



# REPORT

25800 COMMERCENTRE DRIVE, LAKE FOREST, CA 92630

Project No. G102948172

Date: March 7, 2017

REPORT NO. 102948172LAX-001

TEST OF ONE LED INDIRECT ONLY

MODEL NO. C-20-LED35-LO-D9  
LED MODEL NO. NICHIA NFSL757D  
DRIVER MODEL NO. OSRAM 79399

RENDERED TO

PRUDENTIAL LIGHTING  
1774 EAST 21ST STREET  
LOS ANGELES, CA 90058-1008

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

AUTHORIZATION: The testing performed was authorized by signed quote number Qu-00710638-6.

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 prototype sample of model number C-20-LED35-LO-D9. The sample was received by Intertek on February 22, 2017, in undamaged condition and one sample was tested as received. The sample designation was LAN1702221443-001.

DATES OF TESTS: March 3, 2017

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## SUMMARY

Model No.:	C-20-LED35-LO-D9
Description:	LED indirect only

Criteria	Result
Total Lumen Output (Lumens)	1567
Total Power (W)	21.24
Luminaire Efficacy (LPW)	73.78
Power Factor	0.998

## EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Date Calibrated	Calibration Due Date	Date Used
Goniophotometer	6440T	000943	03/01/17	04/01/17	03/03/17
AC Source	CW1251P	000944	VBU	VBU	03/03/17
Power Analyzer	WT210	000945	12/05/16	12/05/17	03/03/17
Tape Measure	33-428	001491	01/06/17	01/06/18	03/03/17
Magnetic Level	581-9	001610	09/28/16	09/28/17	03/03/17
Temp. & RH Meter	971	001178	12/22/16	12/22/17	03/03/17

## 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.

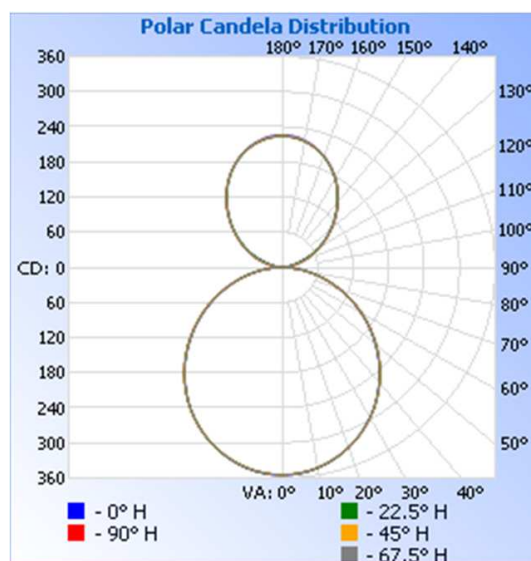
## RESULTS OF TEST (cont'd)

### 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 (LPW)
LAN1702221443-001	Up	120.0	177.4	21.24	0.998	1567	73.78

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

Angle	0	22.5	45	67.5	90
0	354	354	354	354	354
5	353	353	352	352	352
10	348	347	347	347	347
15	339	339	338	338	339
20	328	327	327	327	327
25	313	313	313	313	313
30	296	297	297	296	297
35	277	277	278	277	277
40	255	256	256	256	256
45	232	232	233	233	233
50	206	207	208	208	208
55	180	181	181	182	182
60	153	154	154	155	155
65	126	126	127	127	127
70	100	99	99	100	100
75	73	72	72	73	73
80	49	47	47	47	47
85	25	24	24	24	23
90	3	3	3	2	2
95	4	4	4	6	8
100	10	11	13	19	20
105	22	24	29	33	33
110	39	41	45	47	47
115	58	59	61	62	62
120	75	76	77	78	78
125	93	93	94	95	95
130	111	110	111	112	112
135	128	128	129	129	129
140	146	145	146	146	147
145	163	162	163	163	163
150	178	177	178	178	178
155	192	191	192	192	192
160	204	202	204	203	203
165	213	212	213	212	212
170	220	219	220	219	219
175	225	223	224	223	223
180	225	225	225	225	225

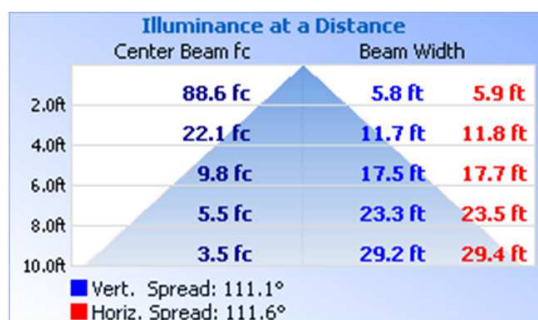


# RESULTS OF TEST (cont'd)

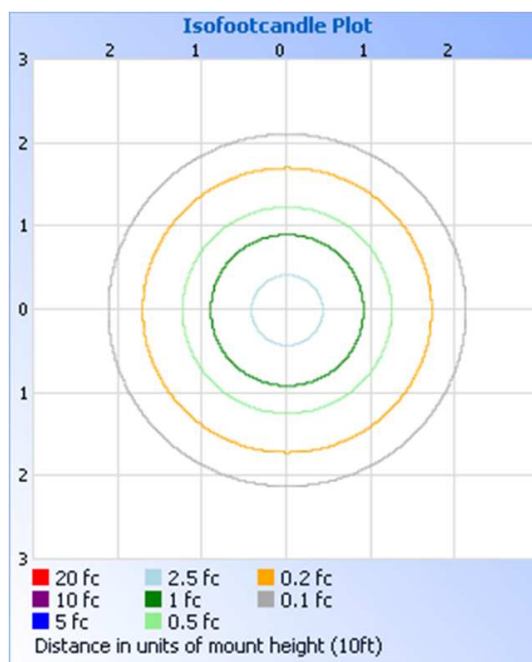
## Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



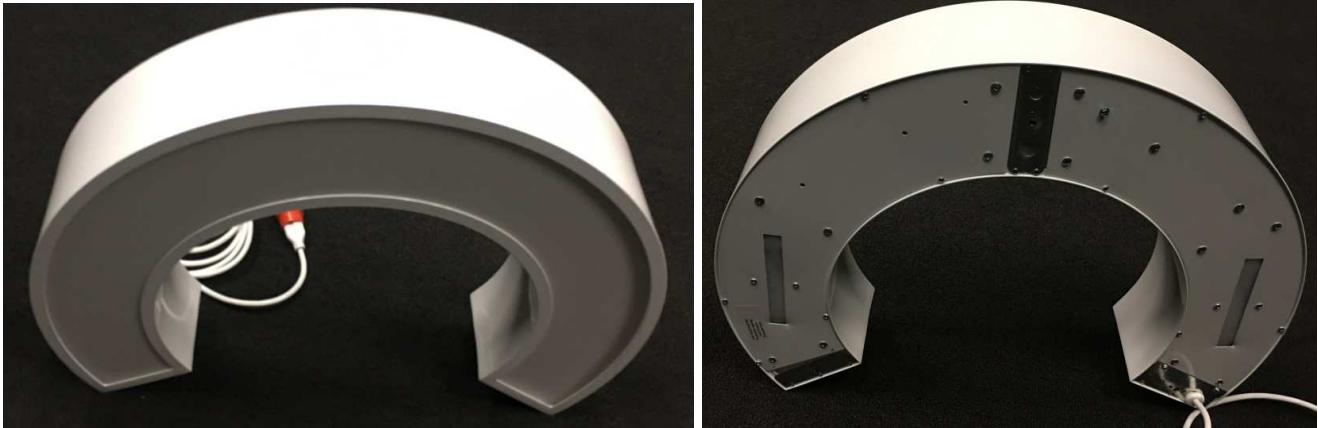
Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	273.3	17.4
0-40	446.8	28.5
0-60	788.0	50.3
60-90	228.7	14.6
0-90	1017	64.9
90-180	551	35.1
0-180	1567	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	33.5	2.1
10-20	95.5	6.1
20-30	144.3	9.2
30-40	173.5	11.1
40-50	179.3	11.4
50-60	162.0	10.3
60-70	125.5	8.0
70-80	76.9	4.9
80-90	26.3	1.7
90-100	6.8	0.4
100-110	30.0	1.9
110-120	59.8	3.8
120-130	84.0	5.4
130-140	99.3	6.3
140-150	101.5	6.5
150-160	88.1	5.6
160-170	59.8	3.8
170-180	21.2	1.4

PICTURES (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:



Ameet Alawi  
Technician  
Lighting Division

Attachment: None

Report Reviewed By:



Timothy Quigley  
Engineer  
Lighting Division