



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.	BTR66.181.19.0007.06
Product Name	Milo 14" Sconce - Satin Nickel or Polished Chrome
Model Number	MLO-14S-SN-12T-30K; MLO-14S-PC-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 23, 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.

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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 22, 2019
Description	Milo 14" Sconce - 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.....	10.5W
Nominal Power Factor	N/A
Nominal Lumen Output.....	659lm
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 MLO-14S-SN-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.

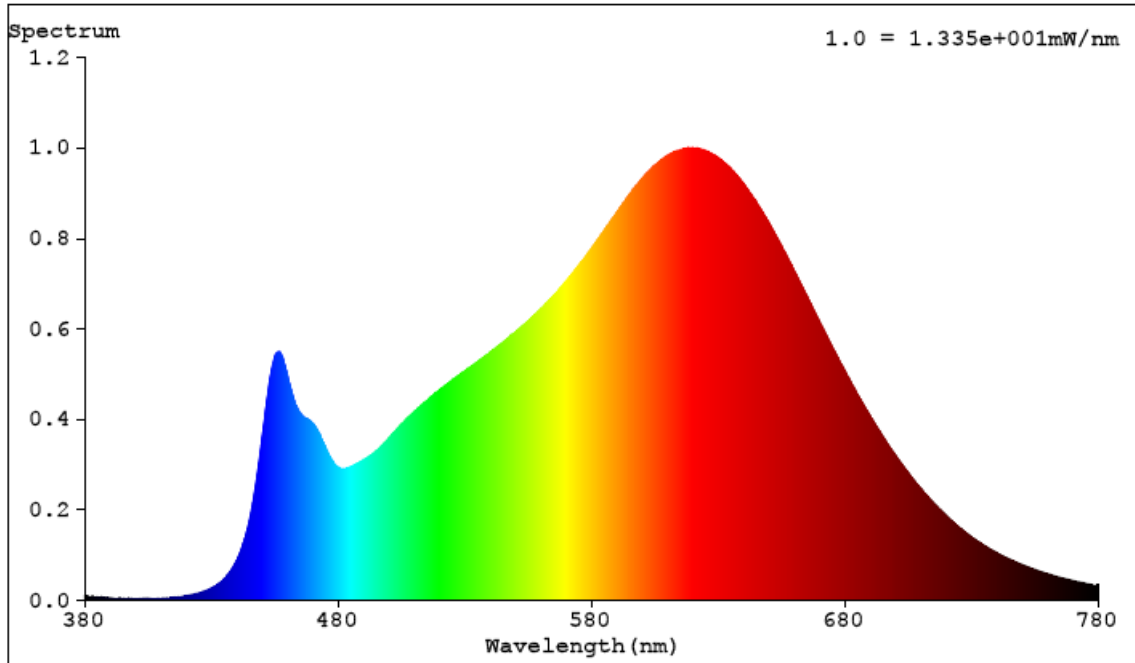
Luminous Intensity

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.

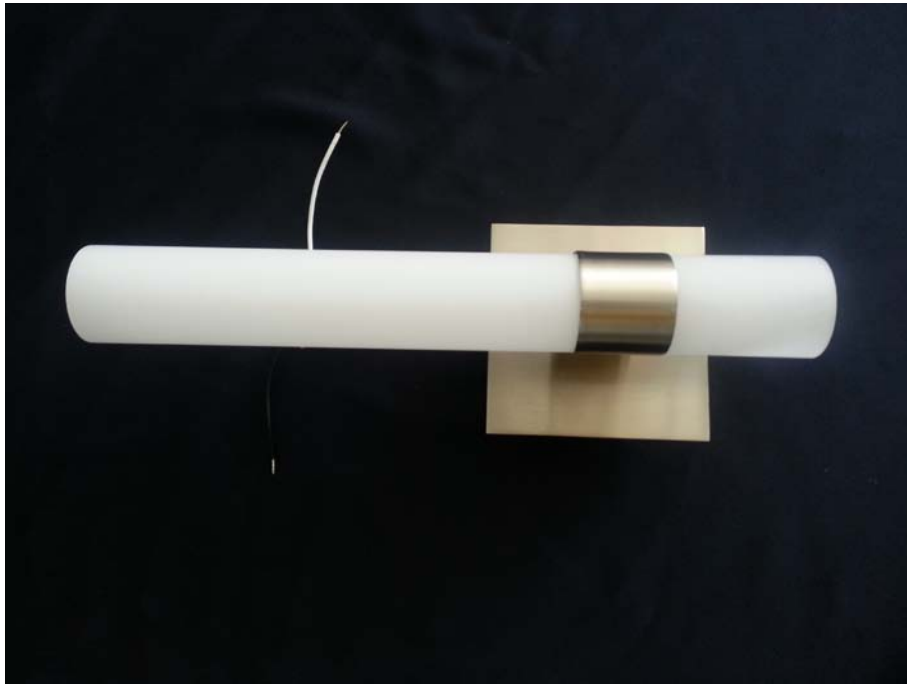
Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency (Lumen/W)
120	60.0	0.0905	/	10.56	0.9732	659.28	62.41
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
2910	92.5	61	0.4406	0.4005	0.2545	0.5205	-0.0019

Spectral Plots




EUT Photo



Annex

Please see the next page for the luminous intensity test data

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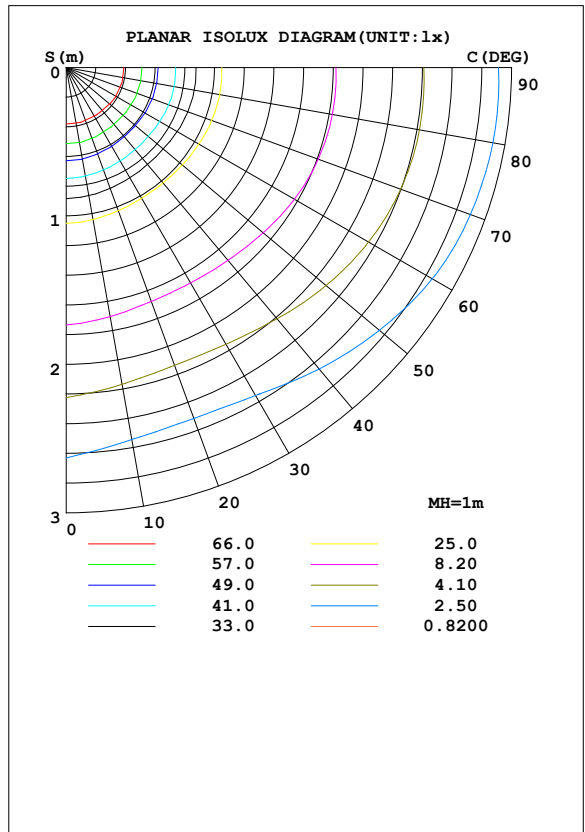
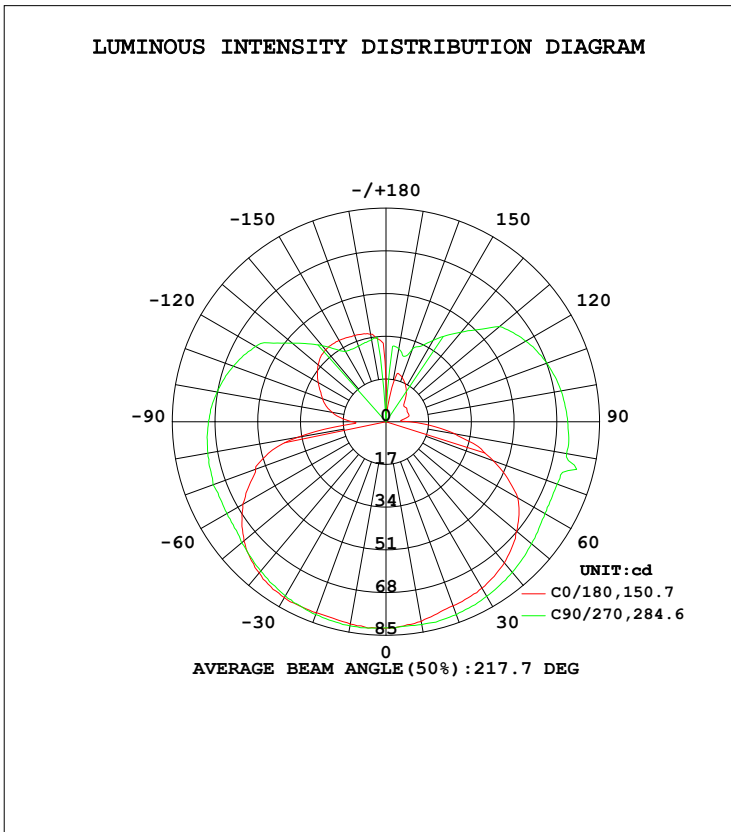


