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NT

Client:

LumCAT: 2-2689-L

Luminaire: 92.70.411.00

Report No: 2024424-B014

Ballast type: AC

Test No: 2024424-C014

Voltage(V): 36.390

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.960

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2405.36, Efficiency(%): 82.26% , Luminous Efficacy(lm/W): 114.76

Central intensity(cd): 4550.184, Maximum intensity(cd): 4550.184

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=42.8

[C90/270]Total=42.8

Field angle(10%Imax): [C0/180]Total=65.0

[C90/270]Total=65.0

Maximum s/h(1/2): C0_180=0.69 C90_270=0.69

Maximum s/h(1/4): C0_180=0.68 C90_270=0.68

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 82.26%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.496%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/24
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4550.183	0.000	0	0.00%	0.00%
1.0	4547.037	4.353	4.353	0.15%	0.18%
2.0	4535.187	13.036	17.389	0.45%	0.72%
3.0	4513.679	21.642	39.03	0.74%	1.62%
4.0	4478.200	30.099	69.129	1.03%	2.87%
5.0	4425.091	38.301	107.431	1.31%	4.47%
6.0	4367.446	46.207	153.638	1.58%	6.39%
7.0	4294.732	53.766	207.404	1.84%	8.62%
8.0	4203.657	60.821	268.225	2.08%	11.15%
9.0	4108.923	67.369	335.594	2.30%	13.95%
10.0	3991.293	73.304	408.898	2.51%	17.00%
11.0	3871.980	78.570	487.468	2.69%	20.27%
12.0	3732.916	83.132	570.601	2.84%	23.72%
13.0	3591.511	86.923	657.523	2.97%	27.34%
14.0	3444.839	90.065	747.588	3.08%	31.08%
15.0	3289.169	92.447	840.035	3.16%	34.92%
16.0	3136.352	94.152	934.187	3.22%	38.84%
17.0	2989.534	95.397	1029.584	3.26%	42.80%
18.0	2831.231	95.972	1125.556	3.28%	46.79%
19.0	2673.878	95.778	1221.333	3.28%	50.78%
20.0	2513.893	94.951	1316.284	3.25%	54.72%
21.0	2351.858	93.432	1409.716	3.20%	58.61%
22.0	2177.388	91.017	1500.733	3.11%	62.39%
23.0	2020.840	88.090	1588.823	3.01%	66.05%
24.0	1854.710	84.733	1673.557	2.90%	69.58%
25.0	1697.869	80.778	1754.335	2.76%	72.93%
26.0	1440.005	74.070	1828.405	2.53%	76.01%
27.0	1305.198	67.162	1895.567	2.30%	78.81%
28.0	1176.046	62.820	1958.386	2.15%	81.42%
29.0	1010.252	57.200	2015.586	1.96%	83.80%
30.0	828.335	49.641	2065.228	1.70%	85.86%
31.0	669.271	41.676	2106.904	1.43%	87.59%
32.0	525.474	34.228	2141.132	1.17%	89.01%
33.0	395.912	27.144	2168.276	0.93%	90.14%
34.0	304.690	21.202	2189.478	0.73%	91.02%
35.0	243.161	17.014	2206.493	0.58%	91.73%
36.0	197.572	14.033	2220.526	0.48%	92.32%
37.0	148.150	11.276	2231.801	0.39%	92.78%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	125.319	9.128	2240.929	0.31%	93.16%
39.0	113.117	8.138	2249.068	0.28%	93.50%
40.0	103.256	7.546	2256.614	0.26%	93.82%
41.0	94.909	7.057	2263.67	0.24%	94.11%
42.0	87.433	6.625	2270.295	0.23%	94.38%
43.0	80.622	6.225	2276.52	0.21%	94.64%
44.0	74.624	5.859	2282.38	0.20%	94.89%
45.0	69.408	5.535	2287.915	0.19%	95.12%
46.0	64.609	5.241	2293.156	0.18%	95.34%
47.0	60.285	4.967	2298.124	0.17%	95.54%
48.0	56.482	4.720	2302.844	0.16%	95.74%
49.0	53.051	4.498	2307.342	0.15%	95.92%
50.0	49.561	4.278	2311.62	0.15%	96.10%
51.0	46.686	4.072	2315.692	0.14%	96.27%
52.0	43.753	3.881	2319.573	0.13%	96.43%
53.0	41.324	3.701	2323.274	0.13%	96.59%
54.0	38.939	3.538	2326.812	0.12%	96.73%
55.0	36.737	3.378	2330.19	0.12%	96.87%
56.0	34.843	3.235	2333.424	0.11%	97.01%
57.0	33.036	3.104	2336.528	0.11%	97.14%
58.0	31.412	2.980	2339.508	0.10%	97.26%
59.0	29.854	2.864	2342.372	0.10%	97.38%
60.0	28.464	2.755	2345.127	0.09%	97.50%
61.0	27.323	2.662	2347.79	0.09%	97.61%
62.0	26.043	2.571	2350.361	0.09%	97.71%
63.0	24.879	2.477	2352.838	0.08%	97.82%
64.0	23.804	2.389	2355.227	0.08%	97.92%
65.0	22.816	2.307	2357.534	0.08%	98.01%
66.0	21.756	2.224	2359.758	0.08%	98.10%
67.0	21.200	2.160	2361.918	0.07%	98.19%
68.0	20.980	2.137	2364.054	0.07%	98.28%
69.0	21.185	2.151	2366.205	0.07%	98.37%
70.0	21.492	2.192	2368.397	0.07%	98.46%
71.0	22.092	2.253	2370.65	0.08%	98.56%
72.0	22.677	2.328	2372.978	0.08%	98.65%
73.0	23.153	2.397	2375.374	0.08%	98.75%
74.0	23.468	2.451	2377.825	0.08%	98.86%
75.0	23.402	2.476	2380.302	0.08%	98.96%

