



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:

LumCAT: 2-2679-L 铝反光罩

Luminaire: GH36D-B40 Hodel

Report No: 2024419-B003

Ballast type: AC

Test No: 2024419-C003

Voltage(V): 32.990

LampCAT: LUMINUS CXM-14-AC40

Current(A): 0.420

Lamp flux(lm): 2356.0

Power (W): 13.855

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2008.76, Efficiency(%): 85.26% , Luminous Efficacy(lm/W): 144.98

Central intensity(cd): 6338.484, Maximum intensity(cd): 6338.484

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.4

[C90/270]Total=25.4

Field angle(10%Imax): [C0/180]Total=61.2

[C90/270]Total=61.2

Maximum s/h(1/2): C0_180=0.42 C90_270=0.42

Maximum s/h(1/4): C0_180=0.49 C90_270=0.49

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.160%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/19
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

NT 2-2679-L 铝反光罩

Zonal flux distribution table

Appendix Page: 2 Total:19

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6338.484	0.000	0	0.00%	0.00%
1.0	6309.077	6.052	6.052	0.26%	0.30%
2.0	6203.444	17.959	24.011	0.76%	1.20%
3.0	6013.172	29.218	53.229	1.24%	2.65%
4.0	5764.232	39.423	92.652	1.67%	4.61%
5.0	5485.811	48.397	141.049	2.05%	7.02%
6.0	5167.742	55.987	197.036	2.38%	9.81%
7.0	4874.178	62.330	259.366	2.65%	12.91%
8.0	4545.501	67.415	326.781	2.86%	16.27%
9.0	4242.940	71.226	398.006	3.02%	19.81%
10.0	3950.327	74.146	472.152	3.15%	23.50%
11.0	3650.326	75.946	548.099	3.22%	27.29%
12.0	3367.663	76.717	624.815	3.26%	31.10%
13.0	3099.703	76.751	701.567	3.26%	34.93%
14.0	2833.206	75.941	777.507	3.22%	38.71%
15.0	2607.821	74.697	852.204	3.17%	42.42%
16.0	2395.165	73.308	925.512	3.11%	46.07%
17.0	2196.335	71.502	997.014	3.03%	49.63%
18.0	2026.912	69.632	1066.646	2.96%	53.10%
19.0	1872.632	67.844	1134.49	2.88%	56.48%
20.0	1720.913	65.772	1200.262	2.79%	59.75%
21.0	1597.796	63.726	1263.988	2.70%	62.92%
22.0	1476.069	61.771	1325.759	2.62%	66.00%
23.0	1328.775	58.853	1384.612	2.50%	68.93%
24.0	1234.744	56.048	1440.66	2.38%	71.72%
25.0	1169.024	54.656	1495.316	2.32%	74.44%
26.0	1076.499	53.006	1548.322	2.25%	77.08%
27.0	974.422	50.176	1598.498	2.13%	79.58%
28.0	882.571	47.015	1645.513	2.00%	81.92%
29.0	787.808	43.702	1689.215	1.85%	84.09%
30.0	693.667	40.000	1729.214	1.70%	86.08%
31.0	598.758	35.966	1765.181	1.53%	87.87%
32.0	510.426	31.777	1796.958	1.35%	89.46%
33.0	430.740	27.727	1824.685	1.18%	90.84%
34.0	353.022	23.719	1848.404	1.01%	92.02%
35.0	287.645	19.897	1868.3	0.84%	93.01%
36.0	252.320	17.193	1885.493	0.73%	93.86%
37.0	196.365	14.634	1900.127	0.62%	94.59%

NT 2-2679-L 铝反光罩

Zonal flux distribution table

Appendix Page: 3 Total:19

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	141.310	11.271	1911.398	0.48%	95.15%
39.0	102.846	8.334	1919.732	0.35%	95.57%
40.0	79.634	6.364	1926.096	0.27%	95.88%
41.0	63.014	5.080	1931.175	0.22%	96.14%
42.0	50.644	4.129	1935.305	0.18%	96.34%
43.0	42.100	3.435	1938.74	0.15%	96.51%
44.0	36.160	2.954	1941.694	0.13%	96.66%
45.0	31.661	2.606	1944.3	0.11%	96.79%
46.0	28.493	2.352	1946.653	0.10%	96.91%
47.0	25.918	2.164	1948.817	0.09%	97.02%
48.0	24.031	2.019	1950.836	0.09%	97.12%
49.0	22.414	1.907	1952.744	0.08%	97.21%
50.0	21.178	1.817	1954.561	0.08%	97.30%
51.0	20.168	1.749	1956.31	0.07%	97.39%
52.0	19.481	1.701	1958.012	0.07%	97.47%
53.0	18.976	1.673	1959.685	0.07%	97.56%
54.0	18.683	1.660	1961.344	0.07%	97.64%
55.0	18.581	1.663	1963.008	0.07%	97.72%
56.0	18.669	1.683	1964.691	0.07%	97.81%
57.0	18.844	1.715	1966.406	0.07%	97.89%
58.0	19.078	1.754	1968.16	0.07%	97.98%
59.0	19.342	1.796	1969.956	0.08%	98.07%
60.0	19.437	1.832	1971.788	0.08%	98.16%
61.0	19.283	1.848	1973.636	0.08%	98.25%
62.0	18.844	1.837	1975.473	0.08%	98.34%
63.0	17.988	1.791	1977.264	0.08%	98.43%
64.0	16.913	1.713	1978.977	0.07%	98.52%
65.0	15.757	1.617	1980.594	0.07%	98.60%
66.0	14.638	1.517	1982.11	0.06%	98.67%
67.0	13.665	1.423	1983.533	0.06%	98.74%
68.0	12.992	1.350	1984.884	0.06%	98.81%
69.0	12.451	1.298	1986.182	0.06%	98.88%
70.0	12.034	1.257	1987.439	0.05%	98.94%
71.0	11.741	1.229	1988.668	0.05%	99.00%
72.0	11.456	1.206	1989.874	0.05%	99.06%
73.0	11.214	1.185	1991.06	0.05%	99.12%
74.0	11.017	1.169	1992.228	0.05%	99.18%
75.0	10.827	1.154	1993.383	0.05%	99.23%

NT 2-2679-L 铝反光罩

Zonal flux distribution table

Appendix Page: 4 Total:19

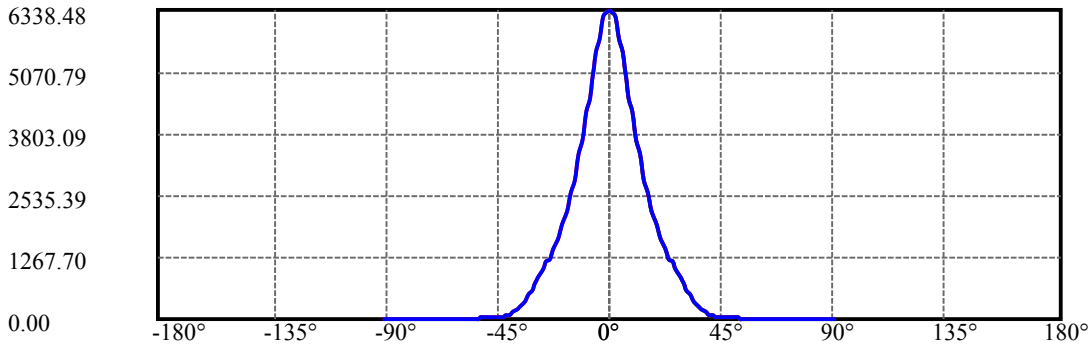
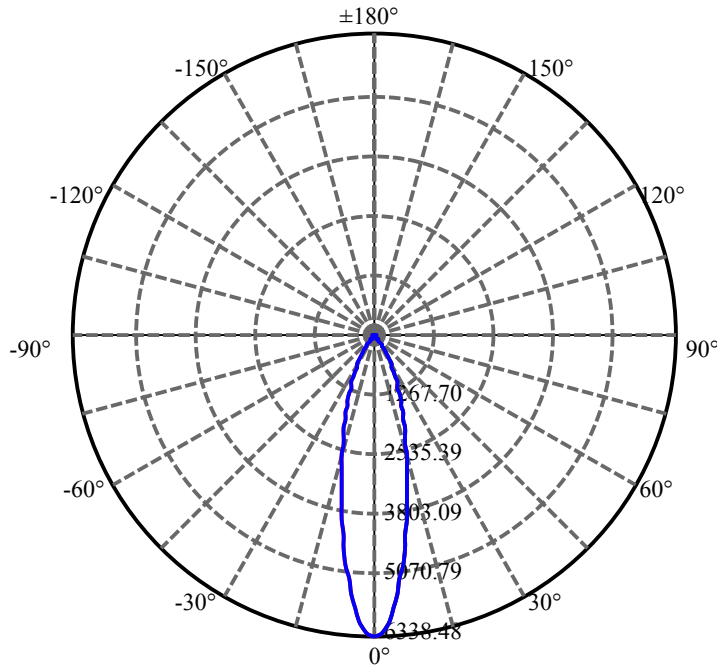
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	10.644	1.140	1994.522	0.05%	99.29%
77.0	10.461	1.125	1995.648	0.05%	99.35%
78.0	10.263	1.109	1996.757	0.05%	99.40%
79.0	10.051	1.091	1997.848	0.05%	99.46%
80.0	9.854	1.073	1998.922	0.05%	99.51%
81.0	9.642	1.054	1999.976	0.04%	99.56%
82.0	9.437	1.035	2001.01	0.04%	99.61%
83.0	9.269	1.017	2002.027	0.04%	99.66%
84.0	9.100	1.001	2003.028	0.04%	99.71%
85.0	8.961	0.986	2004.014	0.04%	99.76%
86.0	8.852	0.974	2004.987	0.04%	99.81%
87.0	8.720	0.962	2005.949	0.04%	99.86%
88.0	8.581	0.948	2006.897	0.04%	99.91%
89.0	8.464	0.934	2007.831	0.04%	99.95%
90.0	8.427	0.926	2008.757	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1729.21	73.40%	86.08%
0-40	1926.10	81.75%	95.88%
0-60	1971.79	83.69%	98.16%
0-90	2007.83	85.22%	99.95%
0-120	2007.83	85.22%	99.95%
0-180	2008.76	85.26%	100.00%
60-90	36.04	1.53%	1.79%
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%
0-27.18	1607.01	68.21%	80.00%

ZONAL LUMEN SUMMARY

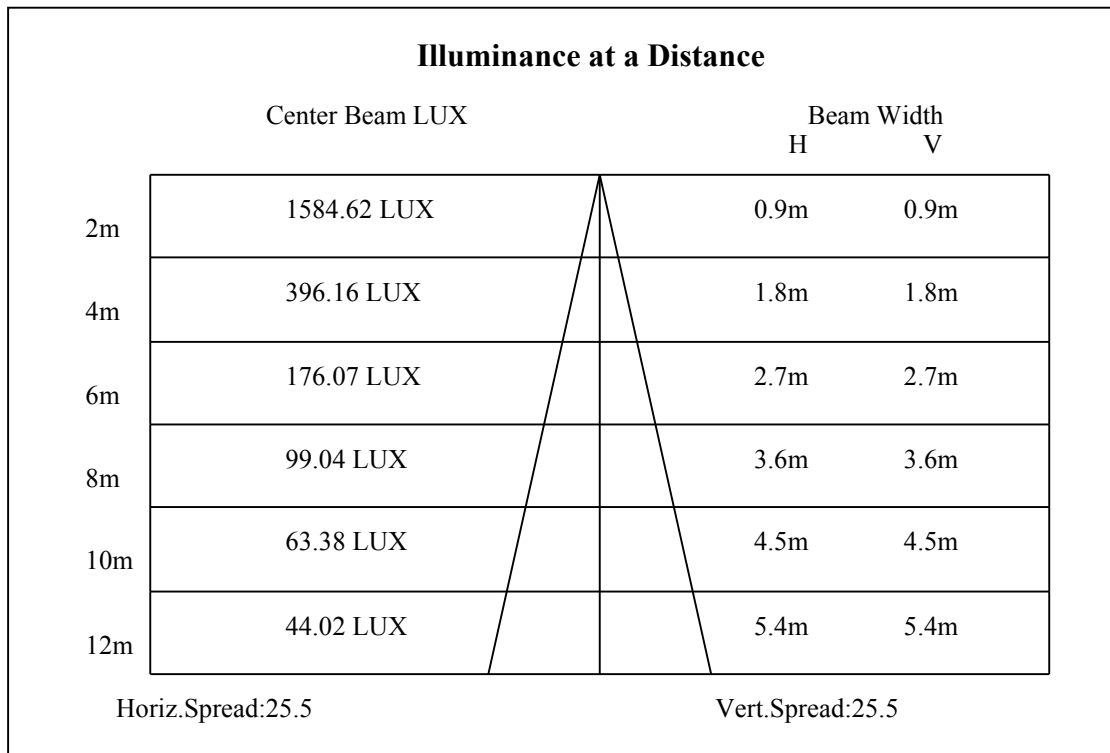
0-10	472.15
10-20	728.11
20-30	528.95
30-40	196.88
40-50	28.47
50-60	17.23
60-70	15.65
70-80	11.48
80-90	8.91
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

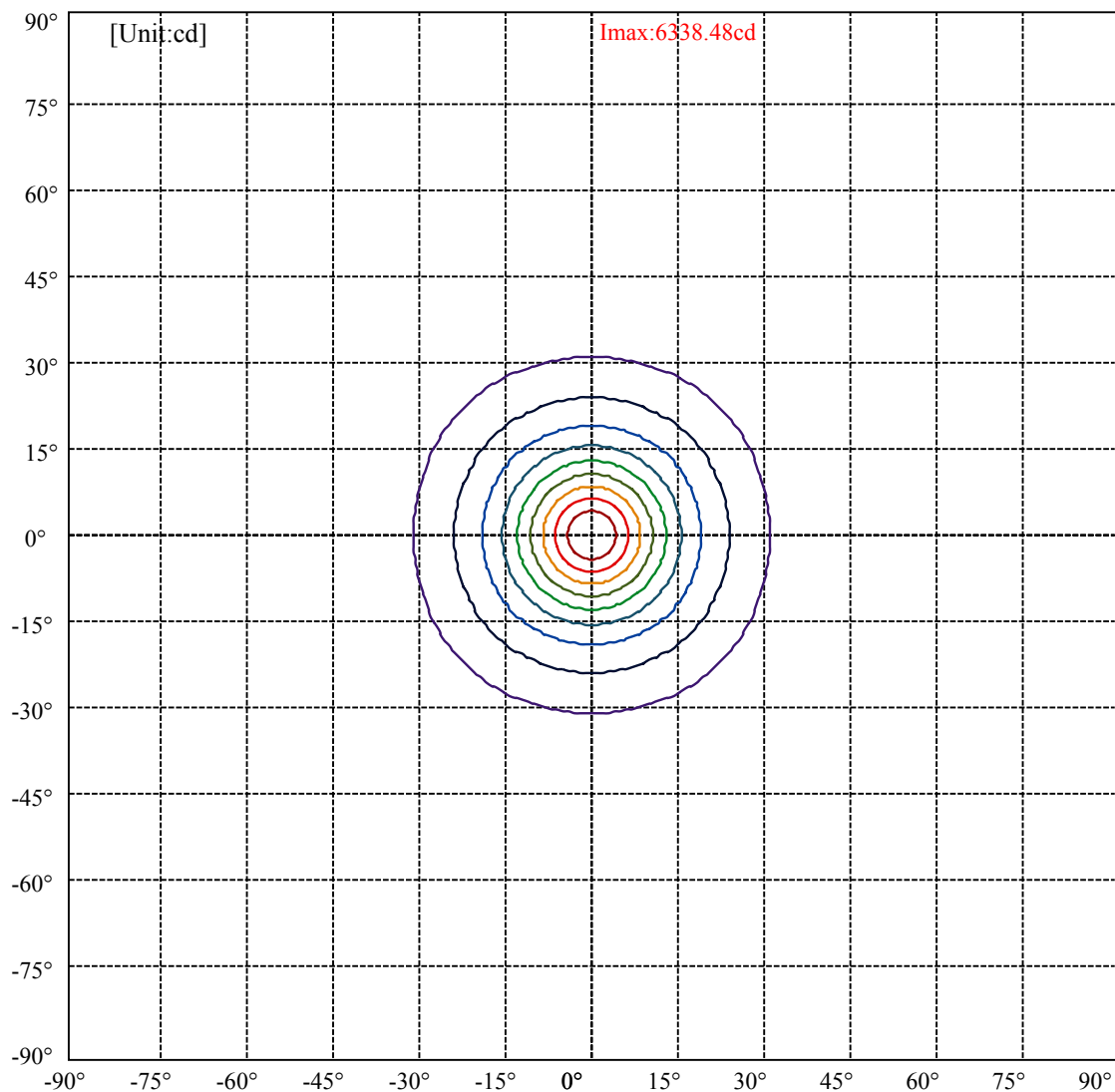


C0(Max): ———
C0/C180: ———
C90/C270: ———

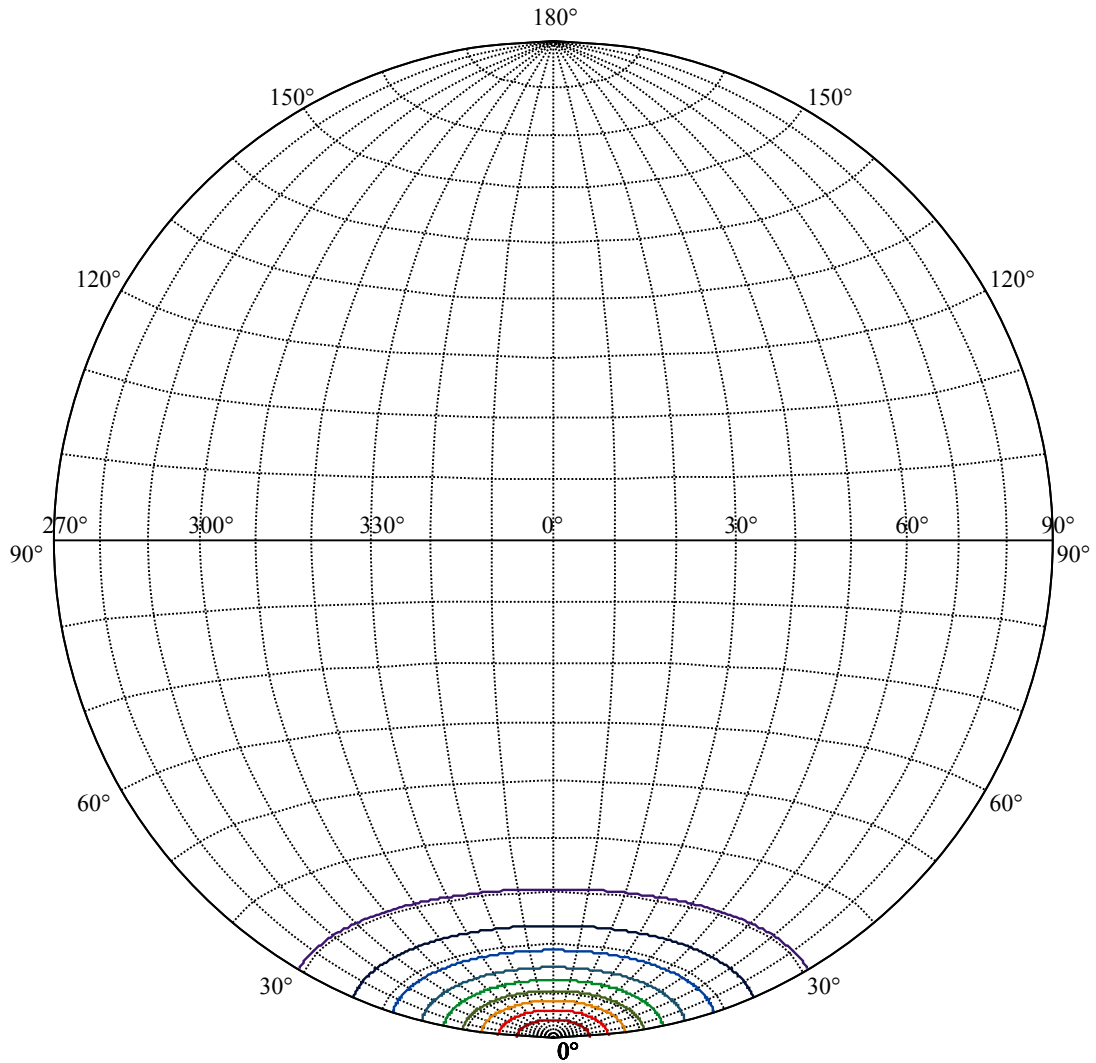
Field angle(10%Imax):C0/180Left:30.6 Right:30.6
:C90/270Left:30.6 Right:30.6

Beam Angle(50%Imax):C0/180Left:12.7 Right:12.7
:C90/270Left:12.7 Right:12.7





(10%Imax) 633.848	—
(20%Imax) 1267.7	—
(30%Imax) 1901.55	—
(40%Imax) 2535.39	—
(50%Imax) 3169.24	—
(60%Imax) 3803.09	—
(70%Imax) 4436.94	—
(80%Imax) 5070.79	—
(90%Imax) 5704.64	—



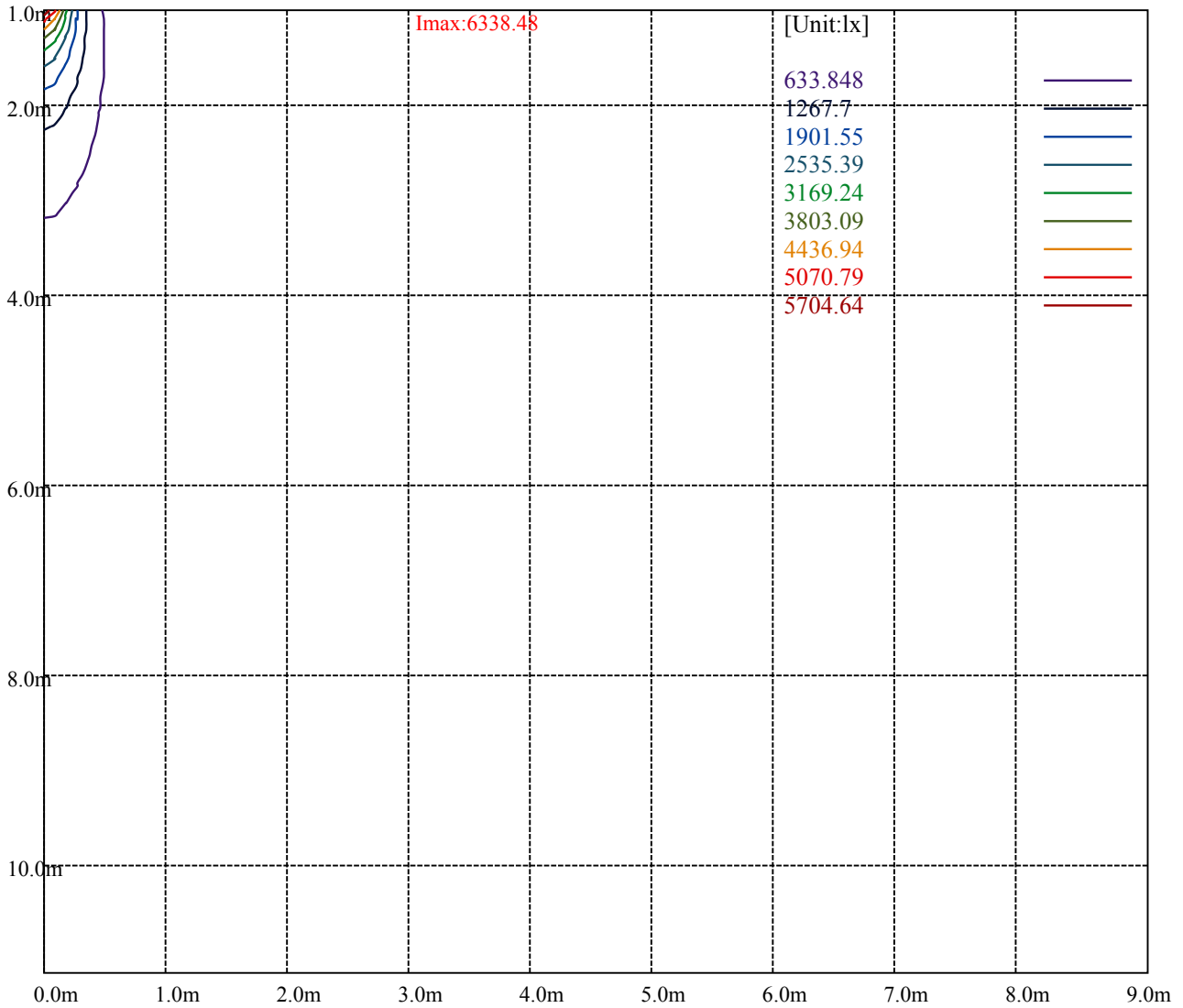
House

[Unit:cd]

Road

Imax:6338.48

(10%Imax) 633.848	—
(20%Imax) 1267.7	—
(30%Imax) 1901.55	—
(40%Imax) 2535.39	—
(50%Imax) 3169.24	—
(60%Imax) 3803.09	—
(70%Imax) 4436.94	—
(80%Imax) 5070.79	—
(90%Imax) 5704.64	—



NT 2-2679-L 铝反光罩

Luminance Limiting Curve(no luminous side)

Luminance Table

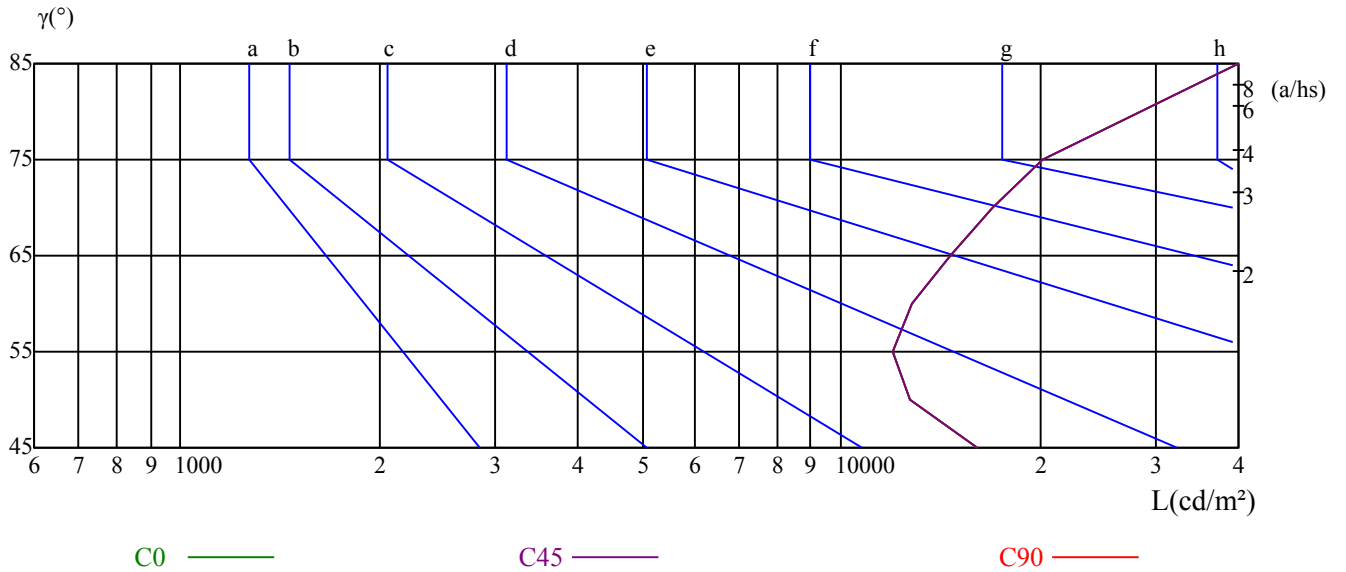
γ	45	50	55	60	65	70	75	80	85
C0	16110	12707	11994	12838	14615	16996	20243	28497	54367
C45	16110	12707	11994	12838	14615	16996	20243	28497	54367
C90	16110	12707	11994	12838	14615	16996	20243	28497	54367

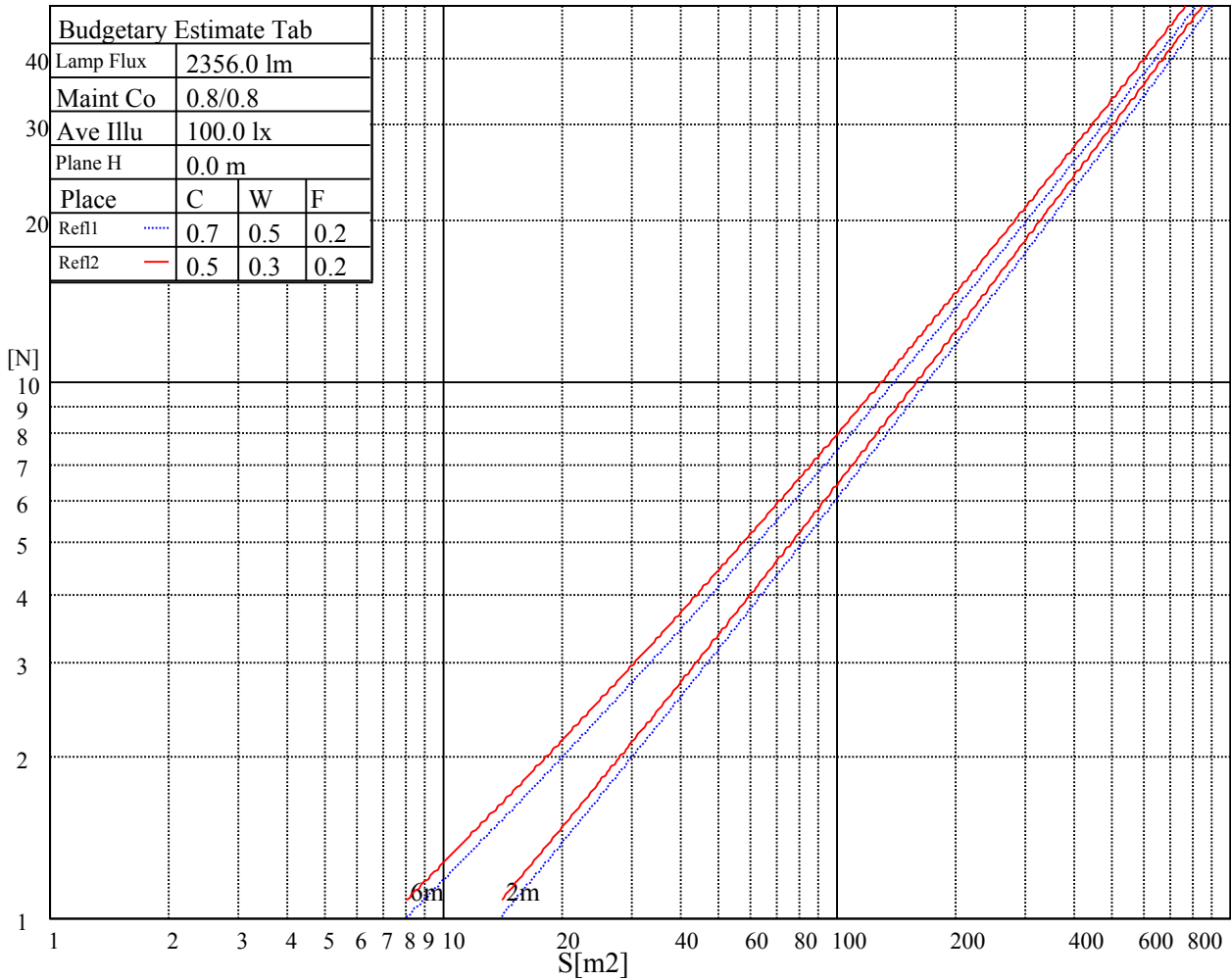
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
14615	14615	14615	20243	20243	20243	54367	54367	54367

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



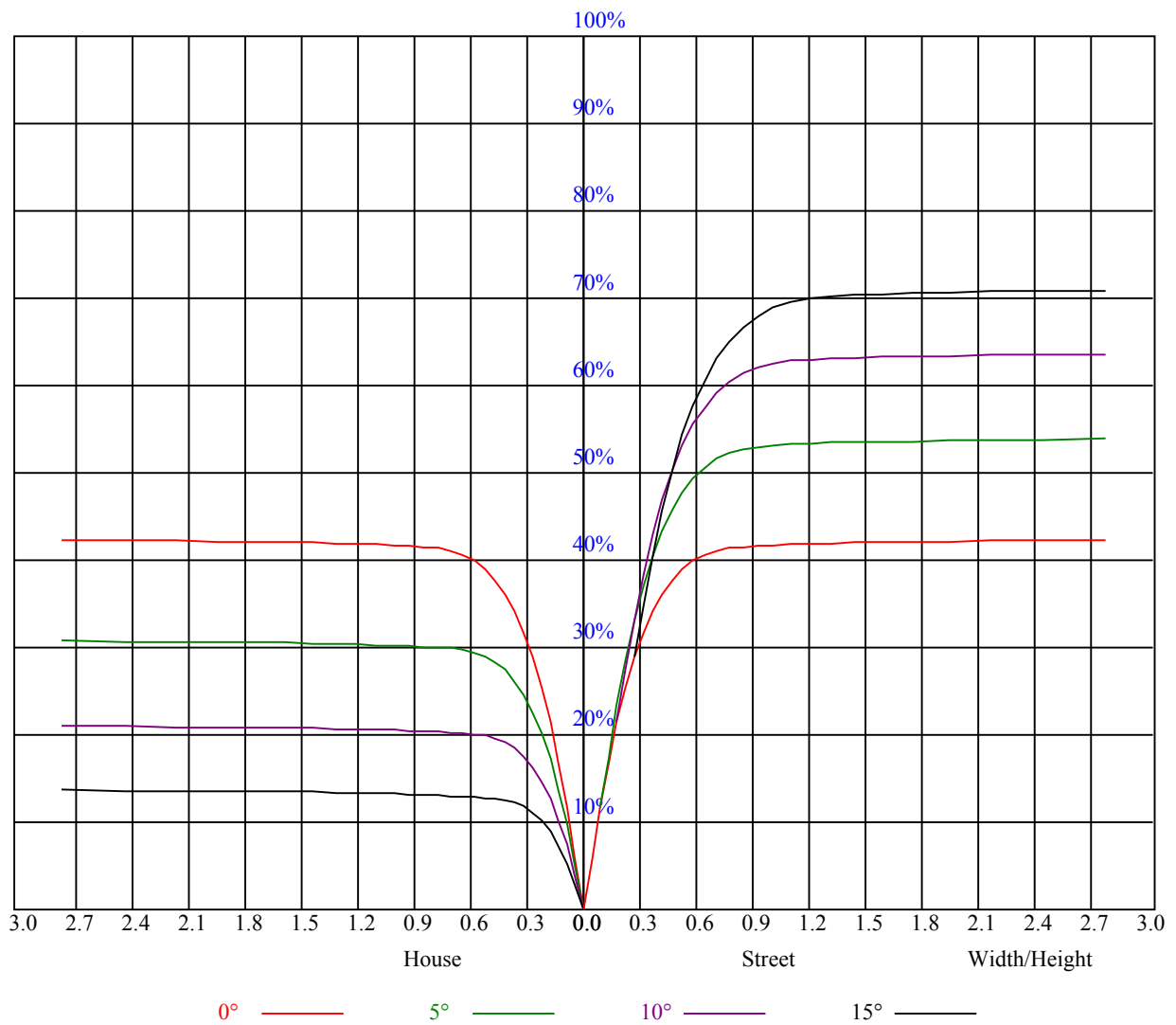


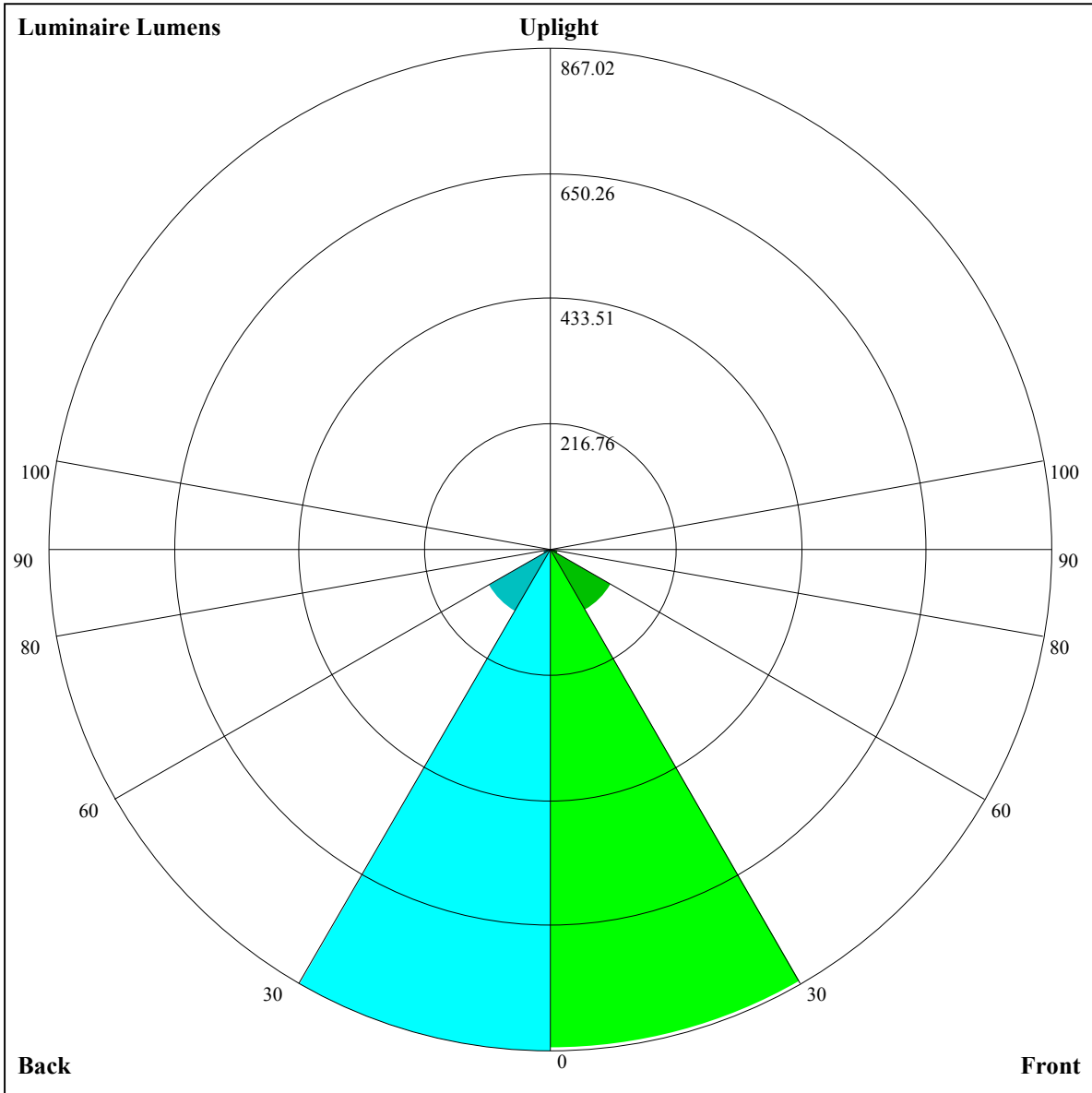
NT 2-2679-L 铝反光罩

Utilization factor table for indoor luminaire

Appendix Page: 14 Total:19

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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.90	0.86	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.81	0.79	0.78	0.76
3	0.85	0.81	0.78	0.84	0.80	0.77	0.81	0.79	0.76	0.79	0.77	0.75	0.77	0.76	0.74	0.73
4	0.80	0.76	0.73	0.79	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.69
5	0.77	0.72	0.69	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
6	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
7	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.61	0.60
8	0.67	0.63	0.60	0.67	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.58
9	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.54





Luminaire Lumens:

FL=861.78,FM=119.66,FH=13.53,FVH=4.93

BL=867.02,BM=125.24,BH=13.6,BVH=4.92

UL=0,UH=0

BUG Rating:B2-U0-G0

NT 2-2679-L 铝反光罩

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	6331.61	6281.28	6174.18	5949.46	5695.47	5421.58	5068.11	4779.59	4489.32
45.0	6347.41	6323.41	6256.11	6093.42	5880.98	5619.39	5265.91	4969.79	4679.52
90.0	6316.98	6225.68	6006.81	5763.35	5494.74	5210.90	4834.02	4537.31	4247.04
135.0	6357.94	6330.44	6255.53	6051.29	5802.56	5544.48	5188.66	4891.37	4599.93
180.0	6331.61	6333.95	6247.92	6082.30	5866.94	5552.67	5276.45	4979.15	4609.88
225.0	6347.41	6301.76	6142.58	5922.54	5680.25	5353.70	5063.43	4767.30	4409.73
270.0	6316.98	6360.28	6335.70	6233.29	5988.67	5745.21	5487.13	5207.98	4838.11
315.0	6357.94	6315.81	6208.71	6009.73	5704.25	5438.55	5158.23	4860.94	4490.49
360.0	6331.61	6281.28	6174.18	5949.46	5695.47	5421.58	5068.11	4779.59	4489.32
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4133.50	3859.62	3589.83	3325.31	3013.97	2782.22	2570.95	2371.39	2150.76
45.0	4314.92	4039.28	3765.40	3433.57	3180.76	2941.40	2707.89	2448.64	2261.37
90.0	3974.91	3634.89	3366.27	3115.21	2820.26	2599.04	2399.48	2173.58	2012.65
135.0	4316.68	3974.32	3704.53	3435.33	3182.51	2883.46	2658.15	2452.74	2219.82
180.0	4331.31	4049.82	3701.02	3429.48	3176.66	2875.85	2656.39	2450.98	2218.06
225.0	4125.89	3853.18	3510.24	3255.08	3006.36	2716.09	2505.99	2315.21	2141.98
270.0	4547.84	4261.08	3983.69	3629.04	3351.06	3100.00	2803.87	2585.58	2383.68
315.0	4198.46	3930.43	3581.64	3318.28	3066.05	2767.59	2559.83	2363.20	2182.36
360.0	4133.50	3859.62	3589.83	3325.31	3013.97	2782.22	2570.95	2371.39	2150.76
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1994.51	1848.78	1686.09	1565.54	1456.68	1157.81	1157.81	1135.98	1022.91
45.0	2094.58	1938.32	1765.68	1640.44	1522.81	1392.89	1291.65	1172.85	1078.04
90.0	1865.17	1700.72	1580.17	1468.97	1294.58	1167.11	1143.41	1052.64	961.64
135.0	2052.44	1907.89	1740.52	1618.21	1508.18	1377.68	1279.36	1188.65	1096.77
180.0	2059.47	1914.33	1742.27	1620.55	1511.69	1411.04	1317.99	1205.04	1119.01
225.0	1951.78	1815.43	1690.77	1580.17	1451.42	1357.20	1154.88	1154.88	1070.73
270.0	2211.62	2012.06	1875.70	1720.03	1600.06	1488.29	1373.00	1282.29	1192.16
315.0	1985.73	1843.52	1686.09	1568.46	1463.12	1278.19	1159.86	1159.86	1070.73
360.0	1994.51	1848.78	1686.09	1565.54	1456.68	1157.81	1157.81	1135.98	1022.91
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	935.48	842.61	755.76	646.73	562.17	480.65	405.44	323.34	263.64
45.0	985.58	891.36	774.90	686.53	599.91	517.40	420.84	353.53	306.72
90.0	847.93	760.21	672.01	565.39	484.33	391.28	326.03	265.52	199.85
135.0	984.41	893.11	781.92	715.20	608.11	526.18	448.34	361.14	299.11
180.0	1011.33	923.54	835.17	723.98	635.03	548.41	467.65	376.94	314.32
225.0	965.68	876.55	788.24	698.99	590.20	505.69	426.16	357.63	280.67
270.0	1104.38	1000.21	913.01	821.71	729.25	617.47	532.03	451.27	362.31
315.0	960.59	872.98	781.45	690.80	581.07	496.33	419.43	334.81	274.53
360.0	935.48	842.61	755.76	646.73	562.17	480.65	405.44	323.34	263.64
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	211.15	157.13	122.43	89.13	70.58	56.83	44.71	38.04	33.30
45.0	306.72	174.22	136.42	106.04	78.19	62.85	51.73	42.08	36.64
90.0	157.60	122.72	95.63	71.28	58.35	48.57	41.61	35.41	31.72
135.0	299.11	176.68	137.76	99.96	78.36	62.91	51.85	42.14	36.69
180.0	299.69	299.69	151.28	118.80	93.11	73.39	55.95	46.29	39.44
225.0	225.37	177.85	130.51	101.48	79.01	62.97	49.10	41.49	34.88
270.0	299.11	299.11	228.94	136.88	106.51	78.01	62.21	50.86	42.66
315.0	219.81	163.51	127.52	99.20	72.98	58.58	47.99	40.50	33.94
360.0	211.15	157.13	122.43	89.13	70.58	56.83	44.71	38.04	33.30

NT 2-2679-L 铝反光罩

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	29.73	26.34	24.35	22.71	21.48	20.19	19.43	18.90	18.43
45.0	31.66	28.73	26.34	24.40	22.47	21.24	20.25	19.55	18.90
90.0	28.85	25.93	24.11	22.65	21.19	20.25	19.55	19.02	18.73
135.0	32.66	29.55	26.45	24.58	23.00	21.42	20.42	19.78	19.20
180.0	33.42	30.02	26.80	24.81	23.17	21.95	20.72	19.96	19.43
225.0	31.13	28.27	25.52	23.82	22.41	21.30	20.25	19.61	19.20
270.0	35.58	31.60	28.56	26.22	23.88	22.47	21.24	20.13	19.49
315.0	30.26	27.51	25.22	23.06	21.71	20.60	19.49	18.90	18.43
360.0	29.73	26.34	24.35	22.71	21.48	20.19	19.43	18.90	18.43
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	18.32	18.26	18.43	18.67	18.90	19.20	19.25	19.08	18.61
45.0	18.55	18.38	18.43	18.55	18.79	19.20	19.43	19.43	19.08
90.0	18.55	18.55	18.79	19.08	19.31	19.55	19.37	19.02	18.32
135.0	18.84	18.73	18.79	18.96	19.20	19.49	19.66	19.55	19.14
180.0	19.14	18.96	19.02	19.20	19.49	19.72	19.84	19.66	19.25
225.0	18.90	18.84	18.96	19.14	19.37	19.61	19.61	19.25	18.73
270.0	18.90	18.73	18.61	18.67	18.84	19.02	19.25	19.37	19.20
315.0	18.26	18.20	18.32	18.49	18.73	18.96	19.08	18.90	18.43
360.0	18.32	18.26	18.43	18.67	18.90	19.20	19.25	19.08	18.61
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	17.62	16.62	15.51	14.46	13.46	12.82	12.41	11.94	11.70
45.0	18.32	17.38	16.33	14.86	13.93	13.23	12.70	12.17	11.88
90.0	17.09	16.04	14.63	13.69	12.99	12.41	12.06	11.76	11.53
135.0	18.38	17.21	16.04	14.92	13.81	13.11	12.52	12.06	11.76
180.0	18.43	17.15	16.09	14.92	13.75	13.11	12.52	12.11	11.76
225.0	17.73	16.50	15.39	14.34	13.52	12.76	12.29	11.94	11.65
270.0	18.73	17.97	16.74	15.63	14.57	13.81	12.93	12.47	12.06
315.0	17.62	16.44	15.33	14.28	13.28	12.70	12.17	11.82	11.59
360.0	17.62	16.62	15.51	14.46	13.46	12.82	12.41	11.94	11.70
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	11.35	11.18	11.00	10.83	10.65	10.48	10.24	10.07	9.83
45.0	11.59	11.29	11.12	10.89	10.71	10.53	10.36	10.12	9.95
90.0	11.24	11.06	10.89	10.71	10.48	10.30	10.12	9.83	9.66
135.0	11.47	11.18	11.00	10.83	10.65	10.48	10.30	10.07	9.89
180.0	11.47	11.29	11.06	10.83	10.65	10.48	10.24	10.07	9.83
225.0	11.41	11.18	10.94	10.77	10.59	10.36	10.18	10.01	9.77
270.0	11.76	11.47	11.24	11.06	10.89	10.71	10.48	10.30	10.12
315.0	11.35	11.06	10.89	10.71	10.53	10.36	10.18	9.95	9.77
360.0	11.35	11.18	11.00	10.83	10.65	10.48	10.24	10.07	9.83
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	9.66	9.48	9.31	9.19	9.01	8.90	8.78	8.66	8.49
45.0	9.77	9.48	9.36	9.19	9.01	8.90	8.72	8.60	8.49
90.0	9.48	9.31	9.13	8.95	8.84	8.72	8.60	8.49	8.43
135.0	9.66	9.42	9.19	9.01	8.90	8.84	8.66	8.54	8.43
180.0	9.66	9.48	9.31	9.13	9.01	8.90	8.78	8.66	8.49
225.0	9.54	9.36	9.25	9.07	8.95	8.84	8.72	8.54	8.43
270.0	9.83	9.60	9.42	9.25	9.07	8.95	8.84	8.66	8.54
315.0	9.54	9.36	9.19	9.01	8.90	8.78	8.66	8.49	8.43
360.0	9.66	9.48	9.31	9.19	9.01	8.90	8.78	8.66	8.49

NT 2-2679-L 铝反光罩

Intensity data(cd)

Appendix Page: 19 Total:19

C/γ(°)	90.0
0.0	8.49
45.0	8.43
90.0	8.43
135.0	8.37
180.0	8.49
225.0	8.43
270.0	8.43
315.0	8.37
360.0	8.49