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NATA

LumCAT: 1567-E	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 35.5000
Test No: GC2019010308	Current(A): 0.2600
LampCAT: BRIDGELUX V8E G7	Power (W): 9.2300
Lamp flux(lm): 1392.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 21	Width(mm): 21
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1220.04
Efficiency(%): 87.65%
Lumens(lm)/Power(W): 132.55
Central intensity(cd): 755.705
Maximum intensity(cd): 762.167
Angle of maximum intensity: C=0.0 γ =10.0
Beam Angle(50%Imax): [C0/180]Total=81.8
[C90/270]Total=81.8
Field angle(10%Imax): [C0/180]Total=106.1
[C90/270]Total=106.1
Maximum s/h(1/2): C0_180=1.25 C90_270=1.25
Maximum s/h(1/4): C0_180=1.18 C90_270=1.18
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.89%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.000%

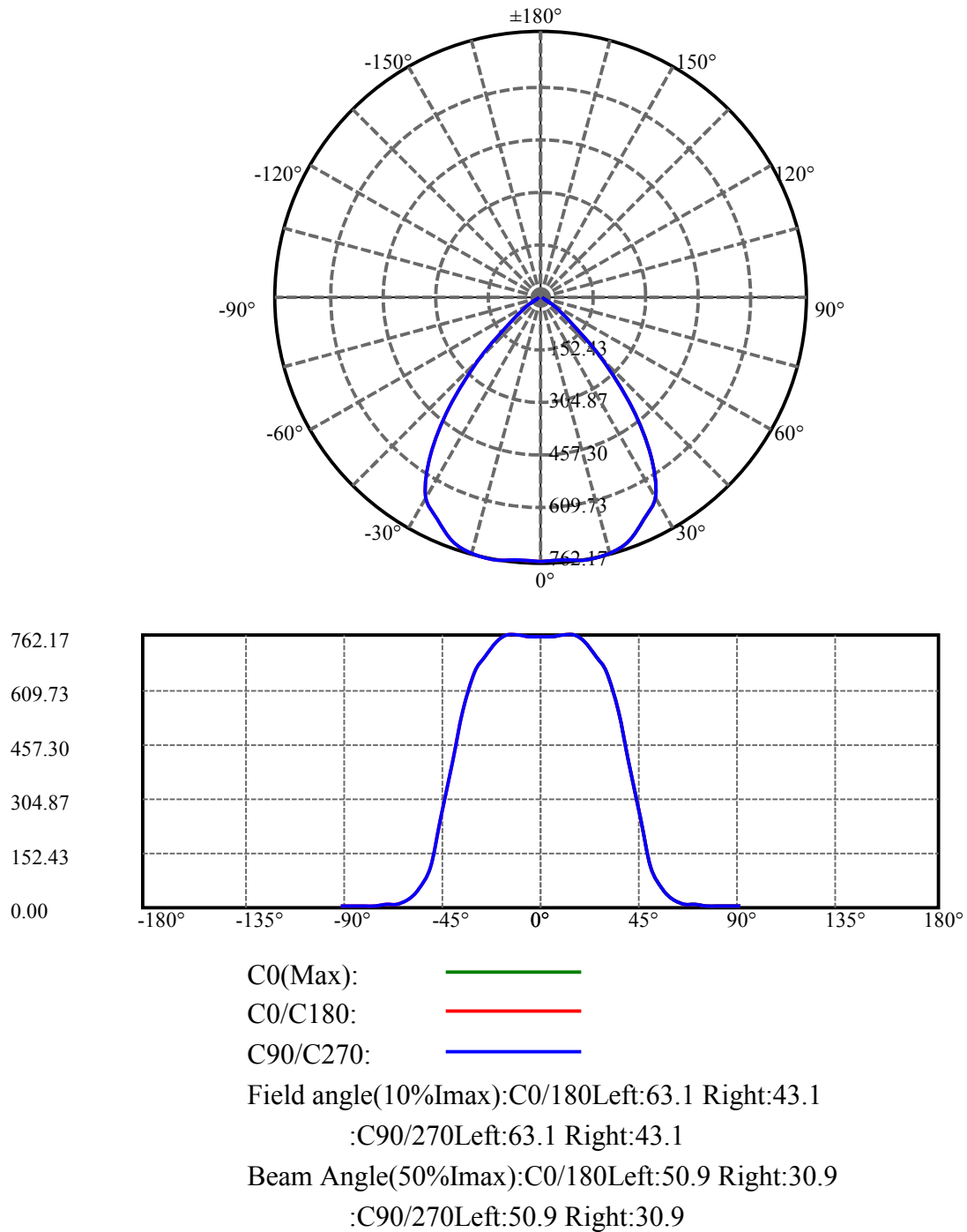
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	755.705	4.519	4.519	.325%	.370%
5.0	756.921	36.161	40.68	2.598%	3.334%
10.0	762.166	72.545	113.225	5.212%	9.280%
15.0	760.781	107.931	221.156	7.754%	18.127%
20.0	744.413	139.558	360.714	10.026%	29.566%
25.0	701.501	162.505	523.219	11.674%	42.885%
30.0	655.664	179.697	702.916	12.909%	57.614%
35.0	551.313	173.332	876.248	12.452%	71.821%
40.0	409.141	144.155	1020.403	10.356%	83.637%
45.0	250.523	97.101	1117.504	6.976%	91.596%
50.0	114.159	47.935	1165.439	3.444%	95.525%
55.0	52.066	23.378	1188.817	1.679%	97.441%
60.0	21.305	10.113	1198.931	.727%	98.270%
65.0	11.166	5.547	1204.478	.398%	98.725%
70.0	8.360	4.306	1208.784	.309%	99.078%
75.0	6.912	3.659	1212.443	.263%	99.378%
80.0	6.145	3.317	1215.761	.238%	99.650%
85.0	5.611	3.064	1218.824	.220%	99.901%
90.0	4.423	1.212	1220.037	.087%	100.000%

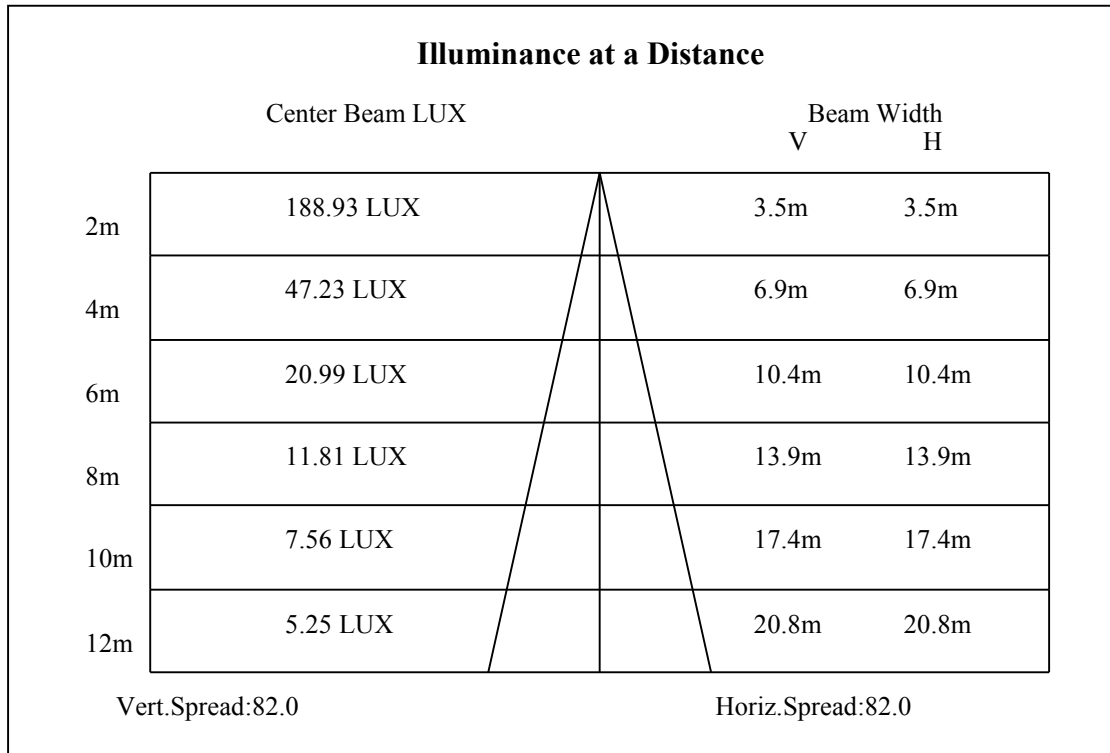
ZONAL LUMEN SUMMARY

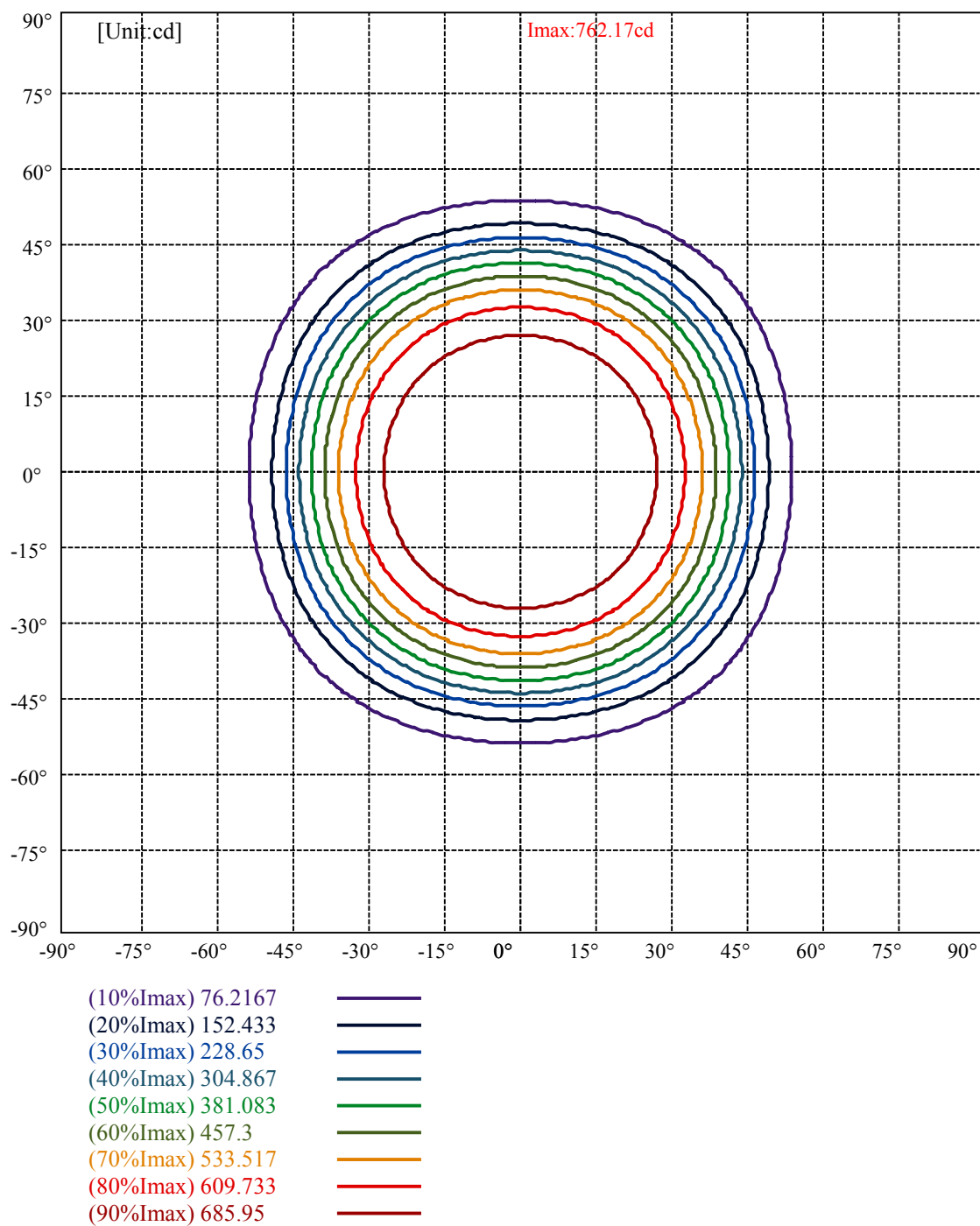
Zone	Lumens	%Lamp	%Fixt
0-30	702.92	50.50%	57.61%
0-40	1020.40	73.30%	83.64%
0-60	1198.93	86.13%	98.27%
0-90	1218.82	87.56%	99.90%
0-120	1218.82	87.56%	99.90%
0-180	1220.04	87.65%	100.00%
60-90	30.01	2.16%	2.46%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-38.46	976.03	70.12%	80.00%

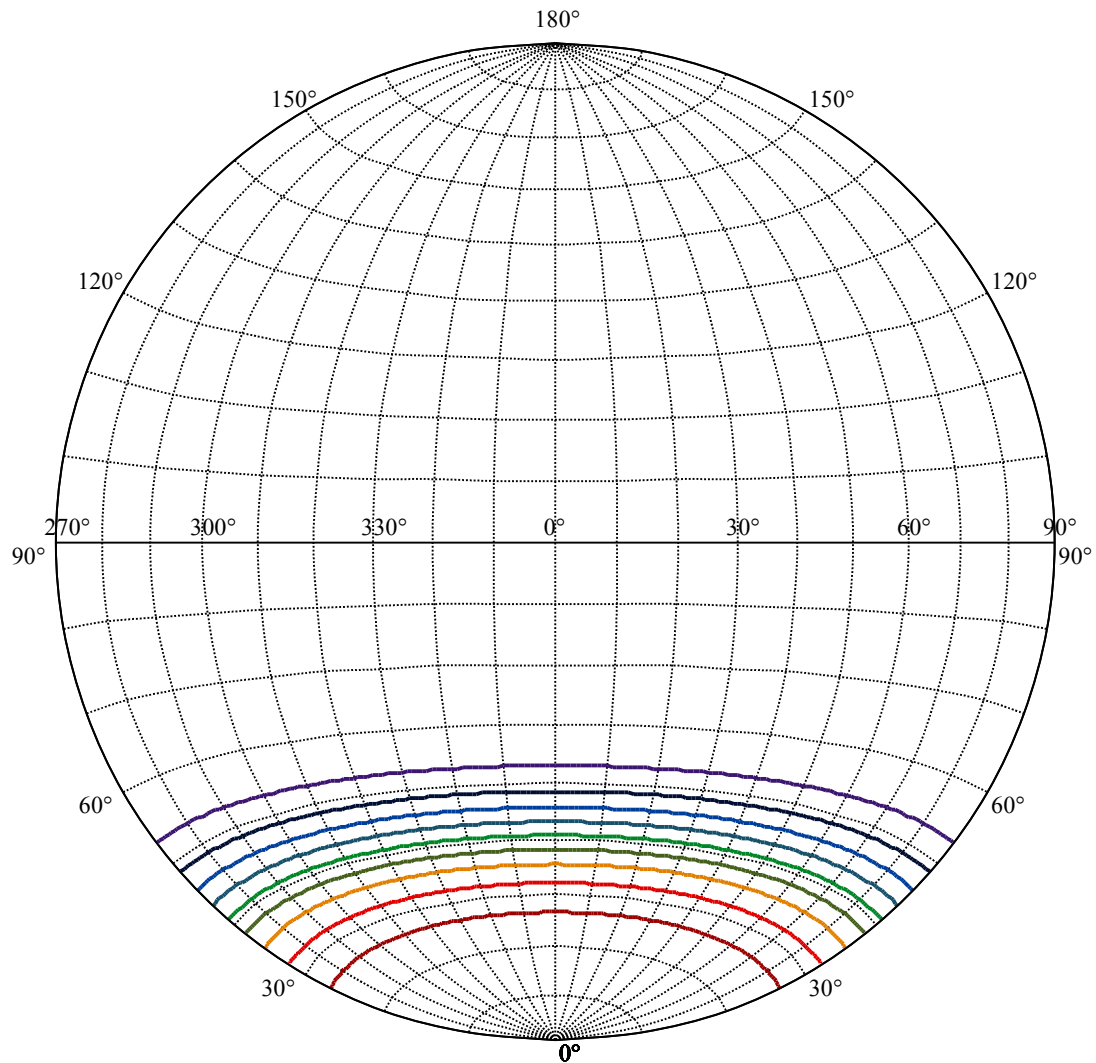
ZONAL LUMEN SUMMARY

0-10	113.23
10-20	247.49
20-30	342.20
30-40	317.49
40-50	145.04
50-60	33.49
60-70	9.85
70-80	6.98
80-90	3.06
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









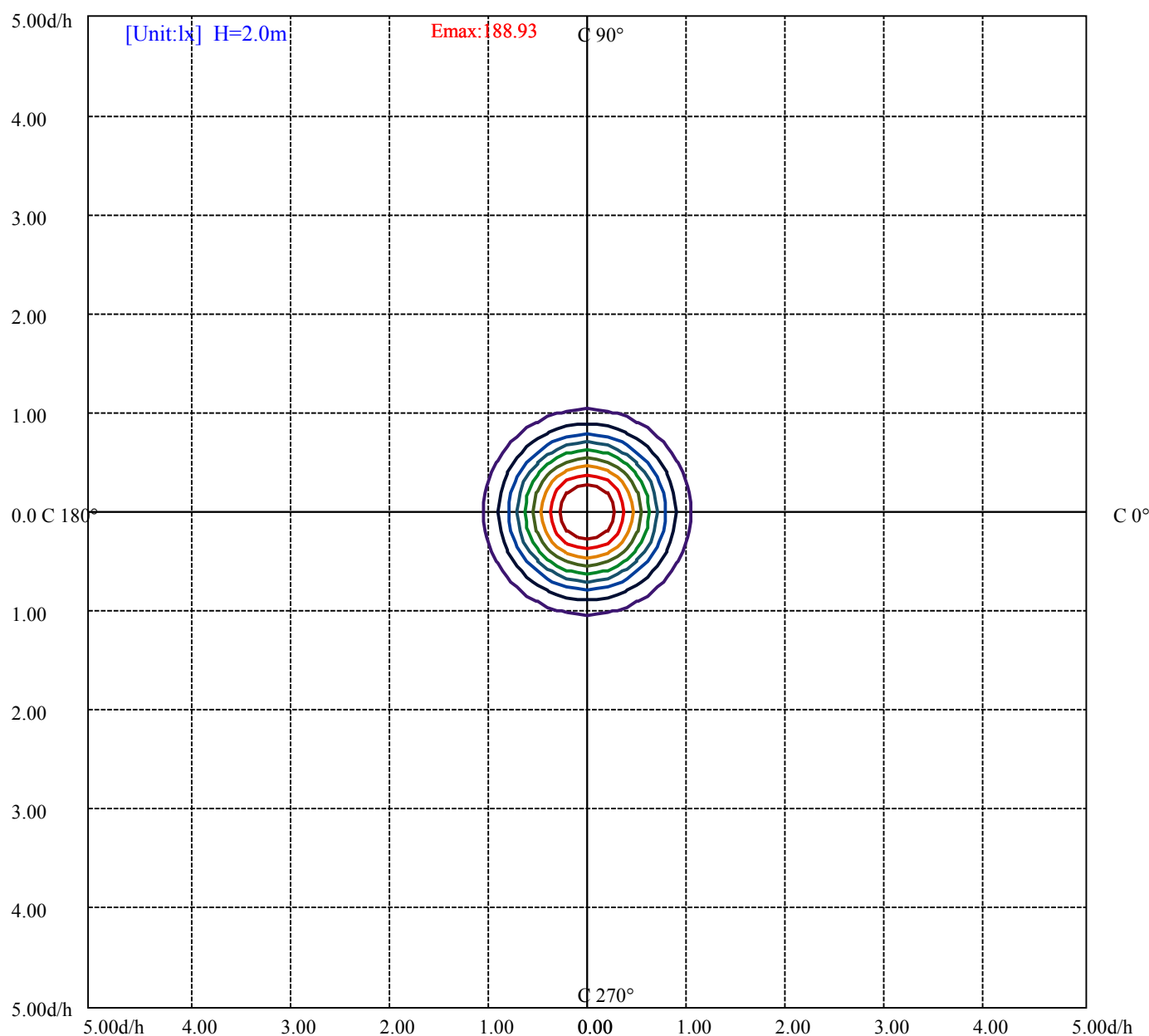
House

[Unit:cd]

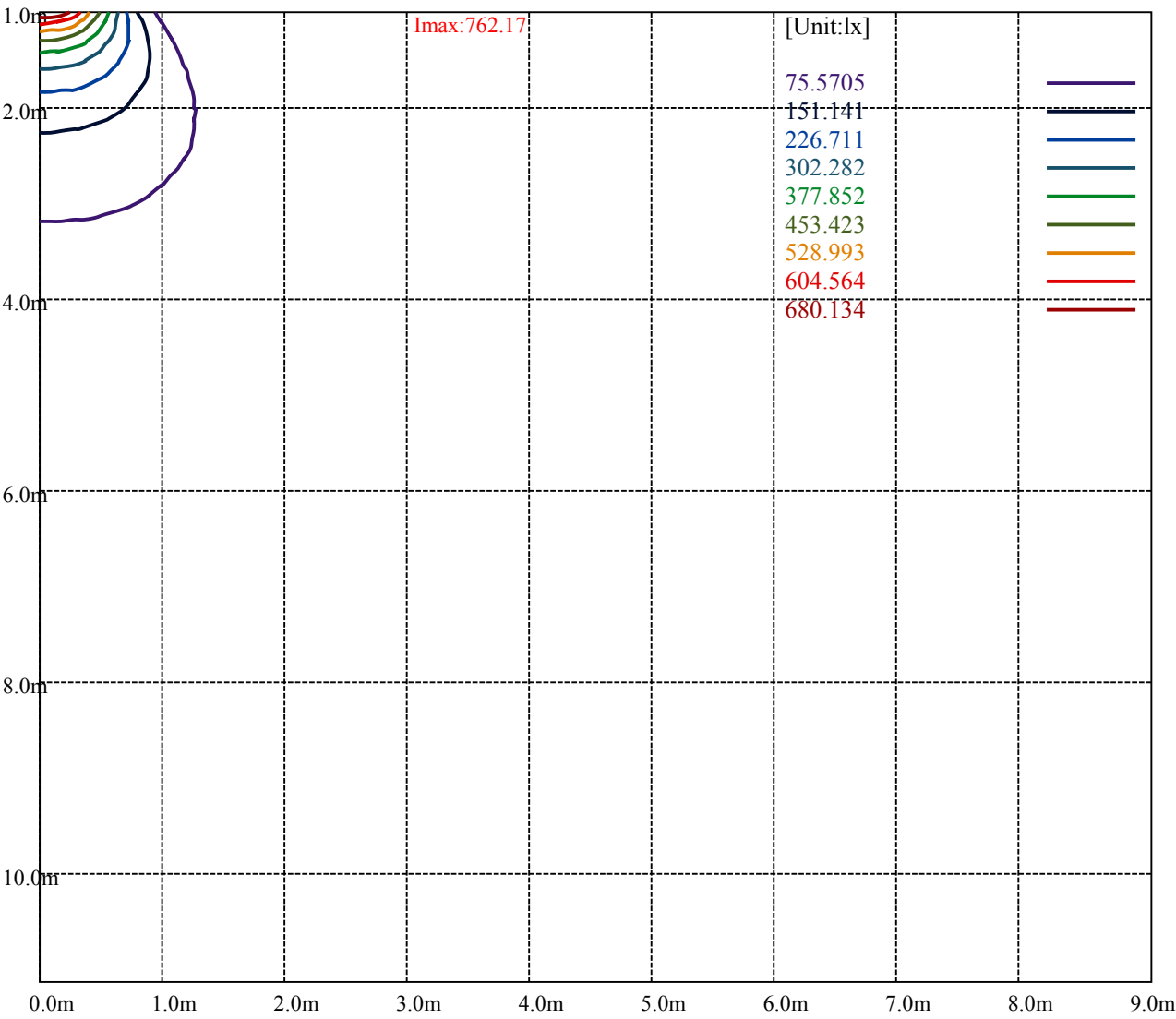
Road

Imax:762.17
(10%Imax) 76.2167
(20%Imax) 152.433
(30%Imax) 228.65
(40%Imax) 304.867
(50%Imax) 381.083
(60%Imax) 457.3
(70%Imax) 533.517
(80%Imax) 609.733
(90%Imax) 685.95





(10%E _{max})	18.89263	—
(20%E _{max})	37.78525	—
(30%E _{max})	56.67775	—
(40%E _{max})	75.5705	—
(50%E _{max})	94.463	—
(60%E _{max})	113.3558	—
(70%E _{max})	132.2482	—
(80%E _{max})	151.141	—
(90%E _{max})	170.0335	—



Luminance Table

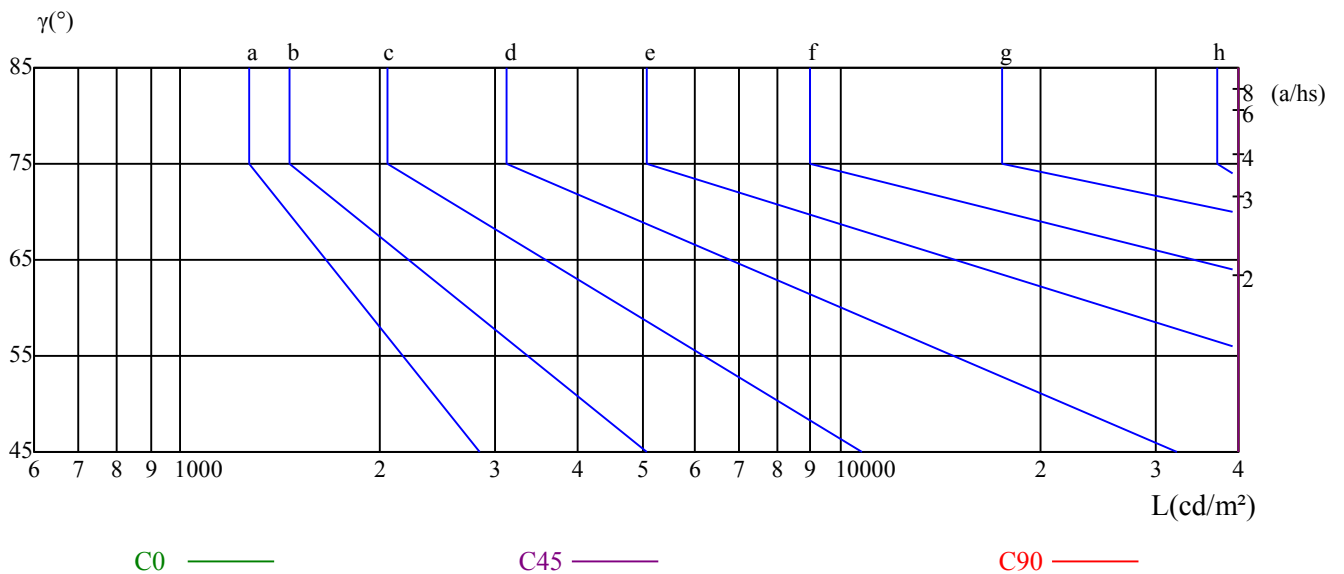
γ	45	50	55	60	65	70	75	80	85
C0	803387	402722	205839	96620	59910	55427	60555	80248	145983
C45	803387	402722	205839	96620	59910	55427	60555	80248	145983
C90	803387	402722	205839	96620	59910	55427	60555	80248	145983

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
59910	59910	59910	60555	60555	60555	145983	145983	145983

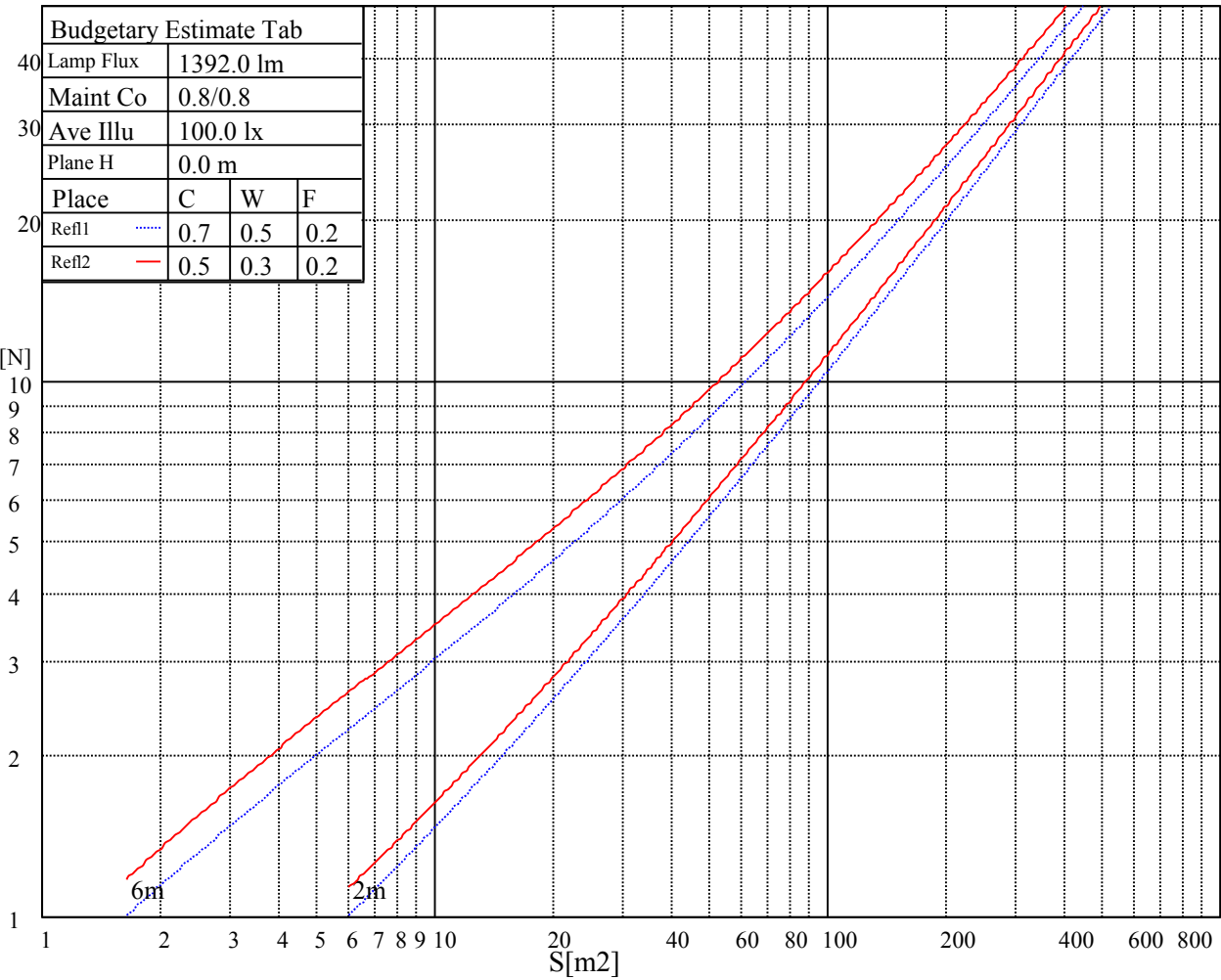
Glare Table

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

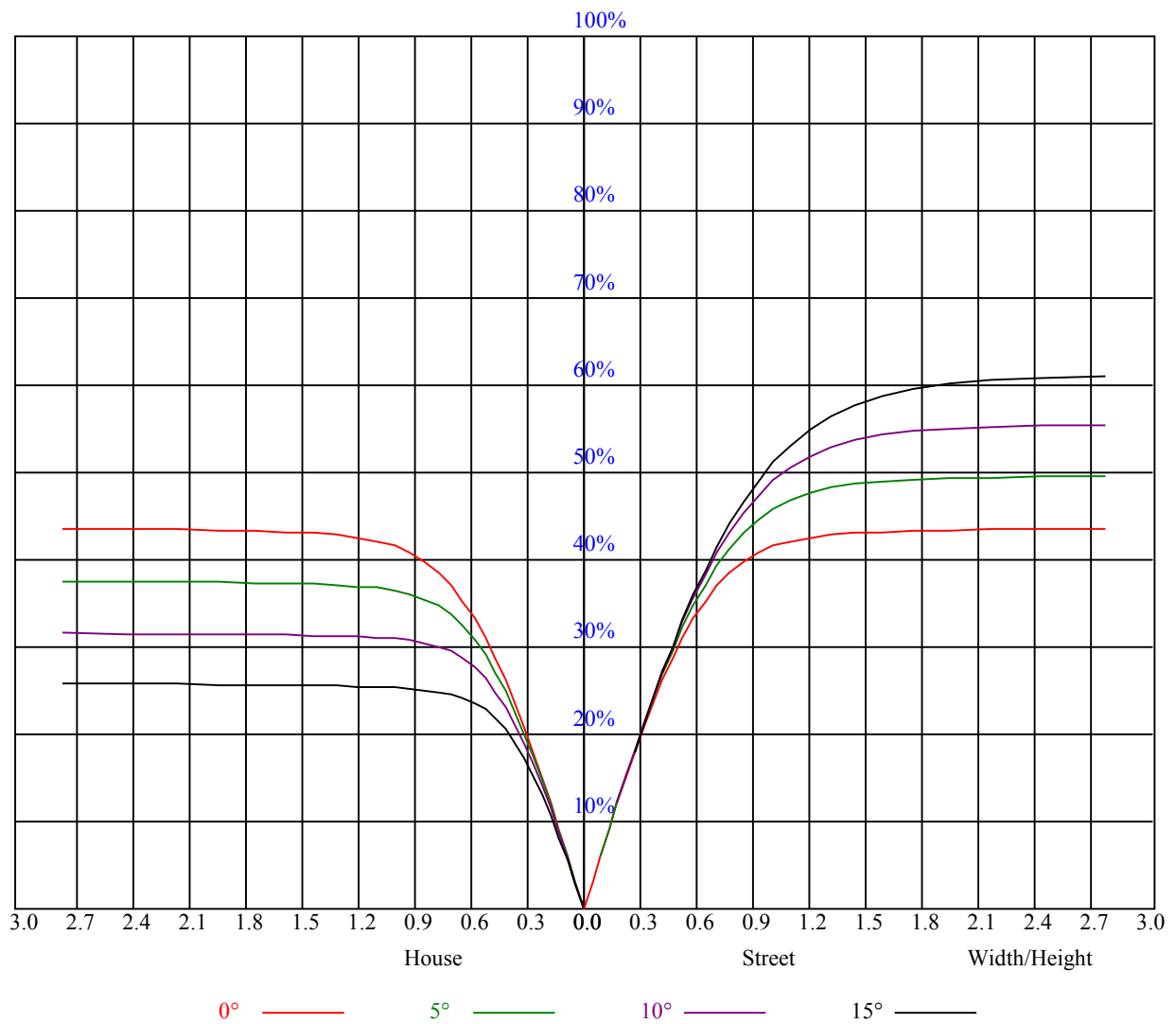
Luminance Limiting Curve



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	23.44	24.62	23.81	24.93	25.25	23.56	24.73	23.93	25.05	25.36
	3H	23.71	24.74	24.09	25.07	25.44	23.81	24.84	24.19	25.17	25.53
	4H	23.89	24.84	24.29	25.20	25.58	23.98	24.94	24.39	25.29	25.68
	6H	24.19	25.06	24.60	25.43	25.83	24.28	25.15	24.70	25.53	25.92
	8H	24.41	25.23	24.84	25.63	26.03	24.51	25.33	24.94	25.72	26.13
	12H	24.91	25.69	25.34	26.08	26.51	25.02	25.81	25.45	26.19	26.62
4H	2H	23.36	24.32	23.77	24.67	25.05	23.47	24.43	23.88	24.78	25.17
	3H	23.77	24.55	24.19	24.95	25.36	23.86	24.64	24.28	25.04	25.45
	4H	24.07	24.76	24.51	25.18	25.63	24.16	24.85	24.60	25.27	25.72
	6H	24.52	25.11	24.98	25.56	26.03	24.60	25.19	25.07	25.64	26.11
	8H	24.87	25.43	25.35	25.88	26.35	24.96	25.52	25.44	25.96	26.44
	12H	25.52	26.00	26.01	26.49	26.96	25.63	26.11	26.12	26.60	27.07
8H	4H	24.15	24.71	24.63	25.15	25.63	24.23	24.79	24.71	25.23	25.71
	6H	24.80	25.25	25.30	25.75	26.23	24.87	25.32	25.38	25.82	26.31
	8H	25.33	25.73	25.85	26.25	26.74	25.41	25.81	25.93	26.33	26.83
	12H	26.33	26.69	26.84	27.18	27.76	26.42	26.78	26.94	27.28	27.85
12H	4H	24.16	24.65	24.65	25.13	25.61	24.24	24.73	24.73	25.21	25.69
	6H	25.33	25.29	25.42	25.76	26.31	25.40	25.36	25.49	25.83	26.38
	8H	25.52	25.88	26.04	26.38	26.95	25.60	25.96	26.11	26.45	27.03
Variation with the observer position at spacings:											
S = 1.0H		2.2/-5.9					2.2/-5.9				
S = 1.5H		4.1/-8.4					4.1/-8.4				
S = 2.0H		6.2/-7.9					6.2/-7.9				
Standard tables:		BK0					BK0				
Uncorrected UGR		13.7					13.7				



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	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	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	0.96	0.94	0.91	0.94	0.92	0.90	0.91	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.80
2	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.73
3	0.82	0.77	0.73	0.80	0.76	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.71	0.69	0.67
4	0.75	0.70	0.66	0.74	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.63	0.62
5	0.70	0.64	0.60	0.69	0.64	0.60	0.67	0.63	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.57
6	0.65	0.59	0.55	0.64	0.59	0.55	0.63	0.58	0.54	0.62	0.57	0.54	0.60	0.57	0.54	0.52
7	0.60	0.55	0.51	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.48
8	0.56	0.51	0.47	0.56	0.50	0.47	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.45
9	0.53	0.47	0.43	0.52	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.41
10	0.50	0.44	0.40	0.49	0.44	0.40	0.48	0.44	0.40	0.48	0.43	0.40	0.47	0.43	0.40	0.39



NATA 1567-E

Intensity data(cd)										Appendix Page: 15 Total:15	
C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	756.90	753.53	759.54	762.19	749.87	714.66	671.79	569.93	432.45		
45.0	754.43	757.18	759.49	756.17	740.87	697.67	657.00	564.86	423.68		
90.0	757.35	766.86	772.99	770.51	746.61	695.81	648.28	543.15	402.41		
135.0	754.14	765.68	772.93	775.69	760.28	713.81	667.01	575.04	439.59		
180.0	756.90	764.61	767.98	766.13	748.52	698.34	656.33	545.46	395.66		
225.0	754.43	754.20	762.08	758.76	741.38	698.18	646.82	529.48	386.55		
270.0	757.35	747.11	750.71	746.89	732.38	695.98	645.92	544.50	405.28		
315.0	754.14	746.21	751.61	749.93	735.41	697.56	652.16	538.09	387.51		
360.0	756.90	753.53	759.54	762.19	749.87	714.66	671.79	569.93	432.45		
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	269.94	125.89	60.69	24.30	11.31	8.38	7.03	6.30	5.68		
45.0	270.56	131.06	57.99	22.67	11.08	8.38	6.92	6.13	5.74		
90.0	243.39	107.55	49.05	18.28	10.35	7.99	6.53	5.74	5.18		
135.0	269.89	126.68	52.54	20.25	11.31	8.49	6.92	6.02	5.40		
180.0	234.39	102.15	46.91	18.56	10.97	8.44	6.86	6.08	5.68		
225.0	227.64	98.38	45.17	20.64	10.97	8.33	6.92	6.19	5.74		
270.0	254.19	119.59	52.93	25.82	12.66	8.66	7.20	6.47	5.79		
315.0	234.17	101.98	51.24	19.91	10.69	8.21	6.92	6.24	5.68		
360.0	269.94	125.89	60.69	24.30	11.31	8.38	7.03	6.30	5.68		
C/ γ (°)	90.0										
0.0	4.67										
45.0	4.50										
90.0	4.33										
135.0	4.28										
180.0	4.28										
225.0	4.28										
270.0	4.44										
315.0	4.61										
360.0	4.67										