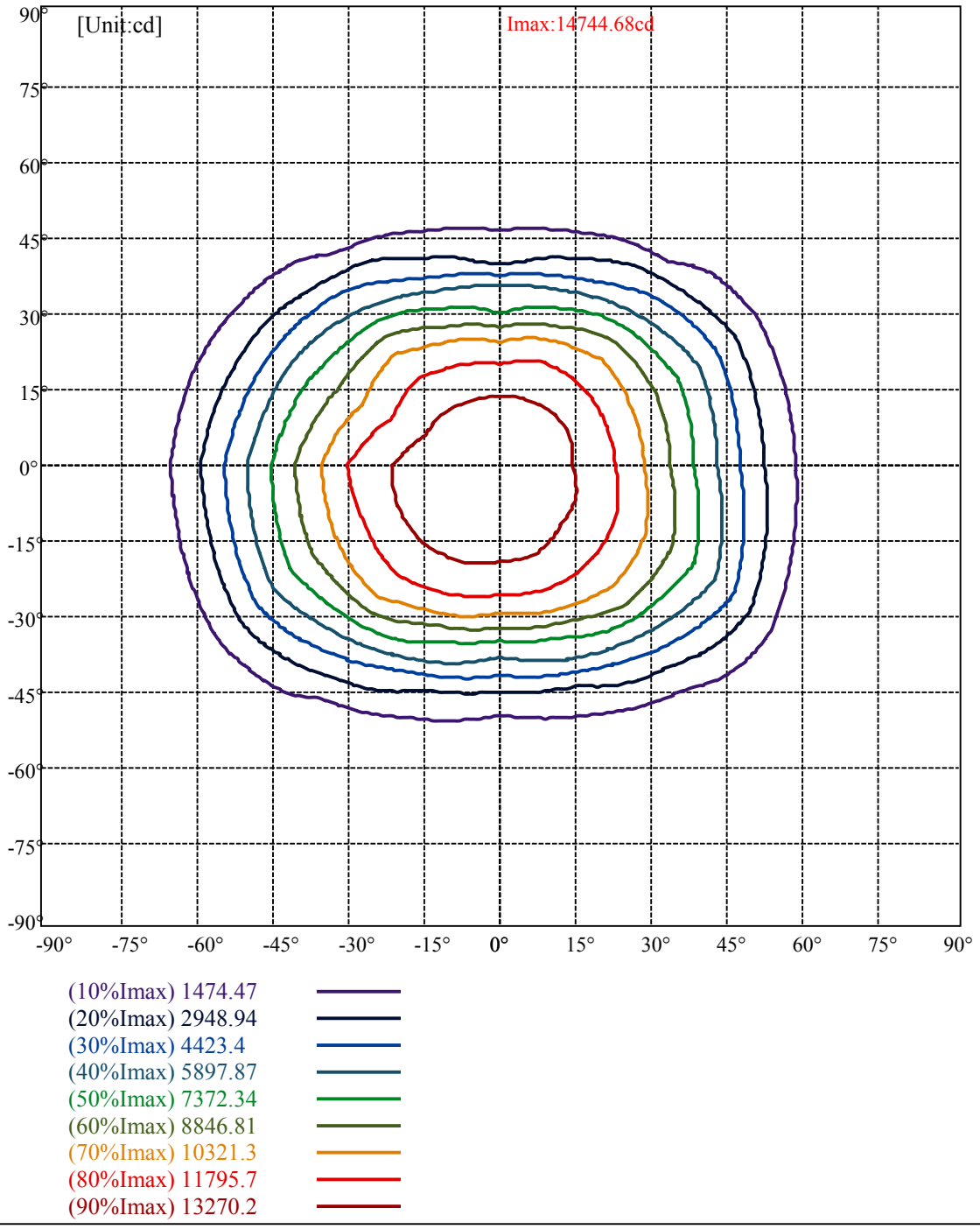
C90/C270:

Field angle(10%Imax):C0/180Left:64.5 Right:58.0
:C90/270Left:49.2 Right:46.2

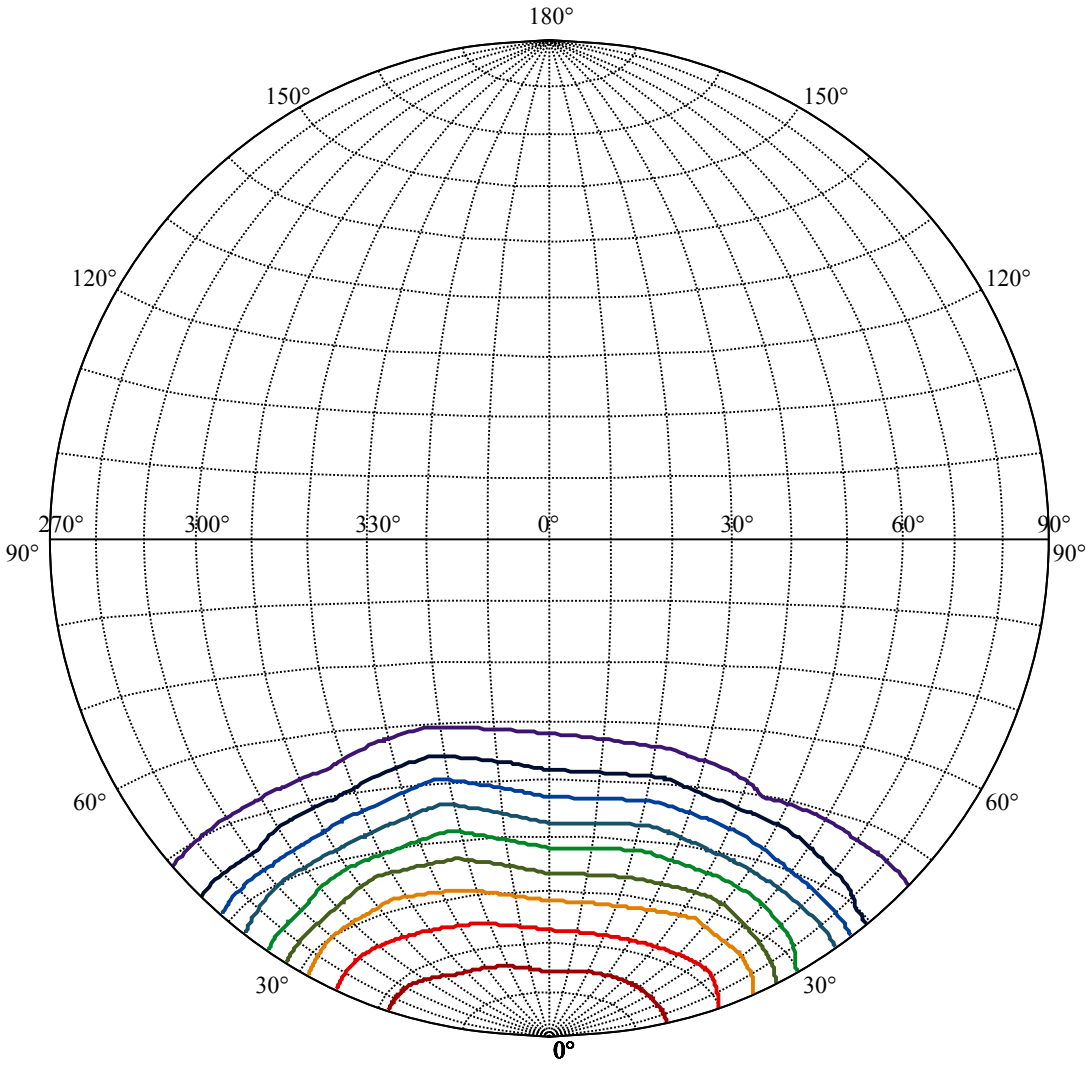
Beam Angle(50%Imax):C0/180Left:44.8 Right:38.1
:C90/270Left:34.8 Right:30.6



Max , Ave Beam angle of C180plane83.11


[Unit:cd]
Imax:14744.68cd
90°
75°
60°
45°
30°
15°
0°
-15°
-30°
-45°
-60°
-75°
-90°
-90° -75° -60° -45° -30° -15° 0° 15° 30° 45° 60° 75° 90°
(10%Imax) 1474.47
(20%Imax) 2948.94
(30%Imax) 4423.4
(40%Imax) 5897.87
(50%Imax) 7372.34
(60%Imax) 8846.81
(70%Imax) 10321.3
(80%Imax) 11795.7
(90%Imax) 13270.2

ISO candela diagram on circular web



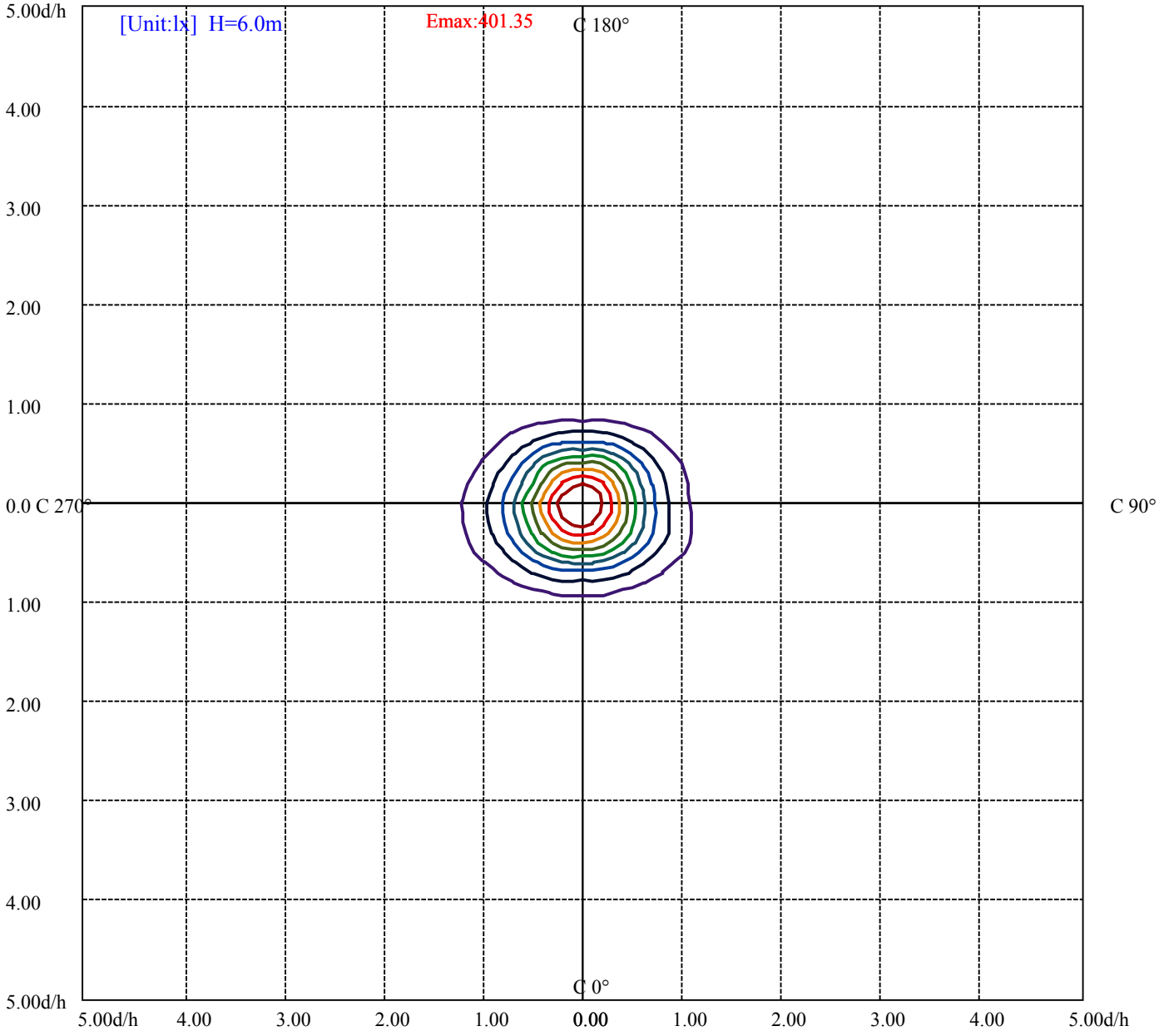
House [Unit:cd] Road

Imax:14744.68

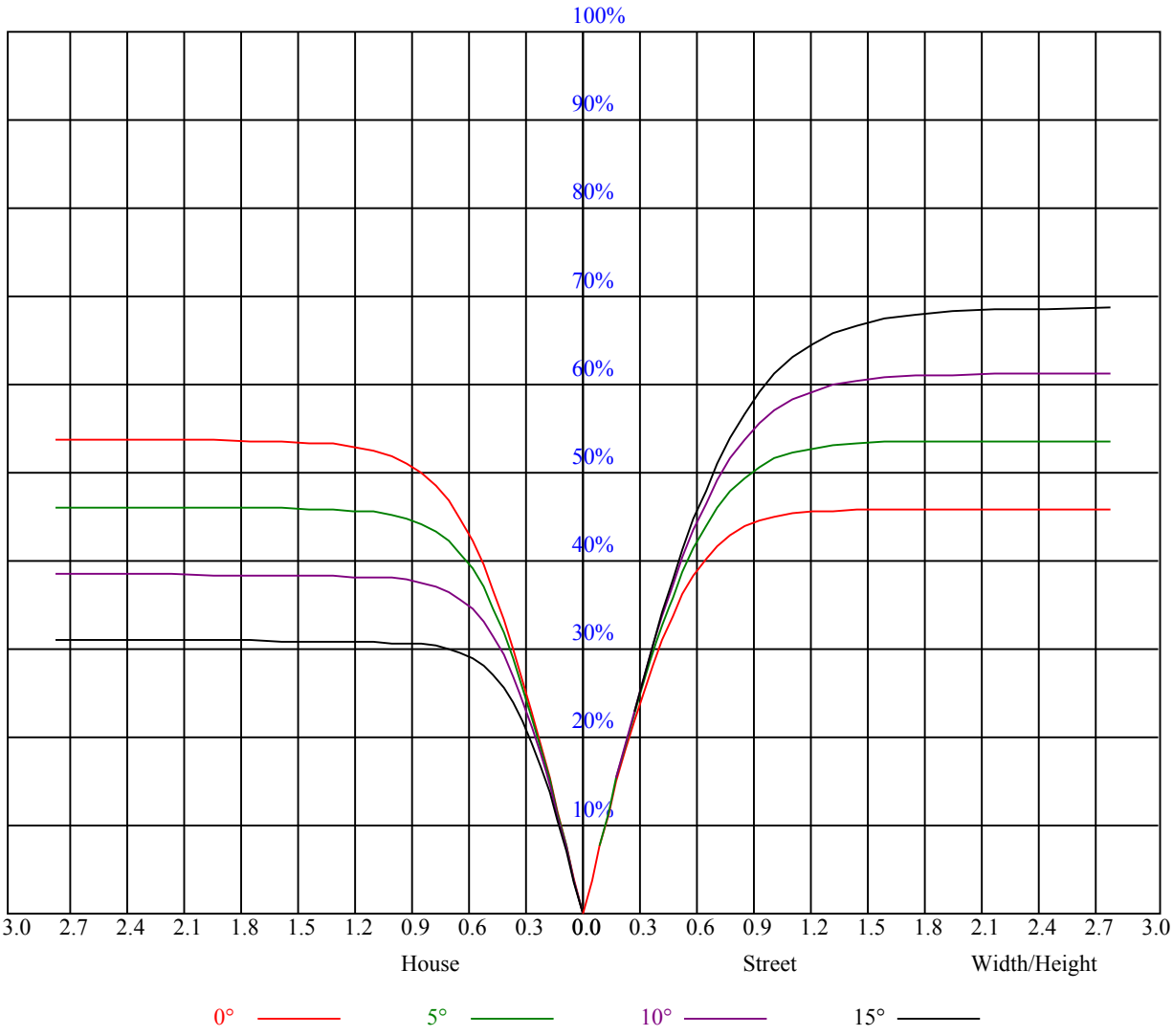
(10%Imax) 1474.47
(20%Imax) 2948.94
(30%Imax) 4423.4
(40%Imax) 5897.87
(50%Imax) 7372.34
(60%Imax) 8846.81
(70%Imax) 10321.3
(80%Imax) 11795.7
(90%Imax) 13270.2

Equipment: GMS-3000 Date: Operator: Sam
Temperature(°C): 25.2 Humidity(%): 60%

ISO illuminance diagram



Equipment: GMS-3000 Date: Operator: Sam
Temperature(°C): 25.2 Humidity(%): 60%


100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
3.0 2.7 2.4 2.1 1.8 1.5 1.2 0.9 0.6 0.3 0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0
House
Street
Width/Height
0°
5°
10°
15°

