

WEC AND CCEC

Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0.28*0.28	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	.349	.198	.063	.337	.192	.061	.316	.181	.058	.296	.171	.055	.277	.161	.052	
2.0	.313	.171	.053	.302	.166	.051	.283	.157	.049	.265	.149	.046	.248	.140	.044	
3.0	.283	.150	.045	.273	.146	.044	.256	.139	.042	.240	.131	.040	.224	.124	.038	
4.0	.257	.134	.039	.249	.130	.039	.233	.124	.037	.218	.117	.035	.204	.111	.034	
5.0	.236	.120	.035	.228	.117	.034	.214	.111	.033	.200	.106	.031	.188	.100	.030	
6.0	.217	.109	.031	.210	.106	.031	.197	.101	.029	.185	.096	.028	.173	.091	.027	
7.0	.201	.099	.028	.195	.097	.028	.183	.092	.027	.172	.088	.026	.161	.084	.025	
8.0	.187	.091	.026	.181	.089	.025	.170	.085	.024	.160	.081	.023	.150	.077	.022	
9.0	.175	.085	.024	.170	.083	.023	.159	.079	.022	.150	.075	.022	.141	.072	.021	
10.0	.164	.079	.022	.159	.077	.021	.150	.073	.021	.141	.070	.020	.133	.067	.019	

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	.301	.301	.301	.257	.257	.257	.176	.176	.176	.101	.101	.101	.032	.032	.032	
1.0	.294	.267	.243	.252	.229	.209	.172	.158	.144	.099	.091	.084	.032	.029	.027	
2.0	.287	.244	.208	.246	.210	.180	.169	.145	.125	.097	.085	.073	.031	.027	.024	
3.0	.280	.227	.185	.240	.196	.161	.165	.136	.113	.095	.080	.066	.031	.026	.022	
4.0	.272	.214	.170	.234	.185	.148	.161	.129	.104	.093	.076	.062	.030	.025	.020	
5.0	.265	.204	.160	.227	.177	.139	.157	.124	.098	.091	.073	.058	.029	.024	.019	
6.0	.257	.196	.153	.221	.170	.133	.153	.119	.094	.089	.070	.056	.029	.023	.018	
7.0	.251	.190	.147	.216	.165	.128	.149	.115	.091	.087	.068	.054	.028	.022	.018	
8.0	.244	.184	.143	.210	.160	.125	.145	.112	.088	.085	.066	.053	.027	.022	.017	
9.0	.238	.179	.140	.205	.156	.122	.142	.109	.087	.083	.065	.052	.027	.021	.017	
10.0	.232	.175	.137	.200	.152	.120	.139	.107	.085	.081	.063	.051	.026	.021	.017	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm										
NAME:					TYPE:EQS-11F-PC			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Blackjack Lighting					SUR.:0.28*0.28			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	17.7	19.1	18.2	19.6	20.1	18.1	19.5	18.6	20.0	20.5
3H	19.6	20.9	20.1	21.4	21.9	20.2	21.5	20.7	21.9	22.5
4H	20.5	21.7	21.0	22.2	22.7	21.2	22.4	21.7	22.9	23.4
6H	21.2	22.4	21.8	22.9	23.5	22.1	23.3	22.7	23.8	24.4
8H	21.6	22.7	22.2	23.2	23.8	22.6	23.7	23.1	24.2	24.8
12H	22.0	23.1	22.6	23.6	24.2	23.1	24.1	23.6	24.7	25.3
4H 2H	18.6	19.8	19.1	20.3	20.8	18.8	20.1	19.4	20.6	21.1
3H	20.6	21.7	21.2	22.2	22.8	21.1	22.2	21.7	22.7	23.3
4H	21.6	22.6	22.2	23.2	23.8	22.3	23.2	22.8	23.8	24.4
6H	22.6	23.5	23.2	24.0	24.7	23.4	24.2	24.0	24.8	25.5
8H	23.0	23.8	23.7	24.4	25.1	24.0	24.8	24.6	25.4	26.0
12H	23.5	24.3	24.2	24.9	25.6	24.5	25.3	25.2	25.9	26.6
8H 4H	22.2	23.0	22.8	23.6	24.3	22.7	23.5	23.3	24.1	24.8
6H	23.4	24.0	24.0	24.7	25.4	24.1	24.7	24.7	25.4	26.1
8H	24.0	24.6	24.6	25.2	26.0	24.8	25.4	25.5	26.0	26.8
12H	24.6	25.2	25.3	25.8	26.6	25.6	26.1	26.3	26.8	27.6
12H 4H	22.3	23.0	22.9	23.6	24.3	22.7	23.5	23.4	24.1	24.8
6H	23.6	24.2	24.2	24.8	25.6	24.2	24.8	24.9	25.5	26.2
8H	24.3	24.8	25.0	25.5	26.3	25.0	25.6	25.7	26.2	27.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.1				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 1386 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.1)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0.28*0.28	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	50	38	31	49	38	31	48	37	31	24
0.80	60	47	40	58	47	39	56	45	39	31
1.00	68	56	48	66	55	47	63	55	46	38
1.25	75	63	55	73	62	54	69	60	53	44
1.50	80	69	61	78	67	60	73	64	58	48
2.00	87	77	70	85	75	68	79	72	66	55
2.50	92	82	75	89	80	74	83	76	70	59
3.00	95	87	80	92	84	78	86	80	75	62
4.00	100	93	87	96	90	85	90	84	80	67
5.00	103	96	91	99	93	89	92	88	84	70
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
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 Operators:David
 Test Date:2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

