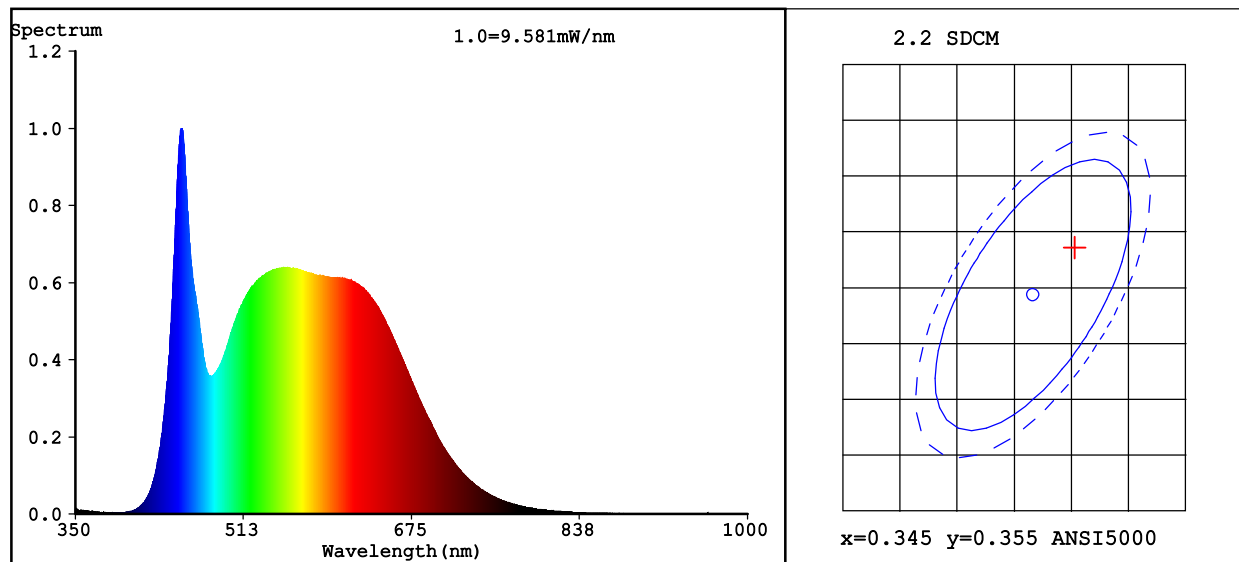


Spectrum Test Report



Color Parameters:

Chromaticity Coordinate: $x=0.3484$ $y=0.3596$ $u'=0.2106$ $v'=0.4890$

CCT=4908K (Duv=0.0027) Dominant WL:Ld =571.5nm Purity=12.4%

Ratio:R=17.1% G=77.8% B=5.1% Peak WL:Lp=452.5nm FWHM=27.0nm

Render Index:Ra=92.1

R1 =92	R2 =95	R3 =95	R4 =91	R5 =90	R6 =91	R7 =96
R8 =88	R9 =67	R10=86	R11=90	R12=66	R13=93	R14=97
						R15=90

Photo Parameters:

Flux = 387.0 lm Eff. : 104.15 lm/W Fe = 1.450 W

Electrical parameters:

V = 119.94 V I = 0.04027 A P = 3.717 W PF = 0.7698

Status: Integral T = 2000 ms Ip = 45571 (70%)

Model:G16.5-3-E12-950-F-F
 Tester:SY
 Temperature:24.8Deg
 Manufacturer:RAB Lighting Inc.

Number:1
 Date:2018-10-11
 Humidity:65.0%
 Remarks:

RAB Lighting Inc.

Client:

LumCAT: G16.5-3-E12-950-F-F

Luminaire:

Report No:

Voltage(V): 120.0000

Test No: 255153-01-001

Current(A): 0.0410

LampCAT:

Power (W): 3.7960

Lamp flux(lm)

PF: 0.7702

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 450.77

Lumens(lm)/Power(W): 118.75

Central intensity(cd): 38.983

Maximum intensity(cd): 47.884

Angle of maximum intensity: C=90.0 γ =60.0

Beam Angle(50%Imax): [C0/180]Total=315.9

[C90/270]Total=308.5

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=338.5

Maximum s/h(1/2): C0_180=1.53 C90_270=1.66

Maximum s/h(1/4): C0_180=1.79 C90_270=1.81

Up flux rate of LUM(%): 43.00%

Down flux rate of LUM(%): 54.60%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 28.976%

