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LumCAT: LED-CL3-S-12W 4000K Ra80

Luminaire:

Report No:

Voltage(V): 230.1000

Test No:

Current(A): 0.0660

LampCAT:

Power (W): 11.5600

Lamp flux(lm): -1.0

PF: 0.7540

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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### Photometric Results

Lumens(lm): 1032.00

Efficiency(%): 79.38%

Lumens(lm)/Power(W): 89.27

Central intensity(cd): 316.864

Maximum intensity(cd): 319.009

Angle of maximum intensity: C=45.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=119.6

[C90/270]Total=109.5

Field angle(10%Imax): [C0/180]Total=168.6

[C90/270]Total=165.4

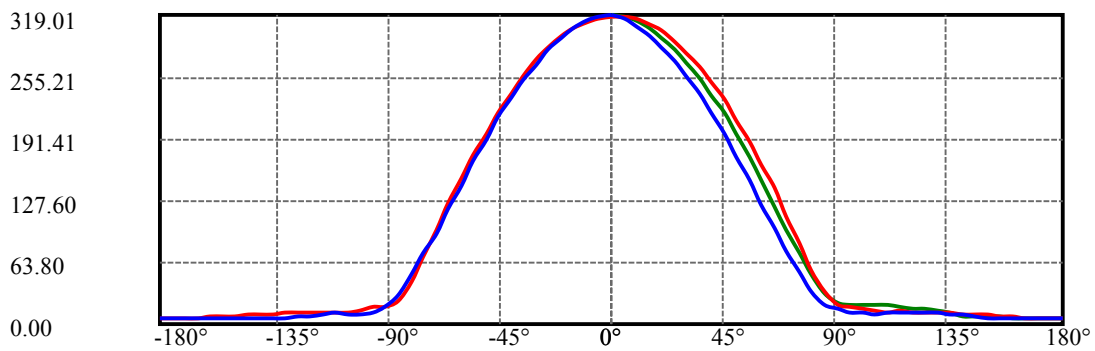
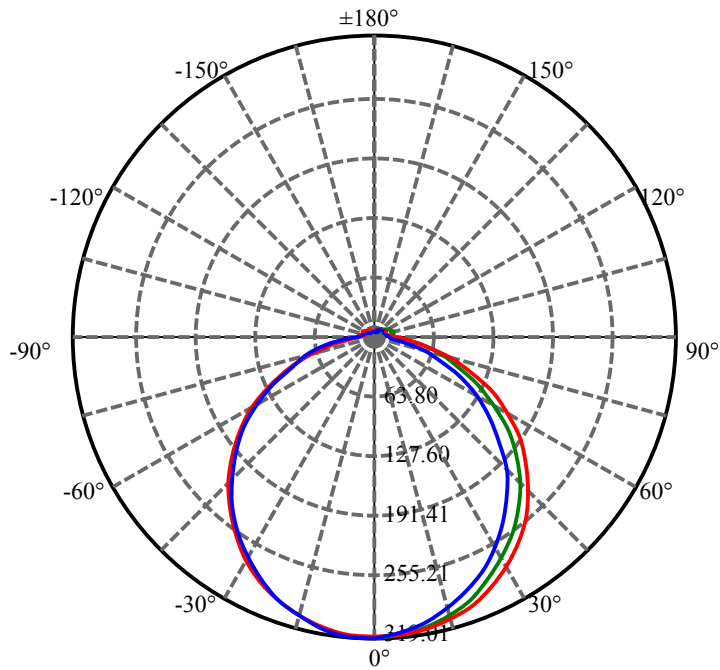
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	317.839	.000	.000	.000%	.000%
5.0	316.328	7.581	7.581	.583%	.583%
10.0	311.965	22.476	30.057	1.729%	2.312%
15.0	304.653	36.577	66.635	2.814%	5.126%
20.0	295.195	49.436	116.071	3.803%	8.929%
25.0	283.203	60.663	176.734	4.666%	13.595%
30.0	269.481	69.943	246.677	5.380%	18.975%
35.0	253.223	76.972	323.648	5.921%	24.896%
40.0	235.528	81.544	405.193	6.273%	31.169%
45.0	216.053	83.614	488.806	6.432%	37.600%
50.0	193.994	82.856	571.662	6.374%	43.974%
55.0	170.765	79.311	650.973	6.101%	50.075%
60.0	146.513	73.338	724.311	5.641%	55.716%
65.0	120.750	64.972	789.283	4.998%	60.714%
70.0	94.913	54.607	843.890	4.201%	64.915%
75.0	71.636	43.533	887.424	3.349%	68.263%
80.0	48.553	32.159	919.583	2.474%	70.737%
85.0	28.859	21.035	940.618	1.618%	72.355%
90.0	19.182	13.154	953.772	1.012%	73.367%
95.0	17.891	10.151	963.923	.781%	74.148%
100.0	16.477	9.338	973.261	.718%	74.866%
105.0	15.307	8.504	981.766	.654%	75.520%
110.0	14.990	7.919	989.685	.609%	76.130%
115.0	14.015	7.344	997.029	.565%	76.695%
120.0	12.723	6.500	1003.529	.500%	77.195%
125.0	11.675	5.640	1009.169	.434%	77.628%
130.0	10.627	4.849	1014.018	.373%	78.001%
135.0	9.701	4.108	1018.126	.316%	78.317%
140.0	8.702	3.407	1021.533	.262%	78.579%
145.0	7.995	2.786	1024.319	.214%	78.794%
150.0	7.312	2.254	1026.573	.173%	78.967%
155.0	6.898	1.798	1028.371	.138%	79.105%
160.0	6.508	1.406	1029.777	.108%	79.214%
165.0	5.996	1.031	1030.808	.079%	79.293%
170.0	5.533	.684	1031.491	.053%	79.345%
175.0	5.143	.382	1031.873	.029%	79.375%
180.0	5.070	.122	1031.995	.009%	79.384%

