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Report No	:		Voltage	:	V
Test No	:	A2017091A001	Current	:	A
LumCAT	:	0028920008	Power	:	49.987 W
Luminaire	:	Batten 1500mm 52W 4000K IP65 <del>PK</del> 08		:	
LampCAT	:	N/A	Ballast type	:	
Lamp flux	:	lm	Width	:	63 mm
Number of Lamps	:	1	Length	:	1500 mm
Phm Type	:	C	Height	:	63 mm

### Photometric Results

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Lumens(lm)	:	6186.38	Central intensity(cd)	:	1574.500
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	1574.500
Luminous Efficacy(lm/W)	:	123.76	Angle of maximum intensity	:	C=0.0 $\gamma$ =0.0
Beam Angle(50%Imax)	:	[C0/180]Total=137.2 [C90/270]Total=113.8			
Field angle(10%Imax)	:	[C0/180]Total=263.6 [C90/270]Total=160.3			
Maximum s/h(1/2)	:	C0_180=1.33 C90_270=1.28			
Maximum s/h(1/4)	:	C0_180=1.48 C90_270=1.39			
CIE Type	:	Semidirect lighting			
Output flux ratio in $\pi$ solid angle	:	60.959%			

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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	1574.500	0.000	0	0.00%	0.00%
5.0	1569.308	37.583	37.583	0.61%	0.61%
10.0	1551.650	111.647	149.23	1.80%	2.41%
15.0	1522.700	182.368	331.598	2.95%	5.36%
20.0	1482.575	247.677	579.275	4.00%	9.36%
25.0	1431.525	305.635	884.91	4.94%	14.30%
30.0	1371.175	354.684	1239.594	5.73%	20.04%
35.0	1301.583	393.582	1633.177	6.36%	26.40%
40.0	1222.258	421.084	2054.261	6.81%	33.21%
45.0	1135.225	436.507	2490.768	7.06%	40.26%
50.0	1041.167	439.772	2930.54	7.11%	47.37%
55.0	939.633	430.692	3361.231	6.96%	54.33%
60.0	833.700	409.901	3771.132	6.63%	60.96%
65.0	724.792	378.872	4150.005	6.12%	67.08%
70.0	614.575	339.136	4489.141	5.48%	72.56%
75.0	507.825	293.377	4782.518	4.74%	77.31%
80.0	409.317	245.402	5027.92	3.97%	81.27%
85.0	324.233	199.323	5227.243	3.22%	84.50%
90.0	262.142	160.554	5387.797	2.60%	87.09%
95.0	220.442	132.135	5519.932	2.14%	89.23%
100.0	189.050	111.269	5631.201	1.80%	91.03%
105.0	165.508	94.870	5726.071	1.53%	92.56%
110.0	147.192	81.735	5807.806	1.32%	93.88%
115.0	131.950	70.680	5878.486	1.14%	95.02%
120.0	118.225	60.818	5939.304	0.98%	96.01%
125.0	106.517	51.948	5991.252	0.84%	96.85%
130.0	95.617	43.951	6035.203	0.71%	97.56%
135.0	85.400	36.577	6071.78	0.59%	98.15%
140.0	76.075	29.898	6101.678	0.48%	98.63%
145.0	67.717	23.991	6125.669	0.39%	99.02%
150.0	60.650	18.903	6144.572	0.31%	99.32%
155.0	54.625	14.588	6159.16	0.24%	99.56%
160.0	49.583	10.930	6170.09	0.18%	99.74%
165.0	44.250	7.733	6177.823	0.13%	99.86%
170.0	40.100	5.004	6182.826	0.08%	99.94%
175.0	38.783	2.822	6185.648	0.05%	99.99%
180.0	22.500	0.733	6186.381	0.01%	100.00%

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

Date:  
Humidity(%): 50%

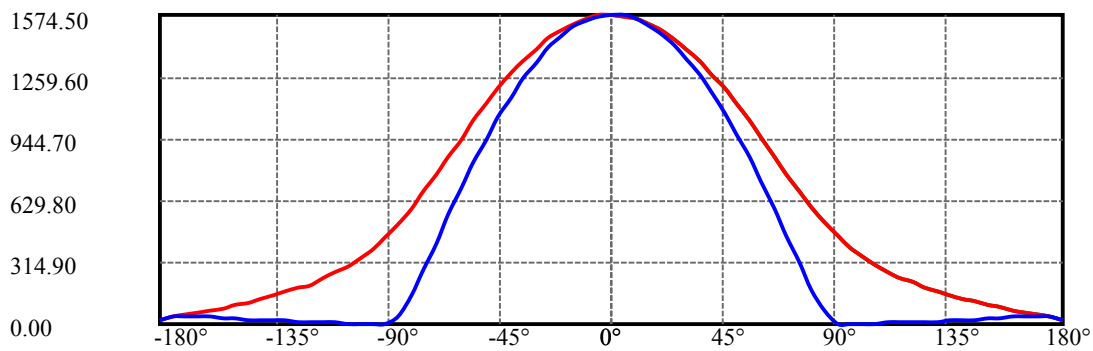
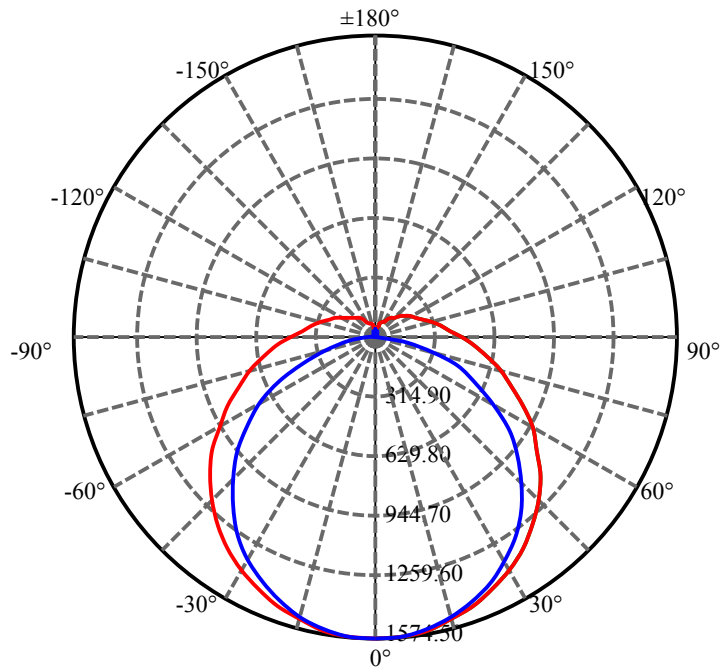
Operator: LSC

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-30	1239.59	20.04%
0-40	2054.26	33.21%
0-60	3771.13	60.96%
0-90	5387.80	87.09%
0-120	5939.30	96.01%
0-180	6186.38	100.00%
60-90	1616.66	26.13%
90-120	551.51	8.91%
90-130	647.41	10.47%
90-150	756.77	12.23%
90-180	797.85	12.90%
0-78.39	4949.10	80.00%

ZONAL LUMEN SUMMARY

0-10	149.23
10-20	430.05
20-30	660.32
30-40	814.67
40-50	876.28
50-60	840.59
60-70	718.01
70-80	538.78
80-90	359.88
90-100	243.40
100-110	176.60
110-120	131.50
120-130	95.90
130-140	66.48
140-150	42.89
150-160	25.52
160-170	12.74
170-180	2.82



C0(Max): ———

C0/C180: ———

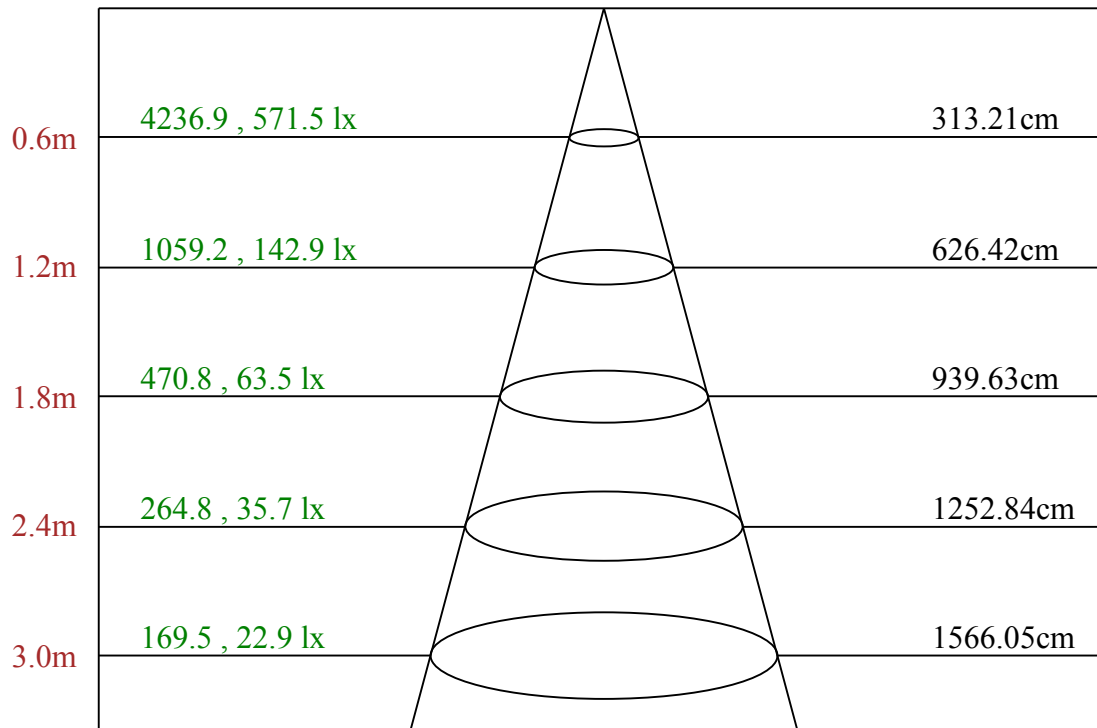
C90/C270: ———

Field angle(10%Imax):C0/180Left:131.5 Right:132.1

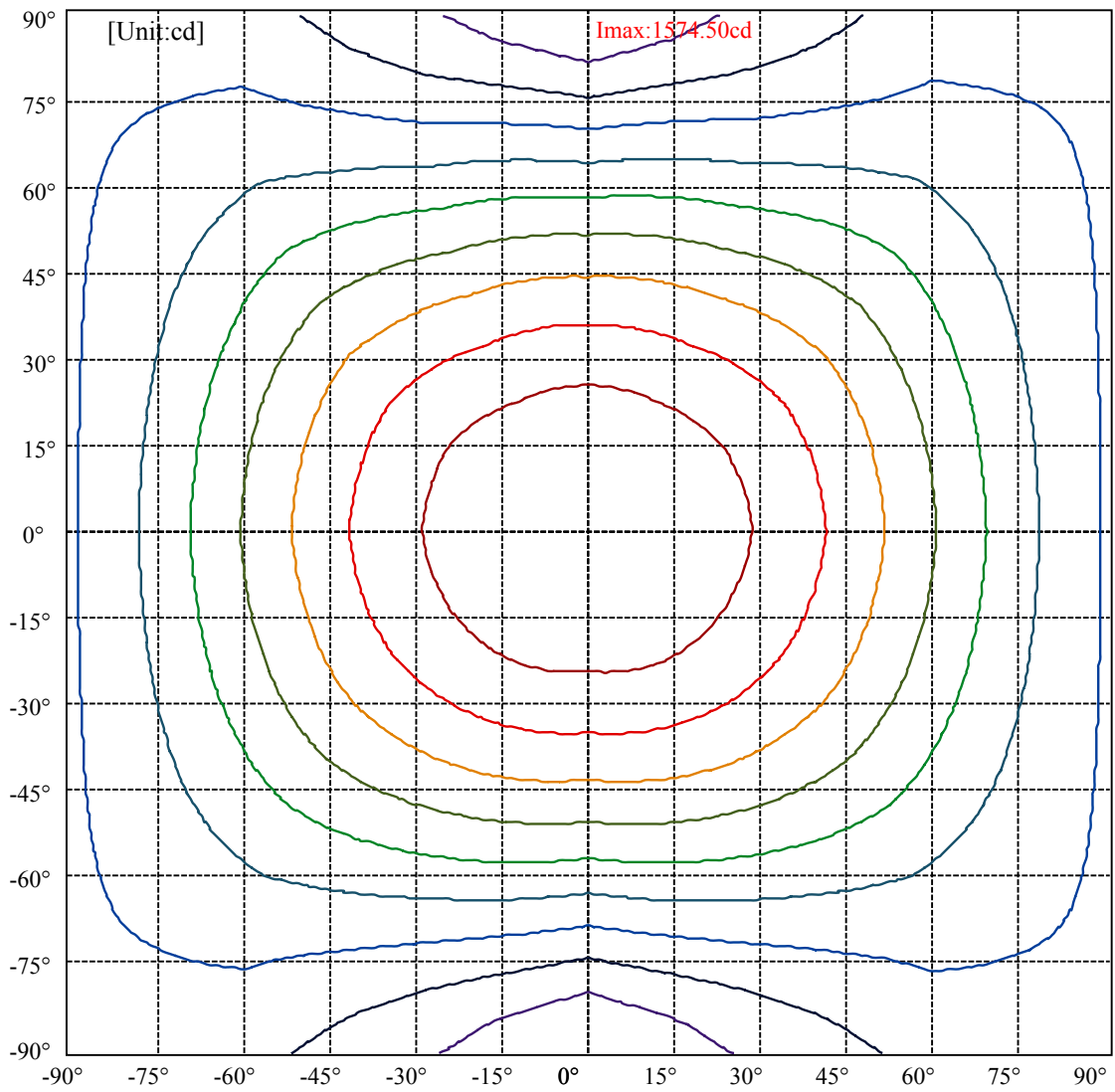
:C90/270Left:79.4 Right:80.9










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

:C90/270Left:56.2 Right:57.6



Max , Ave      Beam angle of C0 plane 137.46

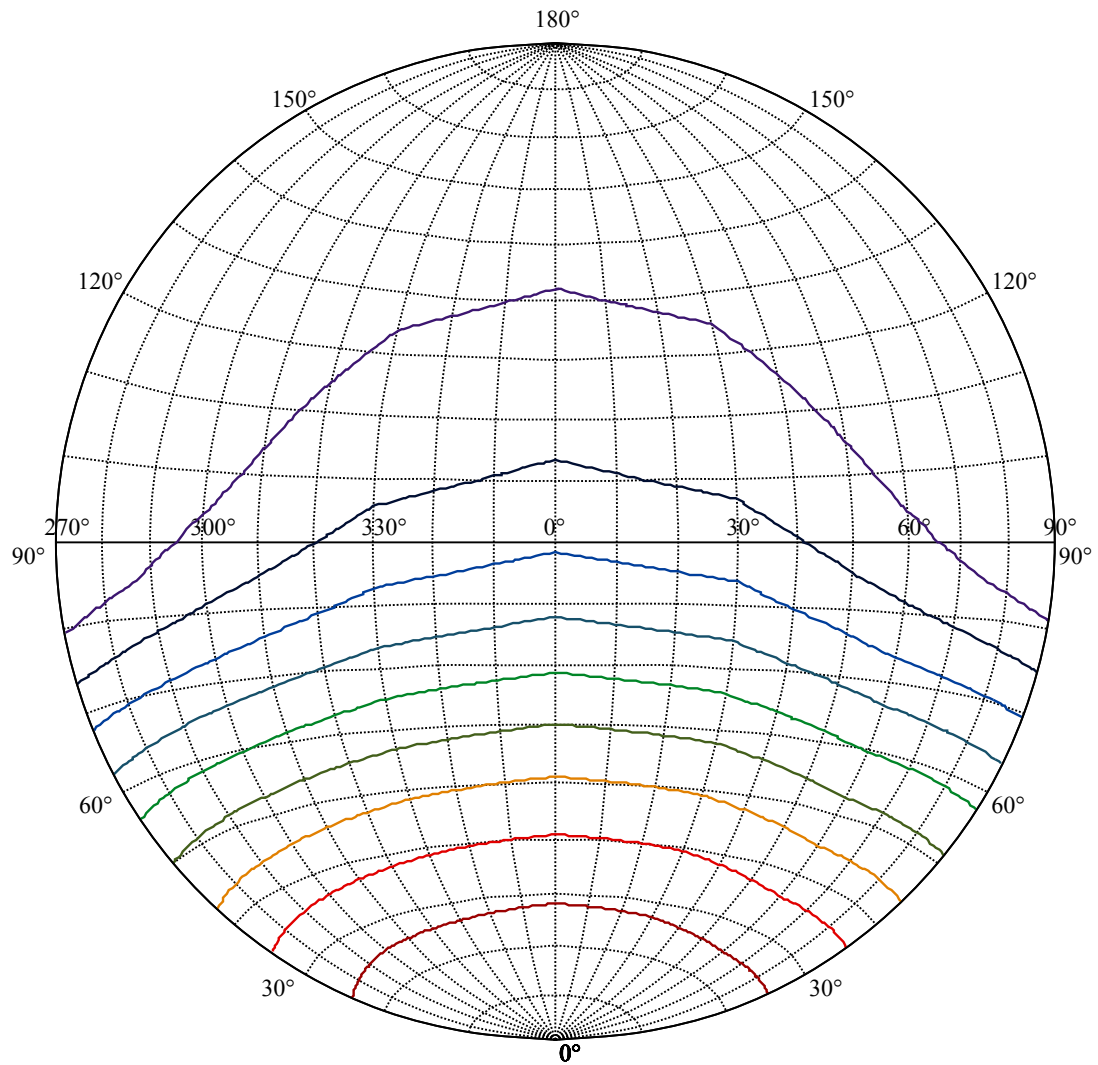


(10%Imax) 157.45	
(20%Imax) 314.9	
(30%Imax) 472.35	
(40%Imax) 629.8	
(50%Imax) 787.25	
(60%Imax) 944.7	
(70%Imax) 1102.15	
(80%Imax) 1259.6	
(90%Imax) 1417.05	

Equipment:  
Temperature(°C): 24.9

Date:  
Humidity(%): 50%

Operator: LSC



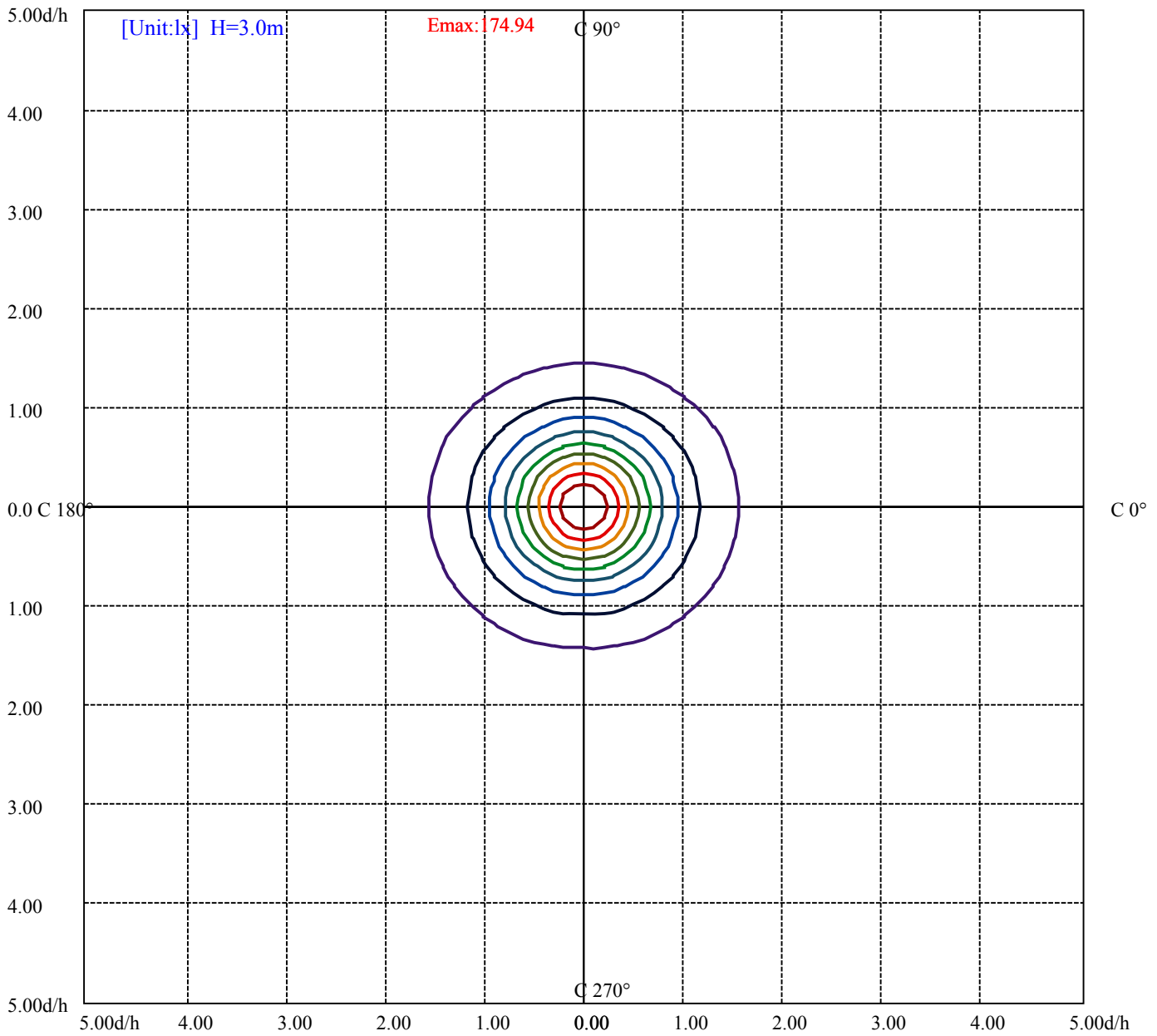
House

[Unit:cd]

Road

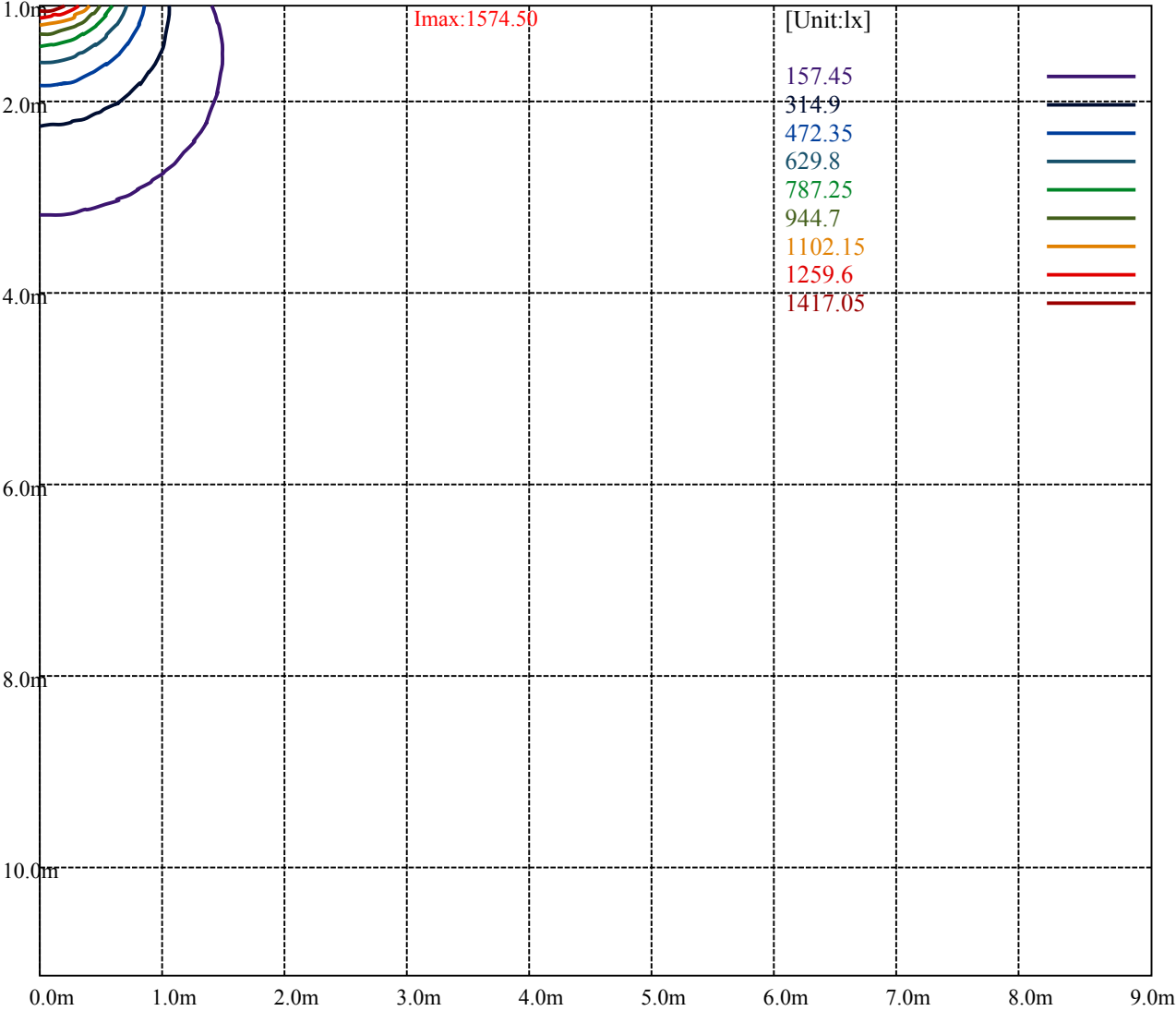
**Imax:1574.50**

(10%Imax) 157.45	
(20%Imax) 314.9	
(30%Imax) 472.35	
(40%Imax) 629.8	
(50%Imax) 787.25	
(60%Imax) 944.7	
(70%Imax) 1102.15	
(80%Imax) 1259.6	
(90%Imax) 1417.05	



(10%Emax) 17.49444	—
(20%Emax) 34.98889	—
(30%Emax) 52.48333	—
(40%Emax) 69.97778	—
(50%Emax) 87.47222	—
(60%Emax) 104.9667	—
(70%Emax) 122.4611	—
(80%Emax) 139.9556	—
(90%Emax) 157.45	—





Luminance Limiting Curve(no luminous side)

Luminance Table

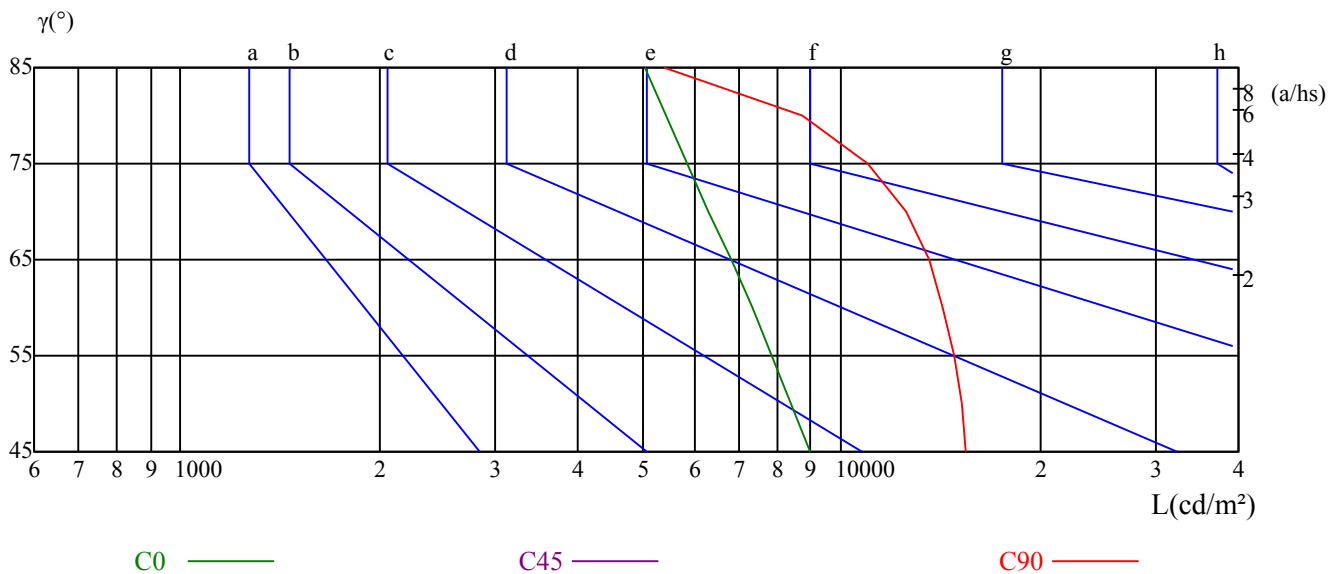
$\gamma$	45	50	55	60	65	70	75	80	85
C0	8985	8425	7855	7323	6808	6291	5833	5421	5040
C45	0	0	0	0	0	0	0	0	0
C90	15502	15222	14862	14274	13580	12596	10964	8746	5390

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
21367	14355	0	27510	11902	0	62456	6235	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(°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	18.86	20.30	19.41	20.86	21.48	18.51	19.95	19.06	20.51	21.13
	3H	20.91	22.23	21.47	22.80	23.44	20.26	21.58	20.83	22.16	22.80
	4H	21.84	23.09	22.41	23.67	24.32	20.91	22.16	21.49	22.74	23.40
	6H	22.75	23.92	23.34	24.51	25.19	21.40	22.56	21.98	23.16	23.84
	8H	23.16	24.29	23.75	24.89	25.57	21.52	22.65	22.11	23.25	23.94
	12H	23.54	24.63	24.14	25.24	25.93	21.57	22.67	22.17	23.27	23.97
4H	2H	19.59	20.84	20.16	21.42	22.07	19.31	20.56	19.89	21.14	21.80
	3H	21.81	22.89	22.41	23.50	24.19	21.21	22.29	21.81	22.90	23.60
	4H	22.94	23.92	23.56	24.55	25.27	22.05	23.03	22.66	23.65	24.37
	6H	23.98	24.86	24.62	25.51	26.23	22.64	23.53	23.28	24.18	24.89
	8H	24.49	25.32	25.14	25.98	26.71	22.86	23.69	23.51	24.34	25.08
	12H	24.99	25.77	25.64	26.41	27.18	23.01	23.78	23.66	24.42	25.19
8H	4H	23.28	24.11	23.92	24.76	25.49	22.49	23.32	23.14	23.97	24.71
	6H	24.52	25.23	25.18	25.89	26.66	23.27	23.98	23.94	24.65	25.41
	8H	25.22	25.85	25.91	26.55	27.31	23.66	24.28	24.34	24.98	25.74
	12H	25.87	26.41	26.55	27.11	27.88	23.90	24.44	24.59	25.14	25.91
12H	4H	23.32	24.09	23.97	24.73	25.50	22.59	23.37	23.24	24.01	24.78
	6H	24.66	25.29	25.34	25.98	26.74	23.50	24.13	24.18	24.82	25.58
	8H	25.39	25.93	26.07	26.63	27.40	23.91	24.45	24.59	25.15	25.92
Variation with the observer position at spacings:											
S = 1.0H	0.2/-0.7					0.2/-0.8					
S = 1.5H	0.5/-0.6					0.5/-0.7					
S = 2.0H	0.7/-0.7					0.4/-0.6					
Standard tables:	BKBF					BKBF					
Uncorrected UGR	8.5					9.7					

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	1574.50	1568.80	1553.30	1528.10	1492.30	1449.30	1399.80	1342.00	1273.80
30.0	1574.50	1566.40	1550.40	1524.50	1486.20	1440.60	1386.70	1322.90	1252.80
60.0	1574.50	1567.60	1548.50	1516.30	1473.10	1419.50	1352.30	1277.60	1194.60
90.0	1574.50	1571.30	1552.70	1520.60	1476.80	1420.40	1350.20	1271.70	1182.80
120.0	1574.50	1571.10	1551.20	1520.40	1477.20	1420.60	1355.40	1279.70	1191.50
150.0	1574.50	1572.90	1557.30	1532.00	1496.20	1448.80	1393.70	1330.90	1257.40
180.0	1574.50	1569.90	1555.60	1530.10	1496.80	1454.20	1402.00	1343.50	1276.90
210.0	1574.50	1565.90	1549.80	1521.80	1484.80	1437.90	1382.20	1316.30	1244.30
240.0	1574.50	1568.50	1550.50	1520.40	1476.80	1423.10	1358.60	1281.00	1196.60
270.0	1574.50	1567.90	1546.40	1512.40	1465.60	1404.80	1334.30	1252.90	1157.40
300.0	1574.50	1572.10	1552.60	1522.50	1480.00	1424.40	1359.20	1284.90	1197.50
330.0	1574.50	1569.30	1551.50	1523.30	1485.10	1434.70	1379.70	1315.60	1241.50
360.0	1574.50	1568.80	1553.30	1528.10	1492.30	1449.30	1399.80	1342.00	1273.80
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1200.80	1121.60	1033.80	945.30	855.00	762.00	675.10	593.50	516.00
30.0	1175.60	1088.70	999.20	905.50	806.40	711.10	619.40	530.50	453.80
60.0	1100.10	1001.10	895.90	781.30	667.70	553.60	439.40	340.00	254.80
90.0	1079.40	970.90	853.90	723.50	591.20	454.10	310.20	177.70	65.70
120.0	1097.60	997.20	885.70	772.80	657.10	536.90	425.30	324.10	237.50
150.0	1178.30	1093.20	998.80	903.40	806.10	705.40	612.00	524.60	443.30
180.0	1200.50	1120.10	1035.00	942.50	851.70	761.40	670.60	588.40	512.80
210.0	1164.60	1075.60	984.10	889.00	788.30	692.20	600.20	511.40	435.10
240.0	1103.30	1000.10	893.10	780.60	661.00	545.30	434.00	329.50	246.20
270.0	1055.10	943.50	818.80	690.40	555.40	410.80	272.00	142.10	37.00
300.0	1105.40	1005.90	895.70	783.60	668.20	548.40	436.80	335.90	249.70
330.0	1162.00	1076.10	981.60	886.50	789.40	693.70	598.90	514.10	438.90
360.0	1200.80	1121.60	1033.80	945.30	855.00	762.00	675.10	593.50	516.00
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	450.20	393.10	342.50	301.50	266.80	236.40	210.90	187.60	166.20
30.0	387.80	330.80	286.10	250.00	219.80	196.10	175.90	156.90	138.70
60.0	193.20	152.40	126.00	109.90	99.00	88.80	77.30	65.90	57.30
90.0	2.80	1.40	2.20	3.50	5.50	7.30	9.40	11.40	13.40
120.0	175.90	136.10	112.00	97.00	87.70	81.10	75.70	70.60	65.70
150.0	376.10	319.90	273.30	237.50	209.10	185.30	166.10	149.50	134.10
180.0	443.50	385.90	336.90	294.30	260.10	231.10	199.40	182.70	163.10
210.0	369.90	313.90	270.70	236.10	207.60	184.40	165.40	148.40	133.60
240.0	184.50	142.20	117.50	102.30	92.20	85.20	79.70	74.20	69.50
270.0	0.50	1.10	2.70	4.50	6.70	8.90	10.90	13.00	15.00
300.0	188.80	148.50	122.80	107.60	97.40	87.80	77.10	65.10	56.30
330.0	372.50	320.00	275.90	241.90	214.40	191.00	170.90	152.90	134.50
360.0	450.20	393.10	342.50	301.50	266.80	236.40	210.90	187.60	166.20
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	145.80	128.30	112.80	98.30	83.90	71.10	59.20	46.80	34.90
30.0	116.80	95.90	79.00	65.00	58.30	51.90	43.20	36.70	35.10
60.0	54.50	51.70	46.30	42.90	39.00	37.60	36.10	35.30	39.20
90.0	15.20	16.90	20.70	25.50	30.00	34.30	38.20	40.10	41.40
120.0	61.60	58.00	54.40	50.90	45.60	41.70	38.50	40.00	41.70
150.0	120.70	107.80	94.80	82.90	72.60	62.60	52.50	43.10	40.70
180.0	144.60	128.10	111.90	96.40	82.10	69.50	57.70	46.30	36.30
210.0	120.30	106.70	94.60	82.60	71.60	61.20	51.30	43.30	41.30
240.0	64.80	60.00	55.80	52.10	47.50	43.80	39.80	39.50	41.40
270.0	16.70	18.30	22.40	26.10	30.20	34.40	37.60	39.40	40.70
300.0	53.50	50.60	45.20	41.80	37.90	36.10	35.20	35.20	38.80
330.0	110.30	90.60	74.70	63.30	56.80	50.80	41.70	35.50	33.90
360.0	145.80	128.30	112.80	98.30	83.90	71.10	59.20	46.80	34.90

Equipment:  
Temperature(°C): 24.9

Date:  
Humidity(%): 50%

Operator: LSC

Intensity data(cd)

C/ $\gamma$ ( $^{\circ}$ )	180.0
0.0	22.50
30.0	22.50
60.0	22.50
90.0	22.50
120.0	22.50
150.0	22.50
180.0	22.50
210.0	22.50
240.0	22.50
270.0	22.50
300.0	22.50
330.0	22.50
360.0	22.50