



IESNA LM-79 TEST REPORT

Applicant's name	BlackJack Lighting LLC
Address	1547 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name	Blackjack Lighting
Report No.	BTR66.181.19.0007.09
Product Name	Float Linear Pendant 48" Vanity- Satin Nickel or Polished Chrome
Model Number	FLT-48P-PC-12T-30K; FLT-48P-SN-12T-30K

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 19, 2019	

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: admin@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/method	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:
The laboratory has not been responsible for the sampling stage (e.g. the sample has been provided by the customer), the results relate only to the items tested. This report is not valid as a BEST Test Report unless signed by an approved BEST Test Service Shenzhen Co., Ltd. This report shall not be reproduced except in full without approval of BEST TEST SERVICE SHENZHEN CO., LTD can provide assurance that parts of a report are not taken out of context. The test report only allows to be revised within the retention period unless further standard or the requirement was noticed. This report is for the exclusive use of BEST's Client and is provided pursuant to the agreement between BEST and its Client. BEST's responsibility and Liability are limited to the terms and conditions of the agreement. BEST assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the BEST name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by BEST. The observations and test results in this report are relevant only to the sample tested. This report by itself does not cover that the material, product, of service is or has ever been under a BEST certification program. National Voluntary Laboratory Accreditation Program (NVLAP) has accredited this laboratory under ISO17025: 2005 for specific laboratory activities as listed in the NVLAP directory of accredited laboratories. The results shown in this report were determined by this laboratory in accordance with its terms of accreditation. This report must not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the U.S. Government.

Description:	
The date of sampling	Aug 15, 2019
The date of receipt of the test sample / requirement /item(s).....	Aug 15, 2019
Test date.....	Aug 15, 2019 to Aug 19, 2019
Description	Float Linear Pendant 48" Vanity- Satin Nickel or Polished Chrome
The condition of the item	N/A
Sampling method.....	Provided by the customer
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	AC 120V, 60Hz
Nominal Power.....	42W
Nominal Power Factor	N/A
Nominal Lumen Output.....	2770lm
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	1.5H
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	3.1%
Deviation	None

Note: These models are all the same except for color. Here we choose FLT-48P-PC-12T-30K to be tested and the other to share the test data.

Photometric and Electrical Measurement

Total light output (luminous flux) for the 25°C ±1°C ambient temperature conditions was measured using a ø2.0m 4π geometry integrating sphere. Temperature was measured at a position inside the sphere. Spectral radiant flux were measured using the photo detector built in the integrating sphere. Each lamp was operated at rated voltage in its designated orientation. Each lamp was in a stable state before measurements are done as below:

- Step 1 Take 3 measurements of the lamp light output at 15 minute interval (total time=30mintues.), the pre-burning time is not included in the formal testing time period.
- Step 2 Calculate the difference in percentage between the maximum measured value and the minimum measured value with 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 were calculated from the spectral radiant flux measurements taken at 2 nm increment over the range of 380 to 780 nm. The calibration of the sphere photometer-spectrometer system can be traced back to the NIST USA. Lamp efficacy (lumens per watt) for each lamp model was computed based on the luminous flux result revised taking the self-absorbing correction factor into consideration. Electrical measurements including voltage, current, power and power factor were measured using the digital power meter.

The total uncertainty of the light output measurements is estimated, at the 95% confidence level, not to exceed ±3.1% over the wavelength range of 380-780 nm.

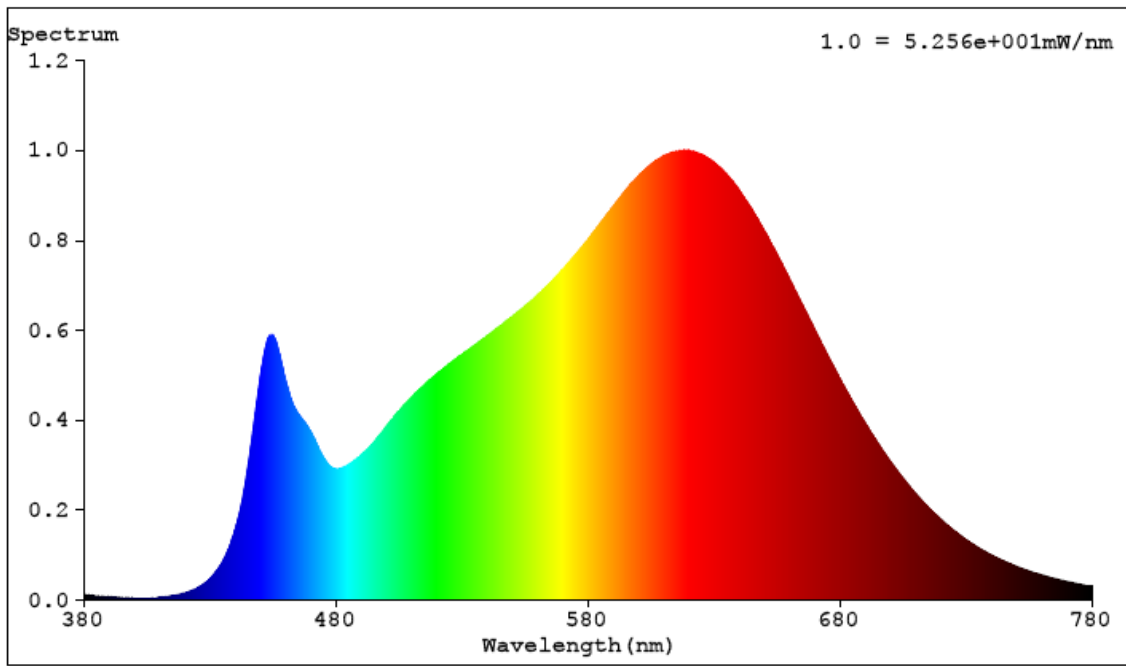
Luminous Intensity

An Everfine GOR-5000 Goniophotometer was used to measure the intensity distribution at each angle, Luminous intensity (cd) was measured within each vertical plane at a 5° vertical angle increment (maximum) from 0° to 360°, measurements were repeated in vertical planes about the lamp (polar) axis in an increments of 22.5° from 0° to 180°, and the intensity data were exported to a file in excel format.

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	0.3386	/	40.26	0.9914	2770.34	68.82
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3042	93.0	60	0.4311	0.3971	0.2498	0.5177	-0.0020