## ZONAL LUMEN SUMMARY

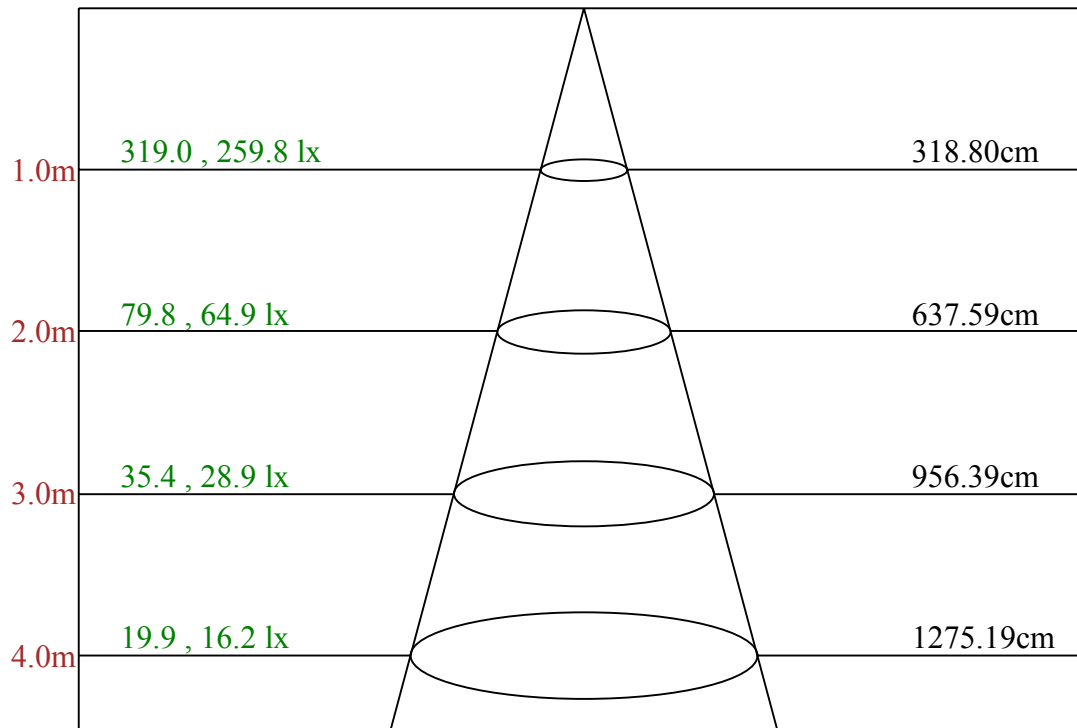
Zone	Lumens	%Lamp	%Fixt
0-30	246.68	N.A.	23.90%
0-40	405.19	N.A.	39.26%
0-60	724.31	N.A.	70.19%
0-90	953.77	N.A.	92.42%
0-120	1003.53	N.A.	97.24%
0-180	1032.00	N.A.	100.00%
60-90	302.80	N.A.	29.34%
90-120	62.91	N.A.	6.10%
90-130	73.40	N.A.	7.11%
90-150	85.96	N.A.	8.33%
90-180	91.26	N.A.	8.84%
0-68.32	825.60	N.A.	80.00%

