



Bell-Southcn Testing Laboratory(Shenzhen)

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Address: Junxiangda Building, West of Zhongshan Park Road, Nanshan District, Shenzhen, Guangdong, China

Hardware Concepts, Inc.

LumCAT: LED-WP35-XXX

Luminaire: LED wall — mounted area luminaire

Report No: BSR1501090101-10

Voltage(V): 119.8900

Test No: BSR1501090101-10

Current(A): 0.2790

LampCAT:

Power (W): 32.8900

Lamp flux(lm)

PF: 0.9830

Number of Lamps: 35

Ballast type:

Length(mm): 200

Width(mm): 150

Phm Type: C

Height(mm): 100

Photometric Results

Lumens(lm): 3211.72

Bright Area: 0.007

Lumens(lm)/Power(W): 97.65

SLI: 19.469

Central intensity(cd): 1038.360

Maximum intensity(cd): 1424.395

Angle of maximum intensity: C=270.0 γ =15.0

Beam Angle(50%Imax): [C0/180]Total=132.3

[C90/270]Total=87.9

Field angle(10%Imax): [C0/180]Total=166.3

[C90/270]Total=142.7

IES Classification : TypeII

Longitudinal Classification : VeryShort

Cut Off Classification : FullCutoff

Max Cd(At 90°Vert) : 129.9581

Max Cd(80 to 90°Vert) : 212.1086

Street Side UpWard Lumens: 3.62%of Luminaire

Street Side DownWard Lumens: 50.59%of Luminaire

House Side UpWard Lumens: 1.47%of Luminaire

House Side DownWard Lumens: 44.32%of Luminaire

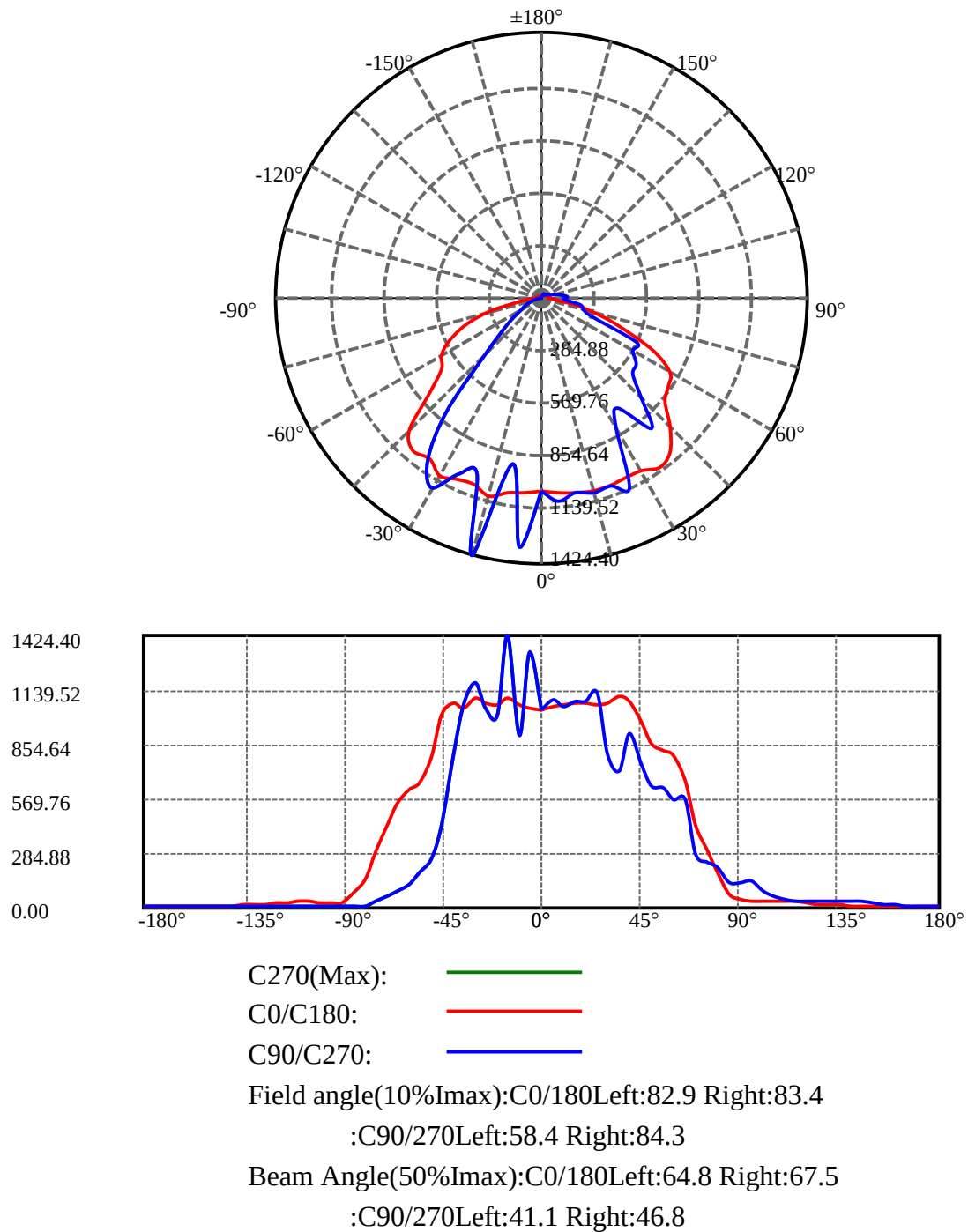
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1038.360	.000	.000	.000%	.000%
5.0	1124.406	25.855	25.855	.805%	.805%
10.0	1090.243	79.225	105.080	2.467%	3.272%
