



IESNA LM-79 TEST REPORT

Applicant's name	Blackjack Lighting
Address	1553 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name	Blackjack Lighting
Report No.....	BTR66.181.16.0040.15
Product Name	038 Dot fixture with white reflector, 36" diameter
Model Number	DOT-36C-PC or EG

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	Aug 01, 2017	

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

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

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description:	
Test date	Aug 01, 2017
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	120V 60Hz
Nominal Power.....	57W
Nominal Power Factor	N/A
Nominal Lumen Output.....	3450lm
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.

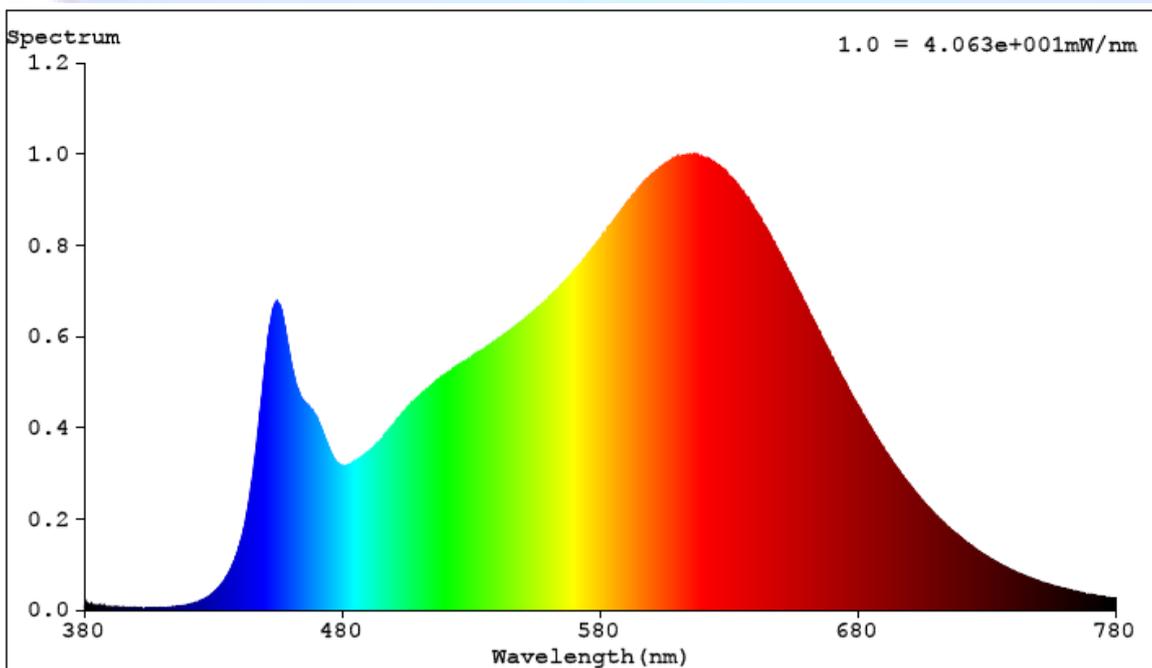
Luminous Intensity

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

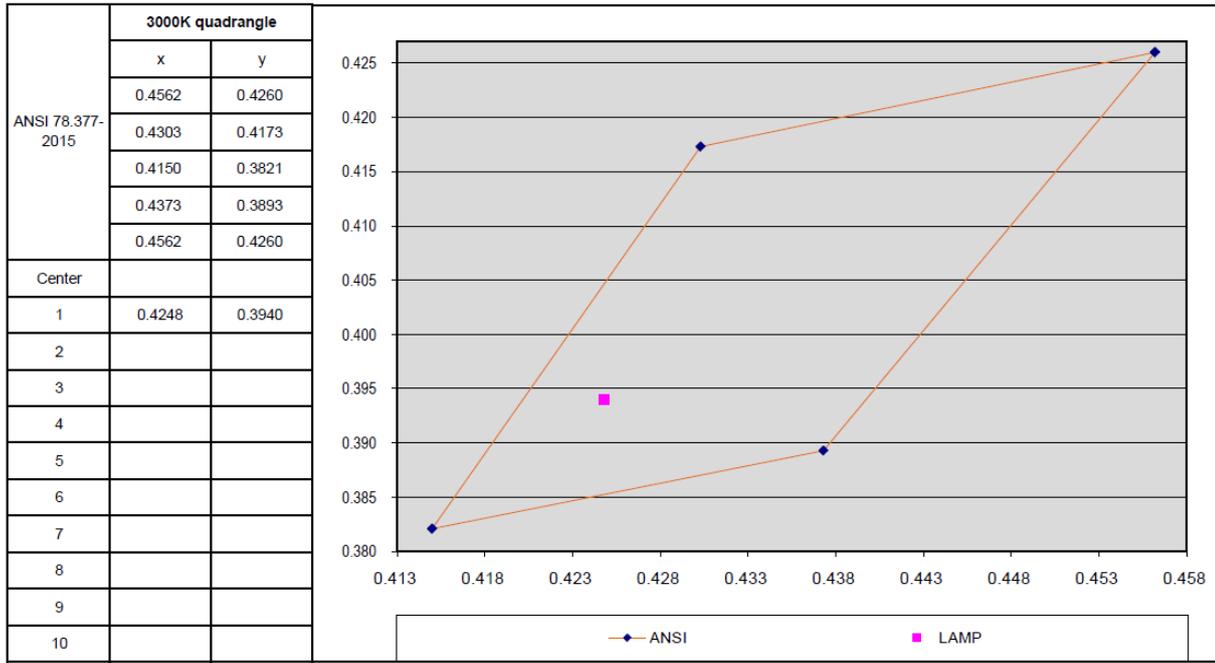
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.1	60.0	0.4730	/	56.54	0.9955	3489.59	61.72
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3131	92.2	57	0.4248	0.3940	0.2470	0.5155	-0.0023

Spectrul Plots



7 Step Quadrangle



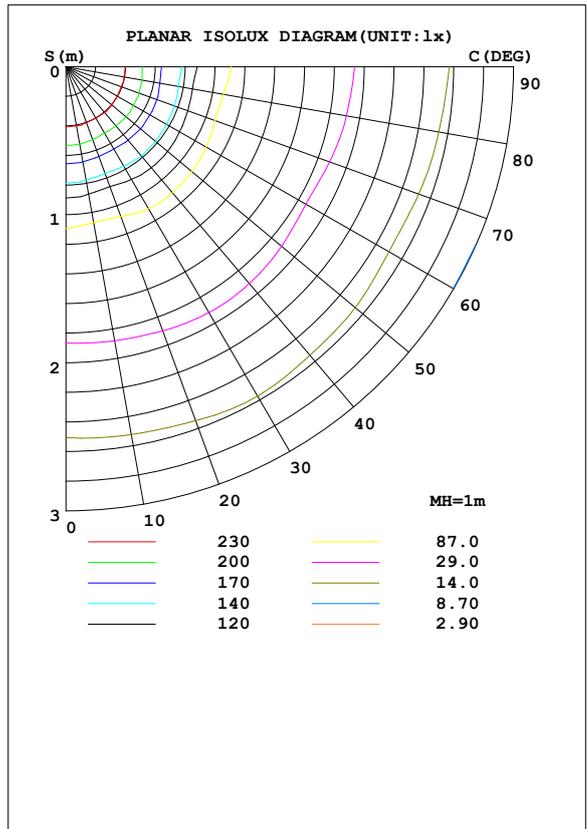
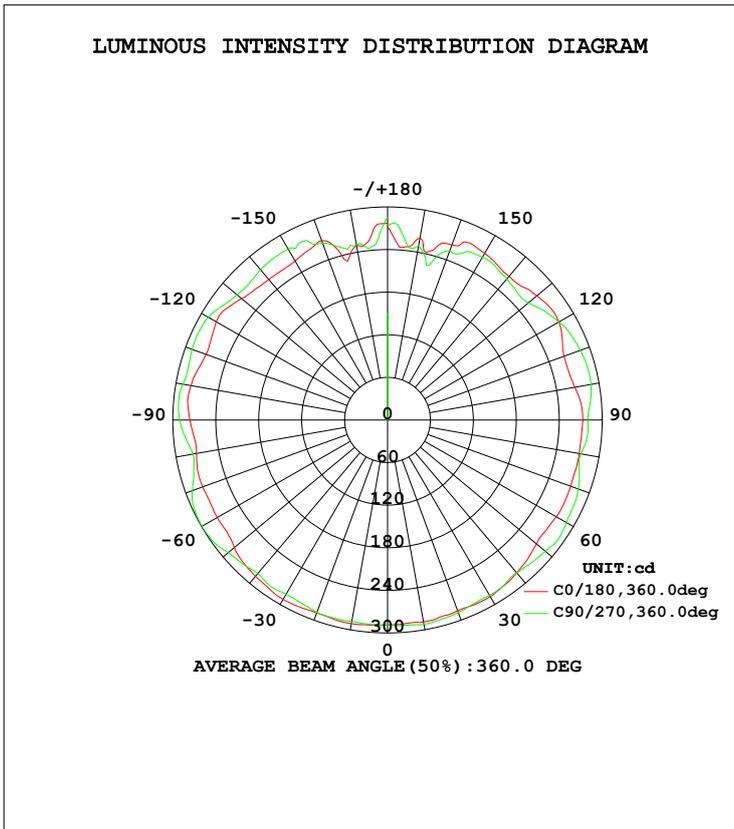
EUT Photo



LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 61.72 lm/W			
MODEL	DOT-36C-PC or EG	I _{max} (cd)	302.2	S/MH(C0/180)	1.51
NOMINAL POWER(W)	57	LOR(%)	100.0	S/MH(C90/270)	1.50
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	3489.6	η UP, DN(C0-180)	24.9,25.7
NOMINAL FLUX(lm)	3489.59	CIE CLASS	DIFFUSE	η UP, DN(C180-360)	24.3,25.2
LAMPS INSIDE	1	η up(%)	49.1	CIBSE SHR NOM	1.75
TEST VOLTAGE(V)	120	η down(%)	50.9	CIBSE SHR MAX	1.75



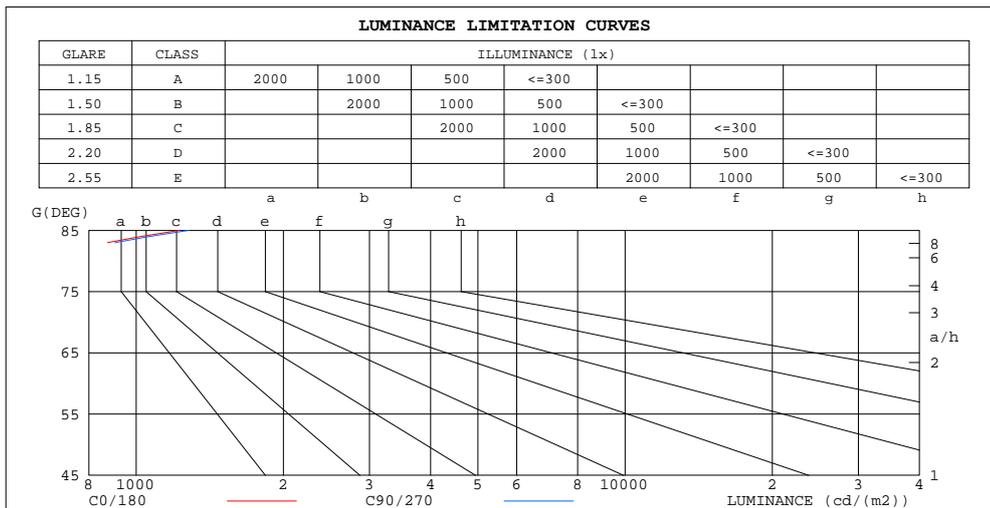
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

**ZONAL FLUX DIAGRAM
AND LUMINANCE LIMITATION CURVES**

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\#lum$
10	291.2	290.8	288.1	289.5	288.7	290.8	292.3	291.5	0- 10	27.64	27.64	0.79
20	289.2	289.8	288.5	288.9	285.9	288.7	288.7	287.6	10- 20	82.02	109.7	3.14
30	291.7	288.6	283.2	286.5	287.0	289.6	285.0	283.6	20- 30	133.1	242.7	6.96
40	287.3	288.3	282.3	279.0	280.7	288.8	280.9	273.1	30- 40	179.2	421.9	12.1
50	279.4	289.9	290.7	278.7	271.4	289.0	287.6	269.0	40- 50	218.0	639.9	18.3
60	275.0	290.0	299.4	288.8	272.4	286.1	288.8	278.7	50- 60	254.7	894.6	25.6
70	275.0	284.2	290.4	288.7	272.3	276.0	283.8	272.7	60- 70	280.4	1175	33.7
80	271.3	289.3	276.1	285.3	272.0	281.9	274.4	274.3	70- 80	295.5	1470	42.1
90	276.2	288.4	290.6	278.3	273.0	284.1	280.0	269.7	80- 90	305.4	1776	50.9
100	279.0	279.7	290.5	279.1	265.7	279.9	288.5	259.8	90-100	304.1	2080	59.6
110	270.1	283.7	290.8	282.7	262.6	276.9	286.9	267.3	100-110	292.8	2373	68
120	276.6	279.8	289.3	280.5	276.6	276.8	276.0	277.1	110-120	276.0	2649	75.9
130	266.1	278.5	274.6	265.2	272.3	273.1	256.8	270.2	120-130	246.8	2895	83
140	258.3	280.2	276.3	255.2	264.1	271.4	259.4	266.3	130-140	207.2	3103	88.9
150	258.6	279.5	278.3	258.9	271.3	268.1	264.9	271.4	140-150	167.9	3271	93.7
160	268.7	268.2	264.9	257.6	262.4	253.0	253.2	267.5	150-160	123.6	3394	97.3
170	249.8	253.0	250.7	252.3	260.8	247.4	249.0	258.3	160-170	71.40	3465	99.3
180	277.0	253.8	285.8	262.7	272.8	257.7	272.7	269.8	170-180	24.11	3490	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	1227	1282
80	615	626
75	418	426
70	317	334
65	255	277
60	217	236
55	188	204
50	171	178
45	159	159

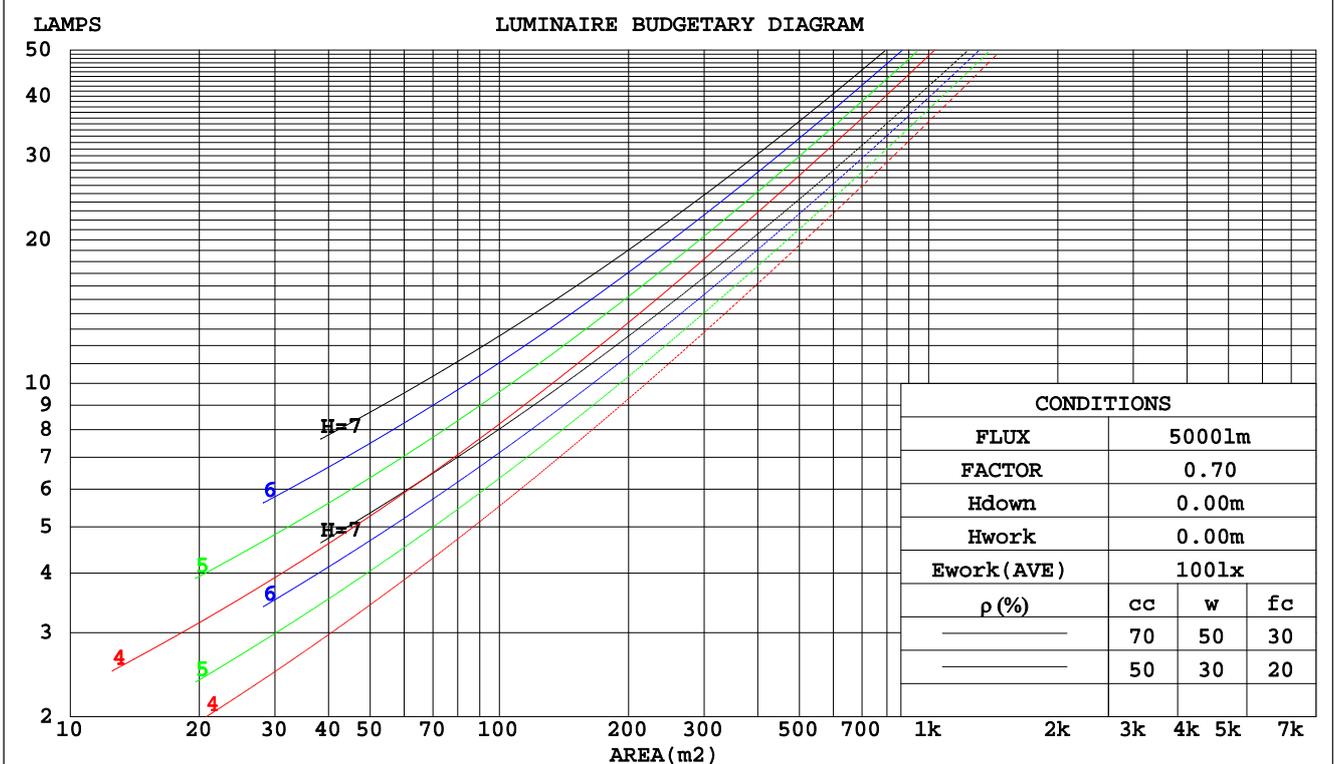
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 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	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	1.07	1.07	1.07	.99	.99	.99	.84	.84	.84	.70	.70	.70	.57	.57	.57	.51
1.0	.88	.82	.77	.80	.76	.71	.67	.63	.60	.55	.52	.50	.44	.42	.40	.34
2.0	.74	.66	.60	.68	.61	.55	.57	.51	.47	.46	.42	.38	.36	.33	.30	.26
3.0	.64	.55	.48	.59	.51	.44	.49	.43	.38	.39	.35	.31	.31	.27	.24	.20
4.0	.56	.47	.40	.51	.43	.37	.43	.36	.31	.34	.29	.25	.27	.23	.20	.16
5.0	.49	.40	.33	.45	.37	.31	.38	.31	.26	.31	.25	.21	.24	.20	.17	.13
6.0	.44	.35	.28	.40	.32	.26	.34	.27	.22	.27	.22	.18	.21	.17	.14	.11
7.0	.39	.31	.24	.36	.28	.23	.30	.24	.19	.25	.20	.16	.19	.15	.12	.10
8.0	.36	.27	.21	.33	.25	.20	.27	.21	.17	.22	.17	.14	.18	.14	.11	.08
9.0	.32	.24	.19	.30	.23	.17	.25	.19	.15	.21	.16	.12	.16	.13	.10	.07
10.0	.30	.22	.17	.27	.20	.16	.23	.17	.13	.19	.14	.11	.15	.11	.09	.07



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	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	.396	.225	.071	.374	.213	.068	.332	.191	.061	.294	.170	.054	.259	.150	.048	
2.0	.333	.182	.056	.313	.172	.053	.275	.153	.047	.240	.135	.042	.208	.117	.037	
3.0	.292	.155	.046	.273	.146	.044	.239	.129	.039	.207	.113	.035	.177	.098	.030	
4.0	.260	.135	.040	.244	.127	.038	.212	.112	.034	.182	.098	.030	.155	.084	.026	
5.0	.236	.120	.035	.220	.113	.033	.191	.099	.029	.164	.086	.026	.138	.074	.022	
6.0	.215	.108	.031	.201	.101	.029	.174	.089	.026	.149	.077	.023	.125	.066	.020	
7.0	.198	.098	.028	.185	.092	.026	.160	.081	.023	.136	.070	.020	.114	.059	.017	
8.0	.183	.090	.025	.171	.084	.024	.148	.074	.021	.126	.064	.018	.106	.054	.016	
9.0	.170	.082	.023	.159	.078	.022	.138	.068	.019	.117	.059	.017	.098	.050	.014	
10.0	.159	.076	.021	.149	.072	.020	.129	.063	.018	.110	.054	.015	.092	.046	.013	

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	.565	.565	.565	.483	.483	.483	.329	.329	.329	.189	.189	.189	.060	.060	.060	
1.0	.564	.533	.505	.482	.457	.434	.330	.315	.300	.190	.182	.175	.061	.059	.057	
2.0	.558	.512	.473	.478	.440	.409	.327	.305	.285	.189	.177	.167	.061	.057	.054	
3.0	.550	.496	.453	.472	.428	.393	.324	.297	.276	.187	.174	.162	.060	.056	.053	
4.0	.543	.485	.440	.466	.419	.382	.321	.292	.269	.185	.171	.159	.060	.056	.052	
5.0	.536	.476	.431	.460	.412	.375	.317	.288	.265	.184	.169	.157	.059	.055	.052	
6.0	.529	.468	.425	.455	.406	.370	.314	.284	.262	.182	.167	.156	.059	.055	.051	
7.0	.522	.462	.420	.449	.401	.366	.310	.281	.260	.180	.165	.154	.058	.054	.051	
8.0	.516	.457	.417	.444	.396	.363	.307	.278	.258	.179	.164	.154	.058	.054	.051	
9.0	.510	.453	.414	.439	.393	.361	.304	.276	.256	.177	.163	.153	.057	.054	.051	
10.0	.504	.449	.412	.435	.390	.359	.301	.274	.255	.176	.162	.152	.057	.053	.051	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	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	4.0	5.1	4.8	5.9	7.1	4.0	5.0	4.8	5.9	7.0
3H	7.1	8.1	8.0	9.0	10.1	7.1	8.1	8.0	9.0	10.2
4H	8.9	9.8	9.8	10.7	11.9	8.9	9.8	9.8	10.7	11.9
6H	10.8	11.7	11.7	12.6	13.8	10.9	11.7	11.8	12.6	13.8
8H	11.9	12.7	12.8	13.7	14.9	12.0	12.8	12.9	13.8	15.0
12H	13.1	13.9	14.1	14.9	16.1	13.3	14.1	14.2	15.1	16.3
4H 2H	5.0	5.9	5.9	6.8	8.0	4.9	5.9	5.8	6.8	8.0
3H	8.3	9.1	9.2	10.0	11.2	8.2	9.0	9.1	9.9	11.2
4H	10.2	10.9	11.1	11.9	13.1	10.1	10.8	11.0	11.8	13.0
6H	12.3	12.9	13.2	13.9	15.2	12.2	12.9	13.2	13.8	15.1
8H	13.4	14.0	14.4	15.0	16.3	13.4	14.0	14.4	15.0	16.3
12H	14.8	15.3	15.7	16.3	17.6	14.9	15.4	15.8	16.4	17.7
8H 4H	10.9	11.5	11.9	12.5	13.8	10.8	11.4	11.8	12.4	13.7
6H	13.3	13.8	14.3	14.8	16.1	13.2	13.7	14.2	14.7	16.0
8H	14.6	15.1	15.6	16.1	17.4	14.6	15.0	15.6	16.1	17.4
12H	16.2	16.6	17.2	17.6	18.9	16.2	16.6	17.2	17.6	19.0
12H 4H	11.1	11.6	12.1	12.6	13.9	11.0	11.6	12.0	12.6	13.9
6H	13.6	14.1	14.6	15.1	16.4	13.5	14.0	14.5	15.0	16.3
8H	15.1	15.5	16.1	16.5	17.9	15.0	15.4	16.0	16.5	17.8
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 3490 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.3)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
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 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
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 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
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SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	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	37	25	18	35	24	17	32	22	16	9
0.80	46	33	24	43	31	23	38	28	21	12
1.00	53	39	31	50	37	29	43	35	26	15
1.25	60	46	37	56	44	35	48	38	31	18
1.50	65	52	42	61	49	40	52	43	36	20
2.00	73	60	51	67	56	48	58	49	42	24
2.50	78	66	57	72	62	54	61	53	47	27
3.00	82	71	63	76	66	59	64	57	51	29
4.00	87	78	70	80	72	65	68	62	56	33
5.00	90	82	75	83	76	70	70	65	60	35
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	PROTECTION ANGLE:

Conical surface Flux(90deg):

526.29 lm

%lum = 15.1%

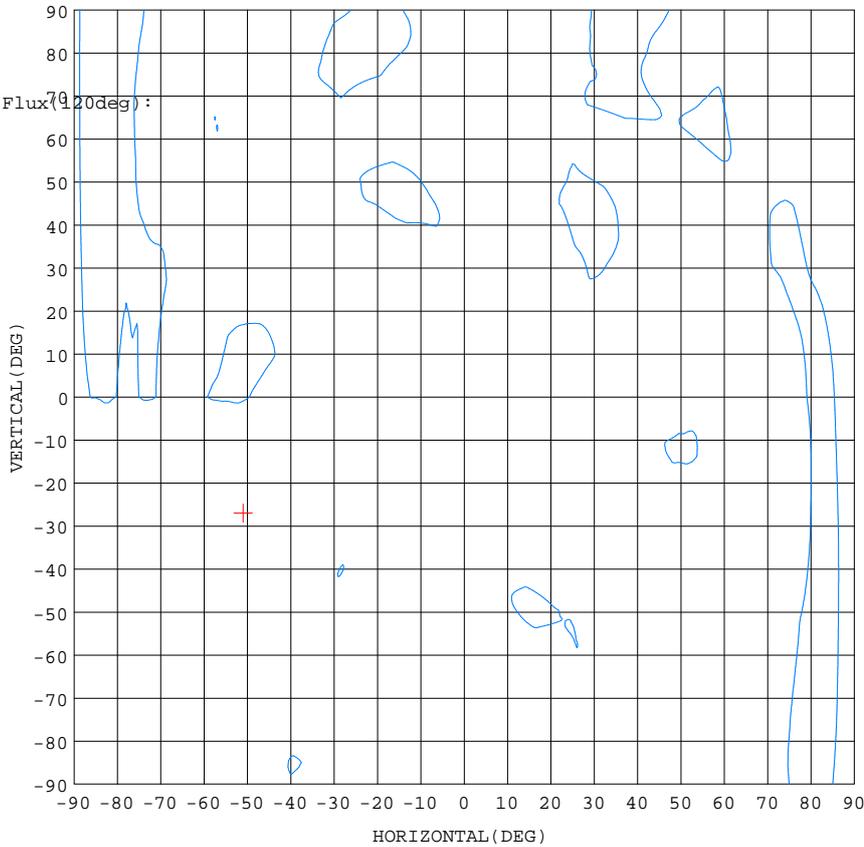
%lamp = 15.1%

Conical surface Flux(70deg):

894.59 lm

%lum = 25.6%

%lamp = 25.6%



Imax:302.1(H=-51.0,V=-27.0)
(At:C=160.0,Gamma=56.0)

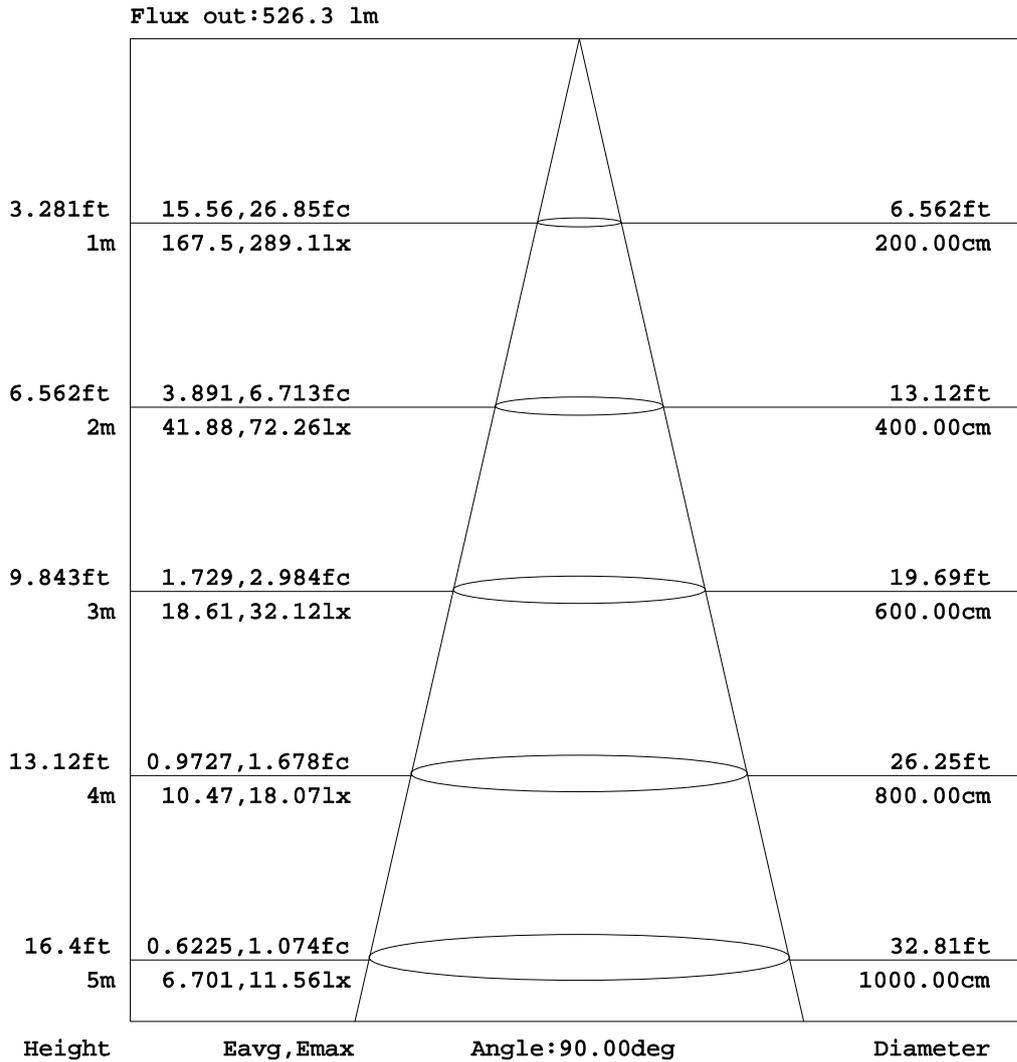
UNIT: cd

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2017-08-01

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:26.000m [K=1.0000]
Remarks:

AAI Figure

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	PROTECTION ANGLE:



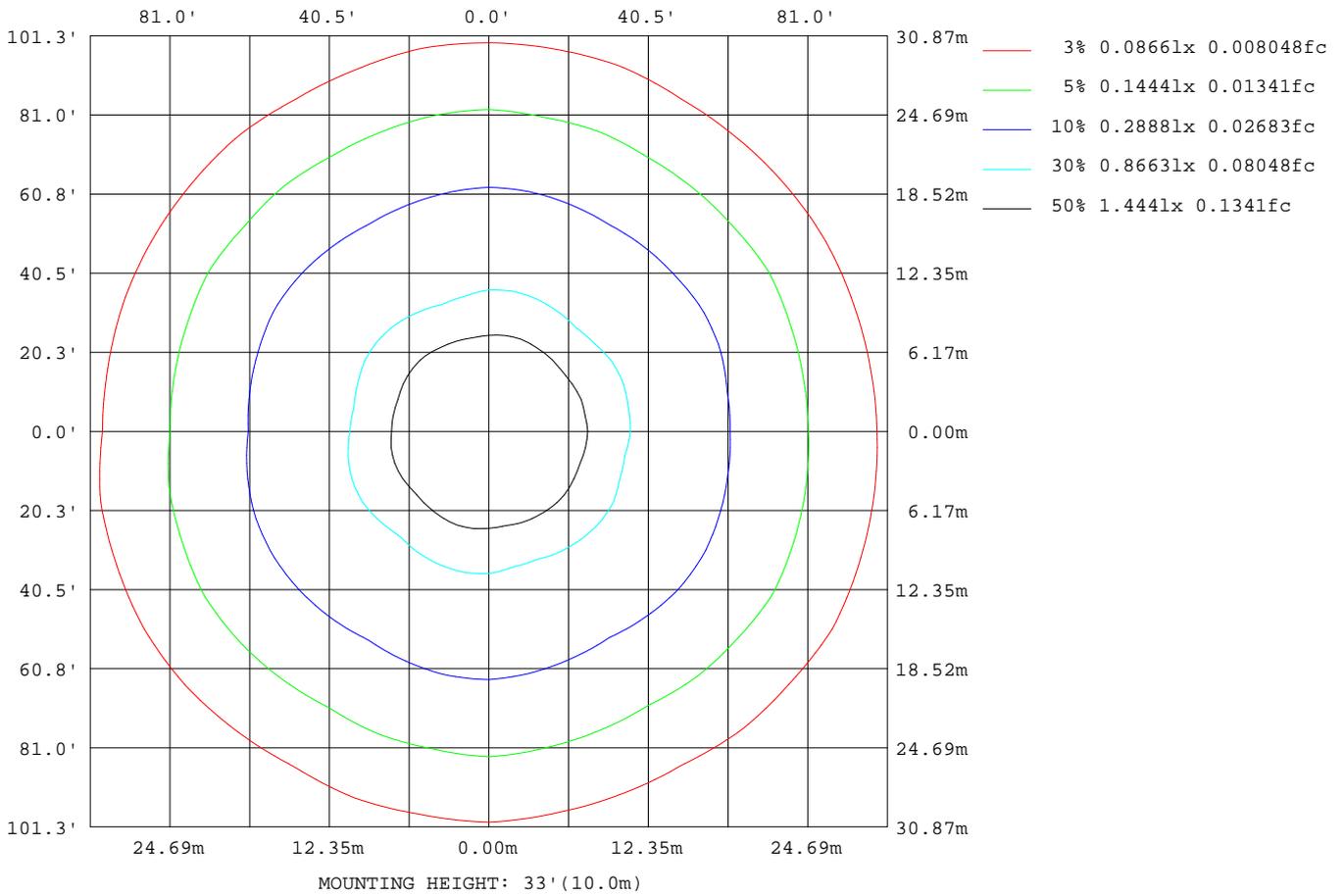
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

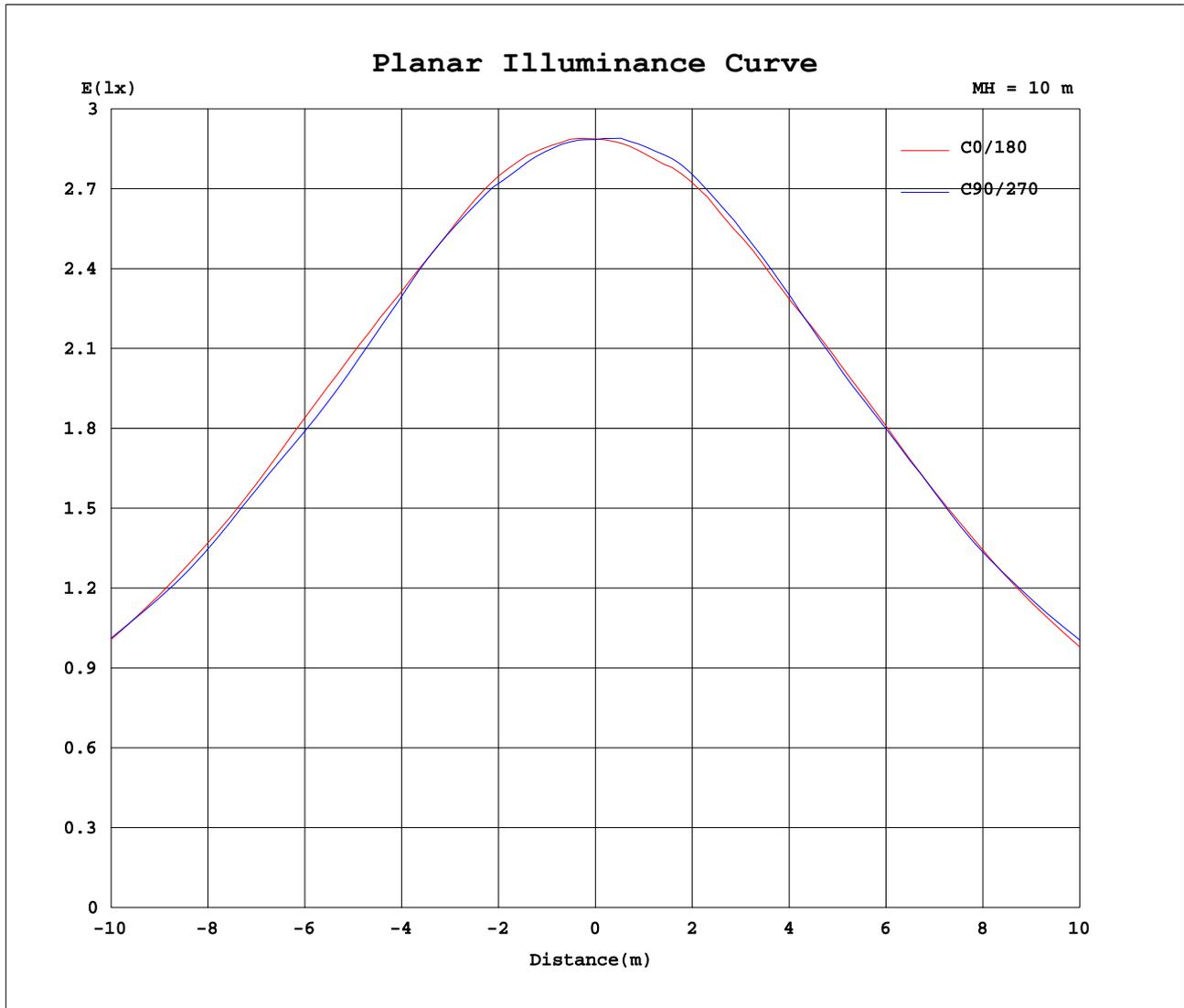
Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [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: 2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	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	289	289	289	289	289	289	288	288	289	289	289	289	288	288	288	288	288	288	289
5	290	290	290	290	290	290	289	289	289	289	289	289	289	289	290	288	289	288	288
10	291	292	291	292	291	291	289	289	289	288	288	289	288	289	290	290	291	290	289
15	290	291	292	291	291	290	289	290	290	289	288	288	288	290	290	289	290	289	287
20	289	290	290	289	290	289	286	287	288	289	288	287	287	288	289	289	290	288	286
25	290	290	289	286	288	289	287	287	286	285	289	290	289	289	288	286	291	290	287
30	292	291	288	284	287	290	288	288	284	283	288	291	289	288	285	285	290	291	287
35	289	288	284	286	289	290	288	287	283	286	289	290	288	285	282	286	290	290	284
40	287	283	277	283	289	288	284	280	276	282	290	292	285	280	278	287	291	289	281
45	285	275	273	286	289	287	282	273	273	286	290	290	284	274	280	291	293	288	277
50	279	269	278	292	293	287	276	268	277	291	293	288	278	272	285	296	297	289	271
55	274	272	284	297	298	289	272	271	284	298	299	290	275	278	290	301	302	291	271
60	275	278	286	295	295	285	272	279	289	299	299	288	277	285	293	299	299	288	272
65	274	279	286	293	289	281	272	280	289	298	293	286	278	286	292	296	292	284	273
70	275	280	285	293	285	283	274	277	281	290	283	285	278	286	292	296	289	287	272
75	275	279	287	290	289	285	275	274	278	280	283	283	278	284	293	292	294	290	272
80	271	275	285	282	292	287	274	272	279	276	287	282	275	279	291	287	299	295	272
85	272	268	280	282	292	290	277	274	284	284	293	290	274	272	287	290	296	297	272
90	276	268	276	283	285	292	280	274	283	291	293	295	281	274	283	289	289	296	273
95	280	268	279	283	278	286	281	270	282	293	289	293	287	274	284	291	284	290	271
100	279	266	282	290	280	279	275	262	277	291	285	288	287	272	286	297	289	284	266
105	275	270	282	294	284	280	270	262	273	288	286	287	283	276	286	298	291	285	262
110	270	274	281	293	286	281	266	268	274	291	286	286	276	280	285	297	292	284	263
115	272	273	280	289	286	278	270	276	282	292	284	281	276	279	286	293	290	280	269
120	277	275	277	282	281	278	279	281	285	289	282	281	280	279	282	286	286	283	277
125	274	272	275	274	278	281	281	281	280	281	280	283	283	279	278	278	282	285	277
130	266	264	264	266	277	280	276	277	275	275	279	279	270	266	264	268	278	283	272
135	261	260	259	264	278	281	274	274	272	273	282	275	264	261	258	262	278	282	266
140	258	255	255	268	279	281	273	272	270	276	282	275	261	256	254	264	279	281	264
145	257	254	259	272	279	280	273	271	272	278	281	273	259	255	257	267	278	279	267
150	259	257	264	275	278	281	275	272	274	278	275	271	260	257	261	270	276	281	271
155	263	262	268	273	273	280	278	274	274	278	274	272	264	260	261	267	272	279	275
160	269	264	257	262	267	269	277	273	266	265	263	261	263	261	254	256	262	267	262
165	235	238	239	248	254	255	256	263	254	252	248	241	240	244	241	252	254	253	248
170	250	246	257	253	247	259	269	259	265	251	242	246	250	246	259	253	251	259	261
175	261	268	259	252	265	244	244	255	246	245	262	252	255	267	257	251	261	240	244
180	277	260	265	269	246	262	265	256	273	286	267	275	278	261	264	271	249	259	273

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.1V I:0.4730A P:56.54W PF:0.9955 Lamp Flux:3489.59x1 lm		
NAME:	TYPE:DOT-36C-PC or EG	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:4*3.14*0.45*0.45	PROTECTION ANGLE:

Table--2

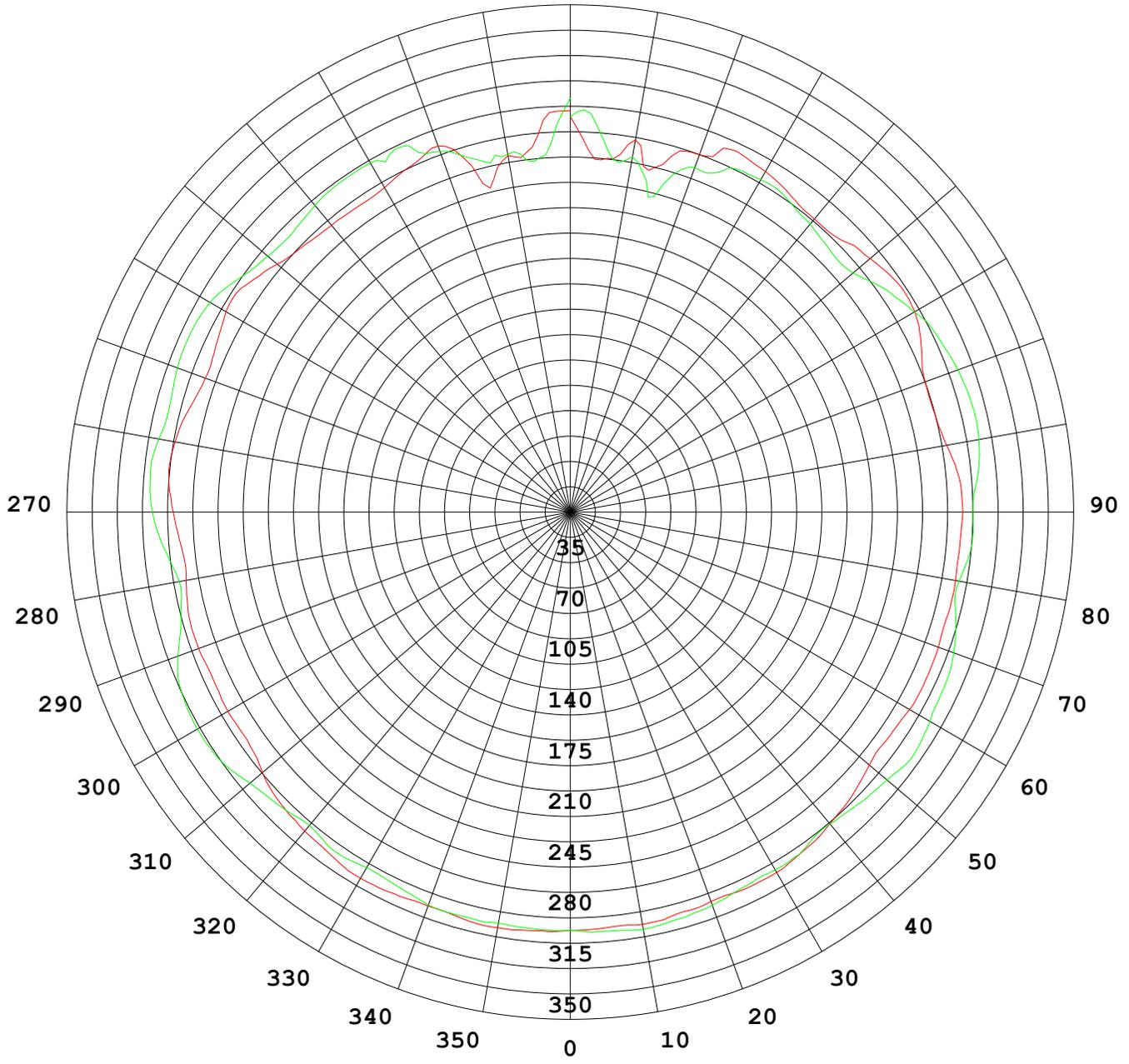
UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	289	289	289	289	289	288	288	289	289	289	289	288	288	288	288	288	288		
5	288	288	289	289	289	288	289	289	290	290	289	288	289	289	288	289	288		
10	290	290	290	290	291	292	292	292	292	292	293	292	291	292	291	290	289		
15	288	289	290	290	289	288	289	291	291	292	290	289	289	291	290	290	287		
20	287	286	288	290	288	287	288	287	289	291	289	287	288	287	287	289	286		
25	287	286	285	289	289	287	287	286	285	288	288	286	286	286	282	286	287		
30	288	285	286	289	291	288	288	286	285	286	286	284	285	282	279	284	286		
35	284	282	288	292	291	285	283	281	284	286	286	283	282	278	279	284	284		
40	279	277	286	288	289	282	276	272	281	286	287	280	275	271	279	286	284		
45	271	276	287	289	286	278	267	271	284	287	284	278	268	270	282	286	283		
50	267	277	290	292	286	271	265	274	288	291	284	271	266	272	286	289	282		
55	271	282	295	295	286	272	270	279	292	293	284	272	270	277	290	293	284		
60	277	284	293	291	281	273	276	282	289	288	279	272	276	281	289	290	279		
65	276	280	289	281	279	273	276	282	287	280	277	273	276	279	287	282	274		
70	272	275	278	275	277	273	276	282	284	279	280	272	272	273	278	273	273		
75	271	276	272	278	276	271	272	281	277	284	281	272	270	273	270	274	271		
80	271	280	274	285	279	268	267	277	274	288	285	272	271	278	271	280	272		
85	269	278	281	284	284	270	264	274	280	285	286	271	269	277	276	281	278		
90	265	276	285	282	286	275	267	276	280	278	284	271	265	275	280	280	279		
95	259	276	285	279	284	280	264	278	284	274	277	269	258	273	281	277	275		
100	253	271	283	278	281	275	262	280	288	279	273	263	250	269	278	274	274		
105	257	267	283	278	278	268	267	279	289	280	274	259	254	267	279	276	274		
110	266	273	285	279	275	265	269	276	287	279	273	259	264	271	282	275	273		
115	273	279	286	282	273	268	269	275	283	277	273	269	272	278	282	271	268		
120	277	278	281	279	275	275	271	270	276	275	276	275	276	279	280	270	269		
125	276	274	273	274	275	272	267	267	268	269	275	274	275	274	271	269	272		
130	270	269	271	275	271	259	255	253	257	267	270	269	270	270	267	269	265		
135	265	265	272	276	269	254	250	247	255	267	267	267	268	267	269	272	261		
140	262	263	273	275	268	252	246	246	259	268	270	266	266	267	274	274	261		
145	263	267	274	273	266	251	248	251	263	268	268	265	267	271	277	273	260		
150	266	270	273	269	267	257	250	255	265	267	267	265	268	275	280	273	263		
155	272	273	271	262	264	261	257	260	262	256	265	267	269	275	278	266	264		
160	270	272	263	254	252	250	257	262	253	250	253	257	264	271	267	263	259		
165	253	254	242	246	244	238	231	231	225	239	244	245	244	249	247	253	249		
170	259	255	264	253	242	250	252	243	249	243	233	249	259	258	264	256	240		
175	245	253	245	236	257	247	251	264	259	251	265	246	242	251	245	240	261		
180	273	261	264	266	249	262	263	259	273	278	265	275	277	262	264	268	249		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-08-01

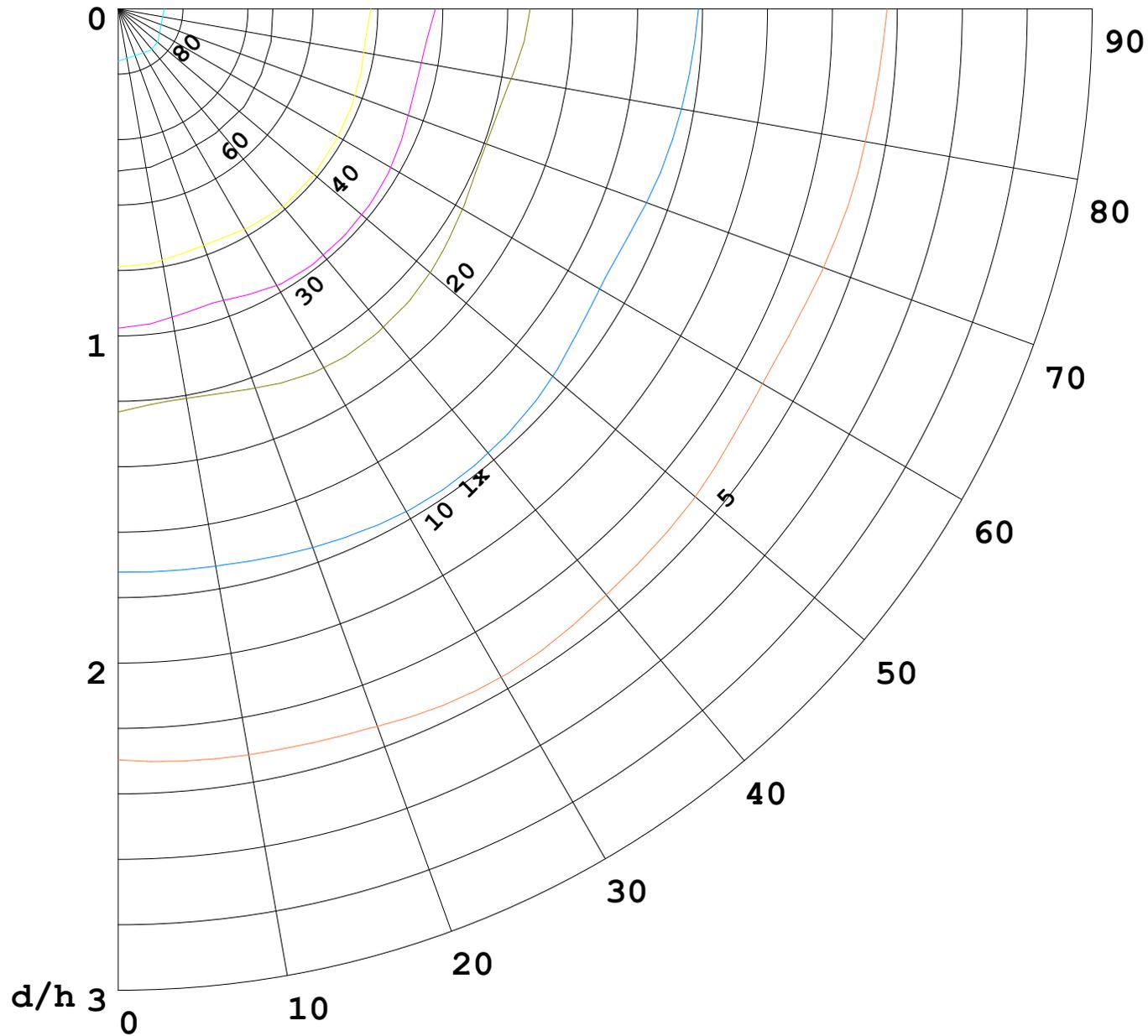
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

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

