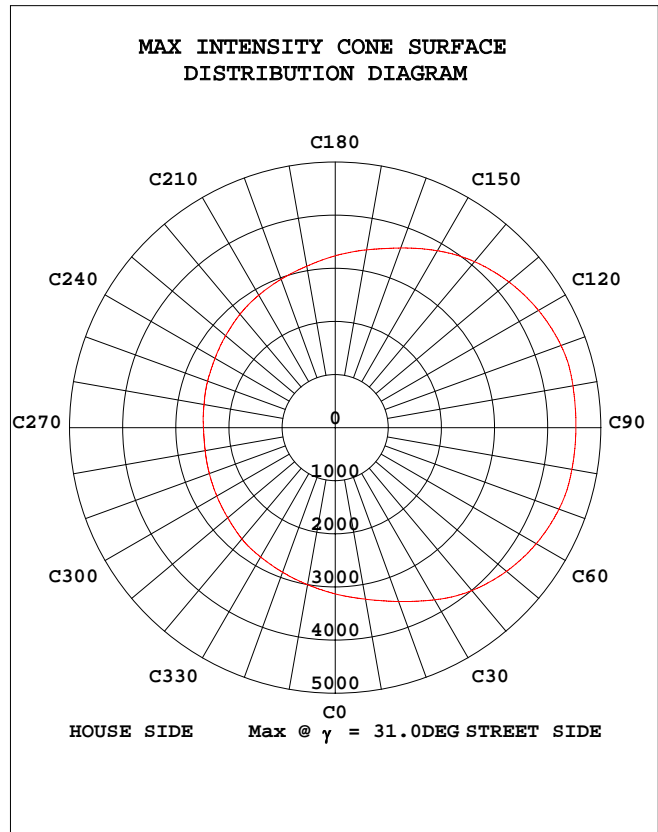
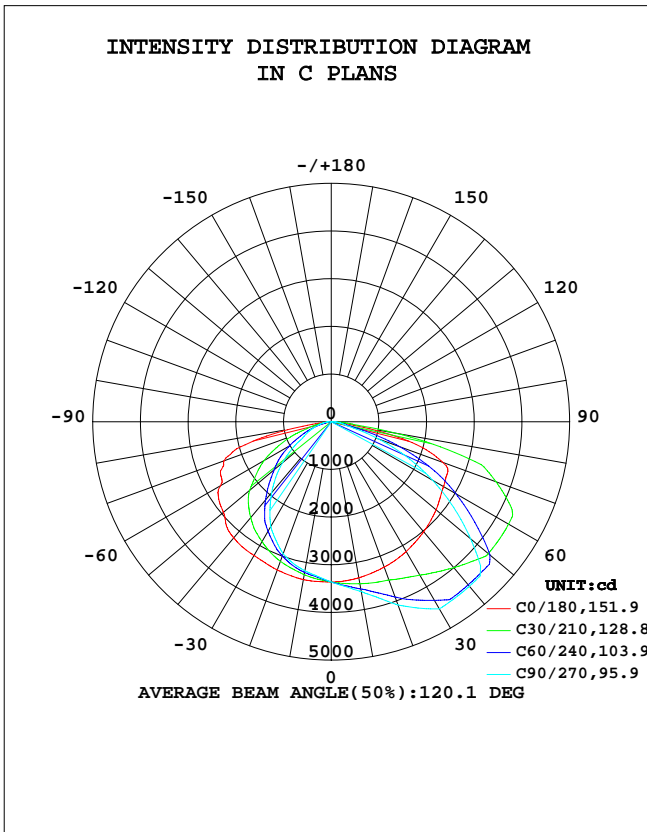


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

DATA OF LAMP		PHOTOMETRIC DATA Eff: 118.01 lm/W			
MODEL	MSD-LED-SBRR-115N50-EX39	I _{max} (cd)	4550	η street_up(%)	0.0
NOMINAL POWER(W)	115	LOR(%)	100.0	η street_down(%)	65.1
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	13140	η house_up(%)	0.0
NOMINAL FLUX(lm)	13139.9	MAXIMUM @(C,γ)	105,31.0	η house_down(%)	34.9
LAMPS INSIDE	1	η up(%)	0.0	76 FLASHAREA(m2)	0.05000
TEST VOLTAGE(V)	120	η down(%)	100.0	SLI	22.988



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25DEG
Operators:
Test Date:2016-08-03