## ZONAL LUMEN SUMMARY

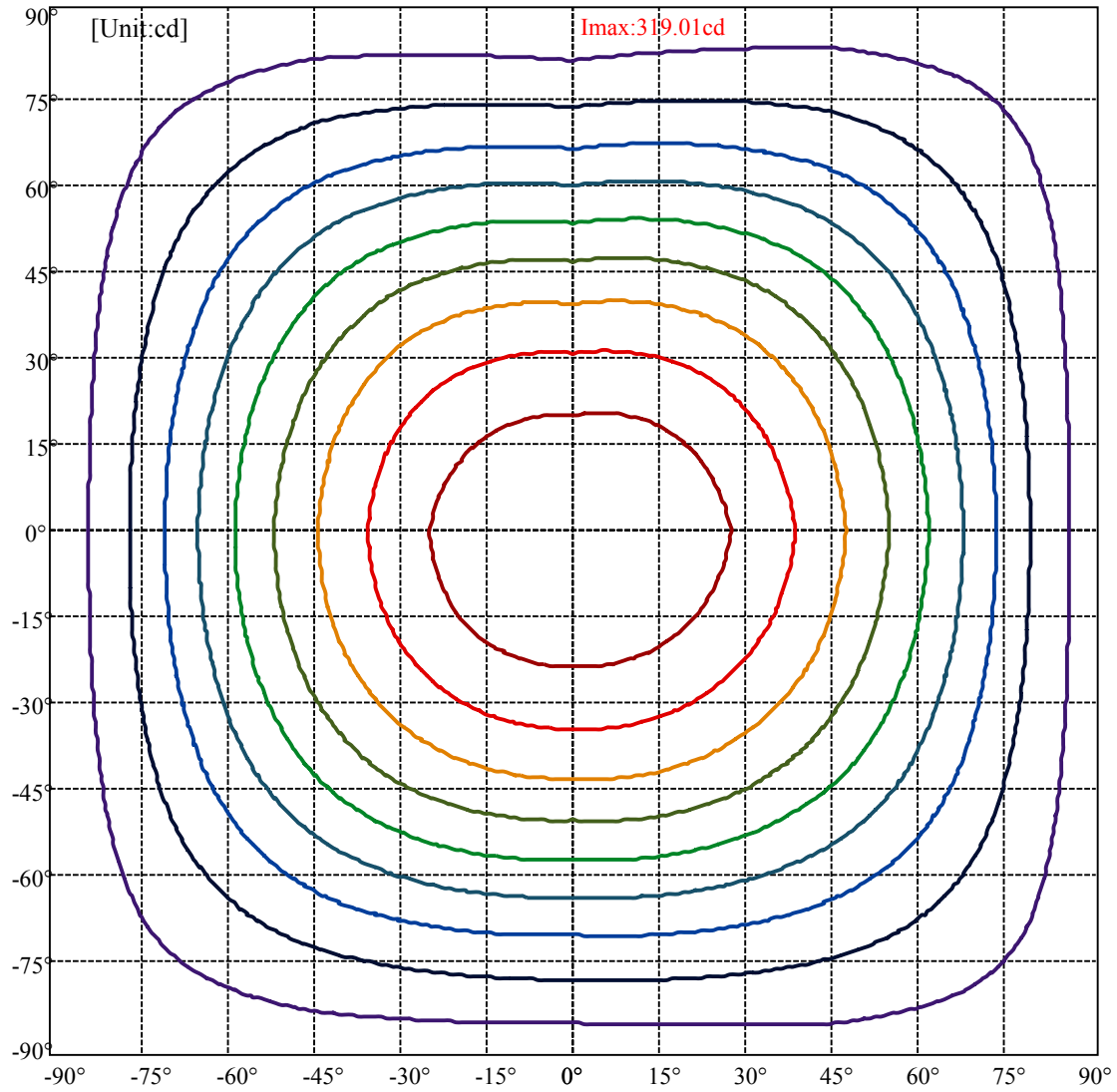
0-10	30.06
10-20	86.01
20-30	130.61
30-40	158.52
40-50	166.47
50-60	152.65
60-70	119.58
70-80	75.69
80-90	34.19
90-100	19.49
100-110	16.42
110-120	13.84
120-130	10.49
130-140	7.51
140-150	5.04
150-160	3.20
160-170	1.71
170-180	0.38












