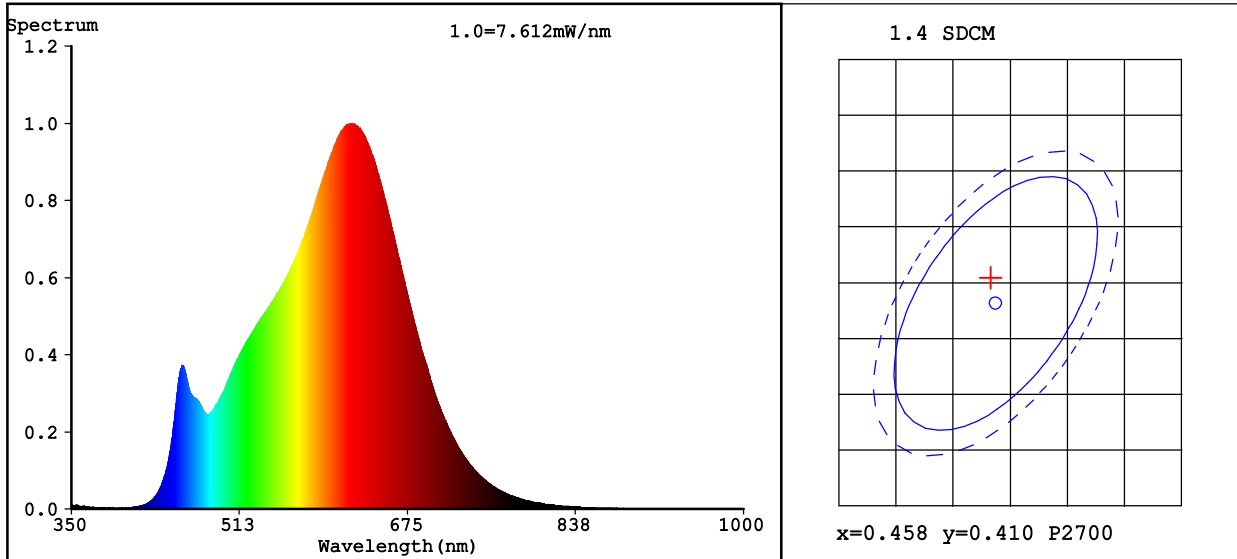


Spectrum Test Report



Color Parameters:

Chromaticity Coordinate: $x=0.4574$ $y=0.4124$ / $u'=0.2601$ $v'=0.5277$
 CCT=2749K (Duv=0.0009) Dominant WL:Ld =583.7nm Purity=61.1%
 Ratio:R=26.1% G=71.1% B=2.8% Peak WL:Lp=621.4nm FWHM=145.0nm
 Render Index:Ra=92.8
 R1 =94 R2 =99 R3 =97 R4 =92 R5 =93 R6 =98 R7 =90
 R8 =80 R9 =57 R10=96 R11=94 R12=84 R13=95 R14=99 R15=88

Photo Parameters:

Flux = 352.0 lm Eff. : 107.01 lm/W Fe = 1.234 W

Electrical parameters:

V = 120.03 V I = 0.03594 A P = 3.290 W PF = 0.7610

Status: Integral T = 1743 ms Ip = 46882 (72%)

Model:BA11-3-E12-927-F-C Number:1
 Tester:XXL Date:2018-10-20
 Temperature:24.8Deg Humidity:65.0%
 Manufacturer:RAB Lighting Inc. Remarks:

RAB Lighting Inc.

Client:

LumCAT: BA11-3-E12-927-F-C

Luminaire:

Report No:

Voltage(V): 120.0300

Test No: 255140-01-001

Current(A): 0.0370

LampCAT:

Power (W): 3.3250

Lamp flux(lm)

PF: 0.7579

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 352.57

Lumens(lm)/Power(W): 106.04

Central intensity(cd): 8.288

Maximum intensity(cd): 43.894

Angle of maximum intensity: C=270.0 γ =100.0

Beam Angle(50%Imax): [C0/180]Total=272.5

[C90/270]Total=282.2

Field angle(10%Imax): [C0/180]Total=316.3

[C90/270]Total=342.6

Maximum s/h(1/2): C0_180=113.17 C90_270=7.14

Maximum s/h(1/4): C0_180=3.25 C90_270=6.66

Up flux rate of LUM(%): 46.56%

Down flux rate of LUM(%): 50.49%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 21.156%

