



IENNA LM-79 TEST REPORT

Applicant's name	Blackjack Lighting
Address	1553 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name.....	Blackjack Lighting
Report No.....	BTR66.181.16.0025.43
Product Name	Seraph 6" single pendant
Model Number	SER-06P-BL or 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: Mar 27, 2017

Testing Laboratory Name: BEST Test Service Shenzhen Co., Ltd.
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Address: Shenzhen, China
[Tel:+86-755-28236006](tel:+86-755-28236006), Email: certification@bestcert.cn
Accrediation: DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE
NVLAP Testing Lab Code: 200770-0

Test specification

Standard

Test procedure

Non-standard test method

Test Report Form No.: BEST_ LM-79

TRF originator.....: BEST Test Service Shenzhen Co., Ltd. Mr Tseng

Master TRF

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description:	
Test date	Mar 15, 2017 to Mar 27, 2017
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	AC 100-308V 50/ 60Hz
Nominal Power.....	4.5W
Nominal Power Factor	N/A
Nominal Lumen Output.....	190 lm
Nominal CCT	2700K
Nominal CRI(Ra)	90
Number of hours operated prior to measurement	0H
Total operating time of the product for measurements including stabilization	2.5H
Ambient temperature	24.7°C
Orientation (burning position) of SSL product during test	Lighting Surface Down or Base Up
Stabilization time	1.0 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 II 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.

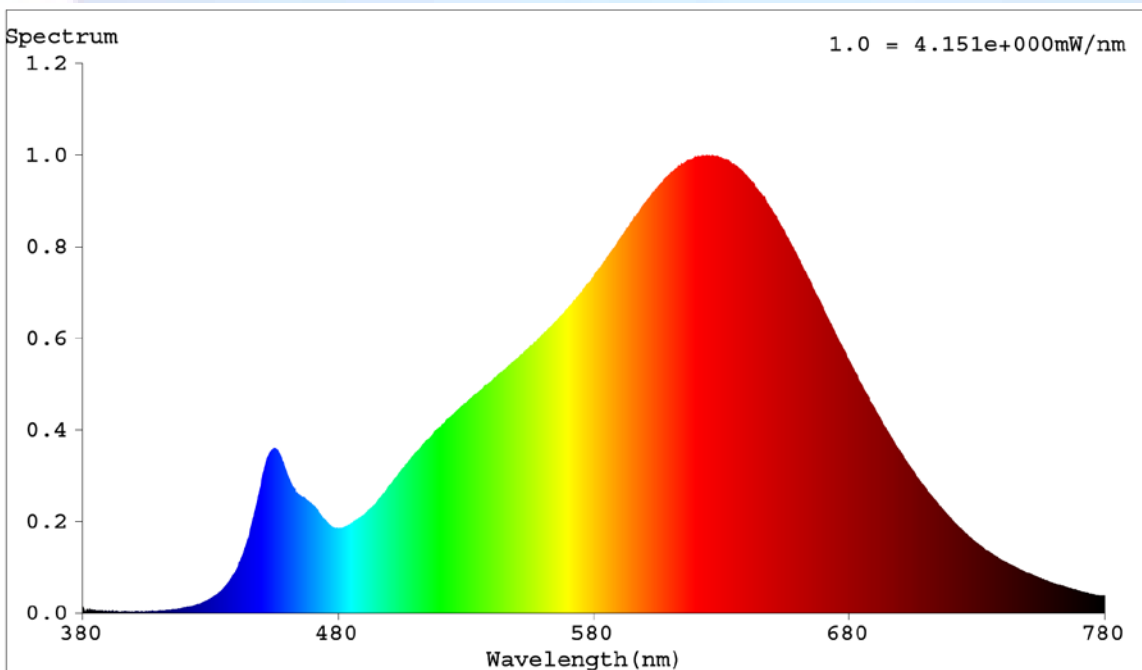
Luminous Intensity

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

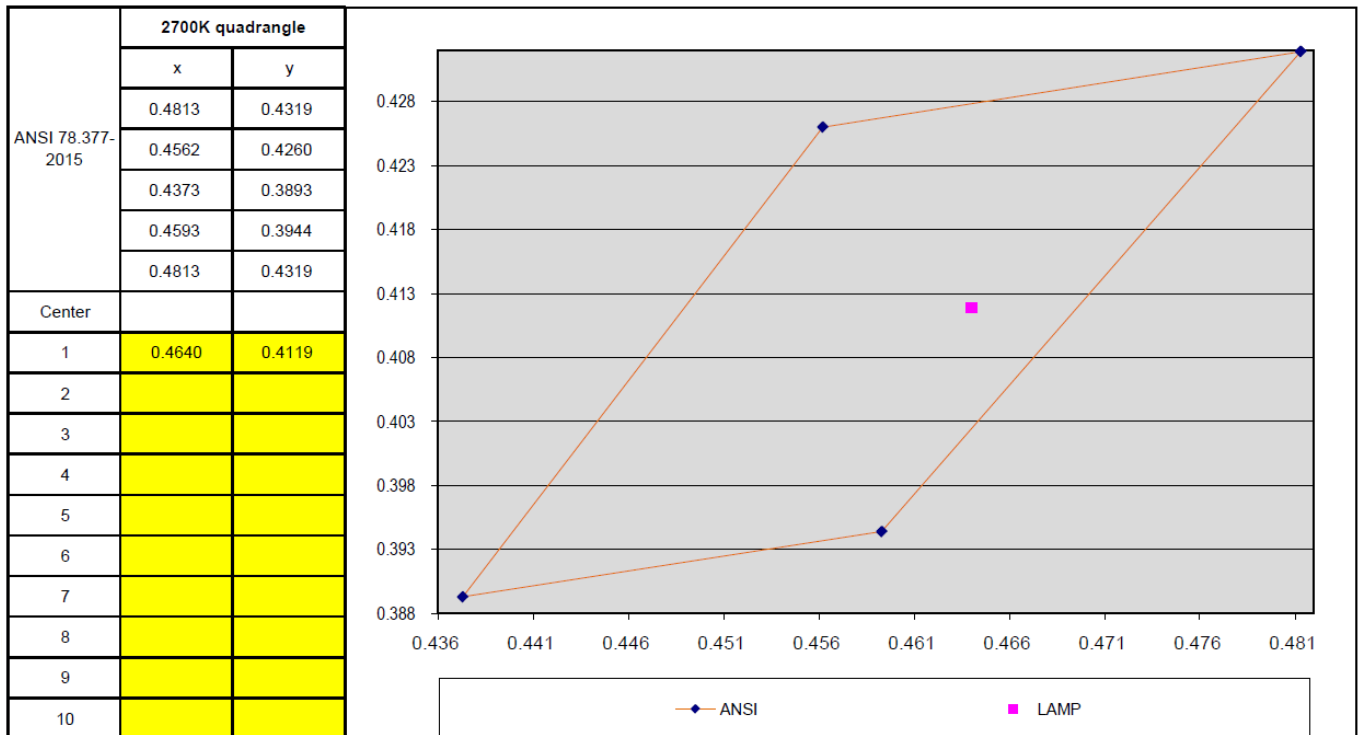
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	0.055	/	4.10	0.619	190.23	46.39
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
2653	92.5	58	0.4640	0.4119	0.2646	0.5285	0.0001

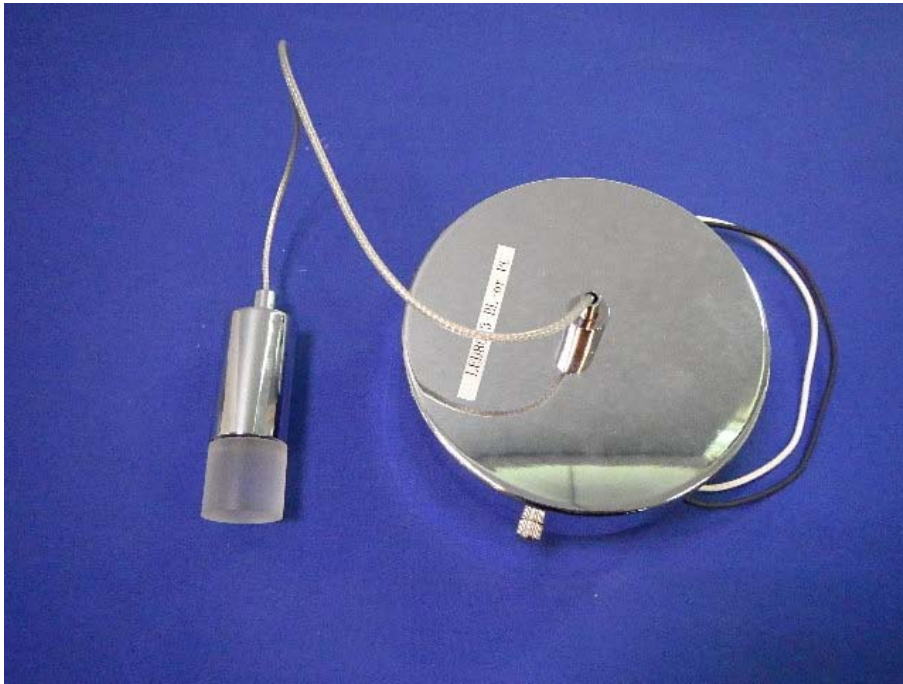
Spectrul Plots



7 Step Quadrangle



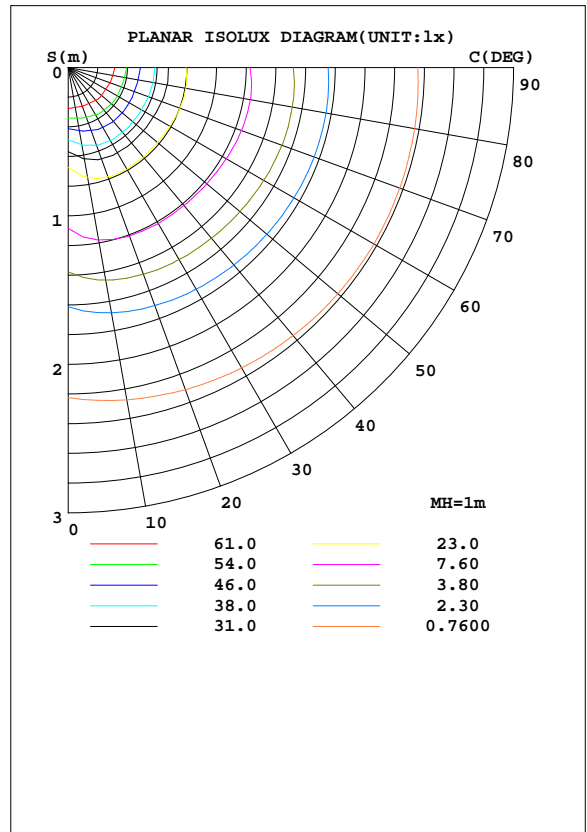
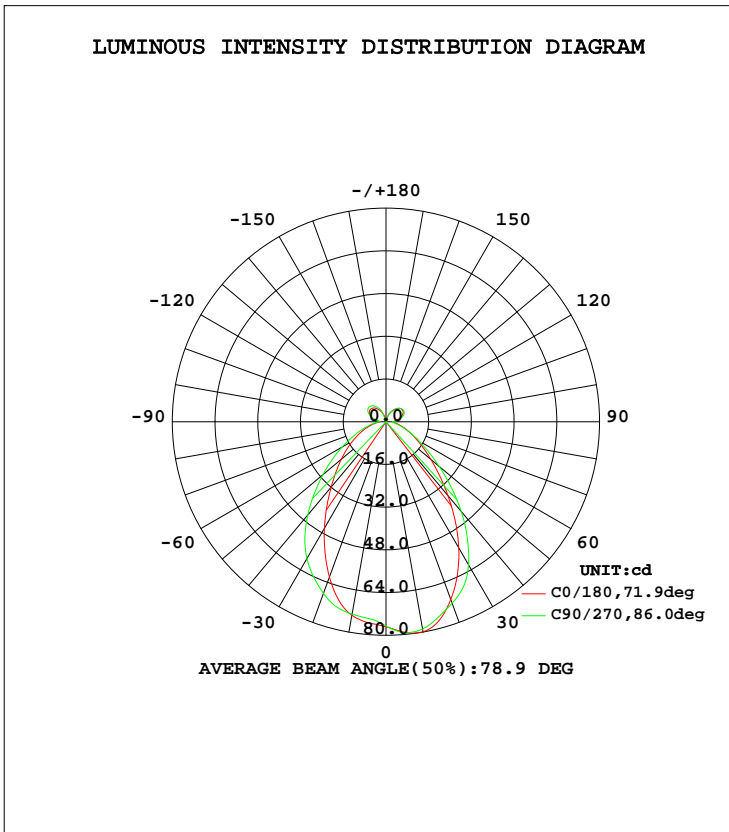
EUT Photo



LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 46.39 lm/W			
MODEL	SER-06P-BL or PC	I _{max} (cd)	81.09	S/MH(C0/180)	1.10
NOMINAL POWER(W)	4.5	LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)	120.0	TOTAL FLUX(lm)	190.22	η UP, DN(C0-180)	9.1, 42.4
NOMINAL FLUX(lm)	190.225	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	9.1, 39.4
LAMPS INSIDE	1	η up(%)	18.2	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120.0	η down(%)	81.8	CIBSE SHR MAX	1.25



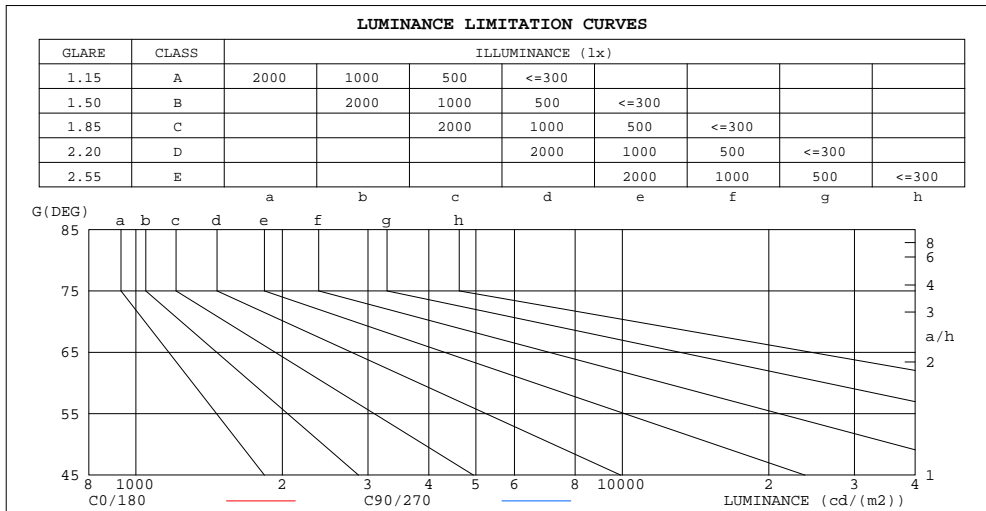
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.564m [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	73.57	72.20	73.18	76.08	79.88	80.70	78.85	77.09	0- 10	7.329	7.329	3.85
20	61.94	66.89	68.44	71.03	70.91	74.60	72.36	70.75	10- 20	20.75	28.08	14.8
30	46.16	57.77	59.22	62.97	54.53	61.73	61.85	59.25	20- 30	29.49	57.57	30.3
40	31.96	44.75	45.55	49.75	36.16	42.13	43.88	42.79	30- 40	31.28	88.84	46.7
50	21.84	30.33	30.87	32.84	21.98	24.08	26.02	25.06	40- 50	26.22	115.1	60.5
60	14.42	18.73	19.01	18.05	13.20	13.12	14.23	13.96	50- 60	18.47	133.5	70.2
70	8.963	10.93	10.77	9.574	7.817	7.129	7.292	7.921	60- 70	11.74	145.3	76.4
80	4.634	5.865	5.501	4.913	4.071	3.569	3.454	3.841	70- 80	6.793	152.1	79.9
90	2.221	2.684	2.594	2.146	2.343	2.733	2.742	2.315	80- 90	3.501	155.6	81.8
100	4.028	3.735	3.619	3.596	4.310	4.928	5.066	4.379	90-100	3.454	159.0	83.6
110	6.043	6.088	6.105	5.786	6.277	6.851	6.969	6.179	100-110	5.628	164.7	86.6
120	7.224	7.583	7.864	7.289	7.438	7.789	7.818	7.088	110-120	6.919	171.6	90.2
130	7.463	8.039	8.446	7.717	7.519	7.633	7.634	7.081	120-130	6.895	178.5	93.8
140	6.740	7.394	7.828	7.034	6.544	6.424	6.467	6.202	130-140	5.699	184.2	96.8
150	5.174	5.841	6.157	5.465	4.789	4.528	4.570	4.588	140-150	3.821	188.0	98.8
160	3.153	3.749	1.757	3.372	2.616	2.452	2.391	2.577	150-160	1.927	189.9	99.8
170	0	0	0	0	0	0	0	0	160-170	0.3080	190.2	100
180	0	0	0	0	0	0	0	0	170-180	0.0000	190.2	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	522	626
80	381	453
75	360	428
70	374	450
65	386	483
60	412	543
55	445	612
50	485	686
45	534	766

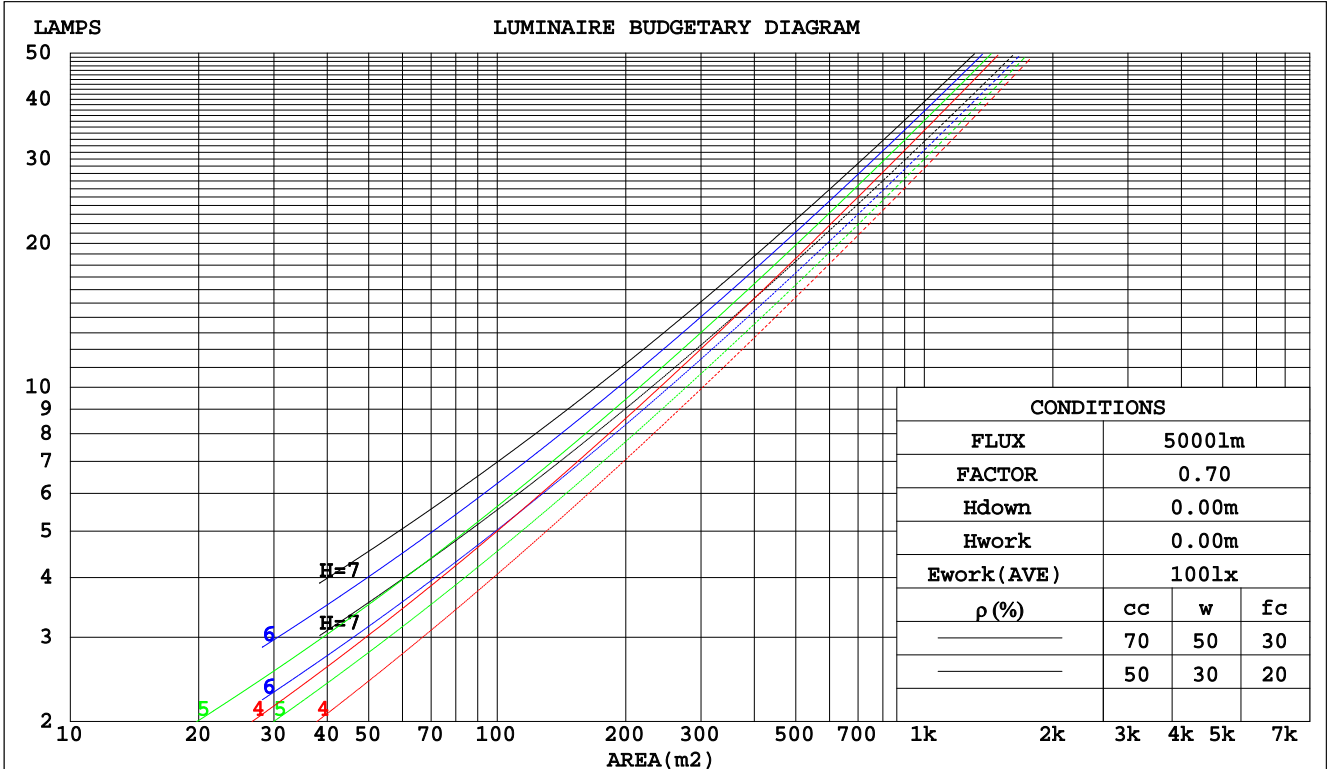
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.564m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Coefficients of Utilization(CU)									
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	.93	.93	.93	.85	.85	.85	.82
1.0	1.01	.98	.94	.97	.94	.91	.90	.87	.85	.83	.81	.79	.77	.75	.74	.70
2.0	.90	.84	.79	.86	.81	.76	.80	.76	.72	.74	.71	.68	.69	.66	.64	.61
3.0	.80	.73	.67	.77	.71	.65	.72	.66	.62	.67	.62	.59	.62	.59	.56	.53
4.0	.72	.64	.58	.69	.62	.57	.65	.59	.54	.60	.55	.51	.56	.52	.49	.46
5.0	.65	.57	.51	.63	.55	.50	.59	.52	.48	.55	.50	.46	.51	.47	.43	.41
6.0	.59	.51	.45	.57	.50	.44	.53	.47	.42	.50	.45	.41	.47	.42	.39	.37
7.0	.54	.46	.40	.52	.45	.39	.49	.43	.38	.46	.41	.37	.43	.39	.35	.33
8.0	.49	.42	.36	.48	.41	.36	.45	.39	.34	.43	.37	.33	.40	.35	.32	.30
9.0	.45	.38	.33	.44	.37	.32	.42	.36	.31	.39	.34	.30	.37	.33	.29	.27
10.0	.42	.35	.30	.41	.34	.30	.39	.33	.29	.37	.31	.28	.35	.30	.27	.25



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.564m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	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	.274	.156	.049	.262	.149	.047	.238	.137	.044	.217	.125	.040	.197	.114	.037	
2.0	.255	.140	.043	.244	.135	.041	.223	.124	.039	.204	.114	.036	.186	.105	.033	
3.0	.237	.126	.038	.227	.122	.037	.208	.113	.034	.191	.104	.032	.174	.097	.030	
4.0	.220	.114	.034	.211	.110	.033	.194	.103	.031	.178	.096	.029	.163	.089	.027	
5.0	.205	.104	.030	.197	.101	.029	.181	.094	.028	.167	.088	.026	.153	.082	.025	
6.0	.191	.096	.027	.184	.093	.027	.170	.087	.025	.157	.081	.024	.144	.076	.023	
7.0	.179	.089	.025	.172	.086	.024	.159	.081	.023	.147	.076	.022	.136	.071	.021	
8.0	.168	.082	.023	.162	.080	.023	.150	.075	.021	.139	.070	.020	.128	.066	.019	
9.0	.159	.077	.021	.153	.075	.021	.142	.070	.020	.131	.066	.019	.122	.062	.018	
10.0	.150	.072	.020	.145	.070	.019	.134	.066	.019	.125	.062	.018	.116	.058	.017	

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	.329	.329	.329	.281	.281	.281	.192	.192	.192	.110	.110	.110	.035	.035	.035	
1.0	.318	.296	.277	.272	.254	.238	.186	.175	.165	.107	.101	.096	.034	.033	.031	
2.0	.308	.273	.243	.264	.235	.210	.181	.163	.147	.104	.095	.086	.033	.031	.028	
3.0	.300	.256	.221	.257	.221	.191	.176	.153	.134	.102	.089	.079	.033	.029	.026	
4.0	.292	.243	.205	.251	.210	.178	.172	.146	.125	.100	.086	.074	.032	.028	.024	
5.0	.285	.232	.194	.244	.201	.169	.168	.140	.119	.098	.082	.071	.031	.027	.023	
6.0	.278	.224	.186	.239	.194	.162	.165	.136	.114	.096	.080	.068	.031	.026	.022	
7.0	.272	.217	.179	.234	.188	.156	.161	.132	.111	.094	.078	.066	.030	.025	.022	
8.0	.266	.212	.175	.229	.184	.152	.158	.129	.108	.092	.076	.064	.030	.025	.021	
9.0	.260	.207	.171	.224	.180	.149	.155	.126	.106	.090	.075	.063	.029	.024	.021	
10.0	.255	.203	.168	.220	.176	.147	.152	.124	.104	.089	.073	.062	.029	.024	.021	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm										
NAME:					TYPE:SER-06P-BL or PC			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Blackjack Lighting					SUR.:			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	9.1	10.2	9.5	10.7	11.2	9.9	11.1	10.4	11.6	12.1
3H	10.0	11.1	10.5	11.6	12.1	10.9	12.0	11.4	12.5	13.0
4H	10.4	11.4	11.0	12.0	12.6	11.3	12.3	11.9	12.9	13.5
6H	10.8	11.8	11.4	12.3	12.9	11.8	12.7	12.3	13.2	13.9
8H	11.0	11.9	11.6	12.5	13.1	12.0	12.9	12.5	13.4	14.1
12H	11.2	12.1	11.8	12.7	13.3	12.2	13.0	12.8	13.6	14.3
4H 2H	9.5	10.5	10.1	11.1	11.6	10.2	11.2	10.8	11.7	12.3
3H	10.7	11.6	11.3	12.1	12.8	11.4	12.3	12.0	12.9	13.5
4H	11.3	12.1	11.9	12.7	13.3	12.0	12.8	12.6	13.4	14.1
6H	11.8	12.5	12.5	13.1	13.9	12.6	13.3	13.2	13.9	14.6
8H	12.1	12.7	12.8	13.4	14.1	12.9	13.5	13.6	14.2	14.9
12H	12.4	13.0	13.1	13.6	14.4	13.2	13.8	13.9	14.4	15.2
8H 4H	11.5	12.2	12.2	12.8	13.6	12.2	12.8	12.9	13.5	14.2
6H	12.3	12.8	13.0	13.5	14.3	13.0	13.5	13.7	14.2	15.0
8H	12.7	13.2	13.4	13.9	14.7	13.4	13.9	14.1	14.6	15.4
12H	13.2	13.6	13.9	14.3	15.1	13.9	14.3	14.6	15.0	15.8
12H 4H	11.6	12.1	12.2	12.8	13.6	12.2	12.8	12.9	13.4	14.2
6H	12.4	12.9	13.1	13.6	14.4	13.1	13.5	13.8	14.2	15.0
8H	12.9	13.3	13.6	14.0	14.8	13.6	13.9	14.3	14.7	15.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.3				
1.5H	+ 0.2 / - 0.5					+ 0.1 / - 0.3				
2.0H	+ 0.4 / - 0.6					+ 0.3 / - 0.4				

CIE Pub.117 Corrected 190.2 lm Total Lamp Luminous Flux.(8log(F/F0) = -5.8)

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
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 Operators:David
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 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	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	58	48	42	57	47	41	55	46	41	35
0.80	68	57	51	66	56	50	63	55	49	42
1.00	75	65	58	73	64	58	70	63	56	48
1.25	82	72	66	79	71	64	75	68	62	54
1.50	86	77	71	84	75	69	79	72	67	57
2.00	92	84	78	89	82	77	84	78	73	63
2.50	96	89	83	93	86	81	86	81	77	65
3.00	99	92	87	95	89	85	89	84	80	68
4.00	103	97	92	99	94	90	92	88	85	71
5.00	105	100	96	101	97	93	93	90	87	73
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:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

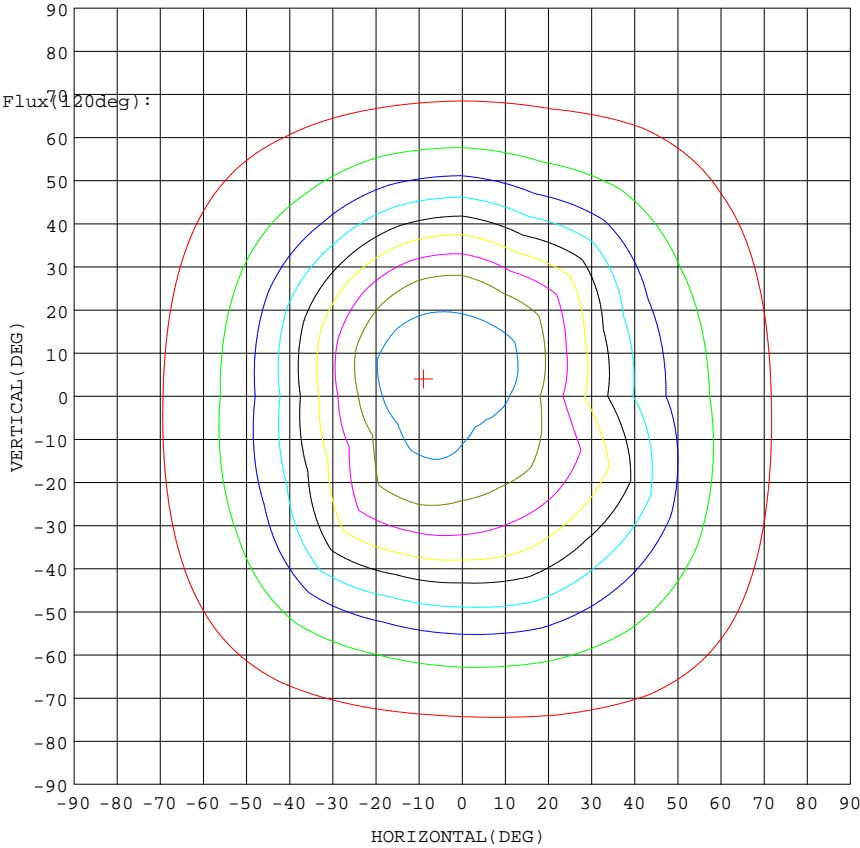
Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

102.88 lm
 %lum = 54.1%
 %lamp = 54.1%

Conical surface Flux(70deg):

133.53 lm
 %lum = 70.2%
 %lamp = 70.2%



- 10% 8.107
- 20% 16.21
- 30% 24.32
- 40% 32.43
- 50% 40.53
- 60% 48.64
- 70% 56.75
- 80% 64.85
- 90% 72.96

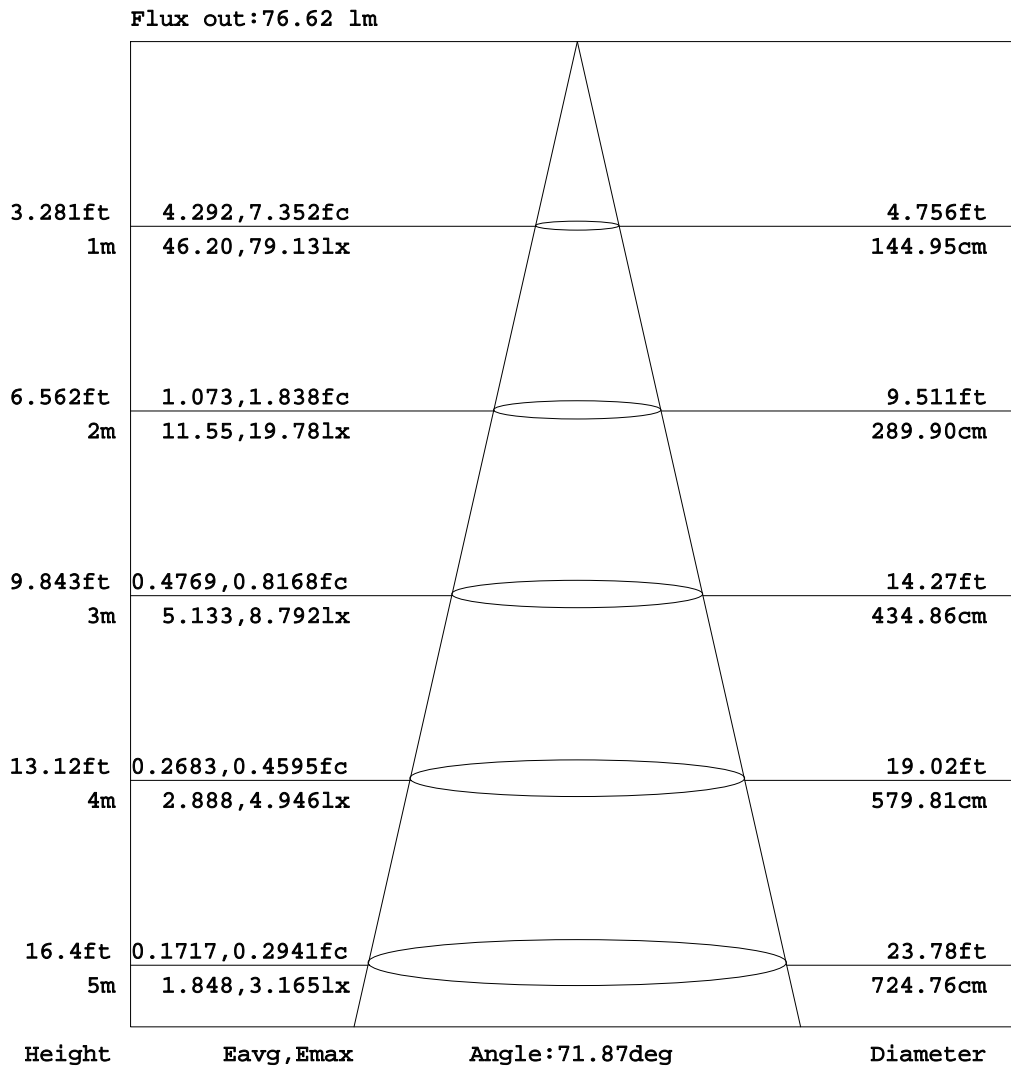
I_{max}:81.07(H-9.0,V4.0)
 (At:C=202.5,Gamma=10.0)
 UNIT: cd

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:



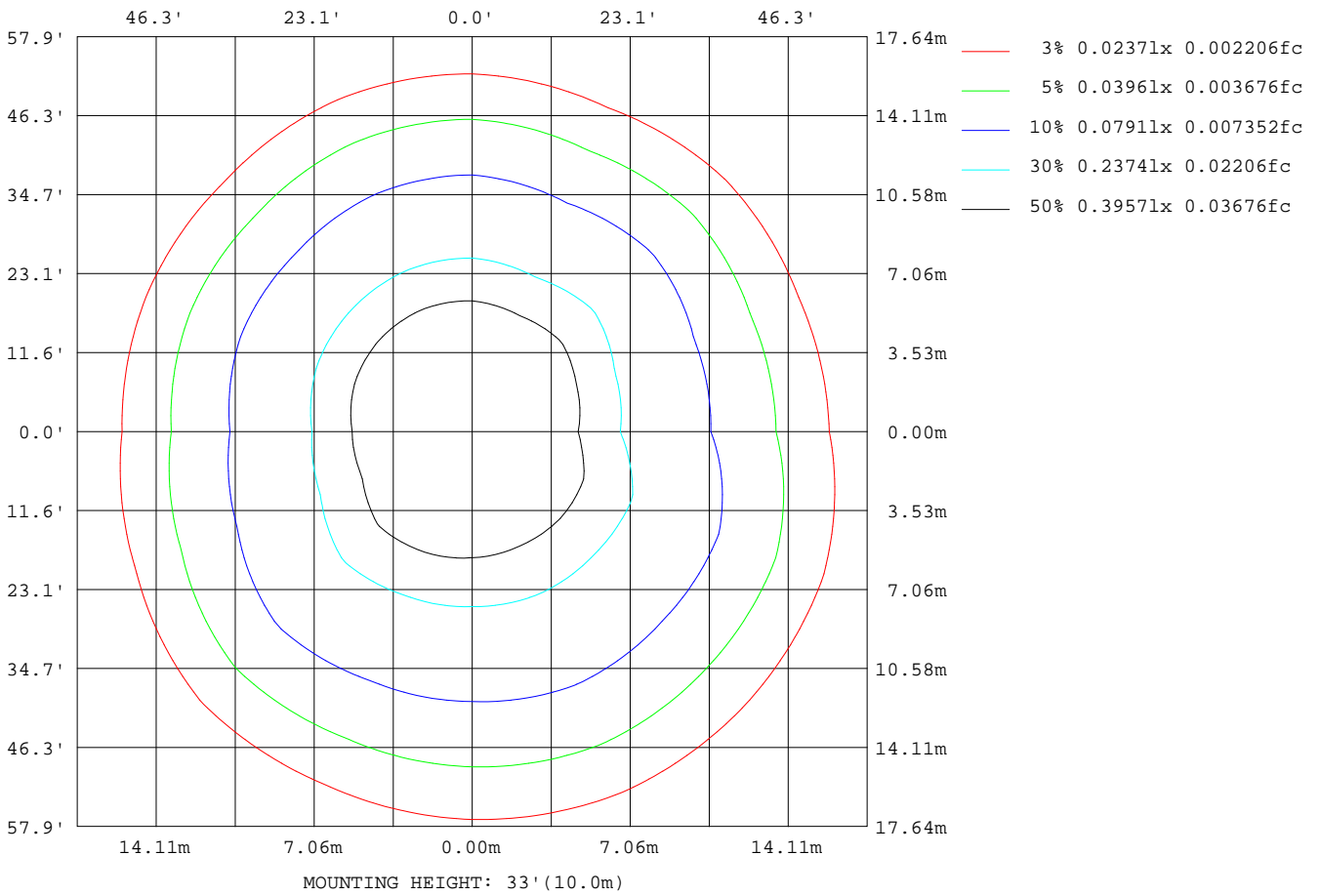
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

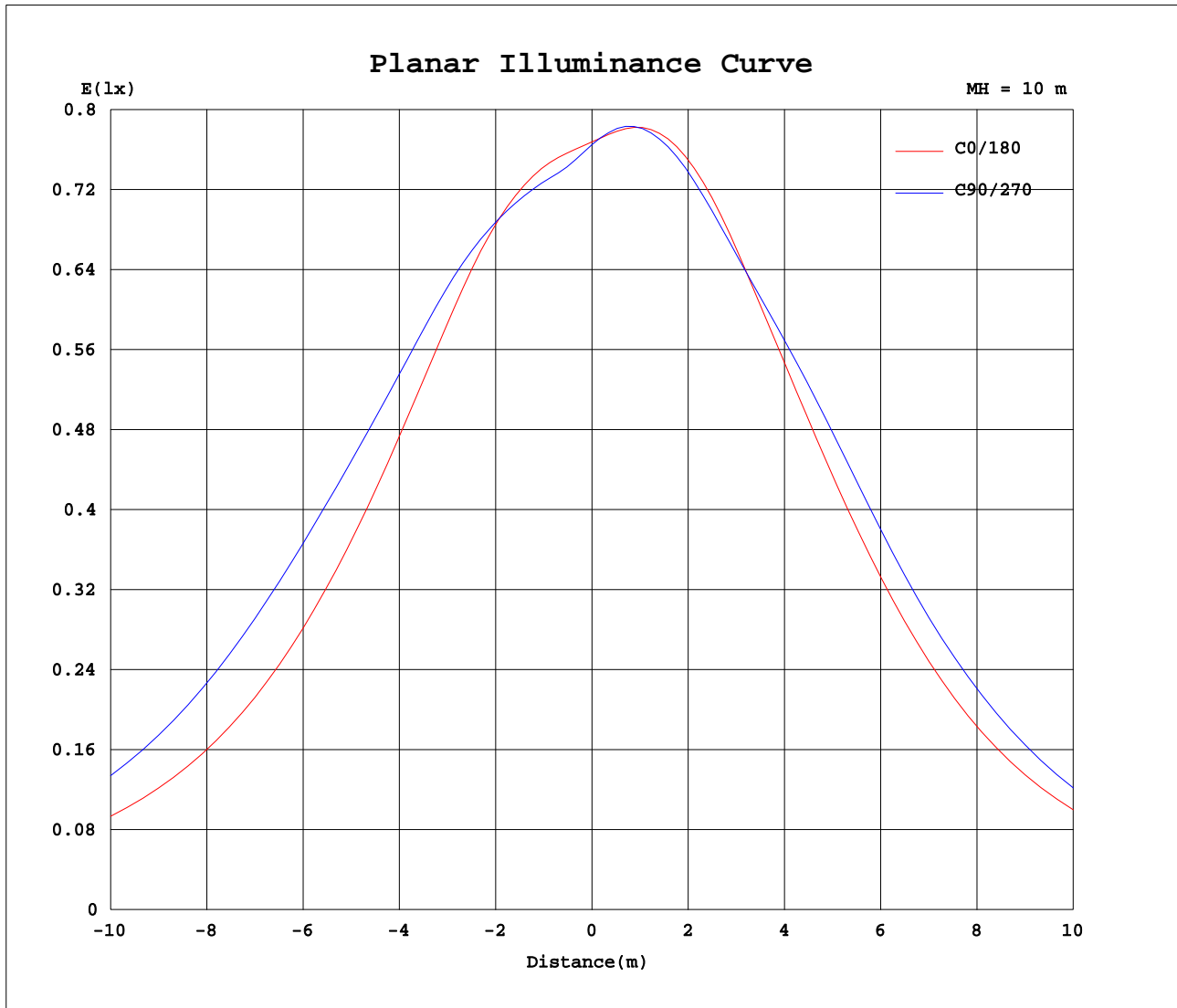
Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [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: 2017-03-24

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity: 67.1%
Test Distance: 2.564m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.0552A P:4.101W PF:0.6189 Lamp Flux:190.225x1 lm		
NAME:	TYPE:SER-06P-BL or PC	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

Table--1

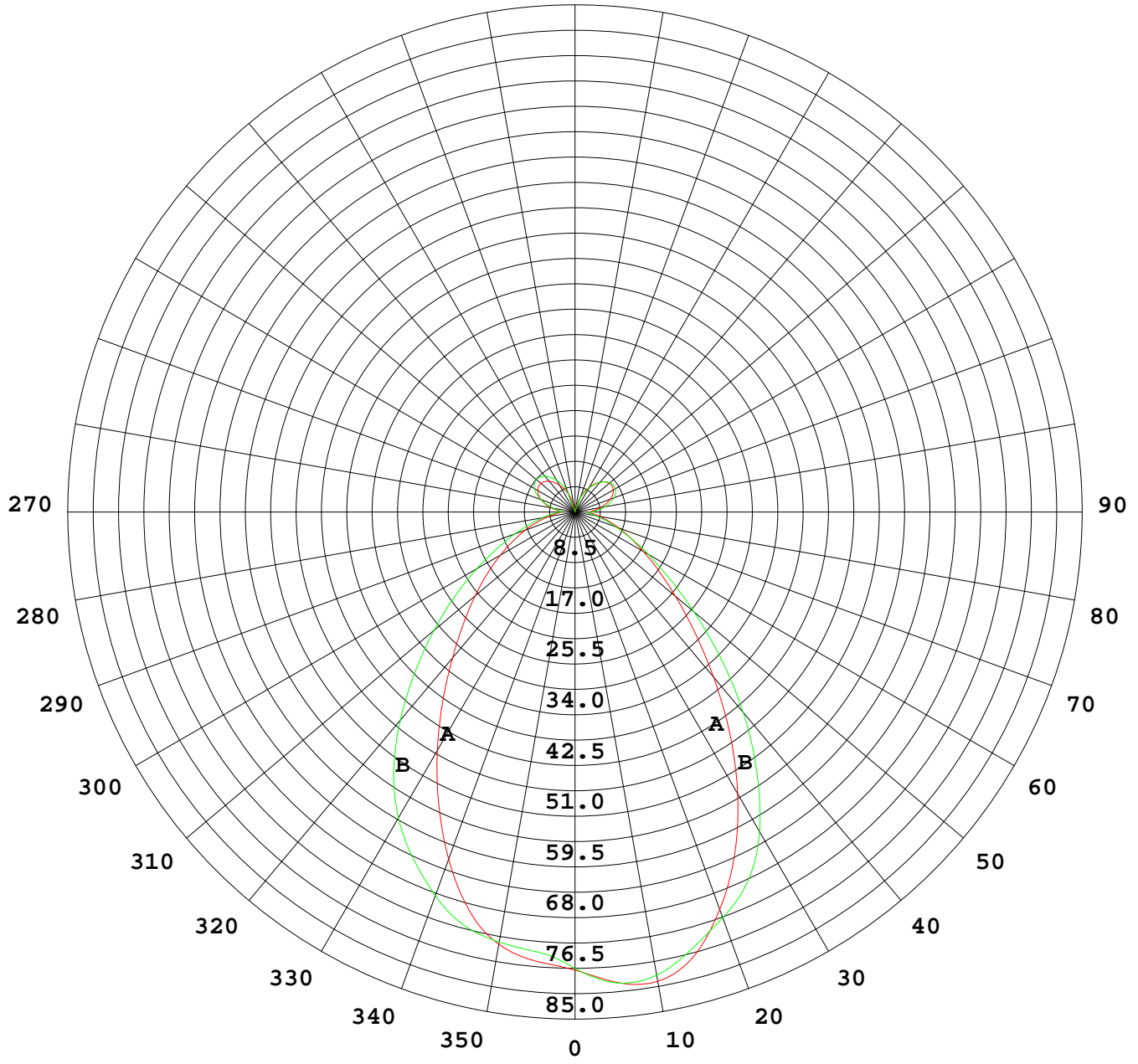
UNIT: cd

C(DEG) γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338			
0	76.8	76.7	76.6	76.5	76.5	76.5	76.5	76.5	76.8	76.7	76.6	76.5	76.5	76.5	76.5	76.5			
5	75.6	74.5	73.8	73.6	74.0	74.9	76.1	77.5	79.1	79.9	80.0	79.8	79.2	78.5	77.5	76.4			
10	73.6	72.5	72.2	72.4	73.2	74.6	76.1	77.6	79.9	81.1	80.7	79.7	78.8	78.0	77.1	75.4			
15	69.0	69.2	70.0	70.6	71.8	73.4	74.4	74.3	77.1	79.3	78.5	76.8	75.8	75.2	74.7	72.0			
20	61.9	64.9	66.9	67.2	68.4	70.5	71.0	68.2	70.9	74.7	74.6	73.4	72.4	71.1	70.7	66.1			
25	54.0	60.8	63.0	62.8	64.1	66.8	67.4	61.6	63.3	67.8	69.0	69.3	68.4	65.6	65.5	58.8			
30	46.2	56.7	57.8	58.0	59.2	61.2	63.0	54.7	54.5	59.4	61.7	62.7	61.9	58.3	59.2	50.4			
35	38.6	51.6	51.6	52.6	53.0	54.4	56.9	47.2	45.2	50.2	52.5	53.7	53.1	49.3	51.7	41.8			
40	32.0	45.0	44.7	46.3	45.6	46.5	49.8	39.4	36.2	40.9	42.1	43.9	43.9	39.6	42.8	34.0			
45	26.4	37.4	37.4	39.3	37.9	38.3	41.5	32.1	28.3	31.9	32.2	34.3	34.5	30.6	33.3	27.3			
50	21.8	29.8	30.3	32.1	30.9	30.6	32.8	25.5	22.0	24.0	24.1	26.0	26.0	23.2	25.1	21.8			
55	17.9	23.0	24.0	25.4	24.6	23.8	24.7	19.8	17.1	17.9	17.9	19.1	19.2	17.6	18.7	17.4			
60	14.4	17.6	18.7	19.5	19.0	18.1	18.0	15.1	13.2	13.3	13.1	14.0	14.2	13.1	14.0	13.7			
65	11.4	13.4	14.4	14.7	14.3	13.5	13.1	11.5	10.2	9.94	9.70	10.1	10.2	9.85	10.6	10.7			
70	8.96	10.1	10.9	11.0	10.8	10.00	9.57	8.66	7.82	7.38	7.13	7.14	7.29	7.20	7.92	8.14			
75	6.52	7.47	8.12	8.17	7.75	7.40	6.93	6.24	5.74	5.38	5.13	5.01	5.05	5.12	5.55	6.01			
80	4.63	5.32	5.86	5.80	5.50	5.28	4.91	4.39	4.07	3.79	3.57	3.45	3.45	3.52	3.84	4.23			
85	3.19	3.64	4.02	4.03	3.82	3.58	3.26	3.01	2.85	2.67	2.53	2.44	2.40	2.41	2.60	2.91			
90	2.22	2.45	2.68	2.71	2.59	2.36	2.15	2.15	2.34	2.56	2.73	2.79	2.74	2.53	2.32	2.21			
95	2.90	2.73	2.63	2.70	2.69	2.39	2.50	2.88	3.22	3.51	3.78	3.94	3.89	3.60	3.29	3.06			
100	4.03	3.86	3.74	3.64	3.62	3.51	3.60	3.97	4.31	4.61	4.93	5.15	5.07	4.73	4.38	4.15			
105	5.11	5.02	5.08	4.93	4.91	4.78	4.74	5.06	5.37	5.64	5.99	6.79	6.12	5.75	5.37	5.17			
110	6.04	6.05	6.09	6.10	6.11	6.01	5.79	6.02	6.28	6.51	6.85	7.09	6.97	6.57	6.18	6.02			
115	6.75	6.86	6.95	7.07	7.11	6.80	6.65	6.80	6.99	7.14	7.46	7.69	7.53	7.14	6.75	6.65			
120	7.22	7.42	7.58	7.78	7.86	7.51	7.29	7.33	7.44	7.49	7.79	7.98	7.82	7.47	7.09	7.06			
125	7.46	7.72	7.95	8.20	8.30	7.94	7.65	7.59	7.61	7.58	7.85	8.00	7.85	7.56	7.19	7.25			
130	7.46	7.76	8.04	8.35	8.45	8.08	7.72	7.57	7.52	7.41	7.63	7.76	7.63	7.41	7.08	7.22			
135	7.22	7.56	7.85	8.21	8.29	7.92	7.50	7.27	7.15	6.97	7.14	7.26	7.16	7.02	6.74	6.96			
140	6.74	7.14	7.39	7.77	7.83	7.47	7.03	6.72	6.54	6.32	6.42	6.53	6.47	6.40	6.20	6.47			
145	6.05	6.48	6.71	7.07	7.10	6.76	6.36	5.96	5.73	5.50	5.52	5.61	5.58	5.58	5.47	5.75			
150	5.17	5.58	5.84	6.15	6.16	5.85	5.47	5.05	4.79	4.59	4.53	4.58	4.57	4.61	4.59	4.83			
155	4.19	4.56	4.83	5.07	5.07	4.80	4.45	4.07	3.78	3.64	3.51	3.51	3.50	3.55	3.60	3.81			
160	3.15	3.47	3.75	3.53	1.76	3.21	3.37	2.61	2.62	2.65	2.45	2.38	2.39	2.47	2.58	2.76			
165	1.93	2.28	1.57	0.00	0.00	0.00	1.05	0.27	0.48	0.46	0.08	0.01	0.00	0.23	0.67	1.28			
170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
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 Operators:David
 Test Date:2017-03-24

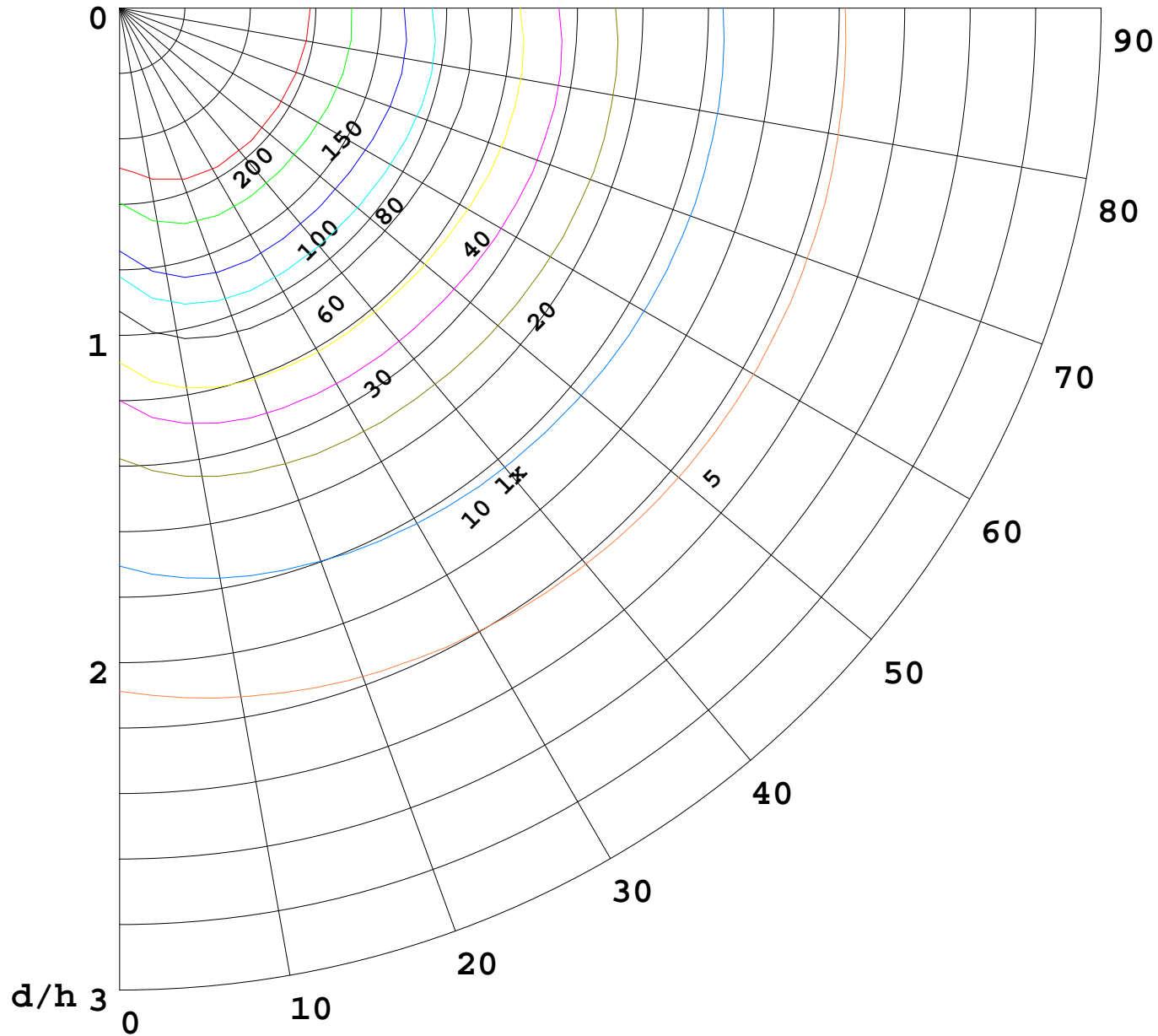
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.564m [K=1.0000]
 Remarks:

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