BEST

LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 62.41 lm/W			
MODEL	MLO-14S-SN-12T-30K	I _{max} (cd)	82.69	S/MH (C0/180)	1.41
NOMINAL POWER (W)	10.5	LOR (%)	100.0	S/MH (C90/270)	1.49
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	659.28	η UP, DN (C0-180)	18.9,30.6
NOMINAL FLUX (lm)	659	CIE CLASS	SEMI-D.	η UP, DN (C180-360)	19.5,31.0
LAMPS INSIDE	1	η up (%)	38.4	CIBSE SHR NOM	1.50
TEST VOLTAGE (V)	120	η down (%)	61.6	CIBSE SHR MAX	1.55



C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	81.74	82.45	82.44	81.19	80.72	80.85	81.93	81.65	0- 10	7.808	7.808	1.18,1.18
20	80.90	81.12	81.65	78.94	77.94	79.34	81.73	80.92	10- 20	22.92	30.73	4.66,4.66
30	80.81	78.94	80.05	76.06	76.43	76.70	80.17	79.46	20- 30	36.78	67.51	10.2,10.2
40	78.51	75.24	77.55	71.67	73.30	73.26	78.17	76.60	30- 40	48.45	116.0	17.6,17.6
50	73.75	69.97	75.05	65.17	67.89	67.97	75.61	71.52	40- 50	56.68	172.6	26.2,26.2
60	65.81	63.78	72.94	57.69	60.54	61.33	72.94	64.74	50- 60	60.73	233.4	35.4,35.4
70	55.27	59.65	73.19	51.13	45.42	54.41	72.55	58.01	60- 70	60.81	294.2	44.6,44.6
80	35.66	57.56	72.01	47.40	27.94	51.00	72.98	57.90	70- 80	58.40	352.6	53.5,53.5
90	13.34	56.10	70.70	44.81	9.599	48.32	72.31	53.98	80- 90	53.60	406.2	61.6,61.6
100	21.74	54.83	68.24	43.39	7.772	47.19	70.77	53.34	90-100	50.94	457.1	69.3,69.3
110	26.95	52.82	64.64	42.13	9.519	46.34	68.18	52.58	100-110	48.71	505.8	76.7,76.7
120	31.12	47.28	59.95	36.19	9.656	45.30	64.23	50.34	110-120	43.70	549.5	83.4,83.4
130	35.24	41.48	48.69	30.54	9.529	37.95	59.00	44.82	120-130	36.36	585.9	88.9,88.9
140	37.36	35.98	39.54	27.17	12.12	30.96	46.57	39.12	130-140	27.91	613.8	93.1,93.1
150	37.43	34.43	32.31	28.07	15.91	26.00	37.37	34.97	140-150	20.36	634.2	96.2,96.2
160	36.51	34.05	32.08	27.96	18.81	27.01	30.78	34.04	150-160	14.22	648.4	98.3,98.3
170	35.39	34.20	33.20	22.87	13.91	29.53	29.59	32.95	160-170	8.698	657.1	99.7,99.7
180	16.66	4.590	0	12.28	16.86	9.757	0	21.94	170-180	2.203	659.3	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 143.52 lm

%lum = 21.8%
 %lamp = 21.8%

Conical surface Flux(120deg): 233.37 lm

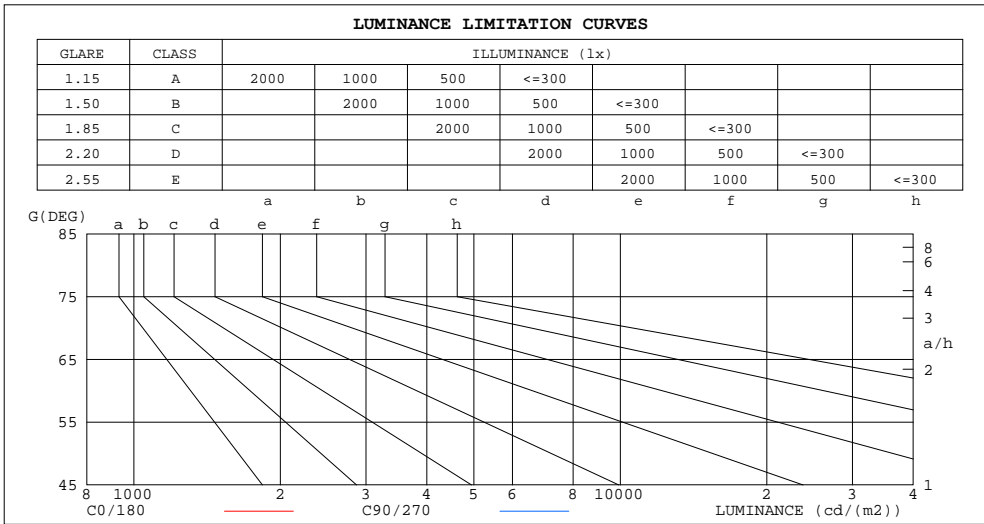
%lum = 35.4%
 %lamp = 35.4%

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	202	820
80	205	415
75	187	280
70	162	214
65	142	172
60	132	146
55	122	128
50	115	117
45	108	108

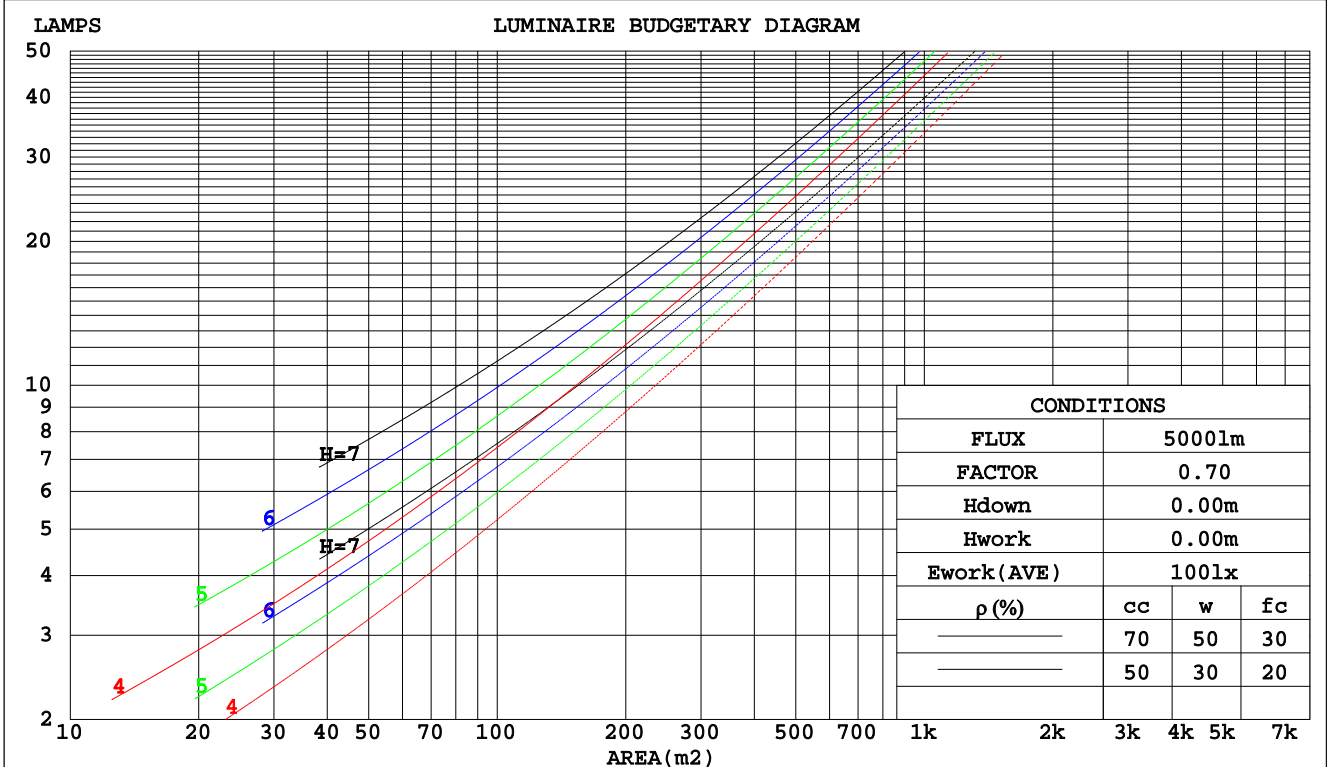
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CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
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	1.10	1.10	1.10	1.03	1.03	1.03	.90	.90	.90	.78	.78	.78	.67	.67	.67	.62
1.0	.90	.85	.80	.84	.80	.75	.73	.69	.66	.63	.60	.57	.53	.51	.49	.44
2.0	.77	.69	.62	.72	.65	.59	.62	.56	.52	.53	.48	.45	.44	.41	.38	.34
3.0	.66	.57	.50	.62	.54	.47	.53	.47	.42	.46	.40	.36	.38	.34	.31	.27
4.0	.58	.49	.42	.54	.46	.39	.47	.40	.35	.40	.34	.30	.33	.29	.26	.22
5.0	.51	.42	.35	.48	.39	.33	.41	.35	.29	.35	.30	.25	.30	.25	.22	.19
6.0	.46	.37	.30	.43	.34	.28	.37	.30	.25	.32	.26	.22	.27	.22	.19	.16
7.0	.41	.32	.26	.38	.30	.25	.33	.27	.22	.29	.23	.19	.24	.20	.16	.14
8.0	.37	.29	.23	.35	.27	.22	.30	.24	.19	.26	.21	.17	.22	.18	.14	.12
9.0	.34	.26	.20	.32	.24	.19	.28	.21	.17	.24	.19	.15	.20	.16	.13	.11
10.0	.31	.23	.18	.29	.22	.17	.26	.19	.15	.22	.17	.13	.19	.15	.12	.10



C Range: 0 - 360DEG
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 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

WEC AND CCEC

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
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	.391	.222	.070	.372	.212	.067	.337	.193	.062	.304	.175	.056	.274	.159	.051	
2.0	.333	.182	.056	.316	.174	.054	.283	.158	.049	.254	.142	.045	.226	.128	.040	
3.0	.293	.156	.047	.278	.149	.045	.248	.134	.041	.221	.121	.037	.196	.108	.034	
4.0	.263	.137	.040	.248	.130	.038	.222	.117	.035	.197	.106	.032	.173	.094	.029	
5.0	.238	.121	.035	.225	.116	.034	.200	.104	.031	.177	.094	.028	.156	.083	.025	
6.0	.218	.109	.031	.206	.104	.030	.183	.094	.027	.162	.084	.025	.142	.075	.022	
7.0	.201	.099	.028	.189	.094	.027	.168	.085	.025	.149	.076	.022	.130	.068	.020	
8.0	.186	.091	.026	.176	.086	.024	.156	.078	.022	.138	.070	.020	.121	.062	.018	
9.0	.173	.084	.023	.163	.080	.022	.145	.072	.020	.128	.064	.018	.112	.057	.016	
10.0	.162	.078	.022	.153	.074	.021	.136	.067	.019	.120	.060	.017	.105	.053	.015	

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	.483	.483	.483	.413	.413	.413	.282	.282	.282	.162	.162	.162	.052	.052	.052	
1.0	.481	.450	.423	.411	.387	.364	.281	.266	.252	.162	.154	.146	.052	.050	.047	
2.0	.475	.429	.390	.406	.369	.337	.279	.255	.235	.161	.148	.138	.052	.048	.045	
3.0	.467	.413	.370	.401	.356	.320	.275	.247	.225	.159	.145	.132	.051	.047	.043	
4.0	.460	.401	.356	.395	.347	.309	.271	.242	.218	.157	.141	.129	.051	.046	.042	
5.0	.453	.392	.347	.389	.339	.302	.268	.237	.213	.155	.139	.126	.050	.045	.042	
6.0	.445	.384	.340	.383	.333	.296	.264	.233	.210	.153	.137	.125	.049	.045	.041	
7.0	.439	.378	.335	.377	.328	.292	.261	.230	.207	.151	.135	.123	.049	.044	.041	
8.0	.432	.373	.332	.372	.323	.289	.257	.227	.205	.150	.134	.122	.048	.044	.040	
9.0	.426	.368	.329	.367	.319	.287	.254	.225	.204	.148	.133	.121	.048	.044	.040	
10.0	.420	.364	.327	.362	.316	.285	.251	.222	.203	.147	.132	.121	.048	.043	.040	

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 C Interval: 10.0DEG
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γ Range: 0 - 180DEG
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 Humidity:59.2%
 Test Distance:2.436m [K=1.0111]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
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	2.8	4.0	3.6	4.8	5.7	3.7	4.9	4.4	5.6	6.6
3H	5.1	6.2	5.9	7.0	8.0	6.9	8.0	7.7	8.8	9.7
4H	6.3	7.3	7.1	8.1	9.1	8.7	9.7	9.5	10.5	11.5
6H	7.4	8.3	8.2	9.2	10.2	10.7	11.7	11.5	12.5	13.5
8H	7.8	8.8	8.7	9.6	10.6	11.8	12.8	12.7	13.6	14.6
12H	8.2	9.1	9.0	9.9	11.0	13.1	14.0	14.0	14.8	15.9
4H 2H	3.7	4.7	4.5	5.5	6.5	4.4	5.4	5.2	6.2	7.2
3H	6.2	7.0	7.0	7.9	8.9	7.8	8.7	8.6	9.5	10.6
4H	7.4	8.2	8.3	9.1	10.2	9.8	10.6	10.7	11.5	12.5
6H	8.6	9.3	9.5	10.2	11.3	12.0	12.8	12.9	13.6	14.7
8H	9.2	9.8	10.0	10.7	11.8	13.3	14.0	14.2	14.8	16.0
12H	9.6	10.2	10.5	11.1	12.3	14.7	15.3	15.6	16.2	17.3
8H 4H	8.4	9.1	9.3	10.0	11.1	10.3	10.9	11.1	11.8	12.9
6H	9.9	10.5	10.8	11.4	12.6	12.8	13.4	13.7	14.3	15.5
8H	10.7	11.2	11.6	12.1	13.3	14.3	14.8	15.2	15.7	16.9
12H	11.4	11.8	12.3	12.8	13.9	16.0	16.4	16.9	17.4	18.5
12H 4H	8.8	9.4	9.7	10.3	11.4	10.3	10.9	11.2	11.8	13.0
6H	10.5	11.0	11.4	11.9	13.1	13.0	13.5	13.9	14.4	15.6
8H	11.4	11.9	12.4	12.8	14.0	14.6	15.0	15.5	16.0	17.2
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.1 / - 0.1					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.3 / - 0.4				

CIE Pub.117, 659.3 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -1.4)

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

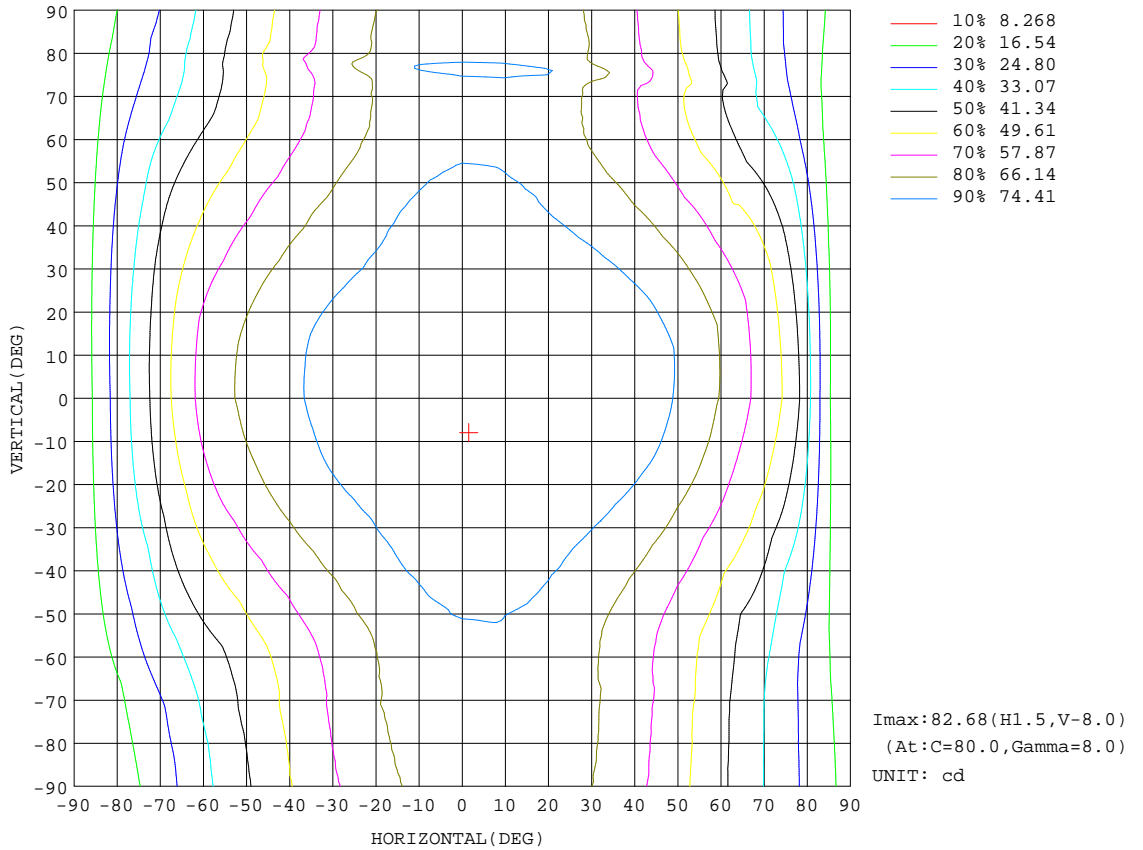
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	41	28	21	39	27	21	36	26	20	13
0.80	50	36	28	47	35	27	43	32	26	17
1.00	57	43	35	54	42	34	49	40	31	21
1.25	64	50	41	60	48	40	54	44	37	25
1.50	69	56	47	65	53	45	58	48	41	28
2.00	77	65	56	72	61	53	64	55	48	33
2.50	81	70	62	76	67	59	67	59	53	36
3.00	85	75	67	80	71	64	70	63	57	39
4.00	90	82	74	85	77	70	74	68	63	42
5.00	94	86	79	88	81	75	77	71	67	45
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:20 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:2.436m [K=1.0111]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

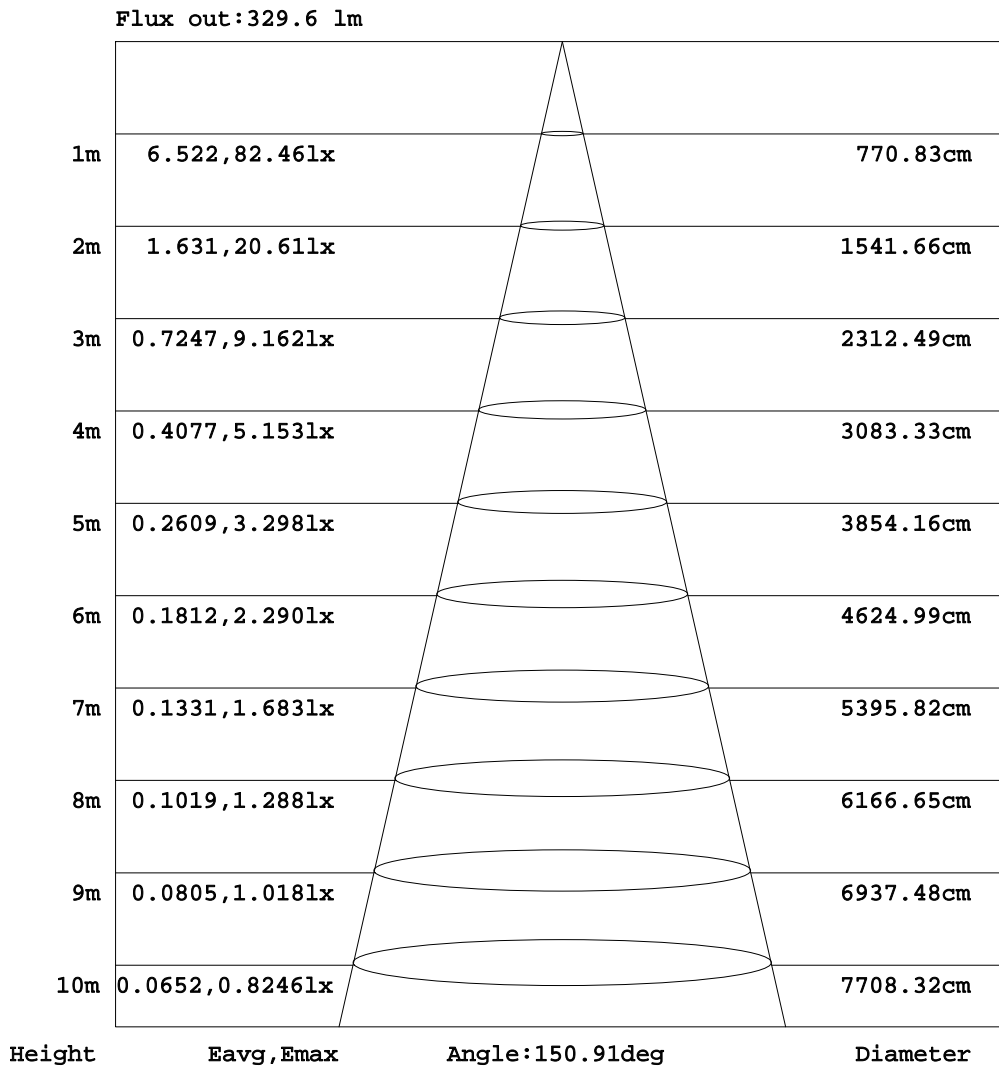


C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 August 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.436m [K=1.0111]
 Remarks:

AAI Figure

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:



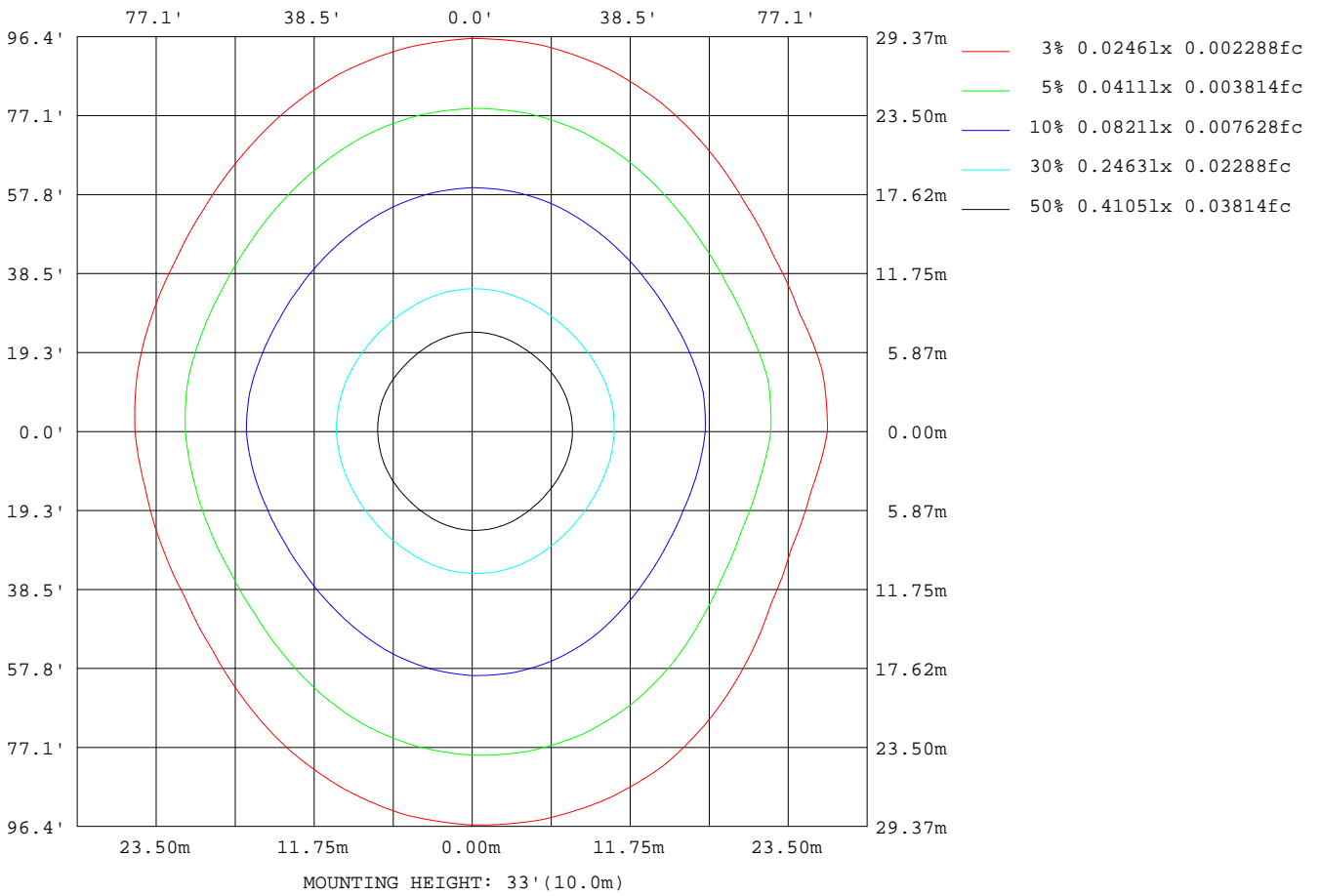
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

ISOLUX DIAGRAM

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
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:20 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:2.436m [K=1.0111]
 Remarks:

LED Avg.L Report

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

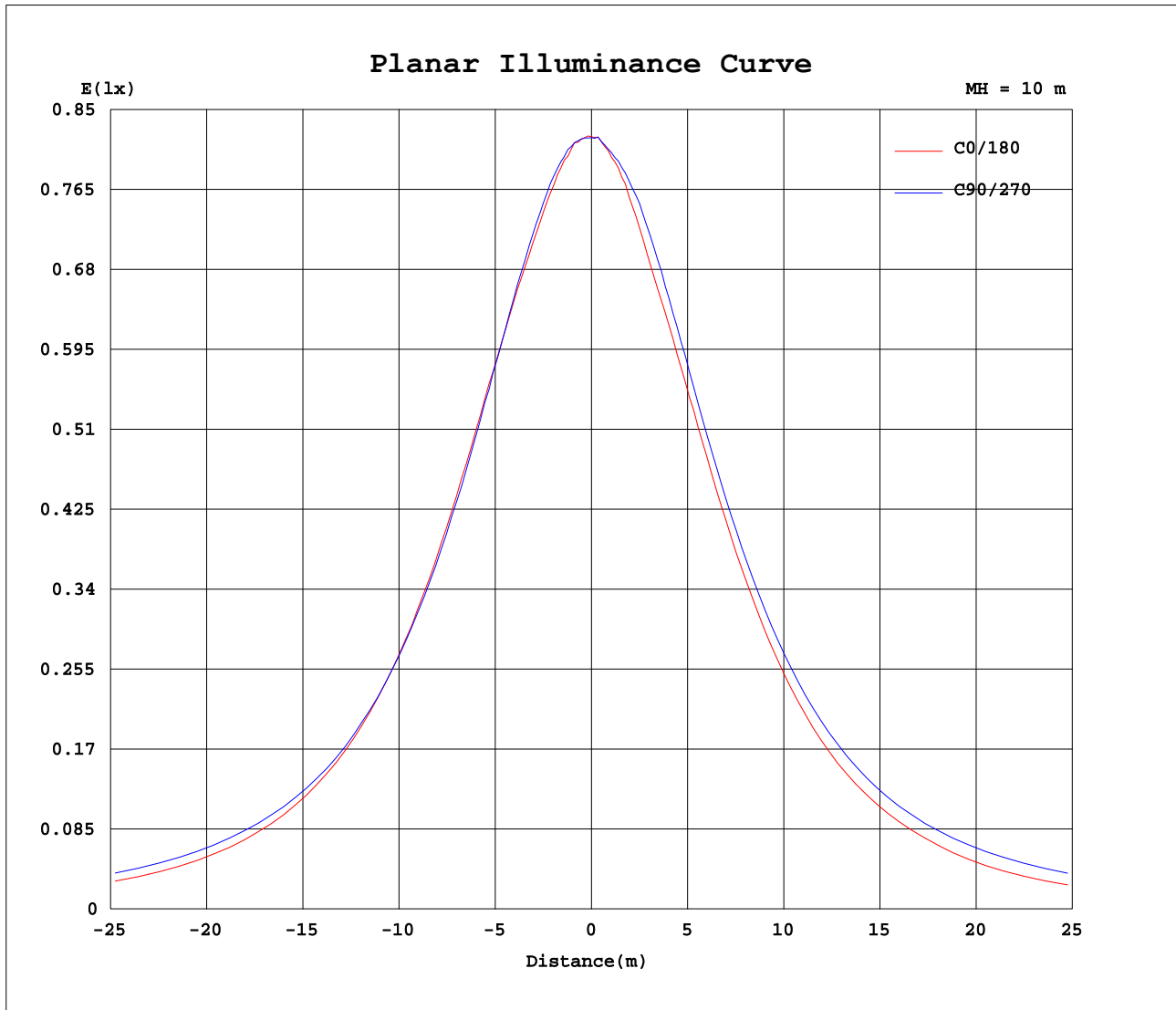
AvgL	cd/m2
L_0~180 (65) av	134
L_0~180 (75) av	167
L_0~180 (85) av	204
L_90~270 (65) av	172
L_90~270 (75) av	285
L_90~270 (85) av	829
L_45 (65) av	138
L_45 (75) av	209
L_45 (85) av	594

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature:25.1DEG
Operators:Mark
Test Date:20 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:2.436m [K=1.0111]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 10.0DEG
Test Speed: HIGH
Temperature: 25.1DEG
Operators: Mark
Test Date: 20 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: 2.436m [K=1.0111]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
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	82.1	82.3	82.2	82.2	82.1	82.1	82.3	82.1	81.9	82.0	82.0	82.0	82.1	81.9	82.0	81.9	81.9	81.9	82.1
5	82.4	82.1	82.3	82.2	82.5	82.3	82.3	82.4	82.4	82.4	82.3	82.2	82.0	81.8	81.7	81.5	81.3	81.2	81.6
10	81.7	81.8	81.9	82.1	82.3	82.6	82.6	82.5	82.6	82.4	82.3	82.0	81.7	81.4	81.0	80.6	80.2	79.9	80.7
15	81.0	81.1	81.4	81.7	81.9	82.0	82.2	82.4	82.3	82.1	81.8	81.5	81.0	80.4	80.0	79.8	79.0	78.6	79.1
20	80.9	81.0	81.2	80.9	80.9	81.4	81.8	81.7	81.7	81.7	81.2	80.7	79.9	79.2	78.7	78.3	78.3	77.9	77.9
25	81.0	81.1	80.8	80.3	80.2	80.2	80.6	81.0	81.1	80.8	80.6	79.5	78.6	77.8	77.2	77.2	77.1	77.2	77.3
30	80.8	80.6	80.2	79.4	79.0	78.9	79.4	79.9	80.1	80.0	79.3	78.4	77.0	76.3	75.8	75.9	76.0	76.0	76.4
35	80.0	79.7	78.7	77.9	77.2	77.4	78.0	78.8	79.1	78.9	78.0	76.8	75.3	74.1	73.7	74.0	74.3	74.5	75.1
40	78.5	78.2	76.8	75.8	75.2	75.3	76.4	77.4	77.7	77.6	76.7	75.0	73.2	71.9	71.5	71.5	71.8	72.4	73.3
45	76.5	75.7	73.9	73.0	72.5	73.4	74.4	75.8	76.6	76.1	75.0	72.9	70.7	69.2	68.1	68.1	68.7	69.7	70.8
50	73.7	72.1	70.1	69.1	69.3	70.6	72.7	74.2	75.0	75.1	73.3	70.9	68.3	65.9	64.4	64.4	65.0	66.5	67.9
55	70.0	67.8	65.5	64.8	65.9	68.1	70.8	72.8	73.8	73.6	71.8	69.2	65.7	62.6	60.4	59.8	60.7	62.6	64.6
60	65.8	62.6	59.9	60.0	62.1	65.5	69.3	72.2	73.4	72.9	71.0	67.7	63.3	59.2	56.2	55.0	55.8	58.0	60.5
65	60.1	55.9	53.5	54.8	58.8	63.9	68.7	71.8	73.1	72.7	70.6	66.8	61.7	56.3	51.9	49.6	49.8	51.2	53.4
70	55.3	50.0	47.6	50.4	56.5	62.8	68.5	72.2	73.5	73.2	70.5	66.1	60.4	54.2	48.1	44.1	43.6	43.0	45.4
75	48.5	40.7	40.3	47.1	55.5	62.2	67.8	71.6	72.9	72.4	69.9	65.5	59.6	52.8	45.4	38.8	35.8	34.9	37.9
80	35.7	29.5	36.2	44.8	53.7	61.4	67.3	71.1	72.6	72.0	69.3	64.8	58.6	51.3	43.5	35.2	28.4	26.9	27.9
85	17.6	23.6	33.6	43.6	52.9	60.7	66.9	70.5	72.0	71.5	68.7	64.2	57.6	50.0	41.5	32.4	23.7	17.5	18.0
90	13.3	23.0	32.9	42.9	52.2	60.0	66.1	70.0	71.3	70.7	68.0	63.2	56.7	49.2	40.4	31.0	20.9	11.6	9.60
95	17.9	23.9	32.9	42.4	51.7	59.3	65.3	68.8	70.2	69.6	66.9	62.3	56.0	48.3	39.7	30.2	20.2	10.8	5.92
100	21.7	25.2	33.1	42.2	51.0	58.7	64.1	67.7	68.9	68.2	65.7	61.2	55.1	47.6	39.2	30.0	20.5	11.8	7.77
105	24.8	26.4	33.0	42.2	50.3	57.4	62.7	66.1	67.3	66.5	64.1	59.9	53.9	46.8	38.8	30.2	19.9	11.1	9.51
110	27.0	27.0	32.2	40.4	49.6	56.1	61.3	64.1	65.2	64.6	62.5	58.3	52.6	45.9	38.3	28.9	16.8	10.0	9.52
115	28.8	28.5	31.9	38.9	46.6	54.6	59.2	61.9	62.9	62.5	60.3	56.5	51.3	45.0	35.7	24.6	14.6	10.8	9.40
120	31.1	30.5	31.8	37.8	44.2	50.3	55.6	59.4	60.4	59.9	57.9	54.5	49.1	40.6	31.8	22.3	14.4	10.3	9.66
125	33.3	32.6	32.8	36.6	42.1	46.7	50.6	53.3	54.7	54.6	52.6	48.7	43.4	36.9	29.1	21.0	16.0	9.64	9.82
130	35.2	34.5	34.0	35.5	39.6	43.4	46.3	48.3	49.1	48.7	47.0	43.8	39.3	33.8	27.3	20.9	17.9	10.7	9.53
135	36.7	36.0	35.0	35.2	37.0	40.0	42.4	43.8	44.3	43.9	42.4	39.6	35.8	31.1	25.5	22.4	18.3	12.3	10.2
140	37.4	36.9	35.6	35.2	35.3	36.7	38.5	39.7	40.0	39.5	38.2	35.8	32.6	28.6	25.8	23.7	18.3	14.2	12.1
145	37.6	37.2	36.0	35.1	34.9	34.8	35.2	35.6	35.8	35.4	34.2	32.2	30.0	28.2	26.6	23.6	19.4	16.3	14.1
150	37.4	37.1	36.1	35.3	34.5	34.4	33.9	33.3	32.9	32.3	31.6	30.7	29.7	28.8	27.3	24.1	22.4	18.2	15.9
155	37.0	36.9	36.2	35.5	34.5	33.7	33.3	32.9	32.4	31.9	31.4	30.8	30.2	29.6	26.2	25.1	24.9	18.8	17.5
160	36.5	36.7	36.1	35.4	34.5	33.6	33.0	32.6	32.4	32.1	31.8	31.3	31.0	29.5	26.4	27.7	27.1	20.2	18.8
165	36.1	36.0	35.6	35.1	34.3	33.5	33.0	32.7	32.7	32.6	32.4	32.1	31.1	27.8	28.5	29.7	27.9	21.6	19.7
170	35.4	35.0	34.8	34.5	34.4	34.0	33.6	33.4	33.3	33.2	33.1	31.6	28.8	24.3	21.5	17.6	14.9	10.4	13.9
175	32.9	33.0	32.9	32.7	32.6	32.3	32.1	32.3	32.8	26.0	14.3	8.93	6.40	2.99	3.05	3.09	3.16	3.18	3.59
180	16.7	15.5	13.5	10.7	5.67	3.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.9	13.6	20.2	25.2	26.5	16.9

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 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:2.436m [K=1.0111]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:119.99V I:0.0905A P:10.564W PF:0.9732 Freq:60.00Hz Lamp Flux:659.277x1 lm		
NAME: Milo 14"Sconce	TYPE:MLO-14S-SN-12T-30K	WEIGHT:1.2KG
SPEC.:	DIM.:	SERIAL No.:
MFR.: BlackJack Lighting LLC	SUR.:	Shielding Angle:

Table--2

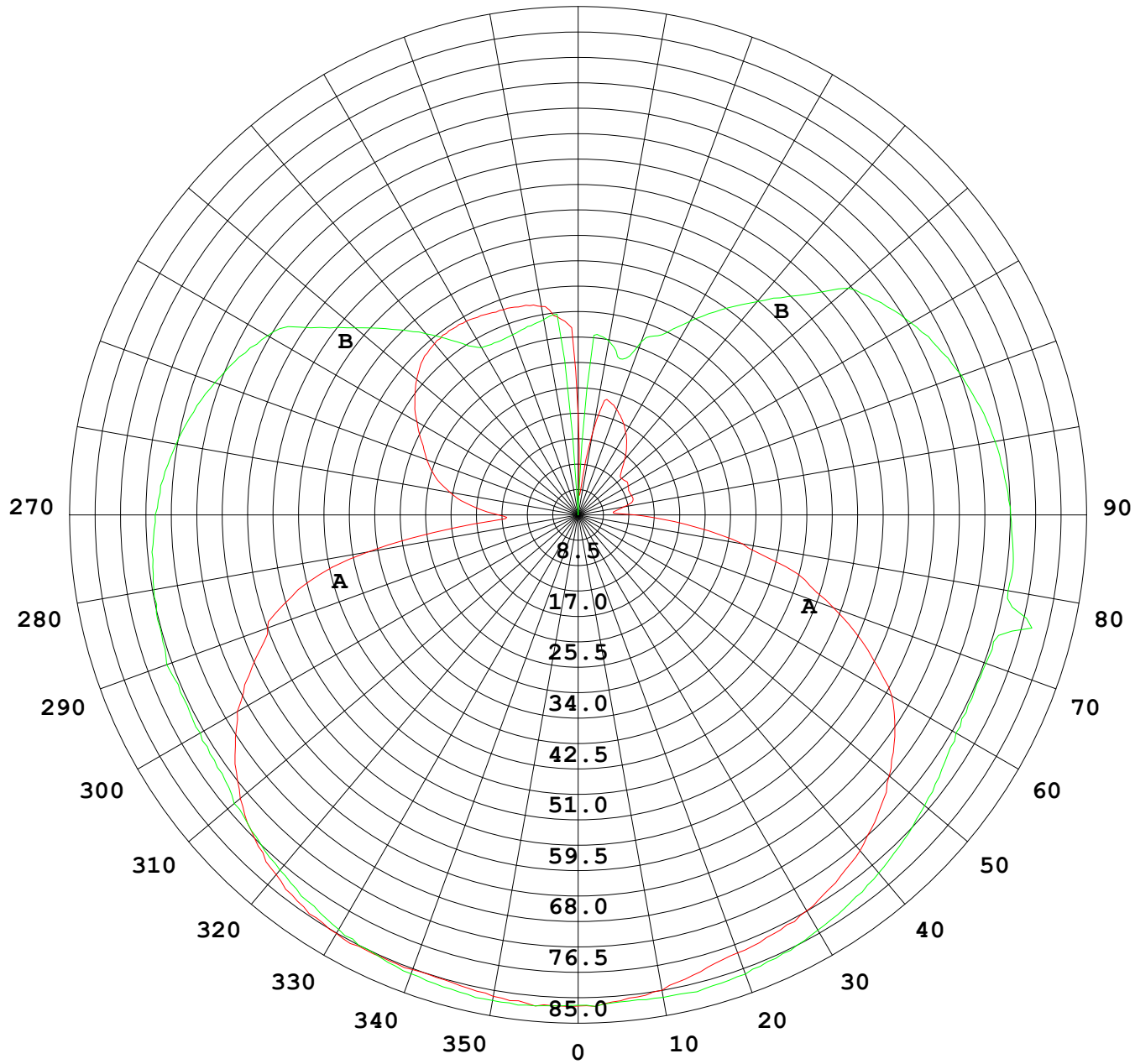
UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	82.3	82.2	82.2	82.1	82.1	82.3	82.1	81.9	82.0	82.0	82.0	82.1	81.9	82.0	81.9	81.9	81.9		
5	81.8	81.6	81.4	81.5	81.6	81.7	81.7	81.7	81.7	81.8	81.8	81.9	81.9	81.8	81.9	81.9	82.0		
10	80.4	80.5	80.5	80.8	80.9	81.3	81.5	82.0	81.9	82.1	81.9	81.8	81.7	81.6	81.8	81.6	81.7		
15	78.9	79.1	79.5	80.0	80.3	80.9	81.4	81.8	82.0	82.2	82.0	81.8	81.5	81.4	81.0	81.1	80.9		
20	77.7	77.8	78.2	79.0	79.6	80.1	80.9	81.3	81.7	81.6	81.6	81.3	81.2	80.7	80.6	80.5	80.7		
25	77.1	77.4	77.9	77.8	78.3	79.3	79.9	80.7	80.9	81.0	80.8	80.5	80.2	80.2	80.3	80.4	80.7		
30	76.5	76.7	76.8	76.6	76.8	77.9	78.9	79.7	80.2	80.3	79.9	79.3	79.2	79.7	80.4	80.6	80.8		
35	75.3	75.6	75.2	75.0	75.3	76.2	77.6	78.6	79.2	79.4	78.8	78.1	78.0	78.6	79.4	80.0	80.2		
40	73.3	73.7	73.1	73.1	73.4	74.4	76.2	77.4	78.2	78.1	77.7	76.9	76.4	76.8	77.7	78.5	78.8		
45	71.1	70.9	70.4	70.4	71.2	72.5	74.5	76.1	76.9	76.9	76.0	74.8	74.3	74.4	75.3	76.3	77.1		
50	68.1	67.7	67.2	67.3	68.6	70.5	72.7	74.6	75.6	75.6	74.3	72.8	71.7	71.4	71.9	73.4	74.4		
55	64.9	63.7	63.2	64.1	65.5	68.2	70.9	73.2	74.2	74.1	72.7	70.6	68.7	67.8	67.9	69.4	71.0		
60	60.6	59.1	58.8	60.1	62.6	65.6	69.2	71.8	72.9	72.8	71.2	68.4	65.7	63.7	63.0	64.3	66.7		
65	54.6	53.9	53.9	56.0	59.4	63.4	67.8	71.1	72.6	72.3	70.3	66.7	62.6	59.3	57.5	58.2	61.4		
70	46.9	47.7	49.0	52.0	56.8	62.3	67.3	70.8	72.5	72.3	70.0	66.0	60.7	55.3	51.5	50.8	54.5		
75	40.3	42.1	43.8	48.8	55.2	61.6	67.0	71.7	75.1	75.5	71.8	66.0	59.5	52.6	46.2	44.0	47.9		
80	31.8	34.1	39.2	46.6	55.4	63.4	67.3	71.1	73.0	73.0	70.5	65.9	60.7	55.1	42.8	35.2	37.2		
85	23.1	28.2	37.5	45.5	53.4	60.8	66.8	70.8	73.0	72.9	70.6	65.8	58.9	50.5	40.9	31.2	22.8		
90	16.5	25.0	34.8	44.1	52.5	60.1	66.1	70.2	72.3	72.3	69.9	65.2	58.3	49.6	40.0	29.5	18.8		
95	13.9	23.9	34.1	43.4	51.9	59.4	65.4	69.5	71.6	71.8	69.3	64.7	57.9	49.3	39.6	29.7	20.9		
100	14.4	23.9	33.7	42.9	51.4	58.6	64.7	68.7	70.8	70.8	68.6	64.1	57.5	49.2	40.0	30.5	22.9		
105	15.1	24.8	33.9	42.8	50.8	57.9	63.6	67.7	69.6	69.6	67.7	63.6	57.0	49.1	40.4	31.6	24.9		
110	13.2	25.7	34.2	42.5	50.2	56.9	62.4	66.2	68.2	68.3	66.4	62.2	56.3	48.9	40.8	31.7	26.4		
115	11.1	22.1	34.6	42.3	49.5	56.1	61.2	64.5	66.3	66.5	64.7	60.9	55.5	48.8	39.2	31.4	27.7		
120	11.8	19.1	30.6	42.0	48.6	54.6	59.4	62.6	64.2	64.3	62.7	59.5	54.5	46.2	38.4	31.5	29.6		
125	14.3	17.4	27.0	37.6	47.4	53.0	57.3	60.4	61.9	61.9	60.6	57.3	50.7	44.2	37.7	32.0	31.8		
130	15.6	16.9	25.4	34.0	41.9	48.7	54.3	57.7	59.0	58.6	55.6	51.9	47.3	42.3	36.7	33.4	33.6		
135	16.9	18.3	22.7	31.5	38.0	43.7	47.8	50.6	51.9	51.7	50.2	47.6	44.2	40.0	35.6	34.6	35.2		
140	18.1	20.4	22.5	27.2	34.8	39.4	43.2	45.5	46.6	46.7	45.7	43.6	40.8	37.5	35.6	35.2	36.2		
145	19.2	22.1	23.3	25.7	28.6	35.6	38.8	40.9	42.0	42.0	41.4	39.7	37.4	35.4	35.2	35.5	36.6		
150	21.3	23.5	24.4	25.9	26.1	28.7	32.7	36.5	37.4	37.6	37.2	36.0	35.1	34.9	35.0	35.6	36.5		
155	23.7	25.0	25.4	26.4	26.2	27.3	27.8	29.7	33.3	33.6	33.8	34.1	34.3	34.5	34.8	35.5	36.2		
160	26.1	26.7	27.0	27.3	26.7	27.6	28.5	29.0	30.8	32.1	33.0	33.4	33.9	34.2	34.6	35.2	35.8		
165	25.1	29.3	29.4	29.5	29.2	27.7	28.5	29.4	27.0	30.1	31.3	32.7	33.3	33.9	34.4	34.9	35.5		
170	14.4	21.9	24.8	28.4	30.6	30.0	29.0	29.3	29.6	27.4	30.0	30.5	32.5	33.4	33.9	34.5	35.1		
175	3.59	3.56	3.80	4.48	5.95	9.60	14.7	21.5	30.2	30.5	27.6	31.8	30.7	31.6	32.6	32.6	33.0		
180	16.5	15.6	13.7	10.5	9.06	2.70	0.33	0.00	0.00	0.00	1.76	8.89	15.0	28.9	29.6	30.9	30.9		

C Range: 0 - 360DEG
 C Interval: 10.0DEG
 Test Speed: HIGH
 Temperature:25.1DEG
 Operators:Mark
 Test Date:20 August 2019

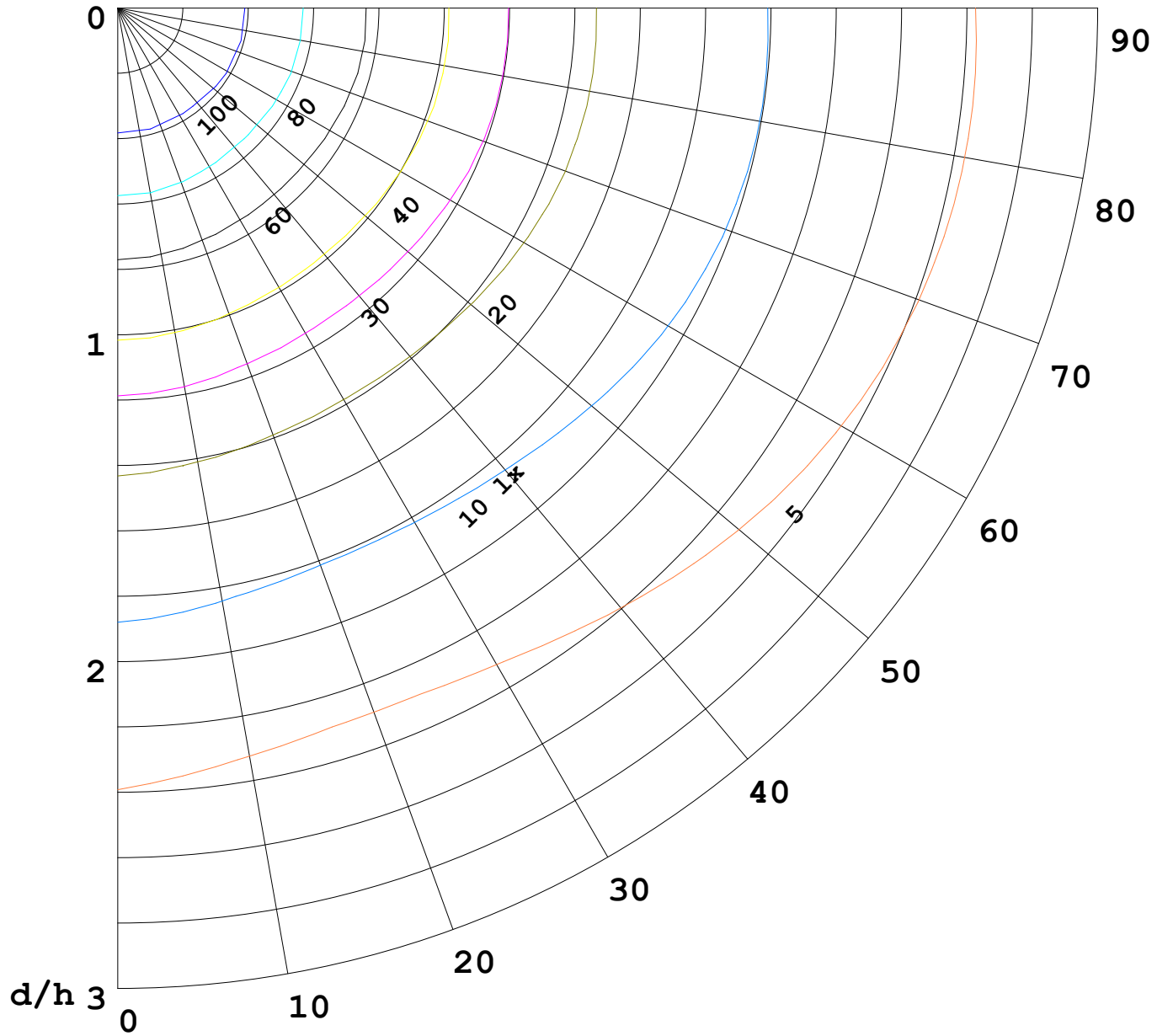
γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
 Humidity:59.2%
 Test Distance:2.436m [K=1.0111]
 Remarks:

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