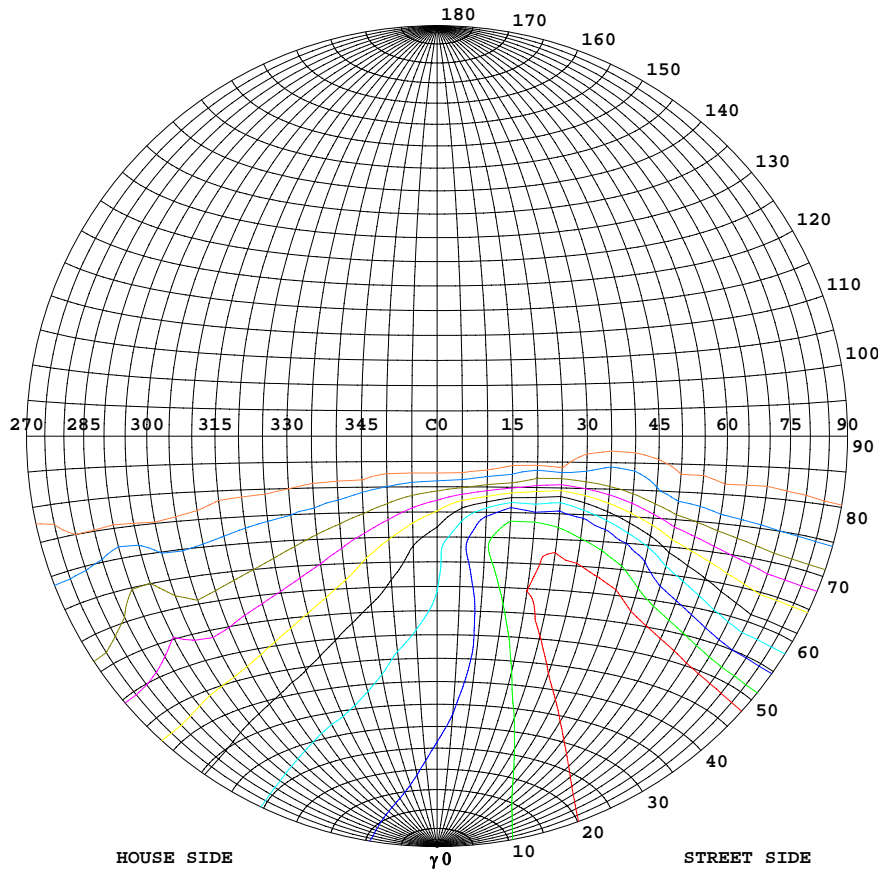
γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
Humidity:65.0%
Test Distance:7.850m [K=1.0000]
Remarks:

Note: SLI:Specific Luminaire Index

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		



Classification:

IES:Type III - Very Short
 CIE:Average - Short
 IES:Semi cut-off
 CIE:Non-cut-off
 Max.At80:123.1cd/klm
 Max.At90:2.268cd/klm
 Max.80-90:123.1cd/klm

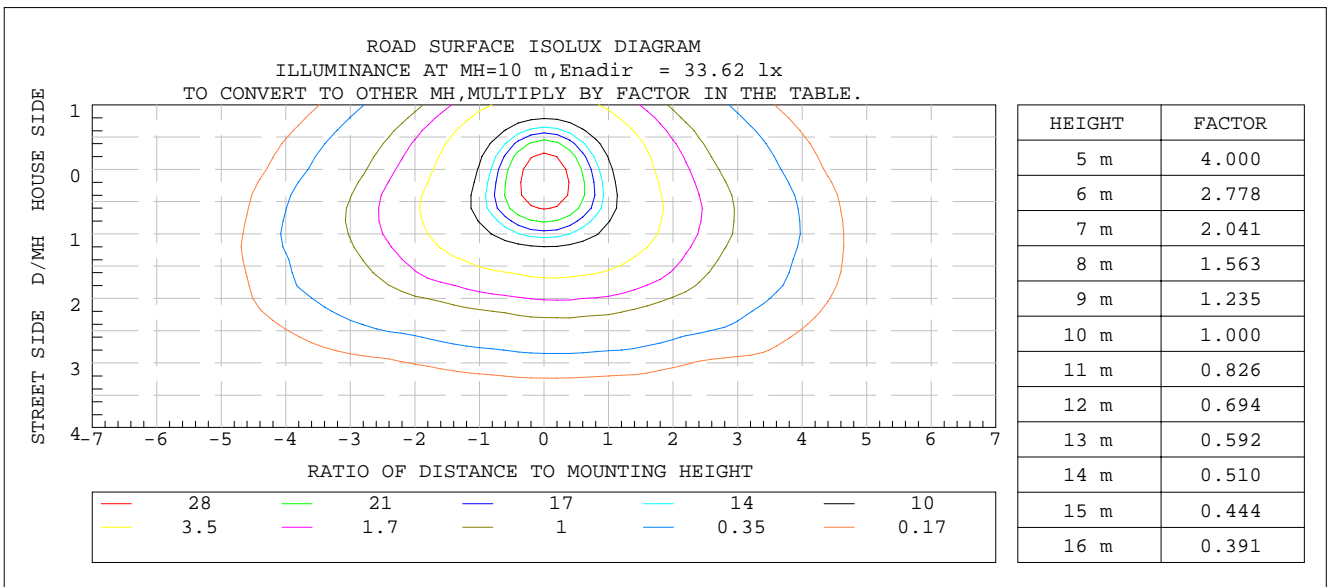
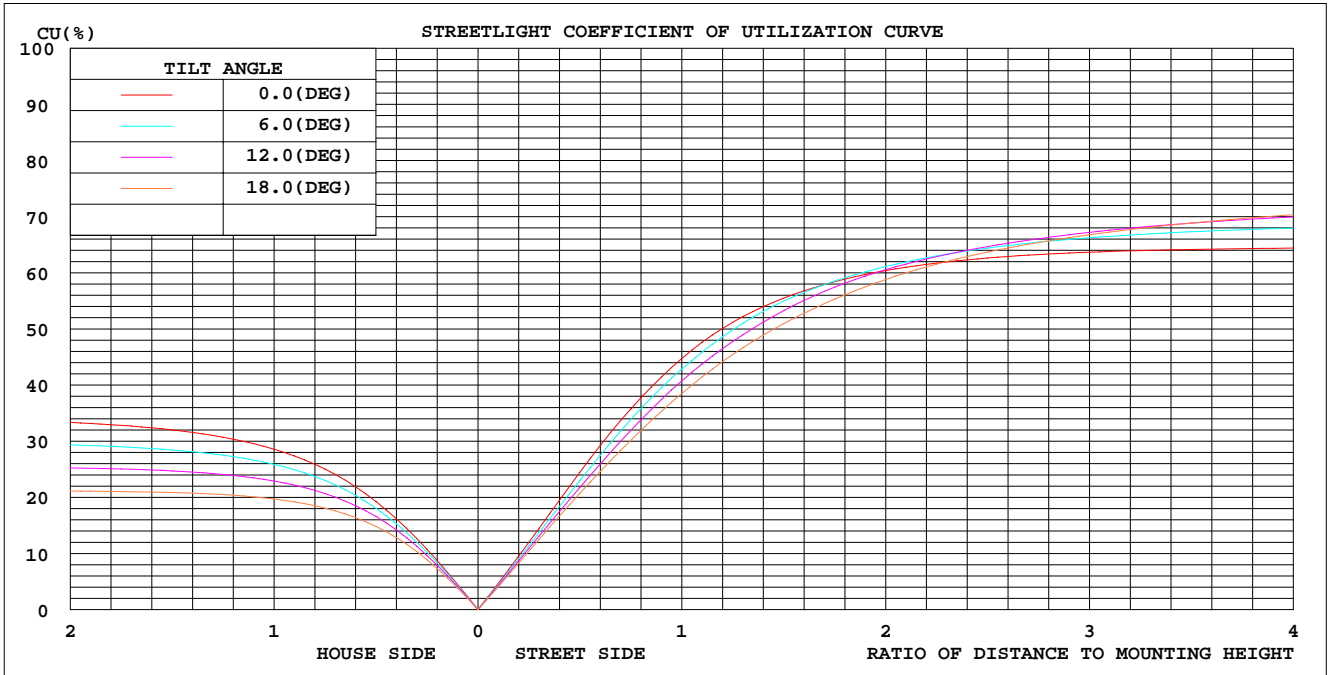
ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	4550
90%	4095
80%	3640
70%	3185
60%	2730
50%	2275
40%	1820
30%	1365
20%	910
10%	455
5%	227

