



Shenzhen BST Technology Co., Ltd.
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s.r.o WD124

LumCAT: WD124	Luminaire: LED panel light
Report No:	Voltage(V): 230.300
Test No:	Current(A): 0.235
LampCAT:	Power (W): 22.500
Lamp flux(lm)	PF: 0.415
Number of Lamps: 1	Ballast type:
Length(mm): 250	Width(mm): 250
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1672.63
Lumens(lm)/Power(W): 74.34
Central intensity(cd): 582.036
Maximum intensity(cd): 582.712
Angle of maximum intensity: C=45.0 γ =0.0
Beam Angle(50%Imax): [H]Left=58.3 Right=53.6
[V]Left=55.8 Right=56.0
Field angle(10%Imax): [H]Left=83.1 Right=78.2
[V]Left=78.5 Right=80.7
Beam angle of C45plane: 112.33

Equipment: GMS1800B
Temperature(°C): 25.0

Date: 2016-5-31
Humidity(%): 60.0%

Operator: Jason Zhan
Distance(m): 13.00

Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	582.247	.000	.000	.000%	.000%
5.0	579.628	13.890	13.890	.830%	.830%
10.0	572.044	41.199	55.089	2.463%	3.294%
15.0	559.390	67.116	122.205	4.013%	7.306%
20.0	541.899	90.762	212.966	5.426%	12.732%
25.0	519.675	111.340	324.306	6.657%	19.389%
30.0	492.931	128.146	452.452	7.661%	27.050%
35.0	460.821	140.447	592.899	8.397%	35.447%
40.0	426.408	148.027	740.926	8.850%	44.297%
45.0	388.299	150.850	891.776	9.019%	53.316%
50.0	346.239	148.424	1040.199	8.874%	62.189%
55.0	300.736	140.674	1180.873	8.410%	70.600%
60.0	253.373	128.081	1308.954	7.657%	78.257%
65.0	204.300	111.261	1420.215	6.652%	84.909%
70.0	154.445	90.836	1511.052	5.431%	90.340%
75.0	104.062	67.569	1578.621	4.040%	94.379%
80.0	59.530	43.773	1622.394	2.617%	96.996%
85.0	25.287	23.047	1645.440	1.378%	98.374%
90.0	3.697	7.936	1653.376	.474%	98.849%
95.0	1.606	1.452	1654.828	.087%	98.935%
100.0	1.711	.901	1655.729	.054%	98.989%
105.0	1.965	.984	1656.713	.059%	99.048%
110.0	2.197	1.088	1657.801	.065%	99.113%
115.0	2.514	1.193	1658.994	.071%	99.184%
120.0	2.894	1.315	1660.308	.079%	99.263%
125.0	3.105	1.387	1661.695	.083%	99.346%
130.0	3.338	1.401	1663.096	.084%	99.430%
135.0	3.739	1.430	1664.526	.085%	99.515%
140.0	4.014	1.436	1665.961	.086%	99.601%
145.0	4.246	1.378	1667.339	.082%	99.683%
150.0	4.479	1.285	1668.624	.077%	99.760%
155.0	4.648	1.155	1669.779	.069%	99.829%
160.0	4.774	.988	1670.767	.059%	99.888%
165.0	4.838	.792	1671.559	.047%	99.936%
170.0	5.049	.586	1672.146	.035%	99.971%
175.0	5.112	.363	1672.509	.022%	99.993%
180.0	5.408	.126	1672.635	.008%	100.000%

Zonal flux distribution table

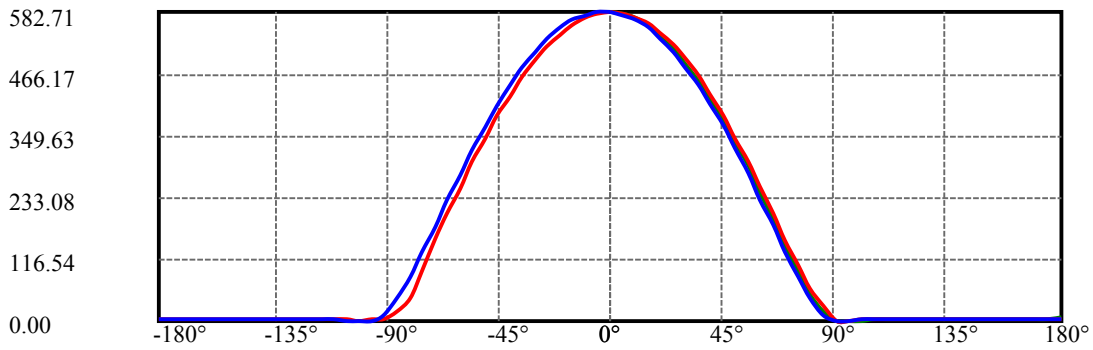
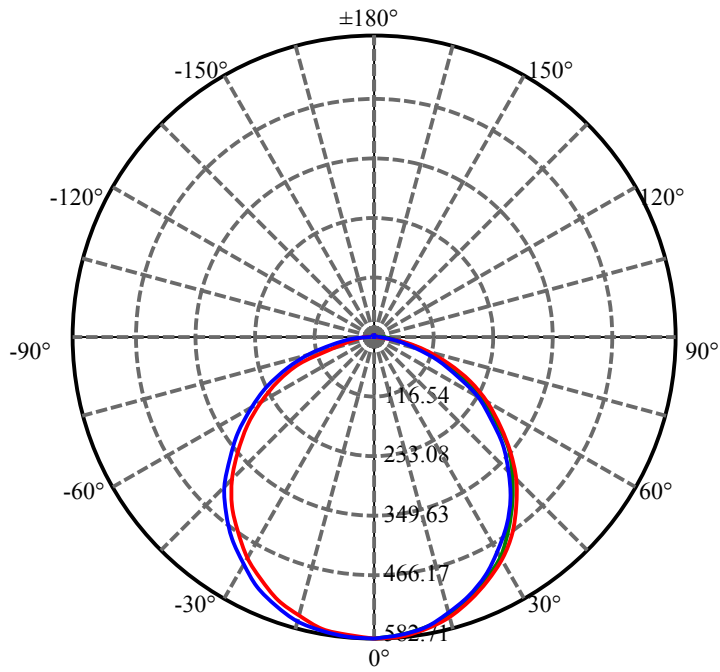
ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	452.45	27.05%
0-40	740.93	44.30%
0-60	1308.95	78.26%
0-90	1653.38	98.85%
90-120	6.93	0.41%
90-130	9.72	0.58%
90-150	15.25	0.91%
90-180	19.13	1.14%
0-180	1672.64	100.00%