15.0	1100.408	129.948	235.028	4.046%	7.318%
20.0	1084.390	180.058	415.086	5.606%	12.924%
25.0	1023.269	221.055	636.141	6.883%	19.807%
30.0	1011.733	257.531	893.672	8.018%	27.825%
35.0	895.495	280.853	1174.525	8.745%	36.570%
40.0	829.845	287.860	1462.385	8.963%	45.533%
45.0	711.744	285.438	1747.822	8.887%	54.420%
50.0	598.656	264.785	2012.607	8.244%	62.664%
55.0	480.932	234.738	2247.346	7.309%	69.973%
60.0	410.466	206.044	2453.390	6.415%	76.389%
65.0	331.470	180.366	2633.756	5.616%	82.005%
70.0	233.118	142.957	2776.713	4.451%	86.456%
75.0	171.511	105.764	2882.477	3.293%	89.749%
80.0	115.863	76.893	2959.370	2.394%	92.143%
85.0	75.869	52.098	3011.468	1.622%	93.765%
90.0	58.701	36.846	3048.314	1.147%	94.912%
95.0	50.949	30.023	3078.337	.935%	95.847%
100.0	40.666	24.894	3103.231	.775%	96.622%
105.0	34.328	20.066	3123.297	.625%	97.247%
110.0	28.720	16.480	3139.776	.513%	97.760%
115.0	24.704	13.527	3153.303	.421%	98.181%
120.0	22.138	11.387	3164.691	.355%	98.536%
125.0	19.496	9.624	3174.314	.300%	98.835%
130.0	17.702	8.088	3182.402	.252%	99.087%
135.0	16.770	6.965	3189.368	.217%	99.304%
140.0	15.875	6.044	3195.412	.188%	99.492%
145.0	14.271	5.030	3200.442	.157%	99.649%
150.0	11.940	3.860	3204.302	.120%	99.769%
155.0	9.975	2.773	3207.075	.086%	99.855%
160.0	8.384	1.926	3209.001	.060%	99.915%
165.0	7.101	1.276	3210.277	.040%	99.955%
170.0	6.597	.813	3211.089	.025%	99.980%
175.0	6.576	.471	3211.561	.015%	99.995%
180.0	6.623	.158	3211.718	.005%	100.000%

