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Report No	:		Voltage	:	V
Test No	:	A2017189A001	Current	:	A
LumCAT	:	0028920007	Power	:	33.252 W
Luminaire	:	Batten 1200mm 34W 4000K IP65:IK08			
LampCAT	:	N/A	Ballast type	:	
Lamp flux	:	lm	Width	:	60 mm
Number of Lamps	:	1	Lengt	:	1164 mm
Phm Type	:	C	Height	:	30 mm

### Photometric Results

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Lumens(lm)	:	4175.71	Central intensity(cd)	:	1069.200
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	1069.200
Luminous Efficacy(lm/W)	:	125.58	Angle of maximum intensity	:	C=0.0 $\gamma$ =0.0
Beam Angle(50%Imax)	:	[C0/180]Total=137.0 [C90/270]Total=113.1			
Field angle(10%Imax)	:	[C0/180]Total=261.9 [C90/270]Total=159.9			
Maximum s/h(1/2)	:	C0_180=1.33 C90_270=1.27			
Maximum s/h(1/4)	:	C0_180=1.48 C90_270=1.39			
CIE Type	:	Semidirect lighting			
Output flux ratio in $\pi$ solid angle	:	61.076%			

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Equipment:  
Temperature(°C): 24.9

Date:  
Humidity(%): 50%

Operator: LSC

## Zonal flux distribution table

Appendix Page: 2 Total:13

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1069.200	0.000	0	0.00%	0.00%
5.0	1063.950	25.501	25.501	0.61%	0.61%
10.0	1051.750	75.685	101.186	1.81%	2.42%
15.0	1031.767	123.593	224.779	2.96%	5.38%
20.0	1004.475	167.815	392.594	4.02%	9.40%
25.0	969.608	207.045	599.639	4.96%	14.36%
30.0	928.175	240.166	839.805	5.75%	20.11%
35.0	880.633	266.360	1106.165	6.38%	26.49%
40.0	826.425	284.810	1390.975	6.82%	33.31%
45.0	766.983	295.032	1686.007	7.07%	40.38%
50.0	703.175	297.067	1983.074	7.11%	47.49%
55.0	634.100	290.768	2273.842	6.96%	54.45%
60.0	562.217	276.525	2550.367	6.62%	61.08%
65.0	488.767	255.496	2805.863	6.12%	67.19%
70.0	414.367	228.679	3034.543	5.48%	72.67%
75.0	342.575	197.852	3232.395	4.74%	77.41%
80.0	276.633	165.683	3398.078	3.97%	81.38%
85.0	220.442	135.067	3533.145	3.23%	84.61%
90.0	177.408	108.934	3642.08	2.61%	87.22%
95.0	149.183	89.423	3731.503	2.14%	89.36%
100.0	127.450	75.168	3806.671	1.80%	91.16%
105.0	110.533	63.678	3870.349	1.52%	92.69%
110.0	98.442	54.623	3924.971	1.31%	94.00%
115.0	88.017	47.212	3972.184	1.13%	95.13%
120.0	79.342	40.685	4012.869	0.97%	96.10%
125.0	71.275	34.815	4047.683	0.83%	96.93%
130.0	63.617	29.330	4077.013	0.70%	97.64%
135.0	56.983	24.369	4101.382	0.58%	98.22%
140.0	50.375	19.878	4121.261	0.48%	98.70%
145.0	44.117	15.765	4137.026	0.38%	99.07%
150.0	38.942	12.231	4149.257	0.29%	99.37%
155.0	34.358	9.276	4158.533	0.22%	99.59%
160.0	31.008	6.856	4165.389	0.16%	99.75%
165.0	27.717	4.840	4170.228	0.12%	99.87%
170.0	25.200	3.139	4173.367	0.08%	99.94%
175.0	23.792	1.753	4175.12	0.04%	99.99%
180.0	25.800	0.593	4175.713	0.01%	100.00%

