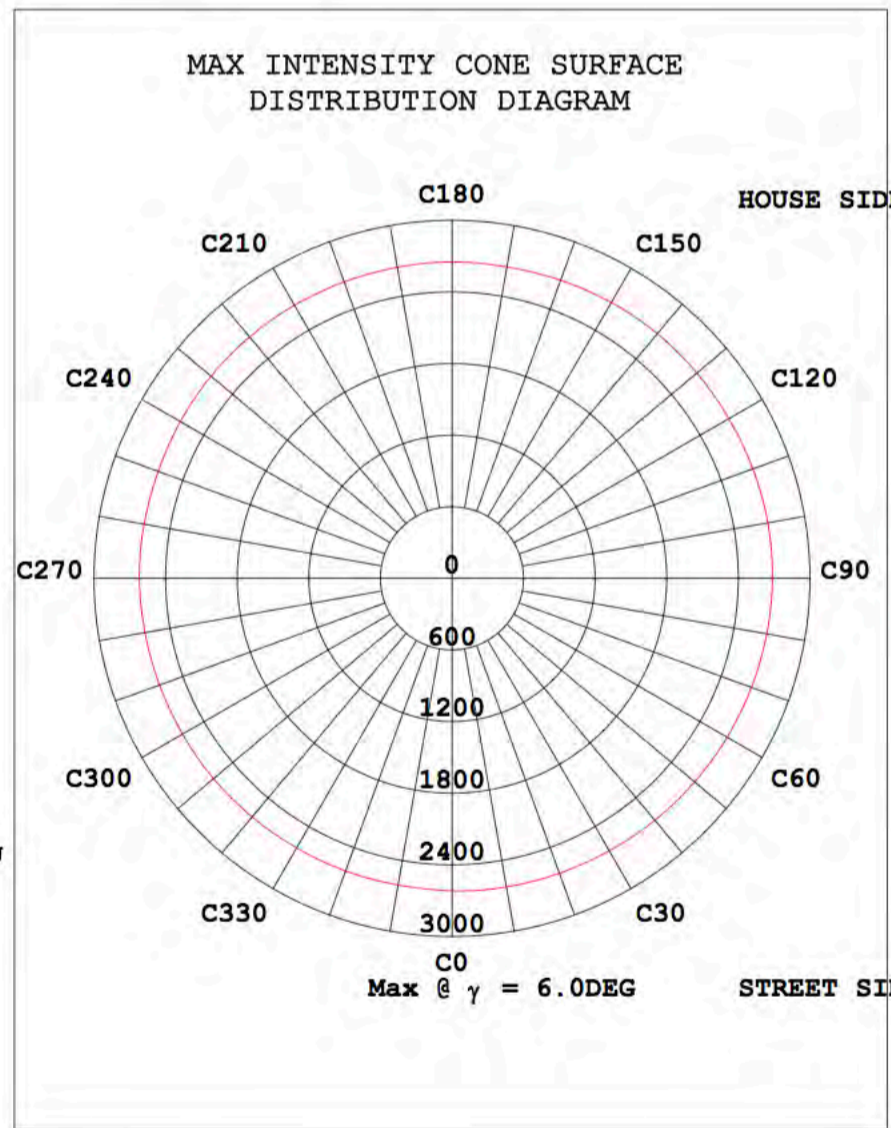
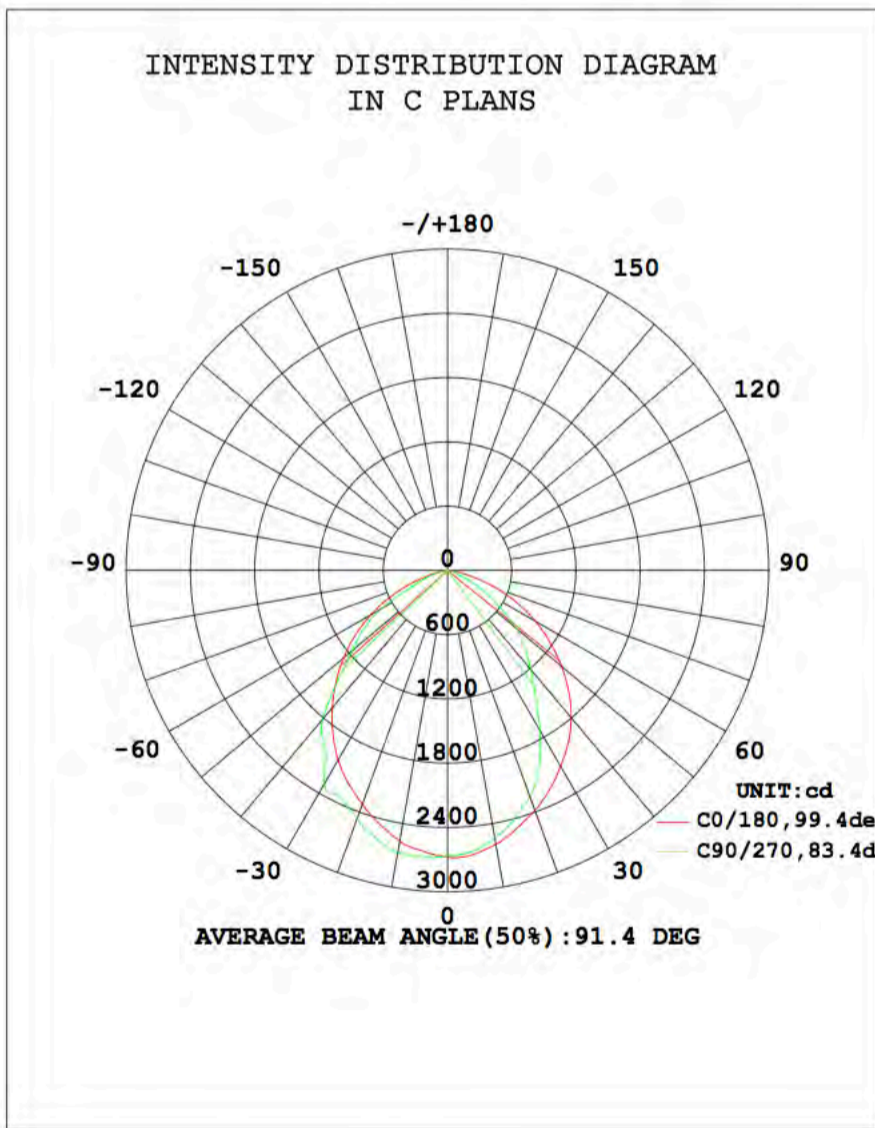


STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE:83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 115.32 lm/W			
MODEL	83364,83365	I _{max} (cd)	2687	η street_up (%)	0.0
NOMINAL POWER (W)	50	LOR (%)	100.0	η street_down (%)	51.2
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	5668	η house_up (%)	0.0
NOMINAL FLUX (lm)	5668	MAXIMUM @ (C, γ)	100, 6.0	η house_down (%)	48.8
LAMPS INSIDE	1	η up (%)	0.0	76 FLASHAREA (m2)	
TEST VOLTAGE (V)	120.0	η down (%)	100.0	SLI	



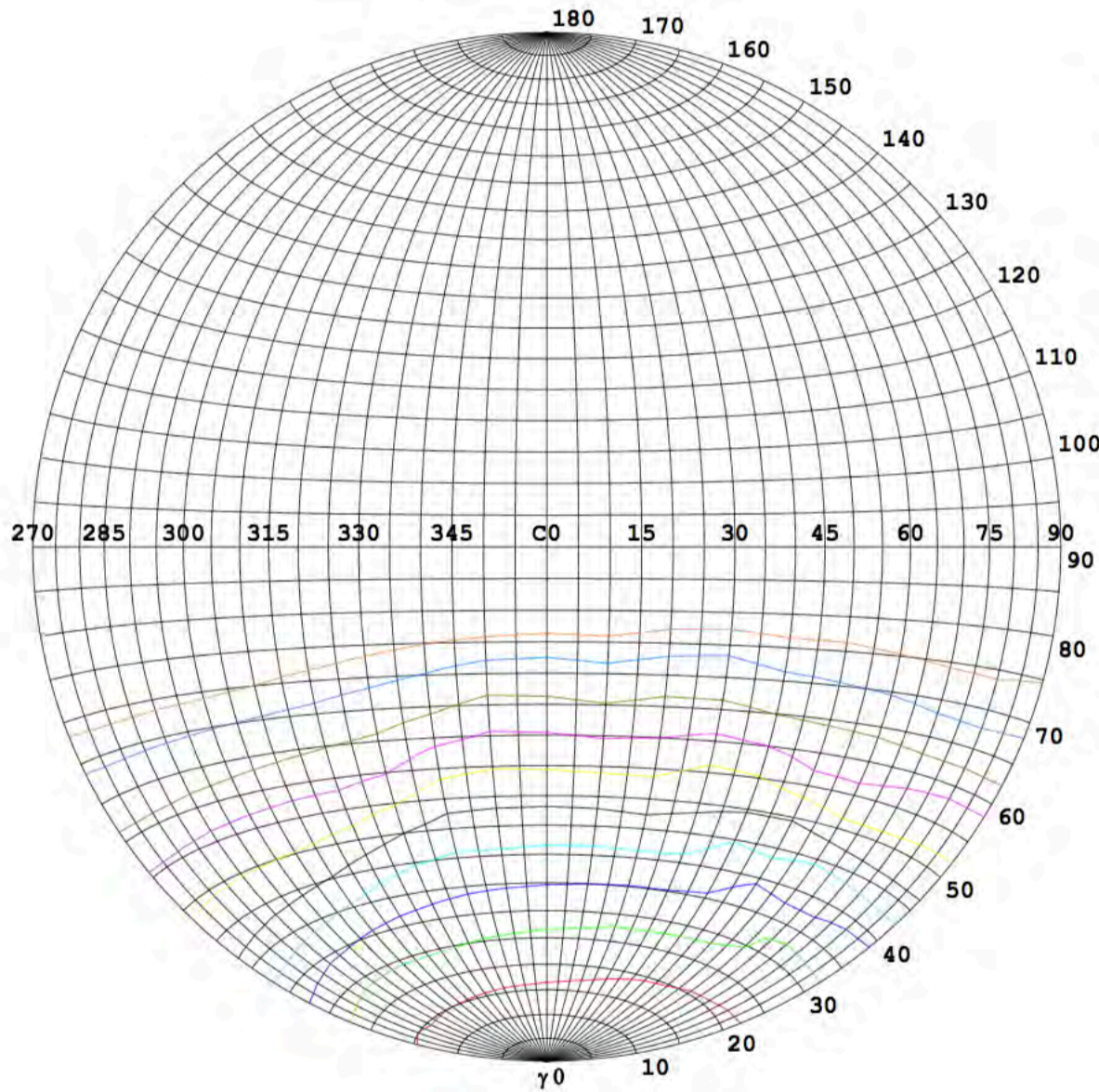
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.543m [K=1.0000]
 Remarks:

Note: SLI: Specific Luminaire Index

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE:83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:



Classification:

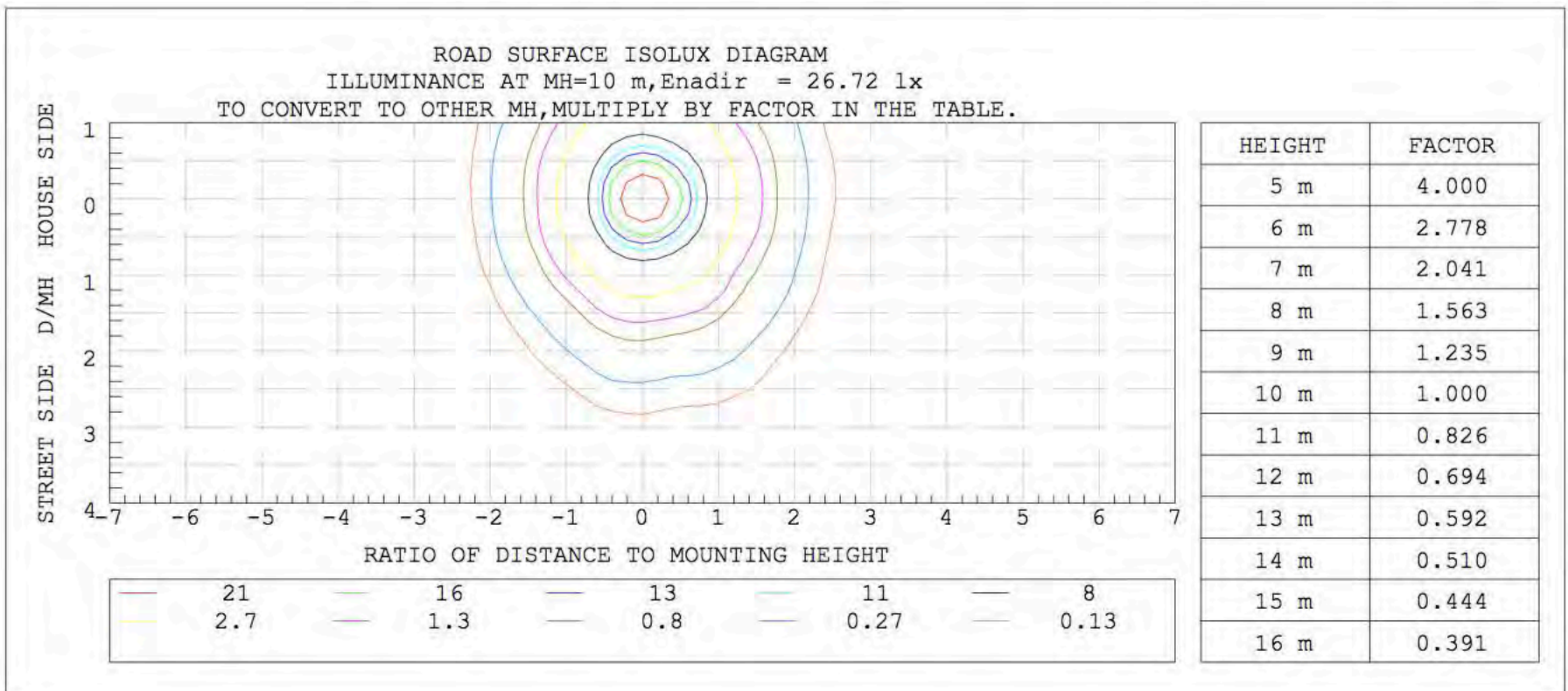
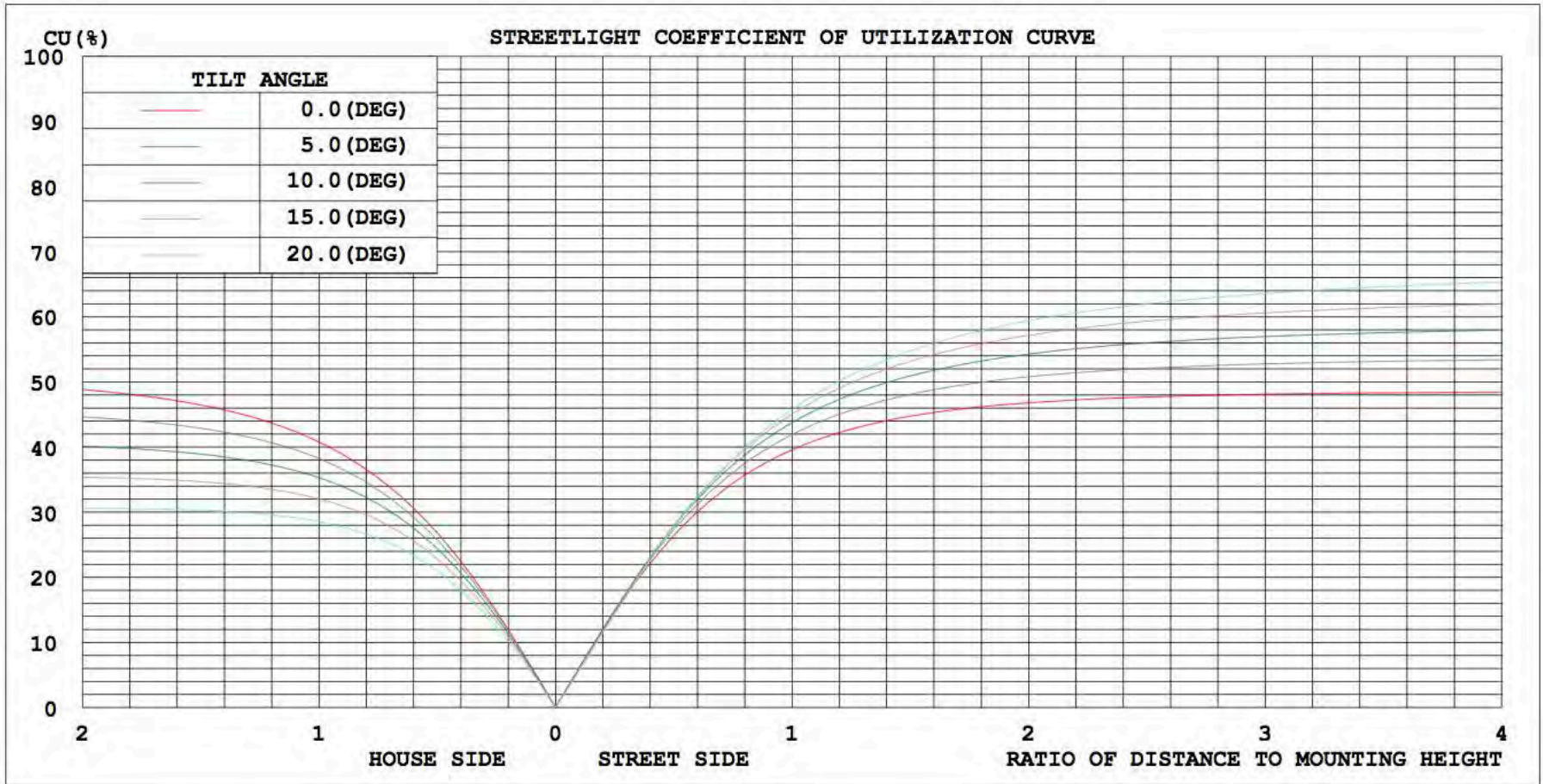
IES:Type II - Very Short
 CIE:Narrow - Short
 IES:Cut-off
 CIE:Full cut-off
 Max.At80:22.40cd/klm
 Max.At90:0.8597cd/klm
 Max.80-90:22.40cd/klm

ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	2687
90%	2418
80%	2149
70%	1881
60%	1612
50%	1343
40%	1075
30%	806
20%	537
10%	269
5%	134

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.543m [K=1.0000]
 Remarks:

**COEFFICIENT OF UTILIZATION CURVE
AND ISOLUX DIAGRAM**



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.6DEG
Operators: David
Test Date: 2017-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity: 67.1%
Test Distance: 2.543m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE: 83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum
10	2567	2624	2672	2650	2595	2566	2538	2539	0- 10	251.2	251.2	4.43
20	2323	2400	2465	2437	2384	2316	2251	2282	10- 20	700.5	951.6	16.8
30	2044	2088	2300	2121	2112	2000	1728	1932	20- 30	1017	1969	34.7
40	1674	1777	1814	1842	1798	1520	1206	1419	30- 40	1149	3118	55
50	1266	1313	1159	1375	1392	1014	838.8	923.0	40- 50	1074	4192	74
60	823.7	747.3	702.4	783.5	951.0	591.6	406.2	496.8	50- 60	823.9	5016	88.5
70	373.0	304.4	223.8	355.9	488.5	218.2	107.9	155.9	60- 70	465.5	5481	96.7
80	48.41	72.01	60.50	100.2	108.3	43.92	33.35	29.99	70- 80	162.0	5643	99.6
90	0.3925	1.416	4.186	4.668	2.957	2.511	1.623	0.3478	80- 90	24.41	5668	100
100	0	0.0081	0.0460	0.0035	0	0	0	0	90-100	0.4124	5668	100
110	0	0	0	0	0	0	0	0	100-110	0.0016	5668	100
120	0.0065	0	0	0	0.0053	0.0042	0.0020	0.0046	110-120	0.0007	5668	100
130	0.0156	0.0060	0.0026	0.0077	0.0147	0.0154	0.0102	0.0151	120-130	0.0057	5668	100
140	0.0233	0.0154	0.0084	0.0162	0.0226	0.0228	0.0224	0.0231	130-140	0.0116	5668	100
150	0.0289	0.0225	0.0190	0.0233	0.0277	0.0290	0.0301	0.0283	140-150	0.0141	5668	100
160	0.0322	0.0285	0.0257	0.0280	0.0325	0.0335	0.0335	0.0306	150-160	0.0131	5668	100
170	0.0344	0.0334	0.0303	0.0319	0.0342	0.0351	0.0325	0.0309	160-170	0.0090	5668	100
180	0	0	0	0	0	0	0	0	170-180	0.0025	5668	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.543m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

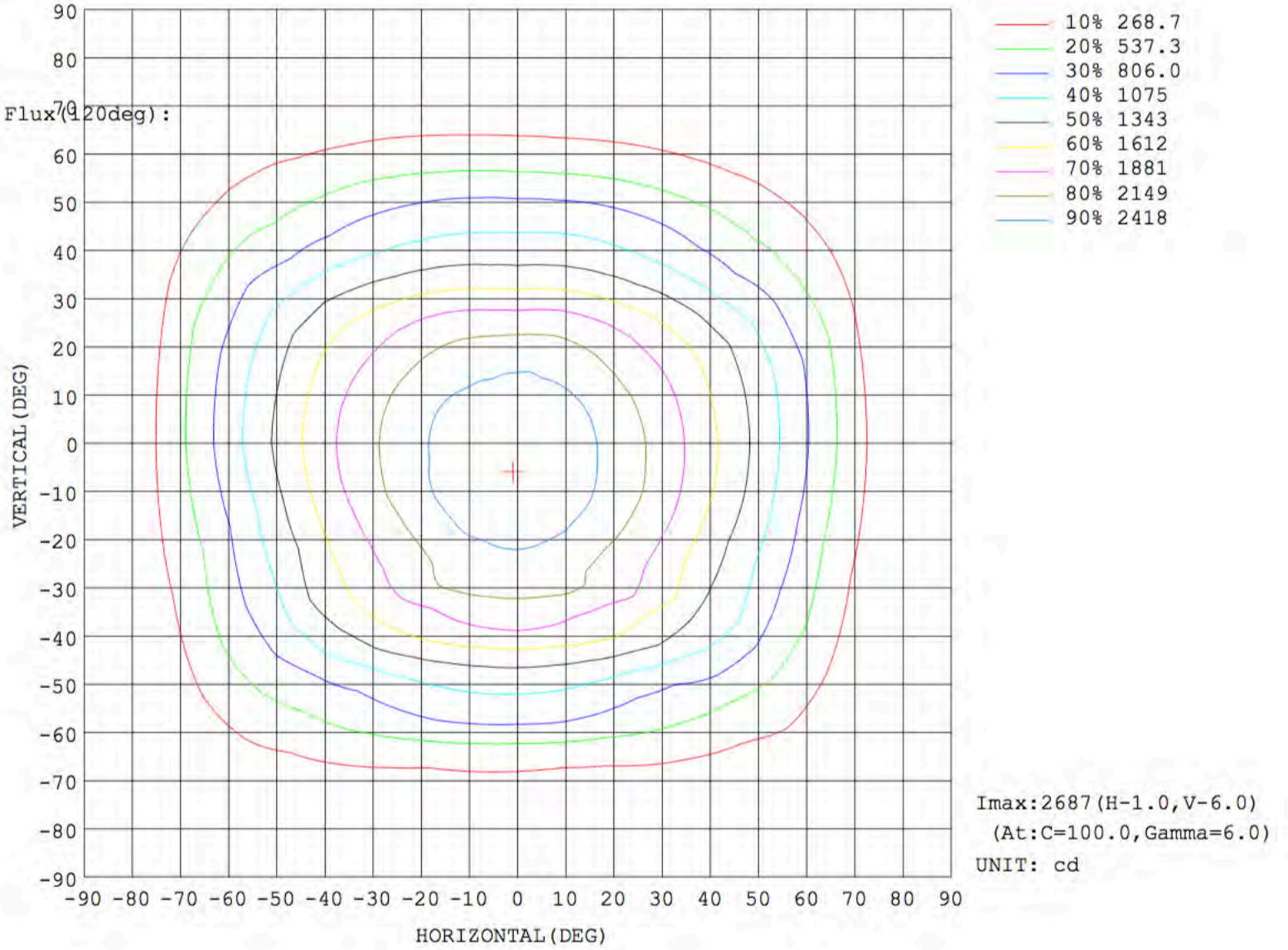
Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE:83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

3676.9 lm
%lum = 64.9%
%lamp = 64.9%

Conical surface Flux(120deg):

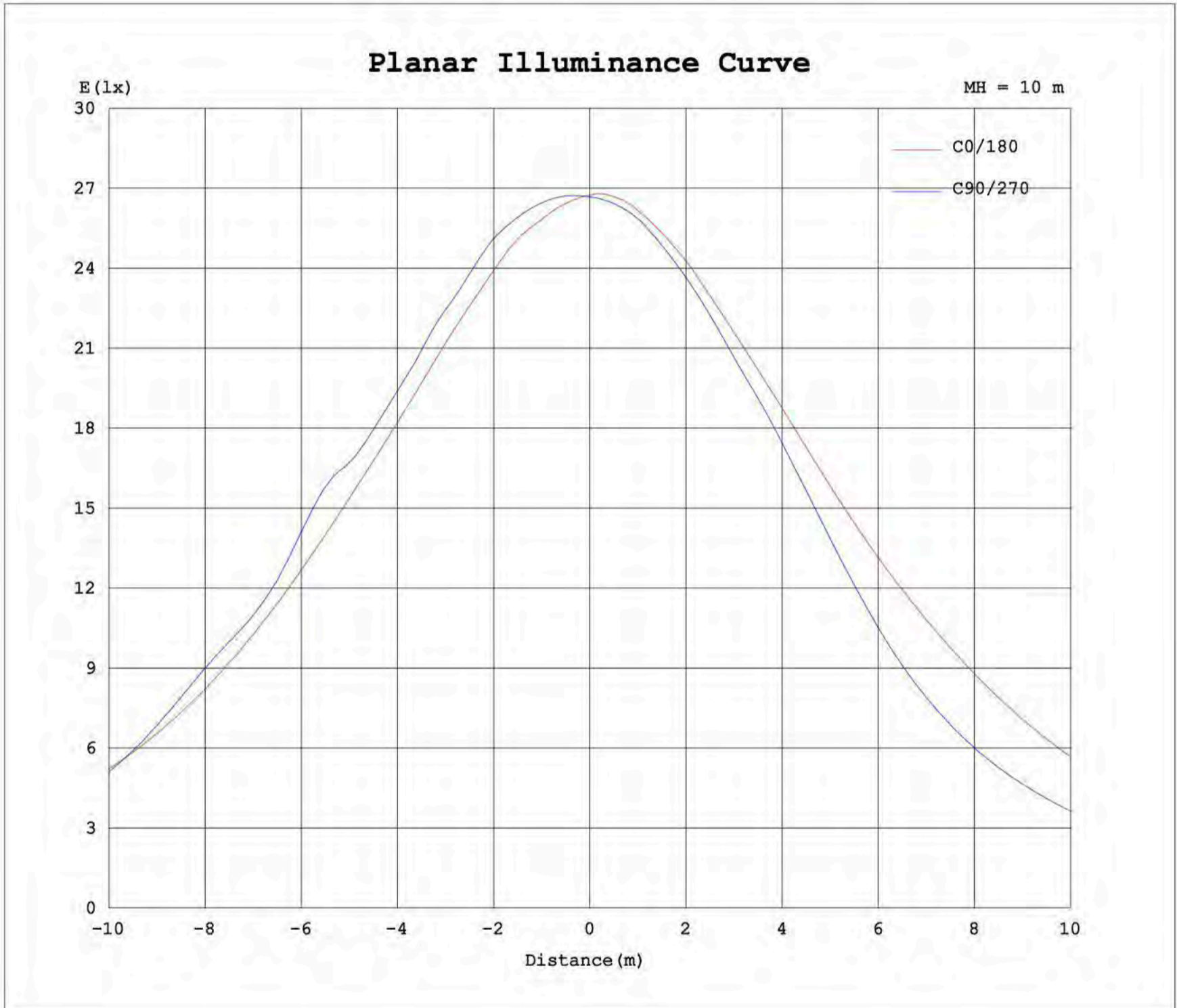
5015.7 lm
%lum = 88.5%
%lamp = 88.5%



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2017-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.543m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.6DEG
Operators: David
Test Date: 2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity: 67.1%
Test Distance: 2.543m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE:83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	2675	2674	2673	2672	2671	2670	2670	2669	2668	2668	2667	2667	2666	2666	2666	2665	2665	2665	2675
5	2631	2633	2637	2643	2652	2659	2667	2673	2678	2685	2686	2684	2681	2678	2677	2673	2668	2661	2665
10	2567	2571	2581	2596	2615	2633	2643	2651	2665	2672	2675	2667	2661	2656	2643	2628	2610	2593	2595
15	2452	2462	2477	2499	2523	2546	2565	2575	2577	2582	2584	2581	2584	2578	2565	2545	2522	2497	2494
20	2323	2334	2352	2376	2395	2406	2431	2453	2462	2465	2464	2462	2470	2438	2435	2426	2409	2387	2384
25	2193	2204	2225	2239	2233	2253	2277	2309	2337	2349	2347	2334	2310	2283	2284	2274	2276	2260	2257
30	2044	2055	2076	2070	2078	2098	2140	2255	2300	2300	2301	2292	2196	2140	2102	2102	2119	2113	2112
35	1867	1878	1888	1888	1913	1976	2056	1992	1987	1997	1998	2007	2071	2055	1953	1936	1944	1961	1965
40	1674	1679	1668	1669	1729	1825	1768	1811	1810	1814	1818	1837	1816	1848	1837	1758	1748	1780	1798
45	1474	1471	1443	1475	1598	1539	1571	1489	1444	1445	1458	1507	1588	1626	1656	1581	1548	1566	1603
50	1266	1253	1233	1282	1316	1310	1176	1150	1151	1159	1169	1182	1235	1351	1399	1421	1318	1330	1392
55	1048	1022	1018	1121	1090	937	879	920	952	957	968	972	959	994	1146	1191	1106	1090	1167
60	824	785	806	873	806	688	685	698	710	702	726	757	756	746	821	928	908	860	951
65	597	548	604	606	532	502	460	396	380	381	399	428	497	562	585	687	716	635	717
70	373	330	393	395	326	283	256	222	206	224	228	228	270	323	389	464	494	425	489
75	179	159	196	204	162	161	139	121	115	129	126	131	155	189	205	256	278	250	273
80	48.4	50.2	72.7	80.2	73.2	70.8	60.5	53.0	52.8	60.5	57.9	60.4	70.7	91.3	109	116	127	105	108
85	8.38	8.44	13.0	15.7	15.3	15.4	14.2	13.9	15.1	17.7	17.7	18.5	22.1	29.1	36.9	39.5	44.0	26.2	23.3
90	0.39	0.52	0.58	0.81	1.13	1.70	2.51	3.18	3.86	4.19	4.27	4.07	3.73	4.46	4.87	4.05	4.43	3.89	2.96
95	0.06	0.11	0.12	0.16	0.25	0.30	0.28	0.25	0.20	0.13	0.12	0.11	0.10	0.09	0.10	0.15	0.27	0.39	0.50
100	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.07	0.06	0.05	0.04	0.03	0.02	0.01	0.00	0.00	0.00	0.00	0.00
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
125	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
130	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
135	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
140	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
145	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03
150	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03
155	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03
160	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
165	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
170	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
175	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.03	0.02
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.543m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.4112A P:49.15W PF:0.9961 Lamp Flux:5668x1 lm		
NAME:	TYPE:83364,83365	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: P.Q.L., Inc.	SUR.:	PROTECTION ANGLE:

Table--2

UNIT: cd

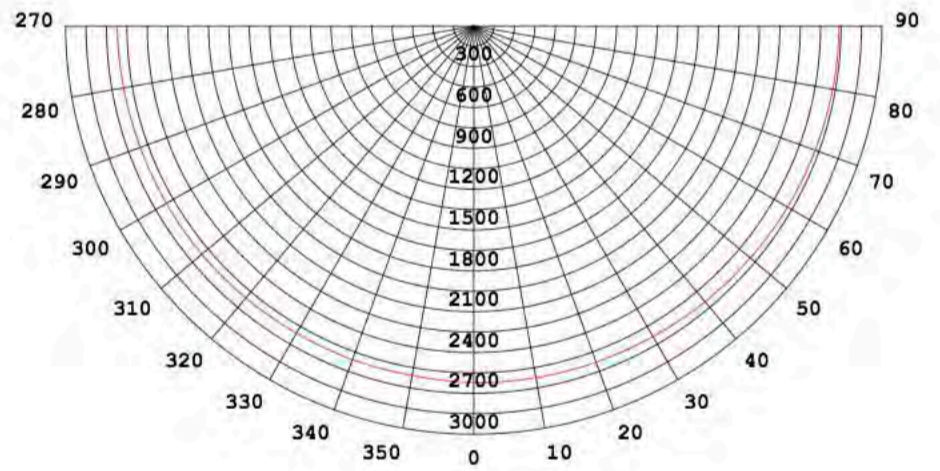
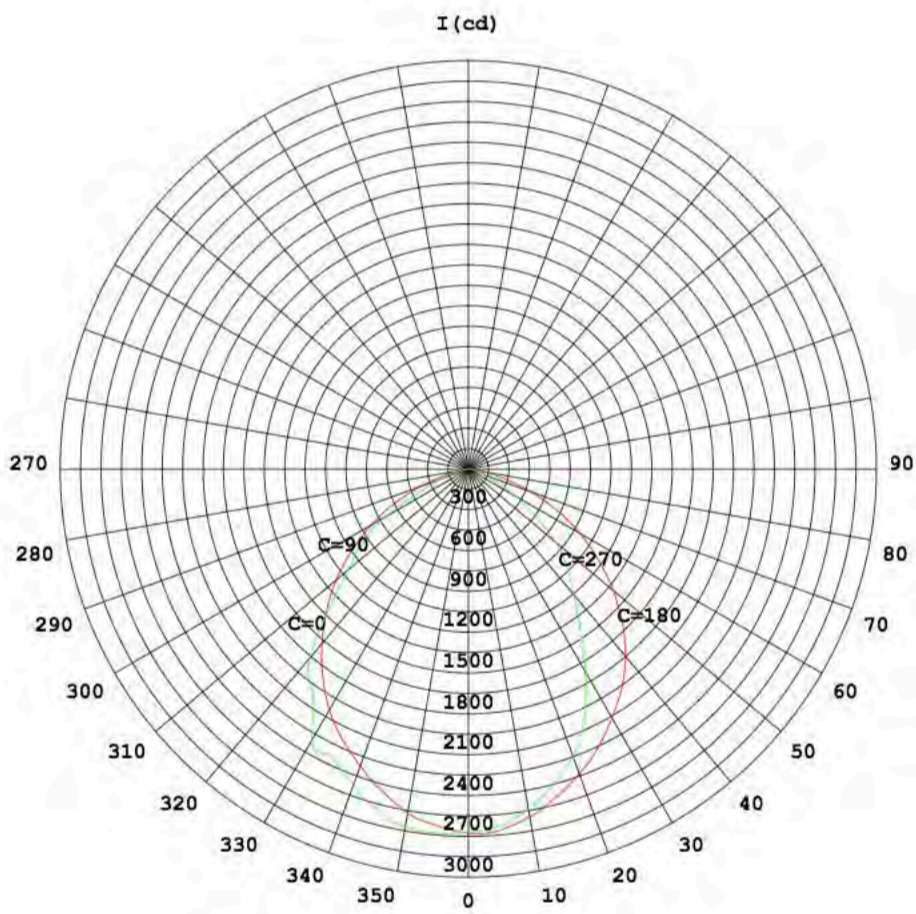
C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	2674	2673	2672	2671	2670	2670	2669	2668	2668	2667	2667	2666	2666	2666	2665	2665	2665		
5	2660	2657	2655	2652	2647	2638	2636	2637	2634	2626	2622	2623	2623	2623	2620	2619	2619		
10	2588	2582	2576	2572	2561	2547	2533	2535	2538	2535	2526	2531	2535	2543	2549	2556	2559		
15	2490	2483	2471	2446	2427	2417	2399	2408	2406	2420	2402	2412	2419	2426	2434	2439	2442		
20	2378	2371	2345	2327	2305	2281	2259	2241	2251	2256	2266	2276	2278	2287	2292	2312	2313		
25	2251	2240	2210	2186	2162	2130	2086	2043	2024	2049	2090	2102	2121	2125	2138	2163	2177		
30	2102	2080	2048	2023	1978	1912	1829	1756	1728	1761	1816	1861	1916	1948	1971	2007	2029		
35	1952	1919	1874	1827	1736	1625	1530	1465	1437	1464	1508	1564	1644	1739	1800	1831	1852		
40	1785	1750	1699	1589	1452	1347	1277	1228	1206	1227	1255	1291	1359	1478	1590	1647	1654		
45	1588	1572	1494	1331	1182	1113	1075	1045	1027	1042	1061	1071	1106	1199	1341	1450	1458		
50	1378	1371	1239	1065	963	925	899	864	839	848	874	888	906	940	1056	1233	1265		
55	1159	1133	951	824	781	732	673	622	593	597	630	669	710	728	793	990	1055		
60	949	900	695	616	567	496	451	425	406	407	421	438	467	526	582	728	835		
65	728	639	491	415	349	316	277	241	219	218	235	260	284	317	391	481	614		
70	507	395	309	242	195	156	125	112	108	106	109	115	135	176	217	278	369		
75	280	204	161	116	82.0	71.3	70.2	68.3	67.8	65.4	64.1	62.4	63.3	72.1	96.1	130	163		
80	106	84.5	61.9	47.9	40.0	36.1	35.2	34.1	33.4	31.9	29.9	28.6	28.8	31.2	35.7	42.1	47.2		
85	23.6	22.2	20.5	17.3	15.0	14.0	13.7	13.4	13.0	11.6	10.6	9.66	9.12	9.03	9.04	9.08	8.97		
90	2.98	2.90	2.84	2.61	2.41	2.28	2.15	1.93	1.62	1.27	0.92	0.61	0.40	0.29	0.23	0.24	0.31		
95	0.40	0.25	0.15	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.05	0.05		
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
120	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01		
125	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
130	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02		
135	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
140	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
145	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
150	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
155	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
160	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
165	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
170	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
175	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.543m [K=1.0000]
 Remarks:

FLUX DATA:

LOR:	100.0 %
STREET DOWN:	2900 lm
STREET UP:	0.1788 lm
HOUSE DOWN:	2768 lm
HOUSE UP:	0.2920 lm



$I_{max}(100\%) = 2687 \text{ cd}$