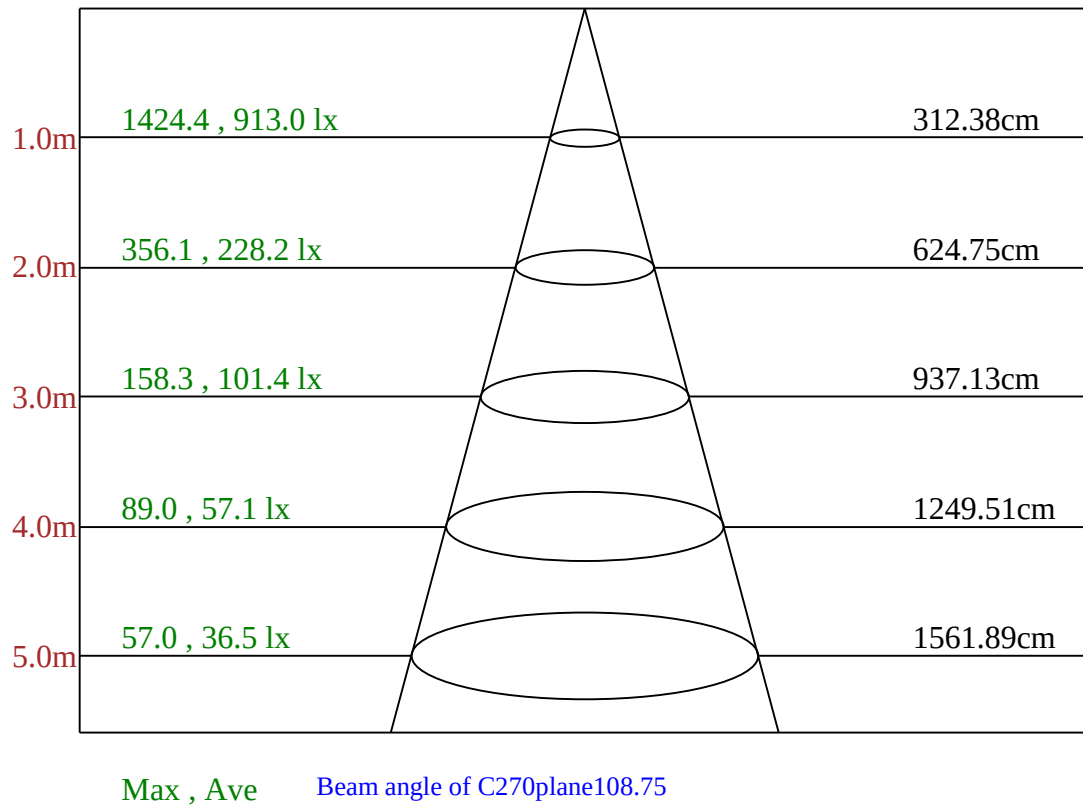
ZONAL LUMEN SUMMARY

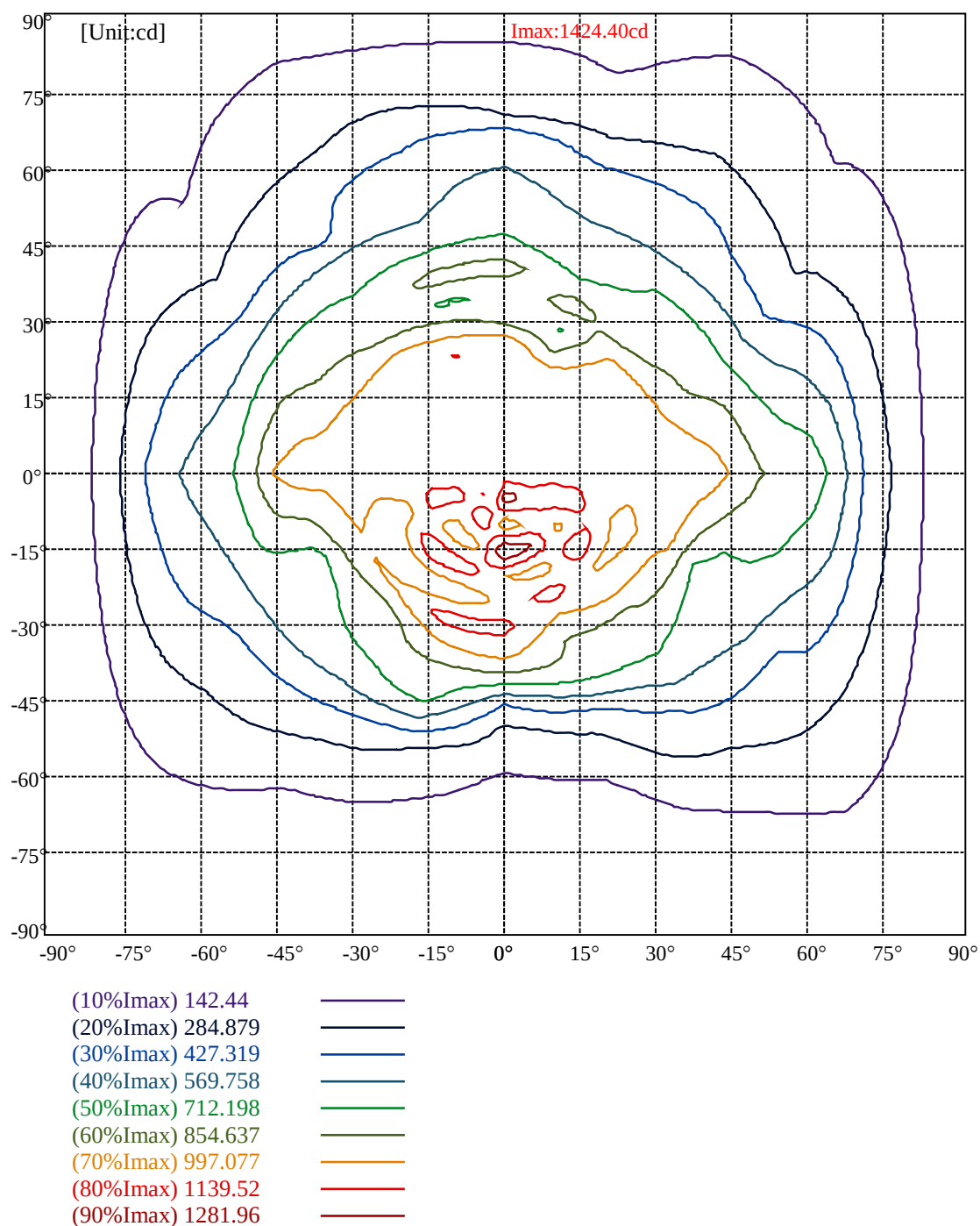
Zone	Lumens	%Fixt
0-30	893.67	27.83%
0-40	1462.39	45.53%
0-60	2453.39	76.39%
0-90	3048.31	94.91%
0-120	3164.69	98.54%
0-180	3211.72	100.00%
60-90	800.97	24.94%
90-120	153.22	4.77%
90-130	170.93	5.32%
90-150	192.83	6.00%
90-180	200.09	6.23%
0-63.22	2569.38	80.00%

