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Nata

LumCAT: 1-0924-M
Luminaire: 92.70.123.00

Report No: 200406-B028	Voltage(V): 220.4000
Test No: 200406-C028	Current(A): 0.0420
LampCAT: LUMINUS CXM-6-AC40	Power (W): 8.4900
Lamp flux(lm): 808.0	PF: 0.8990
Number of Lamps: 1	Ballast type: AC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 591.92
Efficiency(%): 73.26%
Lumens(lm)/Power(W): 69.72
Central intensity(cd): 1720.218
Maximum intensity(cd): 1720.218
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=35.9
[C90/270]Total=35.9
Field angle(10%Imax): [C0/180]Total=54.1
[C90/270]Total=54.1
Maximum s/h(1/2): C0_180=0.59 C90_270=0.59
Maximum s/h(1/4): C0_180=0.56 C90_270=0.56
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 73.26%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.415%

Equipment: GMS 1800	Date: 2020/4/6	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 6.81

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1720.218	0.000	0	.000%	.000%
1.0	1717.144	1.645	1.645	.204%	.278%
2.0	1708.270	4.916	6.561	.608%	1.108%
3.0	1690.926	8.130	14.691	1.006%	2.482%
4.0	1670.219	11.251	25.942	1.392%	4.383%
5.0	1644.233	14.259	40.2	1.765%	6.792%
6.0	1613.723	17.121	57.322	2.119%	9.684%
7.0	1574.454	19.789	77.111	2.449%	13.027%
8.0	1534.489	22.250	99.361	2.754%	16.786%
9.0	1487.796	24.494	123.855	3.031%	20.924%
10.0	1433.678	26.438	150.293	3.272%	25.391%
11.0	1383.562	28.150	178.443	3.484%	30.146%
12.0	1320.048	29.554	207.997	3.658%	35.139%
13.0	1253.459	30.541	238.538	3.780%	40.299%
14.0	1169.991	31.020	269.558	3.839%	45.540%
15.0	1101.180	31.180	300.738	3.859%	50.807%
16.0	1003.066	30.833	331.571	3.816%	56.016%
17.0	924.343	30.015	361.586	3.715%	61.087%
18.0	857.696	29.382	390.968	3.636%	66.051%
19.0	770.313	28.324	419.292	3.505%	70.836%
20.0	681.590	26.574	445.866	3.289%	75.325%
21.0	594.491	24.503	470.369	3.033%	79.465%
22.0	509.468	22.185	492.554	2.746%	83.213%
23.0	431.876	19.752	512.306	2.445%	86.550%
24.0	348.628	17.065	529.37	2.112%	89.433%
25.0	284.777	14.402	543.773	1.782%	91.866%
26.0	235.143	12.273	556.045	1.519%	93.939%
27.0	175.451	10.045	566.091	1.243%	95.636%
28.0	111.496	7.265	573.356	.899%	96.863%
29.0	79.646	5.001	578.356	.619%	97.708%
30.0	37.523	3.164	581.52	.392%	98.243%
31.0	20.423	1.613	583.132	.200%	98.515%
32.0	10.284	0.880	584.012	.109%	98.664%
33.0	5.853	0.475	584.488	.059%	98.744%
34.0	4.049	0.300	584.787	.037%	98.795%
35.0	3.393	0.231	585.018	.029%	98.834%
36.0	3.016	0.204	585.222	.025%	98.868%
37.0	2.703	0.187	585.409	.023%	98.900%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	2.512	0.174	585.583	.022%	98.929%
39.0	2.343	0.166	585.749	.021%	98.957%
40.0	2.239	0.160	585.909	.020%	98.984%
41.0	2.088	0.154	586.063	.019%	99.010%
42.0	1.955	0.147	586.209	.018%	99.035%
43.0	1.903	0.143	586.352	.018%	99.059%
44.0	1.821	0.141	586.493	.017%	99.083%
45.0	1.746	0.137	586.63	.017%	99.106%
46.0	1.665	0.133	586.763	.017%	99.129%
47.0	1.624	0.131	586.894	.016%	99.151%
48.0	1.572	0.129	587.023	.016%	99.173%
49.0	1.520	0.127	587.15	.016%	99.194%
50.0	1.485	0.125	587.276	.016%	99.215%
51.0	1.439	0.124	587.399	.015%	99.236%
52.0	1.398	0.122	587.521	.015%	99.257%
53.0	1.369	0.120	587.641	.015%	99.277%
54.0	1.346	0.120	587.761	.015%	99.297%
55.0	1.305	0.118	587.879	.015%	99.317%
56.0	1.293	0.117	587.997	.015%	99.337%
57.0	1.270	0.117	588.114	.015%	99.357%
58.0	1.235	0.116	588.23	.014%	99.376%
59.0	1.230	0.115	588.345	.014%	99.396%
60.0	1.201	0.115	588.46	.014%	99.415%
61.0	1.172	0.113	588.573	.014%	99.434%
62.0	1.172	0.113	588.686	.014%	99.453%
63.0	1.160	0.113	588.799	.014%	99.473%
64.0	1.160	0.114	588.913	.014%	99.492%
65.0	1.131	0.113	589.027	.014%	99.511%
66.0	1.119	0.112	589.139	.014%	99.530%
67.0	1.125	0.113	589.252	.014%	99.549%
68.0	1.131	0.114	589.366	.014%	99.568%
69.0	1.108	0.114	589.48	.014%	99.588%
70.0	1.096	0.113	589.594	.014%	99.607%
71.0	1.102	0.114	589.707	.014%	99.626%
72.0	1.096	0.114	589.822	.014%	99.645%
73.0	1.085	0.114	589.936	.014%	99.665%
74.0	1.085	0.114	590.05	.014%	99.684%
75.0	1.079	0.114	590.164	.014%	99.703%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	1.085	0.115	590.279	.014%	99.722%
77.0	1.079	0.115	590.394	.014%	99.742%
78.0	1.061	0.115	590.509	.014%	99.761%
79.0	1.079	0.115	590.624	.014%	99.781%
80.0	1.079	0.116	590.74	.014%	99.800%
81.0	1.044	0.115	590.855	.014%	99.820%
82.0	1.073	0.115	590.97	.014%	99.839%
83.0	1.073	0.117	591.086	.014%	99.859%
84.0	1.056	0.116	591.202	.014%	99.879%
85.0	1.073	0.116	591.319	.014%	99.898%
86.0	1.079	0.118	591.436	.015%	99.918%
87.0	1.108	0.120	591.556	.015%	99.938%
88.0	1.102	0.121	591.677	.015%	99.959%
89.0	1.119	0.122	591.799	.015%	99.979%
90.0	1.119	0.123	591.921	.015%	100.000%

Zonal flux distribution table

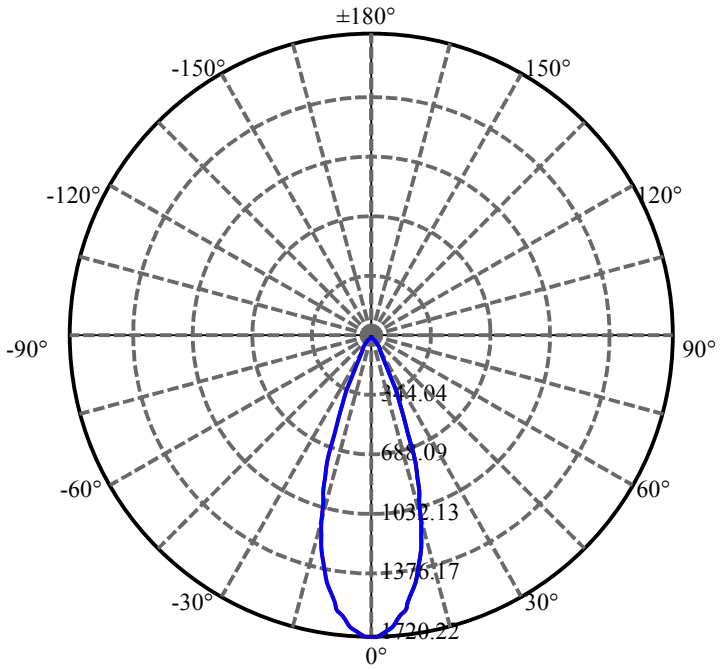
ZONAL LUMEN SUMMARY

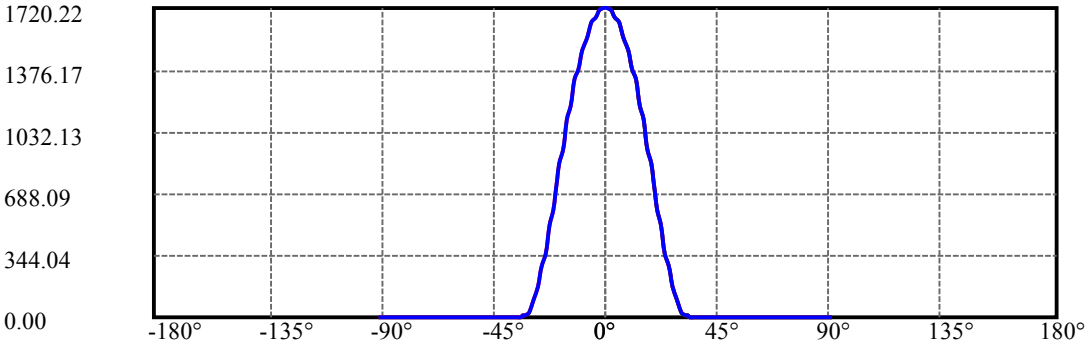
Zone	Lumens	%Lamp	%Fixt
0-30	581.52	71.97%	98.24%
0-40	585.91	72.51%	98.98%
0-60	588.46	72.83%	99.42%
0-90	591.80	73.24%	99.98%
0-120	591.80	73.24%	99.98%
0-180	591.92	73.26%	100.00%
60-90	3.45	0.43%	0.58%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-21.14	473.54	58.61%	80.00%

ZONAL LUMEN SUMMARY

0-10	150.29
10-20	295.57
20-30	135.65
30-40	4.39
40-50	1.37
50-60	1.18
60-70	1.13
70-80	1.15
80-90	1.06
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

Light Distribution Curve [Unit:cd]





C0(Max):

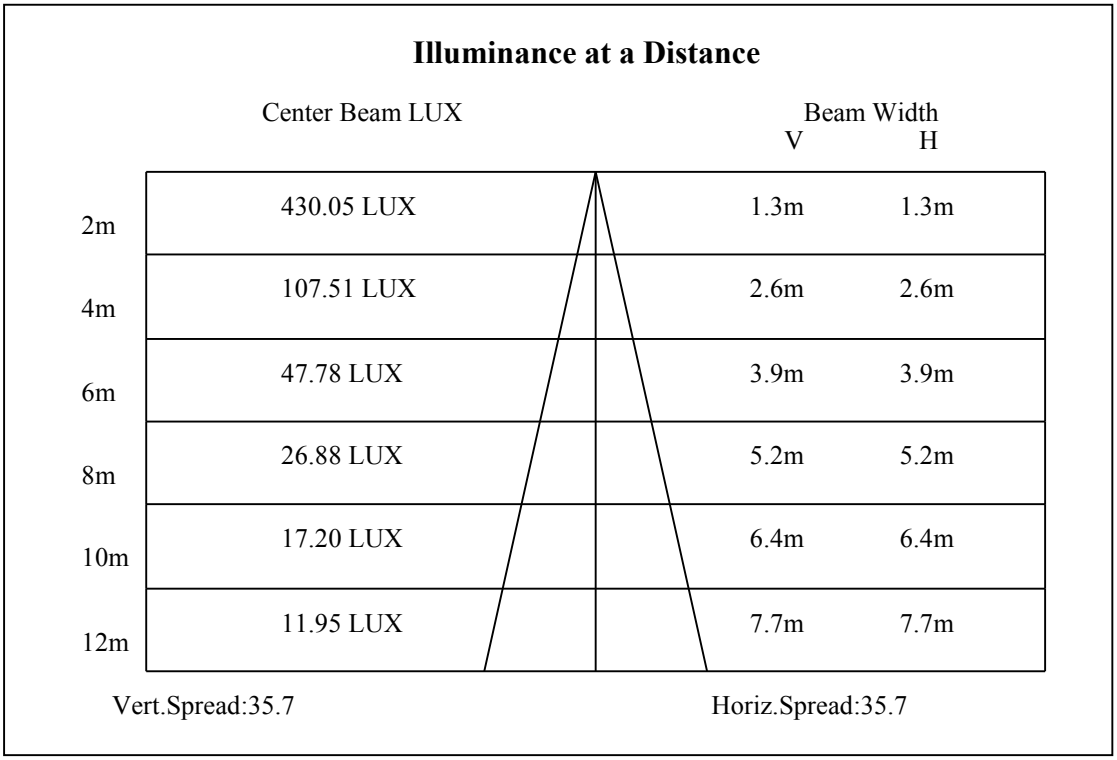
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:27.1 Right:27.1
:C90/270Left:27.1 Right:27.1

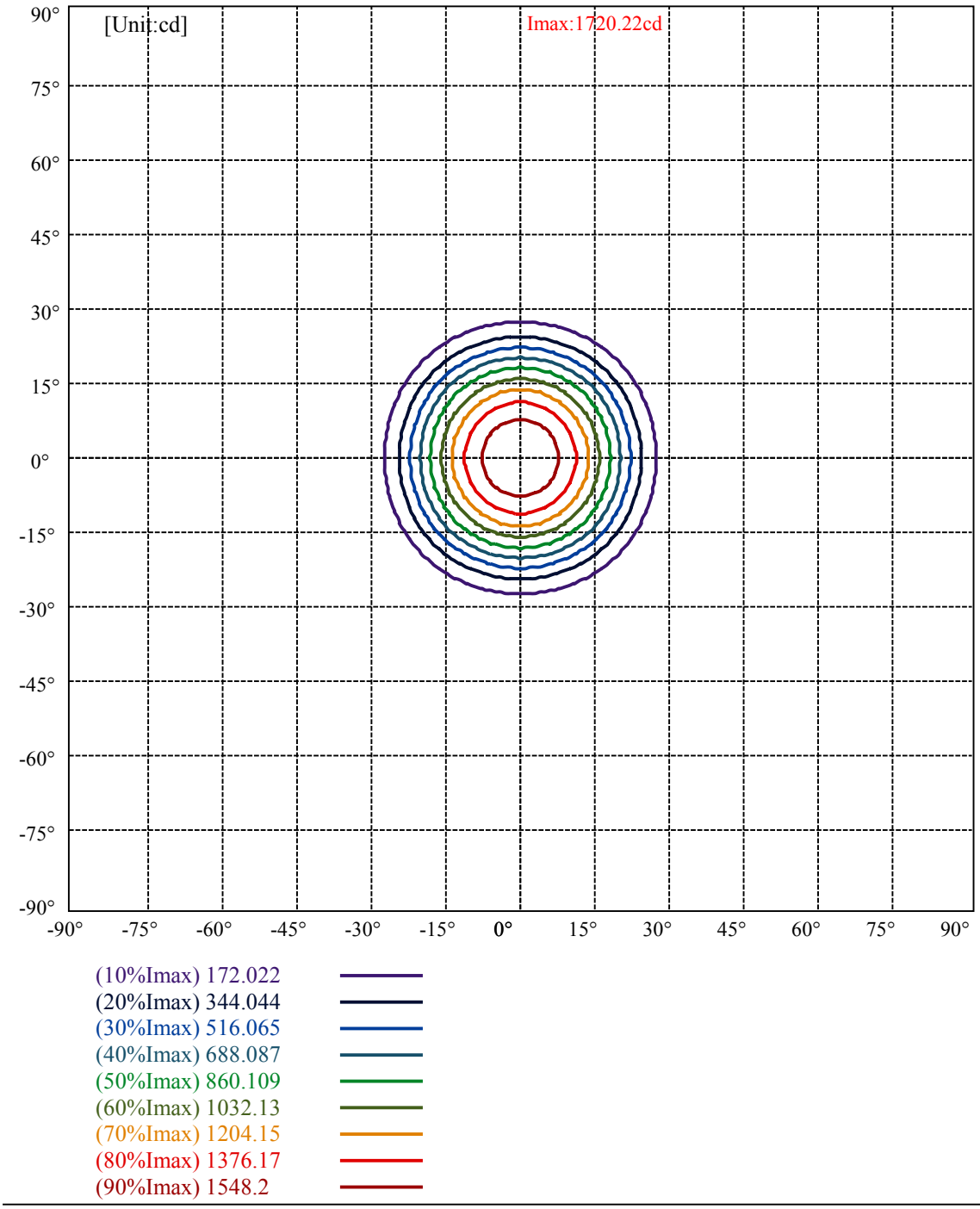
Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0
:C90/270Left:18.0 Right:18.0

Lux distance Curve



Equipment: GMS 1800 Date: 2020/4/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

ISO-Intensity(V-H)

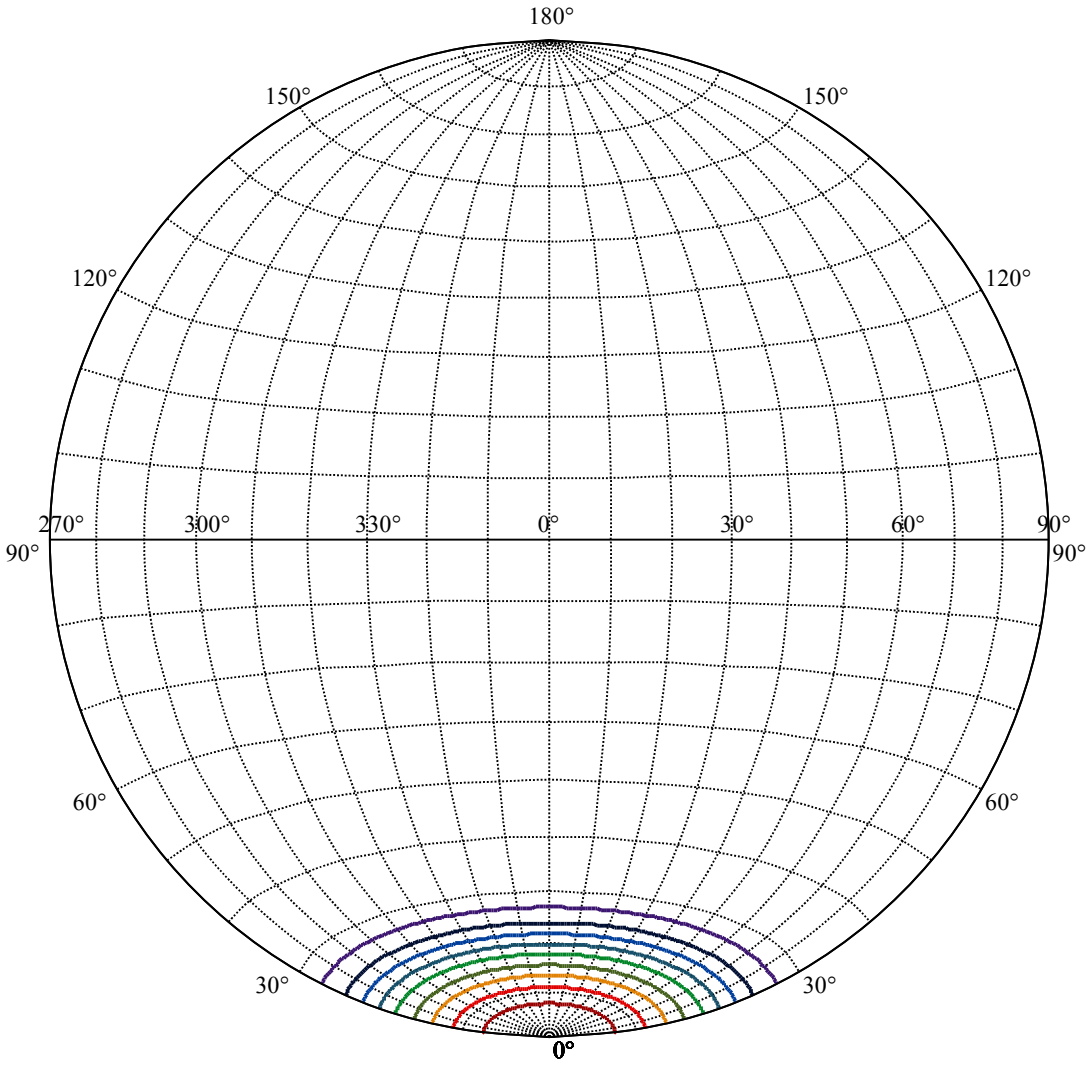


Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

ISO candela diagram on circular web



House [Unit:cd] Road

Imax:1720.22

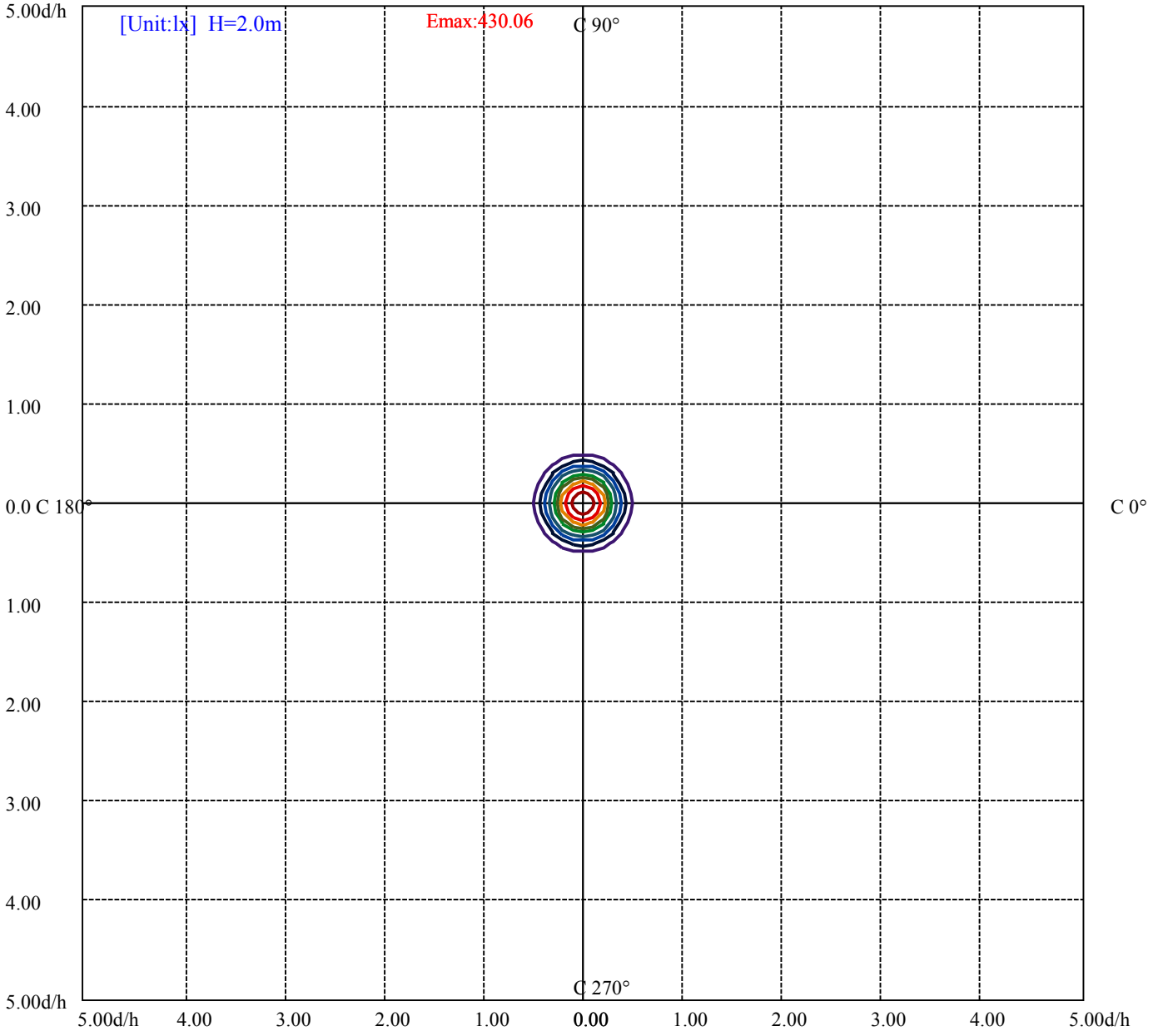
(10%Imax) 172.022
(20%Imax) 344.044
(30%Imax) 516.065
(40%Imax) 688.087
(50%Imax) 860.109
(60%Imax) 1032.13
(70%Imax) 1204.15
(80%Imax) 1376.17
(90%Imax) 1548.2

