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Nata

Client: NT

LumCAT: 1-1818-LM

Luminaire: 92.70.458.00

Report No: 20251122-B006

Ballast type: DC

Test No: 20251222-C006

Voltage(V): 33.990

LampCAT: PHILIPS SLM1202

Current(A): 0.146

Lamp flux(lm): 869.3

Power (W): 4.962

Number of Lamps: 1

PF: 0.000

Length(mm): 35

Width(mm): 35

Phm Type: C

Height(mm): 15

Photometric Results

Lumens(lm): 824.76, Efficiency(%): 94.87% , Luminous Efficacy(lm/W): 166.22

Central intensity(cd): 3866.156, Maximum intensity(cd): 3866.156

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=18.0

[C90/270]Total=18.0

Field angle(10%Imax): [C0/180]Total=42.0

[C90/270]Total=42.0

Maximum s/h(1/2): C0_180=0.31 C90_270=0.31

Maximum s/h(1/4): C0_180=0.32 C90_270=0.32

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.87%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.933%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3866.156	0.000	0	0.00%	0.00%
1.0	3842.259	3.688	3.688	0.42%	0.45%
2.0	3762.599	10.915	14.604	1.26%	1.77%
3.0	3633.637	17.689	32.293	2.03%	3.92%
4.0	3459.678	23.744	56.036	2.73%	6.79%
5.0	3230.387	28.780	84.817	3.31%	10.28%
6.0	2957.607	32.520	117.336	3.74%	14.23%
7.0	2549.987	34.186	151.522	3.93%	18.37%
8.0	2251.243	34.361	185.883	3.95%	22.54%
9.0	1927.900	33.870	219.753	3.90%	26.64%
10.0	1705.930	32.885	252.638	3.78%	30.63%
11.0	1440.987	31.444	284.082	3.62%	34.44%
12.0	1212.859	29.010	313.092	3.34%	37.96%
13.0	1016.897	26.462	339.554	3.04%	41.17%
14.0	856.092	23.974	363.528	2.76%	44.08%
15.0	731.727	21.798	385.326	2.51%	46.72%
16.0	631.722	19.978	405.305	2.30%	49.14%
17.0	556.357	18.502	423.806	2.13%	51.39%
18.0	496.806	17.364	441.171	2.00%	53.49%
19.0	453.704	16.537	457.708	1.90%	55.50%
20.0	424.930	16.081	473.789	1.85%	57.45%
21.0	386.446	15.580	489.369	1.79%	59.33%
22.0	370.933	15.220	504.589	1.75%	61.18%
23.0	341.180	14.942	519.531	1.72%	62.99%
24.0	324.849	14.562	534.093	1.68%	64.76%
25.0	311.878	14.478	548.571	1.67%	66.51%
26.0	300.930	14.465	563.036	1.66%	68.27%
27.0	291.102	14.484	577.52	1.67%	70.02%
28.0	282.716	14.528	592.048	1.67%	71.78%
29.0	275.837	14.613	606.661	1.68%	73.56%
30.0	269.927	14.736	621.397	1.70%	75.34%
31.0	264.674	14.877	636.274	1.71%	77.15%
32.0	259.776	15.025	651.299	1.73%	78.97%
33.0	254.910	15.163	666.462	1.74%	80.81%
34.0	248.925	15.248	681.709	1.75%	82.66%
35.0	240.055	15.186	696.895	1.75%	84.50%
36.0	229.107	14.938	711.833	1.72%	86.31%
37.0	213.843	14.447	726.28	1.66%	88.06%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	195.726	13.671	739.951	1.57%	89.72%
39.0	174.713	12.644	752.595	1.45%	91.25%
40.0	152.376	11.408	764.003	1.31%	92.63%
41.0	128.564	10.004	774.007	1.15%	93.85%
42.0	106.744	8.549	782.556	0.98%	94.88%
43.0	84.116	7.070	789.626	0.81%	95.74%
44.0	63.620	5.576	795.202	0.64%	96.42%
45.0	46.073	4.216	799.417	0.48%	96.93%
46.0	32.370	3.068	802.485	0.35%	97.30%
47.0	22.585	2.186	804.671	0.25%	97.56%
48.0	16.912	1.597	806.267	0.18%	97.76%
49.0	13.876	1.264	807.532	0.15%	97.91%
50.0	12.659	1.106	808.638	0.13%	98.05%
51.0	11.960	1.042	809.68	0.12%	98.17%
52.0	11.099	0.989	810.669	0.11%	98.29%
53.0	10.097	0.922	811.591	0.11%	98.40%
54.0	9.032	0.843	812.434	0.10%	98.51%
55.0	7.826	0.752	813.187	0.09%	98.60%
56.0	6.846	0.663	813.85	0.08%	98.68%
57.0	6.093	0.592	814.441	0.07%	98.75%
58.0	5.608	0.541	814.983	0.06%	98.81%
59.0	5.199	0.505	815.488	0.06%	98.88%
60.0	4.898	0.477	815.965	0.05%	98.93%
61.0	4.650	0.456	816.421	0.05%	98.99%
62.0	4.414	0.437	816.857	0.05%	99.04%
63.0	4.209	0.419	817.277	0.05%	99.09%
64.0	4.005	0.403	817.68	0.05%	99.14%
65.0	3.865	0.389	818.069	0.04%	99.19%
66.0	3.660	0.375	818.445	0.04%	99.23%
67.0	3.499	0.360	818.804	0.04%	99.28%
68.0	3.348	0.347	819.151	0.04%	99.32%
69.0	3.208	0.334	819.486	0.04%	99.36%
70.0	3.079	0.323	819.809	0.04%	99.40%
71.0	2.928	0.310	820.119	0.04%	99.44%
72.0	2.810	0.298	820.417	0.03%	99.47%
73.0	2.745	0.290	820.708	0.03%	99.51%
74.0	2.659	0.284	820.992	0.03%	99.54%
75.0	2.605	0.278	821.27	0.03%	99.58%

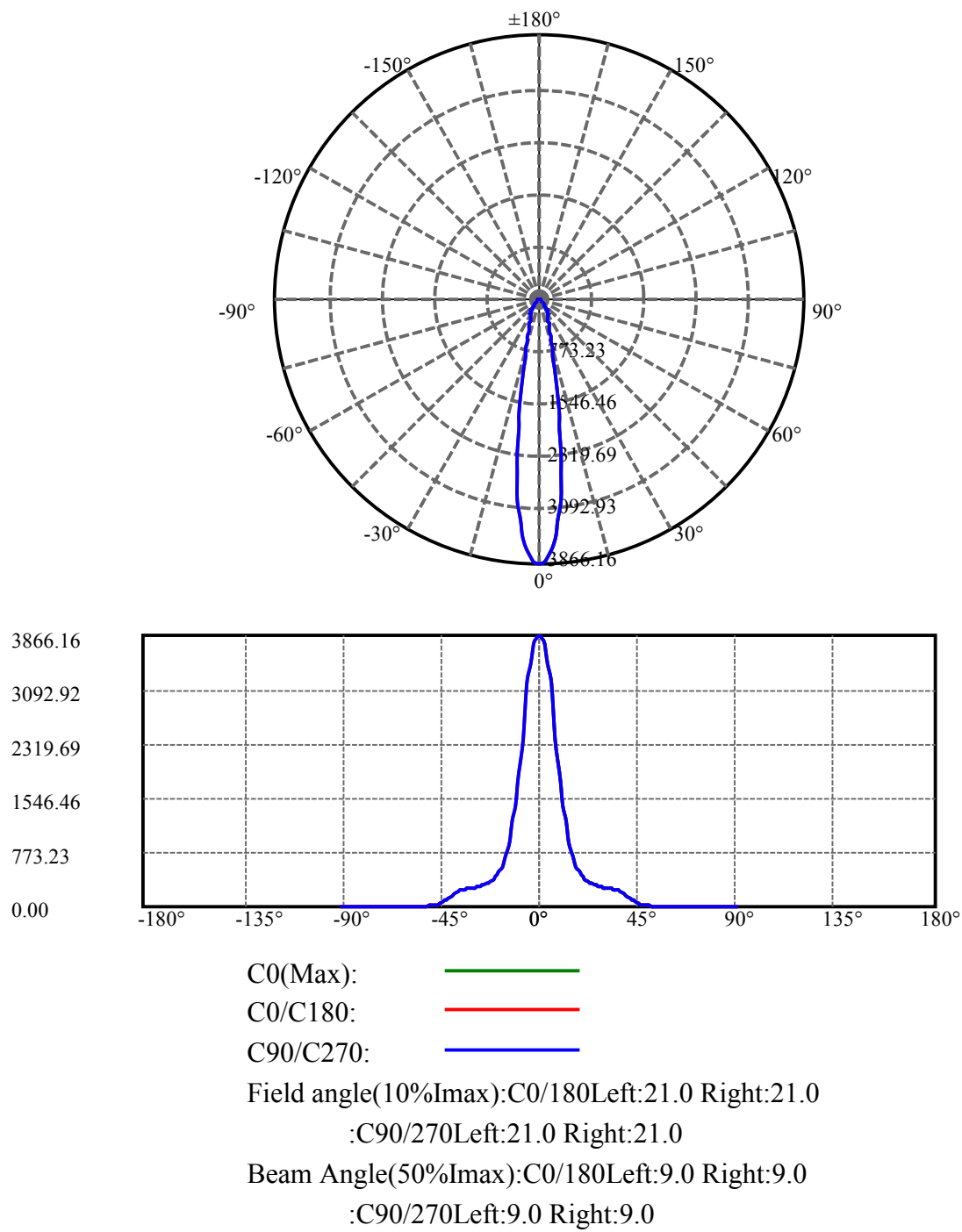
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	2.540	0.273	821.543	0.03%	99.61%
77.0	2.487	0.268	821.811	0.03%	99.64%
78.0	2.401	0.262	822.073	0.03%	99.67%
79.0	2.357	0.256	822.329	0.03%	99.71%
80.0	2.293	0.251	822.579	0.03%	99.74%
81.0	2.218	0.244	822.823	0.03%	99.77%
82.0	2.185	0.239	823.062	0.03%	99.79%
83.0	2.131	0.235	823.297	0.03%	99.82%
84.0	2.088	0.230	823.526	0.03%	99.85%
85.0	2.002	0.223	823.75	0.03%	99.88%
86.0	1.959	0.217	823.966	0.02%	99.90%
87.0	1.895	0.211	824.177	0.02%	99.93%
88.0	1.798	0.202	824.379	0.02%	99.95%
89.0	1.744	0.194	824.574	0.02%	99.98%
90.0	1.679	0.188	824.761	0.02%	100.00%

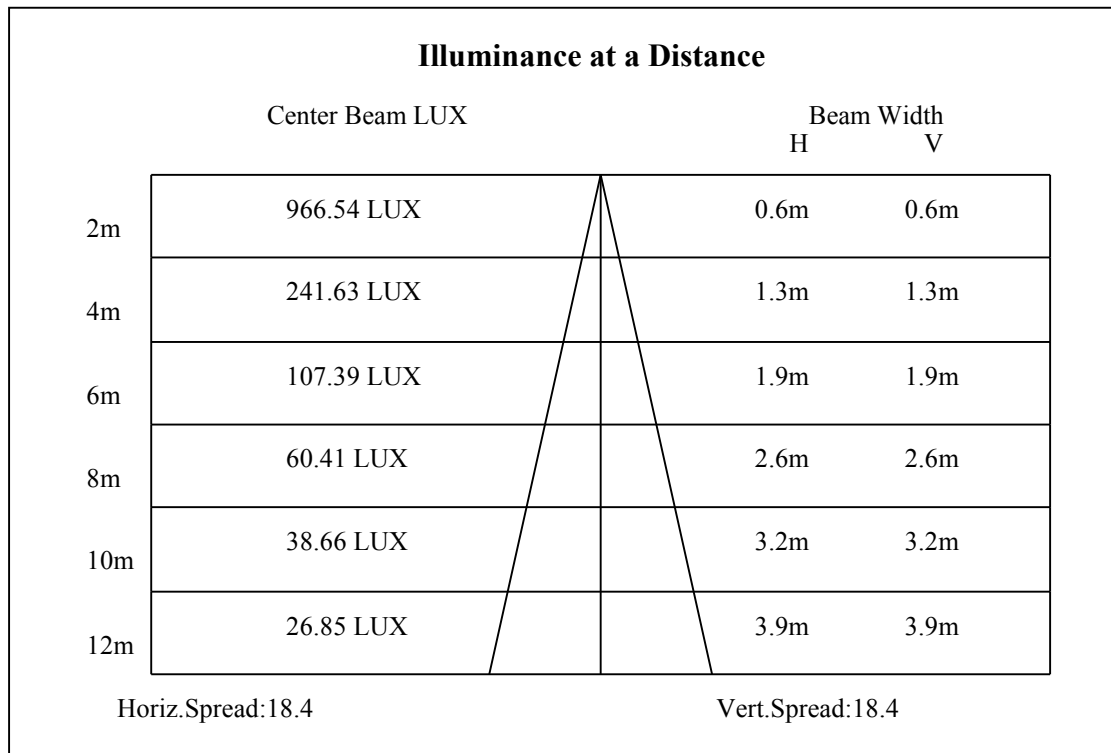
ZONAL LUMEN SUMMARY

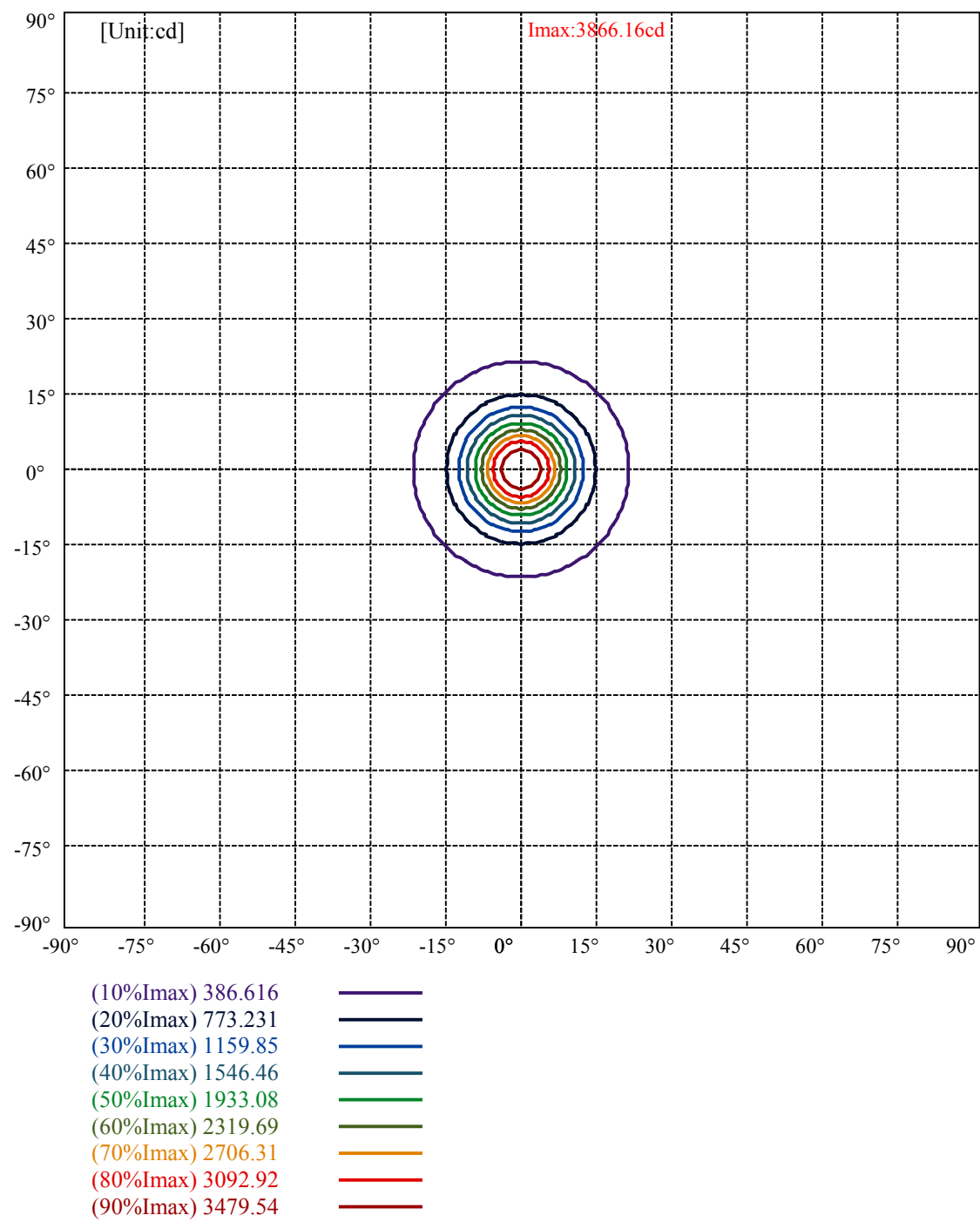
Zone	Lumens	%Lamp	%Fixt
0-30	621.40	71.48%	75.34%
0-40	764.00	87.88%	92.63%
0-60	815.96	93.86%	98.93%
0-90	824.57	94.85%	99.98%
0-120	824.57	94.85%	99.98%
0-180	824.76	94.87%	100.00%
60-90	8.61	0.99%	1.04%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-32.56	659.81	75.90%	80.00%

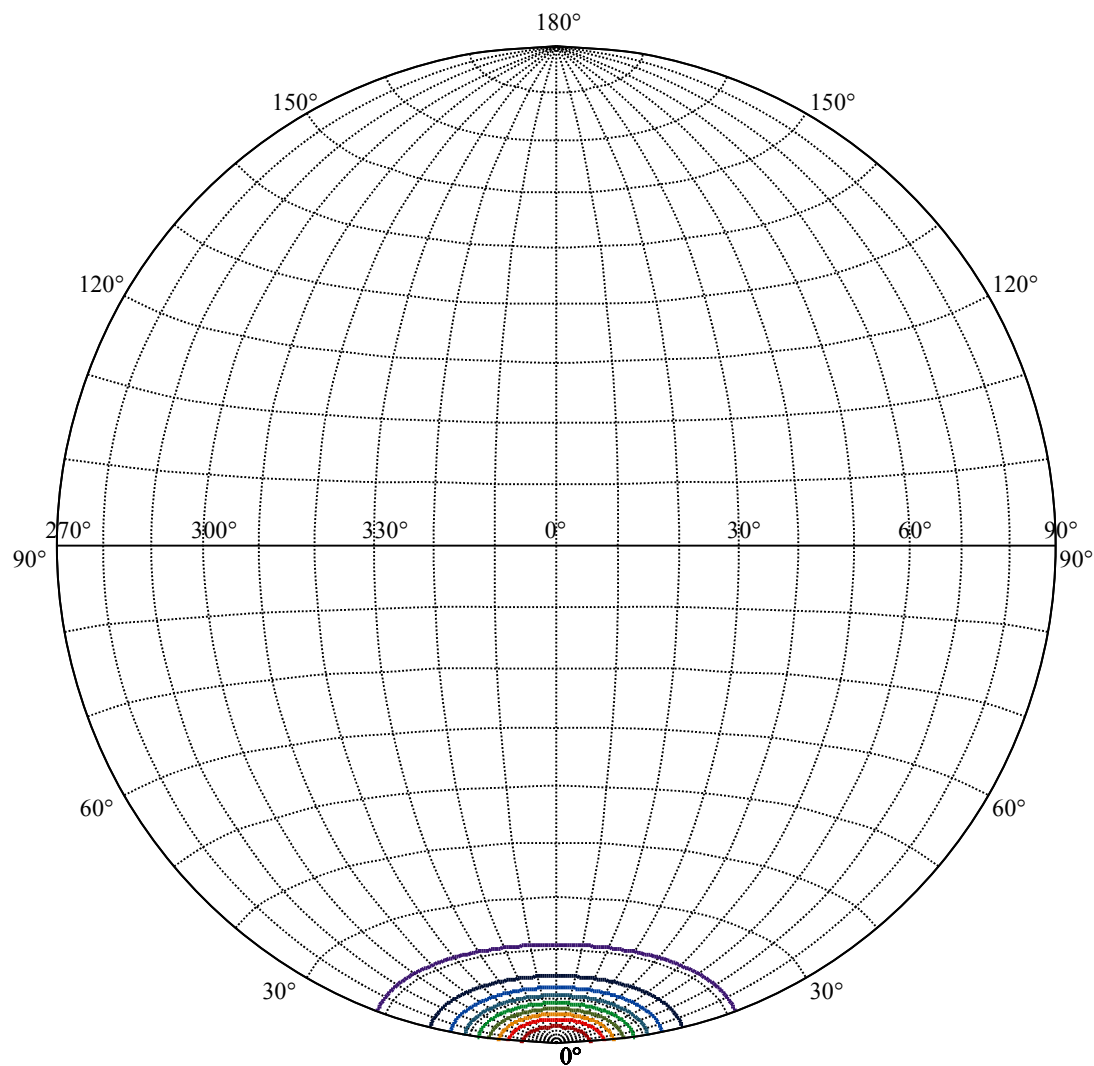
ZONAL LUMEN SUMMARY

0-10	252.64
10-20	221.15
20-30	147.61
30-40	142.61
40-50	44.64
50-60	7.33
60-70	3.84
70-80	2.77
80-90	1.99
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







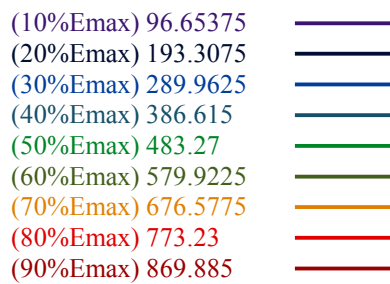


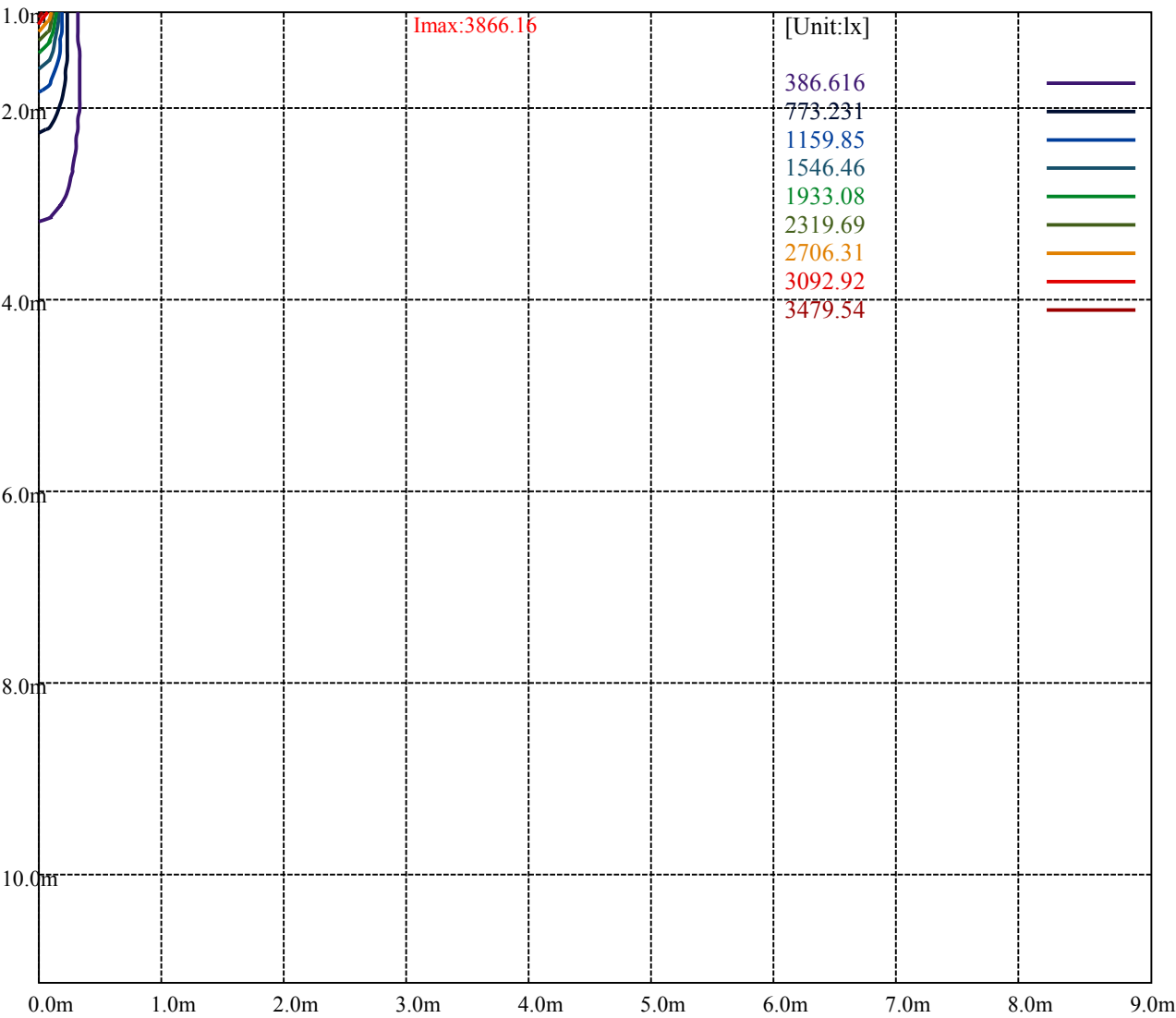
House

[Unit:cd]

Road

Imax:3866.16	
(10%Imax) 386.616	
(20%Imax) 773.231	
(30%Imax) 1159.85	
(40%Imax) 1546.46	
(50%Imax) 1933.08	
(60%Imax) 2319.69	
(70%Imax) 2706.31	
(80%Imax) 3092.92	
(90%Imax) 3479.54	





Luminance Table

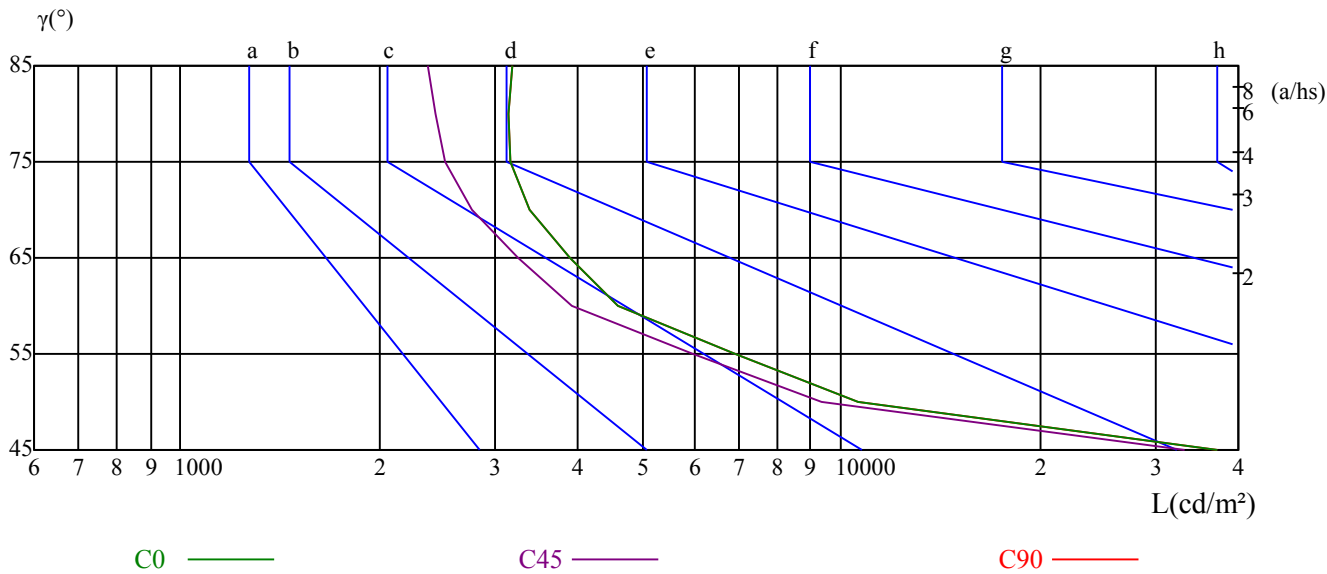
γ	45	50	55	60	65	70	75	80	85
C0	37233	10642	6909	4590	3890	3375	3161	3142	3179
C45	33118	9335	5970	3901	3246	2757	2519	2429	2366
C90	37233	10642	6909	4590	3890	3375	3161	3142	3179

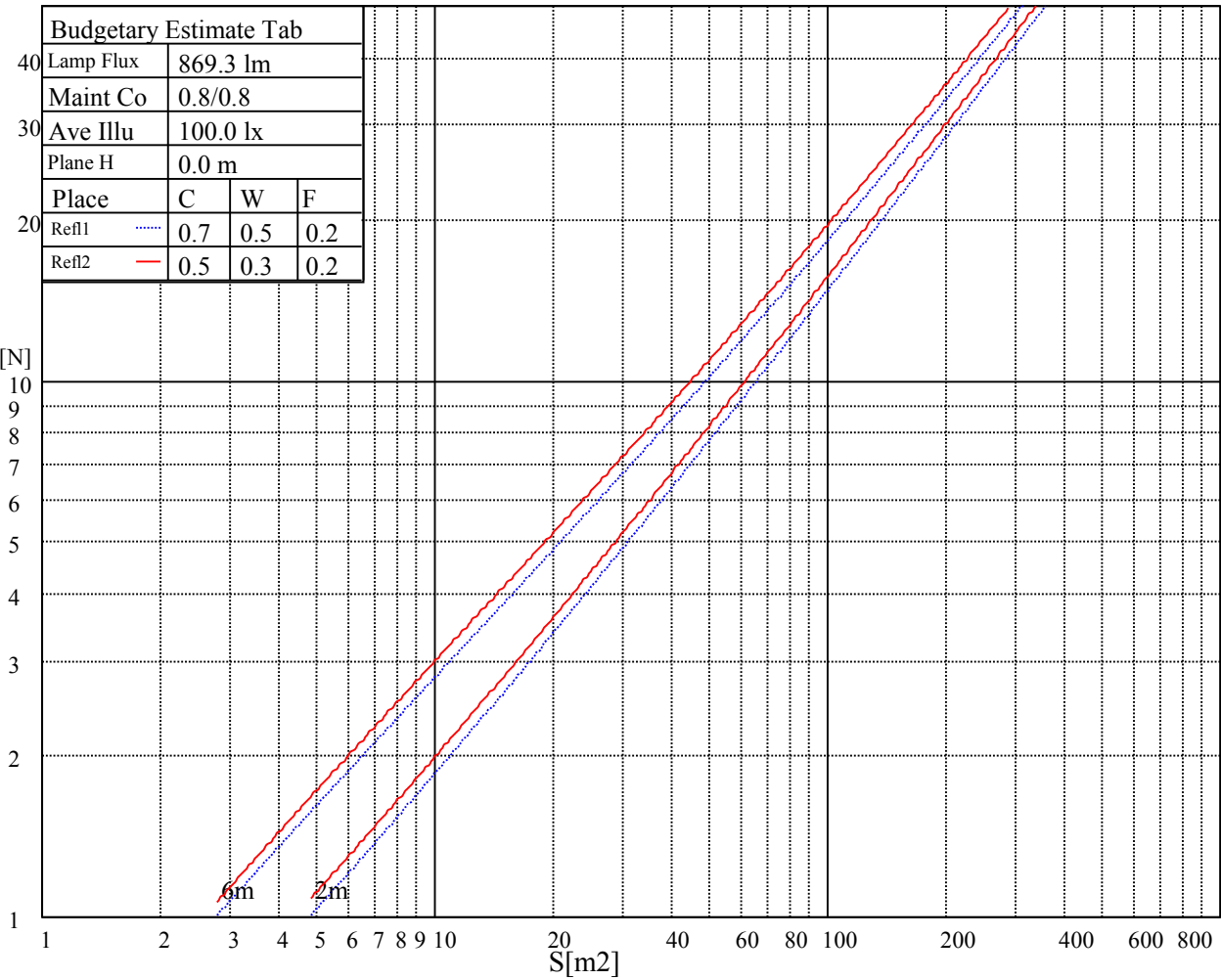
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7465	7465	7465	8217	8217	8217	18754	18754	18754

Glare Table

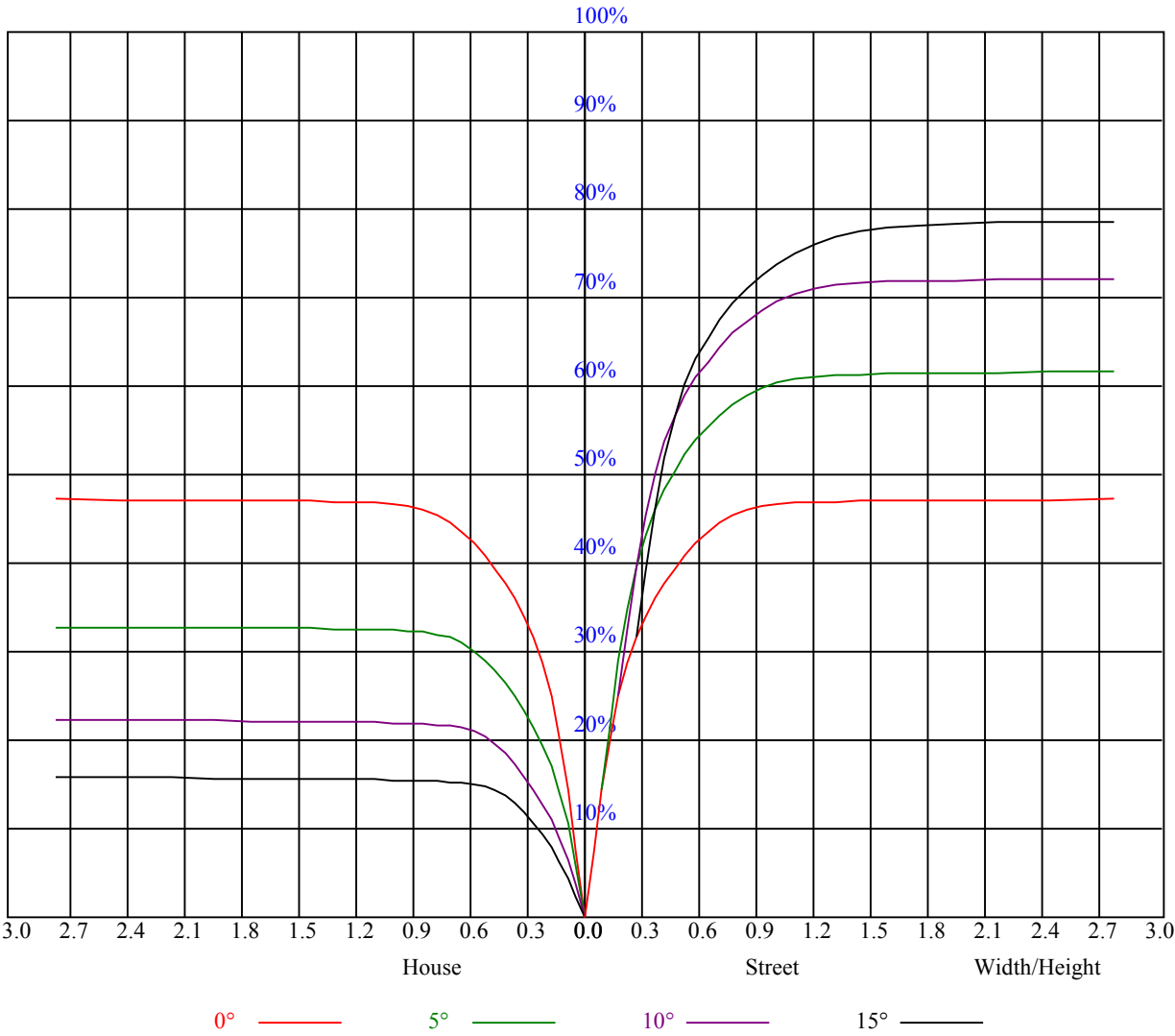
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

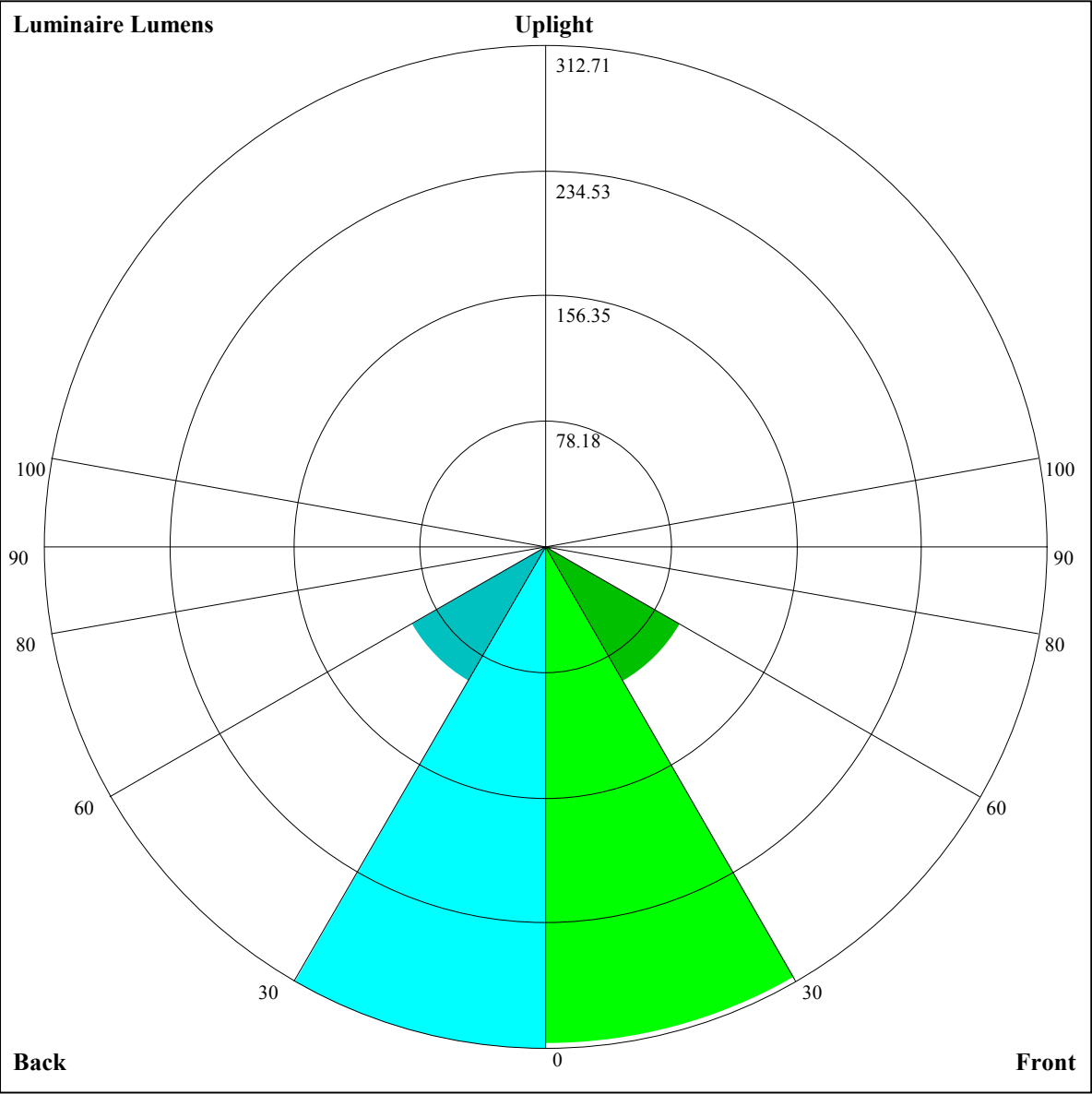
Luminance Limiting Curve





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	1.13	1.13	1.13	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	0.97	0.97	0.97	0.95
1	1.06	1.04	1.02	1.04	1.02	1.00	1.00	0.98	0.97	0.97	0.95	0.94	0.93	0.92	0.92	0.90
2	1.00	0.96	0.93	0.98	0.95	0.92	0.95	0.92	0.90	0.92	0.90	0.88	0.90	0.88	0.87	0.85
3	0.94	0.90	0.87	0.93	0.89	0.86	0.90	0.87	0.85	0.88	0.85	0.83	0.86	0.84	0.82	0.81
4	0.89	0.85	0.81	0.88	0.84	0.81	0.86	0.82	0.80	0.84	0.81	0.79	0.83	0.80	0.78	0.77
5	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.76	0.72	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.72	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.64
9	0.71	0.66	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
10	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.59





Luminaire Lumens:

FL=310.34,FM=97.07,FH=3.49,FVH=1.1

BL=312.71,BM=96.52,BH=3.1,BVH=1.08

UL=0,UH=0

BUG Rating:B1-U0-G0

NT Nata 1-1818-LM

Intensity data(cd)

Appendix Page: 17 Total:19

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	3909.00	3861.64	3769.49	3635.14	3456.88	3166.66	2899.69	2539.72	2024.73
45.0	3871.11	3904.69	3888.33	3825.47	3716.96	3515.44	3307.03	3059.01	2716.26
90.0	3885.75	3884.89	3835.80	3712.65	3561.94	3363.01	3125.32	2785.16	2490.63
135.0	3798.77	3860.77	3878.00	3843.55	3761.74	3625.67	3441.38	3145.99	2875.58
180.0	3909.00	3900.39	3848.72	3742.79	3543.86	3328.56	3070.21	2699.04	2391.59
225.0	3871.11	3793.60	3631.70	3445.68	3210.58	2933.28	2554.36	2003.20	1649.94
270.0	3885.75	3838.38	3747.96	3571.42	3378.51	3141.69	2866.97	2490.63	2184.05
315.0	3798.77	3693.70	3500.80	3292.39	3046.96	2768.79	2395.90	1677.16	1677.16
360.0	3909.00	3861.64	3769.49	3635.14	3456.88	3166.66	2899.69	2539.72	2024.73

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1687.15	1687.15	1379.10	1167.33	988.38	813.39	707.55	624.27	558.13
45.0	2426.04	2136.68	1787.04	1532.13	1300.47	1099.82	932.75	769.98	668.36
90.0	1694.38	1694.38	1563.48	1325.28	1120.06	950.49	785.57	684.47	605.41
135.0	2510.44	2207.30	1910.19	1567.44	1320.28	1107.57	936.19	769.12	664.92
180.0	2079.85	1712.12	1439.99	1201.44	961.17	814.77	698.51	605.50	520.24
225.0	1649.94	1334.92	1120.83	943.43	771.88	665.95	564.33	504.05	456.00
270.0	1889.52	1614.81	1303.92	1095.51	922.41	756.21	656.31	578.80	503.88
315.0	1485.89	1260.08	1023.34	870.31	750.52	640.55	572.60	517.57	473.91
360.0	1687.15	1687.15	1379.10	1167.33	988.38	813.39	707.55	624.27	558.13

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	496.47	458.41	428.53	401.23	372.20	354.81	341.55	328.46	318.81
45.0	590.86	513.35	465.99	437.57	437.57	365.40	345.42	325.53	311.66
90.0	527.65	478.65	430.68	399.07	372.89	351.36	330.87	316.57	303.57
135.0	583.97	521.10	463.40	436.71	436.71	372.03	348.61	333.54	318.04
180.0	470.29	439.29	439.29	365.31	346.97	330.95	315.02	305.46	296.33
225.0	417.67	380.73	356.87	338.10	322.26	305.81	294.87	286.26	275.84
270.0	457.37	436.71	436.71	353.69	334.40	318.64	302.79	292.03	282.55
315.0	430.16	401.40	377.97	359.89	344.47	330.44	319.67	307.18	300.64
360.0	496.47	458.41	428.53	401.23	372.20	354.81	341.55	328.46	318.81

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	307.27	301.24	296.08	288.15	282.55	277.30	272.31	266.36	259.47
45.0	299.86	286.77	278.51	271.19	265.24	258.96	254.22	249.57	244.23
90.0	292.20	280.40	272.48	265.33	258.10	251.72	244.58	239.67	235.28
135.0	307.44	298.40	289.27	283.59	278.94	274.63	270.58	267.57	263.95
180.0	286.17	281.00	274.46	270.50	267.57	264.81	261.97	258.61	251.55
225.0	268.95	262.92	256.20	251.55	247.07	241.65	236.05	227.18	211.25
270.0	274.46	265.50	260.42	255.60	251.21	247.33	244.23	237.51	228.56
315.0	292.46	285.48	279.28	273.51	266.71	261.80	255.34	244.92	226.15
360.0	307.27	301.24	296.08	288.15	282.55	277.30	272.31	266.36	259.47

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	248.62	233.81	210.73	189.29	166.98	137.62	113.59	84.91	63.38
45.0	240.10	232.61	217.62	200.91	182.66	157.51	137.27	116.86	96.02
90.0	227.01	211.68	195.49	177.49	154.15	135.12	114.80	95.33	72.86
135.0	259.91	248.71	233.04	214.09	190.24	168.02	145.88	118.59	97.23
180.0	240.61	220.89	201.78	180.25	156.56	125.99	102.22	74.75	54.77
225.0	195.66	178.09	159.23	132.79	111.95	91.29	72.08	51.15	37.81
270.0	212.71	195.83	179.30	160.96	136.67	114.71	95.16	77.51	54.08
315.0	208.23	189.12	168.62	141.92	119.79	98.26	72.94	53.82	32.81
360.0	248.62	233.81	210.73	189.29	166.98	137.62	113.59	84.91	63.38

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	44.70	29.19	17.22	11.02	9.65	9.56	9.39	9.13	8.78
45.0	71.05	52.96	38.67	27.90	19.81	16.36	15.50	14.55	13.61
90.0	56.24	41.42	29.28	20.67	16.71	15.42	14.30	13.09	11.20
135.0	70.88	51.41	34.88	23.42	14.90	12.83	12.40	11.97	11.45
180.0	38.49	24.03	16.79	12.66	12.23	11.88	11.37	10.68	10.08
225.0	28.33	20.58	17.91	17.22	16.36	15.24	13.95	11.97	10.25
270.0	38.41	26.70	17.48	14.38	13.61	12.40	11.45	10.51	9.13
315.0	20.50	12.66	8.44	8.01	7.75	7.58	7.32	6.89	6.29
360.0	44.70	29.19	17.22	11.02	9.65	9.56	9.39	9.13	8.78
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.27	7.32	6.89	6.54	6.37	6.11	5.86	5.68	5.43
45.0	12.40	11.02	9.39	8.18	7.49	6.98	6.63	6.29	6.03
90.0	9.65	7.58	6.29	5.08	4.56	4.13	3.88	3.62	3.53
135.0	10.94	9.90	8.44	7.23	6.37	5.51	4.91	4.39	3.88
180.0	8.87	7.58	6.54	5.68	5.08	4.48	4.05	3.79	3.53
225.0	8.44	7.41	6.37	5.94	5.60	5.34	5.08	4.99	4.74
270.0	8.01	6.46	5.68	5.17	4.74	4.56	4.39	4.22	4.13
315.0	5.68	5.34	5.17	4.91	4.65	4.48	4.39	4.22	4.05
360.0	8.27	7.32	6.89	6.54	6.37	6.11	5.86	5.68	5.43
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	5.17	4.91	4.65	4.39	4.22	3.88	3.62	3.36	3.19
45.0	5.86	5.60	5.43	5.08	4.74	4.48	4.13	3.88	3.53
90.0	3.36	3.27	3.27	3.19	3.10	3.10	3.01	2.93	2.93
135.0	3.62	3.36	3.10	2.93	2.84	2.76	2.67	2.58	2.50
180.0	3.27	3.10	3.01	2.84	2.76	2.67	2.67	2.58	2.50
225.0	4.48	4.22	3.96	3.70	3.53	3.36	3.19	3.10	2.93
270.0	4.05	3.88	3.88	3.70	3.53	3.44	3.36	3.27	3.10
315.0	3.88	3.70	3.62	3.44	3.27	3.10	3.01	2.93	2.76
360.0	5.17	4.91	4.65	4.39	4.22	3.88	3.62	3.36	3.19
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	2.93	2.84	2.76	2.67	2.58	2.58	2.58	2.50	2.50
45.0	3.36	3.27	3.10	2.93	2.93	2.84	2.67	2.67	2.58
90.0	2.84	2.76	2.76	2.58	2.58	2.58	2.50	2.41	2.33
135.0	2.41	2.41	2.33	2.41	2.33	2.24	2.24	2.24	2.15
180.0	2.50	2.50	2.41	2.41	2.33	2.33	2.24	2.24	2.24
225.0	2.84	2.76	2.67	2.67	2.58	2.50	2.33	2.33	2.24
270.0	3.01	2.93	2.84	2.76	2.67	2.58	2.50	2.41	2.33
315.0	2.58	2.50	2.41	2.41	2.33	2.24	2.15	2.07	1.98
360.0	2.93	2.84	2.76	2.67	2.58	2.58	2.58	2.50	2.50
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.33	2.33	2.24	2.24	2.15	2.07	1.98	1.89	1.89
45.0	2.50	2.41	2.33	2.24	2.15	2.15	2.07	1.89	1.89
90.0	2.24	2.15	2.15	2.07	1.98	1.98	1.89	1.81	1.72
135.0	2.07	2.07	2.07	2.07	1.98	1.98	1.89	1.89	1.72
180.0	2.15	2.15	2.15	2.07	2.07	1.98	1.89	1.81	1.72
225.0	2.15	2.15	2.07	2.07	1.89	1.81	1.72	1.72	1.72
270.0	2.33	2.33	2.24	2.15	2.07	1.98	1.98	1.72	1.64
315.0	1.98	1.89	1.81	1.81	1.72	1.72	1.72	1.64	1.64
360.0	2.33	2.33	2.24	2.24	2.15	2.07	1.98	1.89	1.89

Intensity data(cd)

C/ γ (°)	90.0
0.0	1.72
45.0	1.72
90.0	1.72
135.0	1.64
180.0	1.72
225.0	1.64
270.0	1.64
315.0	1.64
360.0	1.72