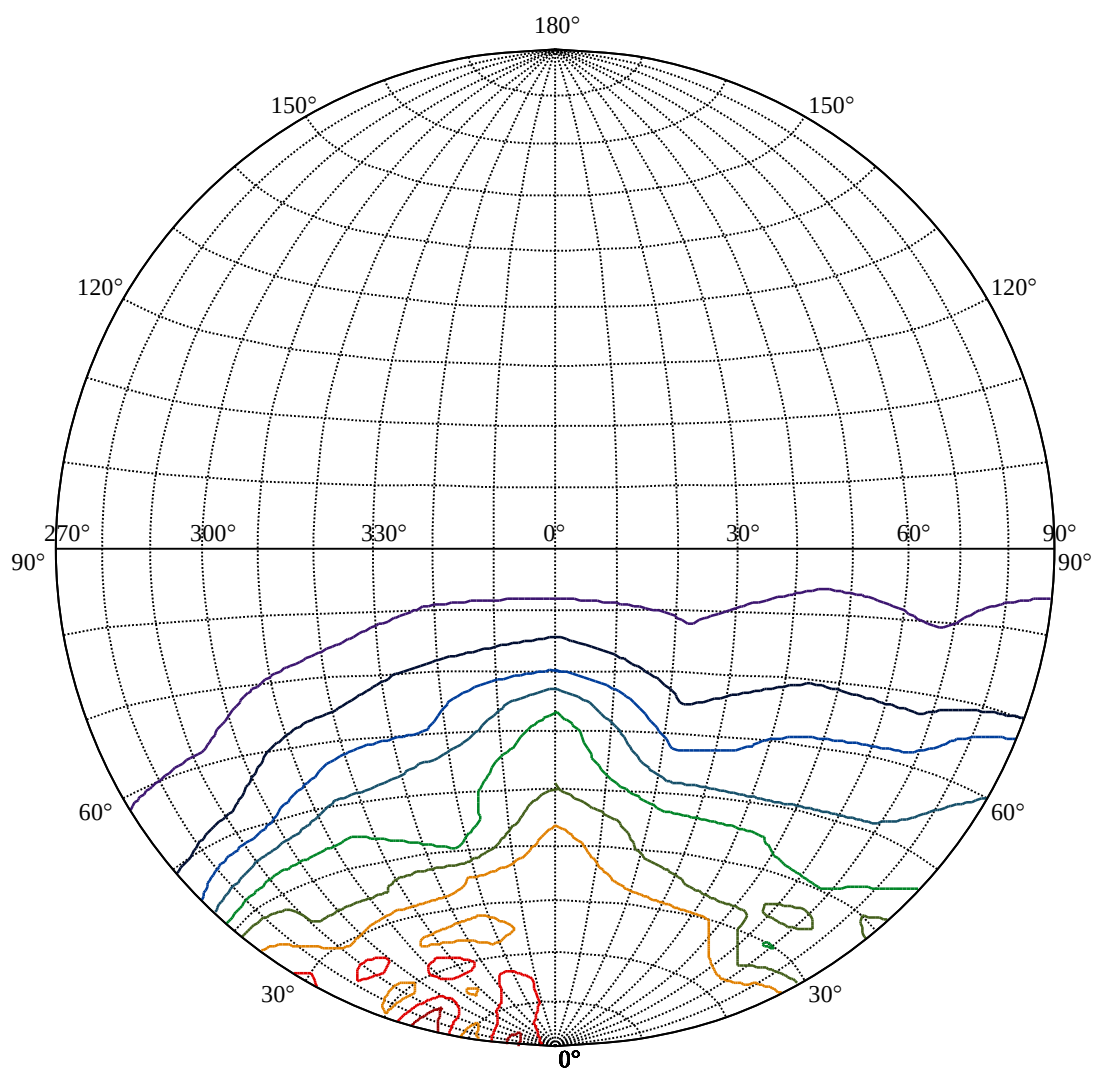
ZONAL LUMEN SUMMARY

0-10	105.08
10-20	310.01
20-30	478.59
30-40	568.71
40-50	550.22
50-60	440.78
60-70	323.32
70-80	182.66
80-90	88.94
90-100	54.92
100-110	36.55
110-120	24.91
120-130	17.71
130-140	13.01
140-150	8.89
150-160	4.70
160-170	2.09
170-180	0.47









House

[Unit:cd]