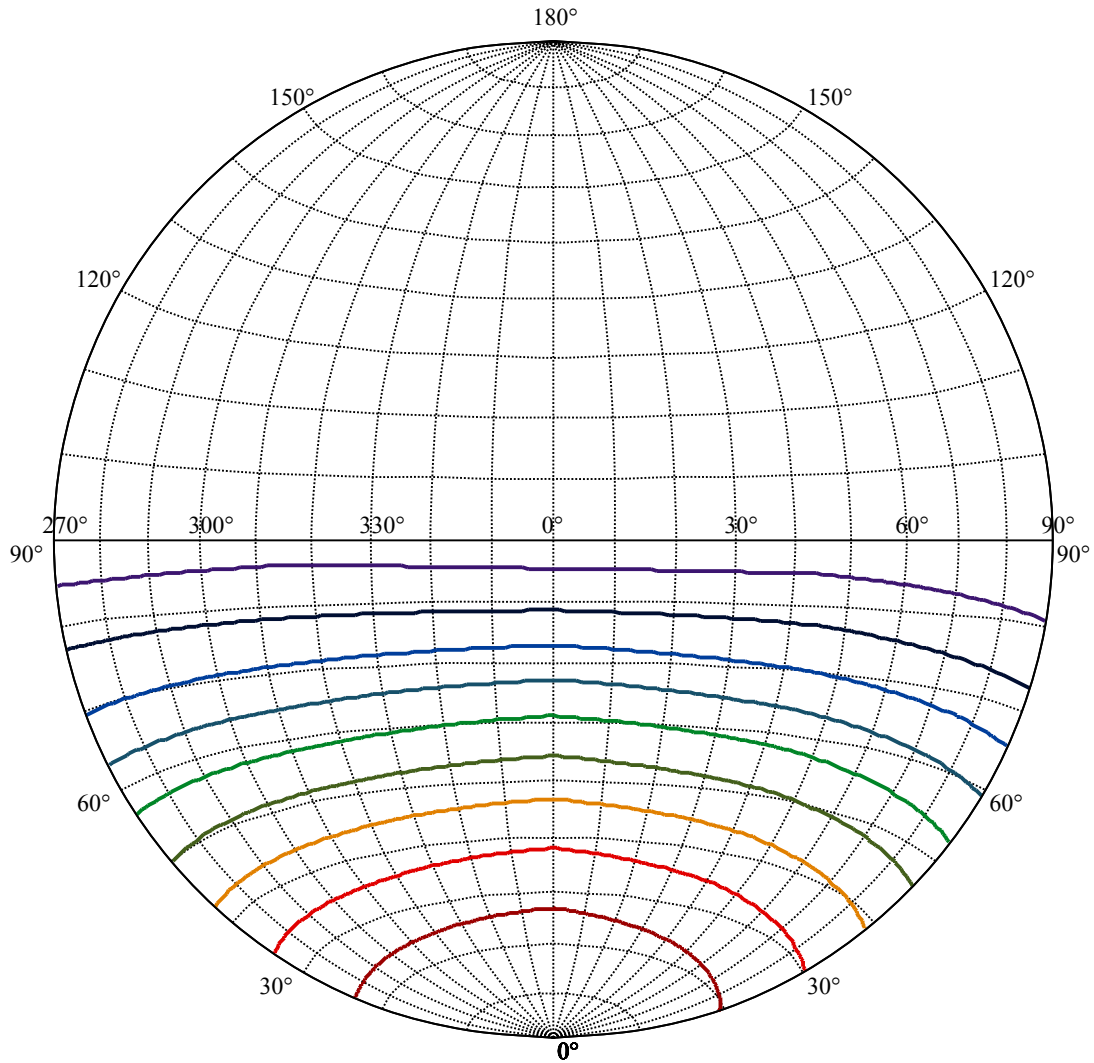
C45(Max): —  
C0/C180: —  
C90/C270: —



Max , Ave      Beam angle of C45plane115.80



(10%Imax)	31.8678	
(20%Imax)	63.7356	
(30%Imax)	95.6034	
(40%Imax)	127.471	
(50%Imax)	159.339	
(60%Imax)	191.207	
(70%Imax)	223.075	
(80%Imax)	254.942	
(90%Imax)	286.81	



House

[Unit:cd]

