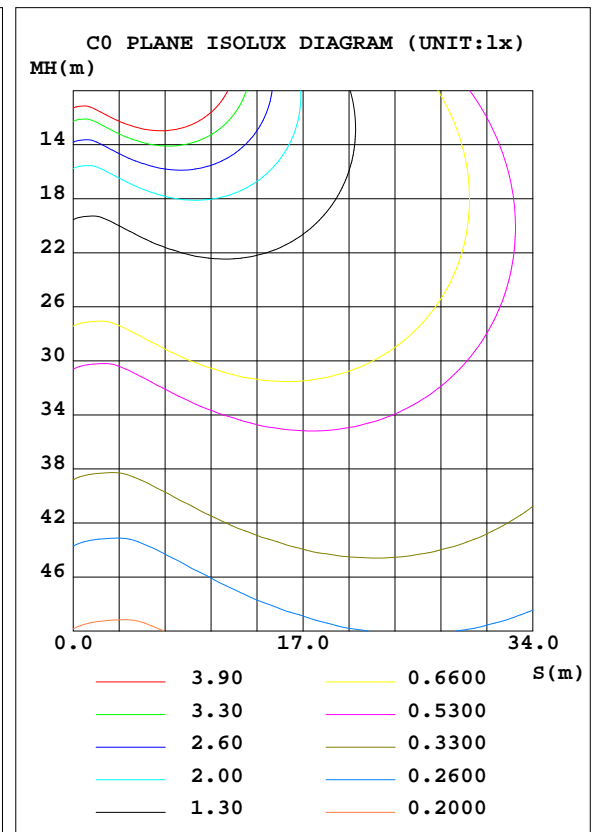
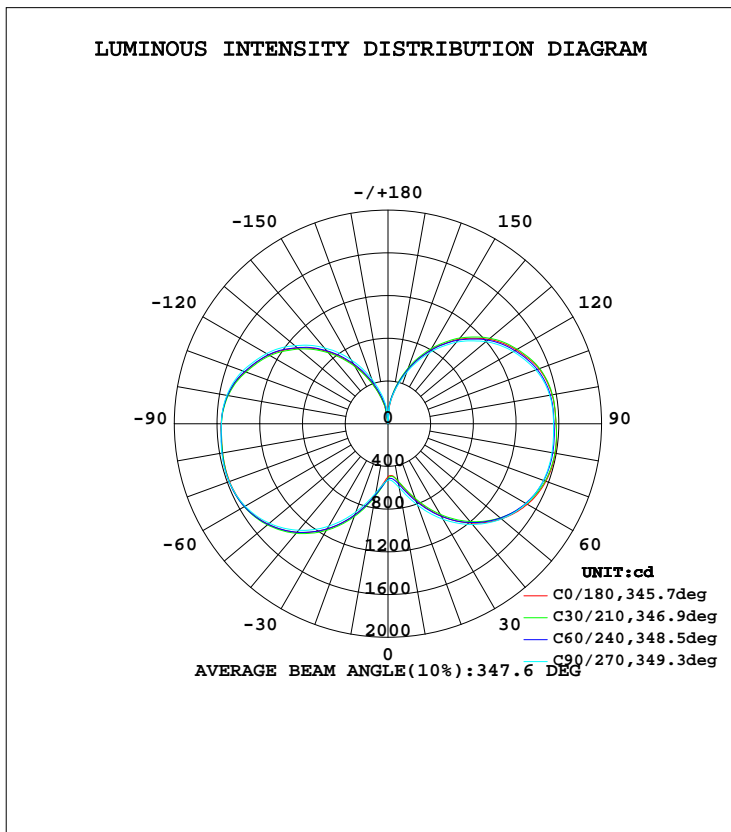


LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 127.60 lm/W			
MODEL		I _{max} (cd)	1590	S/MH(C0/180)	2.96
NOMINAL POWER(W)	132	LOR(%)	100.0	S/MH(C90/270)	2.86
RATED VOLTAGE(V)	232	TOTAL FLUX(lm)	16269	η UP, DN(C0-180)	23.7, 26.4
NOMINAL FLUX(lm)	16269	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	22.7, 27.2
LAMPS INSIDE	1	η up(%)	46.4	CIBSE SHR NOM	2.00
TEST VOLTAGE(V)	231.1	η down(%)	53.6	CIBSE SHR MAX	0.00



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	548.0	559.0	607.0	650.0	668.9	681.8	656.8	630.4	0- 10	55.21	55.21	0.34,0.34
20	758.0	758.0	811.1	859.1	907.3	916.8	878.9	837.4	10- 20	210.3	265.5	1.63,1.63
30	997.5	989.9	1034	1074	1136	1144	1107	1066	20- 30	445.8	711.3	4.37,4.37
40	1214	1202	1231	1258	1326	1332	1302	1268	30- 40	738.0	1449	8.91,8.91
50	1386	1372	1387	1401	1464	1470	1449	1423	40- 50	1044	2493	15.3,15.3
60	1508	1493	1494	1495	1548	1553	1544	1526	50- 60	1323	3816	23.5,23.5
70	1573	1559	1549	1538	1579	1583	1583	1575	60- 70	1536	5352	32.9,32.9
80	1589	1577	1559	1541	1572	1574	1579	1576	70- 80	1662	7014	43.1,43.1
90	1574	1565	1549	1535	1562	1561	1560	1554	80- 90	1705	8719	53.6,53.6
100	1560	1554	1537	1516	1526	1523	1532	1532	90-100	1689	10408	64,64
110	1505	1499	1473	1437	1424	1423	1448	1460	100-110	1588	11996	73.7,73.7
120	1385	1384	1353	1316	1289	1285	1314	1332	110-120	1387	13383	82.3,82.3
130	1232	1233	1197	1149	1104	1099	1138	1170	120-130	1125	14508	89.2,89.2
140	1033	1036	997.8	945.4	882.0	879.7	928.6	971.3	130-140	826.5	15335	94.3,94.3
150	794.0	802.8	762.5	713.4	633.8	633.9	691.9	741.7	140-150	532.3	15867	97.5,97.5
160	534.5	547.8	511.2	468.5	374.4	384.2	447.2	499.4	150-160	279.9	16147	99.3,99.2
170	279.3	301.1	281.4	255.7	160.1	178.4	233.0	277.4	160-170	104.2	16251	99.9,99.9
180	98.79	99.71	99.03	98.76	99.97	100.4	98.88	98.75	170-180	17.64	16269	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

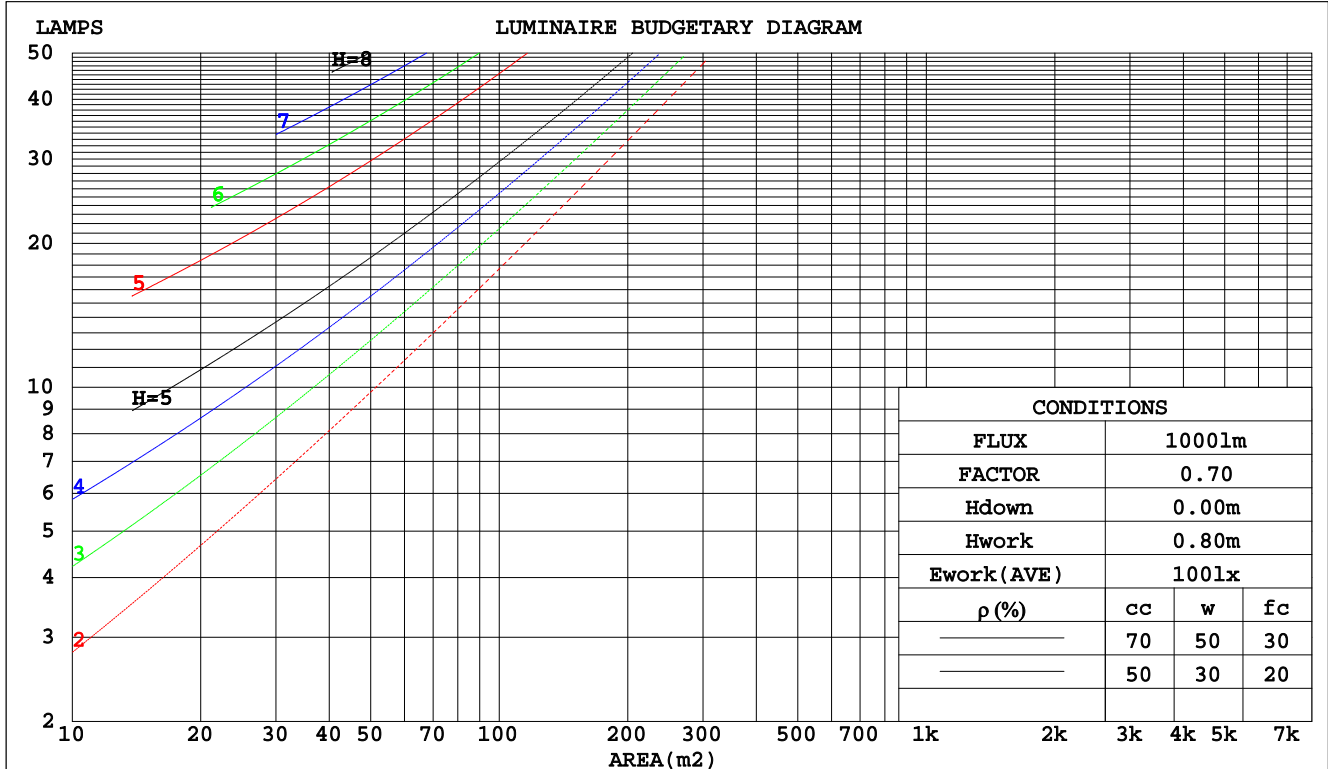
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.08	1.08	1.08	1.00	1.00	1.00	.85	.85	.85	.72	.72	.72	.59	.59	.59	.54
1.0	.87	.81	.75	.80	.74	.70	.67	.63	.59	.55	.52	.49	.44	.42	.40	.34
2.0	.73	.64	.57	.67	.59	.53	.56	.50	.45	.45	.41	.37	.36	.32	.29	.24
3.0	.62	.53	.45	.57	.49	.42	.47	.41	.35	.38	.33	.29	.30	.26	.23	.18
4.0	.54	.44	.37	.49	.41	.34	.41	.34	.29	.33	.28	.23	.26	.22	.18	.14
5.0	.47	.38	.30	.43	.35	.28	.36	.29	.24	.29	.24	.19	.23	.18	.15	.11
6.0	.42	.32	.26	.38	.30	.24	.32	.25	.20	.26	.20	.16	.20	.16	.12	.09
7.0	.37	.28	.22	.34	.26	.20	.29	.22	.17	.23	.18	.14	.18	.14	.11	.08
8.0	.34	.25	.19	.31	.23	.18	.26	.19	.15	.21	.16	.12	.16	.12	.09	.07
9.0	.31	.22	.17	.28	.20	.15	.23	.17	.13	.19	.14	.10	.15	.11	.08	.06
10.0	.28	.20	.15	.26	.18	.13	.21	.15	.11	.18	.13	.09	.14	.10	.07	.05