ZONAL LUMEN SUMMARY

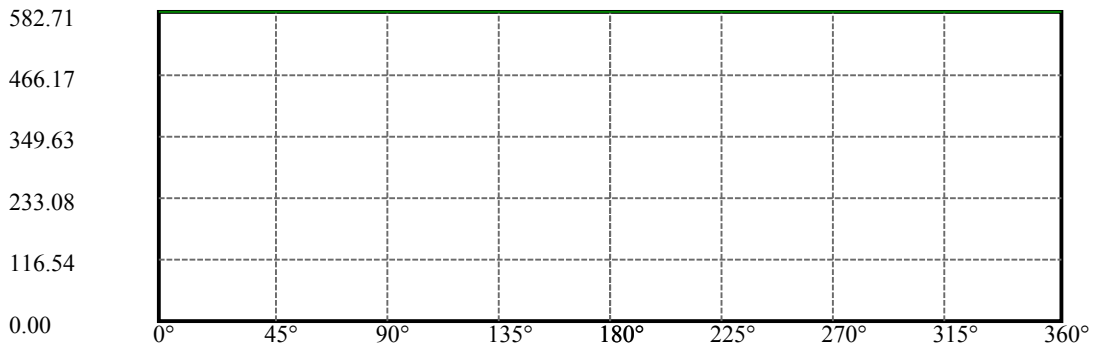
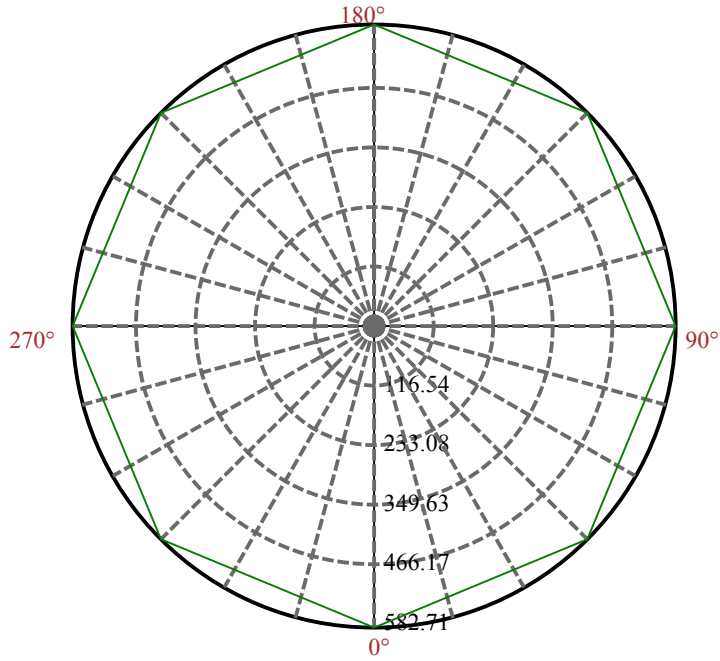
0-10	55.09
10-20	157.88
20-30	239.49
30-40	288.47
40-50	299.27
50-60	268.75
60-70	202.10
70-80	111.34
80-90	30.98
90-100	2.35
100-110	2.07
110-120	2.51
120-130	2.79
130-140	2.87
140-150	2.66
150-160	2.14
160-170	1.38
170-180	0.36

Light Distribution Curve [Unit: cd]



