



REPORT

25800 COMMERCE DRIVE, LAKE FOREST, CA 92630

Project No. G102953252

Date: March 15, 2017

REPORT NO. 102953252LAX-001

TEST OF ONE LED LUMINAIRE

MODEL NO. QUAD-20-LED35-HO-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 Quad-20-LED35-HO-D9. The sample was received by Intertek on March 7, 2017, in undamaged condition and one sample was tested as received. The sample designation was LAN1703071332-001.

DATES OF TESTS: March 9, 2017



SUMMARY

Model No.:	Quad-20-LED35-HO-D9
Description:	LED Luminaire

Criteria	Result
Total Lumen Output (Lumens)	9003
Total Power (W)	110.1
Luminaire Efficacy (LPW)	81.77
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	03/09/17
AC Source	CW1251P	000944	VBU	VBU	03/09/17
Power Analyzer	WT210	000945	12/05/16	12/05/17	03/09/17
Tape Measure	33-428	001491	01/06/17	01/06/18	03/09/17
Magnetic Level	581-9	001610	09/28/16	09/28/17	03/09/17
Temp. & RH Meter	971	001178	12/22/16	12/22/17	03/09/17

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.

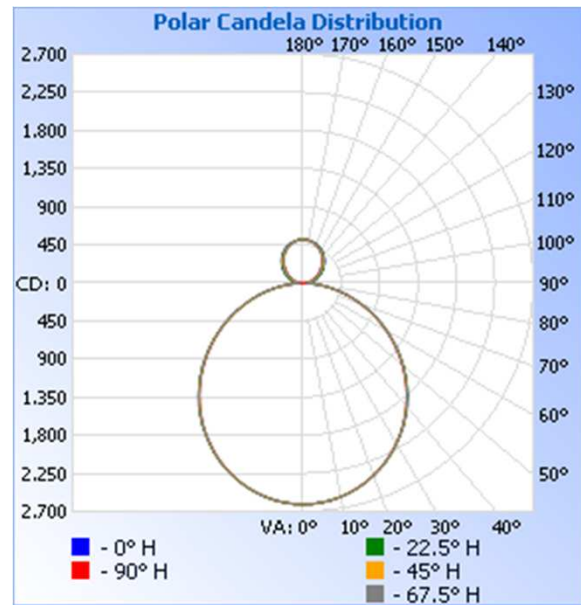
RESULTS OF TEST (cont'd)

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)
LAN1703071332-001	Up	120.2	919.4	110.1	0.998	9003	81.77

Intensity (Candlepower) Summary at 25°C - Candelas

Angle	0	22.5	45	67.5	90
0	2613	2613	2613	2613	2613
5	2601	2601	2600	2600	2599
10	2563	2563	2562	2562	2561
15	2503	2502	2501	2500	2500
20	2421	2420	2419	2417	2415
25	2317	2317	2314	2312	2311
30	2193	2193	2190	2187	2184
35	2053	2052	2048	2043	2044
40	1898	1895	1890	1885	1883
45	1722	1723	1718	1712	1710
50	1538	1537	1532	1527	1524
55	1344	1343	1338	1332	1329
60	1141	1142	1136	1130	1129
65	938	936	931	926	925
70	731	730	724	720	721
75	530	528	523	520	521
80	336	334	329	328	328
85	154	154	150	150	152
90	74	76	66	35	9
95	101	95	74	48	33
100	125	119	98	70	61
105	155	150	125	99	93
110	183	177	155	131	129
115	214	207	188	166	165
120	248	243	222	203	198
125	282	278	260	242	240
130	318	314	298	279	273
135	354	348	336	315	314
140	386	380	368	357	346
145	415	409	400	390	389
150	441	436	428	418	416
155	464	459	453	447	444
160	482	479	474	468	467
165	497	495	491	488	487
170	507	506	504	501	503
175	514	513	511	511	512
180	514	514	514	514	514

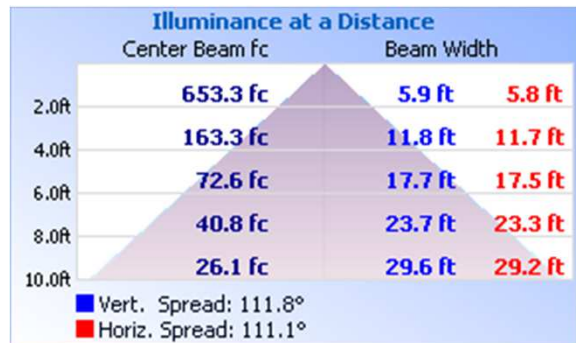


RESULTS OF TEST (cont'd)

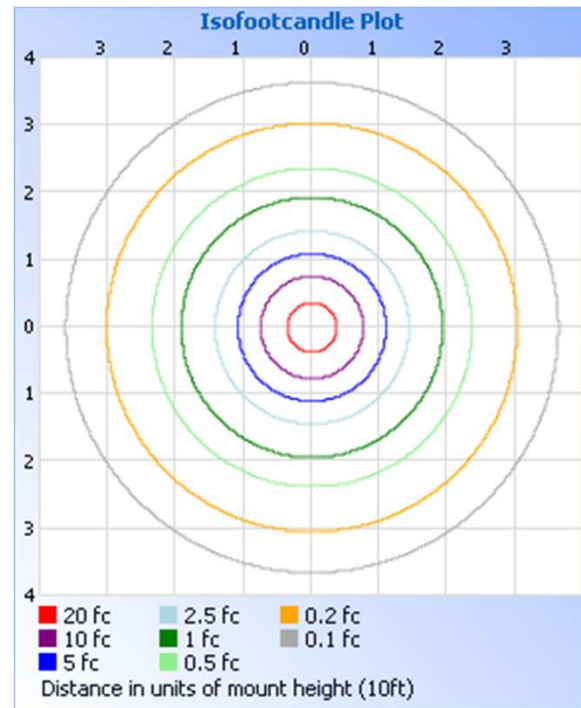
Illumination Plots

Mounting Height: 10 ft.

Illuminance - Cone of Light



Isoillumination Plot



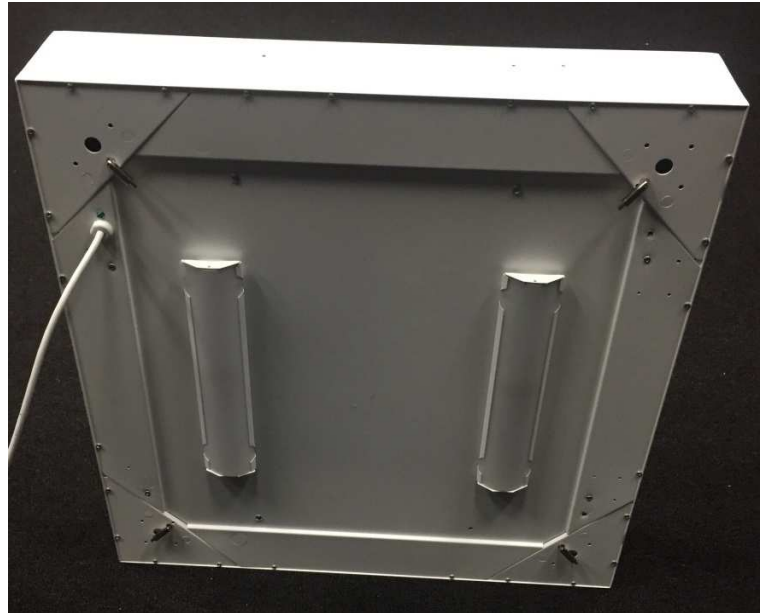
Zonal Lumen Summary and Percentages at 25°C

Zone	Lumens	% Luminaire
0-30	2018	22.4
0-40	3299	36.6
0-60	5818	64.6
60-90	1653	18.4
0-90	7471	83.0
90-180	1532	17.0
0-180	9003	100.0

Zonal Lumens and Percentages at 25°C

Zone	Lumens	% Luminaire
0-10	246.9	2.7
10-20	705.5	7.8
20-30	1066	11.8
30-40	1280	14.2
40-50	1324	14.7
50-60	1195	13.3
60-70	921.3	10.2
70-80	554.3	6.2
80-90	177.6	2.0
90-100	79.9	0.9
100-110	131.4	1.5
110-120	186.0	2.1
120-130	232.4	2.6
130-140	256.8	2.9
140-150	250.0	2.8
150-160	208.6	2.3
160-170	138.6	1.5
170-180	48.6	0.5

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:



Vladimir Kozak
Engineering Supervisor
Lighting Division