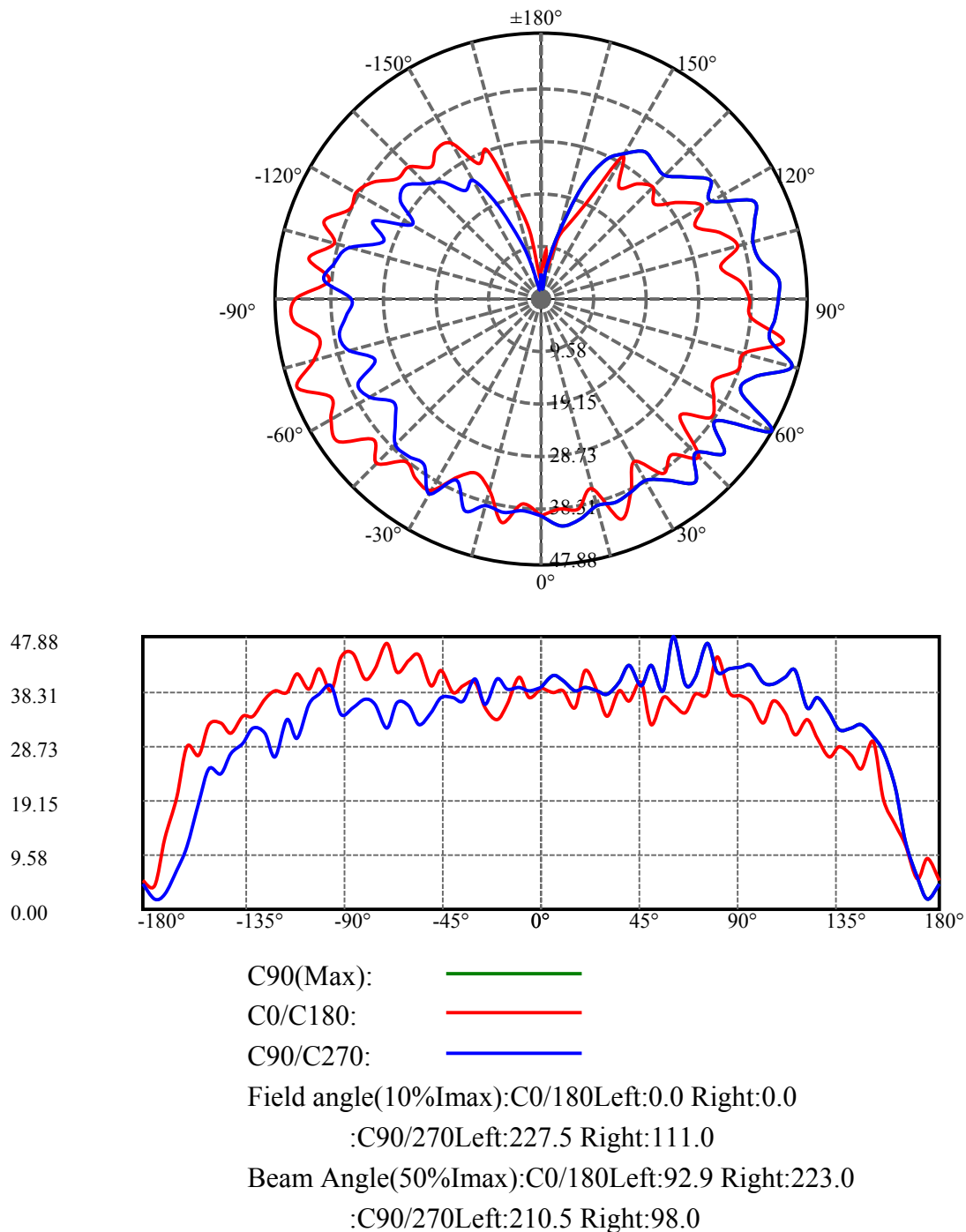
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	38.983	0.233	0.233	.052%	.052%
5.0	38.676	1.848	2.081	.410%	.462%
10.0	39.597	3.769	5.85	.836%	1.298%
15.0	37.064	5.258	11.108	1.167%	2.464%
20.0	38.752	7.265	18.373	1.612%	4.076%
25.0	36.988	8.568	26.941	1.901%	5.977%
30.0	37.985	10.411	37.352	2.309%	8.286%
35.0	38.522	12.111	49.463	2.687%	10.973%
40.0	38.676	13.627	63.09	3.023%	13.996%
45.0	39.597	15.347	78.437	3.405%	17.401%
50.0	37.294	15.660	94.097	3.474%	20.875%
55.0	38.139	17.125	111.222	3.799%	24.674%
60.0	40.748	19.343	130.565	4.291%	28.965%
65.0	37.985	18.870	149.435	4.186%	33.151%
70.0	39.290	20.237	169.672	4.490%	37.641%
75.0	40.671	21.534	191.206	4.777%	42.418%
80.0	40.824	22.037	213.243	4.889%	47.306%
85.0	40.134	21.915	235.158	4.862%	52.168%
90.0	39.597	21.704	256.863	4.815%	56.983%
95.0	39.213	21.412	278.275	4.750%	61.733%
100.0	38.215	20.629	298.904	4.576%	66.310%
105.0	37.678	19.949	318.853	4.426%	70.735%
110.0	36.681	18.893	337.747	4.191%	74.927%
115.0	36.067	17.917	355.664	3.975%	78.901%
120.0	33.458	15.882	371.546	3.523%	82.425%
125.0	33.765	15.161	386.707	3.363%	85.788%
130.0	31.693	13.308	400.014	2.952%	88.740%
135.0	30.772	11.927	411.941	2.646%	91.386%
140.0	29.314	10.328	422.27	2.291%	93.677%
145.0	28.470	8.951	431.22	1.986%	95.663%
150.0	29.237	8.013	439.233	1.778%	97.441%
155.0	23.175	5.368	444.602	1.191%	98.632%
160.0	18.954	3.553	448.155	.788%	99.420%
165.0	12.431	1.764	449.919	.391%	99.811%
170.0	6.523	0.621	450.54	.138%	99.949%
175.0	4.221	0.202	450.741	.045%	99.994%
180.0	4.758	0.028	450.77	.006%	100.000%

