



# REPORT

545 E. Algonquin Rd., Arlington Heights, IL 60005

Project No. G101709870

Date: July 2, 2014

REPORT NO. 101709870CHI-002

TEST OF ONE 13" DIAMETER 22" HIGH LED CYLINDER WITH 40 DEGREE REFLECTOR

MODEL NO. SXCLR4345  
LED MODEL NO. CREE CXA2540  
DRIVER MODEL NO. ACE ELECTRONICS AC-60CD1.4UV -TS

RENDERED TO

ESCO LIGHTING, INC.  
3254 N. KILBOURN  
CHICAGO, IL 60641

TEST: Electrical and Photometric tests as required to the IESNA test standard.

STATEMENT OF LIMITATION: This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

AUTHORIZATION: The testing performed was authorized by signed quote number 500532058.

STANDARDS USED: The following American National Standards or Illuminating Engineering Society of North America Test Guides were used in part or totally to test each specimen:

IESNA LM-79 - 2008: Electrical and Photometric Measurements of Solid State Lighting

DESCRIPTION OF SAMPLE: The client submitted one production sample of model number SXCLR4345. The sample was received by Intertek on May 8, 2014, in undamaged condition and one sample was tested as received. The sample designation was 05082014081606.

DATE OF TEST: July 2, 2014

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SUMMARY

Model No.:	SXCLR4345
Description:	13" Diameter 22" High LED Cylinder with 40 Degree Reflec

Criteria	Result
Total Lumen Output (Lumens)	9353
Total Power (W)	126.1
Luminaire Efficacy (LPW)	74.17
Power Factor	0.997

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date
Yokogawa Power Meter	WT210	146919	09/06/13	09/06/14
Omega Newport Thermometer	DPI8-C24	146920	12/04/13	12/04/14
LSI High Speed Mirror Goniometer	6440T	146928	VBU	VBU
Newport Hygrometer	iServer	146956	01/02/14	01/02/15
Elgar, AC Power Supply	CW1251P	146918	VBU	VBU
Cole-Parmer Triple Timer	94440-00	CHI0041	04/01/14	04/01/15

TEST METHODS

Seasoning in Sample Orientation – LED Products

No seasoning was performed in accordance with IESNA LM-79.

Photometric and Electrical Measurements – Distribution Method

A LSI Type C High Speed Model 6440 Mirror Goniometer was used to measure the intensity (candelas) at each angle of distribution for each sample.

Ambient temperature was measured equal to the height of the sample mounted on the Goniometer equipment. Each sample was operated at input rated voltage in its designated orientation. Each sample was allowed to stabilize for at least thirty minutes before measurements were made. Electrical measurements including voltage, current, and power were measured using the Xitron or Yokogawa Power Analyzer.

Some graphics were created with Photometrics Plus software.

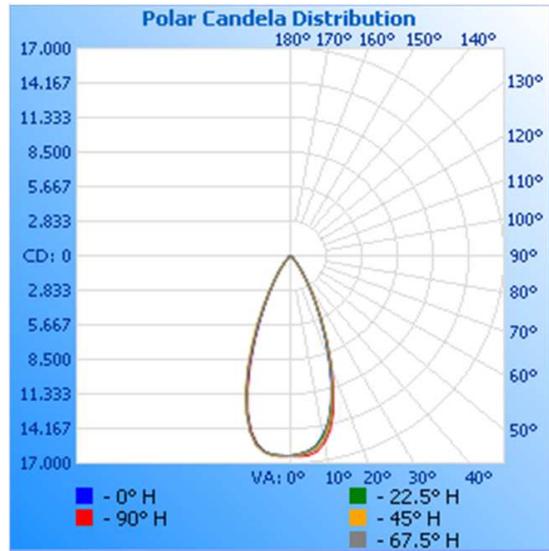
**RESULTS OF TEST**

**Photometric and Electrical Measurements at Ambient Temperature (25°C +/- 1°C) – Distribution Method**

Intertek Sample No.	Base Orientation	Input Voltage {Vac}	Input Current (mA)	Input Power (Watts)	Input Power Factor	Absolute Luminous Flux (Lumens)	Lumen Efficacy (Lumens Per Watt)
05082014081606	UP	120.0	1053	126.1	0.997	9353	74.17

**Intensity (Candlepower) Summary at 25°C - Candelas**

Angle	0	22.5	45	67.5	90
0	16388	16388	16388	16388	16388
5	16059	16103	16151	16225	16427
10	14923	14994	15190	15370	15575
15	12531	12563	12719	12935	13212
20	8956	9140	9298	9323	9392
25	5573	5780	5915	5804	5790
30	3136	3188	3133	3092	3179
35	1681	1587	1393	1446	1570
40	814	718	567	601	721
45	399	334	252	263	320
50	215	172	133	139	169
55	137	110	79	90	110
60	124	90	61	69	80
65	100	70	49	52	60
70	71	56	39	41	46
75	55	42	30	30	34
80	38	28	20	20	22
85	19	14	10	9	9
90	0	0	0	0	0



**Coefficients Of Utilization - Zonal Cavity Method**

Effective Floor Cavity Reflectance 0.20

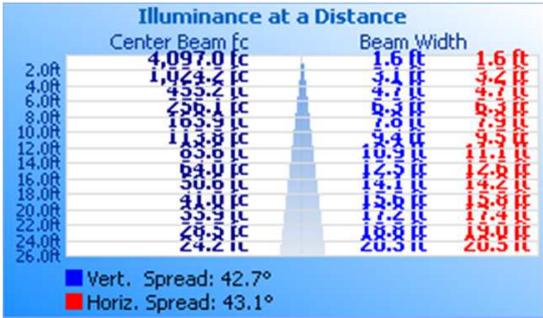
RC	80				70				50			30			10			0
Rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	109	107	112	109	107	105	105	104	102	101	100	99	98	97	96	94
2	109	104	101	98	107	103	99	97	100	97	94	97	94	92	94	92	91	89
3	104	98	94	90	102	97	93	90	94	91	88	92	89	87	90	87	85	84
4	100	93	88	84	98	92	87	84	90	86	83	88	84	82	86	83	81	79
5	95	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75
6	91	83	78	74	90	83	78	74	81	77	74	80	76	73	79	75	73	71
7	88	79	74	70	86	79	74	70	78	73	70	76	72	69	75	72	69	68
8	84	76	70	67	83	75	70	67	74	70	66	73	69	66	72	69	66	65
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	63	62
10	78	69	64	61	77	69	64	60	68	63	60	67	63	60	66	63	60	59

RESULTS OF TEST (cont'd)

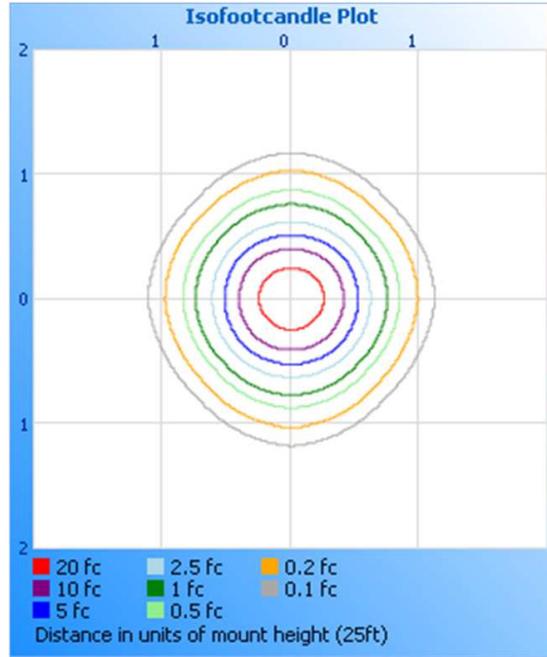
Illumination Plots

Mounting Height: 25 ft.

Illuminance - Cone of Light



Isoillumination Plot



Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	7816	83.6
0-40	8869	94.8
0-60	9242	98.8
60-90	110.6	1.2
0-90	9353	100.0
90-180	0.0	0.0
0-180	9353	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	1528	16.3
10-20	3549	37.9
20-30	2740	29.3
30-40	1053	11.3
40-50	275.9	2.9
50-60	96.8	1.0
60-70	61.5	0.7
70-80	37.0	0.4
80-90	12.1	0.1

PICTURE (not to scale)



CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

In Charge Of Tests:



Kenneth Prettyman  
Technician  
Lighting Division

Attachment: None

Report Reviewed By:



Jeffrey Davis  
Engineering Manager  
Lighting Division