Road

Imax:1424.40

(10%Imax) 142.44

(20%Imax) 284.879

(30%Imax) 427.319

(40%Imax) 569.758

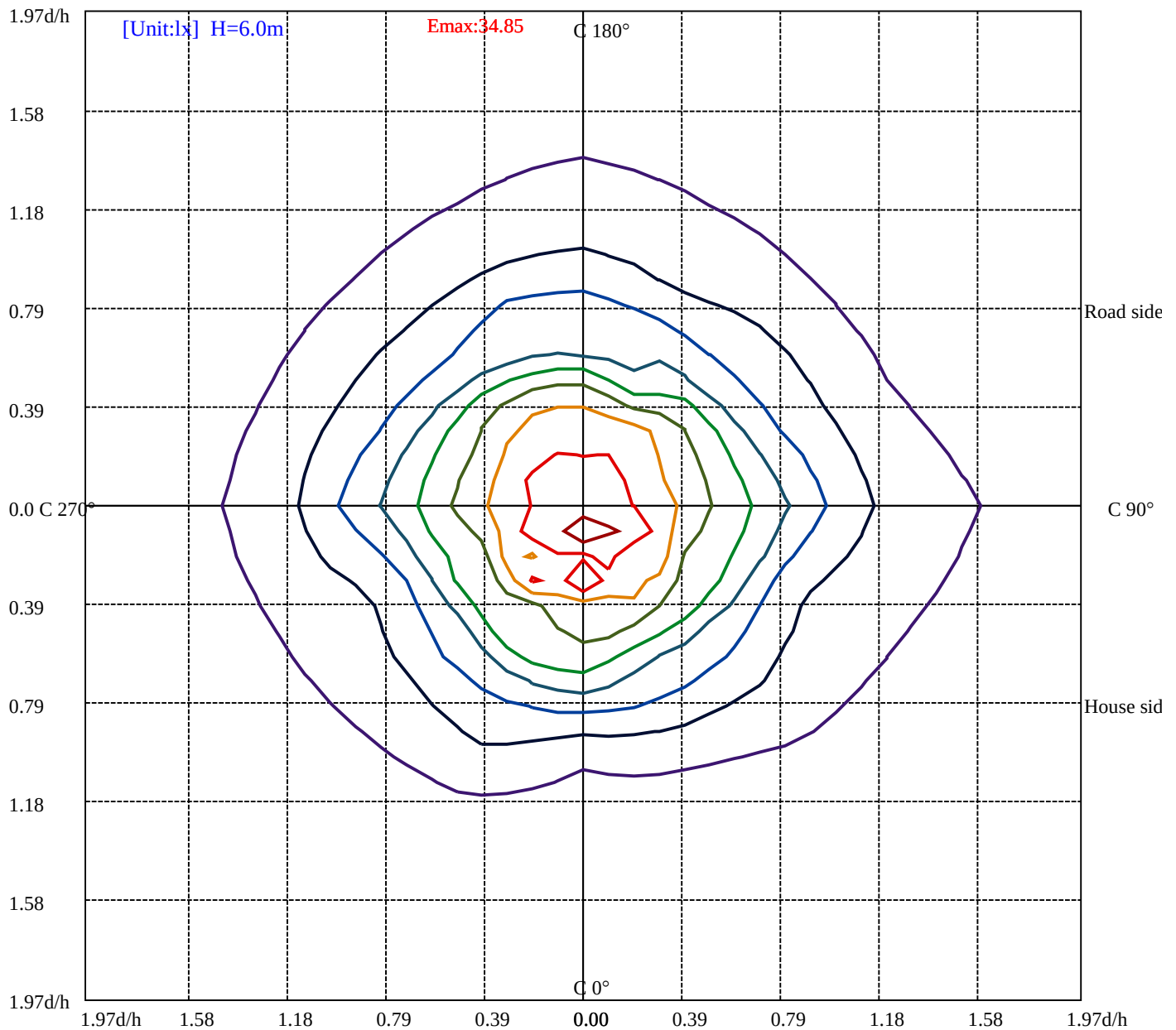
(50%Imax) 712.198

(60%Imax) 854.637