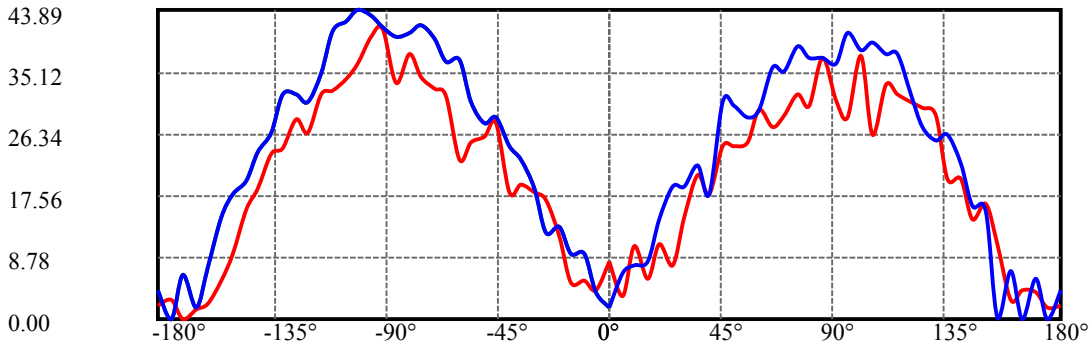
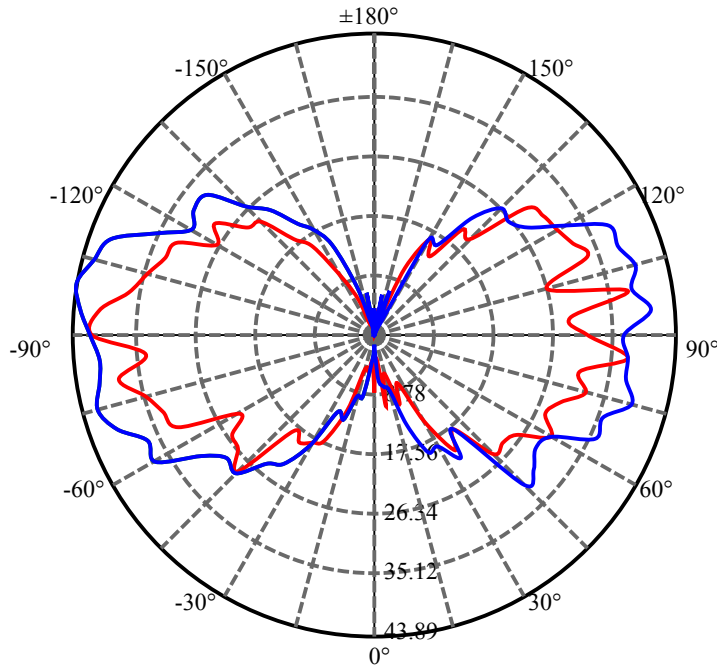
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4.911	0.029	0.029	.008%	.008%
5.0	4.374	0.209	0.238	.059%	.068%
10.0	8.211	0.782	1.02	.222%	.289%
15.0	7.137	1.012	2.032	.287%	.576%
20.0	12.431	2.331	4.363	.661%	1.237%
25.0	13.890	3.218	7.58	.913%	2.150%
30.0	17.419	4.774	12.355	1.354%	3.504%
35.0	21.026	6.611	18.965	1.875%	5.379%
40.0	19.568	6.895	25.86	1.956%	7.335%
45.0	27.932	10.826	36.686	3.071%	10.405%
50.0	27.165	11.407	48.093	3.235%	13.641%
55.0	27.395	12.301	60.393	3.489%	17.130%
60.0	29.774	14.134	74.527	4.009%	21.138%
65.0	32.767	16.278	90.805	4.617%	25.755%
70.0	34.225	17.629	108.434	5.000%	30.755%
75.0	36.681	19.421	127.855	5.508%	36.264%
80.0	36.450	19.676	147.531	5.581%	41.845%
85.0	36.988	20.197	167.728	5.729%	47.573%
90.0	37.448	20.527	188.255	5.822%	53.395%
95.0	38.062	20.784	209.038	5.895%	59.290%
100.0	38.906	21.002	230.04	5.957%	65.247%
105.0	35.453	18.771	248.811	5.324%	70.571%
110.0	36.067	18.577	267.388	5.269%	75.840%
115.0	34.148	16.964	284.353	4.812%	80.652%
120.0	29.928	14.207	298.559	4.029%	84.681%
125.0	29.391	13.197	311.756	3.743%	88.424%
130.0	27.626	11.600	323.356	3.290%	91.714%
135.0	23.942	9.280	332.635	2.632%	94.347%
140.0	21.026	7.408	340.044	2.101%	96.448%
145.0	16.345	5.139	345.183	1.458%	97.905%
150.0	14.657	4.017	349.2	1.139%	99.045%
155.0	7.750	1.795	350.995	.509%	99.554%
160.0	4.758	0.892	351.887	.253%	99.807%
165.0	1.688	0.240	352.126	.068%	99.875%
170.0	3.914	0.373	352.499	.106%	99.980%
175.0	1.074	0.051	352.55	.015%	99.995%
180.0	2.916	0.017	352.568	.005%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	12.35	3.50%
0-40	25.86	7.33%
0-60	74.53	21.14%
0-90	188.25	53.40%
0-120	298.56	84.68%
0-180	352.57	100.00%
60-90	127.86	36.27%
90-120	130.83	37.11%
90-130	155.63	44.14%
90-150	181.47	51.47%
90-180	184.82	52.42%
0-114.32	282.05	80.00%