Road

**I<sub>max</sub>:319.01**

(10%I<sub>max</sub>) 31.9009

(20%I<sub>max</sub>) 63.8018

(30%I<sub>max</sub>) 95.7027

(40%I<sub>max</sub>) 127.604

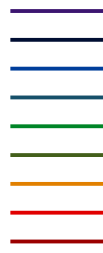
(50%I<sub>max</sub>) 159.505

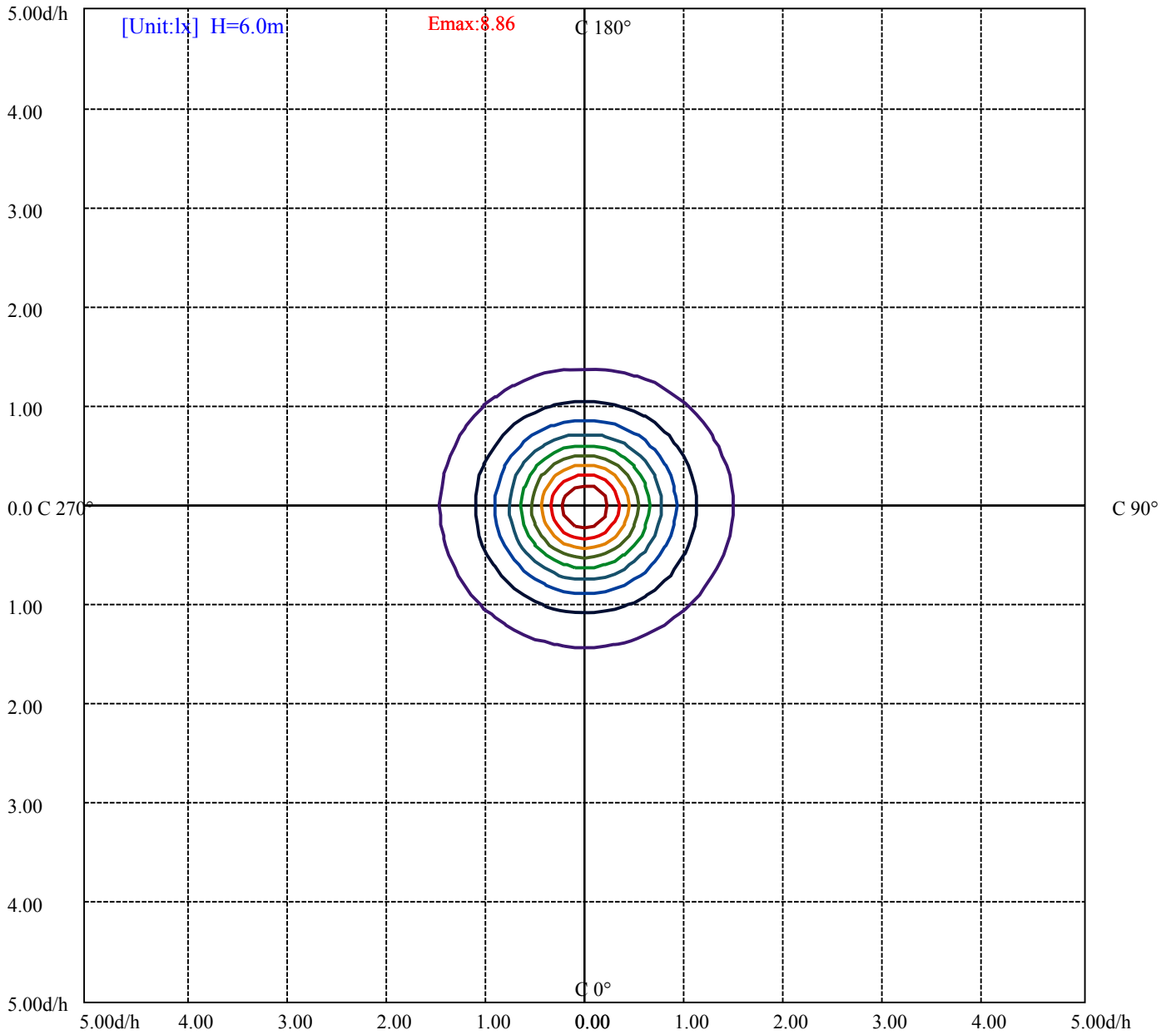
(60%I<sub>max</sub>) 191.405

(70%I<sub>max</sub>) 223.306

(80%I<sub>max</sub>) 255.207

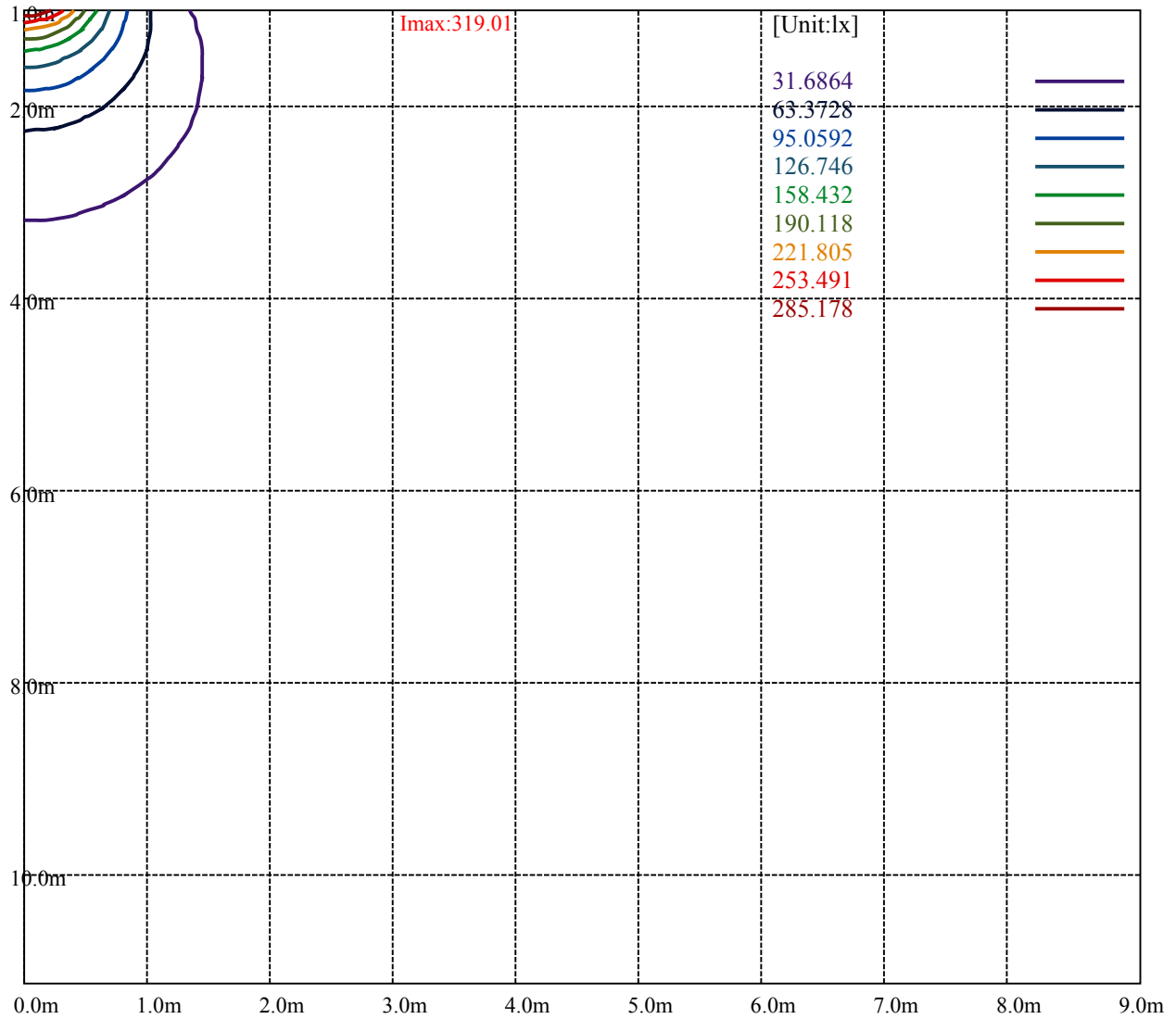