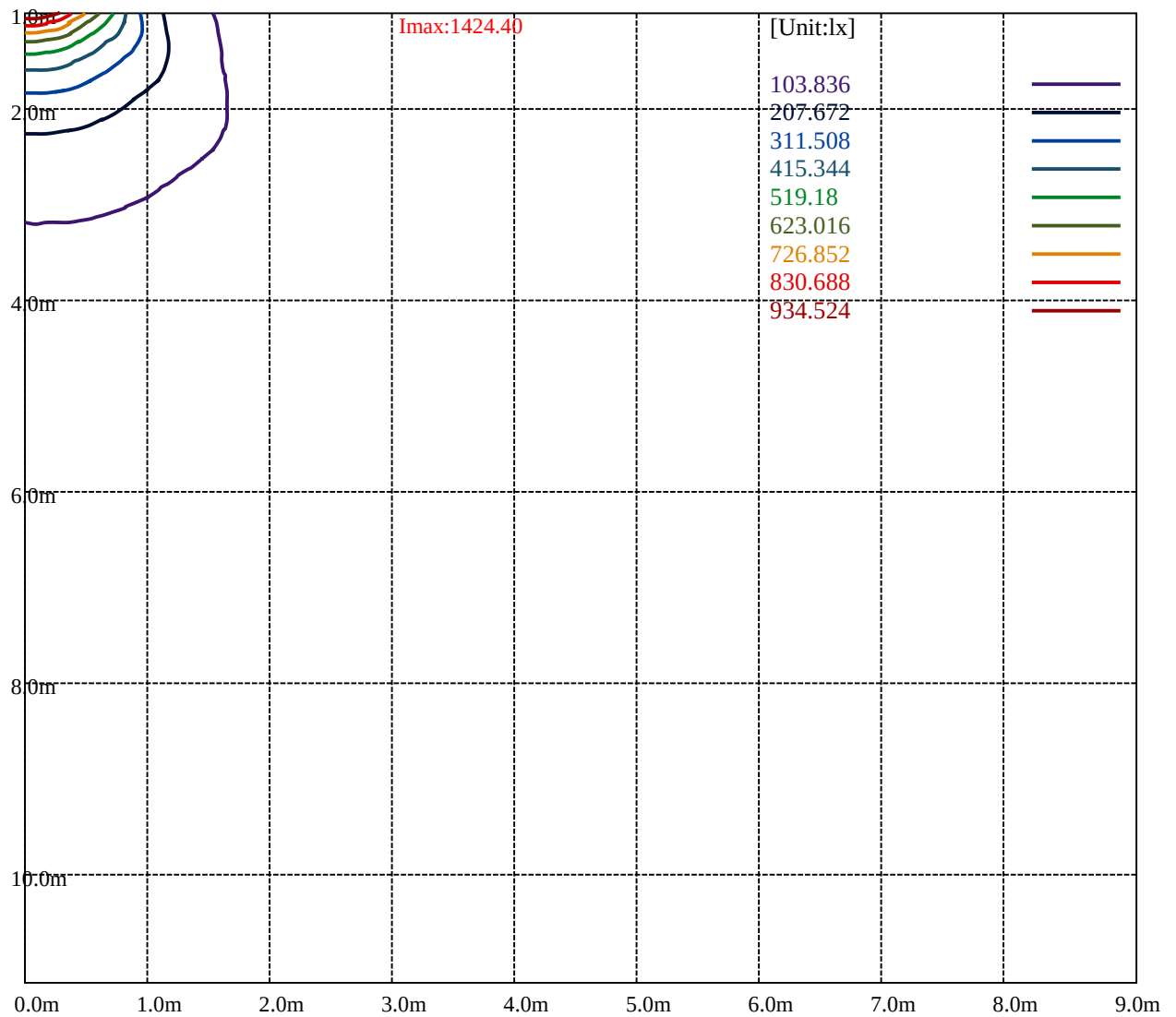
(70%Imax) 997.077

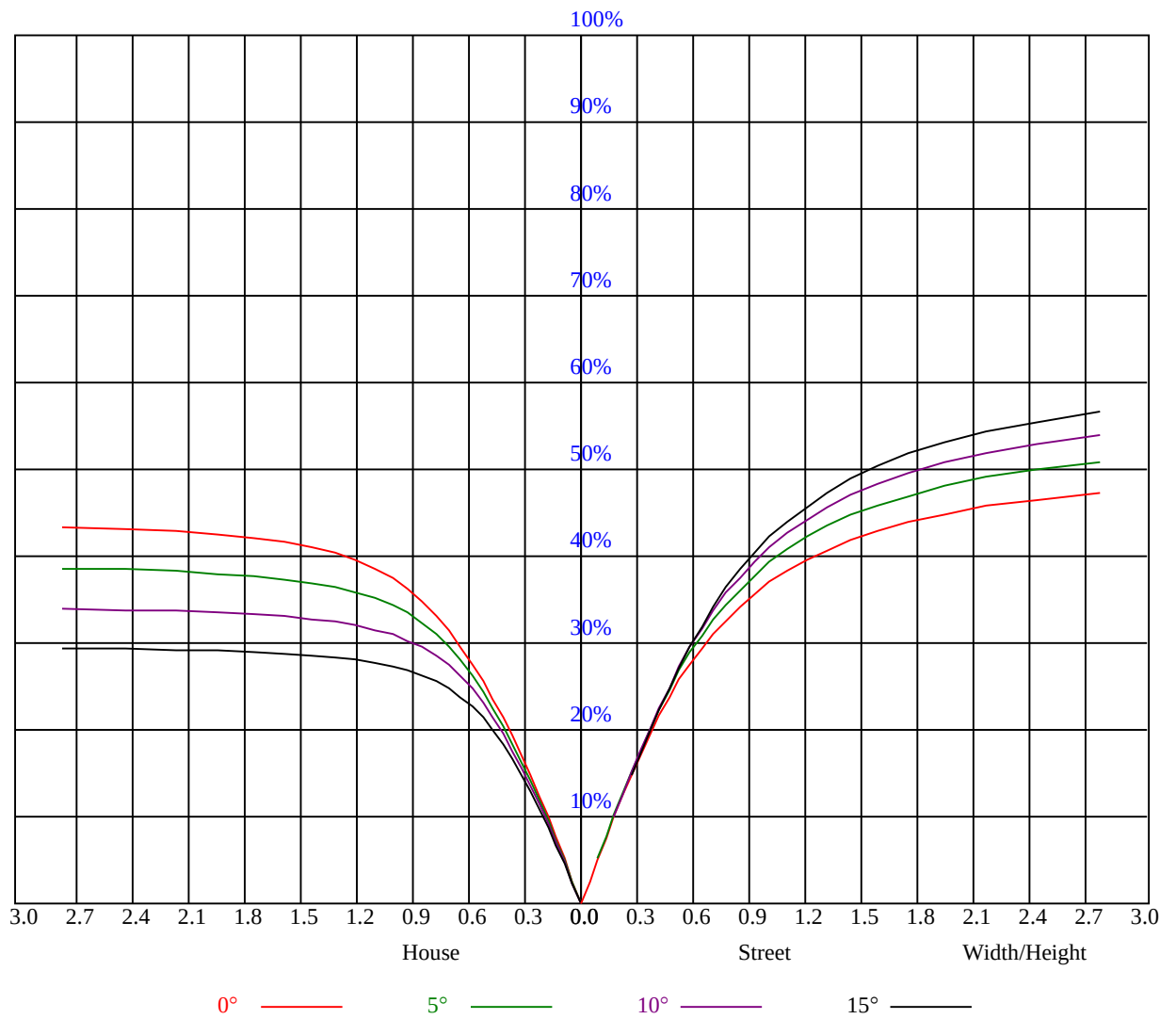
(80%Imax) 1139.52

(90%Imax) 1281.96



(10%Emax) 3.485389	—
(20%Emax) 6.970806	—
(30%Emax) 10.45619	—
(40%Emax) 13.94158	—
(50%Emax) 17.427	—
(60%Emax) 20.91239	—
(70%Emax) 24.3978	—
(80%Emax) 27.88305	—
(90%Emax) 31.36861	—





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	1038.36	1049.20	1061.91	1066.29	1070.83	1062.81	1069.47	1102.30	1078.55
22.5	1038.36	1079.76	1080.82	1029.53	1017.27	1027.86	1048.74	927.11	809.55
45.0	1038.36	1116.82	1043.30	1077.79	1082.93	1100.33	1003.96	779.14	756.30
67.5	1038.36	1064.48	1098.82	1074.01	1133.62	864.17	696.84	921.66	720.14
90.0	1038.36	1092.01	1056.00	1081.42	1076.13	1119.70	801.23	716.66	914.25
112.5	1038.36	1115.16	1067.50	1104.72	1082.03	1146.93	931.34	685.80	907.59
135.0	1038.36	1131.04	1080.21	1075.22	1101.24	1099.73	1047.68	832.55	746.16
157.5	1038.36	1084.90	1115.61	1104.57	1053.43	1010.62	1032.55	971.89	858.27
180.0	1038.36	1046.02	1059.94	1095.79	1065.54	1074.61	1097.31	1046.78	1070.07
202.5	1038.36	1041.93	1174.62	1188.99	962.51	910.77	990.80	842.23	616.20
225.0	1038.36	1147.38	1108.96	908.35	1268.87	893.82	1024.54	774.15	810.31
247.5	1038.36	1012.58	1248.75	933.61	1211.98	871.73	1206.54	988.98	813.79
270.0	1038.36	1335.13	902.44	1424.40	1005.93	1044.66	1175.98	1057.37	796.39
292.5	1038.36	1325.45	984.44	1281.12	916.06	1215.62	965.38	836.03	839.36
315.0	1038.36	1235.74	1147.08	953.58	1262.36	980.06	1069.92	848.89	821.81
337.5	1038.36	1112.89	1213.50	1207.14	1039.51	948.89	1025.44	996.40	718.78
360.0	1038.36	1049.20	1061.91	1066.29	1070.83	1062.81	1069.47	1102.30	1078.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	974.01	861.90	826.65	797.75	663.71	436.02	300.40	184.36	74.56
22.5	765.22	630.12	477.32	364.76	280.04	215.29	159.16	127.84	90.62
45.0	719.84	592.30	440.86	452.66	356.29	279.43	283.97	188.05	131.02
67.5	579.44	585.04	519.23	475.96	333.44	226.48	194.11	131.32	111.05
90.0	755.09	635.57	623.77	568.55	564.61	286.54	238.28	212.11	131.02
112.5	718.63	577.02	538.29	529.97	420.13	362.64	214.53	165.81	137.22
135.0	705.16	621.65	416.65	393.96	344.49	229.96	232.08	169.60	124.97
157.5	781.87	684.89	496.69	359.92	265.21	175.50	132.23	102.88	71.59
180.0	1004.41	786.71	658.87	618.02	548.28	434.50	289.27	151.59	79.88
202.5	593.66	628.91	503.49	388.97	326.79	235.66	169.28	106.66	58.44
225.0	644.80	562.35	420.59	296.50	225.29	127.22	80.23	46.64	27.10
247.5	790.19	567.34	298.93	217.66	147.77	98.13	64.00	36.93	17.44
270.0	429.81	258.42	185.50	122.88	90.82	61.56	33.06	11.15	4.95
292.5	606.52	345.09	244.64	164.91	103.33	66.57	36.91	17.13	9.41
315.0	711.52	599.56	445.85	375.96	251.32	180.16	104.53	55.67	34.66
337.5	607.73	641.62	597.60	439.04	382.01	314.23	212.15	146.06	109.99
360.0	974.01	861.90	826.65	797.75	663.71	436.02	300.40	184.36	74.56
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	44.74	33.57	34.86	35.27	35.28	32.83	26.08	21.45	18.87
22.5	78.22	55.24	45.11	39.08	33.45	29.86	26.04	22.95	20.30
45.0	105.00	82.60	63.98	59.41	49.71	37.81	33.84	29.12	26.25
67.5	119.52	93.80	62.17	46.46	37.52	35.98	32.95	29.89	29.46
90.0	129.96	140.40	88.05	66.31	41.24	37.66	38.49	35.37	31.06
112.5	103.33	104.39	92.89	56.89	46.92	35.37	32.98	29.65	26.57
135.0	98.79	78.52	56.43	47.73	42.06	33.40	28.99	25.27	21.92
157.5	56.54	47.11	37.11	31.86	27.26	24.37	21.59	18.40	16.14
180.0	28.99	28.26	29.24	31.94	31.56	27.55	24.61	20.03	19.24
202.5	40.08	37.14	36.04	36.66	30.18	26.70	22.19	18.81	16.25
225.0	22.75	22.27	18.88	15.82	14.78	12.50	11.23	10.50	9.95
247.5	8.62	7.82	7.25	6.88	6.84	6.82	6.84	6.94	6.90
270.0	4.92	4.98	5.13	5.26	5.48	5.72	5.85	5.99	6.19
292.5	8.26	7.17	6.78	6.41	6.25	6.02	5.95	5.90	5.92
315.0	29.73	25.22	22.66	19.00	16.19	12.48	11.03	10.30	9.61
337.5	59.77	46.69	44.07	44.25	34.80	30.18	25.55	21.35	18.61
360.0	44.74	33.57	34.86	35.27	35.28	32.83	26.08	21.45	18.87

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	15.54	12.86	10.92	9.30	7.99	6.75	5.96	5.70	5.67
22.5	19.76	17.52	14.80	12.10	9.09	7.90	7.32	7.19	7.19
45.0	25.46	25.54	23.00	18.50	14.58	11.24	7.99	7.23	7.22
67.5	30.86	28.79	23.30	18.59	14.19	10.35	7.38	7.34	7.38
90.0	31.03	32.86	31.50	24.98	19.49	14.74	10.35	6.72	6.84
112.5	26.51	28.05	26.52	21.71	17.26	13.06	9.09	6.60	6.51
135.0	20.50	20.89	19.37	15.54	12.39	9.14	6.32	6.17	6.13
157.5	16.32	13.15	11.56	8.82	7.23	6.46	5.96	5.72	5.72
180.0	15.89	12.65	10.29	8.76	7.37	6.49	5.82	5.52	5.57
202.5	14.01	12.39	11.01	9.46	8.47	7.76	7.29	7.25	7.22
225.0	9.44	8.94	8.34	7.70	7.25	7.13	7.20	7.23	7.22
247.5	6.88	6.97	7.13	7.05	7.02	7.10	7.26	7.37	7.38
270.0	6.40	6.55	6.54	6.60	6.81	6.96	6.99	6.96	6.87
292.5	6.20	6.41	6.46	6.61	6.72	6.76	6.75	6.64	6.51
315.0	9.00	8.34	7.61	6.85	6.31	6.07	6.10	6.10	6.07
337.5	14.51	12.09	10.02	8.46	7.43	6.26	5.82	5.82	5.75
360.0	15.54	12.86	10.92	9.30	7.99	6.75	5.96	5.70	5.67

C/γ(°)	180.0
0.0	6.62
22.5	6.62
45.0	6.62
67.5	6.62
90.0	6.62
112.5	6.62
135.0	6.62
157.5	6.62
180.0	6.62
202.5	6.62
225.0	6.62
247.5	6.62
270.0	6.62
292.5	6.62
315.0	6.62
337.5	6.62
360.0	6.62