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 60.0%

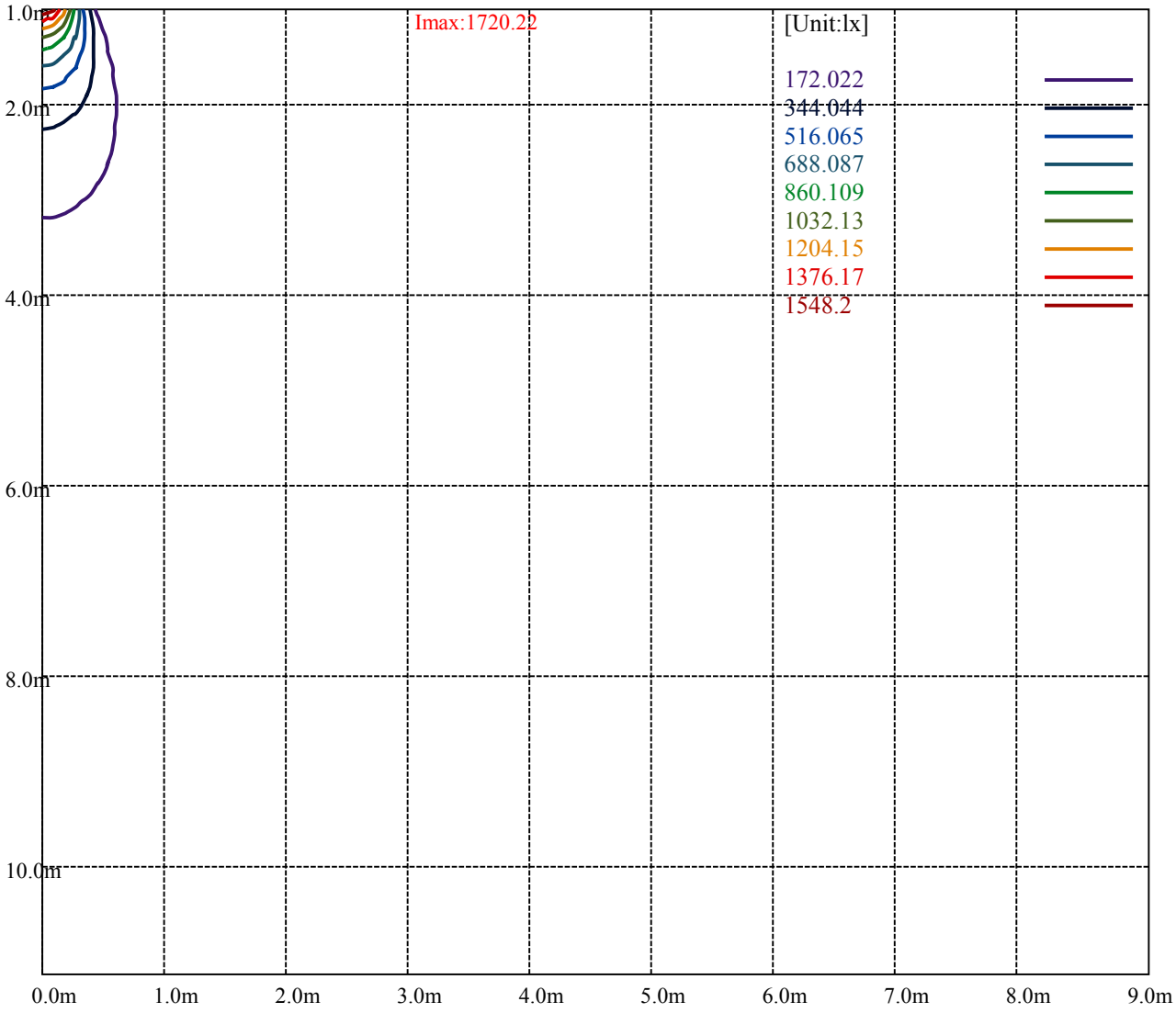
Operator: NT07
Distance(m): 6.81

ISO illuminance diagram



Equipment: GMS 1800	Date: 2020/4/6	Operator: NT07
Temperature(°C): 25.0	Humidity(%): 60.0%	Distance(m): 6.81

Space ISO Lux diagram



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

Luminance Limitting Curve(no luminous side)

Luminance Table

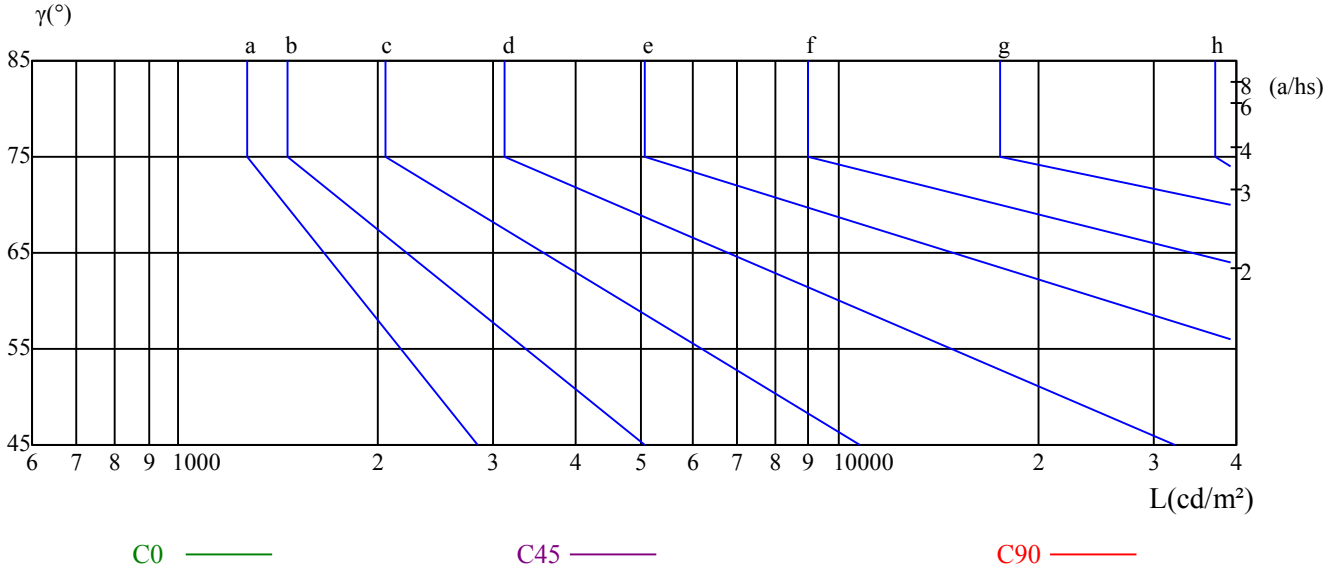
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

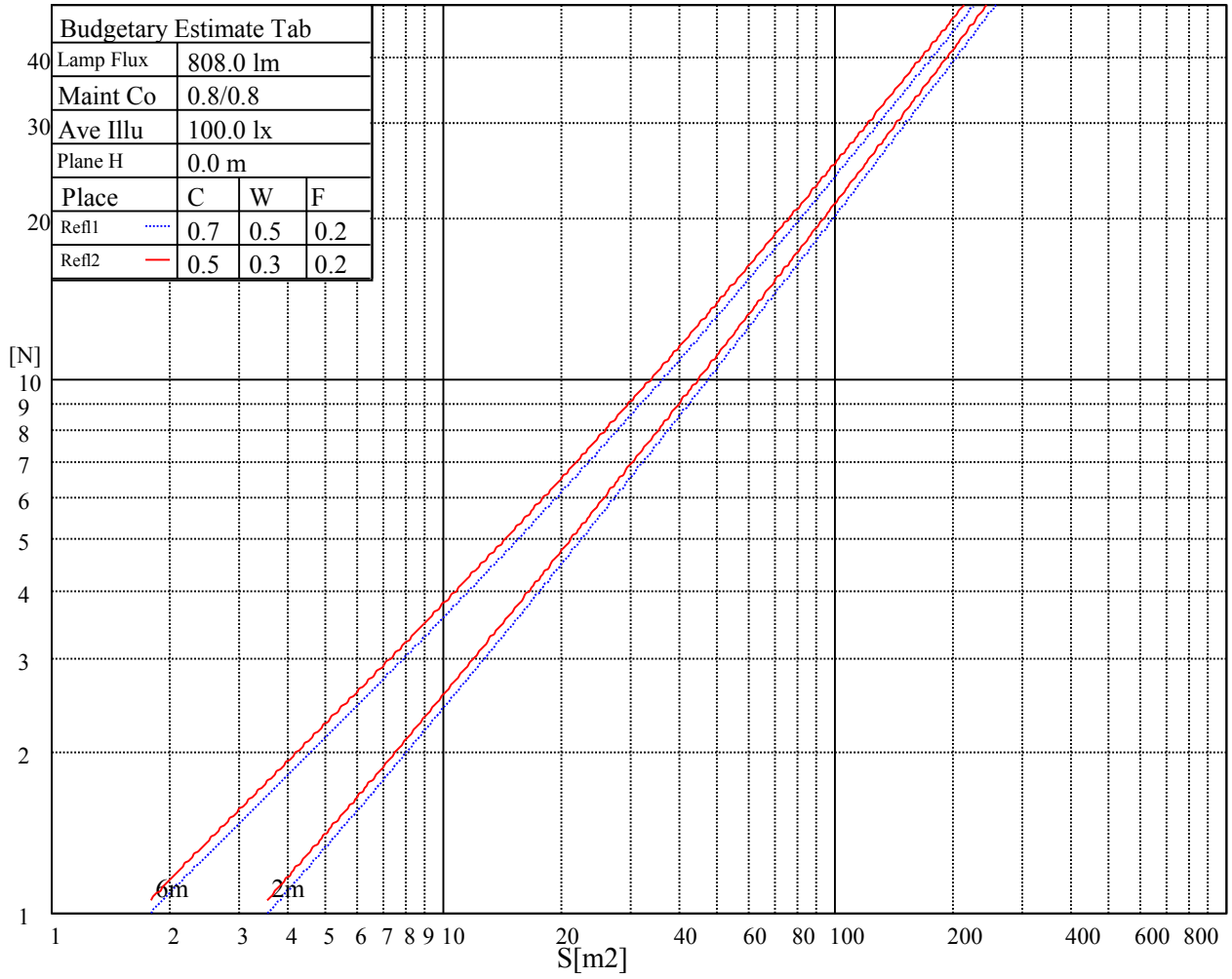
Glare Table

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 Limitting Curve



Budgetary Estimate Table

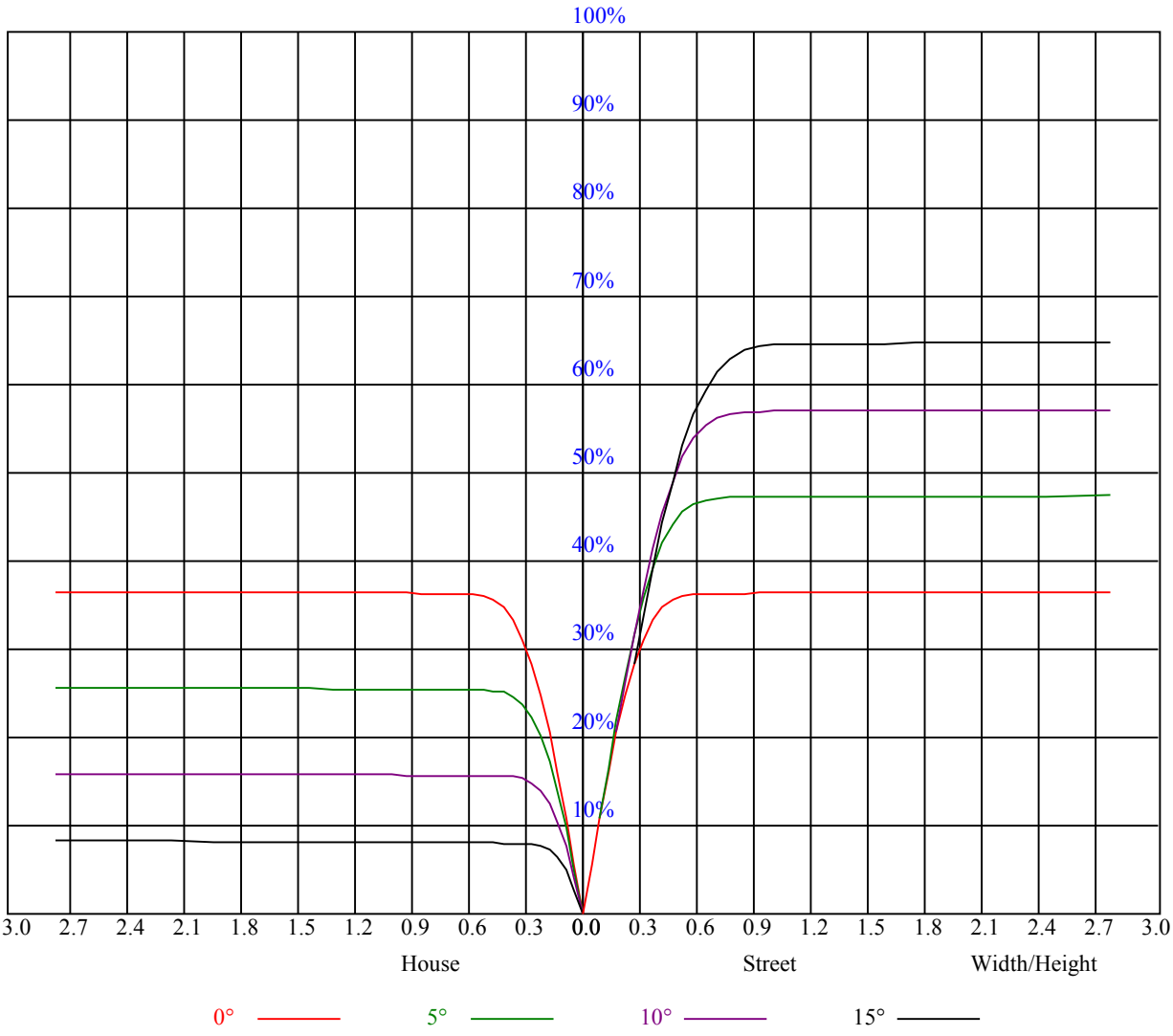


Equipment: GMS 1800 Date: 2020/4/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 6.81

Utilization factor table for indoor luminaire

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	0.87	0.87	0.87	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.75	0.75	0.75	0.73
1	0.82	0.81	0.80	0.81	0.80	0.78	0.78	0.77	0.76	0.75	0.74	0.74	0.73	0.72	0.72	0.70
2	0.78	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.73	0.71	0.70	0.71	0.70	0.69	0.68
3	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.70	0.69	0.67	0.69	0.67	0.66	0.65
4	0.72	0.69	0.66	0.71	0.68	0.66	0.69	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.64	0.63
5	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.61	0.61
6	0.66	0.63	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.60	0.63	0.61	0.59	0.58
7	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.62	0.59	0.57	0.61	0.59	0.57	0.56
8	0.61	0.58	0.56	0.61	0.58	0.56	0.60	0.58	0.56	0.60	0.57	0.56	0.59	0.57	0.55	0.55
9	0.59	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.58	0.55	0.54	0.57	0.55	0.54	0.53
10	0.58	0.54	0.52	0.57	0.54	0.52	0.57	0.54	0.52	0.56	0.54	0.52	0.56	0.54	0.52	0.51

Coefficient Utilization Curve



Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/4/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 6.81

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	1722.07	1718.83	1709.08	1692.84	1671.96	1643.65	1611.17	1573.12	1531.36
45.0	1720.68	1718.83	1713.72	1693.77	1681.70	1656.65	1624.63	1589.36	1548.06
90.0	1714.65	1701.19	1680.31	1654.79	1623.24	1587.04	1545.28	1498.41	1446.44
135.0	1723.47	1716.04	1702.12	1682.17	1656.18	1625.56	1603.75	1546.67	1519.29
180.0	1722.07	1718.83	1713.26	1690.98	1667.78	1651.54	1620.45	1584.26	1542.49
225.0	1720.68	1716.51	1704.91	1687.74	1664.53	1635.76	1602.35	1563.38	1520.22
270.0	1714.65	1722.54	1723.47	1718.83	1708.62	1690.52	1667.78	1639.94	1606.53
315.0	1723.47	1724.39	1719.29	1706.30	1687.74	1663.14	1634.37	1600.50	1561.52
360.0	1722.07	1718.83	1709.08	1692.84	1671.96	1643.65	1611.17	1573.12	1531.36

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	1484.49	1432.98	1377.76	1316.97	1250.15	1177.30	1100.27	901.52	901.52
45.0	1502.59	1452.01	1397.25	1337.85	1273.82	1204.21	1127.65	1046.44	961.06
90.0	1391.22	1330.43	1264.54	1192.15	1113.73	915.12	897.35	897.35	806.91
135.0	1470.10	1394.00	1358.27	1294.24	1224.17	1148.07	1066.86	980.55	891.45
180.0	1496.55	1445.51	1390.75	1330.43	1264.07	1191.22	1113.73	1030.66	943.43
225.0	1471.50	1419.06	1362.45	1300.73	1232.98	1158.27	1078.92	896.00	896.00
270.0	1568.48	1526.72	1479.85	1428.81	1372.66	1310.94	1243.19	1168.95	1090.06
315.0	1517.44	1468.71	1437.62	1359.20	1296.09	1254.79	1181.48	1103.05	904.31
360.0	1484.49	1432.98	1377.76	1316.97	1250.15	1177.30	1100.27	901.52	901.52

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	866.03	776.33	688.07	600.88	517.07	433.41	353.22	278.23	212.62
45.0	873.36	783.80	694.70	607.00	521.16	471.50	358.28	314.20	254.34
90.0	715.40	627.56	541.90	456.84	373.13	297.07	226.26	164.59	110.95
135.0	801.43	711.41	622.32	535.54	452.48	371.27	294.71	236.24	236.24
180.0	853.87	762.92	674.29	587.05	502.13	419.07	337.40	266.40	266.40
225.0	842.50	751.13	661.90	576.47	491.04	410.67	331.97	257.72	194.34
270.0	1004.68	916.98	827.42	737.86	649.69	565.24	481.71	434.38	353.64
315.0	904.31	832.38	742.13	654.29	569.04	486.77	405.47	326.45	252.62
360.0	866.03	776.33	688.07	600.88	517.07	433.41	353.22	278.23	212.62

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	152.62	101.44	60.05	30.12	14.11	7.05	4.64	3.85	3.53
45.0	254.34	112.25	69.47	36.61	16.75	7.93	5.10	4.04	3.43
90.0	67.33	34.94	16.57	8.17	5.20	4.08	3.57	3.02	2.78
135.0	115.08	70.02	39.63	18.61	8.68	5.48	4.22	3.53	3.11
180.0	238.10	101.25	60.00	30.67	13.92	7.10	4.87	3.90	3.39
225.0	135.87	90.67	52.57	25.75	11.00	5.52	4.18	3.53	3.25
270.0	252.48	252.48	238.10	102.55	61.39	30.67	13.69	6.26	4.18
315.0	187.79	128.91	100.79	47.70	32.34	14.43	6.54	4.27	3.48
360.0	152.62	101.44	60.05	30.12	14.11	7.05	4.64	3.85	3.53

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	3.06	2.78	2.69	2.46	2.32	2.23	2.09	1.95	1.90
45.0	3.06	2.83	2.64	2.41	2.32	2.18	2.00	2.04	1.86
90.0	2.60	2.37	2.23	2.13	2.09	1.95	1.81	1.76	1.76
135.0	2.88	2.60	2.41	2.23	2.18	2.04	1.90	1.86	1.76
180.0	3.06	2.74	2.51	2.37	2.23	2.13	1.95	1.90	1.81
225.0	2.92	2.55	2.41	2.27	2.13	1.95	1.90	1.86	1.76
270.0	3.43	2.97	2.69	2.51	2.37	2.13	2.04	1.95	1.86
315.0	3.11	2.78	2.51	2.37	2.27	2.09	1.95	1.90	1.86
360.0	3.06	2.78	2.69	2.46	2.32	2.23	2.09	1.95	1.90

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	1.86	1.76	1.67	1.62	1.62	1.53	1.44	1.44	1.44
45.0	1.76	1.76	1.67	1.58	1.53	1.58	1.48	1.39	1.39
90.0	1.67	1.53	1.53	1.53	1.44	1.39	1.39	1.39	1.30
135.0	1.72	1.62	1.62	1.58	1.53	1.48	1.44	1.39	1.39
180.0	1.76	1.72	1.58	1.58	1.58	1.48	1.39	1.39	1.39
225.0	1.67	1.62	1.62	1.48	1.44	1.44	1.44	1.35	1.30
270.0	1.81	1.67	1.62	1.62	1.53	1.48	1.48	1.44	1.35
315.0	1.72	1.62	1.67	1.58	1.48	1.48	1.44	1.39	1.39
360.0	1.86	1.76	1.67	1.62	1.62	1.53	1.44	1.44	1.44

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	1.39	1.30	1.35	1.30	1.25	1.25	1.21	1.16	1.16
45.0	1.39	1.30	1.25	1.30	1.25	1.30	1.21	1.16	1.16
90.0	1.30	1.30	1.25	1.25	1.21	1.16	1.16	1.16	1.16
135.0	1.35	1.30	1.30	1.30	1.25	1.21	1.25	1.21	1.21
180.0	1.35	1.30	1.35	1.25	1.21	1.21	1.21	1.16	1.16
225.0	1.30	1.30	1.25	1.21	1.21	1.25	1.16	1.16	1.16
270.0	1.35	1.35	1.30	1.25	1.25	1.25	1.21	1.16	1.21
315.0	1.35	1.30	1.30	1.30	1.25	1.21	1.21	1.21	1.16
360.0	1.39	1.30	1.35	1.30	1.25	1.25	1.21	1.16	1.16

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	1.21	1.16	1.11	1.16	1.16	1.11	1.07	1.07	1.11
45.0	1.11	1.11	1.11	1.11	1.16	1.11	1.07	1.11	1.11
90.0	1.11	1.16	1.11	1.11	1.07	1.16	1.11	1.07	1.11
135.0	1.21	1.21	1.16	1.16	1.16	1.16	1.21	1.16	1.11
180.0	1.16	1.16	1.16	1.11	1.11	1.11	1.11	1.07	1.07
225.0	1.16	1.11	1.11	1.11	1.07	1.07	1.07	1.11	1.07
270.0	1.16	1.16	1.11	1.07	1.11	1.16	1.11	1.07	1.11
315.0	1.16	1.21	1.16	1.11	1.16	1.16	1.11	1.11	1.11
360.0	1.21	1.16	1.11	1.16	1.16	1.11	1.07	1.07	1.11

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	1.11	1.07	1.07	1.11	1.07	1.07	1.07	1.11	1.07
45.0	1.07	1.07	1.07	1.07	1.02	1.02	1.07	1.07	1.02
90.0	1.11	1.07	1.07	1.02	1.11	1.07	1.07	1.07	1.07
135.0	1.16	1.16	1.16	1.11	1.16	1.21	1.11	1.11	1.11
180.0	1.07	1.07	1.07	1.07	1.07	1.02	1.02	1.07	1.07
225.0	1.02	1.02	1.07	1.02	1.02	1.07	0.97	1.02	1.07
270.0	1.07	1.07	1.07	1.11	1.07	1.07	1.07	1.07	1.07
315.0	1.16	1.16	1.11	1.11	1.16	1.11	1.11	1.11	1.16
360.0	1.11	1.07	1.07	1.11	1.07	1.07	1.07	1.11	1.07

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	1.02	1.02	1.11	1.02	1.02	1.02	1.07	1.07	1.07
45.0	1.02	1.07	1.02	1.07	1.07	1.07	1.11	1.02	1.07
90.0	1.02	1.07	1.07	1.07	1.16	1.11	1.16	1.11	1.07
135.0	1.16	1.11	1.16	1.11	1.11	1.16	1.39	1.44	1.48
180.0	1.02	1.07	1.07	0.97	1.07	1.02	1.02	0.97	1.02
225.0	0.97	1.07	0.97	1.02	1.02	1.02	0.97	1.02	1.07
270.0	1.02	1.07	1.02	1.07	1.07	1.07	1.02	1.07	1.02
315.0	1.11	1.11	1.16	1.11	1.07	1.16	1.11	1.11	1.16
360.0	1.02	1.02	1.11	1.02	1.02	1.02	1.07	1.07	1.07

Intensity data(cd)

C/γ(°)	90.0
0.0	1.02
45.0	1.02
90.0	1.11
135.0	1.44
180.0	1.02
225.0	1.02
270.0	1.11
315.0	1.21
360.0	1.02