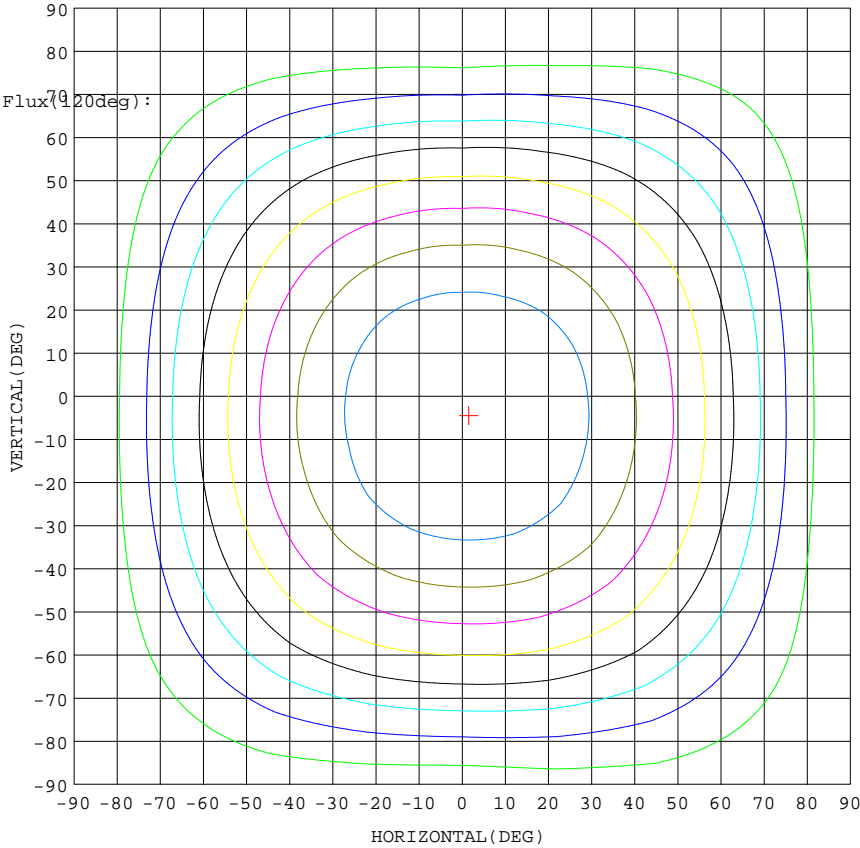
Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: 大显	SUR.:0.28*0.28	PROTECTION ANGLE:

Conical surface Flux(90deg):

559.85 lm
 %lum = 40.4%
 %lamp = 40.4%

Conical surface Flux(70deg):

849.68 lm
 %lum = 61.3%
 %lamp = 61.3%



- 10% 34.77
- 20% 69.54
- 30% 104.3
- 40% 139.1
- 50% 173.8
- 60% 208.6
- 70% 243.4
- 80% 278.2
- 90% 312.9

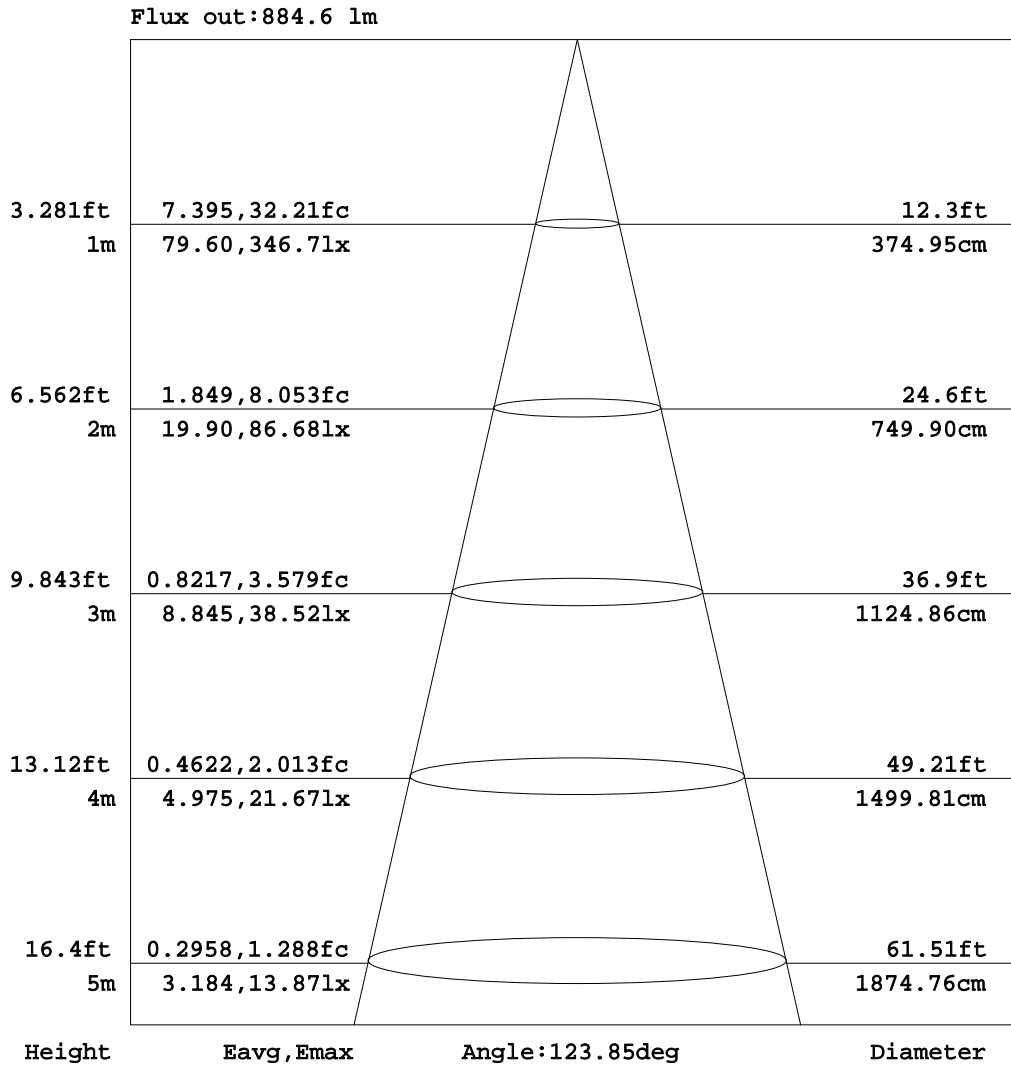
I_{max}: 347.7 (H1.5, V-4.5)
 (At: C=67.5, Gamma=5.0)
 UNIT: cd

C Range: 0 - 360DEG
 C Interval: 22.5DEG
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 Operators: David
 Test Date: 2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.455m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: 大显	SUR.:0.28*0.28	PROTECTION ANGLE:



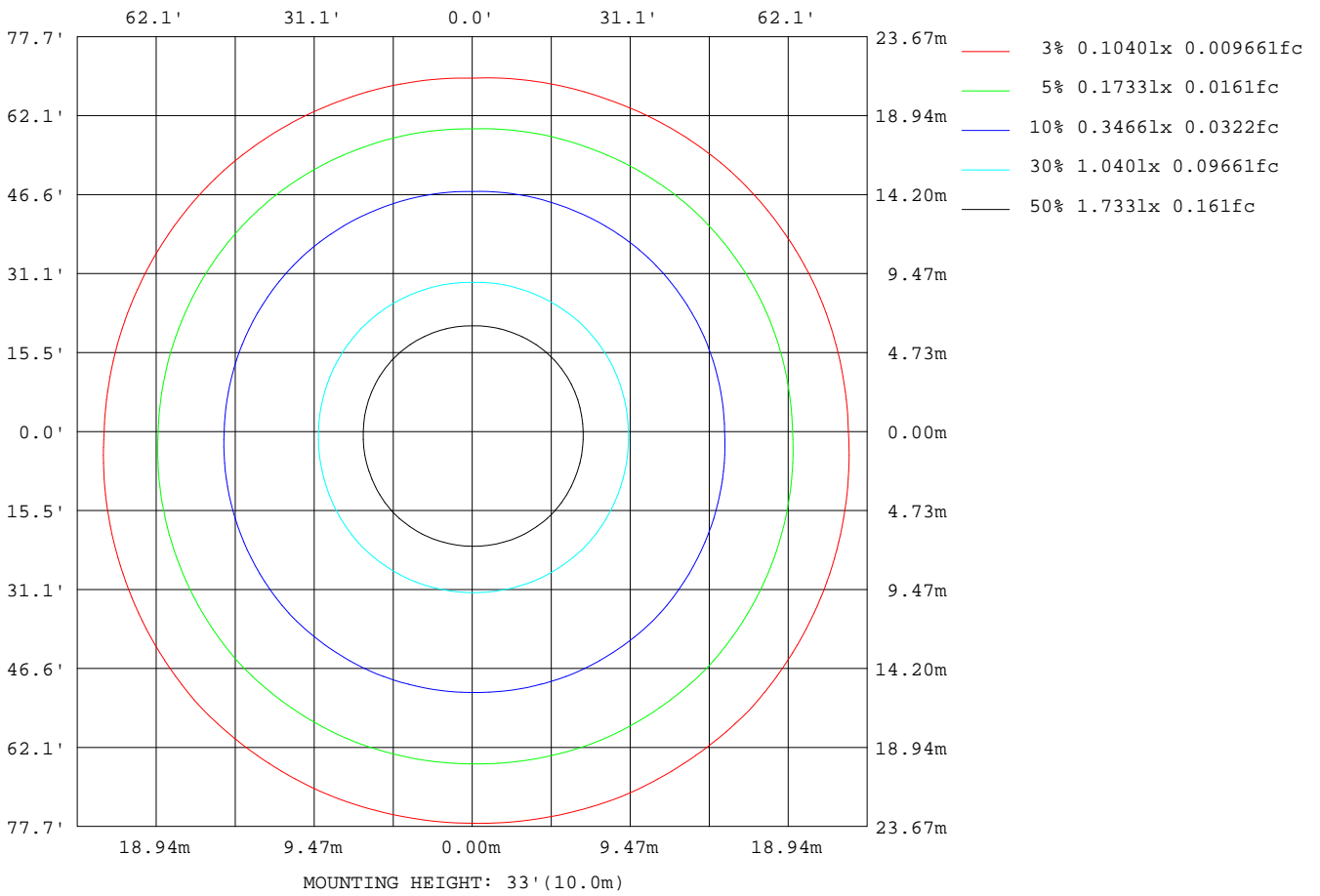
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

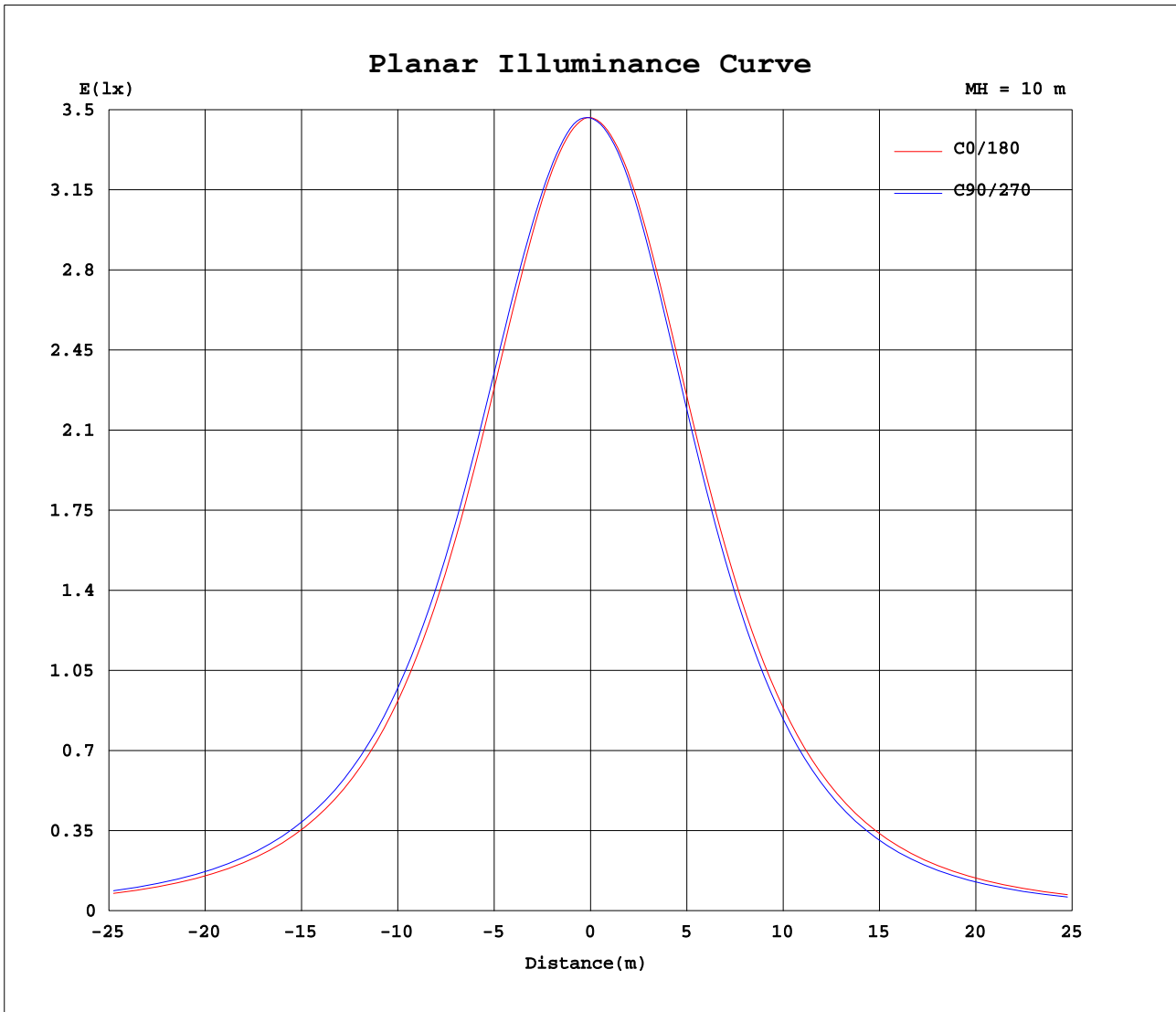
Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: 大显	SUR.:0.28*0.28	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
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γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

Planar Illuminance Curve



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C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2015-05-17

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.455m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.1722A P:20.55W PF:0.9943 Lamp Flux:1385.99x1 lm		
NAME:	TYPE:EQS-11F-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: 大显	SUR.:0.28*0.28	PROTECTION ANGLE:

Table--1

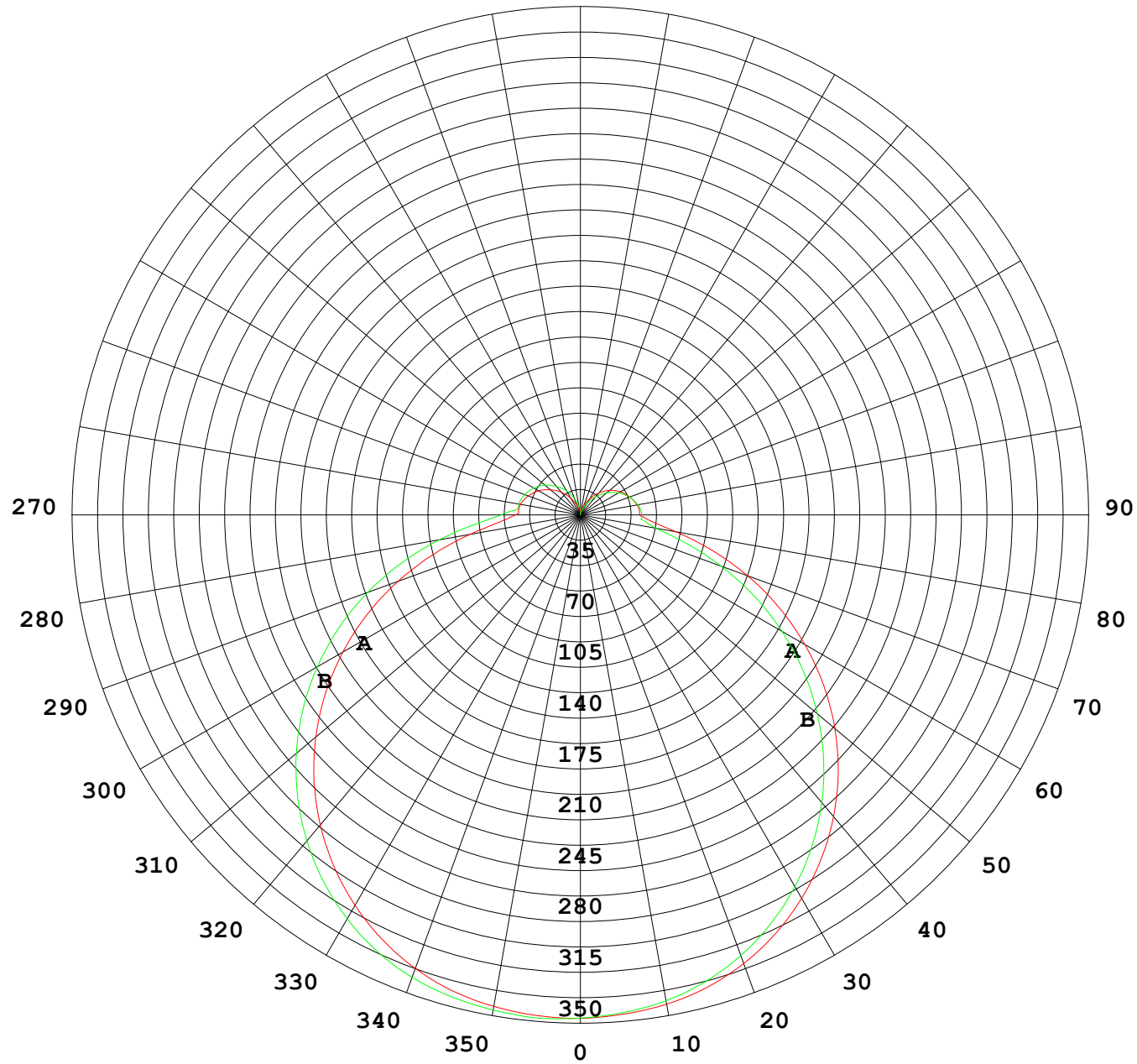
UNIT: cd

C (DEG) \ γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338			
0	347	347	347	346	346	346	346	346	347	347	347	346	346	346	346	346			
5	346	347	347	348	348	347	346	345	345	344	344	344	344	344	344	345			
10	344	345	346	346	346	345	344	343	342	341	340	339	340	340	341	342			
15	339	342	343	343	343	342	340	339	337	335	334	333	333	334	335	337			
20	332	335	338	339	339	337	335	331	329	327	325	323	323	324	328	330			
25	323	327	330	332	331	330	327	321	318	316	314	311	310	313	317	320			
30	310	315	321	322	321	320	316	309	305	302	300	297	295	298	304	308			
35	296	302	308	310	308	307	303	295	289	286	283	280	278	282	288	293			
40	279	286	293	295	293	292	288	278	271	268	265	261	259	263	270	275			
45	259	268	276	278	275	274	270	260	251	247	244	239	237	242	250	256			
50	238	247	256	258	255	254	249	238	229	224	221	216	213	219	227	234			
55	214	225	234	236	233	232	227	215	205	200	196	191	187	193	203	210			
60	189	200	211	213	209	208	203	190	178	173	169	164	160	167	177	184			
65	162	174	185	187	183	182	176	163	151	145	141	136	132	139	150	157			
70	133	146	157	160	156	154	149	135	122	117	113	107	103	110	121	129			
75	104	117	129	131	127	126	121	107	93.6	88.4	85.4	79.5	75.2	82.6	93.4	100			
80	77.0	89.3	101	103	98.7	97.7	92.9	79.7	66.8	63.5	62.8	57.8	52.8	59.4	69.1	74.2			
85	55.7	65.5	76.0	77.2	72.4	72.4	69.2	59.4	48.8	50.2	53.0	49.1	43.6	49.8	55.8	56.3			
90	44.9	52.6	60.0	59.6	54.6	56.3	56.4	49.3	40.6	45.9	50.6	47.8	42.1	47.1	51.8	48.3			
95	42.6	47.8	52.8	50.1	43.6	47.9	51.4	47.3	40.7	45.1	49.6	46.8	41.7	46.4	51.1	48.1			
100	42.0	47.2	52.0	48.9	42.9	46.9	50.6	46.5	39.8	43.1	47.4	44.7	40.2	44.5	49.1	46.4			
105	40.3	45.5	50.3	47.7	42.3	45.6	48.7	44.6	38.1	40.6	44.8	42.3	38.3	42.1	46.5	44.0			
110	38.2	43.3	48.0	45.5	40.8	43.4	46.4	42.4	36.2	37.7	41.8	39.4	36.0	39.3	43.6	41.0			
115	35.9	40.8	45.4	43.1	39.1	41.0	43.8	39.8	34.2	34.6	38.3	36.0	33.3	36.0	40.1	37.8			
120	33.2	38.1	42.3	40.2	37.0	38.2	40.8	37.1	31.9	31.1	34.5	32.3	30.4	32.4	36.2	34.1			
125	30.2	35.0	38.8	37.0	34.7	35.1	37.2	34.1	29.3	27.3	30.2	28.4	27.1	28.4	31.9	30.2			
130	27.0	31.3	34.8	33.2	32.0	31.7	33.3	30.5	26.4	23.3	25.7	24.1	23.7	23.9	27.3	25.9			
135	23.7	27.4	30.7	29.1	28.9	28.1	29.3	26.6	23.2	19.8	20.9	19.8	20.0	19.9	22.4	21.6			
140	20.3	23.2	26.4	25.2	25.6	24.6	25.0	22.5	19.9	16.6	15.9	15.5	16.3	15.7	17.4	17.5			
145	16.8	18.9	21.8	21.3	22.5	21.7	20.7	18.2	16.4	13.2	10.9	11.2	12.7	12.0	12.1	13.7			
150	13.2	14.9	17.0	17.6	19.2	18.8	16.3	13.8	12.7	9.79	6.95	7.11	9.22	8.73	6.80	9.82			
155	9.64	11.5	12.3	14.3	15.7	15.6	12.1	10.1	9.34	6.79	5.05	3.66	5.74	5.54	3.38	6.11			
160	6.32	8.43	8.16	11.0	11.9	12.2	9.06	7.38	6.33	4.86	3.14	2.79	3.12	2.79	2.41	2.84			
165	3.84	5.90	6.14	7.90	8.19	8.67	7.11	6.45	4.39	3.82	2.05	2.56	2.80	1.79	2.43	2.05			
170	3.53	5.29	6.13	6.35	5.56	5.88	6.85	6.29	4.39	4.23	2.45	2.23	1.93	1.13	2.14	1.69			
175	3.04	4.77	5.45	5.47	4.80	4.59	5.24	5.07	3.81	3.81	2.69	1.66	0.60	0.47	1.37	1.82			
180	0.39	0.87	0.21	1.53	2.26	2.41	0.71	0.27	0.66	0.47	0.45	0.68	0.88	1.46	1.31	1.05			

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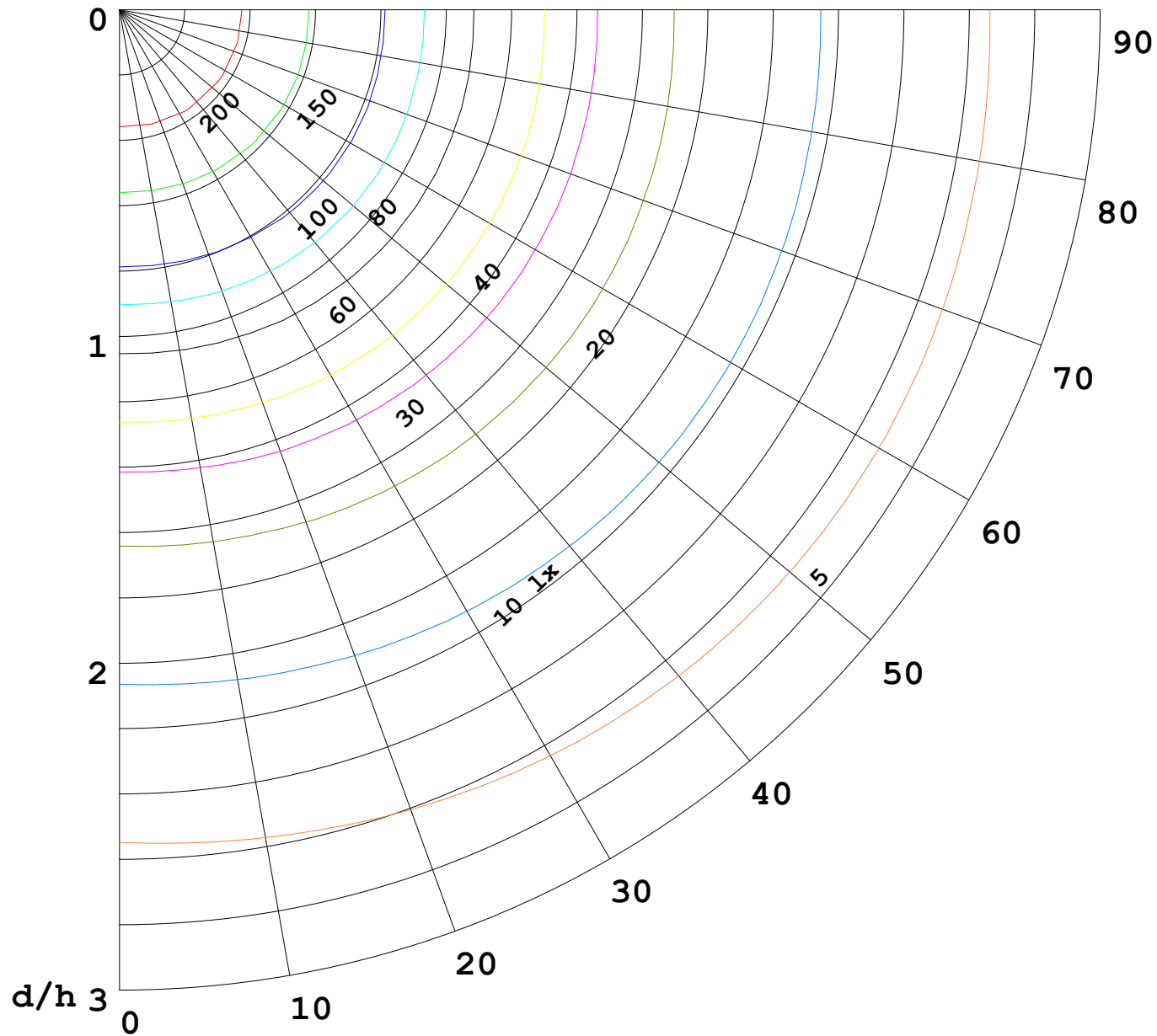
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.455m [K=1.0000]
 Remarks:

I (cd)



1000 lm

$\kappa = 1$



F = 5000 lm
K = 0.7
Hcc = 0.0 m
Hfc = 0.0 m
Eave = 100 lx

	Pcc	Pw	Pfc
—————	70	50	30
—————	50	30	20