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25DEG
Operators:
Test Date: 2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
Humidity: 65.0%
Test Distance: 7.850m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	*lum,lamp
5	3350	3430	3471	3439	3362	3293	3257	3275	0- 5	80.33	80.33	0.61,0.61
10	3324	3510	3615	3538	3361	3229	3176	3197	5- 10	240.7	321.0	2.44,2.44
15	3286	3604	3822	3653	3337	3144	3077	3114	10- 15	400.4	721.4	5.49,5.49
20	3245	3733	4087	3802	3309	3048	2951	3003	15- 20	558.6	1280	9.74,9.74
25	3199	3899	4310	3980	3269	2934	2746	2881	20- 25	713.2	1993	15.2,15.2
30	3143	4075	4532	4147	3240	2777	2541	2723	25- 30	859.5	2853	21.7,21.7
35	3079	4252	4518	4297	3222	2584	2243	2528	30- 35	992.7	3845	29.3,29.3
40	3014	4412	4505	4435	3181	2373	1944	2313	35- 40	1102	4947	37.7,37.7
45	2944	4404	4424	4456	3105	2100	1644	2029	40- 45	1190	6137	46.7,46.7
50	2872	4402	3812	4468	2952	1820	1331	1751	45- 50	1239	7376	56.1,56.1
55	2787	4326	3134	4392	2875	1516	1017	1469	50- 55	1231	8607	65.5,65.5
60	2720	3824	2456	3916	2680	1174	702.7	1136	55- 60	1178	9785	74.5,74.5
65	2670	3349	1753	3459	2564	836.0	560.0	793.3	60- 65	1080	10864	82.7,82.7
70	2486	2647	1051	2735	2396	553.8	417.3	514.4	65- 70	938.1	11802	89.8,89.8
75	1848	1520	407.2	1578	1871	340.6	280.0	336.2	70- 75	722.2	12525	95.3,95.3
80	703.0	481.4	234.4	575.7	824.5	149.4	186.2	181.3	75- 80	420.2	12945	98.5,98.5
85	103.9	261.4	120.4	317.6	117.4	84.13	97.80	101.8	80- 85	154.6	13099	99.7,99.7
90	18.03	13.58	6.469	7.626	12.26	16.45	9.416	19.03	85- 90	40.46	13140	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

