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Hardware Concepts,Inc.

LumCAT: LED-WP15-XXX

Luminaire: LED wall— mounted area luminaire

Report No: BSR1501040201-9

Voltage(V): 120.0600

Test No: BSR1501040201-9

Current(A): 0.1140

LampCAT:

Power (W): 13.4650

Lamp flux(lm)

PF: 0.9840

Number of Lamps: 1

Ballast type:

Length(mm): 200

Width(mm): 150

Phm Type: C

Height(mm): 100

Photometric Results

Lumens(lm): 1317.23

Bright Area: 0.007

Lumens(lm)/Power(W): 97.83

SLI: 18.536

Central intensity(cd): 538.347

Maximum intensity(cd): 565.371

Angle of maximum intensity: $C=337.5$ $\gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=130.2

[C90/270]Total=102.3

Field angle(10%Imax): [C0/180]Total=162.4

[C90/270]Total=140.8

IES Classification : TypeIV

Longitudinal Classification : VeryShort

Cut Off Classification : FullCutoff

Max Cd(At 90°Vert) : 80.335

Max Cd(80 to 90°Vert) : 137.22

Street Side UpWard Lumens: 4.79%of Luminaire

Street Side DownWard Lumens: 58.61%of Luminaire

House Side UpWard Lumens: 1.48%of Luminaire

House Side DownWard Lumens: 35.12%of Luminaire

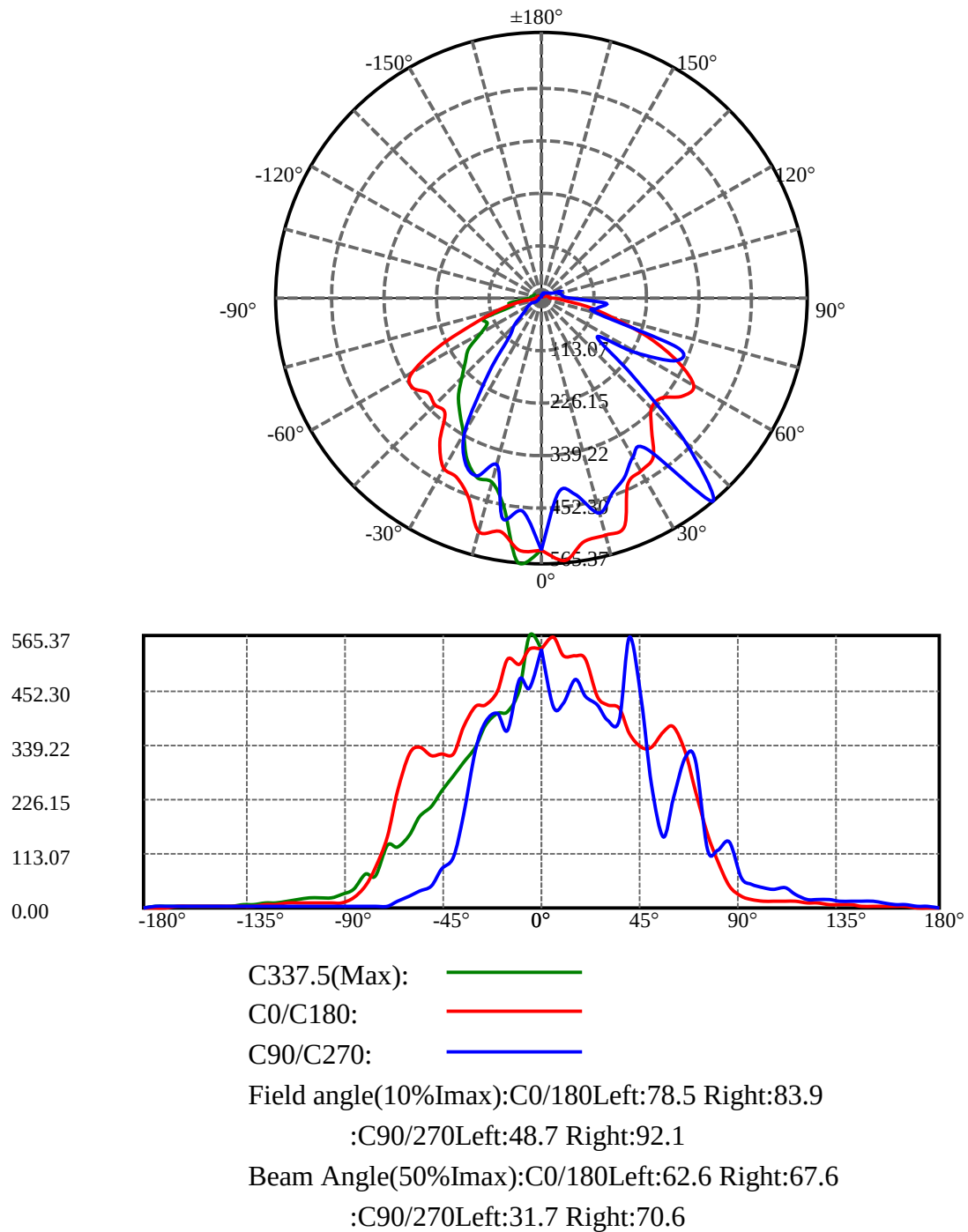
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	538.347	.000	.000	.000%	.000%
5.0	481.783	12.195	12.195	.926%	.926%
10.0	442.419	33.062	45.257	2.510%	3.436%
15.0	430.694	51.793	97.049	3.932%	7.368%
20.0	421.853	70.262	167.311	5.334%	12.702%
25.0	403.112	86.524	253.835	6.569%	19.270%
30.0	372.665	98.175	352.010	7.453%	26.724%
35.0	347.254	106.013	458.023	8.048%	34.772%
40.0	334.753	113.788	571.811	8.638%	43.410%
45.0	298.436	117.240	689.051	8.901%	52.311%
50.0	226.305	106.032	795.083	8.050%	60.360%
55.0	165.130	85.111	880.194	6.461%	66.822%
60.0	153.265	73.596	953.790	5.587%	72.409%
65.0	146.949	72.983	1026.773	5.541%	77.950%
70.0	129.895	70.099	1096.871	5.322%	83.271%
75.0	73.385	53.134	1150.005	4.034%	87.305%
80.0	53.938	34.068	1184.073	2.586%	89.892%
85.0	49.737	28.171	1212.244	2.139%	92.030%
90.0	31.942	22.364	1234.608	1.698%	93.728%
95.0	23.810	15.265	1249.874	1.159%	94.887%
100.0	19.870	11.869	1261.743	.901%	95.788%
105.0	17.316	9.950	1271.693	.755%	96.543%
110.0	16.047	8.721	1280.413	.662%	97.205%
115.0	14.153	7.647	1288.060	.581%	97.786%
120.0	11.111	6.142	1294.202	.466%	98.252%
125.0	9.823	4.839	1299.041	.367%	98.620%
130.0	8.659	4.019	1303.059	.305%	98.925%
135.0	7.769	3.320	1306.379	.252%	99.177%
140.0	7.246	2.780	1309.159	.211%	99.388%
145.0	6.808	2.345	1311.504	.178%	99.566%
150.0	6.226	1.919	1313.423	.146%	99.711%
155.0	5.247	1.452	1314.875	.110%	99.822%
160.0	4.458	1.018	1315.893	.077%	99.899%
165.0	3.748	.676	1316.569	.051%	99.950%
170.0	3.199	.412	1316.981	.031%	99.982%
175.0	2.717	.212	1317.193	.016%	99.998%
180.0	.000	.032	1317.226	.002%	100.000%

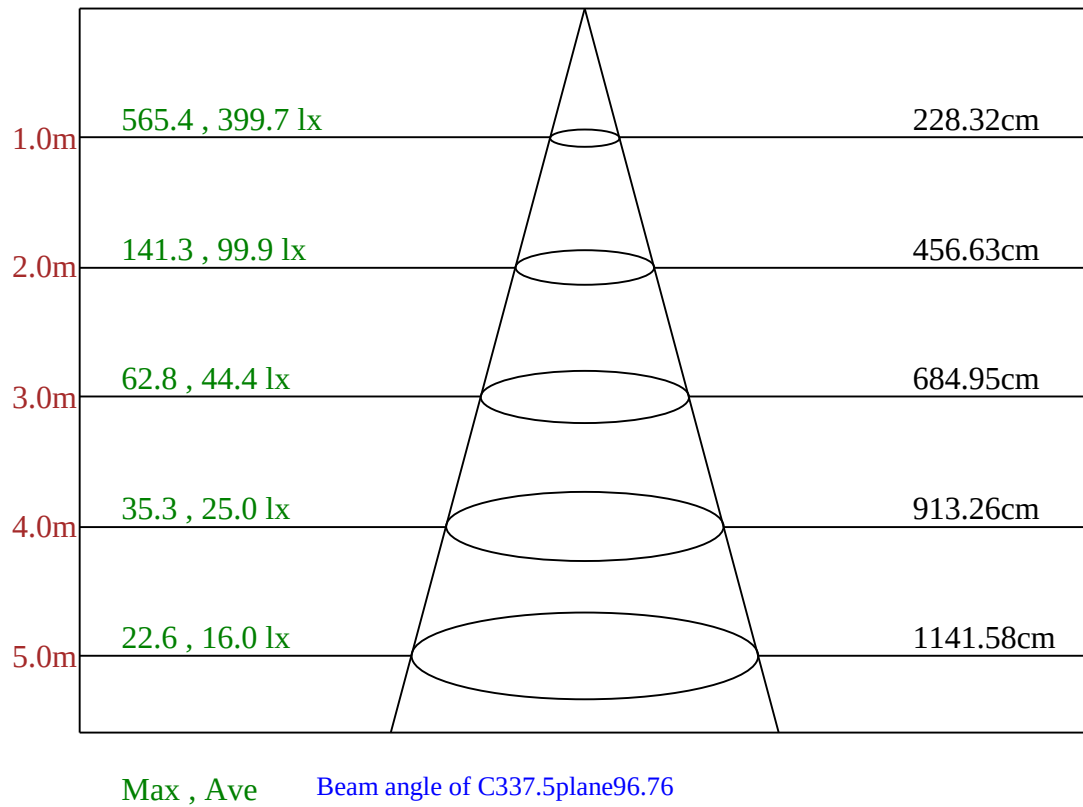
ZONAL LUMEN SUMMARY

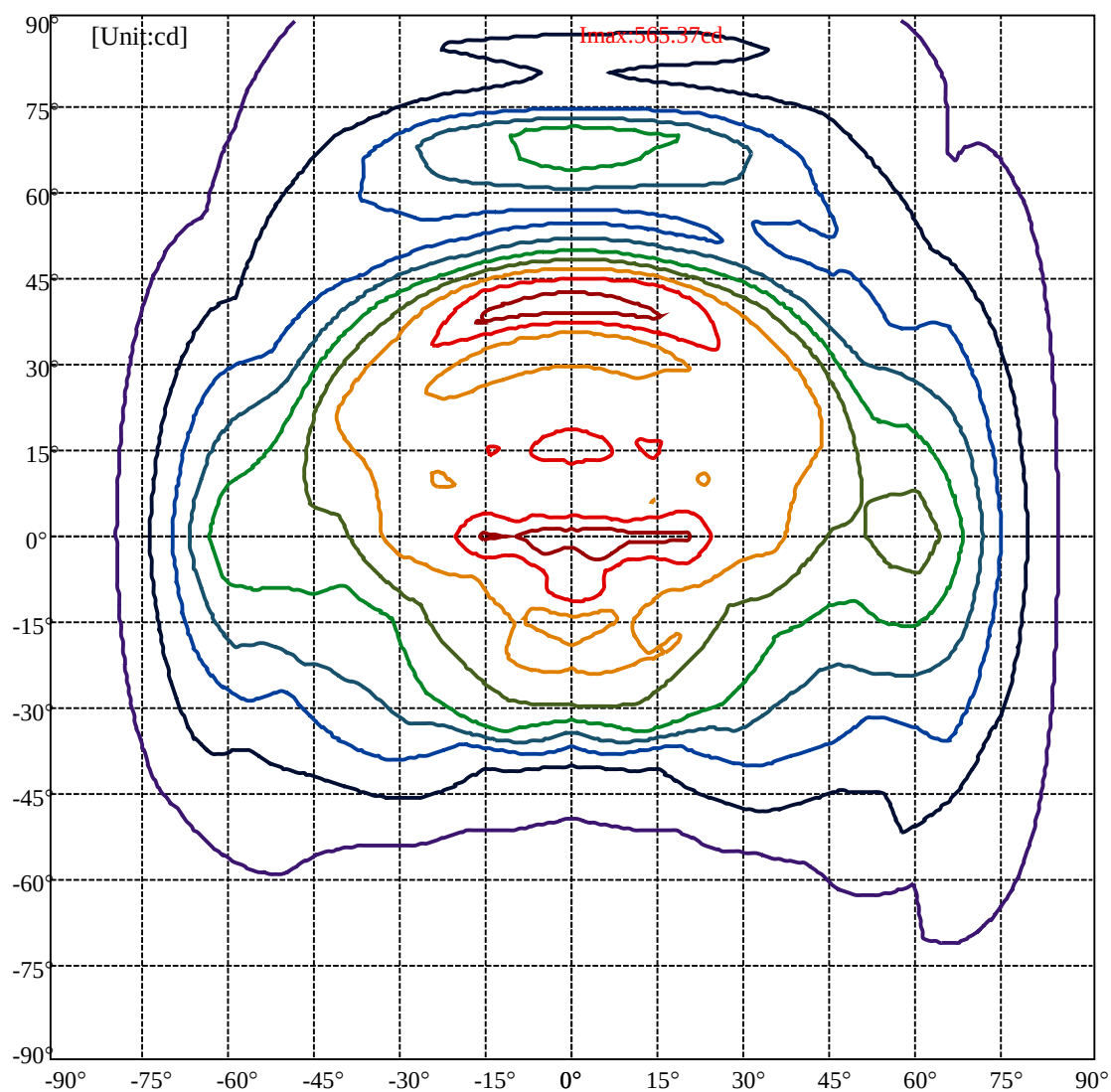
Zone	Lumens	%Fixt
0-30	352.01	26.72%
0-40	571.81	43.41%
0-60	953.79	72.41%
0-90	1234.61	93.73%
0-120	1294.20	98.25%
0-180	1317.23	100.00%
60-90	354.41	26.91%
90-120	81.96	6.22%
90-130	90.82	6.89%
90-150	101.18	7.68%
90-180	104.95	7.97%
0-66.93	1053.78	80.00%