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: li
 Test Date: 2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity: 65.0%
 Test Distance: 9.630m [K=1.0000]
 Remarks:

WEC AND CCEC

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.428	.243	.077	.406	.232	.074	.366	.210	.067	.329	.190	.061	.295	.171	.055	
2.0	.355	.195	.060	.335	.185	.057	.299	.166	.052	.265	.149	.047	.234	.132	.042	
3.0	.308	.164	.049	.291	.156	.047	.257	.139	.042	.226	.124	.038	.197	.109	.034	
4.0	.274	.142	.042	.257	.135	.040	.227	.120	.036	.198	.106	.032	.171	.093	.028	
5.0	.246	.125	.036	.231	.119	.035	.203	.106	.031	.177	.093	.028	.152	.081	.024	
6.0	.224	.112	.032	.210	.106	.031	.184	.094	.027	.160	.083	.024	.137	.072	.021	
7.0	.205	.102	.029	.193	.096	.027	.169	.085	.025	.146	.075	.022	.125	.065	.019	
8.0	.190	.093	.026	.178	.088	.025	.155	.078	.022	.134	.068	.020	.115	.059	.017	
9.0	.176	.085	.024	.165	.080	.023	.144	.071	.020	.125	.062	.018	.106	.054	.016	
10.0	.164	.079	.022	.154	.074	.021	.135	.066	.019	.116	.058	.016	.099	.050	.014	

ρcc	80%			70%			50%			30%			10%			0
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.544	.544	.544	.465	.465	.465	.317	.317	.317	.182	.182	.182	.058	.058	.058	
1.0	.545	.512	.482	.466	.439	.414	.319	.302	.287	.184	.175	.167	.059	.056	.054	
2.0	.540	.490	.449	.462	.422	.388	.317	.292	.271	.183	.170	.159	.059	.055	.052	
3.0	.533	.475	.430	.457	.410	.373	.314	.285	.261	.181	.166	.154	.058	.054	.050	
4.0	.525	.464	.417	.451	.401	.362	.310	.279	.255	.179	.164	.151	.058	.053	.050	
5.0	.518	.455	.408	.445	.394	.355	.306	.275	.251	.177	.161	.149	.057	.053	.049	
6.0	.510	.448	.402	.439	.388	.350	.303	.271	.248	.176	.160	.147	.057	.052	.049	
7.0	.504	.441	.398	.433	.383	.347	.299	.268	.246	.174	.158	.146	.056	.052	.048	
8.0	.497	.436	.395	.428	.378	.344	.296	.266	.244	.172	.157	.145	.056	.051	.048	
9.0	.491	.432	.392	.423	.375	.342	.293	.263	.243	.171	.156	.145	.055	.051	.048	
10.0	.485	.428	.390	.418	.372	.340	.290	.261	.242	.169	.155	.144	.055	.051	.048	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

Uncorrected UGR Table

NAME: 120W		TYPE:					WEIGHT:				
DIM.:		SPEC.:					SERIAL No.:				
MFR.:		SUR.:110°					PROTECTION ANGLE:				
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions	Viewed crosswise					Viewed endwise					
x = 2H y = 2H	25.5	26.7	26.3	27.5	28.6	25.5	26.6	26.3	27.5	28.6	
3H	29.0	30.0	29.8	30.9	32.0	28.9	29.9	29.7	30.8	32.0	
4H	30.9	31.9	31.7	32.8	33.9	30.8	31.8	31.6	32.7	33.8	
6H	33.0	33.9	33.8	34.8	36.0	32.9	33.8	33.7	34.7	35.9	
8H	34.1	35.0	35.0	35.9	37.1	34.0	34.9	34.9	35.8	37.0	
12H	35.4	36.3	36.3	37.2	38.4	35.3	36.2	36.2	37.1	38.3	
4H 2H	26.6	27.6	27.4	28.5	29.6	26.6	27.5	27.4	28.4	29.6	
3H	30.1	31.0	31.0	31.9	33.1	30.0	30.9	30.9	31.8	33.0	
4H	32.1	32.9	33.0	33.9	35.1	32.1	32.8	33.0	33.8	35.0	
6H	34.4	35.1	35.3	36.0	37.3	34.3	35.0	35.2	35.9	37.2	
8H	35.6	36.3	36.5	37.2	38.5	35.5	36.2	36.4	37.1	38.4	
12H	37.0	37.6	38.0	38.6	39.9	36.9	37.5	37.9	38.5	39.8	
8H 4H	32.9	33.5	33.8	34.5	35.7	32.8	33.5	33.7	34.4	35.7	
6H	35.3	35.9	36.3	36.9	38.2	35.3	35.8	36.2	36.8	38.1	
8H	36.8	37.3	37.7	38.3	39.6	36.7	37.2	37.7	38.2	39.5	
12H	38.4	38.8	39.4	39.8	41.2	38.3	38.7	39.3	39.7	41.0	
12H 4H	33.1	33.7	34.0	34.6	35.9	33.0	33.6	34.0	34.6	35.9	
6H	35.7	36.2	36.6	37.2	38.5	35.6	36.1	36.6	37.1	38.4	
8H	37.2	37.6	38.2	38.7	40.0	37.1	37.6	38.1	38.6	39.9	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117 Corrected 16269 lm Total Lamp Luminous Flux. (8log(F/F0) = 9.7)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

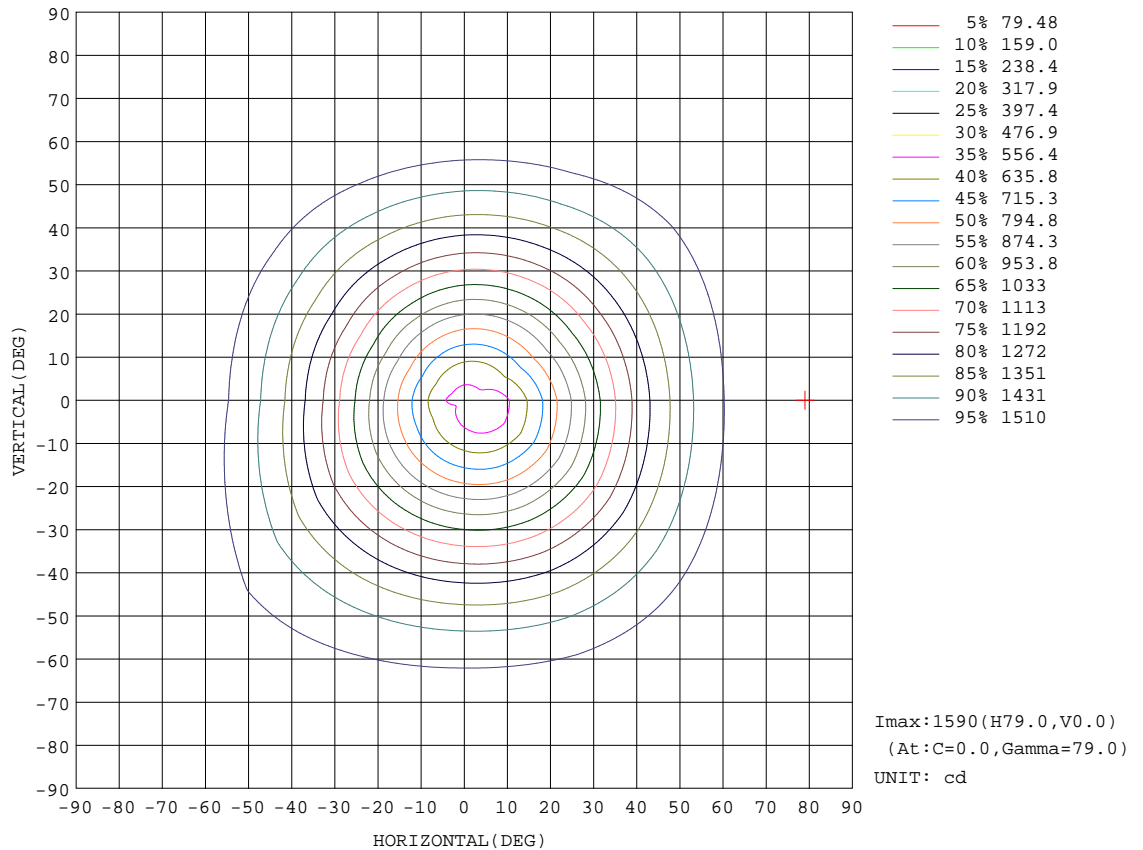
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	35	22	15	34	21	14	30	20	13	6
0.80	44	30	21	41	28	20	37	26	18	9
1.00	51	37	27	48	35	26	42	33	23	12
1.25	58	43	34	54	41	32	47	36	29	15
1.50	63	49	39	59	46	37	51	41	33	18
2.00	71	58	48	66	54	45	57	47	40	22
2.50	76	64	54	71	60	51	61	52	45	25
3.00	81	69	60	75	64	56	64	56	49	28
4.00	86	76	68	80	71	64	68	61	55	32
5.00	90	81	73	83	75	69	70	64	59	35
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: li
 Test Date: 2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity: 65.0%
 Test Distance: 9.630m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

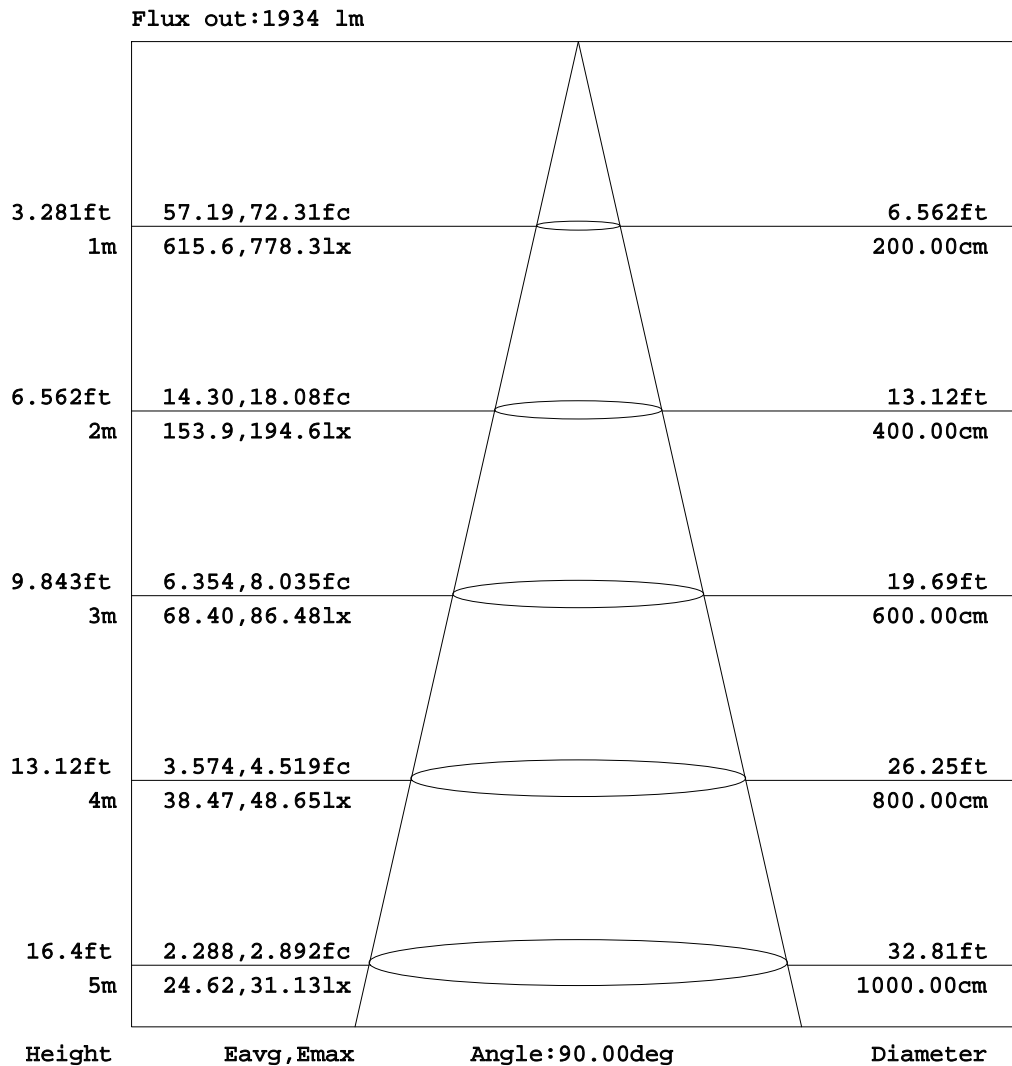


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: li
 Test Date: 2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity: 65.0%
 Test Distance: 9.630m [K=1.0000]
 Remarks:

AAI Figure

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:



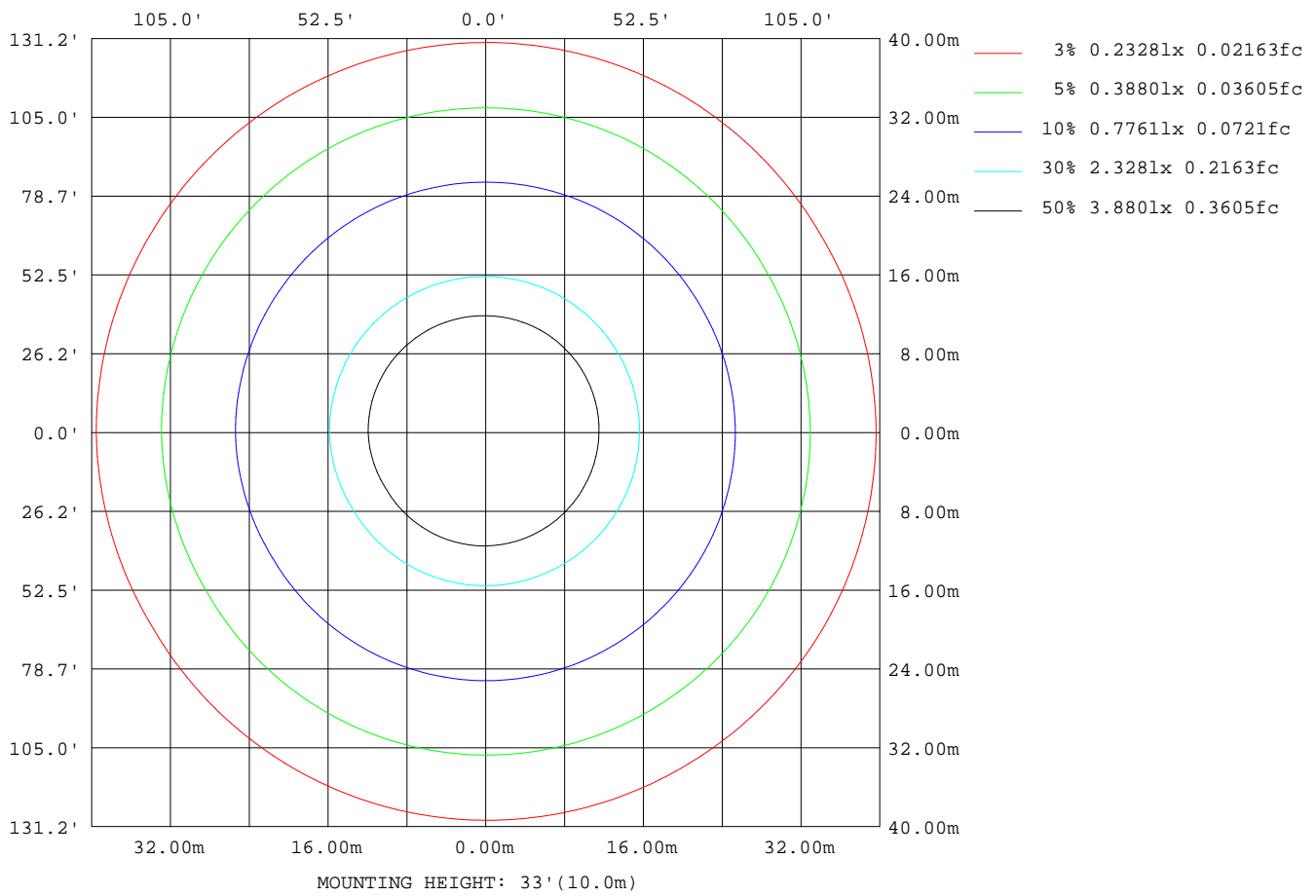
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

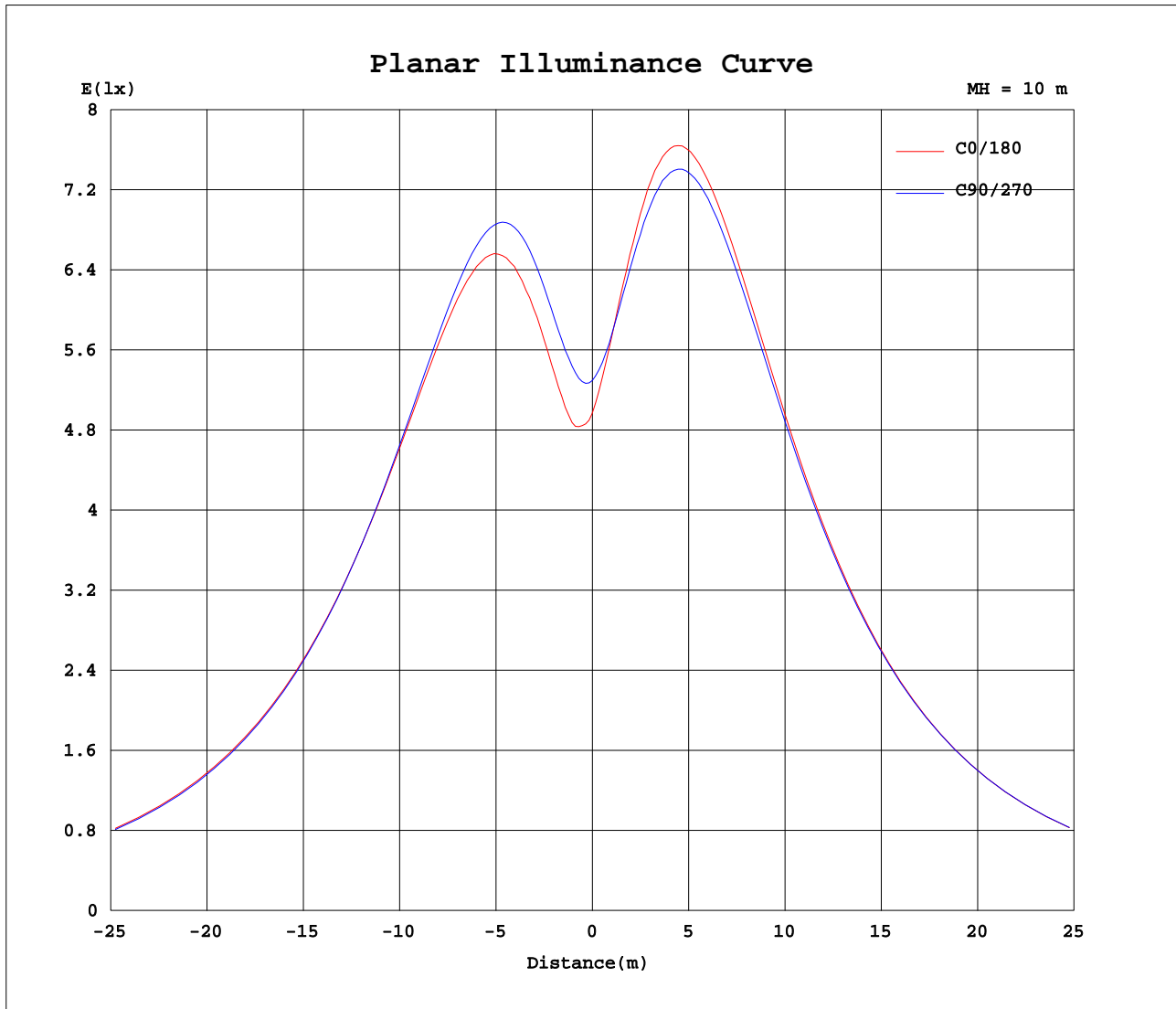
NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: li
 Test Date: 2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity: 65.0%
 Test Distance: 9.630m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: 120W	TYPE:	WEIGHT:
DIM.:	SPEC.:	SERIAL No.:
MFR.:	SUR.:110°	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	497	513	522	529	539	547	497	513	522	529	539	547						
5	489	495	519	544	568	588	568	587	583	573	567	560						
10	548	545	573	607	636	664	669	689	675	657	639	622						
15	645	633	664	702	734	764	785	806	787	763	737	715						
20	758	743	773	811	844	874	907	926	908	879	851	824						
25	879	861	887	924	953	982	1026	1043	1025	995	968	937						
30	998	979	1001	1034	1061	1087	1136	1152	1135	1107	1081	1050						
35	1111	1092	1110	1137	1160	1182	1237	1251	1236	1210	1187	1157						
40	1214	1195	1208	1231	1248	1267	1326	1339	1326	1302	1283	1254						
45	1307	1289	1296	1315	1328	1342	1402	1413	1402	1382	1365	1338						
50	1386	1371	1373	1387	1396	1405	1464	1474	1465	1449	1436	1409						
55	1453	1441	1438	1447	1452	1456	1513	1521	1516	1504	1494	1469						
60	1508	1496	1490	1494	1495	1495	1548	1554	1552	1544	1538	1515						
65	1548	1538	1528	1528	1525	1520	1570	1574	1574	1570	1568	1547						
70	1573	1566	1552	1549	1542	1534	1579	1582	1584	1583	1584	1566						
75	1587	1582	1565	1558	1549	1538	1578	1580	1584	1585	1589	1573						
80	1589	1586	1567	1559	1548	1535	1572	1572	1577	1579	1583	1569						
85	1584	1582	1562	1554	1543	1530	1565	1564	1567	1569	1573	1559						
90	1574	1574	1555	1549	1541	1530	1562	1560	1561	1560	1561	1546						
95	1569	1570	1552	1548	1538	1525	1551	1546	1550	1552	1555	1539						
100	1560	1564	1544	1537	1524	1508	1526	1519	1527	1532	1538	1525						
105	1540	1545	1523	1514	1496	1478	1485	1477	1488	1498	1508	1499						
110	1505	1511	1488	1473	1449	1424	1424	1415	1430	1448	1462	1458						
115	1448	1460	1434	1416	1391	1367	1361	1349	1364	1382	1400	1398						
120	1385	1396	1371	1353	1328	1303	1289	1276	1293	1314	1331	1333						
125	1316	1328	1302	1280	1253	1225	1200	1187	1208	1235	1256	1262						
130	1232	1247	1220	1197	1164	1134	1104	1090	1109	1138	1165	1175						
135	1133	1150	1122	1098	1067	1038	1000	984	1008	1039	1066	1080						
140	1033	1049	1023	998	962	928	882	867	893	929	961	982						
145	914	933	909	882	849	818	760	745	774	813	848	870						
150	794	814	791	762	728	699	634	617	651	692	729	755						
155	666	686	666	639	607	575	503	488	525	569	607	636						
160	534	558	538	511	483	454	374	365	403	447	484	514						
165	402	427	411	390	367	343	259	253	290	332	368	397						
170	279	306	296	281	264	247	160	161	196	233	265	289						
175	172	196	189	170	153	137	102	102	113	135	162	173						
180	98.8	100	99.0	99.0	98.8	98.7	100.0	101	99.4	98.9	98.9	98.6						

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:li
 Test Date:2013-12-23

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.274
 Humidity:65.0%
 Test Distance:9.630m [K=1.0000]
 Remarks: