



IESNA LM-79 TEST REPORT

Applicant's name	Blackjack Lighting
Address	1553 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name	Blackjack Lighting
Report No.....	BTR66.181.17.0031.09
Product Name	Bounce 27" Vanity - Satin Nickel
Model Number	BNC-27V-SN

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 07, 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
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	May 29, 2018 to Jun 07, 2018
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	120V 60HZ
Nominal Power.....	21.5W
Nominal Power Factor	N/A
Nominal Lumen Output.....	1950lm
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.

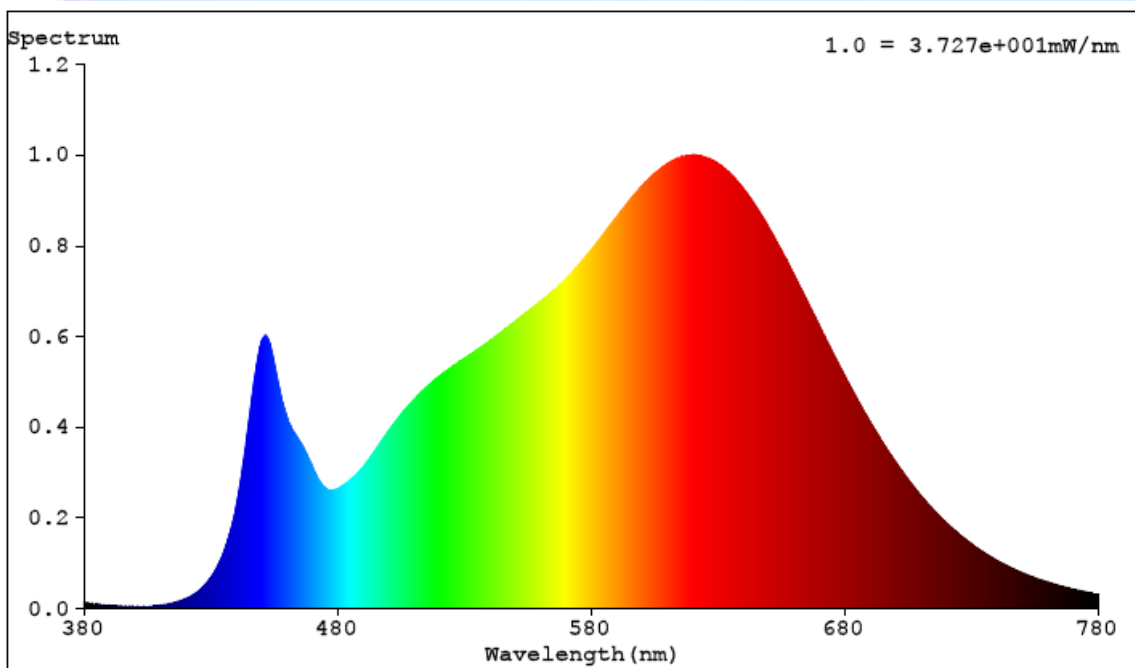
Luminous Intensity

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

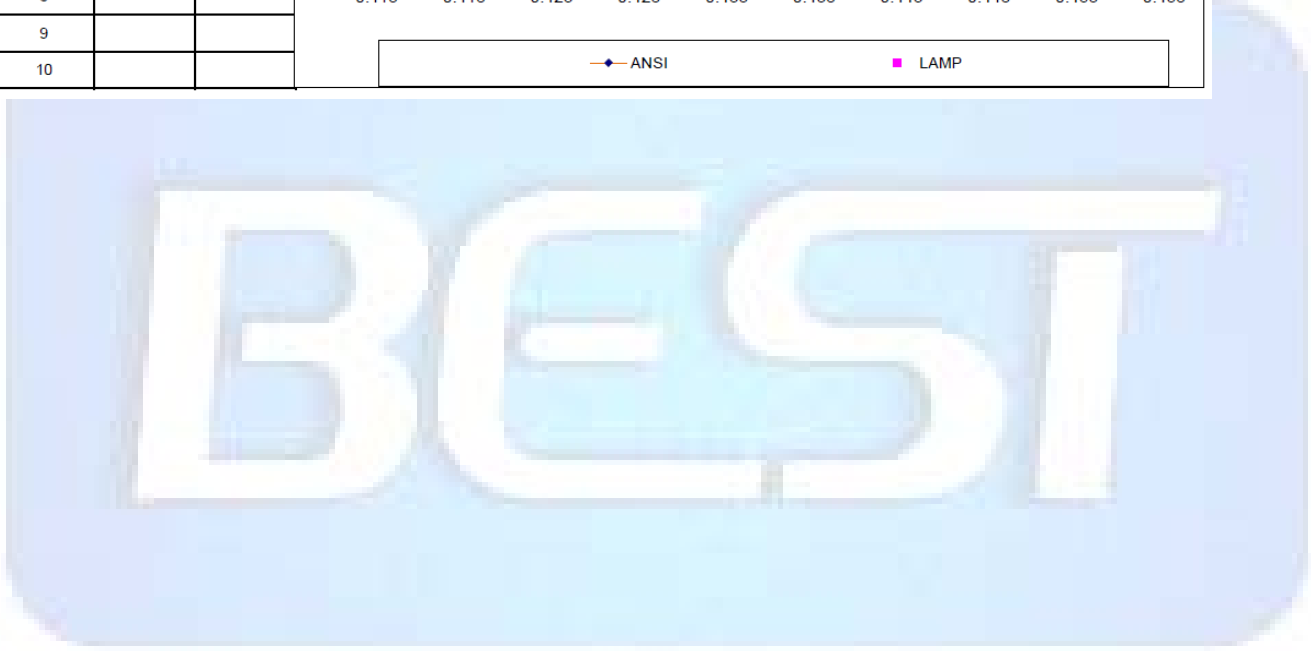
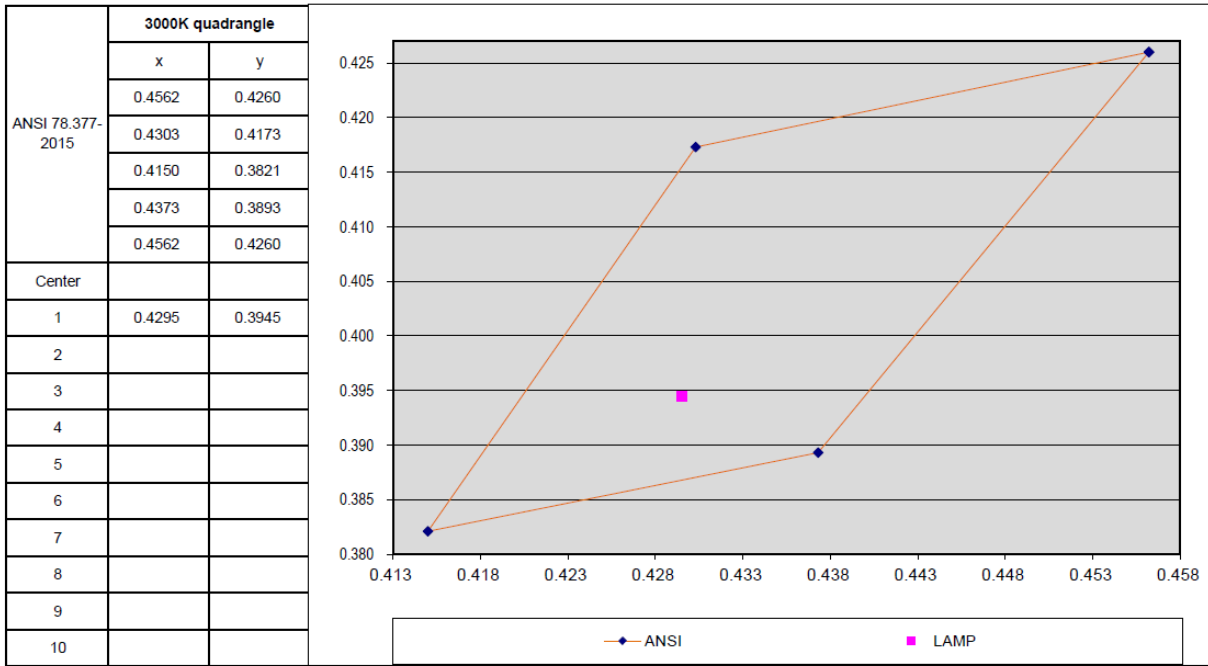
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	0.1746	/	20.88	0.9955	1952.39	93.51
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3048	94.0	65	0.4295	0.3945	0.2499	0.5164	-0.0029

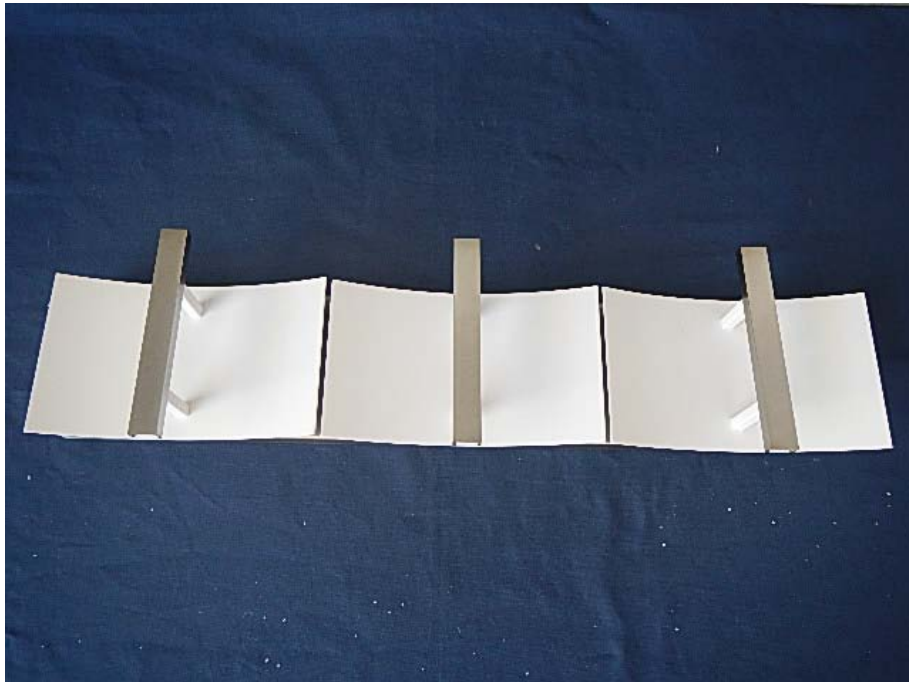
Spectrul Plots



7 Step Quadrangle



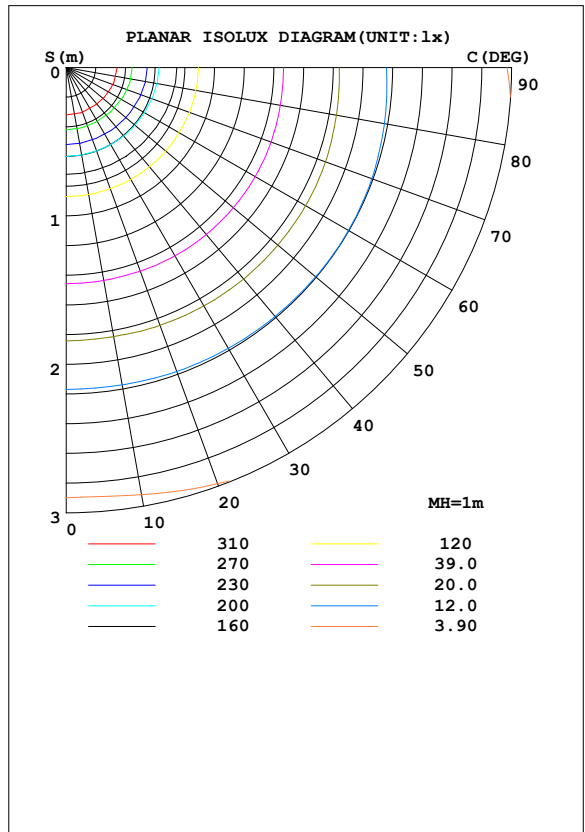
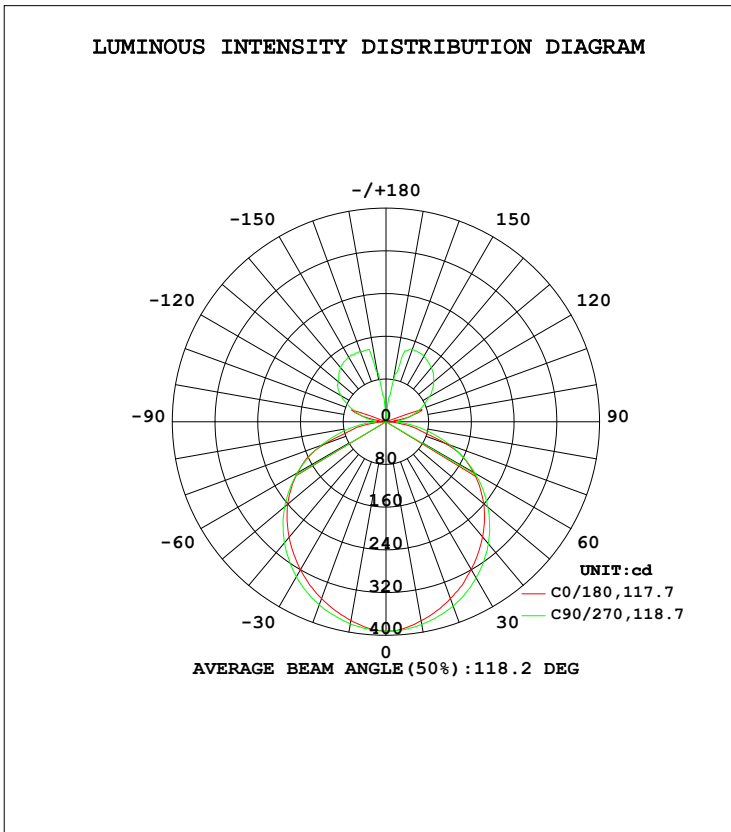
EUT Photo



LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 93.51 lm/W			
MODEL	BNC-27V-SN	I _{max} (cd)	392.3	S/MH (C0/180)	1.22
NOMINAL POWER (W)	21.5	LOR (%)	100.0	S/MH (C90/270)	1.28
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	1952.4	η UP, DN (C0-180)	18.5, 31.2
NOMINAL FLUX (lm)	1952.39	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	19.1, 31.3
LAMPS INSIDE	1	η up (%)	37.5	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120.0	η down (%)	62.5	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 05 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: 26.000m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

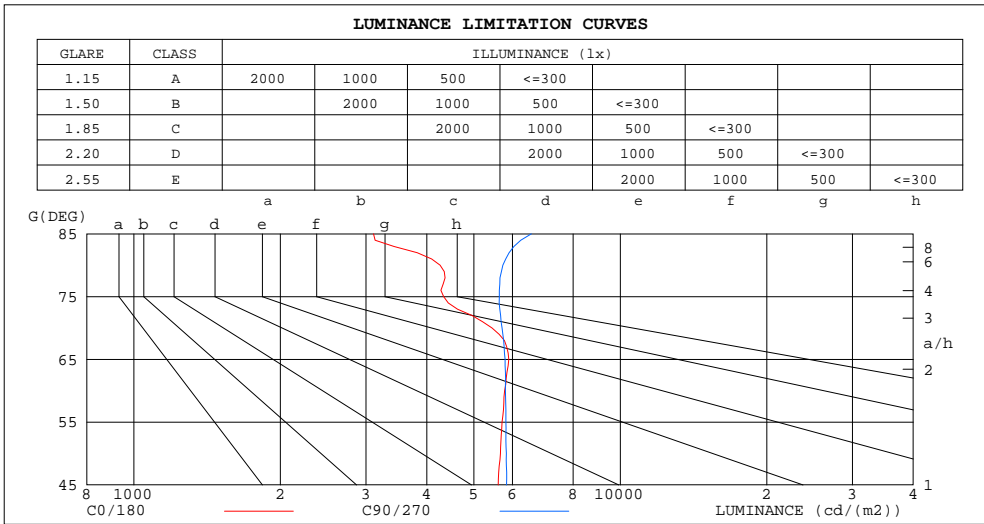
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	#lum,lamp
10	378.2	380.7	384.6	380.1	378.4	381.7	385.3	381.1	0- 10	36.87	36.87	1.89,1.89
20	352.4	354.7	365.0	354.5	352.6	356.7	367.4	355.8	10- 20	104.4	141.3	7.24,7.24
30	320.3	322.6	335.5	322.2	319.4	325.4	337.5	324.8	20- 30	157.8	299.1	15.3,15.3
40	282.4	286.0	296.2	285.0	281.3	287.2	298.7	287.8	30- 40	192.2	491.3	25.2,25.2
50	240.7	245.1	247.7	243.9	238.8	244.9	249.1	246.4	40- 50	205.7	697.0	35.7,35.7
60	191.0	197.6	191.7	195.6	188.8	195.2	192.5	198.6	50- 60	196.7	893.8	45.8,45.8
70	123.0	142.1	129.1	139.3	117.3	137.8	127.6	142.3	60- 70	164.5	1058	54.2,54.2
80	48.87	82.35	65.80	79.12	44.19	78.75	63.71	83.37	70- 80	107.9	1166	59.7,59.7
90	5.250	39.20	18.20	40.03	6.778	42.80	18.95	43.64	80- 90	53.33	1220	62.5,62.5
100	21.83	89.18	35.93	98.64	33.22	107.6	38.29	101.2	90-100	53.27	1273	65.2,65.2
110	52.47	160.8	65.97	172.6	42.60	183.0	67.29	166.1	100-110	131.4	1404	71.9,71.9
120	0.5047	188.9	97.01	195.2	1.439	198.4	93.59	187.3	110-120	151.3	1555	79.7,79.7
130	0.7760	188.5	117.1	191.1	1.574	187.8	116.8	178.6	120-130	140.6	1696	86.9,86.9
140	1.185	145.4	132.8	144.9	1.923	142.4	132.1	136.6	130-140	108.8	1805	92.4,92.4
150	1.612	130.2	138.3	130.2	2.136	136.3	142.0	134.5	140-150	74.51	1879	96.3,96.3
160	1.806	133.2	139.9	130.4	2.136	112.4	144.0	123.8	150-160	48.59	1928	98.8,98.8
170	1.688	51.90	93.50	47.03	2.020	22.89	79.66	46.80	160-170	22.25	1950	99.9,99.9
180	1.981	2.091	2.061	1.989	2.000	1.914	1.866	1.881	170-180	2.119	1952	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:05 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:26.000m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	3108	6563
80	4261	5735
75	4333	5641
70	5446	5715
65	5898	5796
60	5783	5804
55	5715	5818
50	5669	5833
45	5610	5836

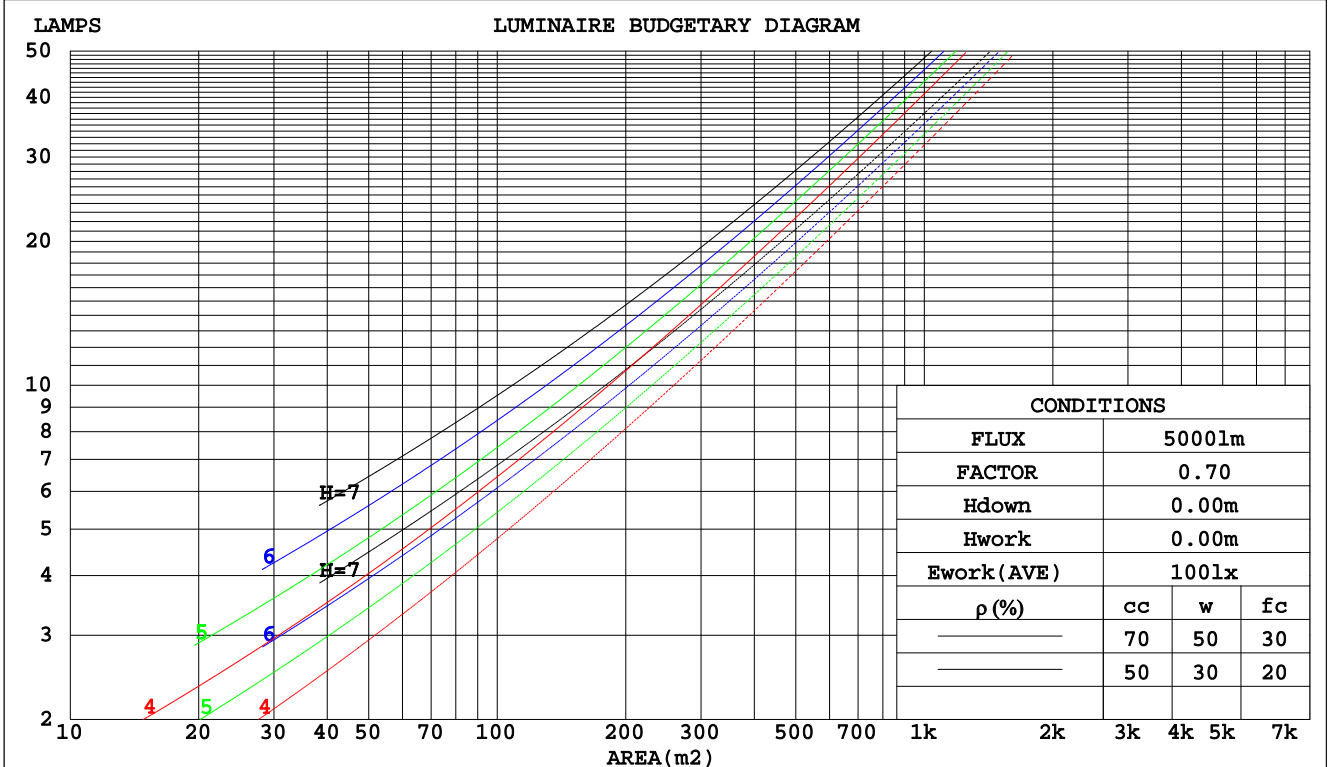
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 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	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	1.10	1.10	1.10	1.03	1.03	1.03	.90	.90	.90	.78	.78	.78	.68	.68	.68	.62
1.0	.95	.90	.86	.89	.85	.81	.78	.75	.72	.67	.65	.63	.58	.56	.55	.50
2.0	.82	.75	.69	.77	.71	.66	.67	.63	.59	.58	.55	.52	.50	.48	.45	.41
3.0	.72	.64	.57	.67	.60	.54	.59	.53	.49	.51	.47	.43	.44	.41	.38	.34
4.0	.63	.55	.48	.59	.52	.46	.52	.46	.41	.45	.41	.37	.39	.35	.32	.29
5.0	.56	.47	.41	.53	.45	.39	.46	.40	.35	.41	.35	.32	.35	.31	.28	.25
6.0	.50	.42	.35	.47	.39	.34	.42	.35	.31	.37	.31	.27	.32	.28	.24	.22
7.0	.45	.37	.31	.43	.35	.30	.38	.31	.27	.33	.28	.24	.29	.25	.22	.19
8.0	.41	.33	.27	.39	.31	.26	.34	.28	.24	.30	.25	.21	.26	.22	.19	.17
9.0	.37	.30	.24	.35	.28	.23	.32	.25	.21	.28	.23	.19	.24	.20	.17	.15
10.0	.34	.27	.22	.33	.26	.21	.29	.23	.19	.26	.21	.17	.23	.19	.16	.14



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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:26.000m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	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	.314	.179	.057	.296	.169	.054	.261	.150	.048	.230	.133	.043	.201	.116	.037	
2.0	.286	.157	.048	.270	.149	.046	.238	.133	.041	.209	.118	.037	.183	.103	.033	
3.0	.262	.139	.042	.246	.132	.040	.218	.118	.036	.191	.105	.032	.167	.092	.029	
4.0	.240	.125	.037	.226	.118	.035	.200	.106	.032	.175	.094	.028	.153	.083	.025	
5.0	.221	.112	.033	.208	.107	.031	.184	.096	.028	.162	.085	.025	.141	.075	.023	
6.0	.204	.102	.029	.192	.097	.028	.170	.087	.025	.150	.078	.023	.130	.069	.020	
7.0	.190	.094	.027	.179	.089	.025	.158	.080	.023	.139	.071	.021	.121	.063	.019	
8.0	.177	.086	.024	.167	.082	.023	.148	.074	.021	.130	.066	.019	.113	.058	.017	
9.0	.166	.080	.022	.156	.076	.021	.139	.069	.019	.122	.061	.018	.106	.054	.016	
10.0	.156	.075	.021	.147	.071	.020	.130	.064	.018	.115	.057	.016	.100	.050	.014	

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	.476	.476	.476	.407	.407	.407	.278	.278	.278	.160	.160	.160	.051	.051	.051	
1.0	.469	.444	.422	.401	.381	.364	.274	.262	.251	.158	.152	.146	.051	.049	.047	
2.0	.462	.422	.389	.396	.363	.336	.271	.251	.235	.156	.146	.137	.050	.047	.045	
3.0	.455	.406	.367	.390	.350	.318	.268	.243	.223	.155	.142	.132	.050	.046	.043	
4.0	.448	.394	.353	.384	.340	.307	.264	.237	.216	.153	.139	.128	.049	.045	.042	
5.0	.441	.384	.343	.379	.333	.298	.261	.232	.211	.151	.136	.125	.049	.045	.041	
6.0	.434	.377	.336	.373	.326	.292	.257	.228	.207	.149	.134	.123	.048	.044	.041	
7.0	.428	.370	.330	.368	.321	.288	.254	.225	.204	.148	.133	.121	.048	.043	.040	
8.0	.422	.365	.326	.363	.317	.284	.251	.222	.202	.146	.131	.120	.047	.043	.040	
9.0	.416	.361	.323	.358	.313	.282	.248	.220	.200	.145	.130	.119	.047	.043	.040	
10.0	.411	.357	.321	.354	.310	.280	.246	.218	.199	.143	.129	.119	.046	.042	.039	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
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 Operators:David
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γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm										
NAME:			TYPE:BNC-27V-SN			WEIGHT:				
SPEC.:			DIM.:			SERIAL No.:				
MFR.: Blackjack Lighting			SUR.:0			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	16.7	17.8	17.4	18.5	19.4	16.8	17.9	17.5	18.6	19.5
3H	18.4	19.4	19.2	20.2	21.1	18.6	19.6	19.3	20.3	21.3
4H	18.9	19.8	19.7	20.6	21.5	19.4	20.3	20.2	21.1	22.0
6H	19.2	20.1	20.0	20.9	21.9	20.1	20.9	20.8	21.7	22.7
8H	19.3	20.2	20.1	21.0	22.0	20.3	21.2	21.1	22.0	23.0
12H	19.4	20.2	20.2	21.0	22.0	20.6	21.4	21.4	22.2	23.2
4H 2H	17.3	18.3	18.1	19.0	20.0	17.4	18.3	18.2	19.1	20.1
3H	19.2	20.0	20.1	20.9	21.9	19.4	20.2	20.2	21.0	22.0
4H	19.9	20.6	20.7	21.5	22.5	20.4	21.1	21.2	21.9	23.0
6H	20.4	21.0	21.3	21.9	23.0	21.2	21.9	22.1	22.7	23.8
8H	20.6	21.1	21.4	22.0	23.1	21.6	22.2	22.5	23.1	24.2
12H	20.6	21.2	21.5	22.0	23.1	22.0	22.5	22.9	23.4	24.5
8H 4H	20.3	20.9	21.2	21.8	22.8	20.7	21.3	21.6	22.2	23.2
6H	21.1	21.6	22.0	22.4	23.6	21.8	22.3	22.7	23.2	24.3
8H	21.3	21.8	22.3	22.7	23.8	22.4	22.8	23.3	23.7	24.9
12H	21.5	21.9	22.4	22.8	24.0	23.0	23.3	23.9	24.3	25.4
12H 4H	20.4	20.9	21.2	21.8	22.9	20.7	21.2	21.6	22.1	23.2
6H	21.2	21.7	22.1	22.6	23.7	21.9	22.4	22.8	23.3	24.4
8H	21.6	22.0	22.5	22.9	24.1	22.6	23.0	23.5	23.9	25.0
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.5				

CIE Pub.117, 1952 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 2.3)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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:26.000m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:

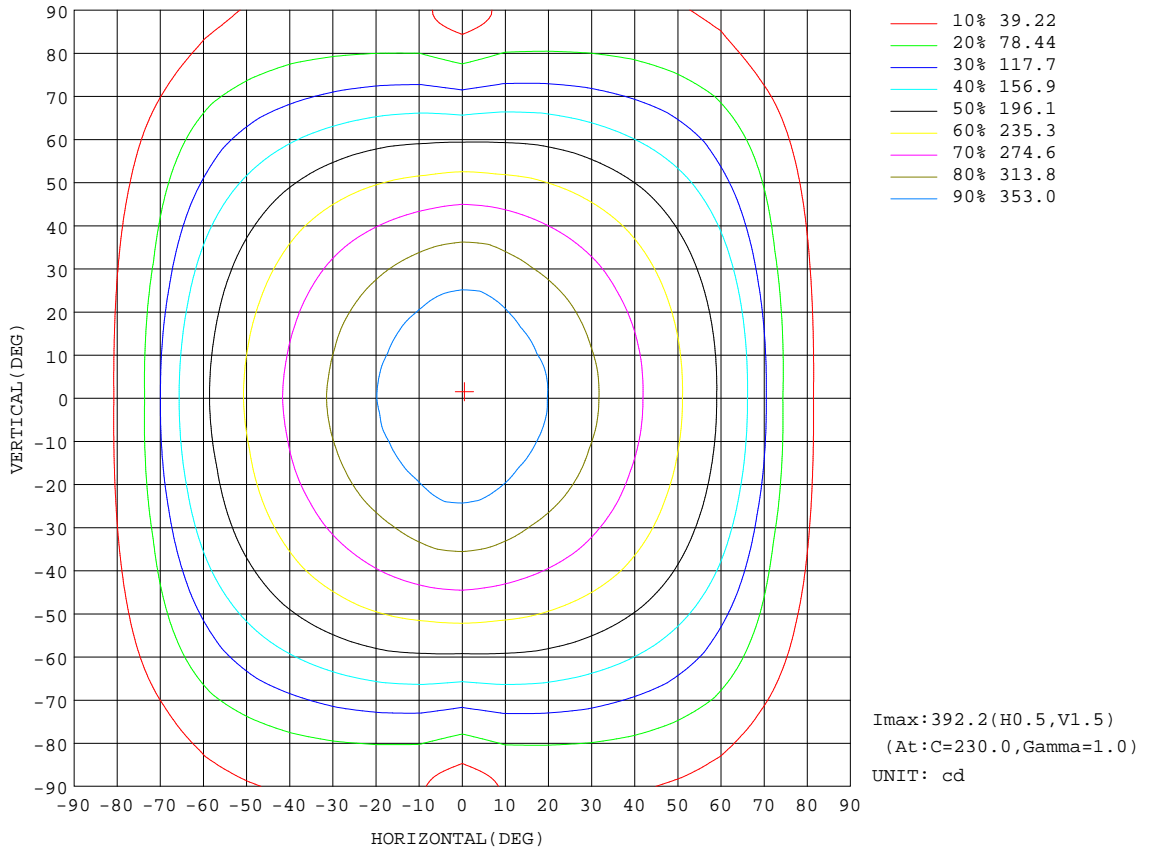
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	45	33	27	43	33	26	40	31	25	18
0.80	55	42	35	52	41	34	48	38	32	23
1.00	62	50	42	59	48	41	54	46	39	28
1.25	69	58	50	66	55	48	59	51	45	33
1.50	75	63	55	71	61	53	63	55	49	36
2.00	82	72	64	77	68	62	69	62	56	41
2.50	86	77	70	81	73	67	72	66	61	44
3.00	90	82	75	85	77	72	75	69	65	46
4.00	95	88	82	89	83	78	78	74	70	50
5.00	97	91	86	91	86	82	80	77	73	52
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:05 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:26.000m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:

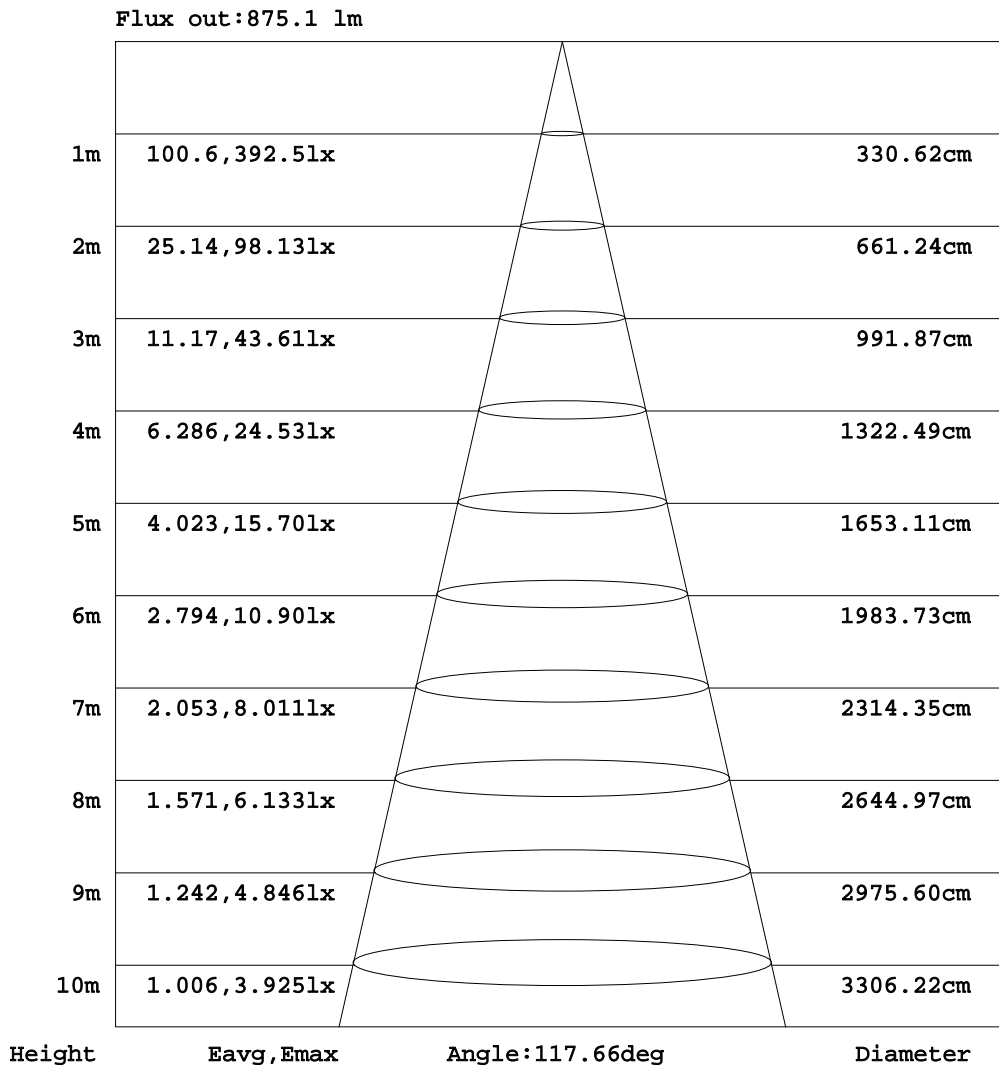


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 05 June 2018

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity: 67.1%
 Test Distance: 26.000m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:



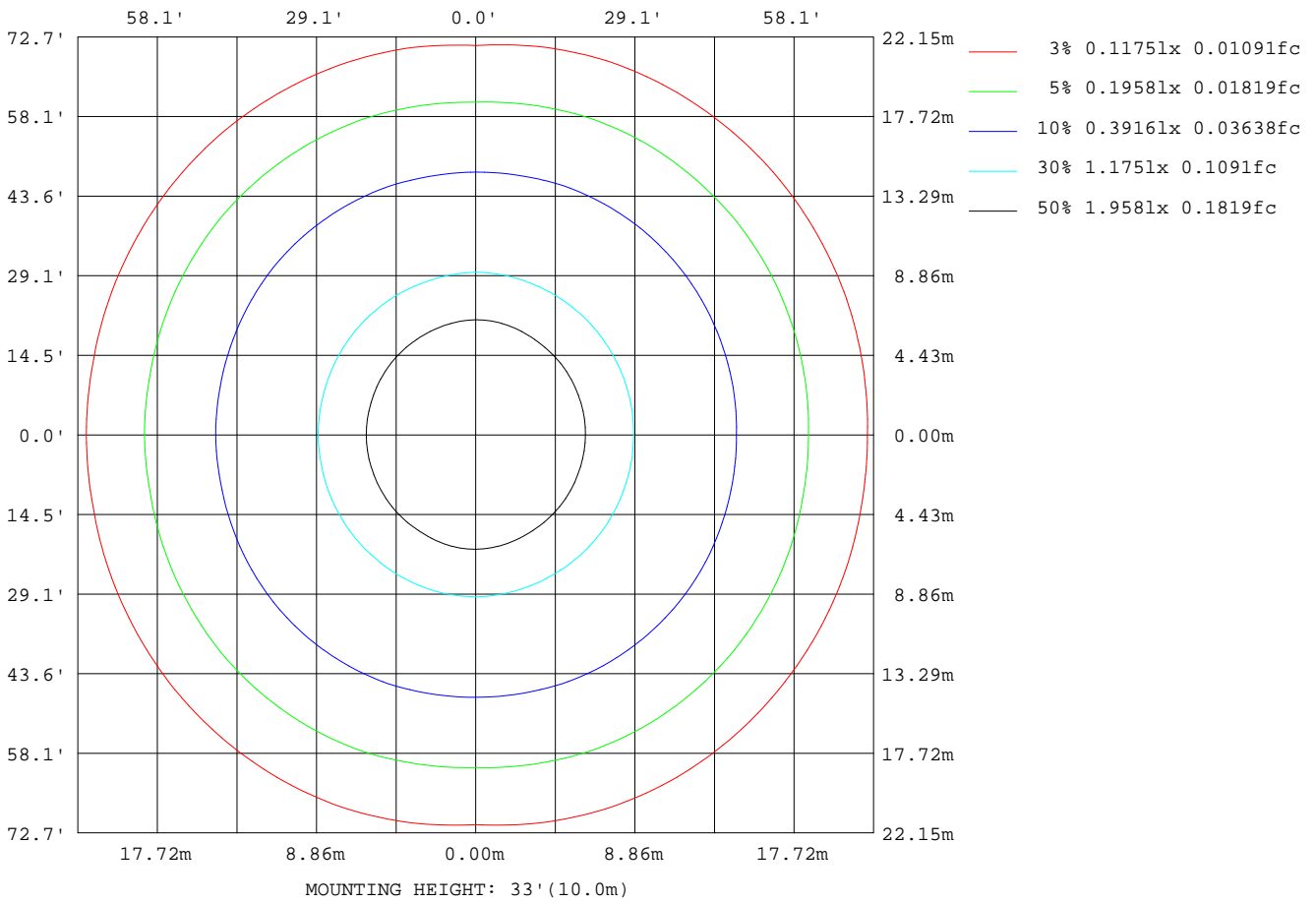
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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:26.000m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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:26.000m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:

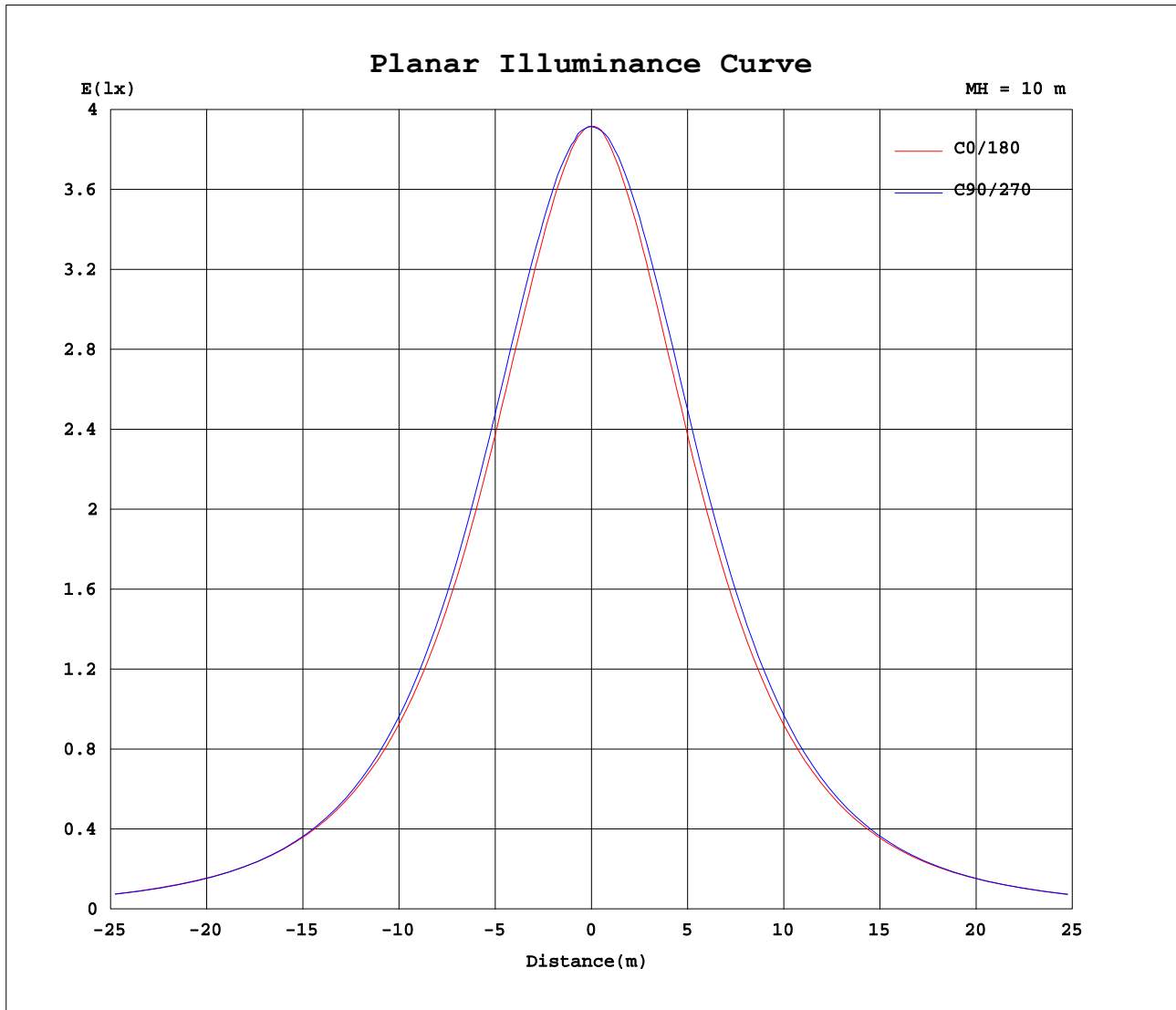
AvgL	cd/m2
L_0~180 (65) av	5840
L_0~180 (75) av	4205
L_0~180 (85) av	2946
L_90~270 (65) av	5792
L_90~270 (75) av	5591
L_90~270 (85) av	6401
L_45 (65) av	6071
L_45 (75) av	6506
L_45 (85) av	9898

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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: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:05 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:26.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding 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	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392
5	388	388	388	388	389	389	389	390	390	389	389	389	390	388	389	388	388	388	388
10	378	378	378	379	380	381	382	383	384	385	384	383	381	380	380	379	379	379	378
15	366	366	366	367	368	369	371	374	375	375	375	373	371	368	368	366	366	366	367
20	352	352	352	352	354	355	358	361	365	365	364	360	358	355	354	352	352	351	353
25	338	337	337	337	339	340	343	347	351	352	351	347	342	340	339	337	336	336	338
30	320	319	319	321	322	324	325	331	334	336	334	330	326	323	322	319	319	319	319
35	302	301	301	302	304	305	308	311	315	316	315	311	307	305	304	301	300	299	301
40	282	282	282	283	285	287	289	291	294	296	294	291	288	286	284	282	280	280	281
45	262	262	263	263	266	267	269	270	271	273	271	270	268	266	264	262	260	259	261
50	241	240	241	243	245	245	246	247	246	248	247	246	246	245	243	240	239	237	239
55	217	217	218	221	222	223	223	223	220	220	221	223	223	222	220	218	215	214	215
60	191	192	193	196	198	198	198	197	194	192	193	197	197	196	195	192	190	187	189
65	165	165	167	168	170	171	171	170	166	162	166	169	170	169	167	165	163	161	161
70	123	126	134	140	142	143	143	142	137	129	137	141	141	140	139	136	129	121	117
75	74.1	79.2	93.3	107	112	113	114	112	108	96.5	107	111	112	110	108	103	90.0	76.1	69.6
80	48.9	53.0	62.8	74.5	80.5	84.2	85.3	83.9	81.2	65.8	80.4	83.0	83.4	81.3	76.9	70.8	59.5	50.1	44.2
85	17.9	25.4	33.8	45.1	53.5	59.6	61.1	60.0	57.7	37.8	57.0	59.0	59.8	57.9	51.8	44.2	32.4	24.8	16.0
90	5.25	13.7	19.2	30.8	36.7	41.7	44.6	44.8	43.2	18.2	43.2	45.0	45.0	42.4	37.6	32.7	21.3	16.3	6.78
95	13.2	20.4	25.9	34.8	38.7	43.5	49.9	58.5	58.0	24.1	61.5	62.8	55.7	49.1	44.6	41.5	33.1	27.5	17.6
100	21.8	36.4	58.2	75.6	84.8	93.5	99.6	101	92.1	35.9	100	111	112	105	92.6	85.1	72.7	52.0	33.2
105	51.4	72.8	108	133	127	141	153	152	134	50.4	146	165	172	155	145	147	124	85.1	56.9
110	52.5	61.4	62.5	100	134	187	208	209	179	66.0	192	223	222	198	147	112	60.5	54.9	42.6
115	0.50	34.8	55.6	111	148	202	249	246	222	81.7	235	255	254	210	159	118	60.6	39.4	1.23
120	0.50	45.3	55.7	114	178	200	248	277	253	97.0	246	278	251	205	185	120	60.6	51.7	1.44
125	0.56	47.3	71.8	114	172	218	230	247	226	110	214	246	231	222	179	118	75.7	58.0	1.55
130	0.78	49.5	86.5	108	167	211	237	218	194	117	186	214	237	213	170	108	88.8	57.2	1.57
135	0.95	54.3	98.5	105	149	182	215	223	191	125	186	218	213	181	153	105	80.6	60.2	1.71
140	1.18	42.2	106	113	128	163	183	192	175	133	165	185	177	160	130	92.0	107	50.6	1.92
145	1.48	39.3	108	120	123	143	158	160	165	137	154	158	157	145	116	120	114	39.6	2.10
150	1.61	40.3	81.7	125	128	132	137	148	145	138	139	145	139	132	128	123	83.1	41.3	2.14
155	1.79	27.2	78.9	122	131	134	137	139	141	140	140	139	137	117	130	125	83.7	38.2	2.14
160	1.81	4.85	46.6	89.2	132	135	136	139	140	140	140	138	133	130	131	89.0	48.4	13.9	2.14
165	1.59	1.96	44.8	50.7	90.7	98.5	137	140	138	139	137	138	137	103	88.6	59.2	46.0	1.93	1.86
170	1.69	1.92	3.71	43.9	49.0	54.8	85.0	93.7	92.3	93.5	93.0	87.9	88.6	61.4	32.7	27.9	8.49	1.79	2.02
175	2.39	2.21	2.24	2.32	2.93	10.1	29.1	41.3	46.2	47.2	47.0	43.7	25.5	14.8	4.94	2.52	2.47	2.45	2.39
180	1.98	1.83	1.72	1.72	2.09	2.09	1.93	1.06	1.64	2.06	1.89	1.62	1.73	2.05	1.93	1.77	1.94	2.00	2.00

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 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:26.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.00V I:0.1746A P:20.879W PF:0.9955 Freq:60.00Hz Lamp Flux:1952.39x1 lm		
NAME:	TYPE:BNC-27V-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:0	Shielding Angle:

Table--2

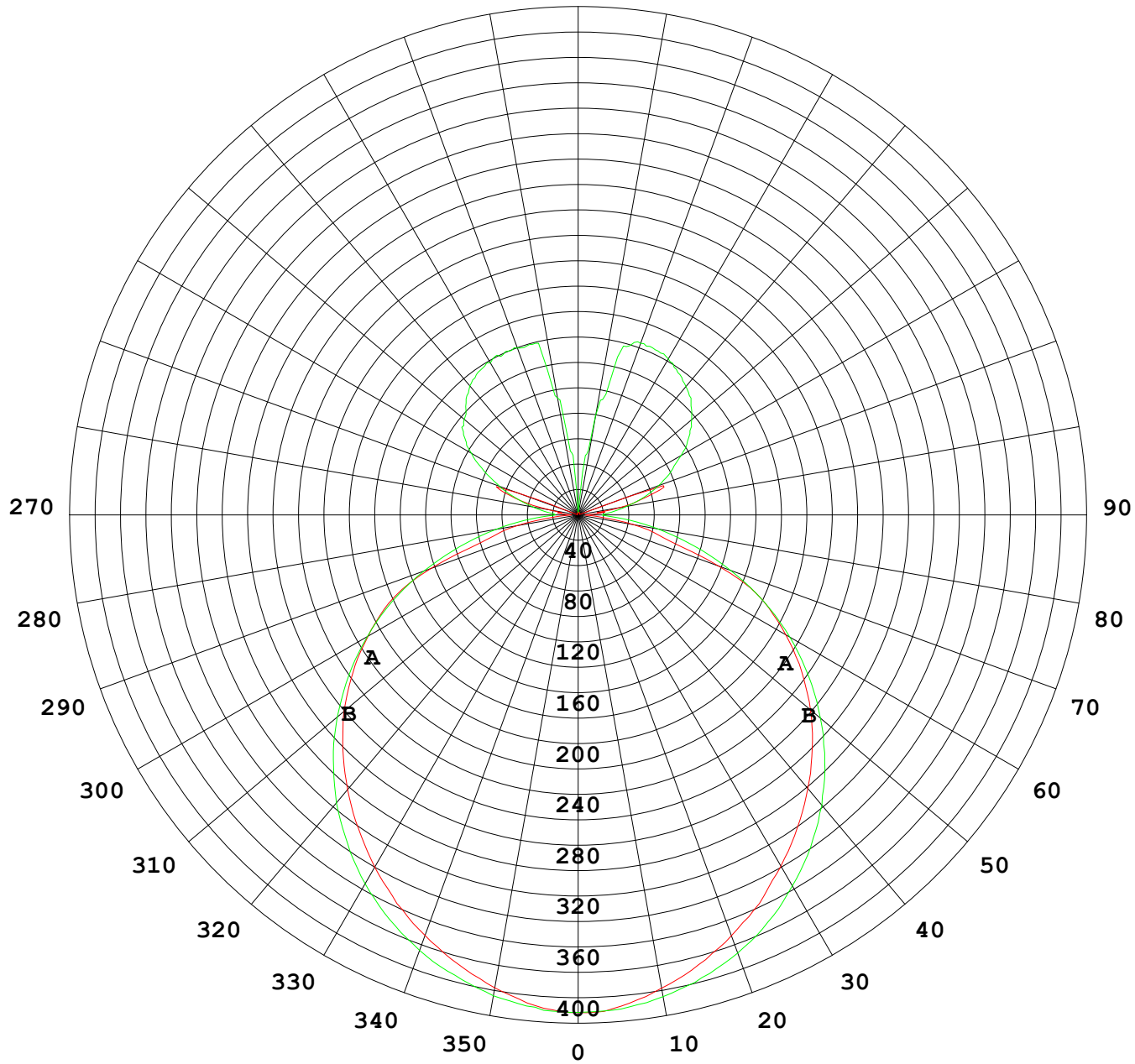
UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392		
5	387	388	388	390	390	389	390	390	391	390	390	389	390	389	388	388	388		
10	378	379	380	381	382	383	384	384	385	384	384	383	382	381	379	379	378		
15	366	367	367	369	371	372	375	377	377	377	375	372	370	369	368	367	366		
20	352	353	353	356	358	361	364	366	367	367	364	360	357	355	353	354	353		
25	336	337	338	341	343	345	349	352	354	353	349	345	342	340	338	338	337		
30	319	319	321	324	327	328	332	336	337	337	333	328	325	324	322	321	321		
35	300	301	302	306	308	310	314	317	319	317	313	310	308	306	304	303	303		
40	281	282	284	286	288	290	293	295	299	296	293	290	289	287	285	284	283		
45	260	261	263	266	268	269	270	272	275	273	271	270	269	268	265	264	263		
50	238	239	242	244	246	247	248	247	249	248	248	248	247	246	244	243	242		
55	215	216	218	221	221	222	222	221	222	221	224	224	224	223	221	219	218		
60	188	191	192	195	196	196	196	193	192	194	198	199	199	199	197	195	193		
65	161	163	165	167	168	168	168	166	161	167	170	171	171	171	169	168	166		
70	120	128	134	137	138	139	139	135	128	136	141	143	143	142	141	135	128		
75	74.9	88.6	102	107	109	110	109	106	94.5	107	111	113	114	113	109	96.0	81.6		
80	49.0	58.4	69.9	76.6	80.9	81.9	81.4	79.2	63.7	80.1	83.7	85.4	85.0	81.8	76.4	65.2	55.4		
85	24.0	32.2	44.3	52.7	58.9	60.6	59.4	56.8	35.8	57.7	60.9	62.7	61.8	56.0	48.1	35.3	27.2		
90	16.0	21.6	34.2	40.1	45.4	48.9	49.4	48.4	18.9	48.4	49.9	49.6	46.3	41.0	34.6	20.6	14.9		
95	25.7	33.4	46.0	50.1	57.3	64.8	72.4	72.3	26.6	69.7	70.5	60.9	51.1	45.3	40.5	28.8	22.5		
100	50.6	72.4	93.0	101	114	124	125	115	38.3	109	116	114	107	95.1	86.4	63.1	40.8		
105	80.3	119	156	143	167	189	182	162	53.6	157	173	174	152	132	141	113	75.7		
110	59.0	62.3	119	153	213	235	240	210	67.3	204	230	223	195	137	106	68.5	64.8		
115	50.5	69.4	133	173	219	272	271	253	80.6	244	258	259	206	157	123	61.8	39.8		
120	53.9	74.4	134	188	208	260	289	278	93.6	260	272	248	200	175	127	64.2	42.2		
125	53.6	88.2	127	189	237	230	260	245	106	227	246	222	228	179	119	80.9	47.6		
130	56.1	97.7	117	164	211	255	236	194	117	175	222	247	203	154	110	92.5	48.3		
135	41.5	107	111	141	195	217	226	208	126	189	211	209	189	130	108	102	34.7		
140	37.6	111	117	124	161	188	182	191	132	169	172	182	154	120	114	107	36.4		
145	33.3	84.7	125	131	136	152	170	166	137	143	161	149	132	125	122	78.3	34.9		
150	18.0	82.1	125	135	138	137	152	152	142	141	146	136	136	133	124	81.0	14.5		
155	2.71	46.3	89.0	132	138	140	141	141	144	143	143	140	137	132	94.3	48.3	3.38		
160	2.25	39.3	63.4	89.0	136	138	141	142	144	144	142	138	134	113	89.1	45.3	2.76		
165	1.79	1.95	43.7	48.7	84.5	91.9	118	137	138	137	138	117	91.3	89.1	47.0	42.7	2.76		
170	1.98	1.95	2.07	9.36	36.4	33.1	49.9	66.5	79.7	81.5	73.0	55.6	46.9	46.7	36.4	3.09	2.46		
175	2.39	2.28	2.36	2.40	2.13	1.95	2.35	4.13	6.05	6.63	4.88	3.07	2.47	2.05	2.43	2.48	2.61		
180	1.98	1.87	1.89	1.90	1.93	1.93	2.03	1.75	1.87	2.12	1.93	1.74	1.91	1.85	1.87	2.02	2.08		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:05 June 2018

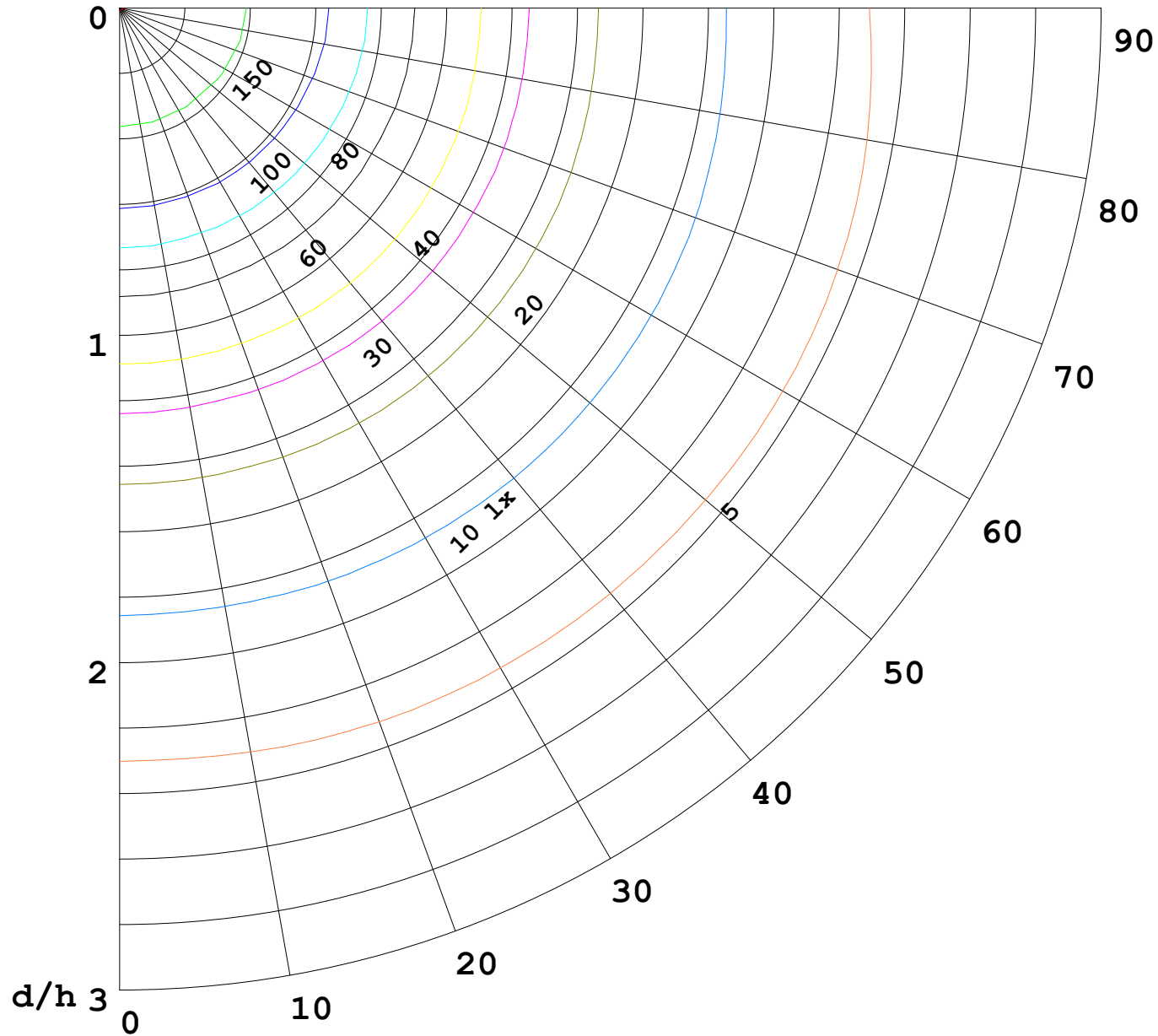
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:67.1%
 Test Distance:26.000m [K=1.0000]
 Remarks:

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