Spectral Plots




EUT Photo



Annex

Please see the next page for the luminous intensity test data

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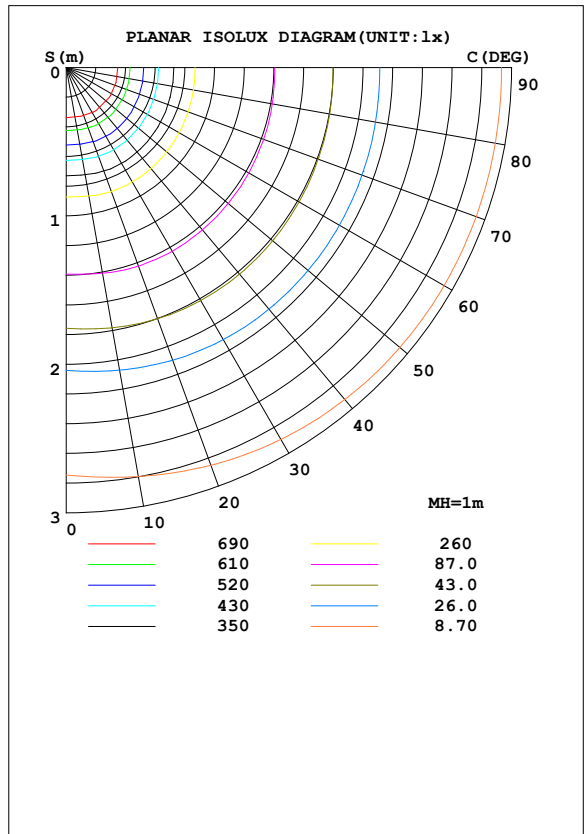
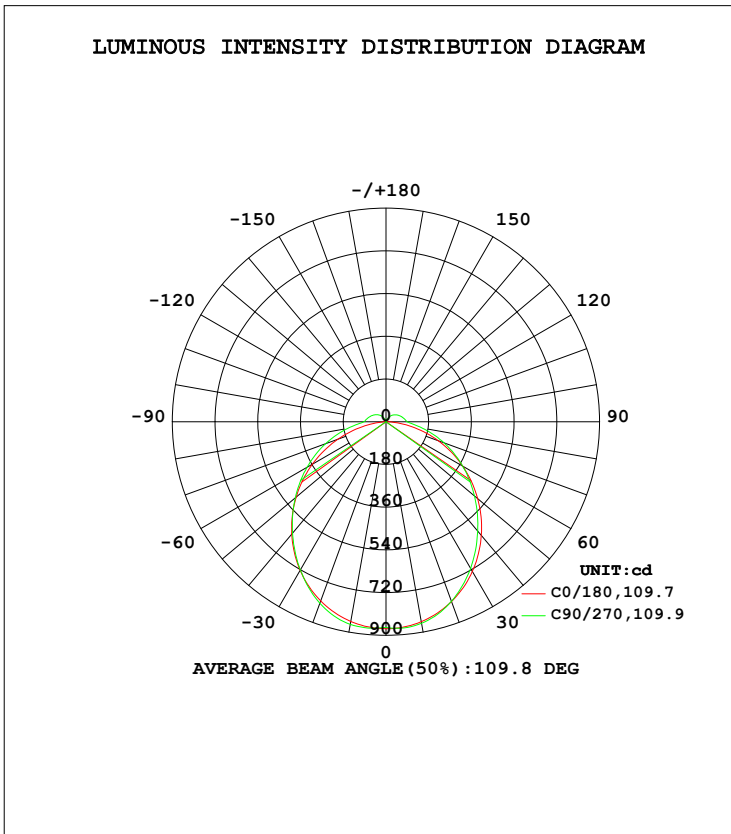


BEST

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 68.82 lm/W			
MODEL	FLT-48P-PC-12T-30K	I _{max} (cd)	872.7	S/MH (C0/180)	1.24
NOMINAL POWER (W)	42	LOR (%)	100.0	S/MH (C90/270)	1.23
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	2770.3	η UP, DN (C0-180)	3.8, 46.4
NOMINAL FLUX (lm)	2770	CIE CLASS	DIRECT	η UP, DN (C180-360)	3.7, 46.2
LAMPS INSIDE	1	η up (%)	7.4	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	120	η down (%)	92.6	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature: 25.1DEG
 Operators: Mark
 Test Date: 19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity: 59.2%
 Test Distance: 2.463m [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	854.5	863.9	866.9	859.9	855.6	863.0	862.5	861.8	0- 10	82.70	82.70	2.99,2.99
20	803.7	822.1	814.2	813.9	806.4	814.1	805.2	813.6	10- 20	237.3	320.0	11.6,11.6
30	723.0	742.1	721.7	730.9	728.1	731.4	713.3	731.6	20- 30	356.6	676.6	24.4,24.4
40	618.0	637.2	612.7	624.0	625.1	627.2	601.8	626.3	30- 40	424.3	1101	39.7,39.7
50	494.4	520.1	498.3	507.1	504.6	510.1	486.7	507.9	40- 50	436.9	1538	55.5,55.5
60	358.6	397.1	384.3	386.9	372.7	388.9	372.3	385.9	50- 60	398.8	1937	69.9,69.9
70	216.0	271.4	271.1	264.4	235.1	266.5	260.0	262.1	60- 70	318.3	2255	81.4,81.4
80	78.49	150.9	164.7	147.1	98.67	148.4	156.0	144.3	70- 80	208.7	2464	88.9,88.9
90	1.991	71.26	93.06	70.98	3.829	68.87	89.71	69.48	80- 90	100.7	2564	92.6,92.6
100	1.738	60.28	80.36	60.23	1.578	58.16	77.82	59.10	90-100	60.85	2625	94.8,94.8
110	1.495	50.19	69.33	50.46	1.334	48.72	67.39	49.55	100-110	50.00	2675	96.6,96.6
120	1.202	40.10	58.18	40.64	1.068	39.42	56.88	39.95	110-120	38.70	2714	98,98
130	0.9648	30.08	46.51	30.79	0.8410	30.06	45.87	30.32	120-130	27.48	2741	99,99
140	0.8082	19.16	34.29	20.17	0.6255	17.77	33.97	17.40	130-140	17.20	2759	99.6,99.6
150	0.7128	8.753	20.38	9.237	0.4414	9.117	18.01	8.588	140-150	8.502	2767	99.9,99.9
160	0.7080	2.030	7.044	2.253	0.4609	2.289	7.462	2.420	150-160	2.763	2770	100,100
170	0.6872	0.7003	0.7735	0.7050	0.5292	0.5220	0.8577	0.5753	160-170	0.4540	2770	100,100
180	0.6516	0.6512	0.6746	0.6640	0.6522	0.6498	0.6625	0.6677	170-180	0.0612	2770	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1321.2 lm

%lum = 47.7%
 %lamp = 47.7%

Conical surface Flux(120deg): 1936.7 lm

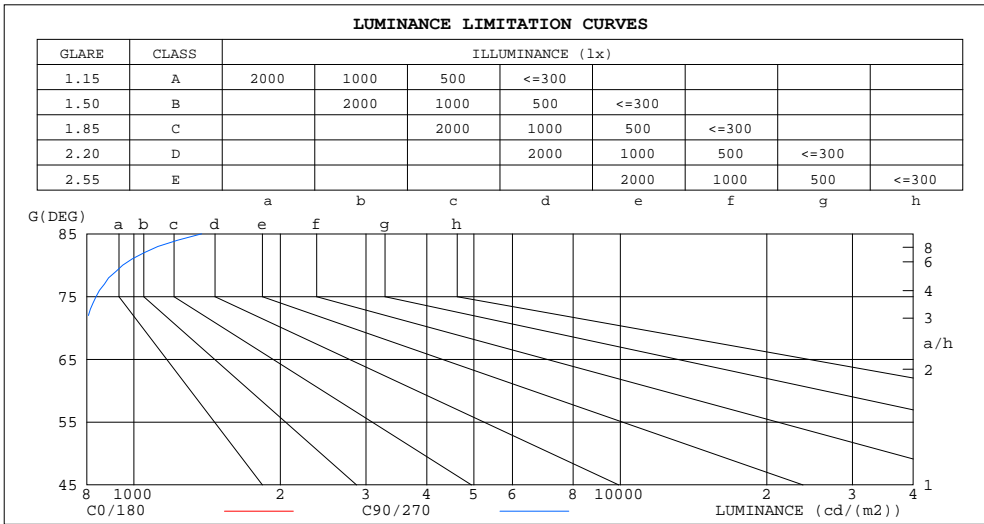
%lum = 69.9%
 %lamp = 69.9%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	268	1378
80	452	949
75	560	836
70	631	793
65	681	775
60	717	769
55	745	770
50	769	775
45	789	786

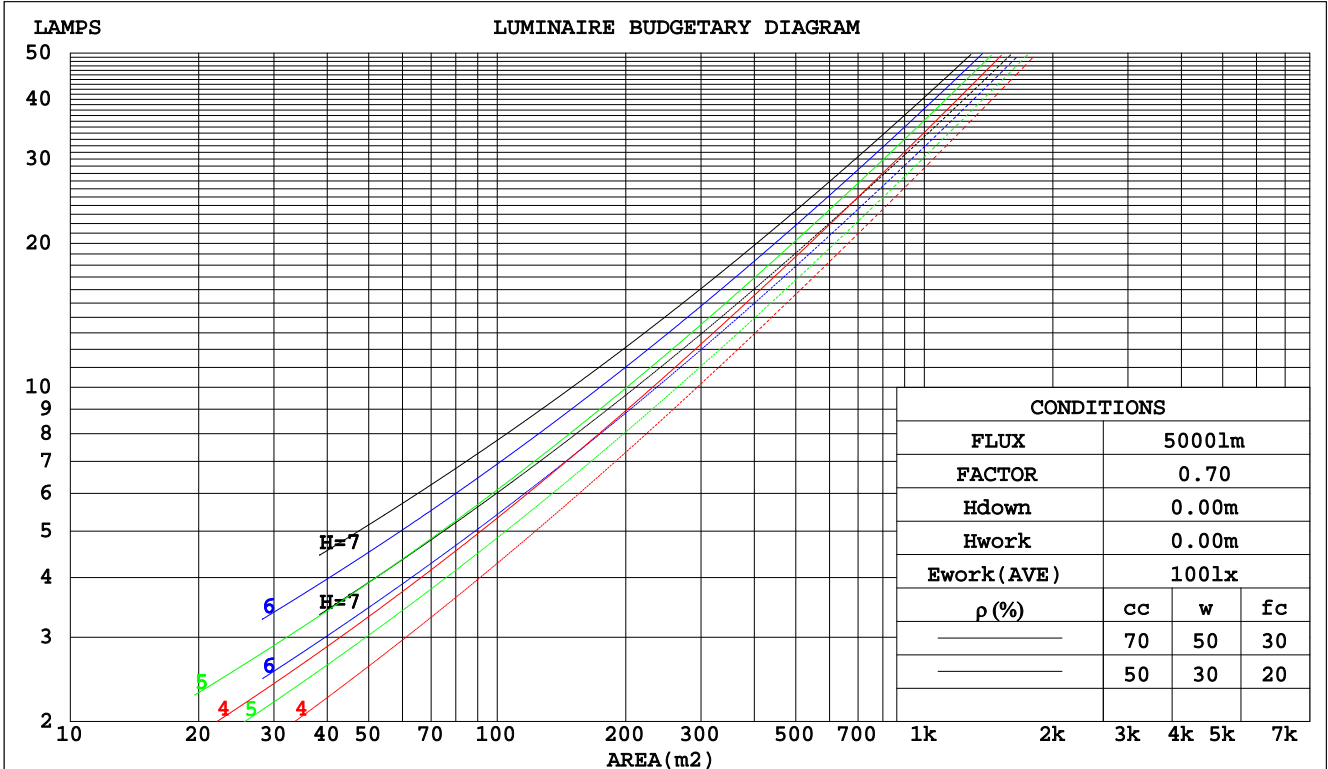
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
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SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	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	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.01	1.01	1.01	.95	.95	.95	.93
1.0	1.01	.96	.92	.98	.94	.90	.92	.89	.86	.87	.84	.82	.82	.80	.78	.76
2.0	.88	.81	.75	.85	.79	.73	.80	.75	.70	.76	.71	.68	.72	.68	.65	.62
3.0	.77	.68	.62	.75	.67	.61	.71	.64	.59	.67	.61	.57	.63	.59	.55	.52
4.0	.68	.59	.52	.66	.58	.51	.63	.55	.50	.59	.53	.48	.56	.51	.47	.44
5.0	.61	.51	.45	.59	.50	.44	.56	.49	.43	.53	.47	.42	.51	.45	.41	.38
6.0	.54	.45	.39	.53	.45	.38	.51	.43	.38	.48	.42	.37	.46	.40	.36	.34
7.0	.49	.41	.34	.48	.40	.34	.46	.39	.33	.44	.37	.32	.42	.36	.32	.30
8.0	.45	.36	.31	.44	.36	.30	.42	.35	.30	.40	.34	.29	.38	.33	.28	.26
9.0	.41	.33	.27	.40	.33	.27	.39	.32	.27	.37	.31	.26	.36	.30	.26	.24
10.0	.38	.30	.25	.37	.30	.25	.36	.29	.24	.34	.28	.24	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	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	.330	.188	.060	.321	.183	.058	.304	.174	.056	.287	.166	.053	.272	.158	.051	
2.0	.302	.165	.051	.293	.162	.050	.278	.154	.048	.263	.148	.046	.250	.141	.045	
3.0	.275	.147	.044	.268	.143	.043	.254	.138	.042	.241	.132	.040	.229	.127	.039	
4.0	.252	.131	.039	.245	.128	.038	.233	.123	.037	.221	.119	.036	.210	.114	.035	
5.0	.232	.118	.034	.226	.116	.034	.214	.112	.033	.204	.108	.032	.194	.104	.031	
6.0	.214	.107	.031	.209	.105	.030	.199	.102	.030	.189	.098	.029	.180	.095	.028	
7.0	.199	.098	.028	.194	.097	.028	.185	.093	.027	.176	.090	.026	.168	.087	.026	
8.0	.185	.091	.025	.181	.089	.025	.173	.086	.025	.165	.083	.024	.157	.081	.024	
9.0	.174	.084	.023	.169	.083	.023	.162	.080	.023	.155	.077	.022	.148	.075	.022	
10.0	.163	.078	.022	.159	.077	.021	.152	.075	.021	.146	.072	.021	.139	.070	.020	

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	.247	.247	.247	.211	.211	.211	.144	.144	.144	.083	.083	.083	.026	.026	.026	
1.0	.239	.213	.190	.204	.183	.163	.140	.126	.113	.080	.073	.066	.026	.023	.021	
2.0	.231	.189	.154	.198	.163	.133	.136	.113	.093	.078	.066	.055	.025	.021	.018	
3.0	.223	.172	.131	.191	.149	.114	.131	.103	.080	.076	.060	.047	.024	.020	.015	
4.0	.216	.159	.116	.185	.137	.101	.127	.096	.071	.074	.056	.042	.024	.018	.014	
5.0	.208	.149	.105	.179	.129	.092	.123	.090	.065	.071	.053	.038	.023	.017	.013	
6.0	.201	.141	.098	.173	.122	.085	.119	.085	.060	.069	.050	.036	.022	.016	.012	
7.0	.194	.134	.092	.167	.116	.080	.115	.081	.057	.067	.048	.034	.022	.016	.011	
8.0	.188	.128	.087	.161	.111	.076	.112	.078	.054	.065	.046	.032	.021	.015	.011	
9.0	.181	.123	.084	.156	.107	.073	.108	.075	.052	.063	.044	.031	.020	.015	.010	
10.0	.176	.119	.081	.152	.103	.071	.105	.073	.050	.061	.043	.030	.020	.014	.010	

C Range: 0 - 360DEG
 C Interval: 10.0DEG
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γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm										
NAME: Float Linear Penant 48"Vanity					TYPE:FLT-48P-PC-12T-30K			WEIGHT:3.1KG		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: BlackJack Lighting LLC					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	11.5	12.9	11.9	13.3	13.6	11.6	13.0	11.9	13.3	13.7
3H	13.0	14.3	13.4	14.7	15.0	13.4	14.7	13.8	15.0	15.4
4H	13.5	14.8	13.9	15.1	15.6	14.2	15.5	14.6	15.9	16.3
6H	13.8	15.0	14.3	15.4	15.8	15.1	16.2	15.5	16.6	17.1
8H	13.9	15.0	14.3	15.4	15.9	15.5	16.6	15.9	17.0	17.5
12H	13.9	15.0	14.4	15.4	15.9	15.9	17.0	16.4	17.4	17.9
4H 2H	12.2	13.5	12.6	13.8	14.2	12.2	13.5	12.7	13.9	14.3
3H	13.9	15.0	14.4	15.4	15.9	14.2	15.3	14.7	15.8	16.2
4H	14.6	15.6	15.1	16.1	16.5	15.2	16.3	15.7	16.7	17.2
6H	15.1	16.0	15.6	16.4	17.0	16.3	17.1	16.8	17.6	18.2
8H	15.2	16.0	15.7	16.5	17.1	16.8	17.6	17.3	18.1	18.6
12H	15.2	16.0	15.8	16.5	17.1	17.3	18.1	17.8	18.6	19.2
8H 4H	15.0	15.9	15.6	16.4	16.9	15.6	16.4	16.1	16.9	17.5
6H	15.7	16.4	16.3	17.0	17.6	16.8	17.5	17.4	18.1	18.6
8H	16.0	16.6	16.6	17.2	17.8	17.5	18.1	18.1	18.7	19.3
12H	16.1	16.7	16.7	17.3	17.9	18.2	18.8	18.8	19.3	20.0
12H 4H	15.1	15.9	15.6	16.4	17.0	15.6	16.4	16.2	16.9	17.5
6H	15.9	16.5	16.5	17.1	17.7	16.9	17.5	17.5	18.1	18.7
8H	16.3	16.8	16.9	17.4	18.0	17.7	18.2	18.3	18.8	19.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.4					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.4					+ 0.1 / - 0.3				

CIE Pub.117, 2770 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 3.5)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

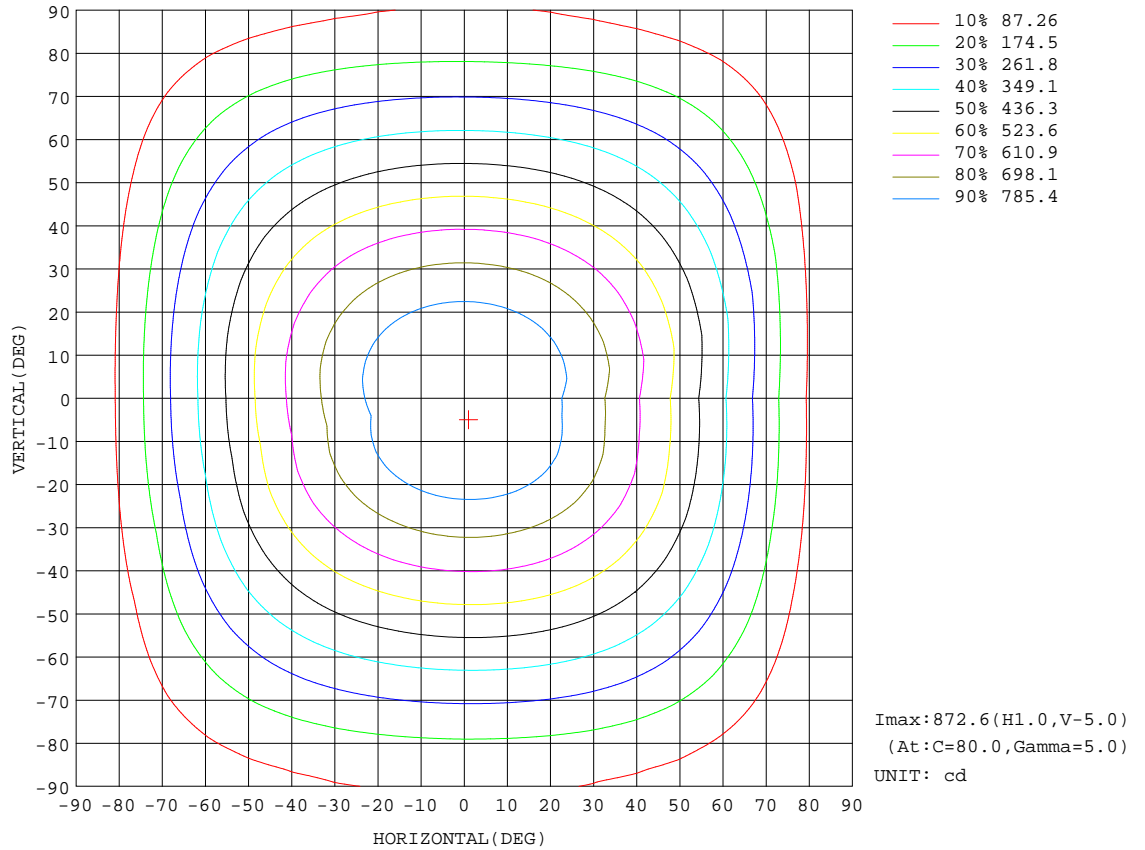
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	54	43	36	54	42	36	52	42	35	29
0.80	64	52	45	63	52	44	61	51	44	37
1.00	72	61	53	71	60	53	68	61	52	44
1.25	79	68	61	77	67	60	74	65	59	51
1.50	84	74	66	82	72	65	78	70	64	55
2.00	91	82	75	89	80	74	84	77	72	62
2.50	95	87	80	93	85	79	88	81	76	66
3.00	99	91	85	96	89	83	91	85	80	70
4.00	103	96	91	100	94	89	94	90	86	75
5.00	105	100	95	102	97	93	97	93	89	78
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:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:



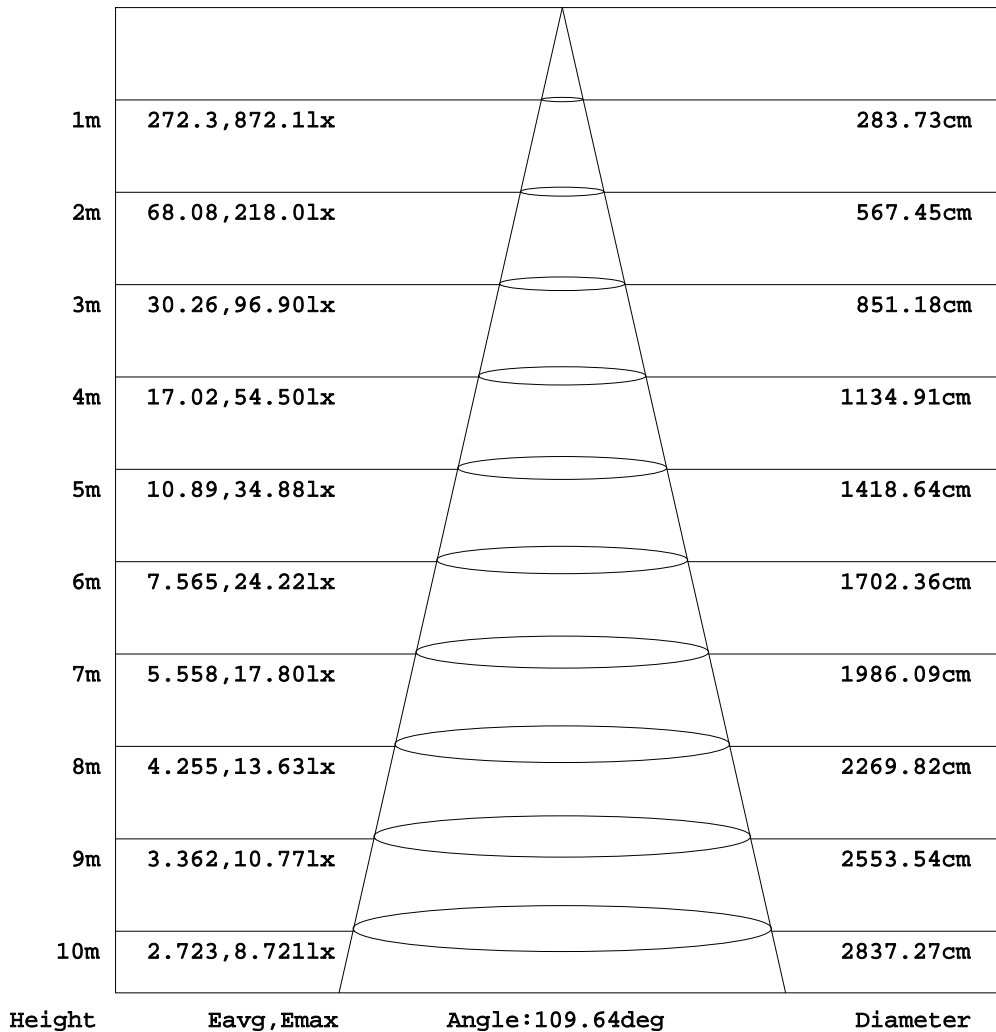
C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

AAI Figure

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

Flux out:1745 lm



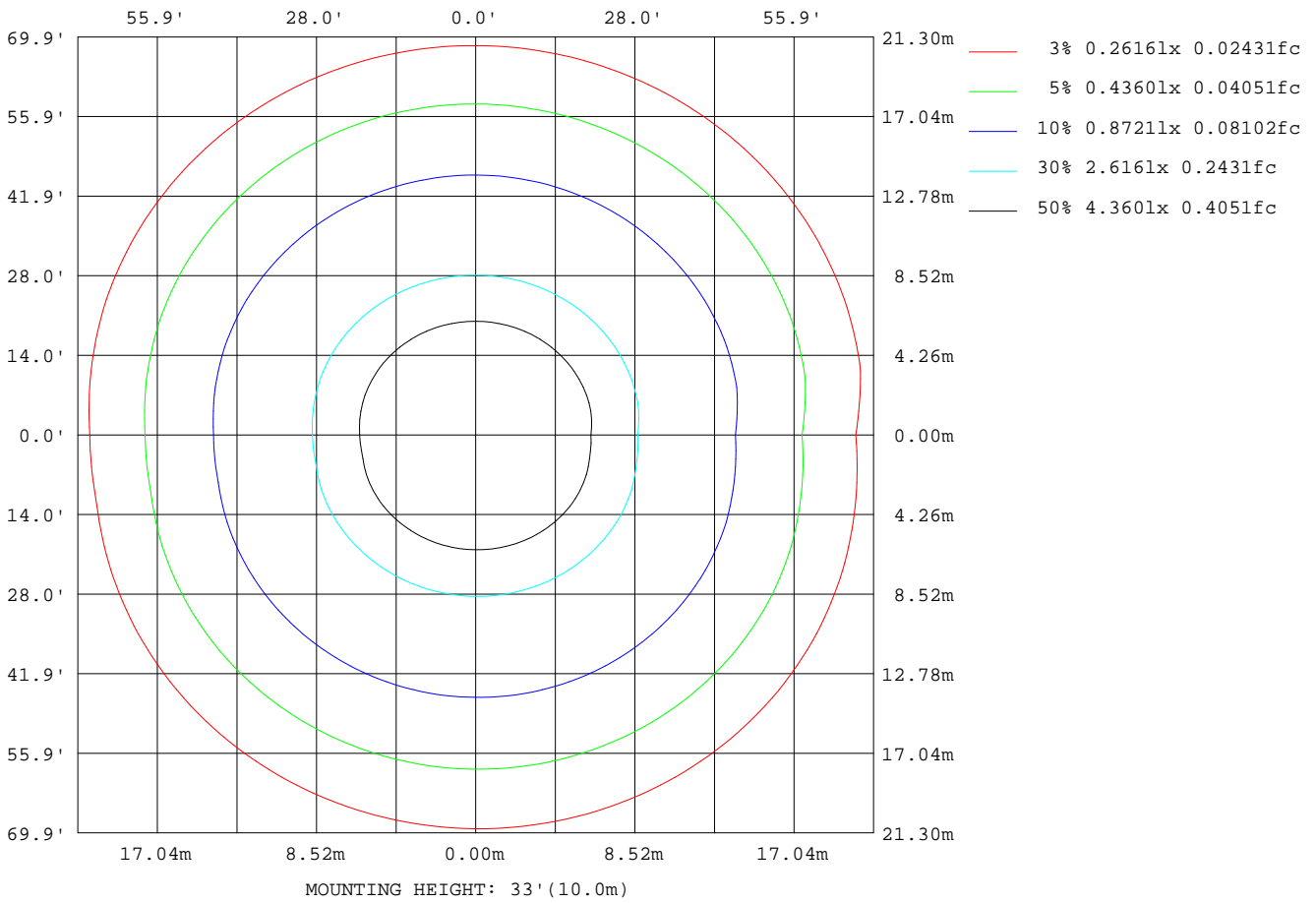
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

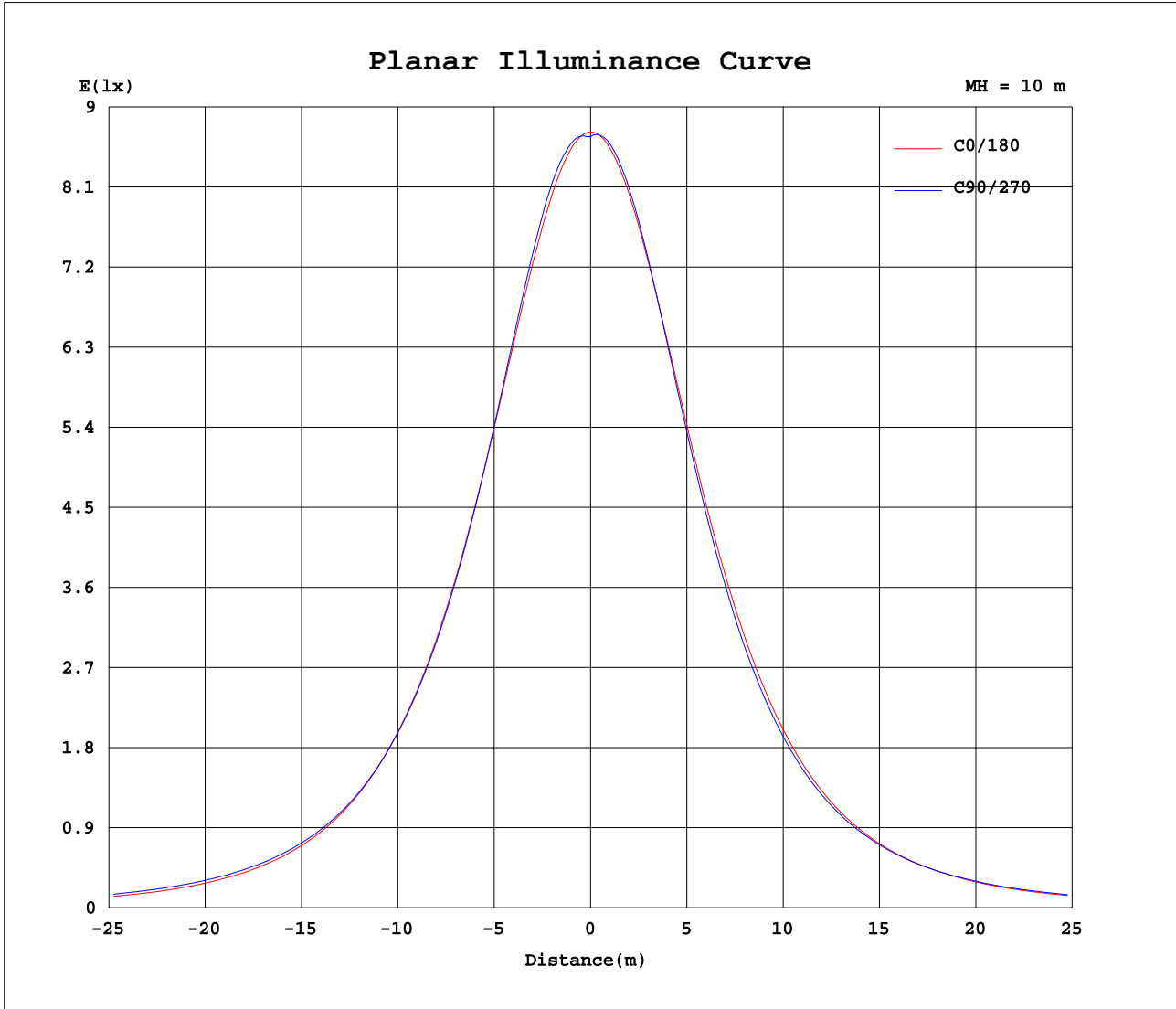
AvgL	cd/m2
L_0~180 (65) av	701
L_0~180 (75) av	600
L_0~180 (85) av	363
L_90~270 (65) av	761
L_90~270 (75) av	817
L_90~270 (85) av	1338
L_45 (65) av	777
L_45 (75) av	795
L_45 (85) av	1129

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Mark
Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:59.2%
Test Distance:2.463m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	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	872	871	870	870	869	869	868	867	867	867	866	866	866	866	865	865	865	865	872
5	868	865	865	867	869	871	872	872	873	872	872	871	870	868	866	864	861	859	868
10	854	852	857	861	863	865	866	867	867	867	866	865	863	861	858	856	852	846	856
15	833	833	839	843	847	849	850	849	848	847	846	846	845	844	841	837	832	826	835
20	804	805	813	819	822	822	820	818	816	814	813	813	814	814	814	811	805	799	806
25	767	771	779	786	787	785	781	777	773	771	771	772	774	776	777	777	771	763	771
30	723	728	740	745	744	740	734	728	724	722	721	722	725	729	733	734	730	721	728
35	673	680	693	697	695	689	682	676	671	668	668	669	672	677	682	684	682	672	679
40	618	626	640	644	640	634	627	620	616	613	612	614	617	622	626	630	629	619	625
45	558	568	582	585	582	577	570	563	559	556	555	557	560	564	569	572	571	562	567
50	494	506	521	524	522	518	512	506	501	498	497	499	502	505	509	511	510	501	505
55	428	441	456	461	461	458	453	448	444	442	441	441	444	446	448	449	446	437	440
60	359	374	388	395	398	396	393	390	387	384	384	384	385	387	387	386	380	371	373
65	288	304	319	329	334	335	334	332	329	327	326	326	326	326	325	321	314	302	304
70	216	232	249	262	270	273	274	273	272	271	270	269	268	266	262	256	246	233	235
75	145	160	180	196	206	213	216	217	217	216	215	214	211	208	201	192	179	163	166
80	78.5	92.3	114	133	146	156	161	164	165	165	163	161	157	151	143	131	116	97.5	98.7
85	23.4	36.2	58.6	79.4	94.3	106	113	118	120	120	119	116	111	104	93.2	80.8	62.1	42.5	39.8
90	1.99	12.0	31.9	50.4	65.5	77.0	86.0	89.8	92.3	93.1	91.8	88.9	85.0	76.3	65.7	51.8	34.6	15.6	3.83
95	1.79	10.2	28.7	46.0	60.1	70.7	78.2	82.9	85.4	86.0	85.0	82.1	77.3	70.2	60.2	47.2	31.0	13.4	1.67
100	1.74	8.67	25.5	41.8	55.2	65.4	72.5	77.1	79.6	80.4	79.3	76.5	71.9	65.0	55.4	43.0	27.8	11.5	1.58
105	1.62	6.60	22.5	37.6	50.3	60.1	67.0	71.5	74.0	74.8	73.8	71.1	66.6	59.9	50.7	38.9	24.6	9.66	1.46
110	1.50	4.88	19.5	33.5	45.5	54.8	61.5	66.0	68.6	69.3	68.4	65.7	61.3	54.9	46.1	34.8	21.6	6.75	1.33
115	1.35	3.66	16.6	29.5	40.7	49.6	56.1	60.5	63.0	63.8	62.9	60.3	56.0	49.8	41.4	30.8	18.5	4.88	1.20
120	1.20	2.38	12.8	25.5	35.9	44.3	50.5	54.8	57.4	58.2	57.3	54.8	50.6	44.6	36.7	26.8	15.5	3.12	1.07
125	1.07	1.56	9.36	21.6	31.2	39.0	45.0	49.2	51.6	52.4	51.6	49.2	45.1	39.4	32.0	22.9	10.6	1.85	0.95
130	0.96	1.14	7.07	16.9	26.4	33.7	39.3	43.3	45.7	46.5	45.8	43.5	39.7	34.3	27.3	19.0	7.88	1.06	0.84
135	0.88	0.94	4.85	11.6	21.8	28.4	33.6	37.4	39.6	40.4	39.7	37.6	34.0	29.0	22.7	12.9	5.39	0.80	0.73
140	0.81	0.82	2.76	8.63	15.1	23.2	28.0	31.4	33.5	34.3	33.7	31.7	28.5	23.9	16.4	9.23	3.17	0.68	0.63
145	0.75	0.75	1.45	5.74	10.5	15.7	22.1	25.3	27.2	27.9	27.4	25.6	22.7	16.6	11.0	6.17	1.47	0.62	0.52
150	0.71	0.71	0.83	2.97	6.97	10.5	13.5	17.0	19.4	20.4	19.8	17.6	14.2	11.0	7.47	3.40	0.90	0.63	0.44
155	0.68	0.68	0.72	1.32	3.59	6.48	8.87	10.7	11.8	12.2	11.9	10.9	9.19	6.85	3.93	1.44	0.74	0.68	0.43
160	0.71	0.71	0.71	0.79	1.35	2.71	4.39	5.81	6.73	7.04	6.81	5.99	4.61	3.02	1.49	0.75	0.71	0.70	0.46
165	0.70	0.70	0.70	0.72	0.76	0.89	1.31	1.79	2.19	2.36	2.26	1.91	1.37	0.88	0.73	0.71	0.70	0.70	0.49
170	0.69	0.69	0.69	0.69	0.69	0.71	0.72	0.75	0.77	0.77	0.77	0.71	0.71	0.71	0.70	0.69	0.69	0.68	0.53
175	0.67	0.68	0.68	0.68	0.68	0.68	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.68	0.68	0.68	0.67	0.67	0.60
180	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.66	0.67	0.66	0.66	0.67	0.67	0.66	0.65	0.65	0.65	0.65

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.93V I:0.3386A P:40.258W PF:0.9914 Freq:60.00Hz Lamp Flux:2770.34x1 lm		
NAME: Float Linear Penant 48"Vanity	TYPE:FLT-48P-PC-12T-30K	WEIGHT:3.1KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

Table--2

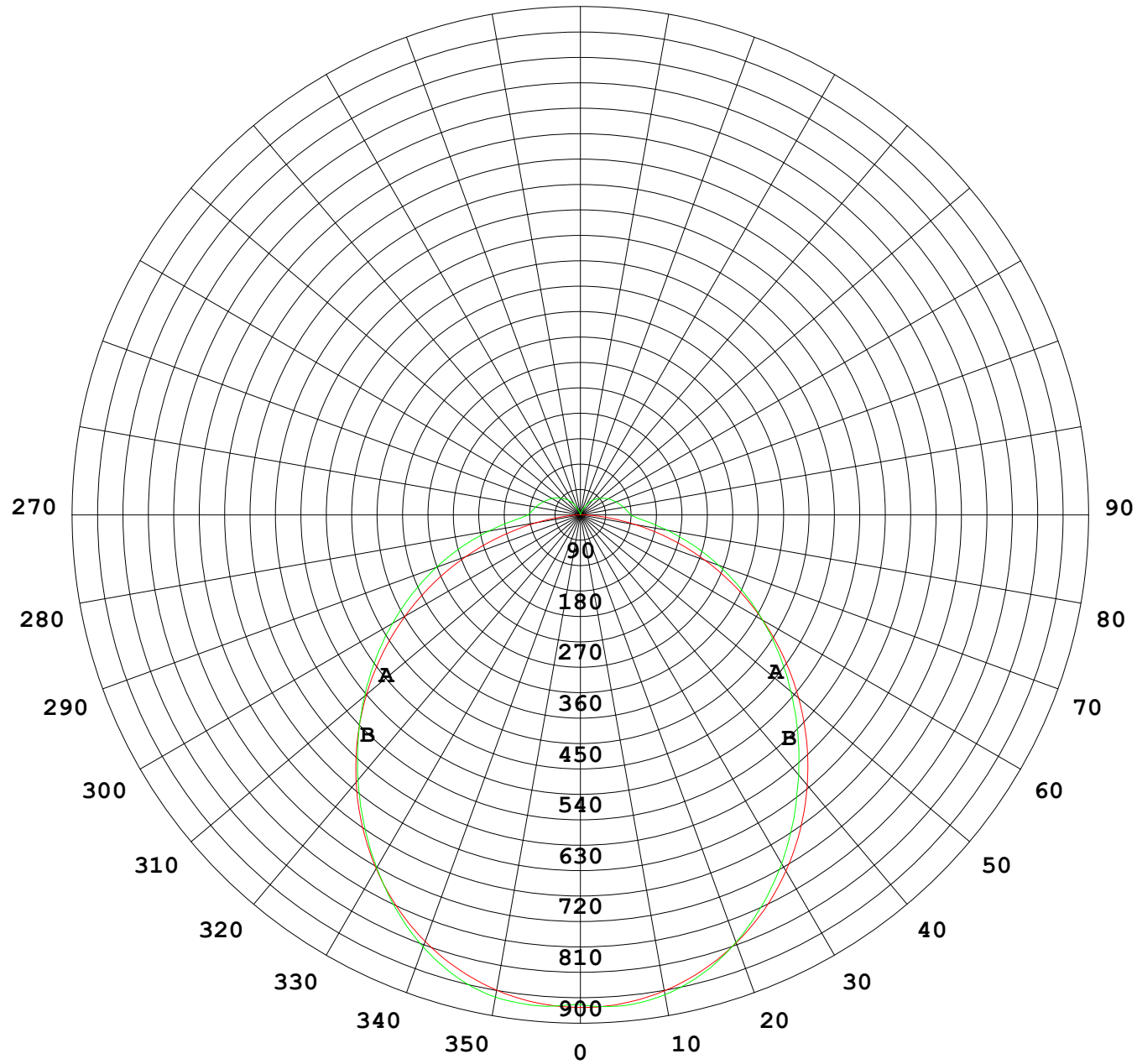
UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	871	870	870	869	869	868	867	867	867	866	866	866	866	865	865	865	865		
5	869	870	871	872	872	873	872	872	872	872	871	871	870	869	868	867	865		
10	859	861	862	863	863	863	863	862	862	862	862	862	862	862	860	859	856		
15	839	842	843	843	843	842	841	840	840	840	841	842	843	843	843	842	838		
20	812	815	816	815	813	810	808	806	805	806	807	810	813	815	816	816	813		
25	778	781	781	778	774	770	766	763	762	763	765	769	773	778	781	782	779		
30	736	739	738	734	729	723	718	715	713	714	717	723	729	735	739	741	738		
35	688	692	690	685	678	671	664	660	658	660	664	670	677	684	690	693	691		
40	635	638	637	631	623	615	608	603	602	603	607	614	622	631	637	641	638		
45	577	581	580	574	566	557	551	546	544	545	549	555	563	573	580	583	581		
50	515	521	520	514	506	499	492	488	487	488	491	497	504	512	519	522	519		
55	452	458	458	453	447	441	435	431	430	430	433	438	444	451	456	459	455		
60	385	393	394	391	387	382	377	374	372	373	375	379	384	388	392	392	387		
65	316	326	329	329	327	323	320	317	316	316	317	320	323	325	326	324	318		
70	247	258	264	267	267	265	263	261	260	260	260	261	262	262	260	255	247		
75	177	190	199	205	207	208	208	207	207	206	205	205	203	200	195	187	176		
80	111	125	137	146	151	154	156	156	156	155	153	151	147	141	133	121	107		
85	51.1	68.1	82.8	94.5	103	108	111	113	113	112	109	105	99.3	90.7	79.1	64.5	47.9		
90	14.7	33.1	49.9	63.7	74.1	81.4	86.2	88.9	89.7	88.9	86.2	81.6	74.5	64.5	51.1	34.5	15.8		
95	11.1	28.5	44.7	57.8	67.8	74.9	79.6	82.2	83.1	82.3	79.8	75.5	68.7	59.2	46.5	30.6	13.1		
100	9.49	25.5	40.8	53.4	63.0	69.8	74.4	76.9	77.8	77.0	74.5	70.3	63.7	54.5	42.3	27.3	11.0		
105	7.25	22.5	36.8	48.8	58.0	64.7	69.2	71.7	72.6	71.8	69.4	65.2	58.8	49.8	38.2	24.1	8.52		
110	5.52	19.7	33.0	44.3	53.1	59.6	64.0	66.5	67.4	66.7	64.2	60.1	53.8	45.2	34.2	21.0	5.95		
115	4.42	16.5	29.3	39.9	48.3	54.6	58.8	61.4	62.2	61.4	59.0	54.9	48.9	40.6	30.2	17.5	4.28		
120	3.17	12.5	25.2	35.4	43.4	49.4	53.6	56.1	56.9	56.1	53.8	49.7	43.9	36.0	26.1	12.8	2.70		
125	2.19	9.64	21.0	30.9	38.5	44.2	48.3	50.6	51.4	50.7	48.4	44.5	38.9	31.5	21.7	9.44	1.46		
130	1.55	7.68	15.9	26.5	33.6	39.0	42.8	45.1	45.9	45.1	42.9	39.1	33.8	26.9	15.7	6.99	1.02		
135	1.05	5.64	11.8	20.2	28.4	33.5	37.2	39.4	40.1	39.4	37.3	33.6	28.6	19.8	11.4	4.67	0.88		
140	0.71	3.59	9.12	14.2	21.3	27.4	31.4	33.3	34.0	33.3	31.4	27.4	20.9	13.9	8.39	2.57	0.76		
145	0.54	1.99	6.51	10.9	14.8	19.6	23.5	26.0	26.8	25.9	23.3	19.2	14.2	10.2	5.47	1.12	0.64		
150	0.45	1.08	3.42	7.49	10.7	13.4	15.5	17.4	18.0	17.3	15.4	13.1	10.3	6.83	2.88	0.71	0.54		
155	0.44	0.60	1.66	4.12	6.95	9.18	10.8	11.8	12.1	11.8	10.7	9.01	6.62	3.78	1.17	0.49	0.44		
160	0.46	0.46	0.77	1.55	3.03	4.81	6.24	7.13	7.46	7.22	6.44	5.10	3.28	1.56	0.77	0.46	0.46		
165	0.49	0.49	0.49	0.64	1.01	1.45	1.96	2.49	2.80	2.71	2.33	1.73	1.19	0.83	0.56	0.49	0.49		
170	0.53	0.53	0.52	0.52	0.52	0.59	0.70	0.80	0.86	0.86	0.80	0.70	0.61	0.54	0.53	0.53	0.53		
175	0.60	0.60	0.59	0.59	0.59	0.59	0.60	0.60	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.60		
180	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.66	0.67	0.66	0.66	0.67	0.67	0.66	0.66	0.65		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:19 August 2019

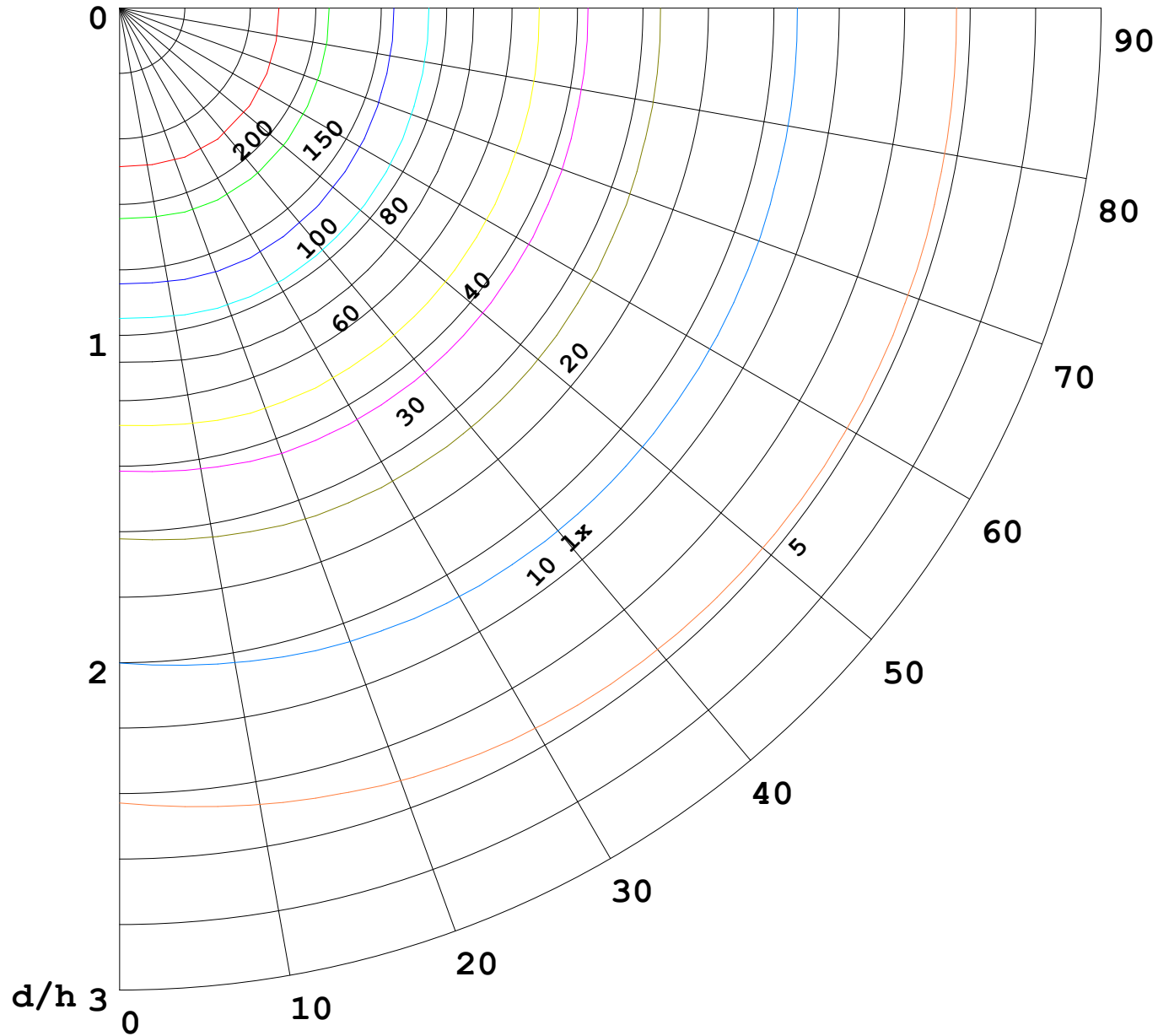
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.463m [K=1.0000]
 Remarks:

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

