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Nata

LumCAT: 1449-E	
Luminaire: 92.70.064.00	
Report No: NATA0100	Voltage(V): 9.4000
Test No: GC2017091902	Current(A): 0.3100
LampCAT: CITIZEN CLU700	Power (W): 2.9140
Lamp flux(lm): 331.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 44	Width(mm): 44
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 291.04
Efficiency(%): 87.93%
Lumens(lm)/Power(W): 100.08
Central intensity(cd): 2535.829
Maximum intensity(cd): 2535.829
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=11.8
[C90/270]Total=11.8
Field angle(10%Imax): [C0/180]Total=23.4
[C90/270]Total=23.4
Maximum s/h(1/2): C0_180=0.20 C90_270=0.20
Maximum s/h(1/4): C0_180=0.21 C90_270=0.21
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.11%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.251%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2535.829	0.607	0.607	.183%	.208%
1.0	2494.021	4.773	5.38	1.442%	1.849%
2.0	2347.639	8.985	14.365	2.714%	4.936%
3.0	2131.268	12.232	26.596	3.695%	9.138%
4.0	1871.608	14.317	40.913	4.325%	14.058%
5.0	1529.945	14.623	55.536	4.418%	19.082%
6.0	1236.350	14.172	69.708	4.282%	23.952%
7.0	936.189	12.512	82.219	3.780%	28.250%
8.0	713.070	10.883	93.102	3.288%	31.990%
9.0	518.924	8.902	102.004	2.689%	35.049%
10.0	381.565	7.266	109.27	2.195%	37.545%
11.0	295.360	6.180	115.45	1.867%	39.669%
12.0	237.637	5.418	120.868	1.637%	41.530%
13.0	196.920	4.858	125.726	1.468%	43.199%
14.0	167.457	4.443	130.168	1.342%	44.726%
15.0	150.782	4.280	134.448	1.293%	46.196%
16.0	138.278	4.180	138.628	1.263%	47.632%
17.0	129.723	4.159	142.787	1.257%	49.061%
18.0	122.920	4.165	146.952	1.258%	50.493%
19.0	118.034	4.214	151.166	1.273%	51.941%
20.0	114.318	4.288	155.454	1.295%	53.414%
21.0	111.321	4.375	159.829	1.322%	54.917%
22.0	109.125	4.483	164.312	1.354%	56.457%
23.0	107.250	4.595	168.907	1.388%	58.036%
24.0	105.529	4.707	173.614	1.422%	59.654%
25.0	104.067	4.823	178.437	1.457%	61.311%
26.0	102.897	4.946	183.383	1.494%	63.010%
27.0	101.593	5.058	188.441	1.528%	64.748%
28.0	100.357	5.167	193.608	1.561%	66.523%
29.0	99.291	5.279	198.887	1.595%	68.337%
30.0	98.238	5.386	204.273	1.627%	70.188%
31.0	97.054	5.482	209.755	1.656%	72.072%
32.0	95.750	5.564	215.319	1.681%	73.983%
33.0	94.611	5.651	220.969	1.707%	75.925%
34.0	93.462	5.731	226.701	1.731%	77.894%
35.0	92.244	5.802	232.503	1.753%	79.888%
36.0	90.926	5.861	238.363	1.771%	81.902%
37.0	89.505	5.907	244.27	1.785%	83.931%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	87.873	5.933	250.203	1.792%	85.970%
39.0	85.341	5.890	256.093	1.779%	87.993%
40.0	80.861	5.700	261.792	1.722%	89.952%
41.0	73.961	5.321	267.113	1.608%	91.780%
42.0	64.007	4.697	271.81	1.419%	93.394%
43.0	51.942	3.885	275.695	1.174%	94.728%
44.0	39.851	3.036	278.73	.917%	95.772%
45.0	27.769	2.153	280.884	.651%	96.511%
46.0	17.752	1.400	282.284	.423%	96.993%
47.0	10.540	0.845	283.129	.255%	97.283%
48.0	6.676	0.544	283.673	.164%	97.470%
49.0	4.811	0.398	284.071	.120%	97.607%
50.0	4.119	0.346	284.417	.105%	97.726%
51.0	3.537	0.301	284.719	.091%	97.829%
52.0	3.007	0.260	284.979	.079%	97.919%
53.0	2.577	0.226	285.205	.068%	97.996%
54.0	2.354	0.209	285.413	.063%	98.068%
55.0	2.223	0.200	285.613	.060%	98.136%
56.0	2.130	0.194	285.807	.059%	98.203%
57.0	2.034	0.187	285.994	.057%	98.267%
58.0	1.965	0.183	286.176	.055%	98.330%
59.0	1.896	0.178	286.355	.054%	98.391%
60.0	1.858	0.176	286.531	.053%	98.452%
61.0	1.803	0.173	286.704	.052%	98.511%
62.0	1.776	0.172	286.876	.052%	98.570%
63.0	1.741	0.170	287.046	.051%	98.629%
64.0	1.717	0.169	287.215	.051%	98.687%
65.0	1.672	0.166	287.382	.050%	98.744%
66.0	1.652	0.165	287.547	.050%	98.801%
67.0	1.624	0.164	287.711	.050%	98.857%
68.0	1.607	0.163	287.874	.049%	98.913%
69.0	1.583	0.162	288.036	.049%	98.969%
70.0	1.569	0.162	288.198	.049%	99.025%
71.0	1.528	0.158	288.357	.048%	99.079%
72.0	1.514	0.158	288.514	.048%	99.133%
73.0	1.487	0.156	288.67	.047%	99.187%
74.0	1.466	0.155	288.825	.047%	99.240%
75.0	1.459	0.155	288.979	.047%	99.293%

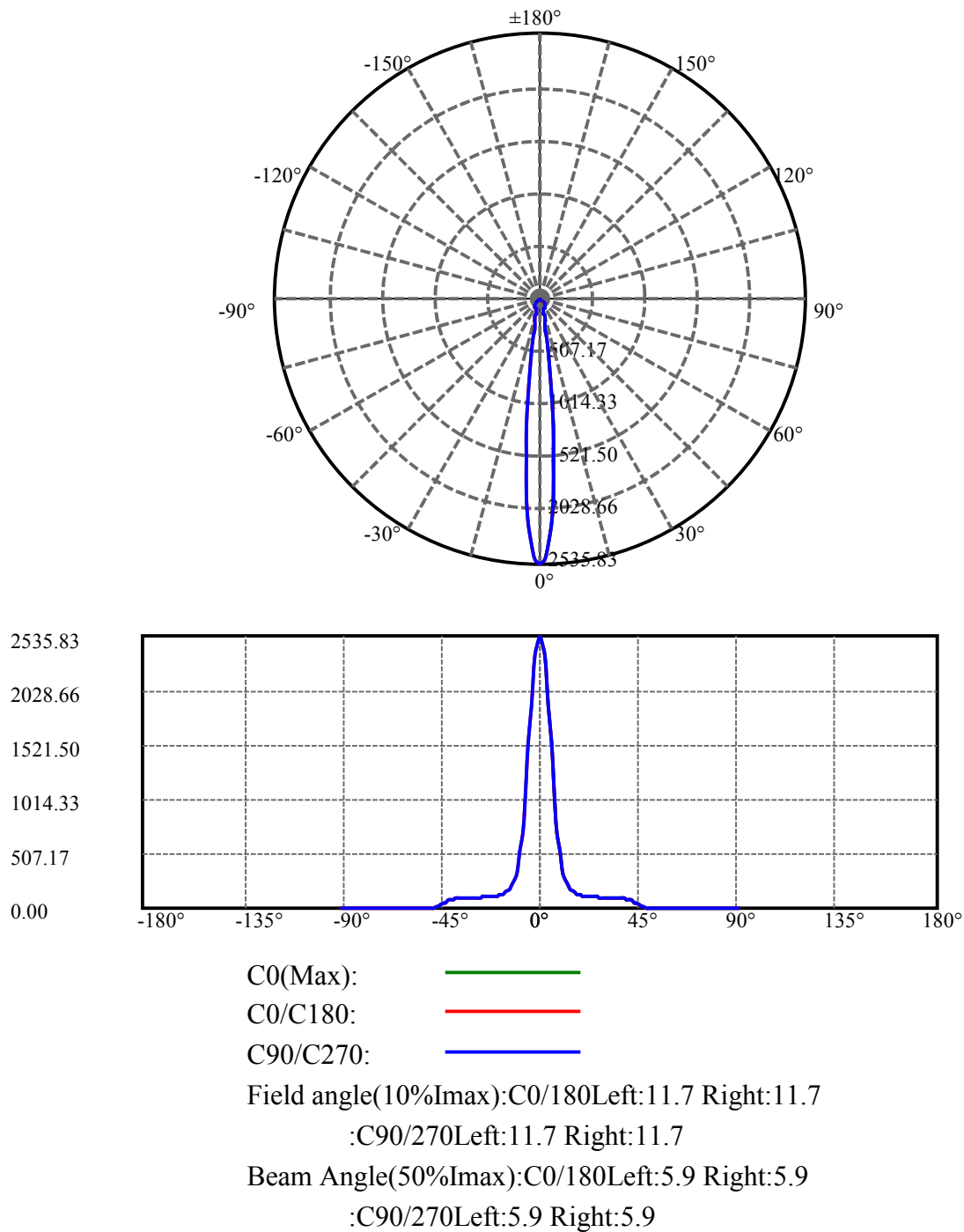
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.456	0.155	289.134	.047%	99.346%
77.0	1.435	0.153	289.288	.046%	99.399%
78.0	1.407	0.151	289.439	.046%	99.451%
79.0	1.370	0.147	289.586	.045%	99.502%
80.0	1.349	0.146	289.732	.044%	99.552%
81.0	1.349	0.146	289.878	.044%	99.602%
82.0	1.325	0.144	290.022	.043%	99.651%
83.0	1.301	0.142	290.163	.043%	99.700%
84.0	1.270	0.138	290.302	.042%	99.747%
85.0	1.270	0.139	290.44	.042%	99.795%
86.0	1.253	0.137	290.577	.041%	99.842%
87.0	1.232	0.135	290.712	.041%	99.889%
88.0	1.187	0.130	290.842	.039%	99.933%
89.0	1.187	0.130	290.973	.039%	99.978%
90.0	1.170	0.064	291.037	.019%	100.000%

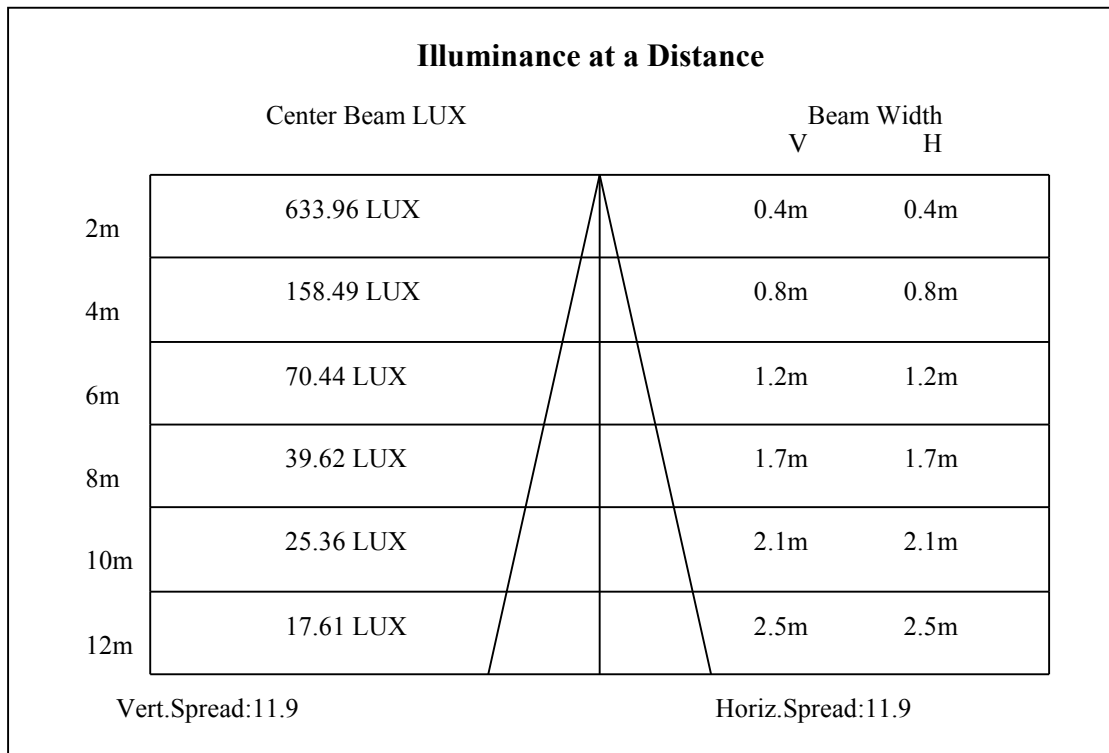
ZONAL LUMEN SUMMARY

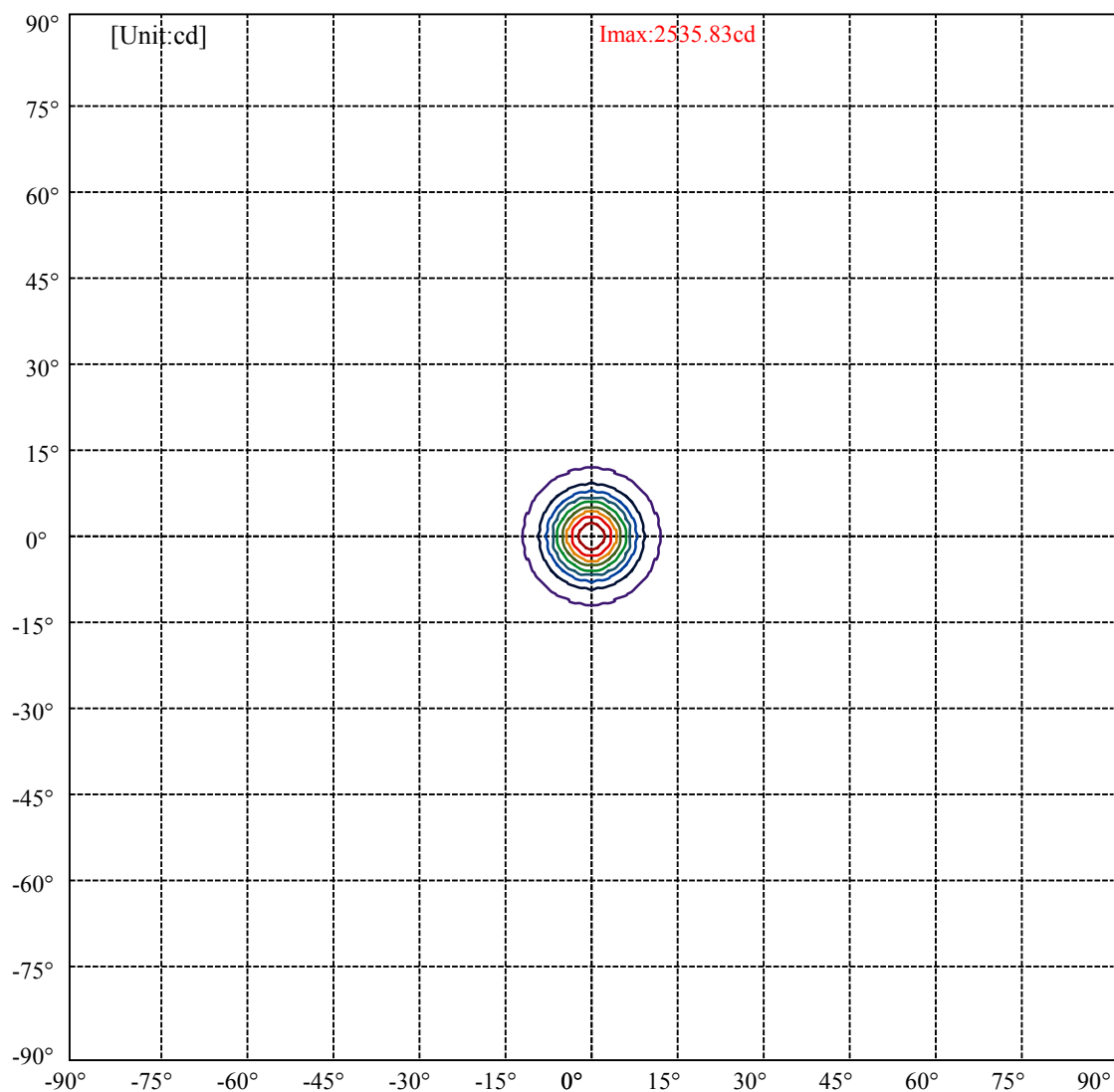
Zone	Lumens	%Lamp	%Fixt
0-30	204.27	61.71%	70.19%
0-40	261.79	79.09%	89.95%
0-60	286.53	86.57%	98.45%
0-90	290.97	87.91%	99.98%
0-120	290.97	87.91%	99.98%
0-180	291.04	87.93%	100.00%
60-90	4.62	1.40%	1.59%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-35.06	232.83	70.34%	80.00%

ZONAL LUMEN SUMMARY

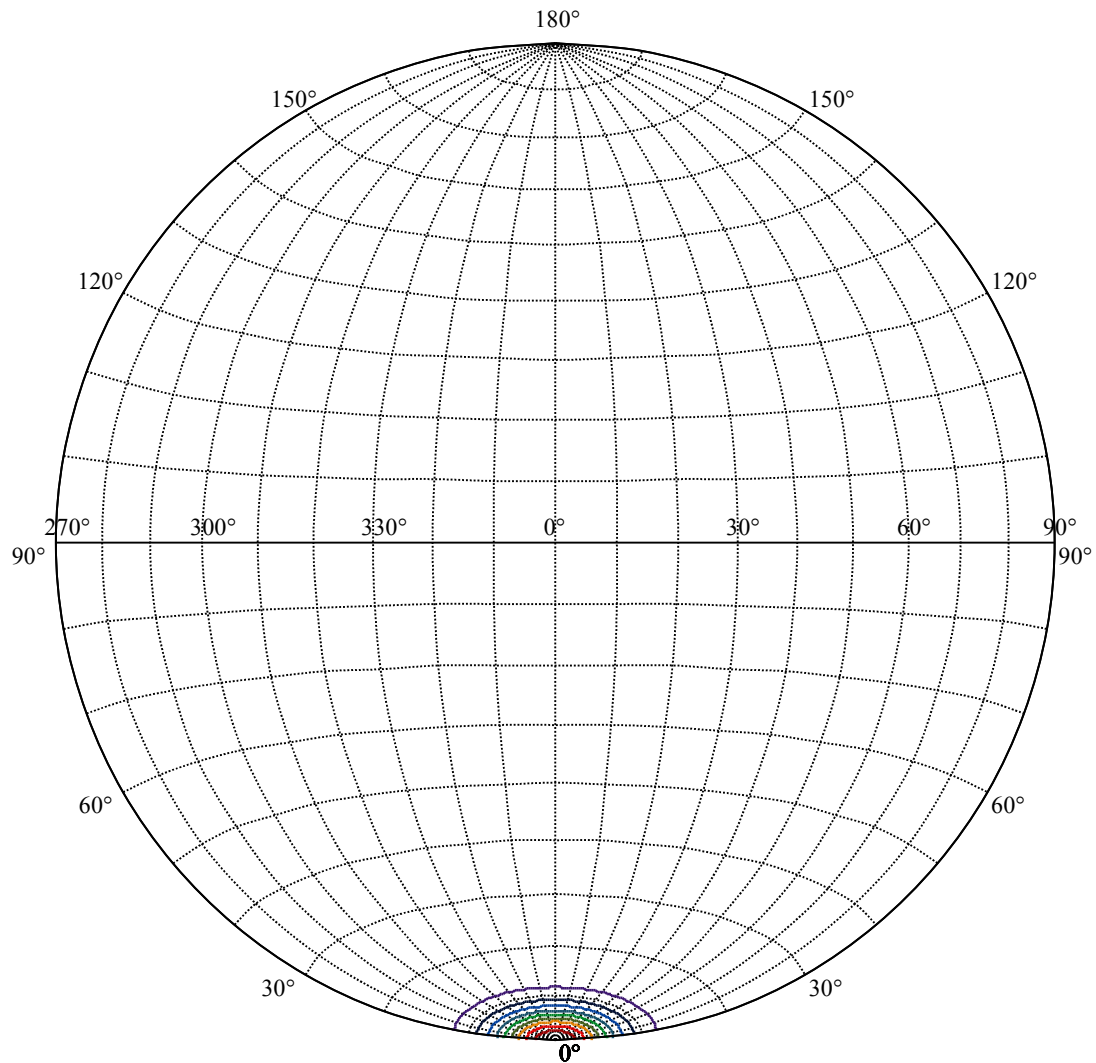
0-10	109.27
10-20	46.18
20-30	48.82
30-40	57.52
40-50	22.63
50-60	2.11
60-70	1.67
70-80	1.53
80-90	1.24
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00







(10%Imax) 253.583	—————
(20%Imax) 507.166	—————
(30%Imax) 760.749	—————
(40%Imax) 1014.33	—————
(50%Imax) 1267.91	—————
(60%Imax) 1521.5	—————
(70%Imax) 1775.08	—————
(80%Imax) 2028.66	—————
(90%Imax) 2282.25	—————



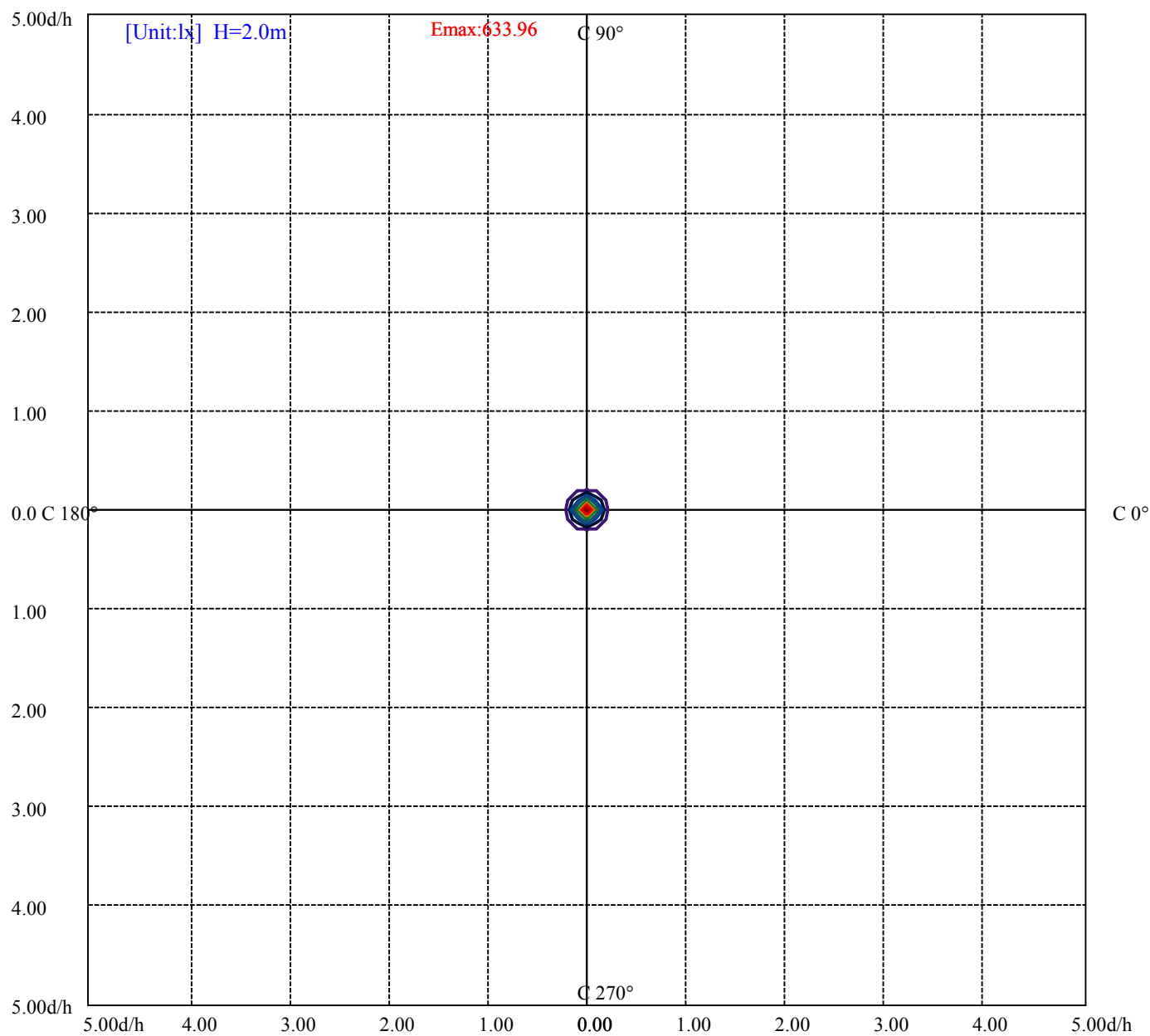
House

[Unit:cd]

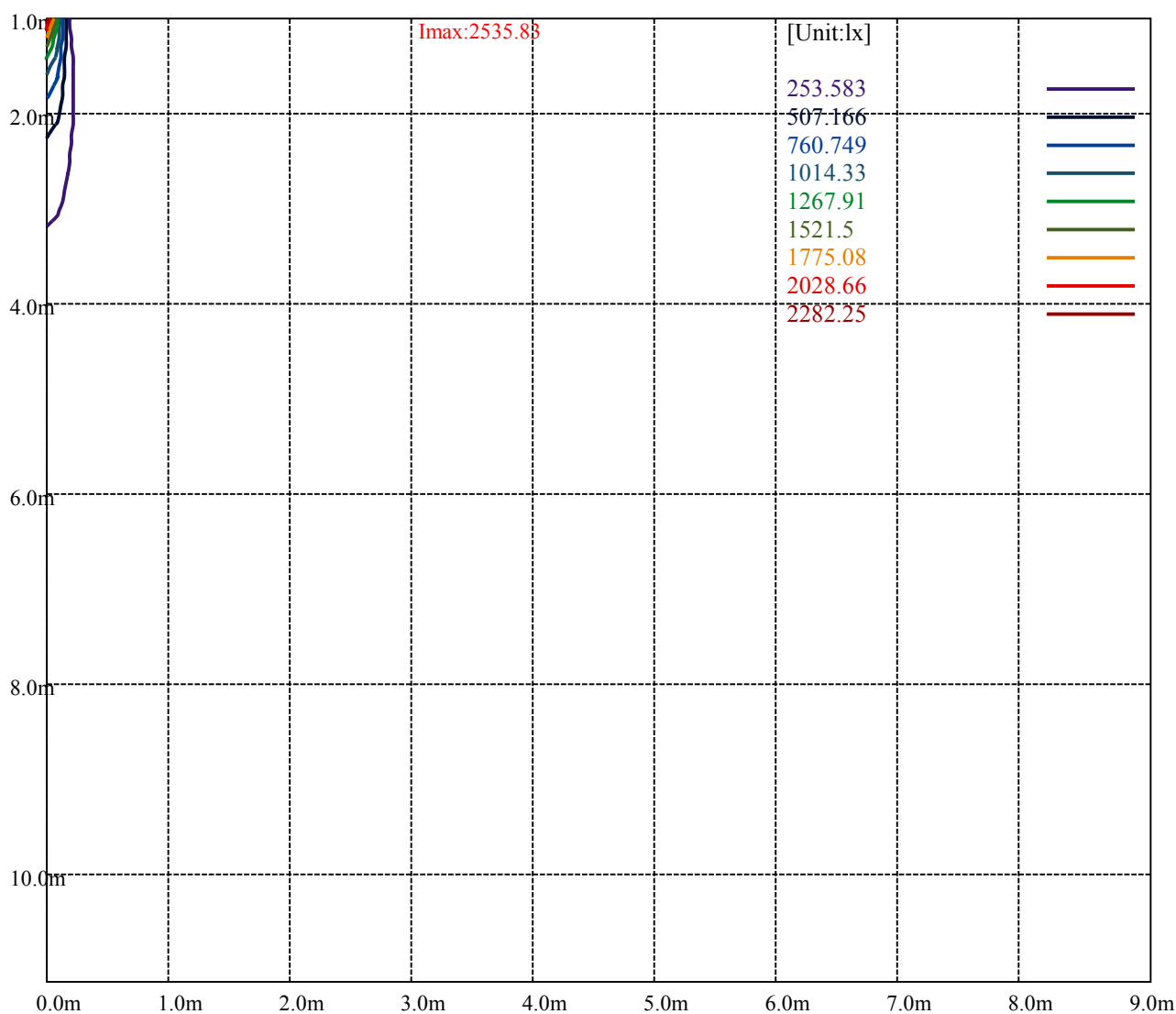
Road

Imax:2535.83

(10%Imax)	253.583	—
(20%Imax)	507.166	—
(30%Imax)	760.749	—
(40%Imax)	1014.33	—
(50%Imax)	1267.91	—
(60%Imax)	1521.5	—
(70%Imax)	1775.08	—
(80%Imax)	2028.66	—
(90%Imax)	2282.25	—



(10%Emax) 63.3955	—
(20%Emax) 126.7913	—
(30%Emax) 190.1868	—
(40%Emax) 253.5825	—
(50%Emax) 316.9775	—
(60%Emax) 380.3725	—
(70%Emax) 443.77	—
(80%Emax) 507.165	—
(90%Emax) 570.56	—



Luminance Table

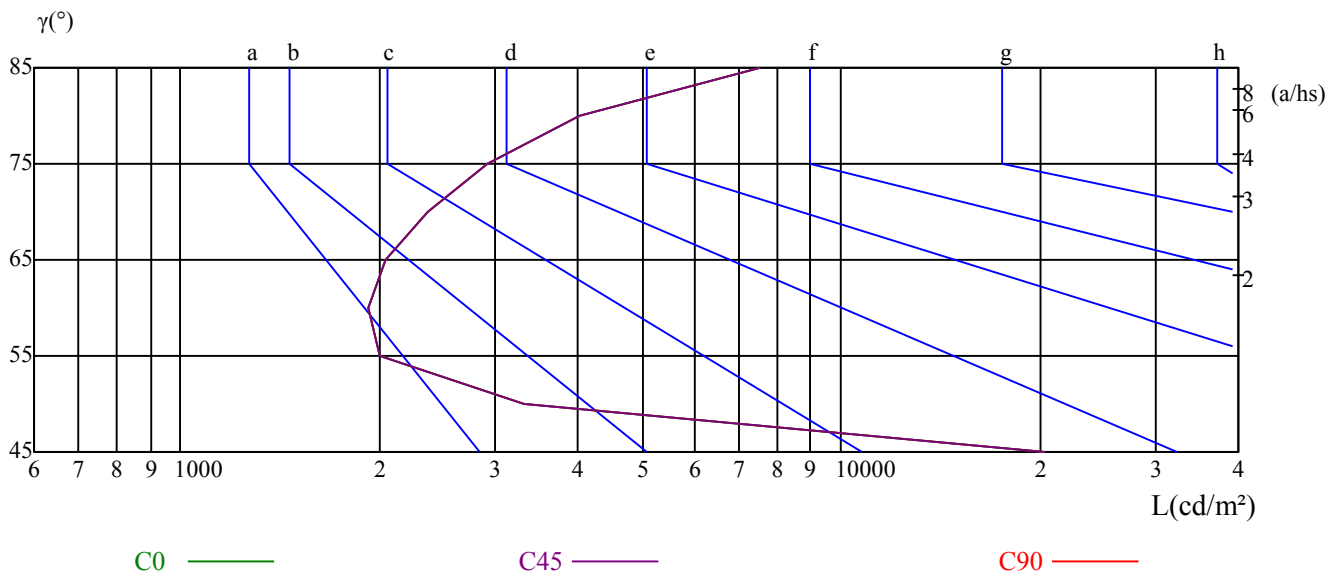
γ	45	50	55	60	65	70	75	80	85
C0	20285	3310	2002	1920	2044	2370	2912	4012	7525
C45	20285	3310	2002	1920	2044	2370	2912	4012	7525
C90	20285	3310	2002	1920	2044	2370	2912	4012	7525

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2044	2044	2044	2912	2912	2912	7525	7525	7525

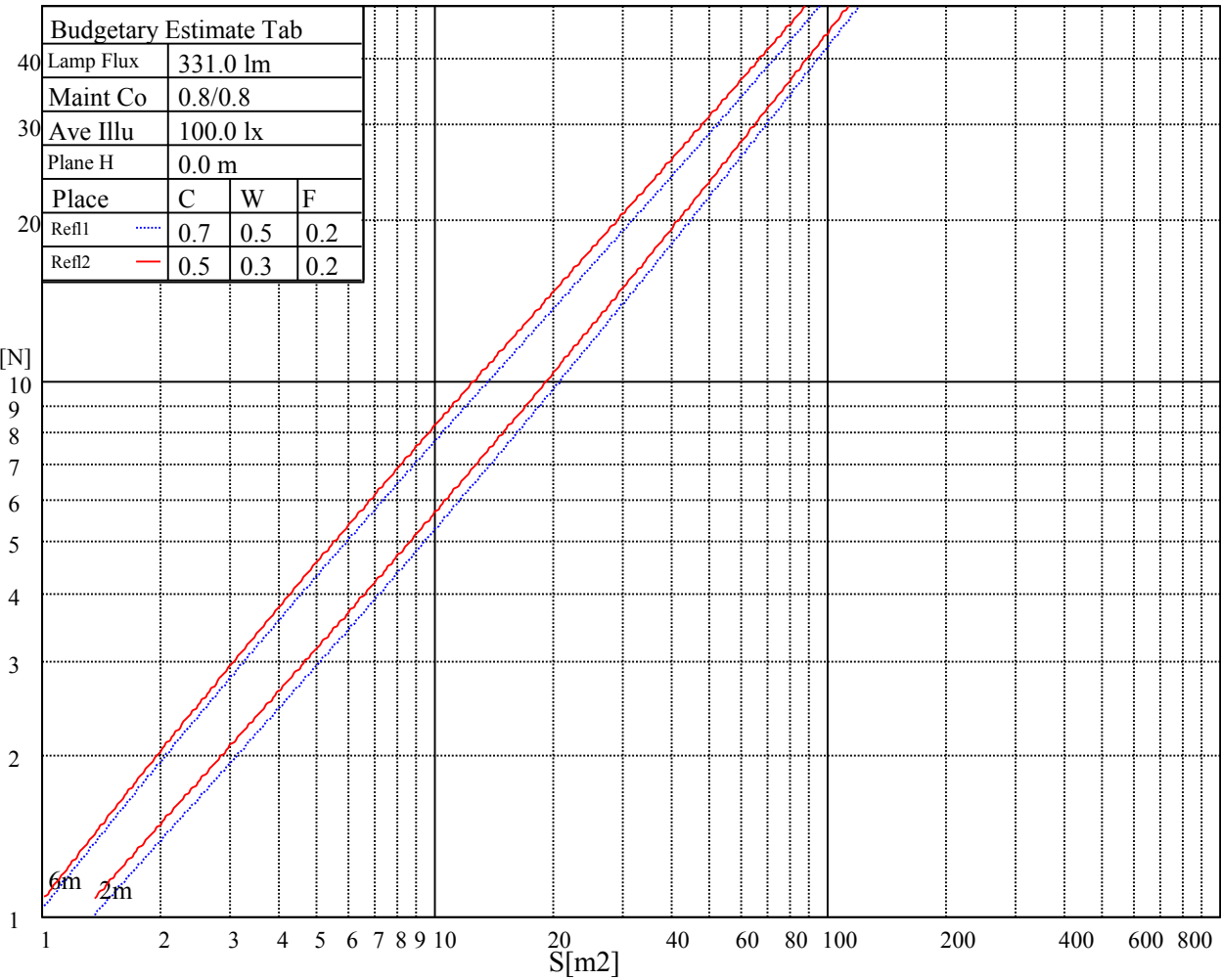
Glare Table

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

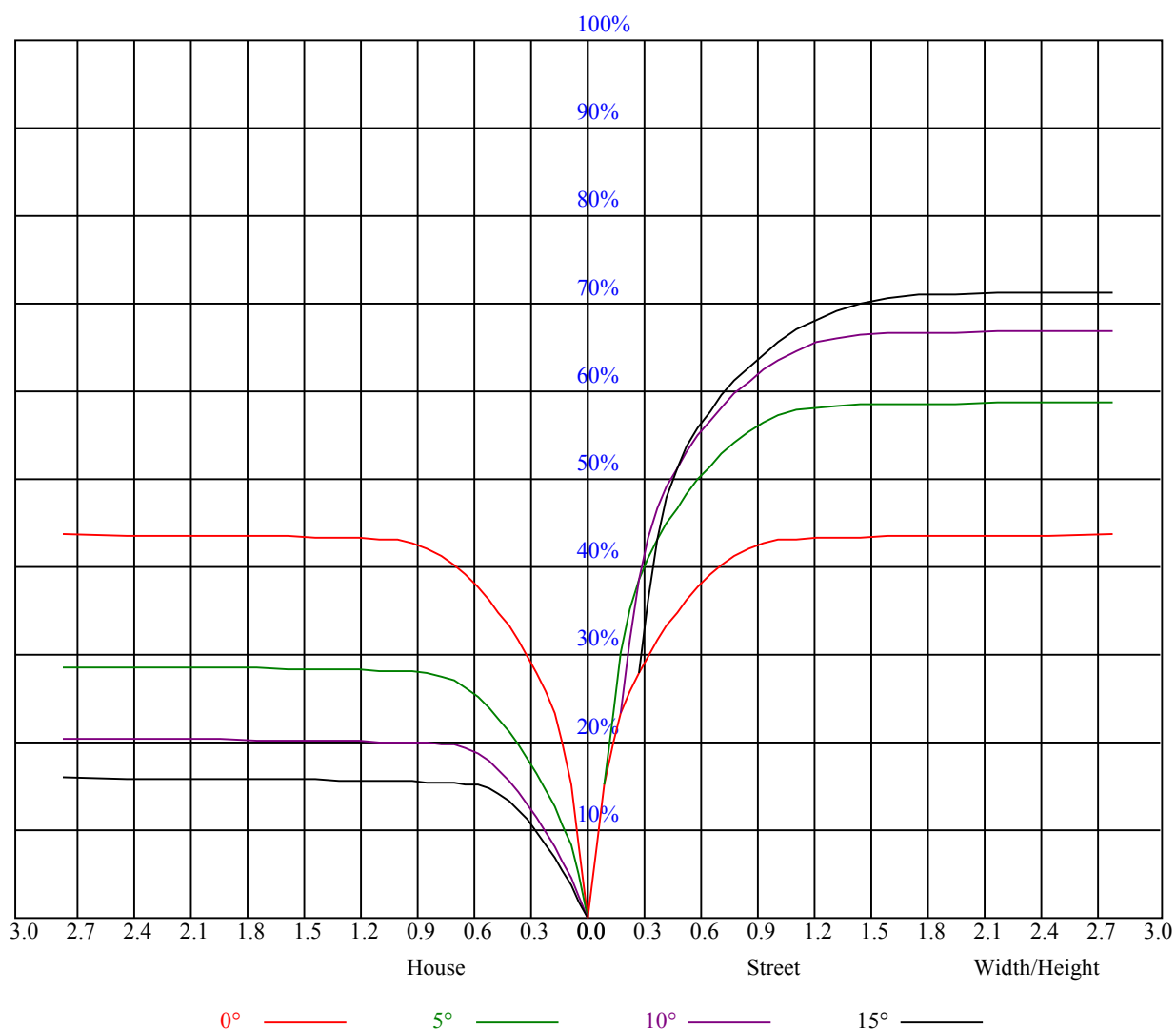
Luminance Limiting Curve



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	8.11	9.11	8.48	9.42	9.74	9.19	10.19	9.56	10.50	10.82
	3H	10.76	11.64	11.14	11.97	12.34	11.60	12.48	11.98	12.82	13.18
	4H	12.21	13.03	12.62	13.38	13.77	12.92	13.73	13.32	14.08	14.47
	6H	13.82	14.57	14.24	14.94	15.34	14.41	15.16	14.83	15.53	15.93
	8H	14.72	15.42	15.16	15.82	16.23	15.26	15.96	15.69	16.35	16.76
	12H	16.24	16.91	16.68	17.29	17.73	16.70	17.37	17.13	17.75	18.18
4H	2H	8.88	9.70	9.29	10.05	10.44	9.71	10.52	10.11	10.88	11.27
	3H	11.82	12.49	12.24	12.90	13.30	12.50	13.17	12.92	13.57	13.98
	4H	13.46	14.05	13.90	14.48	14.92	14.05	14.64	14.49	15.07	15.51
	6H	15.20	15.70	15.67	16.16	16.63	15.68	16.19	16.15	16.64	17.11
	8H	16.22	16.69	16.70	17.14	17.62	16.66	17.14	17.14	17.59	18.06
	12H	17.68	18.09	18.17	18.58	19.06	18.07	18.48	18.56	18.97	19.45
8H	4H	14.14	14.61	14.61	15.06	15.54	14.60	15.08	15.08	15.53	16.00
	6H	16.16	16.54	16.67	17.04	17.53	16.54	16.92	17.05	17.42	17.91
	8H	17.37	17.71	17.90	18.23	18.73	17.72	18.06	18.26	18.58	19.08
	12H	19.01	19.30	19.53	19.80	20.38	19.33	19.62	19.85	20.12	20.70
12H	4H	14.32	14.73	14.81	15.22	15.69	14.74	15.15	15.23	15.64	16.12
	6H	16.74	16.80	16.99	17.27	17.82	17.08	17.14	17.33	17.61	18.16
	8H	17.80	18.09	18.32	18.59	19.17	18.11	18.40	18.63	18.90	19.48
Variation with the observer position at spacings:											
S = 1.0H		3.3/-9.5					3.3/-9.5				
S = 1.5H		5.3/-7.6					5.3/-7.6				
S = 2.0H		7.0/-6.3					7.0/-6.3				
Standard tables:		BK1					BK1				
Uncorrected UGR		0.8					0.8				



RHOC	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 RHOFC=20 CU															
0	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83
2	0.92	0.89	0.86	0.90	0.87	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.78
3	0.87	0.83	0.80	0.86	0.82	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.74
4	0.82	0.78	0.74	0.81	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.74	0.71	0.70
5	0.78	0.73	0.70	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.74	0.70	0.66	0.74	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.67	0.63	0.71	0.66	0.63	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.61
8	0.68	0.64	0.61	0.68	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55



Intensity data(cd)										Appendix Page: 17 Total:20	
C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0		
0.0	2537.55	2496.26	2288.14	2020.02	1697.94	1272.35	956.88	693.16	490.55		
22.5	2527.64	2502.86	2331.09	2088.84	1794.29	1387.42	1063.69	776.30	525.79		
45.0	2521.03	2420.83	2229.23	1896.14	1587.83	1069.31	959.25	634.64	446.01		
67.5	2547.46	2494.05	2309.07	2082.23	1808.60	1429.26	1122.05	837.96	605.62		
90.0	2528.19	2426.34	2256.21	1975.42	1699.59	1403.94	1071.12	772.44	562.40		
112.5	2552.97	2499.56	2361.92	2154.36	1919.82	1650.59	1292.17	1010.84	764.18		
135.0	2537.00	2461.57	2291.45	2104.81	1870.27	1541.58	1090.01	989.64	725.48		
157.5	2534.80	2521.03	2414.22	2292.00	2068.47	1810.25	1587.28	1250.33	993.22		
180.0	2537.55	2499.01	2385.59	2223.18	2036.54	1781.07	1528.92	1070.79	948.90		
202.5	2527.64	2473.68	2350.36	2181.33	1984.78	1718.86	1465.05	1085.55	908.87		
225.0	2521.03	2532.59	2451.11	2322.83	2113.06	1849.90	1591.68	1299.33	1045.52		
247.5	2547.46	2522.13	2407.62	2213.82	1989.19	1688.58	1408.34	1072.88	831.02		
270.0	2528.19	2550.21	2468.18	2304.66	2051.40	1734.83	1434.77	1113.24	858.33		
292.5	2552.97	2510.57	2354.21	2133.44	1821.27	1507.99	1089.40	853.92	631.28		
315.0	2537.00	2541.40	2402.66	2186.29	1904.95	1539.93	1172.70	884.21	622.14		
337.5	2534.80	2452.21	2261.17	1920.92	1597.74	1093.25	948.29	633.81	449.81		
360.0	2537.55	2496.26	2288.14	2020.02	1697.94	1272.35	956.88	693.16	490.55		
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0		
0.0	318.78	284.09	197.16	166.11	150.36	142.93	134.61	129.27	126.13		
22.5	351.81	287.94	199.74	173.98	157.90	148.16	141.94	136.37	131.81		
45.0	319.60	231.29	193.91	172.66	157.96	147.77	140.50	134.56	129.88		
67.5	404.66	301.71	282.99	193.85	169.52	157.08	143.81	135.71	131.31		
90.0	397.45	293.62	235.70	194.73	171.94	154.43	142.05	134.50	128.56		
112.5	527.44	394.75	304.46	287.39	193.85	169.19	150.58	139.13	130.98		
135.0	543.19	399.43	313.99	248.80	204.09	172.93	153.22	139.29	128.50		
157.5	765.28	546.16	418.98	331.44	280.79	210.43	180.47	153.72	139.46		
180.0	732.91	542.36	406.54	321.69	260.69	207.95	178.33	157.41	140.67		
202.5	701.97	517.42	385.23	303.47	246.87	197.82	171.01	151.79	137.70		
225.0	787.31	576.99	437.70	328.69	285.19	209.82	179.87	153.55	139.57		
247.5	623.68	445.35	323.73	253.20	206.74	170.18	150.91	136.21	124.32		
270.0	619.94	437.15	323.73	282.99	195.89	164.84	146.39	132.19	122.61		
292.5	457.63	309.53	237.46	193.19	160.49	144.63	134.28	126.57	121.78		
315.0	430.54	312.17	279.69	188.13	162.53	146.28	136.59	129.66	123.93		
337.5	320.59	225.07	184.77	161.87	145.90	134.89	127.95	122.50	118.37		
360.0	318.78	284.09	197.16	166.11	150.36	142.93	134.61	129.27	126.13		
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0		
0.0	121.23	117.93	115.23	112.98	111.98	110.72	109.67	108.68	107.75		
22.5	127.46	123.38	119.25	116.39	114.24	111.71	109.95	108.08	106.20		
45.0	124.32	119.97	117.22	114.41	111.82	110.17	108.41	105.93	104.50		
67.5	125.31	121.45	118.37	115.12	112.59	110.88	108.41	106.75	105.05		
90.0	122.61	119.03	116.11	113.53	111.32	109.45	106.97	105.32	103.45		
112.5	125.36	121.84	118.37	115.62	113.64	111.27	108.63	107.08	105.43		
135.0	121.18	116.55	113.53	110.44	108.41	106.48	104.61	102.85	101.41		
157.5	129.11	120.90	115.07	111.21	107.64	105.27	102.96	100.92	99.27		
180.0	129.38	122.28	116.61	112.15	109.18	106.26	103.67	101.47	99.60		
202.5	126.08	119.09	114.41	108.74	105.54	102.35	99.93	98.72	98.33		
225.0	128.94	120.57	115.18	112.43	110.61	108.08	106.97	106.92	106.26		
247.5	116.61	112.32	110.50	109.01	107.69	107.30	107.53	107.08	107.97		
270.0	116.33	111.16	106.59	104.28	103.29	103.29	103.73	103.56	104.39		
292.5	118.48	115.45	112.59	109.73	106.92	104.99	102.46	100.04	98.33		
315.0	119.97	116.39	112.54	110.00	108.13	106.31	104.50	103.34	101.74		
337.5	114.35	110.22	107.53	105.10	103.01	101.47	100.09	98.33	96.68		
360.0	121.23	117.93	115.23	112.98	111.98	110.72	109.67	108.68	107.75		

Intensity data(cd)										Appendix Page: 18 Total:20	
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0		
0.0	106.26	104.88	103.73	102.02	100.53	98.99	97.39	95.74	94.42		
22.5	104.77	102.96	101.47	100.20	98.61	96.95	95.52	93.82	92.66		
45.0	102.68	101.19	99.65	98.11	96.51	94.97	93.76	92.11	90.73		
67.5	103.01	101.36	99.87	98.44	96.90	95.52	94.04	92.83	91.17		
90.0	101.74	100.20	98.66	96.84	95.36	93.76	92.27	91.01	89.96		
112.5	103.34	101.80	100.37	98.94	97.28	95.69	94.37	92.94	91.39		
135.0	99.87	98.61	97.45	96.40	95.85	94.64	93.87	92.94	91.67		
157.5	97.34	95.80	94.70	93.43	92.27	91.34	90.51	89.69	89.19		
180.0	97.89	96.79	95.08	93.82	92.88	91.34	90.07	88.97	87.32		
202.5	97.45	96.46	96.40	96.46	96.07	95.58	95.91	96.24	96.02		
225.0	105.60	106.09	106.09	105.43	103.73	101.96	100.20	98.66	96.84		
247.5	108.68	108.46	107.53	105.76	104.33	102.29	100.92	99.43	97.61		
270.0	104.61	103.84	103.84	104.66	104.50	103.78	102.52	100.92	99.21		
292.5	96.73	95.47	95.19	95.19	94.64	94.09	94.09	93.87	93.65		
315.0	100.09	98.22	96.68	95.52	94.20	93.27	91.94	91.23	89.91		
337.5	95.41	93.60	91.94	90.57	89.19	87.81	86.38	85.01	84.13		
360.0	106.26	104.88	103.73	102.02	100.53	98.99	97.39	95.74	94.42		
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0		
0.0	92.77	91.01	89.58	84.02	75.48	64.64	49.44	37.33	25.77		
22.5	91.12	89.52	87.37	83.74	76.75	66.29	51.59	38.54	25.16		
45.0	89.36	87.70	86.05	81.48	71.79	60.51	48.34	32.92	21.25		
67.5	89.74	88.20	86.71	84.90	79.61	69.59	54.67	42.61	30.56		
90.0	88.09	86.82	85.72	84.02	78.73	69.76	57.04	43.71	31.55		
112.5	90.07	88.75	87.43	86.00	84.46	80.44	71.63	59.19	46.80		
135.0	90.68	89.58	88.48	86.71	85.56	83.25	75.65	63.98	52.14		
157.5	87.98	84.29	80.11	77.52	73.45	66.67	59.79	50.87	42.61		
180.0	85.89	84.62	83.03	80.38	78.84	77.30	74.55	66.67	55.72		
202.5	95.03	93.38	91.83	89.58	87.65	85.72	80.33	69.32	57.70		
225.0	95.25	93.65	91.78	90.18	88.04	85.94	81.59	71.57	60.12		
247.5	96.02	94.53	92.44	90.24	88.37	84.57	76.09	62.71	49.22		
270.0	97.50	96.18	93.43	91.78	90.35	85.61	75.48	63.98	49.72		
292.5	93.16	93.38	93.43	92.77	88.48	78.01	65.85	51.09	36.06		
315.0	88.86	87.76	86.82	84.18	78.46	67.50	55.06	43.33	30.45		
337.5	83.30	82.69	81.76	77.96	67.77	57.59	47.02	33.25	22.79		
360.0	92.77	91.01	89.58	84.02	75.48	64.64	49.44	37.33	25.77		
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0		
0.0	13.60	7.32	5.62	5.07	4.46	3.85	3.03	2.53	2.31		
22.5	13.49	6.55	4.07	3.80	3.52	3.19	2.75	2.37	2.20		
45.0	11.29	4.79	3.69	3.41	3.08	2.70	2.26	2.09	2.04		
67.5	16.68	7.87	4.07	3.63	3.36	3.08	2.53	2.15	1.98		
90.0	18.72	9.52	4.29	3.69	3.41	3.08	2.53	2.15	2.09		
112.5	33.91	19.71	10.57	5.45	4.40	3.96	3.58	2.86	2.37		
135.0	38.32	25.05	14.76	7.54	5.78	5.07	4.29	3.52	2.86		
157.5	34.52	25.33	18.83	13.98	9.58	7.82	6.66	5.56	4.73		
180.0	44.87	34.08	20.92	12.33	7.27	5.51	4.90	4.18	3.30		
202.5	43.11	30.39	17.78	8.70	4.90	4.29	3.74	3.25	2.64		
225.0	46.30	32.21	20.76	10.96	4.57	3.85	3.52	3.19	2.59		
247.5	36.17	24.33	11.18	5.45	3.91	3.52	3.19	2.81	2.37		
270.0	35.57	24.94	12.28	6.06	4.13	3.74	3.41	2.97	2.31		
292.5	24.00	12.66	6.17	4.96	4.51	3.96	3.36	2.75	2.31		
315.0	19.99	10.85	6.83	5.84	5.07	4.18	3.47	2.86	2.48		
337.5	13.76	8.42	6.83	5.95	5.01	4.07	3.36	2.86	2.64		
360.0	13.60	7.32	5.62	5.07	4.46	3.85	3.03	2.53	2.31		

Intensity data(cd)										Appendix Page: 19 Total:20	
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0		
0.0	2.15	2.04	1.98	1.82	1.82	1.76	1.71	1.71	1.71		
22.5	2.15	2.04	1.98	1.87	1.82	1.76	1.82	1.76	1.76		
45.0	1.98	1.93	1.93	1.87	1.82	1.76	1.76	1.76	1.65		
67.5	1.98	1.93	1.93	1.87	1.87	1.82	1.76	1.71	1.65		
90.0	1.93	1.87	1.87	1.82	1.82	1.82	1.82	1.65	1.65		
112.5	2.20	2.09	1.98	1.93	1.87	1.82	1.82	1.82	1.76		
135.0	2.53	2.42	2.26	2.20	2.09	2.04	1.98	1.87	1.87		
157.5	4.18	3.69	3.36	3.14	2.92	2.75	2.59	2.42	2.37		
180.0	2.86	2.70	2.48	2.37	2.26	2.09	2.04	1.98	1.93		
202.5	2.31	2.20	2.09	1.98	1.87	1.82	1.82	1.76	1.76		
225.0	2.20	2.09	2.04	1.93	1.87	1.82	1.76	1.71	1.65		
247.5	2.20	2.09	1.98	1.93	1.82	1.76	1.71	1.71	1.71		
270.0	2.09	1.98	1.98	1.93	1.87	1.76	1.71	1.65	1.71		
292.5	2.15	2.04	1.98	1.87	1.82	1.76	1.76	1.71	1.71		
315.0	2.31	2.20	2.09	1.98	1.93	1.87	1.82	1.82	1.71		
337.5	2.42	2.26	2.15	2.04	1.98	1.93	1.87	1.82	1.82		
360.0	2.15	2.04	1.98	1.82	1.82	1.76	1.71	1.71	1.71		
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0		
0.0	1.71	1.71	1.65	1.60	1.60	1.54	1.60	1.54	1.54		
22.5	1.71	1.71	1.71	1.65	1.60	1.60	1.60	1.60	1.54		
45.0	1.65	1.60	1.60	1.60	1.60	1.60	1.49	1.49	1.49		
67.5	1.65	1.71	1.65	1.65	1.54	1.54	1.49	1.49	1.49		
90.0	1.60	1.65	1.65	1.60	1.54	1.54	1.49	1.54	1.54		
112.5	1.76	1.71	1.65	1.65	1.65	1.65	1.60	1.60	1.54		
135.0	1.87	1.87	1.82	1.76	1.76	1.71	1.76	1.76	1.71		
157.5	2.26	2.26	2.15	2.09	2.04	1.98	1.93	1.93	1.87		
180.0	1.93	1.87	1.82	1.76	1.71	1.71	1.71	1.71	1.60		
202.5	1.65	1.65	1.60	1.60	1.60	1.54	1.49	1.49	1.43		
225.0	1.65	1.60	1.54	1.54	1.54	1.54	1.49	1.43	1.38		
247.5	1.65	1.60	1.54	1.54	1.54	1.49	1.43	1.43	1.43		
270.0	1.65	1.60	1.54	1.54	1.49	1.49	1.49	1.49	1.38		
292.5	1.65	1.60	1.54	1.54	1.49	1.49	1.49	1.43	1.38		
315.0	1.71	1.65	1.60	1.65	1.60	1.60	1.60	1.54	1.49		
337.5	1.76	1.71	1.71	1.65	1.71	1.71	1.71	1.65	1.65		
360.0	1.71	1.71	1.65	1.60	1.60	1.54	1.60	1.54	1.54		
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0		
0.0	1.49	1.54	1.49	1.43	1.43	1.43	1.43	1.43	1.43		
22.5	1.54	1.49	1.49	1.49	1.49	1.49	1.43	1.43	1.38		
45.0	1.49	1.43	1.43	1.38	1.43	1.38	1.38	1.27	1.27		
67.5	1.54	1.49	1.49	1.43	1.43	1.38	1.38	1.32	1.27		
90.0	1.49	1.43	1.43	1.43	1.49	1.49	1.43	1.38	1.27		
112.5	1.60	1.54	1.49	1.49	1.54	1.49	1.49	1.43	1.38		
135.0	1.65	1.65	1.60	1.65	1.60	1.60	1.54	1.49	1.49		
157.5	1.82	1.76	1.71	1.76	1.71	1.65	1.60	1.54	1.49		
180.0	1.54	1.49	1.49	1.49	1.49	1.43	1.43	1.43	1.32		
202.5	1.43	1.38	1.38	1.38	1.38	1.38	1.32	1.27	1.27		
225.0	1.38	1.38	1.38	1.38	1.32	1.32	1.32	1.32	1.32		
247.5	1.43	1.43	1.38	1.38	1.32	1.32	1.32	1.27	1.32		
270.0	1.38	1.38	1.38	1.38	1.38	1.32	1.27	1.27	1.32		
292.5	1.38	1.38	1.38	1.32	1.32	1.32	1.27	1.32	1.32		
315.0	1.49	1.49	1.43	1.43	1.43	1.43	1.38	1.32	1.32		
337.5	1.60	1.54	1.54	1.54	1.54	1.54	1.54	1.43	1.43		
360.0	1.49	1.54	1.49	1.43	1.43	1.43	1.43	1.43	1.43		

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Intensity data(cd)									Appendix Page: 20 Total:20		
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0		
0.0	1.38	1.49	1.38	1.43	1.38	1.38	1.32	1.16	1.10		
22.5	1.38	1.27	1.27	1.32	1.27	1.27	1.27	1.21	1.21		
45.0	1.27	1.27	1.27	1.21	1.27	1.27	1.21	1.21	1.16		
67.5	1.27	1.27	1.27	1.21	1.27	1.21	1.21	1.21	1.21		
90.0	1.27	1.32	1.27	1.21	1.27	1.21	1.21	1.21	1.16		
112.5	1.43	1.43	1.32	1.27	1.27	1.21	1.21	1.16	1.21		
135.0	1.54	1.43	1.43	1.32	1.38	1.32	1.27	1.16	1.16		
157.5	1.49	1.38	1.38	1.32	1.27	1.27	1.27	1.21	1.21		
180.0	1.32	1.32	1.27	1.32	1.21	1.21	1.21	1.16	1.16		
202.5	1.32	1.27	1.27	1.21	1.27	1.27	1.21	1.16	1.21		
225.0	1.27	1.27	1.27	1.27	1.27	1.27	1.21	1.16	1.27		
247.5	1.32	1.27	1.27	1.21	1.27	1.27	1.27	1.21	1.27		
270.0	1.27	1.21	1.27	1.21	1.21	1.21	1.27	1.21	1.21		
292.5	1.32	1.27	1.27	1.21	1.21	1.27	1.21	1.21	1.21		
315.0	1.38	1.32	1.32	1.27	1.27	1.21	1.21	1.21	1.16		
337.5	1.38	1.43	1.32	1.32	1.27	1.21	1.16	1.16	1.10		
360.0	1.38	1.49	1.38	1.43	1.38	1.38	1.32	1.16	1.10		
C/ γ (°)	90.0										
0.0	1.10										
22.5	1.16										
45.0	1.10										
67.5	1.16										
90.0	1.16										
112.5	1.16										
135.0	1.21										
157.5	1.16										
180.0	1.21										
202.5	1.21										
225.0	1.21										
247.5	1.21										
270.0	1.21										
292.5	1.16										
315.0	1.16										
337.5	1.16										
360.0	1.10										