ZONAL LUMEN SUMMARY

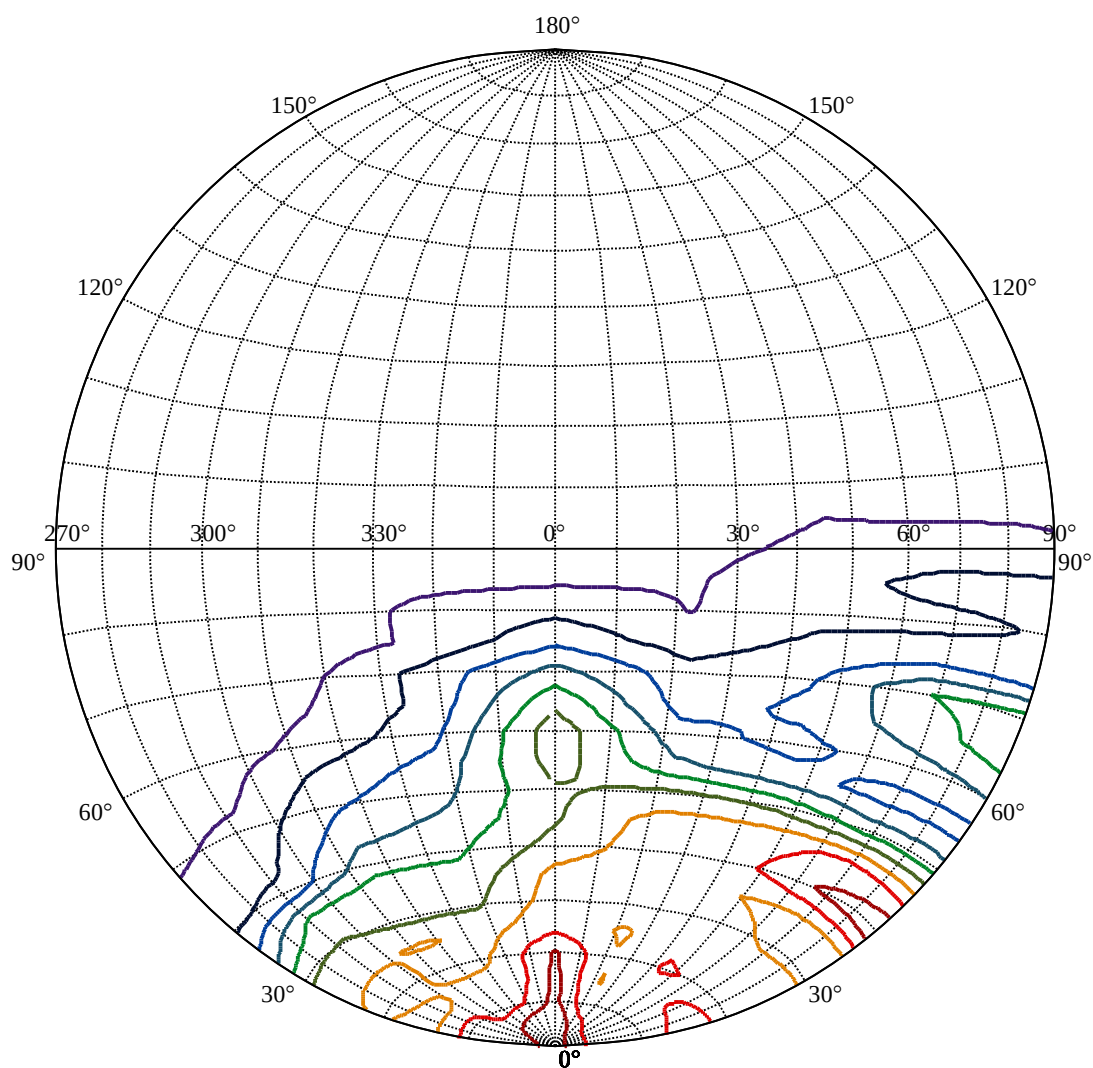
0-10	45.26
10-20	122.05
20-30	184.70
30-40	219.80
40-50	223.27
50-60	158.71
60-70	143.08
70-80	87.20
80-90	50.54
90-100	27.13
100-110	18.67
110-120	13.79
120-130	8.86
130-140	6.10
140-150	4.26
150-160	2.47
160-170	1.09
170-180	0.21





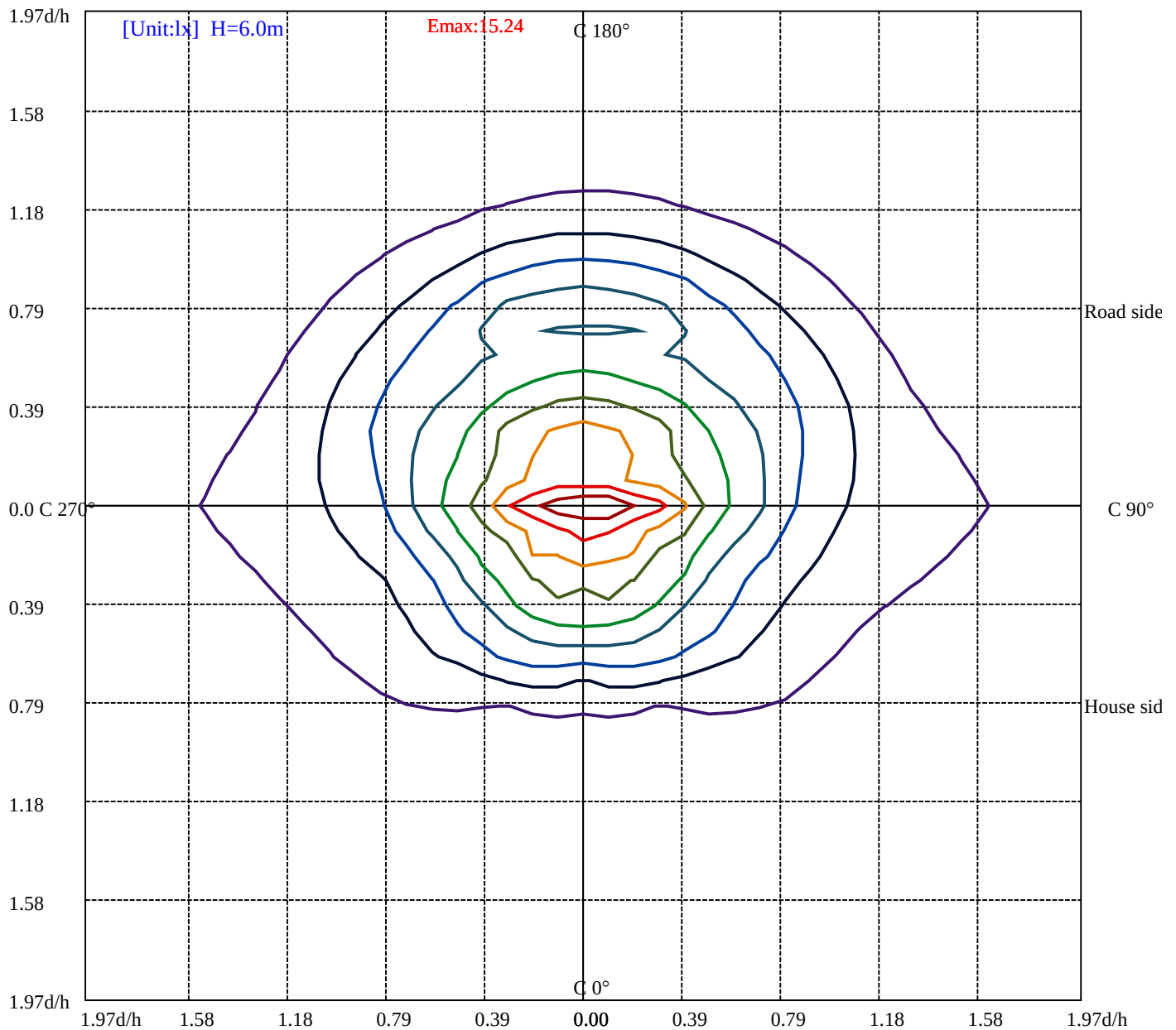


(10%Imax) 56.3101
(20%Imax) 112.62
(30%Imax) 168.93
(40%Imax) 225.241
(50%Imax) 281.551
(60%Imax) 337.861
(70%Imax) 394.171
(80%Imax) 450.481
(90%Imax) 506.791