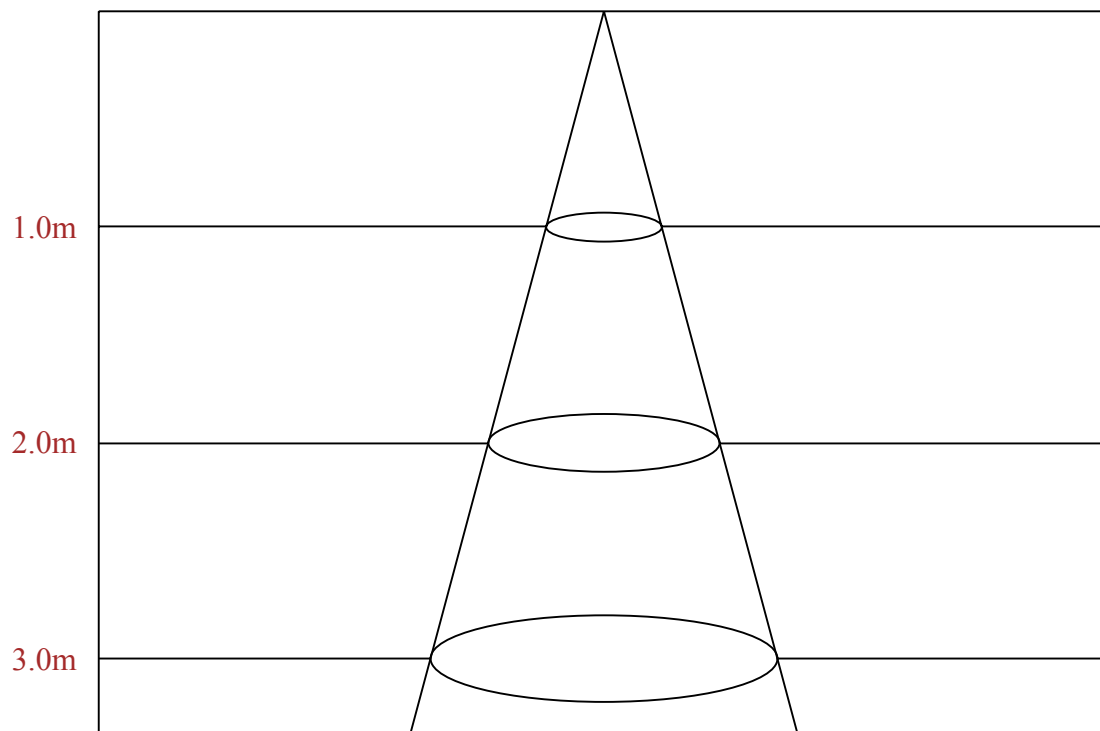
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	37.35	8.29%
0-40	63.09	14.00%
0-60	130.56	28.96%
0-90	256.86	56.98%
0-120	371.55	82.42%
0-180	450.77	100.00%
60-90	145.64	32.31%
90-120	136.39	30.26%
90-130	164.86	36.57%
90-150	204.07	45.27%
90-180	215.58	47.83%
0-116.56	360.62	80.00%

ZONAL LUMEN SUMMARY

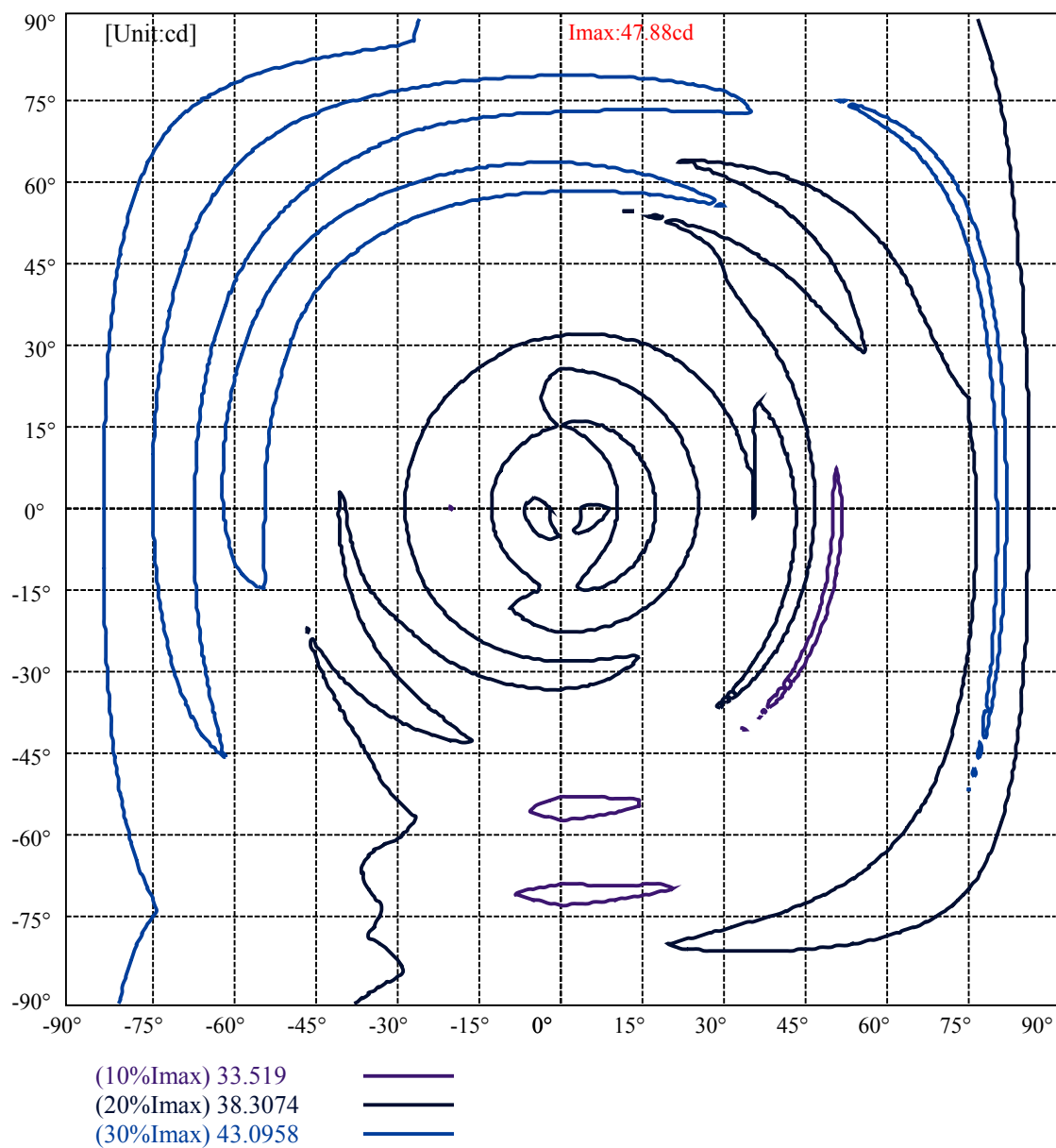
0-10	5.85
10-20	12.52
20-30	18.98
30-40	25.74
40-50	31.01
50-60	36.47
60-70	39.11
70-80	43.57
80-90	43.62
90-100	42.04
100-110	38.84
110-120	33.80
120-130	28.47
130-140	22.26
140-150	16.96
150-160	8.92
160-170	2.38
170-180	0.20

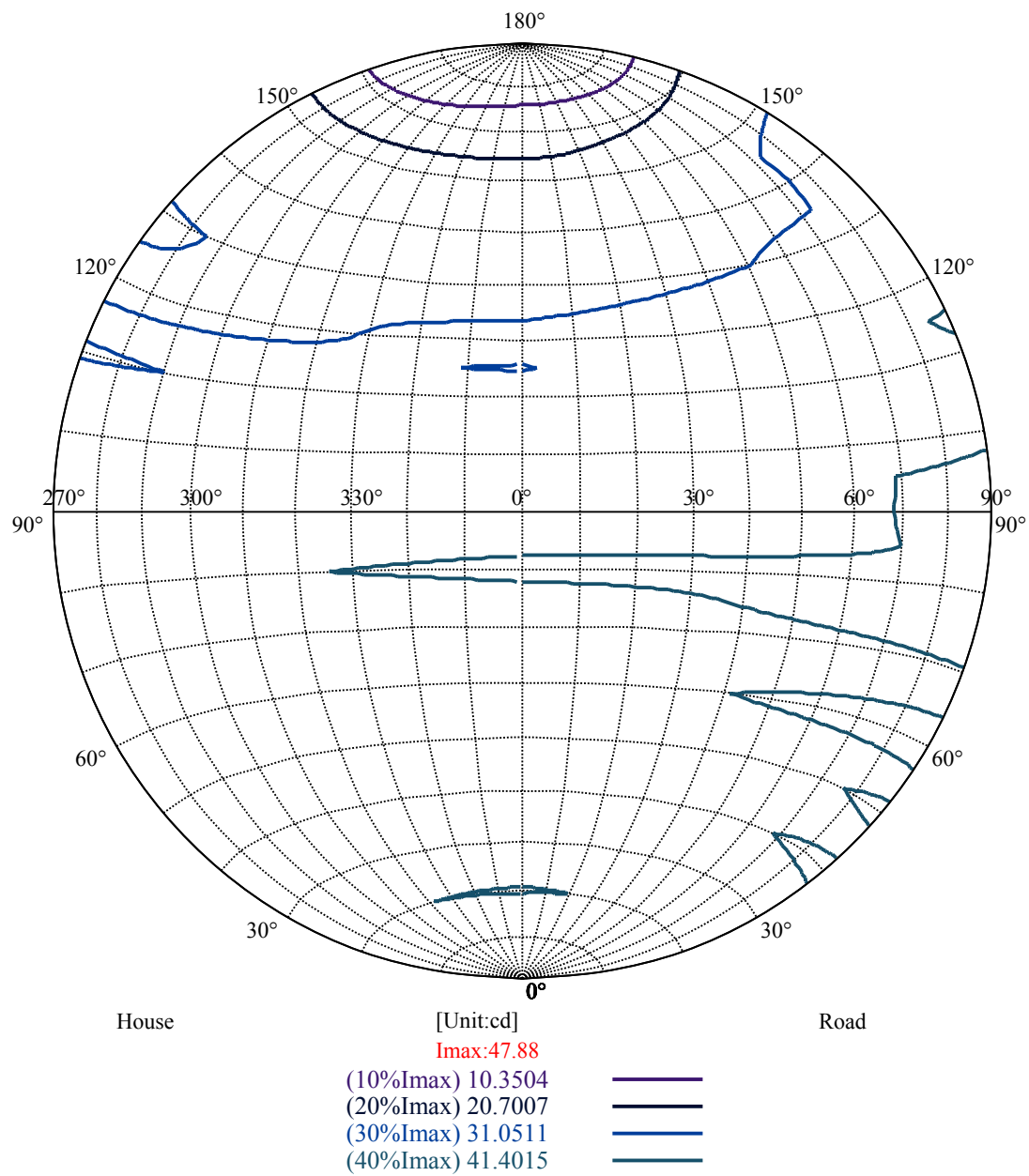


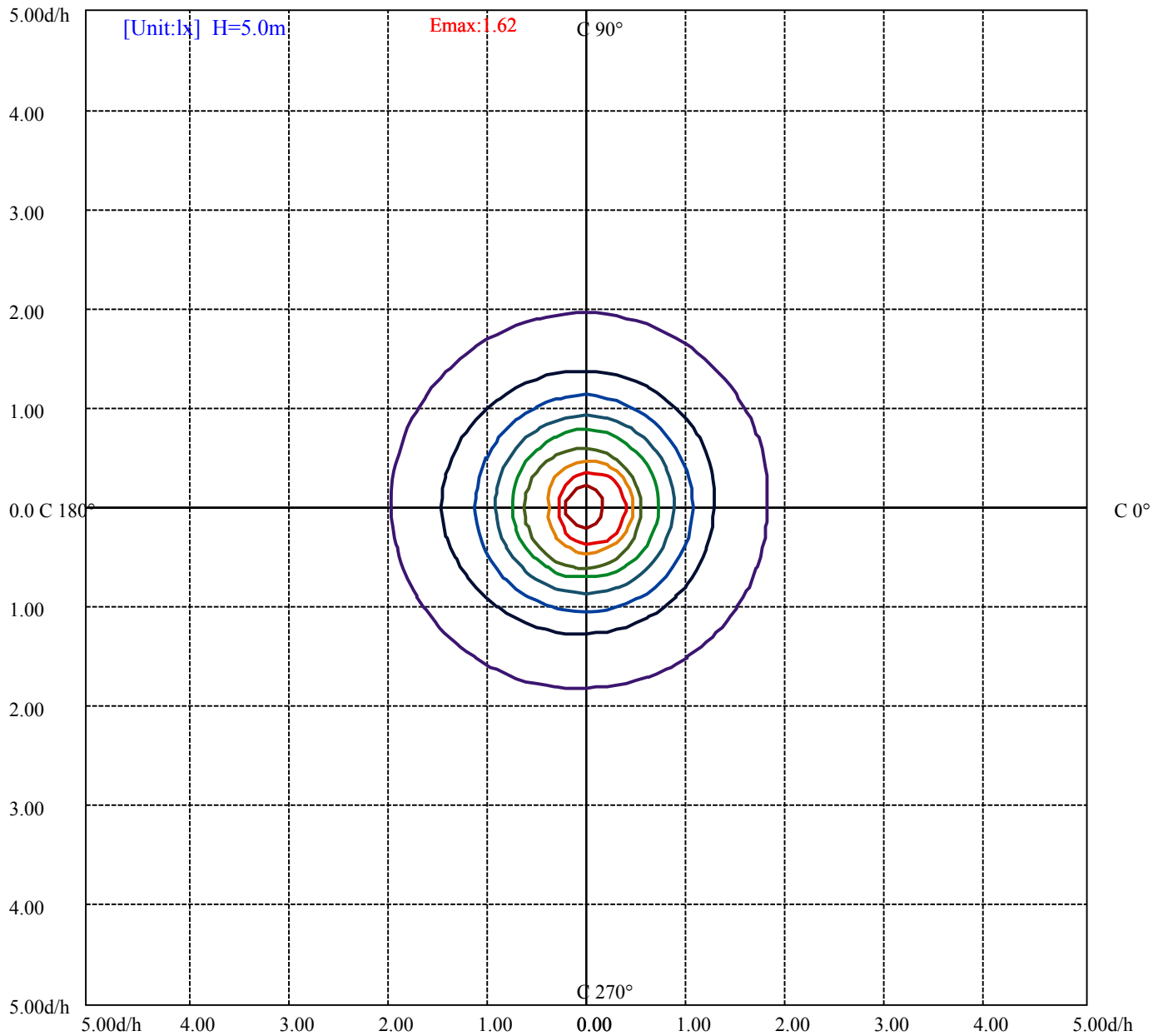


Max , Ave

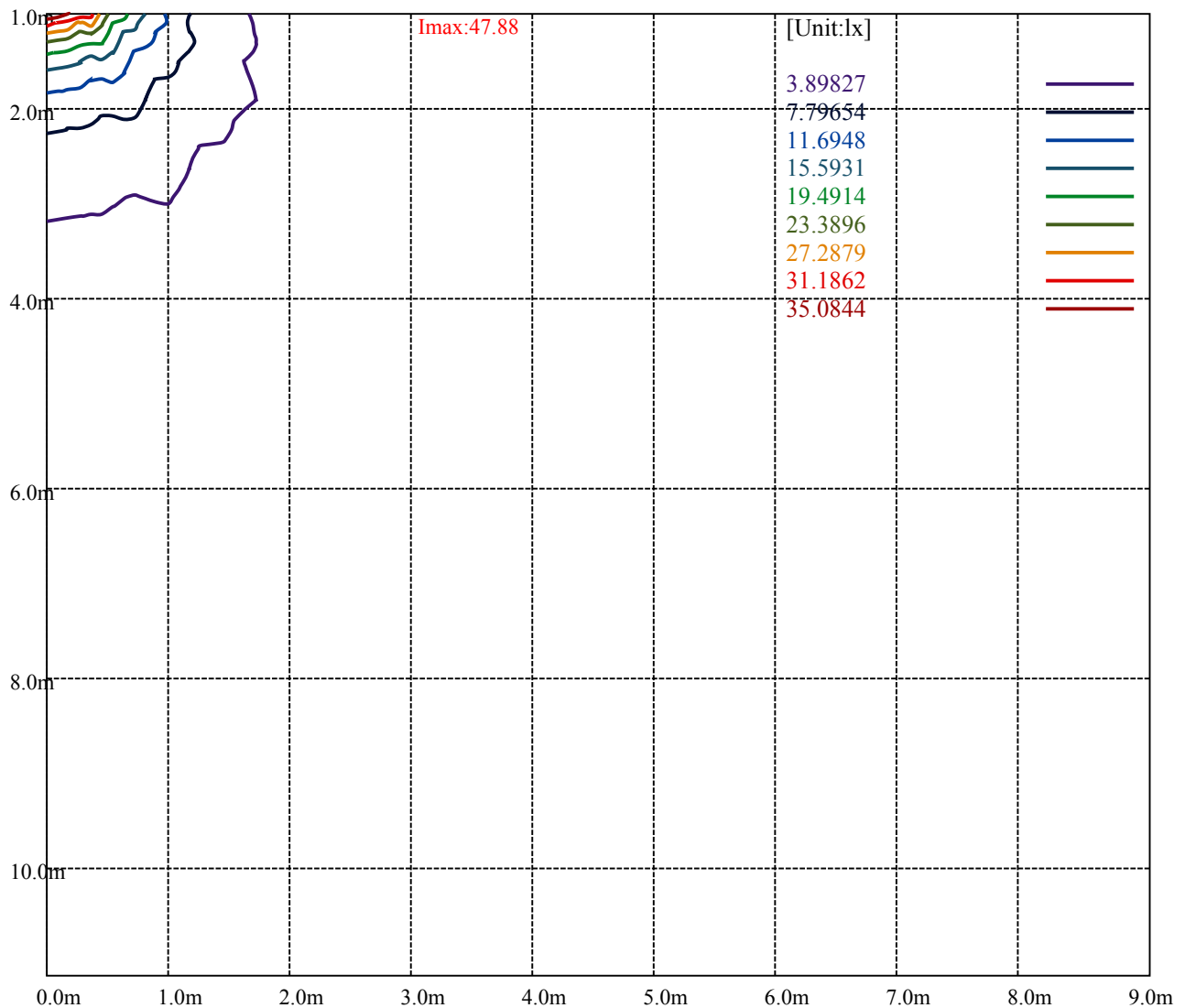
Beam angle of C90 plane 315.81







(10%Emax) 0.1615708	—
(20%Emax) 0.3231412	—
(30%Emax) 0.484712	—
(40%Emax) 0.646284	—
(50%Emax) 0.807852	—
(60%Emax) 0.969424	—
(70%Emax) 1.130996	—
(80%Emax) 1.292564	—
(90%Emax) 1.454136	—



Luminance Table

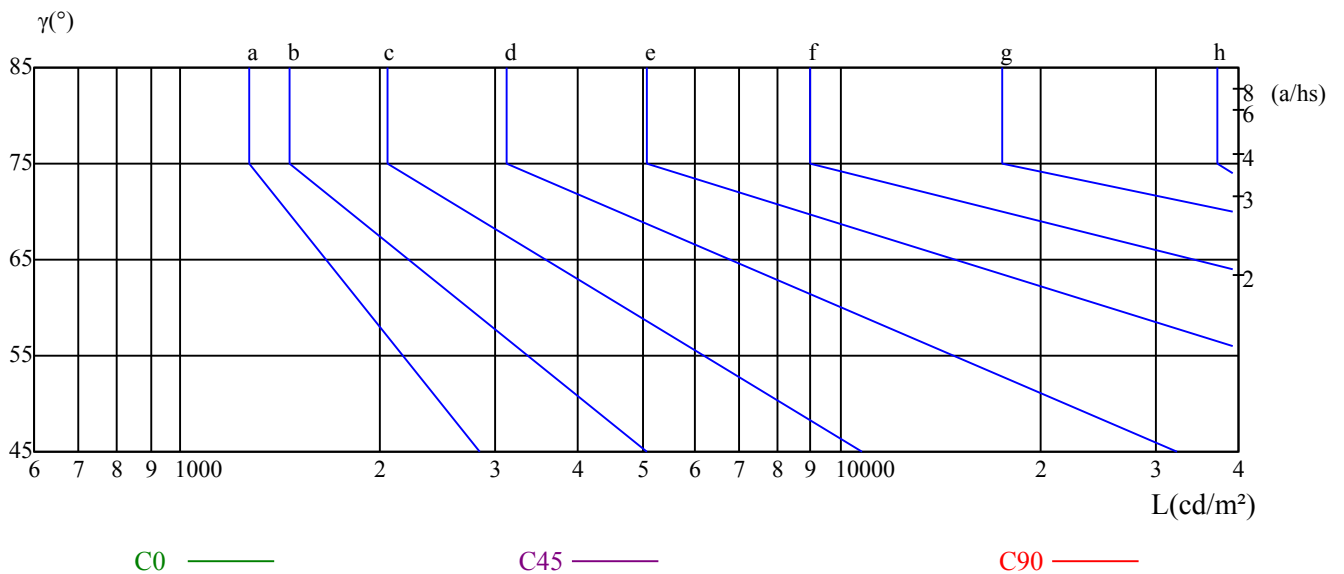
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

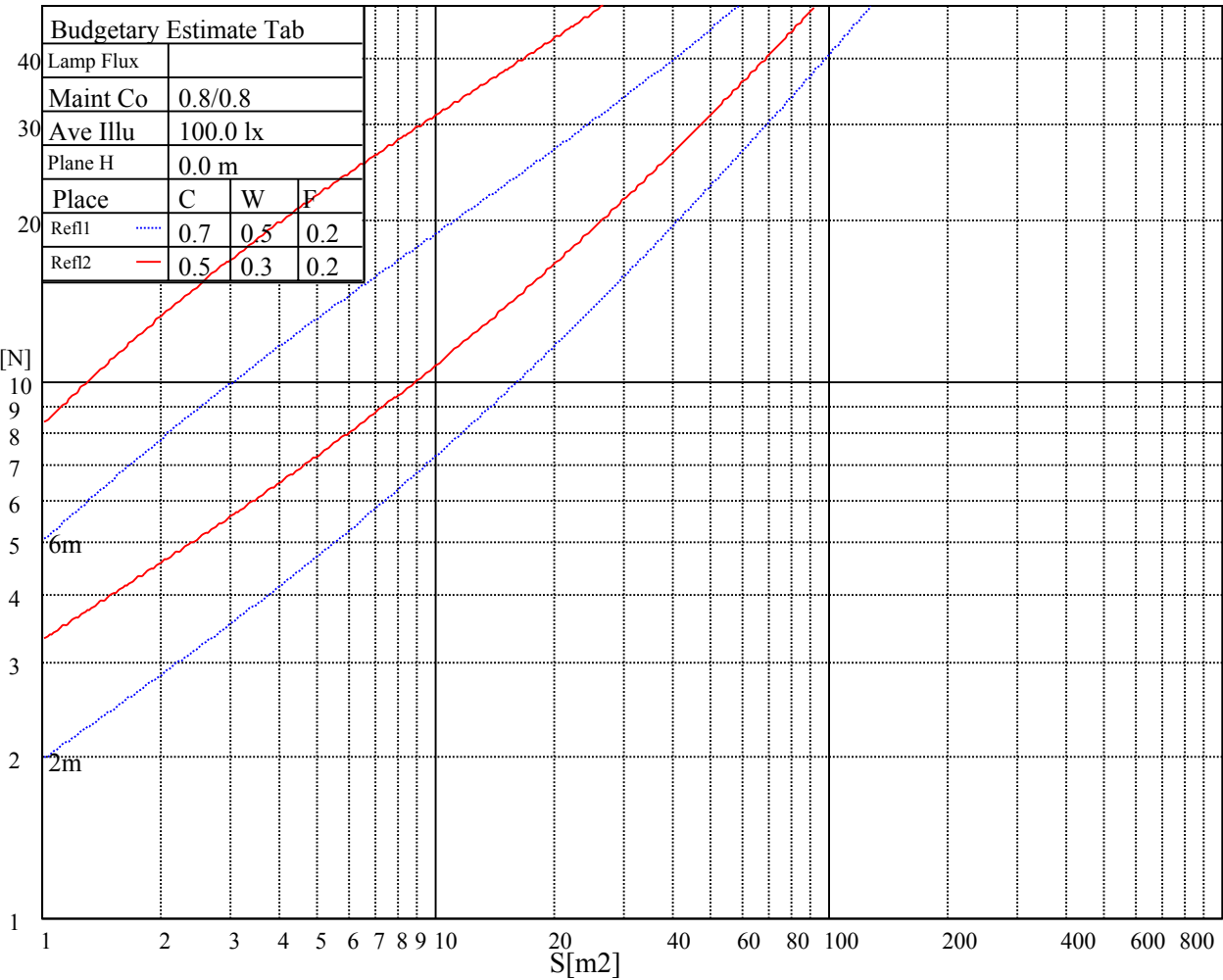
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
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





RHOC	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	1.08	1.08	1.08	1.00	1.00	1.00	0.86	0.86	0.86	0.73	0.73	0.73	0.60	0.60	0.60	0.55
1	0.89	0.84	0.79	0.82	0.78	0.73	0.70	0.66	0.63	0.58	0.55	0.53	0.47	0.45	0.44	0.38
2	0.75	0.68	0.61	0.70	0.63	0.57	0.59	0.53	0.49	0.49	0.44	0.41	0.39	0.36	0.33	0.29
3	0.65	0.56	0.49	0.60	0.52	0.46	0.50	0.44	0.39	0.42	0.37	0.33	0.34	0.30	0.27	0.23
4	0.57	0.47	0.40	0.52	0.44	0.38	0.44	0.38	0.32	0.36	0.31	0.27	0.29	0.25	0.22	0.18
5	0.50	0.41	0.34	0.46	0.38	0.32	0.39	0.32	0.27	0.32	0.27	0.23	0.26	0.22	0.19	0.15
6	0.45	0.36	0.29	0.41	0.33	0.27	0.35	0.28	0.23	0.29	0.24	0.20	0.23	0.19	0.16	0.13
7	0.40	0.31	0.25	0.37	0.29	0.23	0.31	0.25	0.20	0.26	0.21	0.17	0.21	0.17	0.14	0.11
8	0.36	0.28	0.22	0.34	0.26	0.21	0.29	0.22	0.18	0.24	0.19	0.15	0.19	0.15	0.12	0.10
9	0.33	0.25	0.19	0.31	0.23	0.18	0.26	0.20	0.16	0.22	0.17	0.13	0.18	0.14	0.11	0.09
10	0.30	0.22	0.17	0.28	0.21	0.16	0.24	0.18	0.14	0.20	0.15	0.12	0.17	0.13	0.10	0.08

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	38.98	38.06	38.37	35.30	42.05	38.37	33.76	38.37	36.53
90.0	38.98	41.13	40.21	38.37	38.98	38.37	37.75	39.90	42.97
180.0	38.98	37.14	40.82	35.91	33.46	35.30	39.90	39.29	38.06
270.0	38.98	38.37	38.98	38.68	40.52	35.91	40.52	36.53	37.14
360.0	38.98	38.06	38.37	35.30	42.05	38.37	33.76	38.37	36.53
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	39.90	32.54	37.14	35.91	34.38	37.75	37.75	44.20	38.06
90.0	39.29	42.97	38.37	47.88	39.60	40.82	46.66	41.75	42.36
180.0	42.05	39.29	44.51	43.59	41.75	46.66	42.36	40.52	44.81
270.0	37.14	34.38	32.54	35.61	36.22	31.92	35.91	36.83	35.30
360.0	39.90	32.54	37.14	35.91	34.38	37.75	37.75	44.20	38.06
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	37.45	36.22	32.84	36.53	34.38	30.70	33.46	30.08	26.70
90.0	42.67	42.97	39.90	39.60	40.82	42.05	35.30	37.14	34.38
180.0	44.20	38.37	42.36	38.68	41.44	38.06	38.37	36.83	33.76
270.0	34.07	39.29	37.75	35.91	30.08	33.46	26.70	31.00	31.92
360.0	37.45	36.22	32.84	36.53	34.38	30.70	33.46	30.08	26.70
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	28.55	27.01	24.56	29.47	19.34	14.73	11.36	5.22	8.90
90.0	31.62	31.92	32.54	30.39	27.63	21.49	11.97	5.53	1.84
180.0	33.76	31.00	32.84	32.54	27.01	28.55	19.64	12.58	4.30
270.0	29.16	27.32	23.94	24.56	18.72	11.05	6.75	2.76	1.84
360.0	28.55	27.01	24.56	29.47	19.34	14.73	11.36	5.22	8.90
C/γ(°)	180.0								
0.0	4.91								
90.0	4.60								
180.0	4.91								
270.0	4.60								
360.0	4.91								