ZONAL LUMEN SUMMARY

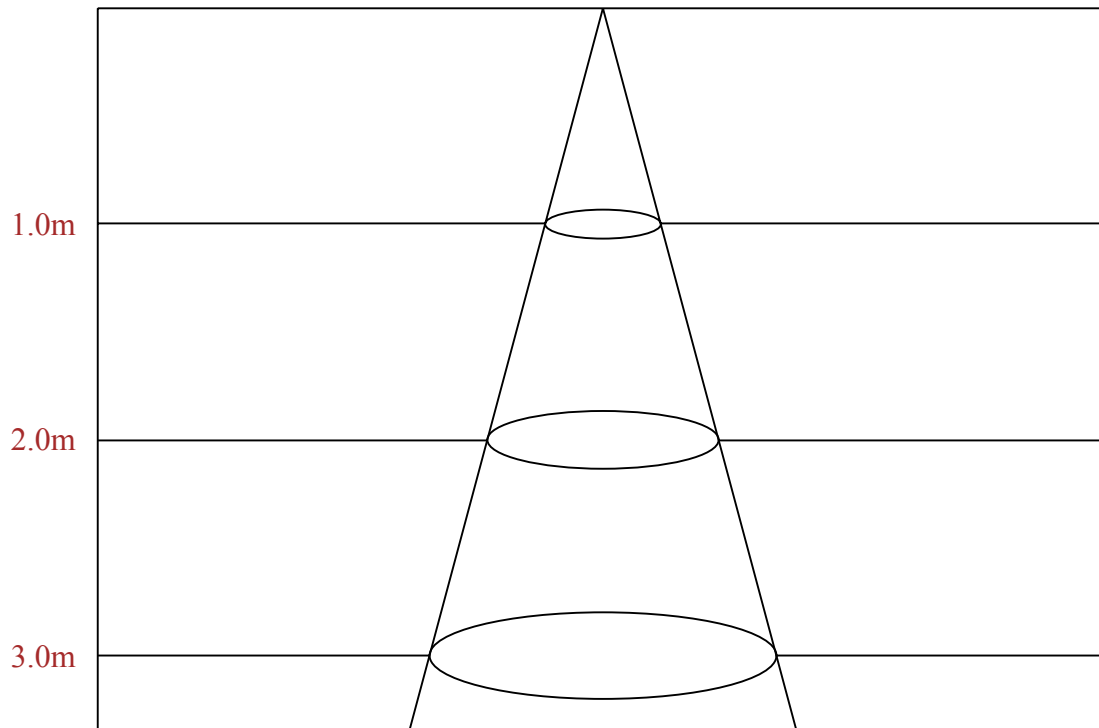
0-10	1.02
10-20	3.34
20-30	7.99
30-40	13.51
40-50	22.23
50-60	26.43
60-70	33.91
70-80	39.10
80-90	40.72
90-100	41.79
100-110	37.35
110-120	31.17
120-130	24.80
130-140	16.69
140-150	9.16
150-160	2.69
160-170	0.61
170-180	0.05



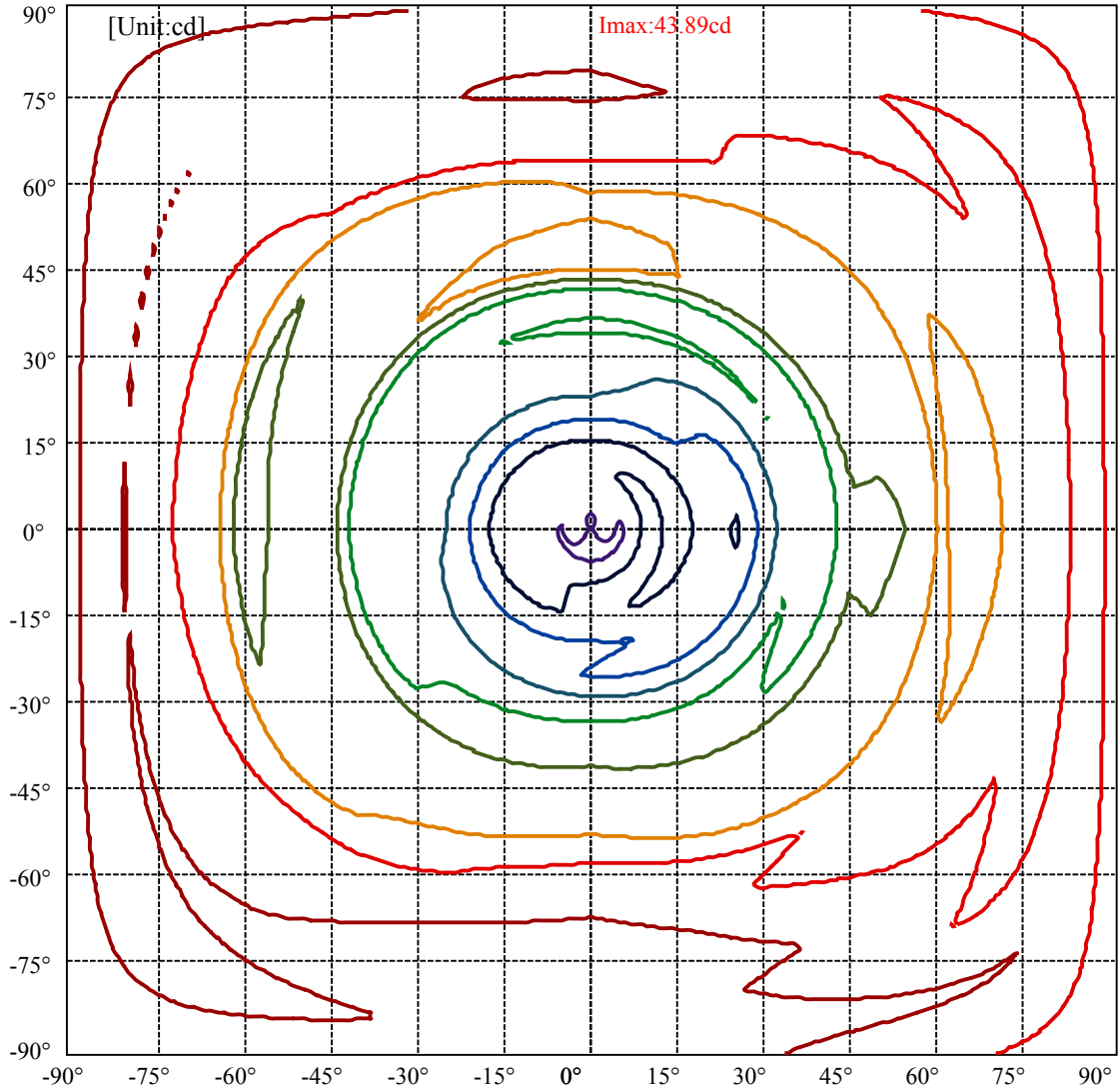
C270(Max): ———
C0/C180: ———
C90/C270: ———