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	14629.91	14586.55	13890.29	13140.47	12354.95	11281.22	9789.24	8368.66	6693.04
22.5	14520.24	14492.19	14005.06	13242.49	12293.74	11151.15	9728.03	8396.71	6840.96
45.0	14410.58	14589.10	14089.22	13201.68	12222.33	11125.65	9947.36	7751.46	5417.83
67.5	14331.51	14614.61	14101.98	13023.15	12263.13	11005.78	8417.11	6537.46	3879.94
90.0	14201.44	14512.59	14127.48	12944.09	11750.50	9990.72	7254.13	5938.12	2523.12
112.5	14132.58	14504.94	14096.88	12956.84	12079.50	10822.15	8345.70	6476.25	3872.29
135.0	14068.82	14382.52	14135.13	13267.99	12390.65	11429.15	10222.80	8126.37	5792.74
157.5	14012.71	14219.29	14015.26	13408.27	12365.15	11416.40	10097.83	8766.52	7363.80
180.0	14629.91	14652.87	14744.68	14178.49	13421.02	12696.70	11763.25	10253.41	8863.44
202.5	14520.24	14499.84	14635.01	14326.41	13563.84	12566.63	11505.66	10255.96	8837.93
225.0	14410.58	14344.27	14584.00	14214.20	13443.97	12627.84	11584.72	10197.30	7662.19
247.5	14331.51	14257.55	14520.24	14234.60	13326.65	12436.56	10888.46	7904.48	6246.72
270.0	14201.44	14209.09	14507.49	14094.33	13020.60	11916.28	9845.35	7001.64	4905.20
292.5	14132.58	14096.88	14277.96	13859.69	13058.86	12056.55	10477.85	7606.09	5938.12
315.0	14068.82	14048.42	14035.67	13528.13	12775.76	11875.47	10878.26	9396.47	6930.23
337.5	14012.71	13997.41	13887.74	13451.62	12678.85	11750.50	10600.27	9391.37	7968.24
360.0	14629.91	14586.55	13890.29	13140.47	12354.95	11281.22	9789.24	8368.66	6693.04

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	5083.73	3408.11	2071.70	1056.64	288.96	110.43	41.57	3.32	0.00
22.5	5134.74	3313.75	1661.08	712.33	174.19	67.08	13.52	0.00	0.00
45.0	3813.63	1398.39	638.37	143.59	61.98	13.52	0.00	0.00	0.00
67.5	2127.81	908.71	171.64	82.38	23.72	0.00	0.00	0.00	0.00
90.0	1727.39	482.79	156.34	74.73	18.62	0.00	0.00	0.00	0.00
112.5	2158.41	972.47	174.19	82.38	31.37	0.00	0.00	0.00	0.00
135.0	4170.68	1653.43	791.39	161.44	72.18	18.62	0.00	0.00	0.00
157.5	5683.08	3803.43	2023.24	936.77	220.10	82.38	18.62	0.00	0.00
180.0	7261.78	5736.64	4068.67	2502.72	1357.58	426.68	128.29	54.32	8.42
202.5	7328.09	5649.92	3719.26	1793.70	793.94	202.25	112.98	51.77	13.52
225.0	5384.68	3334.15	1531.01	490.44	204.80	128.29	74.73	31.37	3.32
247.5	3249.99	1990.08	393.53	225.20	146.14	95.13	59.43	23.72	0.77
270.0	2632.79	1181.60	342.52	217.55	151.24	105.33	64.53	18.62	0.00
292.5	3028.10	1780.95	378.23	217.55	143.59	90.03	54.32	18.62	0.00
315.0	4872.05	2755.21	1227.51	337.42	179.29	110.43	59.43	21.17	0.00
337.5	6460.95	4772.58	2867.43	1316.78	475.14	166.54	90.03	36.47	3.32
360.0	5083.73	3408.11	2071.70	1056.64	288.96	110.43	41.57	3.32	0.00

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77
45.0	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.77	0.77
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77
112.5	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.77
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
157.5	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.77
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C/γ(°)	180.0
0.0	0.00
22.5	0.77
45.0	0.77
67.5	0.77
90.0	0.77
112.5	0.77
135.0	0.00
157.5	0.00
180.0	0.00
202.5	0.77
225.0	0.77
247.5	0.77
270.0	0.77
292.5	0.77
315.0	0.00
337.5	0.00
360.0	0.00