(90%I<sub>max</sub>) 287.108





- (10%Emax) 0.8861361 —
- (20%Emax) 1.772272 —
- (30%Emax) 2.658408 —
- (40%Emax) 3.544555 —
- (50%Emax) 4.430666 —
- (60%Emax) 5.316805 —
- (70%Emax) 6.202944 —
- (80%Emax) 7.089083 —
- (90%Emax) 7.975222 —





Luminance Table

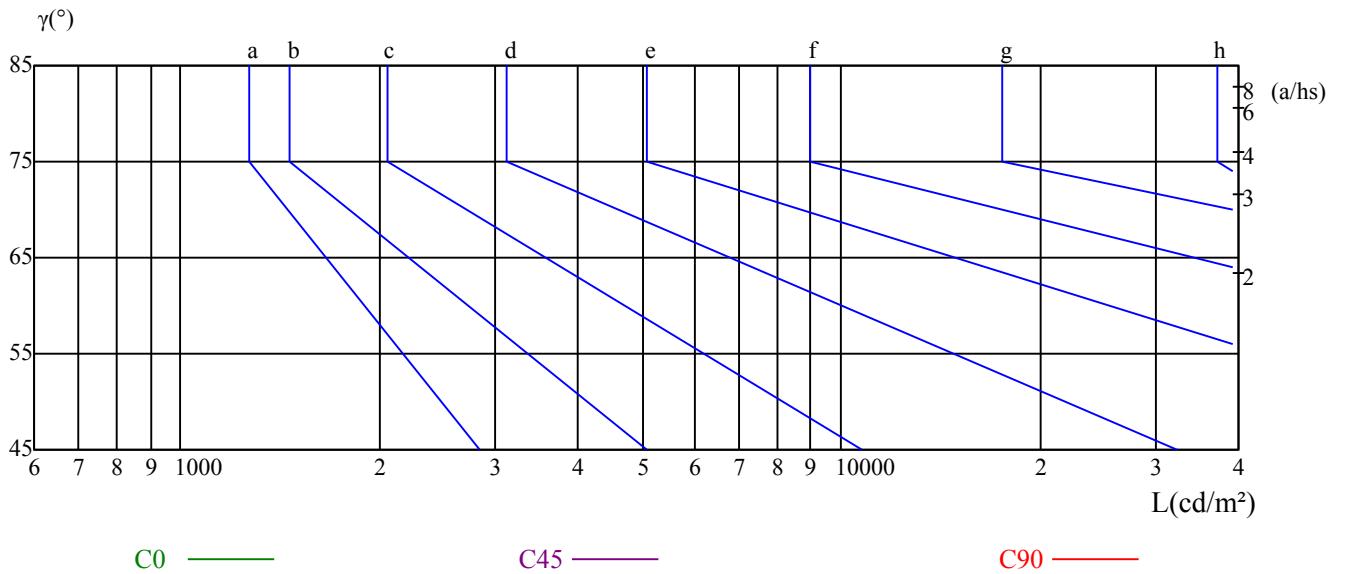
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