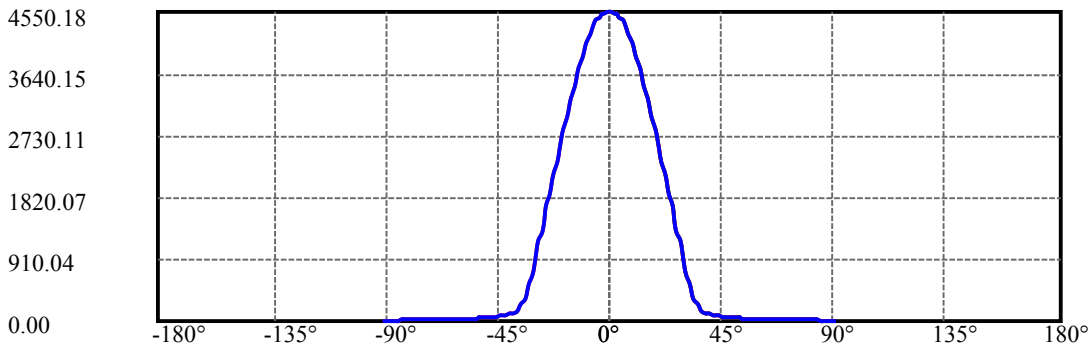
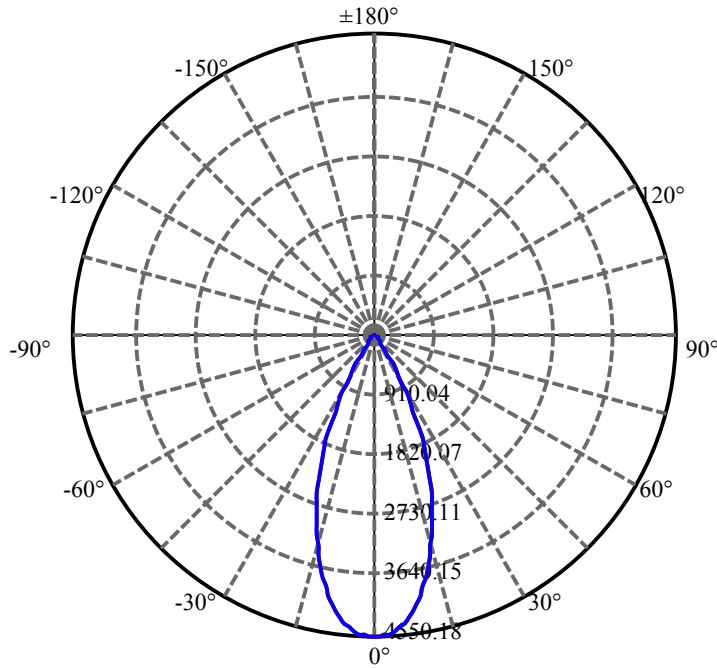
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	22.824	2.454	2382.756	0.08%	99.06%
77.0	21.580	2.367	2385.123	0.08%	99.16%
78.0	20.073	2.230	2387.353	0.08%	99.25%
79.0	18.522	2.074	2389.427	0.07%	99.34%
80.0	16.789	1.904	2391.33	0.07%	99.42%
81.0	15.091	1.724	2393.054	0.06%	99.49%
82.0	14.623	1.611	2394.666	0.06%	99.56%
83.0	14.367	1.576	2396.242	0.05%	99.62%
84.0	13.980	1.544	2397.786	0.05%	99.68%
85.0	13.051	1.475	2399.261	0.05%	99.75%
86.0	11.814	1.359	2400.62	0.05%	99.80%
87.0	11.251	1.262	2401.883	0.04%	99.86%
88.0	10.688	1.202	2403.084	0.04%	99.91%
89.0	10.322	1.152	2404.236	0.04%	99.95%
90.0	10.249	1.128	2405.364	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2065.23	70.63%	85.86%
0-40	2256.61	77.18%	93.82%
0-60	2345.13	80.20%	97.50%
0-90	2404.24	82.22%	99.95%
0-120	2404.24	82.22%	99.95%
0-180	2405.36	82.26%	100.00%
60-90	59.11	2.02%	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%
0-27.46	1924.29	65.81%	80.00%

ZONAL LUMEN SUMMARY

0-10	408.90
10-20	907.39
20-30	748.94
30-40	191.39
40-50	55.01
50-60	33.51
60-70	23.27
70-80	22.93
80-90	12.91
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: —————