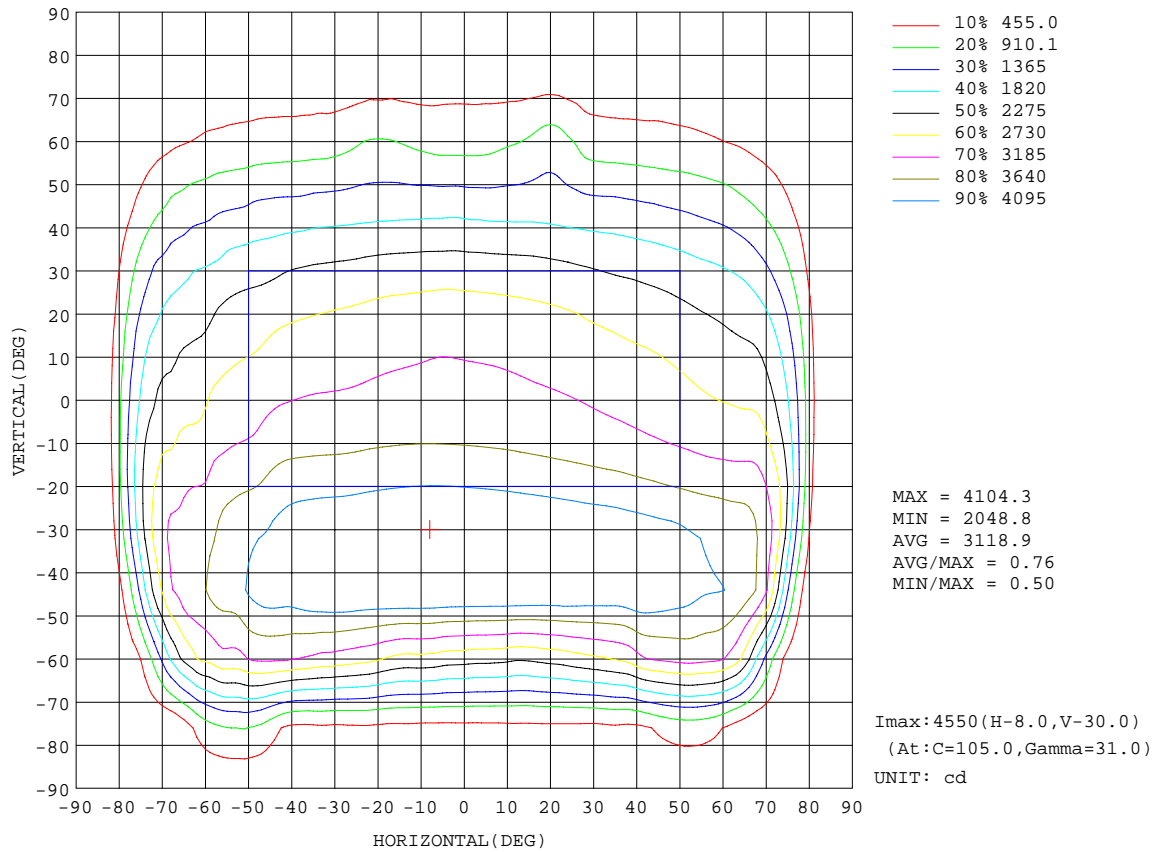
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ISOCANDELA DIAGRAM

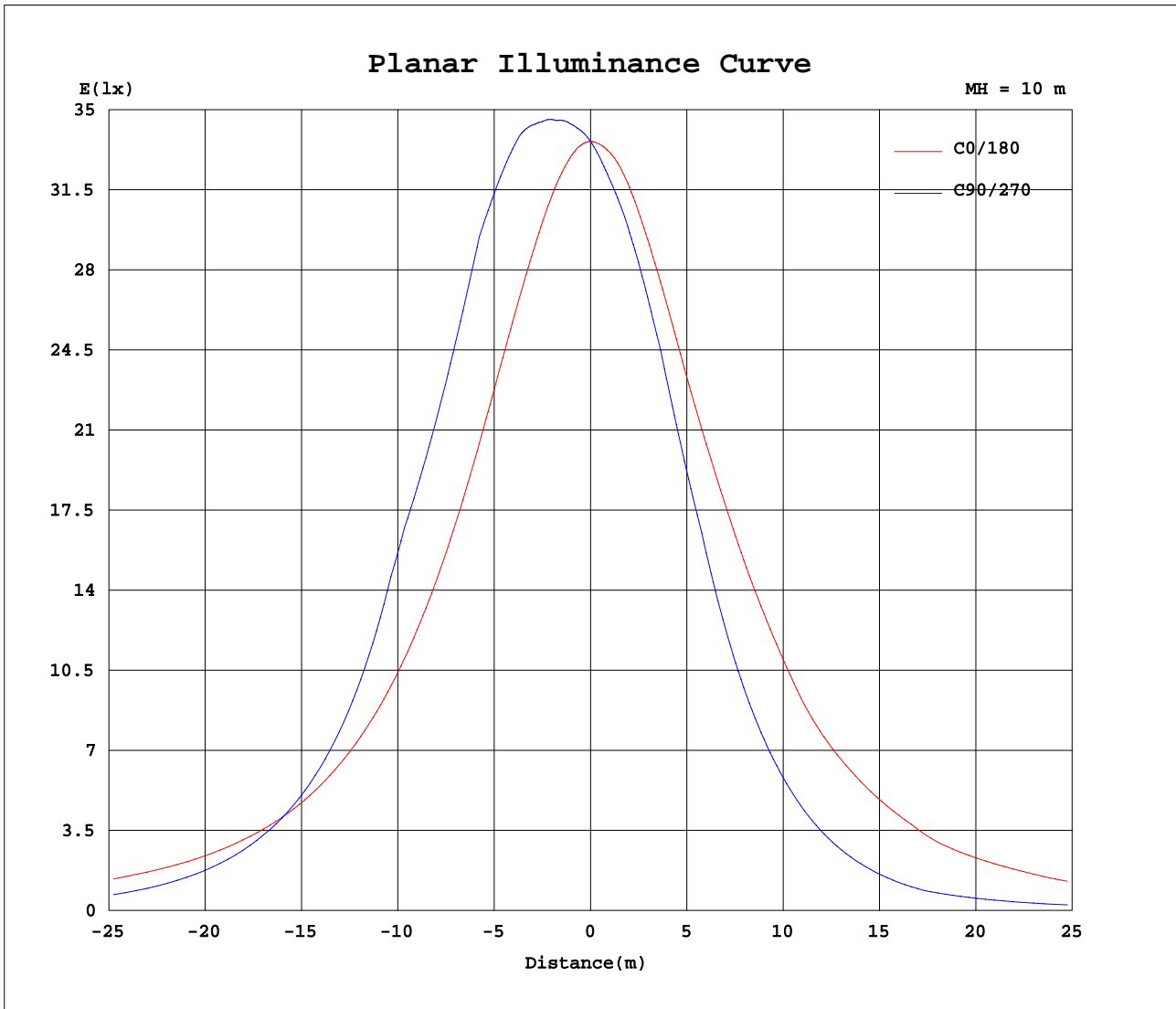
Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25DEG
 Operators:
 Test Date: 2016-08-03