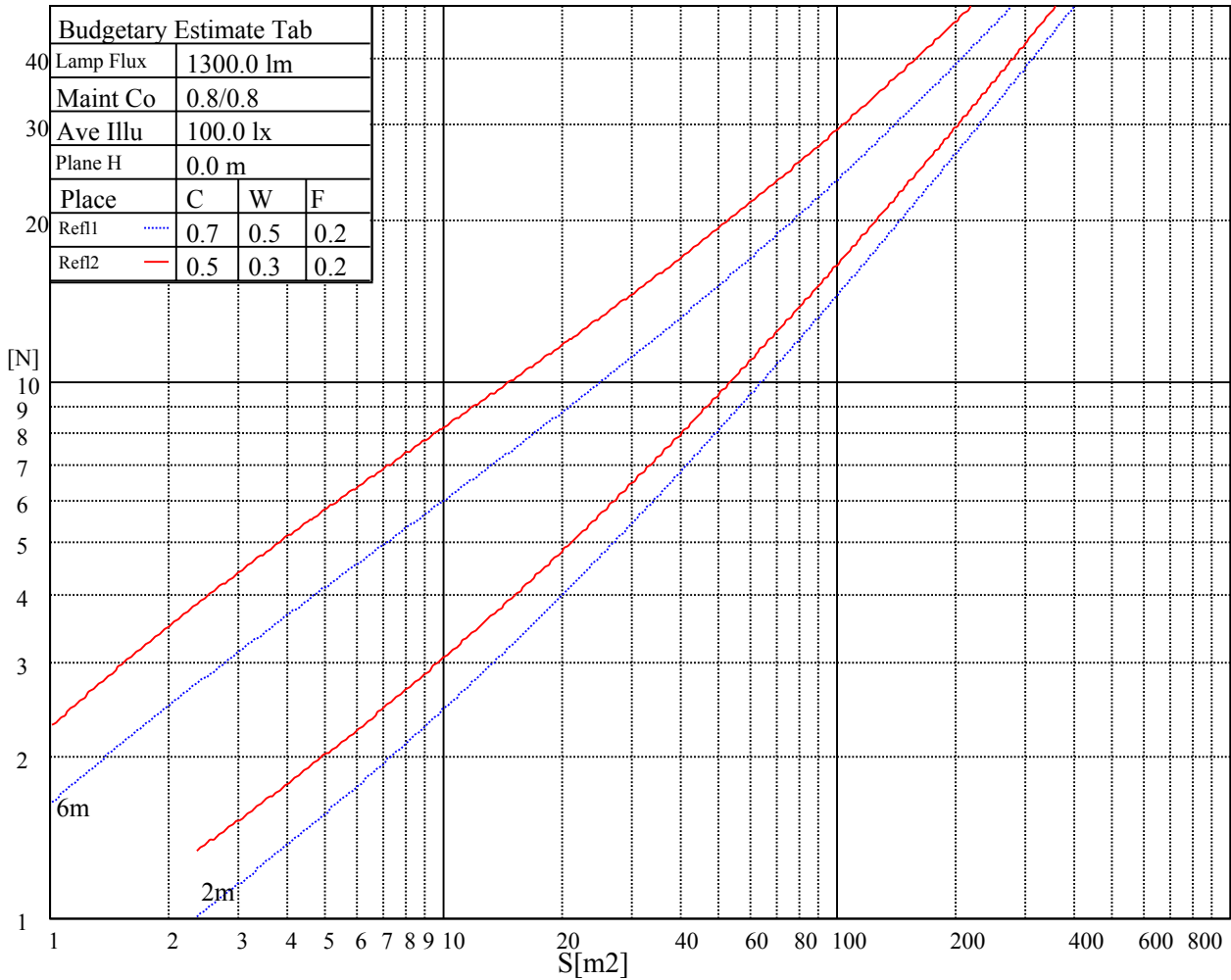
L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
0	0	0	0	0	0	0	0	0

