



IESNA LM-79 TEST REPORT

Applicant's name	Blackjack Lighting
Address	1553 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name	Blackjack Lighting
Report No.	BTR66.181.17.0031.10
Product Name	Facets 24" Chandelier -Polished Chrome
Model Number	FAC-24C-PC

Tested by (printed name and signature)	David Zhang	
Title	Test Engineer
Approved by (printed name and signature)	Steven Huo	
Title	Approved Signatory
Date of issue	Jun 22, 2018	

Testing Laboratory Name	BEST Test Service Shenzhen Co., Ltd.
Address	1 st Floor, 1 st Building, Weitai Industrial Park, Yingrenshi, Shiyao, Baoan, Shenzhen, China Tel:+86-755-28236006 , Email: certification@bestcert.cn
Accreditation	DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE NVLAP Testing Lab Code: 200770-0

Test specification	
Standard	IESNA LM-79
Test procedure	IESNA LM-79 Test Procedure
Non-standard test method	No

Test Report Form No.	BEST_LM-79
TRF originator	BEST Test Service Shenzhen Co., Ltd. Mr Tseng
Master TRF	BEST_LM-79.doc

Note:
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description:	
Test date	Jun 19, 2018 to Jun 22, 2018
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	120V 60HZ
Nominal Power.....	29W
Nominal Power Factor	N/A
Nominal Lumen Output.....	1800LM
Nominal CCT	3000K
Nominal CRI(Ra)	90
Number of hours operated prior to measurement	0H
Total operating time of the product for measurements including stabilization	3.5H
Ambient temperature	24.7°C
Orientation (burning position) of SSL product during test	Lighting Surface Down or Base Up
Stabilization time	1.5 H
Photometric method	Sphere-spectroradiometer+Goniophotometer
Calibration standard lamp used	DC 24V 100W Omni-Directional Halogen Calibrated by NIM China(Sphere) DC 120V 500W Omni-Directional Halogen Calibrated by NIM China(Goniophotometer)
Correction factors applied	Self absorbing applied
Photometric measurement conditions	See test method description below
Equipments used	EVERFINE HASS-2000 Sphere System CHROMA 61602 AC Source YOKOGAWA WT 310 Power Meter FLUKE 52II EVERFINE GOR-5000 Goniophotometer CALIFORNIA INSTRUMENT 1501I AC Source YOKOGAWA WT 210 Power Meter FLUKE 233 Temperature Meter
Bandwidth of spectroradiometer	2nm
Statement of uncertainties	1.12%
Deviation from standard operating procedures,	None

Photometric and Electrical Measurement

Total light output (luminous flux) for the 25°C ±1°C ambient temperature conditions is measured using a EVERFINE 2.0 m 4 Π geometry integrating sphere. Temperature is measured at a position inside the sphere. Spectral radiant flux measurements are made using Integral Sphere to the detector port of the integrating sphere. Each lamp is operated at rated voltage in its designated orientation by a CHROMA 61602 AC SOURCE. Each lamp should be stable before measurements are made as below:

Step 1 Take 3 measurements of the lamp light output at 15 minute interval (total time=30mintues.)This time period is in addition to the recommended pre-burning time.

Step 2 Calculate the percent difference between the maximum measured value and the minimum measured value for the three consecutive measurements.

Step 3 if the value calculated in Step 2 does not exceed 0.5 percent, the lamp is considered stable.

Luminous flux, chromaticity coordinates, correlated color temperature and color rendering index for each lamp are calculated from the spectral radiant flux measurements taken at 2 nm intervals over the range 380 to 780 nm by EVERFINE HASS-2000. The calibration of the sphere photometer-spectrometer system is traceable to the NIM China by a calibrated halogen incandescent lamp. Lamp efficacy (lumens per watts) for each lamp model is computed based on the revised luminous flux result. Electrical measurements including voltage, current, power and power factor are measured using the YOKOGAWA WT310 digital power Meter.

The total uncertainty of the light output measurements is estimated, at the 95% confidence level, not to exceed ±1.12% over the wavelength range 380-780 nm.

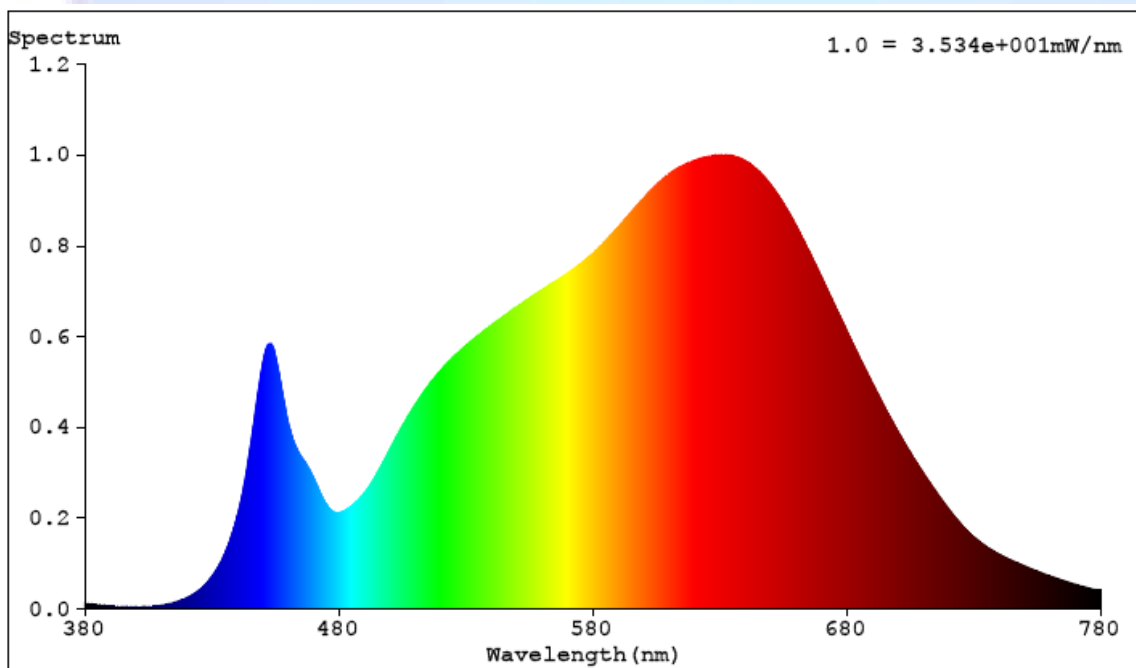
Luminous Intensity

A Everfine GOR-5000 Goniophotometer was used to measure the intensity at each angle of distribution, Luminous intensity (cd) is measured within each vertical plane at a 5° vertical angle increment (maximum) from 0° to 180° Luminous intensity (cd), measurements repeated in vertical planes about the lamp (polar) axis in maximum increments of 22.5° from 0° to 180°, and export the intensity (cd) with excel format. The test distance is 25meters from the Goniophotometer to the detector

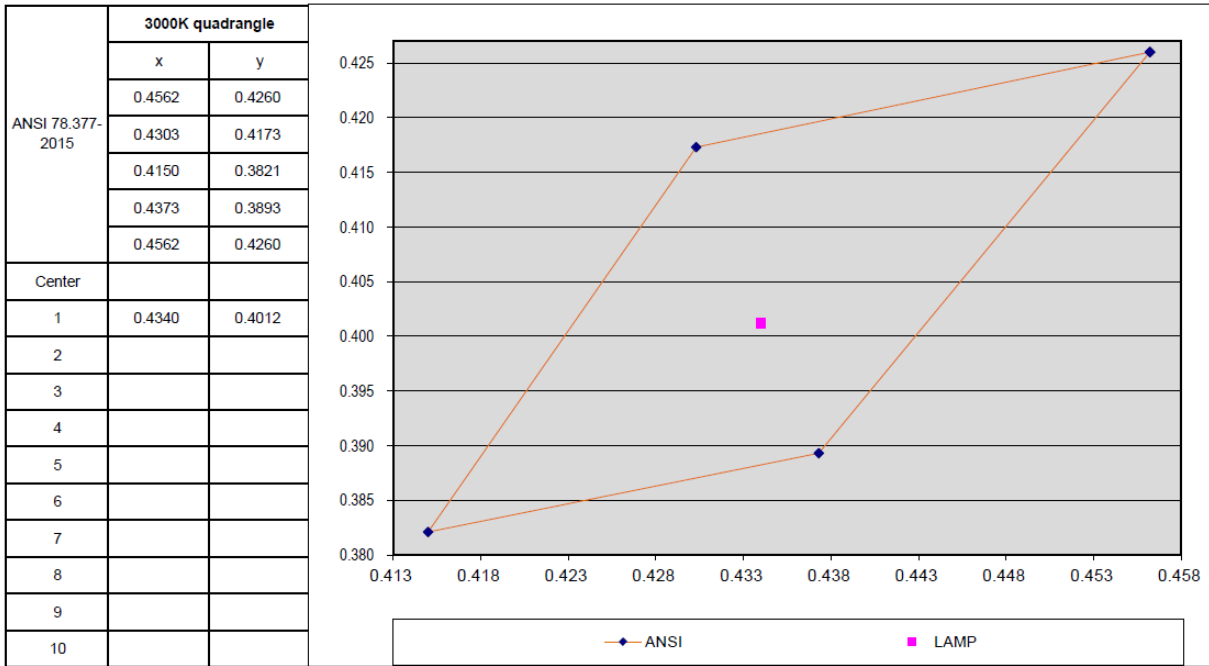
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	0.2356	/	28.20	0.9978	1809.92	64.17
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3026	94.1	73	0.4340	0.4012	0.2499	0.5198	-0.0007

Spectrul Plots



7 Step Quadrangle



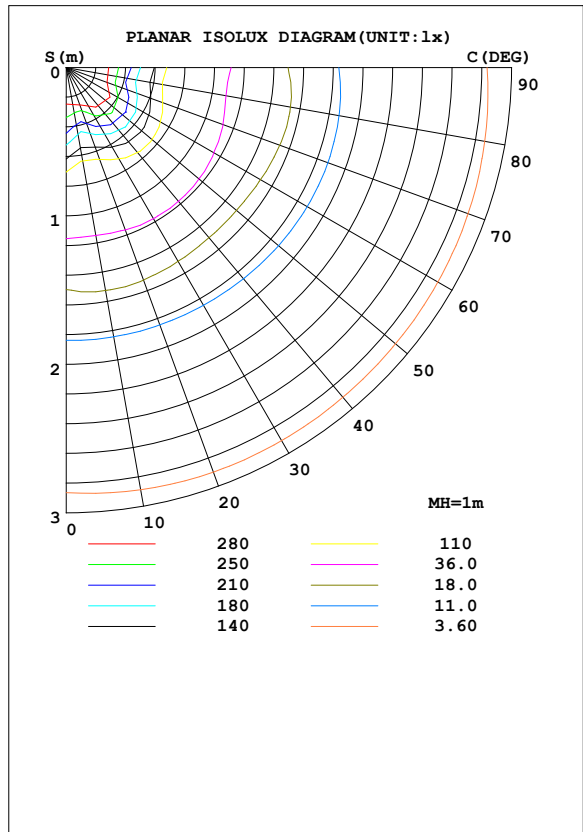
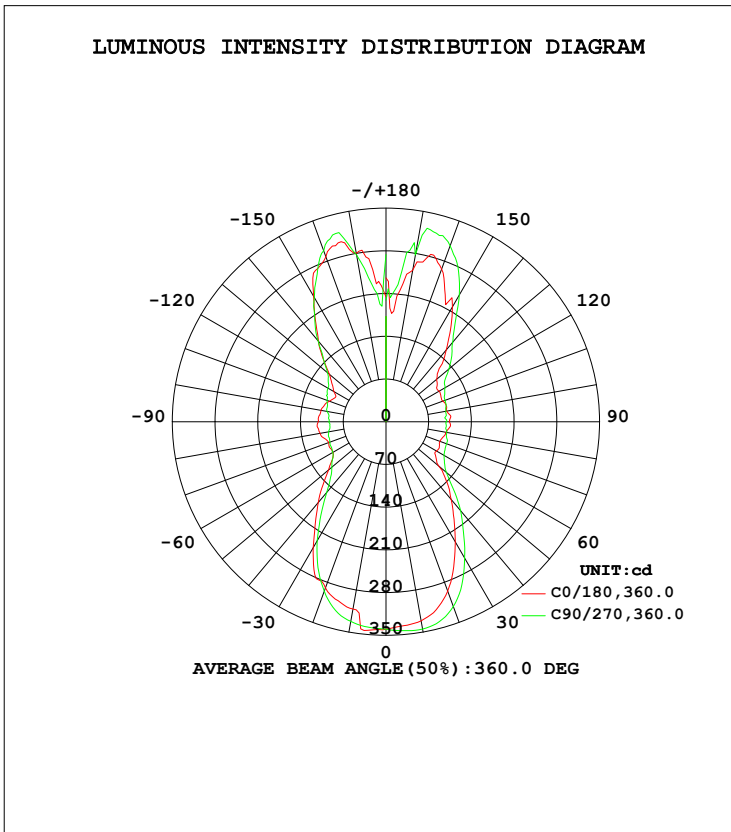
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LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 64.17 lm/W			
MODEL	FAC-24C-PC	I _{max} (cd)	375.1	S/MH (C0/180)	1.05
NOMINAL POWER (W)	29	LOR (%)	100.0	S/MH (C90/270)	1.15
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	1809.9	η UP, DN (C0-180)	24.7, 24.7
NOMINAL FLUX (lm)	1809.92	CIE CLASS	DIFFUSE	η UP, DN (C180-360)	24.7, 25.9
LAMPS INSIDE	1	η up (%)	49.4	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	120.0	η down (%)	50.6	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity: 67.1%
 Test Distance: 2.457m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