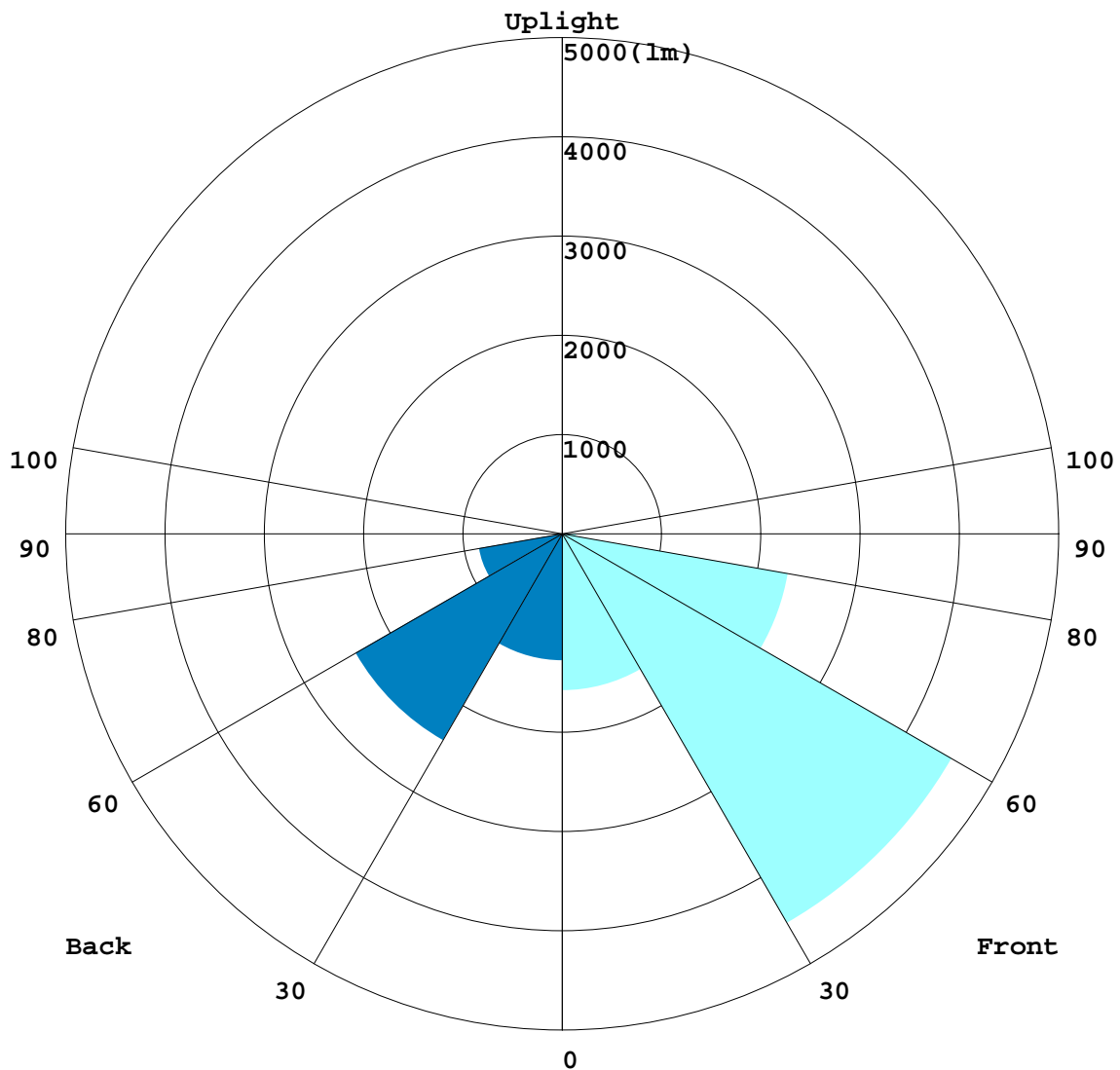
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity: 65.0%
 Test Distance: 7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LCS REPORT

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

BUG REPORT

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	1577	12.0
FM - Front-Medium(30-60)	4529.3	34.5
FH - Front-High(60-80)	2309.1	17.6
FVH - Front-Very High(80-90)	140.74	1.1
Total Forward Light	8556.1	65.1

BL - Back-Low(0-30)	1275.7	9.7
BM - Back-Medium(30-60)	2402.8	18.3
BH - Back-High(60-80)	851	6.5
BVH - Back-Very High(80-90)	54.316	0.4
Total Back Light	4583.8	34.9

UL - Uplight-Low(90-100)	0	0.0
UH - Uplight-High(100-180)	0	0.0
Total Up Light	0	0.0

BUG(Back,Up,Glare) Rating	B3-U0-G2
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	4583.8	0	4583.8
Street Side	8556.1	0	8556.1

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

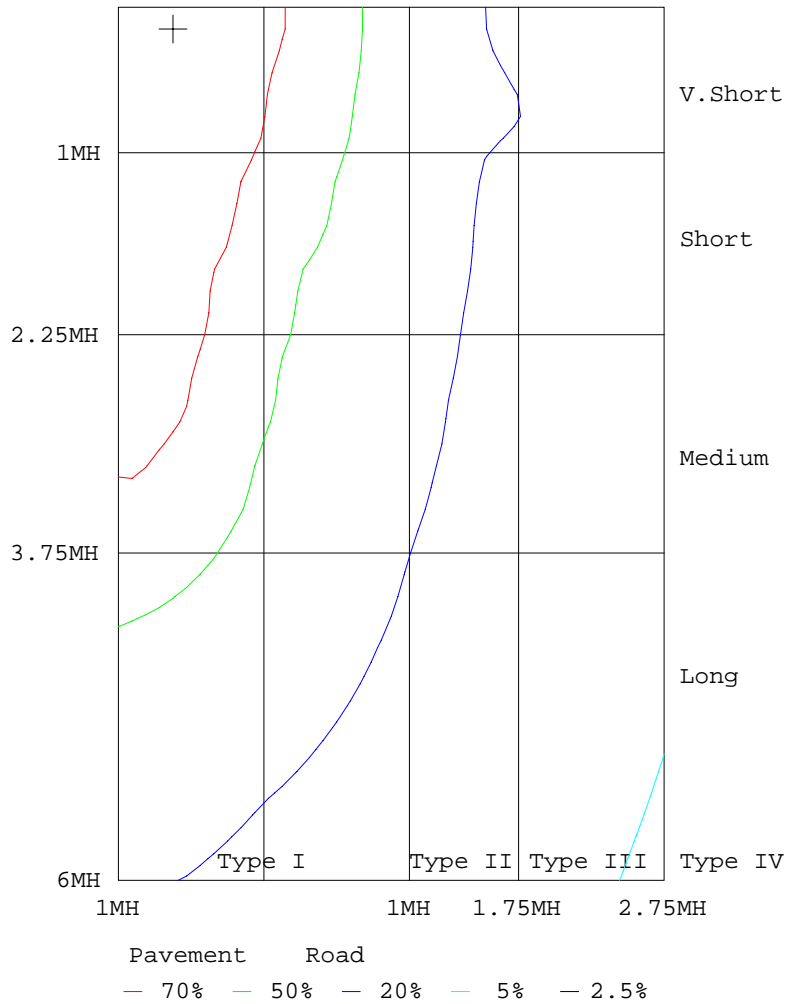
γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ROAD ISOCANDELA REPORT

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362
5	3350	3360	3369	3379	3388	3397	3406	3415	3423	3430	3437	3444	3450	3456	3461	3465	3468	3470	3471
10	3324	3345	3366	3387	3407	3429	3450	3470	3490	3510	3528	3546	3561	3576	3588	3597	3605	3611	3615
15	3286	3317	3350	3382	3418	3455	3493	3529	3563	3604	3643	3679	3711	3739	3764	3786	3804	3815	3822
20	3245	3286	3328	3375	3426	3480	3535	3604	3670	3733	3795	3855	3911	3960	4001	4035	4061	4079	4087
25	3199	3250	3305	3371	3440	3523	3615	3709	3805	3899	3986	4058	4123	4177	4222	4258	4284	4302	4310
30	3143	3208	3282	3371	3473	3590	3716	3850	3972	4075	4169	4254	4326	4387	4438	4478	4508	4525	4532
35	3079	3166	3270	3385	3527	3682	3848	3998	4132	4252	4359	4456	4479	4492	4501	4507	4513	4516	4518
40	3014	3115	3247	3408	3594	3805	3995	4165	4312	4412	4434	4452	4466	4482	4495	4500	4501	4503	4505
45	2944	3066	3224	3432	3681	3926	4152	4354	4389	4404	4426	4454	4460	4470	4490	4496	4454	4430	4424
50	2872	3021	3227	3491	3793	4076	4300	4365	4376	4402	4420	4429	4342	4162	4021	3917	3854	3814	3812
55	2787	2986	3253	3596	3951	4218	4301	4399	4442	4326	4118	3886	3675	3471	3303	3183	3150	3123	3134
60	2720	2977	3337	3743	4092	4193	4294	4369	4205	3824	3512	3257	3015	2780	2595	2446	2440	2432	2456
65	2670	3023	3498	3909	4061	4144	4141	3935	3705	3349	2921	2616	2325	2075	1906	1772	1753	1741	1753
70	2486	3003	3555	3863	4036	3884	3675	3494	3179	2647	2075	1765	1525	1339	1209	1103	1070	1050	1051
75	1848	2433	2981	3452	3229	3270	2975	2478	1988	1520	1088	876	687	578	502	458	434	414	407
80	703	846	1069	1278	1508	1618	1355	1055	767	481	325	324	274	275	273	260	251	239	234
85	104	100	102	152	118	177	334	394	356	261	170	167	142	145	151	143	136	126	120
90	18.0	22.1	20.5	18.0	15.8	14.2	12.9	12.7	13.9	13.6	8.96	8.05	9.97	16.0	29.8	25.4	19.7	11.9	6.47

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25DEG
 Operators:
 Test Date:2016-08-03

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Humidity:65.0%
 Test Distance:7.850m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

Table--2

UNIT: cd

C (DEG) \ γ (DEG)	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185
0	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362
5	3471	3471	3469	3465	3462	3457	3451	3445	3439	3432	3424	3417	3408	3400	3391	3381	3372	3362	3354
10	3616	3614	3610	3603	3594	3583	3570	3555	3538	3519	3499	3480	3460	3440	3421	3401	3381	3361	3341
15	3824	3820	3810	3795	3776	3752	3723	3690	3653	3615	3583	3549	3512	3476	3440	3406	3371	3337	3307
20	4090	4083	4068	4043	4009	3966	3916	3860	3802	3744	3683	3618	3564	3511	3457	3406	3357	3309	3267
25	4311	4307	4292	4267	4230	4184	4128	4061	3980	3893	3805	3716	3625	3540	3468	3397	3332	3269	3212
30	4533	4527	4512	4481	4436	4379	4312	4234	4147	4054	3942	3823	3703	3585	3483	3397	3317	3240	3166
35	4524	4533	4540	4538	4531	4520	4494	4400	4297	4190	4079	3955	3814	3671	3526	3416	3315	3222	3129
40	4510	4521	4527	4526	4519	4502	4480	4458	4435	4353	4233	4096	3939	3767	3593	3435	3305	3181	3073
45	4438	4474	4515	4517	4506	4487	4476	4477	4456	4433	4401	4236	4050	3846	3627	3404	3248	3105	2992
50	3839	3919	3998	4100	4236	4382	4498	4502	4468	4421	4364	4292	4068	3802	3542	3294	3112	2952	2828
55	3170	3273	3347	3470	3658	3848	4061	4250	4392	4353	4291	4203	4076	3847	3569	3290	3065	2875	2725
60	2503	2628	2689	2857	3106	3315	3531	3726	3916	4086	4284	4183	3985	3874	3546	3226	2926	2680	2498
65	1789	1886	1954	2134	2404	2660	2974	3236	3459	3686	3867	3878	3850	3667	3518	3188	2852	2564	2321
70	1071	1133	1199	1337	1540	1729	1975	2298	2735	3192	3330	3375	3519	3546	3374	3163	2770	2396	2083
75	408	426	468	523	650	758	947	1166	1578	2093	2372	2768	2912	2915	3009	2749	2338	1871	1558
80	232	236	253	271	299	287	313	321	576	1012	1263	1440	1532	1581	1379	1221	1049	824	680
85	119	123	132	143	153	147	158	168	318	499	562	515	240	93.8	181	127	125	117	115
90	6.60	9.57	12.3	12.7	8.81	7.47	7.42	7.43	7.63	7.93	8.12	8.18	8.50	9.30	10.5	11.9	13.0	12.3	14.9

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 5.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
Temperature:25DEG	Humidity:65.0%
Operators:	Test Distance:7.850m [K=1.0000]
Test Date:2016-08-03	Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm																	

