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Nata

LumCAT: 2-1121-A4
Luminaire: TE 2213407-1+92.76.365.00
Report No: NT2017051302
Test No: GC2017051302
LampCAT: CXA2530
Lamp flux(lm): 1717.0
Number of Lamps: 1
Length(mm): 63
Phm Type: C

Voltage(V): 35.1000
Current(A): 0.5100
Power (W): 17.9010
PF: 0.0000
Ballast type: DC
Width(mm): 63
Height(mm): 0

Photometric Results

Lumens(lm): 1578.80
Efficiency(%): 91.95%
Lumens(lm)/Power(W): 88.20
Central intensity(cd): 4098.398
Maximum intensity(cd): 4098.398
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=31.2
 [C90/270]Total=31.2
Field angle(10%Imax): [C0/180]Total=69.5
 [C90/270]Total=69.5
Maximum s/h(1/2): C0_180=0.53 C90_270=0.53
Maximum s/h(1/4): C0_180=0.48 C90_270=0.48
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.95%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.414%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4098.398	0.000	0	.000%	.000%
1.0	4096.196	3.921	3.921	.228%	.248%
2.0	4088.075	11.747	15.668	.684%	.992%
3.0	4065.777	19.501	35.169	1.136%	2.228%
4.0	4034.946	27.116	62.285	1.579%	3.945%
5.0	3988.010	34.514	96.799	2.010%	6.131%
6.0	3930.476	41.614	138.413	2.424%	8.767%
7.0	3841.285	48.239	186.652	2.810%	11.822%
8.0	3745.349	54.296	240.948	3.162%	15.262%
9.0	3620.234	59.694	300.642	3.477%	19.042%
10.0	3450.247	63.985	364.628	3.727%	23.095%
11.0	3276.819	67.217	431.845	3.915%	27.353%
12.0	3064.577	69.321	501.165	4.037%	31.744%
13.0	2793.562	69.521	570.687	4.049%	36.147%
14.0	2517.179	67.977	638.664	3.959%	40.453%
15.0	2233.776	65.223	703.887	3.799%	44.584%
16.0	1920.367	60.870	764.757	3.545%	48.439%
17.0	1650.178	55.603	820.36	3.238%	51.961%
18.0	1381.241	49.982	870.341	2.911%	55.127%
19.0	1155.524	44.135	914.476	2.570%	57.922%
20.0	1014.400	39.716	954.191	2.313%	60.438%
21.0	894.212	36.649	990.841	2.134%	62.759%
22.0	805.324	34.153	1024.993	1.989%	64.922%
23.0	748.024	32.593	1057.587	1.898%	66.987%
24.0	708.438	31.843	1089.43	1.855%	69.004%
25.0	678.226	31.530	1120.96	1.836%	71.001%
26.0	657.552	31.531	1152.491	1.836%	72.998%
27.0	637.484	31.683	1184.175	1.845%	75.005%
28.0	620.761	31.856	1216.031	1.855%	77.023%
29.0	605.593	32.085	1248.116	1.869%	79.055%
30.0	588.842	32.250	1280.365	1.878%	81.098%
31.0	564.521	32.096	1312.462	1.869%	83.131%
32.0	532.395	31.425	1343.887	1.830%	85.121%
33.0	494.324	30.248	1374.134	1.762%	87.037%
34.0	444.925	28.424	1402.559	1.655%	88.837%
35.0	399.200	26.215	1428.774	1.527%	90.498%
36.0	347.213	23.766	1452.54	1.384%	92.003%
37.0	294.579	20.932	1473.472	1.219%	93.329%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	249.461	18.159	1491.631	1.058%	94.479%
39.0	201.204	15.382	1507.014	.896%	95.453%
40.0	148.639	12.201	1519.215	.711%	96.226%
41.0	107.277	9.113	1528.328	.531%	96.803%
42.0	70.458	6.457	1534.785	.376%	97.212%
43.0	40.535	4.112	1538.897	.239%	97.473%
44.0	24.280	2.446	1541.343	.142%	97.628%
45.0	16.778	1.578	1542.921	.092%	97.728%
46.0	13.709	1.192	1544.113	.069%	97.803%
47.0	11.369	0.997	1545.111	.058%	97.866%
48.0	9.607	0.848	1545.959	.049%	97.920%
49.0	8.203	0.731	1546.69	.043%	97.966%
50.0	7.667	0.662	1547.352	.039%	98.008%
51.0	7.543	0.643	1547.995	.037%	98.049%
52.0	7.433	0.643	1548.638	.037%	98.090%
53.0	7.295	0.641	1549.279	.037%	98.130%
54.0	7.185	0.638	1549.917	.037%	98.171%
55.0	7.089	0.637	1550.554	.037%	98.211%
56.0	7.047	0.639	1551.193	.037%	98.252%
57.0	6.992	0.642	1551.835	.037%	98.292%
58.0	6.896	0.642	1552.477	.037%	98.333%
59.0	6.827	0.642	1553.118	.037%	98.374%
60.0	6.744	0.641	1553.76	.037%	98.414%
61.0	6.676	0.640	1554.4	.037%	98.455%
62.0	6.634	0.641	1555.041	.037%	98.495%
63.0	6.579	0.643	1555.684	.037%	98.536%
64.0	6.607	0.647	1556.331	.038%	98.577%
65.0	6.855	0.666	1556.997	.039%	98.619%
66.0	7.212	0.702	1557.699	.041%	98.664%
67.0	7.295	0.729	1558.429	.042%	98.710%
68.0	7.570	0.753	1559.182	.044%	98.758%
69.0	7.832	0.786	1559.967	.046%	98.807%
70.0	8.038	0.815	1560.782	.047%	98.859%
71.0	8.644	0.862	1561.645	.050%	98.914%
72.0	9.236	0.930	1562.574	.054%	98.972%
73.0	9.607	0.985	1563.56	.057%	99.035%
74.0	9.814	1.021	1564.581	.059%	99.100%
75.0	9.951	1.044	1565.625	.061%	99.166%