Equipment:  
Temperature( $^{\circ}$ C): 24.9

Date:  
Humidity(%): 50%

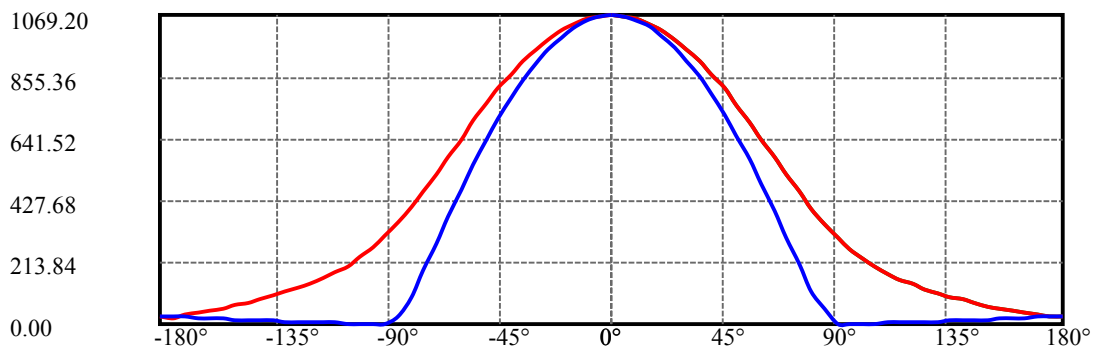
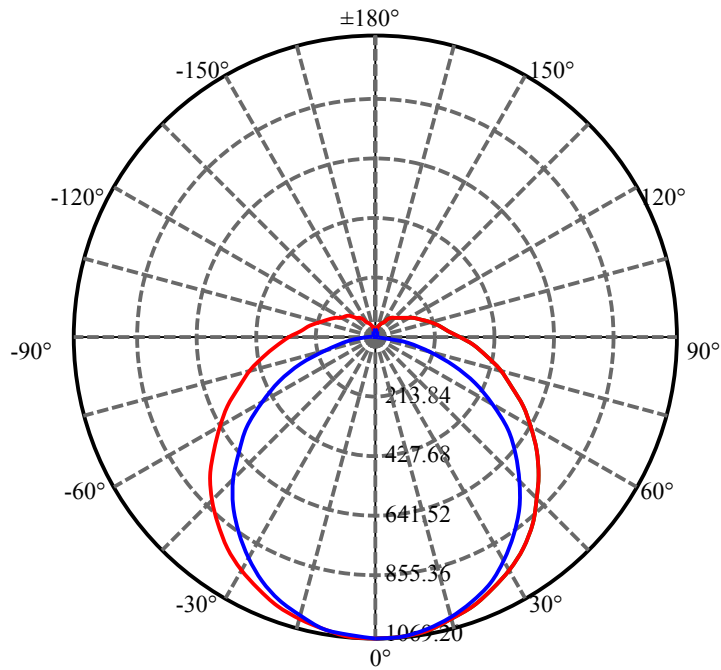
Operator: LSC

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	839.81	20.11%
0-40	1390.97	33.31%
0-60	2550.37	61.08%
0-90	3642.08	87.22%
0-120	4012.87	96.10%
0-180	4175.71	100.00%
60-90	1091.71	26.14%
90-120	370.79	8.88%
90-130	434.93	10.42%
90-150	507.18	12.15%
90-180	533.04	12.77%
0-78.26	3340.57	80.00%

ZONAL LUMEN SUMMARY

0-10	101.19
10-20	291.41
20-30	447.21
30-40	551.17
40-50	592.10
50-60	567.29
60-70	484.18
70-80	363.54
80-90	244.00
90-100	164.59
100-110	118.30
110-120	87.90
120-130	64.14
130-140	44.25
140-150	28.00
150-160	16.13
160-170	7.98
170-180	1.75



C0(Max): ———

C0/C180: ———

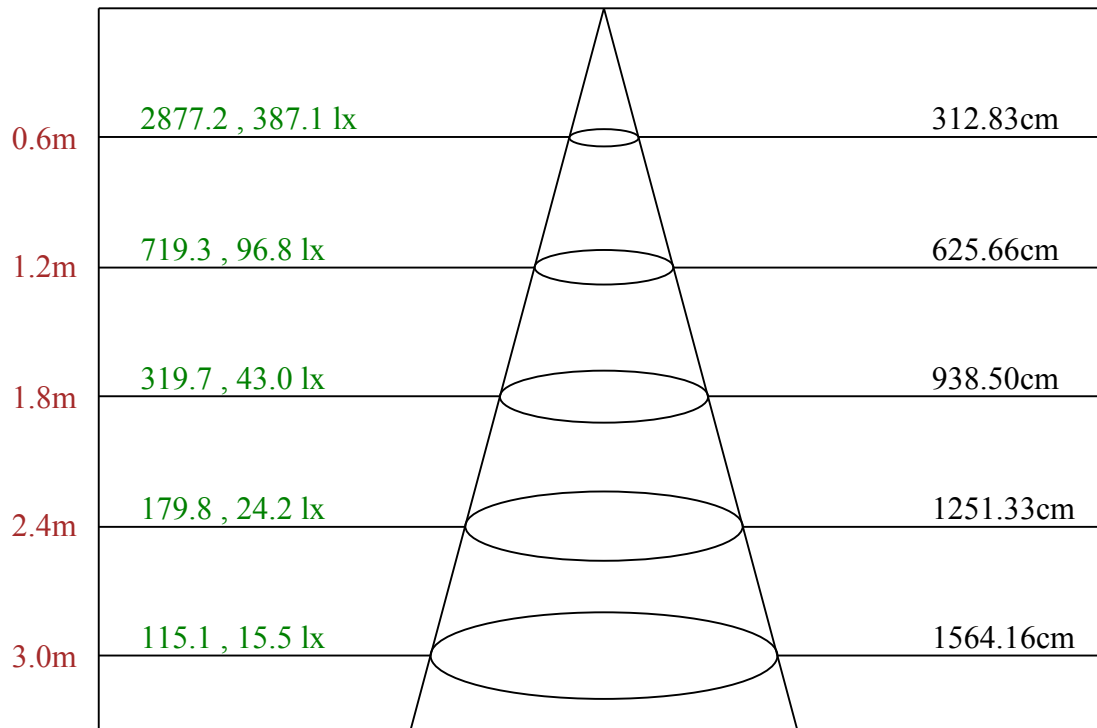
C90/C270: ———

Field angle(10%Imax):C0/180Left:131.5 Right:130.5

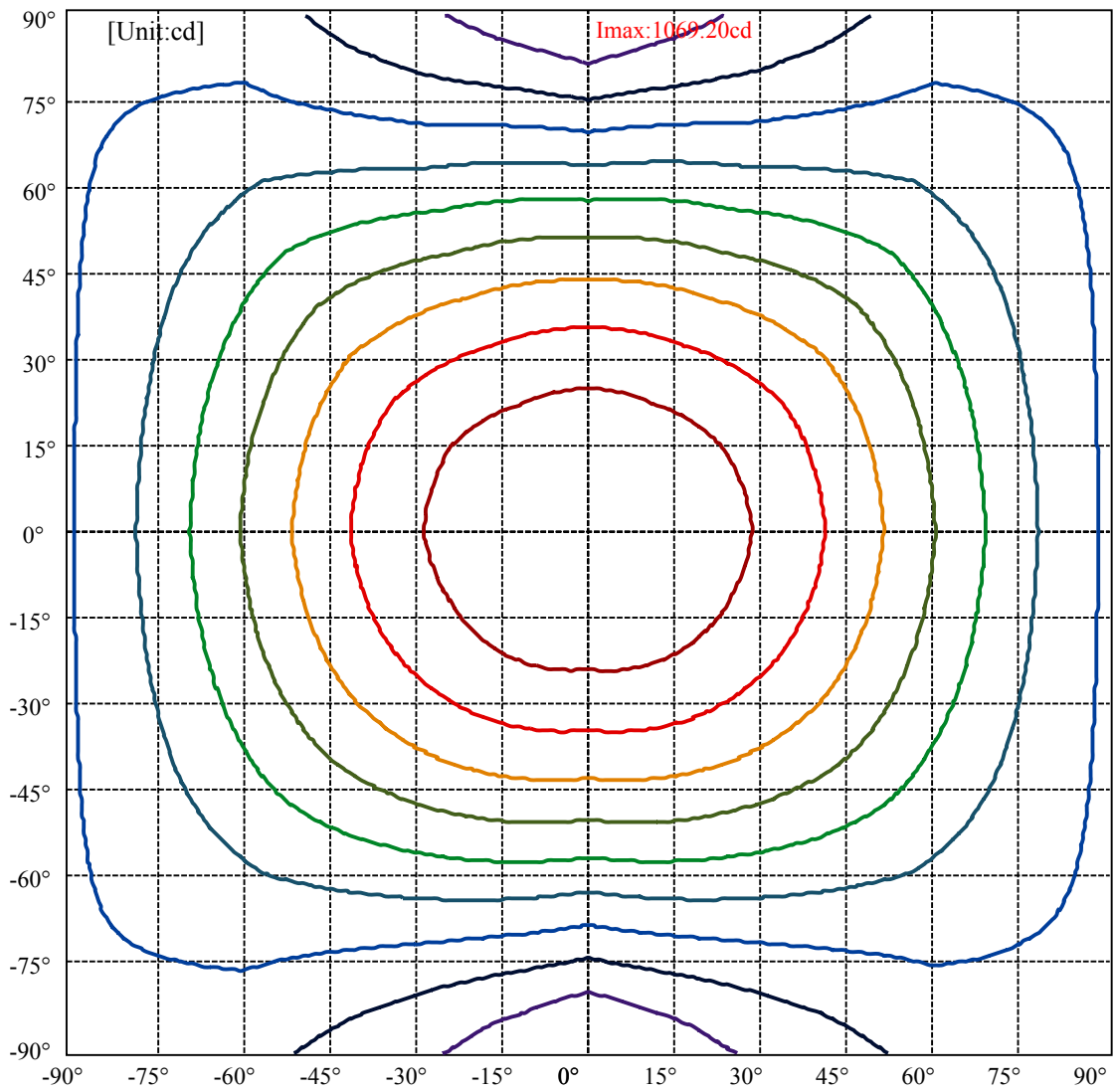
:C90/270Left:79.3 Right:80.6

Beam Angle(50%Imax):C0/180Left:68.6 Right:68.4

:C90/270Left:56.1 Right:57.0



Max , Ave      Beam angle of C0 plane 137.42

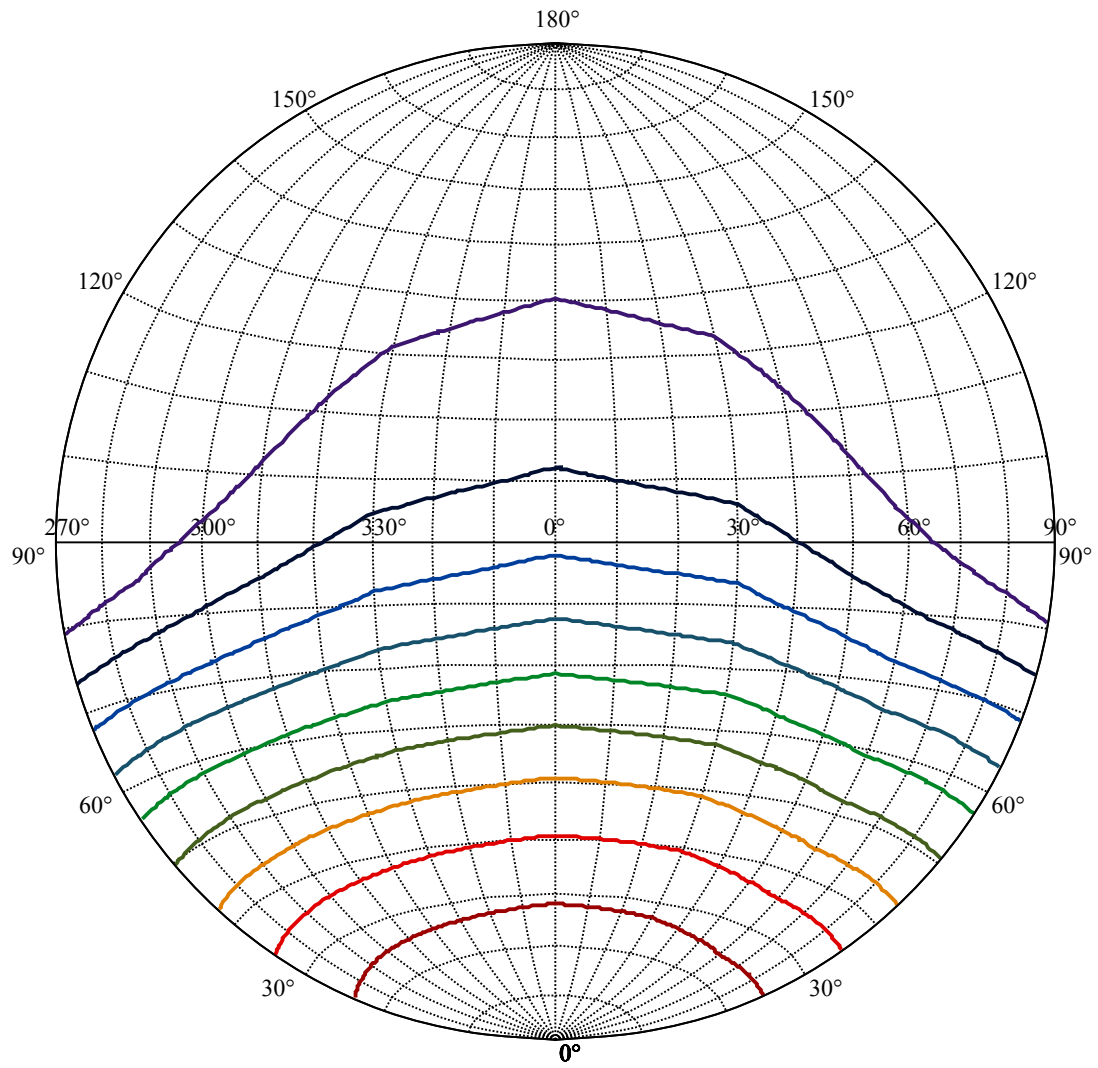


(10%I <sub>max</sub> ) 106.92	—
(20%I <sub>max</sub> ) 213.84	—
(30%I <sub>max</sub> ) 320.76	—
(40%I <sub>max</sub> ) 427.68	—
(50%I <sub>max</sub> ) 534.6	—
(60%I <sub>max</sub> ) 641.52	—
(70%I <sub>max</sub> ) 748.44	—
(80%I <sub>max</sub> ) 855.36	—
(90%I <sub>max</sub> ) 962.28	—

Equipment:  
Temperature(°C): 24.9

Date:  
Humidity(%): 50%

Operator: LSC



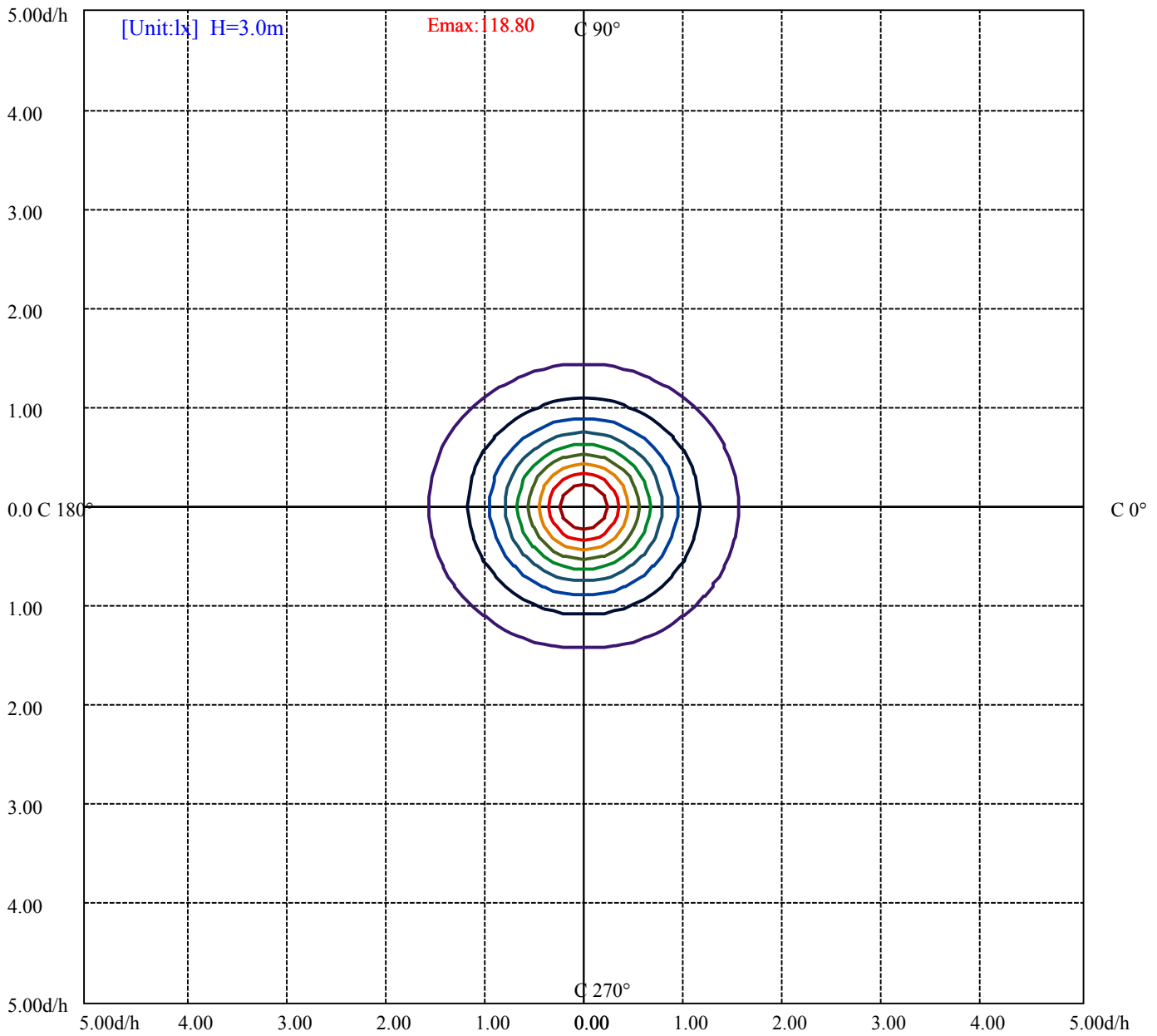
House










[Unit:cd]

Road

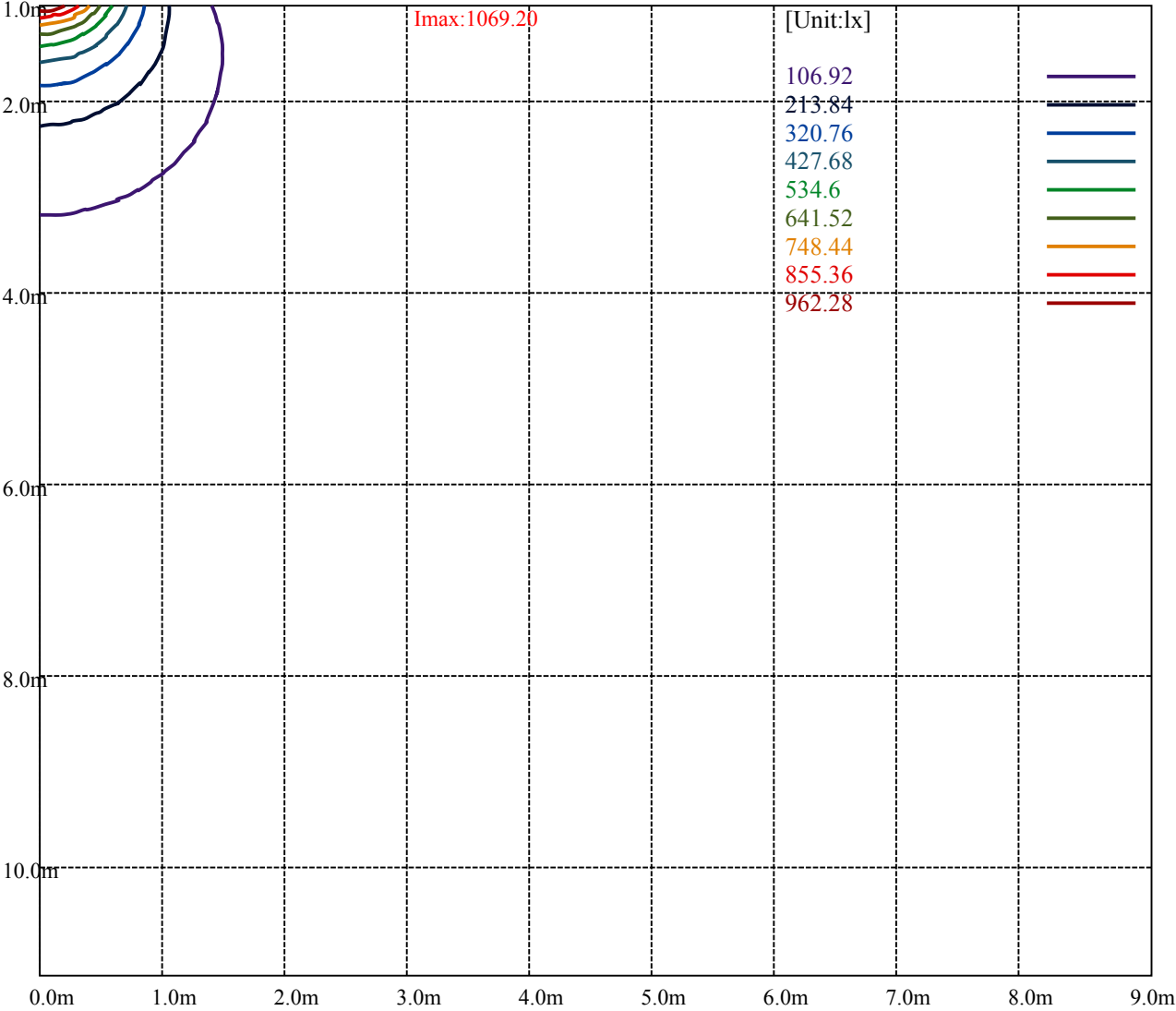
**I<sub>max</sub>:1069.20**

(10%I <sub>max</sub> ) 106.92	
(20%I <sub>max</sub> ) 213.84	
(30%I <sub>max</sub> ) 320.76	
(40%I <sub>max</sub> ) 427.68	
(50%I <sub>max</sub> ) 534.6	
(60%I <sub>max</sub> ) 641.52	
(70%I <sub>max</sub> ) 748.44	
(80%I <sub>max</sub> ) 855.36	
(90%I <sub>max</sub> ) 962.28	



(10%Emax) 11.88	
(20%Emax) 23.76	
(30%Emax) 35.64	
(40%Emax) 47.52	
(50%Emax) 59.4	
(60%Emax) 71.28	
(70%Emax) 83.16	
(80%Emax) 95.04	
(90%Emax) 106.92	





Luminance Limiting Curve(no luminous side)

Luminance Table

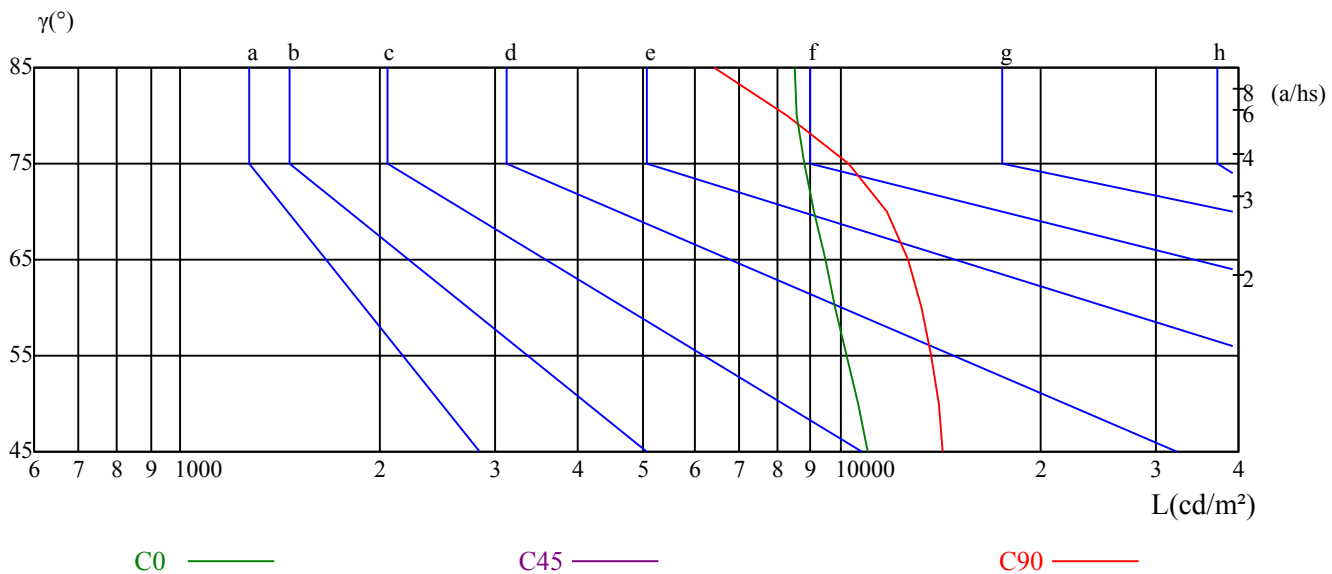
$\gamma$	45	50	55	60	65	70	75	80	85
C0	10983	10600	10187	9808	9447	9077	8798	8599	8489
C45	0	0	0	0	0	0	0	0	0
C90	14304	14065	13736	13227	12621	11741	10285	8280	6409

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
19613	12974	0	25313	10760	0	57442	6333	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



Equipment:  
Temperature( $^{\circ}C$ ): 24.9

Date:  
Humidity(%): 50%

Operator: LSC

Illumination 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	19.75	21.19	20.29	21.74	22.36	19.09	20.53	19.63	21.09	21.70
	3H	21.91	23.23	22.47	23.80	24.44	20.82	22.14	21.38	22.71	23.35
	4H	22.91	24.16	23.49	24.75	25.40	21.46	22.71	22.03	23.29	23.94
	6H	23.92	25.09	24.51	25.68	26.36	21.93	23.10	22.52	23.70	24.37
	8H	24.38	25.52	24.97	26.11	26.80	22.06	23.19	22.65	23.79	24.48
	12H	24.82	25.91	25.42	26.52	27.21	22.13	23.23	22.73	23.83	24.52
4H	2H	20.46	21.72	21.04	22.30	22.95	19.95	21.20	20.53	21.79	22.44
	3H	22.81	23.90	23.41	24.50	25.20	21.84	22.92	22.43	23.53	24.22
	4H	24.03	25.01	24.64	25.64	26.35	22.68	23.66	23.29	24.28	25.00
	6H	25.17	26.05	25.81	26.70	27.42	23.27	24.15	23.91	24.80	25.51
	8H	25.75	26.58	26.39	27.23	27.96	23.50	24.33	24.14	24.98	25.71
	12H	26.31	27.08	26.96	27.73	28.49	23.66	24.44	24.31	25.08	25.84
8H	4H	24.37	25.20	25.01	25.85	26.58	23.20	24.03	23.84	24.68	25.41
	6H	25.73	26.44	26.39	27.10	27.86	24.00	24.71	24.66	25.37	26.13
	8H	26.50	27.13	27.18	27.83	28.58	24.40	25.03	25.08	25.72	26.48
	12H	27.22	27.77	27.91	28.47	29.23	24.67	25.22	25.36	25.92	26.68
12H	4H	24.41	25.18	25.06	25.83	26.59	23.33	24.10	23.98	24.75	25.51
	6H	25.87	26.50	26.55	27.20	27.95	24.27	24.90	24.95	25.59	26.35
	8H	26.68	27.22	27.36	27.92	28.69	24.70	25.25	25.39	25.95	26.71
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.6					0.2/-0.9					
S = 1.5H	0.5/-0.6					0.4/-0.7					
S = 2.0H	0.6/-0.7					0.4/-0.6					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	9.2					10.8					

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25

## 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	1069.20	1064.80	1054.60	1037.60	1014.90	984.80	950.20	910.40	863.60
30.0	1069.20	1062.30	1052.10	1034.30	1009.50	978.50	940.00	897.40	849.60
60.0	1069.20	1062.80	1048.80	1027.20	997.90	959.30	914.30	863.20	803.40
90.0	1069.20	1064.70	1051.60	1028.90	998.20	959.20	910.70	856.40	795.20
120.0	1069.20	1064.50	1050.30	1028.60	998.80	959.90	915.20	863.50	803.60
150.0	1069.20	1066.20	1055.80	1037.00	1012.70	981.50	943.80	900.70	852.90
180.0	1069.20	1064.60	1053.50	1036.90	1014.50	984.60	950.80	911.40	864.70
210.0	1069.20	1061.00	1049.20	1029.60	1003.80	972.00	933.10	889.80	840.50
240.0	1069.20	1063.60	1050.60	1030.10	1001.30	963.50	919.60	868.90	809.70
270.0	1069.20	1062.70	1048.50	1024.80	991.70	952.00	903.60	845.60	782.80
300.0	1069.20	1065.40	1052.90	1031.90	1003.20	965.00	920.80	870.00	810.00
330.0	1069.20	1064.80	1053.10	1034.30	1007.20	975.00	936.00	890.30	841.10
360.0	1069.20	1064.80	1054.60	1037.60	1014.90	984.80	950.20	910.40	863.60
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	813.60	759.40	699.50	639.10	577.80	514.70	455.80	400.00	347.00
30.0	794.20	736.90	675.90	610.00	544.80	480.50	416.00	358.00	305.50
60.0	739.90	672.40	597.50	522.20	445.20	365.40	291.70	225.20	167.50
90.0	724.60	650.80	570.50	482.50	393.10	300.30	203.80	115.10	50.50
120.0	740.20	671.90	596.70	520.50	442.10	361.20	286.30	219.00	161.30
150.0	797.70	740.30	678.10	611.60	546.10	481.10	416.30	358.20	306.30
180.0	815.00	760.70	701.10	640.80	580.00	517.40	459.30	404.40	352.30
210.0	784.60	726.60	664.60	597.90	532.50	468.10	404.20	347.70	297.30
240.0	747.00	679.60	604.70	528.80	451.00	370.20	295.30	227.50	171.40
270.0	713.70	635.40	553.90	467.30	372.80	279.40	185.20	95.10	26.60
300.0	746.70	678.60	603.40	527.20	449.40	368.50	293.60	225.50	167.00
330.0	786.60	725.50	663.30	598.70	530.40	465.60	403.40	343.90	292.60
360.0	813.60	759.40	699.50	639.10	577.80	514.70	455.80	400.00	347.00
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	301.20	261.40	226.20	197.80	174.00	153.50	136.60	121.70	108.00
30.0	258.00	219.90	188.70	162.80	143.00	127.10	113.20	101.80	91.70
60.0	126.30	98.60	80.70	70.20	63.20	58.10	54.00	46.90	39.80
90.0	1.30	1.00	1.70	2.80	4.10	5.40	6.80	8.10	9.30
120.0	121.00	94.20	77.30	67.20	60.40	53.40	49.10	45.40	42.50
150.0	259.50	221.90	191.10	165.40	145.60	129.20	115.00	102.80	90.40
180.0	307.70	268.70	234.00	199.20	180.90	159.70	142.20	126.50	111.40
210.0	252.40	216.40	186.20	161.70	142.70	127.00	113.00	101.10	88.80
240.0	128.00	100.20	82.60	71.10	63.80	57.60	52.50	47.60	43.50
270.0	0.30	0.60	1.50	2.60	4.00	5.50	6.60	7.90	9.00
300.0	124.90	96.90	79.10	68.80	62.10	57.20	53.30	47.10	40.40
330.0	248.30	210.40	180.30	156.80	137.50	122.50	109.80	98.40	88.60
360.0	301.20	261.40	226.20	197.80	174.00	153.50	136.60	121.70	108.00
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	96.00	84.60	73.10	62.90	53.70	45.50	37.60	30.30	24.70
30.0	81.80	68.40	55.00	43.90	35.50	31.10	24.80	22.30	21.30
60.0	35.10	31.50	27.70	25.70	22.50	21.90	22.30	22.90	25.00
90.0	10.50	11.50	12.30	14.20	17.30	20.10	22.70	24.20	25.50
120.0	40.20	37.90	35.60	33.10	30.10	26.90	24.20	24.10	22.30
150.0	79.90	71.30	63.20	55.10	47.90	41.40	34.30	28.00	24.40
180.0	96.70	84.90	73.70	63.90	54.60	45.90	38.00	30.30	22.50
210.0	78.30	69.00	60.70	53.30	46.10	40.00	33.90	27.60	27.50
240.0	41.00	38.80	36.70	34.70	31.70	28.20	25.70	25.50	22.90
270.0	10.10	11.10	12.00	13.90	17.10	19.90	22.20	23.40	24.40
300.0	34.90	30.00	26.30	24.10	22.30	21.40	21.90	22.00	24.70
330.0	79.30	65.50	53.10	42.50	33.50	29.80	25.00	21.80	20.30
360.0	96.00	84.60	73.10	62.90	53.70	45.50	37.60	30.30	24.70

Equipment:  
Temperature(°C): 24.9

Date:  
Humidity(%): 50%

Operator: LSC

Intensity data(cd)

<b>C/<math>\gamma</math>(<math>^{\circ}</math>)</b>	<b>180.0</b>
<b>0.0</b>	<b>25.80</b>
<b>30.0</b>	<b>25.80</b>
<b>60.0</b>	<b>25.80</b>
<b>90.0</b>	<b>25.80</b>
<b>120.0</b>	<b>25.80</b>
<b>150.0</b>	<b>25.80</b>
<b>180.0</b>	<b>25.80</b>
<b>210.0</b>	<b>25.80</b>
<b>240.0</b>	<b>25.80</b>
<b>270.0</b>	<b>25.80</b>
<b>300.0</b>	<b>25.80</b>
<b>330.0</b>	<b>25.80</b>
<b>360.0</b>	<b>25.80</b>