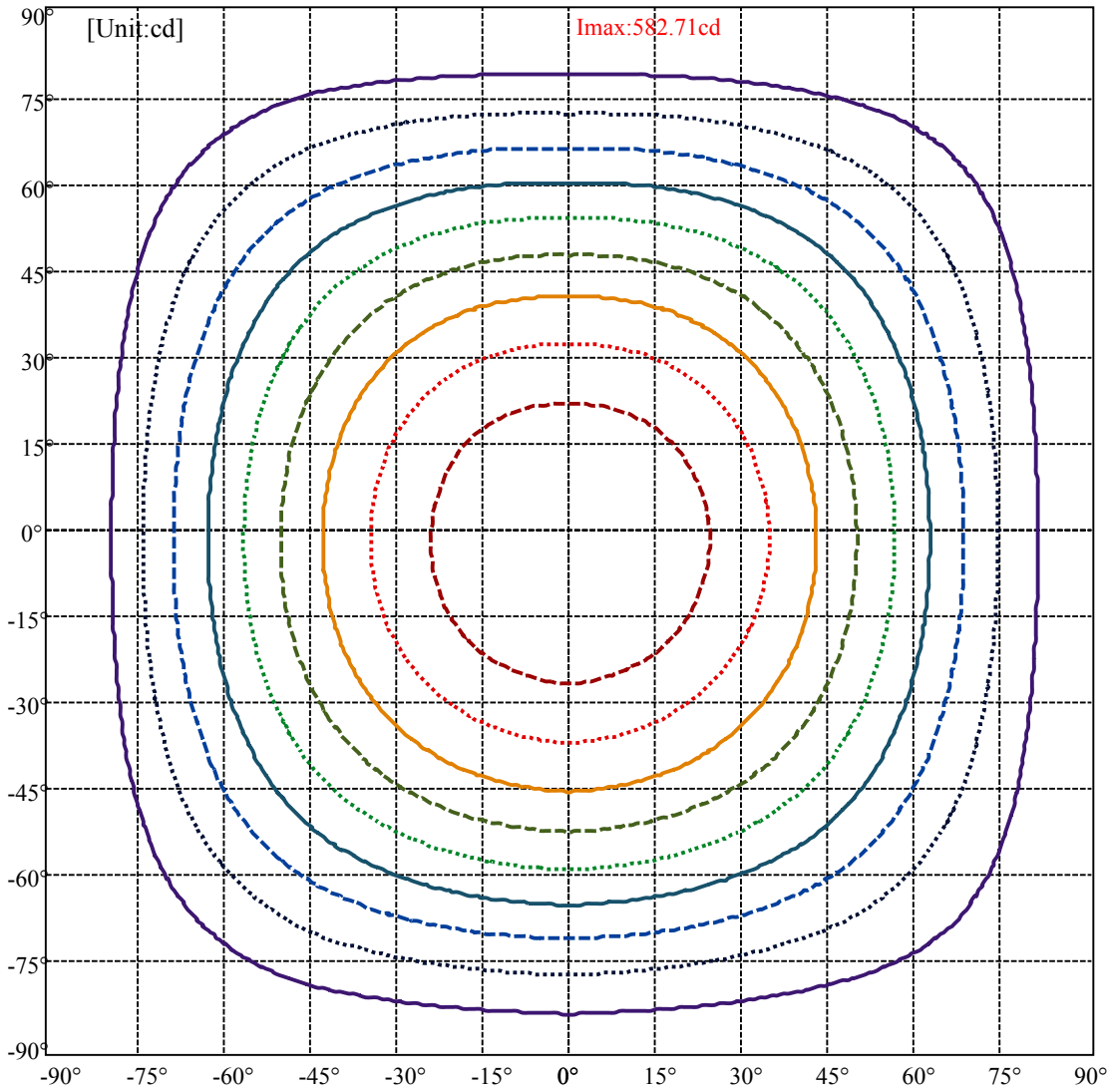
C45(Max): —
C0/C180: —
C90/C270: —

Light Distribution Curve [Unit: cd]



MaxG=0

ISO-Intensity(V-H)



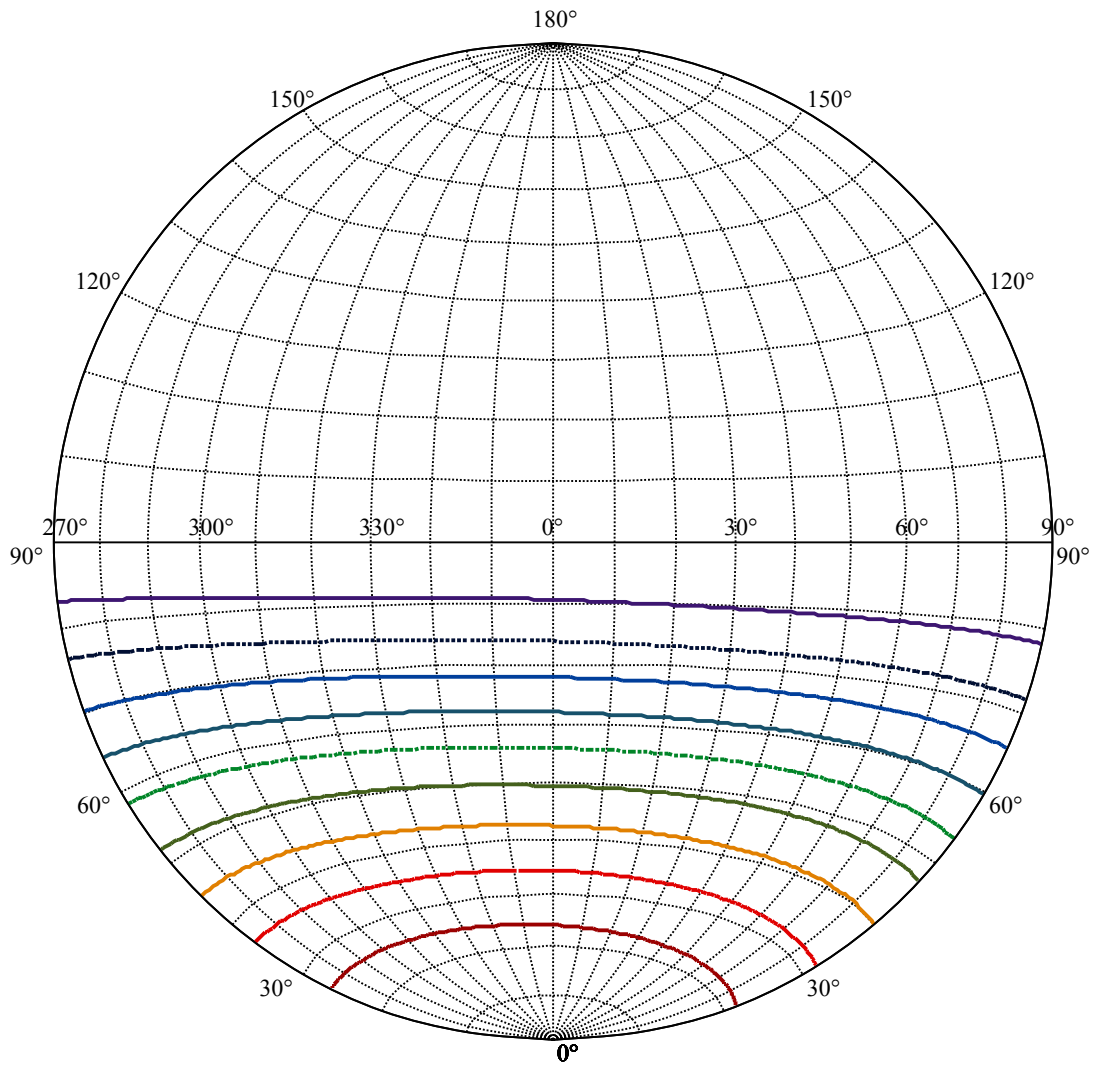
(10%Imax)	58.2377	—
(20%Imax)	116.475	·····
(30%Imax)	174.713	- - - - -
(40%Imax)	232.951	—
(50%Imax)	291.189	·····
(60%Imax)	349.426	- - - - -
(70%Imax)	407.664	—
(80%Imax)	465.902	·····
(90%Imax)	524.14	- - - - -