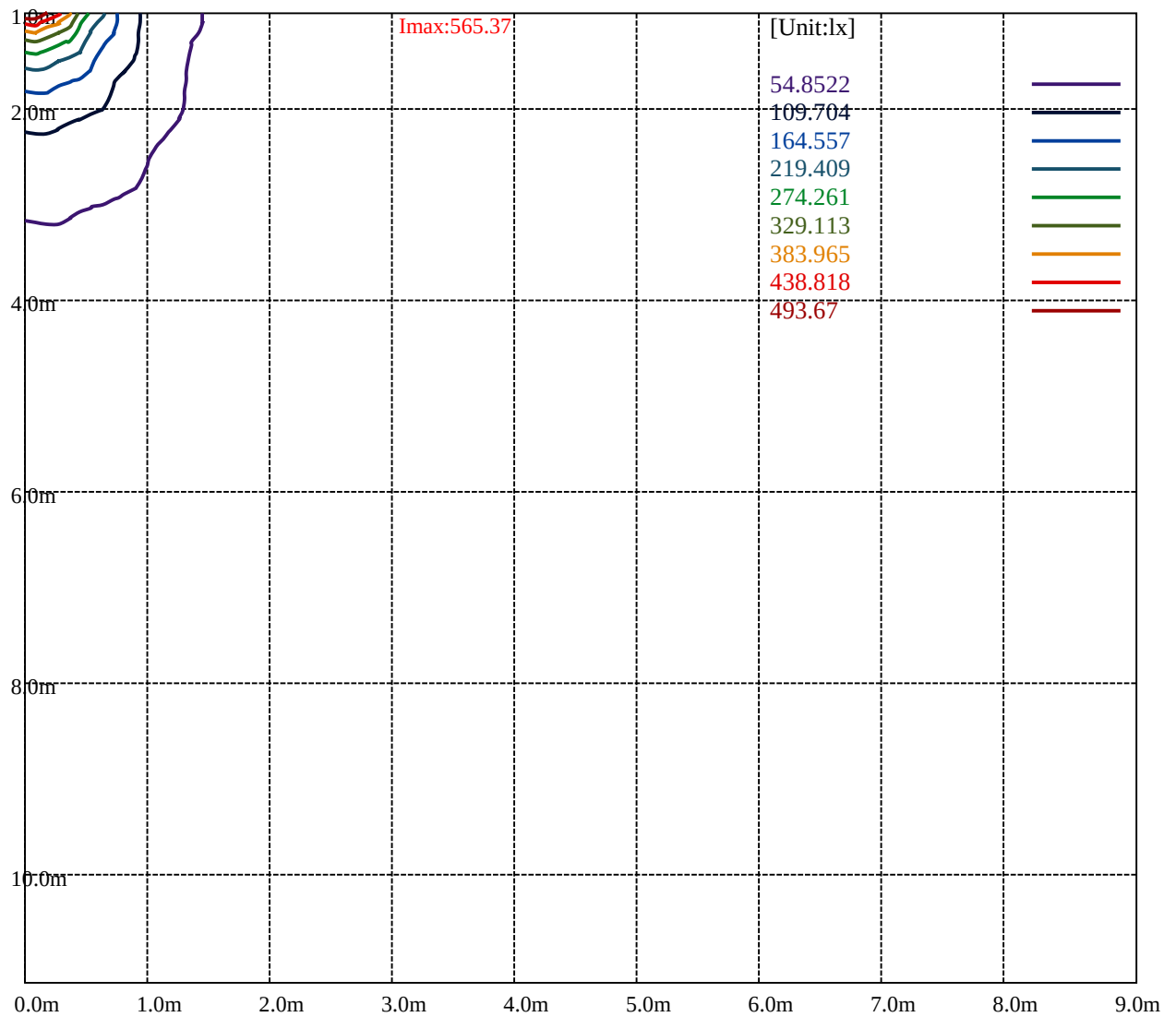


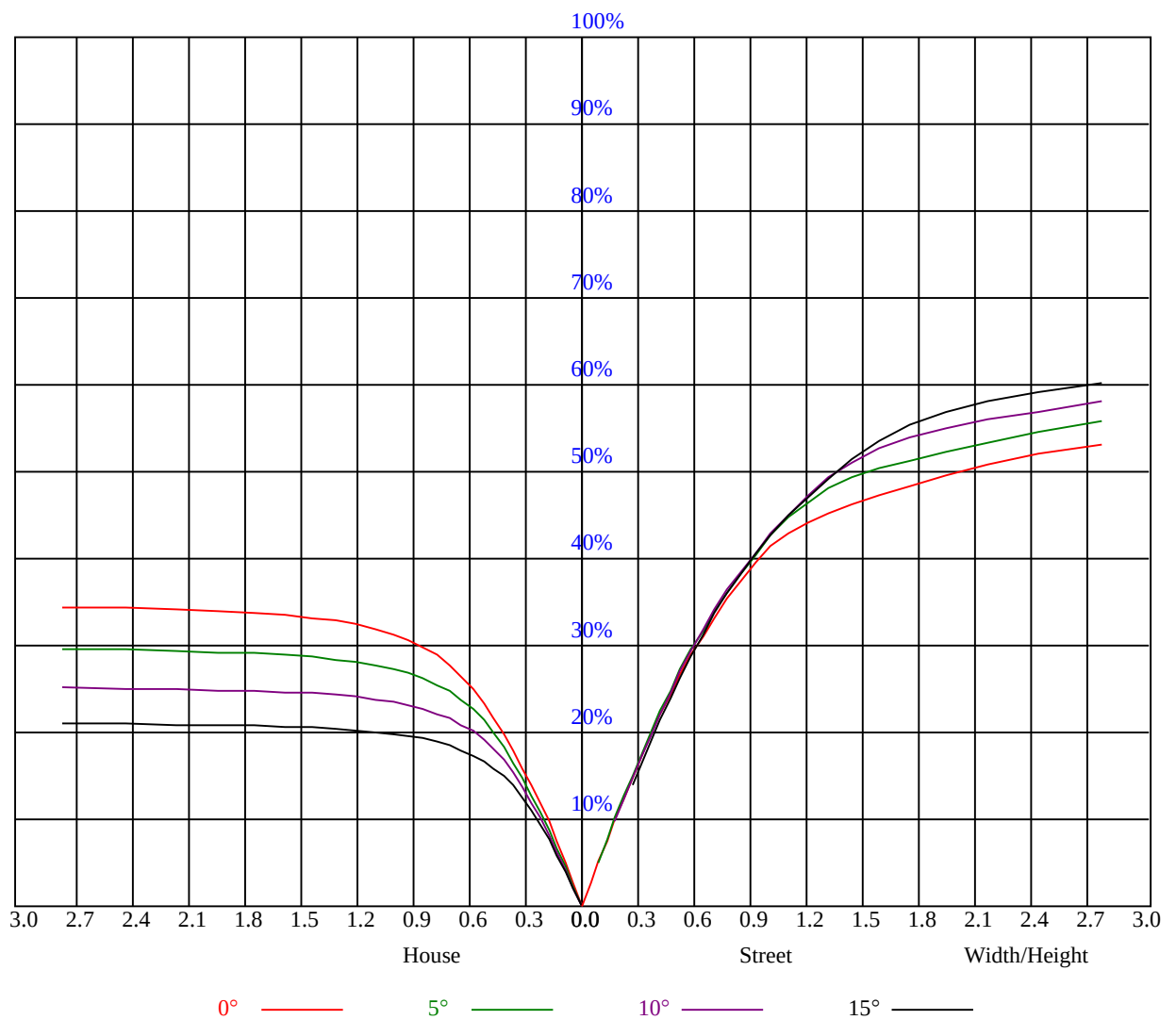
Imax:565.37
(10%Imax) 56.5297
(20%Imax) 113.059
(30%Imax) 169.589
(40%Imax) 226.119
(50%Imax) 282.648
(60%Imax) 339.178
(70%Imax) 395.708
(80%Imax) 452.237
(90%Imax) 508.767





(10%Emax) 1.523658
(20%Emax) 3.047306
(30%Emax) 4.570972
(40%Emax) 6.094639
(50%Emax) 7.618306
(60%Emax) 9.141944
(70%Emax) 10.66561
(80%Emax) 12.18928
(90%Emax) 13.71292





Hardware Concepts,Inc. LED-WP15-XXX

Intensity data(cd)										Page: 11 Total:12	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	538.35	562.04	524.98	523.46	515.45	437.23	422.55	413.02	361.89		
22.5	538.35	488.67	413.93	392.60	400.01	387.91	431.48	432.99	426.18		
45.0	538.35	438.14	400.16	423.76	458.26	442.67	416.80	399.71	439.50		
67.5	538.35	420.74	422.70	456.29	442.83	412.42	390.33	379.28	515.29		
90.0	538.35	416.20	424.97	473.08	440.71	419.98	389.87	391.24	563.10		
112.5	538.35	415.74	413.48	456.59	441.92	410.00	390.93	387.91	525.28		
135.0	538.35	439.65	411.81	425.12	454.78	432.84	395.62	391.54	426.94		
157.5	538.35	496.84	423.46	422.25	394.26	388.97	405.76	408.33	411.06		
180.0	538.35	537.84	504.10	515.90	451.00	422.86	417.71	374.29	320.89		
202.5	538.35	531.48	441.92	406.82	384.43	367.79	323.00	266.15	231.85		
225.0	538.35	492.30	410.15	449.18	331.48	388.97	311.96	293.40	241.82		
247.5	538.35	458.56	459.01	360.68	442.83	382.61	338.59	300.60	128.23		
270.0	538.35	454.78	474.14	367.79	402.43	387.30	326.18	192.17	105.93		
292.5	538.35	475.20	480.04	367.48	440.71	387.15	344.94	301.85	126.86		
315.0	538.35	514.99	420.43	443.73	344.03	403.19	324.82	321.49	257.04		
337.5	538.35	565.37	453.42	406.37	404.55	377.92	332.08	302.10	274.18		
360.0	538.35	562.04	524.98	523.46	515.45	437.23	422.55	413.02	361.89		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	332.38	332.54	366.27	375.65	321.64	243.11	154.03	97.93	44.63		
22.5	422.10	354.93	238.13	191.53	145.69	134.95	84.12	54.95	51.54		
45.0	429.36	329.51	190.78	151.90	180.64	165.81	129.20	96.98	92.74		
67.5	461.74	261.88	150.68	198.64	255.83	281.70	148.26	96.07	134.35		
90.0	432.84	255.98	147.21	228.45	313.47	304.70	123.00	119.07	137.22		
112.5	441.16	240.40	142.21	197.43	240.10	260.22	130.56	90.62	115.74		
135.0	388.97	287.90	169.29	135.40	154.01	131.92	103.63	81.09	67.31		
157.5	395.02	305.15	206.96	150.23	119.52	92.29	56.58	42.03	37.84		
180.0	320.58	316.35	333.44	320.89	243.58	146.90	84.87	44.06	22.32		
202.5	233.58	212.68	153.00	132.82	99.08	91.32	46.37	37.67	20.71		
225.0	198.17	154.03	105.33	64.89	46.79	33.48	16.84	11.44	11.91		
247.5	94.74	73.38	43.72	28.81	17.87	9.29	4.49	3.68	3.27		
270.0	81.91	46.95	33.60	23.04	12.87	4.83	1.98	1.95	1.97		
292.5	97.13	72.68	43.18	28.09	18.35	8.71	3.84	3.04	2.65		
315.0	204.36	164.66	129.91	74.04	55.13	38.25	19.77	13.31	11.88		
337.5	240.93	211.87	188.36	150.43	126.60	130.84	66.60	69.12	39.73		
360.0	332.38	332.54	366.27	375.65	321.64	243.11	154.03	97.93	44.63		
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	23.86	18.78	14.16	13.98	13.96	13.72	11.30	9.79	7.29		
22.5	41.45	29.41	23.84	21.89	19.06	17.60	15.25	13.48	11.66		
45.0	69.14	55.10	38.81	28.29	24.02	22.22	20.48	18.64	15.70		
67.5	80.34	47.16	40.68	35.60	33.42	33.47	20.74	17.93	16.66		
90.0	62.23	48.10	43.51	38.53	42.09	27.07	18.74	17.93	17.25		
112.5	63.10	43.39	37.54	32.24	29.68	29.02	18.41	15.98	14.49		
135.0	58.41	44.12	31.67	22.98	19.65	18.00	16.13	14.33	12.35		
157.5	30.92	22.47	18.46	16.29	14.37	13.22	11.07	9.55	8.05		
180.0	11.29	10.35	10.48	10.53	10.30	9.15	7.59	6.43	5.17		
202.5	17.01	16.46	16.38	15.93	13.99	11.60	9.95	7.93	7.13		
225.0	9.52	8.59	7.97	7.20	6.40	5.42	5.23	4.72	4.25		
247.5	3.15	3.07	3.00	3.01	3.10	3.19	3.10	2.94	2.86		
270.0	2.03	2.10	2.13	2.22	2.33	2.44	2.41	2.38	2.47		
292.5	2.48	2.39	2.36	2.24	2.22	2.21	2.18	2.16	2.25		
315.0	9.68	8.00	7.14	6.55	5.25	4.42	4.28	4.12	3.86		
337.5	26.48	21.48	19.79	19.56	16.88	13.71	10.89	8.88	7.11		
360.0	23.86	18.78	14.16	13.98	13.96	13.72	11.30	9.79	7.29		

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	6.29	5.49	4.69	3.49	2.69	2.28	1.95	1.74	1.69
22.5	10.39	9.52	8.81	7.75	6.60	5.61	4.75	4.10	3.53
45.0	13.53	12.63	12.10	11.09	9.18	7.38	5.95	4.80	3.65
67.5	15.08	14.24	13.56	13.04	10.54	8.53	6.60	5.16	3.77
90.0	15.08	13.86	13.90	13.63	11.01	8.77	6.52	4.78	3.42
112.5	13.24	12.60	12.09	11.66	9.52	7.66	5.85	4.28	2.92
135.0	10.58	9.89	9.55	8.40	6.78	5.49	4.34	3.30	2.21
157.5	7.13	6.46	5.92	4.95	4.12	3.39	2.72	2.16	1.80
180.0	4.71	4.58	3.45	2.69	2.30	2.01	1.77	1.68	1.65
202.5	6.61	5.54	4.98	4.54	4.08	3.83	3.63	3.53	3.48
225.0	4.07	4.04	3.87	3.72	3.57	3.45	3.42	3.39	3.33
247.5	3.00	3.22	3.33	3.31	3.27	3.22	3.22	3.19	3.13
270.0	2.68	2.86	2.90	2.86	2.86	2.86	2.81	2.77	2.71
292.5	2.45	2.62	2.63	2.62	2.56	2.50	2.45	2.42	2.34
315.0	3.57	3.18	2.74	2.45	2.24	2.09	2.06	2.06	2.03
337.5	5.90	5.20	4.42	3.40	2.63	2.25	1.92	1.83	1.82
360.0	6.29	5.49	4.69	3.49	2.69	2.28	1.95	1.74	1.69
C/γ(°)	180.0								
0.0	0.00								
22.5	0.00								
45.0	0.00								
67.5	0.00								
90.0	0.00								
112.5	0.00								
135.0	0.00								
157.5	0.00								
180.0	0.00								
202.5	0.00								
225.0	0.00								
247.5	0.00								
270.0	0.00								
292.5	0.00								
315.0	0.00								
337.5	0.00								
360.0	0.00								