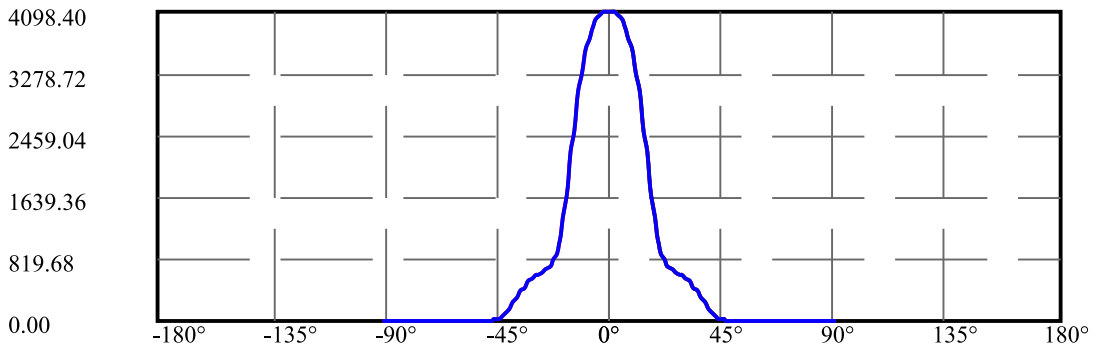
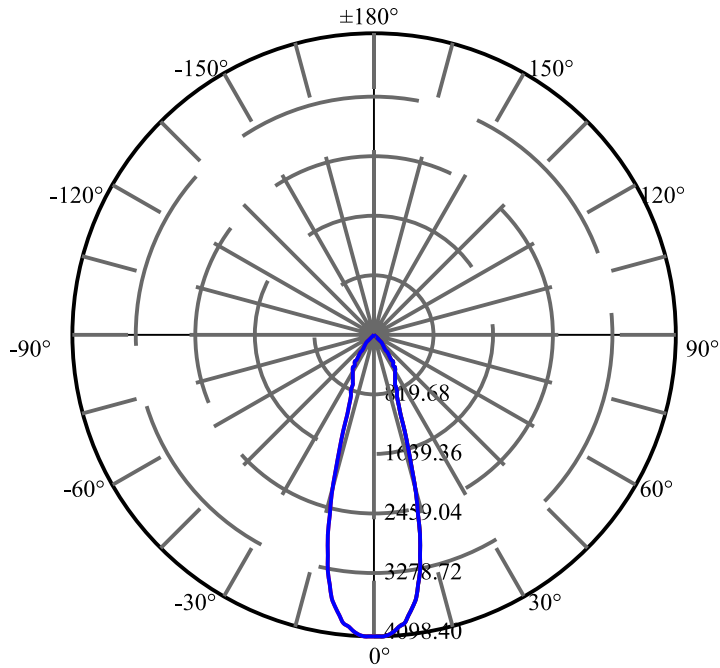
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	10.062	1.062	1566.687	.062%	99.233%
77.0	10.075	1.074	1567.761	.063%	99.301%
78.0	9.993	1.074	1568.835	.063%	99.369%
79.0	9.910	1.069	1569.905	.062%	99.437%
80.0	9.676	1.056	1570.961	.061%	99.504%
81.0	9.332	1.028	1571.988	.060%	99.569%
82.0	8.644	0.975	1572.963	.057%	99.631%
83.0	7.832	0.896	1573.859	.052%	99.687%
84.0	7.102	0.814	1574.672	.047%	99.739%
85.0	6.689	0.753	1575.425	.044%	99.786%
86.0	6.331	0.712	1576.137	.041%	99.832%
87.0	6.166	0.684	1576.821	.040%	99.875%
88.0	6.029	0.668	1577.489	.039%	99.917%
89.0	5.946	0.656	1578.145	.038%	99.959%
90.0	5.932	0.651	1578.797	.038%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1280.37	74.57%	81.10%
0-40	1519.21	88.48%	96.23%
0-60	1553.76	90.49%	98.41%
0-90	1578.15	91.91%	99.96%
0-120	1578.15	91.91%	99.96%
0-180	1578.80	91.95%	100.00%
60-90	25.03	1.46%	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%
0-29.46	1263.04	73.56%	80.00%