Equipment: GMS1800B
Temperature(°C): 25.0

Date: 2016-5-31
Humidity(%): 60.0%

Operator: Jason Zhan
Distance(m): 13.00

ISO candela diagram on circular web



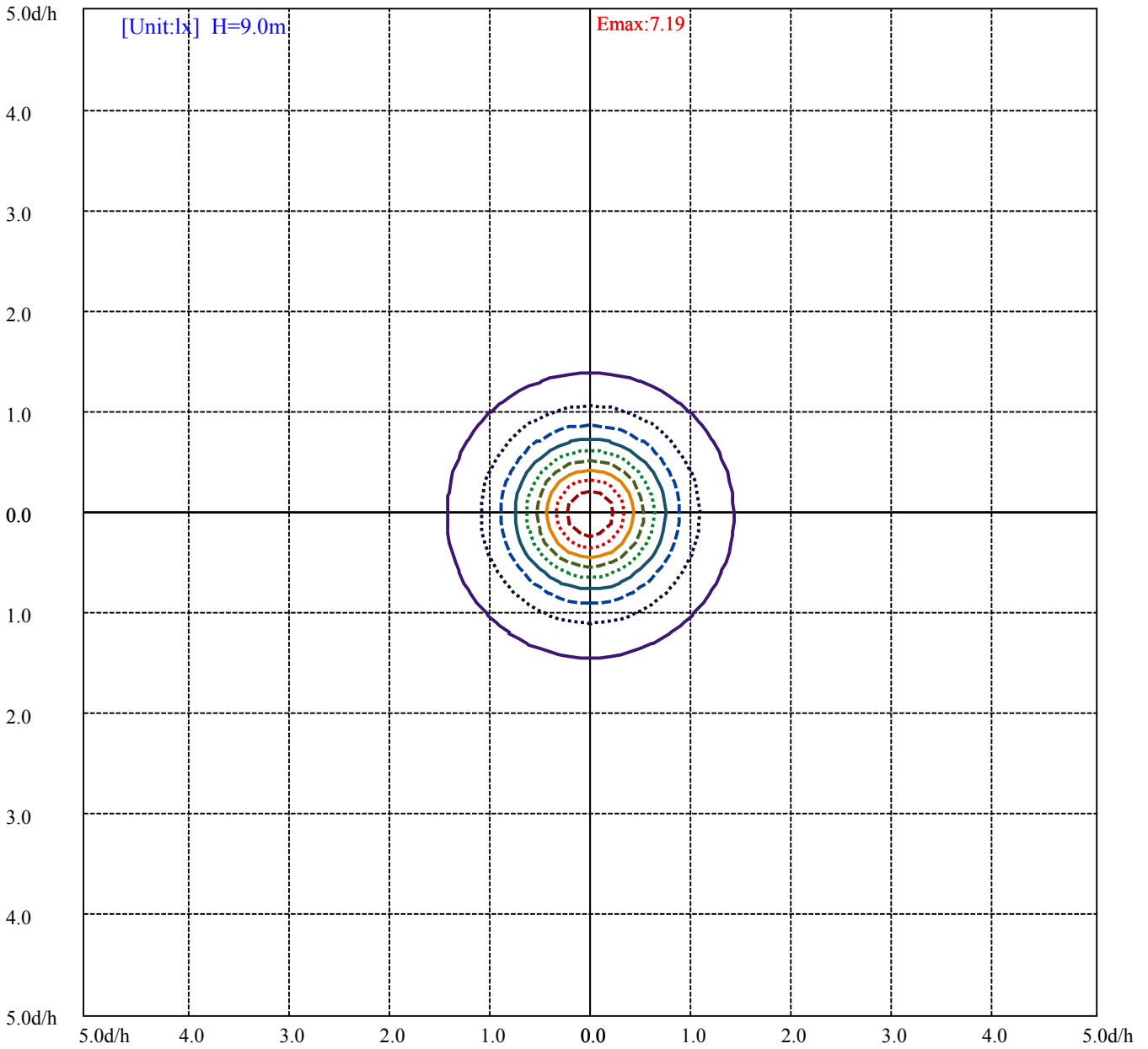
House

Road

I_{max}:582.71cd

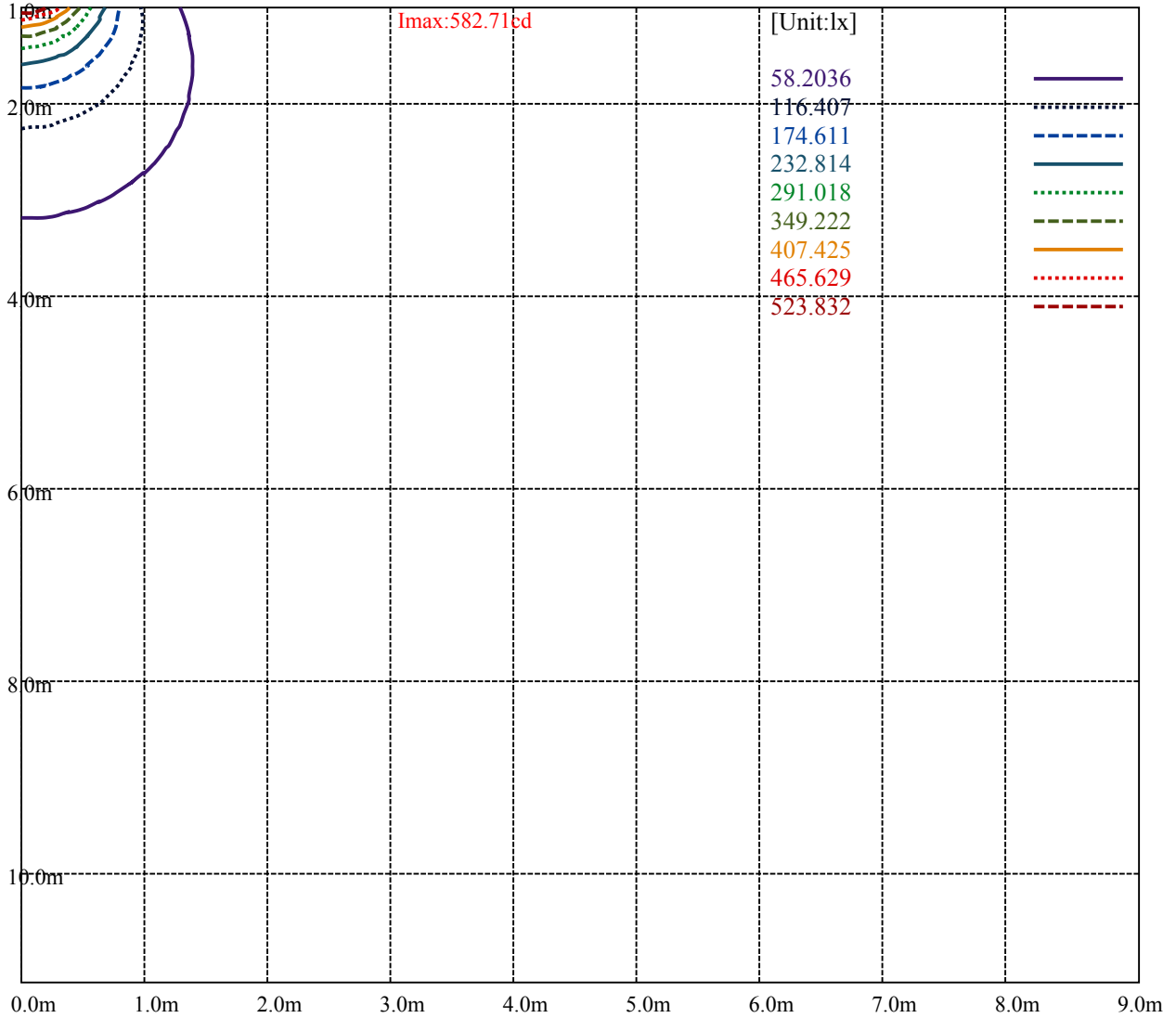
(10%I _{max}) 58.2712	—
(20%I _{max}) 116.542	·····
(30%I _{max}) 174.814	- - - - -
(40%I _{max}) 233.085	—
(50%I _{max}) 291.356	·····
(60%I _{max}) 349.627	- - - - -
(70%I _{max}) 407.898	—
(80%I _{max}) 466.17	·····
(90%I _{max}) 524.441	- - - - -

ISO illuminance diagram



- (10%Emax) 0.7193975
- (20%Emax) 1.43879
- (30%Emax) 2.158197
- (40%Emax) 2.877593
- (50%Emax) 3.596987
- (60%Emax) 4.316383
- (70%Emax) 5.035778
- (80%Emax) 5.755173
- (90%Emax) 6.47458

Space ISO Lux diagram



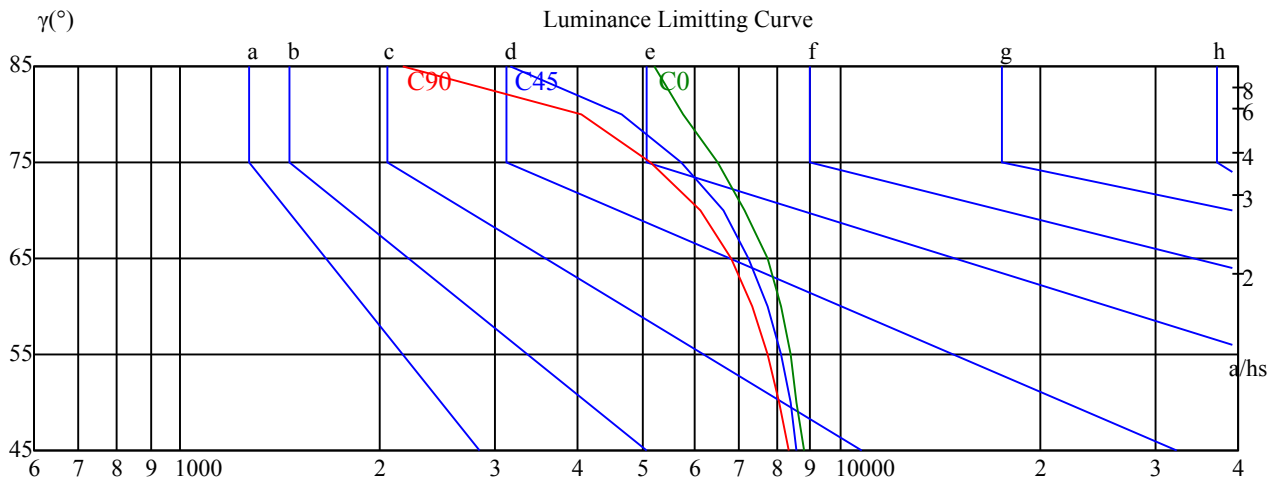
Luminance Limiting Curve(no luminous side)

Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	8803	8594	8396	8101	7735	7163	6498	5777	5212
C45	8585	8405	8142	7766	7262	6649	5725	4656	3165
C90	8336	8094	7741	7339	6820	6135	5151	4049	2172

Glare Table

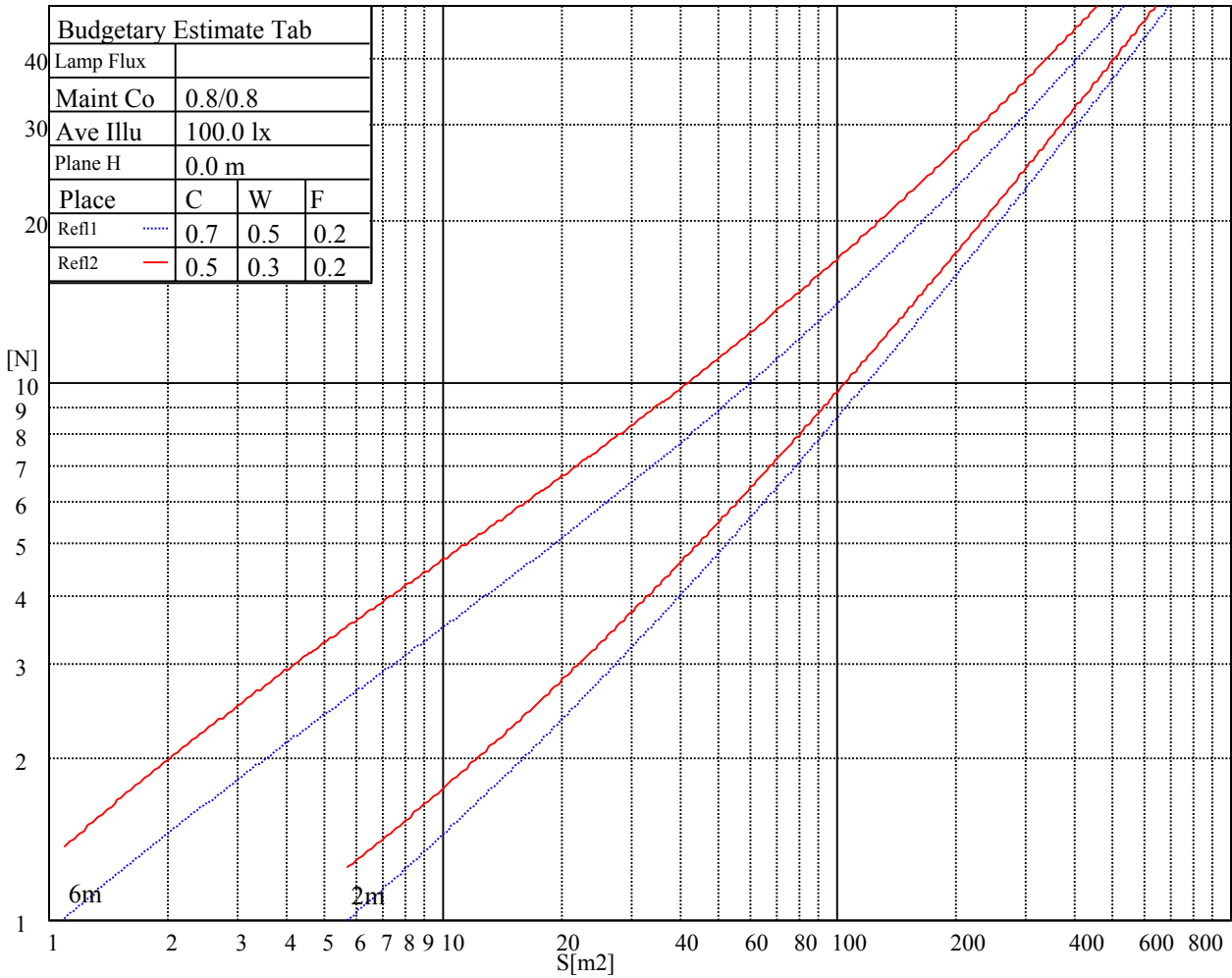
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h



UGR Glare

Illuminatin assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	18.1	19.5	18.4	19.7	20.0	17.8	19.1	18.1	19.4	19.6
	3H	19.6	20.9	20.0	21.2	21.5	19.1	20.4	19.5	20.7	21.0
	4H	20.1	21.1	20.5	21.5	21.8	19.5	20.5	19.9	20.8	21.2
	6H	20.6	21.6	21.0	22.0	22.3	19.8	20.9	20.2	21.2	21.6
	8H	20.8	21.8	21.1	22.1	22.5	19.9	21.0	20.3	21.3	21.7
	12H	20.7	21.5	21.1	21.9	22.3	19.8	20.6	20.2	21.0	21.4
4H	2H	18.5	19.6	18.9	19.9	20.3	18.3	19.3	18.7	19.6	20.0
	3H	20.2	21.0	20.7	21.4	21.9	19.8	20.6	20.3	21.0	21.4
	4H	21.0	21.8	21.4	22.2	22.6	20.5	21.2	20.9	21.7	22.1
	6H	21.6	22.4	22.0	22.8	23.2	20.9	21.7	21.4	22.1	22.5
	8H	21.7	22.1	22.2	22.6	23.1	20.9	21.3	21.4	21.8	22.4
	12H	21.8	22.3	22.4	22.8	23.3	21.0	21.4	21.5	21.9	22.4
8H	4H	21.2	21.6	21.7	22.1	22.6	20.7	21.1	21.2	21.6	22.1
	6H	21.9	22.3	22.4	22.8	23.3	21.2	21.7	21.7	22.2	22.7
	8H	22.2	22.6	22.7	23.1	23.6	21.4	21.9	21.9	22.4	22.9
	12H	22.4	22.8	22.9	23.3	23.9	21.5	22.0	22.0	22.5	23.0
12H	4H	21.2	21.6	21.7	22.1	22.7	20.7	21.2	21.2	21.7	22.2
	6H	21.9	22.4	22.4	22.9	23.4	21.3	21.8	21.8	22.2	22.8
	8H	22.2	22.7	22.8	23.2	23.7	21.5	22.0	22.0	22.5	23.0
Variation with the observer position at spacings:											
S = 1.0H	0.3/-0.6					0.3/-0.5					
S = 1.5H	0.6/-0.6					0.6/-0.7					
S = 2.0H	0.8/-0.8					1.0/-1.0					
Standard tables:	BK3					BK3					
Uncorrected UGR	3.5					2.9					
According 1000lm											

Budgetary Estimate Table



Utilization factor table for indoor luminaire

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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.04	0.99	0.96	1.01	0.97	0.94	0.97	0.94	0.91	0.93	0.90	0.88	0.89	0.87	0.85	0.83
2	0.90	0.84	0.78	0.88	0.82	0.77	0.85	0.79	0.75	0.81	0.77	0.73	0.78	0.74	0.71	0.69
3	0.79	0.71	0.65	0.78	0.70	0.64	0.74	0.68	0.63	0.72	0.66	0.61	0.69	0.64	0.60	0.58
4	0.70	0.61	0.55	0.69	0.61	0.54	0.66	0.59	0.53	0.64	0.58	0.53	0.61	0.56	0.52	0.49
5	0.63	0.54	0.47	0.62	0.53	0.47	0.59	0.52	0.46	0.57	0.51	0.46	0.55	0.49	0.45	0.43
6	0.56	0.47	0.41	0.55	0.47	0.41	0.53	0.46	0.40	0.52	0.45	0.40	0.50	0.44	0.39	0.37
7	0.51	0.42	0.36	0.50	0.42	0.36	0.49	0.41	0.36	0.47	0.40	0.35	0.46	0.40	0.35	0.33
8	0.47	0.38	0.32	0.46	0.38	0.32	0.44	0.37	0.32	0.43	0.36	0.32	0.42	0.36	0.31	0.29
9	0.43	0.35	0.29	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.28	0.39	0.33	0.28	0.26
10	0.39	0.32	0.26	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	0.24
RCR	COEFFICIENTS OF UTILIZATION RHOF=20 WLC															
1	0.31	0.17	0.06	0.30	0.17	0.05	0.29	0.16	0.05	0.27	0.16	0.05	0.26	0.15	0.05	
2	0.29	0.16	0.05	0.28	0.16	0.05	0.27	0.15	0.05	0.26	0.15	0.05	0.25	0.14	0.04	
3	0.27	0.14	0.04	0.26	0.14	0.04	0.25	0.14	0.04	0.24	0.13	0.04	0.23	0.13	0.04	
4	0.25	0.13	0.04	0.24	0.13	0.04	0.23	0.12	0.04	0.22	0.12	0.04	0.22	0.12	0.04	
5	0.23	0.12	0.03	0.22	0.12	0.03	0.22	0.11	0.03	0.21	0.11	0.03	0.20	0.11	0.03	
6	0.21	0.11	0.03	0.21	0.11	0.03	0.20	0.10	0.03	0.19	0.10	0.03	0.19	0.10	0.03	
7	0.20	0.10	0.03	0.19	0.10	0.03	0.19	0.09	0.03	0.18	0.09	0.03	0.18	0.09	0.03	
8	0.19	0.09	0.03	0.18	0.09	0.03	0.18	0.09	0.03	0.17	0.09	0.02	0.16	0.08	0.02	
9	0.17	0.08	0.02	0.17	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.08	0.02	
10	0.16	0.08	0.02	0.16	0.08	0.02	0.16	0.08	0.02	0.15	0.07	0.02	0.15	0.07	0.02	
RCR	COEFFICIENTS OF UTILIZATION RHOF=20 CCLU															
0	0.20	0.20	0.20	0.17	0.17	0.17	0.12	0.12	0.12	0.07	0.07	0.07	0.02	0.02	0.02	
1	0.16	0.15	0.14	0.14	0.13	0.12	0.10	0.09	0.08	0.06	0.06	0.05	0.02	0.02	0.02	
2	0.13	0.11	0.10	0.12	0.10	0.09	0.09	0.08	0.06	0.06	0.05	0.04	0.02	0.02	0.01	
3	0.11	0.09	0.07	0.10	0.08	0.06	0.08	0.06	0.05	0.06	0.04	0.03	0.02	0.01	0.01	
4	0.09	0.07	0.06	0.09	0.07	0.05	0.08	0.05	0.04	0.05	0.04	0.02	0.02	0.01	0.01	
5	0.08	0.06	0.04	0.08	0.06	0.04	0.07	0.05	0.03	0.05	0.03	0.02	0.02	0.01	0.01	
6	0.07	0.05	0.04	0.07	0.05	0.03	0.07	0.04	0.03	0.05	0.03	0.02	0.02	0.01	0.01	
7	0.06	0.04	0.03	0.07	0.04	0.03	0.06	0.04	0.02	0.05	0.03	0.01	0.02	0.01	0.01	
8	0.06	0.04	0.03	0.06	0.04	0.03	0.06	0.04	0.02	0.04	0.03	0.01	0.02	0.01	0.00	
9	0.05	0.04	0.02	0.06	0.04	0.02	0.06	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	
10	0.05	0.03	0.02	0.05	0.03	0.02	0.05	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.00	

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	582.04	579.67	572.07	560.24	542.66	520.86	494.83	462.89	427.23
45.0	582.71	578.83	570.21	556.35	537.25	513.93	486.55	453.77	418.61
90.0	582.21	576.97	567.33	551.95	531.84	508.01	478.61	444.81	407.97
135.0	582.04	578.49	569.19	555.33	537.25	513.42	485.03	453.77	418.61
180.0	582.04	579.16	571.73	558.21	539.79	517.65	491.45	459.34	424.70
225.0	582.71	581.53	574.43	563.28	547.05	525.93	500.75	467.79	435.01
270.0	582.21	581.87	576.80	566.83	552.46	531.67	505.48	476.41	443.79
315.0	582.04	580.52	574.60	562.94	546.88	525.93	500.75	467.79	435.34
360.0	582.04	579.67	572.07	560.24	542.66	520.86	494.83	462.89	427.23

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	389.04	345.27	300.99	253.16	204.32	153.11	105.12	62.70	28.39
45.0	379.41	337.66	291.86	242.68	191.82	142.13	92.61	50.53	17.24
90.0	368.42	325.16	277.50	229.33	180.15	131.14	83.32	43.94	11.83
135.0	379.91	336.48	291.36	244.04	194.35	144.50	95.15	51.88	18.76
180.0	386.17	345.10	298.62	251.47	203.48	154.13	93.29	43.43	18.42
225.0	398.16	357.60	312.31	265.84	217.67	168.32	118.30	70.64	31.77
270.0	407.12	365.38	321.78	275.81	227.31	176.44	129.96	83.49	43.26
315.0	398.16	357.27	311.47	264.65	215.31	165.79	114.75	69.63	32.62
360.0	389.04	345.27	300.99	253.16	204.32	153.11	105.12	62.70	28.39

C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.69	1.35	1.86	2.20	2.37	2.37	3.04	3.38	3.55
45.0	1.35	1.52	1.69	1.86	2.03	2.54	3.04	2.87	3.55
90.0	1.52	1.69	1.86	1.86	2.37	2.70	2.87	2.87	3.21
135.0	1.52	1.69	1.69	1.86	2.20	2.54	2.70	3.21	3.72
180.0	3.72	2.20	1.69	2.37	2.37	2.54	3.04	3.38	3.38
225.0	4.23	1.35	1.69	2.03	2.03	2.54	2.87	3.04	3.21
270.0	11.66	1.35	1.52	1.69	2.03	2.20	2.70	3.21	2.87
315.0	3.89	1.69	1.69	1.86	2.20	2.70	2.87	2.87	3.21
360.0	1.69	1.35	1.86	2.20	2.37	2.37	3.04	3.38	3.55

C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	3.72	4.06	4.23	4.39	5.07	4.90	5.07	5.24	5.07
45.0	3.55	3.89	4.39	4.39	4.73	4.90	5.07	4.90	5.24
90.0	3.55	4.06	4.23	4.56	4.56	4.90	4.90	5.07	5.41
135.0	3.89	4.23	4.39	4.56	4.90	5.07	5.07	5.24	5.24
180.0	4.06	4.56	4.39	4.90	4.56	4.73	4.73	5.24	4.90
225.0	3.72	3.55	4.23	4.23	4.56	4.39	4.56	4.73	5.07
270.0	3.55	3.89	3.89	4.06	4.23	4.56	4.73	4.90	5.07
315.0	3.89	3.89	4.23	4.73	4.56	4.73	4.56	5.07	4.90
360.0	3.72	4.06	4.23	4.39	5.07	4.90	5.07	5.24	5.07

C/ γ (°)	180.0
0.0	5.41
45.0	5.75
90.0	5.24
135.0	5.24
180.0	5.41
225.0	5.75
270.0	5.24
315.0	5.24
360.0	5.41