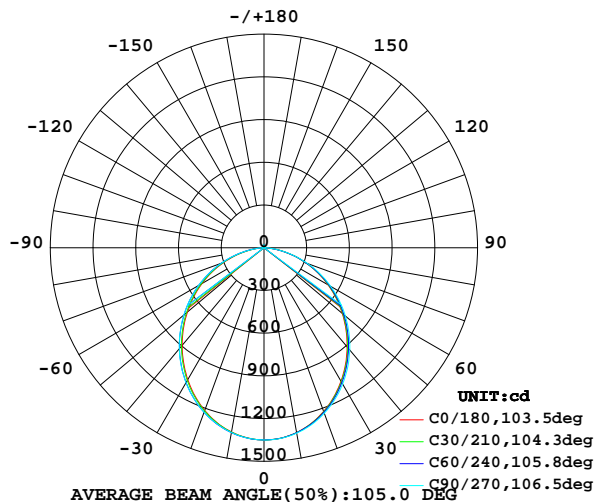


LUMINAIRE PHOTOMETRIC TEST REPORT

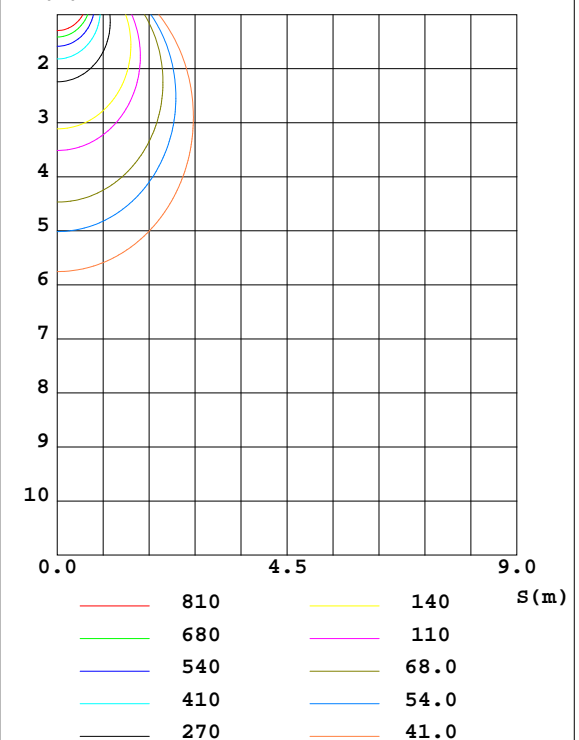
Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.81 lm/W			
MODEL	DB77A-1200-36W	I _{max} (cd)	1350	S/MH(C0/180)	1.20
NOMINAL POWER(W)	36	LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	3598.9	η UP,DN(C0-180)	0.8,49.5
NOMINAL FLUX(lm)	3598.89	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.9,48.8
LAMPS INSIDE	1	η up(%)	1.7	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	240.8	η down(%)	98.3	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [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	1318	1319	1322	1321	1314	1317	1318	1315	0- 10	127.3	127.3	3.54,3.54
20	1224	1228	1237	1232	1216	1225	1230	1222	10- 20	360.6	487.9	13.6,13.6
30	1082	1090	1105	1095	1070	1085	1095	1082	20- 30	535.3	1023	28.4,28.4
40	908.5	919.7	937.0	923.6	894.3	913.7	926.3	910.7	30- 40	628.8	1652	45.9,45.9
50	717.4	728.5	746.0	732.3	702.3	722.2	735.3	719.7	40- 50	634.7	2287	63.5,63.5
60	518.4	526.5	540.7	529.9	502.5	520.3	531.0	518.0	50- 60	559.1	2846	79.1,79.1
70	315.5	318.2	327.2	321.4	298.4	313.0	319.5	310.6	60- 70	415.3	3261	90.6,90.6
80	121.2	120.3	123.5	122.9	107.6	116.6	116.5	114.1	70- 80	226.3	3487	96.9,96.9
90	4.163	4.417	3.430	4.240	2.917	4.014	3.269	3.860	80- 90	51.50	3539	98.3,98.3
100	3.981	4.446	4.590	4.171	4.425	4.678	4.982	4.848	90-100	4.091	3543	98.4,98.4
110	5.783	6.373	6.907	6.219	6.488	6.747	7.283	6.859	100-110	5.837	3549	98.6,98.6
120	7.856	8.552	9.221	8.421	8.697	9.000	9.629	9.096	110-120	7.597	3556	98.8,98.8
130	10.21	10.96	11.63	10.85	11.10	11.41	12.03	11.52	120-130	8.940	3565	99.1,99.1
140	12.65	13.41	14.05	13.30	13.53	13.79	14.35	13.92	130-140	9.594	3575	99.3,99.3
150	14.99	15.67	16.19	15.56	15.77	15.93	16.36	16.06	140-150	9.230	3584	99.6,99.6
160	17.06	17.50	17.89	17.43	17.74	17.64	17.97	17.74	150-160	7.726	3592	99.8,99.8
170	18.91	18.92	19.19	18.89	19.22	18.91	19.10	18.97	160-170	5.176	3597	99.9,99.9
180	19.76	19.54	19.68	19.53	19.80	19.52	19.65	19.55	170-180	1.839	3599	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

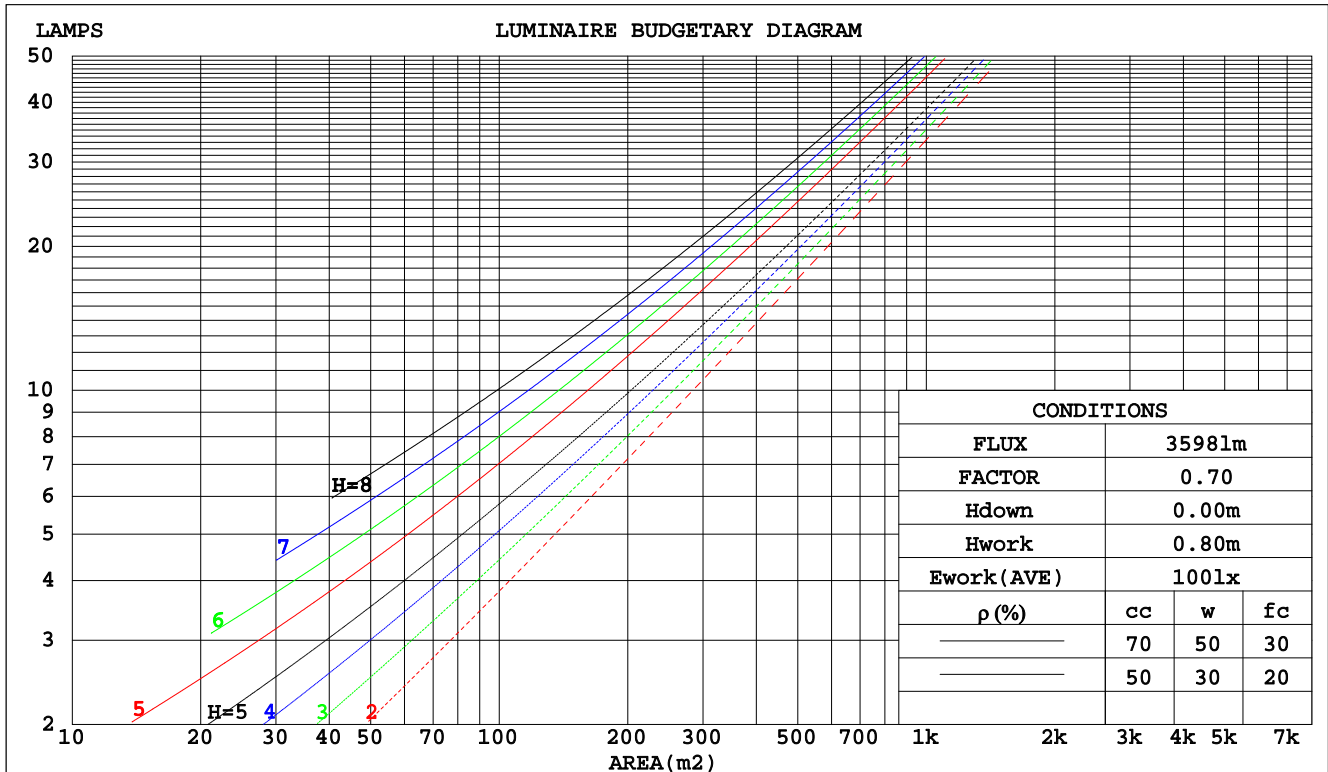
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	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	1.19	1.19	1.19	1.16	1.16	1.16	1.10	1.10	1.10	1.05	1.05	1.05	1.01	1.01	1.01	.98
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.91	.84	.79	.89	.83	.78	.85	.80	.76	.82	.77	.74	.78	.75	.72	.69
3.0	.80	.72	.66	.78	.71	.65	.75	.69	.64	.72	.67	.62	.69	.65	.61	.59
4.0	.71	.62	.56	.70	.62	.55	.67	.60	.54	.64	.58	.53	.62	.57	.53	.50
5.0	.64	.55	.48	.62	.54	.48	.60	.53	.47	.58	.51	.46	.56	.50	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.52	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.37	.48	.41	.36	.46	.40	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.30
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.29	.39	.33	.29	.27
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMAN
 Test Date:2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm					
NAME: DB77A-1200-36W			TYPE:36W		WEIGHT:
DIM.:			SPEC.:3000K		SERIAL No.:1
MFR.:			SUR.:0.054X1.2		PROTECTION ANGLE:

pcc	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	.299	.170	.054	.291	.166	.053	.277	.159	.051	.264	.152	.049	.252	.146	.047	
2.0	.283	.155	.048	.276	.152	.047	.264	.147	.046	.252	.142	.044	.242	.137	.043	
3.0	.263	.140	.042	.257	.138	.041	.246	.133	.041	.236	.129	.040	.226	.125	.039	
4.0	.244	.127	.037	.238	.125	.037	.228	.121	.036	.219	.118	.036	.211	.115	.035	
5.0	.226	.115	.033	.221	.113	.033	.212	.110	.033	.204	.108	.032	.196	.105	.032	
6.0	.210	.105	.030	.205	.104	.030	.198	.101	.029	.190	.099	.029	.183	.097	.029	
7.0	.195	.097	.027	.192	.096	.027	.185	.093	.027	.178	.091	.027	.172	.089	.026	
8.0	.183	.089	.025	.179	.088	.025	.173	.086	.025	.167	.085	.024	.162	.083	.024	
9.0	.171	.083	.023	.168	.082	.023	.163	.080	.023	.157	.079	.023	.152	.077	.022	
10.0	.161	.077	.021	.159	.077	.021	.153	.075	.021	.149	.074	.021	.144	.072	.021	

pcc	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	.203	.203	.203	.174	.174	.174	.119	.119	.119	.068	.068	.068	.022	.022	.022	
1.0	.192	.169	.148	.165	.145	.127	.113	.100	.088	.065	.058	.051	.021	.019	.017	
2.0	.184	.145	.112	.158	.125	.097	.108	.086	.068	.062	.050	.040	.020	.016	.013	
3.0	.176	.127	.088	.151	.110	.077	.104	.076	.054	.060	.045	.032	.019	.014	.010	
4.0	.168	.114	.072	.145	.098	.063	.099	.069	.044	.058	.040	.026	.019	.013	.009	
5.0	.161	.103	.061	.138	.090	.053	.095	.063	.037	.055	.037	.022	.018	.012	.007	
6.0	.154	.095	.053	.132	.082	.046	.091	.058	.033	.053	.034	.019	.017	.011	.006	
7.0	.147	.088	.047	.127	.076	.041	.088	.054	.029	.051	.032	.017	.016	.010	.006	
8.0	.141	.082	.042	.121	.071	.037	.084	.050	.026	.049	.030	.016	.016	.010	.005	
9.0	.135	.077	.039	.116	.067	.034	.081	.047	.024	.047	.028	.014	.015	.009	.005	
10.0	.129	.073	.036	.111	.064	.031	.077	.045	.022	.045	.026	.013	.015	.009	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

Uncorrected UGR Table

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm											
NAME: DB77A-1200-36W					TYPE:36W			WEIGHT:			
DIM.:					SPEC.:3000K			SERIAL No.:1			
MFR.:					SUR.:0.054X1.2			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	22.5	24.0	22.8	24.2	24.5	22.6	24.1	22.9	24.3	24.6	
	3H	23.9	25.3	24.3	25.6	25.8	24.1	25.4	24.4	25.7	26.0
	4H	24.5	25.8	24.8	26.1	26.3	24.6	25.9	25.0	26.2	26.5
	6H	24.8	26.0	25.2	26.3	26.7	25.0	26.2	25.3	26.5	26.8
	8H	24.9	26.1	25.3	26.4	26.7	25.0	26.2	25.4	26.5	26.8
	12H	25.0	26.1	25.3	26.4	26.7	25.1	26.2	25.4	26.5	26.9
4H	2H	23.1	24.4	23.4	24.7	25.0	23.2	24.5	23.5	24.8	25.1
	3H	24.7	25.8	25.1	26.2	26.5	24.8	25.9	25.2	26.3	26.6
	4H	25.4	26.4	25.8	26.7	27.1	25.5	26.5	25.9	26.8	27.2
	6H	25.8	26.7	26.3	27.1	27.5	25.9	26.8	26.3	27.2	27.6
	8H	26.0	26.8	26.4	27.2	27.6	26.0	26.9	26.5	27.3	27.7
	12H	26.0	26.8	26.5	27.2	27.6	26.1	26.9	26.5	27.3	27.7
8H	4H	25.6	26.4	26.0	26.8	27.3	25.7	26.5	26.1	26.9	27.3
	6H	26.2	26.9	26.6	27.3	27.8	26.3	27.0	26.7	27.4	27.8
	8H	26.4	27.0	26.9	27.5	27.9	26.4	27.1	26.9	27.5	28.0
	12H	26.5	27.0	27.0	27.5	28.0	26.5	27.1	27.0	27.5	28.1
12H	4H	25.6	26.4	26.0	26.8	27.2	25.7	26.5	26.1	26.9	27.3
	6H	26.2	26.8	26.7	27.3	27.8	26.3	26.9	26.8	27.4	27.8
	8H	26.4	27.0	26.9	27.4	28.0	26.5	27.0	27.0	27.5	28.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					

CIE Pub.117 Corrected 3599 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.4)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	PROTECTION ANGLE:

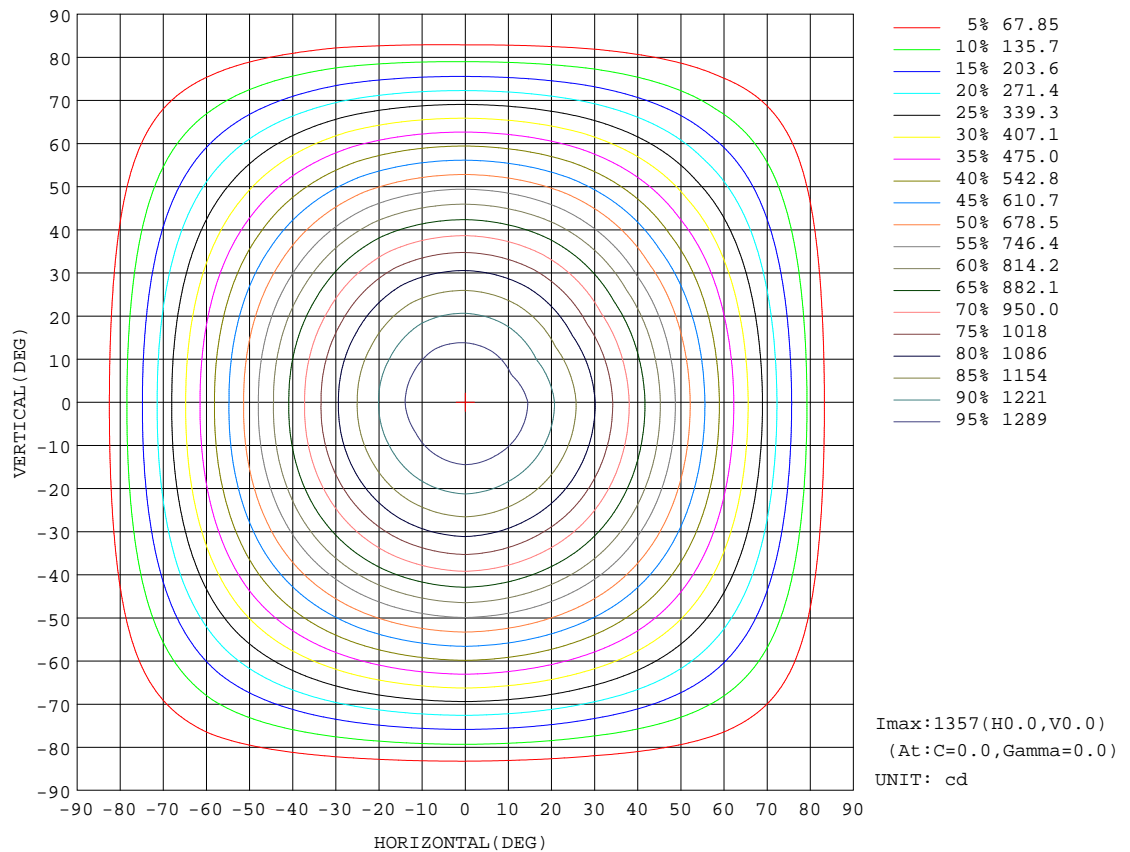
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	58	47	40	57	47	40	56	46	40	33
0.80	68	57	50	67	56	49	65	55	49	42
1.00	77	66	59	75	65	58	73	66	58	50
1.25	84	73	66	82	73	66	79	71	65	58
1.50	89	79	72	87	78	71	84	76	70	63
2.00	95	87	81	93	86	80	90	83	78	70
2.50	99	92	86	97	90	85	93	87	83	74
3.00	102	96	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	99	95	92	83
5.00	109	104	100	106	102	98	101	98	95	85
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:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	PROTECTION ANGLE:

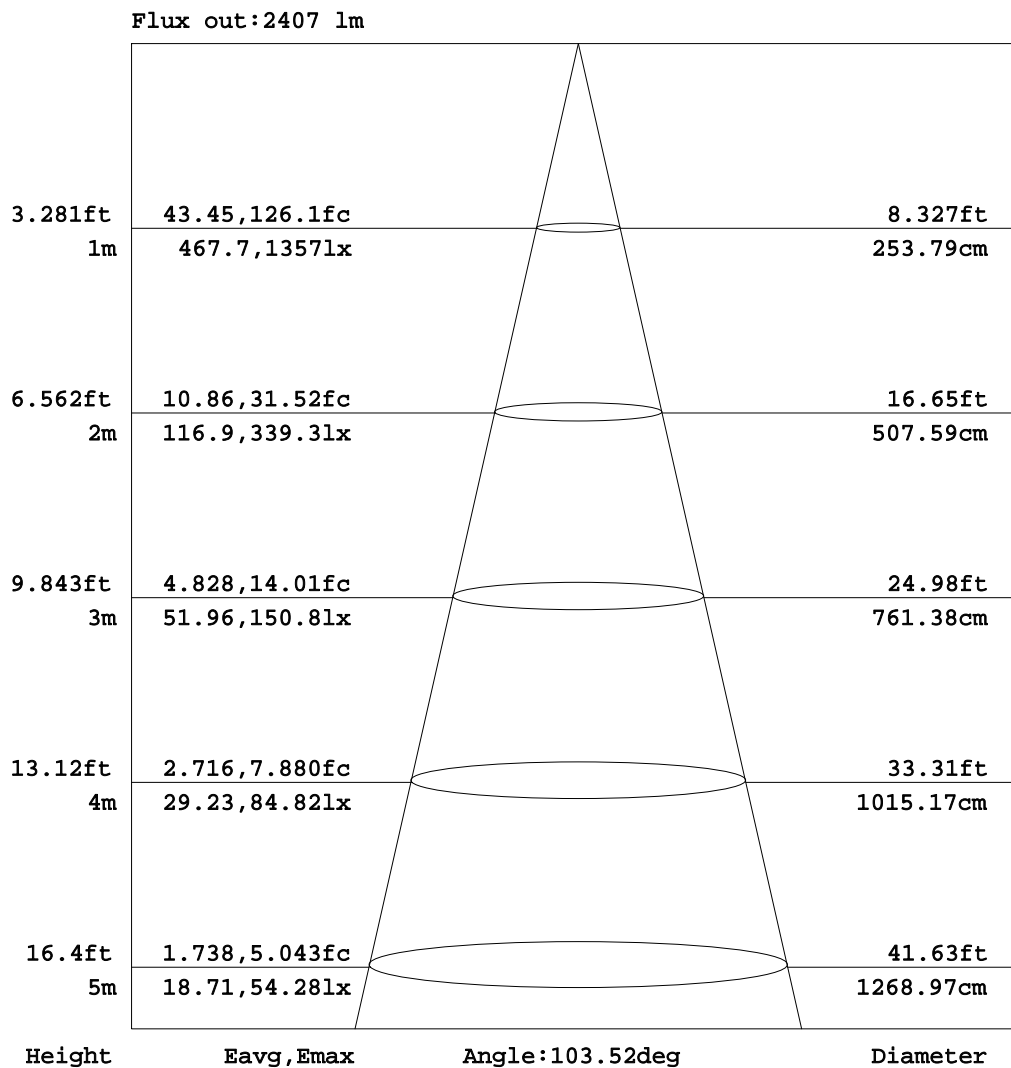


C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	PROTECTION ANGLE:



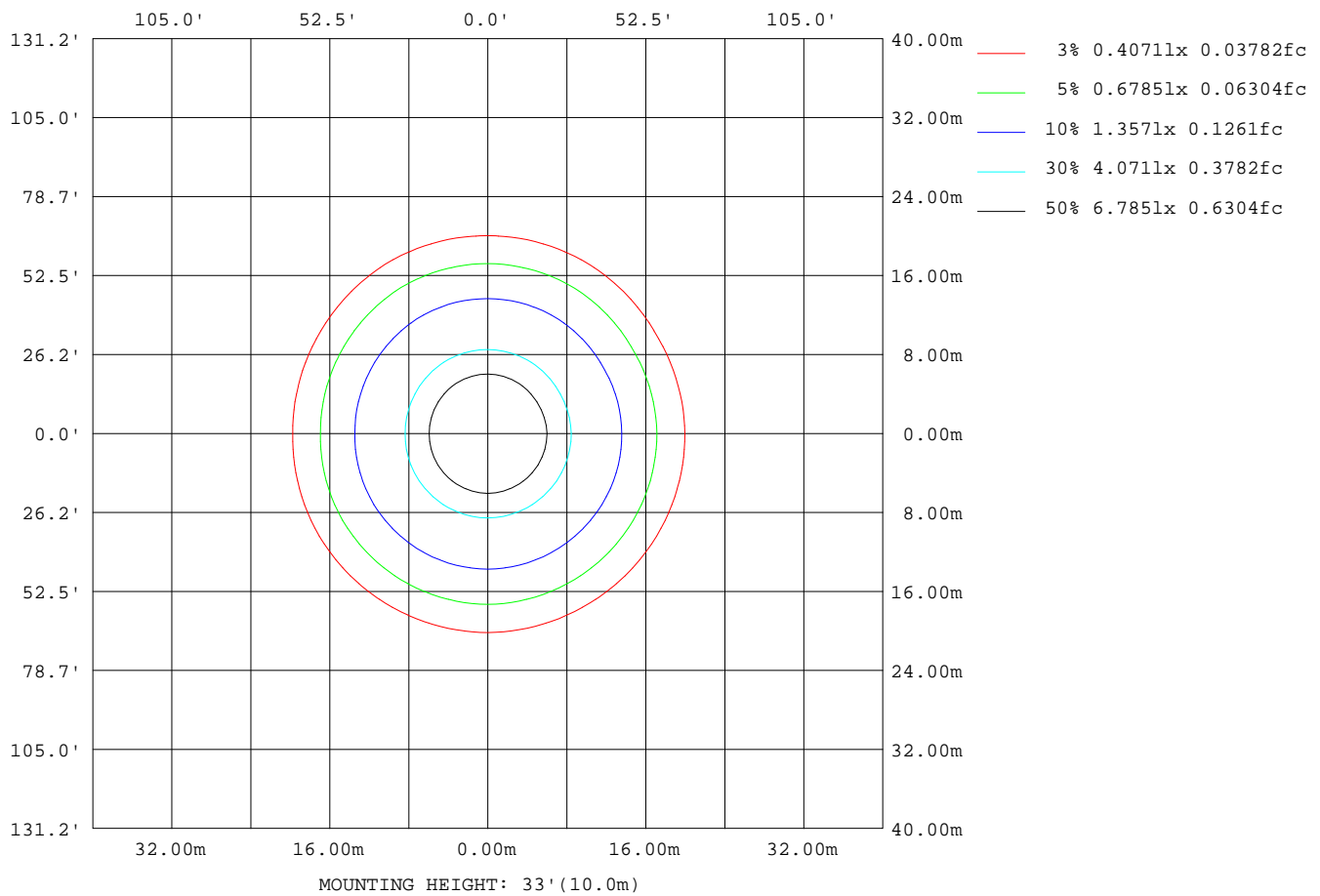
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

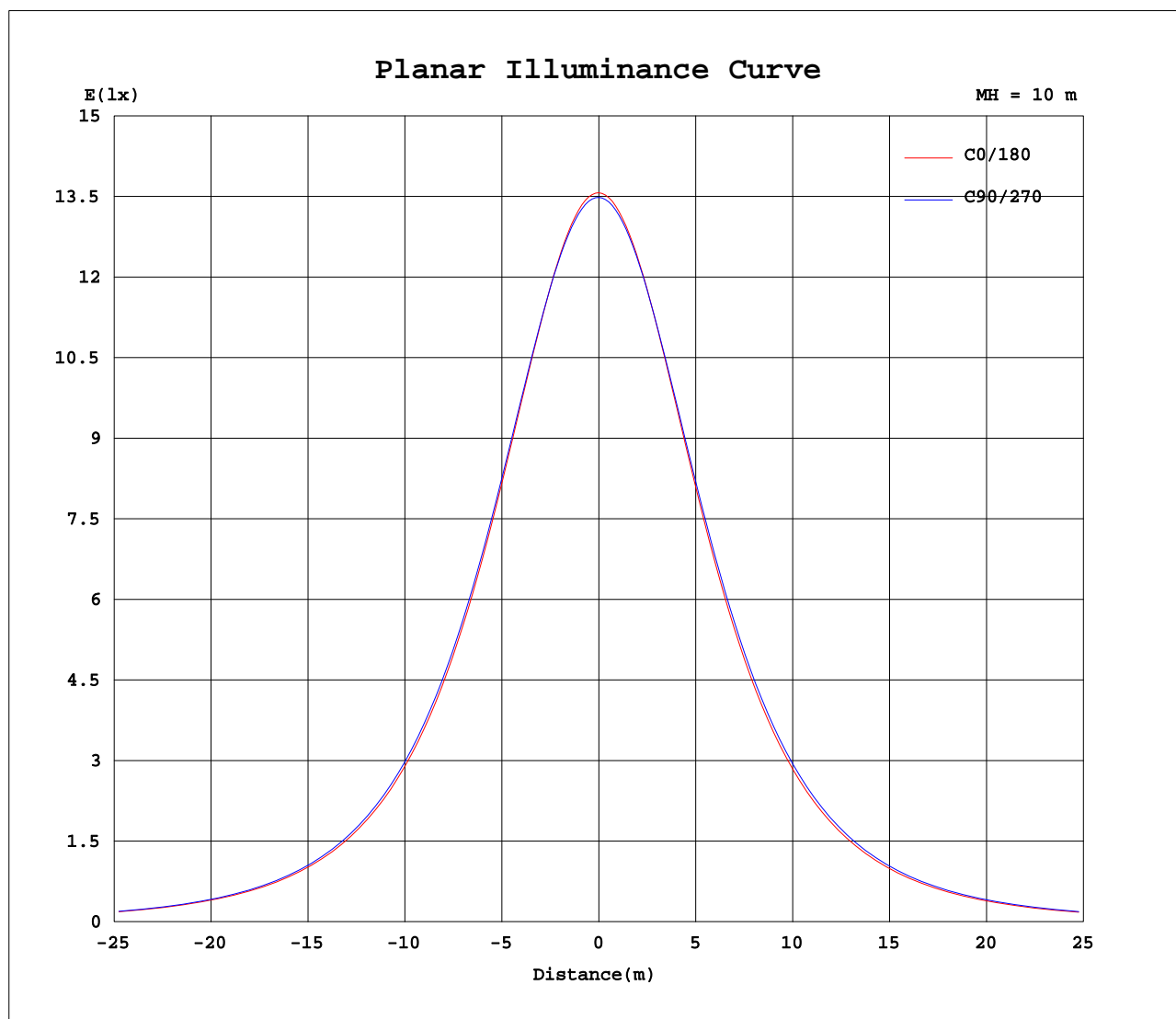
Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm		
NAME: DB77A-1200-36W	TYPE:36W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.054X1.2	PROTECTION ANGLE:



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMAN
Test Date: 2020-04-11

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity: 65.0%
Test Distance: 9.443m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:240.7V I:0.1540A P:35.70W PF:0.9620 Lamp Flux:3598.89x1 lm											
NAME: DB77A-1200-36W						TYPE:36W			WEIGHT:		
DIM.:						SPEC.:3000K			SERIAL No.:1		
MFR.:						SUR.:0.054X1.2			PROTECTION ANGLE:		

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350							
5	1343	1342	1342	1344	1343	1343	1340	1341	1342	1341	1341	1340							
10	1318	1319	1319	1322	1321	1321	1314	1315	1319	1318	1317	1314							
15	1278	1280	1282	1287	1285	1282	1272	1275	1281	1280	1278	1272							
20	1224	1227	1230	1237	1234	1230	1216	1220	1230	1230	1226	1217							
25	1158	1162	1167	1176	1172	1165	1148	1153	1167	1168	1163	1151							
30	1082	1087	1094	1105	1100	1090	1070	1077	1094	1095	1089	1075							
35	999	1004	1012	1025	1018	1007	985	993	1013	1014	1008	991							
40	909	915	924	937	930	917	894	903	924	926	919	902							
45	815	821	831	844	836	823	800	809	830	833	826	808							
50	717	724	733	746	738	726	702	711	733	735	729	710							
55	619	625	633	645	638	627	603	612	632	634	629	611							
60	518	523	530	541	535	525	503	511	530	531	526	510							
65	417	421	425	435	429	423	401	408	426	426	422	408							
70	315	317	319	327	324	319	298	306	320	319	316	305							
75	216	216	216	222	220	218	199	206	218	215	214	205							
80	121	122	119	123	123	123	108	112	121	116	118	111							
85	43.4	43.3	40.5	42.7	43.4	44.2	34.1	36.8	42.5	37.8	39.6	35.5							
90	4.16	4.55	4.29	3.43	4.41	4.07	2.92	3.53	4.50	3.27	4.14	3.58							
95	3.22	3.55	3.79	3.53	3.52	3.15	3.50	3.68	3.90	3.91	4.06	3.89							
100	3.98	4.29	4.60	4.59	4.37	3.97	4.42	4.56	4.80	4.98	4.93	4.77							
105	4.87	5.17	5.56	5.77	5.39	4.93	5.44	5.53	5.80	6.12	5.94	5.67							
110	5.78	6.12	6.63	6.91	6.47	5.97	6.49	6.58	6.92	7.28	7.04	6.68							
115	6.81	7.15	7.72	8.06	7.58	7.01	7.56	7.68	8.04	8.45	8.15	7.75							
120	7.86	8.25	8.85	9.22	8.71	8.13	8.70	8.83	9.17	9.63	9.28	8.91							
125	9.01	9.44	10.0	10.4	9.93	9.31	9.91	9.99	10.4	10.8	10.5	10.1							
130	10.2	10.7	11.3	11.6	11.2	10.5	11.1	11.2	11.6	12.0	11.7	11.3							
135	11.4	11.9	12.5	12.9	12.4	11.8	12.3	12.4	12.8	13.2	12.9	12.6							
140	12.7	13.2	13.7	14.0	13.6	13.0	13.5	13.6	14.0	14.4	14.1	13.8							
145	13.8	14.4	14.8	15.2	14.7	14.2	14.7	14.8	15.1	15.4	15.2	14.9							
150	15.0	15.5	15.9	16.2	15.8	15.3	15.8	15.8	16.1	16.4	16.2	16.0							
155	16.1	16.5	16.8	17.1	16.8	16.3	16.8	16.7	17.0	17.2	17.0	16.9							
160	17.1	17.4	17.6	17.9	17.6	17.2	17.7	17.5	17.8	18.0	17.8	17.7							
165	18.0	18.2	18.3	18.6	18.4	18.0	18.6	18.2	18.5	18.6	18.5	18.3							
170	18.9	18.9	19.0	19.2	19.0	18.8	19.2	18.8	19.0	19.1	19.0	18.9							
175	19.5	19.3	19.3	19.5	19.4	19.2	19.7	19.2	19.4	19.5	19.4	19.3							
180	19.8	19.5	19.6	19.7	19.6	19.5	19.8	19.5	19.6	19.7	19.6	19.5							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMAN
Test Date:2020-04-11

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Humidity:65.0%
Test Distance:9.443m [K=1.0000]
Remarks: