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Nata

Client: NT

LumCAT: 3-2878-LM2

Luminaire: 92.70.121.00 LED HOLDER

Report No: 20260106-B008

Ballast type: DC

Test No: 20260106-C008

Voltage(V): 36.850

LampCAT: CITIZEN CLU038 LES14.5

Current(A): 0.717

Lamp flux(lm): 3692.9

Power (W): 26.420

Number of Lamps: 1

PF: 0.000

Length(mm): 92

Width(mm): 92

Phm Type: C

Height(mm): 49

Photometric Results

Lumens(lm): 3599.70, Efficiency(%): 97.48% , Luminous Efficacy(lm/W): 136.25

Central intensity(cd): 28030.240, Maximum intensity(cd): 28030.240

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=14.6

[C90/270]Total=14.6

Field angle(10%Imax): [C0/180]Total=29.0

[C90/270]Total=29.0

Maximum s/h(1/2): C0_180=0.25 C90_270=0.25

Maximum s/h(1/4): C0_180=0.26 C90_270=0.26

Up flux rate of lamp(%): 0.00%

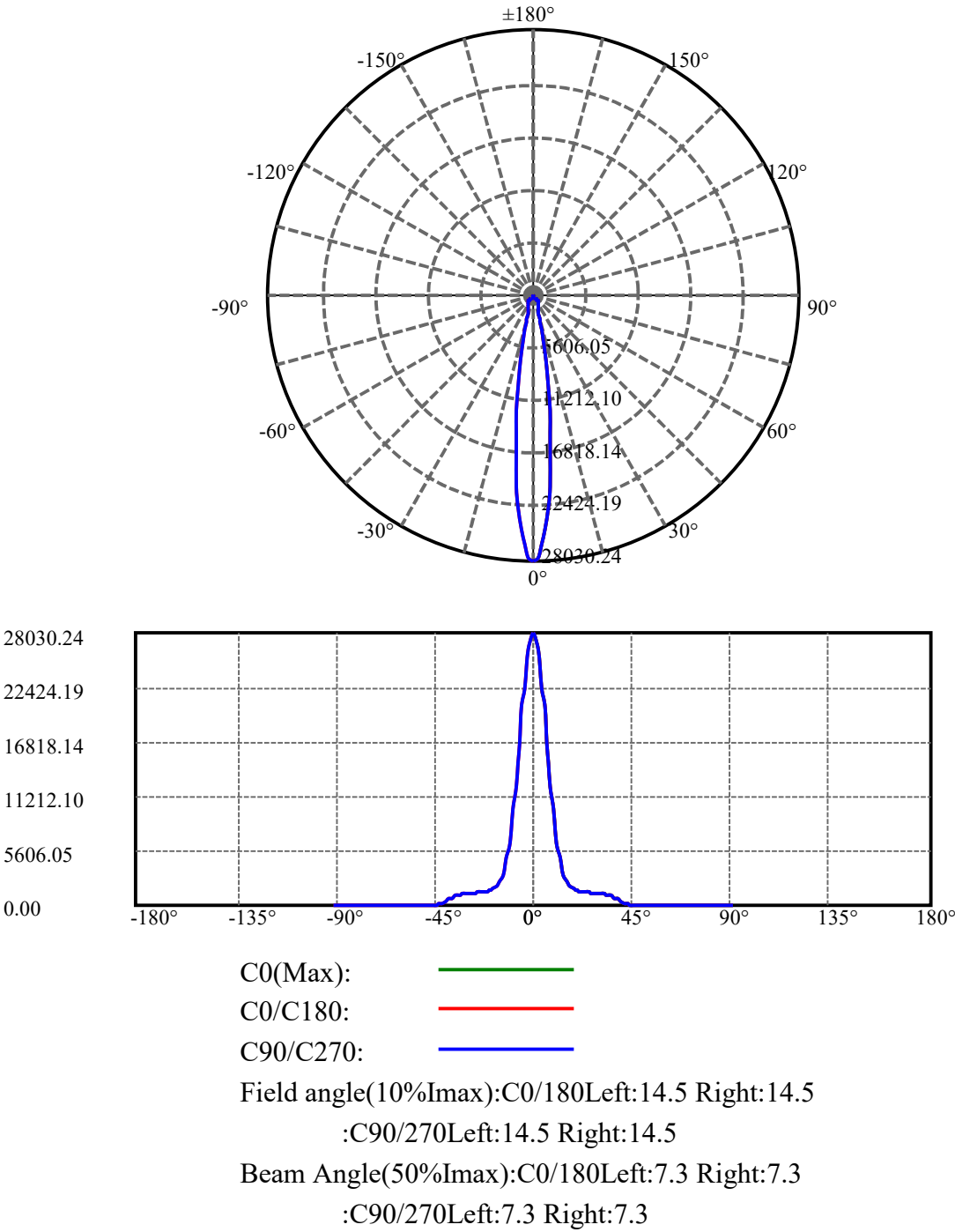
Down flux rate of lamp(%): 97.48%

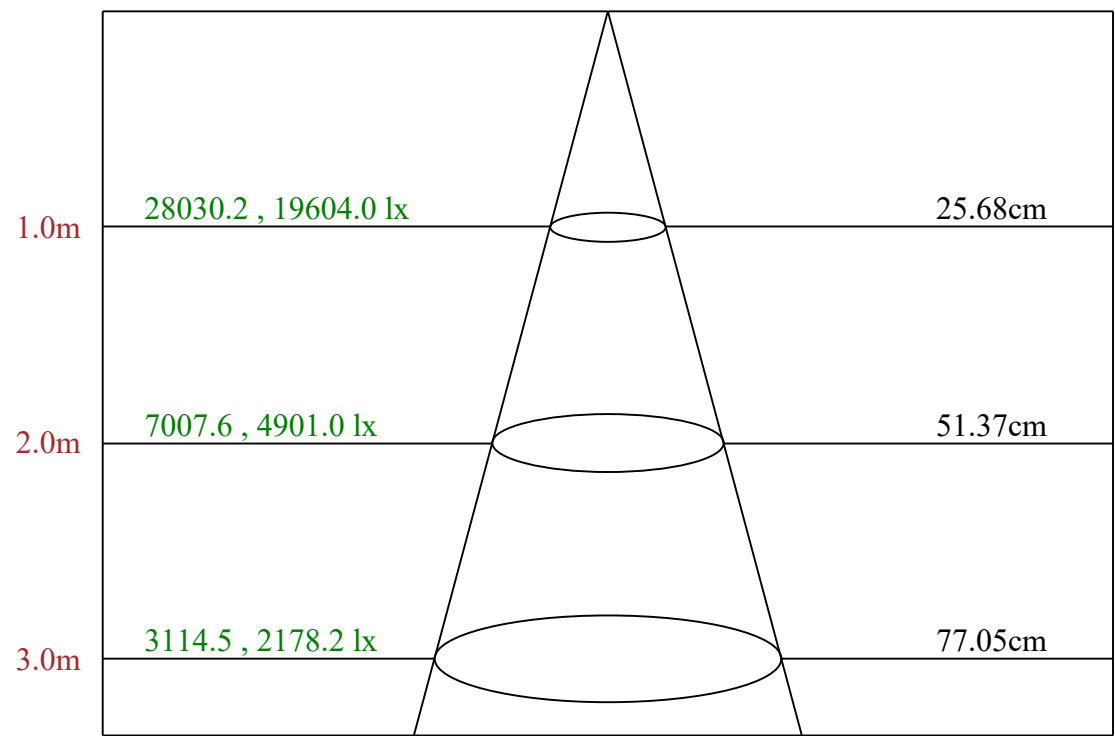
Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

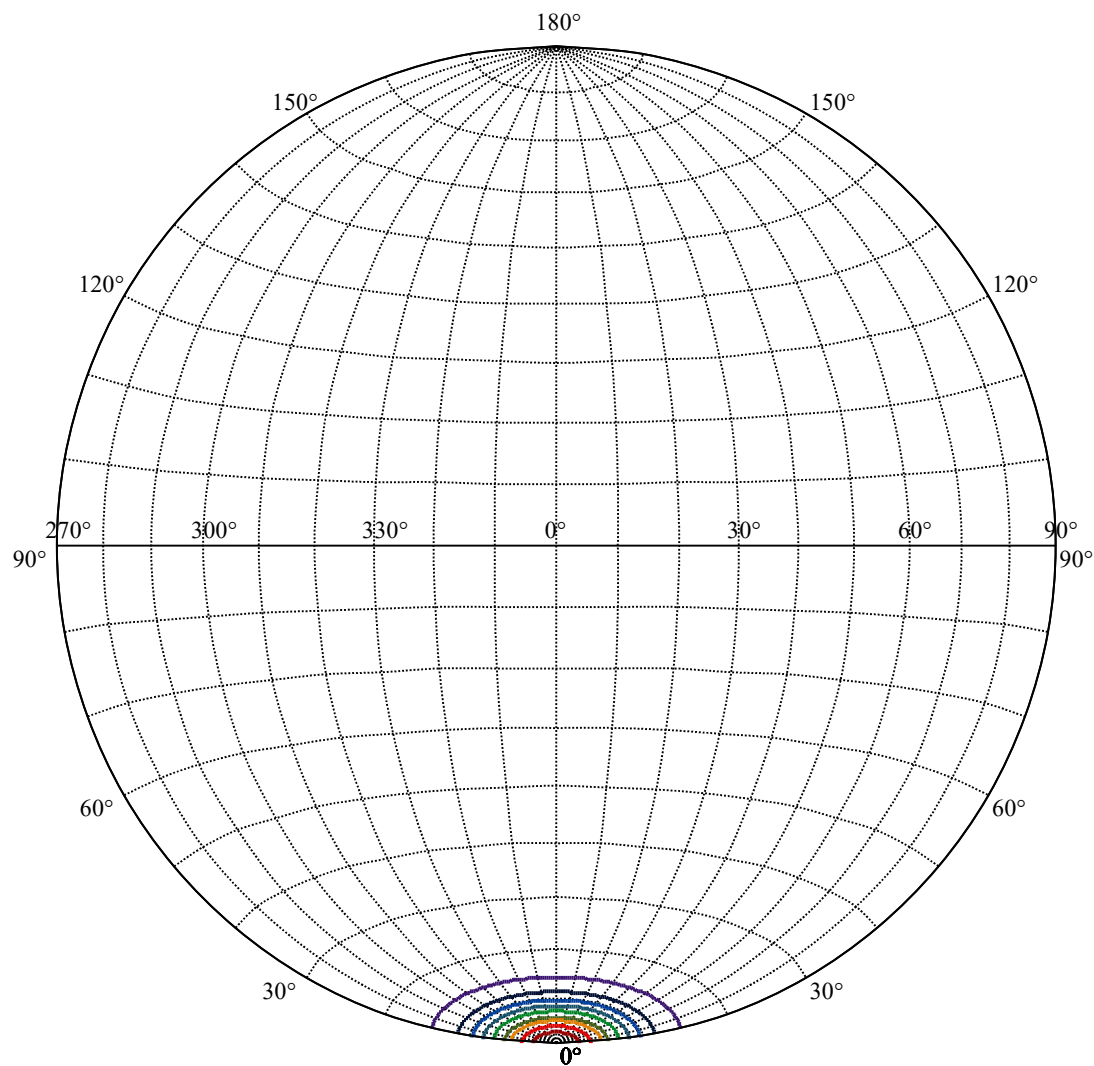
CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.143%





Max , Ave Beam angle of C0 plane 14.64



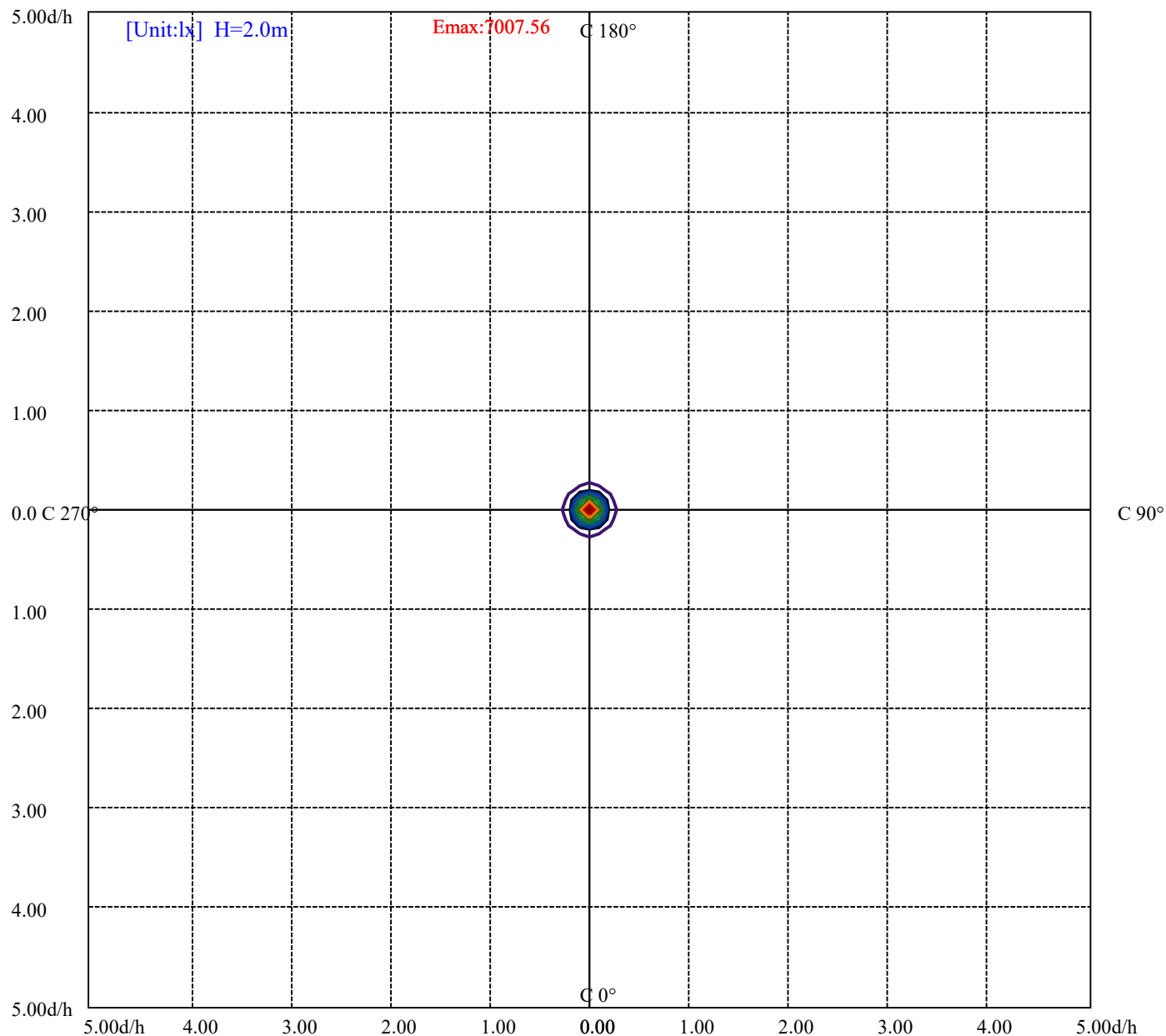
House

[Unit:cd]

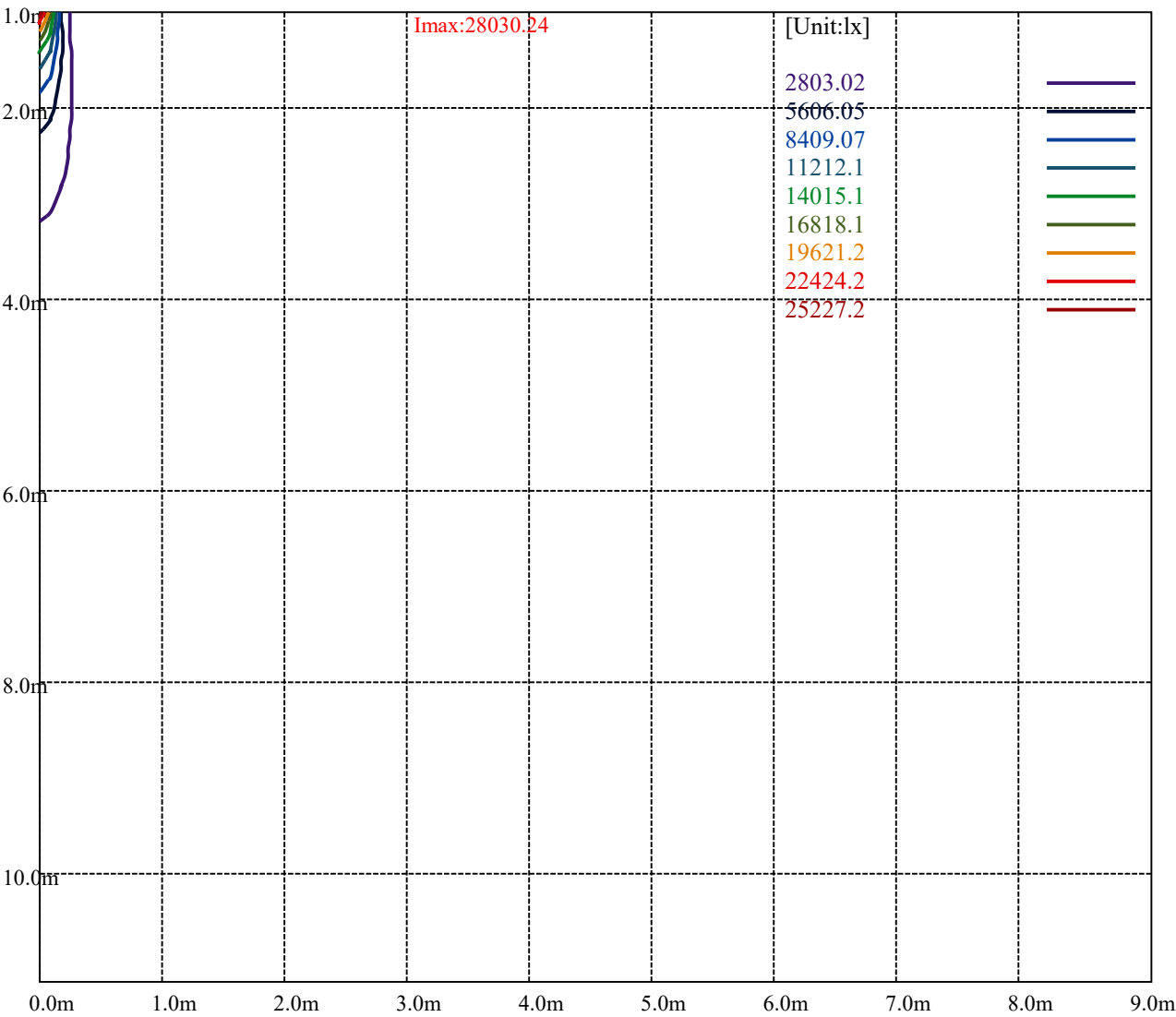
Road

Imax:28030.24

(10%Imax)	2803.02	—
(20%Imax)	5606.05	—
(30%Imax)	8409.07	—
(40%Imax)	11212.1	—
(50%Imax)	14015.1	—
(60%Imax)	16818.1	—
(70%Imax)	19621.2	—
(80%Imax)	22424.2	—
(90%Imax)	25227.2	—



(10%Emax)	700.755	
(20%Emax)	1401.51	
(30%Emax)	2102.265	
(40%Emax)	2803.025	
(50%Emax)	3503.775	
(60%Emax)	4204.525	
(70%Emax)	4905.275	
(80%Emax)	5606.05	
(90%Emax)	6306.8	



Luminance Table

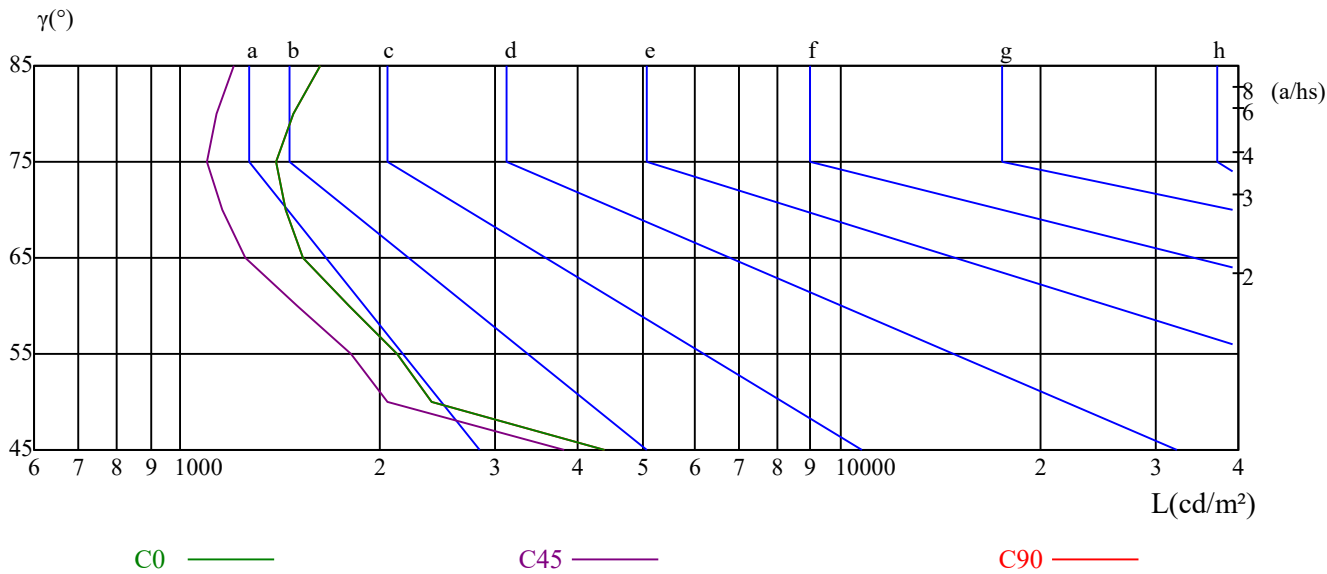
γ	45	50	55	60	65	70	75	80	85
C0	4373	2397	2133	1798	1533	1439	1400	1483	1631
C45	3823	2064	1810	1500	1255	1155	1097	1131	1203
C90	4373	2397	2133	1798	1533	1439	1400	1483	1631

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3283	3283	3283	4182	4182	4182	11557	11557	11557

Glare Table

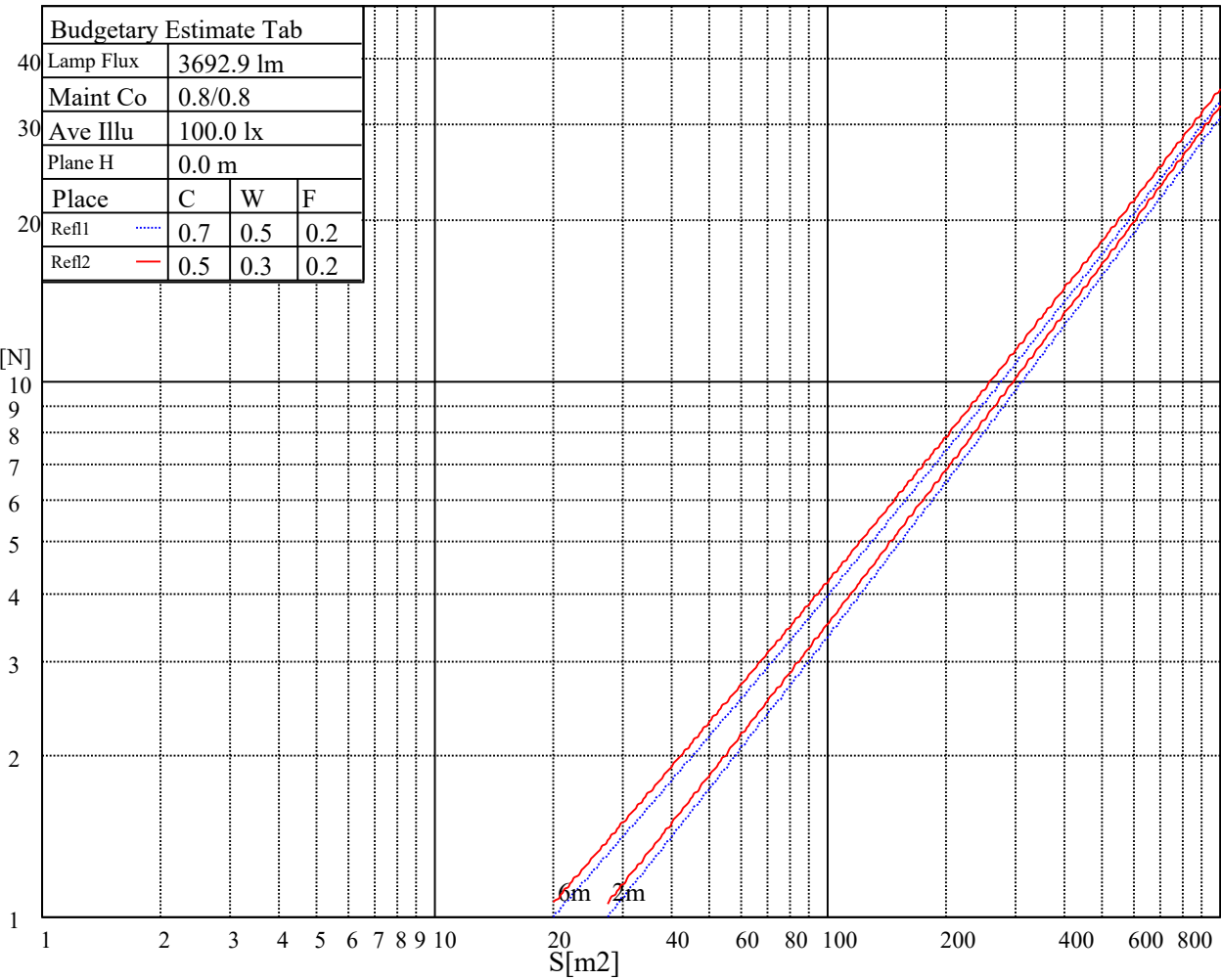
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve

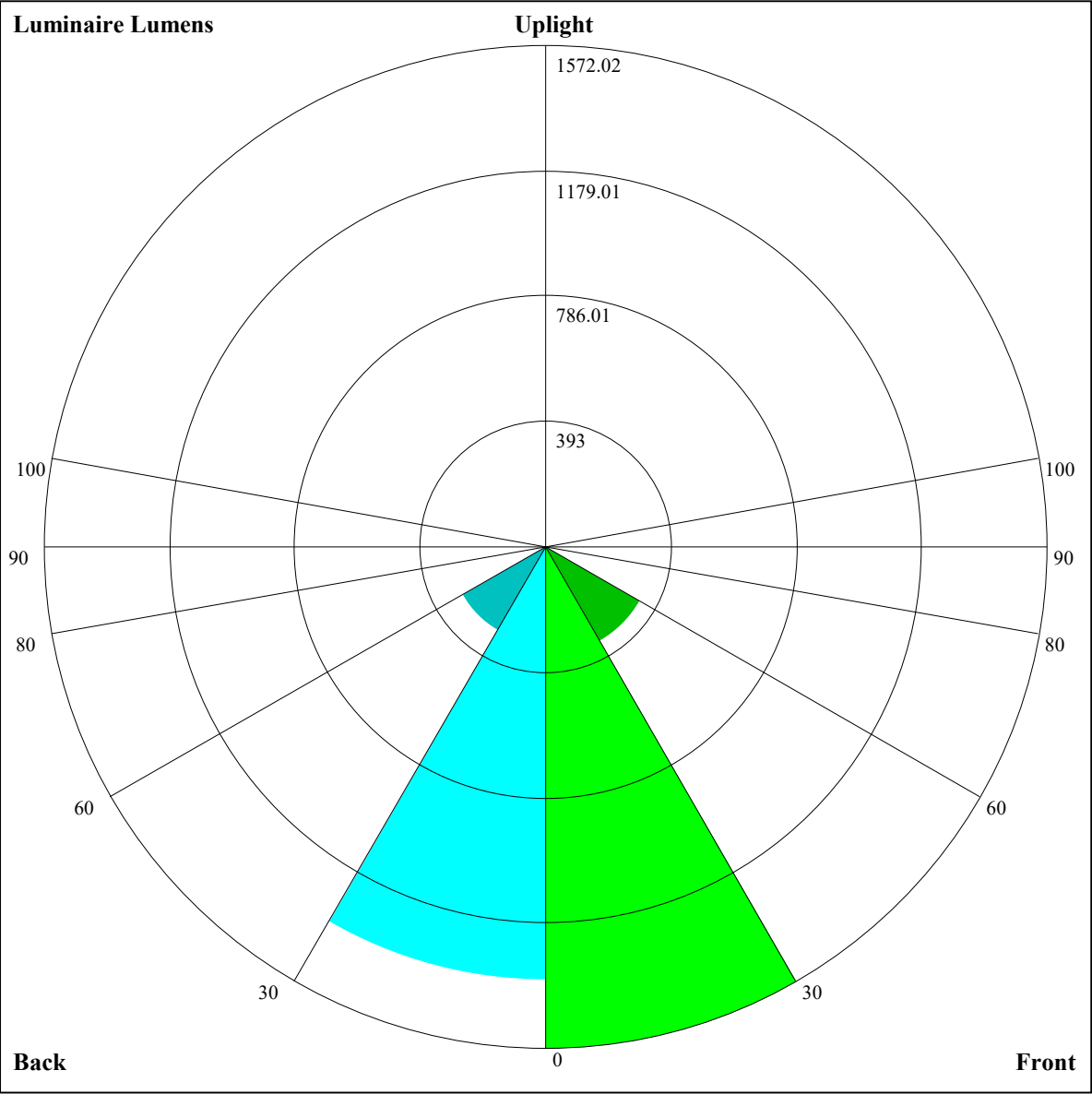


Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	18.31	19.23	18.67	19.54	19.86	17.97	18.90	18.34	19.21	19.52
	3H	18.11	18.93	18.50	19.27	19.62	17.78	18.60	18.17	18.94	19.28
	4H	18.02	18.78	18.42	19.14	19.50	17.69	18.45	18.09	18.80	19.17
	6H	17.96	18.65	18.37	19.03	19.43	17.63	18.32	18.05	18.70	19.10
	8H	17.90	18.56	18.32	18.94	19.35	17.57	18.23	18.00	18.62	19.03
	12H	17.85	18.47	18.28	18.87	19.29	17.53	18.15	17.95	18.55	18.96
4H	2H	17.99	18.75	18.39	19.10	19.47	17.66	18.41	18.06	18.77	19.14
	3H	17.77	18.40	18.19	18.80	19.22	17.43	18.07	17.86	18.47	18.88
	4H	17.71	18.26	18.15	18.69	19.14	17.38	17.93	17.82	18.36	18.81
	6H	17.61	18.10	18.09	18.55	19.00	17.29	17.78	17.77	18.23	18.68
	8H	17.59	18.03	18.07	18.49	18.97	17.27	17.72	17.76	18.18	18.65
	12H	17.58	17.99	18.07	18.44	18.96	17.26	17.67	17.75	18.13	18.65
8H	4H	17.52	17.97	18.01	18.43	18.90	17.19	17.64	17.68	18.10	18.57
	6H	17.43	17.79	17.93	18.27	18.78	17.11	17.47	17.62	17.95	18.47
	8H	17.46	17.77	18.00	18.29	18.79	17.15	17.46	17.69	17.98	18.48
	12H	17.48	17.71	18.03	18.23	18.75	17.18	17.41	17.72	17.92	18.45
12H	4H	17.47	17.88	17.96	18.33	18.86	17.14	17.55	17.63	18.01	18.53
	6H	17.42	17.72	17.95	18.25	18.74	17.10	17.41	17.64	17.93	18.43
	8H	17.43	17.66	17.97	18.17	18.70	17.12	17.35	17.66	17.87	18.39
Variation with the observer position at spacings:											
S = 1.0H		5.1/-11.1					5.1/-11.1				
S = 1.5H		7.8/-9.7					7.8/-9.7				
S = 2.0H		9.7/-8.7					9.7/-8.7				
Standard tables:		BK0					BK0				
Uncorrected UGR		-2.0					-2.0				

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	1.16	1.16	1.16	1.13	1.13	1.13	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.97
1	1.09	1.07	1.06	1.07	1.06	1.04	1.03	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	0.95	0.96	0.94	0.93	0.94	0.92	0.91	0.89
3	0.99	0.95	0.92	0.97	0.94	0.91	0.95	0.92	0.90	0.93	0.90	0.88	0.91	0.89	0.87	0.86
4	0.94	0.90	0.87	0.93	0.89	0.86	0.91	0.88	0.85	0.89	0.87	0.84	0.88	0.85	0.83	0.82
5	0.90	0.86	0.83	0.89	0.85	0.82	0.88	0.84	0.82	0.86	0.83	0.81	0.85	0.82	0.80	0.79
6	0.87	0.82	0.79	0.86	0.82	0.79	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.80	0.77	0.76
7	0.84	0.79	0.76	0.83	0.79	0.76	0.82	0.78	0.75	0.81	0.78	0.75	0.80	0.77	0.75	0.74
8	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.73	0.78	0.75	0.72	0.71
9	0.78	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.75	0.72	0.70	0.69
10	0.76	0.72	0.69	0.75	0.71	0.69	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67



Luminaire Lumens:

FL=1572.02,FM=343.43,FH=11.2,FVH=4.59

BL=1356.5,BM=300.34,BH=10.64,BVH=4.6

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	28458.69	29233.75	29044.29	28114.21	26133.49	23954.69	16749.25	16749.25	15425.61
45.0	26865.50	28303.67	29121.80	29156.25	28355.34	26908.56	24919.22	21879.24	19252.63
90.0	28493.13	28742.88	28062.54	26796.60	24988.11	22740.42	16924.94	16924.94	14301.77
135.0	28303.67	28665.37	28148.66	26934.39	25160.35	22301.22	19769.34	16531.29	13956.35
180.0	28458.69	27054.96	25082.85	22731.81	19528.21	16884.37	14249.15	11717.27	8840.91
225.0	26865.50	24893.38	19976.02	16551.18	16551.18	13916.82	10758.86	8532.70	6249.70
270.0	28493.13	27588.89	26055.98	23437.98	21000.83	18425.89	15170.62	12612.90	10227.42
315.0	28303.67	27253.03	25160.35	22990.17	17145.40	17145.40	14518.79	11979.16	9602.29
360.0	28458.69	29233.75	29044.29	28114.21	26133.49	23954.69	16749.25	16749.25	15425.61
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	12834.31	9807.25	7676.68	5907.81	4554.03	3413.82	2829.08	2416.57	2122.04
45.0	16548.51	13267.40	10778.58	8005.57	6171.24	4741.68	4448.88	3416.40	2440.68
90.0	11156.72	8865.98	6879.22	4951.89	3846.13	2925.53	2451.02	1939.47	1718.23
135.0	11493.36	9245.67	7239.11	5241.17	4612.50	4612.50	2674.06	2209.88	1967.03
180.0	6929.09	5370.34	4448.88	4448.88	2636.17	2194.38	1965.31	1798.24	1653.56
225.0	4852.00	3815.99	2931.56	2467.38	2149.60	1717.20	1717.20	1643.40	1570.46
270.0	7635.26	5947.34	4612.50	4612.50	2787.74	2340.78	2040.23	1794.79	1659.59
315.0	7526.83	5475.49	4270.70	3394.87	2678.37	2314.09	2056.59	1705.57	1705.57
360.0	12834.31	9807.25	7676.68	5907.81	4554.03	3413.82	2829.08	2416.57	2122.04
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1707.30	1707.30	1635.82	1548.24	1497.60	1453.94	1408.72	1377.81	1343.36
45.0	2134.10	1920.53	1738.82	1640.64	1572.61	1514.91	1465.82	1430.51	1390.90
90.0	1718.23	1577.00	1499.84	1439.64	1390.12	1346.12	1310.72	1281.10	1248.54
135.0	1802.54	1659.59	1577.78	1513.19	1453.76	1415.87	1374.54	1347.84	1322.00
180.0	1570.02	1509.74	1465.82	1421.90	1390.90	1364.20	1340.09	1310.81	1290.14
225.0	1516.63	1463.07	1430.00	1399.60	1371.52	1337.50	1311.76	1283.25	1261.20
270.0	1558.83	1489.07	1421.04	1372.81	1338.37	1301.34	1274.64	1244.50	1222.11
315.0	1610.07	1523.69	1470.13	1430.51	1393.91	1356.54	1330.10	1308.14	1284.97
360.0	1707.30	1707.30	1635.82	1548.24	1497.60	1453.94	1408.72	1377.81	1343.36
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1317.35	1292.72	1269.64	1241.83	1220.13	1199.20	1174.65	1142.27	1116.27
45.0	1358.17	1329.75	1297.03	1272.05	1249.66	1221.25	1198.85	1178.19	1151.49
90.0	1225.72	1200.23	1173.10	1152.35	1126.95	1110.07	1083.80	1058.65	1008.02
135.0	1297.89	1267.75	1246.22	1224.69	1204.02	1179.05	1152.35	1127.38	1098.10
180.0	1269.47	1246.22	1227.27	1203.16	1177.32	1155.80	1105.85	1023.17	920.69
225.0	1239.59	1213.06	1193.17	1165.53	1136.33	1087.59	1001.64	890.21	729.51
270.0	1199.72	1175.60	1156.66	1135.99	1111.87	1084.32	1060.20	998.20	910.36
315.0	1256.55	1235.02	1214.10	1189.38	1163.72	1140.47	1106.10	1044.36	919.14
360.0	1317.35	1292.72	1269.64	1241.83	1220.13	1199.20	1174.65	1142.27	1116.27
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	1062.36	975.38	823.89	681.02	497.16	354.12	229.07	113.76	61.06
45.0	1120.49	1067.09	969.78	846.63	674.39	538.33	436.71	436.71	145.11
90.0	921.90	815.54	694.89	532.30	409.06	297.71	199.19	101.88	61.57
135.0	1011.98	904.33	741.57	594.30	445.32	445.32	178.35	97.40	53.39
180.0	797.54	608.08	457.37	457.37	294.70	102.22	44.26	35.05	27.47
225.0	594.82	457.29	325.44	180.33	93.78	53.05	42.46	35.05	27.90
270.0	814.77	654.59	530.58	439.29	439.29	148.55	73.98	56.75	49.00
315.0	800.56	665.78	525.41	383.83	226.23	125.30	64.85	42.63	35.31
360.0	1062.36	975.38	823.89	681.02	497.16	354.12	229.07	113.76	61.06

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	41.68	35.48	26.61	21.44	19.29	18.34	17.74	17.14	16.62
45.0	78.11	47.71	40.56	32.98	25.84	23.25	22.56	21.87	21.27
90.0	49.26	41.16	34.88	30.66	28.94	28.59	27.90	26.61	25.66
135.0	37.81	30.23	23.77	19.63	18.26	18.08	18.00	18.00	17.91
180.0	19.72	16.19	15.24	14.73	14.38	13.95	13.52	13.35	13.26
225.0	25.84	25.49	25.15	25.06	24.72	24.20	23.42	22.48	21.62
270.0	40.56	35.74	33.16	31.69	29.97	28.68	27.30	25.66	24.03
315.0	27.90	20.93	18.69	17.31	16.02	15.42	15.33	15.67	15.67
360.0	41.68	35.48	26.61	21.44	19.29	18.34	17.74	17.14	16.62
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	15.93	15.59	15.33	15.07	14.90	14.64	14.38	14.12	13.78
45.0	20.75	20.07	19.55	18.60	18.00	17.40	16.36	15.59	14.64
90.0	24.37	23.25	21.53	19.98	18.43	16.62	15.33	14.21	13.00
135.0	18.17	18.00	17.83	17.57	16.88	16.02	15.42	14.64	13.61
180.0	13.18	13.09	13.00	12.83	12.57	12.40	12.14	11.88	11.63
225.0	20.58	18.86	17.65	16.36	14.90	13.95	13.18	12.14	11.54
270.0	22.82	21.27	19.55	18.17	17.14	15.85	15.07	14.21	13.52
315.0	15.67	15.76	15.76	15.85	15.67	15.50	15.16	14.90	14.30
360.0	15.93	15.59	15.33	15.07	14.90	14.64	14.38	14.12	13.78
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	13.52	13.18	12.75	12.49	12.14	11.71	11.28	10.85	10.33
45.0	13.87	13.18	12.57	11.80	11.45	11.11	10.85	10.68	10.51
90.0	12.06	11.45	11.02	10.76	10.68	10.51	10.42	10.33	10.25
135.0	12.83	12.14	11.37	10.76	10.33	10.08	9.82	9.65	9.47
180.0	11.28	10.94	10.76	10.42	10.25	10.16	9.90	9.73	9.39
225.0	11.11	10.76	10.68	10.51	10.33	10.16	9.90	9.65	9.30
270.0	13.00	12.57	12.31	12.14	11.80	11.54	11.20	10.94	10.59
315.0	13.52	13.00	12.49	11.97	11.71	11.20	10.68	10.25	9.73
360.0	13.52	13.18	12.75	12.49	12.14	11.71	11.28	10.85	10.33
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	10.08	9.65	9.39	9.13	9.04	8.96	8.87	8.87	8.70
45.0	10.25	9.90	9.65	9.47	9.13	9.04	8.96	8.87	8.78
90.0	10.16	9.99	9.65	9.56	9.47	9.39	9.30	9.21	9.04
135.0	9.30	9.13	9.04	8.87	8.78	8.70	8.61	8.61	8.61
180.0	9.30	9.13	8.96	8.96	8.87	8.87	8.78	8.78	8.70
225.0	9.13	9.04	9.04	8.96	8.87	8.87	8.78	8.78	8.78
270.0	10.08	9.82	9.73	9.65	9.56	9.47	9.30	9.13	9.04
315.0	9.30	8.87	8.70	8.70	8.70	8.61	8.53	8.44	8.44
360.0	10.08	9.65	9.39	9.13	9.04	8.96	8.87	8.87	8.70
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.78	8.70	8.70	8.61	8.61	8.61	8.44	8.18	8.01
45.0	8.70	8.70	8.61	8.61	8.61	8.61	8.44	8.27	8.10
90.0	8.87	8.78	8.70	8.53	8.44	8.35	8.27	8.10	8.01
135.0	8.53	8.53	8.53	8.44	8.44	8.44	8.35	8.27	8.01
180.0	8.70	8.61	8.61	8.61	8.53	8.53	8.53	8.01	7.75
225.0	8.78	8.70	8.70	8.78	8.61	8.53	8.01	7.84	7.75
270.0	8.96	8.96	8.87	8.78	8.70	8.61	8.44	7.84	7.75
315.0	8.44	8.35	8.35	8.35	8.27	8.10	7.92	7.75	7.66
360.0	8.78	8.70	8.70	8.61	8.61	8.61	8.44	8.18	8.01

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0
0.0	8.01
45.0	7.84
90.0	7.75
135.0	7.75
180.0	7.75
225.0	7.75
270.0	7.75
315.0	7.66
360.0	8.01