Field angle(10%Imax):C0/180Left:67.1 Right:249.2
:C90/270Left:71.4 Right:271.2

Beam Angle(50%Imax):C0/180Left:47.8 Right:224.7
:C90/270Left:42.1 Right:240.1



Max , Ave Beam angle of C270 plane 183.99

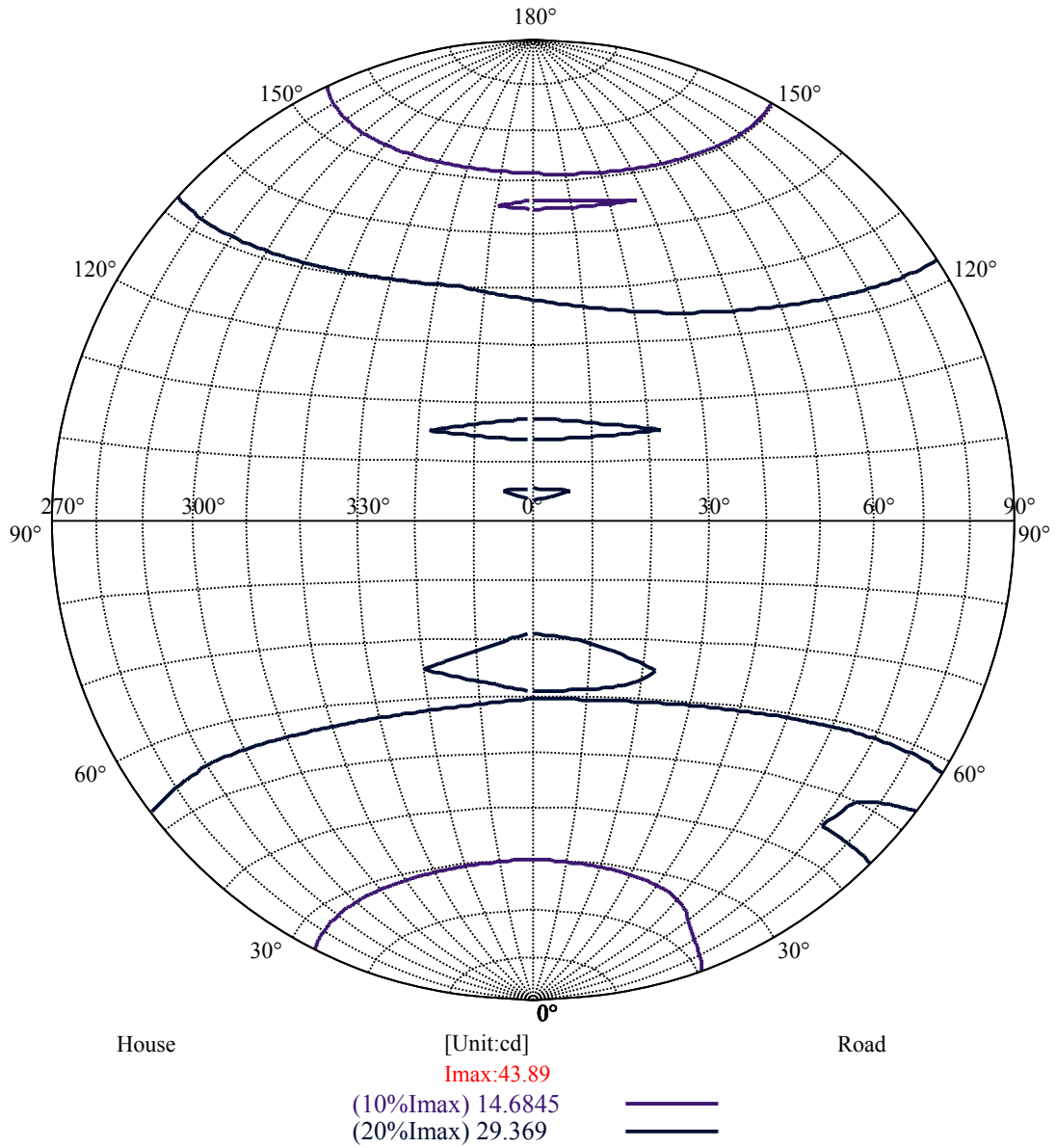


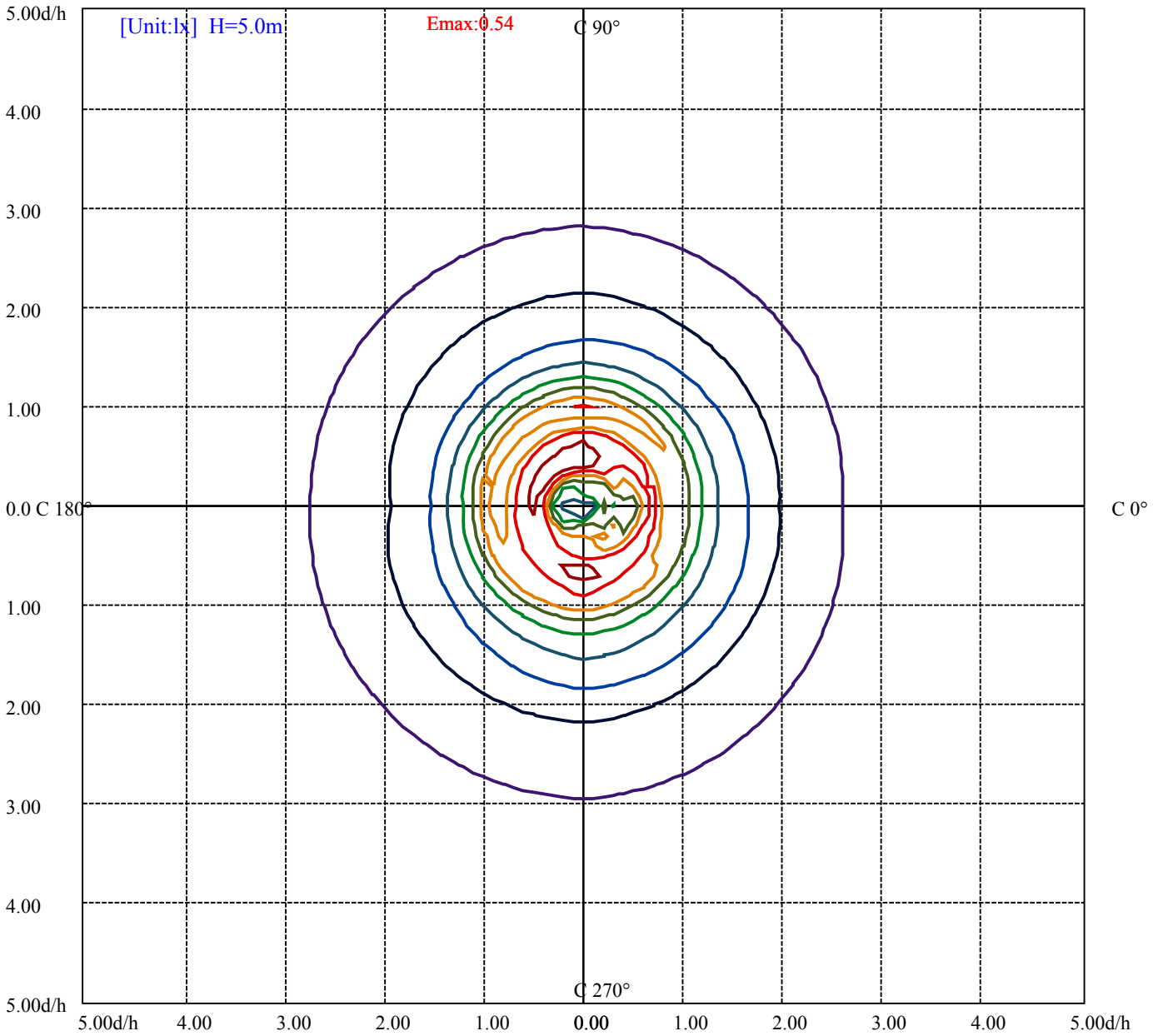
(10%I _{max}) 4.17453	—
(20%I _{max}) 8.34905	—
(30%I _{max}) 12.5236	—
(40%I _{max}) 16.6981	—
(50%I _{max}) 20.8726	—
(60%I _{max}) 25.0472	—
(70%I _{max}) 29.2217	—
(80%I _{max}) 33.3962	—
(90%I _{max}) 37.5707	—

Equipment: Goniophotometer
Temperature(°C): 0.0

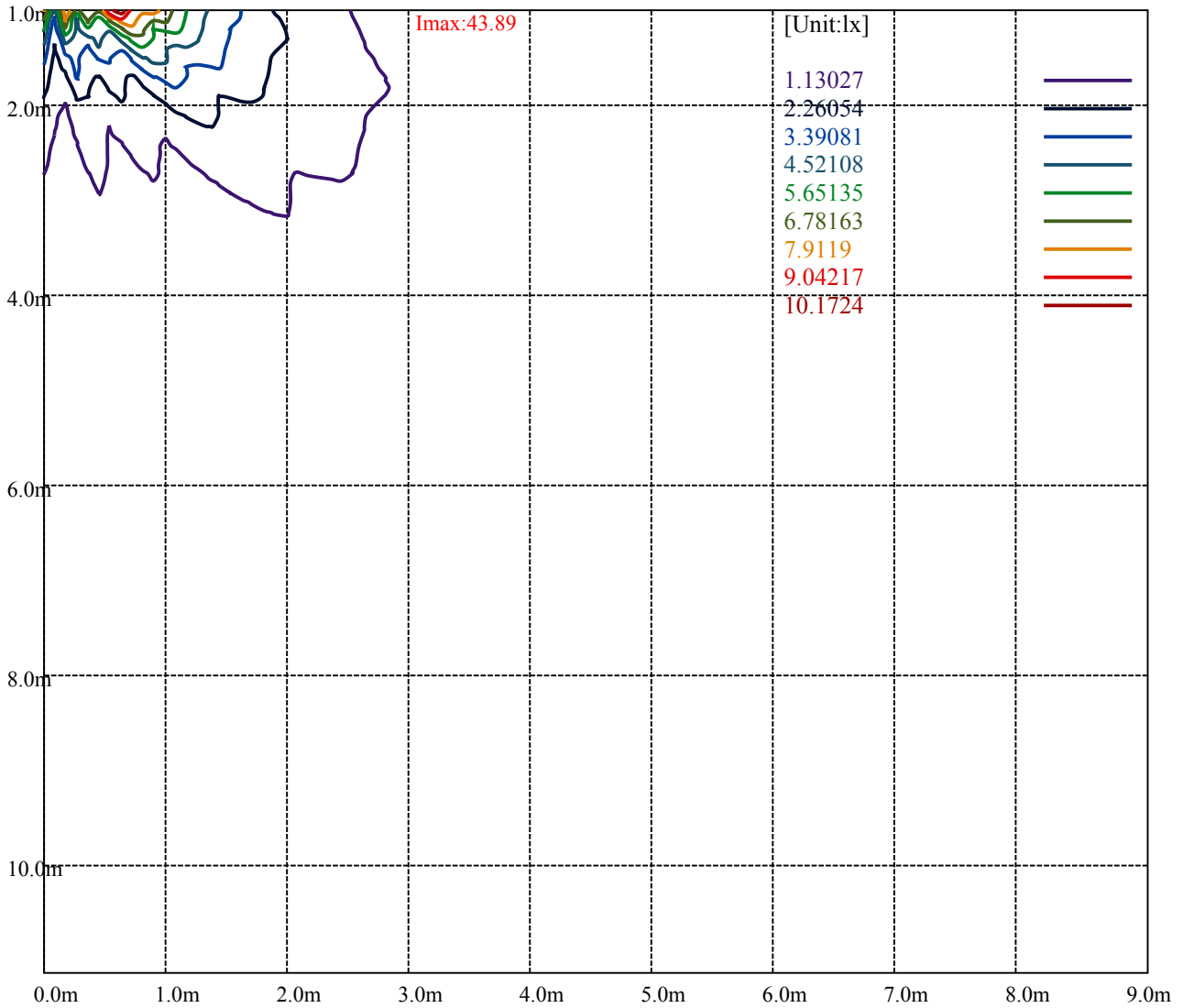
Date: 2018/9/30
Humidity(%): 0.0%

Operator: WANG
Distance(m): 17.52





- (10%Emax) 0.053588
- (20%Emax) 0.107176
- (30%Emax) 0.160764
- (40%Emax) 0.214352
- (50%Emax) 0.26794
- (60%Emax) 0.321528
- (70%Emax) 0.375116
- (80%Emax) 0.428704
- (90%Emax) 0.482292



Luminance Table

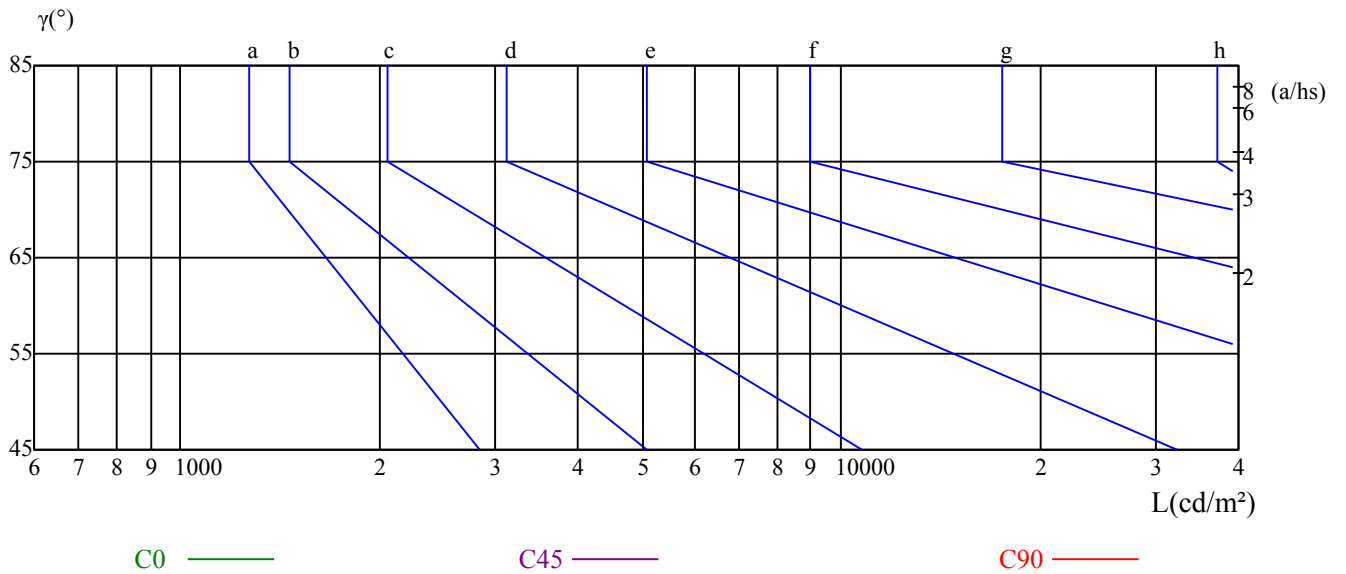
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

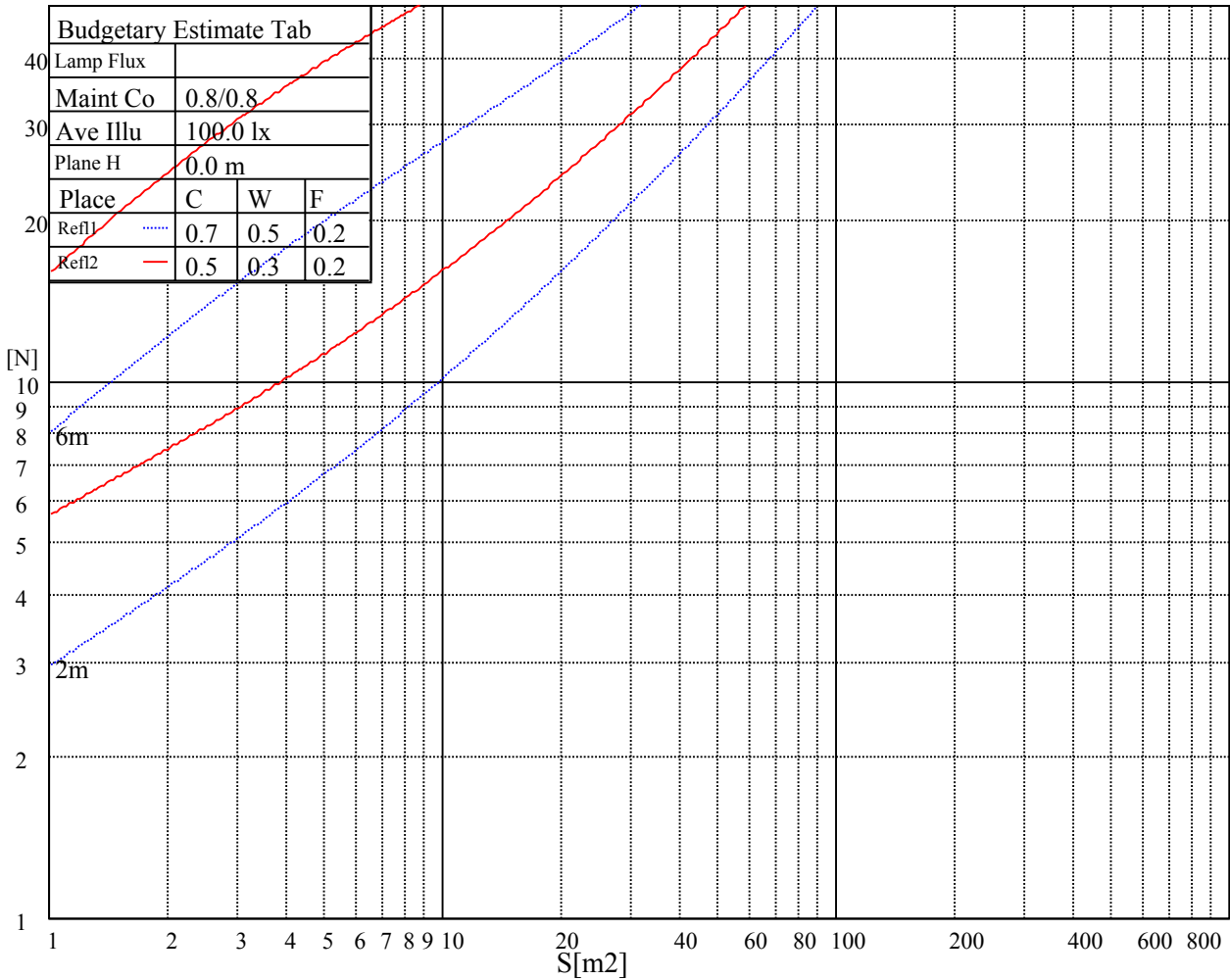
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOF=20 CU															
0	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.50
1	0.87	0.81	0.76	0.80	0.75	0.70	0.66	0.62	0.59	0.54	0.51	0.48	0.43	0.40	0.38	0.33
2	0.73	0.64	0.57	0.66	0.59	0.53	0.55	0.49	0.44	0.44	0.40	0.36	0.34	0.31	0.28	0.23
3	0.62	0.53	0.45	0.56	0.48	0.42	0.46	0.40	0.35	0.37	0.32	0.28	0.28	0.25	0.21	0.17
4	0.54	0.44	0.37	0.49	0.40	0.34	0.40	0.33	0.28	0.32	0.27	0.22	0.24	0.20	0.17	0.13
5	0.47	0.37	0.30	0.43	0.34	0.28	0.35	0.28	0.23	0.28	0.23	0.18	0.21	0.17	0.14	0.10
6	0.42	0.32	0.25	0.38	0.30	0.23	0.31	0.24	0.19	0.25	0.19	0.15	0.19	0.15	0.11	0.08
7	0.37	0.28	0.22	0.34	0.26	0.20	0.28	0.21	0.16	0.22	0.17	0.13	0.17	0.13	0.10	0.07
8	0.33	0.25	0.19	0.31	0.23	0.17	0.25	0.19	0.14	0.20	0.15	0.11	0.15	0.11	0.08	0.06
9	0.30	0.22	0.16	0.28	0.20	0.15	0.23	0.17	0.12	0.18	0.13	0.10	0.14	0.10	0.07	0.05
10	0.27	0.20	0.14	0.25	0.18	0.13	0.21	0.15	0.11	0.17	0.12	0.09	0.13	0.09	0.06	0.04

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	8.29	3.38	10.44	5.83	10.74	7.67	14.43	20.57	17.80
90.0	1.53	6.45	7.67	8.29	14.12	18.72	18.72	21.79	17.80
180.0	8.29	3.99	5.53	5.22	11.66	16.88	18.11	19.03	18.11
270.0	1.53	3.68	9.21	9.21	13.20	12.28	18.42	22.71	24.56
360.0	8.29	3.38	10.44	5.83	10.74	7.67	14.43	20.57	17.80
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	24.56	24.56	25.17	29.77	27.32	28.85	31.92	30.39	37.14
90.0	30.70	30.39	28.55	29.77	35.61	35.30	38.68	37.14	37.14
180.0	27.93	25.78	25.17	22.71	31.62	32.84	34.38	37.75	33.46
270.0	28.55	27.93	30.70	36.83	36.53	39.90	41.75	40.52	40.21
360.0	24.56	24.56	25.17	29.77	27.32	28.85	31.92	30.39	37.14
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	31.00	28.55	37.45	26.09	33.15	31.92	30.70	30.08	28.85
90.0	36.22	40.52	38.06	39.29	37.75	37.75	31.92	27.32	25.48
180.0	41.13	40.21	36.22	34.07	32.54	31.92	26.40	28.24	24.25
270.0	41.44	42.97	43.89	42.36	40.82	34.99	30.70	31.92	31.92
360.0	31.00	28.55	37.45	26.09	33.15	31.92	30.70	30.08	28.85
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	19.95	19.95	14.12	16.27	10.74	2.76	3.99	3.68	1.53
90.0	26.09	22.10	15.96	15.35	0.31	6.75	0.00	5.83	0.00
180.0	23.33	18.42	15.65	9.21	5.53	2.15	1.23	0.00	2.76
270.0	26.40	23.64	19.64	17.80	14.43	7.37	1.53	6.14	0.00
360.0	19.95	19.95	14.12	16.27	10.74	2.76	3.99	3.68	1.53
C/γ(°)	180.0								
0.0	1.84								
90.0	3.99								
180.0	1.84								
270.0	3.99								
360.0	1.84								