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





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 <sub>C</sub> =20 CU															
0	0.93	0.93	0.93	0.90	0.90	0.90	0.85	0.85	0.85	0.80	0.80	0.80	0.75	0.75	0.75	0.73
1	0.80	0.77	0.73	0.78	0.75	0.72	0.73	0.71	0.68	0.69	0.67	0.65	0.65	0.64	0.62	0.60
2	0.70	0.64	0.59	0.68	0.62	0.58	0.64	0.60	0.56	0.60	0.57	0.54	0.57	0.54	0.52	0.50
3	0.61	0.54	0.49	0.59	0.53	0.48	0.56	0.51	0.47	0.53	0.49	0.45	0.50	0.47	0.43	0.41
4	0.54	0.47	0.41	0.52	0.46	0.41	0.50	0.44	0.39	0.47	0.42	0.38	0.45	0.41	0.37	0.35
5	0.48	0.41	0.35	0.47	0.40	0.35	0.44	0.39	0.34	0.42	0.37	0.33	0.40	0.36	0.32	0.30
6	0.43	0.36	0.31	0.42	0.35	0.30	0.40	0.34	0.30	0.38	0.33	0.29	0.36	0.32	0.28	0.26
7	0.39	0.32	0.27	0.38	0.31	0.27	0.36	0.30	0.26	0.35	0.29	0.26	0.33	0.29	0.25	0.23
8	0.36	0.29	0.24	0.35	0.28	0.24	0.33	0.27	0.23	0.32	0.27	0.23	0.30	0.26	0.22	0.21
9	0.33	0.26	0.22	0.32	0.26	0.21	0.31	0.25	0.21	0.29	0.24	0.21	0.28	0.23	0.20	0.19
10	0.30	0.24	0.20	0.29	0.23	0.19	0.28	0.23	0.19	0.27	0.22	0.19	0.26	0.22	0.18	0.17

LED-CL3-S-12W 4000K Ra80

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	316.86	316.47	314.13	309.45	302.24	292.10	280.01	265.58	249.20
45.0	319.01	316.86	312.18	304.77	295.22	282.74	269.09	253.69	236.53
90.0	318.03	314.13	307.31	297.17	285.86	272.02	256.22	237.89	218.20
135.0	317.45	314.72	309.26	301.26	290.93	278.84	265.00	249.59	231.85
180.0	316.86	315.50	311.99	305.36	296.78	285.86	272.80	255.44	237.70
225.0	319.01	317.84	313.55	306.33	296.58	284.89	271.24	254.27	236.72
270.0	318.03	317.84	313.55	305.94	296.19	282.55	268.31	252.13	233.80
315.0	317.45	317.25	313.74	306.92	297.75	286.64	273.19	257.20	240.23
360.0	316.86	316.47	314.13	309.45	302.24	292.10	280.01	265.58	249.20

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	230.87	210.59	188.56	165.16	140.01	110.56	83.85	55.57	32.76
45.0	217.42	195.58	172.96	148.97	121.68	96.13	73.12	50.89	31.39
90.0	196.94	172.57	148.39	123.43	98.08	74.68	54.21	33.93	18.91
135.0	212.54	188.75	165.74	141.57	114.27	89.11	66.88	45.04	26.52
180.0	218.20	197.14	174.13	149.95	124.41	96.13	69.61	44.46	24.57
225.0	217.22	195.97	173.35	148.19	122.85	97.69	73.12	50.31	30.81
270.0	213.91	190.51	167.50	143.13	117.97	93.40	73.51	52.26	30.61
315.0	221.32	200.84	175.49	151.70	126.75	101.59	78.78	55.96	35.29
360.0	230.87	210.59	188.56	165.16	140.01	110.56	83.85	55.57	32.76

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	18.91	17.94	15.21	13.26	12.28	13.65	12.09	11.70	11.31
45.0	21.06	20.67	20.47	20.08	19.30	17.94	16.38	15.01	13.26
90.0	15.40	12.87	10.92	9.94	11.70	11.70	12.28	11.70	11.31
135.0	20.67	20.28	20.08	19.50	18.72	17.16	15.60	14.23	12.48
180.0	17.74	17.16	14.82	11.31	12.67	12.48	12.09	11.70	11.11
225.0	20.86	20.67	20.08	18.91	16.57	14.23	12.09	10.53	9.36
270.0	17.16	12.67	9.75	9.94	11.11	10.14	8.38	7.41	6.43
315.0	21.64	20.86	20.47	19.50	17.55	14.82	12.87	11.11	9.75
360.0	18.91	17.94	15.21	13.26	12.28	13.65	12.09	11.70	11.31

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	10.92	10.33	9.75	8.97	8.38	7.60	6.63	5.85	5.26
45.0	11.31	8.77	7.80	7.41	7.02	6.63	6.04	5.46	5.07
90.0	10.72	9.94	7.80	5.65	5.26	5.26	5.26	5.07	5.07
135.0	10.72	8.38	7.80	7.41	7.21	6.63	5.85	5.46	5.07
180.0	10.53	9.94	9.36	8.58	7.99	7.21	6.43	5.85	5.07
225.0	8.58	7.99	7.80	7.41	7.02	6.63	6.24	5.65	5.07
270.0	6.04	6.04	5.85	5.65	5.46	5.46	5.46	5.26	5.26
315.0	8.77	8.19	7.80	7.41	6.82	6.63	6.04	5.65	5.26
360.0	10.92	10.33	9.75	8.97	8.38	7.60	6.63	5.85	5.26

C/γ(°)	180.0
0.0	5.07
45.0	5.07
90.0	5.07
135.0	5.07
180.0	5.07
225.0	5.07
270.0	5.07
315.0	5.07
360.0	5.07