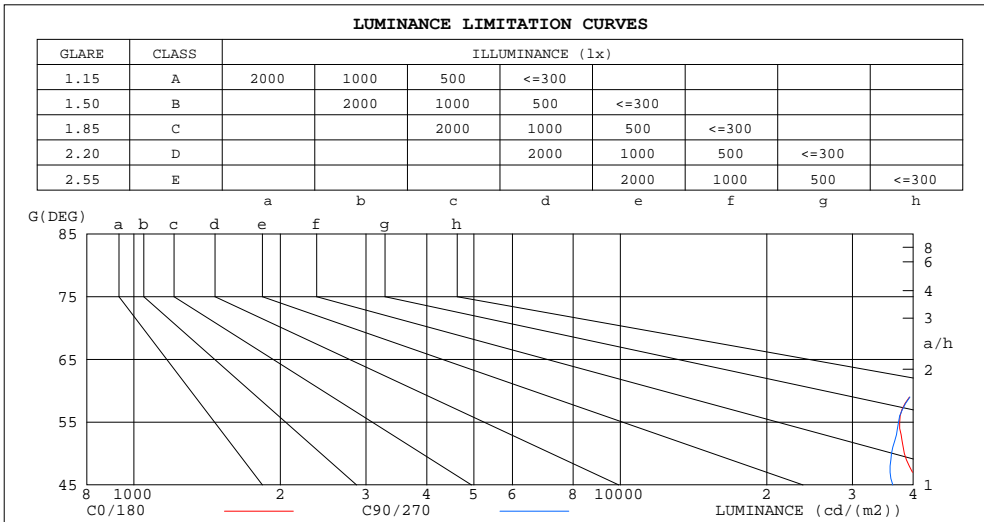
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum,lamp
10	311.5	366.7	332.2	329.3	331.4	339.5	344.9	353.5	0- 10	32.42	32.42	1.79,1.79
20	289.9	339.2	295.9	291.6	295.5	316.6	322.3	338.3	10- 20	91.32	123.7	6.84,6.84
30	238.9	268.4	225.5	220.7	227.2	250.1	257.8	271.8	20- 30	125.7	249.4	13.8,13.8
40	172.6	196.2	151.1	144.0	166.1	164.0	190.1	202.0	30- 40	127.7	377.1	20.8,20.8
50	123.2	129.0	116.0	111.6	112.6	120.8	129.2	152.3	40- 50	113.5	490.6	27.1,27.1
60	100.7	102.6	101.0	101.9	95.89	103.1	110.1	107.2	50- 60	99.91	590.5	32.6,32.6
70	100.1	103.6	97.93	102.9	94.23	100.5	105.6	104.5	60- 70	100.3	690.8	38.2,38.2
80	109.8	108.1	95.51	107.5	99.84	108.8	101.2	111.0	70- 80	109.1	799.9	44.2,44.2
90	111.1	108.1	93.96	108.9	104.1	109.4	99.20	111.1	80- 90	115.1	915.1	50.6,50.6
100	108.3	103.8	98.23	106.5	101.2	109.0	99.77	107.4	90-100	114.4	1030	56.9,56.9
110	98.61	98.04	102.7	100.6	99.06	102.5	103.2	102.9	100-110	108.8	1138	62.9,62.9
120	98.63	102.8	109.9	101.7	100.5	102.6	111.9	101.4	110-120	100.8	1239	68.5,68.5
130	121.5	139.8	125.2	116.2	108.2	116.2	134.5	124.9	120-130	100.7	1340	74,74
140	172.3	195.5	173.2	153.8	153.6	152.9	170.2	198.8	130-140	112.5	1452	80.2,80.2
150	237.2	253.0	235.0	227.3	217.7	226.1	240.5	268.3	140-150	125.1	1577	87.2,87.2
160	288.2	329.8	298.3	289.2	266.6	274.9	307.4	332.5	150-160	122.0	1699	93.9,93.9
170	280.4	313.5	277.3	277.8	251.9	271.8	277.6	325.9	160-170	86.74	1786	98.7,98.7
180	204.7	242.8	274.1	299.2	235.8	228.3	199.1	203.2	170-180	23.87	1810	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:67.1%
Test Distance:2.457m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	257896	211557
80	126566	110048
75	81053	75143
70	58538	57289
65	47994	46803
60	40316	40433
55	37506	37311
50	38352	36108
45	41326	36319

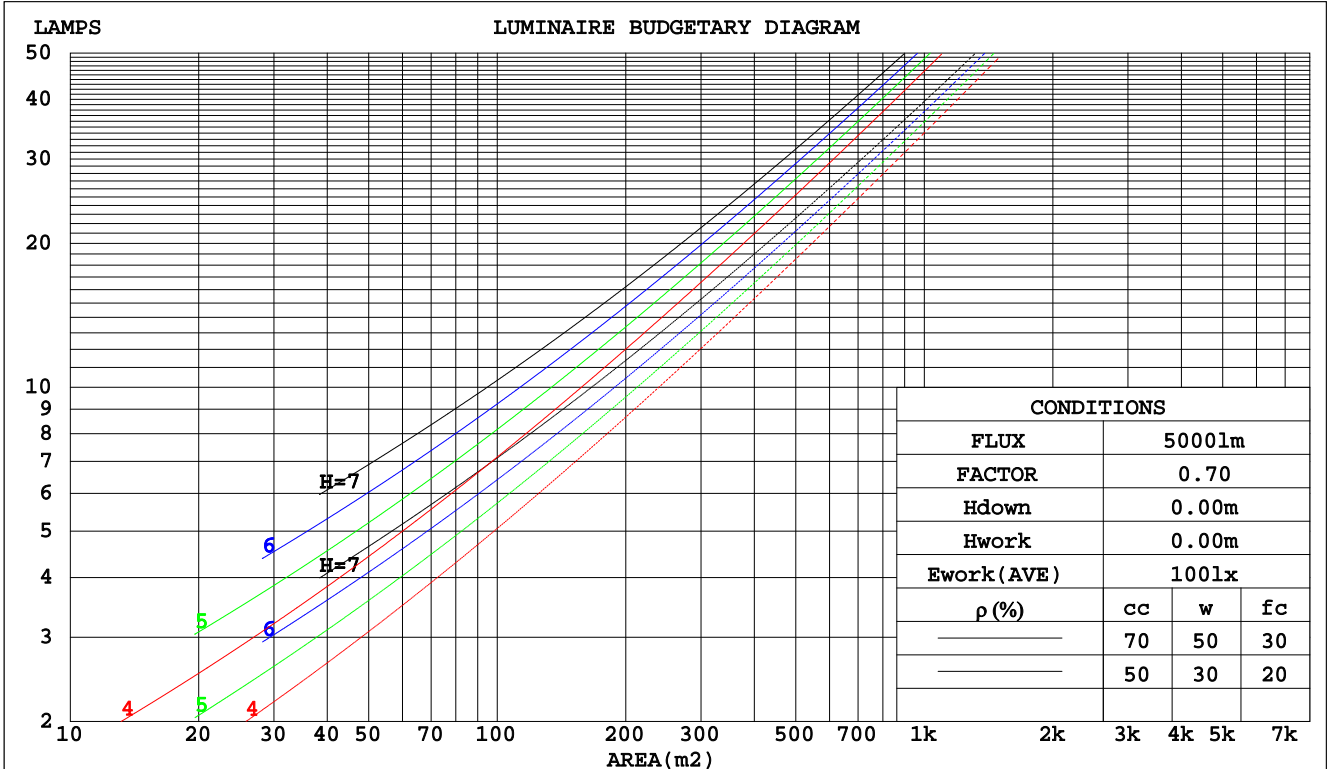
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 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding 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	1.07	1.07	1.07	.99	.99	.99	.84	.84	.84	.70	.70	.70	.57	.57	.57	.51
1.0	.90	.85	.81	.83	.79	.75	.70	.67	.64	.57	.55	.53	.46	.45	.43	.38
2.0	.78	.71	.65	.72	.66	.60	.60	.56	.52	.50	.46	.43	.40	.37	.35	.30
3.0	.68	.60	.54	.63	.56	.50	.53	.48	.43	.44	.40	.36	.35	.32	.30	.25
4.0	.60	.52	.45	.56	.48	.42	.47	.41	.37	.39	.35	.31	.32	.28	.26	.22
5.0	.54	.45	.39	.50	.42	.37	.42	.36	.32	.35	.31	.27	.29	.25	.22	.19
6.0	.48	.40	.34	.45	.37	.32	.38	.32	.28	.32	.27	.24	.26	.23	.20	.17
7.0	.44	.36	.30	.41	.33	.28	.35	.29	.25	.29	.25	.21	.24	.20	.18	.15
8.0	.40	.32	.27	.37	.30	.25	.32	.26	.22	.27	.22	.19	.22	.19	.16	.14
9.0	.37	.29	.24	.34	.27	.22	.29	.24	.20	.25	.20	.17	.21	.17	.15	.12
10.0	.34	.26	.21	.31	.25	.20	.27	.22	.18	.23	.19	.16	.19	.16	.13	.11



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding 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	.347	.197	.062	.325	.185	.059	.283	.163	.052	.245	.141	.045	.210	.122	.039	
2.0	.297	.163	.050	.277	.153	.047	.240	.133	.041	.205	.115	.036	.173	.098	.031	
3.0	.264	.141	.042	.246	.132	.040	.211	.115	.035	.180	.098	.030	.150	.083	.026	
4.0	.239	.124	.036	.222	.116	.034	.190	.101	.030	.161	.086	.026	.134	.073	.022	
5.0	.218	.111	.032	.202	.104	.030	.173	.090	.027	.146	.077	.023	.121	.065	.019	
6.0	.200	.100	.029	.186	.094	.027	.159	.082	.024	.134	.070	.020	.111	.058	.017	
7.0	.185	.092	.026	.172	.086	.024	.147	.075	.021	.124	.064	.019	.102	.053	.016	
8.0	.173	.084	.024	.160	.079	.022	.137	.069	.020	.116	.059	.017	.095	.049	.014	
9.0	.161	.078	.022	.150	.073	.021	.128	.064	.018	.108	.054	.016	.089	.045	.013	
10.0	.151	.073	.020	.141	.068	.019	.121	.059	.017	.102	.050	.014	.084	.042	.012	

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	.567	.567	.567	.485	.485	.485	.331	.331	.331	.190	.190	.190	.061	.061	.061	
1.0	.563	.536	.511	.481	.460	.440	.329	.316	.304	.190	.183	.177	.061	.059	.057	
2.0	.555	.514	.480	.476	.443	.415	.326	.306	.289	.188	.178	.170	.060	.058	.055	
3.0	.548	.499	.460	.470	.430	.398	.322	.299	.279	.186	.175	.165	.060	.057	.054	
4.0	.540	.487	.446	.464	.421	.387	.319	.293	.273	.184	.172	.161	.059	.056	.053	
5.0	.533	.478	.437	.458	.413	.380	.315	.289	.268	.183	.169	.159	.059	.055	.052	
6.0	.526	.470	.430	.452	.407	.374	.312	.285	.265	.181	.168	.157	.058	.055	.052	
7.0	.520	.464	.425	.447	.402	.370	.309	.282	.262	.180	.166	.156	.058	.054	.052	
8.0	.514	.459	.421	.442	.398	.367	.306	.279	.260	.178	.165	.155	.058	.054	.051	
9.0	.508	.454	.418	.438	.394	.364	.303	.277	.259	.177	.164	.154	.057	.054	.051	
10.0	.503	.450	.415	.434	.391	.362	.301	.275	.257	.175	.163	.154	.057	.053	.051	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm										
NAME:					TYPE:FAC-24C-PC			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Blackjack Lighting					SUR.:			Shielding 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	21.5	22.5	22.3	23.3	24.4	21.5	22.5	22.3	23.3	24.4
3H	24.2	25.1	25.1	26.0	27.1	24.2	25.1	25.1	26.0	27.1
4H	26.0	26.8	26.9	27.7	28.9	25.8	26.7	26.7	27.6	28.7
6H	28.1	28.9	29.0	29.8	31.0	27.7	28.5	28.6	29.4	30.6
8H	29.3	30.1	30.2	31.0	32.2	28.8	29.5	29.7	30.4	31.6
12H	30.7	31.4	31.6	32.3	33.6	29.9	30.7	30.9	31.6	32.8
4H 2H	22.3	23.1	23.2	24.0	25.2	22.3	23.1	23.2	24.0	25.2
3H	25.3	26.0	26.2	26.9	28.1	25.3	26.0	26.2	26.9	28.1
4H	27.2	27.9	28.2	28.8	30.1	27.1	27.8	28.1	28.7	30.0
6H	29.5	30.1	30.4	31.0	32.3	29.2	29.8	30.2	30.8	32.0
8H	30.8	31.3	31.7	32.3	33.6	30.3	30.9	31.3	31.8	33.1
12H	32.2	32.7	33.2	33.7	35.0	31.6	32.1	32.6	33.1	34.4
8H 4H	27.9	28.5	28.9	29.5	30.7	27.9	28.4	28.9	29.4	30.7
6H	30.5	30.9	31.5	31.9	33.2	30.2	30.7	31.2	31.7	33.0
8H	31.9	32.3	32.9	33.3	34.7	31.6	32.0	32.6	33.0	34.3
12H	33.6	34.0	34.6	35.0	36.3	33.1	33.4	34.1	34.5	35.8
12H 4H	28.1	28.6	29.1	29.6	30.9	28.1	28.6	29.1	29.6	30.9
6H	30.8	31.2	31.8	32.2	33.5	30.6	31.0	31.6	32.0	33.3
8H	32.3	32.7	33.4	33.7	35.1	32.0	32.4	33.0	33.4	34.7
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, 1810 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.1)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:

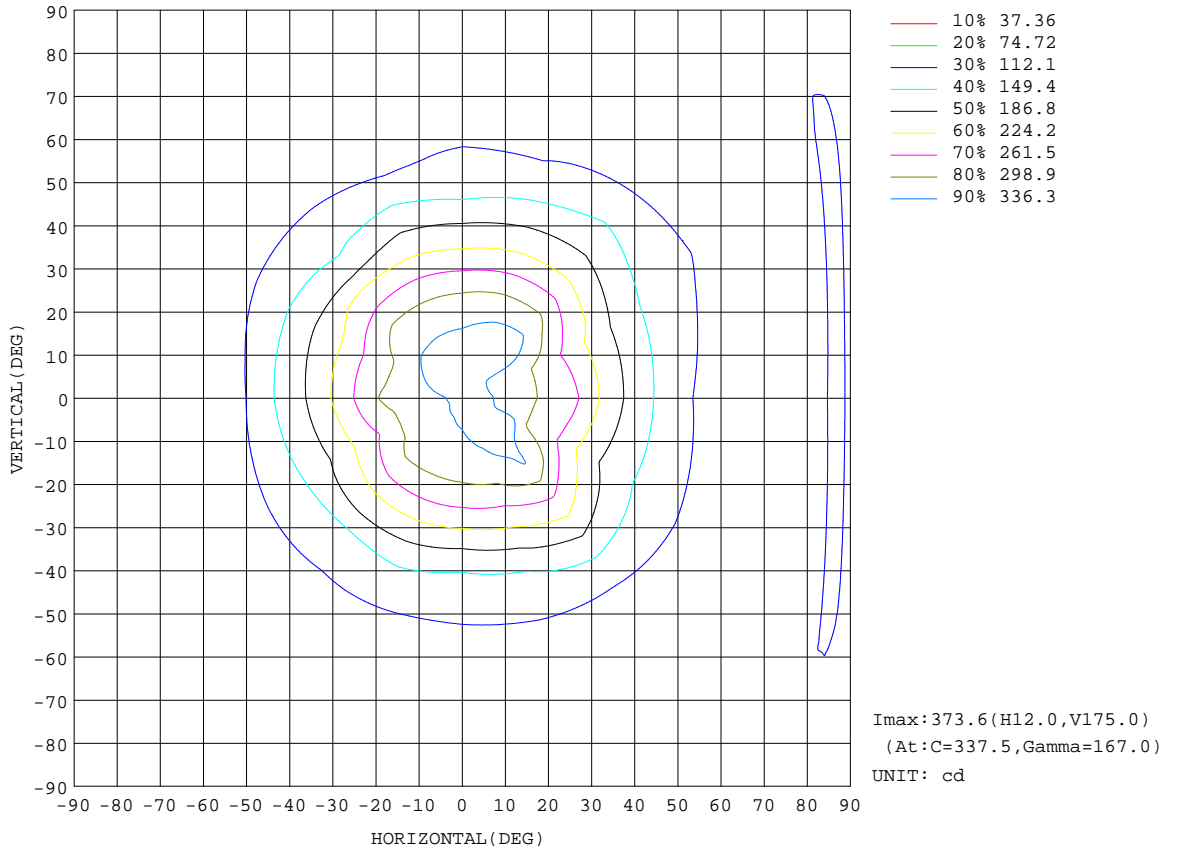
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	43	32	25	41	30	24	37	28	23	16
0.80	52	39	32	49	38	31	43	34	28	19
1.00	59	46	38	55	44	37	48	41	33	22
1.25	65	53	45	61	50	43	53	44	38	25
1.50	70	58	50	65	55	47	56	48	42	27
2.00	77	66	58	71	62	55	61	54	48	30
2.50	81	71	63	75	67	60	64	58	52	32
3.00	85	76	68	79	71	64	67	61	56	34
4.00	90	82	75	83	76	70	70	65	61	37
5.00	93	86	80	85	80	74	72	68	64	39
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:

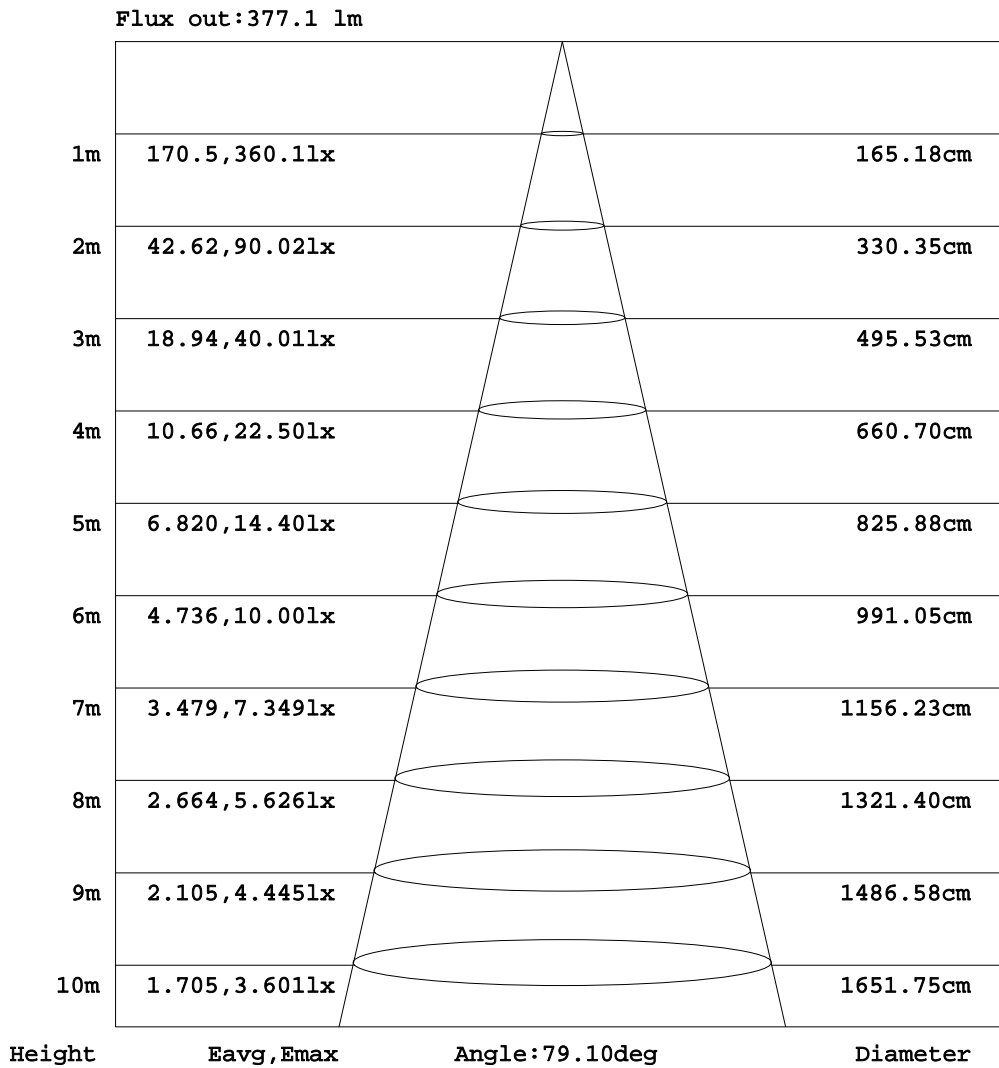


C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity: 67.1%
 Test Distance: 2.457m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:



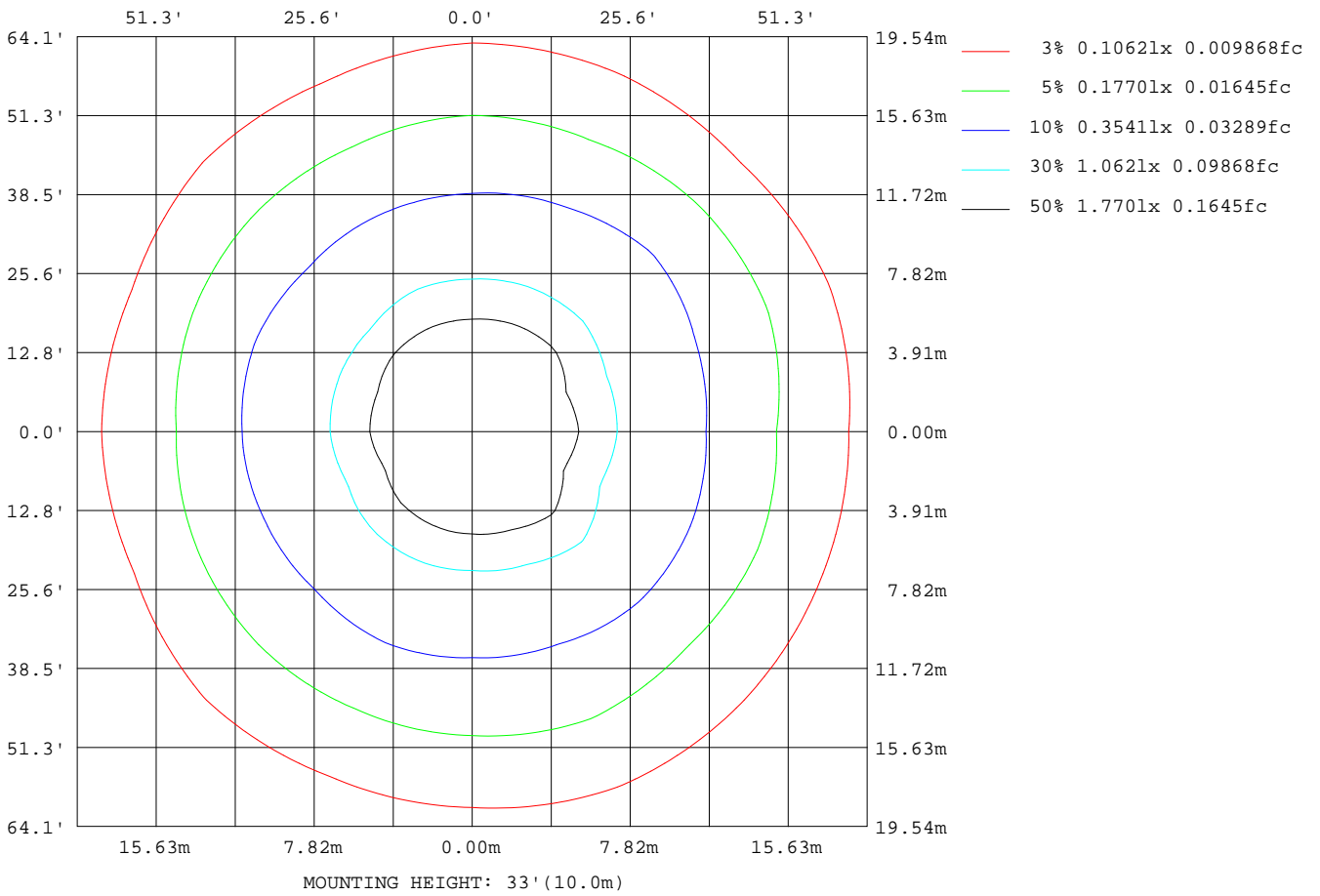
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:

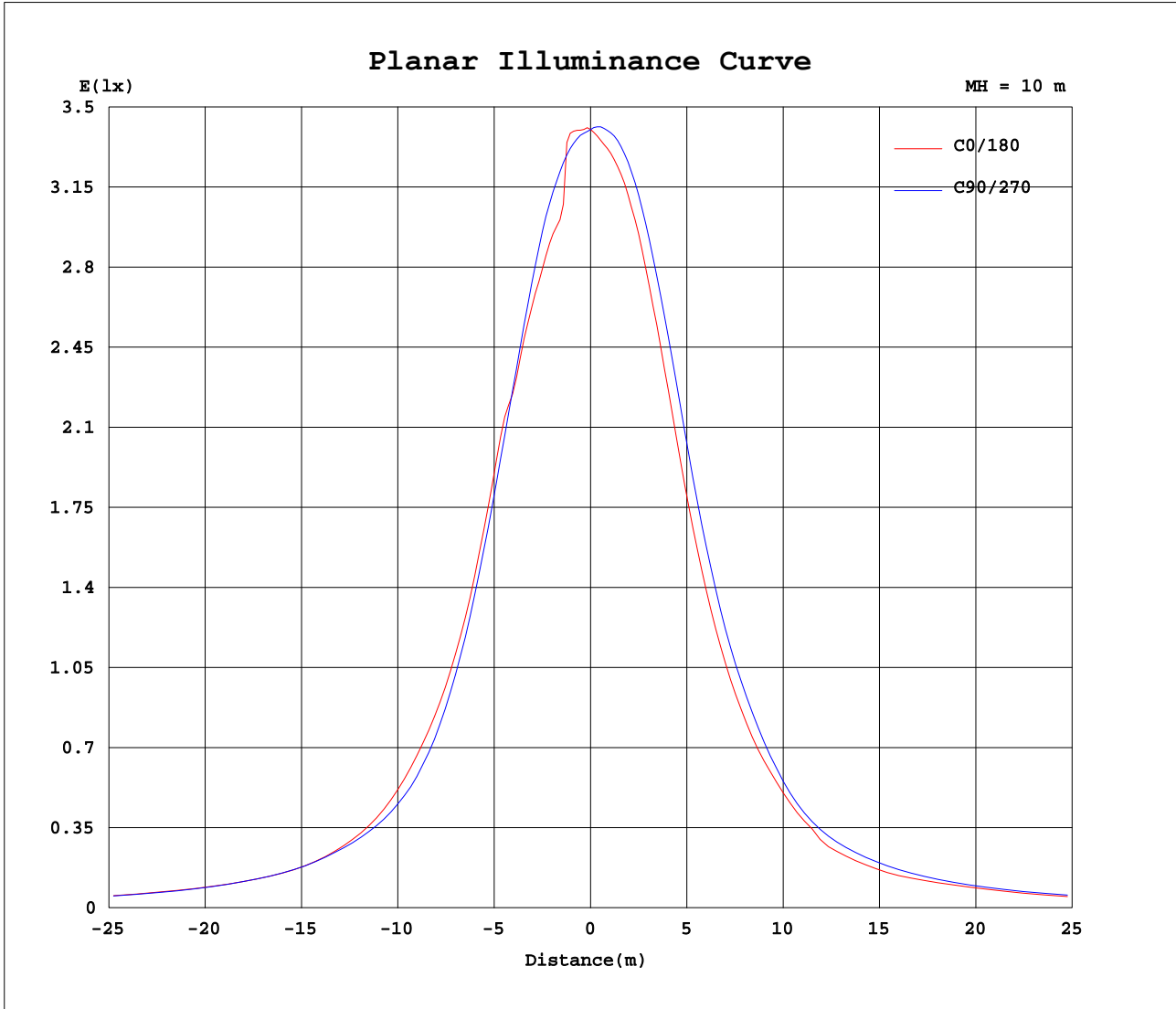
AvgL	cd/m2
L_0~180 (65) av	46844
L_0~180 (75) av	78001
L_0~180 (85) av	249080
L_90~270 (65) av	48660
L_90~270 (75) av	77396
L_90~270 (85) av	219298
L_45 (65) av	48417
L_45 (75) av	82139
L_45 (85) av	251720

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:22 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:67.1%
Test Distance:2.457m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.2356A P:28.204W PF:0.9978 Freq:60.00Hz Lamp Flux:1809.92x1 lm		
NAME:	TYPE:FAC-24C-PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	Shielding Angle:

Table--1

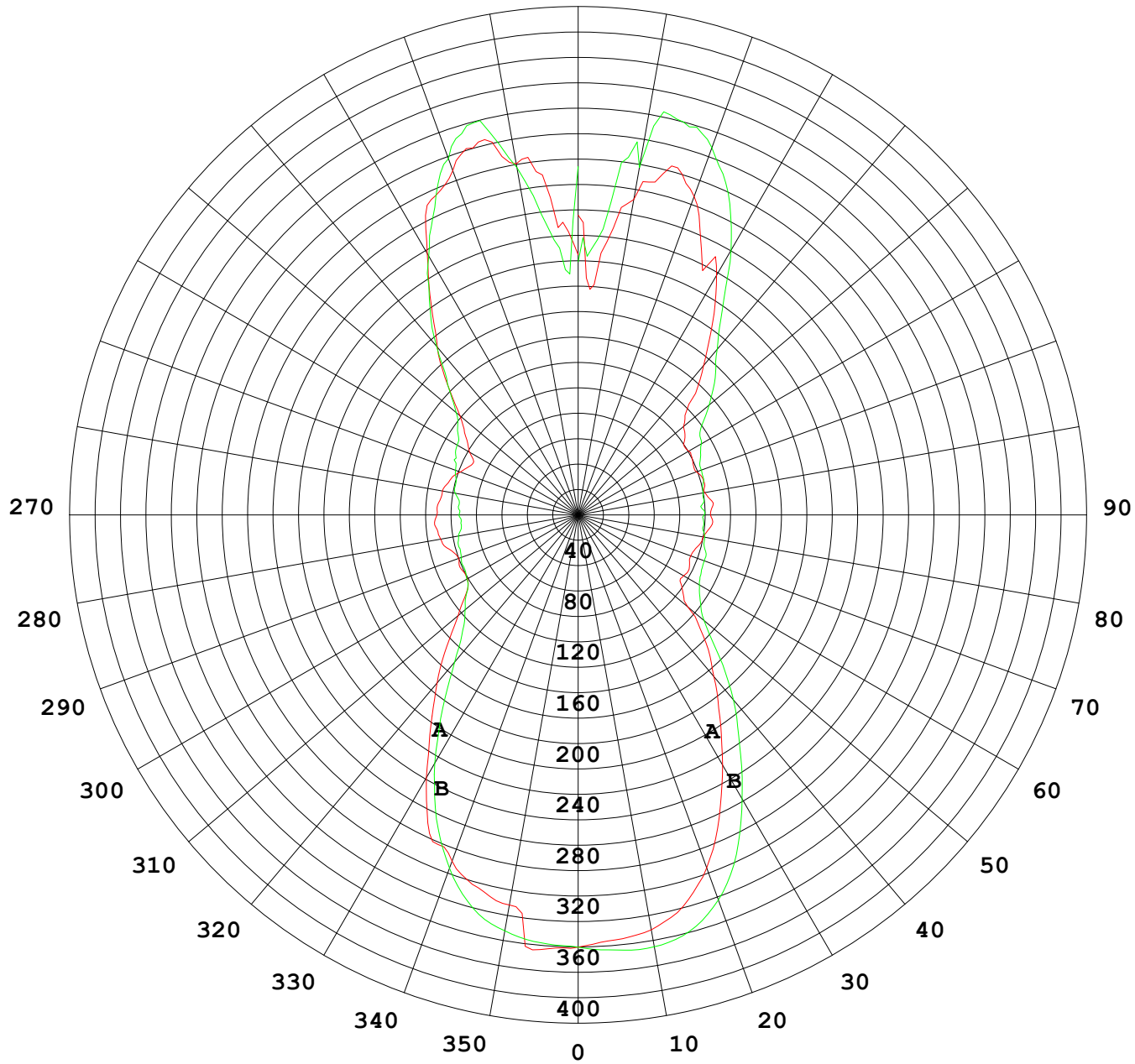
UNIT: cd

C (DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340			
5	343	356	351	341	338	336	336	335	335	337	340	342	344	344	344	344			
10	312	342	367	340	332	329	329	330	331	335	340	343	345	349	353	314			
15	304	311	352	328	320	316	316	315	319	330	333	337	339	347	358	307			
20	290	280	339	306	296	292	292	265	296	283	317	320	322	333	338	288			
25	277	250	309	273	264	261	259	239	262	260	288	291	295	305	308	260			
30	239	215	268	237	225	224	221	204	227	229	250	257	258	267	272	228			
35	202	185	232	199	186	190	187	177	194	198	198	221	221	231	233	204			
40	173	161	196	164	151	157	144	153	166	173	164	190	190	199	202	174			
45	146	144	161	137	128	133	126	131	142	147	139	160	156	168	174	152			
50	123	129	129	119	116	117	112	113	113	124	121	123	129	137	152	134			
55	108	113	108	110	107	103	104	103	99.8	107	110	109	117	116	129	123			
60	101	102	103	107	101	98.8	102	95.8	95.9	97.6	103	106	110	109	107	112			
65	101	99.6	104	103	98.9	99.4	99.9	94.7	96.6	95.4	102	99.9	107	105	103	101			
70	100	102	104	102	97.9	99.1	103	97.1	94.2	98.2	100	101	106	105	105	98.6			
75	105	106	106	107	97.2	98.4	107	104	97.0	100	106	102	103	108	107	102			
80	110	106	108	104	95.5	102	108	106	99.8	104	109	101	101	107	111	103			
85	112	109	107	106	92.2	101	110	109	105	105	110	101	99.0	108	111	109			
90	111	106	108	103	94.0	99.3	109	109	104	104	109	100	99.2	109	111	109			
95	110	104	105	104	94.0	103	111	110	107	107	108	98.9	98.1	111	109	106			
100	108	102	104	105	98.2	101	107	106	101	103	109	99.1	99.8	108	107	103			
105	105	100	102	105	99.5	99.1	106	105	102	102	106	99.5	102	108	107	102			
110	98.6	98.3	98.0	109	103	102	101	98.0	99.1	97.8	103	98.3	103	105	103	99.9			
115	92.7	98.9	97.1	112	106	102	98.4	94.0	99.5	97.2	99.9	101	106	106	100	102			
120	98.6	104	103	112	110	107	102	97.2	100	98.9	103	106	112	114	101	105			
125	108	116	112	120	116	112	106	106	102	104	108	114	118	120	112	110			
130	121	131	140	132	125	125	116	119	108	114	116	126	135	132	125	123			
135	145	147	169	153	145	149	139	135	123	131	132	146	152	154	157	141			
140	172	166	195	185	173	179	154	164	154	165	153	168	170	177	199	161			
145	201	189	222	214	204	204	178	194	184	198	177	197	198	213	242	189			
150	237	219	253	247	235	234	227	203	218	225	226	228	241	252	268	223			
155	274	254	291	279	267	270	246	237	230	261	242	261	279	287	301	285			
160	288	284	330	306	298	297	289	262	267	265	275	279	307	317	332	317			
165	304	294	347	324	319	325	283	277	284	285	283	316	320	339	348	368			
170	280	273	313	293	277	279	278	264	252	247	272	301	278	320	326	348			
175	250	231	232	208	217	188	206	204	207	207	214	223	226	251	258	276			
180	205	241	243	229	274	185	299	234	236	237	228	257	199	230	203	243			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:22 June 2018

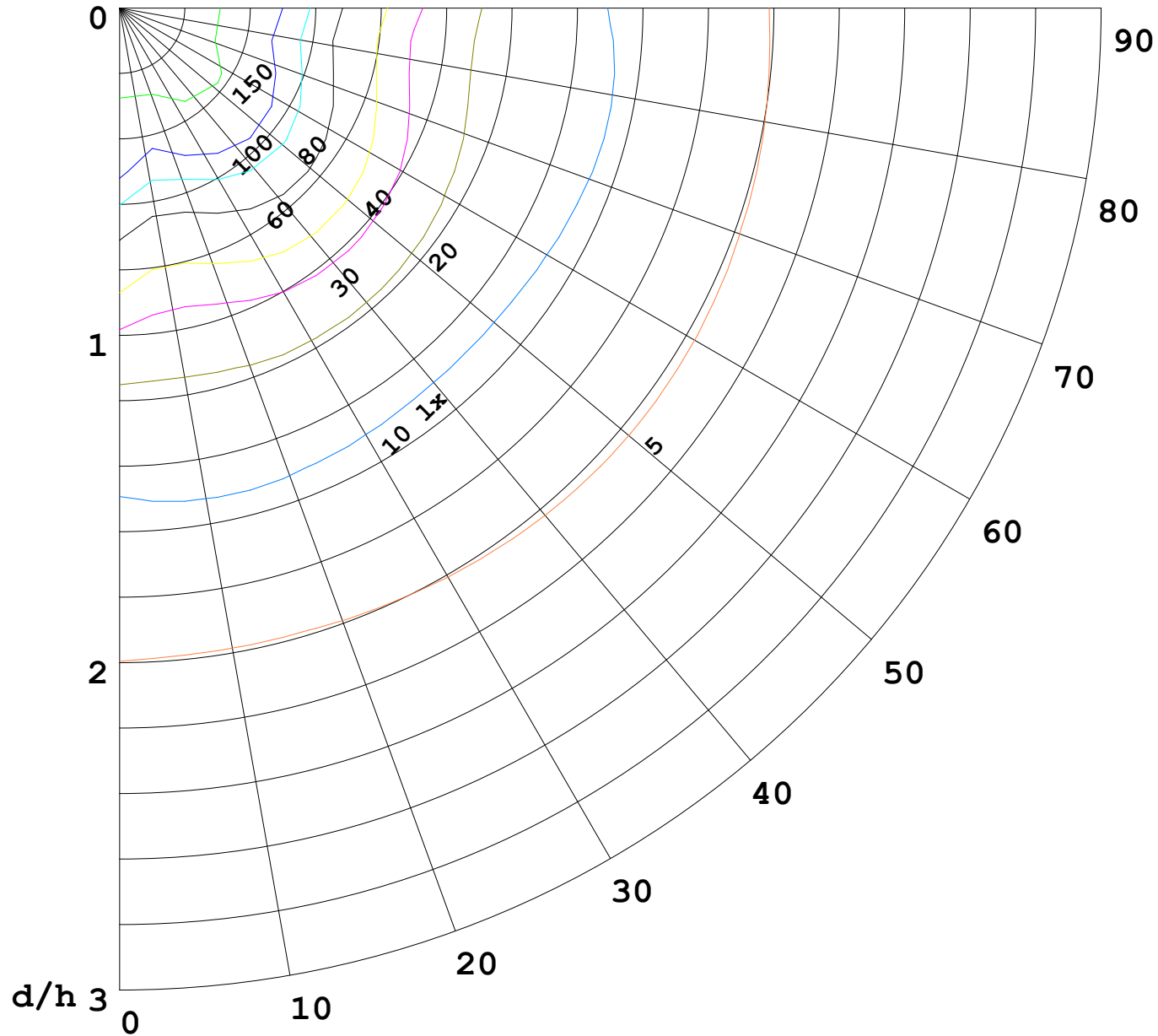
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:2.457m [K=1.0000]
 Remarks:

I (cd)



1000 lm

$K = 1$



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

