



IESNA LM-79 TEST REPORT

Applicant's name	Blackjack Lighting
Address	1553 Barclay Blvd. Buffalo Grove, IL 60089
Brand Name	Blackjack Lighting
Report No.	BTR66.181.17.0017.36
Product Name	Cirque 18" pendant, Satin Nickel
Model Number	CRQ-18P-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	Jan 04, 2018
Testing Laboratory Name	BEST Test Service Shenzhen Co., Ltd. 1 st Floor, 1 st Building, Weitai Industrial Park, Yingrenshi, Shiyuan, Baoan, Address Shenzhen, China Tel: +86-755-28236006, Email: certification@bestcert.cn Accreditation DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE NVLAP Testing Lab Code: 200770-0
Test specification	
Standard	IESNA LM-79
Test procedure	IESNA LM-79 Test Procedure
Non-standard test method	No
Test Report Form No.	BEST_LM-79
TRF originator	BEST Test Service Shenzhen Co., Ltd. Mr Tseng
Master TRF	BEST_LM-79.doc

Note:

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description:	
Test date	Dec 25, 2017
Sample Quantity	1 unit
SKU.....	N/A
Rating(s) (V; Hz)	AC 120V /60Hz
Nominal Power.....	30W
Nominal Power Factor	N/A
Nominal Lumen Output.....	1320lm
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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ 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=30minutes.) 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 $\pm 1.12\%$ over the wavelength range 380-780 nm.

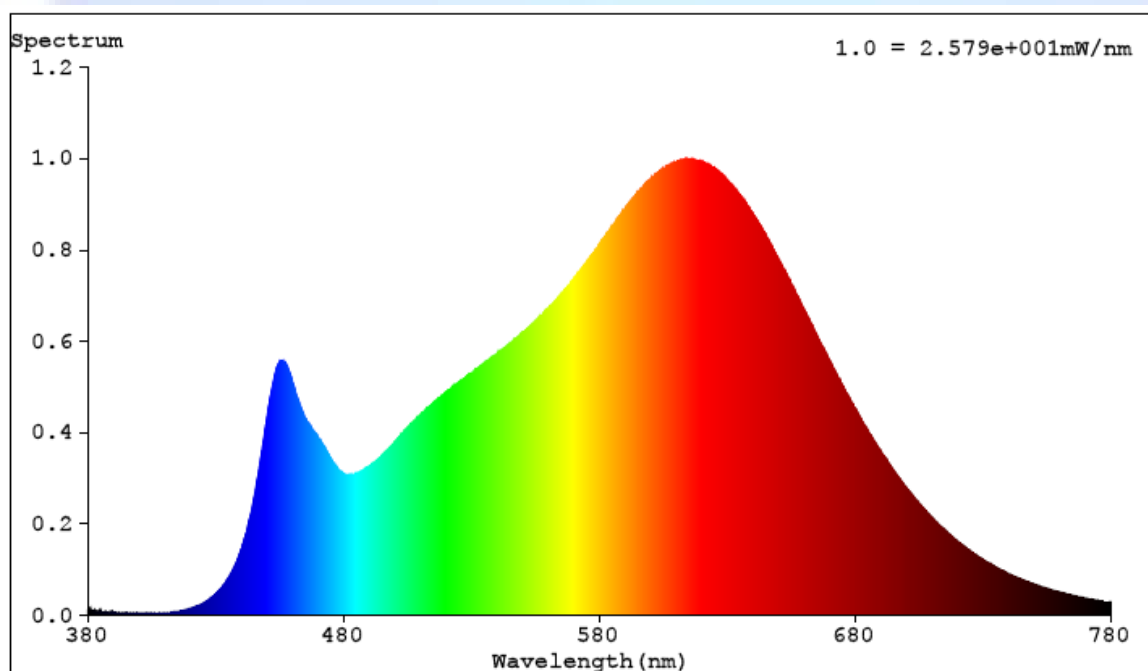
Luminous Intensity

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

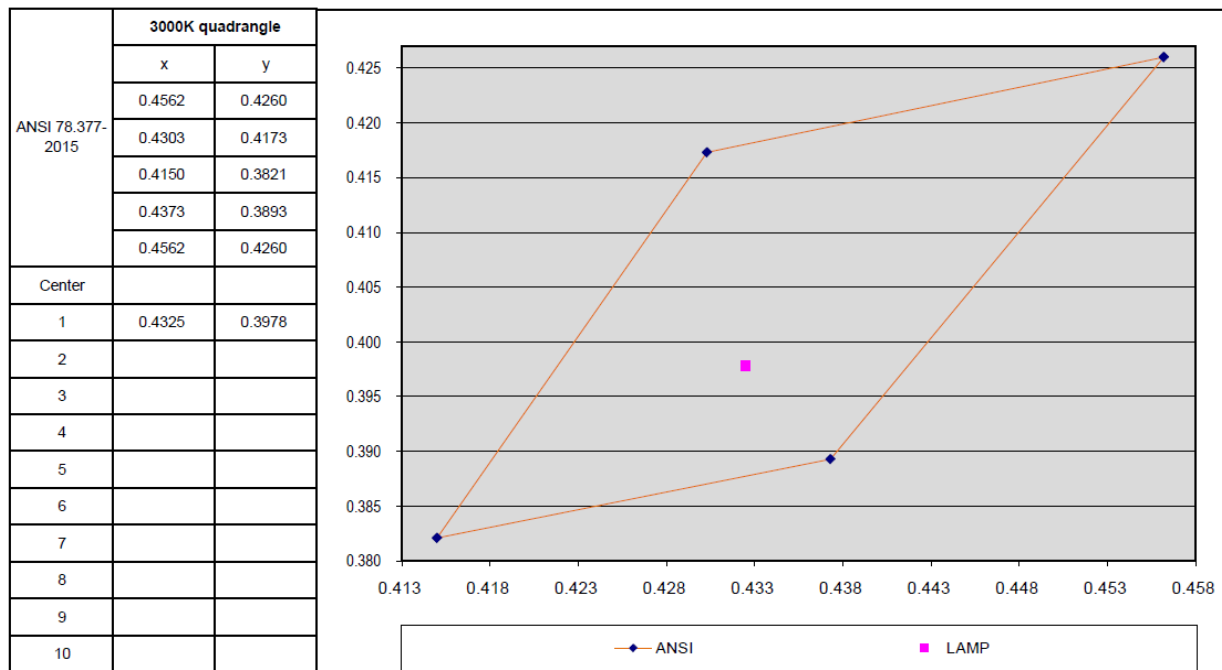
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency Lumen/w
120.0	60.0	0.2464	/	29.42	0.9950	1329.86	45.21
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3024	91.4	52	0.4325	0.3978	0.2504	0.5182	-0.0019

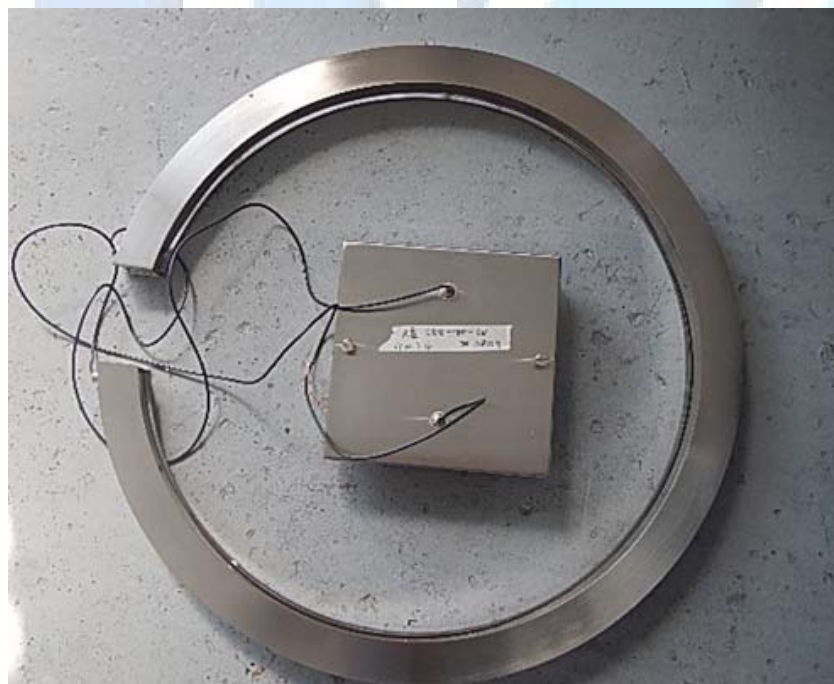
Spectral Plots



7 Step Quadrangle



EUT Photo

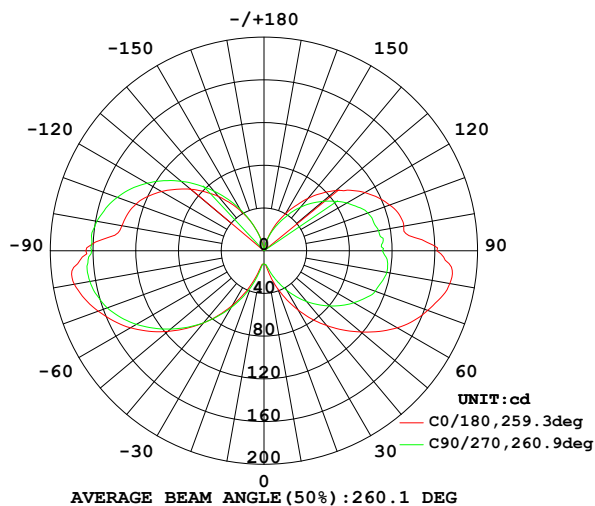


LUMINAIRE PHOTOMETRIC TEST REPORT

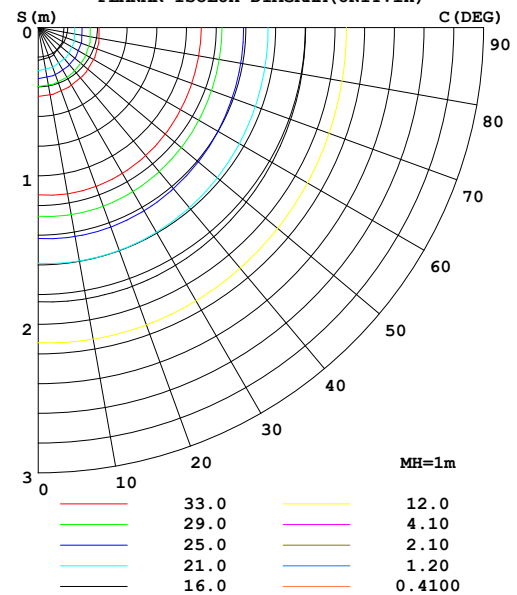
Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 45.21 lm/W			
MODEL	CRQ-18P-SN	I _{max} (cd)	185.0	S/MH (C0/180)	5.17
NOMINAL POWER (W)	30	LOR (%)	100.0	S/MH (C90/270)	4.46
RATED VOLTAGE (V)	120.0	TOTAL FLUX (lm)	1329.9	η UP, DN (C0-180)	24.8, 29.6
NOMINAL FLUX (lm)	1329.86	CIE CLASS	DIFFUSE	η UP, DN (C180-360)	20.7, 24.9
LAMPS INSIDE	1	η up (%)	45.5	CIBSE SHR NOM	1.75
TEST VOLTAGE (V)	120.0	η down (%)	54.5	CIBSE SHR MAX	1.75

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT: lx)



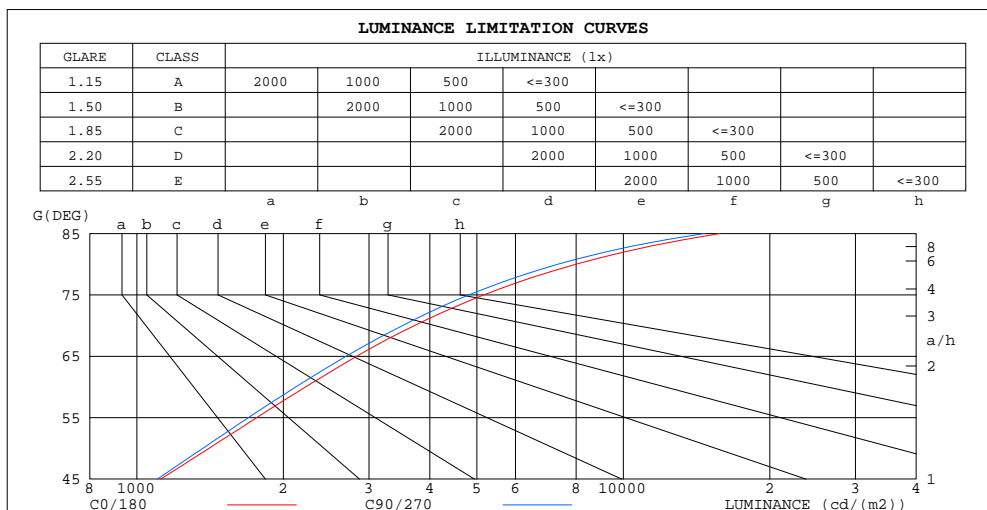
C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.802m [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	14.24	14.73	16.19	17.61	16.75	15.74	14.13	14.13	0- 10	1.290	1.290	0.10
20	32.05	33.56	36.35	38.18	38.08	33.45	25.67	27.02	10- 20	6.908	8.198	0.62
30	58.74	60.24	61.27	62.79	64.09	55.39	42.74	47.28	20- 30	20.95	29.15	2.19
40	88.27	88.91	88.09	89.30	91.49	78.44	62.14	70.20	30- 40	43.90	73.04	5.49
50	117.5	116.9	114.1	114.8	118.3	100.7	80.41	92.88	40- 50	73.54	146.6	11
60	144.4	142.8	137.9	138.7	144.3	122.2	97.34	113.3	50- 60	106.8	253.4	19.1
70	165.2	163.0	156.3	156.3	163.2	138.8	110.9	128.8	60- 70	138.6	392.0	29.5
80	180.3	175.6	165.6	166.2	176.6	146.9	116.8	136.6	70- 80	162.5	554.5	41.7
90	166.8	165.4	161.4	159.8	161.9	135.4	111.0	130.8	80- 90	170.1	724.6	54.5
100	135.1	137.8	158.8	156.4	132.9	115.8	109.0	127.5	90-100	155.0	879.6	66.1
110	127.7	128.0	146.3	145.7	125.3	108.3	103.5	119.1	100-110	138.2	1018	76.5
120	111.0	110.9	126.5	122.5	109.1	93.64	89.65	101.8	110-120	116.4	1134	85.3
130	89.71	89.54	101.3	97.78	87.71	75.60	72.08	81.99	120-130	87.82	1222	91.9
140	66.40	64.13	73.03	70.42	64.11	55.43	53.36	60.69	130-140	58.61	1281	96.3
150	42.32	39.84	44.84	42.38	39.79	35.25	32.62	38.15	140-150	32.48	1313	98.7
160	20.67	18.25	19.87	18.59	18.14	18.14	15.92	18.47	150-160	13.49	1327	99.8
170	3.819	2.767	2.326	1.454	1.894	3.353	3.741	3.670	160-170	3.123	1330	100
180	1.621	1.212	0.9131	1.167	1.141	1.079	1.149	1.093	170-180	0.1209	1330	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



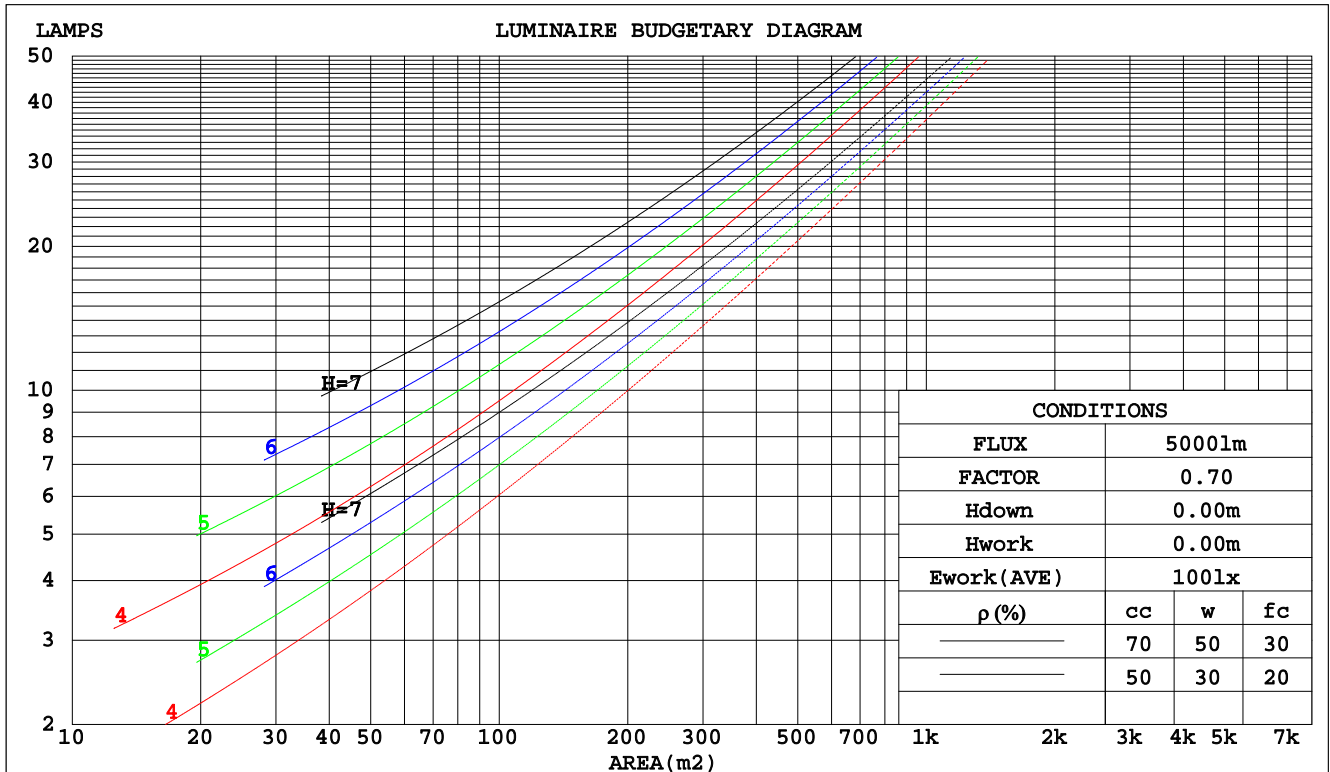
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C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.6DEG
Operators: David
Test Date: 2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity: 67.1%
Test Distance: 2.802m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	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	1.08	1.08	1.08	1.00	1.00	1.00	.86	.86	.86	.72	.72	.72	.60	.60	.60	.54
1.0	.85	.78	.73	.78	.72	.67	.65	.61	.57	.54	.50	.47	.43	.40	.38	.32
2.0	.70	.61	.54	.65	.57	.50	.53	.47	.42	.43	.38	.34	.34	.30	.27	.22
3.0	.60	.50	.42	.55	.46	.39	.45	.38	.32	.36	.31	.26	.28	.24	.20	.15
4.0	.52	.41	.34	.47	.38	.31	.39	.31	.26	.31	.25	.20	.24	.19	.15	.11
5.0	.45	.35	.28	.41	.32	.25	.34	.26	.21	.27	.21	.17	.21	.16	.12	.09
6.0	.40	.30	.23	.36	.28	.21	.30	.23	.17	.24	.18	.14	.18	.14	.10	.07
7.0	.35	.26	.20	.32	.24	.18	.27	.20	.15	.21	.16	.11	.16	.12	.08	.06
8.0	.32	.23	.17	.29	.21	.15	.24	.17	.13	.19	.14	.10	.15	.10	.07	.04
9.0	.29	.20	.14	.26	.19	.13	.22	.15	.11	.18	.12	.08	.14	.09	.06	.04
10.0	.26	.18	.13	.24	.17	.12	.20	.14	.09	.16	.11	.07	.12	.08	.05	.03



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.802m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	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						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.464	.264	.084	.443	.253	.080	.403	.231	.074	.367	.212	.068	.333	.193	.062		
2.0	.379	.207	.064	.359	.198	.061	.323	.179	.056	.289	.162	.051	.258	.146	.046		
3.0	.325	.173	.052	.307	.165	.050	.274	.149	.045	.243	.133	.041	.215	.119	.037		
4.0	.286	.149	.044	.270	.141	.042	.239	.127	.038	.211	.113	.034	.185	.100	.031		
5.0	.256	.130	.038	.241	.124	.036	.213	.111	.033	.187	.099	.029	.162	.087	.026		
6.0	.231	.116	.033	.218	.110	.032	.192	.098	.029	.168	.087	.026	.145	.076	.023		
7.0	.211	.104	.030	.199	.099	.028	.175	.088	.025	.153	.078	.023	.132	.068	.020		
8.0	.194	.095	.027	.183	.090	.025	.161	.080	.023	.140	.071	.020	.120	.062	.018		
9.0	.180	.087	.024	.169	.083	.023	.149	.074	.021	.129	.065	.019	.111	.056	.016		
10.0	.168	.080	.022	.158	.076	.021	.138	.068	.019	.120	.060	.017	.103	.052	.015		

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.537	.537	.537	.459	.459	.459	.313	.313	.313	.180	.180	.180	.058	.058	.058	
1.0	.541	.504	.472	.463	.433	.406	.316	.298	.281	.182	.172	.163	.058	.055	.053	
2.0	.536	.483	.439	.459	.416	.380	.314	.288	.265	.181	.167	.155	.058	.054	.051	
3.0	.529	.469	.420	.453	.404	.364	.311	.281	.256	.180	.164	.151	.058	.053	.049	
4.0	.521	.457	.408	.447	.395	.355	.308	.275	.250	.178	.161	.148	.057	.053	.049	
5.0	.514	.448	.400	.441	.388	.348	.304	.271	.246	.176	.159	.146	.057	.052	.048	
6.0	.506	.441	.394	.435	.382	.343	.300	.267	.243	.174	.157	.144	.056	.051	.048	
7.0	.499	.435	.390	.429	.377	.340	.296	.264	.241	.172	.156	.143	.056	.051	.047	
8.0	.492	.430	.387	.423	.373	.337	.293	.262	.239	.170	.154	.143	.055	.051	.047	
9.0	.485	.425	.384	.418	.369	.335	.290	.259	.238	.169	.153	.142	.055	.050	.047	
10.0	.479	.421	.382	.413	.366	.334	.287	.257	.237	.167	.152	.141	.054	.050	.047	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.6DEG
 Operators:David
 Test Date:2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.802m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm											
NAME: Cirque 18"pendant,Satin Nickel					TYPE:CRQ-18P-SN			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	12.7	13.9	13.6	14.8	15.9	12.5	13.7	13.3	14.5	15.6	
	3H	16.7	17.7	17.5	18.6	19.8	16.3	17.4	17.2	18.3	
	4H	18.8	19.9	19.7	20.8	21.9	18.4	19.5	19.3	20.4	
	6H	21.2	22.1	22.0	23.0	24.2	20.7	21.7	21.6	22.6	
	8H	22.4	23.4	23.3	24.3	25.5	21.9	22.8	22.8	23.8	
	12H	23.8	24.7	24.7	25.6	26.8	23.3	24.2	24.2	25.1	
4H	2H	13.9	15.0	14.8	15.9	17.0	13.8	14.8	14.6	15.7	
	3H	17.9	18.8	18.8	19.7	20.9	17.6	18.5	18.5	19.4	
	4H	20.2	21.0	21.1	21.9	23.1	19.8	20.6	20.7	21.6	
	6H	22.6	23.4	23.6	24.3	25.6	22.2	22.9	23.1	23.9	
	8H	24.0	24.7	24.9	25.6	26.9	23.4	24.2	24.4	25.1	
	12H	25.4	26.1	26.4	27.1	28.3	24.9	25.6	25.8	26.5	
8H	4H	20.9	21.6	21.9	22.6	23.8	20.6	21.4	21.6	22.3	
	6H	23.7	24.3	24.6	25.2	26.5	23.3	23.9	24.2	24.8	
	8H	25.2	25.7	26.2	26.7	28.0	24.7	25.3	25.7	26.3	
	12H	26.9	27.4	27.8	28.4	29.7	26.4	26.8	27.3	27.8	
12H	4H	21.1	21.8	22.1	22.8	24.0	20.9	21.6	21.9	22.6	
	6H	24.0	24.5	24.9	25.5	26.8	23.6	24.2	24.6	25.2	
	8H	25.6	26.1	26.6	27.1	28.4	25.2	25.7	26.2	26.7	
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1					
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3					
2.0H	+ 0.3 / - 0.4					+ 0.3 / - 0.4					

CIE Pub.117 Corrected 1330 lm Total Lamp Luminous Flux.(8log(F/F0) = 1.0)

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UTILIZATION FACTORS TABLE

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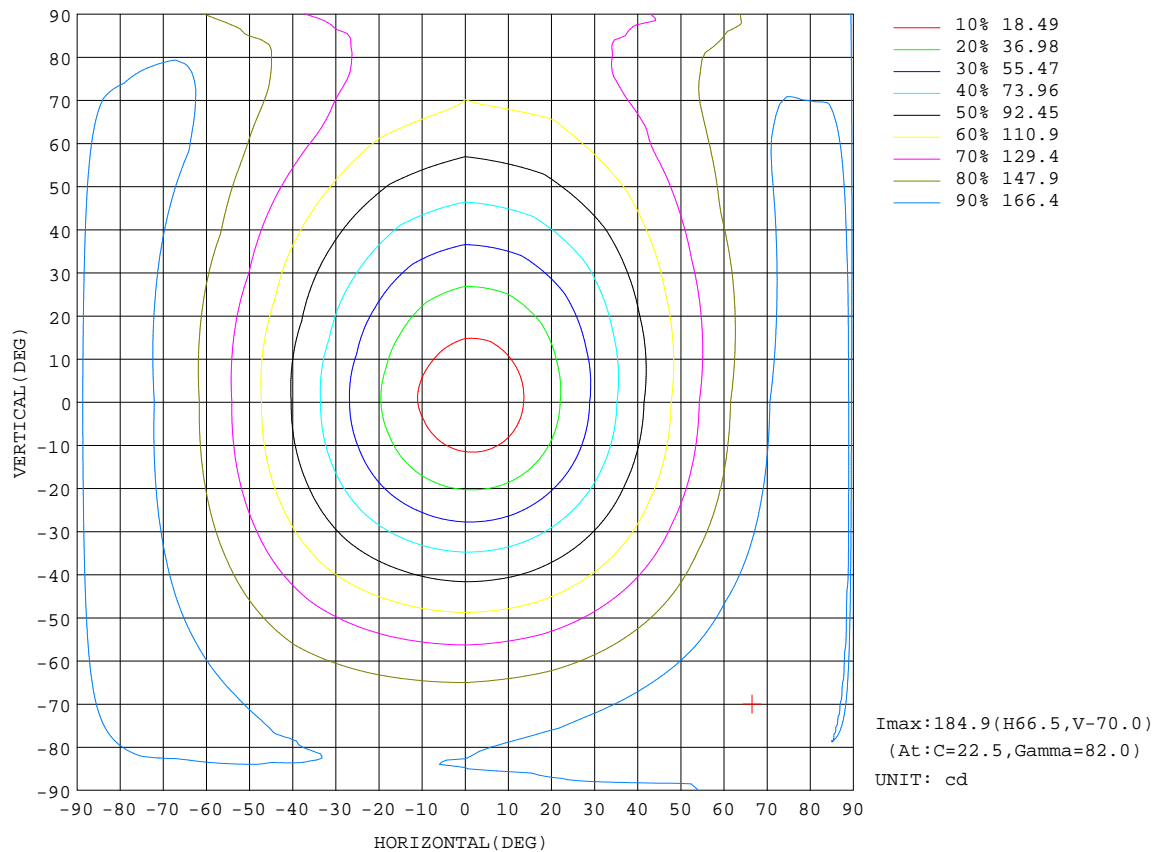
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	33	20	12	32	19	12	29	18	11	4
0.80	42	27	18	39	26	17	35	23	16	6
1.00	49	33	24	46	32	23	40	30	20	9
1.25	56	40	30	52	38	28	45	33	25	12
1.50	61	46	35	57	43	33	49	38	30	15
2.00	69	55	44	64	51	42	55	45	37	19
2.50	74	61	51	69	57	48	59	49	42	22
3.00	79	67	57	73	62	53	62	53	46	25
4.00	84	74	65	78	69	61	66	59	53	30
5.00	88	79	71	82	73	66	69	63	57	33
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:2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity:67.1%
 Test Distance:2.802m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:

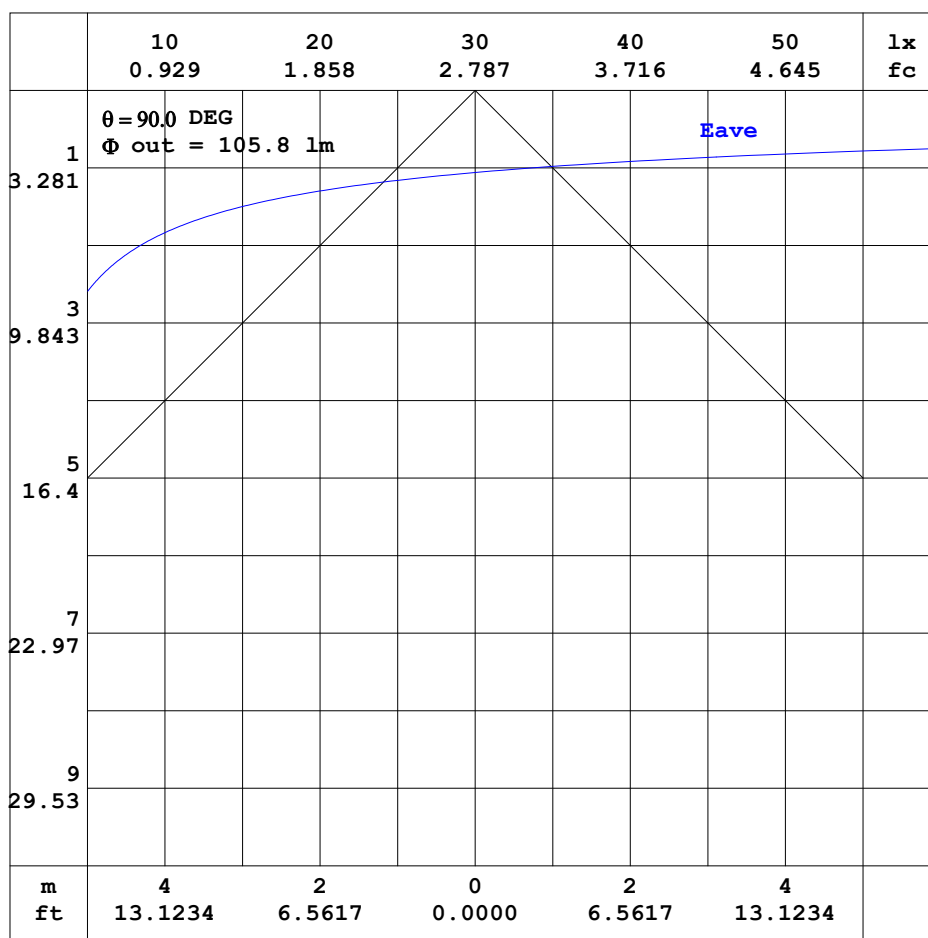


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.802m [K=1.0000]
Remarks:

AAI CURVES

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	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:2018-01-03
```

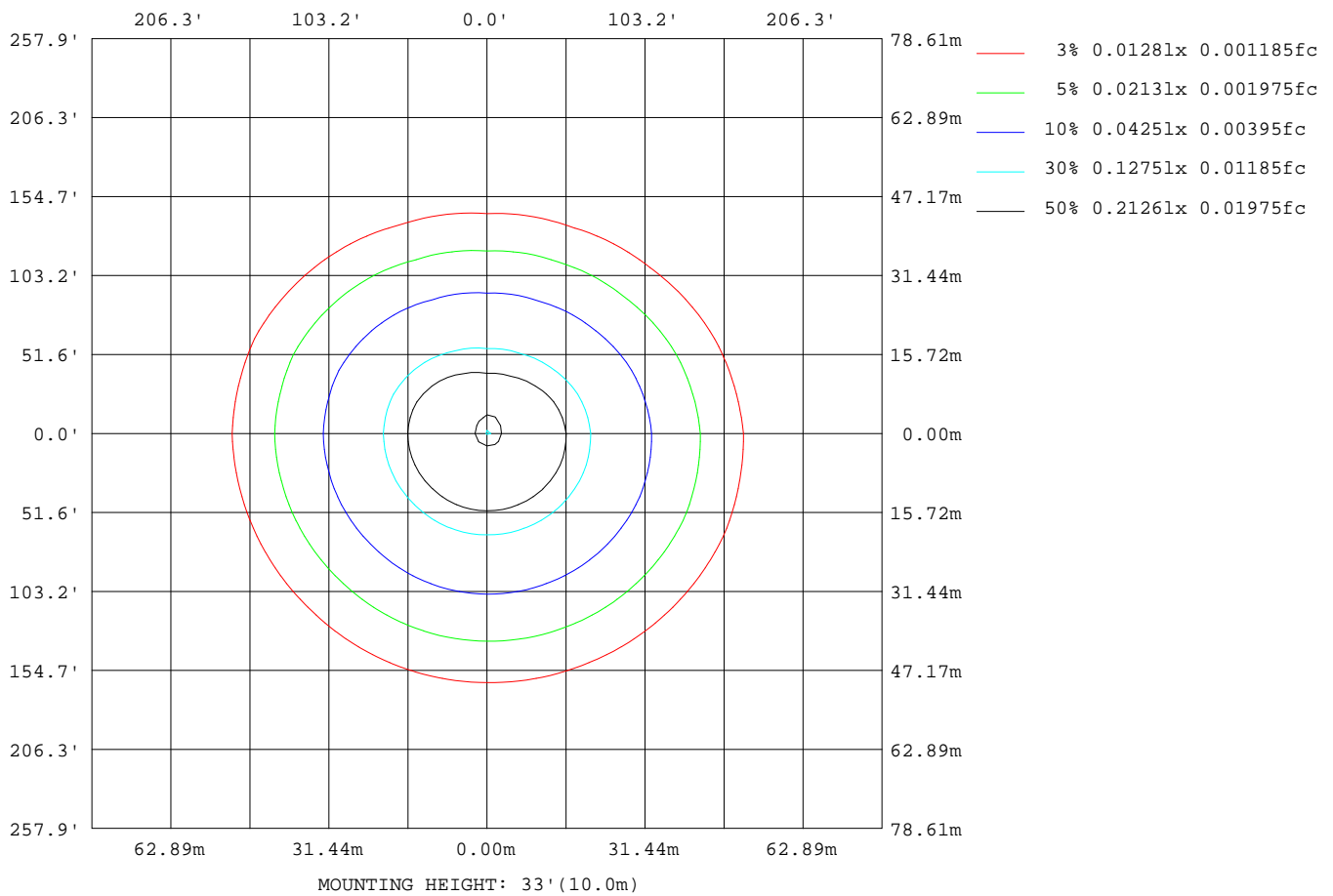
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.802m [K=1.0000]
Remarks:

```

ISOLUX DIAGRAM

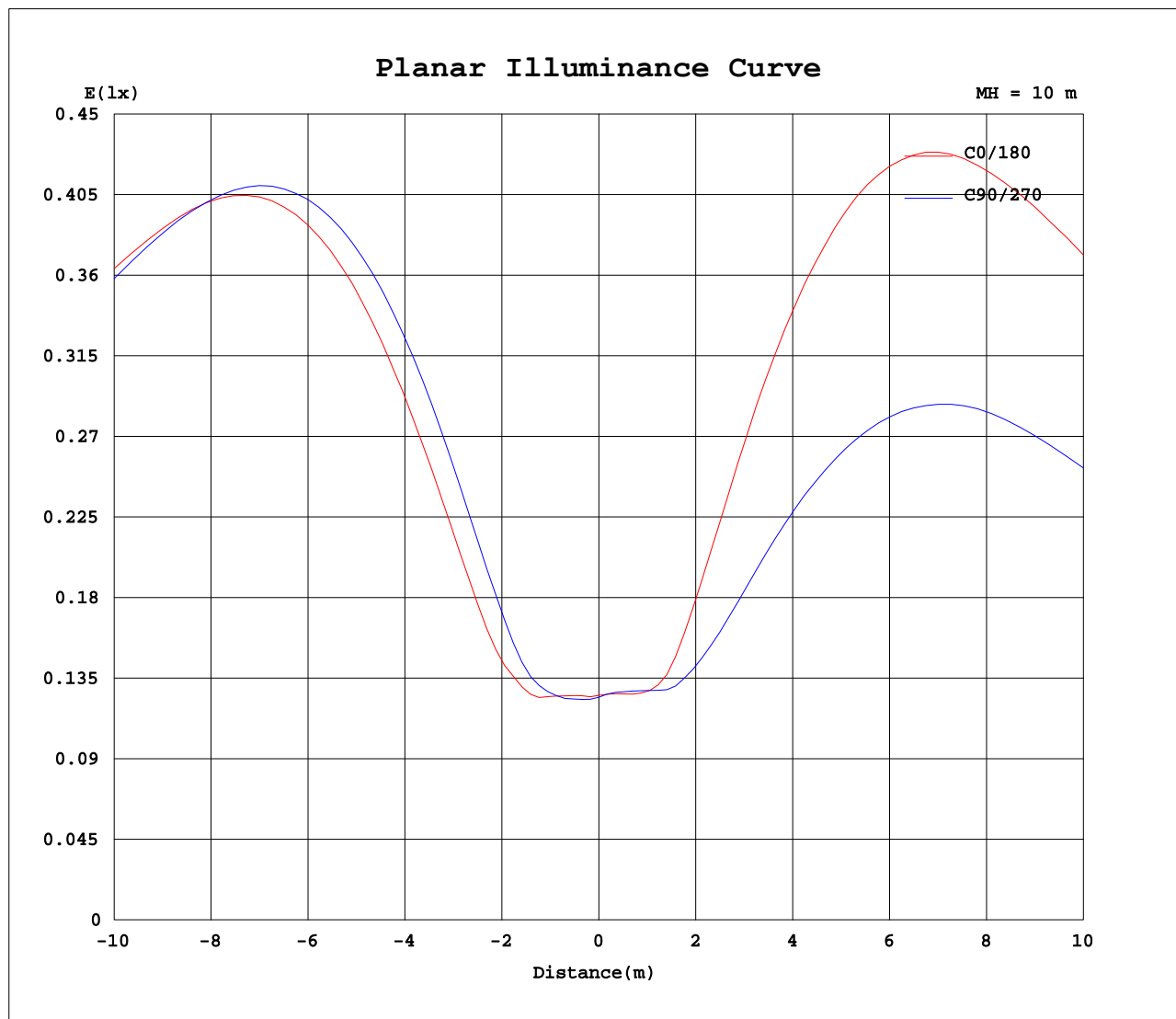
Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm		
NAME: Cirque 18"pendant,Satin Nickel	TYPE:CRQ-18P-SN	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Blackjack Lighting	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.6DEG
 Operators: David
 Test Date: 2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
 Humidity: 67.1%
 Test Distance: 2.802m [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: 2018-01-03

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity: 67.1%
Test Distance: 2.802m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.0V I:0.2464A P:29.42W PF:0.9950 Lamp Flux:1329.86x1 lm																	
NAME: Cirque 18"pendant,Satin Nickel									TYPE:CRQ-18P-SN						WEIGHT:		
SPEC.:									DIM.:						SERIAL No.:		
MFR.: Blackjack Lighting									SUR.:						PROTECTION ANGLE:		

Table--1

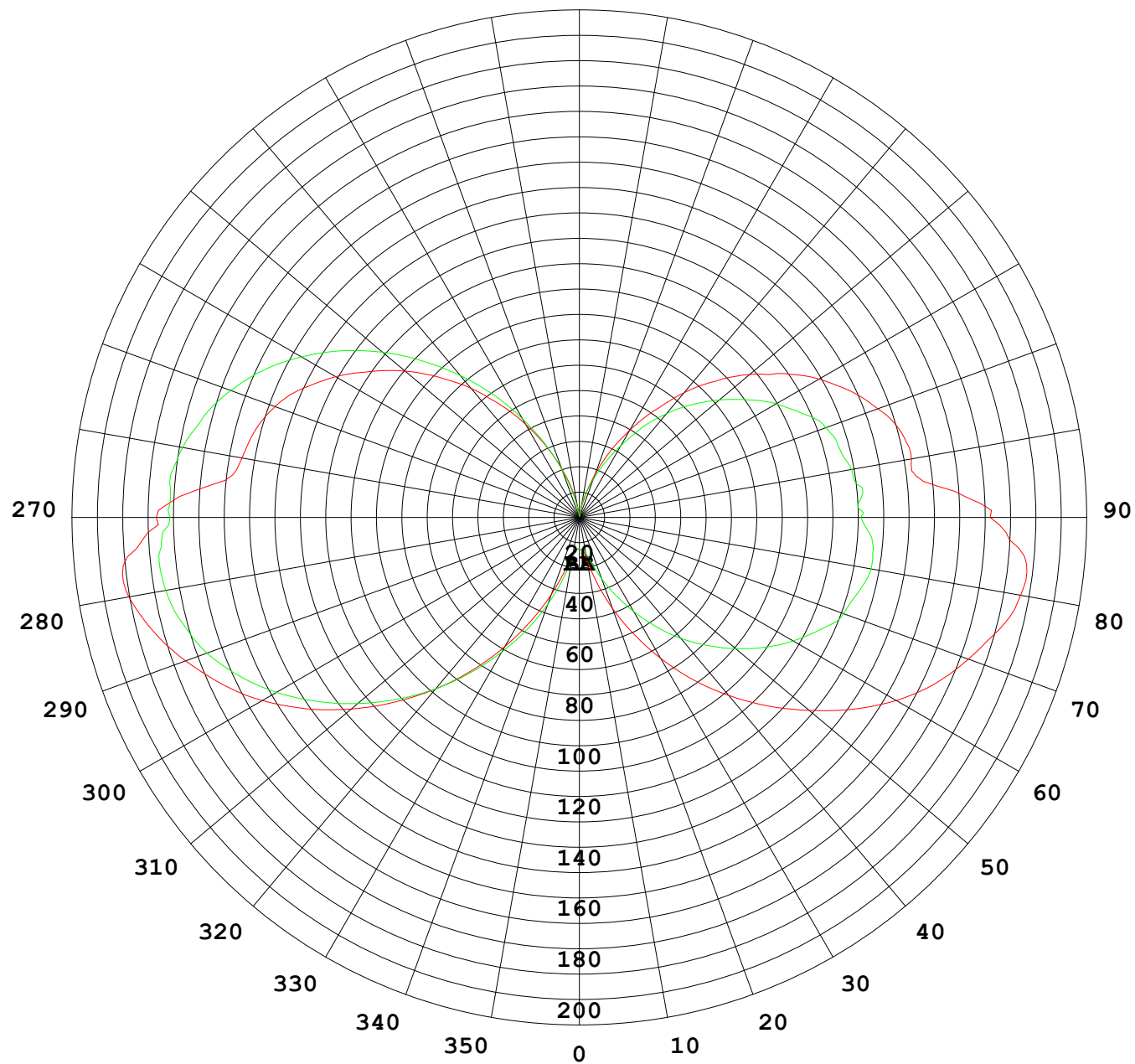
UNIT: cd

C (DEG) γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338			
0	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.5	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.5			
5	12.7	12.6	12.6	12.6	12.7	12.8	12.9	12.9	12.8	12.9	12.9	12.9	12.9	12.9	12.8	12.7			
10	14.2	14.3	14.7	15.3	16.2	17.0	17.6	17.7	16.7	16.3	15.7	14.8	14.1	13.9	14.1	14.1			
15	21.1	21.7	22.6	23.8	25.2	26.2	27.1	27.5	26.4	25.7	23.7	20.8	18.8	18.2	19.0	20.1			
20	32.1	32.6	33.6	34.8	36.4	37.4	38.2	38.8	38.1	37.1	33.4	28.6	25.7	25.3	27.0	30.0			
25	44.8	45.4	46.3	47.3	48.5	49.6	50.2	51.0	50.6	49.4	44.2	37.5	33.7	33.7	36.6	41.5			
30	58.7	59.4	60.2	60.5	61.3	62.3	62.8	63.9	64.1	62.1	55.4	47.3	42.7	43.1	47.3	54.1			
35	73.5	74.3	74.7	74.4	74.6	75.5	75.8	77.3	78.0	75.3	67.0	57.6	52.4	53.2	58.7	67.4			
40	88.3	89.4	88.9	88.1	88.1	89.0	89.3	90.8	91.5	88.1	78.4	67.8	62.1	63.5	70.2	80.6			
45	103	104	103	101	101	102	102	104	105	101	89.5	77.3	71.4	73.4	81.7	93.9			
50	118	119	117	115	114	115	115	117	118	114	101	87.1	80.4	83.0	92.9	107			
55	131	133	130	128	126	127	127	130	132	126	112	96.8	89.2	92.4	104	120			
60	144	146	143	139	138	138	139	142	144	138	122	106	97.3	101	113	131			
65	155	157	154	150	148	148	149	152	155	148	131	114	105	108	122	142			
70	165	166	163	159	156	156	156	160	163	157	139	119	111	114	129	150			
75	174	176	170	165	162	161	162	167	171	164	143	123	114	119	134	156			
80	180	183	176	169	166	165	166	171	177	170	147	125	117	121	137	161			
85	179	182	176	169	166	166	167	171	176	169	147	125	116	121	137	160			
90	167	168	165	163	161	160	160	161	162	154	135	118	111	115	131	151			
95	146	151	146	162	162	162	162	153	142	139	122	119	112	117	133	145			
100	135	137	138	154	159	159	156	143	133	128	116	114	109	113	127	135			
105	132	133	134	146	153	154	151	139	131	126	113	110	106	110	124	129			
110	128	128	128	138	146	148	146	134	125	120	108	104	103	107	119	124			
115	120	120	120	129	137	138	134	124	118	113	101	96.4	96.9	103	112	117			
120	111	111	111	118	127	128	122	114	109	104	93.6	89.1	89.6	94.1	102	107			
125	100	101	101	107	115	116	111	103	98.8	93.4	84.8	80.2	80.9	85.0	91.8	97.3			
130	89.7	89.5	89.5	94.6	101	102	97.8	90.7	87.7	83.5	75.6	71.1	72.1	75.8	82.0	87.1			
135	78.1	77.9	76.9	81.6	87.1	88.3	84.2	78.3	76.0	72.8	66.0	62.0	63.0	66.4	71.9	76.2			
140	66.4	65.9	64.1	67.3	73.0	73.6	70.4	65.7	64.1	60.7	55.4	52.6	53.4	56.4	60.7	64.7			
145	54.0	53.1	52.0	54.3	59.0	58.9	56.4	52.2	51.4	49.5	44.9	42.2	43.5	44.7	49.3	53.0			
150	42.3	40.9	39.8	41.3	44.8	44.5	42.4	39.7	39.8	38.7	35.3	32.6	32.6	34.0	38.1	41.1			
155	31.1	29.5	28.8	29.7	31.9	31.3	29.7	27.7	28.7	28.5	26.3	24.1	23.8	24.5	27.7	30.3			
160	20.7	19.3	18.2	19.1	19.9	19.3	18.6	17.2	18.1	18.7	18.1	16.5	15.9	16.1	18.5	20.8			
165	11.7	10.7	9.73	9.79	9.59	8.99	8.84	8.28	9.03	9.49	10.5	10.4	9.58	9.62	10.8	12.4			
170	3.82	3.01	2.77	2.41	2.33	1.94	1.45	1.38	1.89	1.98	3.35	4.15	3.74	3.44	3.67	4.58			
175	0.67	0.64	0.66	0.63	0.48	0.55	0.47	0.36	0.58	0.58	0.64	0.64	0.65	0.61	0.53	0.60			
180	1.62	1.52	1.21	1.52	0.91	0.77	1.17	1.11	1.14	1.12	1.08	1.05	1.15	1.09	1.09	1.09			

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.6DEG
Operators:David
Test Date:2018-01-03

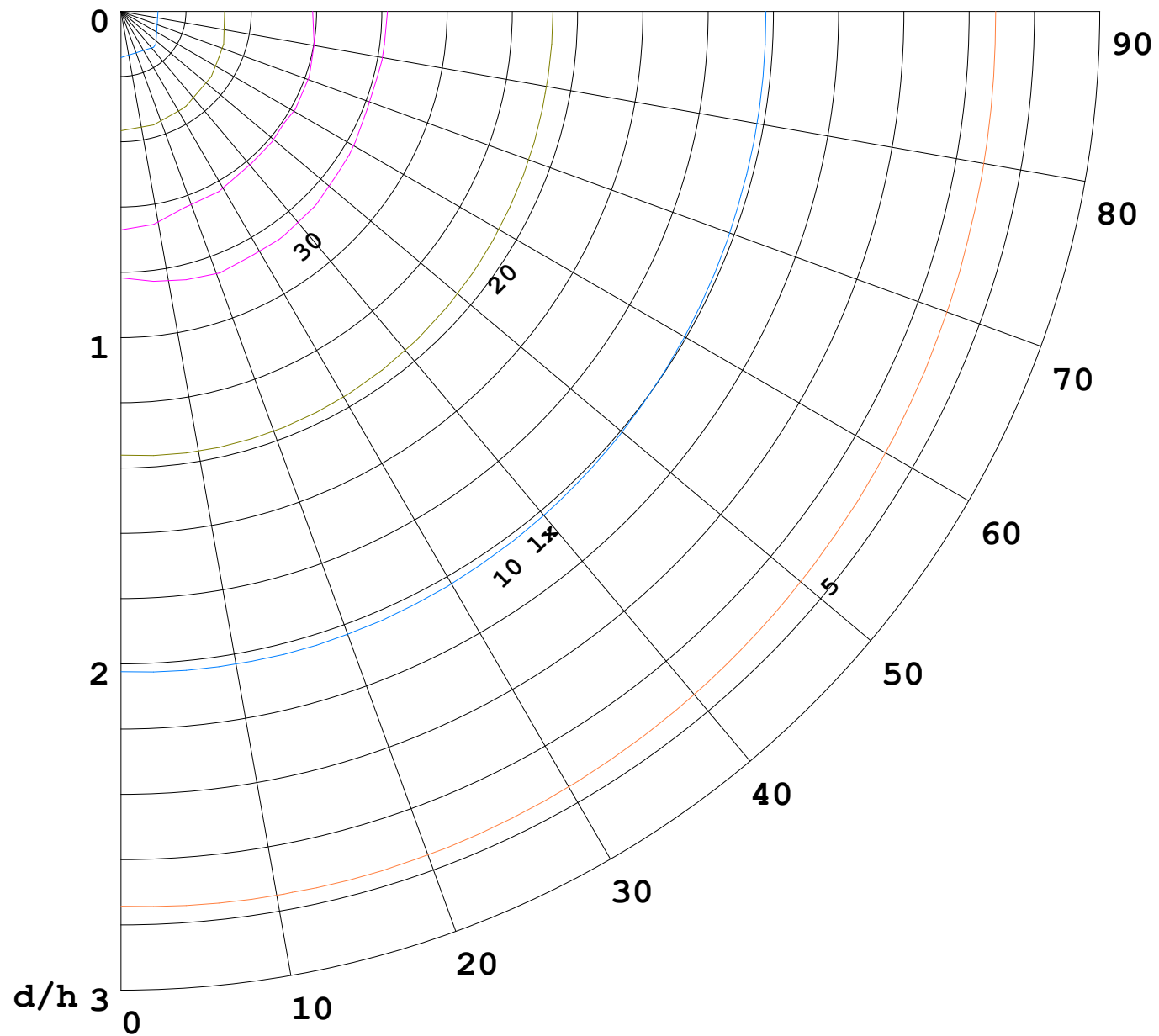
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.287
Humidity:67.1%
Test Distance:2.802m [K=1.0000]
Remarks:

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