Table--3

UNIT: cd

C(DEG) γ (DEG)	190	195	200	205	210	215	220	225	230	235	240	245	250	255	260	265	270	275	280
0	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362
5	3346	3337	3329	3321	3314	3307	3300	3293	3287	3281	3276	3272	3268	3264	3261	3258	3257	3255	3255
10	3322	3304	3286	3270	3257	3245	3236	3229	3222	3216	3210	3204	3197	3190	3185	3180	3176	3174	3173
15	3277	3248	3225	3204	3187	3171	3158	3144	3134	3126	3120	3114	3108	3100	3091	3083	3077	3073	3072
20	3226	3191	3163	3140	3117	3092	3069	3048	3026	3008	2996	2990	2988	2983	2974	2962	2951	2946	2944
25	3160	3116	3081	3050	3022	2993	2964	2934	2907	2872	2838	2813	2797	2784	2772	2758	2746	2742	2744
30	3099	3042	2992	2947	2905	2864	2827	2777	2732	2690	2651	2620	2597	2576	2561	2552	2541	2537	2540
35	3047	2976	2911	2847	2784	2710	2639	2584	2539	2500	2437	2378	2331	2298	2271	2260	2243	2238	2242
40	2980	2896	2813	2727	2628	2535	2456	2373	2285	2211	2144	2085	2034	1999	1976	1964	1944	1936	1937
45	2891	2788	2680	2565	2456	2360	2222	2100	1996	1917	1847	1785	1737	1695	1679	1665	1644	1633	1634
50	2709	2579	2449	2332	2230	2079	1940	1820	1709	1622	1561	1515	1471	1412	1374	1347	1331	1328	1356
55	2584	2430	2265	2103	1919	1776	1625	1516	1407	1327	1307	1283	1232	1147	1073	1028	1017	1024	1091
60	2337	2176	2029	1799	1625	1472	1313	1174	1079	1008	1015	1045	1000	892	779	710	703	723	833
65	2106	1883	1627	1447	1247	1116	967	836	740	675	715	785	757	673	592	562	560	570	632
70	1788	1484	1250	1045	873	719	610	554	505	470	466	507	496	449	406	416	417	418	427
75	1286	973	775	605	493	434	390	341	293	280	236	235	232	226	224	275	280	270	227
80	521	412	317	273	227	187	165	149	131	142	118	123	133	137	141	182	186	178	143
85	100	92.0	68.6	63.4	68.1	77.3	81.8	84.1	73.2	74.4	64.3	67.0	70.9	73.0	74.5	95.4	97.8	93.3	75.8
90	16.2	17.2	17.9	18.3	18.1	18.0	17.5	16.4	15.0	13.3	11.6	10.5	9.33	8.61	8.42	9.56	9.42	9.27	9.13

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 5.0DEG	γ Interval: 0.5DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.350
Temperature:25DEG	Humidity:65.0%
Operators:	Test Distance:7.850m [K=1.0000]
Test Date:2016-08-03	Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.6V I:0.9263A P:111.3W PF:0.9965 Lamp Flux:13139.9x1 lm		

Table--4

UNIT: cd

C(DEG) γ (DEG)	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355				
0	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362	3362				
5	3255	3257	3259	3261	3265	3269	3275	3281	3288	3296	3304	3313	3322	3331	3341				
10	3173	3175	3178	3181	3185	3190	3197	3204	3213	3224	3237	3252	3268	3286	3305				
15	3074	3078	3082	3087	3094	3103	3114	3126	3137	3149	3164	3182	3204	3230	3257				
20	2946	2950	2957	2965	2976	2989	3003	3019	3038	3061	3083	3107	3136	3170	3207				
25	2751	2764	2782	2806	2834	2862	2881	2903	2928	2956	2987	3022	3060	3103	3150				
30	2547	2563	2586	2613	2644	2680	2723	2773	2805	2838	2877	2921	2969	3021	3080				
35	2263	2297	2344	2396	2449	2483	2528	2577	2635	2697	2751	2810	2871	2934	3003				
40	1962	2002	2055	2105	2161	2229	2313	2381	2444	2521	2609	2689	2771	2854	2930				
45	1663	1709	1763	1810	1865	1940	2029	2134	2249	2341	2446	2557	2657	2766	2848				
50	1407	1470	1526	1532	1571	1648	1751	1862	1989	2135	2261	2395	2523	2642	2752				
55	1171	1283	1377	1312	1275	1352	1469	1575	1701	1853	2032	2182	2345	2490	2632				
60	943	1130	1206	1046	953	1034	1136	1252	1387	1537	1717	1927	2122	2324	2515				
65	715	893	913	714	634	696	793	904	1035	1196	1372	1600	1877	2121	2383				
70	475	581	563	444	444	474	514	558	674	815	985	1188	1459	1777	2125				
75	233	250	250	236	257	288	336	374	406	449	552	702	880	1151	1500				
80	140	136	127	125	133	142	181	179	185	226	266	275	358	462	602				
85	75.0	73.4	69.2	69.2	74.0	80.2	102	91.5	83.9	88.3	94.4	103	109	107	107				
90	9.80	10.8	11.9	13.4	14.9	16.7	19.0	22.2	25.7	28.3	28.7	26.8	23.1	19.6	14.4				

C Range: 0 - 360DEG γ Range: 0 - 90DEG
 C Interval: 5.0DEG γ Interval: 0.5DEG
 Test Speed: HIGH Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.350
 Temperature: 25DEG Humidity: 65.0%
 Operators: Test Distance: 7.850m [K=1.0000]
 Test Date: 2016-08-03 Remarks: