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Nata

Client: NT

LumCAT: 2-3056-LM

Luminaire: 92.70.121.00 LED HOLDER

Report No: 20260122-B013

Ballast type: DC

Test No: 20260122-C013

Voltage(V): 35.970

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.711

Lamp flux(lm): 3690.4

Power (W): 26.280

Number of Lamps: 1

PF: 0.000

Length(mm): 69

Width(mm): 69

Phm Type: C

Height(mm): 35

Photometric Results

Lumens(lm): 3617.73, Efficiency(%): 98.03% , Luminous Efficacy(lm/W): 137.66

Central intensity(cd): 20370.010, Maximum intensity(cd): 20370.010

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.2

[C90/270]Total=17.2

Field angle(10%Imax): [C0/180]Total=36.2

[C90/270]Total=36.2

Maximum s/h(1/2): C0_180=0.30 C90_270=0.30

Maximum s/h(1/4): C0_180=0.29 C90_270=0.29

Up flux rate of lamp(%): 0.00%

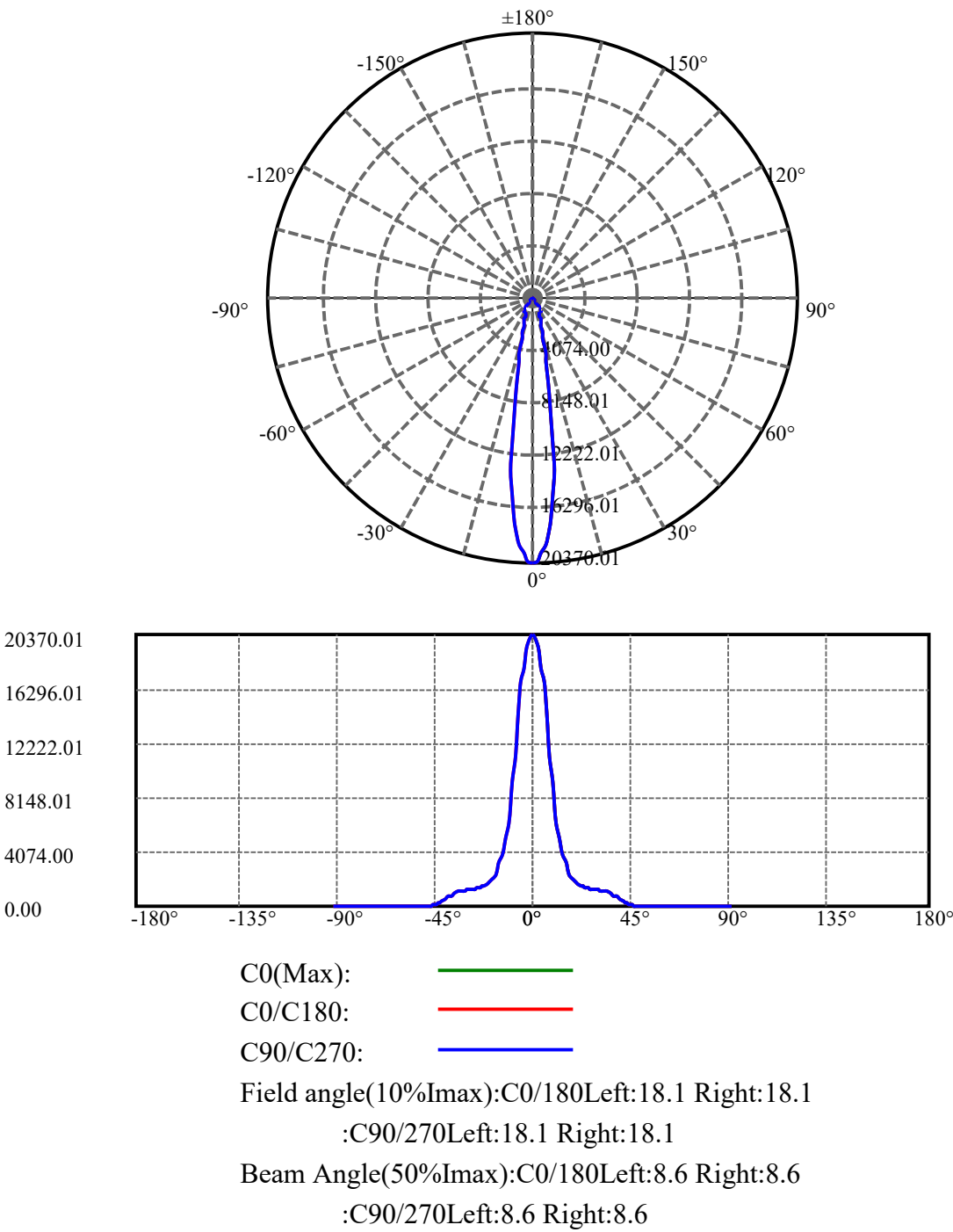
Down flux rate of lamp(%): 98.03%

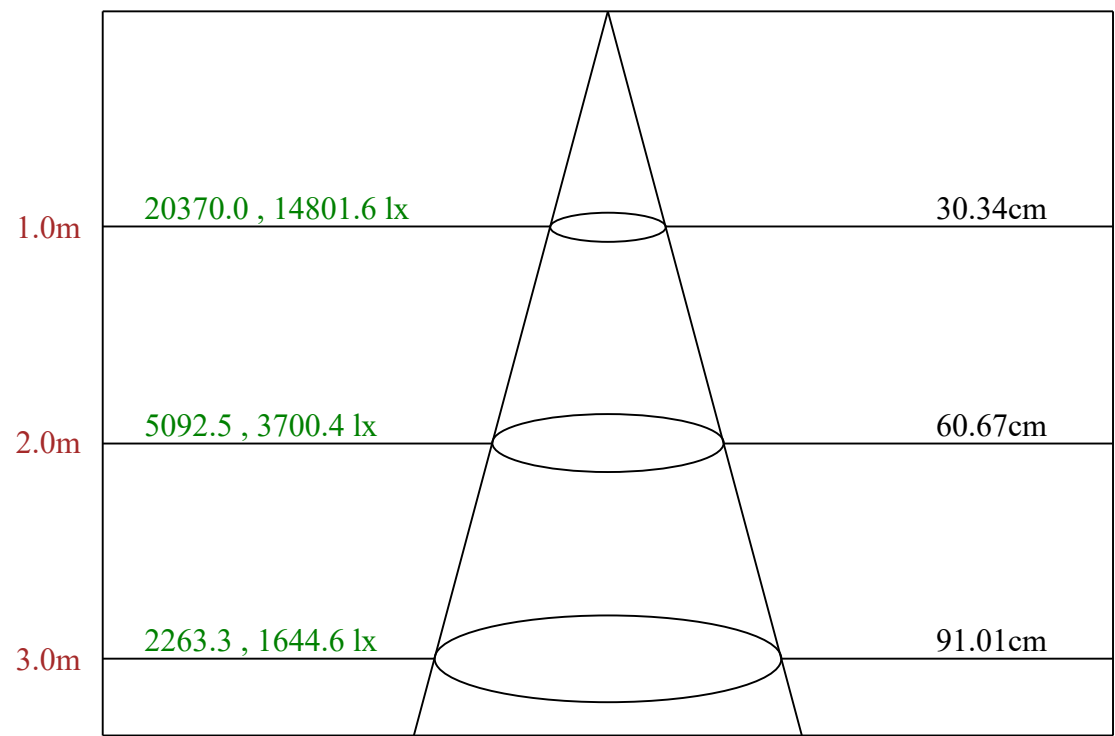
Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

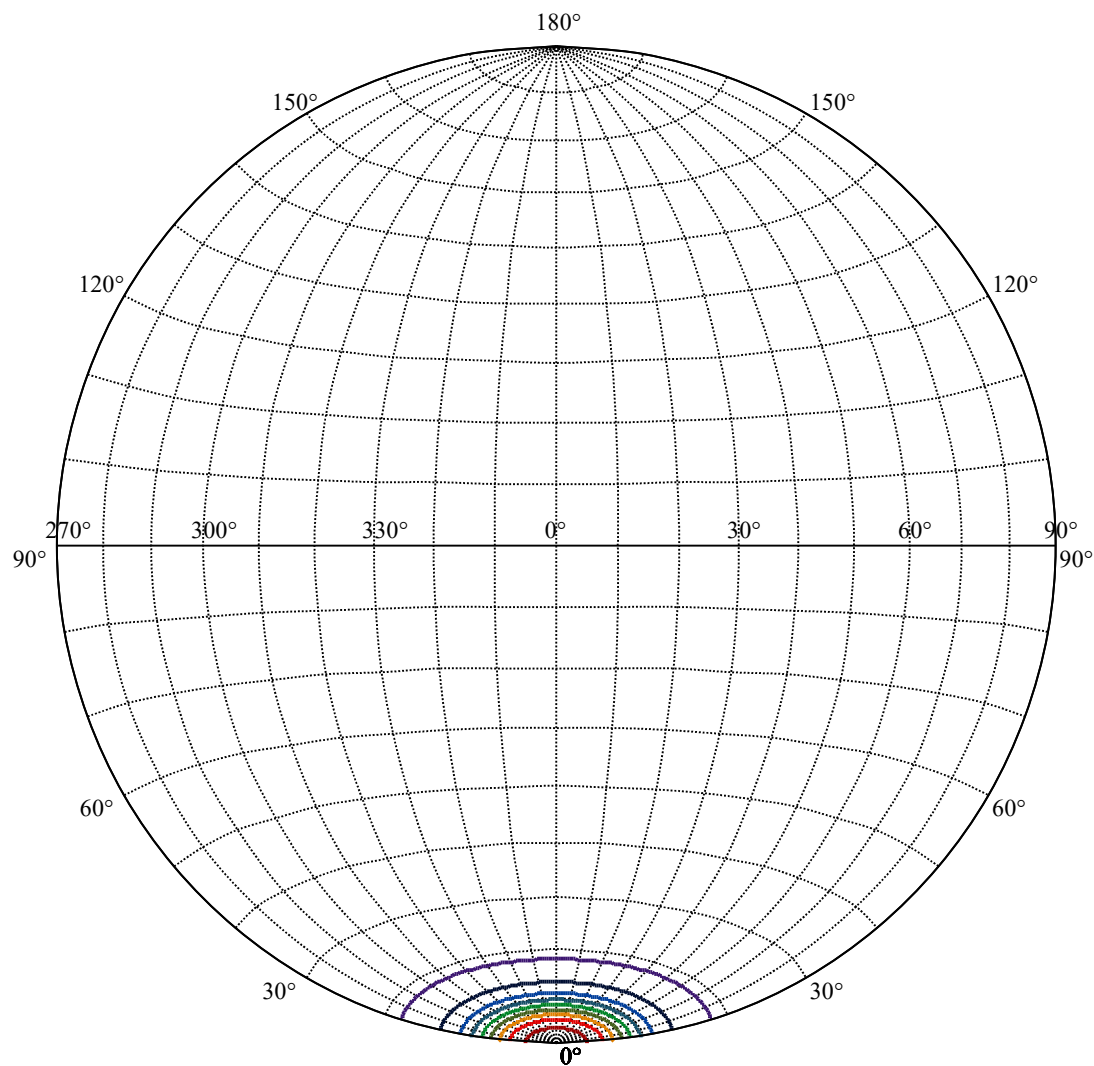
CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.214%





Max , Ave Beam angle of C0 plane 17.25



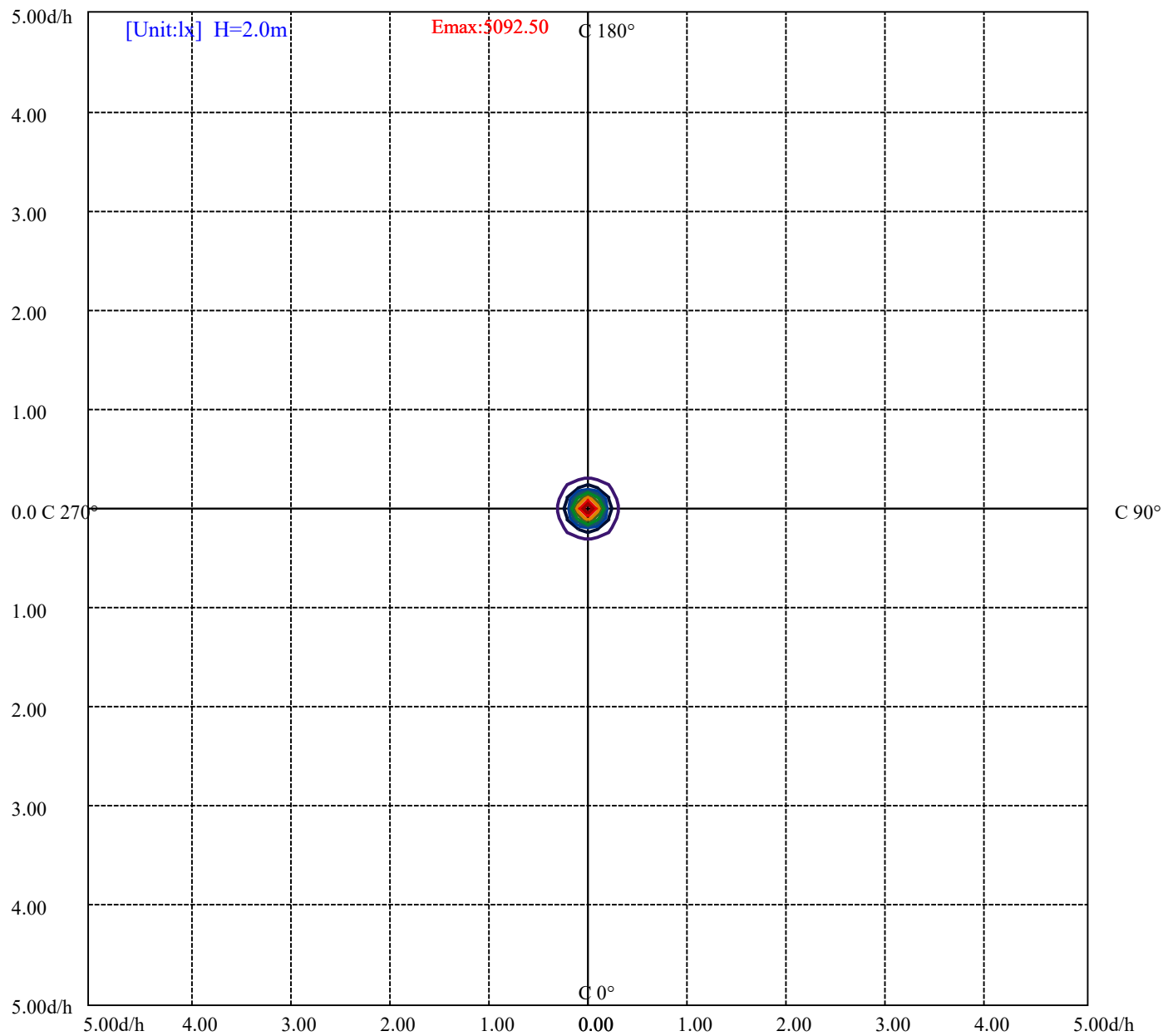
House

[Unit:cd]

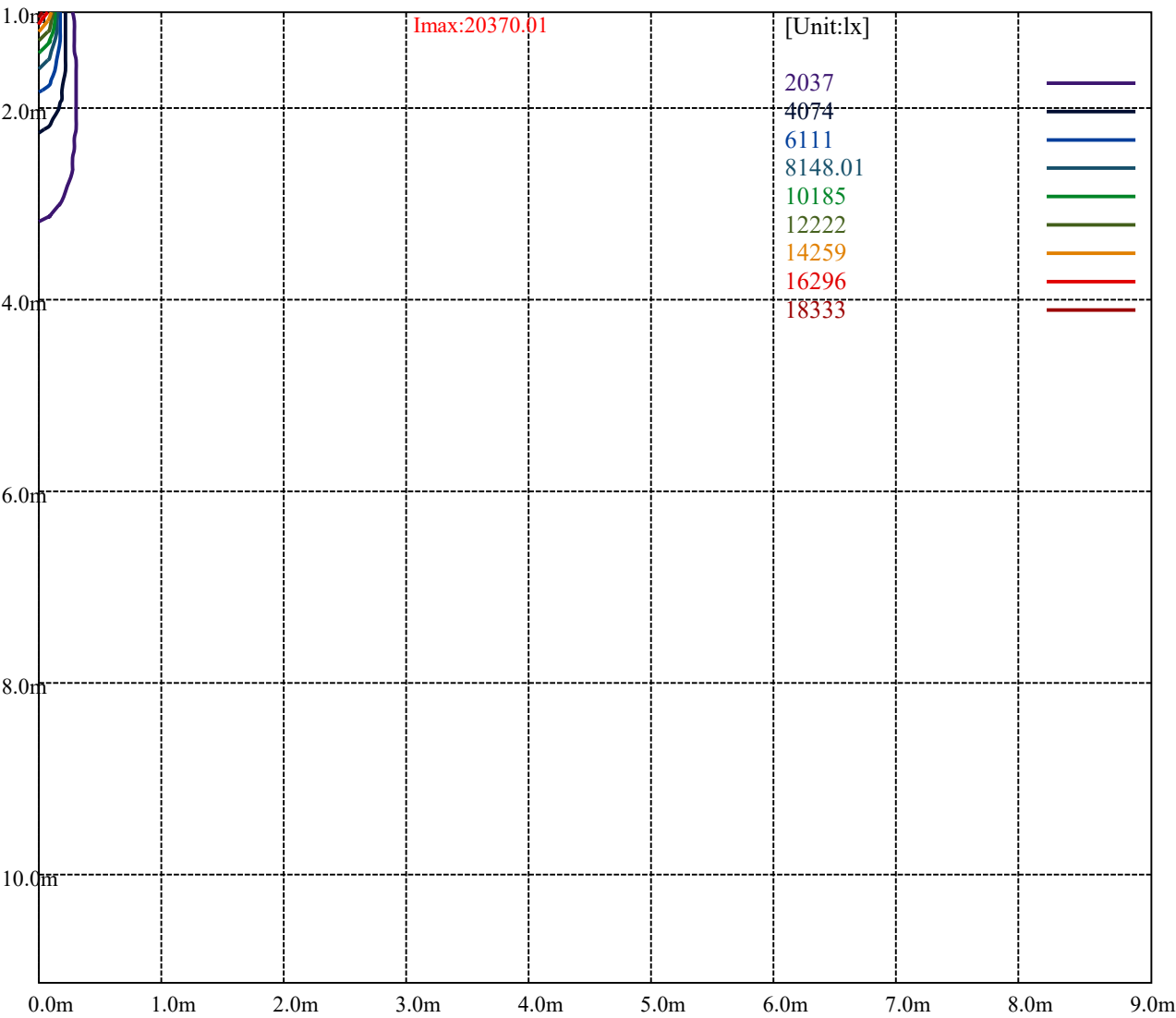
Road

Imax:20370.01

(10%Imax)	2037	
(20%Imax)	4074	
(30%Imax)	6111	
(40%Imax)	8148.01	
(50%Imax)	10185	
(60%Imax)	12222	
(70%Imax)	14259	
(80%Imax)	16296	
(90%Imax)	18333	



(10%Emax)	509.25	
(20%Emax)	1018.5	
(30%Emax)	1527.75	
(40%Emax)	2037	
(50%Emax)	2546.25	
(60%Emax)	3055.5	
(70%Emax)	3564.75	
(80%Emax)	4074	
(90%Emax)	4583.25	



Luminance Table

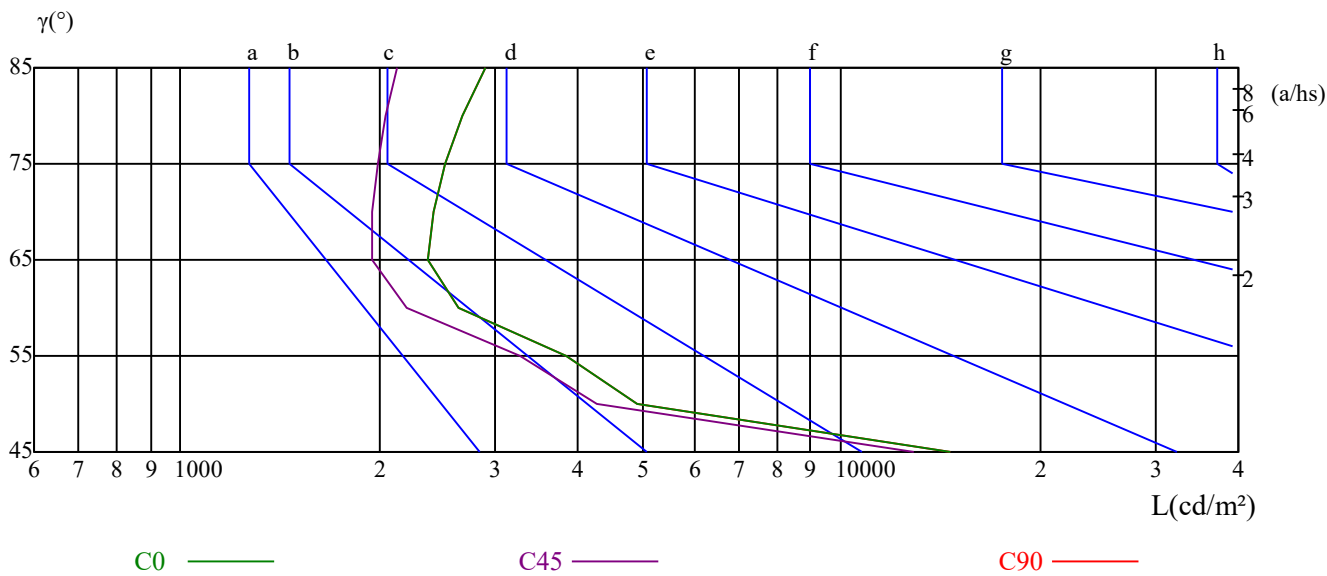
γ	45	50	55	60	65	70	75	80	85
C0	14679	4926	3831	2629	2365	2417	2521	2670	2889
C45	12883	4261	3263	2202	1945	1947	1984	2042	2135
C90	14679	4926	3831	2629	2365	2417	2521	2670	2889

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4938	4938	4938	7295	7295	7295	19638	19638	19638

Glare Table

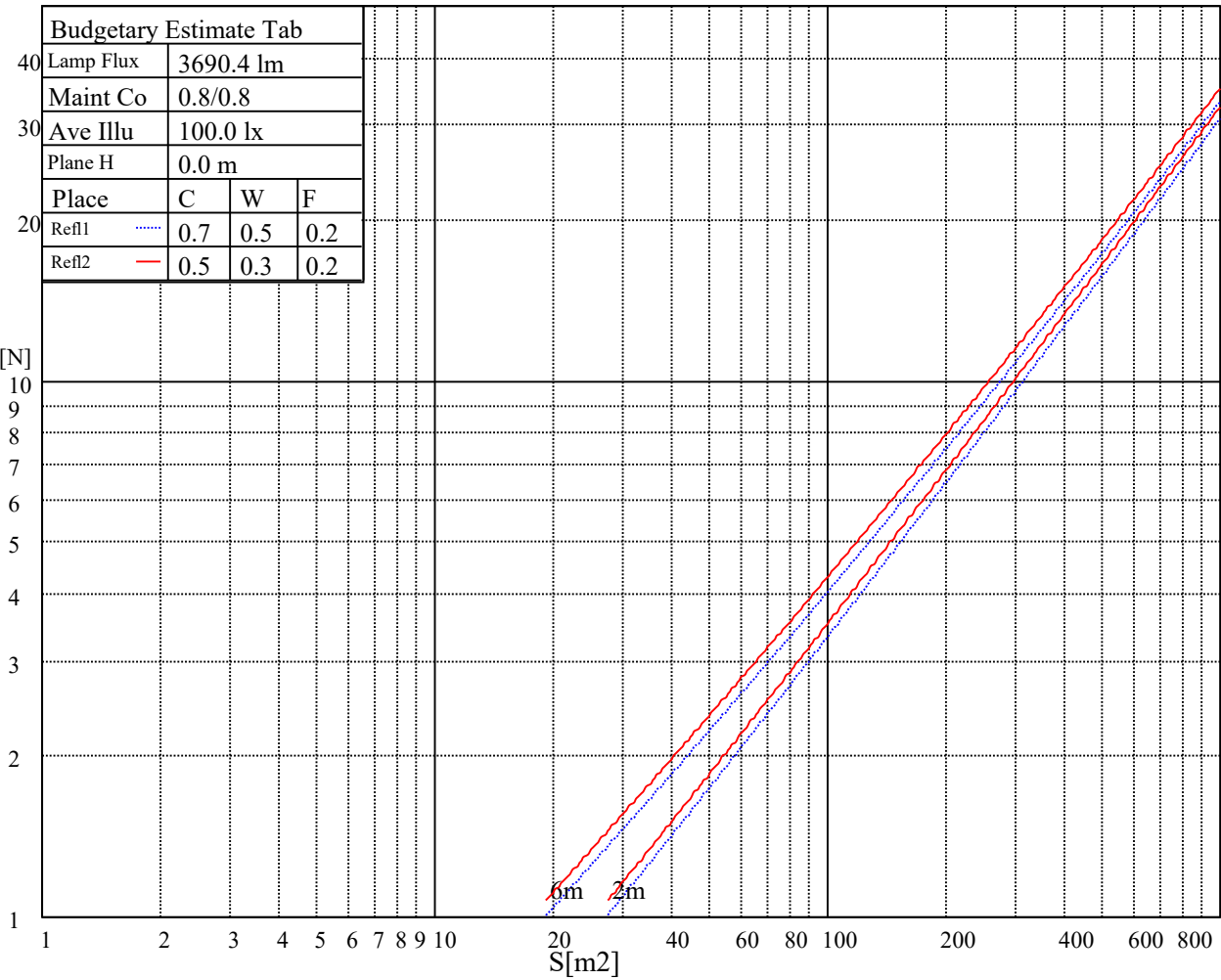
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

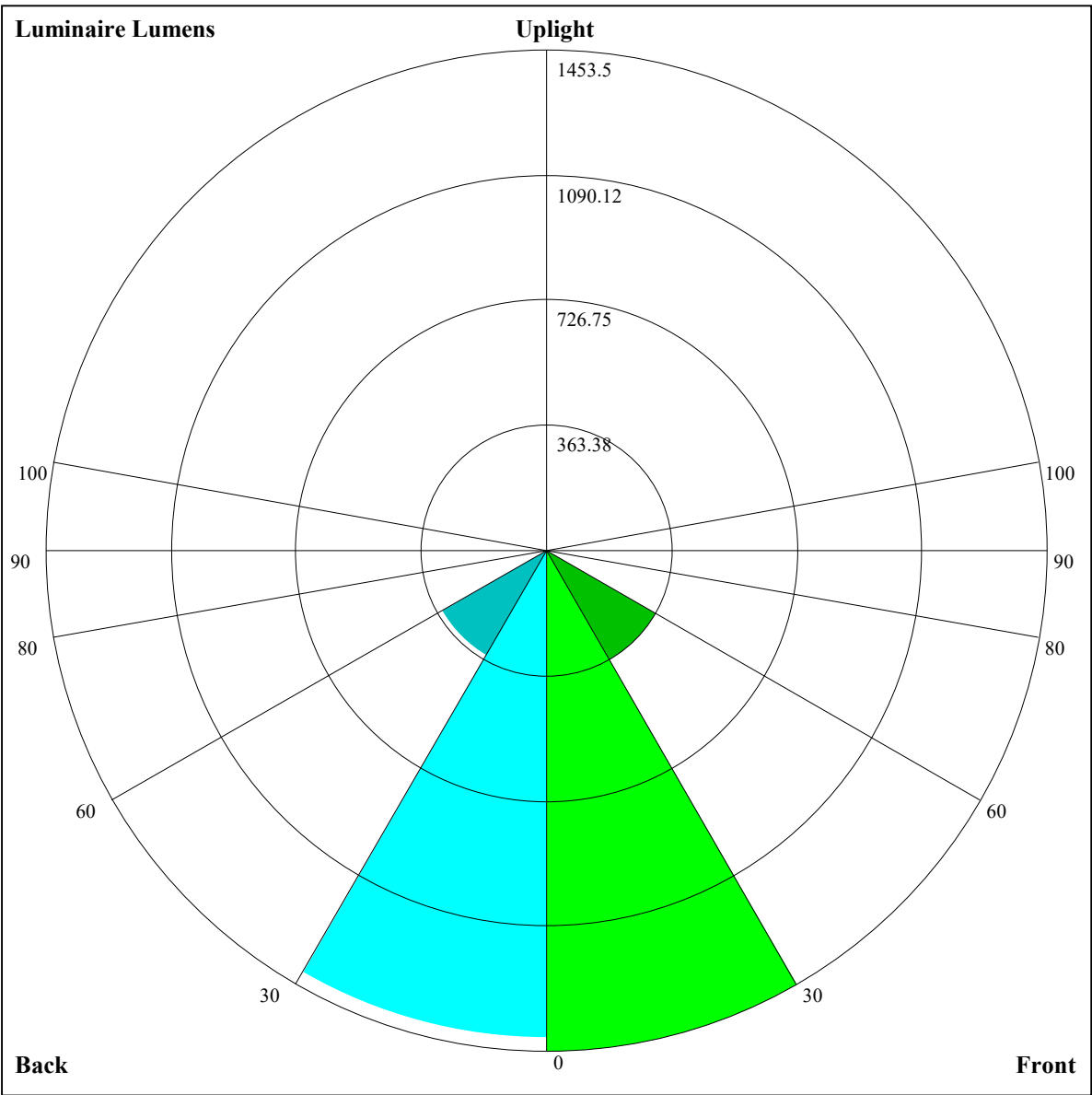


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	20.45	21.39	20.82	21.70	22.02	20.28	21.22	20.64	21.53	21.84
	3H	20.26	21.09	20.64	21.43	21.77	20.08	20.92	20.47	21.25	21.60
	4H	20.16	20.93	20.56	21.29	21.66	19.99	20.76	20.39	21.12	21.49
	6H	20.10	20.80	20.51	21.18	21.58	19.93	20.63	20.35	21.01	21.41
	8H	20.04	20.71	20.46	21.09	21.50	19.87	20.54	20.29	20.93	21.34
	12H	19.99	20.62	20.41	21.02	21.43	19.82	20.46	20.25	20.85	21.27
4H	2H	20.14	20.91	20.54	21.26	21.63	19.96	20.73	20.36	21.09	21.45
	3H	19.91	20.55	20.34	20.95	21.37	19.74	20.38	20.16	20.78	21.19
	4H	19.85	20.41	20.29	20.83	21.28	19.68	20.24	20.12	20.66	21.11
	6H	19.75	20.24	20.22	20.69	21.15	19.59	20.08	20.06	20.53	20.98
	8H	19.72	20.17	20.21	20.63	21.11	19.56	20.01	20.05	20.47	20.95
	12H	19.71	20.13	20.20	20.58	21.10	19.55	19.97	20.04	20.42	20.94
8H	4H	19.66	20.11	20.15	20.57	21.05	19.49	19.94	19.98	20.40	20.88
	6H	19.56	19.93	20.07	20.41	20.92	19.40	19.77	19.91	20.25	20.77
	8H	19.59	19.90	20.13	20.43	20.92	19.44	19.75	19.97	20.27	20.77
	12H	19.61	19.84	20.15	20.36	20.88	19.45	19.69	20.00	20.21	20.73
12H	4H	19.61	20.03	20.10	20.48	21.00	19.44	19.86	19.93	20.31	20.83
	6H	19.55	19.86	20.09	20.39	20.88	19.39	19.70	19.93	20.23	20.72
	8H	19.56	19.79	20.10	20.31	20.83	19.40	19.64	19.95	20.15	20.68
Variation with the observer position at spacings:											
S = 1.0H		4.6/-12.0					4.6/-12.0				
S = 1.5H		7.3/-10.7					7.3/-10.7				
S = 2.0H		9.2/-9.7					9.2/-9.7				
Standard tables:		BK0					BK0				
Uncorrected UGR		0.7					0.7				

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



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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.98
1	1.10	1.08	1.06	1.08	1.06	1.04	1.04	1.02	1.01	1.00	0.99	0.98	0.97	0.96	0.95	0.93
2	1.04	1.00	0.98	1.02	0.99	0.97	0.99	0.97	0.94	0.96	0.94	0.92	0.94	0.92	0.91	0.89
3	0.98	0.94	0.91	0.97	0.93	0.90	0.95	0.92	0.89	0.92	0.90	0.88	0.90	0.88	0.86	0.85
4	0.94	0.89	0.86	0.93	0.89	0.85	0.91	0.87	0.84	0.89	0.86	0.83	0.87	0.85	0.83	0.81
5	0.89	0.85	0.81	0.89	0.84	0.81	0.87	0.83	0.80	0.85	0.82	0.80	0.84	0.81	0.79	0.78
6	0.86	0.81	0.78	0.85	0.81	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.75
7	0.82	0.78	0.74	0.82	0.77	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
8	0.79	0.75	0.71	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.69
9	0.76	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.74	0.70	0.68	0.67
10	0.74	0.69	0.66	0.73	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65



Luminaire Lumens:

FL=1453.5,FM=364.71,FH=9.9,FVH=4.46

BL=1417.54,BM=350.9,BH=9.8,BVH=4.45

UL=0,UH=0

BUG Rating:B3-U0-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	20423.84	20380.78	20122.43	19502.37	16836.23	16836.23	15667.61	13834.15	11911.12
45.0	20268.83	20432.45	20406.62	20105.20	19588.49	18804.81	17702.50	15894.01	14137.20
90.0	20458.29	20398.00	20010.47	19467.93	17052.39	17052.39	15525.51	13686.88	11747.50
135.0	20329.11	20458.29	20423.84	20044.92	19502.37	18649.80	17203.01	15644.27	13319.07
180.0	20423.84	20217.16	19803.79	19132.06	17935.02	16591.57	14851.98	12940.15	10503.00
225.0	20268.83	19864.07	17129.90	17129.90	16768.20	14639.35	12687.91	10717.52	8450.02
270.0	20458.29	20329.11	19976.02	19252.63	18331.16	17116.89	15575.37	13198.51	11260.84
315.0	20329.11	19967.41	18667.02	16968.86	16968.86	15350.69	12966.07	11020.66	9191.50
360.0	20423.84	20380.78	20122.43	19502.37	16836.23	16836.23	15667.61	13834.15	11911.12
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	10067.33	8001.35	6584.70	5420.38	4521.30	3701.45	3207.14	2799.80	2476.85
45.0	12242.59	9977.68	8289.76	6524.33	5387.57	4509.16	4509.16	3189.05	2787.74
90.0	9430.91	7778.30	6080.91	5025.96	4219.89	3469.80	3003.03	2632.73	2327.87
135.0	11381.41	9538.47	7902.22	6162.63	5094.76	4448.88	4448.88	3047.82	2673.20
180.0	8720.35	7135.77	5568.42	4629.73	4431.65	3710.93	2875.58	2546.61	2208.16
225.0	6912.81	5445.35	4549.72	3853.88	3307.03	2875.58	2451.02	2189.22	1714.01
270.0	8987.32	7402.74	6076.51	4776.13	4371.37	4371.37	2971.17	2519.91	2237.44
315.0	7587.98	5915.56	4896.78	3941.73	3375.07	2933.28	2502.69	2238.30	2027.31
360.0	10067.33	8001.35	6584.70	5420.38	4521.30	3701.45	3207.14	2799.80	2476.85
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2171.99	1869.72	1711.86	1685.85	1592.07	1515.43	1441.97	1394.77	1346.03
45.0	2457.91	2203.86	1962.72	1813.74	1695.76	1602.75	1508.88	1452.04	1401.23
90.0	2043.68	1688.70	1688.70	1609.21	1518.53	1429.22	1374.28	1328.03	1282.13
135.0	2382.12	2152.18	1924.83	1784.46	1653.56	1570.02	1498.55	1431.37	1384.87
180.0	1996.31	1838.71	1717.29	1589.83	1512.33	1450.32	1390.04	1350.42	1317.70
225.0	1714.01	1658.90	1567.18	1495.79	1426.90	1382.80	1344.91	1309.34	1284.20
270.0	2005.78	1825.80	1657.87	1556.25	1476.16	1398.65	1346.98	1304.78	1261.72
315.0	1695.76	1695.76	1603.44	1528.08	1464.19	1403.47	1360.50	1325.53	1294.53
360.0	2171.99	1869.72	1711.86	1685.85	1592.07	1515.43	1441.97	1394.77	1346.03
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1313.65	1284.89	1259.83	1237.26	1211.00	1189.12	1167.68	1138.05	1068.13
45.0	1354.73	1324.59	1297.03	1267.75	1245.36	1229.86	1204.88	1185.08	1154.07
90.0	1251.30	1217.63	1194.55	1175.43	1150.03	1128.84	1110.24	1071.92	991.91
135.0	1346.12	1308.22	1282.39	1259.14	1239.33	1212.63	1193.69	1169.57	1129.96
180.0	1291.00	1259.14	1237.61	1215.22	1187.66	1165.27	1117.90	1055.04	977.53
225.0	1256.90	1236.57	1217.20	1196.62	1169.57	1131.08	1062.79	986.31	870.83
270.0	1229.86	1207.47	1174.74	1152.35	1136.85	1113.60	1076.57	1024.03	959.45
315.0	1261.46	1237.95	1211.17	1189.21	1168.63	1134.52	1086.21	1018.09	916.47
360.0	1313.65	1284.89	1259.83	1237.26	1211.00	1189.12	1167.68	1138.05	1068.13
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	991.05	879.79	775.24	665.61	529.37	422.15	318.21	206.00	130.73
45.0	1070.54	987.86	899.16	798.40	691.62	564.16	458.24	434.12	310.37
90.0	908.38	820.45	724.17	600.42	505.34	408.20	292.63	209.61	137.79
135.0	1047.29	963.75	872.47	735.54	621.00	484.93	456.51	456.51	181.11
180.0	887.11	761.37	652.86	546.94	441.87	441.87	216.93	141.49	82.42
225.0	770.33	670.17	566.83	442.99	346.88	235.28	159.66	96.37	54.69
270.0	856.10	763.96	669.23	579.66	464.26	439.29	439.29	170.34	109.03
315.0	821.83	719.17	614.89	480.02	372.55	272.39	185.33	102.05	58.65
360.0	991.05	879.79	775.24	665.61	529.37	422.15	318.21	206.00	130.73

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	74.06	44.70	32.12	27.56	22.65	18.43	14.98	14.12	13.78
45.0	154.67	79.40	52.88	43.49	38.24	32.21	28.42	25.92	25.32
90.0	75.70	55.20	48.74	40.82	36.17	32.90	31.00	29.88	28.76
135.0	100.07	58.47	39.53	33.76	26.70	21.62	17.65	15.67	14.90
180.0	43.40	34.28	28.07	22.65	18.17	14.73	14.12	13.78	13.52
225.0	45.56	40.48	35.48	30.66	27.82	27.13	27.39	27.56	27.21
270.0	62.26	50.64	45.38	39.44	33.76	30.23	29.28	28.33	27.21
315.0	40.13	34.02	28.76	22.22	18.43	16.28	16.10	16.02	15.50
360.0	74.06	44.70	32.12	27.56	22.65	18.43	14.98	14.12	13.78
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	13.26	12.92	12.49	12.31	11.97	11.80	11.54	11.20	10.94
45.0	24.72	24.54	23.51	21.44	19.63	17.05	14.38	12.31	11.20
90.0	26.78	23.17	20.75	17.74	15.24	12.66	11.37	10.76	10.51
135.0	14.30	13.95	13.35	13.09	12.57	12.23	11.71	11.20	10.51
180.0	13.18	12.92	12.57	12.40	11.97	11.80	11.63	11.45	11.20
225.0	25.23	20.84	18.08	15.42	12.92	11.63	10.68	10.25	10.08
270.0	24.54	21.44	18.52	16.02	14.30	12.40	11.37	10.85	10.59
315.0	14.98	14.55	13.95	13.61	13.35	12.31	11.37	10.76	10.25
360.0	13.26	12.92	12.49	12.31	11.97	11.80	11.54	11.20	10.94
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.76	10.42	10.16	9.99	9.82	9.56	9.47	9.30	9.21
45.0	10.42	10.08	9.99	9.82	9.73	9.73	9.65	9.47	9.39
90.0	10.42	10.25	10.08	10.08	9.99	9.90	9.82	9.82	9.73
135.0	10.08	9.90	9.73	9.56	9.47	9.39	9.30	9.13	9.13
180.0	10.76	10.25	9.99	9.73	9.56	9.39	9.30	9.21	9.13
225.0	9.90	9.73	9.65	9.65	9.56	9.47	9.47	9.39	9.30
270.0	10.42	10.33	10.16	10.16	10.08	9.99	9.99	9.90	9.82
315.0	10.08	9.90	9.73	9.56	9.47	9.30	9.21	9.13	8.96
360.0	10.76	10.42	10.16	9.99	9.82	9.56	9.47	9.30	9.21
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.13	8.96	8.87	8.87	8.70	8.61	8.53	8.53	8.44
45.0	9.39	9.30	9.21	9.13	8.96	8.87	8.78	8.70	8.61
90.0	9.65	9.65	9.56	9.47	9.30	9.21	9.13	9.04	8.87
135.0	9.04	8.87	8.87	8.78	8.70	8.61	8.61	8.53	8.44
180.0	9.04	8.87	8.78	8.70	8.61	8.53	8.53	8.53	8.44
225.0	9.13	9.04	8.96	8.78	8.78	8.61	8.61	8.53	8.53
270.0	9.73	9.65	9.65	9.56	9.30	9.21	9.04	8.96	8.78
315.0	8.96	8.78	8.70	8.61	8.53	8.44	8.44	8.44	8.35
360.0	9.13	8.96	8.87	8.87	8.70	8.61	8.53	8.53	8.44
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.44	8.35	8.35	8.27	8.27	8.18	8.10	8.01	8.01
45.0	8.53	8.44	8.44	8.35	8.35	8.18	8.10	7.92	7.84
90.0	8.70	8.53	8.44	8.35	8.27	8.10	7.92	8.10	7.75
135.0	8.44	8.44	8.35	8.35	8.27	8.27	8.01	8.01	7.92
180.0	8.44	8.35	8.35	8.27	8.18	8.10	8.01	7.92	7.66
225.0	8.44	8.35	8.35	8.10	7.92	7.92	7.84	7.66	7.66
270.0	8.70	8.53	8.44	8.27	8.10	8.01	7.92	8.01	7.66
315.0	8.35	8.27	8.18	8.18	8.01	8.01	7.92	7.84	7.66
360.0	8.44	8.35	8.35	8.27	8.27	8.18	8.10	8.01	8.01

Intensity data(cd)

C/ γ (°)	90.0
0.0	7.84
45.0	7.75
90.0	7.58
135.0	7.75
180.0	7.66
225.0	7.58
270.0	7.66
315.0	7.66
360.0	7.84