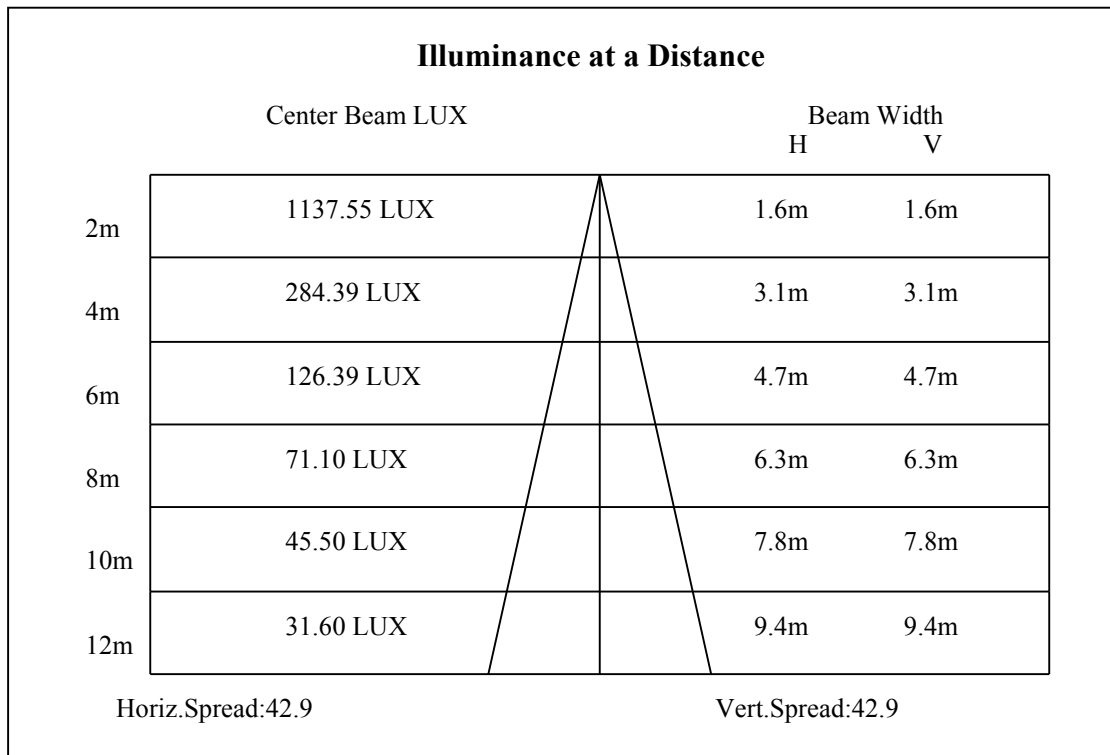
C90/C270: —————

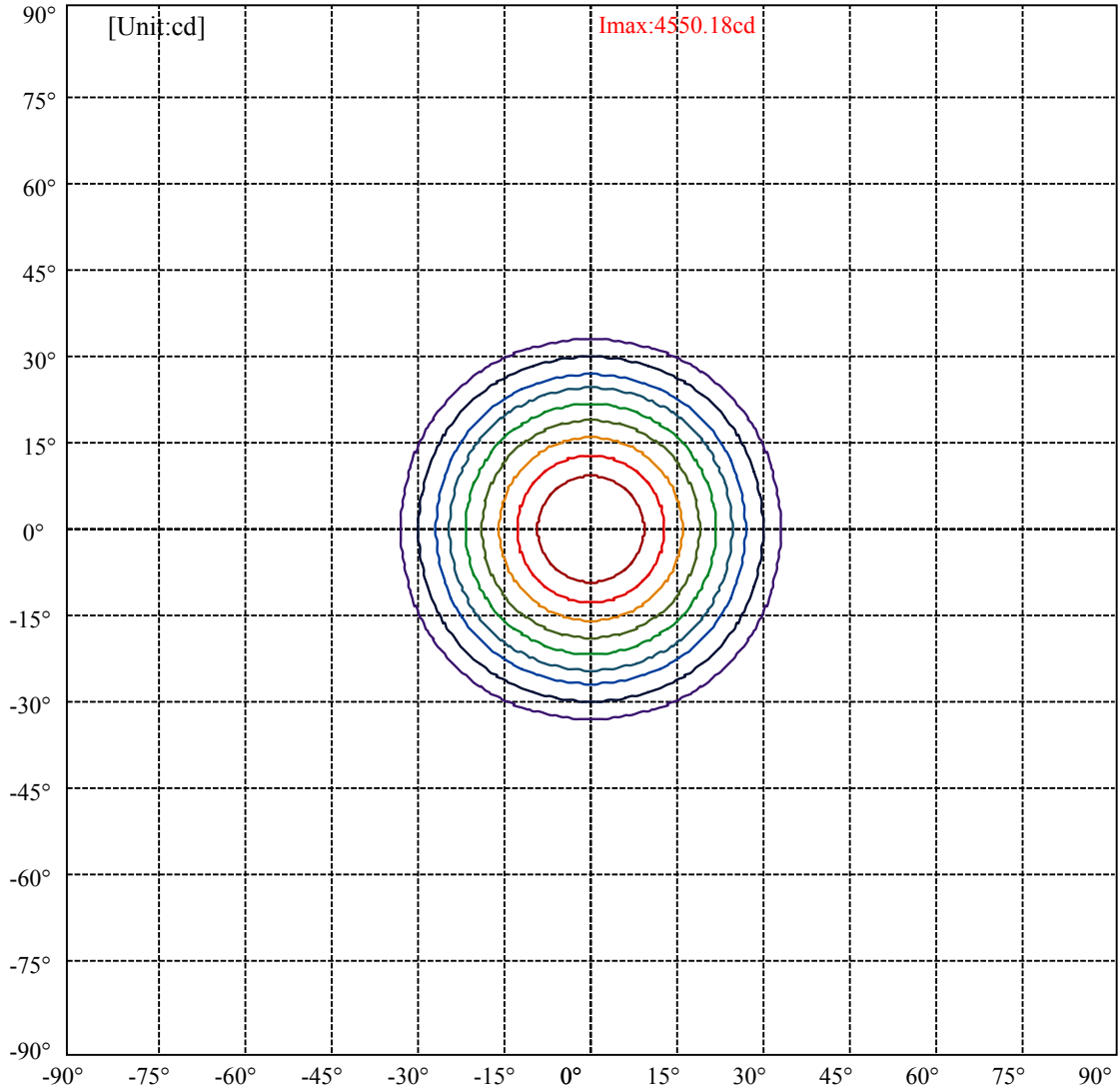
Field angle(10%Imax):C0/180Left:32.5 Right:32.5

:C90/270Left:32.5 Right:32.5

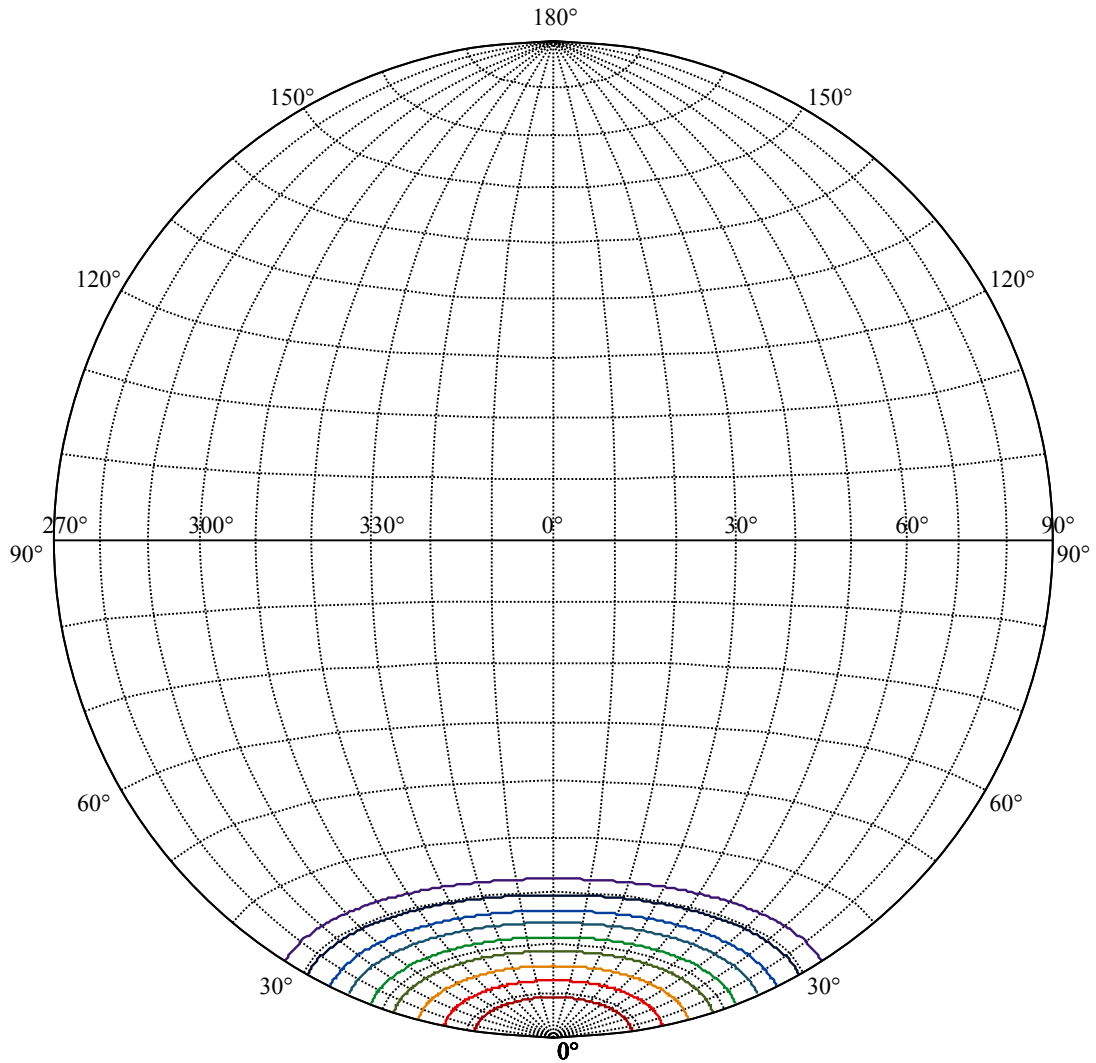
Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4

:C90/270Left:21.4 Right:21.4





(10%Imax) 455.018	—
(20%Imax) 910.037	—
(30%Imax) 1365.06	—
(40%Imax) 1820.07	—
(50%Imax) 2275.09	—
(60%Imax) 2730.11	—
(70%Imax) 3185.13	—
(80%Imax) 3640.15	—
(90%Imax) 4095.17	—



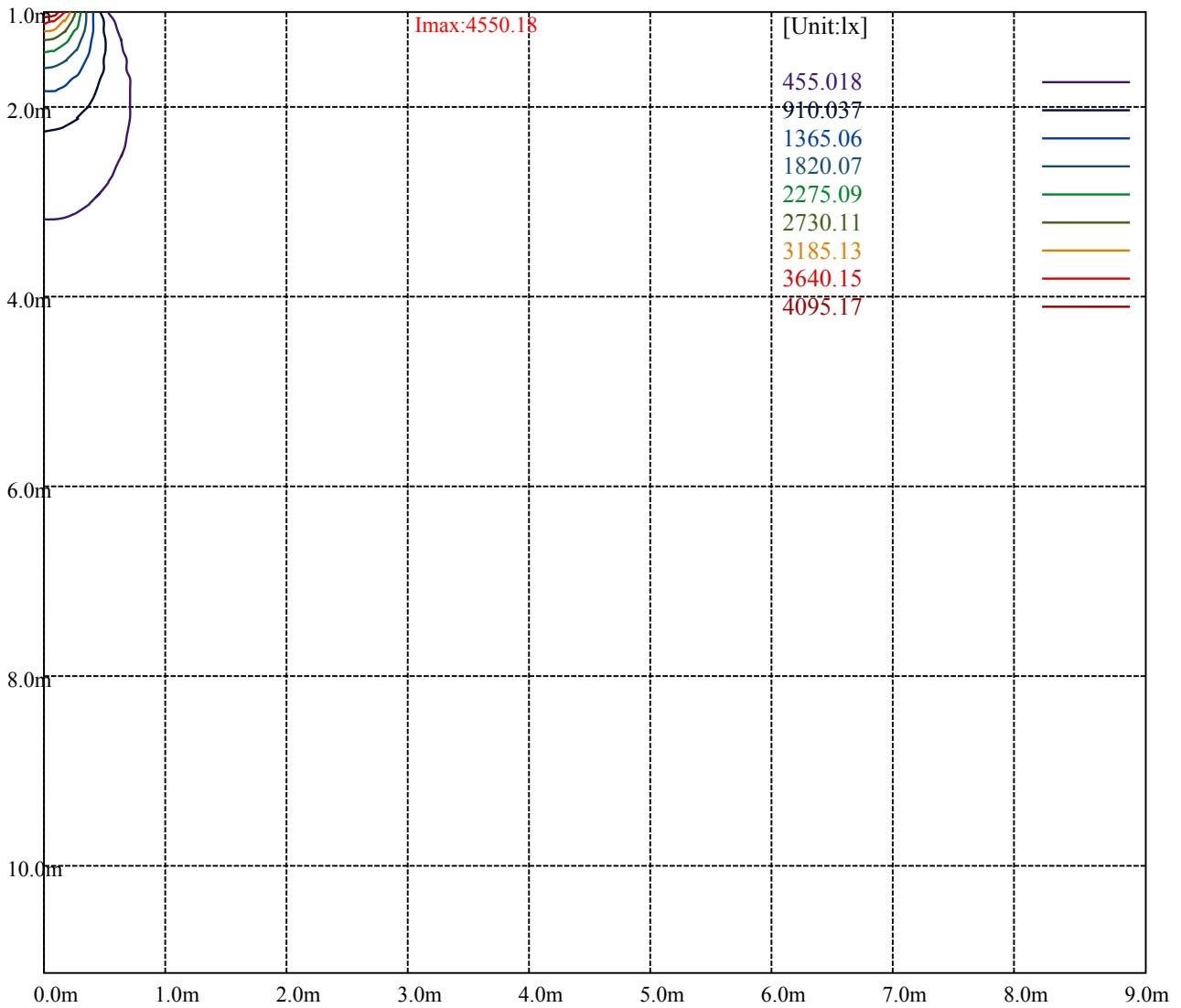
House

[Unit:cd]

Road

Imax:4550.18

(10%Imax)	455.018	—
(20%Imax)	910.037	—
(30%Imax)	1365.06	—
(40%Imax)	1820.07	—
(50%Imax)	2275.09	—
(60%Imax)	2730.11	—
(70%Imax)	3185.13	—
(80%Imax)	3640.15	—
(90%Imax)	4095.17	—



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

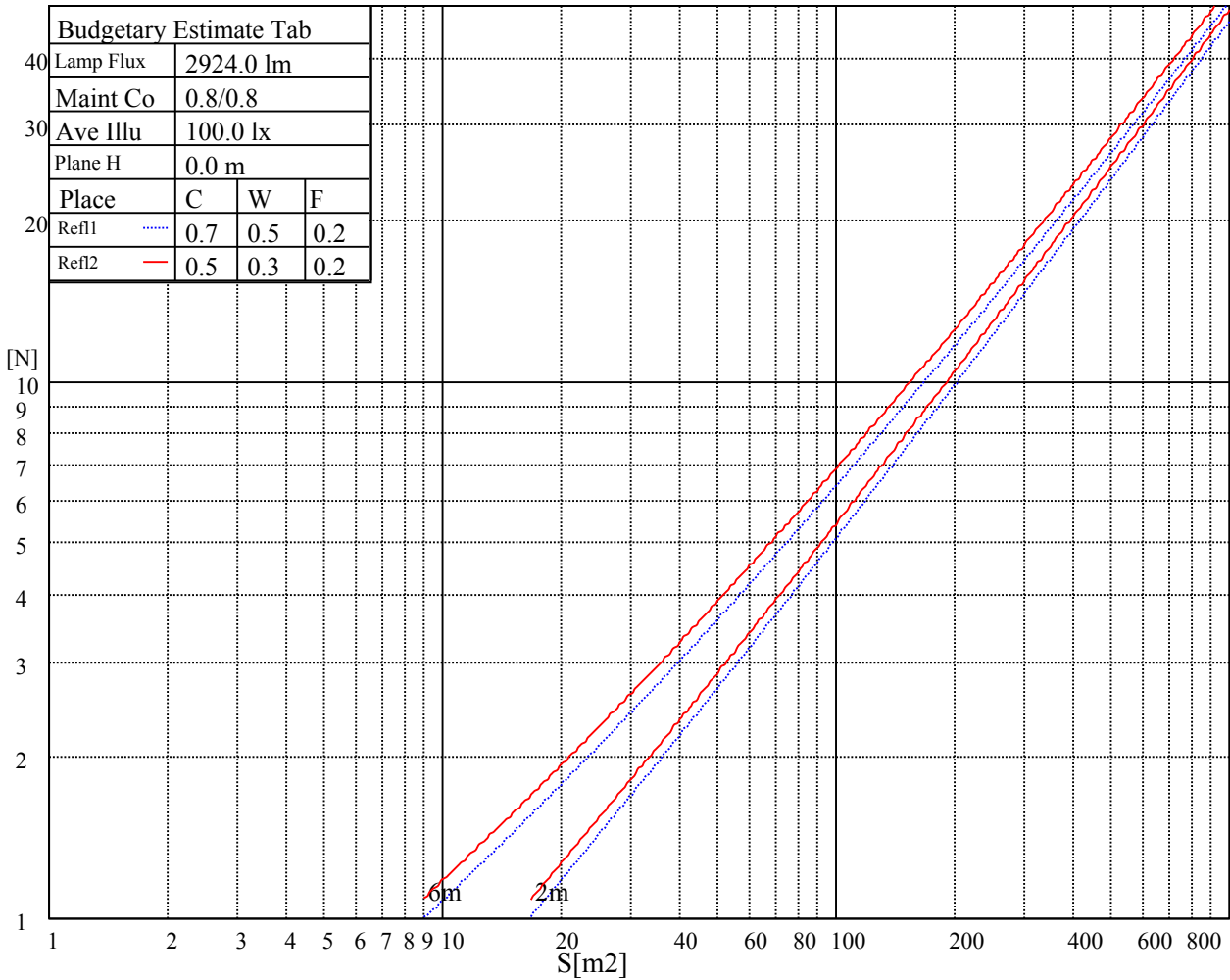
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

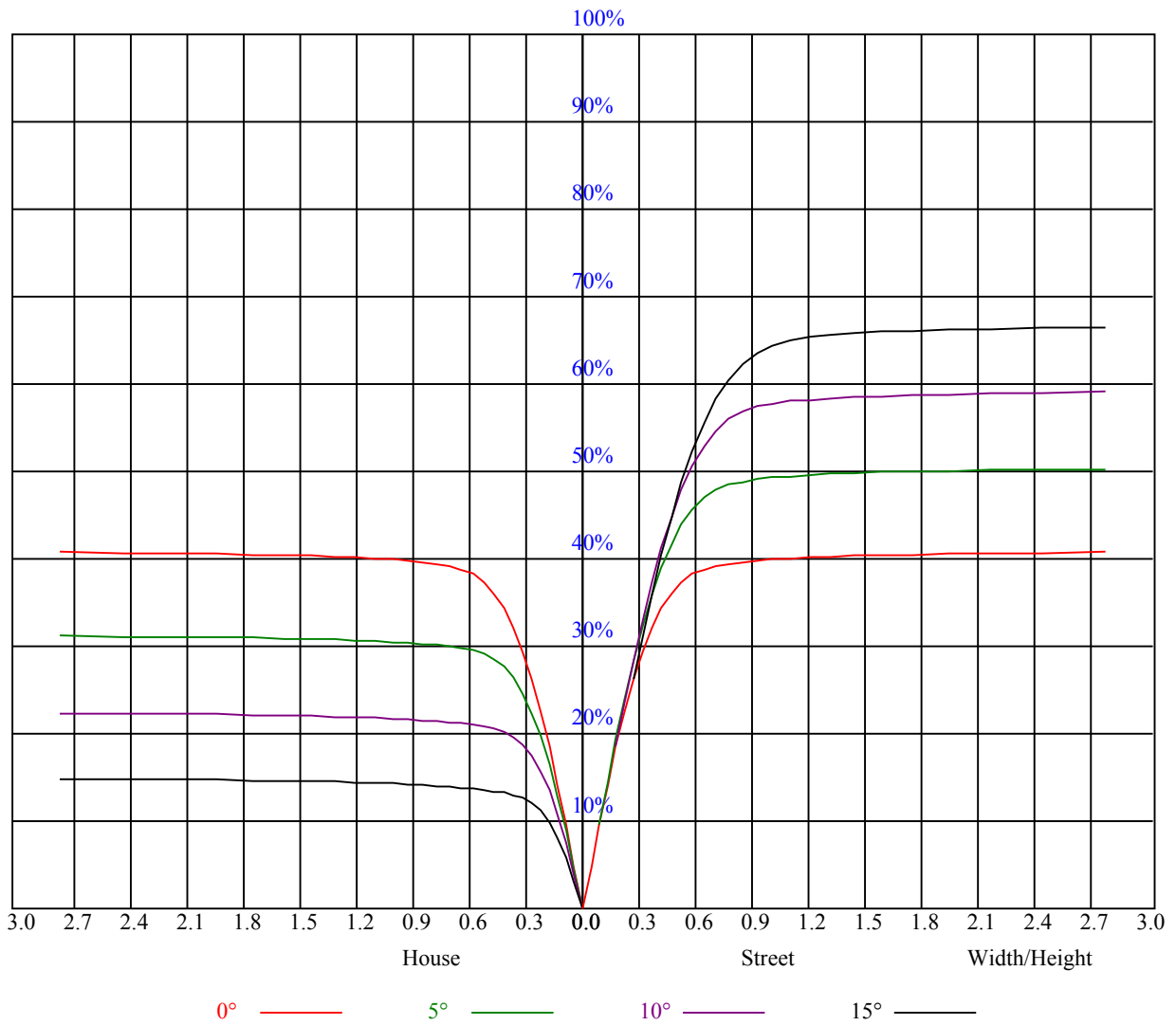
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

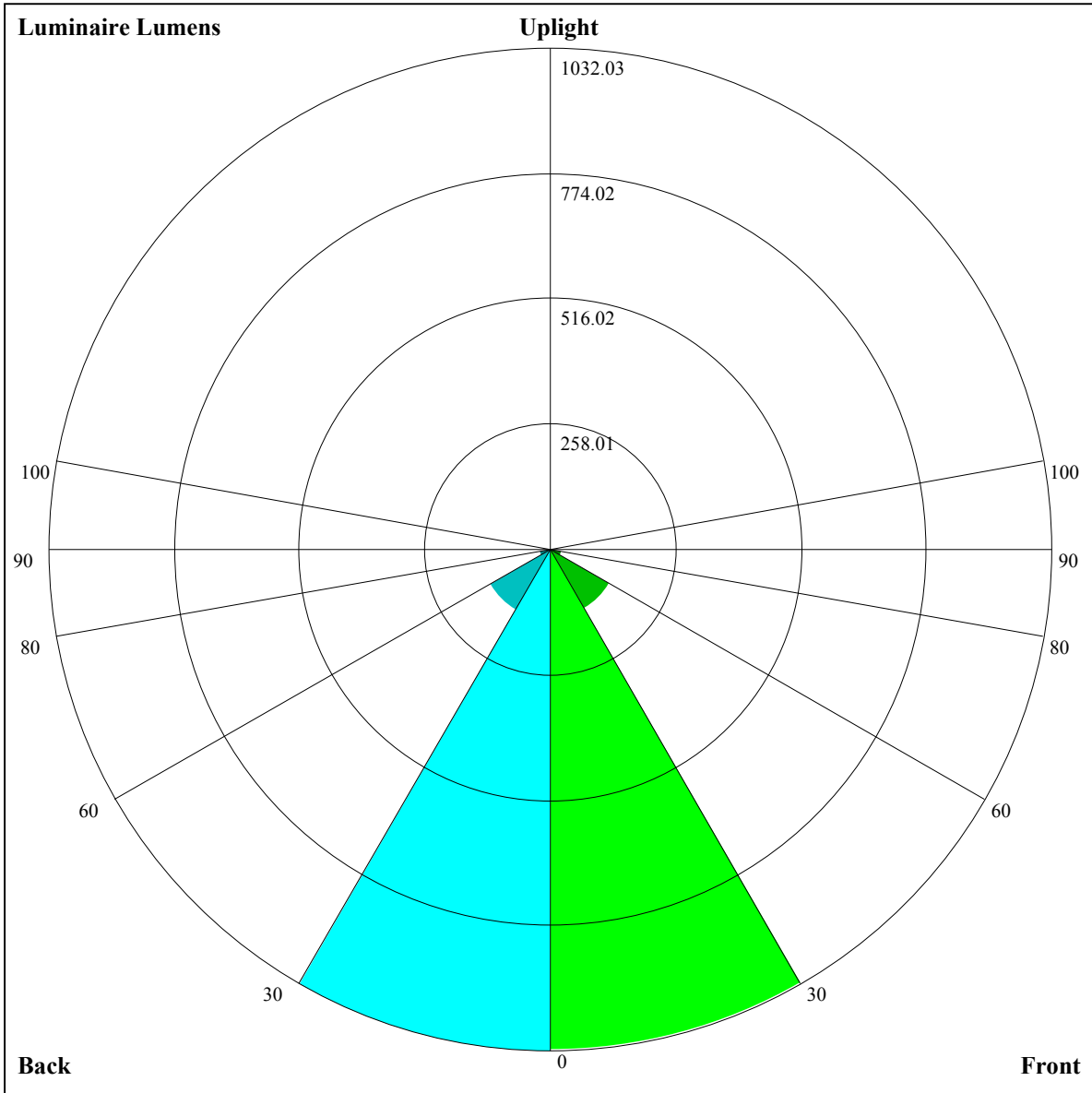
Luminance Limiting Curve





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 RHOFC=20 CU															
0	0.98	0.98	0.98	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.84	0.84	0.84	0.82
1	0.91	0.89	0.88	0.90	0.88	0.86	0.86	0.85	0.83	0.83	0.82	0.81	0.80	0.79	0.79	0.77
2	0.86	0.82	0.80	0.84	0.81	0.79	0.82	0.79	0.77	0.79	0.77	0.76	0.77	0.75	0.74	0.73
3	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.74	0.72	0.70	0.69
4	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.65
5	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.63	0.67	0.65	0.63	0.62
6	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
7	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.56
8	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.60	0.57	0.54	0.53
9	0.60	0.55	0.52	0.59	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49





Luminaire Lumens:

FL=1031.91,FM=140.24,FH=24.27,FVH=7.16

BL=1032.03,BM=143.97,BH=21.91,BVH=7.08

UL=0,UH=0

BUG Rating:B3-U0-G0

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	4557.79	4555.45	4547.26	4529.11	4495.17	4434.89	4379.88	4311.41	4204.90
45.0	4542.57	4554.86	4556.62	4557.21	4540.82	4502.19	4462.98	4394.51	4325.46
90.0	4555.45	4552.52	4539.06	4517.41	4484.64	4443.09	4383.39	4313.75	4244.11
135.0	4544.92	4543.75	4540.82	4528.53	4495.17	4460.64	4413.83	4337.75	4273.96
180.0	4557.79	4550.77	4540.23	4511.56	4472.93	4415.58	4360.57	4293.85	4216.02
225.0	4542.57	4529.11	4505.12	4462.98	4405.05	4339.50	4264.59	4179.74	4065.03
270.0	4555.45	4552.52	4537.31	4513.90	4481.71	4419.68	4358.23	4287.42	4177.39
315.0	4544.92	4537.31	4515.07	4488.73	4450.11	4385.15	4316.09	4239.43	4122.38
360.0	4557.79	4555.45	4547.26	4529.11	4495.17	4434.89	4379.88	4311.41	4204.90
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4098.39	3984.27	3857.28	3695.17	3558.23	3416.02	3239.28	3091.22	2908.63
45.0	4247.04	4135.26	4035.18	3931.60	3800.51	3637.23	3497.36	3352.81	3210.02
90.0	4165.69	4036.94	3921.65	3765.98	3630.21	3494.44	3318.87	3175.49	3030.35
135.0	4193.78	4082.59	3983.10	3834.45	3713.31	3576.95	3408.99	3259.76	3122.82
180.0	4111.26	4013.53	3901.17	3777.10	3612.65	3476.30	3339.94	3163.78	3027.43
225.0	3955.01	3809.87	3681.71	3549.45	3381.49	3241.62	3100.00	2925.01	2778.71
270.0	4083.76	3973.15	3854.35	3695.75	3563.49	3420.11	3249.23	3105.85	2964.22
315.0	4016.46	3894.73	3741.40	3613.82	3472.20	3296.05	3159.69	3016.89	2874.10
360.0	4098.39	3984.27	3857.28	3695.17	3558.23	3416.02	3239.28	3091.22	2908.63
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2764.08	2614.84	2465.61	2268.39	2110.97	1957.64	1807.23	1614.69	1158.63
45.0	3031.52	2887.56	2740.08	2555.15	2396.55	2239.71	2045.42	1895.02	1746.37
90.0	2858.88	2710.24	2561.59	2405.33	2213.38	2057.12	1904.38	1761.59	1567.29
135.0	2982.95	2843.67	2667.51	2520.62	2364.37	2213.38	2016.74	1868.68	1688.43
180.0	2887.56	2699.12	2546.37	2400.65	2205.19	2049.52	1907.31	1731.74	1579.58
225.0	2624.79	2474.98	2282.44	2125.01	1974.61	1793.19	1654.49	1505.84	1143.47
270.0	2817.33	2631.23	2474.39	2323.99	2130.28	1976.36	1804.31	1659.76	1501.16
315.0	2682.73	2529.40	2373.15	2215.72	2023.77	1879.80	1697.80	1545.64	1135.10
360.0	2764.08	2614.84	2465.61	2268.39	2110.97	1957.64	1807.23	1614.69	1158.63
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1158.63	1117.66	914.94	757.57	583.29	457.00	347.39	257.73	182.00
45.0	1547.98	1384.12	1220.25	1010.16	849.22	697.65	556.02	431.37	299.11
90.0	1147.22	1147.22	1060.84	853.26	698.58	523.54	401.58	300.40	211.03
135.0	1529.84	1364.80	1155.29	989.67	826.98	677.16	508.03	389.82	311.40
180.0	1431.52	1267.66	1100.28	896.04	738.61	595.23	436.05	331.30	308.47
225.0	1143.47	979.49	820.31	635.67	503.00	385.66	266.28	200.03	162.28
270.0	1347.83	1137.15	964.51	794.21	639.12	472.34	357.05	307.89	307.89
315.0	1135.10	1010.27	845.59	690.10	515.35	395.20	294.89	218.99	163.10
360.0	1158.63	1117.66	914.94	757.57	583.29	457.00	347.39	257.73	182.00
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	151.05	132.14	115.99	106.16	98.08	90.83	82.87	77.25	72.16
45.0	299.11	208.40	140.92	124.65	110.55	101.42	93.46	86.38	78.89
90.0	171.30	147.89	131.27	116.40	106.86	98.67	91.12	82.93	77.13
135.0	311.40	161.05	140.69	125.88	112.54	103.88	96.21	87.78	81.70
180.0	215.19	147.83	127.46	116.05	106.69	98.55	91.12	82.98	77.07
225.0	137.29	126.35	112.54	103.35	95.33	86.44	79.88	74.21	68.00
270.0	155.03	136.53	120.03	110.08	101.48	93.69	85.09	79.01	73.45
315.0	140.22	125.00	113.65	102.36	94.51	85.79	79.71	74.44	68.59
360.0	151.05	132.14	115.99	106.16	98.08	90.83	82.87	77.25	72.16

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	66.60	62.56	58.93	54.78	51.68	48.16	45.71	43.31	41.08
45.0	73.45	68.65	63.26	59.34	55.83	52.44	49.28	45.88	43.48
90.0	71.87	65.95	61.68	57.00	53.43	50.10	47.17	43.83	41.43
135.0	76.08	70.11	65.66	61.57	57.82	53.31	50.10	47.17	44.07
180.0	71.87	67.01	61.62	57.88	54.31	50.21	47.29	43.83	41.26
225.0	63.50	58.70	55.13	51.79	48.75	45.30	42.72	40.20	38.04
270.0	67.42	63.15	59.40	55.83	51.79	48.81	46.12	43.01	40.56
315.0	64.49	60.75	56.59	53.67	50.80	48.16	45.12	42.78	40.67
360.0	66.60	62.56	58.93	54.78	51.68	48.16	45.71	43.31	41.08
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	38.51	36.64	34.88	33.24	31.43	30.08	28.97	28.27	27.62
45.0	40.61	38.51	36.46	34.70	32.83	31.31	29.50	28.27	26.98
90.0	39.21	37.04	34.70	33.07	31.49	29.67	28.38	27.04	25.57
135.0	41.61	39.39	37.28	35.00	33.36	31.31	29.79	28.56	26.86
180.0	38.92	36.28	34.35	32.60	30.96	29.14	27.80	26.57	25.40
225.0	35.46	33.65	32.07	30.20	28.91	27.56	26.16	24.99	23.70
270.0	38.51	36.05	34.29	32.71	30.96	29.61	28.44	27.39	25.93
315.0	38.68	36.34	34.70	32.77	31.37	30.14	28.68	27.51	26.28
360.0	38.51	36.64	34.88	33.24	31.43	30.08	28.97	28.27	27.62
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	27.27	27.10	27.10	27.15	27.68	28.56	29.61	30.72	32.07
45.0	25.81	24.29	23.12	22.00	20.83	19.37	18.55	17.97	17.44
90.0	24.29	23.06	21.54	20.31	19.25	18.26	17.85	17.50	17.79
135.0	25.57	24.35	23.12	21.59	20.48	19.43	18.73	18.20	18.14
180.0	23.82	22.65	21.54	20.13	19.14	19.14	19.84	20.78	21.89
225.0	22.24	21.13	19.96	18.73	18.14	17.73	17.38	16.97	16.74
270.0	24.87	23.70	22.82	21.36	21.07	21.42	22.53	23.70	25.22
315.0	25.16	24.17	23.35	22.77	23.00	23.94	24.99	26.10	27.45
360.0	27.27	27.10	27.10	27.15	27.68	28.56	29.61	30.72	32.07
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	32.42	32.19	31.60	30.49	29.32	27.97	24.58	20.83	17.50
45.0	17.09	16.68	16.39	16.09	15.80	15.45	15.22	14.98	14.75
90.0	18.61	19.55	20.42	21.01	20.83	20.31	19.66	19.14	17.44
135.0	18.73	19.96	20.89	21.54	22.00	21.65	20.95	19.72	17.85
180.0	23.17	23.53	23.53	23.17	22.41	21.71	21.07	20.31	17.85
225.0	16.44	16.15	15.86	15.63	15.39	15.22	15.16	15.22	15.27
270.0	26.51	27.68	28.68	29.20	28.09	25.22	22.06	19.37	17.38
315.0	28.44	29.50	30.37	30.08	28.73	25.11	21.89	18.61	16.27
360.0	32.42	32.19	31.60	30.49	29.32	27.97	24.58	20.83	17.50
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	14.51	14.05	13.87	13.40	12.58	11.82	11.41	10.59	10.18
45.0	14.63	14.51	14.28	14.22	13.93	12.99	11.70	11.29	10.71
90.0	15.27	14.22	13.99	13.69	12.41	11.70	11.47	11.06	10.36
135.0	15.33	14.92	14.28	13.99	12.93	11.88	11.47	11.29	10.53
180.0	15.22	13.87	13.75	13.34	12.23	11.24	11.18	10.53	10.18
225.0	15.39	15.22	14.69	13.93	11.59	11.41	10.53	10.07	10.24
270.0	15.45	15.33	15.27	14.92	14.57	11.76	11.29	10.42	10.18
315.0	14.92	14.86	14.81	14.34	14.16	11.70	10.94	10.24	10.18
360.0	14.51	14.05	13.87	13.40	12.58	11.82	11.41	10.59	10.18

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.24
45.0	10.12
90.0	10.12
135.0	10.12
180.0	10.18
225.0	10.48
270.0	10.36
315.0	10.36
360.0	10.24