ZONAL LUMEN SUMMARY

0-10	364.63
10-20	589.56
20-30	326.17
30-40	238.85
40-50	28.14
50-60	6.41
60-70	7.02
70-80	10.18
80-90	7.18
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



C0(Max): —————

C0/C180: —————

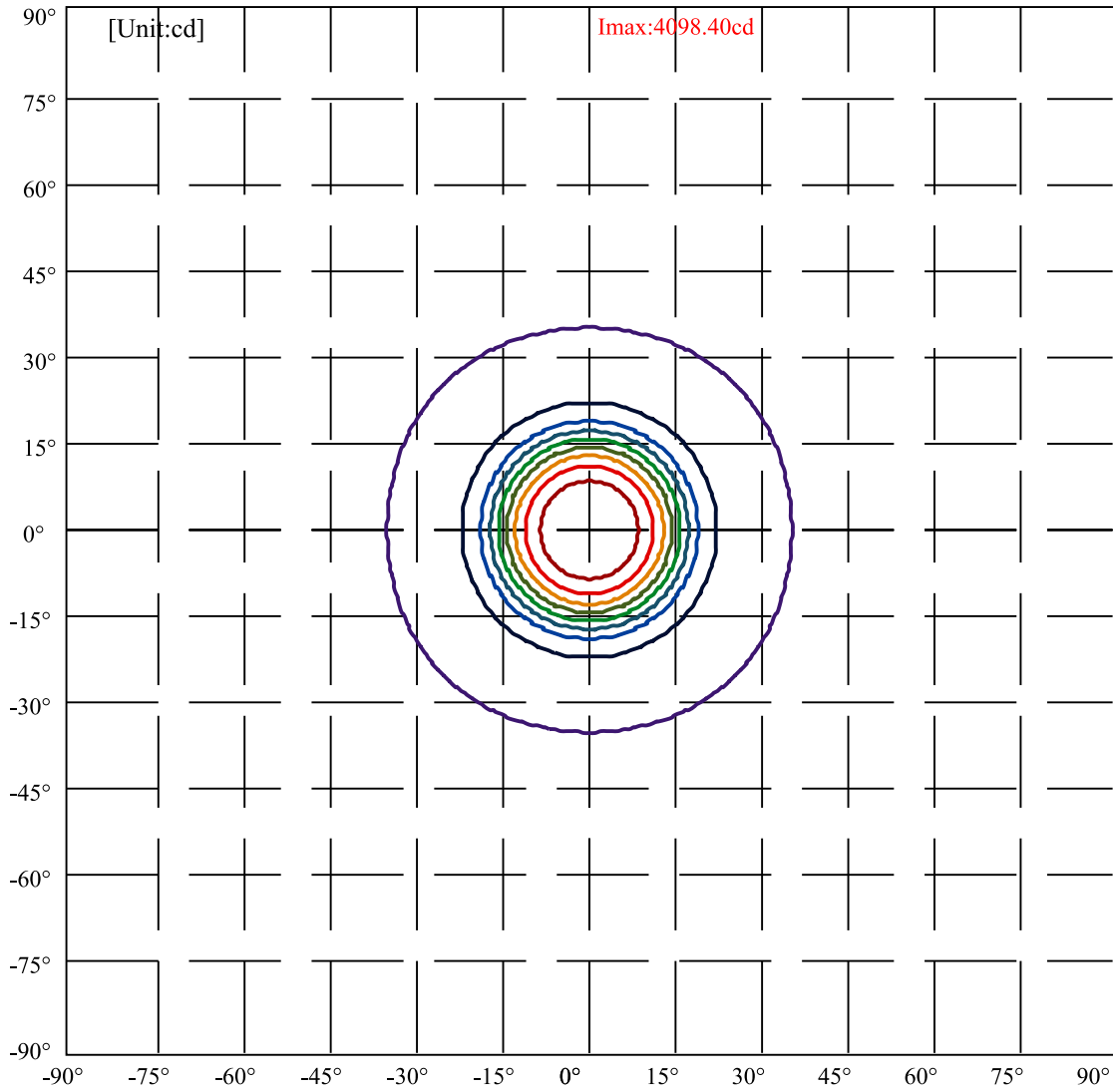
C90/C270: —————

Field angle(10%Imax):C0/180Left:34.8 Right:34.8

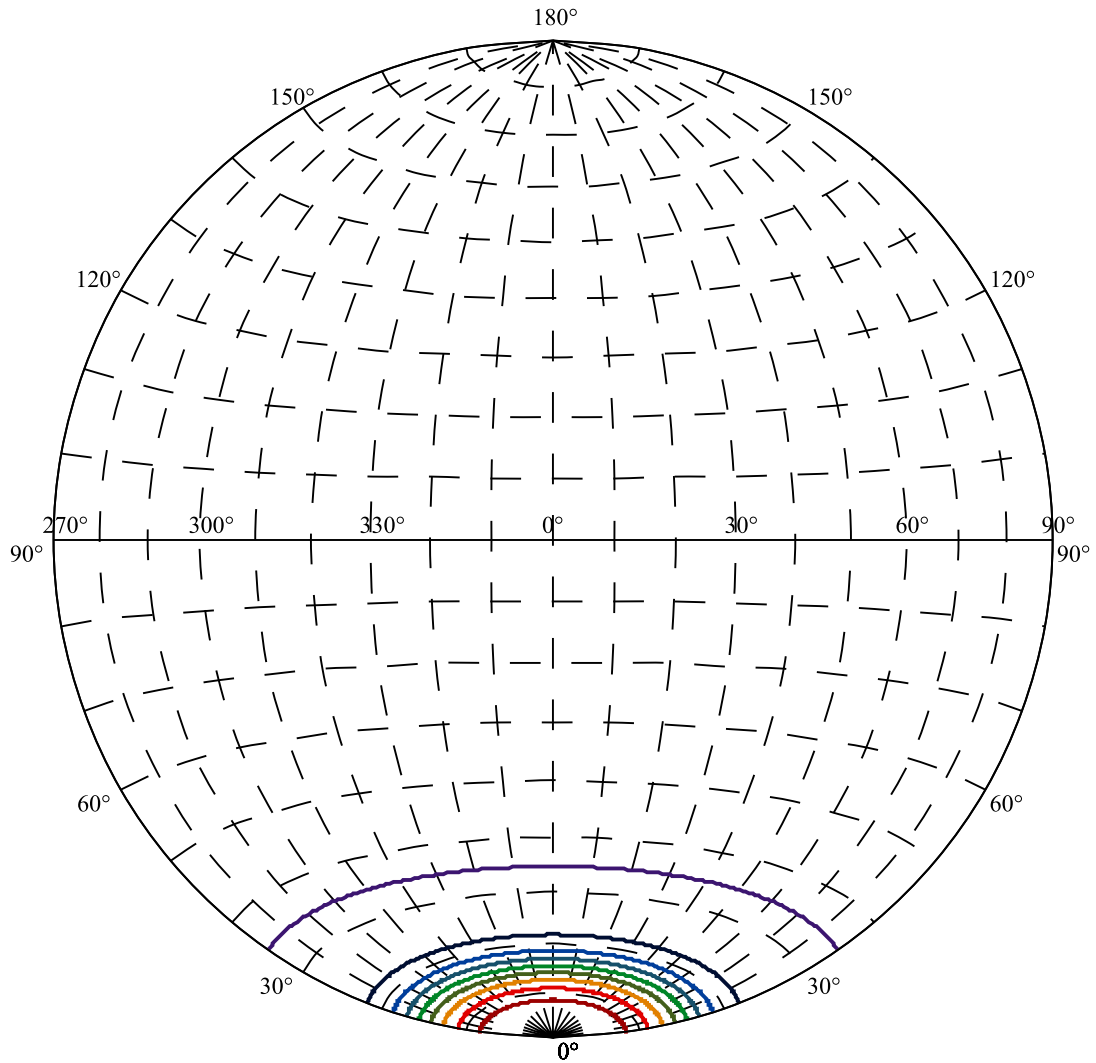
:C90/270Left:34.8 Right:34.8

Beam Angle(50%Imax):C0/180Left:15.6 Right:15.6

:C90/270Left:15.6 Right:15.6



(10%Imax)	409.84	—
(20%Imax)	819.68	—
(30%Imax)	1229.52	—
(40%Imax)	1639.36	—
(50%Imax)	2049.2	—
(60%Imax)	2459.04	—
(70%Imax)	2868.88	—
(80%Imax)	3278.72	—
(90%Imax)	3688.56	—



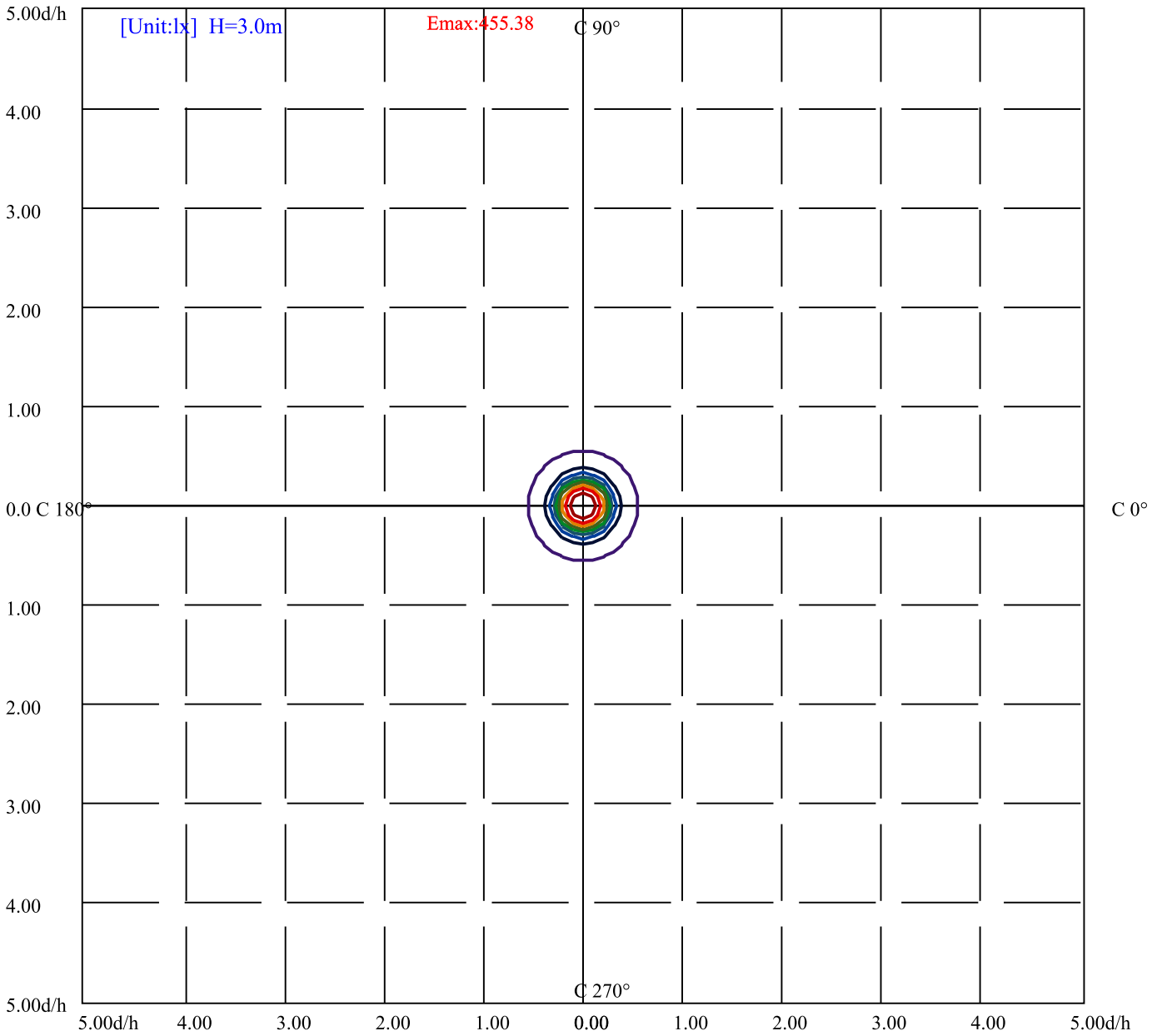
House

[Unit:cd]

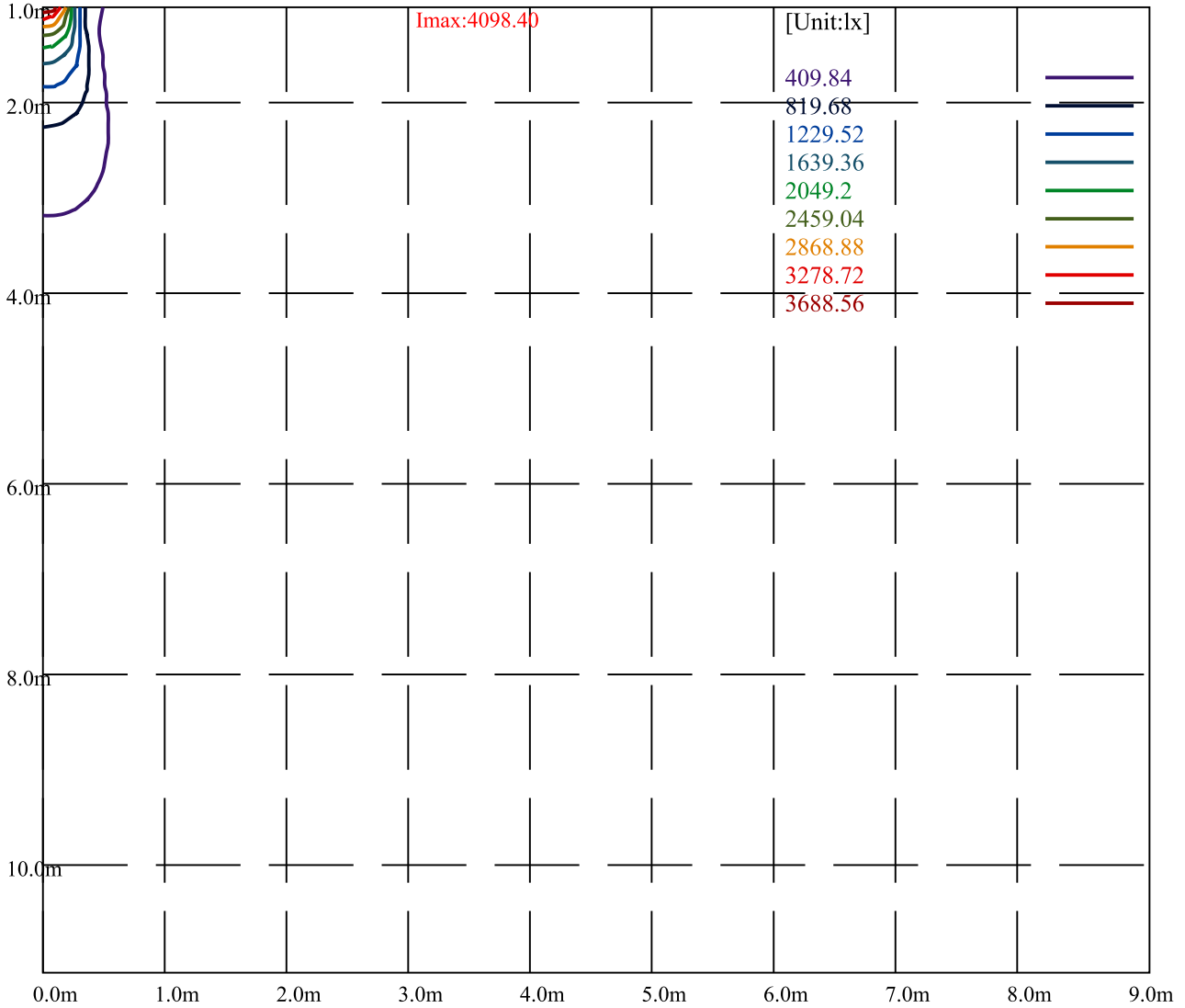
Road

Imax:4098.40

(10%Imax) 409.84	—
(20%Imax) 819.68	—
(30%Imax) 1229.52	—
(40%Imax) 1639.36	—
(50%Imax) 2049.2	—
(60%Imax) 2459.04	—
(70%Imax) 2868.88	—
(80%Imax) 3278.72	—
(90%Imax) 3688.56	—



(10%Emax) 45.53778	—
(20%Emax) 91.07555	—
(30%Emax) 136.6133	—
(40%Emax) 182.1511	—
(50%Emax) 227.6889	—
(60%Emax) 273.2267	—
(70%Emax) 318.7644	—
(80%Emax) 364.3022	—
(90%Emax) 409.84	—



Luminance Table

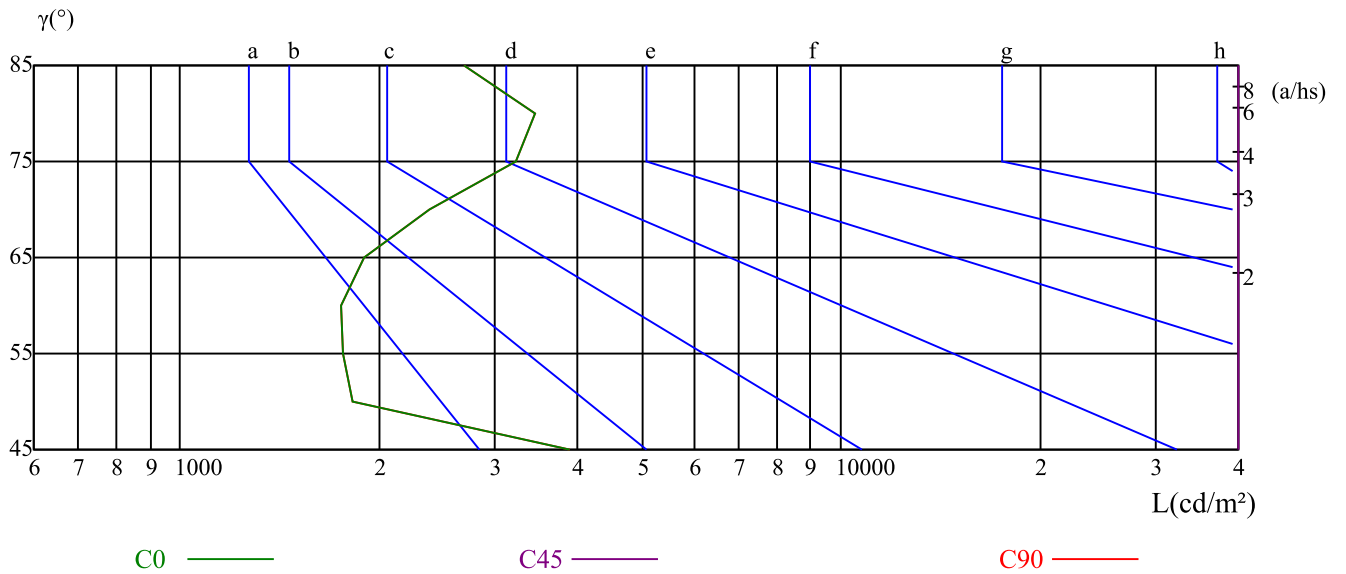
γ	45	50	55	60	65	70	75	80	85
C0	3883	1829	1758	1757	1894	2385	3214	3457	2698
C45	70646	53820	51409	51059	52039	53939	58223	60479	66473
C90	3883	1829	1758	1757	1894	2385	3214	3457	2698

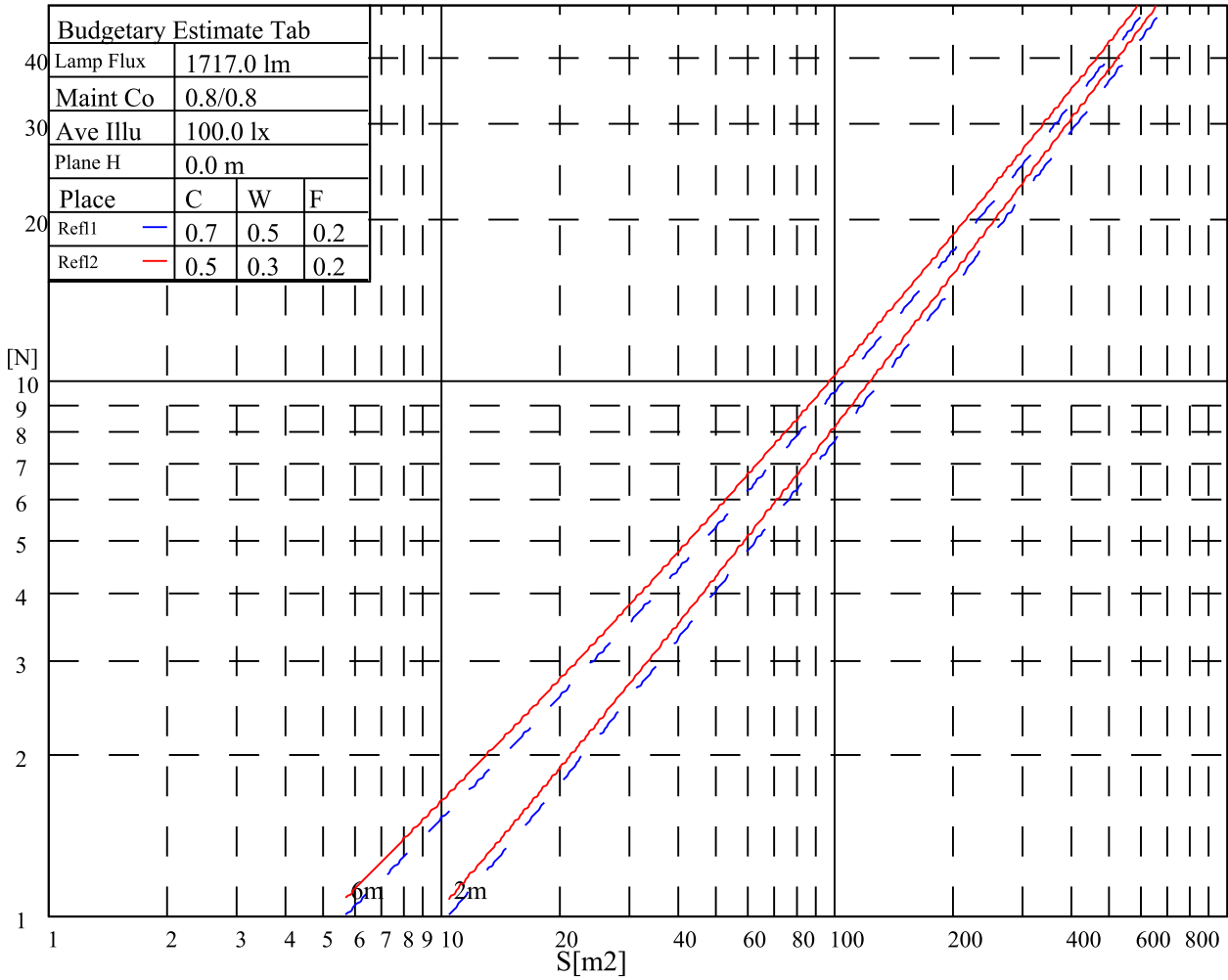
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4086	4086	137213	9687	9687	224064	19338	19338	646364

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	COEFFICIENTS OF UTILIZATION RHOF=20 CU															
0	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.99	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.89	0.87
2	0.96	0.93	0.90	0.95	0.92	0.89	0.92	0.89	0.87	0.89	0.87	0.86	0.87	0.85	0.84	0.82
3	0.91	0.87	0.84	0.90	0.86	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.78
4	0.86	0.82	0.79	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.76	0.74
5	0.82	0.78	0.74	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.72	0.71
6	0.78	0.74	0.70	0.78	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
7	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.65
8	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.69	0.65	0.63	0.62
9	0.69	0.64	0.61	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.60	0.59
10	0.66	0.62	0.59	0.66	0.61	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.57

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	4099.50	4094.54	4084.08	4061.51	4020.77	3962.96	3901.30	3811.00	3713.55
90.0	4097.30	4097.85	4098.40	4101.70	4093.44	4075.27	4048.85	3986.63	3919.47
180.0	4099.50	4103.90	4102.80	4087.39	4061.51	4016.91	3953.60	3871.57	3777.42
270.0	4097.30	4088.49	4067.02	4012.51	3964.06	3896.89	3818.16	3695.94	3570.96
360.0	4099.50	4094.54	4084.08	4061.51	4020.77	3962.96	3901.30	3811.00	3713.55
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3579.22	3415.15	3239.52	3031.41	2734.10	2464.88	2181.89	1859.81	1561.95
90.0	3834.13	3695.94	3558.30	3388.72	3135.46	2897.62	2634.45	2280.99	1991.94
180.0	3641.98	3479.56	3308.89	3078.75	2840.91	2547.46	2237.49	1955.05	1685.83
270.0	3425.61	3210.34	3000.57	2759.43	2463.77	2158.76	1881.28	1585.62	1360.99
360.0	3579.22	3415.15	3239.52	3031.41	2734.10	2464.88	2181.89	1859.81	1561.95
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1333.47	1121.50	959.08	857.23	779.05	726.19	693.71	667.28	648.56
90.0	1712.25	1425.41	1183.71	1032.31	888.06	800.52	747.12	704.17	677.74
180.0	1385.77	1083.29	1030.05	887.18	811.37	758.35	712.65	685.89	664.59
270.0	1093.48	991.90	884.76	800.13	742.82	707.03	680.28	655.56	639.31
360.0	1333.47	1121.50	959.08	857.23	779.05	726.19	693.71	667.28	648.56
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	629.85	613.33	599.56	585.80	558.82	526.89	488.35	433.84	387.60
90.0	653.52	634.80	620.49	606.72	588.00	568.18	540.65	491.65	449.26
180.0	642.89	628.96	610.47	591.97	576.00	543.96	501.95	461.10	416.01
270.0	623.68	605.95	591.86	570.88	535.26	490.55	446.34	393.10	343.94
360.0	629.85	613.33	599.56	585.80	558.82	526.89	488.35	433.84	387.60
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	338.60	284.09	246.54	179.32	141.27	93.87	57.15	32.21	18.72
90.0	404.66	349.61	298.96	280.24	196.06	153.39	106.70	68.16	40.03
180.0	356.99	310.13	264.44	206.90	162.36	120.24	82.64	44.38	24.94
270.0	288.61	234.49	187.91	138.36	94.86	61.61	35.35	17.40	13.43
360.0	338.60	284.09	246.54	179.32	141.27	93.87	57.15	32.21	18.72
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	14.92	12.72	10.35	8.48	7.71	7.54	7.38	7.27	7.16
90.0	22.63	17.56	15.09	12.72	9.63	7.98	7.87	7.76	7.60
180.0	17.89	14.76	11.95	9.47	7.93	7.71	7.60	7.43	7.27
270.0	11.67	9.80	8.09	7.76	7.54	7.43	7.32	7.27	7.16
360.0	14.92	12.72	10.35	8.48	7.71	7.54	7.38	7.27	7.16
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	7.05	6.99	6.94	6.88	6.83	6.72	6.61	6.61	6.55
90.0	7.38	7.27	7.21	7.16	7.05	6.99	6.88	6.77	6.77
180.0	7.21	7.10	7.05	6.99	6.83	6.77	6.72	6.66	6.61
270.0	7.10	6.99	6.99	6.94	6.88	6.83	6.77	6.66	6.61
360.0	7.05	6.99	6.94	6.88	6.83	6.72	6.61	6.61	6.55
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	6.50	6.55	6.72	7.21	7.60	7.98	8.31	8.53	8.81
90.0	6.66	6.61	6.66	6.88	7.49	7.93	8.31	8.81	9.36
180.0	6.55	6.55	6.66	6.99	7.43	7.82	8.15	8.48	8.64
270.0	6.61	6.72	7.38	7.76	6.66	6.55	6.55	6.33	7.76
360.0	6.50	6.55	6.72	7.21	7.60	7.98	8.31	8.53	8.81

Nata 2-1121-A4

Intensity data(cd)

C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.92	9.03	9.14	9.03	8.97	8.81	8.64	8.37	8.09
90.0	9.97	10.57	10.96	11.29	11.40	11.40	11.40	11.34	11.12
180.0	8.97	9.36	9.58	9.74	10.08	10.24	10.24	10.30	10.13
270.0	9.08	9.47	9.58	9.74	9.80	9.86	9.69	9.63	9.36
360.0	8.92	9.03	9.14	9.03	8.97	8.81	8.64	8.37	8.09
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.54	7.27	6.88	6.55	6.39	6.28	6.00	6.00	5.95
90.0	10.85	10.08	9.19	8.37	7.60	6.61	6.44	6.17	5.95
180.0	10.02	9.47	8.37	7.10	6.50	6.39	6.28	6.00	5.95
270.0	8.92	7.76	6.88	6.39	6.28	6.06	5.95	5.95	5.95
360.0	7.54	7.27	6.88	6.55	6.39	6.28	6.00	6.00	5.95
C/ γ (°)	90.0								
0.0	5.95								
90.0	5.95								
180.0	5.89								
270.0	5.95								
360.0	5.95								